#### DOCUMENT RESUME

ED 115 879

CE 005 717

TITLE

Fall Department Head Report--Reporting Booklet 2.0 to the Massachusetts Division of Occupational Education (Fiscal Year Ending June 30, 1975) for Electronics

Program.

INSTITUTION

Management and Information System for Occupational

Education, Winchester, Mass.

SPONS AGENCY

Massachusetts State Dept. of Education, Boston. Div.

of Occupational Education.

PUB DATE

30 Jun 75

NOTE

204p.; For related documents, see ED 062 553; ED 068 646-647; ED 072 225; ED 072 228; ED 072 303-304; CE 005 687-727: Instructions for completing the booklet

are available in CE 005 701

EDRS PRICE **DESCRIPTORS**  MF-\$0.76 HC-\$10.78 Plus Postage

Annual Reports; Census Figures; Data Collection; Demonstration Projects; \*Educational Objectives;

\*Electronics: Job Skills; \*Management Information Systems: Program Design; Program Evaluation; \*Records

(Forms); State Programs; Trade and Industrial

Education; \*Vocational Education

**IDENTIFIERS** 

Census Data System; \*Management Information System

Occupational Educa; MISOE; Terminal Performance,

Objectives: TERMOBS

ABSTRACT

The reporting booklet is required for the Census Data System (CDS) of the Management Information System for Occupational Education (MISOE); it contains the reporting forms which collect data that describe program structure and job-entry skill outcomes expected of program completors in the individual occupational education area of electronics. Utilization of instructional area is also determined. This booklet contains the terminal performance objectives (TERMOBS) for this program area. They are actually the forms by which the skills of program completors are reported by department heads. CDS, one of two major subsystems of the integrated management information system, was developed to provide occupational education managers with comprehensive data on which to base rational management decisions. Essentially, CDS contains descriptive information systematically structured in a manner which allows it to be used as a basis for sampling evaluative research studies. CDS collects and stores census data for all school systems offering occupational education programs, including all data formerly collected by the Annual Federal Report for Occupational Information, except followup data. (Author/AJ)

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| Name of School             |       | School ID No. |
| Name of Preparer of Report | Title | Telephone No. |

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### THE COMMONWEALTH OF MASSACHUSETTS

#### DEPARTMENT OF EDUCATION

## FALL DEPARTMENT HEAD REPORT-REPORTING BOOKLET 2.0

to the

DIVISION OF OCCUPATIONAL EDUCATION (Fiscal Year Ending June 30, 1975)

for

ELECTRONICS PROGRAM

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

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Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.

(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.



### THE COMMONWEALTH OF MASSACHUSETTS

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| ν      |                              |
|--------|------------------------------|
| (Date) | Superintendent of Schools    |
|        |                              |
|        |                              |
| (Date) | Chairman of School Committee |



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MISOE Number

Table 2.1 Enrollment in Final Grade by Student Group & Terminal Objectives (TERMOB)

|   | <u> </u>  |               |            | •        | 9   | _        |       |   |   |           |          | 3        |     |     |          |         |
|---|---|---------------|------------|----------|-----|----------|-------|---|---|-----------|----------|----------|-----|-----|----------|---------|
| ١.                                      | Grade   |               |            | o        |     |          |       |   |   |           | •        |          | _   |     |          | -       |
| 2.                                      | Student Group <b>Name</b><br>an <b>d</b> Number |               |            |          | 101 |          |       |   |   |           |          | 10:      | 2 _ |     | •        | :       |
| 3.                                      | USOE Code(s)                                    |               |            |          | ·.  |          |       |   |   | _         | <u>.</u> | _        |     |     |          |         |
| 4.                                      | Level Code                                      |               |            |          |     |          |       |   |   |           |          |          |     |     |          |         |
| 5.                                      | Type Code                                       |               |            |          |     |          |       |   |   |           |          |          | _   |     |          |         |
| 6.                                      | Session Code                                    |               |            |          |     |          |       |   |   |           |          |          |     |     |          |         |
| 7.                                      | Program Length (Years)                          | <b>&lt;</b> i |            | <u> </u> | 2   | 3        | 4     |   |   | <u> </u>  | 1_       | 2        | 3   |     | <u> </u> |         |
| 8.                                      | Cooperative                                     | ,             | res_       |          | N   | <u> </u> |       |   |   | Υe        | ۹<br>s   |          | No_ |     | _        |         |
| 9.                                      | Workstudy                                       |               | ′es        |          | N   | o *      |       |   |   | Ye        | s _      |          | No_ |     |          |         |
| 10.                                     | Exploratory                                     | \             | <u>Yes</u> | _        | N   | 0 _      |       |   |   | Υe        | s        |          | No_ | •   |          |         |
| - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 | instructors and<br>Teacher's Aides              |               | e          |          |     | •        |       |   |   |           |          |          |     | 4   |          |         |
| ·                                       | A. Full Time                                    |               |            |          |     |          |       |   | + | +         | +        | +        |     |     |          |         |
|   | 3. Percentage of Time                           |               |            | -        |     |          |       |   | + | $\dagger$ |          |          |     |     | <b> </b> |         |
| 12.                                     | Enroliment                                      |               | Ма         | le_      |     | Fe       | ema l | 8 | + | Ma        | le_      | <u> </u> | F   | ema | ıle      | <u></u> |

TERMOB Applicability

| 4 |   |   |   |   |      |      |  |
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| 1 |   |   |   |   |      | 4.   |  |
|   | 13. TERMOB Numbers                      |   | - |   | <br> | <br> |  |
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| 4.  | Level Code                                    |   |  |                                   |   | ,        |       |      |     |     |          |   |    |     |          |  |
|-----|---|---|--|-----------------------------------|---|----------|-------|------|-----|-----|----------|---|----|-----|----------|--|
| 5.  | Type Code                                     | _ |  |                                   |   |          | -     |      |     |     |          |   |    |     |          |  |
| 6.  | Session Code                                  |   | <u>.                                    </u> |                                   |   |          |       | er . |     |     |          |   |    |     |          |  |
| 7.  | Program Length (Years)                        | < | J.   | !                                 | 2 | <u> </u> | 4     |      | _ < | 1   | 1        | 2 | 3  |     | <u> </u> |  |
| 8.  | Cooperative                                   | , | Yes  |                                   | N | <u>。</u> | _     |      |     | Yes | <u>s</u> |   | No |     | _        |  |
| 9.  | Workstudy                                     | ` | es!  |                                   | N | 0        |       |      |     | Ye  | s        |   | No |     | _        |  |
| 10. | Exploratory                                   | , | Yes  |                                   | N | 0        |       |      |     | Ye  | s        |   | No |     |          |  |
| 11. | Instructors and Teacher's Aides  A. Full Time |   |  | 1 (Acceptable 1) 2 (Acceptable 2) |   |          |       |      |     |     | 7        |   |    |     |          |  |
|     | 3. Percentage of Time                         |   |  |                                   | · |          |       | ń    |     |     |          |   |    |     |          |  |
| 12. | Enroliment                                    |   | Ма   | le                                |   | Fe       | ema i | е    |     | Ма  | le       |   | ı  | ema | le       |  |

# TERMOB Applicability

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| 13. TERMOB Numbérs |  |  |  | <del> </del>                                     | <br>  |   |          |
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Table 2.1 (Cont'd) Enrollment in Final Grade by Student Groups

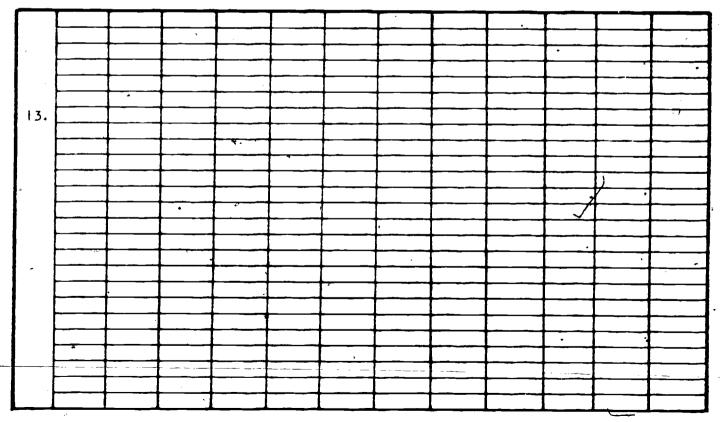
|          | <del></del> | 1   |    |      | i | <i>(</i> |      |          |     | 5 . |     |    |   |    |      | • • |          | δ   |     |     |     |
|----------|-------------|-----|----|------|---|----------|------|----------|-----|-----|-----|----|---|----|------|-----|----------|-----|-----|-----|-----|
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| 2.       |             | 103 |    |      |   |          |      |          | 1 ( | 04  |     |    |   |    |      |     | ı        | 05  |     |     |     |
|          |             |     | *  |      |   | -        |      |          |     |     | j.  |    |   |    |      | •   |          |     |     | •   |     |
| 3.       |             |     |    |      |   | +        |      |          |     |     | •   |    |   |    |      |     | <u> </u> |     |     | 9   | ,   |
| 4.       |             |     |    |      |   | -        |      |          |     |     |     |    | · | -  |      | ,   |          |     |     |     |     |
| 5.<br>6. |             |     | •  |      |   |          |      |          |     |     |     |    |   | -  |      |     |          |     |     |     |     |
|          | <, ,        |     |    |      |   | <,       |      |          |     |     |     |    |   |    |      |     |          |     |     |     | · . |
| 8.       | · Yes       |     | No |      | 4 |          | Yes  | <u> </u> | _2_ | No  | 3   | 4_ |   | <1 | Yes  |     | 2        | No  | 3   | _4_ |     |
| 9.       | Yes         |     | No |      |   |          | Yes  |          |     | No  |     |    |   |    | Yes  |     |          | No. |     |     |     |
| 10.      | Yes         |     | No | 5    |   |          | Yes  |          | _   | No  |     |    |   |    | Yes  |     |          | No  | _   | _ • |     |
| 11.      |             |     |    |      |   |          |      |          | •   | ø   |     |    |   |    |      |     |          |     |     |     | -   |
| 12.      | Male        |     | Fe | male |   |          | Male | <u> </u> |     |     | ema | le |   | ,  | Male |     |          |     | ema | le  |     |

TERMOB Applicability

|               |                             |             |             |         |             |          |  |  |             | _             |  |  |           |
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| <b>4.</b> |             |   |    |     | _   |   |               |      |   |   |    |     |     |     |        |   |          |     |          |         |   |
|-----------|-------------|---|----|-----|-----|---|---------------|------|---|---|----|-----|-----|-----|--------|---|----------|-----|----------|---------|---|
| 5.        |             | _ |    |     |     |   |               |      |   |   |    |     |     |     |        |   | -        | **  |          |         |   |
| ۴.        |             |   | _  |     |     |   |               |      |   |   |    |     |     |     |        |   | -        |     |          |         |   |
| 7.        | <b>&lt;</b> |   |    | 3   |     | 4 | <b>&lt;</b> 1 |      | 1 | 2 |    | 3   | 4   | · < | ,      |   | <u> </u> |     | <br>3    | ` 4     |   |
| 8.        | Yes         |   | No |     |     |   |               | Yes  | _ |   | No |     |     |     | Yes    |   |          | No  | ,        | <u></u> |   |
| 9.        | Yes         |   | No |     | •   |   |               | Yes  |   |   | No |     |     |     | Yes    |   |          | No  | )        |         |   |
| 10.       | Yes         |   | Nο |     |     |   |               | Yes  |   |   | No |     |     |     | Yes    |   |          | "No | <u> </u> | •       |   |
|           |             |   |    |     |     |   |               | •    |   |   |    | ٠   | •   |     | . 4    |   |          | 2   |          |         | · |
| 12.       | Male        | - | F  | ema | le_ |   |               | Male | 9 | - |    | ema | ele |     | Ma f e | · |          | F   | ema      | le      |   |

TERMOB Applicability





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Misoe Number -

Table 2.1 Enrollment in Final Grade by Student Group & Terminal Objective (TERMOB)

| _ |            | 7                                  |    |      |    | 8  |     |    |          |               |     | 9   |          |       |         |   |
|---|------------|------------------------------------|----|------|----|----|-----|----|----------|---------------|-----|-----|----------|-------|---------|---|
|   | 1.         | Grade                              |    |      |    |    |     |    |          |               |     |     |          |       | · .     |   |
|   | 2.         | Student Group Name<br>and Number   | ø  |      | 1( | 06 |     |    |          |               |     | 107 | ,<br>    |       |         | Į |
|   | 3.         | USOE Code(s)                       |    | Ų    |    | -  |     |    |          |               |     |     | •        | -     |         |   |
|   | 4.         | Level Code *                       |    |      |    |    |     |    |          |               |     |     |          |       |         |   |
|   | 5.         | Type Code                          |    |      |    |    |     |    |          |               |     |     |          |       |         |   |
|   | 6.         | Session Code                       |    |      |    |    |     |    |          |               |     |     |          |       |         |   |
|   | 7.         | Program Length (Years)             | <1 |      | 2  | 7  | 3   | 4  | <u>.</u> | <b>&lt;</b> 1 |     | . 2 | <u> </u> | 3     | 4       | _ |
|   | 8.         | Cooperative                        | 5, | Yes_ |    | No |     |    |          | <br>Y         | es_ |     | No       |       |         | , |
|   | 9.         | Workstudy                          | ,  | Yes_ |    | No |     |    |          | · Y           | es  |     | No       | !<br> |         |   |
|   | 10.        | Exploratory                        |    | Yes  |    | No | ٠   |    |          | Y             | es  |     | No       |       |         |   |
|   | , <u> </u> | Instructors and<br>Teacher's Aldes |    |      |    | q  |     | •  | ė.       | ٠             |     | •   |          | -     |         | · |
|   |            | A. Full Time                       |    |      | ,  |    |     |    |          |               |     |     |          |       |         |   |
|   |            | . Percentage of Time               |    |      |    |    |     |    |          |               |     |     |          |       | <u></u> |   |
|   | 12.        | Enrollment                         | Ma | le   |    | ı  | ema | le | •        | Male          | 9   |     | 1        | ema   | l e     |   |

TERMOB Applicability

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| i                                     |   |   |   |   |   |      |  |
| 13. TĘRMOB Numbers                    |   |   |   |   |   |      |  |
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|                                       | L |   |   |   |   |      |  |
|                                       |   |   |   | C |   |      |  |
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|                                       |   | ! |   |   |   |      |  |
| 1 ·                                   |   |   |   |   |   |      |  |



| 4.       | Level Code :                         |     |            |     | -   |         |    |            | -   |   |     |      |          | •  |
|----------|--------------------------------------|-----|------------|-----|-----|---------|----|------------|-----|---|-----|------|----------|--|
| 5.       | Type Code                            |     |            |     |     |         | _  |            | -   |   | *   |      |          |  |
| 6.       | Session Code •                       | i,  |            | -   | -   | -       |    | ÷ .        |     |   |     |      |          |  |
| 7.       | Program Length (Years)               | · < |            | 2   | - 3 | 4       |    | <b>∢</b> ι | 1   |   | 2   | 3    | 4        |  |
| 8.       | Cooperative*                         | Ye  | 9 <b>5</b> | N   | 0   |         |    | _<br>Y     | 'es |   | _Nc | )    |          |  |
| 9.       | Workstudy                            | ·Ye | es         | N   | 0   |         |    | Y          | es  | • | No  | )    |          |  |
| 10.      | Exploratory                          | Ye  | )<br>95    | . N | 0   | _6_     |    | Y          | es  |   | No  | )    |          |  |
| <b>!</b> | Instructors and .<br>Teacher's Aides | Đ   |            |     | •   |         |    |            |     |   |     |      |          |  |
|          | A. Full Time                         |     |            |     |     | $\bot$  | 1_ |            |     | _ | L   |      |          | $oldsymbol{ol}}}}}}}}}}}}}}}}}}$ |
| В        | . Percentage of Time                 |     |            |     |     | $\perp$ |    |            |     |   |     |      | <u> </u> | L  |
|          |                                      | Mai | е          |     | Fe  | male    |    | Male       | ∋   |   |     | Fema | ale      |  |
| 12:      | Enro! Iment                          |     | -          |     |     |         |    | ,          |     |   |     |      |          |  |

TERMOB Applicability

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|                    |             |              |              | <b></b>      |              |   |             |          |
|                    |             |              |              |              |              |   |             | <u></u>  |
| 17 TERMOR Number   | <u> </u>    |              | <del> </del> |              |              | · |             |          |
| 13. TERMOB Numbers | <u> </u>    |              | <del> </del> |              | <u> </u>     |   |             |          |
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Table 2.1 (Cont'd) Enrollment in Final Grade by Student Group and Terminat Objectives (TFRMOBS)

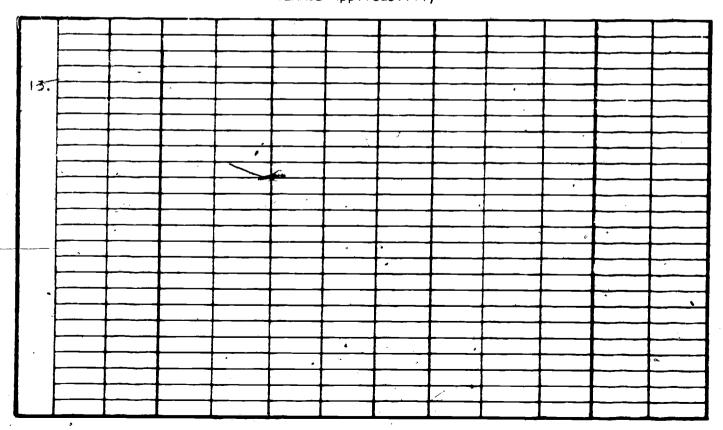
|     | 10             |        |                | <u></u> | 1                 | 2        |
|-----|----------------|--------|----------------|---------|-------------------|----------|
| 1.  |                |        |                |         |                   | ·        |
|     |                |        |                |         |                   |          |
| 2.  |                | • @    |                | •       |                   |          |
| 3.  | 108            |        |                | •       |                   |          |
| 4.  | 100            |        | 10             | 9       | 1                 | 0        |
| 5.  |                |        |                | 4       |                   | -        |
| 6.  |                |        |                |         |                   |          |
| 7.  | <b>∢</b>     2 | 3 4    | <b>∢</b> I I 2 | 3 4     | <b>&lt;</b> 1 1 2 | 3 4      |
| 8.  | Yes            | No     | Yes            | No      | Yes               | No       |
| 9.  | Yes            | . No   | Yes            | No No   | Yes               | No       |
| 10. | Yes            | · No   | Yes            | No .    | Yes               | No       |
| 11. |                |        |                |         |                   |          |
|     |                |        |                |         |                   | <u> </u> |
| 12. | Male           | Female | Male           | Female  | Male              | Female   |

TERMOB Applicability

| Г               |      |     |                |              |   |   |          |              |           |          |          |              |              |
|-----------------|------|-----|----------------|--------------|---|---|----------|--------------|-----------|----------|----------|--------------|--------------|
| 1               |      |     | <del> </del>   | <b>}</b>     | Ļ |   |          | ļ            |           | <u> </u> |          |              |              |
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| ı               | 13.  |     |                |              |   |   |          |              | <u> </u>  | ·        | <u> </u> |              |              |
|                 |      |     |                |              |   |   |          |              |           |          |          |              |              |
| 1               | -    |     | <b>-</b>       | ļ            |   |   |          |              |           |          |          |              |              |
| 1               | ł    |     |                |              |   |   |          |              | · ·       |          |          |              |              |
| i               |      | 200 |                |              |   |   |          |              |           |          |          |              |              |
| 3               |      |     |                |              |   |   |          |              |           |          |          |              |              |
| RĬ              | C.   |     |                |              |   |   |          |              |           |          |          |              |              |
| ext Provided by | ERIC |     |                |              |   |   |          |              |           |          |          |              | a. i sabanda |

| T | 4.  |          |     |     |    |     |          |      |          |   |     |          |     |   |   |     | ,,, |       |     |      |   |   |      |    |   |
|---|-----|----------|-----|-----|----|-----|----------|------|----------|---|-----|----------|-----|---|---|-----|-----|-------|-----|------|---|---|------|----|---|
|   | 5.  |          | •   |     |    | ٠.  |          | •    |          |   |     | _        |     |   |   |     |     |       |     |      |   |   |      |    | · |
|   | 6.  | 1        |     |     |    | -   |          |      |          | - |     | <u>.</u> |     |   |   |     |     |       |     |      |   |   |      |    |   |
|   | 7.  | *        | _   |     |    | 2   |          | 3    | . 4      | l | <   | :<br>: 1 | 1   | 2 | - | 3   | 4   | <br>< | :1  | Į    | 2 | 3 | 4    |    |   |
|   | 8.  |          |     | Y   | es |     |          | No   | <u> </u> |   |     | •        | Yes |   |   | No  | , . |       | ,   | 'es  |   |   | No . |    |   |
|   | 9.  | <u> </u> |     | Y   | es |     | <u>.</u> | No   |          |   |     |          | Yes |   |   | No  | )   |       |     | res' |   |   | No   |    |   |
| L | 10. |          | _   | ` Y | es |     |          | _ No | <u> </u> |   |     |          | Yes |   |   | No  | )   |       | ,   | es   |   |   | No   |    |   |
|   | -   | •        |     |     |    |     |          |      |          |   | · · | -        |     |   | • |     |     |       |     |      |   |   |      |    |   |
| - | 12. |          | Mai | 9   |    | - ( | F        | ema  | e        | q | 1   | lale     |     |   | F | ema | le  | N     | ale |      |   | F | ema  | le |   |

TERMOB Applicability



|                         | Al soe | Number |   |   |          |   |                | <del></del> |         |        |   | 1     |           |
|-------------------------|--------|--------|---|---|----------|---|----------------|-------------|---------|--------|---|-------|-----------|
|                         |        |        | - |   |          |   | 7 }            | Q.          | No      | 2      |   |       | 7673<br>6 |
| 9                       |        | 205    |   |   |          |   | <b>«</b> 1 1 2 | Yes         | Yes     | Yes    |   |       | Mai e     |
|                         |        | 4      |   | · |          |   | 3 4            | NO<br>NO    | Ņo      | S<br>S |   |       | rema la   |
| 3                       |        | 204    |   | - |          |   | 7              | کر<br>ھ     | Yes     | ×es    | , |       | √a¦e      |
| udent Group             |        | , ČA   |   |   |          |   | 3 4            | C.          | No      | O,N    |   |       | řemale    |
| Grades by Student Group |        | 202    |   |   |          | ~ | -              | ,<br>Yes    | sex     | Yes    |   |       | Me e      |
| Enrollment in Lower     |        |        |   |   | <b>3</b> |   | 4              | 0           | 9       | o'N    |   |       | Femal a   |
|                         |        | 207    |   |   |          |   | <b>V</b>       | ⊋a`}        | se>     | Yes    |   |       |           |
| Table 2.11              |        |        |   |   |          |   | 3 4            | <u>Q</u>    | No<br>S | No.    | 3 |       | Female    |
| RÎC                     |        | 102.   |   |   |          |   |                | se).        | Yes     | Yes    |   | •     | Ma l e    |
| xt Provided by ERIC     |        |        |   |   |          |   |                |             |         |        | · | ع ليو |           |

5.

| 1. Grade  2. Student Group Name 2. and Number 3. USOE Code(s) 4. LEVEL Code 5. Type Code 6. Session Code 7. Program Length (Years) <1 2 3 4  E. Cooperative (es 10 Yes No  | -  |     |                                  |               |          |           |          | L   |       |             |       |
|--|----|-----|----------------------------------|---------------|----------|-----------|----------|-----|-------|-------------|-------|
| 2. and Number  3. UsoE Ccde(s)  4. LEVEL Code  5. Type Code  6. Session Code  7. Program Length (Yezrs)  8. Cooperative  9. Workstudy  10. Exploratory  11. Irstructors and  Teacher's Aides  12. Enrollment  13. Errollment  14. Errollment  15. Exploratory  16. Exploratory  17. Feacher's Aides  18. Percentage of Time  19. Errollment  10. Exploratory  10. Exploratory  11. Instructors and  12. Errollment  13. Errollment  14. Errollment  15. Errollment   |    |     | Grade                            |               |          |           |          |     |       | -           |       |
| 2. Student Stour Fores  5. USOE Code(s)  6. Session Code  7. Program Length (Years)  8. Cooperative  9. Workstudy  10. Exploratory  11. Instructors and  12. Exploratory  13. Full Time  14. Full Time  15. Facher's Aides  16. Exploratory  17. Facher's Aides  18. Percentage of Time  19. Percentage of Time  10. Exploratory  10. Exploratory  11. Instructors and Instruc |    |     | Carlo Original Association       |               |          |           |          |     |       |             |       |
| 3. USOE Code(s) 4. LEVEL Code 5. Type Code 6. Session Code 7. Program Length (Yegrs)   | _  | 7.  | Student Group Mane<br>and Number | ا <i>ر</i> اد |          | )?        | 20       |     | . 20  | . 203       | . 203 |
| 4. LEVEL Code         5. Type Code         6. Session Code         7. Program Length (Years)       KI 1 2 3 4 KI 1 2 3 4         8. Cooperative       Yes 100 Yes No  |    |     |                                  | -             |          | ÷ ,       |          |     |       |             |       |
| 5. Type Code         6. Session Code         7. Program Length (Years)       41 2 3 4         8. Cooperative       Yes       No         9. Workstudy       Yes       No         10. Exploratory       Yes       No         11. Irstructors and Teacher's Aides       A. Full Time       A. Full Time         B. Percentage of Time       Male       Female         12. Enrollment       Male       Female  |    | r,  | USOE Code(s)                     | -             |          |           |          | 1   |       |             |       |
| 5. Type Code  6. Session Code  7. Program Length (Years)   |    | 4   |                                  |               |          |           |          | 1   | ,     |             |       |
| 6. Session Code 7. Program Length (Yezrs)  |    | 5.1 | <u> </u>                         |               |          |           |          | l l |       |             |       |
| 7. Program Length (Years)       <1   2   3   4   |    | 6   | Session Code                     | _             |          |           |          |     |       |             |       |
| E. Cooperative         7es         10         Yes         No           9. Workstudy         Yes         1c         Yes         1c           10. Exploratory         Yes         No         Yes         No           11. Instructors and Teacher's Aides         A. Full Time   |    | 1.  | <del></del>                      |               |          |           | - MJ     |     |       | -           | 1 2 3 |
| 9. Workstudy         Yes         No         Yes         10.           10. Exploratory         Yes         No         Yes         No           11. Irstructors and Teacher's Aides         A. Full Time         A. Full Time         B. Percentage of Time         A. Full Time         Female         Female         Female           12. Enrollment         12. Enrollment         13.         A. Full Time   |    | ß.  |                                  | - sə,         | <u>o</u> | æ.<br>Ye. | SNO.     | {-  | Yes   | ći: sə'     |       |
| 10. Exploratory Yes No Yes N   | _  | 5   |                                  | رج<br>جون     | <u>Q</u> | , es      | ,<br>9   |     | Yes   | Yes No      |       |
| II. Irstructors and Teacher's Aides  A. Full Time  B. Percentage of Time  Male Female Female  12. Enrollment   |    | 10. |                                  | ŞeX           | Ŋ.       | Yes       | 9%<br>** |     | Yes   | Yes No      |       |
| Teacher's Aides  A. Full Time  B. Percentage of Time  Male  Enrollment   | 14 |     |                                  |               |          |           |          |     |       |             |       |
| B. Percentage of Time Male Female Male Female  |    |     |                                  |               |          |           |          |     |       |             |       |
| B. Percentage of Time Male Female Male Female  |    |     | A. Full Time                     |               |          |           |          | 4   |       |             |       |
| Male Female Vale Fema<br>Enrollment  |    |     | Percenta                         |               |          |           | # T      |     |       |             |       |
|  |    |     | i                                | Male          |          | l'ale     |          |     | Me le | Male Female | Fema  |
| ١  |    | 12. |                                  |               |          |           | ·        | 1   |       |             |       |

|   |       |   |   |   |  |        |         | ż      | M | isoe Num | ber          |             |
|---|-------|---|---|---|--|--------|---------|--------|---|----------|--------------|-------------|
|   | 210   |   | • |   | 2  |        | Yes Yes | (es    |   |          | Male Ferrale | 5           |
| dn dn                                   | 509   |   |   |   | <1 1 2 3 4 The state of the sta | Yes No | Yes No  | Yes No |   |          | Z            |             |
| wer Grades by Student Group             | 508   |   |   |   | <1 1 2 3 4 <   | Yes No | Yes No  | ves No |   |          |              |             |
| Table 2.11 (Cont'd) Enrollment in Lower | . 207 | • |   | • | <1 1 2 3 4 THE STATE OF THE STA | Yes No | Yes No  | Yes No |   |          |              | Male Female |
| Table 2.11 (6                           | 206   |   |   |   | <1   2 3 d   | Ž      | Yes No  | Yes No |   |          |              | Male Female |

Table 2.11 (Cont'd) Enrollment in Lower Grades by Student Group

. 59

| 2. and Number 5049 Name 505 207 209 209  2. and Number 6049 Name 505 209 209  3. LEVE Code 5  5. Type Code 6. Session Code 6. Session Code 6. Session Code 74 1 2 3 4 41 2 3 4 41 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | Y ERIC      |                                    | α         | σ·    | 6.                                    | <del>_</del> |   |
|---|-------------|------------------------------------|-----------|-------|---------------------------------------|--------------|---|
| Structor Group Name  206  207  209  Level Code(s)  Level Code  Type Code(s)  Pession Code  Session Code  Cooperative Yes No Yes | -           | Grade                              |           |       |                                       |              |   |
| Level Code   Code   | 2           | i                                  | l         | 207   | 208                                   | 509          |   |
| Type Code   Session  | il w        |                                    |           |       |                                       |              |   |
| Type Code   Session  | 4           | Level Code                         |           |       |                                       |              |   |
| Program Length (Years)  | 2           |                                    |           |       |                                       |              | 1 |
| Program Length (Years)  | ا۳          |                                    |           | , c   | 1 2 3                                 | - 3          |   |
| Cooperative         Yes         No         Yes         No <td>'^<u> </u></td> <td></td> <td>2 3 1 3 S</td> <td>es No</td> <td></td> <td>S S</td> <td>1</td>  | '^ <u> </u> |                                    | 2 3 1 3 S | es No |                                       | S S          | 1 |
| Page     | ٣ 3         |                                    |           |       |                                       | ON C         |   |
| Instructors and Teacher's Aides  A. Full Time  B. Percentage of Time  Male Female Male Female Male  Enrollment  |             | Exploratory                        | -         |       |                                       |              |   |
| Instructors and Teacher's Aides  A. Full Time  B. Percentage of Time Male Female Male Female Male  Enrollment   |             |                                    |           |       |                                       |              |   |
| B. Percentage of Time Male Female Male Female Male Enrollment   |             | Instructors and<br>Teacher's Aides |           |       |                                       |              |   |
| Enrollment  |             |                                    | E B       |       | e e e e e e e e e e e e e e e e e e e | Φ            | 0 |
|   |             | Enro                               |           |       | •                                     |              | ł |

| Misoe N                   | lumber |   |   |   |   | <i>/</i> ~        | 17            | 7        |                  |   |        |          |
|---------------------------|--------|---|---|---|---|-------------------|---------------|----------|------------------|---|--------|----------|
| 91                        | 215    |   |   | · |   | 2 3 4             | No            | No.      | O <sub>N</sub>   |   |        | Female   |
|                           |        |   |   |   |   | -<br>-<br>V       | Yes           | Yes      | Yes              |   |        | Male     |
|                           | 4      |   |   |   |   | 3 4               | No            | <u>9</u> | <b>N</b>         |   |        | Female   |
| (Cont'd)                  | 214    |   | ₩ |   | - | <b>~</b> - 2      | Yes           | Yes      | Yes              |   |        | Ma le    |
| Student Group (Cont'd) 16 | ٠      |   |   |   |   | 3 4               | S<br>O        | .No      | No               | • |        | Female   |
| ades by                   | 213    |   |   |   |   | <b>&lt;</b> 1 1 2 | ` <b>'</b> 95 | Yes      | Yes              |   |        | Male     |
| Enrollment in Lower Gr    |        |   |   |   |   | 3 4               | No            | ON O     | o <mark>N</mark> |   |        | Female " |
| 2.11 Enrollme             | 2      | , |   |   |   | <1 1 2            | Yes           | Yes      | Yes              |   |        | Ma l e   |
| Table                     |        | Ł |   |   |   | 2 3 4             | No            | No       | N <sub>O</sub>   |   |        | Female   |
| 4                         | 112    |   |   |   |   | <b>4</b> 1 - 2    | Yes           | Yes      | Yes              |   |        | Male     |
| S<br>LC.<br>Med by ERIC   | 10     |   |   |   | , | Gars)             |               | •        |                  |   | I Time | ,        |

Table 2.11 Enrollment in Lower Grades by Student Group (Cont'd) 15

7

Female S કૃ ပ္ 214 ~ Yes Mo e Yes Yes Female 4 ô å ဥ M ~ Male Yes Yes Yes V Female 4 õ 2 Š М 2 Male Yes Yes Yes V 4 Female M **₽** Š <del>2</del> 211 ~ ... Male Yes Yes Yes Ţ A. Full Time Percentage of Time Program Length (Years) Student Group Name and Number Instructors and Teacher's Aides Session Code USOE Code(s) Enrollment Cooperative Exploratory Level Code Type Code Workstudy Grade œ. 12. = 10. ×. 'n 9 2. œ.

|               |   |     |  |   |  |                   | <del></del> | 19  |          | Misoe Number  |   |
|---------------|---|-----|--|---|--|-------------------|-------------|-----|----------|---|---|
|               | • | 220 |  |   |  | 2 3 ,4            | 9           | ٥   | NO       | - Fera a  |   |
|               |   |     | . •  | 4 |  | -<br>-<br>V       | Yes         | Yes | Yes      | Ma le   |   |
|               |   | 219 | and the second s |   |  | 2 3 4             | 02          | 2   | No       | Fema le   |   |
| ·             |   |     |  |   |  | -                 | Yes         | Yes | Yes      | 0<br>29<br>0  | J |
|               | · | 8   |  |   |  | 3 4               | No '        | No  | No       | Fema i e  |   |
|               | , | 218 |  |   |  | <b>&lt;1</b> -1 2 | Yes         | Yes | Yes      | Wa   8  |   |
|               |   | 217 |  |   |  | 2 3 4             | <u>0</u>    | No  | No       | P. 60 |   |
|               |   |     |  |   |  | <br>. ▼           | Yes         | Yes | Yes      | <b>X</b><br><b>10</b><br><b>10</b><br><b>10</b>   |   |
|               |   |     |  |   |  | 3 4               | N.          | No  | ,<br>ON. | Fema le   |   |
|               |   | 216 |  |   |  | .1 2              | Yes         | Yes | Yes      | Ma e  |   |
| C<br>aby ERIC |   |     |  | - |  | ars) K            | ├—          |     |          |   |   |

| •   | 3  |
|---|----|
| Table 2.1! Enrollment in Lower Grades by Student Group (Cont'd) | 23 |
| Table 2.11 Enrolln  | 20 |
|   |    |

|     | 61                     | 50                 | 21           |          | 22          |      | 23           |     |
|-----|------------------------|--------------------|--------------|----------|-------------|------|--------------|-----|
|     | Grade                  |                    | ·            |          | •           |      |              |     |
|     | <u> </u>               | 216                | . 12         | , ,      | 51.<br>81.7 |      | 219          | 6   |
| 7   |                        |                    |              |          | •           |      |              |     |
| M   | USOE Code(s)           | ,                  |              |          |             | 3    |              |     |
| 4   | 1                      |                    |              |          |             | ,    |              |     |
| ľ   |                        |                    |              |          |             |      |              |     |
| 9   | ┸                      |                    |              | •        |             |      |              |     |
| _   | Program Length (Years) | <b>K</b> i i 2 3 4 | - 5          | 3 4      | <1 1 2      | 3 4  | <b>4</b>   2 | 3 4 |
| ω   | 1                      | 1                  | Yes          | NO       | Yes         | No   | Yes          | NO  |
| 6   | <u> </u>               | Yes No             | Yes          | No       | Yes         | No   | Yes          | 2   |
| 0   | L                      | Yes No             | Yes          | NO<br>ON | Yes         | No " | Yes          | No  |
| Ξ   |                        |                    |              |          |             |      |              |     |
|     |                        |                    |              |          |             |      |              |     |
|     | A. Full Time           |                    |              |          |             |      |              |     |
|     | B. Percentage of Time  |                    | _            |          |             |      |              |     |
| 12. |                        | Ma 1 6             | 9   <b>6</b> | 9 0 0    | D 0         |      | 0            |     |

|   |      |       |   |   |              |   | 2 i |   |     |   |     |    |   |  |   |
|---|------|-------|---|---|--------------|---|-----|---|-----|---|-----|----|---|--|---|
| M1 S                                    | oe N | umb e |   |   | ٠.           |   |     |   |     |   |     |    |   | 0  | - |
|   | 0-   | 109   |   |   |              |   |     |   |     |   |     |    |   | , and the second |   |
| -                                       | ΰ    | 108   |   |   |              |   | •   |   |     |   |     | 'n | i |  | • |
| 9                                       | 8    | 197   |   |   |              |   | ,   | · |     |   |     |    |   |  |   |
| Final Grade                             | . 7  | . 901 |   |   |              |   | ·   | • |     |   |     |    |   |  |   |
| Class Time:                             | ô    | 105   |   |   |              | • |     |   |     | • |     | L. |   |  | , |
| Utilization of Student Class Time:      | ÷ 5  | 104   |   |   |              |   |     |   |     |   |     |    |   |  |   |
|   |      | 103   |   | , |              |   |     |   |     |   |     |    |   |  | ~ |
| Table 2.2                               | ٣    | 102   | • |   | •            |   |     |   |     |   |     |    | - |  |   |
| 3                                       |      | 101   |   |   | <del>.</del> |   |     |   |     |   |     |    |   |  |   |
| I C O O O O O O O O O O O O O O O O O O |      |       |   |   | <u> </u>     |   |     |   | 500 | _ | lon |    |   |  |   |

Table 2.2 Utilization of Student Class Time: Final Grade

| =1      | Student Group Number                          | 2 101 | 3 102 | 103 | 5  | 105 | 106 | 107 | 6 108 |
|---------|---|-------|-------|-----|----|-----|-----|-----|-------|
| -:      | Grade   |       |       |     |    |     |     |     | y     |
|         |   |       |       |     |    | ۰   |     |     |       |
| K 4     | USOE Code(s) In Occupational Shon/lab Area(s) |       |       |     |    |     |     |     |       |
| 5       |   |       |       |     |    |     |     |     |       |
| 6       |   | ·     |       |     |    | -   |     | - I |       |
| ,       | 1   |       |       |     |    | ·   |     |     |       |
| 80      |   | ā     |       |     |    |     |     | -   |       |
| 6       |   |       | ٠     |     |    |     |     | .,  |       |
| C       | l   |       |       |     | ٠  |     |     | ·   | ·     |
| =       |   |       | ·     | ·   |    | . · |     |     |       |
| <u></u> | _   |       |       | , a |    | ū.  |     |     |       |
| <u></u> |   |       |       |     | ٠. | ć   |     |     |       |

|   |      |      |   |      | , |   |   | 23 . | <del></del> |   | Mi | soe Numb | er |  |
|---|------|------|---|------|---|---|---|------|-------------|---|----|----------|----|--|
|   | 777  | . 20 |   |      |   |   | ٠ |      |             | , | 4. |          |    |  |
|   | 12   | 119  |   | 1    |   |   | • |      | •           |   | ·  |          | -  |  |
| -   | 20   | 118  |   |      |   |   |   |      |             |   | 3  |          |    |  |
| l Grade   | , 19 | 117  |   |      |   | * |   |      |             |   |    |          |    |  |
| n+'d): Fina   | 18   | 911  |   |      |   |   |   |      |             |   |    |          |    |  |
| Table 2.2 Utilization of Student Class Time (Cont'd): Final Grade |      | 115  |   |      |   |   |   |      |             |   |    | ń        | ·  |  |
| f Student Cla   | 16   | 114  |   |      |   |   |   |      | · ·         |   |    | -        |    |  |
| Filization o  | , 51 | 113  |   |      | - | ^ |   |      | -           |   |    |          | *  |  |
| able 2.2 U1   | . 14 | 112  |   |      |   |   |   | ,    |             |   |    |          |    |  |
| ,<br>,  | 13   | =    |   |      |   |   |   |      | ·           |   | •  |          |    |  |
| RIC<br>ext Provided by ERIC                                       | ·    |      | _ | <br> |   | + |   | 2    | -           | - | +  | 1        |    |  |

Table 2.2 Utilization of Student Class Time (Cont'd): Final Grade

|           |    |                                       | <u>-</u> - | 5   | <u></u> | 9     | 7  | . 18  | . 61 | 20          |
|-----------|----|---------------------------------------|------------|-----|---------|-------|----|-------|------|-------------|
| <b></b> - |    | 1                                     |            |     |         | 7   1 | 7. | . 911 | 117  | 811         |
|           | 1  | Student Group Number                  |            | 711 |         |       |    |       |      |             |
| ,         | 2. | Grade                                 |            |     |         |       |    |       |      |             |
|           |    |                                       |            |     |         |       |    |       |      | ,           |
| ,         | 14 | LEOE COde(s)                          |            |     |         |       |    |       |      |             |
|           | 4  |                                       |            |     |         |       |    |       |      |             |
| • .       | ,  | L                                     | . •        |     |         |       |    | -     |      |             |
| -         |    |                                       | •          |     |         |       |    |       | 2    |             |
| 11        | ó  |                                       |            |     |         |       |    |       |      |             |
| 24        | r: | In Nonoccupational Areas              |            |     |         |       |    |       |      |             |
| Ĺ         | 80 |                                       |            |     |         |       |    |       |      |             |
|           | 6  | Length of Grade Session (weeks)       |            | ,   |         |       |    |       |      |             |
|           |    |                                       | •          |     |         |       |    |       |      | ,           |
| ne.       | 2  | Additional Notes Necessary to Explain |            |     |         |       | •  |       | •    | <del></del> |
|           | _  | . Lines 4 through 10                  |            |     |         |       |    |       |      |             |
|           |    | 9                                     |            |     |         |       |    |       |      |             |
|           | _  |                                       |            |     |         |       |    |       |      |             |

| MI soe                             | Numbe | er    | <br>— <u>.</u> |    |   | 25 | 1 |     | -  |          | T | -T |   |
|------------------------------------|-------|-------|----------------|----|---|----|---|-----|----|----------|---|----|---|
|                                    |       | 0.0   |                |    |   | -  |   |     |    |          |   |    |   |
|                                    | 10    | 209   | .,             |    |   |    |   |     | -  |          |   |    |   |
| ,                                  | 6     | 208   | 4              |    |   |    | • |     |    |          |   |    |   |
| 5                                  | 8     | 207   |                |    |   | ş  |   |     |    | ٠        |   |    |   |
| Lower Grade                        | 7     | 206   |                |    |   |    |   |     |    |          |   |    |   |
|                                    | 9     | 205   | · · ·          |    |   |    |   | ·   |    |          |   |    | i |
| f Student Cl                       | ř.    | . 204 |                |    | - |    |   |     | ·  |          |   |    |   |
| Utilization of Student Class Time: | 7     | 203   |                | 6. |   |    |   |     |    |          |   |    |   |
| Table 2.21 U                       |       | 202   |                |    |   |    |   |     |    |          |   |    |   |
|                                    | 7     | 201   |                |    |   |    |   |     |    |          |   |    |   |
| IC and by ERIC                     |       |       | ·              | -  | - | -  |   | Sec | Ę, | <b>†</b> | 1 |    |   |

Table 2.21 Utilization of Student Class Time: Lower Grade

|  |                                       | 7   | 3   | 7   | 5     | 9    | 7   | 8            | 6   |
|--|---------------------------------------|-----|-----|-----|-------|------|-----|--------------|-----|
| <b>.</b>                               | 1. Student Group Number               | 201 | 202 | 203 | 204   | 205. | 206 | 207          | 208 |
| ٠                                      | 2. Grade                              |     |     |     |       |      |     |              |     |
| ــــــــــــــــــــــــــــــــــــــ |                                       |     |     |     |       |      | •   |              |     |
|  |                                       | 4.2 |     |     |       |      |     |              |     |
|  | 3. USOE Code(s)                       |     |     |     |       |      |     |              |     |
| - <del> </del>                         |                                       |     |     |     |       |      |     |              |     |
|  |                                       |     |     |     |       |      |     | 4            | -   |
|  | Total Occupational                    |     |     |     |       | -    |     | •            |     |
|  |                                       |     |     |     |       |      |     |              |     |
| 0                                      |                                       |     | ~   |     |       |      |     | 2            |     |
| ,                                      | Length of Grade Session               |     |     |     | ·<br> |      | 7   |              |     |
|  | y. (weeks)                            |     |     |     |       |      |     | -            |     |
|  | Additional Notes Necessary to Explain |     |     |     |       |      | ų.  |              | •   |
|  | 11. Fines 4 miougn to                 |     |     |     | 4.    |      |     |              |     |
|  |                                       | ,   |     |     |       |      |     | ਰੰ<br>ਲ<br>- |     |
|  |                                       |     |     |     |       |      |     |              |     |

Misoe Number

220 es, 219 Ø 6 217 <u>∞</u> 216 4 215 214 9 <u>.</u> 2 3 4 212 2 | eas 5

Table 2.21 (Contid) Utilization of Student Class Time: Lower Grade

Table 2.21 (Cont'd) Utilization of Student Class Time: Lower Grade

Table 2.3 Utilization of Departmental Instructional Area by Rooms

# Check Applicable Program Schedule

| I. a. [ ] Weekly 2. b. [ ] Alternating c. [ ] Variable | a. [ ] Semester Sched<br>b. [ ] No Semester Sc | uie Change<br>hedule Chang |
|--|--|----------------------------|
|--|--|----------------------------|

|   |                |                        | _                 | WEEKL             | Y OR SCHEDUL | E A        |                     |                       |
|---|----------------|------------------------|-------------------|-------------------|--------------|------------|---------------------|-----------------------|
|   | 1              | ,2                     |                   | 3                 | ·            | 4          |                     | 5                     |
|   | Room           | Day                    | Мо                | rning             | Afte         | rnoon      | <sup>*</sup> Eve    | ning '                |
|   | No. or         | of the                 | 7:00 a.<br>No. of | m12:00N<br>No. of | 12:00N-6     | 0:00 p.m.  | 6:00 p.m.<br>No. of | -11:00 p.m.<br>No. of |
|   | Name           | Week                   |                   | Stud. Hrs.        | Hrs. Used    | Stud. Hrs. | Hrs. Used           |                       |
| · | _ IA           | Mon.<br>Tues.          |                   |                   |              | 4.         | ,                   |                       |
|   |                | Wed.<br>Thurs.<br>Fri. |                   |                   |              |            |                     |                       |
|   | LS C           | Sat.                   |                   |                   |              | ·          |                     | •                     |
|   | TOTALS         |                        | -                 |                   |              | ·          |                     |                       |
|   | 2 <sup>A</sup> | Mon.<br>Tues.<br>Wed.  |                   |                   |              |            |                     |                       |
| - |                | Thurs.<br>Fri.         |                   |                   |              |            |                     |                       |
|   | LS C<br>TOTALS | Sat.                   |                   |                   |              |            |                     |                       |
|   | 3A             | Mon.                   |                   |                   |              |            |                     |                       |
|   |                | Tues.<br>Wed.          |                   |                   |              |            |                     |                       |
|   | LS C           | Thurs,<br>Fri.<br>Sat. |                   |                   |              |            |                     |                       |
|   | TOTALS         |                        |                   |                   |              |            |                     |                       |
|   | 4 A            | Mon.<br>Tues.          |                   |                   |              |            |                     | ·                     |
|   |                | Wed.<br>Thurs          |                   |                   |              |            |                     |                       |
|   | LS C           | Sat.                   |                   |                   |              |            |                     |                       |
|   | TOTALS<br>5A   | Mon.                   |                   |                   |              |            |                     |                       |
|   | 5n             | Tues.                  |                   |                   |              |            |                     |                       |



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|        | WEEKLY OR SCHEDULE A |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
|--------|----------------------|---------------------------------------|---------------------------------------|---------------------|----------------------|---------------------|--------------------------------|--|--|--|--|
| 1      | 1 2 3                |                                       |                                       |                     | 4                    | 5                   |                                |  |  |  |  |
| Room   | Day.                 | Mo_                                   | rning                                 | Afte                | ernoon               | Ev                  | ening                          |  |  |  |  |
| No. or | of the               | 7:00 a.                               | m12:00N                               |                     | 6:00 p.m.            |                     | 11:00 p.m.                     |  |  |  |  |
| Name   | Week                 | No. of<br>Hrs.Used                    | No. of<br>Stud. Hrs.                  | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>St <b>ud. Hrs.</b> ` |  |  |  |  |
| IA     | Mon.                 |                                       |                                       | -                   |                      |                     | ·                              |  |  |  |  |
|        | Tues.<br>Wed.        |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| -      | Thurs.<br>Fri.       |                                       |                                       | · · · · -           |                      |                     |                                |  |  |  |  |
| LS C   | Sat.                 |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| TOTALS |                      |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| 2A     | Mon.                 |                                       | · · · · · · · · · · · · · · · · · · · |                     | 1                    |                     |                                |  |  |  |  |
|        | Tues.                | <del></del>                           |                                       |                     | ,                    |                     |                                |  |  |  |  |
|        | Thurs.<br>Fri.       |                                       |                                       |                     |                      |                     | · · · · ·                      |  |  |  |  |
| LS C   | Sat.                 |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| TOTALS | <u>.</u>             |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| 3A     | Mon.                 |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| •      | Tues.<br>Wed.        | · · · · · · · · · · · · · · · · · · · |                                       |                     |                      |                     |                                |  |  |  |  |
|        | Thurs.<br>Fri.       |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| LS C   | Sat.                 |                                       |                                       |                     | -                    |                     |                                |  |  |  |  |
| TOTALS |                      |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| 4 A    | Mon.                 |                                       |                                       | 8                   |                      |                     |                                |  |  |  |  |
|        | Tues.<br>Wed.        |                                       | ·                                     | <u> </u>            |                      |                     |                                |  |  |  |  |
| ·      | Thurs.               |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| LS C   | Sat.                 |                                       |                                       |                     |                      |                     | 3                              |  |  |  |  |
| TOTALS |                      |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| 5A     | Mon.                 |                                       | ,                                     |                     |                      |                     | 1                              |  |  |  |  |
|        | Tues.<br>Wed.        |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
|        | Thurs.<br>Fri.       | -                                     |                                       |                     |                      |                     |                                |  |  |  |  |
| LS C   | Sat.                 |                                       |                                       |                     |                      |                     |                                |  |  |  |  |
| TOTALS |                      |                                       |                                       |                     | ,                    |                     |                                |  |  |  |  |





Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Rooms

## Check Applicable Program Schedule

| 1. | a.[]Weekly         |    | [ ] Semester Schedule Change    |
|----|--------------------|----|---------------------------------|
|    | b. [ ] Alternating | b. | [ ] No Semester Schedule Change |
|    | c.[]Variable       |    | •                               |

|          |                | . [ ] Varia        | able<br>                              |                     |                      |  |                                       |
|----------|----------------|--------------------|---------------------------------------|---------------------|----------------------|--|---------------------------------------|
| ,        |                |                    | WEEKL                                 | Y OR SCHEDU         | LE B                 |  |                                       |
| 5        | 7              |                    | 8                                     |                     | 9                    |  | 0                                     |
| Room     | Day            | Мо                 | rn <b>in</b> g                        | Afte                | rnoon                | Eve  | ning                                  |
| No. or   | of the         |                    | m12:00N                               | 12:00N-6            |                      |  | -11:00 p.m.                           |
| Name     | Week           | No. of<br>Hrs.Used | No. of<br>Stud. Hrs.                  | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used                              | No. of<br>Stud. Hrs.                  |
| I B      | Mon.           |                    |                                       |                     |                      |  |                                       |
|          | Tues.<br>Wed.  |                    |                                       | :                   |                      |  |                                       |
|          | Thurs.<br>Fri. |                    |                                       |                     | :                    |  |                                       |
| LS C     | Sat.           |                    |                                       |                     | -                    |  |                                       |
| TOTALS   |                | _                  |                                       |                     |                      |  |                                       |
| 2 B      | Mon.           |                    |                                       |                     |                      |  |                                       |
|          | Wed.           |                    | · · · · · · · · · · · · · · · · · · · |                     |                      |  |                                       |
| p. `     | Thurs.<br>Fri. |                    |                                       |                     |                      |  | · · · · · · · · · · · · · · · · · · · |
| LS C     | Sat.           |                    |                                       |                     |                      |  | •                                     |
| TOTALS   |                |                    |                                       |                     |                      |  |                                       |
| 3 B      | Mon.<br>Tues.  |                    |                                       |                     |                      | ļ  | ·                                     |
| ,        | Wed.           |                    |                                       |                     |                      |  |                                       |
|          | Thurs.<br>Fri. |                    |                                       |                     |                      | -  |                                       |
| I.S C    | Sat.           |                    |                                       |                     |                      |  |                                       |
| TOTALS   |                |                    |                                       |                     |                      |  |                                       |
| 4 B      | Mon.<br>Tues.  |                    |                                       |                     |                      |  |                                       |
|          | Wed.<br>Thurs. |                    |                                       |                     |                      |  | 0                                     |
| <u> </u> | Frl.           |                    |                                       |                     |                      |  |                                       |
| LS C     | Sat.           |                    |                                       |                     |                      | <del>                                     </del> |                                       |
| TOTALS   |                |                    |                                       |                     | <u> </u>             |  |                                       |
| 5 B      | Mon.           |                    | 1                                     |                     | l                    |  |                                       |

c. [ ] Variable

| WEEKLY OR SCHEDULE B |                |                    |  |                     |                      |                     |                      |  |  |  |
|----------------------|----------------|--------------------|--|---------------------|----------------------|---------------------|----------------------|--|--|--|
| 5                    | 7 8 9 10       |                    |  |                     |                      |                     | )                    |  |  |  |
| r<br>Room            | Day            | Мо                 | rning  | Afte                | rnoon                | Eve                 | ning                 |  |  |  |
| No. or               | of the         |                    | m12:00N  | 12:00N-6            |                      |                     | -11:00 p.m.          |  |  |  |
| Name                 | Week           | No. of<br>Hrs.Used | No. of<br>Stud. Hrs.                             | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. |  |  |  |
| 1 B                  |                |                    |  |                     |                      |                     |                      |  |  |  |
| . 8                  | Mon.<br>Tues.  |                    |  |                     |                      |                     |                      |  |  |  |
|                      | Wed.<br>Thurs. |                    | ,  |                     |                      |                     |                      |  |  |  |
|                      | Fri.           |                    |  |                     |                      |                     |                      |  |  |  |
| LS C                 | Sat.           |                    |  |                     | •                    | · ·                 |                      |  |  |  |
| TOTALS               |                |                    |  |                     |                      |                     |                      |  |  |  |
| 2 B                  | Mon.           |                    | ,,   |                     |                      |                     |                      |  |  |  |
|                      | Tues.<br>Wed.  |                    |  |                     |                      |                     |                      |  |  |  |
|                      | Thurs.         |                    |  |                     |                      |                     |                      |  |  |  |
| LS C                 | Fri.<br>Sat.   |                    |  |                     |                      |                     |                      |  |  |  |
| TOTALS               | 00.11          |                    |  |                     | ,                    |                     | ů.                   |  |  |  |
| <u> </u>             |                |                    |  |                     |                      |                     |                      |  |  |  |
| 3 B                  | Mon.<br>Tues.  |                    | -  |                     |                      |                     | 1                    |  |  |  |
|                      | Wed.           |                    |  |                     |                      |                     |                      |  |  |  |
| 1                    | Thurs.<br>Fri. |                    |  |                     |                      |                     |                      |  |  |  |
| LS C                 | Sat.           |                    |  |                     | `                    |                     |                      |  |  |  |
| TOTALS               |                |                    |  |                     |                      |                     |                      |  |  |  |
| 4 в                  | Mon.           |                    |  |                     |                      |                     |                      |  |  |  |
| ]                    | Tues.          |                    |  |                     |                      |                     |                      |  |  |  |
|                      | Wed.<br>Thurs. | <del></del>        | <del>                                     </del> |                     |                      | ,                   |                      |  |  |  |
| 18.0                 | Fri.           | ļ ———              |  |                     |                      |                     |                      |  |  |  |
| LS C                 | Sat.           |                    |  |                     |                      | <del> </del>        | ·                    |  |  |  |
| TOTALS               |                |                    |  |                     |                      |                     |                      |  |  |  |
| 5 B                  | Mon.           | ·                  |  |                     |                      | ļ                   |                      |  |  |  |
|                      | Tues.<br>Wed.  |                    |  |                     | ,                    |                     |                      |  |  |  |
|                      | Thurs.         | ļ                  |  |                     |                      |                     |                      |  |  |  |
| LS C                 | Sat.           |                    |  |                     | ,                    |                     |                      |  |  |  |
| TOTALS               |                |                    |  |                     |                      |                     |                      |  |  |  |
| 1017123              | <del></del>    | <del>}</del>       | <del> </del>                                     | <del></del>         | <del> </del>         | <del>}</del>        |                      |  |  |  |



Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Room

# Check Applicable Program Schedule

| ١. | a.[] Weekly b.[] Alternating c.[] Variable | 2. | a. [ ] Semester Schedule Change<br>b. [ ] No Semester Schedule Change |
|----|--|----|---|
|----|--|----|---|

| • |        |                                 | · [ ] Varia        | (                    |                     |                      |                     | <del></del>          |  |  |  |  |  |
|---|--------|---------------------------------|--------------------|----------------------|---------------------|----------------------|---------------------|----------------------|--|--|--|--|--|
|   |        | WEEKLY OR SCHEDULE A .          |                    |                      |                     |                      |                     |                      |  |  |  |  |  |
|   | 11     | 12                              |                    | 13                   |                     | 14                   |                     | 15 .                 |  |  |  |  |  |
|   | Room   | Day                             | i Mo               | rning                | Afte                | ernoon               | , Eve               | ning °               |  |  |  |  |  |
|   | No. or | of the                          | 7:00 a.            | m12:00N              | 12:00N-6            | 5:00 p.m.            |                     | -11:00 p.m.          |  |  |  |  |  |
| l | Name   | Week.                           | No. of<br>Hrs.Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | Ņo. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. |  |  |  |  |  |
|   |        | Mon.                            | ·                  |                      |                     |                      |                     |                      |  |  |  |  |  |
|   | 6A     | Tues.<br>Wed.<br>Thurs.         |                    |                      |                     |                      | 1                   |                      |  |  |  |  |  |
|   | LS C   | Fri.                            |                    |                      |                     |                      |                     |                      |  |  |  |  |  |
| / | TOTALS |                                 |                    |                      |                     |                      |                     |                      |  |  |  |  |  |
|   | 7A     | Mon.<br>Tues.<br>Wed.<br>Thurs. |                    |                      | ·                   |                      |                     |                      |  |  |  |  |  |
|   | LS C   | Sat.                            |                    | ·                    |                     |                      |                     |                      |  |  |  |  |  |
|   | TOTALS |                                 | •                  |                      |                     |                      |                     |                      |  |  |  |  |  |
|   | 8A ,   | Mon.<br>Tues.<br>Wed.<br>Thurs. |                    |                      |                     | •                    |                     | 1                    |  |  |  |  |  |
|   | LS C   | Sat.                            |                    |                      |                     |                      |                     |                      |  |  |  |  |  |
|   | TOTALS |                                 |                    |                      |                     |                      | -                   |                      |  |  |  |  |  |
|   | 9A     | Mon<br>Tues.<br>Wed.            |                    |                      |                     | -                    | #                   |                      |  |  |  |  |  |
|   | LS C   | Thurs.<br>Fri.<br>Sat.          |                    |                      |                     |                      |                     |                      |  |  |  |  |  |
| - | TOTALS | Mon.                            |                    |                      |                     |                      |                     | 3                    |  |  |  |  |  |
|   |        | T TYPE T                        | 1                  | ,                    | 1                   | <u> </u>             |                     | <del>*</del>         |  |  |  |  |  |

c. [ ] Variable

| ·          | WEEKLY OR SCHEDULE A |                    |                      |                     |                      |                     |                       |  |  |  |  |
|------------|----------------------|--------------------|----------------------|---------------------|----------------------|---------------------|-----------------------|--|--|--|--|
| 11         | 12                   |                    | 13                   |                     | 14                   | l <sup>t</sup> 5    |                       |  |  |  |  |
| Room       | Day                  | . Mo               | rning                | Afte                | ernoon               | Eve                 | ning                  |  |  |  |  |
| Nö. or     | of the               |                    | m12:00N              |                     | 5:00 p.m.            | 6:00 p.m.<br>No. of | -11:00 p.m.<br>No. of |  |  |  |  |
| Name       | Week                 | No. of<br>Hrs.Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | Hrs. Used           | Stud. Hrs.            |  |  |  |  |
| * .        | Mon.                 |                    |                      | ţ                   |                      |                     |                       |  |  |  |  |
| 6A ·       | Tues.<br>Wed.        |                    |                      |                     |                      |                     |                       |  |  |  |  |
|            | Thurs.               |                    |                      |                     |                      |                     |                       |  |  |  |  |
| LS C       | Sat.                 | -                  | 1 January 14         | ·                   |                      |                     |                       |  |  |  |  |
| TOTALS     |                      |                    | • •                  |                     |                      |                     |                       |  |  |  |  |
|            | Món.                 |                    |                      |                     |                      |                     |                       |  |  |  |  |
| 7 <b>A</b> | Tues.<br>Wed.        |                    |                      |                     |                      |                     |                       |  |  |  |  |
|            | Thurs.               | Î                  |                      |                     |                      |                     |                       |  |  |  |  |
| LS C       | Sat.                 |                    |                      |                     |                      |                     |                       |  |  |  |  |
| TOTALS     |                      |                    |                      |                     |                      |                     |                       |  |  |  |  |
| • 2        | Mon.                 |                    |                      | -                   |                      |                     |                       |  |  |  |  |
| 8A .       | Tues.<br>Wed.        |                    |                      |                     |                      |                     |                       |  |  |  |  |
|            | Thurs.               |                    |                      |                     |                      |                     |                       |  |  |  |  |
| LS C       | Sat.                 |                    | ·                    |                     |                      | · ·                 |                       |  |  |  |  |
| TOTALS     |                      |                    |                      |                     |                      |                     |                       |  |  |  |  |
| 9A         | Mon                  |                    |                      |                     |                      |                     |                       |  |  |  |  |
| 30         | Tues.<br>Wed.        |                    |                      |                     |                      |                     |                       |  |  |  |  |
|            | Thurs.               |                    | i                    |                     |                      |                     |                       |  |  |  |  |
| LS C       | Sat.                 |                    |                      |                     | <b>—</b>             |                     | -                     |  |  |  |  |
| TOTALS     | ļ                    |                    |                      |                     |                      |                     |                       |  |  |  |  |
| 10A        | Mon.<br>Tues.        |                    |                      |                     | -                    |                     |                       |  |  |  |  |
| 100        | Wed.                 | <del> </del>       | -                    |                     | <u> </u>             |                     |                       |  |  |  |  |
|            | Thurs<br>Fri.        | •                  |                      |                     |                      |                     |                       |  |  |  |  |
| LSC        | Sat.                 |                    |                      |                     | <del> </del>         | +                   |                       |  |  |  |  |
| TOTALS     |                      | ,                  |                      |                     | <u> </u>             |                     |                       |  |  |  |  |



| Misoe | Number |
|-------|--------|

Table 2.3 (Cont'ú) Utilization of Departmental Instructional Area by Room

# Check Applicable Program Schedule

| 1. | a. [ ] Weekly b. [ ] Alternating c. [ ] Variable | 2. | a. [ ] Semester Schedule Change<br>b. [ ] No Semester Schedule Change |
|----|--|----|---|
|    |  |    | OUEDINE D   |

| 1                    |                |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
|----------------------|----------------|--------------------|---------------------------------------|----------|----------------------|---------------------|-----------------------|--|--|--|--|--|
| WEEKLY OR SCHEDULE B |                |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
| 16                   | 17             |                    | 18                                    |          | 19                   |                     | 20                    |  |  |  |  |  |
| . Room               | Ďay.           | Мо                 | rning                                 | Afte     | ernoon               | - Eve               | ning                  |  |  |  |  |  |
| No. or               | of the         |                    | m12:00N                               | 12:00N-  | 5:00 p.m.<br>-No. of | 6:00 p.m.<br>No. of | -il:00 p.m.<br>No. of |  |  |  |  |  |
| Name                 | Week           | No. of<br>Hrs.Used | No. of<br>Stud. Hrs.                  |          | Stud. Hrs.           | Hrs. Used           | Stud. Hrs.            |  |  |  |  |  |
| 6 <b>B</b>           | Mon .          |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
| ·                    | Wed.<br>Thurs. |                    |                                       |          | ,                    |                     |                       |  |  |  |  |  |
|                      | Fri.           |                    | , .                                   |          |                      |                     |                       |  |  |  |  |  |
| LS C                 | , Sat.         |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
| TOTALS<br>7B         | Mon.           |                    |                                       |          |                      |                     | ,                     |  |  |  |  |  |
| 75                   | Tues.<br>Wed.  | -3                 |                                       |          |                      |                     |                       |  |  |  |  |  |
|                      | Thurs.<br>Fri. |                    |                                       | <i>'</i> |                      |                     |                       |  |  |  |  |  |
| LS C                 | Sat.           | -                  |                                       | _        |                      |                     |                       |  |  |  |  |  |
| TOTALS               |                |                    | ,                                     |          |                      |                     |                       |  |  |  |  |  |
| 85                   | Hon.<br>Tues.  |                    |                                       |          |                      | ·                   | -                     |  |  |  |  |  |
| ۱۰,                  | Wed.<br>Thurs  |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
| LS C                 | Fri.<br>Sat.   |                    |                                       |          |                      |                     | ,                     |  |  |  |  |  |
| TOTALS               |                |                    |                                       |          |                      |                     |                       |  |  |  |  |  |
| 7 <b>3</b> R         | Mon.           |                    |                                       |          |                      | -                   |                       |  |  |  |  |  |
|                      | Wed.<br>Thurs  | +                  | · · · · · · · · · · · · · · · · · · · |          |                      |                     |                       |  |  |  |  |  |
|                      | Fri.           | -                  |                                       | 1        |                      |                     |                       |  |  |  |  |  |
| LS C                 | Sat.           | <del> </del>       | <b>†</b>                              |          |                      |                     |                       |  |  |  |  |  |
| TOTALS               | -              |                    | +                                     | +        |                      |                     |                       |  |  |  |  |  |
| i I OB               | Mon.           | 1                  | 1.                                    | i        | <u> </u>             |                     | <del> </del>          |  |  |  |  |  |

c. [ ] Variable

| Room   | <del></del> _ |        |                      | WEE  | KIY OR SCHEI                                     | MILE B       |     |  |  |
|--|---------------|--------|----------------------|--|--|--------------|-----|--|--|
| 16   | ,             | •      | WEEKLY OR SCHEDULE B |  |  | OCÉ B        |     |  |  |
| No. or of the 7:00 a.m12:00N   | 16            | 17     | ,                    | 48   | <u> </u>   | 19           | 20  |  |  |
| Name   No. of   No. of   No. of   No. of   No. of   No. of   Hrs. Used   Stud. Hrs.   Hrs. Used   Hrs. Used   Stud. Hrs.   Hrs. Used   Hrs | Room          | Day    | Мо                   | rning  | Afte   | ernoon       | Eve | ning .   |  |
| Name   Week   Hrs. Used   Stud. Hrs.   Hrs. Used   Stud. Hrs.   Hrs. Used   Stud. Hrs.   | No. or        | of the |                      | m12:00N -  |  | 5:00 p.m.    |     | -11:00 p.m.                                      |  |
| Tues. Wed. Thurs. Fri.  S C Sat.  TOTALS  7B Mon.  Tugs. Wed. Thurs. Fri. LS C Sat.  Totals  8B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Tous. Wed. Thurs. Fri. LS C Sat.  Totals  8B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Totals  9B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Totals  10B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Totals  10B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Totals  10B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  Totals  10B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  | Name          | Week   | No. 01<br>Hrs.Used   |  |  |              |     |  |  |
| Mod   Thurs   Fri  | 6B            |        |                      | - ,  |  |              |     |  |  |
| Thurs   Fri  |               |        |                      |  |  |              |     |  |  |
| TOTALS   T |               | Thurs  |                      |  | ,  |              |     |  |  |
| TOTALS  78   | _\$ C         |        |                      |  |  |              |     |  |  |
| Tuccomment   Tuc |               |        |                      |  |  |              |     | ,  |  |
| TUGS, Wed. Thurs. Fri. LS C Sat.  88   |               | No.    | -                    |  |  |              |     |  |  |
| Wed.   Thurs.   Fri.   | 78            |        |                      |  |  | ,            |     |  |  |
| Fri.   LS C   Sat.   |               | Wed.   |                      |  | ·  |              |     |  |  |
| TOTALS   Sat.   TOTALS   Sat.   Sat |               |        |                      | <del> </del>                                     |  |              |     |  |  |
| TOTALS   | LS C          |        |                      |  |  |              |     |  |  |
| Turs.   Wed.   Thurs.   Fri.   | TOTALS        |        |                      |  |  |              |     |  |  |
| Turs.   Wed.   Thurs.   Fri.   | 99            | i deu  |                      |  |  |              |     |  |  |
| Thurs. Fri.  US C Sat.  TCTALS  9B Mon. Tues. Wed. Thurs. Fri. LS C Sat.  TOTALS  10B Mon  Tues. Wed. Thurs. Fri. LS C Sat.  TOTALS  1 COMMON  Thurs. Fri. LS C Sat.  TOTALS  1 COMMON  Thurs. Fri. LS C Sat.  TOTALS  1 COMMON  Thurs. Fri. LS C Sat.   | 05            | Tues.  |                      |  |  |              |     |  |  |
| Fri.   |               |        |                      |  |  |              |     |  |  |
| TCTALS   TCTALS   TCTALS   TUCS.   TUCS.   Wed.   Thurs.   Fri.   TOTALS   TUCS.   TOTALS   TUCS.    | ľ             |        | +                    | <del>                                     </del> |  |              |     |  |  |
| TCTALS  9B   | LS C          | Sat.   |                      |  |  |              |     | <del> </del>                                     |  |
| Tues. Wed. Thurs. Fri. LS C Sat.  10B Mon Tues. Wed. Thurs. Fri. LS C Sat.   | TOTALS        | ₩.     |                      |  |  | ,            |     |  |  |
| Tues. Wed. Thurs. Fri. LS C Sat.  10B Mon Tues. Wed. Thurs. Fri. LS C Sat.   | QU            | Mon    |                      |  |  | ٠            |     |  |  |
| Wed. Thurs. Fri. LS C Sat.  TOTALS  i OB Mon. Tues. Wed. Thurs. Fri. LS C Sat.   | 95            |        |                      |  |  |              |     |  |  |
| Fri. LS C Sat.  TOTALS  I OB Mon  Tues. Wed. Thurs. Fri. LS C Sat.   | 1             |        |                      |  |  | <del> </del> |     | <del> </del>                                     |  |
| TOTALS  I OB   |               |        | +                    | +  | <del> </del>                                     |              |     |  |  |
| Tues.  | LS C          | Sat.   |                      |  |  |              |     |  |  |
| Tues.  | TOTALS        |        |                      |  |  |              |     |  |  |
| Tues. Wed. Thurs. Fri. LS C Sat.   |               | Mon    |                      |  | 1  |              |     |  |  |
| Wed. Thurs. Fri. LS C Sat.   |               |        |                      |  |  |              |     |  |  |
| LS C Sat.  | 1             | Wed.   | <u> </u>             |  | <del>                                     </del> | <del></del>  | -   | <del> </del>                                     |  |
| LS C Sat.  | ì             |        |                      | +  | 1  | 1            |     |  |  |
|  | LS C          |        |                      | <u> </u>   |  |              |     | <del>                                     </del> |  |
|  | TOTALS        |        |                      |  |  |              |     |  |  |



Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Room

# Check Applicable Program Schedule

| ١, | a. [ ] Waekly b. [ ] Alternating | 2. a | . [ ] Semester Schedule Change<br>. [ ] No Semester Schedule Change |
|----|----------------------------------|------|---|
|    | c.[] Variable                    |      |   |

| •           | 00     |                                       | •  | Y OR SCHEDL                                      |  | 2   | 5  |  |
|-------------|--------|---------------------------------------|--|--|--|---|--|--|
| 21          | 22     |                                       | 23   |  | 24   | 1   | <u></u>  |  |
| Room        | Day    | : , . <b>Mo</b> :                     | rning  | Afte   | rnoon  | Evening   |  |  |
| No. or      | of the | 7:00 a.i                              | m12:00N  | 12:00N-6   | 5:00 p.m.  |   | -11:00 p.m                                       |  |
| 1           | •      | No. of                                | No. of   | No. of   | No. of   | No. of  | No. of   |  |
| Name        | Week   | Hrs.Used                              | Stud. Hrs.                                       | Hrs. Used  | Stud. Hrs.   | Hrs. Used   | Stud. Hrs  |  |
|             | Mon.   |                                       |  |  |  |   |  |  |
| I İ A       | Tues.  | <del></del>                           |  |  | ,  | 1   |  |  |
| 117         | Wed.   |                                       |  |  |  |   |  |  |
|             | Thurs. | _                                     |  |  |  |   |  |  |
|             | Fri.   |                                       |  |  |  | <del> </del>  | <u></u>  |  |
| <b>\$</b> 0 | Sat.   |                                       |  |  |  |   | <u> </u>   |  |
| CTALS       |        |                                       |  |  |  |   |  |  |
|             | Mon.   |                                       | ,  | e 9  |  |   |  |  |
| 12A         | Tues.  |                                       | -  | <del>                                     </del> | <del>                                     </del>   |   | <del>                                     </del> |  |
| 127         | Wed.   | <del></del>                           | <del> </del>                                     | <del> </del>                                     |  |   | 1  |  |
|             | Thurs. |                                       | 1  |  |  |   |  |  |
|             | Fri.   | · · · · · · · · · · · · · · · · · · · | <del> </del>                                     | · · · · · · · · · · · · · · · · · · ·            | -  |   |  |  |
| S C         | Sat.   |                                       |  |  |  |   |  |  |
| OTALS       |        |                                       |  |  |  |   |  |  |
|             | ====   |                                       | <del></del>                                      | -  |  |   |  |  |
| *           | Mon.   |                                       |  | L  |  |   | ļ  |  |
| 1.3A        | โมอร.  |                                       |  |  |  | <del></del>   | <u> </u>   |  |
|             | Wed.   |                                       |  | L  |  | <b></b>   | <del> </del> -                                   |  |
|             | Thurs. |                                       | <u> </u>   | -  |  | +   | <del> </del>                                     |  |
| · .         | Fri.   |                                       | <del>                                     </del> | <del> </del>                                     | <del> </del>   | <del></del>   | +  |  |
| S C         | Sat.   |                                       | <del> </del>                                     | <del> </del>                                     | <del> </del>   | +   | <del>                                     </del> |  |
| OTALS       |        |                                       |  |  |  |   |  |  |
|             | Mon.   |                                       |  |  |  |   |  |  |
| 14A         | Tues.  | <del></del>                           |  |  |  | 1   |  |  |
|             | Wed.   |                                       |  |  |  |   |  |  |
|             | Thurs. |                                       |  |  |  |   |  |  |
|             | Fri.   |                                       |  |  |  |   | <del>                                     </del> |  |
| .s c        | Sat.   |                                       |  |  |  | -   | <del> </del>                                     |  |
| TOTA_S      |        |                                       |  |  |  |   |  |  |
|             | A A    |                                       |  | ,  |  |   |  |  |
|             | Mon.   |                                       | <del> </del>                                     | <del> </del>                                     | <del> </del>   | +   | +  |  |
| LEA         |        |                                       |  |  | The contract of the contract o | the second control of | The second second second                         |  |



|         | - ;             |                                       | , WEEKI              | Y OR SCHEDU         | JLE A                |                     | ,                                     |  |
|---------|-----------------|---------------------------------------|----------------------|---------------------|----------------------|---------------------|---------------------------------------|--|
| 21      | 22              |                                       | 23                   |                     | 24                   | 2                   | 5                                     |  |
| Room    | Day             | Mo                                    | rning                | Afte                | ernoon               | Eve                 | n <b>ing</b>                          |  |
| Noor    | of the          |                                       | m12:00N              |                     | 5:00 p.m.            | 6:00 p.m11:00 p.m.  |                                       |  |
| Name    | Week            | No. of<br>Hrs.Used                    | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs.                  |  |
|         |                 |                                       |                      |                     |                      |                     |                                       |  |
| JIA     | Mon.<br>Tues.   |                                       | <u>-</u>             |                     |                      | <u> </u>            |                                       |  |
| 1 7 7 7 | Wed.<br>Thurs.  |                                       |                      |                     |                      |                     |                                       |  |
|         | Ēri.            |                                       | ,                    |                     |                      |                     |                                       |  |
| LS C    | Sat.            |                                       |                      |                     |                      |                     |                                       |  |
| TOTALS  |                 |                                       |                      |                     |                      |                     |                                       |  |
|         | Mon.            | -                                     |                      |                     |                      |                     |                                       |  |
| 12A     | Tues.<br>Wed.   |                                       |                      |                     |                      |                     |                                       |  |
|         | Thurs.          |                                       |                      |                     |                      |                     |                                       |  |
| LS C    | Fri.            |                                       |                      |                     |                      |                     |                                       |  |
| LSC     | Sat.            |                                       |                      |                     |                      |                     |                                       |  |
| TOTALS  |                 |                                       |                      |                     |                      |                     |                                       |  |
|         | Mon.            |                                       |                      |                     | ,                    |                     | ,                                     |  |
| 1.3A    | Tues.           |                                       |                      |                     |                      |                     | ,                                     |  |
|         | Thurs.          |                                       |                      |                     |                      |                     |                                       |  |
| LS C    | .fri.<br>Sat.   |                                       |                      |                     |                      |                     | · · · · · · · · · · · · · · · · · · · |  |
| TOTALS  | 0011            |                                       |                      |                     |                      |                     |                                       |  |
| TOTALS  |                 |                                       |                      |                     |                      | <del>-</del> -      |                                       |  |
| 144     | Mon.<br>Tues.   |                                       | -                    |                     | -                    | <b> </b>            |                                       |  |
| 147     | Wed.            |                                       |                      |                     |                      |                     | <u> </u>                              |  |
|         | Thurs.          |                                       | -                    | <del> </del>        |                      | <del> </del>        |                                       |  |
| LS C    | Sat.            |                                       |                      |                     |                      |                     |                                       |  |
| TOTA_S  |                 |                                       |                      |                     |                      | i                   |                                       |  |
|         | Mon.            |                                       |                      |                     |                      |                     |                                       |  |
| 15A     | 5A Tues.        |                                       |                      |                     |                      |                     |                                       |  |
|         | Wed.<br>Thurs.  | · ·                                   | -                    | -                   |                      | -                   |                                       |  |
|         | Fri.,           |                                       |                      |                     |                      |                     |                                       |  |
| LS C    | Sa <sup>†</sup> | /                                     |                      |                     |                      | <del> </del>        | ļ                                     |  |
| TOTALS  |                 | · · · · · · · · · · · · · · · · · · · |                      |                     |                      |                     |                                       |  |



| ٥  |      |     |   |    | <br>- |  |
|----|------|-----|---|----|-------|--|
| Μi | SOUL | ыlı | m | be |       |  |

Table 2.3 (Consta) Utilization or Departmental Instructional Area by Room

# Check Applicable Program Schedule

| ١. | [ ] Weekly<br>[ ] Alternating | 2. |    | [ ] Semester Schedule Change [ ] No Semester Schedule Change |
|----|-------------------------------|----|----|--|
|    | [ ] Variable                  |    | ٠. |  |

|                  | <del>-</del>   | <del></del> |                      |                     | ······································ |                     |                               |  |
|------------------|----------------|-------------|----------------------|---------------------|--|---------------------|-------------------------------|--|
|                  |                | •           | WEEK                 | LY OR SCHEL         | ULE B                                  | ···                 |                               |  |
| 26               | 27             |             | 28                   |                     | 29                                     |                     | )                             |  |
| Room             | Day            | Мо          | rning                | Aft                 | ernoon                                 | Evening             |                               |  |
| No. or           | of the         | 7:00 a.     | m12:00N              | 12:00N-             | 6:00 p.m.                              | 6:00 p.m.           | -11:00 p.m.                   |  |
| Name             | Week -         |             | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs.                   | No. of<br>Hrs. Used | No. of<br>Stud. H <b>rs</b> . |  |
| 11B              | Mon.           |             |                      | ;                   |  |                     |                               |  |
|                  | Tues.          |             |                      |                     |  |                     |                               |  |
|                  | Wed.<br>Thurs. |             |                      |                     |  |                     |                               |  |
|                  | Fri.           |             |                      |                     |  |                     | -                             |  |
| _\$ C            | Sat.           |             |                      |                     |  |                     |                               |  |
| TOTALS           |                |             |                      | *                   |  |                     |                               |  |
| 1 2B             | Mon.           |             |                      |                     |  |                     | <del></del>                   |  |
|                  | Tues.          |             |                      |                     |  |                     |                               |  |
| 1                | Wed.           |             |                      |                     |  |                     |                               |  |
| 1                | Thurs.<br>Fri. |             |                      |                     |  |                     |                               |  |
| LS C             | Sat.           |             | _                    |                     |  |                     |                               |  |
| TOTALS           |                |             | a                    |                     |  |                     | ,                             |  |
| 138              | Mon.           | ===         |                      |                     | -                                      |                     |                               |  |
|                  | Tues.          |             |                      |                     |  |                     |                               |  |
| į                | Wed.           |             |                      | <del></del>         | ,                                      |                     |                               |  |
|                  | Thurs.         |             | •                    |                     |  |                     |                               |  |
| LS C             | Fri.<br>Sat.   |             |                      |                     |  | ·                   |                               |  |
|                  | 307.           |             |                      | <del>i</del>        |  |                     |                               |  |
| TOTALS           |                |             |                      |                     |  |                     | ,                             |  |
| 148              | Mon.           |             |                      |                     |  |                     |                               |  |
|                  | Tues.<br>Wed.  |             |                      |                     |  |                     |                               |  |
|                  | Thurs.         |             |                      | <del>-</del>        |  |                     |                               |  |
|                  | Fri.           |             |                      |                     |  |                     |                               |  |
| <b>Ŀ</b> Ś C     | Sat.           |             |                      |                     |  | ,                   |                               |  |
| P_FALS           |                |             |                      |                     |  | ·                   |                               |  |
| sed by ERIC   5B | Mon.           |             |                      |                     |  |                     | •                             |  |

c. [ ] Variable

| 26<br>Room<br>No. or | 27<br>Day      |          | 28                   |                     | 29                   | - C                 |                               |  |  |
|----------------------|----------------|----------|----------------------|---------------------|----------------------|---------------------|-------------------------------|--|--|
| 1 - 1                |                | Mo       | v<br>e               |                     | 30                   |                     |                               |  |  |
| No. or               | of the         |          | rning .              | _ Af1               | ernoon               | Eve                 | Evening                       |  |  |
|                      | 9              | 7:00 a.  | m12:00N              | 12:00N-             | 6:00 p.m.            | 6:00 p.m.           | 6:00 p.m11:00 p.m.            |  |  |
| Name                 | Week           | Hrs.Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. Hrs. | No. of<br>Hrs. Used | No. of<br>Stud. H <b>rs</b> . |  |  |
| 118                  | Mon.           |          |                      |                     |                      |                     |                               |  |  |
|                      | Tues<br>Wed.   |          |                      |                     |                      | atu .               |                               |  |  |
|                      | Thurs.         |          |                      |                     |                      |                     |                               |  |  |
| JS C                 | ŝat.           |          |                      |                     |                      |                     |                               |  |  |
| TOTALS               |                |          |                      |                     |                      | -                   | `                             |  |  |
| 12B                  | Mon.           |          |                      |                     |                      |                     | :                             |  |  |
| <u></u>              | Tues.<br>Wed.  |          |                      |                     |                      |                     |                               |  |  |
|                      | Thurs.<br>Fri. |          |                      |                     |                      |                     |                               |  |  |
| LS C                 | Sat.           |          |                      |                     |                      | 3                   |                               |  |  |
| TOTALS               |                |          | -                    |                     |                      |                     |                               |  |  |
| 1.38                 | Mon.           |          |                      |                     | !                    |                     |                               |  |  |
|                      | Tues.<br>Wed.  |          |                      |                     | <u> </u>             |                     | ·                             |  |  |
| ,                    | Thurs.<br>Fri. |          |                      |                     |                      |                     |                               |  |  |
| LS C                 | Sat.           |          |                      |                     |                      |                     |                               |  |  |
| TOTALS               |                |          |                      |                     | _                    |                     |                               |  |  |
| 14B.                 | Mon.           |          |                      |                     |                      |                     |                               |  |  |
| _                    | Tues.<br>Wed.  |          |                      | <del></del>         |                      |                     |                               |  |  |
| -                    | Thurs.<br>Fri. |          |                      |                     |                      |                     |                               |  |  |
| LS C                 | Sat.           |          |                      |                     |                      |                     |                               |  |  |
| TOTALS               |                |          |                      |                     | •                    | · .                 |                               |  |  |
| 15B                  | Mon.           |          |                      |                     |                      |                     |                               |  |  |
|                      | Tues.          |          |                      | -                   |                      |                     |                               |  |  |
|                      | Thurs.         |          |                      |                     |                      |                     |                               |  |  |
| LS C                 | Fri.<br>Sat.   |          |                      |                     |                      |                     |                               |  |  |
| TOTALS               |                |          |                      |                     |                      |                     |                               |  |  |

| MISOR | Number |  |
|-------|--------|--|

Table 2.3 Utilization of Departmental Instructional Area By Room

# Check Applicable Program Schedule

| •  | Γ-  | Weekly      | 2.       | a. |   | ] S  | emester: | Sch | edule Cha             | ange 🤟 |
|----|-----|-------------|----------|----|---|------|----------|-----|-----------------------|--------|
|    |     | Alternating |          | b. | Ĺ | 3 No | Semest   | er  | edule Cha<br>Schedule | Change |
|    |     | Variable    |          |    |   |      |          |     | 1                     |        |
| C. | L - | 1 101 10010 | <u> </u> | •  |   |      |          |     |                       |        |

|                            | С.     | [ ] var  | able         | <u>.</u>   |  |  |                |  |
|----------------------------|--------|--|--------------|--|--|--|----------------|--|
| ·                          |        |  | WEEKL'       | Y OR SCHEDUL                                     | <br>_E A   | r e  |                |  |
| 3Î                         | 32     | . 3  | 3            | 34   | 4  | 35   |                |  |
| Room                       | Day    | , Mo   | rning        | Afte   | ernoon   | Evening  |                |  |
| No.or                      | of the | 7:00 a.  | m12:00N      |  | 6:00 p.m.  | 6:00 P.M11:00 p.m.                               |                |  |
|                            | 1 .[   | No. oí<br>Hrs.Used                               | No. of       | No. of<br>Hrs. Used                              | No. of<br>Stud. Hrs.                             | No. of No. of<br>Hrs. Used Stud. Hrs             |                |  |
| Name                       | Week   | HI 5.03eu  | 3140         | 11.0.  |  |  |                |  |
| 16A                        | Mon.   |  |              |  |  | ļ  |                |  |
|                            | Tues.  |  | <b></b>      | <b> </b>   | <b> </b>   | <b> </b>   |                |  |
| 1                          | Wed.   | -  | <b></b>      |  | <del></del>                                      | <del> </del>                                     |                |  |
| _                          | Thurs. |  | <b></b>      |  | <del>                                     </del> |  |                |  |
|                            | Fri.   | <b> </b>   | <b></b>      | <del>                                     </del> | · · · ·  |  |                |  |
| LS C                       | Sat.   | <del>                                     </del> |              |  | <del> </del>                                     |  |                |  |
| TOTALS                     | •      |  |              |  |  |  |                |  |
| 1.7A                       | Mon.   |  |              |  | è  |  | <u> </u>       |  |
|                            | Tues.  |  |              |  | <u> </u>   |  | <del> </del>   |  |
| İ                          | Wed.   |  |              | <u> </u>   | <del></del>                                      | <del>                                     </del> |                |  |
| 1                          | Thurs. |  |              |  | <del></del>                                      | <del>                                     </del> | <del> </del>   |  |
|                            | Fri.   | <u> </u>   |              | <u> </u>   | <b></b>  | <del> /</del>                                    | <u> </u>       |  |
| LS C                       | Sat.   |  |              | <del> </del>                                     | <del> </del>                                     | <del>                                     </del> | \\ \frac{7}{1} |  |
| TOTALS                     |        |  |              | ,  |  | /  |                |  |
|                            |        | +  |              |  |  | 1  |                |  |
| 18A                        | Mon.   | <del> </del>                                     | <u> </u>     | 4  |  | +  |                |  |
|                            | Tues   |  | <del> </del> | <del> </del>                                     |  | <del>                                     </del> |                |  |
|                            | Wed.   | <del> </del>                                     | +            | <del></del>                                      | \$   | +  |                |  |
| <b>i</b> .                 | Thurs. | <del></del>                                      | +            | +  | 7  | 1  |                |  |
| L                          | Fri.   | <del> </del>                                     | +            | -  |  |  |                |  |
| LS C                       | Sat.   | <del> </del>                                     | +            | +  |  | ,  |                |  |
| TOTALS                     |        |  |              |  |  |  |                |  |
| - 19A                      | Mon .  |  |              |  |  |  |                |  |
| 130                        | Tues   | +  | †            | 1  | T  |  | <del></del>    |  |
| . •                        | Wed.   |  | -            |  | T  | <del></del>                                      | <del></del>    |  |
| 0                          | Thurs  |  | T            |  | <u> </u>   | <del></del>                                      | <del>-</del>   |  |
| ERIC                       | Fri.   |  |              |  |  | <del></del>                                      | <del></del>    |  |
| Full Text Provided by ERIC | Sat.   | <del></del>                                      |              |  | <u> </u>   | <del> </del>                                     | <del></del>    |  |

| b. | ] Weekly<br>] Alternating<br>] Variable | , | 2. | a.<br>b: | ב<br>ב | ויין | Semester Schedule Change<br>No Semester Schedule Chang | e |
|----|---|---|----|----------|--------|------|--|---|
|    |   |   |    |          |        |      |  |   |

| WEEKLY OR SCHEDULE A |                |  |                   |  |  |                     |                                       |  |  |  |  |  |
|----------------------|----------------|--|-------------------|--|--|---------------------|---------------------------------------|--|--|--|--|--|
| 31                   | 32             | 3  | 3                 | 34   | 4  | 35                  |                                       |  |  |  |  |  |
| Room                 | Day            | Mo   | rning             | Afte   | ernoon   | Ever                | ning                                  |  |  |  |  |  |
| No.or                | of the         | 7:00 a.  | m12:00N<br>No. of | 12:00N-6<br>No. of                               | 5:00 p.m.<br>No. of                              | 6:00 P.M.<br>No. of | -11:00 p.m.<br>No. of                 |  |  |  |  |  |
| Name                 | Week           | No. of<br>Hrs.Used                               | Stud. Hrs.        |  | Stud. Hrs.                                       | Hrs. Used           |                                       |  |  |  |  |  |
| 16A.                 | Mon.           |  |                   |  |  | ·                   |                                       |  |  |  |  |  |
| ]                    | Tues.          |  |                   |  |  |                     |                                       |  |  |  |  |  |
| -                    | Wed.<br>Thurs. |  |                   | ·  |  |                     | :                                     |  |  |  |  |  |
| LS C                 | Fri.<br>Sat.   |  |                   |  |  |                     |                                       |  |  |  |  |  |
|                      |                |  |                   | ·  |  |                     |                                       |  |  |  |  |  |
| TOTALS               | -              |  |                   |  |  |                     |                                       |  |  |  |  |  |
| 1 7A                 | Mon.<br>Tues.  |  |                   |  |  |                     |                                       |  |  |  |  |  |
| 1.                   | Wed.<br>Thurs. |  |                   |  |  |                     |                                       |  |  |  |  |  |
| ·                    | Fri.           |  |                   |  | 9<br>  |                     |                                       |  |  |  |  |  |
| LS C                 | Sat.           |  |                   |  |  |                     |                                       |  |  |  |  |  |
| TOTALS               |                | -  |                   |  |  |                     |                                       |  |  |  |  |  |
| 18A                  | Mon.           |  | <u> </u>          |  | <u> </u>   |                     |                                       |  |  |  |  |  |
|                      | Tues.<br>Wed.  |  |                   |  |  |                     |                                       |  |  |  |  |  |
|                      | Thurs.         |  |                   |  |  |                     |                                       |  |  |  |  |  |
| LS C                 | • Sat.         |  |                   | · · · · · ·                                      | <del>                                     </del> |                     |                                       |  |  |  |  |  |
| TOTALS               |                |  |                   |  |  |                     |                                       |  |  |  |  |  |
| 19A                  | Mon.           |  |                   |  |  |                     |                                       |  |  |  |  |  |
|                      | Tues.<br>Wed.  |  |                   | <del>                                     </del> | <del>                                     </del> |                     |                                       |  |  |  |  |  |
| 1                    | Thurs          |  |                   |  |  |                     |                                       |  |  |  |  |  |
| LS C                 | Fri.<br>Sat.   |  |                   |  | 1  |                     |                                       |  |  |  |  |  |
| TOTALS               |                |  |                   |  |  |                     | <u> </u>                              |  |  |  |  |  |
| -                    | 1              |  |                   |  |  |                     |                                       |  |  |  |  |  |
| 20A                  | Mon.<br>Tues.  |  |                   |  |  |                     |                                       |  |  |  |  |  |
|                      | Wed.<br>Thurs  |  | <del> </del>      | <del>                                     </del> | +  |                     | <b></b>                               |  |  |  |  |  |
|                      | Fri.           |  |                   |  | 0  |                     | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |  |  |  |  |  |
| LS C                 | Sa,t.          | <del>                                     </del> | <b>†</b>          | 7  |  |                     |                                       |  |  |  |  |  |
| TOTALS               | <u></u>        |  |                   | <del> </del>                                     |  |                     |                                       |  |  |  |  |  |

Table 2.5 (Conr d) Utilization of Departmental Instructional Area by Room

# Check Applicaboe Program Schedule

|    | [ ] Weekly<br>[ ] Alternating | <ol> <li>a. [ ] Semester Schedule Change</li> <li>b. [ ] No Semester Schedule Change</li> </ol> |
|----|-------------------------------|---|
| c. | [ ] Variable                  | •   |

|          |               |  |  |  | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · ·            |                                       |
|----------|---------------|--|--|--|---------------------------------------|--|---------------------------------------|
|          |               |  | WEEK   | LY OR SCHED                                      | JLE B                                 | *  |                                       |
|          |               |  |  | 39   |                                       | 40   |                                       |
| 36       | 37            | 38   |  |  |                                       |  | •                                     |
| Room     | Day           | Мо   | rning  | Aft  | ernoon                                | Eve  | ning                                  |
|          |               | 7.00 -   | 12.00N   | 12:00N=  | 6:00 p.m.                             | 6:00 p.m.  | -11:00 p.m.                           |
| No.or    | of the        | 7:00 a.<br>No. of                                | No_of  | No. of   | No. of                                | No. of   | No. of                                |
| Name .   | Week          | Hrs.Used   | stud. Hrs  | Hrs. Used  | Stud. Hrs.                            | Hrs. Used  | Stud. drs.                            |
|          |               | - 1  |  | ·  |                                       |  |                                       |
| 16B      | Mon.<br>Tues. |  |  |  |                                       |  |                                       |
| 1        | Wed.          |  |  |  |                                       |  |                                       |
| <u> </u> | Thurs.        |  |  |  |                                       |  |                                       |
|          | Fri.          |  |  | -  |                                       | <del>                                     </del> |                                       |
| LS C     | Sat.          |  | <u> </u>   | -  |                                       | <b>+</b> · · · · · · · · · · · · · · · · · · ·   |                                       |
| TOTALS   |               |  |  |  |                                       |  |                                       |
|          |               |  |  |  |                                       | 1  |                                       |
| 17B      | Mon.          | <del></del>                                      |  | <del>                                     </del> |                                       |  |                                       |
|          | Tues.<br>Wed. | <del></del>                                      |  | 1  |                                       |  |                                       |
| 1        | Thurs.        |  | -  |  | ů,                                    |  |                                       |
|          | Fri.          | <del>                                     </del> |  |  | ,                                     | <b></b>  | ļ                                     |
| LS C     | Sat.          | Ť  | •  |  |                                       | <del> </del>                                     | · · · · · · · · · · · · · · · · · · · |
|          |               | •  |  |  |                                       |  |                                       |
| TOTALS   |               | +  |  | -  |                                       |  |                                       |
| 18B      | Mon.          |  |  | <b></b> _  |                                       | <del> </del>                                     | <del> </del>                          |
|          | Tues.         |  | <b></b>  |  | <del></del>                           | <del> </del>                                     |                                       |
|          | Wed.          |  | <del>                                     </del> | <del> </del>                                     | <del> </del>                          | <del> </del>                                     |                                       |
|          | Thurs         | ·  | <del></del>                                      | +  | +                                     |  |                                       |
| 100      | Fri.          |  | +  | <del> </del>                                     |                                       |  |                                       |
| LS C     | Sat.          | +  | 1  |  |                                       |  | 1                                     |
| TOTALS   |               |  |  |  |                                       |  |                                       |
| 19B      | Mon.          |  |  |  | <u> </u>                              |  | <u> </u>                              |
| 130      | Tues.         | 1  |  |  |                                       |  |                                       |
| 1        | Wed.          |  |  | <del></del>                                      |                                       | <del></del>                                      | +                                     |
|          | Thurs         | •  | <b></b>  |  |                                       | +  | <del> </del>                          |
|          | Fri.          |  | <del>-</del>                                     |  | <del></del>                           | <del></del>                                      |                                       |
| LS C     | Sat.          |  | +  | +  |                                       |  | ì                                     |
| TOTALS   |               |  |  |  |                                       |  |                                       |
| 222      | 145           |  | . 3  |  |                                       | 1 .  |                                       |
| 20B      | Mon           |  | +  | +  |                                       |  | <b></b>                               |
|          | Wod.          |  | +  | 1  | •                                     |  |                                       |



#### WEEKLY OR SCHEDULE B

| ,            |                |                    | WEEKL                                 | Y OR SCHEDU                                      | FF B                |                     |                       |
|--------------|----------------|--------------------|---------------------------------------|--|---------------------|---------------------|-----------------------|
| 36           | 37             | 38                 |                                       | 39   |                     | 40                  |                       |
| Room         | Day            |                    | rning                                 | Afte   | ernoon              | Eye                 | ning                  |
| No.or        | of the         |                    | m12:00N                               | 12:00N-6   | 5:00 p.m.<br>No. of | 6:00 p.m.<br>No. of | -11:00 p.m.<br>No. of |
| Name         | Week           | No. of<br>Hrs.Used | No. of<br>Stud. Hrs                   | ₩rs. Used  | Stud. Hrs.          | Hrs. Used           | Stud. drs.            |
| 16B          | Mon.           |                    | :                                     |  | ¢                   |                     |                       |
| 100          | Tues           |                    |                                       |  |                     |                     |                       |
|              | Wed.           |                    |                                       |  |                     |                     |                       |
|              | Thurs.         |                    |                                       |  |                     |                     |                       |
| LS C         | Sat.           |                    |                                       | 2  | 9                   | <del></del>         |                       |
| TOTALS_      | :              |                    |                                       | ć  |                     |                     |                       |
| 1 7B         | Mon.           |                    |                                       |  |                     |                     | · · •                 |
| ,            | Tues.          |                    |                                       | <del>                                     </del> |                     | <u> </u>            |                       |
|              | Wed.<br>Thurs. | <del></del>        |                                       | +  |                     |                     |                       |
| '            | Fri.           | +                  |                                       |  |                     |                     |                       |
| LSC          | Sat.           |                    |                                       |  | <del> </del>        |                     |                       |
| TOTALS       |                |                    |                                       |  |                     |                     |                       |
| , 18B        | Mon.           |                    |                                       | *  |                     | ļ                   |                       |
| •            | Tues.          |                    | ·                                     | · · · · · · · ·                                  |                     |                     |                       |
|              | Wed.<br>Thurs  |                    | <del> </del>                          |  |                     |                     |                       |
|              | Fri.           |                    |                                       | · ·  |                     |                     |                       |
| LS C         | Sat.           | <u> </u>           | · · · · · · · · · · · · · · · · · · · |  |                     |                     | ,                     |
| TOTALS       |                |                    |                                       |  |                     |                     | <del> </del>          |
| 19B          | Mon.           |                    |                                       |  |                     |                     | <del> </del>          |
|              | Tues.          |                    |                                       | <u> </u>   | +                   |                     |                       |
|              | Wed.<br>Thurs  |                    |                                       |  |                     |                     |                       |
|              | Fri.           |                    |                                       |  | <del> </del>        | <del></del>         | +                     |
| LS C         | Sat.           |                    |                                       |  |                     |                     |                       |
| TOTALS       | 5              |                    |                                       |  |                     |                     |                       |
| 20B          | Mon.           |                    |                                       |  |                     |                     | -                     |
| 1            | Tues.          |                    |                                       | <del></del>                                      | <del>\</del> ,      |                     |                       |
| <i>و</i> ، ا | Wed.<br>Thurs  | <del></del>        | +                                     |  | , i                 | T                   |                       |
|              | Fri.           |                    |                                       |  |                     | <u> </u>            | +                     |
| L\$ C        | Sat.           |                    |                                       | · · ·  | +                   |                     |                       |
| TOTAL        |                |                    |                                       |  |                     |                     |                       |
| IUIAL        | <u>~</u>       |                    |                                       |  |                     |                     | *                     |



REPORTING TERMINAL PERFORMANCE OBJECTIVES (TERMOBS)



# TABLE T-1 - INSTRUCTIONAL DIVISION AND UNIT OUTLINE

# ELECTRONICS PROGRAM

DOES THIS OUTLINE CONTAIN ALL OF THE INSTRUCTIONAL CONTENT OF YOUR PROGRAM? YES NO

| ODE      | DIVISION            | CODE     | UNIT                             |
|----------|---------------------|----------|----------------------------------|
| 01       | PASSIVE CIRCUITS-DC | 01       | INTRODUCTION TO ELECTRICITY      |
| <i>7</i> | 111002112 02313     | 02       | ATOMIC STRUCTURE                 |
|          |                     | 03       | STATIC ELECTRICITY               |
|          | •                   | 04       | ELECTRICAL TERMS AND UNITS       |
| - *      |                     | 05       | BATTERIES AND CELLS              |
|          | • •                 | 06       | SERIES CIRCUITS                  |
|          |                     | 07       | PARALLEL CIRCUITS                |
|          |                     | 0.8      | COMPLEX NETWORK CIRCUITS         |
|          |                     | 09       | OHM'S LAWS                       |
|          |                     | 10       | FIRCHOFF'S LAWS                  |
|          |                     | 11       | POWER                            |
|          | ·                   | 12       | OVERLOAD PROTECTION              |
|          |                     | 13       | CONDUCTANCE                      |
|          |                     | 14       | MAGNETIŞM                        |
|          | •                   | 15       | ELECTROMAGNETISM                 |
|          |                     | 16 ·     | INDUCTANCE                       |
|          |                     |          | CAPACITANCE                      |
|          | •                   | 17       | DC MOTORS                        |
|          |                     | 18       | DC GENERATORS                    |
|          | •                   | 19       | BASIC METER CIRCUITS             |
|          |                     | 20       |                                  |
|          |                     | 21       | TEST EQUIPMENT                   |
| 02       | PASSIVE CIRCUITS-AC | 01       | AC CURRENT AND VOLTAGE           |
| · .      |                     | 02       | AC GENERATORS                    |
|          |                     | Ù3       | AC MOTOR                         |
|          |                     | 04       | PHASE                            |
|          |                     | 05       | REACTANCE                        |
| •        |                     | 06 "     | IMPEDANCE                        |
|          |                     | 07       | AC POWER                         |
|          |                     | 08       | TRANSFORMERS                     |
|          |                     | 09       | SERIES AC ANALYSIS               |
| ,        |                     | 10       | PARALLEL AC ANALYSIS             |
|          |                     | 11       | COMPLEX AC ANALYSIS              |
|          |                     | 12       | RESONANCE                        |
|          | •                   | 13       | BAND PASS AND BAND REJECT FILERS |
|          | ٠,                  | 14       | TIME CONSTANTS .                 |
|          |                     | 15       | TEST EQUIPMENT                   |
|          |                     | ٠.<br>٥  | ACTIVE DEVICES                   |
| 03       | ACTIVE CIRCUITS     | 01<br>02 | AMPLIFIERS                       |
|          |                     |          | OSCILLATORS                      |
| 1,       |                     | 03       |                                  |
|          |                     | 04       | DETECTORS  DOWN SUPPLIES         |
| -        |                     | 05       | POWER SUPPLIES                   |
|          | •                   | 06       | PULSE CIRCUITS                   |
|          |                     | 0.7,     | INTEGRATED CIRCUITS              |
|          | •                   | 0.8      | TRANSDUCERS                      |
|          |                     | 09       | TEST EQUIPMENT                   |
| 0.4      | ELECTRONIC SYSTEMS  | 01       | RECEIVERS                        |
| 04       | DIECTRONIC DIDIDIO  | 02       | TRANSMITTERS                     |
|          |                     | 03       | PHONOGRAPHS                      |

| 4                      | 02   | ATOMIC STRUCTURE                 |
|------------------------|------|----------------------------------|
|                        | 03   | STATIC ELECTRICITY               |
| ·                      | 04   | ELECTRICAL TERMS AND UNITS       |
|                        | 05   | BATTERIES AND CELLS              |
|                        | 06   | SERIES CIRCUITS                  |
|                        | 07   | PARALLEL CIRCUITS                |
|                        | 08   | COMPLEX NETWORK CIRCUITS         |
|                        | 09   | OHM'S LAWS                       |
|                        | 10   | FIRCHOFF'S LAWS                  |
| ,                      | 11 ′ | POWER                            |
| i                      | 12   | OVERLOAD PROTECTION              |
|                        | 13   | CONDUCTANCE                      |
|                        | 14   | MAGNETISM                        |
| •                      | 15   | ELECTROMAGNETISM                 |
|                        | 16 · | INDUCTANCE                       |
|                        |      | CAPACITANCE ·                    |
|                        | 17   |                                  |
|                        | 18   | DC MOTORS                        |
|                        | 19   | DC GENERATORS                    |
|                        | 20   | BASIC METER CIRCUITS             |
|                        | 21   | TEST EQUIPMENT                   |
|                        |      | A CHARLE AND HOLMACE             |
| 02 PASSIVE CIRCUITS-AC | 01   | AC CURRENT AND VOLTAGE .         |
|                        | 02   | AC GENERATORS                    |
|                        | 03   | AC MOTOR                         |
| •                      | 04   | PHASE                            |
|                        | 05   | REACTANCE                        |
|                        | 06   | IMPEDANCE                        |
|                        | 07   | AC POWER                         |
|                        | 08   | TRANSFORMERS                     |
|                        | 09   | SERIES AC ANALYSIS               |
|                        | 10 · | PARALLEL AC ANALYSIS             |
| •                      | 11   | COMPLEX AC ANALYSIS              |
|                        | 12   | RESONANCE                        |
|                        | 13 · | BAND PASS AND BAND REJECT FILERS |
| ,                      | 14   | TIME CONSTANTS                   |
|                        | 15   | TEST EQUIPMENT                   |
|                        |      |                                  |
| 03 ACTIVE CIRCUITS     | 01   | ACTIVE DEVICES                   |
| 05 ACTIVE CINCOLLE     | 02   | AMPLIFIERS                       |
|                        | 03   | OSCILLATORS                      |
|                        | 04   | DETECTORS                        |
|                        | 05   | POWER SUPPLIES                   |
| 1                      | 06   | PULSE CIRCUITS                   |
| J                      | 07   | INTEGRATED CIRCUITS              |
| ·                      | 08   | TRANSDUCERS                      |
| <i>k</i>               | 09   | TEST EQUIPMENT                   |
| d.                     | 09   | IBSI DQUII PDMI                  |
| OA DIROMPONIO EVEMENE  | 01   | RECEIVERS                        |
| 04 ELECTRONIC SYSTEMS  | 02   | TRANSMITTERS                     |
|                        | 03   | PHONOGRAPHS                      |
| •                      |      |                                  |
| •                      | 04   | TAPE RECORDERS                   |
|                        | 05   | TELEVISION                       |
| •                      | 06   | WAVE PROPAGATION                 |
|                        | 07   | MICROWAVES                       |
|                        | 08   | INDUCTION HEATING                |
| •                      | 09   | ULTRASONICS                      |
|                        | 10   | COMPUTER TECHNOLOGY              |
| *                      | 11   | CONTROL CIRCUITS                 |
| •                      | 12   | ANTENNA SYSTEM                   |
|                        |      | m_ 2                             |

# TABLE T-1 (CONT.) - INSTRUCTIONAL DIVISION AND UNIT OUTLINE

## ELECTRONICS PROGRAM

| CODE       | DIVISION           | CODE | UNIT                             |
|------------|--------------------|------|----------------------------------|
| 04         | ELECTRONIC SYSTEMS | 13   | RADAR                            |
| .04        | (CONT.)            | 14   | SONAR                            |
|            | (CONT.)            | 15   | RADIO DIRECTION FINDER           |
|            | ,                  | 16   | LORAN                            |
|            |                    | 17   | TEST EQUIPMENT                   |
|            | •                  |      |                                  |
|            |                    | 18   | MODULATION                       |
|            |                    | 19   | COMMUNICATION SYSTEM             |
| 05         | SHOP PRACTICES     | 01   | SOLDERING                        |
| <b>U</b> 3 | Dilot 114.011-011  | 02   | TOOLS                            |
|            | •                  | 03   | MACHINES                         |
|            |                    | 04   | PRINTED CIRCUITS                 |
|            |                    | -    | WIRING                           |
|            |                    | 05   |                                  |
|            | •                  | 06   | CABLING                          |
|            |                    | 07   | ELECTRONIC EQUIPMENT FABRICATION |
|            |                    | 08   | SPLICING                         |
|            |                    | 09   | DEPARTMENTAL OPERATION           |
|            |                    | 10   | CHASSIS                          |
|            |                    | 11   | PREVENTIVE MAINTENANCE           |
|            |                    |      | BASIC TROUBLESHOOTING TECHNIQUES |
|            | •                  | 12   |                                  |
| *          |                    | 13   | ELECTRONIC DRAFTING              |

# TABLE T-2 - TERMOB DIVISION AND UNIT OUTLINE

## ELECTRONICS PROGRAM

DOES THIS OUTLINE CONTAIN ALL TOPICS IN WHICH GRADUATES ACQUIRE JOB-ENTRY SKILLS? YES\_\_\_\_\_ NO\_\_\_\_

|   |     |                      | <del>_</del> |                                     |
|---|-----|----------------------|--------------|-------------------------------------|
| C | ODE | DIVISION             | CODE         | UNIT                                |
| _ | 01  | CIRCUIT CONSTRUCTION | 1 01         | CABLES                              |
| • | -   |                      | 02           | CHASSIS WIRING AND ASSEMBLY         |
|   |     |                      | 03           | PRINTED CIRCUIT BOARDS              |
|   | . • |                      | 04           | WIREWRAP                            |
|   | •   | ,                    | 05           | WAVE GUIDE                          |
| ( | 02  | CIRCUIT DESIGN       | 01           | RECTIFIERS                          |
| • | -   |                      | 02           | AMPLIFIERS                          |
|   |     |                      | 03           | OSCILLATORS                         |
|   |     |                      | 04           | SPECIAL CIRCUITS AND DEVICES        |
|   |     | ·                    | 05           | DIGITAL CIRCUITS.                   |
|   | 03  | CIRCUIT CALIBRATION  | 01           | METERS                              |
| • | • • |                      | 02           | POWER SUPPLIES                      |
|   |     |                      | 03           | OSCILLOSCOPES                       |
|   |     |                      | 04           | OSCILLATORS AND FUNCTION GENERATORS |
|   |     |                      | 05           | SPECIAL INSTRUMENTATION             |
| , | 0 4 | CIRCUIT TESTING      | 01           | AMPLIFIERS                          |
|   | 0 4 | CINCUIT IZDIINO      | 02           | RECTIFIERS                          |
|   |     |                      | 03           | OSCILLATORS                         |
|   |     | ,                    | 04           | SPECIAL CIRCUITS AND DEVICES        |
|   |     |                      | 05           | DIGITAL CIRCUITS                    |
|   | 05  | CIRCUIT DIAGNOSIS    | 01           | SUB ASSEMBLIES                      |
| , | -   |                      | 02           | ASSEMBLY                            |
|   |     |                      |              |                                     |

TERMINAL PERFORMANCE OBJECTIVES (TERMOBS)
and
REPORTING FORMS

| MISOE N | NO   |  |  |                     |
|---------|--|--|--|---------------------|
| PROGRAM | M ELI  | ECTRONICS  | DIVISION 01                                  | CIRCUIT CONSTRUCTIO |
| ,       |  |  | UNIT 01                                      | CABLES              |
|         |  |  | TERMOB NO.                                   | 13-001              |
| 1.00    | 1.02<br>1.03<br>1.04<br>1.05<br>1.06<br>1.07<br>1.08<br>1.09<br>1.10 | NUMBERING TABS CABLE BOARD ASSOCIATED HARDW BASIC ELECTRONIC | E WIRE TORS  ARE AS NEEDED S TOOLS AND EQUIP | MENT (TABLE T-3)    |
| .00 F   | PERFORMANC   | HIGH VOLTAGE POW   | EK SUPPLI                                    |                     |

| GENE | RAL ST | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME CONSTRUCT A CABLE HARNESS CONSISTING OF 100 WIRES WITH |
|------|--------|---|
| x .  |        | 3 BREAKOUTS EMPLOYING THE FOLLOWING PROCEDURE:  |
| ()   | 2.02   | SELECT PROPER MATERIALS FOR THE JOB   |
| ( )  | 2.03   | ASSEMBLE WIRES  |
| ( )  | 2.04   | LACE, WRAP AND SECURE CABLE   |
| ( )  | 2,05   | STRIP WIRES AND MAKE CONNECTIONS TO TERMINALS, JACKS AND CONNECTORS                                 |
| ( )  | 2.06   | CHECK CONTINUITY  |
| ( )  | 2.07   | HI-POT CABLE  |

#### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 CABLE HARNESS CONSTRUCTED WITH NO SHORTS OR VOLTAGE

LEAKS TO THE APPROVAL OF A BOARD OF EXPERT RATERS.

TO BE COMPLETED WITHIN 6 HOURS WITH EACH STEP OF

THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO PRODUCE THE SIMPLEST ASSEMBLY IN THE MOST

ECONOMICAL WAY

( ) 3.03 USING ACCEPTED HARNESSING TECHNIQUES. ALL WIRES

COLOR CODED AND LABELED

( ) 3.04 USING ACCEPTED HARNESSING TECHNIQUES

( ) 3.05 ALL SOLDERING DONE PROPERLY. HEAT SINKS SHALL BE

USED WHERE NECESSARY. HARDWARE (PLUGS, TERMINALS,

JACKS AND CONNECTORS) SHALL BE SECURE
( ) 3.06 100% CONTINUITY



| (). | 1.02 | APPROPRIATE GAUGE WIRE                            |
|-----|------|---|
| ( ) | 1.03 | TERMINALS   |
| ( ) | 1.04 | JACKS AND CONNECTORS                              |
| ( ) | 1.05 | TIE WRAPS   |
| ( ) | 1.06 | LACING  |
| ( ) | 1.07 | SLEEVING  |
| ( ) | 1.08 | NUMBERING TABS                                    |
| ( ) | 1.09 | CABLE BOARD                                       |
| ( ) | 1.10 | ASSOCIATED HARDWARE AS NEEDED                     |
| ( ) | 1.11 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) |
| ( ) | 1.12 | HIGH VOLTAGE POWER SUPPLY                         |

|     |      | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME  CONSTRUCT A CABLE HARNESS CONSISTING OF 100 WIRES WITH BREAKOUTS EMPLOYING THE FOLLOWING PROCEDURE: |
|-----|------|---|
|     |      | 3 BREAROUTS EMPLOTING THE FOLLOWING PROCEDURE:  |
| 7   | 2.02 | SELECT PROPER MATERIALS FOR THE JOB   |
| ( ) | 2.03 | ASSEMBLE WIRES  |
| ( ) | 2.04 | LACE, WRAP AND SECURE CABLE   |
| ( ) | 2.05 | STRIP WIRES AND MAKE CONNECTIONS TO TERMINALS, JACKS  |
|     |      | AND CONNECTORS  |
| ( ) | 2.06 | CHECK CONTINUITY  |
| ( ) | 2.07 | HI-POT CABLE  |

# 3.00 EXTENT

|   | 1                          |        |   |
|---|----------------------------|--------|---|
| Ì | GENE                       | RAL ST | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME   |
|   |                            | 3.01   | CABLE HARNESS CONSTRUCTED WITH NO SHORTS OR VOLTAGE   |
| Ì | ` ′                        |        | LEAKS TO THE APPROVAL OF A BOARD OF EXPERT RATERS.  |
|   | ]                          |        | TO BE COMPLETED WITHIN 6 HOURS WITH EACH STEP OF  |
|   |                            | *      | THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY  |
| 1 |                            |        | THE PROCEDURE CONCED AD DATIDIRETORY OR CHARLEST AND THE PROCEDURE OF THE |
|   | <del>ل ``</del> _          | 3 0 2  | TO PRODUCE THE SIMPLEST ASSEMBLY IN THE MOST  |
|   | $\mathcal{A}(\mathcal{A})$ | 3.02   |   |
|   | •                          |        | ECONOMICAL WAY  |
|   | ( )                        | 3.03   | USING ACCEPTED HARNESSING TECHNIQUES. ALL WIRES   |
|   |                            |        | COLOR CODED AND LABELED   |
|   | ( )                        | 3.04   | USING ACCEPTED HARNESSING TECHNIQUES  |
|   |                            |        | ALL SOLDERING DONE PROPERLY. HEAT SINKS SHALL BE  |
|   | ` '                        | 3.03   | USED WHERE NECESSARY. HARDWARE (PLUGS, TERMINALS,   |
|   |                            |        | JACKS AND CONNECTORS) SHALL BE SECURE   |
|   |                            |        | , .   |
|   | ( )                        | 3.06   | 100% CONTINUITY   |
|   | ( )                        | 3.07   | NO VOLTAGE LEAKAGE DUE TO DEFECTIVE MATERIALS OR  |
|   |                            |        | WORKMANSHIP   |



|                              |             | MISOE NO.            |
|------------------------------|-------------|----------------------|
| PROGRAM <u>ELECTRONICS</u> " | DIVISION 01 | CIRCUIT CONSTRUCTION |
| USOE CODE NO(S)              | UNIT 01     | CABLES               |
| X                            | TERMOB NO.  | 13-001               |
|                              |             |                      |
| 1 00 CONDITION               |             | •                    |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE       | NO.                | -       |                                       |                |      | J                                 |
|-------------|--------------------|---------|---------------------------------------|----------------|------|-----------------------------------|
| PROGR       | AM                 | ELECTI  | RONICS                                | DIVISION       | 01   | CIRCUIT<br>CONSTRUCTION           |
|             |                    |         |                                       | UNIT           | 01   | CABLES                            |
|             | ٠                  | •       | •                                     |                |      |                                   |
|             |                    |         |                                       | TERMOB NO      |      | 13-002                            |
|             |                    |         |                                       |                |      |                                   |
|             |                    |         | •                                     |                | *    | ·                                 |
| 1,00        | CONE               | ITION   |                                       |                | **   |                                   |
|             | (')                | 1.01    | SCHEMATIC DIAGRAM                     | OF A COAX CA   | BLE  |                                   |
|             |                    |         | COAX CABLES                           |                |      | •                                 |
| •           | $\sim 6.5^{\circ}$ | 1.03    | COAX CONNECTORS                       |                |      |                                   |
|             | ii                 | 1.04    | ACCOCTAMEN HAPDW                      | ARE AS NEEDED  | ·    | (MADEE M-2)                       |
|             | ( )                | 1.05    | BASIC ELECTRONICS                     | S TOOLS AND EQ | UIP  | MENT (TABLE 1-3)1                 |
| •           |                    |         | · •                                   | •              |      | · .                               |
| 2.00        | PERF               | FORMANC | E                                     |                |      | •                                 |
|             | GENI               | ERAL ST | ATEMENT OF PERFORMED THE FOLLOWING PR | CABLE WITH CC  | NNE  | NG OUTCOME<br>CTORS EMPLOYING     |
|             | I                  | 2,02    | SELECT PROPER MA                      | TERIALS FOR TH | E J  | OB .                              |
|             | ( )                | 2.02    | STRIP CABLE AND                       | SECURE         |      |                                   |
|             | ()                 | 2.04    | CHECK FOR SHORTS                      | AND CONTINUIT  | Ϋ́   | •                                 |
|             | •                  |         |                                       | •              |      |                                   |
| 3.00        | EXT                | ENT     |                                       |                |      | ·                                 |
| 1           |                    |         |                                       |                |      |                                   |
| İ           | GEN                | ERAL ST | PATEMENT OF EXTENT                    | AND EXTENT OF  | FRE  | SULTING OUTCOME                   |
|             | (7)                | 3.01    |                                       |                |      |                                   |
| [<br>!      |                    |         | EXPERT RATERS. T                      | O RE COMPLETE  | DCEL | THIN 4 HOURS WITH AS SATISFACTORY |
| 1<br>2<br>- | İ                  |         | EACH STEP OF THE                      | , PROCEDURE OU |      |                                   |
| •           | 1                  |         | OR UNSATISFACTOR                      | (I             |      |                                   |
|             | <u></u>            |         | TO PRODUCE A RUG                      | GED. RELIABLE  | ANI  | SAFE ASSEMBLY                     |
| v           | ( )                | 3.02    |                                       | NE PROPERLY    |      |                                   |
|             | ( )                | 3.03    | MIL SOUDERING DO                      | CONTINUITTY    |      |                                   |

| •                          | . *         | MISOE NO.              |  |
|----------------------------|-------------|------------------------|--|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 01 | CIRCUIT                |  |
| USOE CODE NO(S)            | UNIT 01     | CONSTRUCTION<br>CABLES |  |
|                            | TERMOB NO.  | ¥ 13-002               |  |
|                            |             |                        |  |
| · · ·                      |             |                        |  |
| 1 00 CONDITION             |             |                        |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE      | NO                 |   |                                   |                     |
|------------|--------------------|---|-----------------------------------|---------------------|
| PROGR      | AM ELECT           | RONICS  | DIVISION 01                       | CONSTRUCTION        |
|            |                    |   | UNIT 01                           | CABLES              |
| ¥          |                    |   | TERMOB NO.                        | 13-003              |
|            |                    | •   |                                   |                     |
| 1.00       | CONDITION          |   |                                   |                     |
| · ,        | () 1.02<br>() 1.03 | SCHEMATIC DIAGRAM<br>WIRE OF APPROPRIAT<br>CONNECTORS | OF AN EXTERNAL OF TYPE AND GAUGE  | CONNECTOR CABLE     |
|            | () 1.05            | TIE WRAPS SLEEVING ASSOCIATED HARDWA                  | RE AS NEEDED                      | (marker m_2)        |
| -          | () 1.07            | BASIC ELECTRONICS                                     | TOOLS AND EQUIP                   | MENT (TABLE T-3)    |
| 2.00       | PERFORMANCE        | ***************************************               | •                                 |                     |
| 1          |                    |   | ANCE AND DECILITATI               | NG OUTCOME          |
|            | GENERAL ST         | CONSTRUCT AN EXTE                                     | RNAL CABLE WITH '                 | TWO CONNECTORS      |
|            |                    | EMPLOYING THE FOL                                     | LOWING PROCEDURE                  |                     |
| • <u>.</u> | ( ) 2.02           | SELECT PROPER MAT                                     | ERIALS FOR THE J                  | OB                  |
| J.         | () 2.03            | STRIP WIRE AND SE                                     | CURE TO CONNECTO                  | RS                  |
|            | () 2.04            | CHECK FOR SHORTS                                      | AND CONTINUITY                    |                     |
|            |                    |   |                                   |                     |
| 3.00       | EXTENT             |   |                                   | •                   |
|            | 4.00               | • .   |                                   |                     |
|            |                    |   | AND EVMENT OF DE                  | SILTING OUTCOME     |
| •          | GENERAL ST         | TATEMENT OF EXTENT EXTERNAL CONNECTO                  | R CABLE CONSTRUC                  | TED TO THE APPROVAL |
|            | , , ,              | OF A BOARD OF EXP                                     | ERT RATERS. TO                    | BE COMPLETED MITHIN |
|            | (                  | 3 HOURS WITH EACH<br>SATISFACTORY OR U                | STEP OF THE PRO<br>INSATISFACTORY | CEDURE JUDGED AS    |
| `          | () 3.02            | TO PRODUCE A RUGO                                     | ED, RELIABLE AND                  | SAFE ASSEMBLY       |
|            | () 3.03            | ALL SOLDERING DON                                     | E PROPERLY                        |                     |
|            | () 3.04            | MU SHUKIS. 1008                                       | CONTINOTIT                        |                     |

|                     | r           | MISOE NO. | - |
|---------------------|-------------|-----------|---|
| PROGRAM ELECTRONICS | DIVISION 01 | CIRCUIT   | _ |
| USOE CODE NO(S)     | UNIT 01     | CABLES    | _ |
|                     | TERMOB NO.  | 13-003    |   |
| 1.00 CONDITION      |             |           |   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT



| ₩ <sup>r</sup> |                    | ,   |                         |                  | •  |
|----------------|--------------------|---|-------------------------|------------------|--|
| MISOE          | NO.                |   |                         |                  | •  |
|                |                    | <del></del> 58                            |                         |                  |  |
| PROGRA         | M ELECT            | RONICS                                    | DIVISION                | 01               |  |
|                |                    |   | UNIT                    | 02               | CONSTRUCTION CHASSIS WIRING &                |
|                |                    |   |                         | 02               | ASSEMBLY                                     |
|                |                    |   | TERMOB NO               | ).               | 13-004                                       |
|                |                    |   |                         |                  |  |
| 1.00           | CONDITION          |   |                         |                  |  |
|                | ( ) 1 01           | SCHEMATIC DIAGRAM OF                      | A FULL WA               | VE I             | RECTIFIER CIRCUIT                            |
|                | () 1.01<br>() 1.02 | RESISTORS                                 |                         |                  | *  |
|                | () T.03            | CAPACITORS                                |                         |                  | , , , , , ,                                  |
|                | () 1.04            | INDUCTORS                                 |                         |                  |  |
|                | () 1.05<br>() 1.06 | VACUUM TUBES TRANSFORMERS                 | •                       |                  | •  |
|                | .( )               | TOGGLE SWITCH                             |                         | •                |  |
|                | () 1.08            | FUSE AND FUSE HOLDER                      |                         |                  |  |
|                | () 1.09            | CONNECTORS AND TEST                       | JACKS                   |                  |  |
|                | () 1.10            | ASSOCIATED HARDWARE ABSIC ELECTRONICS TO  | AS NEEDED<br>OIS AND EO | UIP              | MENT (TABLE T-3)                             |
|                | () 1.11            | BASIC ELECTRONICS 100                     |                         | , - , - ,        | •  |
|                |                    |   |                         |                  |  |
| 2.00           | PERFORMANC         | E   |                         | $\mathbf{r}^{t}$ |  |
|                |                    | •   | •                       |                  | ···  |
| ſ              |                    |   |                         | -                |  |
|                |                    | ATEMENT OF PERFORMANC                     | E AND RESU              | LTI              | NG OUTCOME                                   |
|                | 7) 2.01            | CONSTRUCT A FULL WAY POINT TO POINT WIRIN | E RECTIFIE              | TES              | EMPLOYING THE                                |
|                |                    | FOLLOWING PROCEDURE:                      | G 120mmig               |                  |  |
|                | () 2.02            | SELECT PROPER MATERI                      | ALS AND CO              | MPO              | NENTS  |
|                | () 2.03            | PREPARE CHASSIS FOR                       | COMPONENT               | INS              | TALLATION                                    |
|                | () 2.04            | ASSEMBLE CIRCUIT                          |                         |                  |  |
|                | () 2.05            | LOAD CIRCUIT ENERGIZE CIRCUIT             |                         |                  |  |
| 1              | () 2.06            | DEMONSTRATE PROPER O                      | PERATION (              | OF C             | CIRCUIT                                      |
|                |                    |   | 2                       |                  | •  |
|                |                    | •   | 7                       |                  |  |
| 3.00           | EXTENT             |   |                         | •                |  |
|                |                    | <u> </u>                                  |                         | _                |  |
|                | G711771 G          | PATEMENT OF EXTENT AND                    | EXTENT O                | F RF             | SULTING OUTCOME                              |
|                | ( ) 3.01           | CTRCITT PRODUCES AN                       | OUTPUT THE              | AT I             | S STABLE AND OF AN                           |
|                | ( ) 3.02           | EYPECTED NATURE TO T                      | HE APPROV               | AL C             | OF A BOARD OF EXPERT                         |
|                |                    | PATERS TO BE COMPI                        | ETED WITH               | IN 8             | HOURS WITH EACH STEP                         |
|                | -                  | OF THE PROCEDURE JUD                      | GED'AS SA               | TISE             | FACTORY OR UNSATISFACTOR                     |
|                | ( ) 3.02           | TO PRODUCE A RUGGED,                      | RELIABLE                | ANI              | SAFE ASSEMBLY                                |
|                | () 3.03            | ALL HOLES DRILLED/PU                      | INCHED TO               | PROF             | PER SIZE                                     |
|                | () 3.04            | ENGLIDING SAFE AND RE                     | ELTABLE OP              | ERA'I            | CION. ALL SOLDERING                          |
|                |                    | SHALL BE DONE USI                         | NG ACCEPT.<br>PROMPCM 및 | EVU<br>Pu        | TECHNIQUES. HEAT SINKS SENSITIVE COMPONENTS. |
|                |                    | HARDWARE SHALL BE                         | E SECURE                |                  |  |
| •              | () 3.05            |   | DEVICE/CO               | MPO              | NENT FOR PROPER                              |
| C              | •                  | OPERATION                                 | •                       |                  |  |
| ERIC           | () 3.06            | WITH AN INPUT OF PROCHARACTERISTICS       | OPER AMPLI              | TUDI             | E, FREQUENCY AND OUTPUT                      |

| ( )  | 1.01 | SCHEMATIC DIAGRAM OF A FULL WAVE RECTIFIER CIRCUIT |
|------|------|--|
| ()   | 1.02 | RESISTORS  |
| ( )  | 1.03 | CAPACITORS   |
| ·( ) | 1.04 | INDUCTORS  |
| (.)  | 1.05 | VACUUM TUBES                                       |
| ( )  | 1.06 | TRANSFORMERS                                       |
| ( )  | 1.07 | TOGGLE SWITCH                                      |
| ( )  | 1.08 | FUSE AND FUSE HOLDER                               |
| ( )  | 1.09 | CONNECTORS AND TEST JACKS                          |
| ( )  | 1.10 | ASSOCIATED HARDWARE AS NEEDED                      |
| ( )  | 1.11 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)  |
|      |      |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 CONSTRUCT A FULL WAVE RECTIFIER ON A CHASSIS USING POINT TO POINT WIRING TECHNIQUES EMPLOYING THE FOLLOWING PROCEDURE:

( ) 2.02 SELECT PROPER MATERIALS AND COMPONENTS
( ) 2.03 PREPARE CHASSIS FOR COMPONENT INSTALLATION
( ) 2.04 ASSEMBLE CIRCUIT
( ) 2.05 LOAD CIRCUIT
( ) 2.06 ENERGIZE CIRCUIT
( ) 2.07 DEMONSTRATE PROPER OPERATION OF CIRCUIT

#### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME CIRCUIT PRODUCES AN OUTPUT THAT IS STABLE AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT TO BE COMPLETED WITHIN 8 HOURS WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY 3.02 ALL HOLES DRILLED/PUNCHED TO PROPER SIZE 3.03 ) ENSURING SAFE AND RELIABLE OPERATION. ALL SOLDERING 3.04 SHALL BE DONE USING ACCEPTED TECHNIQUES. HEAT SINKS SHALL BE USED TO PROTECT HEAT SENSITIVE COMPONENTS. HARDWARE SHALL BE SECURE WITH AN APPROPRIATE DEVICE/COMPONENT FOR PROPER 3.05 **OPERATION** WITH AN INPUT OF PROPER AMPLITUDE, FREQUENCY AND OUTPUT ( ) 3.06 **CHARACTERISTICS** REQUIRED VALUES DISFLAYED ON APPROPRIATE TEST EQUIPMENT 3.07



|                     | r           | MISOE NO         | — |
|---------------------|-------------|------------------|---|
| PROGRAM ELECTRONICS | DIVISION 01 | CIRCUIT          |   |
|                     |             | CONSTRUCTION     |   |
| USOE CODE NO(S)     | UNIT 02     | CHASSIS WIRING & |   |
| 3                   |             | ASSEMBLY         | _ |
|                     | TERMOB NO.  | 13-004           |   |
|                     | _           |                  |   |
| A                   |             | ٠                |   |
| 1.00 CONDITION      |             | · ·              |   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT



|        | •   | ·  |                |      |                                       |
|--------|---|--|----------------|------|---------------------------------------|
| MISOE  | NO  | 6.   | <b>i</b>       |      | •                                     |
| PROGRA | M ELECTR  | ONICS  | 1              | 01   | CIRCUIT CONSTRUCTION CHASSIS WIRING & |
|        |   | ,  | UNIT           | 02   | ASSEMBLY                              |
|        |   |  | TERMOB NO      | .* - | 13-005                                |
| •      | •   |  | ••             |      |                                       |
|        | υ   |  | •              | <    |                                       |
|        |   |  |                | · -  | *                                     |
| 1.00   | CONDITION   |  |                |      | ·                                     |
| 2.00   | () 1.04<br>() 1.05<br>() 1.06<br>() 1.07<br>() 1.08<br>() 1.09<br>() 1.10 | SCHEMATIC DIAGRAM RESISTORS CAPACITORS INDUCTORS VACUUM TUBES TRANSISTORS AUDIO OSCILLATOR TRANSFORMERS SPEAKER POWER SUPPLY CHASSIS ASSOCIATED HARDWA BASIC ELECTRONICS | ADE AS NEEDED  |      | *                                     |
| -      | GENERAL ST  | EMPLOYING THE FO   | LLOWING PROCEL | URE  | :                                     |
| !      | () 2.04<br>() 2.05  | PREPARE CHASSIS SASSEMBLE CIRCUIT LOAD CIRCUIT ENERGIZE CIRCUIT  | FOR COMPONENT  | ,    |                                       |
| 3.00   | EXTENT  |  | \              |      |                                       |

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 CIRCUIT PRODUCES AN OUTPUT THAT IS STABLE, AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY 3.02 ALL HOLES DRILLED/PUNCHED TO PROPER SIZE 3.03 ) USING POINT TO POINT WIRING TECHNIQUES ENSURING 3.04 ALL SOLDERING SHALL SAFE AND RELIABLE OPERATION. BE DONE USING ACCEPTED TECHNIQUES. HARDWARE SHALL BE SECURE WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION 3.05 ( ) INDUT OF PROPER AMPLITUDE, FREQUENCY AND CURRENT

|      | ( ) 1.01    | SCHEMATIC DIAGRAM OF A VOLTAGE AMPLIFIER  |    |
|------|-------------|---|----|
|      | °( ) 1.02   | RESISTORS   |    |
|      | • •         | CAPACITORS  |    |
| •    |             | INDUCTORS   |    |
|      | () 1.05     | VACUUM TUBES TRANSISTORS  |    |
|      |             | AUDIO OSCILLATOR  |    |
|      |             | TRANSFORMERS  |    |
| •    | (.) 1.09    | SPEAKER   |    |
|      |             | POWER SUPPLY  |    |
|      | () 1.11     | CHASSIS   |    |
|      | () 1.12     | ASSOCIATED HARDWARE AS NEEDED<br>BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)                        |    |
|      | ( ) 1.13    | BASIC ELECTRONICS TOOLS THIS EXCLUSIVE  |    |
|      | •           |   |    |
| 2.00 | PERFORMANO  | CE  |    |
|      |             |   |    |
| ,    |             |   | 7  |
|      | CENEDAL S   | TATEMENT OF PERFORMANCE AND RESULTING OUTCOME   | I  |
|      | () 2.01     | CONSTRUCT A VOLTAGE AMPLIFIER INTO A CHASSIS  | ļ  |
| ļ    | ( ) = = = = | EMPLOYING THE FOLLOWING PROCEDURE:  |    |
|      |             | COMPONENTS FOR THE JOB  |    |
|      |             | SELECT PROPER MATERIALS AND COMPONENTS FOR THE JOB PREPARE CHASSIS FOR COMPONENT INSTALLATION             |    |
|      | () 2.03     | ASSEMBLE CIRCUIT  | -, |
|      | () 2.04     |   |    |
|      | () 2.06     | FNFPGTZE CIRCUIT  |    |
|      | () 2.07     |   |    |
|      |             |   |    |
|      | ·           |   |    |
| 3.00 | EXTENT      |   |    |
|      |             |   |    |
| ٠    | <u> </u>    |   |    |
| -    | GENERAL S   | TATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME  |    |
|      | () 3.01     | CIRCUIT PRODUCES AN OUTPUT THAT IS STABLE, AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT | -  |
|      |             | RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH STEE   | ,  |
|      |             | OF THE PROCEDURE JUDGED AS SATISFACTORY OR  |    |
|      |             | UNSATISFACTORY  | ı  |
| • 4  |             | · · · · · · · · · · · · · · · · · · ·   | _  |
|      | 7 7 3 03    | TO PRODUCE A RUGGED. RELIABLE AND SAFE ASSEMBLY   |    |

ALL HOLES DRILLED/PUNCHED TO PROPER SIZE 3.03 ( ) USING POINT TO POINT WIRING TECHNIQUES ENSURING 3.04 SAFE AND RELIABLE OPERATION. ALL SOLDERING SHALL BE DONE USING ACCEPTED TECHNIQUES. HARDWARE SHALL BE SECURE WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION  $() \cdot 3.05$ WITH AN INPUT OF PROPER AMPLITUDE, FREQUENCY AND CURRENT 3.06 ( ) REQUIRED VALUES DISPLAYED ON APPROPRIATE TEST 3.07 EQUIPMENT



|                                       | t           | MISOE NO.                 |
|---------------------------------------|-------------|---------------------------|
| PROGRAM ELECTRONICS                   | DIVISION 01 | CIRCUIT                   |
| USOE CODE NO(S)                       | UNIT 0.2    | CHASSIS WIRING & ASSEMBLY |
| · · · · · · · · · · · · · · · · · · · | TERMOB NO.  | 13-005                    |
|                                       |             | •                         |
|                                       |             |                           |
| 1 OO CONDITION                        |             |                           |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

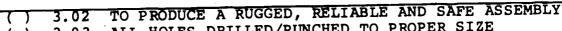
## 3.00 EXTENT

| MISOE  | NO  | <del></del> | · · · · · · · · · · · · · · · · · · ·  | 64   | Į                          | •  |      |         |                              |
|--------|---|-------------|--|--|----------------------------|--|------|---------|------------------------------|
| PROGRA | M   | ELECTI      | RONICS   |  |                            | DIVISIO  | ON 0 | 1       | CIRCUIT                      |
| 1      |   | <del></del> |  |  |                            | UNIT   | . 0  | 2       | CHASSIS WIRING<br>& ASSEMBLY |
|        |   |             |  |  |                            | TERMOB   | NO.  |         | 13-006                       |
|        |   | · •         | •  |  |                            |  |      |         |                              |
| 1.00   | COND  | NOITI       | *  |  |                            |  |      |         | •                            |
| ,      | ( )<br>( )<br>( )<br>( )<br>( )<br>( )<br>( )<br>( )<br>( ) | 1.08        | SCHEMATIC SCHEMATIC SCHEMATIC SCHEMATIC SCHEMATIC SCHEMATIC REACTORS CAPACITOR INDUCTORS VACUUM TU TRANSISTO POWER SUP CHASSIS | DIAGRAM<br>DIAGRAM<br>DIAGRAM<br>DIAGRAM<br>DIAGRAM<br>S<br>BES<br>RS<br>PLY | OF<br>OF<br>OF<br>OF<br>OF | A MULTI A WEIN A CRYST A RELAX A COLPI A SPECI | ED   | ATTORES | OSCILLATOR                   |
| 2.00   | PERE  | FORMANC     | E  |  |                            |  |      |         |                              |
|        | GENE  | 2.01        | CATEMENT OF<br>CONSTRUCT<br>EMPLOYING  | AN OSCI  | LLA                        | TOR CIR  | COTA | T       | NTO A CHASSIS                |

#### SELECT PROPER MATERIALS AND COMPONENTS 2.02 PREPARE CHASSIS FOR COMPONENT INSTALLATION 2.03 ASSEMBLE CIRCUIT 2.04 LOAD CIRCUIT 2.05 ENERGIZE CIRCUIT 2.06 DEMONSTRATE PROPER OPERATION OF THE CIRCUIT 2.07

#### 3.00 EXTENT

| GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME  |
|--|
| 7 7 3 61 CIRCUIT PRODUCED AN OUTPUT THAT IS STABLE AND OF AN |
| EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT         |
| RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH             |
| OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY           |
| The Sankhy   |



ALL HOLES DRILLED/PUNCHED TO PROPER SIZE 3.03

USING POINT-TO-POINT WIRING TECHNIQUES ENSURING SAFE 3.04 ALL SOLDERING SHALL BE DONE AND RELIABLE OPERATION. USING ACCEPTED TECHNIQUES. HARDWARE SHALL BE SECURE

- SCHEMATIC DIAGRAM OF A PHASE SHIFT OSCILLATOR 1.01 SCHEMATIC DIAGRAM OF A MULTIVIBRATOR OSCILLATOR 1.02 SCHEMATIC DIAGRAM OF A WEIN BRIDGE OSCILLATOR 1.03 SCHEMATIC DIAGRAM OF A CRYSTAL OSCILLATOR 1.04 SCHEMATIC DIAGRAM OF A RELAXATION OSCILLATOR 1.05 SCHEMATIC DIAGRAM OF A COLPITTS OSCILLATOR 1.06 SCHEMATIC DIAGRAM OF A SPECIALTY CIRCUIT OSCILLATOR . 1.07 1.08 REACTORS 1.09 CAPACITORS INDUCTORS 1.10 VACUUM TUBES 1.11 1.12 TRANSISTORS 1.13 POWER SUPPLY 1.14 CHASSIS 1.15 ASSOCIATED HARDWARE AS NEEDED 1.16 BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)
- 2.00 PERFORMANCE

# GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME ( ) 2.01 CONSTRUCT AN OSCILLATOR CIRCUIT INTO A CHASSIS EMPLOYING THE FOLLOWING OPERATIONS:

- ( ) 2.02 SELECT PROPER MATERIALS AND COMPONENTS ( ) 2.03 PREPARE CHASSIS FOR COMPONENT INSTALLATION ( ) 2.04 ASSEMBLE CIRCUIT
- () 2.05 LOAD CIRCUIT () 2.06 ENERGIZE CIRCUIT
- ( ) 2.07 DEMONSTRATE PROPER OPERATION OF THE CIRCUIT
- 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 CIRCUIT PRODUCED AN OUTPUT THAT IS STABLE AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

- () 3.02 TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY
  () 3.03 ALL HOLES DRILLED/PUNCHED TO PROPER SIZE
- () 3.04 USING POINT-TO-POINT WIRING TECHNIQUES ENSURING SAFE AND RELIABLE OPERATION. ALL SOLDERING SHALL BE DONE
- USING ACCEPTED TECHNIQUES. HARDWARE SHALL BE SECURE

  ( ) 3.05 WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION
  ( ) 3.06 WITH AN INPUT OF PROPER AMPLITUDE, FREQUENCY AND
- CURRENT,

  ( ) 3.07 REQUIRED VALUES DISPLAYED ON APPROPRIATE TEST
  EQUIPMENT

| •                          | MISOE- NO.  |                |  |  |
|----------------------------|-------------|----------------|--|--|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 01 | CIRCUIT        |  |  |
| USOE CODE NO(S)            | UNIT 02     | CHASSIS WIRING |  |  |
|                            | TERMOB NO.  | 13-006         |  |  |
|                            |             |                |  |  |
| 1 00 CONDITION             |             |                |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

|                         | MISOE  | иÖ.  | . <del></del>  |                     |                    |             | •                      |
|-------------------------|--------|--|----------------|---------------------|--------------------|-------------|------------------------|
|                         |        |  |                |                     | ,                  |             |                        |
|                         | PROGR  | ΔM   | <b>ድኒድ</b> ሮጥם | ONICS               | DIVISION           | 01          | CIRCUIT                |
|                         | FAUGIO |  | Buscin         | 0.1100              | ,                  |             | CONSTRUCTION           |
|                         |        |  | <del></del>    |                     | UNIT               | 03          | PRINTED CIRCUIT        |
|                         |        | •  |                |                     |                    |             | BOARD                  |
|                         |        |  |                |                     | TERMOB NO          |             | 13-007                 |
|                         |        |  |                | -                   |                    |             |                        |
|                         |        |  |                | •                   |                    |             |                        |
|                         |        |  |                | •                   |                    |             | ^ ·                    |
|                         | 1.00   | CONT   | DITION         | · ·                 |                    |             |                        |
|                         | 1.00   | CO111  |                |                     | •                  |             |                        |
|                         |        | , ,  | 1 01           | SCHEMATIC DIAGRAM   | OF A FIIT.T. WAY   | VE R        | ECTIFIER CIRCUIT       |
| *                       |        | ( )  | 1.01           |                     | or harden has      |             |                        |
|                         |        | ( )  | 1.02           | RESISTORS           |                    |             |                        |
|                         |        | ( )  | 1.03           | CAPACITORS          |                    |             |                        |
|                         |        | ( )  | 1.04           | INDUCTORS           |                    |             |                        |
|                         | χ.     | ( )  | 1.05           | DIODES              |                    |             |                        |
|                         |        | ( )  | 1.06           | TRANSFORMERS        |                    |             |                        |
|                         | ·      | ( )  | 1.07           | COPPER CLAD EPOXY   | OR PHENOLIC        | BOAF        | RD                     |
|                         |        | ( )  | 1.08           | CHASSIS             |                    |             |                        |
| •                       | •      | ()   | 1.09           | POWER SUPPLY        | •                  |             |                        |
| ,                       |        | <i>( )</i>                                       | 1.10           | ASSOCIATED HARDWAR  | E AS NEEDED        | 14          |                        |
|                         |        | ii   | 1.11           | BASIC ELECTRONICS   | TOOLS AND EQ       | UIPN        | MENT (TABLE T-3)       |
|                         |        | ` '  |                | ,                   |                    |             |                        |
|                         |        |  |                | _                   | •                  | r           | ,                      |
| ,                       | 2.00   | PERI   | FORMANCI       | ⊡                   |                    | ,           |                        |
|                         | 2.00   | 1 21.  | . 011111       | _                   |                    |             | ·                      |
|                         |        |  |                |                     |                    |             |                        |
|                         |        | ı  |                |                     | 9                  |             |                        |
| *-                      |        | GEN  | ERAL ST        | ATEMENT OF PERFORMA | NCE AND RESU       | LTI         | NG OUTCOME             |
|                         |        | 77   | 2.01           | CONSTRUCT A SOLID   | STATE RECTIF       | IER         | CIRCUIT INTO A         |
|                         |        | ` ′  | _,,_           | CHASSIS USING PRIN  | TED CIRCUIT        | <u>BOAI</u> | RD TECHNIQUES          |
|                         |        | 1  |                | EMPLOYING THE FOLL  | OWING OPERAT       | IONS        | S:                     |
| •                       |        |  |                | · E                 |                    |             |                        |
|                         |        | <del>'                                    </del> | 2.02           | SELECT PROPER MATE  | RIALS AND CC       | . iPOi      | NENTS                  |
|                         |        | i i  | 2.03           | ,                   | ARD FOR COMP       | ONE         | NT INSTALLATION        |
|                         |        | 15   | 2.04*          | ASSEMBLE CIRCUIT    | ,                  |             |                        |
|                         |        | 7.5  | 2.05           |                     | RD TO CHASSI       | S           |                        |
|                         |        | 7 5  | 2.06           |                     | *                  |             |                        |
|                         |        | , ,  | 2.07           |                     |                    |             |                        |
|                         |        | ( )  | 2.08           | DEMONSTRATE PROPER  | OPERATION O        | Ė T         | HE CIRCUIT             |
|                         |        | ( )  | 2.00           | DEMONDINATE THEFT   |                    |             |                        |
|                         |        |  |                |                     |                    |             | •                      |
| •                       | 3.00   | EVM  | ENT            | •                   |                    |             |                        |
|                         | 3.00   | EXI  | ENI            | •                   |                    |             |                        |
|                         |        |  |                |                     | The winds the same | •           |                        |
|                         | ,      |  |                |                     | <del></del>        |             |                        |
|                         | •      | GEN  | ERAL ST        | ATEMENT OF EXTENT A | ND EXTENT OF       | RE          | SULTING OUTCOME        |
|                         |        | 1 77   | 3.01           | CIRCUIT IS SOUND A  | ND PRODUCES        | AN (        | OUTPUT THAT IS STABLE  |
| •                       |        | ` '  | 3,01           | AND OF AN EXPECTED  | NATURE TO T        | HE .        | APPROVAL OF A BOARD OF |
|                         |        |  |                | EXPERT RATERS. TO   | BE COMPLETE        | D W         | ITHIN 10 HOURS WITH    |
| 7                       |        |  |                | EACH OPERATION JUL  | GED AS SATIS       | FAC         | TORY OR UNSATISFACTORY |
|                         |        | i  |                | 2                   |                    |             |                        |
|                         |        | 4  | 3.02           | TO PRODUCE A RUGGE  | D, RELIABLE        | AND         | SAFE ASSEMBLY          |
|                         |        | ()   |                | ALL HOLES DRILLED   | TO PROPER SI       | ZE.         | BOARD ETCHED TO        |
|                         |        | ` '  |                | PROVIDE SIMPLES     | T NETWORK US       | ING         | ACCEPTED TECHNIQUES    |
| •                       |        | ( )  | 3.04           | SOLDER CONNECTIONS  | SHALL BE ST        | RON         | G AND NEAT. ALL        |
| ٠.                      |        | ` '  | J, U :         | HARDWARE SHALL      | BE SECURE          |             |                        |
| •                       |        | ( )  | 3.05           | SECURELY            |                    |             |                        |
|                         | "      | ()   | 3 06           | WITH AN APPROPRIAT  | E DEVICE FOR       | PR          | OPER OPERATION         |
|                         |        | <i>i</i> • •                                     | 3.07           | WITH AN INPUT OF P  | ROPER AMPLIT       | UDE         | AND FREQUENCY          |
|                         | 67     | ( )  | 3.08           | REQUIRED VALUES DI  | SPLAYED ON-A       | PPR         | OPRIATE TEST EQUIPMENT |
|                         | O'.    | ( )  | 3.00           |                     |                    | *           |                        |
| ERI(                    |        |  |                |                     |                    |             |                        |
| Full Text Provided by E | RIC    | ,  |                |                     |                    |             |                        |

|                     | MISOE NO. |      |                       |  |  |
|---------------------|-----------|------|-----------------------|--|--|
| PROGRAM ELECTRONICS | DIVISION  | 01 _ | CIRCUIT               |  |  |
| USOE CODE NO(S)     | UNIT      | 03_  | PRINTED CIRCUIT BOARD |  |  |
|                     | TERMOB NO | • -  | 13-007                |  |  |
| 1 00 CONDITTION     | •         |      |                       |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.  |  | .,                                       |                   | ,   |
|--------|--|--|--|-------------------|---|
| PROGRA | AM ELECTI  | RONICS   | DIVISION                                 | 01                | CIRCUIT<br>CONSTRUCTION   |
|        |  | -  | UNIT                                     | 03                | PRINTED CIRCUIT BOARD   |
| •      |  |  | TERMOB NO                                | ٥.                | 13-008  |
|        |  |  |  |                   |   |
| 1.00   | CONDITION  |  |  |                   | :   |
|        | () 1.02<br>() 1.03<br>() 1.04<br>() 1.05<br>() 1.06<br>() 1.07<br>() 1.08<br>() 1.09 | SCHEMATIC DIAGRAM ORESISTORS CAPACITORS TRANSISTORS AUDIO OSCILLATOR SPEAKER POWER SUPPLY COPPER CLAD EPOXY OCHASSIS ASSOCIATED HARDWARE BASIC ELECTRONICS T | R PHENOLIC                               | BOAF              | RD  |
| 2.00   | PERFORMANO   | E  |  |                   |   |
| [      |  | ATEMENT OF PERFORMAN   | CE AND RESU                              | <br>JLTIN         | NG OUTCOME  |
|        | ( <u>)</u> 2.01  | CONSTRUCT A SOLID S CHASSIS USING PRINT EMPLOYING THE FOLLO  | ED CIRCUIT                               | BOA               | RD TECHNIQUES   |
|        | () 2.02<br>() 2.03<br>() 2.04  |  | ARD FOR COME                             | PONE              | NENTS<br>NT INSTALLATION  |
| 4. st  | () 2.06  | LOAD CIRCUIT ENERGIZE CIRCUIT DEMONSTRATE PROPER   |  |                   | •   |
| 3.00   | EXTENT   |  |  |                   | -   |
|        | GENERAL S'   | CTABLE AND OF AN E   | ND PRODUCES<br>XPECTED NAT<br>TERS. TO B | AN<br>URE<br>E CO | OUTPUT THAT IS<br>TO THE APPROVAL OF A<br>MPLETED WITHIN 8 HOUR |
|        | () 3.02<br>() 3.03<br>() 3.04  | SOLDER CONNECTIONS   | TO PROPER S<br>T NETWORK U<br>SHALL BE S | IZE.<br>SING      | ACCEPTED TECHNIQUES   |
| C      | () 3.05  | HARDWARE SHALL SECURELY WITH AN APPROPRIAT   |  | R PR              | OPER OPERATION  |

| ( ) | 1.01 | SCHEMATIC DIAGRAM OF A SOLID STATE VOLTAGE AMPLIFIER |
|-----|------|--|
| ( ) | 1.02 | RE\$ISTORS   |
| ( ) | 1.03 | CAPACITORS   |
| ( ) | 1.04 | TRANSISTORS  |
| ( ) | 1.05 | AUDIO OSCILLATOR                                     |
| ( ) | 1.96 | SPEAKER  |
| ( ) | 1.07 | POWER SUPPLY   |
| ( ) | 1.08 | COPPER CLAD EPOXY OR PHENOLIC BOARD                  |
| ( ) | 1.09 | CHASSIS  |
| ( ) | 1.10 | ASSOCIATED HARDWARE AS NEEDED                        |
| ( ) | 1.11 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)    |
|     |      |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME CONSTRUCT A SOLID STATE VOLTAGE AMPLIFIER INTO A 2.01 CHASSIS USING PRINTED CIRCUIT BOARD TECHNIQUES: EMPLOYING THE FOLLOWING OPERATIONS: SELECT PROPER MATERIALS AND COMPONENTS 2.02 PREPARE CIRCUIT BOARD FOR COMPONENT INSTALLATION 2.03 ASSEMBLE CIRCUIT 2.04 SECURE CIRCUIT BOARD TO CHASSIS 2.05 2.06 LOAD CIRCUIT ENERGIZE CIRCUIT 2.07 DEMONSTRATE PROPER OPERATION OF THE CIRCUIT 2.08

#### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME CIRCUIT IS SOUND AND PRODUCES AN OUTPUT THAT IS 3.01 STABLE AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY 3.02 ALL HOLES DRILLED TO PROPER SIZE. BOARD ETCHED TO 3.03 PROVIDE SIMPLEST NETWORK USING ACCEPTED TECHNIQUES SOLDER CONNECTIONS SHALL BE STRONG AND NEAT. 3.04 HARDWARE SHALL BE SECURE SECURELY 3.05 WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION 3.06 WITH AN INPUT OF APPROPRIATE AMPLITUDE AND FREQUENCY 3.07 REQUIRED VALUES DISPLAYED ON APPROPRIATE TEST **EQUIPMENT** 

7(1)

|                     |             | M  | IISOE NO        |
|---------------------|-------------|----|-----------------|
| PROGRAM ELECTRONICS | DIVISION    | 01 | CIRCUIT         |
|                     |             | _  | CONSTRUCTION    |
| USOE CODE NO(\$)    | UNIT        | 03 | PRINTED CIRCUIT |
|                     | <del></del> |    | BOARD           |
|                     | TERMOB NO.  |    | 13-008          |
|                     |             | _  |                 |
|                     | <del></del> |    |                 |
|                     | •           |    |                 |
| 1 AA GONDERTON      |             |    |                 |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE      | NO.            |                        |             |      |  |
|------------|----------------|------------------------|-------------|------|--|
|            |                |                        |             |      |  |
| 22000      | W 57.5.05      | DONICS                 | DIVISION    | 01   | CIRCUIT                                |
| PROGRA     | M <u>ELECT</u> | RONICS                 | D1 (1010)   | -    | CONSTRUCTION                           |
|            |                |                        | UNIT        | 03   | PRINTED CIRCUIT                        |
|            |                |                        |             | •    | BOARD                                  |
|            |                |                        | TERMOB NO   | ).   | 13-009                                 |
|            |                | 1                      | •           |      |  |
|            |                |                        |             |      |  |
|            |                | •                      |             |      |  |
| 1.00       | CONDITION      |                        |             |      |  |
|            |                |                        | ·           |      |  |
|            | () 1.01        | SCHEMATIC DIAGRAM OF   | A TUNED H   | ARTI | EY OSCILLATOR                          |
|            | () 1.02        | SCHEMATIC DIAGRAM OF   | A PHASE SI  | HIFT | OSCILLATOR                             |
|            | () 1.03        | SCHEMATIC DIAGRAM OF   | A MULTIVI   | BRAT | OR OSCILLATOR                          |
|            | () 1.04        | SCHEMATIC DIAGRAM OF   | A WEINBRI   | DGE  | OSCILLATOR                             |
| •          | () 1.05        | SCHEMATIC DIAGRAM OF   | A CRYSTAL   | osc  | CILLATOR                               |
|            | () 1.06        | SCHEMATIC DIAGRAM OF   | A RELAXAT   | ION  | OSCILLATOR                             |
| · <u>-</u> | () 1.07        | SCHEMATIC DIAGRAM OF   | A COLPITT   | s os | CILLATOR                               |
|            | () 1.08        | RESISTORS              |             |      |  |
|            | () 1.09        | CAPACITORS             |             |      |  |
|            | () 1.10        | INDUCTORS              |             |      |  |
|            | () 1.11        | TRANSISTORS            |             |      |  |
|            | () 1.12        | POWER SUPPLY           |             |      | . ·                                    |
|            | () 1.13        | COPPER CLAD EPOXY OR   | PHENOLIC    | BOA  | RD                                     |
|            | () 1.14        | CHASSIS                |             |      |  |
| -          |                | ASSOCIATED HARDWARE    | AS NEEDED   |      | TOUTDMENT (TARLE T-3)                  |
|            | () 1.16        | BASIC ELECTRONICS TO   | OLS AND TE  | ST   | EQUIPMENT (TABLE T-3)                  |
|            |                |                        |             |      |  |
| -          | _              | · · - ·                |             |      |  |
| 2.00       | PERFORMANO     | CE                     |             |      |  |
|            | -4             |                        |             |      |  |
| •          |                |                        |             |      |  |
| I          | CENEDAT C      | TATEMENT OF PERFORMANC | E AND RESU  | LTI  | NG OUTCOME                             |
|            | ( ) 2.01       | CONSTRUCT AN OSCILLA   | TOR CIRCUI  | T I  | NTO A CHASSIS USING                    |
| }          | ( ) 2.01       | PRINTED CIRCUIT BOAR   | D TECHNIOU  | ES I | EMPLOYING THE                          |
|            |                | FOLLOWING OPERATIONS   |             |      | ·                                      |
|            |                | TODDOWING OF DIGITIONS | . •         |      |  |
| 1          | () 2.02        | SELECT PROPER MATERI   | ALS AND CO  | MPO  | NENTS                                  |
| •          | () 2.03        | PREPARE CIRCUIT BOAF   | D FOR COMP  | ONE  | NT INSTALLATION                        |
|            | () 2.04        | ASSEMBLE CIRCUIT       |             |      |  |
|            | () 2.05        |                        | TO CHASSI   | S    |  |
|            |                | LOAD CIRCUIT           |             |      |  |
|            | () 2.07        | ENERGIZE CIRCUIT       |             |      | `                                      |
|            | () 2.08        | DEMONSTRATE PROPER C   | PERATION C  | OF T | HE CIRCUIT                             |
|            | •              | •                      | •           |      |  |
|            |                | <b>₹</b>               |             |      |  |
| 3.00       | EXTENT         |                        |             |      |  |
|            |                |                        |             |      |  |
|            | •              |                        |             |      |  |
|            |                |                        |             |      | CULTURA OUTOONE                        |
|            |                | TATEMENT OF EXTENT AND | EXTENT OF   | RE   | SULTING OUTCOME                        |
| !          | () 3.01        | CIRCUIT IS SOUND AND   | PRODUCES    | AN   | MO WAR YDDDOAY! OF Y                   |
|            |                | STABLE AND OF AN EXI   | PECTED NATU | JRE  | TO THE APPROVAL OF A                   |
|            |                | BOARD OF EXPERT RATE   | ERS. TO BI  | E CO | YC CYMICEYCMODA OD<br>WKTEIEN MIIUIN O |
|            |                | HOURS WITH EACH OPE    | KATION JUDO | עבנ  | AS SHIISTACIORI OR                     |

TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY

ALL HOLES DRILLED TO PROPER SIZE. BOARD ETCHED TO

PROVIDE SIMPLEST NETWORK USING ACCEPTED TECHNIQUES

UNSATISFACTORY

3.02 3.03

ERIC
Full Text Provided by ERIC

| •    | ( ) 1.02<br>( ) 1.03<br>( ) 1.04<br>( ) 1.05<br>( ) 1.06<br>( ) 1.07<br>( ) 1.08<br>( ) 1.09<br>( ) 1.10<br>( ) 1.11<br>( ) 1.12<br>( ) 1.13<br>( ) 1.14 | SCHEMATIC DIAGRAM OF A WEINBRIDGE OSCILLATOR SCHEMATIC DIAGRAM OF A CRYSTAL OSCILLATOR SCHEMATIC DIAGRAM OF A RELAXATION OSCILLATOR SCHEMATIC DIAGRAM OF A COLPITTS OSCILLATOR RESISTORS CAPACITORS INDUCTORS TRANSISTORS POWER SUPPLY COPPER CLAD EPOXY OR PHENOLIC BOARD |
|------|--|--|
| 2.00 | PERFORMANC   | E  |
|      | GENERAL ST   | CATEMENT OF PERFORMANCE AND RESULTING OUTCOME  CONSTRUCT AN OSCILLATOR CIRCUIT INTO A CHASSIS USING PRINTED CIRCUIT BOARD TECHNIQUES EMPLOYING THE FOLLOWING OPERATIONS:   |
|      | () 2.03<br>() 2.04<br>() 2.05<br>() 2.06   | SELECT PROPER MATERIALS AND COMPONENTS PREPARE CIRCUIT BOARD FOR COMPONENT INSTALLATION ASSEMBLE CIRCUIT SECURE CIRCUIT BOARD TO CHASSIS LOAD CIRCUIT ENERGIZE CIRCUIT DEMONSTRATE PROPER OPERATION OF THE CIRCUIT   |
| 3.00 | EXTENT   |  |
|      | GENERAL ST   | CIRCUIT IS SOUND AND PRODUCES AN OUTPUT THAT IS STABLE AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 8 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY  |
|      | () 3.02<br>() 3.03<br>() 3.04  | ALL HOLES DRILLED TO PROPER SIZE. BOARD ETCHED TO PROVIDE SIMPLEST NETWORK USING ACCEPTED TECHNIQUES   |
|      | () 3.05<br>() 3.06<br>() 3.07<br>() 3.08   | SECURELY WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION WITH AN INPUT OF APPROPRIATE AMPLITUDE  |



2.

| •                   |               | MISOE NO.                      |  |  |  |  |
|---------------------|---------------|--------------------------------|--|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 0    |                                |  |  |  |  |
|                     |               | CONSTRUCTION 3 PRINTED CIRCUIT |  |  |  |  |
| USOE CODE NO(S)     | UNIT 0        | BOARD                          |  |  |  |  |
|                     | TERMOB NO.    | 13-009                         |  |  |  |  |
|                     | _ <del></del> |                                |  |  |  |  |
| <del></del>         | <del></del>   |                                |  |  |  |  |
| 1.00 CONDITION      |               | •                              |  |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT

| MISOE  | NO.  |  | <u> </u>                                       | 4   |
|--------|--|--|--|---|
| PROGRA | AM ELECT F   | CONICS   | DIVISION 01 UNIT 03                            | CONSTRUCTION PRINTED CIRCUIT  |
|        |  | •  | TERMOB NO.                                     | 13-010  |
| 1.00   | CONDITION  |  | ٠  |   |
| •      | () 1.04<br>() 1.05<br>() 1.06<br>() 1.07<br>() 1.08<br>() 1.09 | DISPLAY LAMPS LED'S TIMING DIAGRAM POWER SUPPLY ASSOCIATED HARDWARE  | AS NEEDED                                      |   |
| 2.00   | PERFORMANC   | E .  |  | •   |
|        | GENERAL ST   | ATEMENT OF PERFORMANC<br>CONSTRUCT A DIGITAL<br>BOARD EMPLOYING THE  | LOGIC CIRCULA                                  | ON A PRINTED CIRCUIT  |
| 1      | () 2.03<br>() 2.04<br>() 2.05<br>() 2.06                       | SELECT PROPER MATERI<br>PREPARE CIRCUIT BOAR<br>ASSEMBLE CIRCUIT<br>LOAD CIRCUIT<br>ENERGIZE CIRCUIT<br>DEMONSTRATE PROPER O | RD FOR COMPONE                                 | ENT INSTALLATION  |
| 3.00   | EXTENT   |  | •  |   |
|        | GENERAL ST   | ATEMENT OF EXTENT AN   | D EXTENT OF RI                                 | ESULTING OUTCOME<br>OUTPUT THAT IS STABLE                               |
|        | ( ) 3.01   | AND OF AN EXPECTED DOES EXPERT RATERS.   | NATURE TO THE<br>TO BE COMPLET                 | APPROVAL OF A BOARD<br>ED WITHIN 15 HOURS WIT<br>CTORY OR UNSATISFACTOR |
|        | () 3.02<br>() 3.03<br>() 3.04                                  | ALL HOLES DRILLED TO<br>PROVIDE SIMPLEST<br>SOLDER CONNECTIONS   | O PROPER SIZE<br>NETWORK USIN<br>SHALL BE STRO | . BOARD ETCHED TO G ACCEPTED TECHNIQUES                                 |
|        | ( ) 3.05<br>( ) 3.06   | WITH AN INPUT OF PR  | DEVICE FOR P                                   | ROPER OPERATION<br>E AND CURRENT  |
| C .    | ( ) 3.07   | CHARACTERISTICS REQUIRED VALUES DIS CONFORMANCE WITH   | PLAYED ON APP<br>TIMING DIAGR                  | ROPRIATE EQUIPMENT IN AM.   |

| ( ) | 1.01 | LOGIC DIAGRAM WITH IN-LINE INTEGRATED CIRCUITS   |    |
|-----|------|--|----|
| ( ) | 1.02 | COPPER CLAD BOARD                                |    |
| ()  | 1.03 | RESISTORS  | ,  |
| ( ) | 1.04 | CAPACITORS                                       |    |
| ( ) | 1.05 | IC'S   |    |
| ( ) | 1.06 | DISPLAY LAMPS                                    |    |
| ( ) | 1.07 | LED'S  |    |
| ( ) | 1.08 | TIMING DIAGRAM                                   |    |
| ( ) | 1.09 | POWER SUPPLY                                     |    |
| ( ) | 1.10 | ASSOCIATED HARDWARE AS NEEDED                    |    |
| ( ) | 1.11 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3 | 5) |

| () 2.01 C  | EMENT OF PERFORMANCE AND RESULTING OUTCOME ONSTRUCT A DIGITAL LOGIC CIRCUIT ON A PRINTED CIRCUIT OARD EMPLOYING THE FOLLOWING PROCEDURE:                                     |
|--|--|
| В  | OAKD EMPLOYING THE FOLEOWING PROCEDURG:  |
| () 2.03 P<br>() 2.04 A<br>() 2.05 L<br>() 2.06 E | ELECT PROPER MATERIALS AND COMPONENTS REPARE CIRCUIT BOARD FOR COMPONENT INSTALLATION SSEMBLE CIRCUIT OAD CIRCUIT NERGIZE CIRCUIT EMONSTRATE PROPER OPERATION OF THE CIRCUIT |

#### 3.00 EXTENT

3.07

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME CIRCUIT IS SOUND AND PRODUCES AN OUTPUT THAT IS STABLE AND OF AN EXPECTED NATURE TO THE APPROVAL OF A BOARD TO BE COMPLETED WITHIN 15 HOURS WITH OF EXPERT RATERS. EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY TO PRODUCE A RUGGED, RELIABLE AND SAFE ASSEMBLY 3.02 BOARD ETCHED TO ALL HOLES DRILLED TO PROPER SIZE. 3.03 PROVIDE SIMPLEST NETWORK USING ACCEPTED TECHNIQUES SOLDER CONNECTIONS SHALL BE STRONG AND NEAT. HARDWARE SHALL BE SECURE 3.04 WITH AN APPROPRIATE DEVICE FOR PROPER OPERATION 3.05 WITH AN INPUT OF PROPER AMPLITUDE AND CURRENT 3.06 CHARACTERISTICS

REQUIRED VALUES DISPLAYED ON APPROPRIATE EQUIPMENT IN

76

CONFORMANCE WITH TIMING DIAGRAM.



| •                   |           | M          | 150E NO          |         |
|---------------------|-----------|------------|------------------|---------|
| PROGRAM FLECTRONICS | DIVISION  | 01 _       | CIRCUIT          |         |
|                     | /15/TM    |            | CONSTRUC         |         |
| USOE CODE NO(S)     | UNIT      | 03_        | PRINTED<br>BOARD | CIRCUIT |
|                     | TERMOB NO | · <u> </u> | 13-010           |         |
|                     |           | •          |                  | •       |
|                     |           | 4          | •                |         |
| 1 00 CONDITTON      |           |            |                  |         |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.   | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\                               |   | 1                       | -                                  |                        |                                |                  |
|--|---|--|---|-------------------------|------------------------------------|------------------------|--------------------------------|------------------|
| PROGRA   | AM  | ELECT  | RONICS  | •<br>•                  | DIVISION UNIT TERMOB NO            | 04                     | CIRCUIT CONSTRUCTION WIRE WRAP | ON .             |
| 1.00   | COND  | ĮTION  | æ   |                         |                                    |                        |                                |                  |
| The second secon | ( )<br>( )<br>( )<br>( )<br>( )<br>( )<br>( )   | 1.01<br>1.02<br>1.03<br>1.04<br>1.05<br>1.06<br>1.07<br>1.08<br>1.09 | WIREWRAP GUN SLEEVES AND BITS IC'S POWER SUPPLY TIMING DIAGRAM  | FOR                     | WIREWRAPP                          | PING                   |                                |                  |
| 2.00   | PERF  | FORMANC  | Е   |                         |                                    | •                      |                                |                  |
|  | GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME  ( ) 2.01 CONSTRUCT A DIGITAL LOGIC CIRCUIT ON A WIREWRAP BOARD EMPLOYING THE FOLLOWING PROCEDURE: |  |   |                         |                                    |                        |                                |                  |
|  | ()  | 2.03<br>2.04<br>2.05   | SELECT PROPER MA ASSEMBLE AND WIR INSTALL IC'S ENERGIZE CIRCUIT DEMONSTRATE PROP                      | EWRAF                   | BOARD                              |                        |                                |                  |
| 3.00   | EXT   | ENT  |   |                         |                                    |                        |                                |                  |
| •  | GEN:  | ERAL ST  | CATEMENT OF EXTENT CIRCUIT IS SOUND AND OF AN EXPECT OF EXPERT RATERS WITH EACH OPERAT UNSATISFACTORY | AND<br>ED NA            | PRODUCES<br>ATURE TO<br>BE COMP    | AN (<br>THE .<br>LETE: | APPROVAL OF D WITHIN 12        | A BOARD<br>HOURS |
|  | ()  | 3.03<br>3.04<br>3.05   | TO PRODUCE THE FENSURING SAFE AN NEATLY. FREE OF WITH AN INPUT OF ACTERISTICS REQUIRED VALUES         | ND REI<br>FANY<br>FPROI | LIABLE OP<br>LOOSE WR<br>PER POLAR | ERAT<br>APS<br>.ITY    | AND OUTPUT                     |                  |

| Ċ.                         | ,           |                         |
|----------------------------|-------------|-------------------------|
| PROGRAM <u>FLECTRONICS</u> | DIVISION 01 | CIRCUIT<br>CONSTRUCTION |
| USOE CODE NO(S)            | UNIT 04     | WIRE WRAP               |
|                            | TERMOB NO.  | 13-011                  |
|                            |             |                         |
| 1.00 CONDITION             |             | •                       |

MISOE NO.

# 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

|       |                  | *C.pr                                | ¢                          |                  | ,   |
|-------|------------------|--------------------------------------|----------------------------|------------------|---|
| MISOE | NO.              | ·                                    |                            |                  |   |
|       |                  |                                      |                            | •                |   |
| PROCE | AM ELEC          | TRONTCS                              | DIVISI                     | ON 01            | CIRCUIT                                   |
| PROGR | An EDEC          | TRONICS                              |                            |                  | CONSTRUCTION                              |
|       |                  | •                                    | UNIT                       | 04               |   |
| 4     | <del>-</del> ;   |                                      |                            | '                |   |
| į     |                  |                                      | TERMOB                     | NO.              | 13-012                                    |
| 4     |                  |                                      |                            | 1                |   |
|       | •                |                                      | ,                          |                  |   |
| 1.00  | CONDITION        | Ī                                    |                            |                  |   |
|       | \$               |                                      |                            |                  | • .                                       |
|       | () 1.01          |                                      |                            | LOG IC           | CIRCUIT                                   |
|       | (4) 1.02         |                                      | •                          |                  | •   |
|       | ( ) 1.03         |                                      |                            |                  |   |
|       | () 1.0           |                                      | FOR WIREWRA                | APPING           |   |
|       | ( )\ 1.00        |                                      |                            |                  |   |
|       | () 1.0           |                                      |                            |                  | 4.  |
|       | ( ) 1.08         | B ASSOCIATED HARDW                   | VARE AS NEEDI              | ED               | (======================================   |
| •     | ( ) \ 1.09       | BASIC ELECTRONIC                     | S TOOLS AND                | EQUIP            | MENT (TABLE T-3)                          |
|       |                  |                                      |                            |                  |   |
| 2.00  | PERFORMAL        | NCE                                  |                            | •                | ,   |
| 2.00  | PERFURMA         | ·                                    |                            |                  |   |
|       | 100              |                                      | _                          |                  |   |
|       |                  |                                      |                            |                  |   |
|       |                  | STATEMENT OF PERFOR                  | RMANCE AND RI              | ESULTI           | NG OUTCOME                                |
|       | ( ) 2.0          | CONSTRUCT AN ANA<br>EMPLOYING THE FO | ALOG CIRCUIT               | ON A             | WIREWRAP BOARD                            |
|       | * 1              | EMPLOYING THE FO                     | DELOWING OPE               | RATION           | <b>.</b>                                  |
|       | () 2.0           | SELECT PROPER MA                     | ATERIALS AND               | COMPO            | NENTS                                     |
|       | () 2.0           |                                      |                            |                  |   |
|       | () 2.0           | 4 INSTALL IC'S                       |                            |                  |   |
|       | () 2.0!          | ENERGIZE CIRCUIT                     | r                          |                  | ·   |
|       | () 2.0           | DEMONSTRATE PROP                     | PER OPERATION              | N OF T           | HE CIRCUIT                                |
|       |                  |                                      |                            |                  | •   |
| 3.00  | EXTENT           | •                                    |                            |                  |   |
| 3.00  | EXIENI           |                                      | Š                          |                  |   |
|       | •                |                                      |                            |                  |   |
|       |                  |                                      |                            |                  |   |
|       | GENERAL          | STATEMENT OF EXTENT                  | r AND EXTENT               | OF RE            | SULTING OUTCOME                           |
|       | ( ) 3.0          | I CIRCUIT IS SOUND                   | D AND PRODUC.              | C THE            | OUTPUT THAT IS STABLE APPROVAL OF A BOARD |
|       |                  | OF EXPERT RATERS                     | S. TO BE CO                | MPLETE           | D WITHIN 12 HOURS WITH                    |
|       | }                | EACH OPERATION                       | JUDGED AS SA               | TISFAC           | TORY OR UNSATISFACTORY                    |
|       | 1/               | •                                    |                            |                  |   |
|       | () 3.0           |                                      |                            | CUIT I           | N THE MOST                                |
| •     | <b>j</b>         | ECONOMICAL WA                        | AY                         | * ****           | ODERATION                                 |
|       | () 3.0           |                                      |                            |                  | OPERATION                                 |
|       | () 3.0           |                                      | L DBUDED DUL<br>VANT FOODE | M LAND<br>VTTG A | AMPLITUDE AND OUTPUT                      |
|       | ∦() 3.0          | CHARACTERIST                         |                            | *****            |   |
| ,     | <i>.</i> ( ) 3 0 |                                      |                            | N APPR           | OPRIATE TEST EQUIPMENT                    |

| PROGRAM     | ELECTRONICS | DIVISION     | 01   | CIRCUIT      |  |
|-------------|-------------|--------------|------|--------------|--|
| 1 Koolasi _ |             | <b>-</b>     |      | CONSTRUCTION |  |
| USOE CODE   | NO(S)       | UNIT         | 04 _ | WIREWRAP     |  |
| •           |             | TERMOB NO    |      | 13-012       |  |
|             |             | <del>-</del> | -    |              |  |
|             |             | <del>-</del> |      |              |  |
| 1.00 CON    | DITION      | ·            |      |              |  |

MISOE NO.

2.00

PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE NO                                 | ·• <del></del>  |  |  |                        |  |
|--|---|--|--|------------------------|--|
| PROGRAM.                                 | ELECTI  | RONICS   | DIVISION   | 01                     | CIRCUIT  |
| •  |   | •  | UNIT   | 05                     | WAVEGUIDE  |
|  |   | . *<br>•   | TERMOB NO  |                        | 13-013   |
| •  |   |  |  |                        |  |
| 1.00 CO                                  | NDITION   | •  |  |                        |  |
| 1.00                                     | . *   |  |  | n •~··                 | COMPA  |
|  | ) 1.03.<br>) 1.04<br>) 1.05<br>) 1.06<br>) 1.07<br>) 1.08<br>) 1.09<br>) 1.10<br>) 1.11<br>) 1.12 | DIAGRAM OF MICROV<br>DIAGRAM OF MICROV<br>DIAGRAM OF RADAR<br>DIAGRAM OF HIGH I<br>KLYSTRON TUBE<br>WAVEGUIDE DIODE I<br>X BAND CONVERTER<br>DISCRIMINATOR<br>AMPLIFIER<br>BARRETTER<br>POWER BRIDGE<br>POWER SUPPLIES<br>SLOTTED LINE | VAVE TRANSMITT TRANSMITTER S FREQUENCY SPEC PROBE AND HOLD | ER S<br>YSTE<br>TRUM   | YSTEM<br>M   |
| · · (. · · (. · · · · · (. · · · · · · · | ) 1.15<br>) 1.16<br>) 1.17<br>) 1.18  | WAVEGUIDE TO COA<br>FREQUENCY METER<br>BALOMETER<br>POWER METER<br>COUPLERS<br>ASSOCIATED HARDW<br>BASIC ELECTRONIC  | ARE AS NEEDED  | UIP                    | MENT (TABLE T-3)   |
| 2.00 P                                   | ERFORMANC   | <b>E</b>   |  | ·•                     |  |
| GI                                       | ENERAL ST   | ATEMENT OF PERFOR CONSTRUCT A MICR THE FOLLOWING OP  | OWAVE WAVEGUID   | LTII<br>DE CI          | NG OUTCOME<br>HASSIS EMPLOYING                               |
| (  | ) 2.02<br>) 2.03<br>) 2.04<br>) 2.05  | SELECT PROPER CO<br>ASSEMBLE WAVEGUI<br>ENERGIZE CIRCUIT<br>DEMONSTRATE PROP   | DE CIRCUIT   |                        | · · · · · · · · · · · · · · · · · · ·                        |
| 3.00 E                                   | XTENT   |  |  |                        | •  |
| G  | ENERAL ST   | OF BOARD OF EXPE<br>HOURS WITH EACH<br>UNSATISFACTORY  | AN OUTPUT THA<br>RT RATERS. TO<br>OPERATION JUDG           | AT IS<br>D BE<br>GED . | S EXPECTED TO APPROVAL COMPLETED WITHIN 8 AS SATISFACTORY OR |
|  | ) 3.02  | TO PRODUCE THE S   | IMPLEST CIRCU  | IŤ I                   | N THE MOST ECONOMICAL  |
| by ERIC (                                | )· 3.03<br>) 3.04   |  | AND RELIABLE   | OPE                    | RATION   |

| ( | )   |   | 1.01 | DIAGRAM OF MICROWAVE OSCILLATOR SYSTEM            |     |
|---|-----|---|------|---|-----|
| ì | Vi. |   | 1.42 | DIAGRAM OF MICROWAVE TRANSMITTER SYSTEM           |     |
| į | Ŋ   |   | 03   | DIAGRAM OF RADAR TRANSMITTER SYSTEM               |     |
| į | ij  |   | 1.04 | DIAGRAM OF HIGH FREQUENCY SPECTRUM ANALYZER       |     |
| į | j   |   | 1.05 | KLYSTRON TUBE                                     |     |
| į | )   |   | 1.06 | WAVEGUIDE DIODE PROBE AND HOLDER                  |     |
| ( | )   |   | 1. 2 | X BAND CONVERTER                                  |     |
| ( | )   |   | 1.08 | DISOR INATOR                                      |     |
| ( | )   |   | 1.09 |   | ٠., |
| ( | )   |   | 1.10 | SARRETT 1922 (A                                   |     |
| ( | )   |   | 1.11 | POWER BRIDGE                                      |     |
| ( | )   |   | 1.12 | SUPPLIES  |     |
| ( | )   |   | 1.13 | SLOTTED LINE                                      |     |
| ( | )   |   | 1.14 | WAVEGUE TO TOAK ADAPTER                           |     |
| ( | )   |   | 1.15 | FREQUENCY MITER                                   |     |
| ( | . ) | l | 1.16 | BALOMETER ** ·                                    |     |
| ( | )   | • | 1.17 | POWER METER                                       |     |
| ( | )   | 1 | 1.18 | COUPLERS  |     |
| ( | )   | 1 | 1.19 | ASSOCIATED HARDWARE AS NEEDED                     |     |
| 1 | )   | ) | 1.20 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) | !   |

| GENERA        |      | TEMENT OF PERFORMANCE AND RESULTING OUT |            |   |
|---------------|------|---|------------|---|
| $\tau$        | 2.01 | CONSTRUCT A MICROWAVE WAVEGUIDE CHASSIS | EMPLOY ING |   |
| , .           |      | THE FOLLOWING OPERATIONS:               |            |   |
| _             |      |   |            |   |
| $\overline{}$ | 2.02 | SELECT PROPER COMPONENTS                |            |   |
| () 2          | 2.03 | ASSEMBLE WAVEGUIDE CIRCUIT              |            | • |
| () 2          | 2.04 | ENERGIZE CIRCUIT                        |            |   |
| () 2          | 2.05 | DEMONSTRATE PROPER OPERATION            |            |   |
| , , ,         | •    |   |            |   |

# 3.00 EXTENT

| CENEDAL ST | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME       |
|------------|---|
| GENERAL ST | CIRCUIT PRODUCES AN OUTPUT THAT IS EXPECTED TO APPROVAL |
| l ( ) 3.01 |   |
| ł          | OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 8     |
| ļ          | HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR     |
| · ···      | UNSATISFACTORY  |
|            | ,   |
| L 3 02     | TO PRODUCE THE SIMPLEST CIRCUIT IN THE MOST ECONOMICAL  |
| () 3.02    |   |
|            | WAY   |
| () 3.03    | TO ENSURE SAFETY AND RELIABLE OPERATION                 |
| () 3.04    | WITH PROPER INPUT                                       |
| () 3.05    |   |
| ( ) 3.03   | ~   |
|            | EQUIPMENT   |

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|  | MISOE NO.         |                                      |  |  |
|--|-------------------|--------------------------------------|--|--|
| PROGRAM <u>ELECTRONICS</u> USOE CODE NO(S) | <u> </u>          | CIRCUIT<br>CONSTRUCTION<br>VAVEGUIDE |  |  |
|  | TERMOB NO.        | 3-013                                |  |  |
| 1.00 CONDITION                             | <del>-</del><br>; |                                      |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.          | -   | ,                               |                    |              |
|--------|--------------|---|---------------------------------|--------------------|--------------|
| PROGRA | M ELECT      | RONICS                                    | DIVISION 02                     | CIRCUIT DESIGN     |              |
|        |              |   | UNIT 01                         | RECTIFIERS         |              |
|        |              |   | TERMOB NO.                      | 13-014             |              |
|        |              |   | 1210105 1101                    |                    |              |
|        |              |   |                                 | <i>-</i>           |              |
| 1.00   | CONDITION    |   |                                 |                    |              |
|        | ( ) 1.01     | LIST OF FORMULAS, T                       | ABLES, GRAPHS                   |                    | -            |
|        | () 1.02      | SLIDE RULE/CALCULAT<br>TUBE, DIODE MANUAL | OR                              | •                  |              |
|        | ( ) 1.03     | TOBE, DIODE MANUAL                        |                                 |                    |              |
| 2 22   | DE DEO DUANO | יים                                       |                                 |                    |              |
| 2.00   | PERFORMANC   | , <b>C</b>                                |                                 | •                  |              |
|        |              |   |                                 |                    |              |
|        | GENERAL ST   | ATEMENT OF PERFORMAN                      | NCE AND RESULT                  | ING OUTCOME        |              |
|        | () 2.01      | DESIGN A FILTERED.                        | HALF-WAVE REC                   | TIFIER WITH VOLTA  | <u>GE</u>    |
|        |              | DIVILER HAVING THE                        | FOLLOWING SPE                   | CIFICATIONS:       |              |
|        |              | INPUT                                     | 120 VAC                         |                    | <u>.</u>     |
|        |              | OUTPUT                                    |                                 | MA and 5VDC 100 M  | A            |
|        |              | REGULATION<br>RIPPLE                      | 10%                             | . 1                |              |
|        |              | AND EMPLOYING THE                         |                                 | EDURÉ:             |              |
|        | () 2.02      | SELECT FORMULAS AN                        | COMPUTE VALU                    | ES BASED ON OVERA  | ĽL           |
| :      | • •          | CIRCUIT INPUT/O                           | UTPUT SPECIFIC                  | ATIONS             |              |
|        | ( ) 2.03     | SELECT FORMULAS AND SUB-ASSEMBLY RE       | D COMPUTE VALU<br>QUIREMENTS    | ES BASED ON DEVEL  | OPED         |
|        | () 2.04      | SKETCH SCHEMATIC D                        |                                 |                    |              |
|        |              |   |                                 |                    | •            |
| 3.00   | EXTENT       | •   |                                 |                    |              |
|        |              | •   | •                               |                    |              |
|        | <del></del>  |   | · ·                             | •                  |              |
|        |              | TATEMENT OF EXTENT A                      | ND EXTENT OF F                  | ESULTING OUTCOME   | <b>-</b> • , |
|        | () 3.01      | CIRCUIT OPERATES S<br>SPECIFIED RESULT T  | ATISFACTORILI<br>O THE APPROVAI | OF A BOARD OF EX   | (PERT        |
|        |              | RATERS. TO BE COM                         | PLETED WITHIN                   | 3 HOURS WITH EACH  | I            |
|        |              | OPERATION JUDGED A                        | S SATISFACTORY                  | OR UNSATISFACTOR   | ξ <b>Υ</b>   |
|        | () 3.02      | WHICH DESCRIBE THE                        | CIRCUIT SUFFI                   | CIENTLY AND PRODU  | CE           |
|        | , ,          | VALUES FOR MORE                           | DETAILED COME                   | UTATION            |              |
|        | () 3.03      | WHICH DESCRIBE SUB                        | -ASSEMBLY SUFF                  | COMPONENT VALUES   | /UCE .       |
|        | () 3.04      | WITH THE VALUES OF                        | ALL CONDUCTOR                   | RS, COMPONENTS AND | )            |
|        | , , = = -    | POTENTIALS CLEA                           | RLY SHOWN, US                   | NG ACCEPTED ELECT  | RONIC        |
|        | •            | SYMBOLS AND TEC                           | HUTOURS LOK SO                  | , UEMMIICS         |              |

|                     | MISOE NO. |      |            |               |
|---------------------|-----------|------|------------|---------------|
|                     |           |      |            |               |
| PROGRAM ELECTRONICS | DIVISION  | 02   | CIRCUIT    |               |
|                     |           | _    | DESIGN     |               |
| USOE CODE NO(S)     | UNIT      | 01 _ | RECTIFIERS |               |
|                     | TERMOB NO |      | 13-014     | - <del></del> |
|                     | y         |      |            |               |
|                     |           |      |            |               |
| 1.00 CONDITION      | Ų.v       |      | •          |               |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

MISOE NO. DIVISION 02 CIRCUIT DESIGN PROGRAM ELECTRONICS 01 RECTIFIERS UNIT 13-015 TERMOB NO. \$ CONDITION 1.00 1.01 LIST OF FORMULAS, TABLES, GRAPHS 1.02 SLIDE RULE/CALCULATOR 1.03 TUBE, DIODE MANUAL PERFORMANCE 2.00 GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME DESIGN A FULL-WAVE RECTIFIER WITH CAPACITOR INPUT FILTER AND RESISTIVE LOAD HAVING THE FOLLOWING . SPECIFICATIONS 120 VAC INPUT 10 VAC 500 MA OUTPUT 10% REGULATION RIPPLE AND EMPLOYING THE FOLLOWING PROCEDURE: SELECT FORMULAS AND COMPUTE VALUES BASED ON OVERALL CIRCUIT INPUT/OUTPUT SPECIFICATIONS SELECT FORMULAS AND COMPUTE VALUES BASED ON DEVELOPED 2.03 SUB-ASSEMBLY REQUIREMENTS 2 20 4 SKETCH SCHEMATIC DIAGRAM EXTENT . 3.00 GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME CIRCUIT OPERATES PROPERLY TO PRODUCE THE SPECIFIED 3.01 RESULT TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY WHICH DESCRIBE THE CIRCUIT SUFFICIENTLY AND PRODUCE 3.02 VALUES FOR MORE DETAILED COMPUTATION

() 3.03

3.04

. €Э

WHICH DESCRIBE SUB-ASSEMBLY SUFFICIENTLY AND PRODUCE

VALUES FOR DETERMINATION OF COMPONENT VALUES WITH THE VALUES OF ALL CONDUCTORS, COMPONENTS AND

POTENTIALS CLEARLY SHOWN, USING ACCEPTED TECHNIQUES FOR SCHEMATICS

| ·                         | h                  | MISOE NO.      |
|---------------------------|--------------------|----------------|
| PROGRAM ELECTRONICS       | DIVISION 02        | CIRCUIT DESIGN |
| USOE CODE NO(S)           | UNIT 01            | RECTIFIERS     |
|                           | TERMOB NO.         | 13-015         |
| 1.00 CONDITION            | -                  |                |
|                           |                    |                |
| 2.00 PERFORMANCE          |                    |                |
| GENERAL STATEMENT OF PERI | FORMANCE AND RESUL | TING OUTCOME , |

3.00 EXTENT

| MISOE  | NO.               |         | and the second of the second o |                |       | *  |
|--------|-------------------|---------|--|----------------|-------|--|
| DBO CB | ΔΜ"               | FI.ECTI | RONICS   | DIVISION       | 02    | CIRCUIT DESIGN   |
| PROGRA |                   | EDBCT   | ONICO  | •              |       | AMPLIFIERS   |
|        |                   |         |  | UNIT           | 02    | AMPLITIENS   |
|        |                   |         |  | TERMOB NO      |       | 13-016   |
|        |                   |         |  |                | •     | R  |
| 1.00   | COND              | ITION   | `  |                |       |  |
|        | ( )<br>( )<br>( ) | 1.02    | LIST OF FORMULAS<br>SLIDE RULE/CALCU<br>TRANSISTOR MANUAL  | LATOR          | HS    |  |
| 2.00   | PERF              | ORMANC  | <b>E</b>   |                |       |  |
|        |                   |         | ATEMENT OF PERFOR  | MANCE AND RESU | JLTII | NG OUTCOME<br>TER VOLTAGE AMPLIFIE                           |
| •      | ( )               | 2.01    | WITH BIAS STABIL SPECIFICATIONS:   | IZATION HAVING | TH    | E FOLLOWING  |
|        |                   |         | INPUTS   | 95<br>. 45     | /DC,  | 40 MVAC (P-P)<br>(P-P)                                       |
|        |                   |         | GAIN   | 10             | 00 (  | MIN)   |
|        | )                 |         | FREQUENCY RES  | PONSE          | JHZ   | - 10KHZ +3DB   |
|        |                   |         | AND EMPLOYING TH   |                |       |  |
|        | +                 | 2.02    | CTRCUTT INPUT  | OUTPUT SPECI   | FICA  | S BASED ON OVERALL<br>TIONS                                  |
|        | ( )               | 2.03    |  | AND COMPUTE V  | ALUE  | S BASED ON DEVELOPED   |
|        | ( )               | 2.04    | SKETCH SCHEMATIC   | DIAGRAM        |       | 4  |
| 3.00   | EXT               | ENT     | ±  |                |       |  |
| **     | GEN               | ERAL ST | TATEMENT OF EXTENT   | AND EXTENT O   | F RE  | SULTING OUTCOME  |
|        | (7)               | 3.01    | CIRCUIT OPERATES   | SATISFACTORI   | LY T  | O PRODUCE THE  |
| ,      |                   |         | RATERS. TO BE O  | COMPLETED WITH | IN 3  | OF A BOARD OF EXPERT<br>HOURS WITH EACH<br>OR UNSATISFACTORY |
|        | L,                | 3.02    | WHICH DESCRIBE T   | THE CIRCUIT SU | FFIC  | CIENTLY AND PRODUCE  |
|        | ( )               | 3.02    | VALUES FOR MO  | DRE DETAILED C | OMPU  | TATION   |
|        | ( )               | 3.03    | WHICH DESCRIBE S   | SUB-ASSEMBLY S | UFFI  | CIENTLY AND PRODUCE  |



3.04

VALUES FOR DETERMINATION OF COMPONENT VALUES WITH THE VALUES OF ALL CONDUCTORS, COMPONENTS AND POTENTIALS CLEARLY SHOWN, USING ACCEPTED ELEC-

TRONIC SYMBOLS AND TECHNIQUES FOR SCHEMATICS

|                             |             | M      | ISOE NO        |
|-----------------------------|-------------|--------|----------------|
| PROGRAM <u>ELECTRONICS</u>  | DIVISION    | 02 _   | CIRCUIT DESIGN |
| USOE CODE NO(S)             | UNIT        | 02 _   | AMPLIFIERS     |
|                             | TERMOB NO.  | _      | 13-016         |
| 1.00 CONDITION              | ·           |        |                |
| 2.00 PERFORMANCE            | WANGE AND D | ecur m | TING OUTCOME   |
| GENERAL STATEMENT OF PERFOI | MANCE AND R | こつハアノ  | TMG ODICOMP    |

3.00 EXTENT



| MISOE  | NO               |   |  |  |   |   |
|--------|------------------|---|--|--|---|---|
| PROGRA | M ELEC           | CTRONICS  |  | DIVISION   | 02                                      | CIRCUIT DESIGN  |
|        |                  |   |  | UNIT   | 02                                      | AMPLIFIERS  |
|        |                  |   | \$   | TERMOB NO  | ) <b>.</b>                              | 13-017  |
| 1.00   | CONDITION        |   |  |  |   |   |
|        | () 1.0           | l LIST OF FORMULA<br>2 SLIDE RULE/CALO<br>3 TUBE, TRANSISTO               | CULATOR  | ₹  | HS                                      | (   |
| 2.00   | PERFORMA         | NCE .   |  |  |   | 7   |
| 3.00   | () 2.0<br>() 2.0 | PROVISIONS FOR SPECIFICATIONS INPUT OUTPUT GAIN FREQUENCY R AND EMPLOYING | TAGE POTENTIAL TRACE POTENTIAL | PUT SPECI COMPUTE V PUT SPECI COMPUTE V IREMENTS                 | VDC<br>WATTOO (100 HZ                   | FOLLOWING  IS INTO 8 OHM SPEAKER MIN.)  - 10 KHZ + 3 DECIBEI FIONS:  S BASED ON OVERALL                       |
|        | GENE RAL         | RESULT TO THE<br>TO BE COMPLETI<br>AS SATISFACTO                          | TES SAT<br>APPROV<br>ED WITH<br>RY OR U  | TISFACTORI<br>TAL OF A B<br>IIN 3 HOUR<br>INSATISFAC             | OARD<br>S WI<br>TORY                    | OF EXPERT RATERS. TH EACH STEP JUDGED   |
| *      | () 3.            | VALUES FOR 03 WHICH DESCRIB! VALUES FOR 04 WITH THE VALUE  ROTENTIALS     | MORE I<br>E SUB-A<br>DETERN<br>ES OF A   | DETAILED C<br>ASSEMBLY S<br>MINATION C<br>ALL CONDUC<br>CY SHOWN | OMPO<br>SUFFI<br>OF CC<br>CTORS<br>USIN | TIENTLY AND PRODUCE TATION CIENTLY AND PRODUCE MPONENT VALUES COMPONENTS AND IG ACCEPTED ELEC- FOR SCHEMATICS |
|        |                  |   |  | 0.4  |   | ٠   |

|                            | MISOE NO.                  |
|----------------------------|----------------------------|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 02 CIRCUIT DESIGN |
| USOE CODE NO(S)            | UNIT 02 AMPLIFIERS         |
|                            | TERMOB NO. 13-017          |
|                            |                            |
|                            | ,                          |
| 1.00 CONDITION             |                            |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO.                           |   |  |                            |  |
|--------|-------------------------------|---|--|----------------------------|--|
| PROGRA | AM <u>ELEC</u>                | TRONICS   | DIVISION<br>UNIT   |                            | CIRCUIT DESIGN OSCILLATORS   |
|        |                               |   | TERMOB NO  | •                          | 13-018   |
| 1.00   | CONDITION                     |   |  |                            |  |
|        | () 1.02                       | LIST OF FORMULAS, TAILURE RULE/CALCULATOR TUBE, SEMI ONDUCTOR   | OR ·   |                            |  |
| 2.00   | PERFORMAN                     | CE  |  | •                          |  |
|        | GENERAL S                     | TATEMENT OF PERFORMAN  DESIGN A TUNABLE OS  SPECIFICATIONS:  OUTPUT  TUNABLE RANGE  AND EMPLOYING THE F | CILLATOR HAS<br>SI<br>10   | VING<br>NE W               | VAVE 2V (P-P) KHZ - 2000 KHZ   |
| •      | () 2.02<br>() 2.03<br>() 2.04 | CIRCUIT INPUT/OU  | TPUT SPECIF<br>COMPUTE VA<br>UIREMENTS                                   | ICAT                       | BASED ON OVERALL<br>TIONS<br>BASED ON DEVELOPED  |
| 3.00   | EXTENT                        |   |  | •                          |  |
|        | GENERAL S                     | SPECIFIED RESULT TO   | TISFACTORIL THE APPROVILETED WITHI                                       | Y TO<br>AL O<br>N 3        | O PRODUCE THE OF A BOARD OF EXPERT HOURS WITH EACH   |
|        | () 3.02<br>() 3.02<br>() 3.04 | VALUES FOR MORE  WHICH DESCRIBE SUB- VALUES FOR DETER WITH THE VALUES OF                                | DETAILED CO<br>ASSEMBLY SU<br>MINATION OF<br>ALL CONDUCT<br>BLY SHOWN, U | MPUT<br>FFIC<br>COI<br>ORS | TATION<br>CIENTLY AND PRODUCE<br>MPONENT VALUES<br>, COMPONENTS AND<br>G ACCEPTED ELECTRONIC |

|                     | M.          | MYSOE NO.      |  |  |  |  |  |
|---------------------|-------------|----------------|--|--|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 02 | CIRCUIT DESIGN |  |  |  |  |  |
| USOE CODE NO(S)     | UNIT #03    | OSCILLATORS    |  |  |  |  |  |
| ·                   | TERMOB NO.  | 13-018         |  |  |  |  |  |
| 1.00 CONDITION      | <del></del> |                |  |  |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT



| MISOE  | NO              |                    | *                                       | پ<br>د                                  |
|--------|-----------------|--------------------|---|---|
|        | N.              | 4                  | STATETON 02                             | CIRCUIT DESIGN                          |
| PROGR/ | AM ELEC         | TRONICS            | DIVISION 02                             | CIRCUIT DEBICA                          |
|        |                 |                    | UNIT 03                                 | OSCILLATORS                             |
|        | ÷               |                    | TERMOB NO.                              | 13-019                                  |
|        |                 | <i>;</i>           | TERMOD NO.                              | 15 017                                  |
|        |                 |                    | •                                       |   |
| 1.00   | CONDITION       | •                  | •                                       |   |
|        |                 | LIST OF FORMULAS   | TARLES GRAPHS                           | - 60                                    |
| 9      | ( ) 1.01        | SLIDE RULE/CALCU   | LATOR                                   |   |
|        | () 1.03         | TUBE . SEMICONDUC  | TOR DATA HANDBOOK                       | • .                                     |
|        |                 |                    | *                                       |   |
| 2.00   | PERFORMAN       | CE                 | 1                                       |   |
| 2.00   | 1 11/1 01/42-11 | <del></del>        | •                                       | •                                       |
|        | ·<br>           |                    |   |   |
|        | GENERAL S'      | TATEMENT OF PERFOR | MANCE AND RESULTIN                      | NG OUTCOME                              |
|        | () 2.01         | DECTON A CVMMETR   | TCAL. STABLE EMIT                       | LEK COOLTED MOTITE                      |
|        |                 | VIBRATOR HAVING    | THE FOLLOWING SPE                       | JITICATIONS:                            |
| *      |                 | INPUT              | 18                                      | VDC                                     |
|        | -               | OUTPUT             |   | (P-P) AT 1 KHZ<br>MMETRICAL SQUAREWAVE  |
|        | ,               |                    | E FOLLOWING OPERA                       | TIONS:                                  |
|        | () 2.02         | SELECT FORMULAS    | AND COMPUTE VALUE                       | S BASED ON OVERALL                      |
|        |                 | CIRCUIT INPUT      | OUTPUT SPECIFICA                        | S BASED ON DEVELOPED                    |
|        | () 2.03         | SUB-ASSEMBLY       | REQUIREMENTS                            | .*                                      |
| •      | ( ) 2.04        |                    | DIAGRAM                                 |   |
|        |                 |                    | •                                       | • · · · · · · · · · · · · · · · · · · · |
| 3 00   | EXTENT          |                    |   |   |
| 3.00   |                 | \$<br>}            |   | •                                       |
|        |                 | t-                 |   |   |
| ,      | GENERAL S       | TATEMENT OF EXTENT | AND EXTENT OF RE                        | SULTING OUTCOME :                       |
| •      | () 3.01         | CTRCUTT OPERATES   | S SATISFACTORILY T                      | O PRODUCE ILE                           |
|        |                 | EADEDM DYMEBC      | TO THE APPROVAL TO BE COMPLETED W       | ITHIN 3 HOURS                           |
|        |                 | WITH EACH OPERAT   | TION JUDGED AS SAT                      | ISFACTORY OR                            |
|        |                 | UNSATISFACTORY     | 1                                       |   |
|        | () 3.02         | WHICH DESCRIBE T   | THE CIRCUIT SUFFIC                      | IENTLY AND PRODUCE                      |
|        | ( ) 3.02        | TESTITED FOR MO    | APR DETATLED COMPL                      | TATION                                  |
| +81    | () 3.03         | WHICH DESCRIBE S   | SUB-ASSEMBLY SUFFI                      | CIENTLY AND PRODUCE                     |
| ,      | ( ) 3.04        | MITTER TUR VALUES  | ETERMINATION OF CO<br>OF ALL CONDUCTORS | COMPONENTS AND                          |
|        | (,) 3.04        | DOMENTALS CI       | LEARLY SHOWN, USIN                      | IG ACCEPTED ELEC-                       |
|        | -               | TRONIC SYMBO       | LS AND TECHNIQUES                       | FOR SCHEMATICS                          |

|                            |             | MISOE NO.      |
|----------------------------|-------------|----------------|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 02 | CIRCUIT DESIGN |
| USOE CODE NO(S)            | UNIT 03     | OSCILLATORS    |
|                            | TERMOB NO.  | 13-019         |
|                            | •           |                |
| 1 AA GOVERNOU              |             |                |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE       | NO.       |   |                                 |                     |        |
|-------------|-----------|---|---------------------------------|---------------------|--------|
| PROGRA      | AM ELEC   | TRONICS   | DIVISION 0                      | 2 CIRCUIT DESIGN    |        |
|             |           |   | UNIT 0                          | 4 SPECIAL CIRCUIT   | rs     |
|             |           |   |                                 | AND DEVICES         |        |
|             |           |   | TERMOB NO.                      | 13-020              |        |
|             |           |   | •                               |                     |        |
| 1.00        | CONDITION | ~   |                                 |                     |        |
|             | () 1.02   | LIST OF FORMULAS, T<br>SLIDE RULE/CALCULAT<br>TUBE, SEMICONDUCTOR | ror                             |                     | -      |
| 2.00        | PERFORMAN | CE  |                                 |                     |        |
|             |           |   |                                 |                     |        |
|             | GENERAL S | TATEMENT OF PERFORMAL   | NCE AND RESULT                  | ING OUTCOME         |        |
|             | () 2.01   | DESIGN A CURRENT ST   | WEEP CIRCUIT I                  | IAVING THE FOLLOWI  | NG     |
|             |           | SPECIFICATIONS:   |                                 | •                   |        |
|             |           | INPUT   | 2V (1                           | P-P) PULSE          | }      |
|             |           | OUTPUT  | 5V (1                           | P-P( AT 100 MA      |        |
|             |           | AND EMPLOYING THE   | FOLLOWING OPE                   | RATIONS:            |        |
|             | () 2.02   | SELECT FORMULAS AN<br>CIRCUIT INPUT/O                             | D COMPUTE VAL                   | JES BASED ON OVERA  | LL     |
|             | ( ) 2.03  | SELECT FORMULAS AN  | D COMPUTE VAL                   | JES BASED ON DEVEL  | OPED   |
|             | () 2.04   | SUB-ASSEMBLY RE<br>SKETCH SCHEMATIC D                             |                                 |                     |        |
|             |           |   |                                 |                     |        |
| 3.00        | EXTENT    | <i>;</i>  |                                 |                     |        |
|             |           |   |                                 |                     |        |
|             | GENERAL S | STATEMENT OF EXTENT A   | ND EXTENT OF                    | RESULTING OUTCOME   |        |
|             | () 3.0    | CIRCUIT OPERATES S  | ATISFACTORILY                   | TO PRODUCE THE SE   | SCTETE |
|             |           | RESULT TO THE APPR<br>TO BE COMPLETED WI                          | THIN 3 HOURS                    | WITH EACH OPERATION | ON.    |
| ا عشرے باند | -         | JUDGED AS SATISFAC  | TORY OR UNSAT                   | ISFACTORY           |        |
| •           | () 3.0    | 2 WHICH DESCRIBE THE  | CIRCUIT SUFF                    | ICIENTLY AND PRODU  | JCE    |
|             |           | VALUES FOR MORE   | DETAILED COM                    | PUTATION            |        |
|             | () 3.0    | 3 WHICH DESCRIBE SUB  | S-ASSEMBLY SUP<br>CRMINATION OF | COMPONENT VALUES    | 700E   |
|             | ( ) 3.0   | 4 WITH THE VALUES OF  | ALL CONDUCTO                    | RS, COMPONENTS ANI  | )      |
|             |           | POTENTIALS CLEA   | ARLY SHOWN, US                  | ING ACCEPTED ELECT  | ronic, |
|             |           | SYMBOLS AND TEC   | HNIQUES FOR S                   | CUEMWIICD           |        |

|                     |             | MISOE NO.                    |          |
|---------------------|-------------|------------------------------|----------|
|                     | • •         | and aware projection         |          |
| PROGRAM ELECTRONICS | DIVISION 02 | CIRCUIT DESIGN               | —        |
| USOE CODE NO(S)     | UNIT 04     | SPECIAL CIRCUITS AND DEVICES | <u> </u> |
|                     | TERMOB NO.  | 13-020                       | _        |
|                     |             |                              |          |
|                     |             |                              |          |
| 1.00 CONDITION      |             | •                            |          |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT



| MISOE  | NO.                           |   |                      |              | · ·   |
|--------|-------------------------------|---|----------------------|--------------|---|
| PROGRA | AM <u>ELECT</u>               | RONICS  | DIVISI               | ON 02        | CIRCUIT DESIGN  |
|        |                               |   | UNIT                 | ∘ 05         | DIGITAL CIRCUITS  |
|        |                               |   | TERMOB               | NO.          | 13-021  |
| 1.00   | CONDITION                     |   |                      |              |   |
| -      | ( ) 1 01                      | TEMPLATE DRAWING BOARD AND AC MICROELECTRONICS HAN  | CESSORII<br>IDBOOK - | ES<br>5400 ( | or 7400 SERIES  |
| 2.00   | PERFORMANC                    | CE  |                      |              |   |
|        | 7) 2.01                       | DESIGN A BCD DECODERNMENT NECESSARY GATES EMPT  | COYING T             | HE FOL       | LOWING OPERATIONS:  |
| -      | () 2.03                       | SELECT GATES FROM TO<br>SKETCH A LOGIC DIAG<br>PROVIDE A PARTS LIS                                  | RAM                  | ELECTR       | ONICS HANDBOOK  |
| 3.00   | EXTENT                        |   |                      |              | •   |
|        | GENERAL S'                    | TATEMENT OF EXTENT AN CIRCUIT IS FUNCTION A BOARD OF EXPERT R 3 HOURS WITH EACH O OR UNSATISFACTORY | AL AND E             | TO BE        | COMPLETED WITHIN  |
|        | () 3.02<br>() 3.03<br>() 3.04 | CONTINUE TOCTO DIA  | CDAM WTT             | PH AT.T.     | AL AND PRACTICAL APPLICABLE LABELS MBERS AND MANUFACTURER |

|      | •                                       | -                              | MISOE NO.                                |
|------|---|--------------------------------|--|
|      | ERAM ELECTRONICS  E CODE NO(S)          | DIVISION 02 UNIT 05 TERMOB NO. | CIRCUIT DESIGN  DIGITAL CIRCUITS  13-021 |
| 1.00 | O CONDITION                             |                                |  |
| 2.00 | PERFORMANCE  GENERAL STATEMENT OF PERFO | RMANCE AND RESU                | ULTING OUTCOME                           |
| 2.00 | EXTENT                                  |                                | •  |



| MISOE  | NO.   |  |  |                            | • Trickening  |
|--------|---|--|--|----------------------------|---|
| PROGRA | AM <u>ELECT</u>                                       | RONICS   | DIVISION   | 02                         | CIRCUIT DESIGN  |
|        |   | •  | UNIT   | 05                         | DIGITAL CURCUITS  |
|        | _   |  | TERMOB NO  | ).                         | 13-022  |
|        |   | •  |  | •                          |   |
|        |   |  |  | •                          | *1<br>***<br>***  |
| 1.00   | CONDITION   |  | ٠.   | •                          |   |
|        | () 1.02<br>() 1.03<br>() 1.04                         | LIST OF FORMULAS,<br>SLIDE RULE/CALCULA<br>DIGITAL LOGIC BOAR<br>ASSOCIATED HARDWAR<br>SEMICONDUCTOR DATA                                  | TOR<br>DS<br>E AS NEEDED   | нѕ                         | The second control of the second control of |
| 2.00   | PERFORMANO  | CE CE  |  |                            | All Constants   |
| 2.00   |   | •  |  |                            |   |
| 3.00   | GENERAL S' ( ) 2.01 ( ) 2.02 ( ) 2.03 ( ) 2.04 EXTENT | INDICATOR LIGHTS A SPECIFICATIONS:  INPUT OUTPUT  AND EMPLOYING THE  SELECT FORMULAS AN CIRCUIT INPUT/O SELECT FORMULAS AN SUB-ASSEMBLY RI | ARY COUNTER AND A RESET HE AS SPECIFOLICATION OF COMPUTE VACUATION OF COMPUTE VACUATION COMPUTE VACUAT | WITH IAVII                 | H PROVISIONS FOR NG THE FOLLOWING  -3V ABOVE TIONS: S BASED ON OVERALL  |
|        | GENERAL S   | SPECIFIED RESULT EXPERT RATERS. TWITH EACH OPERATIONS UNSATISFACTORY   | SATISFACTORI<br>TO THE APPRO<br>O BE COMPLET<br>ON JUDGED AS   | LY T<br>VAL<br>ED W<br>SAT | O PRODUCE THE OF A BOARD OF VITHIN 3 HOURS PISFACTORY OR  |
|        | () 3.02   | WHICH DESCRIBE TH<br>VALUES FOR MOR  | E CIRCUIT SU   | FFIC                       | CIENTLY AND PRODUCE   |
|        | ( ) 3.03  | WHICH DESCRIBE SU  | B-ASSEMBLY S   | UFFI                       | CIENTLY AND PRODUCE OMPONENT VALUES   |

3.04

WITH THE VALUES OF ALL CONDUCTORS, COMPONENTS AND POTENTIALS CLEARLY SHOWN, USING ACCEPTED ELECTRONIC SYMBOLS AND TECHNIQUES FOR SCHEMATICS

|                     | .—          | MISOE NO.        |
|---------------------|-------------|------------------|
| PROGRAM ELECTRONICS | DIVISION 02 | CIRCUIT DESIGN   |
| USOE CODE NO(S)     | UNIT 05     | DIGITAL CIRCUITS |
|                     | TERMOB NO.  | 13-022           |
|                     |             | /                |
| 1.00 CONDITION -    |             |                  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO   |          | <del></del>  |  |   |
|--------|------|----------|--|--|---|
| PROGRA | AM   | ELECT    | RONICS   | DIVISION 02                                  | CIRCUIT DESIGN                                  |
|        |      |          |  | UNIT 05                                      | DIGITAL CIRCUITS                                |
|        |      | <b>C</b> |  | TERMOB NO.                                   | 13-023  |
|        |      |          | ŧ .  |  | •   |
| 1.00   | COND | TION     |  |  | <b>∡</b>  |
|        | ( )  | 1.02     | LIST OF FORMULAS, T<br>SLIDE RULE/CALCULAT<br>MICROELECTRONICS DA  | OR   |   |
| 2.00   | PERF | ORMANC   | Е .  |  |   |
|        | GENE | RAL ST   | ATEMENT OF PERFORMAN  DESIGN ALL OF THE G FOLLOWING SPECIFICA  | ATES LISTED BE                               | NG OUTCOME<br>LOW TO THE                        |
|        |      | uni      | AND GATE OR GATE NAND GATE NOR GATE EXCLUSIVE OR GATE  | INPUT  | 2 PULSE SOURCES<br>0 TO +3 V                    |
|        |      |          | AND EMPLOYING THE E  | FOLLOWING OPERA                              | ATIONS:   |
|        | ()   | 2.02     | SELECT APPROPRIATE DEVELOP THESE GA  |  | 00 SERIES) TO                                   |
| £      | ( )  | 2.03     | SKETCH A LOGIC DIAG<br>DRAW TRUTH TABLE FO   | GRAM FOR EACH                                | •   |
| 3.00   | EXTE | NT       |  | •  |   |
|        | CENE | באל כייי | ATEMENT OF EXTENT A  | ND EXTENT OF RI                              | ESULTING OUTCOME                                |
|        | ()   | 3.01     | CIRCUITS OPERATE SA<br>SPECIFIED RESULT TO<br>EXPERT RATERS. TO<br>WITH EACH OPERATION<br>UNSATISFACTORY | ATISFACTORILY TO THE APPROVAL BE COMPLETED V | O PRODUCE THE<br>OF A BOARD OF<br>VITHIN 1 HOUR |
|        | ()   | 3.03     | PROPER SYMBOLOGY   | INCLUDE PIN NO<br>Y, AND CORRECT             | JMBERS, PART NUMBERS, NOMENCLATURE              |
|        | ( )  | 3.04     | 100% ACCURATE ON T   | RUTH TABLES                                  |   |

|                     |             | MISOE NO.        |
|---------------------|-------------|------------------|
| PROGRAM ELECTRONICS | DIVISION 02 | CIRCUIT DESIGN   |
| USOE CODE NO(S)     | UNIT 05     | DIGITAL CIRCUITS |
|                     | TERMOB NO.  | 13-023           |
|                     |             |                  |
| 1.00 CONDITION      | •           |                  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO                              |                                      |   | Ş                                    |                      |                    |                   |             |
|--------|---------------------------------|--------------------------------------|---|--------------------------------------|----------------------|--------------------|-------------------|-------------|
| PROGRA | ΔM                              | ELECTE                               | RONICS  | DIVISION                             | 03                   | CIRCUIT            | CALIBRAT          | ION         |
|        |                                 |                                      |   | UNIT                                 | 01                   | METERS             | <del></del>       |             |
|        |                                 |                                      |   | TERMOB .NO                           | ٠.                   | 13-024             |                   | <del></del> |
|        |                                 |                                      |   |                                      |                      | _                  | •                 |             |
| 1.00   | CONDI                           | TION                                 |   | 5.<br>                               |                      |                    |                   |             |
|        | ( )<br>( )<br>( )<br>( )<br>( ) | 1.01<br>1.02<br>1.03<br>1.04<br>1.05 | VTVM OUT OF CALIBRAT<br>DVM OUT OF CALIBRATI<br>SERVICE MANUAL  | ION<br>ON<br>R                       |                      |                    | Ģ                 |             |
| 2.00   | PERF(                           | ORMANC                               | E   |                                      |                      |                    |                   | <del></del> |
|        | GENE                            | 2.01                                 | ATEMENT OF PERFORMANC<br>CALIBRATE A METER EN   | APLOYING TH                          | JLŢI                 | NG OUTCOM          | E %<br>PROCEDUR   | E:          |
|        | ()                              | 2.03                                 | SELECT PROPER TEST IN CHECK AND ZERO AS NOT CALIBRATE METER VERIFY AND INDICATE                         | ECESSARY A                           |                      |                    |                   |             |
| 3.00   | EXTE                            | INT .                                |   |                                      |                      |                    |                   |             |
|        | GENE                            | RAL ST                               | TATEMENT OF EXTENT AND METER CALIBRATED TO AND TO THE APPROVAL TO BE COMPLETED WITH JUDGED AS SATISFACT | MANUFACTU<br>OF A BOAR<br>HIN 3 HOUR | RER'<br>D OF<br>S WI | EXPERT I           | RATERS.           | I           |
|        | (),                             | 3.02<br>3.03<br>3.04<br>3.05         | AS SPECIFIED IN SER IN ACCORDANCE WITH FOLLOWING PROCEDURE TO THE SATISFACTION                          | MANUFACTUR<br>S RECOMMEN             | ER'S<br>DED          | PROCED<br>IN SERVI | URES<br>CE MANUAI |             |

|                     | •           | MISOE NO.           |  |
|---------------------|-------------|---------------------|--|
| PROGRAM ELECTRONICS | DIVISION 03 | CIRCUIT CALIBRATION |  |
| USOE CODE NO(S)     | UNIT . 01   | METERS              |  |
|                     | TERMOB NO.  | 13-024              |  |
|                     | <del></del> |                     |  |
| 1 00 CONDITION      | •           |                     |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| ISOE  | NO.                               |   |                           |            | •                          |
|-------|-----------------------------------|---|---------------------------|------------|----------------------------|
| ROGRÆ | AM ELECTI                         | RONTCS  | DIVISION                  | 03         | CIRCUIT                    |
|       |                                   |   | UNIT                      | 02         | CALIBRATION POWER SUPPLIES |
|       |                                   | s.e.  | UNIT                      | 02         | POWER BOTTETED             |
|       | •                                 |   | TERMOB NO                 |            | 13-025                     |
|       |                                   |   |                           |            | *                          |
| 00    | CONDITION                         | •   |                           |            |                            |
|       | ( ) 7 01                          | POWER SUPPLY OUT OF                                 | CAT.TBRATIC               | N          |                            |
|       | ( ) 1.01 <sup>-</sup><br>( ) 1.02 |   | ·                         |            | •                          |
|       | () 1.03                           | TEST LEADS AND PROB                                 | ES                        | ,          | <b>u</b>                   |
|       | ( ) 1.04                          | REQUIRED TEST EQUIP                                 | MENT                      |            |                            |
|       |                                   |   |                           |            |                            |
| 00    | PERFORMANC                        | E   | •                         |            |                            |
|       |                                   |   |                           | <b>A</b> - |                            |
| • ,   |                                   |   |                           |            |                            |
|       | () 2.01                           | ATEMENT OF PERFORMAN CALIBRATE A POWER SOPERATIONS: | SUPPLY EMPLO              | OY INC     | THE FOLLOWING              |
|       | () 2.02                           | SELECT PROPER TEST                                  | EQUIPMENT                 |            |                            |
|       | () 2.02                           | CHECK AND ZERO AS N                                 | IECESSARY A               | ĻL TI      | EST EQUIPMENT USED         |
|       | () 2.04                           | CATTODATE DOWER SILE                                | PLY                       |            | RE OUT OF SPECIFICAT       |
|       | () 2.05                           | VERIFY AND INDICATE                                 | AKEAS WILL                | ≏ri wı     | KIL OOT OT DITTOTT         |
|       |                                   | •   |                           |            |                            |
| .00   | EXTENT                            |   |                           |            | •                          |
|       |                                   |   |                           |            | ·                          |
|       |                                   |   |                           |            |                            |
|       | GENERAL ST                        | ATEMENT OF EXTENT A                                 | ND EXTENT O               | F RES      | SULTING OUTCOME            |
|       | 7 3.01                            | POWER SUPPLY CALIBI                                 | RATED TO MA<br>LOF A BOAR | D OF       | EXPERT RATERS. TO          |
|       | 1                                 | BE COMPLETED WITHII                                 | N 2 HOURS W               | ITH :      | EACH OPERATION .           |
|       |                                   | JUDGED AS SATISFAC                                  | TORY OR UNS               | ATIS:      | FACTORY                    |
|       | L, , , , ,                        | AS SPECIFIED IN SE                                  | RVICE MANIIA              | I.         | •                          |
|       | () 3.02                           | TH ACCORDANCE WITH                                  | MANUFACTUR                | ER'S       | PROCEDURE                  |
|       | () 3.04                           | FOLLOWING PROCEDUR                                  | ES RECOMMEN               | DED        | IN SERVICE MANUAL          |
|       | ( ) 3.05                          | TO THE SATISFACTION                                 | N PANEL                   |            |                            |
|       | •                                 |   |                           |            | •                          |
|       | •                                 |   | , ,                       | *          | a.                         |

|                     | n n         | <del></del>    |            |
|---------------------|-------------|----------------|------------|
| u                   | •           | 4              |            |
| PROGRAM ELECTRONICS | DIVISION Q3 | CIRCUIT        |            |
| P ROGIGET           |             | CALIBRATION    |            |
| USOE CODE NO(S)     | UNIT 02     | POWER SUPPLIES |            |
| 0502 0002 110 (17)  | •           | •              |            |
|                     | TERMOB NO.  | 13-025         |            |
|                     |             |                |            |
|                     | -           |                |            |
|                     | • •         |                | <b>,</b> , |
|                     |             | 4 <b>45</b>    |            |
| 1.00 CONDITION      |             | -              |            |
|                     |             |                |            |

MISOE NO.

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.   |  |   |                  |  |
|--------|---|--|---|------------------|--|
| PROGRA | AM ELECTRONIC   | S  | DIVISION  | 03               | CIRCUIT CALIBRATION OSCILLOSCOPES                              |
|        |   |  |   |                  |  |
| ÷      |   |  | TERMOB N  | ю.               | 13-026   |
|        |   |  |   |                  | •  |
| 1.00   | CONDITION   | e e  |   |                  |  |
| ٧      | () 1.02 DUA<br>() 1.03 TWO<br>() 1.04 FOU<br>() 1.05 APP<br>() 1.06 TES | GLE BEAM OSCILLO  BEAM OSCILLOSC  CHANNEL OSCILLO  CHANNEL OSCILL  LICABLE SERVICE  I LEADS AND PROBUIRED TEST EQUIP | OPE OUT OF<br>SCOPE OUT<br>OSCOPE OUT<br>MANUAL<br>ES | CALI             | BRATION<br>LIBRATION   |
| 2.00   | PERFORMANCE   |  |   |                  | -  |
|        | ,   |  | •   |                  |  |
|        | ( ) 2.01 CAI  | ENT OF PERFORMAN<br>IBRATE AN OSCILI<br>RATIONS:   | ICE AND RES   | LOYI             | NG OUTCOME<br>NG THE FOLLOWING                                 |
|        | ( ) 2.03 CHE  | ECT PROPER TEST CK AND ZERO AS I IBRATE OSCILLOSO IFY AND INDICATI SPECIFICATION                                     | NECESSARY /   |                  | EST EQUIPMENT USED   |
|        |   | )-   | ٦.  | _                |  |
| 3.00   | EXTENT  |  | •   |                  |  |
| r      | () 3.01 OSC<br>SPI<br>EXI<br>WI'<br>UN                                  | PERT RATERS. TO THE ACH OPERATIO SATISFACTORY  SPECIFIED IN SE   | RATED TO M TO THE AP BE COMPLE N JUDGED A RVICE MANU  | PROVATED WES SAT | L OF A BOARD OF WITHIN 2 HOURS PISFACTORY OR  S SPECIFICATIONS |
|        | () 3.03 IN<br>() 3.04 FO  | LLOWING PROCEDUR   | E RECOMMEN  | DED 1            | IN SERVICE MANUAL  |

| ٠                          | MISOR NO.                           |         |
|----------------------------|-------------------------------------|---------|
|                            | , <sub>1</sub> , 8 <sub>1</sub> , 1 |         |
| PROGRAM <u>FLECTRONICS</u> | DIVISION 03 CIRCUI                  |         |
| USOE CODE NO(S)            |                                     | OSCOPES |
|                            | TERMOB NO. 13-026                   |         |
|                            | ,                                   |         |
| 1.00 CONDITION             |                                     |         |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE    | NO.                  |                              |  | # # # # # # # # # # # # # # # # # # #                          |                | •  | s <del></del> |
|----------|----------------------|------------------------------|--|--|----------------|--|---------------|
| PROGRA   | ĀM                   | ELECTE                       | RONICS   | DIVISION   | 03             | CIRCUIT<br>CALIBRATION   |               |
|          |                      |                              | 1.   | UNIT   | 04             | FUNCTION<br>GENERATOR  |               |
|          |                      |                              |  | TERMOB NO  | ٠.             | 13-027   | <b></b> -     |
| 1.00     | COND                 | ITION                        |  |  | •              |  |               |
| <u>.</u> | ()()()()             | 1.02<br>1.03                 | OSCILLATOR OUT OF FUNCTION GENERATOR OU SQUARE WAVE GENERA APPLICABLE SERVICE TEST LEADS AND PROREQUIRED TEST EQUI | OUT OF CALI<br>T OF CALIBRA<br>TOR OUT OF C<br>MANUALS<br>DBES | $101T_{\star}$ | N  | /             |
| 2.00     | PERF                 | ORMANC                       | E  |  |                | <i>;</i>   |               |
|          | GENE ( ) ( ) ( ) ( ) | 2.01                         | ANTENDAME ENVIOLED TO  | ON GENERATOR  ONS:  CEQUIPMENT  NECESSARY AL                   | LL T           | NG OUTCOME PLOYING THE EST EQUIPMENT USED RE OUT OF SPECIFICAT | MOL           |
| 3.00     | EXTI                 | ENT                          |  | r  |                | 1  | _             |
| 4        | \ \( \tau_1 \)       | ERAL ST                      | SPECIFICATIONS AND   | R CALIBRATED<br>D TO THE APP<br>O BE COMPLET                   | ROVA<br>ED W   | MANUFACIURER S<br>AL OF A BOARD OF<br>VITHIN 2 HOURS           |               |
|          | ()                   | 3.02<br>3.03<br>3.04<br>3.05 | IN ACCORDANCE WIT  | H MANUFACTUR<br>RE RECOMMEND                                   | ER'S<br>ED 1   | S PROCEDURE<br>IN SERVICE MANUAL                               | ť             |

|                                     |                                | MISOE NO.                                     |  |
|-------------------------------------|--------------------------------|---|--|
| PROGRAM ELECTRONICS USOE CODE NO(S) | DIVISION 03 UNIT 04 TERMOB NO. | CIRCUIT CALIBRATION FUNCTION GENERATOR 13-027 |  |
| 1 OO CONDITION                      |                                |   |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

### 3.00 EXTENT

| MISOE  | NO         |         |                                |          |                      |            |                              |
|--------|------------|---------|--------------------------------|----------|----------------------|------------|------------------------------|
| PROGRA | AM         | E       | LECTRONICS                     |          | DIVISIO              | ON 04      | CIRCUIT TESTING              |
|        |            |         |                                |          | UNIT                 | 01         | RECTIFIERS                   |
|        |            |         |                                |          | ONII                 | 01         |                              |
|        |            |         |                                | .×       | TERMOB               | NO.        | 13-028                       |
|        |            |         |                                |          |                      |            |                              |
|        |            |         |                                |          |                      |            |                              |
| 1.00   | CONDI      | TION    |                                |          |                      |            |                              |
|        | ( )        | 1.01    | FULL WAVE REC                  | TIFIER   | WITH FI              | LTERIN     | IG                           |
|        | <b>( )</b> | 1 02    | FIIT.T. WAVE BRI               | DGE REC  | TIFIER '             | MILH E     | ILIEKING                     |
|        | ( )        | 1.03    | HALF WAVE REC<br>RECTIFIER CIR | CHITT WI | WITH FI.             | AGE DI     | VIDER                        |
|        | / \        | 1 05    | CCUEMATTO DIA                  | GRAMS    |                      |            |                              |
|        |            |         |                                |          | ABLES, G             | RAPHS      | , ETC.                       |
|        | ( )        | 1.07    | BASIC ELECTRO                  | NICS TO  | JOLS AND             | FOOT       | PMENT (TABLE T-3)            |
|        |            |         |                                |          |                      |            | •                            |
| 2.00   | PERFO      | RMANCE  |                                |          |                      |            |                              |
|        |            |         |                                |          |                      |            |                              |
|        |            |         |                                |          |                      |            |                              |
|        | GENE       |         | ATEMENT OF PER                 | REORMAN  | CE AND R             | ESULT      | RCUIT CHARACTERISTICS        |
|        | ()         | 2.01    | TEST A RECTIF                  | FIER TO  | WING OPE             | RATIO      | NS:                          |
|        |            |         |                                | •        |                      |            |                              |
| • .    | ()         | 2.02    |                                | RTEST    | EQUIPMEN             | T<br>T     | TEST FOUL PMENT USED         |
|        | ( )        | 2.03    |                                | RO AS N  | ECESSARI<br>CIDCIIIT | TO BE      | TEST EQUIPMENT USED          |
|        | ( )        | 2.04    |                                |          | CINCOII              | 10 22      |                              |
|        | ( )        | 2.06    |                                | RECULAT  | ION                  |            |                              |
|        | ` '        | • •     |                                |          |                      |            |                              |
| 2 00   | EXTE       | יייני   |                                |          | •,                   |            |                              |
| 3.00   | EXIE       | 11      | -                              |          |                      |            |                              |
|        | ·          |         |                                |          |                      |            |                              |
|        | GENI       | ERAL ST | ATEMENT OF EX                  | TENT AN  | D EXTENT             | OF F       | ESULTING OUTCOME             |
|        | ()         | 3.01    | FOILOWING PR                   | OPER PE  | COCEDURES            | SAND       | SWLEII LUFCHOLIONS           |
|        |            |         | AS DETERMINE                   | D BY A   | BOARD UTTI           | F EXPE     | HOURS WITH EACH              |
| _      |            |         | OPERATION JU                   | DGED SA  | TISFACT              | ORY OF     | RUNSATISFACTORY              |
|        |            |         | *                              |          |                      |            |                              |
|        | ()         | 3.02    | USING TEST I<br>CHARACTER      | NSTRUME  | ENTS OF              | SUFFIC     | CIENT SENSITIVITY AND        |
|        | , ,        | 3.03    | THE RECORD AND                 | E WITHU  | MANIIFAC             | ייוואד:R ' | 'S PROCEDURES                |
|        | . ( )      | 3.03    | TO AN ACCURA                   | CY THAT  | r WILL V.            | ALTDA'     | THEORETICAL DATA             |
|        | ` '        | ÷       | AC DEMEDM                      | ITNED BY | 7 THE BO.            | ARD OL     | F RATERS TE THEORETICAL DATA |
|        | ( )        | 3.05    | AC DETERM                      | ITNED BY | Y THE BO             | ARD O      | RATERS                       |
|        | ( )        | 3.06    | TO AN ACCURA                   | CY THA!  | r will V             | ALIDA'     | TE THEORETICAL DATA          |
|        | . ,        |         | AS DETERM                      | INED B   | Y THE BO             | ARD O      | F RATERS                     |



| 1                   | MISOE NO.   |                 |  |  |  |
|---------------------|-------------|-----------------|--|--|--|
| PROGRAM FLECTRONICS | DIVISION 04 | CIRCUIT TESTING |  |  |  |
| USOE CODE NO(S)     | UNIT 01     | RECTIFIERS      |  |  |  |
|                     | TERMOB NO.  | 13-028          |  |  |  |
|                     |             |                 |  |  |  |
| 1.00 CONDITION      |             |                 |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO   |  |  | 1                                |
|--------|--|--|--|----------------------------------|
| PROGRA | AM ELECTR  | ONICS  | DIVISION 04  | CIRCUIT TESTING                  |
|        |  |  | UNIT 02  | AMPLIFIER\$                      |
|        |  |  | TERMOB NO.   | 13-029                           |
|        |  |  |  |                                  |
| 1.00   | CONDITION  |  |  | ;<br>;                           |
|        | ( ) 1.01<br>( ) 1.02<br>( ) 1.03<br>( ) 1.04<br>( ) 1.05<br>( ) 1.06<br>( ) 1.07<br>( ) 1.08<br>( ) 1.09 | COMMON COLLECTOR VO<br>SCHEMATIC DIAGRAMS<br>SPECIFICATION SHEET<br>POWER SUPPLY   | E AMPLIFIER E AMPLIFIER PAGE AMPLIFIER OLTAGE AMPLIFII         |                                  |
| 2.00   | PERFORMANCE  | •  | •  |                                  |
|        | GENERAL ST   | ATEMENT OF PERFORMANTEST A DISCRETE COL<br>AMPLIFIER TO DETERMENT OF THE FOLL  | MPONENT SOLID MINE CIRCUIT C OWING OPERATIO                    | HARACTERISTICS                   |
|        | () 2.02<br>() 2.03<br>() 2.04<br>() 2.05<br>() 2.06<br>() 2.07<br>() 2.08                                | SELECT PROPER TEST CHECK AND ZERO AS DETERMINE VOLTAGE DETERMINE INPUT/OU DETERMINE HIGH/LOW DETERMINE POWER GA DETERMINE FREQUENC | NECESSARY ALL<br>GAIN<br>TPUT IMPEDANCE<br>FREQUENCY CUT<br>IN | OFFS                             |
| 3.00   | EXTENT   |  |  |                                  |
|        | GENERAL ST   | CATEMENT OF EXTENT A FOLLOWING PROPER P TO APPROVAL OF A E COMPLETED WITHIN 6 JUDGED AS SATISFAC                                   | PROCEDURES AND<br>BOARD OF EXPERT<br>HOURS WITH EA             | RATERS. TO BE<br>ACH OPERATION   |
|        | () 3.02<br>() 3.03<br>() 3.04  | AC DETERMINED F  | DATA<br>H MANUFACTURER'<br>AT WILL VALIDA'<br>BY THE BOARD OF  | S PROCEDURES TE THEORETICAL DATA |
|        | () 3.05  | AS DETERMINED I  | BY THE BOARD OF<br>AT WILL VALIDAT                             | TE THEORETICAL DATA              |
| C.     |  | AS DETERMINED I  | SI INE DUAKU U   | TE THEORETICAL DATA              |

TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA AS DETERMINED BY THE BOARD OF RATERS

3.07

( )

| (          | ) | 1.01 | MULTI STAGE VOLTAGE AMPLIFIER                     |
|------------|---|------|---|
| į          | ) | 1.02 | SINGLE STAGE VOLTAGE AMPLIFIER                    |
| <i>' i</i> | ì | 1.03 | COMMON BASE VOLTAGE AMPLIFIER                     |
| ì          | j | 1.04 | COMMON EMITTER VOLTAGE AMPLIFIER                  |
| į          |   |      | COMMON COLLECTOR VOLTAGE AMPLIFIER                |
| į          |   |      | SCHEMATIC DIAGRAMS                                |
| i          | ) | 1.07 | SPECIFICATION SHEET                               |
| ì          | ) | 1.08 | POWER SUPPLY                                      |
| ì          | ń | 1 09 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME TEST A DISCRETE COMPONENT SOLID STATE VOLTAGE AMPLIFIER TO DETERMINE CIRCUIT CHARACTERISTICS 2.01 EMPLOYING THE FOLLOWING OPERATIONS: SELECT PROPER TEST EQUIPMENT 2.02 CHECK AND ZERO AS NECESSARY ALL TEST EQUIPMENT USED 2.03 DETERMINE VOLTAGE GAIN 2.04 DETERMINE INPUT/OUTPUT IMPEDANCE 2.05 DETERMINE HIGH/LOW FREQUENCY CUTOFFS 2.06 DETERMINE POWER GAIN 2.07 DETERMINE FREQUENCY RESPONSE CURVE 2.08

#### 3.00 EXTENT

| GENERAL ( ) 3.0 | STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME  OF TO APPROVAL OF A BOARD OF EXPERT RATERS. TO BE  COMPLETED WITHIN 6 HOURS WITH EACH OPERATION  JUDGED AS SATISFACTORY OR UNSATISFACTORY   |
|-----------------|--|
| ( ) 3.          |  |
| ( ) 3.          | PRODUCE VALID DATA  1N ACCORDANCE WITH MANUFACTURER'S PROCEDURES   |
| () 3.           | 04 TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA  |
| () 3.           | TO THE PARTY OF PARTY |
| ( ) 3.          | TO THE OUT OF THE PART OF THE OPENICAL DATA  |
| () 3.           | TO THE OF THE PROPERTY OF THE  |
| ( ) 3.          | THEORETICAL DATA   |

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|                     | MISOE NO.   |                 |  |  |  |  |
|---------------------|-------------|-----------------|--|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 04 | CIRCUIT TESTING |  |  |  |  |
| USOE CODE NO(S)     | UNIT 02     | AMPLIFIERS      |  |  |  |  |
|                     | TERMOB NO.  | 13-029          |  |  |  |  |
| ·                   |             | •               |  |  |  |  |
| 1.00 CONDITION      |             |                 |  |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO   |  |   | 118  |                  |               |                             |
|--------|------|--|---|--|------------------|---------------|-----------------------------|
| PROGRA | \M   | ELECTR                                       | ONICS   |  | DIVISION UNIT -  |               | CIRCUIT TESTING  AMPLIFIERS |
| 1.00   | COND | ITION  |   |  | TERMOB NO        |               | ] 3-0 30                    |
|        | ( )  | 1.01<br>1.02<br>1.03<br>1.04<br>1.05<br>1.06 | VACUUM TUBE PO<br>CATHODE FOLLOW<br>VACUUM TUBE VO<br>CLASS A AMPLIF<br>CLASS B AMPLIF<br>CLASS C AMPLIF<br>SPECIFICATION<br>SCHEMATIC DIAG<br>LIST OF FORMUI<br>BASIC ELECTRON | ER AMPI<br>LTAGE A<br>LER<br>LER<br>LER<br>SHEET<br>GRAM | LIFIER AMPLIFIER | ens,<br>QUIPM | ETC.<br>ENT (TABLE T-3)     |

#### GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME TEST A VACUUM TUBE AMPLIFIER TO DETERMINE CIRCUIT 2.01 CHARACTERISTICS EMPLOYING THE FOLLOWING OPERATIONS: SELECT PROPER TEST EQUIPMENT 2.02 CHECK AND ZERO AS NECESSARY ALL TEST EQUIPMENT USED 2.03 DETERMINE VOLTAGE GAIN 2.04 DETERMINE INPUT/OUTPUT IMPEDANCE 2.05 ( ) DETERMINE HIGH/LOW FREQUENCY CUTOFFS 2.06 DETERMINE POWER GAIN ( ) 2.07 DETERMINE FREQUENCY RESPONSE CURVE 2.08

#### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 FOLLOWING PROPER PROCEDURES AND SAFETY PRECAUTIONS
TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE
COMPLETED WITHIN 6 HOURS WITH EACH OPERATION
JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO
PRODUCE VALID DATA
( ) 3.03 IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES

( ) 3.04 TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA
AS DETERMINED BY THE BOARD OF RATERS

( ) 3.05 TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA
AS DETERMINED BY THE BOARD OF RATERS

( ) 3.06 TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA AS DETERMINED BY THE BOARD OF RATERS

3.07 TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA
AS DETERMINED BY THE BOARD OF RATERS



| ໌ ( ) |      | VACUUM TUBE POWER AMPLIFIER                       |
|-------|------|---|
| ( )   |      | CATHODE FOLLOWER AMPLIFIER                        |
| ( )   | 1.03 | VACUUM TUBE VOLTAGE AMPLIFIER                     |
| ( )   | 1.04 | CLASS A AMPLIFIER                                 |
| ( )   |      | CLASS B AMPLIFIER                                 |
| ( )   |      | CLASS C AMPLIFIER                                 |
| ( )   | 1.07 | SPECIFICATION SHEET                               |
| ( )   | 1.08 | SCHEMATIC DIAGRAM                                 |
| ( )   | 1.09 | LIST OF FORMULAS, TABLES, GRAPHS, ETC.            |
| ( )   | 1.10 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) |

#### GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME TEST A VACUUM TUBE AMPLIFIER TO DETERMINE CIRCUIT CHARACTERISTICS EMPLOYING THE FOLLOWING OPERATIONS: SELECT PROPER TEST EQUIPMENT 2.02 CHECK AND ZERO AS NECESSARY ALL TEST EQUIPMENT USED 2.03 ) DETERMINE VOLTAGE GAIN 2.04 DETERMINE INPUT/OUTPUT IMPEDANCE 2.05 DETERMINE HIGH/LOW FREQUENCY CUTOFFS 2.06 DETERMINE POWER GAIN 2.07 DETERMINE FREQUENCY RESPONSE CURVE 2.08

#### 3.00 EXTENT

| GENE          | RAL STA | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME FOLLOWING PROPER PROCEDURES AND SAFETY PRECAUTIONS TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 6 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY  |
|---------------|---------|--|
| ا <del></del> | 3.02    | OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO   |
| ( )           | 3.02    | PRODUCE VALID DATA   |
| <i>(</i> )    | 3.03    | IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES   |
| ( )           |         | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA   |
| ( )           | 3.04    | AS DETERMINED BY THE BOARD OF RATERS   |
|               | 2 05    | THE DESCRIPTION OF THE PROPERTY OF THE PARTY |
| ( )           | 3.05    | THE PARTY OF PARTY   |
|               |         | NO DETERMINE THE PROPERTY OF THE PARTY OF TH |
| ( )           | 3.06    | TO THE POST OF DAMERO  |
|               |         | AS DETERMINED BY THE BOARD OF RATERS   |
| ( )           | 3.07    | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA   |
|               |         | AS DETERMINED BY THE BOARD OF RATERS   |
| ( )           | 3.08    | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA   |
| ` '           | •       | AS DETERMINED BY THE BOARD OF RATERS   |

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|                       | ,           | MISOE NO        |
|-----------------------|-------------|-----------------|
| PROGRAM ELECTRONICS . | DIVISION 04 | CIRCUIT TESTING |
| USOE CODE NO(S)       | UNIT 02     | AMPLIFIERS      |
|                       | TERMOB NO.  | 13-030          |
|                       | -           |                 |
|                       |             |                 |

1.00 CONDITION

### 2.00 PERFORMANCE

GENERAL STATEMENT OF REFFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| 3              |                | •     |   | •  |  | _   |                                 |                                       | 4         |
|----------------|----------------|-------|---|--|--|---|---------------------------------|---------------------------------------|-----------|
| MISOE          | NO             |       |   | •  | 121  | •   | ū                               | •                                     |           |
| PROGRA         | M EL           | ECTRO | NICS                                    |  | <u>,                                     </u>                              | DIVISION                                      | 04                              | CIRCUIT TI                            | ESTING ·  |
|                |                |       |   |  |  | UNIT  | 02                              | AMPLIFIERS                            | 5         |
|                | •              | •     | •                                       |  |  | TERMOB NO                                     | ٥.                              | 13-031                                |           |
|                |                |       | v                                       |  |  |   |                                 | ð                                     | •         |
| 1.00           | CONDITI        | оÑ    |   |  |  | •   |                                 |                                       | *<br>.•   |
|                | <i>(</i> () 1. | .01 A | UDIO IO                                 | AMPLII                                     | FIER   |   | •                               | •                                     | •         |
| •              | ( ) 1          | .02 O | PAMP<br>C IC A                          | MPLIFIE                                    | R  |   |                                 | •                                     |           |
| `              | () 1           | .05 S | CHEMAT:                                 | IC DIAG<br>FORMUL                          | RAM  | BLES, GRA                                     | PHS,                            | ETC.                                  |           |
| ٠.             | · ·            | .07 P | OWER STARTED                            | UPPLY<br>LECTRON                           | ICS TO   | OLS AND E                                     | QUIP                            | MENT (TABL                            | E T-3)    |
| ,              | PERFORM        | X NCE |   | *  |  | •   |                                 | •                                     |           |
| 2.00           | PERFORM        | ANCE  |   |  |  |   |                                 |                                       | •         |
|                | (), 2          | .01 7 | TEST AN<br>CIRCUIT<br>OPERATI           | INTEGR<br>CHARAC<br>ONS:                   | TERIST   | ICS EMPLO                                     | YING                            | NG OUTCOME<br>IER TO DET<br>THE FOLLO | owing     |
|                | () 2           | .03 C | CHECK A<br>DETERMI<br>DETERMI           | ND ZERO<br>NE VOLT<br>NE INPU              | AS NE<br>AGE GA<br>TOUTE   | CESSARY <i>F</i><br>AIN<br>PUT IMPED <i>F</i> | ANCE                            | EST EQUIPM                            | MENT USED |
| •              | () 2           | .06 I | DETERMI<br>DETERMI                      | NE HIGH                                    | I/LOW E<br>R GAIN  | REQUENCY                                      | COTC                            |                                       |           |
|                | ( ) 2          |       |   |  | •  |   |                                 | •                                     |           |
| 3.00           | EXTENT         |       |   |  |  | •   |                                 |                                       | •1        |
|                | ı <del></del>  |       |   |  |  |   |                                 | •                                     |           |
|                |                | 3.01  | FOLLOWI<br>TO APPI<br>COMPLET<br>JUDGED | ING PROP<br>ROVAL OF<br>PED WITH<br>AS SAT | PER PROFINE PER PROFINE PER PROFINE PER PER PER PER PER PER PER PER PER PE | ARD OF EXHOURS WIT                            | AND S<br>PERT<br>H EA(<br>SATIS | CH OPERATIONS SFACTORY                | TO BE     |
| +              | 1_()           | 3.02  | וחמם                                    | ጎ፤ሮፑ ሂልነ                                   | יגלת חד.ד  | ፐል  |                                 | ARACTERIST                            | •         |
|                | , ,            |       | IN ACCO                                 | ORDANCE<br>ACCURAC                         | WITH I   | MANUFACTU<br>WILL VAL<br>THE BOAR             | IDAT:                           | S PROCEDUR<br>E THEORETI<br>RATERS    | CVE DAIN  |
|                | ( )            | 3.05  | TO AN                                   | ACCURAC                                    | Y THAT   | WILL VAL                                      | IDAT                            | E THEORETI<br>RATERS                  |           |
| • .            | . ( )          | 3.06  | TO AN                                   | ACCURAC                                    | Y THAT   | WILL VAL                                      | IDAT<br>D OF                    | E THEORETI<br>RATERS <sup>®</sup>     |           |
| C <sup>*</sup> | ( )            | 3.07  | TO AN                                   | ACCURAC                                    | Y THAT   | WILL VAL                                      | IDAT<br>OF                      | E THEORETI                            |           |
| ERIC           | ( )            | 3.08  | TO AN                                   | ACCURAC                                    | Y THAT   | WILL VAL                                      | IDAT                            | E THEORETI                            | CAL DATA  |

```
() 1.01 AUDIO IC AMPLIFIER

() 1.02 OPAMP

() 1.03 DC IC AMPLIFIER

() 1.04 VHF IC AMPLIFIER

() 1.05 SCHEMATIC DIAGRAM

() 1.06 LIST OF FORMULAS, TABLES, GRAPHS, ETC.

() 1.07 POWER SUPPLY

() 1.08 BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)
```

```
GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 TEST AN INTEGRATED CIRCUIT AMPLIFIER TO DETERMINE CIRCUIT CHARACTERISTICS EMPLOYING THE FOLLOWING OPERATIONS:
```

```
( ) 2.02 SELECT PROPER TEST EQUIPMENT
( ) 2.03 CHECK AND ZERO AS NECESSARY ALL TEST EQUIPMENT USED
( ) 2.04 DETERMINE VOLTAGE GAIN
( ) 2.05 DETERMINE INPUT/OUTPUT IMPEDANCE
( ) 2.06 DETERMINE HIGH/LOW FREQUENCY CUTOFFS
( ) 2.07 DETERMINE POWER GAIN
( ) 2.08 DETERMINE FREQUENCY RESPONSE CURVE
```

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOMF

() 3.01 FOLLOWING PROPER PROCEDURES AND SAFETY PRECAUTIONS

TO APPROVAL OF A BOARD OF EXPERT RATERS. TO BE.

COMPLETED, WITHIN 2 HOURS WITH EACH OPERATION

JUDGED AS SATISFACTORY OR UNSATISFACTORY

| *           |         |  |
|-------------|---------|--|
| <del></del> | - 3 3 3 | OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO                       |
| (, )        | 3.02    | OF SUFFICIENT SENSITIVITY AND CHARACTERS                               |
| •           |         | PRODUCE VALID DATA   |
| 4/1         | 3 03    | IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES                           |
|             |         | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA                     |
| ( )         | 3.04    | TO AN ACCURACT THAT WITH TARREST PARTIES                               |
|             | •       | AS DETERMINED BY THE BOARD OF RATERS                                   |
|             | 3.05    | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA                     |
| (")         | 3.05    | AS DETERMINED BY THE BOARD OF RATERS                                   |
|             |         | AS DETERMINED BY THE BOARD OF THE TOTAL DATA                           |
| ( )         | 3.06    | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA                     |
| ( )         |         | AS DETERMINED BY THE BOARD OF RATERS                                   |
|             |         | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA                     |
| ( )         | 3.07    | TO AN ACCURACY THAT WILL VALUE AND AND AND AND AND AND AND AND AND AND |
|             |         | AS DETERMINED BY THE BOARD OF RATERS                                   |
| / \         | 3.08    | TO AN ACCURACY THAT WILL VALIDATE THEORETICAL DATA                     |
| ( )         | 3.00    | AS DETERMINED BY THE BOARD OF RATERS                                   |
|             |         | AS DETERMINED DI INE BOARD OF WILDING (                                |

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| PROGRAM ELECTRONICS | DIVISION 04 | CIRCUIT TESTING |
|---------------------|-------------|-----------------|
| USOE CODE NO(S)     | UNIT 02     | AMPLIFIERS      |
| 1                   | TERMOB NO.  | 13-031          |
|                     | •           | • • •           |
| 1.00 CONDITION      | . / 9       | •               |

MISOE NO.

## 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

|          | MISOE  | NO                 |                              |                                      |  | ,                                    |   |                            | •                       |        |
|----------|--------|--------------------|------------------------------|--------------------------------------|--|--------------------------------------|---|----------------------------|-------------------------|--------|
|          | PROGPA | AM.                | ELECTR                       | ONICS                                | 1  | ·                                    | DIVISIO                                   | on 04                      | CIRCUIT TEST            | ING    |
|          |        |                    |                              |                                      | •  |                                      | UNIT'                                     | - 02                       | OSCILLATORS             |        |
| 4        |        | ٠                  | •                            |                                      |  | •                                    | TERMOB                                    | NO.                        | 13-032                  |        |
| ۔        | •      |                    |                              |                                      | •  |                                      | 4   |                            |                         | •      |
|          | 1.00   | CONDI              | TION                         |                                      |  |                                      | ,   | ÷                          |                         | . •    |
| <i>,</i> |        | (· ), ( ) ( ), ( ) | 1.01<br>1.02<br>1.03<br>1.04 | MULTI-                               | HARTLEY (<br>VIBRATOR<br>SHIFT OS<br>IDGE OSC          | OSCIL:<br>CILLAT                     | LATOR<br>OR                               |                            |                         |        |
|          |        | ()                 | 1.05<br>1.06<br>1.07<br>1.08 | CRYSTA<br>RELAXA<br>COLPIT<br>SPECIA | L OSCILL<br>TION OSC<br>TS OSCIL<br>LTY CIRC           | ATOR<br>ILLATO<br>LATOR<br>UIT OS    | R .                                       | R                          |                         |        |
| •        |        | ( )                | 1.10<br>1.11<br>1.12         | SPECIF<br>LIST O                     | TIC DIAG<br>ICATIONS<br>F FORMUL<br>SUPPLY<br>ELECTRON | SHEET<br>AS; TA                      | BLES, G                                   |                            | •                       | r-3)   |
|          | ٠      | ( )                | .1.13                        | BASIC                                | ELECTRON   | '                                    | ·.  | ,                          |                         |        |
| ٠.       | 2.00   | PERFO              | RMANCE                       |                                      | · John · ·   | •                                    | •   |                            | •                       |        |
|          |        | GENI               | 2.01                         | TEST A<br>EMPLOY                     | N OSCILI   | FOLLOW                               | O DETER                                   | RATIO                      |                         |        |
| •        | . , ,  | ( )                | 2.03<br>2.04<br>2.05         | CHECK DETERM DETERM                  | AND ZERO IINE OUTI IINE TUNI IINE OUTI                 | ) AS NE<br>PUT IMI<br>ING RAN        | CESSARY<br>PEDANCE<br>IGE                 | · ALL '                    | rest equipmen           | T USED |
|          | 3.00   | EXTE               | T                            |                                      | · ·  |                                      |   |                            |                         |        |
|          |        |                    |                              |                                      |  |                                      |   |                            | •                       |        |
|          |        |                    | ERAL ST                      | FOLLOW<br>TO API                     | NING PROD<br>PROVAL O                                  | PER PRO<br>F BOAR<br>HIN 2           | OCEDURES<br>O OF EXI<br>HOURS WI          | S AND<br>PERT R<br>ITH EA  | CH STEP JUDGE           | E      |
|          |        | ()                 | 3.02                         | ··· PR                               | יייי עא:   | LTD DA                               | TA  |                            | ARACTERISTICS           | TO     |
|          | •      | ( )                | 3.03<br>3.04<br>3.05         | IN ACC<br>TC AN<br>AS                | CORDANCE ACCURAC DETERMI ACCURAC                       | WITH :<br>Y THAT<br>NED BY<br>Y THAT | MANUFAC'<br>WILL VA<br>THE BOA<br>WILL VA | ALIDAT<br>ARD OF<br>ALIDAT | E THEORETICAL           |        |
|          |        | ( )                |                              | AS                                   | DETERMIT   | NED BY<br>Y THAT                     | THE BOX                                   | ARD OF<br>ALIDAT           | RATERS<br>E THEORETICAL |        |
| ERIC     | TRIC   |                    | 12                           | 4                                    | DETERMIT   | MUD DI                               |   |                            |                         |        |

|                            | •           | :               |
|----------------------------|-------------|-----------------|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 04 | CIRCUIT TESTING |
| USOE CODE NO(S)            | UNIT 02     | OSCILLATORS     |
|                            | TERMOB NO.  | 13-032          |
|                            |             | ·               |
| 1.00 CONDITION             | •           |                 |

MISOE NO.

### 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

## 3.00 EXTENT

| MISOE  | NO.  | and the second s |   |  |
|--------|--|--|---|--|
| PROGRA | M ELEC   | TRONICS  | DIVISION 04   | CIRCUIT TESTING  |
|        |  |  | UNIT 04   | SPECIAL CIRCUITS   |
|        |  |  | TERMOB NO.  | 13-033   |
|        |  |  |   | ,  |
| 1.00   | CONDITION  |  |   | -  |
| -      | () 1.01<br>() 1.02   | SAWTOOTH/TRAPEZOII<br>SQUARE WAVE GENER  | DAL GENERATOR<br>ATOR   |  |
|        | ( ) 1.03<br>( ) 1.04<br>( ) 1.05<br>( ) 1.06<br>( ) 1.07<br>( ) 1.08 | PULSE GENERATOR<br>TRIANGULAR WAVE G<br>SCHEMATIC DIAGRAM<br>LIST OF FORMULAS,<br>SPECIFICATION SHE  | TABLES, GRAPHS  | S, ETC.  |
|        | ( ) 1.09<br>( ) 1.10   | POWER SUPPLY<br>BASIC ELECTRONICS  | TOOLS AND EQUI  | IPMENT (TABLE T-3)   |
| 2.00   | PERFORMAN  | CE   | · •   |  |
|        |  | TATEMENT OF PERFORM  | ANCE AND RESULT   | TING OUTCOME   |
|        | GENERAL S'   | THE THE RESERVE TO BE SHOWN TO BE  | במנו כדר אוזיוימקיאואיא   | PERMINE CIRCUIT OLLOWING OPERATIONS:                           |
|        | () 2.02<br>() 2.03<br>() 2.04<br>(*) 2.05<br>() 2.06                 | CHECK AND ZERO AS DETERMINE OUTPUT   | NECESSARY ALL VOLTAGE : TIME CONSTANT   | TEST EQUIPMENT USED  |
| 3.00   | EXTENT   |  |   |  |
|        | GENERAL S  | APPROVAL OF A BO<br>COMPLETED WITHIN<br>AS SATISFACTORY C  | PROCEDURES AND<br>ARD OF EXPERT<br>2 HOURS WITH E<br>OR UNSATISFACTO  | RATERS. TO BE ACH OPERATION JUDGED RY                          |
|        | () 3.02<br>() 3.03<br>() 3.04<br>() 3.05                             | AND CHARACTERI IN ACCORDANCE WITH TO AN ACCURACY THE AS DETERMINED TO AN ACCURACY THE AS DETERMINED  | STICS TO PRODU<br>TH MANUFACTURER<br>HAT WILL VALIDA<br>BY THE BOARD O<br>HAT WILL VALIDA<br>BY THE BOARD O | 'S PROCEDURES TE THEORETICAL DATA F RATERS TE THEORETICAL DATA |

|                            | ı            | MISOE NO.        |
|----------------------------|--------------|------------------|
| PROGRAM <u>FLECTRONICS</u> | DIVISION 04  | CIRCUIT TESTING  |
| USOE CODE NO(S)            | UNIT 04      | SPECIAL CIRCUITS |
|                            | TERMOB NO.   | 13-033           |
| <del></del>                | <b>-</b><br> | ·                |
| 1.00 CONDITION             |              |                  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

#### 3.00 EXTENT



| •            |   |   |                                   | ,                            |
|--------------|---|---|-----------------------------------|------------------------------|
| MISOE        | NO.                                     | 126                                       | 8                                 | •                            |
| PROGRA       | AM FLECT                                | RONICS                                    |                                   | CIRCUIT TESTING              |
| 1,111        |   |   |                                   | CARCIAL CIRCUITEC            |
| •            |   | •   | UNIT 04                           | SPECIAL CIRCUITS AND DEVICES |
|              |   |   | TERMOB NO.                        | 13-034                       |
|              |   |   |                                   |                              |
|              | •                                       | . •                                       |                                   |                              |
| 1.00         | CONDITION                               | •   |                                   |                              |
|              | () 1.01                                 | FLYBACK POWER SU                          | RIZONTAL DEFLE                    | CTION CIRCUIT AND            |
|              | ( ) 1.02                                | SCHEMATIC DIAGRAM<br>LIST OF FORMULAS, T. | ABLES. GRAPHS.                    | ETC.                         |
|              | () 1.03                                 | BASIC ELECTRONICS TO                      | OOLS AND EQUIP                    | MENT (TABLE T-3)             |
| :            | () 1.05                                 | OSCILLOSCOPE                              | •                                 |                              |
|              | () 1.06                                 | VTVM                                      | TCTMAT \                          |                              |
|              | ( ) 1.07<br>( ) 1.08                    | VOM (CONVENTIONAL/D)                      | IGITAL)                           |                              |
|              | ( ) 1.00                                | 11151 0105                                |                                   |                              |
|              |   |   |                                   | •                            |
| 2.00         | PE RFORMANO                             | CE ·                                      |                                   |                              |
|              |   | ·   |                                   |                              |
|              |   |   | OF AND PECULAT                    | NG OUTCOME                   |
|              | GENERAL ST                              | TATEMENT OF PERFORMAN                     | STON HORIZONTA                    | L DEFLECTION CIRCUIT         |
|              | , | WITH FLYBACK POWER<br>EMPLOYING THE FOLLO | SUPPLY TO DETE                    | RMINE CHARACTERISTICS        |
|              | () 2.02                                 | SELECT PROPER TEST                        | EQUIPMENT                         |                              |
|              | () 2.03                                 | CHECK AND ZERO AS N                       | ECESSARY ALL T                    | EST EQUIPMENT USED           |
|              | () 2.04                                 | DETERMINE REGULATION DETERMINE HIGH VOLT  | N<br>NCE VOLTAGE                  |                              |
|              | () 2.05<br>() 2.06                      |   |                                   |                              |
|              | () 2.07                                 | DETERMINE HORIZONTA                       | L EFFICIENCY                      |                              |
|              | () 2.08                                 | DETERMINE-HORIZONTA                       | L LOCKING RANG                    | E                            |
|              | () 2.09                                 | DEMONSTRATE WAVE FO                       | RMS                               | · ·                          |
|              | •                                       | •   |                                   |                              |
| 3.00         | EXTENT                                  |   |                                   |                              |
|              | •                                       |   |                                   | ,                            |
|              |   |   |                                   | ,                            |
|              | GENERAL S                               | TATEMENT OF EXTENT AN                     | ID EXTENT OF RE                   | SULTING OUTCOME              |
|              | () 3.01                                 | FOLLOWING PROPER PR<br>TO THE APPROVAL OF | ROCEDURES AND S                   | PERT RATERS. TO BE           |
|              |   | COMPLETED WITHIN 2                        | HOURS WITH EAC                    |                              |
|              |   | SATISFACTORY OR UNS                       | SATISFACTORY                      |                              |
|              |   |   | matternia and City                | DACMEDIAMICS TO              |
|              | 3.02                                    | PRODUCE VALID DA                          | ATA                               |                              |
|              | () 3.03                                 |   | MANUFACTURER'S<br>■ WITT VATITATE | F MANUFACTURER'S             |
|              | () 3.04                                 | SPECIFICATIONS                            |                                   | •                            |
|              | ( ) 3.05                                | TO AN ACCURACY THAT                       | r WILL VALIDATE                   | MANUFACTURER'S               |
|              |   | SPECIFICATIONS                            | n 5.7777 TIRTTSAMI                | MANUFACTURER'S               |
| $\mathbf{C}$ | () 3.06                                 | TO AN ACCURACY THAT                       | L MITT ANTIDALE                   | : PREMOTACIONEN B            |
| y ERIC .     | () 3.07                                 | TO AN ACCURACY THAT                       | WILL VALIDATI                     | MANUFACTURER'S               |

| <br>( ) | ) | 1.01 | COLOR TELEVISION HORIZONTAL DEFLECTION CIRCUIT AND |
|---------|---|------|--|
| ` '     |   |      | FLYBACK POWER SUPPLY                               |
| (       | ) | 1.02 | SCHEMATIC DIAGRAM                                  |
| (       | ) | 1.03 | LIST OF FORMULAS, TABLES, GRAPHS, ETC.             |
| į (     | ) | 1.04 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)  |
| (       | ) | 1.05 | OSCILLOSCOPE                                       |
| (       | ) |      | VTVM   |
| (       | ) | 1.07 | VOM (CONVENTIONAL/DIGITAL)                         |
| <br>(   | ) | 1.08 | TEST JIGS  |
|         |   |      |  |

| GENEF      | RAL ST | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME  TEST A COLOR TELEVISION HORIZONTAL DEFLECTION CIRCUIT WITH FLYBACK POWER SUPPLY TO DETERMINE CHARACTERISTICS EMPLOYING THE FOLLOWING OPERATIONS: |
|------------|--------|--|
|            | 2.02   | SELECT PROPER TEST EQUIPMENT   |
| ( )        | 2.03   | CHECK AND ZERO AS NECESSARY ALL TEST EQUIPMENT USED  |
| ( )        | 2.04   | DETERMINE REGULATION   |
| ( )        | 2.05   |  |
| ( )        | 2.06   | DETERMINE DAMPER VOLTAGE   |
| ( )        | 2.07   | DETERMINE HORIZONTAL EFFICIENCY  |
| <i>( )</i> | 2.08   | DETERMINE HORIZONTAL LOCKING RANGE   |
| ( )        | 2.09   | DEMONSTRATE WAVE FORMS   |

## 3.00 EXTENT

| GENERAL ST | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME  |
|------------|--|
| 7 3.01     | FOLLOWING PROPER PROCEDURES AND SAFETY PRECAUTIONS   |
| ( )        | TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE   |
| •          | COMPLETED WITHIN 2 HOURS WITH EACH OPERATION JUDGED  |
|            | SATISFACTORY OR UNSATISFACTORY   |
|            | SATISFACTORY OR UNSATISFACTORI   |
|            | CHARACTERISTICS TO A   |
| () 3.02    | OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO   |
| • •        | PRODUCE VALID DATA   |
| () 3.03    | IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES   |
| () 3.04    | TO AN AGGURACY THAT WILL VALIDATE MANUFACTURER'S   |
| ( ) - 3.04 | SPECIFICATIONS   |
|            | TO THE PARTY OF THE PARTY AND MANUER CHIPPR'S  |
| ( ) 3.05   |  |
|            | SPECIFICATIONS   |
| () 3.06    | TO AN ACCURACY THAT WILL VALIDATE MANUFACTURER'S   |
| •          | SPECIFICATIONS   |
| () 3.07    | TO AN ACCURACY THAT WILL VALIDATE MANUFACTURER'S   |
| ( ) 3.07   | SPECIFICATIONS   |
|            | The second secon |
| () 3.08    | 10 1 1.0001100   |
|            | SPECIFICATIONS   |
| () 3.09    | TO SATISFACTION OF THE BOARD   |
| -          |  |

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| PROGRAM <u>ELECTRONICS</u> | DIVISION 04 | CIRCUIT TESTING  |
|----------------------------|-------------|------------------|
|                            | <del></del> | CIRCUIT TESTING  |
| USOE CODE NO(S)            | UNIT 04     | SPECIAL CIRCUITS |
|                            |             | AND DEVICES      |
|                            | TERMOB NO.  | 13-034           |

MISOE NO.

### 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.               |         |  |       |              |                |                    |
|--------|-------------------|---------|--|-------|--------------|----------------|--------------------|
| PROGRA | M                 | ELECTI  | RONICS                                 |       | DIVISION     | 0 4            | CIRCUIT TESTING .  |
|        |                   |         |  |       | TINIT III    | O 4            | SPECIAL CIRCUITS   |
|        |                   |         |  |       | UNIT         | 04             | AND DEVICES        |
|        |                   |         |  | -     | TERMOB NO    | _              | 13-035             |
|        |                   |         | -                                      |       |              |                | 13 033             |
| 1.00   | COND              | TION    | -                                      |       | •            |                |                    |
| •      | ( )               |         | VACUUM TUBE RADIO                      |       | J            |                |                    |
|        | <u>( )</u> _      | 1.02    | SCHEMATIC DIAGRAM                      |       |              |                |                    |
|        | ( )               | 1.03    | SERVICE MANUAL                         |       |              |                |                    |
| •      | ( )               | 1.04    | TUBE TESTER                            |       | 0 TUD DOI    | 1 <b>T</b> D I | WENT (TABLE T-3)   |
| •      | ( )               | 1.05    | BASIC ELECTRONICS                      | то    | OLS AND EQU  | ITÉ            | MENT (IABLE 1-3)   |
|        |                   |         | •                                      |       |              |                |                    |
| 2.00   | PERF              | O RMANC | <b>E</b>                               |       |              |                | ·                  |
|        |                   |         |  |       | DECIN        | mT             | NC OUTCOME         |
|        | GENE              |         | ATEMENT OF PERFORM                     | IANC  | E AND RESU   | PIT            | MINE CIRCUIT       |
|        | 7                 | 2.01    | TEST A VACUUM TUE<br>CHARACTERISTICS E | MPI   | OYING THE    | FOL            | LOWING OPERATIONS: |
| •      | L <del>, ,-</del> | 2.02    | SELECT PROPER TES                      | T E   | OUIPMENT     |                | 1                  |
|        | ( )               | 2.02    | CHECK AND ZERO AS                      | NE    | CESSARY AL   | L T            | EST EQUIPMENT USED |
|        | ( )               | 2.03    | TEST TUBES                             | •     |              | •              |                    |
|        | ( )               | 2.05    | TEST POWER SUPPLY                      | v vc  | LTAGE        |                |                    |
|        | ( )               | 2.06    |  |       |              |                |                    |
|        | ( )               | 2.07    |  |       |              |                |                    |
|        | ( )               | 2.08    | DEMONSTRATE RADIO                      | O     | PERATION     |                |                    |
|        |                   |         |  |       | -4           |                |                    |
| 3.00   | EXTE              | ENT     |  |       |              |                |                    |
| •      |                   |         | •                                      |       |              |                |                    |
|        |                   |         | PATEMENT OF EXTENT                     | 2 21  |              | מ              | SULTING OUTCOME    |
|        | GENE              |         | PARENT OF EXTENT                       | L QM. | ING PROPER   | PRO            | CEDURES AND SAFETY |
|        | ( )               | 3.01    | PRECAUTIONS TO T                       | HE :  | ADDROVAT: OF | A              | BOARD OF EXPERT    |
|        | ļ                 |         | RATERS. TO BE C                        | UMD.  | LETED WITHI  | N E            | HOURS WITH EACH    |
|        |                   |         | OPERATION TUDGED                       | AS.   | SATISFACTO   | RY             | OR UNSATISFACTORY  |
|        |                   |         |  |       |              |                |                    |
|        | 4                 | 3.02    | OF SUFFICIENT SE                       | NSI'  | TIVITY AND   | CHA            | RACTERISTICS TO    |
|        | ` /               | J. U.   | DRODUCE VALID                          | DA    | ΤA           |                | •                  |
|        | ( )               | 3.03    | IN ACCORDANCE WI                       | TH .  | MANUFACTURE  | R'S            | S SPECIFICATIONS   |
|        | ii                | 3.04    | FOLLOWING LOGICA                       | I, P  | ROCEDURE     |                |                    |
|        | į į               | 3.05    | FOLLOWING LOGICA                       | L P   | ROCEDURE     |                | *                  |
|        | ( )               | 3.06    | FOLLOWING LOGICA                       | L P   | ROCEDURE     |                |                    |
|        | ( )               | 3.07    | FOLLOWING LOGICA                       | L P   | ROCEDURE     |                | `                  |
|        | ii                | 3.08    | TO SATISFACTION                        | OF    | THE BOARD    |                |                    |

|                     | DIVISION 04 CIRCUIT TESTING  UNIT 04 SPECIAL CIRCUITS AND DEVICES TERMOB NO. 13-035 |                 |  |  |
|---------------------|---|-----------------|--|--|
| PROGRAM ELECTRONICS | DIVISION 04 _   | CIRCUIT TESTING |  |  |
| USOE CODE NO(S)     | UNIT 04   |                 |  |  |
|                     | TERMOB NO.  |                 |  |  |
|                     | •   | •               |  |  |
| 1.00 CONDITION      |   |                 |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE | NO    |          |  |               |       |                       |
|-------|-------|----------|--|---------------|-------|-----------------------|
| PROGR | AM    | ELECTR   | ONICS  | DIVISION      | 04    | CIRCUIT TESTING       |
|       |       | <u> </u> |  | UNIT          | 0.4   | SPECIAL CIRCUITS      |
|       |       | ,        |  | 014.7.1       | 0 4   | AND DEVICES           |
| •     |       |          |  | TERMOB NO     | ).    | 13-036                |
| ·     |       |          | •  |               |       |                       |
|       |       |          |  |               |       | -                     |
| 1.00  | CONDI | TION     |  |               |       |                       |
| -     |       |          |  |               |       |                       |
|       | ( )   | 1.01     |  |               |       | •                     |
|       | ( )   |          | SCHEMATIC DIAGRAM  |               |       |                       |
|       | ( )   | 1.03     | SERVICE MANUAL BASIC ELECTRONICS   | TOOLS AND FO  | IITDN | MENT (TABLE T-3)      |
|       | ( )   | 1.04     | BASIC ELECTRONICS  | TOOLS AND LQ  | 0111  |                       |
|       |       | -        |  |               |       | •                     |
| 2 00  | DEDE  | ORMANCI  | F.   | •             |       | 3                     |
| 2.00  | PERF  | OMM      | 1  |               |       |                       |
|       |       | ,        |  |               |       |                       |
|       |       |          |  |               |       |                       |
|       | GENE  | RAL ST   | ATEMENT OF PERFORM   | NCE AND RESU  | LTI   | NG OUTCOME            |
|       | (1)   | 2.01     | TEST A SOLID STATE   | RADIO TO DE   | TER   | MINE CIRCUIT          |
|       |       |          | CHARACTERISTICS EN   | APLOYING THE  | r OL. | LOWING OF LIGHT TOWNS |
|       |       |          | SELECT PROPER TEST   | T POLIT DMFNT |       |                       |
| '     | . ( ) | 2.02     | TEST TRANSISTORS   | LEGUIPMMI     |       |                       |
|       | ( )   | 2.03     | TEST TRANSISTORS TEST POWER SUPPLY   | VOLTAGE       |       |                       |
|       | ( ) : | 2.04     | ALIGN IF'S   | 10211102      |       |                       |
|       | ( )   | 2.05     | TEST SPEAKER   | •             |       |                       |
|       | ( )   | 2.07     | DEMONSTRATE RADIO  | OPERATION     |       |                       |
| •     | ( )   | 2.07     | ,  |               |       | - 9                   |
|       |       |          | •  |               |       |                       |
| 3.00  | EXTE  | NT       | •  |               |       | ·                     |
| •••   |       |          |  | •             |       |                       |
|       |       |          |  |               |       |                       |
|       |       |          | ATEMENT OF EXTENT  | አለር ድሂጥድአጥ 🔿  | ਸਕ ਸ  | SULTING OUTCOME       |
|       | GENE  | 3.01     | RADIO TESTED FOLL  | OWING PROPER  | PRO   | CEDURE AND SAFETY     |
|       | 1 ( ) | 3.01     | PRECAUTIONS TO TH  | E APPROVAL O  | F A   | BOARD OF EXPERT       |
|       | 1     |          | ው የሚከተው መደመ የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመጀመር የመ | MPLETED WITH: | IN 6  | HOURS WITH EACH       |
|       | ,     |          | OPERATION JUDGED   | AS SATISFACT  | ORY   | OR UNSATISFACTORY     |
|       |       |          |  |               |       |                       |
|       | 1-()  | 3.02     | OF SUFFICIENT SEN  | SITIVITY AND  | CHA   | RACTERISTICS TO       |
|       |       |          | PPODITCE VALID   | DATA          |       |                       |
|       | ( )   | 3.03     | IN ACCORDANCE WIT  | H MANUFACTUR  | ER'S  | SPECIFICATIONS .      |
|       | ( )   | 3.04     | FOLLOWING LOGICAL  | PROCEDURE     |       |                       |
| •     | ( )   | 3.05     | FOLLOWING LOGICAL  | PROCEDURE     |       |                       |
|       | ( )   | 3.06     | FOLLOWING LOGICAL  | PROCEDURE     |       |                       |
|       | ( )   | 3.07     | TO SATISFACTION O  | F THE BOARD   |       |                       |

|                     | Ň           | MISOE NO.                    |
|---------------------|-------------|------------------------------|
| PROGRAM ELECTRONICS | DIVISION 04 | CIRCUIT TESTING              |
| USOE CODE NO(S)     | UNIT 04     | SPECIAL CIRCUITS AND DEVICES |
|                     | TERMOB NO.  | 13-0362                      |
| 1 00 CONDITION      |             | *                            |
| 1.00 CONDITION      |             |                              |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

### 3.00 EXTENT



|   |             |            |                 |           |                | ,                   |
|---|-------------|------------|-----------------|-----------|----------------|---------------------|
| MISOE                                   | NO          |            | <del></del> '   |           | •              | • •                 |
|   |             | 4          | •               | •         | /              | GENGUIM MECMING     |
| PROGRA                                  | AM          | ELECTR     | ONICS           | ·         | DIVISION/04    | CIRCUIT TESTING     |
| • |             |            |                 |           | ().            | a constitution      |
|   |             |            |                 | _         | UNIT > 04      | SPECIAL CIRCUITS    |
|   |             |            |                 | •         |                | AND DEVICES         |
|   |             |            | 1               |           | TERMOB NO.     | 13-037              |
| •                                       |             |            | •               | •         |                | •                   |
|   |             | •          |                 |           |                | •                   |
|   |             |            |                 | •         | ÷.             |                     |
| 1.00                                    | COND        | ITION      |                 |           | •              | •                   |
|   | <i>(</i> )  | 1.01       | COLOR TV PICT   | URE TUB   | E              |                     |
|   | -           | 1.02       | BLACK & WHITE   | TV PIC    | TURE TUBE      |                     |
| •                                       | ( )         | 1.03       | SPECIFICATION   | SHEET     |                |                     |
|   | ( )         | 1 04       | CEDUTCE MANIIA  | T.        |                | •                   |
|   | ( )         | 1.05       | BASIC ELECTRO   | NICS TO   | OLS AND EQUIP  | MENT (TABLE T-3)    |
|   | ( )         | 1.03       | D1.010 2==0=110 |           |                | ,                   |
|   |             | , <b>1</b> | •               |           | •              |                     |
| 2.00                                    | PERF        | ORMANCI    | ₹.              |           | •              |                     |
| 2.00                                    |             | • (        |                 |           | ` **** ***     |                     |
|   |             |            | _               |           |                |                     |
| 1                                       |             |            |                 |           |                | NO OURGONE          |
| •                                       | GENE        | RAL ST     | ATEMENT OF PER  | REFORMANC | E AND RESULTI  | NG OUTCOME          |
|   | 17          | 2.01       | TEST A PICTUR   | RE TUBE   | TO DETERMINE   | ITS CHARACTERISTICS |
|   | 1           | •          | EMPLOYING THE   | E FOLLOW  | ING PROCEDURE  | :                   |
|   |             |            | ·               |           | OUTDMENT       |                     |
|   | ( )         | 2.02       | SELECT PROPER   | TEST E    | OECCYDA YYY U  | PET FOULPMENT USED  |
|   | ( )         | 2.03       | CHECK AND ZEI   | KO AS NE  | CESSARI ADD I  | EST EQUIPMENT USED  |
|   | ( )         | 2.04       | TEST TUBE       | NIDE CUM  | DACTEDISTICS   |                     |
|   | ( )         | 2.05       | DEMONSTRATE T   | LOBE CHA  | RACIERIBIÇO    | •                   |
|   |             | ~          |                 | •         |                |                     |
|   |             |            |                 | ŕ         |                | , <u>P</u>          |
| 3.00                                    | EXT         | ENT        | •               |           |                |                     |
|   | •           |            | *               |           | ,              |                     |
|   | <del></del> |            |                 |           |                |                     |
|   | CENT        | TOAT. ST   | ATEMENT OF EXT  | TENT ANI  | EXTENT OF RI   | SULTING OUTCOME     |
|   | 7 7         | 3.01       | DICTURE TURE    | TESTED    | FOLLOWING PRO  | PER PROCEDURES AND  |
|   | ' '         | J. 01      | SAFETY PRECA    | TITIONS T | O THE APPROVA  | AL OF A BOARD OF    |
|   | 1           |            | EXPERT RATERS   | S. TO F   | SE COMPLETED V | ALTHIN 6 HOURS WITH |
| _                                       | Ì           |            | EACH OPERATION  | ON JUDGE  | ED AS SATISFAC | CTORY OR            |
|   | 1           |            | UNSATISFACTO    |           |                |                     |
|   |             |            |                 |           |                |                     |
|   | 4           | 3.02       | OF SUFFICIEN'   | T SENSI   | TIVITY AND CH  | ARACTERISTICS TO    |
|   | ` '         | -,         | PRODUCE V       | AT.TD DA  | r <b>a</b>     | •                   |
|   | ( )         | 3.03       | IN ACCORDANC    | E WITH !  | ANUFACTURER'   | S SPECIFICATIONS    |
| `                                       | ii          | 3.04       | FOLLOWING LO    | GICAL P   | ROCEDURE .     | •                   |
| *                                       | ( )         | 3.05       | TUBE CONFORM    | S TO MAI  | NUFACTURER'S   | SPECIFICATIONS      |
|   |             |            |                 |           | •              |                     |

|                      | • • •       |   | ` .         | MISOE NO.                    |
|----------------------|-------------|---|-------------|------------------------------|
| PROGRAM <sup>2</sup> | ELECTRONICS |   | DIVISION 04 | CIRCUIT TESTING              |
| USOE CODE            | E NO(S)     |   | UNIT 04     | SPECIAL CIRCUITS AND DEVICES |
|                      | ,           | * | TERMOB NO.  | 13-037                       |

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE NO.  |  |   |      |                                  |
|--|--|---|------|----------------------------------|
| PROGRAM <u>ELECTI</u>  | RONICS   | DIVISION  | 04   | CIRCUIT TESTING                  |
| <b>\$</b>  | <u> </u>   | UNIT  | 05   | DIGITAL CIRCUITS                 |
|  |  | TERMOB NO   |      | 13-038                           |
|  |  |   |      | -                                |
| 1.00 CONDITION   |  |   |      |                                  |
| () 1.02<br>() 1.03<br>() 1.04<br>() 1.05<br>() 1.06<br>() 1.07<br>() 1.08<br>() 1.09 | BCD 'COUNTER LOGIC CI<br>CLOCK OSCILLATOR WIT<br>UP/DOWN COUNTER WITH<br>LOGIC DIAGRAMS<br>SCHEMATIC DIAGRAM<br>LIST OF FORMULAS, TA<br>POWER SUPPLY<br>BASIC ELECTRONICS TO | CIRCUIT C CIRCUIT RCUIT H TIME INC PRESET LO                          | REMI | ENTS LOGIC CIRCUIT CIRCUITS ETC. |
| () 2.01  | TEST A LOGIC CIRCUIT CHARACTERISTICS EMPI  SELECT PROPER TEST F CHECK AND ZERO AS NE DETERMINE TIMING DIA DETERMINE OUTPUT VOI DEMONSTRATE WAVEFORM                          | TO DETERM<br>COYING THE<br>EQUIPMENT<br>ECESSARY AI<br>AGRAM<br>LTAGE | FOL  | LOWING OPERATIONS:               |
| 3.00 EXTENT  |  |   |      | •                                |

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 FOLLOWING PROPER PROCEDURES AND SAFETY PRECAUTIONS

TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE

COMPLETED WITHIN 2 HOURS WITH EACH STEP JUDGED AS

SATISFACTORY OR UNSATISFACTORY

|       | 3.02 | OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO |
|-------|------|--|
|       |      | PRODUCE VALID DATA /                             |
| (1)   | 3.03 | IN ACCORDANCE WITH MANUFACTURER'S PROCEDURES     |
| ( )   | 3.04 | 100% ACCURATE                                    |
| ( )   | 3.05 | ALL OUTPUTS AND INPUTS, TO HAVE A LEVEL WITHIN . |
|       |      | * MANUFACTURER'S SPECIFICATIONS                  |
| ( ) ` | 3.06 | TO SATISFACTION OF THE BOARD                     |

|                     |             | MISOE NO.        |  |  |  |
|---------------------|-------------|------------------|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 04 | CIRCUIT TESTING  |  |  |  |
| USOE CODE NO(S)     | UNIT 05     | DIGITAL CIRCUITS |  |  |  |
|                     | TERMOB NO.  | 13-038           |  |  |  |
|                     |             | •                |  |  |  |
| 1.00 CONDITION      |             |                  |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

(

| MISOE N                               | NO  |   |  |            |   |   |
|---------------------------------------|---|---|--|------------|---|---|
| PROGRAI                               | M ELECT   | ronics  | DIVISION   | 0 4        | CIRCUIT TESTING                           |   |
|                                       |   |   | UNIT   | 05         | DIGITAL CIRCULTS                          | _ |
| •                                     |   |   | TERMOB NO  | ).         | 13-039                                    |   |
|                                       |   |   | × .  |            | -   |   |
| 1.00                                  | CONDITION   |   |  |            |   |   |
| 2.00                                  | () 1.03<br>() 1.04<br>() 1.05                       | NAND GATE OR GATE NOR GATE AND GATE EXCLUSIVE OR GATE TRUTH TABLE SCHEMATIC DIAGRAM LIST OF FORMULAS, BASIC ELECTRONICS | TABLES, GRAF   | PHS,       | ETC.<br>MENT (TABLE T-3)                  | - |
| ,                                     | GENERAL S   | TATEMENT OF PERFORM TEST A GATE TO DE   | TERMINE CIRC   | TT.        | CHARACTERISTICS                           |   |
|                                       |   | EMPLOYING THE FOL   | LOWING OPERA   |            |   |   |
| · · · · · · · · · · · · · · · · · · · | () 2.02<br>() 2.03<br>() 2.04<br>() 2.05<br>() 2.06 | DETERMINE TIMING TEST TRUTH TABLES DETERMINE OUTPUTS  | DIAGRAM  | ·          |   |   |
| 3.00                                  | EXTENT  |   |  |            |   |   |
|                                       | GENERAL S   | TAVORDE AUD DOUGLE  | PROCEDURES A<br>OF A BOARD OF<br>2 HOURS WITH<br>OR UNSATISFAC | EXE<br>EAC | PERT RATERS. TO BE<br>CH OPERATION JUDGED |   |

() 3.02 OF SUFFICIENT SENSITIVITY AND CHARACTERISTICS TO PRODUCE VALID DATA

() 3.03 100% ACCURATE

() 3.04 100% ACCURATE

() 3.05 ALL OUTPUTS AND INPUTS TO HAVE A LEVEL WITHIN MANUFACTURER'S SPECIFICATIONS

() 3.06 TO SATISFACTION OF THE BOARD

|           | · i         |             |                  |
|-----------|-------------|-------------|------------------|
| PROGRAM   | ELECTRONICS | DIVISION 04 | CIRCUIT TESTING  |
| USOE CODE | NO(S)       | UNIT 05     | DIGITAL CIRCUITS |
|           |             | TERMOB NO.  | 13-039           |
|           |             |             |                  |
| 1.00 CON  | DITION      |             | • :              |

MISOE NO.\_\_\_\_

### 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.  | ,       |   |               |                 |                |
|--------|--|---------|---|---------------|-----------------|----------------|
| PROGRA | νM   | ELECT   | RONICS  | DIVISION (    | 5 <u>CIRCUI</u> | T DIAGNOSIS    |
|        |  |         |   | UNIT (        | 1 SNB-AS        | SEMBLY         |
| ,      |  |         |   | TERMOB NO.    | 13-040          |                |
|        |  |         |   |               | _1.3-040        |                |
|        | -  |         |   |               |                 |                |
| 1.00   | COND   | ITION   |   |               | •               |                |
|        | ( )  |         | SOLID STATE VOLTAGE<br>FOLLOWING CIRCUI<br>OF THE CIRCUIT T | T DEFECTS RES | SULTING IN      | MORE OF THE    |
|        | ( )  | 1.02    | OPEN CIRCUIT  |               |                 | ·              |
|        | (, )   | 1.03    | LOOSE CONNECTION WEAK/DEFECTIVE COMP                        | ONENT (TDANS  | TSTOR. DIC      | DE. RESISTOR.  |
|        | ( )  |         | CAPACITOR, TRANS INDUCTOR)                                  | FORMER, SPEA  | KER, SWITC      | CH, OR         |
|        | ( )  | 1.05    | SHORT CIRCUIT   |               |                 |                |
|        | ( )  | 1.06    | SCHEMATIC DIAGRAM BASIC ELECTRONICS T                       | OOLS AND EOU  | IPMENT (TA      | ABLE T-3)      |
|        | . ( )  | 1.07    | BASIC EDECIRONICS   | .0025 , 12·2  |                 | ,              |
|        | •  |         |   |               |                 | . •            |
| 2.00   | PERI   | FORMANC | E   | ,             |                 |                |
|        |  |         | •   |               |                 |                |
| ſ      |  |         |   |               |                 | 21/72          |
|        | GENE   |         | TROUBLE-SHOOT A DEE   | NCE AND RESUL | TING OUTCO      | OME<br>PLIFIER |
| ,      | ( )  | 2.01    | EMPLOYING THE FOLLO   | WING OPERATI  | ONS:4           | \              |
| •      |  |         | EMPLOTING THE TOPE  |               |                 |                |
|        | <del>\                                    </del> |         | ANALYZE SYMPTOMS  |               |                 | J ,            |
|        | ( )  | 2.03    | MAKE DC VOLTAGE MEA   | ASUREMENTS    |                 |                |
|        | ( )  | 2.04    | MAKE RESISTANCE ME  | ASUREMENTS    | TDED            |                |
|        | ( )  |         | MAKE OTHER MEASURE  | MENTS AS REQU | TRED            |                |
|        | ( )  | 2.06    | REPAIR AMPLIFIER  |               |                 | .**            |
|        | ·  | •       |   |               |                 | . *            |
| 3.00   | EXT  | ENT     |   |               |                 |                |
| 3.00   |  |         |   |               |                 |                |
|        |  |         |   |               |                 |                |
|        | CEN  | PDXT C  | TATEMENT OF EXTENT A  | ND EXTENT OF  | RESULTING       | OUTCOME        |
|        |  | 3.01    | TO THE EXTENT THAT  | THE SPECIFIC  | : FAULTY P      | ART, WIRE,     |
|        | ` ′  |         | CONTACT, ETC., IS   | LOCATED AND F | REPAIRED T      | O THE .        |
| *      | 1  |         | APPROVAL OF A BOAR  | D OF EXPERT F | RATERS. T       | O BE COM-      |
| *      |  |         | PLETED WITHIN 6 HO  | URS WITH EACH | DA OBEKWIIO     | N JODGED       |
|        |  |         | AS SATISFACTORY OR  | ONDWITDEWCIC  | /1\1            | •              |
|        | 1  | 3.02    | ALL SYMPTOMS NOTED  |               |                 |                |
|        | ()   | 3.03    | FAULTY COMPONENT I  | S LOCATED     |                 |                |
|        | ( )  | 3.04    | FAULTY COMPONENT I  | S LOCATED     |                 |                |
|        | ( )  | 3.05    |   | S LOCATED     |                 | v              |
|        | ( )  | 3.06    | AMPLIFIER 100% OPE  | KATIUNAL      |                 | , ,            |

| •                          | MISOE NO.   |                   |  |
|----------------------------|-------------|-------------------|--|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 05 | CIRCUIT DIAGNOSIS |  |
| USOE CODE NO(S)            | UNIT 01     | SUB-ASSEMBLY      |  |
| 9                          | TERMOB NO.  | 13-040            |  |
|                            |             |                   |  |
| 1.00 CONDITION             | •           |                   |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| ROGRA        | M     | ELECT   | RONICS   | DIVISION     | 05        | CIRCUIT DIAGNOSIS                           |
|--------------|-------|---------|--|--------------|-----------|---|
|              |       |         |  | UNIT .       | 01        | SUB-ASSEMBLY                                |
|              |       |         |  | TERMOB NO    |           | 13-041                                      |
|              |       |         |  | •            |           | سعدا فللمستعدد والدارا                      |
| .00          | COND  | ITION   |  |              |           | ·   |
|              | ( )   | 1.01    | VACUUM TUBE AMPLIFI<br>CIRCUIT DEFECTS<br>TO OPERATE PROPE | RESULTING I  | OR<br>N F | MORE OF THE FOLLOWI<br>AILURE OF THE CIRCUI |
|              | ( )   | 1.02    | BROKEN WIRE  |              |           |   |
|              | ( )   | 1.03    | LOOSE CONNECTION   |              |           |   |
|              | ( )   |         | DIRTY CONTACT  | ₹            |           | •   |
|              | ( )   |         | BROKEN SWITCH  |              |           |   |
|              | ( )   | 1.06    | WEAK/BAD VACUUM TUB  | E            | 220       | EGMOD CADACIMOD                             |
|              | ( )   | 1.07    | THERMAL FAILURE OF   | COMPONENT (  | RES.      | ISTOR, CAPACITOR,                           |
|              | •     |         | DIODE, TRANSFORM<br>OVER DRIVEN COMPONE                    | ER, ETC.)    | ΩP        | DIODE RESISTOR.                             |
|              | ( )   | 1.08    | OVER DRIVEN COMPONE<br>ETC.)                               | NT (CAPACII  | OR,       | DIODE, MEDICION,                            |
|              | ( )   | 2.09    | SHORT CIRCUIT  |              |           |   |
|              | ( )   | 1.10    | OPEN CIRCUIT   |              |           | (======================================     |
|              | ( )   | 11      | BASIC ELECTRONICS T  | OOLS AND EQ  | UIP       | MENT (TABLE T-3)                            |
|              | ( )   |         | APPLICABLE TEST EQU  | IPMENT       |           |   |
|              | ( )   | 1.13    | SCHEMATIC DIAGRAM  |              |           |   |
|              | ne pe | ORMANO  | ٠ <del>٠</del>   |              |           | -   |
| .00          | PER   | OKHNIC  |  |              |           |   |
|              |       |         | - · · · · · · · · · · · · · · · · ·                        |              |           |   |
| {            | GENE  | RAT. ST | ATEMENT OF PERFORMAN                                       | ICE AND RESU | LTI       | NG OUTCOME                                  |
|              | 7)    | 2.01    | TROUBLE-SHOOT A DEF  | ECTIVE VACU  | JUM _     | TUBE AMPLIFIER                              |
|              |       |         | EMPLOYING THE FOLLO  | WING OPERAT  | ION       | <b>S</b> :                                  |
| į            | -     | 2.02    | ANALYZE SYMPTOMS   |              |           |   |
|              | ( )   | 2.03    | TÈST ALL STAGES  |              |           |   |
|              | ( )   |         | MAKE DC VOLTAGE MEA  |              |           |   |
| •            | ( )   | 2.05    | MAKE RESISTANCE MEA  | SUREMENTS    |           |   |
|              | ( )   |         | MAKE OTHER MEASUREM  | MENTS AS REC | QUIR      | ED .  |
|              | ( )   | 2.07    | REPAIR AMPLIFIER   |              |           |   |
| .00          | EXTI  | ENT     | •  |              |           |   |
| <del>.</del> |       |         |  |              |           |   |
|              |       |         |  |              |           |   |

CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM-PLETED WITHIN 6 HOURS WITH EACH OPERATION JUDGED

AS SATISFACTORY OR UNSATISFACTORY

ALL SYMPTOMS NOTED 3.02 FAULTY STAGE IS LOCATED 3.03 FAULTY COMPONENT IS LOCATED 3.04

3.05 FAULTY COMPONENT IS LOCATED

| mente de mente de | ( )                             | 1.01                                 | VACUUM TUBE AMPLIFIER WITH ONE OR MORE OF THE FOLLOWING CIRCUIT DEFECTS RESULTING IN FAILURE OF THE CIRCUIT TO OPERATE PROPERLY |
|-------------------|---------------------------------|--------------------------------------|---|
|                   | ( )                             | 1.02                                 | BROKEN WIRE   |
|                   | ( )                             | 1.03                                 | LOOSE CONNECTION  |
|                   | ( )                             | 1.04                                 | DIRTY CONTACT   |
|                   | ( )                             | 1.05                                 | BROKEN SWITCH   |
|                   | ( )                             | 1.06                                 | WEAK/BAD VACUUM TUBE  |
|                   |                                 | 1.07                                 | THERMAL FAILURE OF COMPONENT (RESISTOR, CAPACITOR, DIODE, TRANSFORMER, ETC.)  |
| •                 | ( )                             | 1.08                                 | · — i — i — i — n — n — n — n — n — n — n   |
| -                 | ( )-                            | 1.09                                 |   |
|                   | ( )                             | 1.10                                 | OPEN CIRCUIT  |
|                   | Ċ                               | 1.11                                 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)   |
|                   | <b>(</b> )                      | 1.12                                 | APPLICABLE TEST EQUIPMENT   |
|                   | ( )                             | 1.13                                 | SCHEMATIC DIAGRAM   |
| 2.00              | PERFO                           | RMANC                                | E   |
| !                 |                                 |                                      |   |
|                   | GENER                           | AL ST                                | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME  |
|                   |                                 | 2.01                                 |   |
|                   | ,                               | 11.5                                 | EMPLOYING THE FOLLOWING OPERATIONS:   |
| 1                 |                                 |                                      |   |
|                   | ( ) .                           | 2.02                                 |   |
| 1                 | ( ) .                           | 2.03                                 | TEST ALL STAGES   |
| 1                 | ().                             | 2.03                                 | TEST ALL STAGES MAKE DC VOLTAGE MEASUREMENTS  |
| •                 | ().                             | 2.03<br>2.04<br>2.05                 | TEST ALL STAGES  MAKE DC VOLTAGE MEASUREMENTS  MAKE RESISTANCE MEASUREMENTS   |
| 1                 | ().                             | 2.03<br>2.04<br>2.05<br>2.06         | TEST ALL STAGES MAKE DC VOLTAGE MEASUREMENTS MAKE RESISTANCE MEASUREMENTS MAKE OTHER MEASUREMENTS AS REQUIRED                   |
| 1                 | () () () () ()                  | 2.03<br>2.04<br>2.05                 | TEST ALL STAGES MAKE DC VOLTAGE MEASUREMENTS MAKE RESISTANCE MEASUREMENTS MAKE OTHER MEASUREMENTS AS REQUIRED                   |
| 3.00              | ( )<br>( )<br>( )<br>( )<br>( ) | 2.03<br>2.04<br>2.05<br>2.06<br>2.07 | TEST ALL STAGES MAKE DC VOLTAGE MEASUREMENTS MAKE RESISTANCE MEASUREMENTS MAKE OTHER MEASUREMENTS AS REQUIRED                   |

| GENERAL ST   | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM- PLETED WITHIN 6 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY |
|--|--|
| () 3.02<br>() 3.03<br>() 3.04<br>() 3.05<br>() 3.06<br>() 3.07 | FAULTY COMPONENT IS LOCATED  |

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|                     | r           |                   |
|---------------------|-------------|-------------------|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)     | UNIT 01     | SUB-ASSEMBLY      |
|                     | TERMOB NO.  | 13-041            |
|                     |             |                   |
| 1.00 CONDITION      |             |                   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

MISOE NO.

|                     |  |            |      | <b>%</b>           |
|---------------------|--|------------|------|--------------------|
| PROGRAM EI          | LECTRONICS   | DIVISION   | 05   | CIRCUIT DIAGNOSIS  |
|                     | *  |            |      |                    |
|                     |  | UNIT       | 01   | SUB-ASSEMBLY       |
|                     |  | ws.        |      | <u> </u>           |
| •                   | ·  | TERMOB NO  | •    | 13-042             |
|                     | <b>,</b>   |            |      | •                  |
|                     |  |            |      |                    |
|                     | 4  |            |      | `                  |
| 1.00 CONDITI        | ON   |            | *    |                    |
|                     | N. Committee of the Com |            |      | •                  |
| () 1.               | .01 OSCILLATOR WITH ONE O  | OR MORE OF | THE  | FOLLOWING CIRCUIT  |
| , ,                 | DEFECTS RESULTING  | IN FAILUR  | E OF | THE CIRCUIT TO     |
|                     | OPERATE PROPERLY   |            |      | •                  |
| () 1.               | .02 A MULTI-VIBRATOR OSCI  | LLATOR WI  | TH O | NE OR MORE OF THE  |
| , , –               | FOLLOWING DEFECTS  | RESULTING  | IN   | FAILURE OF THE     |
|                     | CIRCUIT TO OPERATE   | E PROPERLY |      |                    |
| ( ) Ĩ.              | .03 BROKEN WIRE  |            |      | •                  |
| ( $)$ $1$           | .04 LOOSE CONNECTION   |            |      |                    |
|                     | .05 DIRTY CONTACT  | e in       |      |                    |
| $\cdot$ $($ $)$ $1$ | .06 BROKEN SWITCH  | •          |      |                    |
| . () 1              | 07 WEAK RAD VACUUM TUBE  | •          | •    | /                  |
|                     | OR THERMAI FAILURE OF CO   | OMPONENT ( | RESI | STOR, CAPACITOR,   |
| 1                   | TOTORE TRANSTSTOR  | . TRANSFOR | MER. | ·ETC.)             |
| 1 () 1              | .09 OVER DRIVEN COMPONEN   | T (CAPACIT | OR,  | DIODE, TRANSISTOR, |
| 1                   | I.C., ETC.)  |            |      |                    |
| () 1                | .10 SHORT CIRCUIT  |            |      |                    |
| () 1                | .11 OPEN CIRCUIT -   | •          |      |                    |
| ( ) 1               | .12 INCORRECT FREQUENCY  |            |      |                    |
| ( ) 1               | .13 BASIC ELECTRONICS TO   | OLS AND EQ | UIPM | ENT (TABLE T-3)    |
| ( ) 1               | .14 APPLICABLE TEST EQUI   | PMENT      |      |                    |
|                     | .15 SCHEMATIC DIAGRAM  |            |      |                    |
|                     |  |            |      |                    |

### 2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 TROUBLE SHOOT A DEFECTIVE OSCILLATOR EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ANALYZE SYMPTOMS
( ) 2.03 TEST ALL STAGES
( ) 2.04 MAKE DC VOLTAGE MEASUREMENTS
( ) 2.05 MAKE RESISTANCE MEASUREMENTS
( ) 2.06 MAKE OTHER MEASUREMENTS AS REQUIRED
( ) 2.07 REPAIR OSCILLATOR

### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE,

CONTACT, ETC., IS LOCATED AND REPAIRED TO THE

APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED

AS SATISFACTORY OR UNSATISFACTORY



|     |     |      | THE PART OF MARK POLICE CIRCULA                      |
|-----|-----|------|--|
| (   | )   | 1.01 | OSCILLATOR WITH ONE OR MORE OF THE FOLLOWING CIRCUIT |
| `   |     |      | DEFECTS RESULTING IN FAILURE OF THE CIRCUIT TO       |
|     |     |      | OPERATE PROPERLY                                     |
|     |     |      | OPERATE PROFESSION OF THE OPERATE OF THE             |
| , ( | )   | 1.02 | A MULTI-VIBRATOR OSCILLATOR WITH ONE OR MORE OF THE  |
|     |     |      | FOLLOWING DEFECTS RESULTING IN FAILURE OF THE        |
|     |     |      | CIRCUIT TO OPERATE PROPERLY                          |
| ,   | `   | 1 02 | BROKEN WIRE  |
| ,   | !   | 1.03 | LOCAL CONNECTION                                     |
| (   | )   | 1.04 | LOOSE CONNECTION                                     |
|     |     |      | DIRTY CONTACT  |
| (   | )   | 1.06 | BROKEN SWITCH  |
| i   | ``  | 1 07 | WEAK/RAD VACUUM TUBE                                 |
| ì   | Ś   | 1 08 | THERMAL FAILURE OF COMPONENT (RESISTOR, CAPACITOR,   |
|     |     |      | DIODE MEANSTOMOR TRANSFORMER, LIC./                  |
|     |     | - 00 | OVER DRIVEN COMPONENT (CAPACITOR, DIODE, TRANSISTOR, |
| (   | ) . | 1.09 | OVER DRIVEN COMPONENT (CALLETTON, 2001)              |
|     |     |      | I.C., ETC.)  |
| (   | )   | 1.10 | SHORT CIRCUIT  |
| į   | )   | 1.11 | OPEN CIRCUIT   |
| į,  | ,   | 1 12 | TNCOPPECT FRECIENCY                                  |
| ì   | ΄,  | 1 13 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)    |
| ,   | ′.  | 1.13 | ADDITION TO THE TEST FOUITMENT                       |
| (-  | • ) |      | APPLICABLE TEST EQUIPMENT                            |
| (-  | · ) | 1.15 | SCHEMATIC DIAGRAM                                    |
|     |     |      | _  |

| GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCO   | ME        |
|--|-----------|
| () 2.01 TROUBLE SHOOT A DEFECTIVE OSCILLATOR EMPL<br>FOLLOWING OPERATIONS:   | OYING THE |
| ( ) 2.02 ANALYZE SYMPTOMS ( ) 2.03 TEST ALL STAGES ( ) 2.04 MAKE DC VOLTAGE MEASUREMENTS ( ) 2.05 MAKE RESISTANCE MEASUREMENTS ( ) 2.06 MAKE OTHER MEASUREMENTS AS REQUIRED ( ) 2.07 REPAIR OSCILLATOR |           |

# 3.00 EXTENT

| GENERAL ST   | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM- PLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY |
|--|--|
| () 3.02<br>() 3.03<br>() 3.04<br>() 3.05<br>() 3.06<br>() 3.07 | ALL SYMPTOMS NOTED  FAULTY STAGE IS LOCATED  FAULTY COMPONENT IS LOCATED  FAULTY COMPONENT IS LOCATED  FAULTY COMPONENT IS LOCATED  OSCILLATOR 100% OPERATIONAL  |

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| •                   |             |                   |
|---------------------|-------------|-------------------|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)     | UNIT · 01   | SUB-ASSEMBLY      |
| •                   | TERMOB NO.  | 13-042            |
| <del></del>         |             | •                 |

MISOE NO.

2.00 PERFORMANCE

1.00 CONDITION

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

DIVISION 05 CIRCUIT DIAGNOSIS PROGRAM ELECTRONICS UN1T 01 SUB-ASSEMBLY TERMOB NO. 13-043

#### CONDITION 1.00

- 1.01 COLOR T.V. HORIZONTAL DEFLECTION CIRCUIT WITH FLYBACK POWER SUPPLY WITH ONE OR MORE OF THE FOLLOWING CIRCUIT DEFECTS RESULTING IN FAILURE OF THE CIRCUIT TO OPERATE PROPERLY
- BROKEN WIRE 1.02 LOOSE CONNECTION
- 1.03 1.04 DIRTY CONTACT.
- BROKEN SWITCH 1.05
- WEAK/BAD VACUUM TUBE 1.06
- THERMAL FAILURE OF COMPONENT (RESISTOR, CAPACITOR, 1.07 DIODE, TRANSISTOR, TRANSFORMER, ETC.
- OVER DRIVEN COMPONENT (CAPACITOR, DIODE), TRANSISTOR, 1.08 I.C., ETC.)
  - SHORT CIRCUIT 1.09
- 1.10° OPEN CIRCUIT
- BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) 1.11
- 1.12 APPLICABLE TEST EQUIPMENT
- SCHEMATIC DIAGRAM 1.13

#### PERFORMANCE ' 2.00

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME 2.01 TROUBLE SHOOT A DEFECTIVE TELEVISION HORIZONTAL CIRCUIT WITH A FLY BACK POWER SUPPLY EMPLOYING THE FOLLOWING OPERATIONS:

ANALYZE SYMPTOMS 2.02

2.03 TEST ALL STAGES

2.04 MAKE DC VOLTAGE MEASUREMENTS

2.05 MAKE RESISTANCE MEASUREMENTS

2.06 MAKE OTHER MEASUREMENTS AS REQUIRED

2.07 REPAIR CIRCUIT

### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM-PLETED WITHIN 3 HOURS WITH FACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

3.02 ALL SYMPTOMS NOTED

3.03 FAULTY STAGE IS LOCATED.



CIRCUIT DEFECTS RESULTING IN FAILURE OF THE CIRCUIT TO OPERATE PROPERLY BROKEN WIRE 1.02 LOOSE CONNECTION DIRTY CONTACT 1.03 1.94 BROKEN SWITCH 1.05 WEAK/BAD VACUUM TUBE 1.06 THERMAL FAILURE OF COMPONENT (RESISTOR, CAPACITOR, 1.07 DIODE, TRANSISTOR, TRANSFORMER, ETC.) OVER DRIVEN COMPONENT (CAPACITOR, DIODE, TRANSISTOR, 1.08 . I.C., ETC.) SHORT CIRCUIT 1.09 OPEN CIRCUIT. 1.10 BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) 1.11 APPLICABLE TEST EQUIPMENT 1.12 SCHEMATIC DIAGRAM 1.13 PERFORMANCE 2.00 GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME TROUBLE SHOOT A DEFECTIVE TELEVISION HORIZONTAL CIRCUIT WITH A FLY BACK POWER SUPPLY EMPLOYING THE FOLLOWING OPERATIONS: ANALYZE SYMPTOMS 2.02 TEST ALL STAGES 2.03 MAKE DC VOLTAGE MEASUREMENTS MAKE RESISTANCE MEASUREMENTS 2.04 2.05 MAKE OTHER MEASUREMENTS AS REQUIRED 2.06 REPAIR CIRCUIT 2.07

POWER SUPPLY WITH ONE OR MORE OF

THE FOLLOWING

EXTENT 3.00

> GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, 3.01 CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM-PLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SÁTISFACTORY OR UNSATISFACTORY

ALL SYMPTOMS NOTED 3.02 FAULTY STAGE IS LOCATED 3.03 FAULTY COMPONENT IS LOCATED 3.04 FAULTY COMPONENT IS LOCATED 3.05 FAULTY COMPONENT IS LOCATED 3.06 CIRCUIT 100% OPERATIONAL 3.07

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|           | .*          |             | MISOE NO.         |
|-----------|-------------|-------------|-------------------|
| ·         |             |             |                   |
| PROGRAM _ | ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE | NO(S)       | UNIT 01     | SUB-ASSEMBLY      |
|           |             | TERMOB NO.  | 13-043            |
|           |             |             |                   |

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

|                    | ,*   |              |                        |                        |  |              |  |     |
|--------------------|------|--------------|------------------------|------------------------|--|--------------|--|-----|
| MISOE              | NO.  |              |                        | 152                    |  | •            |  | •   |
|                    |      |              |                        | - 12.00                | DIVISION                               | 05           | CIRCUIT DIAGNOS  | SIS |
| PROGRA             | AM _ | ELECTRO      | NICS ,                 |                        | DIVISION                               |              |  | _   |
|                    |      |              |                        |                        | UNIT                                   | 01           | SUB-ASSEMBLY   |     |
|                    |      |              |                        |                        | TERMOB NO                              | ٥.           | 13-044   |     |
|                    |      |              | *                      |                        |  |              |  |     |
|                    |      |              | •                      |                        |  |              | <i>)</i>   |     |
| 1.00               | CON  | DITION       |                        |                        | •                                      |              |  |     |
|                    | ( )  | 1.01         | FOLLOWING OF THE C     | G CIRCUIT<br>IRCUIT TO | R WITH ONE<br>DEFECTS R<br>OPERATE P   | ESUL'        | MORE OF THE<br>FING IN FAILURE<br>RLY  | •   |
|                    | ( )  | 1.02         | BROKEN WIR             |                        |  |              | ٠  |     |
|                    | ( )  | 1.03         |                        |                        |  |              |  |     |
|                    | ( )  | 1.04         | DIRTY CONT. BROKEN SWI |                        |  | •            |  |     |
|                    | ( )  | 1.05<br>1.06 | THERMAL FA             | TLURE OF               | COMPONENT                              | (RES         | ISTOR, CAPACITOR   | 7   |
|                    | ( )  | 1.00         | DIODE M                | DANCTOTOL              | TRANSFOR                               | MER.         | ETC.   |     |
| " + <sub>0</sub> , | ( )  | 1.07         | OVER DRIVE             | N COMPONE              | NT (CAPACI                             | TOR,         | DIODE, TRANSIST  | OR, |
|                    | ( )  | 1.08         | SHORT CIRC             |                        |  |              |  |     |
|                    | ( )  | 1.09         | OPEN CIRCU             |                        |  |              |  |     |
|                    | ( )  | 1.10         | BINARY .COU            |                        |  |              | •  |     |
|                    | ( )  | 1.11         | BCD COUNTE             |                        |  |              | •  | a   |
|                    | ( )  | 1.12         | SHIFT REGI             |                        |  |              | •  |     |
|                    | ( )  | 1.13         | UP/DOWN CO             | UNTER                  | G0:::::::::::::::::::::::::::::::::::: |              |  | ,   |
|                    | ( )  | 1.14         | PRESETABLE             | UP/DOWN                | COUNER NEW                             | VGOI         | (PPOM)   |     |
|                    | ( )  | 1.15         | PREPROGRAM             | MABLE REA              | AD ONLY MEM                            | IORI .       | (FROM)   |     |
| •                  | ( )  | 1.16         | READ ONLY              | MEMORY (1              | KUM)                                   | :            |  |     |
| ·                  | ( )  | 1.17         | DIVIDE BY              | N LOGIC                | CIRCUIT                                |              |  |     |
|                    | ( )  | 1.18         | LOGIC DIAG             | RAMS                   |  |              |  |     |
|                    | ( )  | 1.19         | SCHEMATIC              | DIAGRAMS               | TOTAL TABLES                           | •            |  |     |
|                    | .( ) | 1.20         | TIMING DIA             | MECAMO/IN              | TOOLS AND F                            | COUTE        | MENT (TABLE T-3)   | j   |
|                    | ,( ) | 1.21         | BASIC ELEC             | IRONICS                | 10020 1110 -                           | <b>3 % 0</b> | **************************************   |     |
| •                  |      |              |                        |                        |  |              | in the second se |     |
| 2.00               | PE   | RFORMANC     | E                      |                        | ā                                      | • •          |  |     |
|                    |      |              |                        |                        |  |              | •  |     |
|                    |      |              |                        |                        |  |              |  |     |
| ••                 |      |              |                        | PEPEODMA               | Nor and dr                             | erit.mi      | NG OUTCOME   |     |
|                    | GEI  |              | ATEMENT OF             | PERFURMA               | RECTIVE COL                            | UNTE         | NG OUTCOME<br>EMPLOYING THE  |     |
|                    |      | 2.01         | FOLLOWING              | OPERATIO               | NS:                                    | 011 2 2 3    |  |     |
|                    | L,   | 2.02         | ANALYZE S              | YMPTOMS                |  |              |  |     |
|                    | (    | ) \2.02      | TEST ALL               | STAGES                 |  |              |  |     |
|                    | (    | 2.03         | ISOLATE F              | AULTY OUT              | PUT                                    |              |  |     |
|                    | (    | ) 2.05       |                        | REPLACE                | FAULTY COM                             | PONE         | NT   |     |
|                    | 1    | 2.06         | TEST CIRC              | UIT FOR O              | PERATION                               |              |  |     |
|                    | •    | * 5 T T      |                        |                        |  |              |  |     |

EXTENT 3.00



GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE

| ( )   | }   | 1.01 | 4-BIT BINARY COUNTER WITH ONE OR MORE OF THE         |
|-------|-----|------|--|
| •     | •   |      | FOLLOWING CIRCUIT DEFECTS RESULTING IN FAILURE       |
|       |     |      | OF THE CIRCUIT TO OPERATE PROPERLY                   |
| ( )   | ) : | 1.02 | BROKEN WIRE  |
| · ( ) | )   | 1.03 | LOOSE CONNECTION                                     |
| • (   | )   | 1.04 | DIRTY CONTACT  |
|       | 1   | 1 05 | BROKEN SWITCH  |
| į     | )   | 1.06 | THERMAL FAILURE OF COMPONENT (RESISTOR, CAPACITOR,   |
|       |     |      | DIODE, TRANSISTOR, TRANSFORMER, ETC.)                |
| (     | )   | 1.07 | OVER DRIVEN COMPONENT (CAPACITOR, DIODE, TRANSISTOR, |
|       |     |      | I.C., ETC.)  |
| (     | )   | 1.08 | SHORT CIRCUIT  |
| (     | )   |      | OPEN CIRCUIT   |
| (     | )   | 1.10 | BINARY COUNTER                                       |
| (     | )   |      | BCD COUNTER  |
| (     | )   |      | SHIFT REGISTER                                       |
| (     | )   | 1.13 | UP/DOWN COUNTER                                      |
| (     | )   | 1.14 | PRESETABLE UP/DOWN COUNER                            |
| (     | )   | 1.15 | PREPROGRAMMABLE READ ONLY MEMORY (PROM)              |
| (     | )   | 1.16 | READ ONLY MEMORY (ROM)                               |
| (     | )   | 1.17 | DIVIDE BY N LOGIC CIRCUIT                            |
| ( )   |     |      | LOGIC DIAGRAMS                                       |
| ( j   | )   | 1.19 | SCHEMATIC DIAGRAMS                                   |
| (     | )   | 1.20 | TIMING DIAGRAMS/TRUTH TABLES                         |
| ('}   | )   | 1.21 | BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)    |
|       |     |      |  |

| GENER<br>( ) | RAL STA<br>2.01                      | TROUBLE SHOOT A DEFECTIVE COUNTER EMPLOYING FOLLOWING OPERATIONS:  | ТНЕ |
|--------------|--------------------------------------|--|-----|
| ()           | 2.02<br>2.03<br>2.04<br>2.05<br>2.06 | ANALYZE SYMPTOMS TEST ALL STAGES ISOLATE FAULTY OUTPUT REPAIR OR REPLACE FAULTY COMPONENT TEST CIRCUIT FOR OPERATION |     |

### 3.00 EXTENT

| GENERAL ST | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME   |
|------------|---|
| GEREIGE ST | TO THE DYTENT THAT THE SPECIFIC FAHLTY PART. WIRE   |
| ( ) 3.01   | TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY |

|     |      | ALL SYMPTOMS NOTED          |
|-----|------|-----------------------------|
| ( ) | 3.03 | FAULTY STAGE IS LOCATED     |
| ( ) | 3.04 | FAULTY COMPONENT IS LOCATED |
| ĊŚ  | 3.05 | DEFECT(S) CORRECTED         |
| 75  | 3.06 | COUNTER IS 100% OPERATIONAL |
|     |      | 14.9                        |

153

|                            | •           | 11001, 1101       |
|----------------------------|-------------|-------------------|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)            | UNIT 01     | SUB-ASSEMBLY      |
|                            | TERMOB NO.  | 13-044            |
|                            | ·· .        |                   |
| 1.00 CONDITION             |             | •                 |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME



3.0 ) IXTH"

| MISOE  | NO    |                      |  |  | •   |          |                          |                       |
|--------|-------|----------------------|--|--|---|----------|--------------------------|-----------------------|
| PROGRA | AM    | ELECTI               | RONICS                                   | ·  | DIVISIO   |          | CIRCUIT                  |                       |
| į      |       |                      |  |  | UNIT  | 01       | SUB-ASSE                 | MBLY                  |
|        | •     |                      | •  |  | TERMOB  | No.      | 13-045                   |                       |
|        |       |                      |  | •  |   |          | •                        |                       |
|        | • •   |                      |  |  |   |          |                          |                       |
| 1.00   | COND  | TION                 |  |  |   |          |                          | <b>`</b>              |
|        | ( )   | 1.01                 | THE                                      | GRATED CIRC<br>FOLLOWING (                               | CIRCUIT DEF                                     | FECTS    | RESULTING                | MORE OF<br>IN FAILURE |
|        |       |                      | OPEN CI                                  | RCUIT  |   |          | •                        | _                     |
|        |       |                      |  | CONNECTION   |   |          |                          |                       |
|        | ( )   | 1.04                 | BAD I.C                                  | VE COMPONE   | NT (SWITCH                                      | , RESI   | STOR, CAPA               | CITOR, ETC.           |
|        | ()    | 1.06                 | SHORT C                                  | CIRCUIT  |   | -        |                          |                       |
|        | ( )   |                      | 00117147                                 | MKCC DINCDAM   | TOOLS AND                                       | PAULD    | MENT (TARI               | .е. т-3)              |
|        | ( )   | 1.08                 | BASIC E                                  | ELECTRONICS  | TOOLS AND                                       | FOOTP    | PENI (IADI               | ш т с,                |
|        | GENE  | 2.02<br>2.03<br>2.04 | TROUBLI<br>EMPLOY:<br>ANALYZI<br>MAKE DO | OF PERFORM E SHOOT AN ING THE FOI E SYMPTOMS C MEASUREME | INTEGRATED<br>LOWING OPE<br>ENTS<br>MEASUREMENT | RATION   | IS:                      | EIER                  |
|        | ( )   | 2.05                 | REPAIR                                   | OR REPLACE   | E DEFECTIVE                                     | COMPO    | ONENT                    |                       |
|        | ( )   | 2.06                 | TEST A                                   | MPLIFIER   | ÷   |          | •                        |                       |
|        |       |                      |  |  |   |          |                          |                       |
| 3.00   | EXT   | ENT                  |  |  |   |          |                          |                       |
|        |       |                      |  |  |   |          |                          |                       |
|        |       |                      |  | OF EXTENT  | AND EXTENT                                      | OF R     | ESULTING O               | UTCOME                |
|        | GEN ( | 3.01                 | TO THE                                   | E EXTENT THE<br>EPAIRED TO '                             | AT THE SPEC<br>THE APPROVA<br>OMPLETED WI       | AL OF A  | A BOARD OF<br>4 HOURS WI | EXPERT<br>TH EACH     |
|        | L,    | 3.02                 | AT.T. SV                                 | MPTOMS NOT   | ED  |          |                          |                       |
|        | ( )   | 3.02                 | FAULTY                                   | COMPONENT  | IS LOCATE!                                      | <u> </u> |                          |                       |
|        | ( )   | 3.04                 | FAULTY                                   | COMPONENT  | IS LOCATE                                       | כ        |                          |                       |
|        | ( )   | 3.05                 |  | r(S) CORREC<br>FIER IS 100                               | TEU<br>% OPERATIOI                              | NAL      |                          |                       |
|        | ( )   | 3.06                 | WWALTI                                   | TEK TO TOO   | OF DIGHT OF                                     |          |                          |                       |

| <del>-</del>               | <b>M</b>    | HISOE NO.         |
|----------------------------|-------------|-------------------|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)            | UNIT 01     | SUB-ASSEMBLY      |
| :                          | TERMOB NO.  | 13-045            |
|                            |             | ,3 <b>(</b>       |
| 1.00 · CONDITION           |             | •                 |

PERFORMANCE

2.00

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3 00 EXTENT

| MISOE  | NO.          |  |                  |   |
|--------|--------------|--|------------------|---|
| PROGRA | M ELE        | CTRONICS                                     | DIVISION 05      | CIRCUIT DIAGNOSIS   |
|        |              |  | UNIT 01          | SUB-ASSEMBLY  |
|        |              | •  | MUDWOR NO        | 13-046  |
|        |              | •  | TERMOB NO.       | 13-040  |
|        |              | •  |                  |   |
|        |              | ••   |                  | •   |
| 1.00   | CONDITIO     |  |                  | •   |
|        | () 1.0       | ONE OR MORE OF RESULTING IN FA               | THE FOLLOWING C  | RESISTIVE LOAD WITH IRCUIT DEFECTS RCUIT TO OPERATE   |
|        | ( ) 1.0      | 2 OPEN CIRCUIT                               |                  |   |
|        | • • • • • •  | NO TOOGE COMMECTION                          | (m::DD -         | ATORE RECISMOR  |
|        | ( ) 1.0      | 4 WEAK/DEFECTIVE COM                         | APONENT (TUBE, L | SWITCH, OR FUSE)  |
|        | / \ e1 (     | OS SHORT CIRCUIT                             | iore, chilerion, |   |
| •      | ì            | ACCUMUNTO DINCENAM                           |                  | NAME OF THE STATE |
|        | ()/1.0       | DO BASIC ELECTRONICS                         | TOOLS AND EQUIP  | MENT (TABLE 1-3)  |
|        | -1           |  | Ter.             |   |
| 2.00   | PERFORM      | ANCE   |                  |   |
| •      | i            |  |                  | , _ <u> </u>  |
|        | ·            |  |                  |   |
|        | GENERAL      | STATEMENT OF PERFORM<br>01 TROUBLE SHOOT A D | ANCE AND RESULT  | ING OUTCOME   |
|        | 7) 2.        | 701 TROUBLE SHOOT A D<br>FOLLOWING OPERATI   | ONS:             |   |
|        |              | · · · · · · · · · · · · · · · · · · ·        |                  |   |
| •      |              | 02 ANALYZE SYMPTOMS                          |                  |   |
|        |              | 03 TEST ALL STAGES<br>04 MAKE DC VOLTAGE M   | EASUREMENTS      |   |
| _      | 11 2         | OS MAKE RESTSTANCE M                         | EASUREMENTS      |   |
|        | () 2.        | 06 MAKE OTHER MEASUR                         | EMENTS .AS REQUI | RED   |
| 4      | ( ), 2.      | 07 REPAIR RECTIFIER                          | •                | •   |
|        |              |  |                  |   |
| 3.00   | EXTENT       |  | •                |   |
|        |              | · ·  |                  |   |
|        | GENERAL      | STATEMENT OF EXTENT                          | AND EXTENT OF R  | ESULTING OUTCOME  |
| · {    |              | AT TO THE EXPENT THE                         | THE SPECIFIC     | LAOUTI LAKI' MITON  |
| •      | i i          | CONTACT, ETC., IS<br>APPROVAL OF A BOX       | NON OF EXPERT RA | TERS. TO BE COM-  |
|        |              | PLETED WITHIN 3 F                            | HOURS WITH EACH  | OPERATION JUDGED  |
|        |              | AS SATISFACTORY                              | R UNSATISFACTOR  | Y.  |
|        | ,            | 02 ALL SYMPTOMS NOTE                         | <u> </u>         | ·   |
|        | <i>i</i> i 3 | 03 FAULTY STAGE IS I                         | LOCATED          |   |
|        | <i>i</i> i 3 | 04 FAULTY COMPONENT                          | IS LOCATED       | •   |
|        | ( ) 3.       | 05 FAULTY COMPONENT                          | IS LOCATED       |   |
|        | • •          | .06 FAULTY COMPONENT<br>.07 RECTIFIER IS 100 | B OPERATIONAL    |   |
|        | ( )          | , <b>,</b>                                   |                  |   |

|                                       |             | MISOE NO.         |
|---------------------------------------|-------------|-------------------|
| PROGRAM ELECTRONICS                   | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)                       | UNIT 01     | SUB-ASSEMBLY      |
| · · · · · · · · · · · · · · · · · · · | TERMOB NO.  | 13-046            |
| <del></del>                           |             |                   |
| 1.00 CONDITION                        |             |                   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

|        | MISOE  | NO          |              | <u> </u>                                 | ,                   |               |                              |
|--------|--------|-------------|--------------|--|---------------------|---------------|------------------------------|
| ·      | PROGRA | AM          | ELECT        | RONICS                                   | DIVISION            | 05            | CIRCUIT DIAGNOSIS            |
|        | -      |             |              |  | UNIT                | 02            | ASSEMBLY                     |
|        | * >    |             |              |  | <b>550</b>          |               |                              |
| *.     |        |             |              |  | TERMOB NO           | •             | 13-047/                      |
|        | -      |             |              | •  |                     |               |                              |
| -<br>• | 1.00   | CONDI       | TION         | **                                       |                     |               |                              |
|        |        | ( )         | 1.01         | GIVEN A BLACK AND BY ONE OR MORE         | WHITE T.V. W        | TH<br>WING    | A DEFECT INDICATED SYMPTOMS: |
|        | 43     | ( )         | 1.02         | NO SOUND                                 | •                   |               |                              |
|        |        | ( )         |              | STATIC                                   | `                   |               |                              |
|        |        | ( )         |              | AUDIBLE HUM                              |                     |               |                              |
|        |        | ( )         | 1.05         | INTERMITTENT SOUND                       |                     |               |                              |
|        |        | ( )         |              | NO PICTURE                               |                     | *,            | -                            |
|        |        | ( )         | 1.07<br>1.08 | BAD FOCUS FLASHES ON SCREEN              |                     |               |                              |
|        |        | ( )         | 1.09         | SMOKE                                    |                     |               |                              |
|        |        |             |              | INTERMITTENT PICTU                       | RE                  |               |                              |
|        | •      | 7 7         |              | BURNING SMELL                            |                     |               | ·                            |
|        |        | ( )         |              | SERVICE MANUAL                           | •                   |               |                              |
|        |        | <i>(</i> )  | 1.13         | APPLICABLE TEST EO                       | UIPMENT             |               |                              |
|        |        | ·( )        | 1.14         |  | TOOLS AND EQ        | UIP           | MENT (TABLE T-3)             |
| •      |        |             |              |  |                     |               |                              |
|        | 2.00   | PERF        | ORMANC       | E  |                     |               |                              |
|        | 2.00   |             |              |  |                     |               |                              |
|        |        |             |              |  | <u> </u>            |               |                              |
|        |        |             | <b></b>      | ATEMENT OF PERFORMA                      | NCE AND DESI        | T. <b>T</b> T | NG OUTCOME                   |
|        |        | GENE        | 2.01         | TROUBLE SHOOT A DE                       | FECTIVE BLAC        | KA            | ND WHITE T.V.                |
|        |        |             | 2.01         | EMPLOYING THE FOLI                       | OWING OPERAT        | ION           | S:                           |
|        |        | <del></del> | 2.02         | CHECK ALL CIRCUIT                        | BREAKERS/FUS        | ES/           | TUBES                        |
|        |        | λí          | 2.03         | LOCATE SPECIFIC PR                       | OBLEM(S) USI        | NG            | TROUBLE SHOOTING             |
|        |        | • •         |              | CHART AND/OR CI                          | RCUIT SCHEMA        | TIC           |                              |
| •      | •      | ( )         | 2.04         | REPAIR CIRCUIT                           |                     |               |                              |
|        |        | ( )         | 2.05         | DEMONSTRATE NORMAI                       | OPERATION           |               | ٠                            |
|        | 3.00   | EXTE        | ידיא:        |  |                     |               | •                            |
| •      |        |             |              |  |                     |               |                              |
|        | į      |             |              |  |                     |               |                              |
|        | •      | •           |              |  | ;                   |               | CUT MING OUTCOME             |
|        |        | GENE        |              | ATEMENT OF EXTENT                        | ND EXTENT OF        | DAD           | MINE CONTACT                 |
|        |        | ( )         | 3.01         | TO THE EXTENT THAT<br>ETC., IS LOCATED A | ND DEDAIDED         | PAR<br>TT∩    | THE APPROVAL OF              |
|        |        | 1           |              | A BOARD OF EXPERT                        | DATERS. TO          | RE            | COMPLETED WITHIN             |
| i      |        |             |              | 3 HOURS WITH EACH                        | OPERATION JU        | JDGE          | D AS SATISFACTORY            |
| . {    |        | 1           |              | OR UNSATISFACTORY                        | <b>0.2.2.20</b> 9 9 |               |                              |
|        |        |             |              | -  | -                   |               |                              |
| - 1    | •      | <u></u>     | 3.02         | FOLLOWING LOGICAL                        | SEQUENCE AND        | SI            | RICTEST SAFETY               |
| . (_   |        | • •         |              | PRECAUTIONS                              |                     |               |                              |
|        |        | ( )         | 3.03         | FOLLOWING LOGICAL                        | SEQUENCE AND        | SI            | RICTEST SAFETY               |
|        |        | -           | -            | PRECAUTIONS                              |                     |               |                              |
| -      |        | ( )         | 3.04         | ACCORDING TO PROCE                       | EDURES RECOMM       | MEND          | DED IN SERVICE MANUAL        |
|        |        | , .         | a a=         | BY ACCEPTED ELI                          | SCIKONIUS KE        | ATW:          | ( PROCEDURE                  |
| ERIC   |        | ( )         | 3.0 <b>5</b> | TO THE SATISFACTION                      | ON OF THE BU!       | ZKD           | 159                          |
|        |        |             |              |  |                     |               |                              |

|                     |             | MISOE NO.         |             |
|---------------------|-------------|-------------------|-------------|
| PROGRAM FIECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |             |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          | <del></del> |
|                     | TERMOB NO.  | 13-047            |             |
|                     |             |                   |             |
| 1 00 CONDITION      |             | · ·               |             |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO                 | , • .                        | •                          | •                        | •            |           |               |                  |
|--------|--------------------|------------------------------|----------------------------|--------------------------|--------------|-----------|---------------|------------------|
| PROGRA | M ELE              | CTRONIES                     |                            | DIVISION                 | 05           | CIRCUIT   | DIAGNO        | SIS              |
| ·      |                    |                              |                            | UNIT                     | 02           | ASSEMBI   | Y             |                  |
|        |                    | •                            |                            | TERMOB NO                | <b>.</b>     | 13-048    |               |                  |
|        | •                  | •                            |                            |                          |              | -         |               |                  |
| 1.00   | CONDITIO           | N                            | •                          |                          | . •          |           | 1             |                  |
| )      | () 1.0             | 1 -GIVEN A TI                | RANSISTOR R<br>MORE OF TH  | ADIO WITH<br>E FOLLOWIN  | A DE         | FECT INI  | DICATED       | BY               |
|        |                    | 2 NO SOUND                   |                            |                          |              |           |               | •                |
|        | () 1.0             | 3 STATIC<br>4 AUDIBLE H      | UM                         | . Standard               | •            |           |               |                  |
|        | () 1:0             | 5 INTERMITT                  | ENT SOUND                  |                          |              | •         | ø             |                  |
|        |                    | 6 SMOKE                      | METT                       |                          |              | 1         | •             |                  |
|        | () 1.0             | 7 BURNING SI<br>MB SERVICE M | ANUAL                      |                          | ,            |           |               |                  |
|        | () 1.0             | O . ADDITCARI.               | E TEST FOUL                | PMENT                    |              | mum /ma   | מום חבים      |                  |
|        | ( ) 1:1            | LO BASIC ELE                 | CTRONICS TO                | OLS AND EQ               | JOTH         | MENT (TA  | PUE I-J       | •                |
|        |                    | •                            |                            |                          |              |           |               |                  |
| 2.00   | PERFORM            | ANCE                         | •                          | ·                        |              |           |               |                  |
| +      | <del></del>        |                              |                            |                          |              |           |               |                  |
|        | GENERAL            | STATEMENT OF                 | PERFORMANO                 | E AND RES                | ULTI         | NG OUTCO  | ME<br>O EMPLO | YING             |
|        | () 2.0             | TROUBLE S                    | HOOT A DEFE                | CTIVE TRA                | N212         | TOR RADI  | O EMP LO      | 1110             |
|        |                    |                              |                            |                          | 222          |           |               |                  |
|        | ( ) 2.0<br>( ) 2.0 | O2 CHECK ALL                 | CIRCUIT BE                 | REAKERS/FU<br>RIEM(S) US | olo<br>Ing   | TROUBLE   | SHOOTIN       | <b>G</b>         |
|        | 2.1                | CHART                        | AND/OR CIRC                | CUIT SCHEM               | ATIC         |           | <b>t</b> .    | •                |
|        | ( ) 2.0            | 04 REPAIR CI                 | RCUIT                      |                          |              |           |               |                  |
|        | <del>(')- 2.</del> | 05 DEMONSTRA                 | TE NORMAL                  | OPERATION                |              | •         | •             | •                |
|        |                    |                              |                            | د                        |              |           | •             |                  |
| 3.00   | EXTENT             |                              |                            |                          |              |           | •             | •                |
|        |                    |                              |                            |                          |              |           | v             |                  |
| -      |                    |                              |                            |                          |              |           |               |                  |
|        | GENERAL            | STATEMENT OF                 | EXTENT AN                  | D EXTENT O               | F RE         | SULTING   | OUTCOME       | <u>:</u><br>ਮੋਸ਼ |
|        | () 3.              | לק קאיתי ∩יתי דה             | TENT THAT ETC., IS L       | THE ECIF                 | TC L         | WOTIT LE  | 77/7 \ 11.7.  | Œ                |
|        |                    | ADDBOURT.                    | OF A BOARD                 | OF EXPERI                | ' RAI        | ERS. TO   | ) BE COM      | <b>i</b> –       |
|        |                    | PLETED W                     | THIN 3 HOU                 | RS WITH EA               | ACH C        | DEKALION  | 1 JUDGED      | ,                |
|        | <u> </u>           | AS SATISI                    | FACTORY OR                 | UNSATISFAC               | TORY         | •         |               | ٠                |
| •      | L 3.               | 02 FOLLOWING                 | G LOGICAL S                | EQUENCE AN               | ID SI        | RICTEST   | SAFETY        |                  |
|        | •                  | PRECAI                       | UTIONS                     | · '                      |              |           |               |                  |
|        | () 3.              | DDDCAI                       | G LOGICAL S<br>UTIONS TO L | OCATE SMAL               | LEST         | ' PAULTI  | COMPONE       | NT               |
| 3      | () 3.              | OA ACCORDING                 | G TO PROCED                | URES RECOM               | <b>IMENI</b> | DED IN SI | EKATCE L      | IANUAL           |
|        | , ,                | BY AC                        | CEPTED ELEC                | TRONICS RE               | EPALE        | R PROCEDI | OKE.          |                  |
|        | () 3.              | 05 TO THE S                  | ATISFACTION                |                          | MKU          |           |               |                  |
|        |                    |                              | 16.                        | 1                        | عبيد         |           |               |                  |

| •                   | MISOE NO.   |                   |  |  |
|---------------------|-------------|-------------------|--|--|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |  |  |
|                     | TERMOB NO.  | 13-048            |  |  |
|                     |             |                   |  |  |
| 1 00 CONDITION      |             |                   |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

VHF TRANSMITTER 1.04 MF TRANSMITTER ) 1.05 1.06 LF TRANSMITTER WHF TRANSCEIVER 1.07 LORAN TRANSMITTER/RECEIVER 1.08 SERVICE MANUALS 1.09 NO/IMPROPER RF OUTPUT 1.10 STATIC IN SOUND 1.1k NO MODULATION 1.12 AUDIBLE HUM 1.13 INTERMITTENT SOUND MODULATION 1.14 1.15 SMOKE

BURNING SMELL

IMPROPER OUTPUT VOLTAGE

IMPROPER OUTPUT CURRENT

#### PERFORMANCE 2.00

1.16

1.17

1.18

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME TROUBLE SHOOT A DEFECTIVE TRANSMITTER EMPLOYING THE FOLLOWING OPERATIONS: CHECK ALL CIRCUIT BREAKERS/FUSES 2.02 LOCATE SPECIFIC PROBLEM(S) USING TROUBLE SHOOTING 2.03 CHART AND/OR CIRCUIT SCHEMATIC REPAIR CIRCUIT 2.04 DEMONSTRATE NORMAL OPERATION 2.05

BASIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3)

### 3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, CONTACT, ETC., I\$ LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM-PLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY



FOLLOWING LOGICAL SEQUENCE AND STRICTEST SAFETY 3.02 PRECAUTIONS

FOLLOWING LOGICAL SEQUENCE AND STRICTEST SAFETY

| (   | )  | 1.01 | HAM TRANSMITTER                                   |
|-----|----|------|---|
| (   | )  | 1.02 | CB TRANSMITTER                                    |
| ï   | )  | 1.03 | UHF TRANSMITTER                                   |
| ì   | j  | 1.04 | VHF TRANSMITTER                                   |
| i   | )  | 1.05 | MF TRANSMITTER                                    |
| ì   | j. |      | LF TRANSMITTER                                    |
| ì   | í  | 1.07 | VHF TRANSCEIVER                                   |
| ì   | í  | 1.08 | LORAN TRANSMITTER/RECEIVER                        |
| ì   | í  | 1.09 | SERVICE MANUALS                                   |
| ì   | í  | 1.10 | NO/IMPROPER RF OUTPUT                             |
| ì   | í  | 1.11 |   |
| ì   | í  |      | NO MODULATION                                     |
| ì   | í  | 1.13 | AUDIBLE HUM                                       |
| ì   | Ś  | 1.14 |   |
| ì   | í  | 1.15 | •   |
| ì   | í  | 1.16 | BURNING SMELL                                     |
| ì   | í  | 1.17 |   |
| ì   | ĵ  | 1.18 | TMPROPER OUTPUT CURRENT                           |
| ` ; | (  | 1 10 | PACIC ELECTRONICS TOOLS AND EQUIPMENT (TABLE T-3) |

| () 2.01 | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME TROUBLE SHOOT A DEFECTIVE TRANSMITTER EMPLOYING THE FOLLOWING OPERATIONS:  |
|---------|---|
| () 2.03 | CHECK ALL CIRCUIT BREAKERS/FUSES LOCATE SPECIFIC PROBLEM(S) USING TROUBLE SHOOTING CHART AND/OR CIRCUIT SCHEMATIC REPAIR CIRCUIT DEMONSTRATE NORMAL OPERATION |

# 3.00 EXTENT

| GENE ( )   | RAL ST | ATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME TO THE EXTENT THAT THE SPECIFIC FAULTY PART, WIRE, CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE COM- PLETED WITHIN 3 HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY |
|------------|--------|--|
|            | _      | ·  |
| '          | 4.     | FOLLOWING LOGICAL SEQUENCE AND STRICTEST SAFETY PRECAUTIONS  |
| <i>(</i> ) | 3.03   | FOLLOWING LOGICAL SEQUENCE AND STRICTEST SAFETY  PRECAUTIONS TO LOCATE SMALLEST FAULTY COMPONENT   |
| ( )        | 3.04   | ACCORDING TO PROCEDURES RECOMMENDED IN SERVICE MANUAL BY ACCEPTED ELECTRONICS REPAIR PROCEDURE   |
| ( )        | 3.05   | TO THE SATISFACTION OF THE BOARD   |

**164** 

| •                   |               | ۸.          | MISOE NO.         |
|---------------------|---------------|-------------|-------------------|
| PROGRAM ELECTRONICS | <del></del> - | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)     | _ /           | UNIT 02     | ASSEMBLY          |
| ·                   | _<br>_        | TERMOB NO.  | 13-049            |
|                     | <u>.</u>      |             | · :               |
|                     | <del></del>   |             | , ·               |

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE    | NO      |            | ·                                       | · · · · · · · · · · · · · · · · · · · |                |                                   |
|----------|---------|------------|---|---------------------------------------|----------------|-----------------------------------|
| PROGRA   | M       | PT ECTE    | ONICS                                   | DIVISION                              | 05             | CIRCUIT DIAGNOSIS                 |
| 1 100.0. |         |            |   | UNIT                                  | 02             | ASSEMBLY                          |
| •        |         |            |   |                                       | ŀ              |                                   |
|          |         | ļ          |   | TERMOB NO                             | ) <b>.</b><br> | 13-050                            |
|          |         | <u>,</u>   | ,                                       | ,                                     | į              | •                                 |
| 1.00     | CONDI   | TION       |   |                                       | ì              |                                   |
| 1.00     | CONDI   | 1011       |   | ,/                                    |                | 1                                 |
|          | ( ) .   | 1.01       | GIVEN A VACUUM TUBI<br>BY ONE OR MORE   | E RADIO WITH<br>OF THE FOLLO          | A I<br>WIN     | DEFECT INDICATED S SYMPTOMS:      |
|          | ( )/    | 1.02       | NO SOUND                                | -                                     |                |                                   |
|          | ( )     | 1.03       | STATIC<br>AUDIBLE HUM                   |                                       |                |                                   |
|          |         | 1.05       | INTERMITTENT SOUND                      |                                       |                |                                   |
| •        | ( )     | 1.06       | SMOKE<br>BURNING SMELL                  |                                       |                |                                   |
| -        | ( )     | 1.07       | NONE OF THE ABOVE                       |                                       |                | •                                 |
|          | ·( ).   | 1.09       | CEDUTCE MANITAT.                        | moore and ec                          | MITD           | MENT (TARIE T-3)                  |
|          | ( )     | 1.10       | BASIC ELECTRONICS                       | LOOPS WAD EC                          | ZOTE:          | MENT (TRUE 1 3)                   |
| 2.00     | <b></b> | RAL ST     | AMENIENO OF DEPENDINA                   | NCE AND RESU                          | JLTI           | NG OUTCOME                        |
|          |         | 2.01       | TROUBLE SHOOT A DE                      | FECTIVE VACU                          | JUM            | TUBE RADIO EMPLOYING              |
|          |         |            | THE FOLLOWING OPER                      | ATIONS:                               | ĺ              | •                                 |
|          | 7       | 2.02       | CHECK ALL CIRCUIT                       | BREAKERS/FUS                          | SES/           | TUBES                             |
| •        | ( )     | 2.03       | LOCATE SPECIFIC PE<br>CHART AND/OR CI   | ROBLEM(S) US<br>RCUIT SCHEM           | ING<br>ATIC    | TROUBLE SHOOTING                  |
| •        |         | 2.04       | REPAIR CIRCUIT<br>DEMONSTRATE NORMAL    | OPERATION                             |                |                                   |
|          | ( )     | 2.05       | DEMONDINATE NOTALE                      |                                       |                |                                   |
|          |         | :          |   |                                       |                |                                   |
| 3.00     | EXTE    | NT         |   | ·                                     |                |                                   |
|          | _       | <u> </u>   |   | , j                                   |                |                                   |
|          | CENE    | י אד פיז   | ATEMENT OF EXTENT                       | AND EXTENT O                          | F RE           | SULTING OUTCOME                   |
|          | ()      | 3.01       | · ΜΟ ΜΗΡ ΕΧΜΈΝΗ ΜΗΑΊ                    | THE SPECIF                            | TC I           | AUDIT PART, WIND,                 |
| ,        |         | 1          | CONTACT, ETC., IS<br>APPROVAL OF A BOAL | LOCATED: AND                          | REF            | PAIRED TO THE<br>PERS. TO BE COM- |
|          |         | :<br>      | PLETED WITHIN 3 HO                      | OURS WITH EA                          | CH (           | PERATION JUDGED                   |
|          |         | - i<br>- i | AS SATISFACTORY OF                      | R UNSATISFAC                          | TOR            |                                   |
| 0 .      | 1       | 3.02       | FOLLOWING LOGICAL                       | SEQUENCE AN                           | D S            | TRICTEST SAFETY                   |
|          | ( )     | 3.02       | PRECAUTIONS                             |                                       |                |                                   |
|          | ( )     | 3.03       | TO LOCK TO LOCK TO LOCK                 | TATE SMALLES                          | T F I          | AULTY COMPONENT                   |
|          | ( )     | 3.04       | ACCORDING TO PROC                       | EDURES RECOM                          | MENI           | DED IN SERVICE MANUAL             |
|          | • •     | 1          | BY ACCEPTED EL                          | ECTRONICS RE                          | PAL            | K BROĆEDOKE                       |
|          | . ( )   | 3.05       | TO THE SATISFACTION                     | ON OF THE BO                          | AKD            |                                   |

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|                            | MISOE NO.   |                   |  |  |  |
|----------------------------|-------------|-------------------|--|--|--|
| PROGRAM <u>ELECTRONICS</u> | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |  |
| USOE CODE NO(S)            | UNIT 02     | ASSEMBLY          |  |  |  |
|                            | TERMOB NO.  | 13-050            |  |  |  |
|                            | •           |                   |  |  |  |
| 1.00 CONDITION             |             |                   |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE. | йo   |        |  |                                 |              |                              |
|--------|------|--------|--|---------------------------------|--------------|------------------------------|
| PROGRA | M \  | ELECT  | RÓNICS   | DIVISION                        | 05           | CIRCUIT DIAGNOSIS            |
|        |      |        |  | UNIT                            | 02           | ASSEMBLY                     |
|        |      |        |  | TERMOË NO.                      |              | 13-051                       |
|        |      | •      |  | Throb we.                       |              |                              |
|        |      |        | •  | ŕ                               |              |                              |
| 1.00   | COND | ITION  | •  |                                 |              |                              |
|        | ( )  | 1.01   | GIVEN A LOW VOLTAGE INDICATED BY ONE SYMPTOMS: | DC POWER SU<br>OR MORE OF       | PPI<br>THE   | Y WITH A DEFECT<br>FOLLOWING |
|        | ( )  | 1.02   | NO VOLTAGE OUTPUT                              |                                 |              |                              |
|        | ( )  |        | LOW VOLTAGE OUTPUT INTERMITTENT OUTPUT         | 4                               |              | 1                            |
|        | ( )  | 1.05   | EXCESSIVE HUM                                  |                                 |              |                              |
|        | ( )  |        | POOR REGULATION<br>BURNING SMELL               |                                 |              |                              |
|        | ( )  |        | NONE OF THE ABOVE                              |                                 |              |                              |
|        | ( )  | 1 00   | CEDUTCE MANIJAI.                               | MOTE AND FOI                    | ITDN         | ARNT (TARLE T-3)             |
|        | ( )  | 1.10   | BASIC ELECTRONICS T                            | OGES WAD EGG                    | JIEL         | THE CHAPT I ST               |
| 2.00   | PERF | ORMANO | e <b>E</b>                                     |                                 |              |                              |
|        |      |        |  | 1                               |              |                              |
|        |      |        |  |                                 |              | are armanum                  |
|        | GENE |        | TROUBLE SHOOT A DEE                            | TECTIVE LOW                     | LTII<br>VOL' | NG OUTCOME<br>TAGE DC POWER  |
| ,      | ( )  | 2.01   | SUPPLY EMPLOYING TH                            | E FOLLOWING                     | .OP          | ERATIONS:                    |
|        | L    | 3 00   | CHECK ALL CIRCUIT E                            | REAKERS /FUS                    | ES           |                              |
| *      | ( )  | 2.02   | LOCATE SPECIFIC PROCESSES CHART AND/OR CIT     | )BLEM(S) USI                    | NG '         | TROUBLE SHOOTING             |
|        | ( )  |        | REPAIR CIRCUIT DEMONSTRATE NORMAL              | OPERATION                       |              | •                            |
|        | ( )  | 2.05   | DEMONSTRATE NORMAL                             | OI DIWIT TO I                   |              |                              |
| 3.00   | EXT  | ENT    |  |                                 |              |                              |
|        |      |        | PATEMENT OF EXTENT A                           | AD FYTENT OF                    | ਸਧ           | SULTING OUTCOME              |
|        | GEN  | 3.01   | TO THE EXTENT THAT                             | THE SPECIFI                     | C F          | AULTY PART, WIRE             |
|        | ` ′  |        | CONTACT, ETC., IS                              | LOCATED AND                     | REP          | AIRED TO THE                 |
|        |      |        | APPROVAL OF A BOAR PLETED WITHIN 3 HO          | URS WITH EAC                    | H O          |                              |
|        |      |        | AS SATISFACTORY OR                             | UNSATISFACT                     | ORY          |                              |
|        | 1    | 3.02   | FOLLOWING LOGICAL                              | SEQUENCE AND                    | ST           | RICTEST SAFETY               |
|        | ( )  |        | PRECAUTIONS                                    |                                 |              |                              |
| _      | ( )  | 3.03   | PRECAUTIONS TO                                 | LOCATE SMALI                    | LES:         | r FAULTY COMPONENT           |
|        | ( )  | 3.04   | ACCORDING TO PROCE                             | DURES RECOMM                    | END          | ED IN SERVICE MANUAL         |
|        | ( )  | 3.05   | BY ACCEPTED ELE<br>TO THE SATISFACTIO          | CTRONICS REP<br>N OF THE BOA    | ALF<br>ARD   | RUCEDURE                     |
|        |      | 5.05   |  | . <b>01</b> - 111 - 111.<br>113 |              |                              |

|                     |             | MISOE NO.         |
|---------------------|-------------|-------------------|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |
|                     | TERMOB NO.  | 13-051            |
|                     |             |                   |
| 1.00 CONDITION      |             |                   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| PROGR | LAM      | ELECT  | RONICS   | DIVISION   | 05                                  | CIRCUIT DIAGNOSIS  |
|-------|----------|--|--|--|-------------------------------------|--|
|       |          |  |  | UNIT   | 02                                  | ASSEMBLY   |
|       |          |  |  | TERMOB NO  | ).                                  | 13-052   |
|       |          | N.   |  |  |                                     |  |
| •     | 4        | 7  |  |  |                                     | •  |
| 1.00  | COND     | TION   |  |  |                                     |  |
|       | <u> </u> | 1.01   | GIVEN AN OSCILLOSCO<br>ONE OR MORE OF T  | PE WITH A D<br>HE FOL <b>LO</b> WIN  | EFEC<br>G SY                        | CT INDICATED BY MPTOMS:  |
|       | ( )      |  | NO TRACE BAD FOCUS   |  |                                     |  |
|       | ( )      | 1.04   | FLASHES ON SCREEN  |  |                                     |  |
|       | ( )      | 1.05   | SMOKE  |  |                                     |  |
|       | ( )      | 1.06   | INTERMITTENT TO CE   |  |                                     | • • •  |
|       | ( )      | 1.08   | NONE OF THE ABOVE  |  | •                                   |  |
|       | ( )      | 1.09   | SERVICE MANUAL   | OOLG AND DO  | יתדוו                               | MENT (ጥ <u>አ</u> ዩፒድ ጥ <u>-</u> 3)   |
|       | ( )      | 1.10   | BASIC ELECTRONICS T  | OOLS AND EC  | IOTLI                               | WENT (INDUE I-3)   |
|       | GENE     |  | ATEMENT OF PERFORMAN   | CE AND RESU  | JLTI                                | NG OUTCOME   |
|       |          | 2.01   | THE FOLLOWING OPERA  | TIONS:   | _                                   |  |
|       | ()       | 2.02   | LOCATE SPECIFIC PRO  | BLEM(S) US:  | ING '                               | TROUBLE SHOOTING   |
|       |          |  | CHART AND/OR CIT   | CUIT SCHEMA  | ATIC                                |  |
|       | ( )      | 2.04   | CHART AND/OR CIF<br>REPAIR CIRCUIT<br>DEMONSTRATE NORMAL   | CUIT SCHEMA  | ATIC                                |  |
| 3.00  | ( )      | 2.05   | REPAIR CIRCUIT   | CUIT SCHEMA  | ATIC                                | · •  |
| 3.00  | EXTI     | 2.05<br>ENT<br>ERAL ST                                 | REPAIR CIRCUIT DEMONSTRATE NORMAL  | OPERATION  OPERATION   | F RE                                | SULTING OUTCOME  |
| 3.00  | EXTI     | 2.05<br>ENT  | REPAIR CIRCUIT DEMONSTRATE NORMAL  TATEMENT OF EXTENT AN TO THE EXTENT THAT CONTACT, ETC., IS IN APPROVAL OF A BOAR  | OPERATION  OPERATION  OPERATION  THE SPECIF  LOCATED AND  OF EXPERT  | F REIC FREP                         | SULTING OUTCOME<br>AULTY PART, WIRE,<br>AIRED TO THE<br>ERS. TO BE COM-  |
| 3.00  | EXTI     | 2.05<br>ENT<br>ERAL ST                                 | TATEMENT OF EXTENT AND TO THE EXTENT THAT CONTACT, ETC., IS APPROVAL OF A BOARD PLETED WITHIN 3 HOUAS SATISFACTORY OR  | OPERATION  OPERATION  THE SPECIF  LOCATED AND  OF EXPERT  JRS WITH EA  | F REIC FATCH OTORY                  | SULTING OUTCOME AULTY PART, WIRE, AIRED TO THE ERS. TO BE COM- OPERATION JUDGED  |
| 3.00  | EXTI     | 2.05<br>ENT<br>ERAL ST<br>3.01                         | REPAIR CIRCUIT DEMONSTRATE NORMAL  TATEMENT OF EXTENT AN TO THE EXTENT THAT CONTACT, ETC., IS I APPROVAL OF A BOARI PLETED WITHIN 3 HOU AS SATISFACTORY OR  FOLLOWING LOGICAL S PRECAUTIONS  | OPERATION  OPERATION  OPERATION  THE SPECIF  LOCATED AND  OF EXPERT  JRS WITH EA  UNSATISFAC  SEQUENCE AN  | F REIC F RATCH OTORY                | SULTING OUTCOME AULTY PART, WIRE, AIRED TO THE ERS. TO BE COM- PERATION JUDGED RICTEST SAFETY  |
| 3.00  | GENI     | 2.05<br>ENT<br>ERAL ST<br>3.01                         | REPAIR CIRCUIT DEMONSTRATE NORMAL  TATEMENT OF EXTENT AN TO THE EXTENT THAT CONTACT, ETC., IS I APPROVAL OF A BOARI PLETED WITHIN 3 HOU AS SATISFACTORY OR  FOLLOWING LOGICAL S PRECAUTIONS FOLLOWING LOGICAL S PRECAUTIONS TO SERVICE OF THE PRECAUTI | OPERATION  OPERATION  OPERATION  THE SPECIF  LOCATED AND  OF EXPERT  JRS WITH EA  UNSATISFAC  SEQUENCE AN  SEQUENCE AN  LOCATE SMAL              | F RE RAT CH OTORY                   | SULTING OUTCOME AULTY PART, WIRE, AIRED TO THE PERS. TO BE COM- PERATION JUDGED  RICTEST SAFETY FRICTEST SAFETY FAULTY COMPONENT                     |
| 3.00  | GENI     | 2.05<br>ENT<br>ERAL ST<br>3.01<br>3.02<br>3.03<br>3.04 | REPAIR CIRCUIT DEMONSTRATE NORMAL  TATEMENT OF EXTENT AN TO THE EXTENT THAT CONTACT, ETC., IS I APPROVAL OF A BOARI PLETED WITHIN 3 HOU AS SATISFACTORY OR  FOLLOWING LOGICAL S PRECAUTIONS FOLLOWING LOGICAL S PRECAUTIONS FOLLOWING TO PROCES BY ACCEPTED ELES   | OPERATION  OPERATION  OPERATION  THE SPECIF  LOCATED AND  OF EXPERT  JRS WITH EA  UNSATISFAC  SEQUENCE AN  LOCATE SMAL  DURES RECOM  CTRONICS RE | F REFICE FATORY D STATESTAMEND PAIF | SULTING OUTCOME AULTY PART, WIRE, AIRED TO THE ERS. TO BE COM- PERATION JUDGED  PRICTEST SAFETY PRICTEST SAFETY FAULTY COMPONENT DED IN SERVICE MANU |

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|                    |             | 1150E NO          |
|--------------------|-------------|-------------------|
| PROGRAM ELECTRICAL | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)    | UNIT 02     | ASSEMBLY          |
|                    | TERMOB NO.  | 13-052            |
|                    |             | •                 |
| 1 00 CONDITION     | •           | 4.5               |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE                    | NO.           |              |  |
|--------------------------|---------------|--------------|--|
| P <b>R</b> OĞ <b>R</b> J | AM            | ELECTE       | RONICS DIVISION 05 CIRCUIT DIAGNOSIS   |
|                          | · <del></del> | <u> </u>     | UNIT 02 ASSEMBLY   |
|                          |               |              | TERMOB NO. 13-053  |
|                          |               |              |  |
|                          |               | -            |  |
| 1.00                     | COND          | ITION        |  |
|                          | ( )           | 1.01         | INDUSTRIAL ULTRASONIC WASHER WITH A DEFECT INDICATED BY ONE OR MORE OF THE FOLLOWING SYMPTOMS:   |
| -                        | ( )           | 1.02         | NO CLEANING ACTION   |
|                          | ( )           | 1.03<br>1.04 | INADEQUATE CLEANING ACTION BURNING SMELL   |
| •                        | ( )           | 1.04         | NONE OF THE ABOVE  |
|                          | ()            | 1.06         | CREAT OF MANUAT  |
|                          | .( )          | 1.07         |  |
|                          |               | •            | ·  |
| 2.00                     | PERF          | ORMANC       | E .  |
|                          |               |              | ·  |
|                          |               |              | ATEMENT OF PERFORMANCE AND RESULTING OUTCOME   |
|                          | GENE          | 2.01         | TROUBLE SHOOT A DEFECTIVE ULTRASONIC WASHER  |
|                          | \             |              | THE FOLLOWING OPERATIONS:  |
|                          | L, -          | 2.02         | CHECK ALL CIRCUIT BREAKERS/FUSES/TUBES   |
|                          | ( )           | 2.02         | LOCATE SPECIFIC PROBLEM(S) USING TROUBLE SHOOTING  |
|                          | ` '           |              | CHART AND/OR CIRCUIT SCHEMATIC   |
|                          | ( )           | 2.04         | REPAIR CIRCUIT DEMONSTRATE NORMAL OPERATION  |
|                          | ( )           | 2.05         | DEMONSTRATE NORTH OF THE PROPERTY OF THE PROPE |
|                          |               |              |  |
| 3.00                     | EXT           | ENT          |  |
|                          |               |              |  |
|                          | GEN           | ERAL S       | TATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME   |
|                          | 1 7           | 3.01         | THE SPECIFIC FAULT FART THE SPECIFIC FAULT FART TO THE   |
|                          | 1             |              | CONTACT, ETC., IS LOCATED AND REPAIRED TO THE APPROVAL OF A BOARD OF EXPERT RATERS. TO BE  |
|                          |               |              | COMPTEMED WITHIN 3 HOURS WITH EACH OPERATION   |
|                          | ,             | - · #        | JUDGED AS SATISFACTORY OR UNSATISFACTORY   |
|                          | , j           |              | FOLLOWING LOGICAL SEQUENCE AND STRICTEST SAFETY  |
|                          | (\)           | 3.02         | TOPPOSITETONS /  |
|                          | ( )           | 3.03         | FOLLOWING LOCICAL SEQUENCE AND STRICTEST SAFETI  |
|                          | •             |              | PRECAUTIONS TO LOCATE SMALLEST FAULTY COMPONENT ACCORDING TO PROCEDURES RECOMMENDED IN SERVICE MANUAL  |
|                          | ( )           | 3.04         | BY ACCEPTED ELECTRONICS REPAIR PROCEDURE   |
|                          | ( )           | 3.05         |  |
|                          | • •           |              | <b>\</b>   |

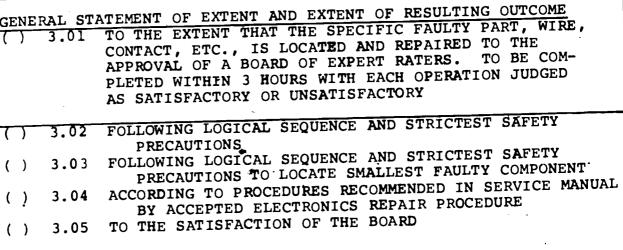
|                                      | м                              | ISOE NO.                            |
|--------------------------------------|--------------------------------|-------------------------------------|
| PROGRAM ELECTRONICS  USOE CODE NO(S) | DIVISION 05 UNIT 02 TERMOB NO. | CIRCUIT DIAGNOSIS  ASSEMBLY  13-053 |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

### 3.00 EXTENT



| ROGRAM | ELECT                                 | RONICS   | DIVISION 0   | 5 CIRCUIT DIAGNOSI  |
|--------|---------------------------------------|--|--|---|
|        |                                       |  | IINIT'T ()   | 2 ASSEMBLY  |
|        | •                                     |  | ONII O   | •   |
| •      | · · · · · · · ·                       | •  | TERMOB NO.   | 15-054  |
|        |                                       |  | -  | •   |
| .00    | CONDITION                             |  | £  | •   |
|        | ( ) 1.01                              | RADAR SET WITH DEF   | FECT INDICATED SYMPTOMS:   | BY ONE OR MORE OF   |
| 1-     | () 1.02                               | NO VIDEO   |  | 1   |
|        | () 1.03                               | NO SYNCHRO<br>FLASHES ON SCOPE   | · · · · · ·  | _   |
|        | () 1.04                               | PHONY CONTACTS   |  | <b>3</b>  |
|        | 1.06                                  | BURNING SMEXL  | •  |   |
|        |                                       |  |  | · mxpir m=3)  |
|        | () 1.08                               | BASIC ELECTRONICS  | TOOLS AND EQUI   | IPMENT (TABLE 1-3)  |
|        | / \ 1 00                              |  |  | ·   |
|        | () 1.09                               | SERVICE MANUAL   | •  | · • • •   |
|        | ( ) 1.09                              | SERVICE MANUAL   |  |   |
| 2.00   |                                       | SERVICE MANUAL   |  | · · · · · · · · · · · · · · · · · · ·                       |
| 2.00   | PERFORMANO                            | SERVICE MANUAL   |  | · · · · · · · · · · · · · · · · · · ·                       |
| 2.00   |                                       | SERVICE MANUAL   |  |   |
| 2.00   | PERFORMANO                            | SERVICE MANUAL   | ANCE AND RESUL   | TING OUTCOME  |
| 2.00   | PERFORMANO                            | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D   | ANCE AND RESUL<br>DEFECTIVE RADAR  | TING OUTCOME  |
| 2.00   | PERFORMANO GENERAL S ( ) 2.01         | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  | ANCE AND RESULDEFECTIVE RADAR  | TING OUTCOME  SET EMPLOYING THE                             |
| 2.00   | PERFORMANO GENERAL S ( ) 2.01         | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  | ANCE AND RESULDEFECTIVE RADAR ONS:   | TING OUTCOME  SET EMPLOYING THE                             |
| 2.00   | GENERAL S'                            | SERVICE MANUAL  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  CHECK ALL CIRCUIT   | ANCE AND RESULTIONS:  BREAKERS/FUSE ROBLEM(S) USIN                               | TING OUTCOME  SET EMPLOYING THE  S/TUBES G TROUBLE SHOOTING |
| 2.00   | GENERAL S' ( ) 2.01 ( ) 2.02 ( ) 2.03 | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  CHECK ALL CIRCUIT  LOCATE SPECIFIC P  CHART AND/OR C                | ANCE AND RESULDEFECTIVE RADAR ONS:   | TING OUTCOME  SET EMPLOYING THE  S/TUBES G TROUBLE SHOOTING |
| 2.00   | GENERAL S' ( ) 2.01 ( ) 2.02 ( ) 2.03 | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  CHECK ALL CIRCUIT  LOCATE SPECIFIC P  CHART AND/OR COREPAIR CIRCUIT | ANCE AND RESULDEFECTIVE RADAR ONS: BREAKERS/FUSE PROBLEM(S) USIN CIRCUIT SCHEMAT | TING OUTCOME  SET EMPLOYING THE  S/TUBES G TROUBLE SHOOTING |
| 2.00   | GENERAL S' ( ) 2.01 ( ) 2.02 ( ) 2.03 | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  CHECK ALL CIRCUIT  LOCATE SPECIFIC P  CHART AND/OR C                | ANCE AND RESULDEFECTIVE RADAR ONS: BREAKERS/FUSE PROBLEM(S) USIN CIRCUIT SCHEMAT | TING OUTCOME  SET EMPLOYING THE  S/TUBES G TROUBLE SHOOTING |
|        | GENERAL S' ( ) 2.01 ( ) 2.02 ( ) 2.03 | SERVICE MANUAL  CE  TATEMENT OF PERFORM  TROUBLE SHOOT A D  FOLLOWING OPERATI  CHECK ALL CIRCUIT  LOCATE SPECIFIC P  CHART AND/OR COREPAIR CIRCUIT | ANCE AND RESULDEFECTIVE RADAR ONS: BREAKERS/FUSE PROBLEM(S) USIN CIRCUIT SCHEMAT | TING OUTCOME  SET EMPLOYING THE  S/TUBES G TROUBLE SHOOTING |





|                     | B           | MISOF NO.         |
|---------------------|-------------|-------------------|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| PROGRAM             |             | · ·               |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |
| ( <u> </u>          | TERMOB NO.  | 13-054            |
| ·.                  |             | <del></del>       |

CONDITION

1.00

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE N  | 10.                |  |               |              |  |
|--|--------------------|--|---------------|--------------|--|
| PROGRAM  | M ELECTR           | ONICS  | DIVISION      | 05           | CIRCUIT DIAGNOSIS  |
|  |                    |  | UNIT          | 02           | ASSEMBLY   |
|  |                    |  | TERMOB NO     | ٥.           | 13-055   |
| , ,  |                    | •  | v<br>3        |              |  |
|  |                    |  | *<br>*<br>*   |              |  |
| 1.00   | CONDITION          |  |               |              | <b>-</b>   |
|  | · ·                | BY ONE OR MORE   | OF THE FOLLO  | R WIT        | TH A DEFECT INDICATED SYMPTOMS:  |
| - 4-   | () 1.03            | NO SOUND<br>STATIC                                       | t<br>Ž        |              | No   |
|  | () 1.04            | AUDIBLE HUM<br>INTERMITTENT SOUN                         | D :           |              | •  |
|  | () 1.06            | SMOKE  | _             |              |  |
| To the second se |                    | BURNING SMELL<br>NONE OF THE ABOVE                       |               |              |  |
| amenin it  | 1 0-0              | CEDUTCE MANUAL.  | #             | מדוזר!       | MENT (TABLE T-3)   |
| v. v. v. v. v. v. v. v. v. v. v. v. v. v   | ( ) 1.10           | BASIC ELECTRONICS  | TOOLS MAD E   | ZOIF         | THIN (IIII   |
| 2.00   | PERFORMANCI        | E  |               |              |  |
|  |                    |  |               |              |  |
| and the second   | GENERAL ST         | ATEMENT OF PERFORM                                       | IANCE AND RES | ULTI         | NG OUTCOME   |
| and the second s | () 2.01            | EMPLOYING THE FOL  | LOWING OPERA  | TION         | S:   |
|  | () 2.02<br>() 2.03 | CHECK ALL CIRCUIT<br>LOCATE SPECIFIC F<br>CHART AND/OR C | ROBLEM(S) US  | ING          | TROUBLE SHOOTING.  |
| •  | () 2.04            | REPAIR CIRCUIT   |               | 0            |  |
|  | () 2.05            | DEMONSTRATE NORMA  | AL OPERATION  |              |  |
|  |                    |  | •             |              | •  |
| 3.00   | EXTENT             |  | •             |              |  |
|  | -                  | ·  |               |              |  |
| , .  | GENERAL ST         | ATEMENT OF EXTENT  | AND EXTENT C  | FRE          | SULTING OUTCOME  |
|  | () 3.01            | CONTACT, ETC., IS  | S LOCATED AND | ) KEI        | AULTY PART, WIRE,<br>PAIRED TO THE   |
|  | 1                  | APPROVAL OF A BOX<br>PLETED WITHIN 3                     | ARD OF EXPERT | 'RAI         | ERS. TO BE COM-  |
|  |                    | AS SATISFACTORY  | OR UNSATISFAC | TORY         | ?  |
| l  | () 3.02            | FOLLOWING LOGICA   | 1             |              |  |
| 1  |                    | PRECAUTIONS  |               | •            |  |
|  | () 3.03            | DEPOSITEDIS TO   | O LOCATE SMAJ | יבשוני.      | L LWOTTI COMPONENT   |
|  | ( ) 3.04           | ACCORDING TO PROBY ACCEPTED E                            | CEDURES RECOL | <b>IMENI</b> | DED IN SERVICE MANUAL  |
|  | () 3.05            | TO THE SATISFACT   | ION OF THE PA | ANEL         |  |
|  |                    | ,  | 176           |              | . 1  |
| ERIC   |                    |  |               |              | 15   |
| an extraorder of the   |                    |  |               |              | and the track of t |

|                     |             | MISOR NO.         |  |  |
|---------------------|-------------|-------------------|--|--|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |  |  |
|                     | TERMOB NO.  | 13-055            |  |  |
|                     |             | ١                 |  |  |
| 1.00 CONDITION      | <u> </u>    | 1                 |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE !  | NO.         | *                                       |                            |              |                        |
|----------|-------------|---|----------------------------|--------------|------------------------|
| PROGRA   | M ELECTR    | ONICS                                   | DIVISION                   | 05           | CIRCUIT DIAGNOSIS      |
|          |             |   | UNIT                       | 02           | ASSEMBLY               |
|          |             |   | TERMOB NO                  | •            | 13-056                 |
|          |             |   | •                          |              |                        |
| 1.00     | CONDITION   |   |                            |              |                        |
| <b>\</b> | ( ) 1.01    | GIVEN A TAPE RECORDS                    | ER WITH A DI               | EFEC<br>G·SY | T INDICATED BY MPTOMS: |
|          |             | NO SOUND                                |                            |              |                        |
|          | 1 1.04      | STATIC<br>AUDIBLE HUM                   |                            |              | ,                      |
|          | () /1.05    | INTERMITTENT SOUND                      |                            |              | •                      |
|          | () 1.07     | BURNING SMELL                           |                            |              |                        |
| 1        |             | NONE OF THE ABOVE<br>SERVICE MANUAL     |                            |              |                        |
| •        | ( ) 1.09    | BASIC ELECTRONICS T                     | OOLS AND EQ                | UIP          | MENT (TABLE T-3)       |
| ,        | •           |   | v.                         |              | . 👟 .                  |
| 2.00     | PERFORMANC  | E                                       |                            |              |                        |
|          |             |   |                            |              |                        |
|          |             | ATEMENT OF PERFORMAN                    | CE AND RESU                | LTI          | NG OUTCOME             |
| ,        | GENERAL ST. | TROUBLE SHOOT A DEF                     | ECTIVE TAPE                | RE           | CORDER EMPLOYING       |
|          | 4           | THE FOLLOWING OPERA                     | TIONS:                     |              | ·                      |
| l        | () 2.02     | CHECK ALL CIRCUIT B                     | REAKERS/FUS                | ES           | TROUBLE SHOOTING       |
| •        | () 2.03     | LOCATE SPECIFIC PRO<br>CHART AND/OR CIF | BLEM(S) USI<br>CUIT SCHEMA | TIC          | IROUBLE BROOTING       |
|          | () 2.04     | REPATR CIRCUIT                          |                            |              |                        |
|          | () 2.05     | DEMONSTRATE NORMAL                      | OPERATION                  |              | 1                      |
|          |             |   |                            |              |                        |
| 3.00     | EXTENT      | •                                       |                            |              |                        |
|          |             |   |                            |              |                        |
|          | GENERAL ST  | TATEMENT OF EXTENT AN                   | D EXTENT OF                | RE           | SULTING OUTCOME        |
|          | () 3.01     | TO THE EXTENT THAT CONTACT, ETC., IS    | THE SPECIE                 | L            | MUDII IANI/ WIII       |
|          |             | ADDDOURT OF A ROARI                     | ) OF EXPERT                | KVI          | EKS. IO DE             |
|          |             | COMPLETED WITHIN 3 JUDGED AS SATISFACT  | HOURS WITH                 | EAC          | H OPERATION            |
|          |             |   |                            |              |                        |
|          | () 3.02     | ひかたぐまじ作すへなら                             |                            |              | •                      |
| ·        | ( ) 3.03    | TOTTOWING TOCICAL                       | SEQUENCE ANI               | o si         | RICTEST SAFETY         |
|          | •           | PRECAUTIONS SO                          | THAT THE SM                | ALLE         | ST FAULTI COMPONENT    |
|          | ( ) 3.04    | ACCORDING TO PROCE                      | DURES RECOM                | MENI         | DED IN SERVICE MANUAL  |
| · **     | *           | BY ACCEPTED ELE                         | CTRONICS RE                | <b>LWT</b>   | ( PROCEDURE .          |
|          | () 3.05     | TO THE DATIONACTION                     | · • •                      |              |                        |

| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
|---------------------|-------------|-------------------|
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |
|                     | TERMOB NO.  | 13-056            |
|                     | •           |                   |
| 1.00 CONDITION      |             | ,                 |

MISOE NO.

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE  | NO.           |   |                    | Į.           | -           |            | •                |             |
|--------|---------------|---|--------------------|--------------|-------------|------------|------------------|-------------|
| . 6    |               | 4 · · · · · · · · · · · · · · · · · · · |                    | \$ .<br>\$ . | ì           |            | GIRGUIM DIACNO   | CTC         |
| PROGRA | ΔM            | ELECTE                                  | RONICS             | •            | DIVISION    | 05         | CIRCUIT DIAGNO   | <del></del> |
|        |               |   |                    | \$.<br>      | UNIT        | 02         | ASSEMBLY         |             |
|        |               | 4                                       |                    | • )          |             |            |                  |             |
| ••     |               | ;                                       |                    |              | TERMOB NO   | •          | 13-057           |             |
|        | (             | 2                                       |                    |              | N. Carlotte |            | . 1              |             |
|        | •             |   |                    | ţ            | <b>3</b>    |            | •                | •           |
| •      |               |   | •                  |              |             |            | •                |             |
| 1.00   | CONDI         | LION                                    |                    |              | •           |            | •                |             |
|        |               | . 01                                    | GIVEN A VOM, VTVM, | ΛŖ           | אינים אינים | A D        | EFECT INDICATE   |             |
| •      | ( )           | 1.01                                    | BY ONE OR MORE     | OF           | THE FOLLO   | WING       | SYMPTOMS:        | *           |
| •      | <i>(</i> )    | 1 02                                    | NO READING         | <b>01</b> ;  |             |            |                  |             |
|        |               | 1.03                                    | NO CURRENT SCALE   |              | F           |            |                  |             |
|        | / /           |   | NO DC SCALE        | *            | 1 <b>)</b>  |            | •                | ~           |
| :      | ( )           | 1.05                                    | NO AC SCALE        | :            |             |            |                  |             |
|        |               | 1.06                                    | NO OHM SCALE       |              |             |            | (                |             |
|        | ii            | 1.07                                    | BROKEN TEST LEADS  |              |             |            | •                |             |
|        | ( )           | 1.08                                    | BROKEN CASE        | :            | •           | ٠          | >                | ٠,          |
|        | ( )           | 1 00                                    | CEDUTCE MANITAL.   | 1            |             |            | /manto m. 3\     |             |
|        | ( ).          | 1.10.                                   | BASIC ELECTRONICS  | TOO          | LS AND EQ   | OIPM       | MENT (TABLE T-5) | •           |
| -      |               | -                                       | -                  |              | •           |            | <i>*</i>         | • •         |
|        |               |   | _                  |              |             |            | •                |             |
| .2.00  | PERFO         | RMANC                                   | E                  |              |             |            | ,                |             |
|        | •             |   |                    | 4            | ~           |            |                  |             |
| •      |               |   |                    | <del></del>  |             | 1          |                  |             |
|        | GENER         | RAL ST                                  | ATEMENT OF PERFORM | ANCE         | AND RESU    | LTI        | NG OUTCOME       |             |
|        | (-1)          | 2.01                                    | TROUBLE SHOOT A DI | ${	t EFEC}$  | TIVE METE   | R E        | MPLOYING THE     |             |
| •      | ` ′           |   | FOLLOWING PROCEDU  | RE:          |             | 4          | •                | ,           |
|        |               |   |                    |              | <del></del> |            | _ <del></del>    |             |
| ,      | <del>()</del> | 2.02                                    | CHECK CALIBRATION  |              | • •         |            |                  |             |
| 6      | ( )           | 2.03                                    | ISOLATE DEFECT     |              |             |            | ·                |             |
|        | ( )           | 2.04                                    | REPAIR DEFECT      | TO TON       | , ,         | a ·        | •                |             |
| •      | ( - )         | 2.05                                    | DEMONSTRATE OPERA  | TION         |             |            |                  |             |
|        |               |   |                    |              |             |            | •                |             |
| 2 00   | EXTE          | NT T                                    |                    |              |             |            |                  |             |
| 3.00   | EVIE          | AT                                      |                    |              |             |            |                  |             |
|        |               |   | 4h                 |              |             |            | 1                |             |
| , -    |               |   |                    |              |             |            |                  |             |
|        | GENE          | RAL SI                                  | TATEMENT OF EXTENT | AND          | EXTENT OF   | RE         | SULTING OUTCOME  | <u>-</u>    |
|        | 1             | 3.01                                    | TWO THE EXTENT THA | ויד ידי      | HE SPECIFI  | ע ט        | ELECT IN POCHIE  | ٠.          |
|        |               |   | AND REPAIRED TO N  | BS S         | STANDARDS   | AND        | BE COMPLETED     |             |
|        |               |   | OF A BOARD OF EXP  | EKT          | KATEKS.     | ነር<br>አጥተር | N JUDGED AS      |             |
|        |               | `                                       | WITHIN 3 HOURS WI  | TATE A       | TTEFACTOPER | ΣΥΤΑΦ      | M CODOLD IN      | 4           |
|        |               | ,                                       | SATISFACTORY OR U  | MCJM.        | LIBEACIOR.  | •          |                  |             |
| ĝ      | 1             | 3.02                                    | LOCATING FAULT     |              |             |            |                  | •           |
|        | <b>(</b> , )  | 3.02                                    | SPECIFIC DEFECT I  | S T          | SOLATED     |            | ,                | •           |
|        | ( )           | 3.04                                    | USING STRICTEST S  | SAFE         | TY PRECAU   | rion       | S                |             |
|        | ( )           | 3.05                                    | 100% OPERATIONAL   |              |             |            |                  |             |
|        | ` '           |   | 1                  |              |             |            | 1                |             |
|        | *             |   |                    |              |             |            | •                |             |

| ,                                       | MISOE NO.   |                   |                  |
|---|-------------|-------------------|------------------|
| • |             |                   | ا<br>می          |
| PROGRAM <u>ELECTRONICS</u>              | DIVISION 05 | CIRCUIT DIAGNOSIS | <del>- y'-</del> |
| USOE CODE NO(S)                         | UNIT 02     | ASSEMBLY          |                  |
|   | TERMOB NO.  | 13-057            |                  |
|   |             |                   |                  |
|   | -           |                   |                  |

CONDITION

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE    | NO       |  |                                       |                              |              | . 1                |
|----------|----------|--|---------------------------------------|------------------------------|--------------|--------------------|
| , PROGRA | .M       | ELECTE   | RONICS                                | DIVISION                     | 05           | CIRCUIT DIAGNOSIS  |
|          |          |  |                                       | UNIT                         | 02           | ASSEMBLY           |
|          |          |  |                                       | 01111                        | ٠.           |                    |
|          |          |  | •                                     | TERMOB NO                    | ) <b>.</b> • | 130-58             |
|          |          |  |                                       | •                            |              |                    |
|          |          |  |                                       |                              |              |                    |
| 1.00     | COND     | TION   |                                       |                              |              |                    |
|          | ( )      | 1.01   | GIVEN ONE OF THE INTERPRETATION       | ISTRUMENTS B<br>IS NORMAL OF | ELOW         | I ISOLATE DEFECT   |
|          | ( )      | 1.02   | UNIVERSAL COUNTER MULTI-FUNCTION COUN |                              |              |                    |
|          | ( )      | 1.03   | FREQUENCY COUNTER                     |                              |              |                    |
|          | ( )      | 1.05   | MICROWAVE FREQUENCY                   | COUNTER                      |              |                    |
|          | ( )      | 1.06   | PRESET CONTROLLER/C                   | COUNTER                      |              |                    |
|          | ( )      | 1.07   | NORMALIZING COUNTER                   | R ·                          |              | • •                |
|          | ( )      | 1.08   | PERIOD-RATIO COUNTI                   | ER .                         |              |                    |
|          | ( )      | 1.09   | TIME-INTERVAL OR EL                   | PUT COUNTER                  |              |                    |
|          | ( )      |  | SERVICE MANUALS                       | TOOTE NID EC                 | TIT DI       | APNT (TABLE T-3)   |
|          | ( )      | 1.11   | BASIC ELECTRONICS                     | LOOFS WAD E                  | JOIPE        | MENT (TABLE 1 )    |
| 2.00     | PERF     | ORMANC   | <b>E</b>                              |                              |              | ·                  |
| 1        |          |  |                                       |                              |              |                    |
|          | GENE     | RAL ST   | ATEMENT OF PERFORMA                   | NCE AND RESI                 | ULTI         | NG OUTCOME_        |
|          | 7        | 2.01   | TROUBLE SHOOT A DE                    | FECTIVE COU                  | NTER         | ASSEMBLY EMPLOYING |
|          |          | •  | THE FOLLOWING OPER                    | ATIONS: 8                    |              |                    |
| Ì        |          | <del>- ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~</del> | CUPOT ALL CIDCULE                     | DDEVKEDO                     |              |                    |
| •        | ( )      | 2.02   |                                       | ORIFM(S) US                  | ING :        | SERVICE MANUAL     |
|          | ( )      | 2.03   | REPAIR CIRCUIT                        | OBELITIES CO.                |              | •                  |
|          | ( )      | 2.05   | DEMONSTRATE NORMAL                    | OPERATION                    |              |                    |
|          | ( )      | 2.03   |                                       |                              |              |                    |
|          |          |  |                                       | •                            |              |                    |
| 3.00     | EXTE     | ENT  |                                       |                              | •            |                    |
|          | •        |  | • .                                   |                              | ,            |                    |
|          | <u> </u> |  |                                       |                              |              |                    |
| *        | CENT     | דאם ד  | ATEMENT OF EXTENT A                   | ND EXTENT O                  | F RE         | SULTING OUTCOME    |
|          | T T      | 3.01   | TO THE EXTENT THAT                    | THE DEFECT                   | IS           | ISODATED AND       |
| •        | ` ′      | 3.01   | REPAIRED TO APPROV                    | 'AL OF A BOA                 | RD O         | F EXPERT RATERS.   |
|          |          |  | TO BE COMPLETED WI                    | THIN 5 HOUR                  | s WI         | TH EACH OPERATION  |
|          |          |  | JUDGED AS SATISFAC                    | TORY OR UNS                  | ATIS         | FACTORY            |
|          | L        |  |                                       | TO S M TO STATE              |              |                    |
|          | 7        | 3.02   | CIRCUIT BREAKER OF                    | EKATIONAL                    | ם כת         | RTCTEST SAFETY     |
|          | ( )      | 3.03   | FOLLOWING LOGICAL                     | PEROFICE WIN                 | ום ע         | MICIEST DINETT     |
|          | , ,      | 2 04   | PRECAUTIONS<br>SUBMIT FINALIZED J     | IOR REPORT                   | CTR          | CUIT REPAIRED      |
|          | ( )      | 3.04<br>3.05                                       |                                       | ERATIONAL O                  | N AL         | L FUNCTIONS        |
| •        |          |  |                                       | •                            |              |                    |

|                     | MISOD NO    |                   |  |  |  |
|---------------------|-------------|-------------------|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |  |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |  |  |  |
|                     | TERMOB NO.  | 130-58            |  |  |  |
|                     |             |                   |  |  |  |
|                     |             |                   |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE 1 | NO                                     |                |                                       |  |          |  |
|---------|--|----------------|---------------------------------------|--|----------|--|
| PROGRA  | M                                      | ELECTR         | ONICS                                 | DIVISION                               | 05       | CIRCUIT DIAGNOSIS                      |
|         |  |                |                                       | UNIT                                   | 02       | ASSEMBLY                               |
|         |  |                | -                                     |  |          | 12.050                                 |
|         |  |                | ·                                     | TERMOB NO                              | •        | 13-059                                 |
|         |  |                | -                                     |  |          |  |
| 1.00    | CONDI                                  | TION           |                                       |  |          |  |
| 1.00    | •                                      |                | *                                     |  |          | TOTAL MUE DEFECT                       |
|         | ( )                                    | •              | THAT PREVENTS                         | ASSEMBLIES BE<br>NORMAL OPERAT         | LOW      | ISOLATE THE DEFECT                     |
|         | ( )                                    |                | 8 TRACK STEREO<br>CASSETTE TAPE ST    | •<br>₽ <b>₽₽</b> ∩                     |          |  |
|         | ( )                                    |                | FM STEREO                             |  |          |  |
|         | ( )                                    | 1 05           | 8 TRACK - FM STE                      | REO                                    |          | -<br>.we                               |
|         | ( )                                    |                | CASSETTE - FM ST.<br>BASIC ELECTRONIC | מיסוגיה                                | UIPI     | MENT (TABLE T-3)                       |
|         | ( )                                    | 1.07<br>1.08   | SERVICE MANUALS                       | 2 10010 140 54                         |          |  |
| •       | ( )                                    | 1.00           | PERAICE IMPROVED                      |  |          |  |
|         | -                                      |                |                                       |  |          |  |
| 2.00    | PERF                                   | ORMANC         | E                                     | •                                      |          |  |
|         |  | •              |                                       |  |          |  |
| [       |  |                | ATEMENT OF PERFOR                     | MANCE AND RES                          | ULT I    | NG OUTCOME                             |
|         | GENE<br>7.7                            | 2.01           | TROUBLE SHOOT A                       | DEFECTIVE SIE                          | REÓ      | ASSEMBLY EMPLOYING                     |
|         | ( )                                    | 2.02           | THE FOLLOWING OF                      | ERATIONS:                              |          | •                                      |
|         | ــــــــــــــــــــــــــــــــــــــ | - <del> </del> | CHECK ALL FUSE F                      | ESTSTORS, FUS                          | ES,      | AND/OR CIRCUIT                         |
|         | ( )                                    | 2.02           |                                       |  |          |  |
|         | ( )                                    | 2.03           | LOCATE SPECIFIC                       | PROBLEM(S) US                          | ING      | SERVICE MANUAL                         |
|         | ()                                     | 2.04           | REPAIR CIRCUIT DEMONSTRATE NORM       |  |          |  |
|         | ( )                                    | 2.05           | DEMONSTRATE NOR                       | MD OF LIGHT TOW                        |          |  |
|         |  |                |                                       | •                                      |          |  |
| 3.00    | EXT                                    | ENT            |                                       |  |          |  |
|         | •                                      |                |                                       |  |          |  |
|         |  |                |                                       | T AND EVERNE (                         | ات الا   | ESULTING OUTCOME                       |
|         | GEN                                    | ERAL S'        | TATEMENT OF EXTENT                    |  |          |  |
|         | 10                                     | 3.01           |                                       | ************************************** | 1 H()/   | ARU UF EAFENI                          |
|         |  |                | mo DD                                 | איויו או רויבויזים דכתאסיס             | 4 I NI 1 | 6 HOURS WITH EACH<br>OR UNSATISFACTORY |
|         |  |                | OPERATION JUDGE                       | D AS SALISTAC                          |          |  |
|         | 4                                      | 3.02           | FUSES AND BREAK                       | ER ARE OPERAT                          | ANO      | L STEET STEETV                         |
|         | ()                                     | 3.03           | FOLLOWING LOGIC                       | AL SEQUENCE A                          | 'ט טא    | IKICIESI SMEETI                        |
|         |  | 2 04           | PRECAUTIONS<br>SUBMIT FINALIZE        | D REPORT. CI                           | RCUI'    | T REPAIRED                             |
| •       | · ( )                                  | 3.04<br>3.05   |                                       | OPERATIONAL OF                         | N 🐴L     | L FUNCTIONS                            |
|         |  |                | -                                     | 184                                    |          |  |
|         | -                                      |                |                                       |  |          |  |

| w                   | MISOE NO.   |                   |  |  |
|---------------------|-------------|-------------------|--|--|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |  |  |
|                     | TERMOB NO.  | 13-059            |  |  |
|                     |             |                   |  |  |
| 1 00 CONDITION      |             |                   |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE      | NO          |         | ·  |            |            | •                                 |
|------------|-------------|---------|--|------------|------------|-----------------------------------|
| PROGRA     | м           | ELECTR  | ONICS  | DIVISION   | 05         | CIRCUIT DIAGNOSIS                 |
|            |             |         |  | UNIT       | 02         | ASSEMBLY                          |
|            |             |         |  | TERMOB NO  | ٠.         | 13-060                            |
| 1.00       | CONDI       | TION    |  |            |            |                                   |
|            |             |         |  |            |            |                                   |
| ٠          | ( )         | 1.02    | PA SYSTEM BASIC ELECTRONIC TOO INSTALLATION MANUAL | LS AND EQU | IPMI       | ENT (TABLE T-3)                   |
| 2.00       | PERF        | ORMANCI | E  | •          |            |                                   |
| ſ          | ·           |         |  |            |            |                                   |
|            | GENE        |         | ATEMENT OF PERFORMANC<br>INSTALL A PA SYSTEM       | E AND RESU | MPT        | NG OUTCOME<br>OVING THE FOLLOWING |
| \$         | ( )         | 25,01   | OPERATIONS:  |            |            |                                   |
| l          | ()          | 2.02    | LOCATE SPEAKER FOR E                               | EST ACOUST | ICA        | L RESULTS                         |
| Ų          | ( )         | 2.03    | RUN CABLING<br>CHECK FOR SECURE CAP                | TE CONNEC  | rton       | S.                                |
|            | ( )         | 2.04    | DEMONSTRATE NORMAL                                 | PERATION   |            |                                   |
|            | ЕХТЕ        | NIT     |  |            |            |                                   |
| 3.00       | EALE        |         |  |            |            | ·                                 |
| -          |             |         | TUMPAM AND   |            | न प्रस     | SULTING OUTCOME                   |
|            | GENE        | RAL ST  | ATEMENT OF EXTENT AND SPEAKER IS INSTALLED         | CORRECTL   | Y TO       | APPROVAL OF A                     |
|            | ( )         | ., 01   | POADO OF EYDERT RATI                               | ERS. TO B  | E CO       | MAPELED MITHIN O                  |
|            |             |         | HOURS WITH EACH OPEN<br>OR UNSATISFACTORY          | RATION JUD | GED        | AS SATISFACTORI                   |
|            | <del></del> | 3.02    | SPEAKERS PROPERLY LO                               | CATED      |            |                                   |
| <b>~</b> - | ( )         | 3.03    | FOLLOWING LOGICAL ST<br>PRECAUTIONS                | EQUENCE AN |            | RICTEST SAFETY                    |
|            | ( )         | 3.04    |  | CONNECTION | ວ <b>ນ</b> | ALL FUNCTIONS                     |
|            | ( )         | 3.05    | PA SYSTEM IS 100% O                                | EDIVITION  | <b></b>    |                                   |

| •                   | MISOE NO.   |                   |  |  |  |  |
|---------------------|-------------|-------------------|--|--|--|--|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |  |  |  |  |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |  |  |  |  |
|                     | TERMOB NO.  | 13-060            |  |  |  |  |
| _ <u></u>           |             | • .               |  |  |  |  |
| 1.00 CONDITION      |             |                   |  |  |  |  |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT



| MISOE  | NO.  | -       | •                                       |                             |              |                        |
|--------|------|---------|---|-----------------------------|--------------|------------------------|
| PROGR  | MA   | ELECTE  | RONICS                                  | DIVISION                    | 05           | CIRCUIT DIAGNOSIS      |
|        |      |         |   | UNIT                        | 02           | ASSEMBLY               |
| .8     |      |         | ,                                       | TERMOB NO                   | ) <b>.</b>   | 13-061                 |
|        | CONT | TUTON   |   |                             | ٠            |                        |
| 1.00   | CONL | NOITIC  |   |                             |              |                        |
|        | ( )  |         | GIVEN ONE OF THE INTERPRETATION         | ORMAL OPERAT                | ELOW         | V LOCATE DEFECT        |
| ı      | ( )  | 1.02    | RESISTANCE DECADE                       | ASSEMBLY                    |              |                        |
| •      | ( )  | 1.03    | CAPACITOR DECADE A INDUCTOR DECADE AS   | SEMBLY                      |              | •                      |
|        | ( )  | 1.05    | CODUTE MANUATS                          |                             |              | (m. n. n. m. 2)        |
|        |      | 1.06    |   | TOOLS AND EQ                | UIPN         | MENT (TABLE T-3)       |
| an exp |      |         |   |                             |              |                        |
| 2.00   | PER  | FORMANC | E                                       |                             | -            |                        |
|        |      |         |   |                             |              |                        |
|        | GEN  | ERAL ST | ATEMENT OF PERFORMA                     | NCE AND RESU                | JLTI         | NG OUTCOME             |
|        | (7)  | 2.01    | TROUBLE SHOOT A DE                      | FECTIVE DECA                | ADE .        | ASSEMBLY EMPLOYING     |
|        |      |         | THE FOLLOWING OPER                      | ATIONS:                     | _            |                        |
|        | 4    | 2.02    | LOCATE DEFECT                           |                             |              | m                      |
|        | ( )  | 2.03    | REPAIR OR REPLACE<br>DEMONSTRATE NORMAL | FAULTY COMPO                | ONEN         | <b>T</b>               |
|        | ( )  | 2.04    | DEMONSTRATE NORMAL                      | OPERATION                   |              |                        |
| 3.00   | EXT  | ENT     |   |                             |              |                        |
|        |      |         |   |                             |              |                        |
|        | GEN  | ERAL SI | TATEMENT OF EXTENT A                    | AND EXTENT O                | F RE         | SULTING OUTCOME        |
|        |      | 3.01    |   | THE DEFECT                  | 15           | TROUBLED WILD          |
|        | ,    | •       | PARENC MO DE COMI                       | титти сатал                 | N 2          | HOURS WITH             |
|        |      |         | EACH OPERATION JUI                      | GED AS SATI                 | SFAC         | TORY OR UNSATISFACTORY |
|        | L-,- | 3.02    | FOLLOWING LOGICAL                       | SEQUENCE AS                 | DEF          | INED BY SERVICE        |
|        | . ,  |         | MANIIAT.                                |                             |              |                        |
|        | ( )  | 3.03    | SUBMIT FINALIZED                        | JOB REPORT.<br>S 100% OPERA | ALD<br>MOITA | NAL ON ALL FUNCTIONS   |
|        | (·)  | 3.04    | DECADE VOSELIETI I                      | J 1001 OLDIG                |              | ·                      |
|        |      |         |   | 188 1                       |              |                        |

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|                                      | •                                    | MISOE NO.                           |
|--------------------------------------|--------------------------------------|-------------------------------------|
| PROGRAM ELECTRONICS  USOE CODE NO(S) | DIVISION 05<br>UNIT 02<br>TERMOB NO. | CIRCUIT DIAGNOSIS  ASSEMBLY  13-061 |
|                                      |                                      | •                                   |
| 1 OO CONDITION .                     |                                      | •                                   |

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

| MISOE    | NO      |                         | •   |                            |  |                     |                                 | * *         |              |
|----------|---------|-------------------------|---|----------------------------|--|---------------------|---------------------------------|-------------|--------------|
| PROGRA   | .M. ₽T  | ድርጥ <b>ድ</b> (          | ONICS   |                            | DIVISION   | 05                  | CIRCUIT                         | DIAGNOSIS   | ·<br>—       |
| 1 10 010 |         |                         |   |                            | UNIT   | 02                  | ASSEMBLY                        | <u> </u>    | <del>.</del> |
|          | :       |                         |   |                            | TERMOB NO  | ) <b>.</b>          | 13-062                          |             |              |
|          |         |                         | <b>.</b>  | *                          |  |                     | -                               |             |              |
| 1.00     | CONDITI | ON                      |   |                            | ,  |                     |                                 | -           |              |
|          | ( ) 1.  | .01                     | DEFECTIVE DIGITAL OF 7400 SERIES                        | LOG                        | IC ASSEMB  | LY E                | MPLOYING                        | THE USE     | •            |
| ٠        |         |                         | OSCILLOSCOPE<br>VOM/DVM                                 | 100                        |  |                     | 1                               |             |              |
|          | (1) 1   | .04                     | TIMING DIAGRAM<br>LOGIC DIAGRAMS                        |                            |  |                     |                                 |             |              |
|          |         | .06<br>.07 <sub>¦</sub> | WIRE LISTS<br>BASIC ELECTRONICS                         | <b>TO</b> 0                | LS AND EQ  | UIPM                | ENT (TAB                        | LE T-3)     |              |
| 2.00     | PERFOR  | MANCE                   | * .   |                            | i  |                     |                                 |             | į            |
|          |         | L STA                   | TEMENT OF PERFORM TROUBLE SHOOT A DI EMPLOYING THE FOLI | SFEC                       | LIAE DIGI  | TWT                 | DOGIC 710                       | E<br>SEMBLY |              |
|          | () 2    | .02                     | LOCATE DEFECTIVE OR REPLACE                             | GATE<br>IC                 |  |                     |                                 |             |              |
| 3.00     | EXTENT  | ,                       |   |                            |  |                     |                                 |             | -            |
|          | GENE RA | AL ST                   | EACH OPERATION JUUNSATISFACTORY                         | T TI<br>PPR<br>MPL:<br>DGE | HE DEFECT<br>OVAL OF A<br>ETED WITH<br>D AS SATI | BOA<br>IN 4<br>SFAC | RD OF EXI<br>HOURS W<br>TORY OR | PERT        |              |
|          | •       | 3.02                    | FOLLOWING LOGICAL AND LOGIC DIAG                        | RAM                        | S  | DEF                 | INED BY                         | THE TIMING  |              |
|          | ` '     | 3.03<br>3.04            | IC REPAIRED OR REDIGITAL ASSEMBLY                       | IS                         | 100% OPER  | ATIC                | NAL ON A                        | LL FUNCTION | SŤ           |

| -                   |             | / ( · ·           |
|---------------------|-------------|-------------------|
| PROGRAM ELECTRONICS | DIVISION 05 | CIRCUIT DIAGNOSIS |
| USOE CODE NO(S)     | UNIT 02     | ASSEMBLY          |
| <u> </u>            | TERMOB NO.  | 13-062            |
| ·                   |             |                   |

MISOE NO.

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

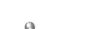
3.00 EXTENT

| PROGRAM  | M ELECTE             | RONICS                                | DIVISION                        | 05        | CIRCUIT DIAGNOS  | rs_  |
|----------|----------------------|---------------------------------------|---------------------------------|-----------|------------------|------|
|          | •                    |                                       | UNIT                            | 02        | ASSEMBLY         |      |
| •        |                      | T.                                    | TERMOB NO.                      |           | 13-063           |      |
| ħ        |                      | . *                                   | I ERMOD NO.                     | t t       |                  |      |
|          | -                    |                                       |                                 |           |                  | •    |
| 1.00     | CONDITION            |                                       | 3                               |           |                  | . /  |
|          | () 1.01              | GIVEN ONE OF THE THAT PREVENTS        | NSTRUMENTS BE<br>NORMAL OPERATI | LOW<br>ON | ISOLATE DEFECT   | **   |
|          | () 1.02              | QUARTZ OSCILLATOR<br>AUDIO OSCILLATOR |                                 |           |                  |      |
|          | () 1.03              | SINE, SQUARE OSCI                     | LLATOR                          |           |                  |      |
|          | () 1.05              | FUNCTION GENERATO                     | र                               |           |                  |      |
|          | () 1.06              | SIGNAL GENERATOR                      | 760                             |           |                  | , .  |
|          | () 1.07              | FREQUENCY SYNTHES:                    | ATOR A                          | ie e      |                  | p    |
|          | () 1 09              | WHF SIGNAL GENERA'                    | ror                             |           | 1                |      |
| •        | () 1.10              | FM-AM SIGNAL GENE                     | RATOR                           |           | -                | 1    |
|          | • •                  | UHF SIGNAL GENERA                     | ror                             |           | j.<br>n          |      |
|          | () 1.12              | CHRISTON MANUATO                      | ,                               |           | i -              |      |
|          | () 1.13              |                                       | TOOLS AND EQU                   | JIPM      | IENT (TABLE T-3) | •    |
|          |                      |                                       |                                 |           | •                |      |
|          |                      | •                                     | <i>"</i>                        |           |                  | . 43 |
| 2.00     | PERFORMANC           | . <b>E.</b><br>-{                     |                                 |           |                  | • -  |
| •        | , (G                 |                                       |                                 |           |                  |      |
|          | MUNICIPAL CO         | ATEMENT OF PERFORM                    | ANCE AND RESUI                  | LTIN      | IG OUTCOME       |      |
| , ]      | () 2.01              | TROUBLE SHOOT A D                     | EFECTIVE OSCID                  | ואידי     | OK MASEEMBEL     |      |
|          | ( ,                  | EMPLOYING THE FOL                     | LOWING OPERAT                   | IONS      | <b>∄:</b>        |      |
| <u> </u> | 7 3 72               | LOCATE SPECIFIC P                     | ROBLEM(S) USI                   | NG /S     | ERVICE MANUAL    |      |
| •        | ( ) 2.02<br>( ) 2.03 | CHECK ALL CIRCUIT                     | BREAKERS                        |           | •                |      |
|          | () 2.04              | REPAIR CIRCUIT                        |                                 | •         | <i>)</i>         |      |
|          | () 2.05              | DEMONSTRATE NORMA                     | L OPERATION                     |           | ·                |      |
| ł        |                      | •                                     |                                 |           | <b>A</b>         |      |
| 3.00     | EXTENT               | গু                                    |                                 | نذ        | , <b>*</b>       |      |
| 3.00     |                      |                                       | _                               | v         |                  |      |
|          |                      |                                       |                                 |           | *                |      |
| 1        | CENERAL ST           | TATEMENT OF EXTENT                    | AND EXTENT OF                   | RE        | SULTING OUTCOME  |      |
|          | () 3.01              | MA TOTAL TYPENT THE                   | THE DEFECT                      | 15 .      | TOUTHIED WAD     |      |
|          | • •                  | REPAIRED TO THE P                     | PPROVAL OF A<br>MPLETED WITHI   | BOA       | KD OL EXPERT     |      |
|          | 1                    | RATERS. TO BE CO<br>EACH OPERATION JU | IDGED AS SATIS                  | FAC'      | TORY OR          |      |
|          | •                    | UNSATISFACTORY                        | )                               |           | • •              |      |
|          |                      |                                       | 1                               | - 00      | DICMESM SAFETY   |      |
| • '      | () 3.02              | FOLLOWING LOGICAL                     | SEQUENCE AND                    | 51.       | KICIESI SAFEII   | ٠    |
|          | () 3 03              | PRECAUTIONS<br>CIRCUIT BREAKER (      | PERATIONAL                      |           | <b>A</b> *       |      |
| فرسو     | ( ) 3.04             | CHEMIT PINALIZED                      | TOR REPORT.                     | CIR       | CUIT REPAIRED    |      |
|          | () 3.05              |                                       | OPERATIONAL O                   | N A       | LL FUNCTIONS     |      |
|          |                      | •                                     | 00                              |           | •                | ٠    |
| •        | •                    |                                       | 92                              |           |                  |      |

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|       |         |          |            | •          |              |              |          |
|-------|---------|----------|------------|------------|--------------|--------------|----------|
|       |         |          |            |            | 1            | MISOE NO     |          |
| P ROG | RAM ELE | CTRONICS |            | DIVIS      | ION 05       | CIRCUIT D    | IAGNOSIS |
|       |         | (s)      |            | UNIT       | 0 2.         | ASSEMBLY     |          |
| 0002  | 0022    |          |            |            |              | 13-063       |          |
|       |         |          |            | LERMO      | <b>B NO.</b> | 23,000       |          |
|       |         |          |            |            |              |              |          |
| 1.00  | CONDIT  | ION      |            |            |              |              |          |
|       |         |          |            |            |              |              |          |
|       |         |          |            |            |              |              |          |
|       |         |          |            |            |              |              |          |
|       |         |          |            |            |              |              |          |
| •     |         | •        |            |            |              |              |          |
|       |         |          |            |            |              |              | ٠        |
|       |         |          |            |            |              |              |          |
| •     |         |          |            |            |              | ·            |          |
|       |         |          | •          |            |              |              |          |
|       |         | ٠        |            |            |              |              |          |
| 2 00  | PERFORM | NCE      |            |            |              | ·            | ζ.       |
|       |         |          |            | ionuryce i | ND DECII     | TINC OUTCOME |          |
|       |         |          | IT OF PERI |            | MU RESUL     | TING OUTCOME | 7        |
|       |         | 2        | <i>:</i>   | 9          |              |              | e ·      |
| •     | •       |          |            |            | ^            | •            | •        |
|       |         |          |            |            |              |              |          |
|       | r.      |          | •          |            |              |              |          |
| •     |         |          |            |            |              | •            | •        |
|       |         |          | ٠          |            |              |              |          |
| 3.00  | EXTENT  |          | •          |            |              |              |          |
| 3.00  | DVIDNI  |          |            |            |              |              | •        |



#### TABLE T-3

### BASIC ELECTRONICS TOOLS AND EQUIPMENT

SOLDERING IRON WITH ASSORTED TIPS

SOLDER OF VARIOUS

SOLDERING AID

SOLDER SUCKER

HEAT SINK TOOL

FLUX

LINE CORD

INSULATED WIRE, ASSORTED LENGTHS AND GAUGES

TEST LEADS AND PROBES

ALLIGATOR CLIPS AND BOOTS

LACING

TIE WRAPS

SLEEVING

NUMBERING TABS

HEAT SHRINK TUBING

TERMINALS, JACKS AND CONNECTORS

WIRE STRIPPERS

WIRE CUTTERS

CRIMPING TOOL

NEEDLE NOSE PLIERS

SLIP JOINT PLIERS

HEX DRIVER

SCREWDRIVER

KNIFE

ADJUSTABLE WRENCHES

DENTAL MIRROR

TEST JIGS AND DEVICES

SAFETY GLASSES

CHASSIS PUNCHES

SOCKET PUNCHES

ELECTRIC DRILL AND BITS

DISTORTION ANALYZER

FREQUENCY COUNTER

PULSE GENERATOR

OSCILLOSCOPE

SIGNAL GENERATOR

VOM (CONVENTIONAL/DIGITAL)

VTUM

SOLDERING AID

SOLDER SUCKER

HEAT SINK TOOL

FLUX

LINE CORD

INSULATED WIRE, ASSORTED LENGTHS AND GAUGES

TEST LEADS AND PROBES

ALLIGATOR CLIPS AND BOOTS

LACING

TIE WRAPS

SLEEVING

NUMBERING TABS

HEAT SHRINK TUBING

TERMINALS, JACKS AND CONNECTORS

WIRE STRIPPERS

WIRE CUTTERS

CRIMPING TOOL

NEEDLE NOSE PLIERS

SLIP JOINT PLIERS

HEX DRIVER

SCREWDRIVER

KNIFE

ADJUSTABLE WRENCHES

SCRIBER

TWEEZER

VOM (CONVENTIONAL/DIGITAL)

SAFETY GLASSES

CHASSIS PUNCHES

SOCKET PUNCHES

ELECTRIC DRILL AND BITS

DISTORTION ANALYZER

FREQUENCY COUNTER

PULSE GENERATOR

OSCILLOSCOPE

SIGNAL GENERATOR

VTUM

195

## Table T-4 Additional TERMOB Performance Statements

This form is provided for the addition of TERMOB performance statements to ensure more complete coverage of your program. Please provide a comprehensive performance statement (coded 2.01 on each TERMOB) for each area of deficiency that you have identified.

The performance statement need only be listed identified by the division and unit numbers of the deficient areas; the conditions and extents will be incorporated later.

| 1. | Division | Performance Statement |
|----|----------|-----------------------|
|    |          | *                     |
| 2. | Division | Performance Statement |
| 3. | Division | Performance Statement |
| 4. | Division | Performance Statement |
| 5. | Division | Performance Statement |
| 6. | Division | Performance Statement |



| *  | Unit               |                       |
|----|--------------------|-----------------------|
| -  | •                  |                       |
| 2. | Division           | Performance Statement |
|    | Unit               |                       |
|    |                    | •                     |
| 3. | Division           | Performance Statement |
|    | Unit               |                       |
|    |                    |                       |
| 4. | Division           | Performance Statement |
|    | Unit               |                       |
| -  | <u></u>            |                       |
| 5. | •                  | Performance Statement |
|    | Unit               |                       |
|    | ·                  |                       |
| б. | Division_~<br>Unit | Performance Statement |
| •  | •                  |                       |
|    | Dinimi ma          | Performance Statement |
| 7. | Division           | Periormance Statement |
|    |                    |                       |
| •  |                    |                       |



### Table T-4 (Cont'd) Additional TERMOB Performance Statements

This form is provided for the addition of TERMOB performance statements to ensure more complete coverage of your program. Please provide a comprehensive performance statement (coded 2.01 on each TERMOB) for each area of deficiency that you have identified.

The performance statement need only be listed identified by the division and unit numbers of the deficient areas; the conditions and extents will be incorporated later.

| <b>8.</b>  | Division | Performance Statement |
|------------|----------|-----------------------|
| <b>9.</b>  | Division | Performance Statement |
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