ABSTRACT
        The Philadelphia City Schools engaged in a four-year
program to develop and test dual audio television, a way to help
children learn more from the massive amounts of time they spend
watching commercial television. The format consisted of an
instructional radio broadcast which accompanied popular television
shows and attempted to clarify and amplify the vocabulary concepts
that were presented. To assist the writers and announcers of the dual
broadcasts, a manual was developed which emphasized relevant learning
theory and demonstrated practical techniques to bridge the middle
ground between what is immediately obvious in the television
broadcast and some more generally useful educational information. The
manual lists basic pedagogical principles and illustrates how these
principles should be exercised within the constraints of commercial
productions. (EMH)

DUAL AUDIO TELEVISION INSTRUCTION

A Manual for Writers and Announcers

(Draft)

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INTRODUCTION

This manual was prepared by codifying notes taken during the first year of experimentation on dual audio TV instruction. It contains a number of suggestions which we believe new writers and announcers will find helpful. Careful study combined with actual writing or announcing experience should help produce rapid improvement in the ability to write dual audio instruction.

The material is organized under the following main headings:

       1.00 Basic Approaches to Writing Dual Audio Instruction
       2.00 Writing Effective Dual Audio Instruction
       3.00 Handling The Language of Dual Audio Instruction
       4.00 Participation Cues
       5.00 Strategies for Teaching
       6.00 Improving The Quality of TV
       7.00 Script Format
       8.00 Announcing Dual Audio Instruction
       9.00 Sample Script

Each major heading (1.00, 2.00, etc.) is subdivided with identifying code numbers for each item. We have attempted to make these divisions logical, but they are certainly not mutually exclusive.

Since the logic of the divisions and our own sense of what we knew was important did not always fit, a system of stars under each number is used to indicate importance:

       ****   fundamental
       ***   very important
       **   useful
       *   potentially useful

We assume that there is still much to learn about the art of writing good dual audio instruction. We urge you to make marginal feedback notes, to use the blank space at the end of each section to add new ideas, and to create new categories of your own.

1.00
xxxx
BASIC APPROACHES TO WRITING DUAL AUDIO INSTRUCTION

Dual audio instruction is a way of providing a child with a radio instructor's voice that helps him learn more from watching television. Writing it requires an ability, (1) to move back and forth between the television program and the child, (2) to use the silences which are part of the television script, (3) to respond to audio and visual cues, (4) to negotiate the thin line between TV fantasy and reality, and (5) to handle the opening and closing sections of the television script effectively.

1.10
xxxx
Moving Away From the TV Script and Back Again

All dual audio narration is written in some middle ground between what is immediately obvious on the television show and some more generally useful kind of educational information.

1.11
xxxx
The closer the dual audio is to what is on the show itself, the less educational it is. The further away from the show the narration is, the more it is likely to annoy the child.

Ex: (Kimba) "That's a volcano." This comment is close to the show, but probably does not add information for most children. "Volcanos are mountains full of melted rock." This comment is more transferable or educational, but also probably more irritating to children. "That volcano is full of melted rock." This comment is specific, informational, and less obtrusive because the "that" ties it closely to the show.

1.12
xx
There are a number of interjections which can help bridge the gap between the show, the narrator, and the child.

Ex: "Hey!" "Yeah!" "Say!" are all introductary comments which can signal that the dual audio narrator is about to break-in. "Whew", "Hum", "Wow" are all exclamations that can give children a sense of how the dual audio narrator is feeling about what he is watching.

4

1.20   The Use of Silence
xxxx

"Silent-time" or "dead-time", when the characters on the TV show
are not talking, is the class time of dual audio instruction. If there
is not enough dual audio instruction to fill most of these spaces chil-
dren will not listen; and there is no reason to be on the air. On the
other hand, if there is too much dual audio, children will not respond
because they will feel over-whelmed by all the talk. The writers
problem then is to use the spaces, but use them effectively and dis-
cretely.

1.21   Timing
xxx

It is generally not a good idea to fill up the entire amount of time
and space. Usually a few seconds are necessary to digest what
happened on the TV just before the dual audio, and a few seconds
to respond to whatever the dual audio announcer says. The best
way to get a sense of how much time is needed at either the begin-
ning or the end of the dual audio comment is for the writer to play
it back and try it out himself, speaking the words out loud so he
can hear how they fit.

1.22   Using Long Pauses
xx

Long pauses where there is repetitive action (such as a chase)
can be used in the following ways.

  A. By making a comment that points backward or forward in
      time and ties to past or future action.

      Ex: "Remember when Spiderman was brainstorming"? Do
      you think he might have to do it again soon?" or "Looks like
      Spiderman is getting into trouble. He might have to begin
      brainstorming again soon. "

  B. By asking open questions.

      Ex: "I wonder what Spiderman's thinking about now? "

1.23   Some Silences Need to be Respected
xx

      Ex: Peter Parker (alias, Spiderman) learns of the death of his
      father from a policeman. There is a visual close-up of a tear
      trickling down his face and no audio.

1. Sedulus, The New Republic, Sept. 1972.

1.24
x

Some silences cannot be used without changing the character of the dual audio narrator.

> Ex: <u>In the Good Life</u> - Silences come when Albert is being made fun of. The pauses are necessary to build some sympathetic feeling toward him, and the dual audio narrator can't talk then without assumming the character's role.

1.25
xxx

The silences which dual audio doesn't use are the child's time. If his time is not respected, a child will yell, "Shut-up", because he feels he's being interrupted. Silences when neither the TV nor the dual audio is speaking also give the child room to respond without having to override someone. These are the times when a child is most likely to use the dual audio receiver as a microphone and talk back to the narrator, or pick-up on his comments and begin to talk to his friends about them.

1.30
xxxx
Responding to Audio Cues

There are two kinds of cues which dual audio narration can use to tie itself to the TV show, audio and visual. Though audio cues seem to be less important to children then visual ones, the fact that they are in the same medium as the dual audio narration makes it natural to pick-up on them.

1.31
xx
Theme songs and choral singing in a program are natural places for the dual audio instructor to participate with the television show, either by singing along or by making fun with the song.

Ex: In Astroy Boy, Steve sings the theme, sings it as a hillbilly, sings it as an opera star, sings it in soul, and then overrides a part of it to introduce reading.

1.32
xx
Changes in musical tone or theme are natural cues which the dual audio narrator can point out.

Ex: The music in Astro Boy changes to a heavy military sounding beat. The instructor says, "How does that music make you feel?"

1.33
x
In radio, song has been used to indicate a move to fantasy.

Ex: In Amos and Andy the most unlikely of the various unlikely characters was introduced with a song, "De Boom, de boom", after which he began to chatter in an incoherent manner.

1.34
x
If the music of the program can be used with an educational jingle, the children will probably not forget it.

Ex: Sesame Street

1.35
xx
There are enumerable sound effects on the TV show which can be pointed out, or questioned.

Ex: Phone ringing, voices mumbling in the background, echo chamber effects, babble of voices, etc.

1.36
xx
Often the silences which are used for dual audio are not silent at all, but have various background noises in them. If these are obtrusive enough they might have to be referred to by dual audio comment, or the comment will seem disconnected from the show.

Ex: A sudden thunder clap in the midst of otherwise errie silence.

1.37
x
It may be useful to provide a background noise for the dual audio narration itself, both so that kids are aware that the dual audio is there, and so they can find it if they are hunting for it with their ordinary FM tuners.

Ex: The sound track of the show itself as with Astro Boy, a heart

beat, body motion sounds, and distinct short sounds such as a
cricket.

1.40
xxxx

Responding to Visual Cues

The experience of television for children is mostly the experience of watching television. It is a visual experience, and the visuals need to be handled with care or children will find dual audio intrusive.

1.41
xxx

Without a visual context or an image to refer to, dual audio comments will often seem non-sensical to a child.

> Ex: (Batman) "Were the Vikings the first people to come to this country?" when there is no visual Viking on the screen.

1.42
xx

Often it is possible to move away from the image on the screen by making the shift explicit.

> Ex: (Family Affair) Uncle Bill's picture is on the screen. "Uncle Bill doesn't look too happy. How do you think the kids feel?" rather than, "How do you think the kids feel?"

1.43
xx

The dual audio narration can be used to set up or cue for a picture which is about to arrive.

> Ex: (Beverly Hillbillies) "Here comes some reading now. Watch it."

1.44
xx

Often it is helpful to first orient the child to the visual and then explain it.

> Ex: (Kimba) "Hey, see that volcano? A volcano is ...."

1.45
xx

In general it is smart to provide the word on the dual audio and let the TV picture do the explaining, rather than pick-up the word from the television and try to explain with dual audio.

> Ex: (Astro Boy) "Experiment" is easier to explain when Astro Boy is seen doing an experiment, than by trying to define the word when Dr. Elephant uses it on the way to his car.

1.46
xxx

The more the exact visual on the screen is used by the dual audio, the closer the dual audio will seem to the show.

> Ex: (Lidsville) "The professor can see things up close through that telescope," rather than "A telescope lets you see things up close."

1.47
xx

"This" and "That" give immediacy and closeness in dual audio narration. Don't use "A" or "The".

> Ex: (Kimba) "What will Kimba find in that valley?" not the valley.

1.48 An over-load of visual dynamism and complexity takes all of kids' attention
x   to process.

1.49 Sometimes the dual audio instructor can play off of the visual on the show.
x
      Ex: (Superman) "Look at that. His nose is a hose!"
      (Astro Boy) An explorer is terrified, screaming in his bed. The dual
      audio narrator says; "Ooh whee, is he scared?" and then laughs, and
      then tries to scare him again, "Aah!" This strategy must be used with
      caution, as it tends to put the dual audio narrator inside the action and
      give him a clear role inside the show.

1.50   The Fantasy - Reality Continuum
xxxx

    Much of television, particularly children's television, is fantasy. It is not
    real: Yet dual audio instruction, because it is educational, is usually push-
    ing toward an examination of the way things really are. The dual audio
    instruction can easily come between the child and his fantasy. The dual audio
    instructor needs to be careful that he does not become a "reality demon" who
    takes away fantasy from the child. There are a number of ways in which the
    narrator can move back and forth on this fantasy-reality continuum.

1.51   The instructor can react to the fantasy with wonder.
x

        Ex: (Aqua Man) "That must be some strange gas to burn under water!"

1.52   The instructor can raise a question about whether what happened is fantasy
xx   or reality.

        Ex: (Aqua Man) "Did you ever see fire burn under water anywhere
        else?"

1.53   The instructor can make it clear that this is a television fantasy.
xx

        Ex: (Aqua Man) That's what they call his "telepathic signal."

1.54   The instructor can use a "self conscious voice" to shift into a more fanci-
xx   ful frame of mind.

        Ex: (Aqua Man) "Dig this. They better move fast or this swim is
        their............."

1.55   The instructor can encourage the fantasy.
xx

        Ex: (Kimba) "That really must be some monster."

1.56   The instructor can make an explicit distinction between what is fantasy
xxx   and what is not.

        Ex: (Astro Boy) "Hey, look at that sawfish, cutting down a tree.
        Sawfish don't do that , but did you know there are sawfish?........
        Yeah, for real!"

11

1.60   Opening the Show
xxx

    The opening of the show is a chance for the instructor to introduce himself and to set the context of what will happen during the broadcast. There are several devices that can get kids thinking right away.

1.61   During the opening credits it is often possible to do some pre-teaching
xx   even without a visual context. This will provide an Aah ha - experience later when the actual visual comes up.

    Ex: (Beverly Hillbillies) Comment made before the program starts: "A statue is like a picture that you paint, except that it is made by putting materials together."

1.62   Like the old Endo Crime Clue series, the narrator can give the children
x   clues as to what's going to happen during the program and let them figure out for themselves, what actually happened.

    Ex: A. The clue to todays show is not in what you see, but what you don't see.

        B. "Hi kids, investigating Steve here with you again today."

1.70 Closing the Show
xxxx

The closing of the show is the "last word". Often there is silent time for credits at the end of TV programming which provides the opportunity for many different kinds of activities.

1.71 The instructor can summarize and review.
x

Ex: (Batman) "Hey kids, today we were talking about...... or Batman say's........."

1.72 The instructor can use prolonged silent times for kids to rehearse
xx some of the things they've learned.

Ex: (Family Affair) "Disillusioned; that's a big word we learned this time. Can you say it?' Disillusioned."

1.73 The instructor can use the time to make a reflective comment about
xx what's been going on.

Ex: (Family Affair) "They sure got disillusioned this time. 'I wonder how they would feel if............"

1.74
xxx The instructor can tell a story which in some way illustrates the theme that he has been talking about.

Ex: (Astro Boy) - Steve tells a long story about how he "disguised" himself on Halloween.

1.75 The instructor can describe something which children can do, using
xxxx the knowledge that they have learned in the course of the program.

Ex: (Astro Boy) - Steve explains how to do a simple "experiment".

1.76 Other people can come in and talk about the show or reflect on it.
x

1.77 The instructor can talk about the process of doing dual audio televi-
xx sion instruction.

Ex: (Astro Boy) - Steve talks about how difficult it is to say what he wants to say in a short period of time, or he talks about the fact that he's been able to see the program ahead of time. Letting children in on the process helps de-mystify the experience for them.

13

1.78
xx
The instructor can use the blank time to build a sense of his own personality and let children see behind the public role.

> Ex: Steve tells stories about what life.was like for him when he was a little boy, or how he feels about what's he doing, or what he thinks about the show he's just seen.

1.79
xxx
The instructor can use the open time for "straight talk".

> Ex: (Astro Boy) - Steve tells how to take a test or what it feels like to be lonely.

2.00 WRITING EFFECTIVE DUAL AUDIO INSTRUCTION
xxxx

Effective dual audio instruction requires a consistent character for
the instructor, a personal approach, a clear relationship to the child's
own life, a use of local references, a use of the child's own knowledge
of television culture, and attempts to involve a wide range of children
and parents in the instructions.

2.10 Consistency of Character
xxx

Aside from the ordinary traits of a consistent character such as,
personality, style, tone, language, etc., there is a peculiarity of
the dual audio instructor which must be taken into account. This
is whether he is a first or second-time viewer of the show, or
some combination of the two, which is in fact what he usually turns
out to be. A dual audio instructor can have both first and second-
time viewer characteristics provided neither one is over emphasized.

2.11 First-time viewers can ask questions that are real questions.
xx

Ex (Kimba) "Are those clouds?"

2.111 A first-time viewer can express genuine surprise and
xx excitement.

Ex: (Kimba) "Hey, did you see that? Wow!"

2.112 A first-time viewer can not prompt for the future.
xx

Ex He can not say, "Watch this coming up".

2.12 The second-time viewer is one who appears to have seen the
xx show before.

2.121 If the second-time viewer asks questions, the questions
xx sound like "teacher questions" because it is clear that
he already knows the answer.

Ex: (Kimba) "Do you think those are clouds?"

2.122 The second-time viewer can not surmise.
xx

Ex He can not say, "I think those are clouds."

2.123 The second-time viewer can not have any real emotional
xx feelings--no hopes, no fears, no excitement. He has seen
it all before.

Ex: (Kimba) He can not say, "I hope Kimba's o.k."

2.124
xx

The second-time viewer can not ask any real "what's
going to happen?" questions, because he already knows.

      Ex: (Kimba) He can not say, "Do you think Kimba will
      be o.k.?"

2.13
xxx

In practice the best stance seems to be to have the narrator
be primarily a first-time viewer who occasionally has second-
time inside information.

2.19
xx

Many children will in fact be second-time viewers of the show
and the dual audio narration can be such that it puts them in the
position of being an expert on the show.

      Ex: "What do you think is going to happen next?"

2.20   Personalizing the Dual Audio Instructor
xxxx

Radio has traditionally been thought of as an intimate communicator because the effect of listening to a radio is similar to having a voice speaking in one's ear. The voice carries many qualities of warmth and personal attention. These factors of intimacy tend to foster acceptance.[1]   Dual audio instruction is an even more intimate kind of radio because it is talking to the child about something which he can see right in front of him. The effect is of somebody out their in radio-land watching the same thing that he is watching. The more specific and personal and concrete the dual audio instructor can be the less he will seem like a "deity voice" who knows all the answers and never makes mistakes.

2.21   The dual audio instructor can make mistakes.
xx

    Ex: (Spiderman) "I bet he's going to steal the jewels."

2.22   The dual audio instructor can not know what to do.
xx

    Ex: (Spiderman) "I'm glad I'm not Spiderman, I wouldn't know what to do now."

2.23   The dual audio instructor can make references to his personal life.
xx

    Ex: (Batman) "My little brother follows me around just like those penguins follow him."

2.24   The dual audio instructor can contrast what's happening on the
xx   screen with what life is like for him.

    Ex: (The Good Life) "I don't steal things, and I don't like people who do."

1. Gordon ----- The New Literacy, p . 136

17

2.30   Relating Dual Audio Instruction to the Child's Immediate Life
xxxx

Dual audio instruction is experience-based learning. The experience is watching television. Because the child's primary interest is in the television show, dual audio narration cannot tell him things that he doesn't want to hear and doesn't want to know. It is important then to find out what the child wants to know and what connection that has to his immediate experience of watching television.

2.31   One child using her dual audio receiver as a walkie-talkie, told the instructor to, "Tell us about sharing, not all this stuff, " because the children were fighting around her and she needed to know how to share.

2.32   Piaget has pointed out that children tend to be egocentric.
x   They tend to assume that everyone knows what they are thinking, and so it is likely that children assume the dual audio instructor is talking directly to them, particularly when the instructor says something which fits into what they are thinking. Care needs to be taken therefore not to say things which will confuse the child if he translates them as being said directly to him, or to say things which may get him into trouble.

        Ex: (Aquaman) TV: "They're not communicating. "
        DA: "Hey, can these guys talk?" Kid's response:
        "Yeah, we can talk. Who do you think we are?"

2.33   Use things that kids might be doing or thinking or feeling,
xxx   and relate the dual audio instruction to that.

        Ex: Fighting, daydreaming, waiting for dinner, fooling with the radio, talking to parents, eating, etc.

2.34   Since the childs' primary experience is that of watching
xxx   television, it is important not to take away the fun of that experience and to give him a chance to figure things out for himself, otherwise he will tell the instructor to, "Shut-up. "

2.35   It is irritating to children to be asked questions which they
xxx   can't possibly answer.

        Ex: "Do you know what a creature is?" Kids' response:
        "They're your creatures, so shut-up. "

18

2. 36
xxx

It's easy for kids to respond to experiences which they've just had, so questions about the show are likely to evoke comments from them.

    Ex: <u>(Kimba)</u> "What did you like about what happened today?"

2. 37
xx

The experience of listening to dual audio is also a recent one for children and one they can easily respond to questions about.

    Ex: <u>(Astro Boy)</u> "Hey do you remember what I said a.?....
..............was?"

2. 38
xxx

Questions about what is happening on the program can sometimes seem stupid to kids because the answer is so obvious to them, but questions about their own experience never seem stupid.

    Ex: <u>(Astro Boy)</u> "Have you ever ....?"

2. 39
xx

Any question which calls upon the child to reach into the show and pick out something is a useful way of getting him to respond to what is on the television.

    Ex: <u>(Astro Boy)</u> "What did he say?"

2.40
xx

Using Local References

Anything which can be done to tie the mass media of television to the child's own local environment will help him to get a clearer grip on what is happening.

2.41
xx

Use local references whenever possible.

Ex: (Spiderman) "That statue is like the statue of William Penn on top of City Hall." or "That's their mayor. Who's our mayor here in Philadelphia? Do you know?"

2.42
xx

Connect a child's previous experience to what is happening on the television.

Ex: (Spiderman) "Did you every ride on a subway here in Philadelphia?" "Have you ever been to the museum here in Philadelphia?"

2.43
xx

Use the experience of other people in the child's family to bring the television experience closer to him.

Ex: "Did your mom ever ride on a subway?" "Was your father ever in the army?"

2.50
xx

Using the Child's Knowledge of TV

Children are experts on television. The knowledge they have about
it is a natural thing for dual audio instruction to capitalize on and
build from.

Ex: "He acts like Little Joe on _Bonanza_. "

2.51
x

Use the predictability of television to help children see the
patterns that are used.

Ex: By the time children are six they usually know that a
television hero always comes out all right, but when they
are younger they don't.. Pointing out similar patterns can
give children a greater conscious understanding of the tele-
vision medium and how it works. These same patterns can
then be extended to other areas of life. For example chil-
dren can be asked if they know any people who try to pre-
tend that they are Superman and can always make things
come out all right.

2.52
xx

Find out how the child expresses what he sees on the television
and reinforce that expression.

Ex: (Spiderman) "He sprays his own ropes, right?"

2.53
xx

Just because something is on television doesn't mean that chil-
dren are experiencing it.

Ex: Many of the words used on the television go right by the
children as though they had never been spoken. If these words
are to be used for dual audio instruction they must be first
highlighted or pointed out so that the child begins to perceive
them.

2.54
x

Characters and events from other TV shows can be used as part
of the dual audio narration.

Ex: (Beverly Hillbillies) A hillbilly character does the
narrating.

2.60
xxxx

Ways to Involve Many Different Ages of Children and their Parents:

Dual audio instruction, like television, is often heard by people of
various age range and levels of educational understanding. There
are a number of ways in which the dual audio instruction can help
generate conversation between these different people. Such conver-
sation, because it is immediate and personal, is probably one of the
most effective educating relationships which dual audio can produce.
It does not work by providing specific information - so much as by
changing the informational ecology in which the child lives. Such
parent involvement is particularly important since research on
Sesame Street has shown that its success depended heavily on how
involved parents were with their child's watching.

2.61
xx

A "Magazine Format" such as Sesame Street allows a variety
of age levels in each show.

> Ex: (Astro Boy) Teach the reading of "boy" and the mean-
> ing of "experiment" in the same program.

2.62
xx

Young children seem to be interested in what they can see and
older children in what they can understand. Write comments
for both in the same program.

> Ex: (Beverly Hillbillies) "Look at Jeffro eating that chicken."
> and "Ecstasy is when you feel really good about something."

2.63
xx

Suggest that older kids teach the younger ones.

> Ex: "Hey, can you read that?   Can you read it to some-
> body else?"

2.64
x

Have two instructors, one who asks questions that will help
young children understand, and the other who explains. Or,
have two sides of the same instructor which perform the same
functions.

> Ex: "Now what is that?" "Oh, I see, that's a........."

2.65
xx

Since young children are interested in the feeling and excitement,
of the program rather than the information, combine both into
one comment.

> Ex: (The Good Life) "Oh, Ough! All of his income tax
> papers got messed up."

2.66
xx

Open ended questions or statements can generate cross-age talk.

> Ex: "What do you think is going on now?"

2.67
xx

Paraphrasing such as Martin Luther King used to do in his speeches, is a way to say the same thing at two different levels.

 Ex: (Astro Boy) "He's trying to find out what's going on. He's investigating by carrying on an experiment."

2.68
xx

The use of adjectives and adverbs can give increasingly specific information.

 Ex: "That's a German Shepperd Dog." rather than, "That's a dog."

2.69
xx

Use one word recognition comments that don't get in the way of older children, and don't bother them.

 Ex: (Kimba) "A volcano!"

2.691
x

Other ways of handling a wide range of kids: Write the instruction to the age level which is most likely to be listening at a given time. Before 3:30 p.m. only young children will be home. Write different age levels on different channels for different kids. Write a Charlie McCarthy dialogue with an adult and a puppet.

3.00 HANDLING THE LANGUAGE OF DUAL AUDIO INSTRUCTION
xxxx

The language of dual audio instruction is characterized by explicit and implicit statements, by simplification, by repetition, by non-verbal exclamations and by questions.

3.10 Explicit and Implicit Comments
xxxx

Much of dual audio instruction involves making explicit and externalized what kids already know implicitly, That is, dual audio instruction works best when it can highlight something on the television screen and make it clearer and more understandable to a child. It is least effective at laying-on material or adding-on material.

3.11
xxxx

There is some evidence to suggest that explicit definitions are learned faster by children then implicit ones.

> Ex: (Astro Boy) "Investigate means to find out all you can about something.

3.12
xx

Implicit comments seem not to be learned as fast, but on the other hand they seem to give kids more of an opportunity to pick things up for themselves and draw their own meaning from what is said.

> Ex: (Astro Boy) "It looks like Astro Boy is about to investigate again."

3.13
x

The various uses of implicit and explicit comments will be the subject of a research study in 1972-73.

3.21 Simplification
xxxx

As Gordon points out in The New Literacy, radio is characterized by a specturn of intelligibility; the attention of the listeners wanders. Radio commentators builds in safeguards to get their message across, basically the safeguards of simplification and repetition.

3.22
xxxx

Keep all language as simple, as sparse, and as direct as possible.

> Ex: Look at previous scripts.

3.23
x

Once a dual audio convention has been established, it is possible to cut down on the number of words that are used and still convey the idea. This process is used in television commercials when a commercial is first broadcast in the 30 second version, then in a 20 second, and then 10 second.

> Ex: Tone signals or words signals to indicate reading, spelling, process understanding, etc.

3.30
xxxx

Repetition

Repetition is necessary in order to teach children an idea in a medium as fleeting as dual audio instruction and yet it is also necessary not to repeat so often that the children become bored.

3.31
xx

The instructor can establish a convention of repeating words more often then would be usual.

Ex: (Beverly Hillbillies) "Well, there's that statue. What do you think of that statue?"

3.32
xx

By picking up on a word used in the context of the television show, repeating it, and then defining it while repeating it again, the same word can be said three times in succession without obviously being repeated.

Ex: (Dick VanDuke) TV. "He's going to hypnotize him."
Dual Audio: "Aah, hpynotize. The psychiatrist is going to hypnotize him. Hypnotize means ......"

3.33
x

Sometimes a game can be made out of repeating a word.

Ex: (Spiderman) "Okay, I've said, Identify, about fifteen times now. Next time it comes up, you say it." or,
Talk about something else and then say, "Ha, I've fooled you. I didn't say 'identity'."

3.34
xx

The word can be repeated and used as a test for the child or as a self-test.

Ex: (Beverly Hillbillies) "Ecstasy? Ecstasy? What's that mean?"

3.35
xxx

A word or an idea can be repeated a great many times if the definition or explanation of it shifts a little each time.

Ex: (Astro Boy) "Investigate" begins simply as a definition and gradually is blended in to "experiment" so that an experiment becomes a way to investigate something.

3.40   Non-verbal Comments

xxxx

There are hundreds of non-verbal expressions which are used
to convey meaning and which are part of the natural sound sys-
tem of English. They are difficult to write about because there
are no written translations for them. Often however a few of
these expressions can call attention to things or raise questions
and save the narrator from having to intrude on the show while
keeping his presence alive.

3.50
xxxx

Questioning

The appropriate use of questions is an important tool for dual audio writing because they can either open up the television environment for the child or close it down.

3.51
xx

Closed questions are questions which have an immediately obvious and usually short answer. If the child can answer the questions without thinking, the question should be avoided because asking it will encourage an automatic response.

Ex: (Kimba) "Do you like Kimba?" Kids: "Yes!"

3.52
xx

Closed questions about a piece of information which is being taught are useful because they can prompt a child to say the word or use it.

Ex: (Beverly Hillbillies) "What's that?" Kids: "A statue."

3.53
xx

Open questions are questions to which there can be many different answers, and are useful for stimulating discussion.

Ex: (Astro Boy) "What do you think he ought to do now?"

3.54
xx

Speculations or statements which are in the subjunctive mood, have the effect of being a quasi-question because they invite kids to respond as though a question had been asked.

Ex: (Kimba) "It seems to be raining." Kids: "I don't think so."

3.55
x

Avoid questions which kids can't answer, as such questions annoy them.

Ex: (Beverly Hillbillies) "Who's that sitting there?"
(The writer couldn't tell either.)

3.56
xx

When something is happening that the instructor doesn't understand, he can speculate about it, or muse about it, and so generate questions. The instructor is in effect questioning himself without asking the kids directly, and they can pick up the idea and explore it if they want to.

Ex: (Astro Boy) "Wonder what's in that box?"

3.57
xx

Open questions just before a commercial can sometimes
generate discussion which will carry through the commer-
cial period. This is particularly true of questions that are
designed to stimulate fantasy or controversy.

Ex (Kimba) "Would you like to sleep on a bed of
flowers?"

4.00 PARTICIPATION CUES

xxxx

One of the strengths of dual audio narration is that it can increase the amount of a child's participation while watching television. There are a number of strategies that are useful for getting kids to interact more both with the television and with each other.

4.10 Direct Participation Cues

x

Cues to participation can be direct or inbedded in the context of the show.

4.11
xx

A direct question will often evoke an answer.

Ex: (Batman) "Remember how many are in a trio?"

4.12
xx

A pause where one would expect a word can often evoke a response from children.

Ex: (Beverly Hillbillies) "That's Jeffro's ...."

4.13
xx

After pausing for a child to fill in a space the instructor can give several examples for children to choose from.

Ex: (Spiderman) "The rhino's as big as a ...., an elephant, a house, or a garage, or a train."

4.14
xx

Giving children permission to be enthusiastic in their answers often helps them give responses.

Ex: (Astro Boy) "If you know what's he going to do, shout it out!"

4.15
xxx

Any physical actions which are either on the screen or which are similar to things that are on the screen will easily be picked-up by children.

Ex: (Lidsville) "Hey, lock your fingers together and pretend you changed." or "Can you dance like that?"

4.16
xx

Questions about an action that is on the screen will often stimulate the child to do the action.

Ex: (Batman) "Can you move that fast?"

Caution: We don't want kids jumping off window ledges like Superman or swinging off of buildings on ropes like Spiderman.

29

4.17
xx

Describing a new word to a child and telling him ahead of
time the appropriate place to use it will allow him to use
it appropriately.

> Ex: (Spiderman) "When those hills start to transform again,
> you say, 'transform'."

4.18
x

A "hint" will often get kids talking about what is being hinted at.

> Ex: (F.B.I.) A sequence in which a man is running off into
> the desert without his water bag. (Dual audio) "He forgot
> something."

4.20   Changing the Nature of the Television Experience
xxxx

There are some things which the dual audio instructor can do that
will change the sense of what it means to watch television.

4.21   The instructor can ask kids to point to things on the screen or
xx   to draw them on the screen, much as used to be done in the old
        Winky Dink television program.

    Ex: (Batman) "Batman's going to need something round to
    get out of this one. Draw a circle on the screen for him."

4.22   Changing the volume level changes what is possible while
xx   watching TV.

    Ex: (Spiderman) "Hey, turn the television sound down for
    a minute and see if you can do the talking for them."

4.23   Turning the sound down can provide a way for the dual audio
x   narrator to say something extensive.

    Ex: "Hey, turn your TV down for a minute. I want to lay
    something heavy on you."

4.24   The closing section provides a chance to tell kids about things
xx   to write away for or to do, as well as things to remember.

    Ex: "Write to me at such and such and I'll send you a list
    of all the words we've learned so far." or "Send a stamped
    self-addressed envelope to me and I'll tell you how to get
    to a museum."

4.25   In the time just before commercials kids can guess about the
xx   end of the show and perhaps try dialoguing it.

    Ex: "Hey, during this break see if you can act out the rest
    of what's going to happen."

4.26   The end of the show is an appropriate time to ask kids to play
xx   with each other around some idea.

    Ex: "Now you know what investigating means, why don't
    you try playing investigator. Play private eye."

31

4.30   Dual Audio Games
xxx

Various kinds of games can help make dual audio instruction fun
and interesting.

4.31   Pick up on the games which children naturally play with the
xx   dual audio medium.

Ex   "I can't hear you, but you can play that you're talking
with me. "

4.32   Have the dual audio instructor give hints about some subject so
xx   that the children are involved in a guessing game as they go
along.

Ex: (Astro Boy) "What do you think that stuff is that Astro
Boy is going to use to kill the snails? I'll give you some hints:
It's white ....and it has thousand of little pieces ....,
and you have some in your kitchen.........., and it tastes
funny .... and you use it on potato chips ....,
and pretzels ...." (Check with Bernie DeKoven and
Len Belasco for more information on games.)

4.33   Concluding comment on function of entertainment:
x

"The perception of reality demands entertainment and is facil-
itated by entertainment." The New Literacy, page 136.

5.00   STRATEGIES FOR TEACHING

5.10   Teaching Reading
xxxx

5.11   Much of our teaching of reading involves prompts which will get
xxx   children to read written material on the screen. A wide variety
          of prompts is necessary or the teaching will seem overly repeti-
          tious.

              Ex   "That says..............." "What's that say?" "What's
              this place?" when there are signs labeling the place.   "Can
              you read that?" "What's that?" "Where are they now?" "What
              kind of .... are those?"

5.12   Actually reading what is on the screen is a useful first step.
xx
              Ex: "That says 'hotel'."

5.13   A partial prompt can often get a child to pick up and finish the
xx   reading for himself.

              Ex: rhymes, first consonants

5.14   Purposely miss reading will induce a child to correct the
xx   instructor.

              Ex: "That says 'lotel', doesn't it?"

5.16   Changing the word around a little bit can make it funny.
xx
              Ex: "Not Astro Boy, but Astro Steve."

5.17   The credits often provide an opportunity for reading, particularly
xx   the title of the show, which may require some explanation.

              Ex: (The Partridge Family) "Terrible Tonsils"

33

5.20
xxx

Teaching a Process

Teaching a process is difficult because understanding the process requires the child to step away from the action. Since his primary interest is in watching the television program, this is asking a lot.

5.21
xx

If the process is one which is both close to the child and close to the program, it is much easier to teach.

>   Ex: (Spiderman) "Brainstorming" where the children can see Spiderman brainstorming and also brainstorm for Spiderman.

5.22
x

The super powers of many characters are a starting place for describing process powers.

5.23
xx

Participation is vital if the process is going to become well enough internalized so that a child can use it.

>   Ex: (Spiderman) "Spiderman sure needs some help now. Brainstorm what he can do."

5.30
xxxx

Teaching Vocabulary

In teaching vocabulary, as in teaching most things, it is necessary to make the child aware of what he is learning. He cannot be expected to learn vocabulary simply because the dual audio narrator uses it, any more than he learns vocabulary from the television simply because the television uses it. The instructor therefore needs to highlight what he wants the child to learn and make it clear that it is to be learned.

5.31
x

Ray Bird whistle's research suggests that it's best to pre-prompt to give the child the syntax and let him figure out the particulars.

5.32
x

The amount of time available may determine how generalizable a definition can be given.

> Ex: (Aqua Man) (Two seconds) "A genius ------, now he's real smart." (Five seconds) "A genius ----------? A genius is someone who's real smart."

5.33
xx

Often words can be defined by defining what they are not.

> Ex: (Batman) "They're not museum specimens, they're thieves."

5.34
xxx

A good pattern to follow is to use the word to label the action on the screen, relate it to the narrator, and then to the child.

> Ex: (Kimba) "Kimba's bored. I feel bored too when it rains. Do you?"

5.35
xxx

A similar pattern involves reacting to the word, playing with it, difining it, and relating it generally to feelings.

> Ex: (Spiderman) "A bookworm? Hey, ever see a worm in a book? No, that's just a name they call somebody who studies a lot. How do you think he feels about being called that?"

5.36
x

The words of the theme songs are useful because kids will learn them by rote, but can also easily pick up what they mean.

> Ex: (Astro Boy) "On your mission today."

5.37
xx

Once children have been introduced to a word they can be told to listen for it, and then say it when they hear it.

> Ex: (Yogi Bear) "Next time Yogi says, 'hibernate', you say 'hibernate'. Try it."

35

5.38
xx

Twisting or alliterating the word a little will also help kids feel less self conscious about saying it.

>   Ex: (Spiderman) "A rhinocerous, can you say that? A raging rhinocerous."

5.39
xx

Anytime a child can act out the meaning of the word, he will remember it more easily.

>   Ex: In Astro Boy, Steve tells the children what an experiment is, and how to perform one.

5. 38
xx

Twisting or alliterating the word a little will also help kids feel less self conscious about saying it.

    Ex: (Spiderman) "A rhinocerous, can you say that? A raging rhinocerous."

5. 39
xx

Anytime a child can act out the meaning of the word, he will remember it more easily.

    Ex: In Astro Boy, Steve tells the children what an experiment is, and how to perform one.

5.40
xx

Designing A Dual Audio Curriculum

In designing a dual audio curriculum it is important to analyze the problems and possibilities of a show: whether or not it will produce boredom with a constant repetition of scenes and actors, whether it provides a chance to move off in many different directions.

5.41
xx

The first step in designing curriculum is to define what the themes of the show are and what related vocabulary, process, reading, etc., items will go along with those themes.

Ex: In _Astro Boy_, "Investigate"

5.42
xx

The next step is to chart out when each item is going to be taught and how many times it's going to be repeated.

Ex: The _Astro Boy_ chart

5.43
xx

Dual audio curricula can not be forced in to a linear sequence with one thing following another because children do not attend to it that competely. Therefore it must be cyclical with each piece of information occurring again and again.

5.44
x

Following are strategies to use in devising a cyclical curricula:

A. Loop de loop
B. A steady trickle
C. A turn of the screw
D. Hell bent for leather - Short sections that go after one item at a time
E. Kill the ball and fumble
F. Sloganeering
G. One bite at a time - give in pieces
H. Kick, let them run, and use the idea

38

6.00 IMPROVING THE QUALITY OF TV
xxxx

Much of television programming for children leaves a great deal to be desired. Dual audio can sometimes compensate for the television shows own inadequacies by covering mistakes and by ameliorating some of the more obvious negative factors.

6.10 Covering TV Mistakes

6.11
xx

The dual audio narrator can fill in for cuts made in formating a program for commercials. A useful strategy is to say that something "must have happened".

> Ex: (Astro Boy) "He must have called in the army to get help."

6.12
xx

If there are outright scientific mistakes in the program, they can be ignored, or contradicted, or agreed with, or the instructor can make a distinction between fantasy and reality as suggested earlier.

6.13
xx

Ignoring a mistake does not call attention to it, and does not put the narrator outside of the program, but of course does not correct it either.

> Ex (Superman) A pile of atomic waste explodes. The narrator says nothing.

6.14
xx

Contradicting a mistake sets the record straight, but children may resent it.

> Ex (Superman) "Atomic waste can't explode, only atomic bombs."

6.15
xx

Shifting the mistake into the fantasy-reality continuum seems to be one of the most effective ways to handle such incidents.

> Ex (Superman) "Atomic wastes give off radiation, but they don't really explode."

6.20
xxxx

Handling Violence

There is increasing documentation of the effect that TV violence has on children. The dual audio instructor needs to be careful that the kinds of comments he makes do not increase the effect that TV violence has on children.

6.21
xx

The instructor can simply refrain from making any remarks during a violent scene.

> Ex: (Batman) Batman socks the villians, and the dual audio instructor says nothing.

6.22
x

The dual audio instructor can express enthusiasm for a stylized or ritualized violence.

> Ex: (Batman) Batman socks the villians. Dual audio narrator, "Go get him, Batman."

6.23
xx

The dual audio instructor can point out what's fair and what is not.

> Ex: (Batman) "Three against one. That's not a fair one."

6.24
xx

The dual audio instructor can act as a hand in the dark, reassuring kids that things are all right.

> Ex: (Kimba) "That's scary, isn't it?"

6.25
xxx

The dual audio instructor can point out other alternatives.

> Ex: (Astro Boy) In project research, children who watched television without dual audio thought the only way to change someone's point of view was to fight him. Children who heard dual audio instruction about "point of view" were able to think of a half-a-dozen different ways to change someone's point of view.

7.00 SCRIPT FORMAT
xxxx

Writing the script in the proper format is important both for record keeping and to help the announcer.

7.10
xxx

The dual audio script should be clear so that the narrator can easily recognize television cues and the suggested tone of voice (if necessary) for a particular passage that he is to read. There is a standard format for dual audio scripts. In preparing the final draft of a dual audio script remember to write clearly enough for a typist to read what you've written. (Examples taken from Astro Boy Show No. 27.)

7.11
xxxx

All cues from the television program should appear on the left side of the page, while the narrator's comments are on the right.

Ex: All men at some time or other ---------- Yeah, I'm a star
     are star gazers.   gazer, are you?

7.12
xxx

The television cue, if verbal, should be long enough for the narrator to quickly recognize.

*Ex: Looked as though it ----------------- There really are
      was landing over there   shooting stars.

*The TV cue need not be a complete sentence, but should be more than "over there."

7.13
xxx

All visual cues from the television should be in parentheses.

Ex: (Vis. <u>Astro Boy's</u> eyes light up)-------------------"

In most cases since visual cues appear unexpectedly, a line from the dialogue just before should accompany them.

Ex: Looked as though someone
     is taking the whole bottom
     of the sea apart
        (Vis. of building)---------------------- A building
                                                 under water??

7.14
xxx

If the narrator should <u>pause</u> at any time in his delivery, pauses are indicated by: ....

Ex: Looked as though it --------------------There really are shooti
     was landing over there   stars ......Yeah for re

7.15
xxx

All stage directions to the narrator as to voice inflection, tone,
or length of time to deliver a passage should be in parentheses
beside the narrator's comment. If the narrator is going to have
to rush to get the comment into the space, put "(Quick)". If he
has more than adequate time and needs to pace it out, put
"(Time)".

Ex: a. (Vis. Astro Boy's eyes----------(laughingly) Man, his search
         light up)   light eyes even work under-
                                         water!

     b. See the dam?------------------Oooh! Is Astro Boy cussing
                                         (laughing) Nah, he's talking
                                         about stopping the water.

     c. Hey, see what I see?------------(Quick) I saw it............
                                         did you?

     d. There's no reason--------------(Time) You're a stranger to
         for you all to run   them Astro Boy. They don't
         away.   know who you are so they
                                         don't trust you.... They're
                                         different from you and
                                         sometimes people who are
                                         different just don't trust each
                                         other.

7.20
xxxx

The Dual Audio Script Summary Sheet

The following detailed form is to be filled out after writing a script.
For evaluation purposes, it is extremely important to have a precise
record of what is actually taught.

DUAL AUDIO SCRIPT SUMMARY SHEET

DATE_____   WRITER'S NAME_____

TITLE OF SHOW_____

1. Brief synopsis of plot:

2. Define what you hope the child will learn under each of the applicable categories. Indicate whether you taught them explicitly or implicitly by placing an (E) or an (I) after each item. For items occurring more than once indicate the total number of teachings or separate mentions like this:(3E), (4I).

    A. Basic knowledge:
       1. Survival information

       2. Science

       3. History - Urban Affairs

       4. Consumer education

       5. Health

       6. English - Vocabulary Development

       7. Other

    B. Skills:
       1. Reading

       2. Math

       3. Social Survival

    4. Problem Solving Process(es)

    5. Arts and Crafts

    6. Other

C. Affective:
    1. Awareness and Acceptance of Self

    2. Learning to Deal with Emotions

    3. Awareness and Acceptance of Others

    4. Other

8.00   ANNOUNCING DUAL AUDIO INSTRUCTION

8.10   Announcing Tips
xxxx

A. First view the tapes, trying to determine the mood of the program,
    of characters, of changes of tone which call for changes in delivery.
    Read the dual audio script along with the television program, then
    re-read the script to learn it. Don't try to memorize it.

B. Don't exhaust yourself through preparing. Try to keep fresh.

C. Read the copy aloud as some comments may sound good mentally,
    but be complicated and difficult to speak.

D. Be careful of nervous words that are added into the script, "Hey,"
    "Like", etc. Pace yourself from the time of the first rehearsal
    to the final take.

E. Rehearse the meat of the script (long passages and so forth) but
    leave the script open and expect that you will add things on the
    final take.

F. Read the script enough so that you don't panic if your eye gets
    lost.

G. Keep a glass of water handy, and don't eat a lot before a take.

H. Don't forget any psychological props, good-luck pencils, shirts,
    etc.

I. Be yourself. Try not to become another smoothy TV voice.

J. Determine the relationship you are going to have to the cartoon.
    "Would a grown man really groove on Astro Boy?"

K. Laugh at what's funny to you. Don't fake laughs. They don't
    sound genuine.

L. Do whatever you need to do the night before in order to feel com-
    fortable the day of the taping.

M. Remember any comments that you heard neighborhood kids make
    and ad lib those as they seem appropriate.

N. Keep connected to the show, and reacting to it.

O. Indicate through tone of voice what is essential and what is
    incidental.

46

8.20
xxxx

Tone of Voice

Tone of voice is one of the basic ways in which inflection, complexity and feeling are conveyed by dual audio narration.

8.21
xxx

The instructor needs to indicate with his tone of voice that he is aware when his turn to speak comes up. There is a conversational ethic at work in dual audio which allows him to speak when there is a space in the television sound track.

8.22
xx

The questions which the dual audio narrator asks have to sound like "teacher questions" at least part of the time or the dual audio instructor sounds as though he doesn't know anything.

8.23
xx

One way to make these questions sound as though they were teacher questions is to make them explicitly instructional.

Ex: (Batman) "Let's see if you can read this?" Batman, right?

8.24
xx

It's important to avoid a patronizing tone of voice which says, "This is good for you." or "I know the answer, but I'm asking the questions for you."

8.25
xxx

The instructor can't pretend to be ignorant, because the kids know that he knows.

8.26
xx

There are a wide range of non-verbal signals and cues which help to break the teacher image and yet give a sense of the instructor's presence.

Exs: Un Hum - meaning Yes
Un un - meaning No
Hum? - Question
Un Hum? - Get that?
Sigh - Boredom
Hum - How about that?
Aah - Disgust
Huun - Boredom
Huh - Surprise
A yawn - for boredom
Huuuul - for a yawn
Huum Huum - for, I don't know
Eeh - for disgust
Huum - I see what you mean
Huun, Huun - Maybe yes, maybe no
Huh - What?
Ooah ooah - troubles coming

8.26
xx

Exs: Aaah, aaah, aaah -- You've doing something you shouldn't.
Huum, Huuum - Isn't that something?
Uuunt, uuun - Now something's going to happen.
Huuum, huuum - They did it that time.
Wheew, a whistle - Man, look at that?
Ssshumpf - Isn't that too much?
Huuummmm, huuummmm - Yes and deedy.
Aaah - Well, I don't know.
Taaa, taaa - Naughty, naughty!
Hmmmmmmm, hmmmmmmm - You're putting me on.
Hmm, hmmmm, hmmmmmm - A wimper.
Taaaaa, taaaa - A kiss-up.

8.27
xxx

Tone of voice can indicate the direction that an answer is supposed to take and turn a closed question into an open one or vice-a-versa.

Ex: (Kimba) "Think you'd like to sleep in a bed of flowers?" With the head shaking and the emphasis on you, the answer is no. With the head going from side to side and the voice up at the end, the answer is yes. With the head up and the voice musing, the question is an open one, translated as, "I wonder if I'd like to sleep on a bed of flowers?"

8.28
xx

Tone of voice can be used as part of the definition of many words.

Ex: "Ecstacy!"

49

The Character of the Dual Audio Instructor

Unless the dual audio instructor has a name and a personality kids
evolve a wide range of ways of talking about him. They call him the
"Talk-out", "That Man", "The Voice", "Tom Thumb", "The Man
Inside", "The Man on the Phone", "Mister". It seems important
to them that the dual audio narrator have a name and that he be a
person. As a result the instructor needs to give as many indications
of what he is like personally as he possible can, both through his
tone of voice, through things that he ad libs in the course of the pro-
gram, and through things which writers put in the script for him.
The qualities of the dual audio instructor which make him most
appealing to kids are his good humor, his genuine concern for kids,
the inside information that he has and that he shares with them, and
the fact that he can get excited about what's going on. He needs to
know what kids like. He doesn't talk down to kids because he
respects them as people and he's interested in what they think.
The dual audio instructor's enthusiasm is more for being with kids
than about a particular cartoon show itself. If the dual audio
instructor gets excited about a program when kids don't then he
seems like a little kid himself, which he doesn't want to do.

The dual audio instructor needs to be aware of how he sounds to
kids. He can sound like a dumb dumb because he asks questions
all the time and never answers. He can seem like a talking doll,
something that they play with, manipulate, and kick around, be-
cause he never reacts, never responds. He can also appear to
be a super-information dispenser, and if he does, kids are likely
to clam up and feel if they have nothing to say.

However, if he presents himself as a warm friendly figure who is
interested in kids and wants to help them learn, he will be seen as
a friend, -- liked, respected, and listened to.

SAMPLE SCRIPT - ASTRO BOY # 27
xxxx

Introduction--------------------------------- HI, THIS IS STEVE AND I'M READY T

INVESTIGATE THIS <u>ASTRO BOY</u> SHOW

TODAY!......I'M GONNA TRY SOME

THING DIFFERENT TOO. I'M GONNA

SING ASTRO BOY'S SONG IN DIFFERE

VOICES, HAVE A LITTLE FUN. YOU

PICK THE ONE YOU LIKE THE BEST,

O.K.? HERE WE GO! (sing)

(vis. Before Astro Boy's name)------------- ASTRO BOY'S NAME'S COMING UP.

TRY READING IT.

All men at some time or other
      are star gazers--------------------- YEAH, I GUESS I'M A STAR GAZER,

ARE YOU?

Looked as though it was landing THERE REALLY ARE SHOOTING
      over there---------------------------

STARS.......YEAH, FOR REAL!

Rarely does anything look back
      at them------------------------------ (Jivey) WHAT'S LOOKING IN THAT
(vis. of cat's eyes)

TELESCOPE?

The Institute of Science appointed
Astro Boy to investigate this new
mystery-------------------------------

HEY, TO INVESTIGATE MEANS TO

FIND OUT EVERYTHING YOU CAN

ABOUT SOMETHING.........IT'S LIKE,

LIKE SOLVING A MYSTERY..........

(vis Astro Boy's eyes light up)--------------

(laughingly) MAN, HIS SEARCHLIGHT

EYES EVEN WORK UNDER WATER.

(vis 3 boys peeking around corner)----------

THEY MUST HAVE FOUND A CLUE II

THEIR INVESTIGATION.

Looks as though someone is taking the
whole bottom of the sea apart------------
(vis of building)

A BUILDING UNDER WATER???????

HUH! NOW THERE'S SOMETHING TO

FIND OUT ABOUT, TO INVESTIGATE

Police boats!------------------------------------

THOSE POLICE MUST BE INVESTIGA

ING THE MYSTERY TOO. FROM THE

POINT OF VIEW ANYONE AROUND

THERE WOULD BE SUSPICIOUS...NO

WONDER THEY'RE AFTER THEM.

They were afraid we might be the ones who were knocking it down-------------	YEAH, SPECS CAN SEE HOW THE POLICE WOULD HAVE A DIFFEREN[POINT OF VIEW.
What's that?(weird music begins)------------	MAN....HOW DOES THIS MUSIC MA[YOU FEEL?
(vis of Astro Boy's searchlight going on and music changes)-------------	HMMMMM, THIS MUSIC CHANGES T[MOOD.
(vis of fish in Astro Boy's searchlight writing welcome)----------------------	HEY, THAT SAYS WELCOME!
(vis of dancing fish)-----------------------	I BET THAT SHOW MAKES THEM FE[WELCOME TOO.
What's that over there? Let's find out-------	YEAH, INVESTIGATE SOME MORE.
(vis of Astro Boy's searchlight coming on)----	HIS EYES ARE LIKE A FLASHLIGHT. DID YOU EVER USE A FLASHLIGHT [INVESTIGATE SOMETHING?
(vis sawfish sawing tree)--------------------	WELL, SAWFISH DON'T DO THAT B[DID YOU KNOW THERE REALLY AR[SUCH THINGS AS SAWFISH?........ NO KIDDING!

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(lots of laughter)----------------------------   (laugh along) HA, HA, HA

(vid of laughing)----------------------------   HEY, THEY THOUGHT IT WAS FUNN

                                                  TOO!

It's music, lovely music------------------   UMM, DO YOU HEAR IT?

I think it's coming from down
  · there........where?-------------------   (to self) WHAT COULD BE MAKING

                                                  THAT MUSIC?

Pearls, lovely Pearls!----------------------   WOW! PEARLS! LOOK AT THEM

                                                  SPARKLE AND LOOK AT ALL THOSE

                                                  OYSTER SHELLS THEY GREW IN.

Hey, do you see what I see?----------------   I SAW IT........DID YOU?

It has to be coming from those
  oysters over there------------------------   MAN, OYSTER MUSIC. THAT'S STRAI

                                                  MAYBE THOSE PEARLMEN ARE TRY

                                                  ING TO COMMUNICATE SOMETHING.

                                                  MUSIC CAN TELL HOW YOU'RE FEEL

                                                  ING OR WHAT YOU'RE THINKING, JUS

                                                  LIKE A LANGUAGE.

What have you done to my friends?
  Hey!-------------------------------------   WHAT'S THAT?

A stranger, go to your nest--------------- | FROM THE PEARLMAN'S POINT OF

VIEW ASTRO BOY'S A STRANGER....

INSTEAD OF RUNNING AWAY MAYBE

THE PEARLMAN SHOULD DO SOME

INVESTIGATING AND FIND OUT AS

MUCH AS HE CAN ABOUT ASTRO BOY

There's no reason for you all to
run away---------------------------------- | YOU'RE A STRANGER TO THEM, ASTR

BOY. THEY DON'T KNOW WHO YOU

ARE SO THEY DON'T TRUST YOU....

THEY'RE DIFFERENT FROM YOU AN

SOMETIMES PEOPLE WHO ARE DIF-

FERENT DON'T TRUST EACH OTHER.

Its causing a whirlpool.
Nothing can fight against it--------------- | A WHIRLPOOL IS WATER GOING

AROUND IN CIRCLES REAL FAST....

(vis of fish pulled apart)----------------- | IT'S SO STRONG IT EVEN PULLED TH

FISH APART!

I must go back and find out why
those oysters did that-------------------- | MAN THIS IS SOME MYSTERY, YOU

DON'T KNOW WHAT CLUE HE'S GOIN

TO INVESTIGATE NEXT.

(vis f Astro Boy in whirlpool)-------------- UTCH, HE'S CAUGHT IN THAT WHIR

POOL!

So that's what's causing this whirlpool------- WHAT'S THAT?........IT LOOKS LIK

A SPINNING TOP, ONLY IT'S

GIGANTIC, IT'S MAMMOTH.

(vis of Astro Boy as rocket)---------------- OOOH, GO ASTRO BOY!

It's like a helicopter and I can save A HELICOPTER! HEY, YOU EVER
my energy---------------------------------

SEEN A REAL HELICOPTER?

(vis of Astro Boy's eyes on oyster)---------- DIG THOSE SEARCHLIGHT EYES. IF

YOU HAD EYES LIKE THAT, WHAT

WOULD YOU INVESTIGATE?

Perhaps Dr. E will have the answers-------- WHEN SCIENTISTS WANT TO INVESTI

GATE SOMETHING, THEY DO AN

EXPERIMENT......HEY, DO YOU

THINK HE'LL DO AN EXPERIMENT

NEXT?