AVL GENESIS SYSTEM

PROGRAMMING MULTI-IMAGE SHOWS

Audio Visual Laboratories, Inc.

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CHAPTER 1

INTRODUCTION TO MULTI-IMAGE PRESENTATIONS

1.1 GENERAL

After the slides have been created for your show, there are a number of steps to be completed to convert them into an attractive, effective Multi-Image Presentation or Show.

The process, in general, is as follows:

* Load the Slide Trays
* Register the Projected Images
* Program the Show
* Edit if necessary
* Synchronize the Show
* Save the Show in Memory to Tape and Disk.
* Load the Show into the Computer for later Presentation.

We'll cover each step in turn in this manual.

1.2 THE PRESENTATION

The actual running of your slide shows or modules should be well planned for the audience to be able to comprehend what they are experiencing. The key to effective presentation is not in what they see, but in what they retain! Please don't overload your audience with information. Give it to them in digestible servings where they will have a chance to absorb it, then move on to the next subject or module.

Mixing of canned (automated) show segments with live segments gives your audience a welcome change of pace. Always leave them wanting more, not saying - when does it all end?

1.3 FACTS ABOUT TRAY LOADING

Loading your slides into Slide Trays sounds easy, and it is. It's just that it must be done in the correct sequence and very accurately.

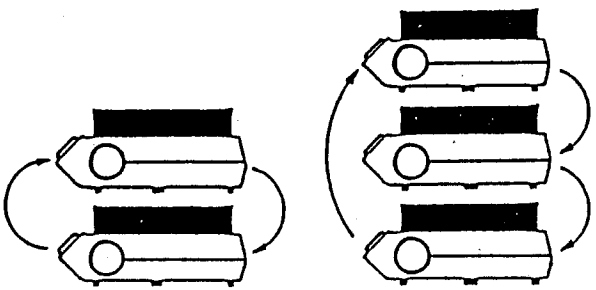
Virtually every Programming System utilizes the same sequential pattern for showing slides.

1.3.1 TWO PROJECTOR CYCLE

If you are using just 2 projectors, the first projector turned ON will be the TOP or LEFT projector depending on whether your projectors are stacked one over the other, or side by side. Thereafter, the system simply alternates between the two projectors.

1.3.2 THREE PROJECTOR CYCLE

In a 3 projector stack, again the TOP projector is turned ON first, then the CENTER, then the BOTTOM, but the next cycle is BACK TO THE TOP, NOT THE CENTER! The cycle is Top to Center to Bottom, and back to the Top.



1.3.3 LOADING THE SLIDES IN TRAYS

With your slides laid out in the order you wish them to appear on the screen, mark your Trays:

a. TOP/LEFT or BOTTOM/RIGHT when using two projectors, and load the first slide in the TOP or LEFT tray alternating each succeeding slide between the trays.

b. TOP, CENTER, and BOTTOM, when using three projectors, loading then becomes First Slide in the TOP Tray, Second Slide in the CENTER Tray, Third Slide in the BOTTOM Tray, Fourth Slide in the TOP Tray and so on.

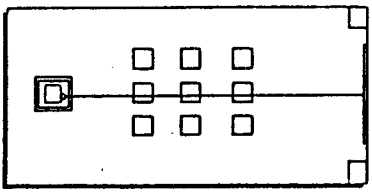
Use care! One slide in the wrong tray and you start all over again!

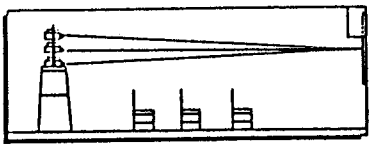
1.4 THE PRESENTATION ENVIRONMENT - SCREENING YOUR SHOW

Now that your slides are all in the correct Trays, you must get your image to the screen. This section will give you some helpful information on the Projected Image and how to set up your Presentation Room for maximum effect.

1.4.1 PROJECTION ANGLE

It is important for the quality of your images and the comfort of your audience that you project your images with as little distortion as possible. Essentially this means the projectors should be situated as nearly as possible at right angles to the screen, both up and down, and right and left. This may necessitate elevating your projectors. The diagrams illustrate the ideal setup.





1.4.2 IMAGE REGISTRATION

Make the effort to adjust lenses for image size and focus as accurately as possible. Project one image, then match the others to the first, one at a time. This is called Registration, and though they won't know why, your audience will love you for it. Unregistered images are very uncomfortable to watch.

We would suggest you obtain several Industry Standard Alignment Slides from your AV Dealer. They will make the task of registration much easier and more consistent.

1.4.3 SOUND SYSTEM

Speakers for any sound accompanying your show should be placed on either side of the screen and preferably elevated. A test for adequate, not dominating, sound levels should be done before your audience arrives.

1.4.4 ROOM ENVIRONMENT

It is critical for effective presentation, that the room be comfortable. Don't make it cold in the mistaken belief that it will keep the audience awake. All that would do is force their attention to the temperature, not the presentation. Comfortable seating, and tables, if note taking is required will add immeasurably to the receptiveness of your audience.

Variable light controls are ideal if they are available. Try to keep some slight ambient light in the room so it is not completely dark. A floor lamp with low wattage lamps will help. The

audience will not tire as easily under these conditions.

Remember, if a person gets turned off once to your style of presentation, it will take a long time to get them back.

1.5 PROJECTOR CONTROL

It can be very helpful if you understand how we control projector lamps and the slide changing process. The few simple facts presented here will go a long way toward dispelling the mystery that seems to surround Audio Visual Programming.

1.5.1 LAMP ON/OFF - ADVANCE/REVERSE

As far as a Slide Projector is concerned, we can only do two things with it. We can turn THE LAMP ON or OFF, or we can ADVANCE it or REVERSE it. That's all. Nothing more, nothing less. Surprised? It's true.

The magnificent effects you may have seen on a screen are made possible by HOW we turn the lamp On and Off, and HOW and WHEN we Advance it and Reverse it. The specifics of how we do this will be demonstrated when we get into actual Programming.

1.5.2 PROJECTOR DESIGNATIONS

Programming, in many cases, requires individual projectors to be designated in cues. If we designate a single projector or any combination of projectors in a single cue, they will be the only ones to react. All others will remain as they are. This is the secret of Special Effects Programming.

The AVL GENESIS System provides full 30 projector capability. For programming purposes, these projectors are divided into two Banks of 15 projectors each, Bank A and Bank B.

	BANK A	BANK B
DOVE NO.	1 2 3 4 5	1 2 3 4 5
PROJECTOR LETTER	A D G J M B E H K N C F I L O	A D G J M B E H K N C F I L O

Within each Bank, the 15 projectors can be designated by a DOVE (Screen) Number 1 thru 5, to control 5 separate Systems of 3 projectors each, or, individual projectors may be designated and accessed by Letter, A thru O.

We cannot include Dove numbers in the same Cue line with projector letters. Genesis will not accept the Cue. This

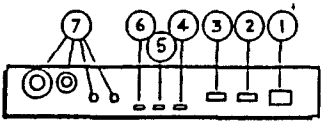
allows us to designate any one or more projectors individually by Letter, or, a System of 3 projectors by Dove Number.

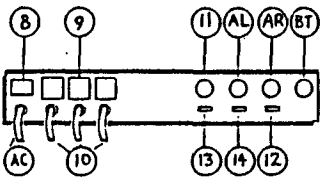
System and Individual Projector control will become very important as we get deeper into programming.

1.5.3 THE DOVE-X PROJECTOR CONTROL UNIT

The DOVE-X is the projector control unit for your GENESIS System. It reads the data from the System or from Magnetic Tape and converts it into actions on the projectors.

The significant controls and their functions are shown with the illustrations.





1 - DOVE Number Switch -
This thumbwheel assigns the DOVE a screen number. It will read only data assigned to that number and ignore all else.

2 - Setup Switch -
Turns on all three projector lamps for registering images and checking that all is operating as it should. Pressed a second time it returns the lamps to their normal position.

3 - Reset Button -
Returns all projectors and lamps to the starting position.

4 - Ready L.E.D. -
Indicates power in the initial stage and that the projector has advanced during programming.

5 - Amp L.E.D. -
Indicates the DOVE is receiving data.

6 - MT Error L.E.D. -
Indicates bad data is being received from the Mag Tape.

7 - Play Link -
These connectors are the inputs to the DOVE. Either connector will receive data, or act as a daisy chain connection to another DOVE.

8 - On/Off Power Switch.

9 - AC Convenience Outlets -
Allow plugging of the projectors into a consistent power source with the same circuit and phase.

10 - Projector Cables -
These cables plug into the back of the projectors and provide the instructions from the DOVE.

11 - Remote Cue -
A standard Kodak Hand Control may be plugged here to cycle between projectors. Forward starts a 2 Second Dissolve. Reverse starts a Cut. Focus starts a sequential reverse.

12 - Sequence 2/3 -
This switch tells the DOVE to cycle thru all 3 projectors (3) or only the Top and Bottom projectors (2).

13 - Lamp 115/24 -
This switch customizes the electronic dissolve curve to fit the type of projector you are using. The 115 position should be used with Ekta-graphic B2, E2, AF2, and B2AR projectors. The 24 position should be used with Kodak SAV or E3 projectors.

14 - Posi-Trak On/Off -
Posi-Trak locks the program to the Audio Track and Automatically re-syncs the projectors should any problem occur during the running of the show. This switch turns Posi-Trak on or off.

AL - Auxiliary Left -
where we can control additional equipment.

AR - Auxiliary Right control.

AC - AC Power Cord.

BT - Battery Plug.

Finally, the DOVE has a Cycle-Trak feature which senses an advance of the projector. Should a projector fail to advance, the DOVE recognizes it, and when the problem is resolved, auto-

matically advances it to its proper posiiton.

1.6 CONVENTIONS USED IN MANUAL

The following conventions are used in this manual.

CONTROL/C	A slash between the names of the keys indicate that the keys, in this case Control and C, must be pressed simultaneously.
<Ret>	This syntax means that the Return key must be< pressed to initiate the command or complete the< statement.
<Ret> (2)	If Return is followed by a number enclosed in parenthesis, Return must be pressed that many times to complete the CUE.

NOTES:

CHAPTER 2

AUDIO VISUAL SHOW PROGRAMMING

2.1 GENERAL

You now have some knowledge regarding AV Presentations, Projector Control, and setting up the Presentation environment. It's time to put this knowledge to use and add a lot more to it using the Effects we have to work with and by seeing how Programming really works.

2.2 THE EFFECTS

In Audio Visual Programming we will be working with the four most popular effects.

Cuts	-The instantaneous change from one image to the next with an Advance on the downgoing projector.
Dissolves	-The gradual change of images at different rates of speed with an Advance on the downgoing projector.

Alternates -Instant change with no projector advance.

Alternate Dissolves -Gradual change of images with no projector advance.

2.2.1 THE CUT EFFECT

There are three different types of CUTS available to us:

The Cut -An instantaneous change from one projector to the next with an automatic slide advance on the downgoing projector.

Soft Cut -This is not really a CUT. It is more like Fast dissolve. Where a CUT is instantaneous, a SOFT CUT takes approximately 1/2 second, and gives a smooth yet rapid transition from one image to the next. A very useful tool.

Hard Cut -Almost the same as the Cut but the downgoing projector starts its advance before the effect

is visible on the screen. It is most often used as a Programming tool in sophisticated Programming. It shortens the advance time of the downgoing projector.

2.2.2 THE DISSOLVE EFFECT

The DISSOLVE, a gradual transition of images, allows us to control the pace of a show, time sequences within the show, and provide our audience with a beautiful, ever-changing visual display.

There is an entire range of dissolve speeds available to us. If we include CUTS in the range it looks like this:

Hard Cut	1 Sec.	3 Sec.	6 Sec.	16 Sec.
Cut	2 Sec.	4 Sec.	8 Sec.	32 Sec.
Soft Cut				

2.2.3 THE ALTERNATE AND ALTERNATE DISSOLVE EFFECTS

These two effects correspond to the CUT and the DISSOLVE except that here there is NO SLIDE ADVANCE AT THE END OF THE CYCLE. The used slide is still in the gate ready to be used again. The entire

range of speeds noted under Dissolve is available to us for these two effects.

2.3 THE KEYBOARD FUNCTIONS

The Keyboard of your computer is completely functional for the GENESIS system. We simply use letters and numbers to designate what we want to happen. The functions we will be using are listed with their Keyboard designations.

Code Heading Entries:

FA	Fast Alternate	CT	Cut
AT	Alternate	HC	Hard Cut
SA	Soft Alternate	SC	Soft Cut
1A	1 Sec. Alt.	1D	1 Sec. Dis.
2A	2 Sec. Alt.	2D	2 Sec. Dis.
3A	3 Sec. Alt.	3D	3 Sec. Dis.
4A	4 Sec. Alt.	4D	4 Sec. Dis.
6A	6 Sec. Alt.	6D	6 Sec. Dis.
8A	8 Sec. Alt.	8D	8 Sec. Dis.
16A	16 Sec. Alt.	16D	16 Sec. Dis.
32A	32 Sec. Alt.	32D	32 Sec. Dis.

N	No Operation	PF	Proj.Forward
HOME	Prog. Home	PR	Proj. Reverse
S10	10 Cues/Sec.	W.05	Wait .05 increments
S20	20 Cues/Sec.	W10	Wait 10 Sec.

Screen Heading Entries:

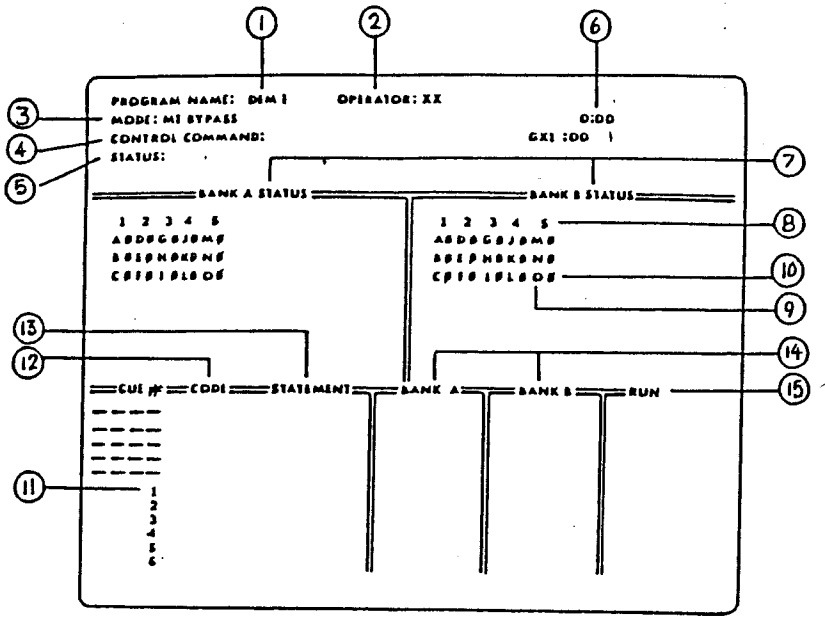
A thru O	Projector Designation on Bank A and Bank B
12345	Dove (Screen) Numbers on Bank A and Bank B

R Run - S Stop

2.4 THE MONITOR

This is the diagram of the Monitor with its area definitions. Since we will utilize much of the basic programming capability of GENESIS, it will be a simple matter to expand your experience beyond the Basic level.

1 - Program Name
2 - Operator Name
3 - Operating Mode
4 - Where you talk to GENESIS
5 - GENESIS talks to you
6 - Clock
7 - Projector Status
8 - Screen or DOVE Numbers
9 - Projector Designations
10 - Tray Positions
11 - Cue Numbers
12 - Short Definition of Function
13 - Expanded Definition
14 - Projector Designation Fields
15 - Cue Sequence Designation



The first series of Cues we program will make the Monitor very understandable.

2.5 PROGRAMMING - GETTING STARTED

To get started on Programming, we will use the following Cue Demonstration form until you become familiar with the process, then we will simplify it somewhat.

Throughout these demonstration sequences, the designation <Ret> is short for the RETURN Key and we will use Dove 1 and projectors A, B, and C on Bank A.

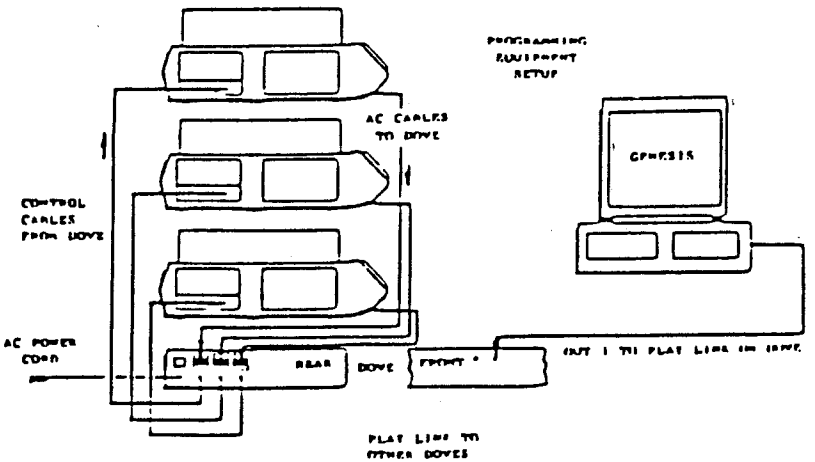
To perform a 2 Second Dissolve on the Top Projector (A), Dove 1, Bank A:

(Keys)	(Code)	(Stmt)	(Scrn)	(Actn)
2D 1<Ret>(2)	2D	2 Sec Dis 1		Top Proj (A) Comes On.

It's as simple as that! Decide WHAT you want to do, WHERE you want to do it, and push the appropriate keys. Certain aspects of programming will be covered in detail as the need arises - Editing, Cue-to-Cue Time, Sequence Programming, etc.

It would be helpful if you can work with a Projector setup as shown in the accompanying assembly diagram and enter

the Cues as we go along. Occasionally we will use functions that have not been explained. Enter them as indicated, they are used to control the Cue Lists and will be explained under Editing.



The Keys F9 and F10 will allow you to move Forward and Backward thru the Cue List to check it for accuracy. F9 moves Backward one step at a time if programmed in single steps, or to the beginning of the current Sequence or RUN Cue. F10 moves Forward in the same manner.

Q and CTRL/Q perform the same function except that they will move us Forward or Back ONLY ONE STEP AT A TIME whether in a Run or Single Step. Also, by pressing

Q or CTRL and Q, and holding them down, we can move thru the Program in Fast Forward or Fast Reverse Mode until you reach the desired point in the Program.

2.6 TWO TYPES OF PROJECTOR CONTROL!

It is important that you know there are two types of projector control. They are:

- Independent Projector Control
- System Projector Control

2.6.1 INDEPENDENT PROJECTOR CONTROL

By designating PROJECTORS A thru O, on each Bank, we can restrict action to any number of specific projectors. When we do this, only those projectors designated will react, all others remain as they are.

2.6.2 SYSTEM PROJECTOR CONTROL

By designating DOVE NUMBERS 1,2,3,4,5 for each Bank, we can allow the Genesis to cycle automatically thru all three projectors controlled by a single DOVE, Top to Center to Bottom, and back to the Top again, etc.

2.7 EASY THREE PROJECTOR PROGRAMMING USING CUTS ONLY

(Keys)	(Statement)	(Screen)	(Action)
CT 1<Ret>(2)	CUT	1	TOP Proj. (A) Comes ON.
CT 1<Ret>(2)	CUT	1	A OFF and advances B comes ON
CT 1<Ret>(2)	CUT	1	B OFF and Advances C comes ON
CT 1<Ret>(2)	CUT	1	C OFF and Advances A comes ON

In the example above, we have designated a 1 under the Screen Heading, therefore Genesis will automatically cycle thru all 3 projectors connected to Dove 1.

2.8 EASY THREE PROJECTOR PROGRAMMING USING DISSOLVES

By simply changing the Function we wish to do from CT to D (Dissolve) and adding a Dissolve Speed, we can change the entire character of the presentation. (At this point the Top projector (A)

should be ON.)

4D	1<Ret>(2)	4 Sec Dis	1	A goes OFF - Advances B comes ON in 4 Sec.
3D	1<Ret>(2)	3 Sec Dis	1	B goes OFF - Advances C comes ON in 3 Sec.
6D	1<Ret>(2)	6 Sec Dis	1	C goes OFF - Advances A comes ON in 6 Sec.
2D	1<Ret>(2)	2 Sec Dis	1	A goes OFF - Advances B comes ON in 2 Sec.

CUTS and DISSOLVES at different speeds can be intermixed to create a presentation paced to the speaker or the sound track music or voice.

2.9 ALTERNATES

Up to now we have programmed those functions that normally end up in an Advance of the downgoing projector. Alternates and Alternate Dissolves allow us to program sequences using LAMP

CONTROL only - no advance cycles. When we program Alternates we are simply turning the Lamp On or Off. When the sequence has been completed, we add a standard Cut or Dissolve Cue to Advance the downgoing projectors.

First, let's Clear the Memory.

CTRL/C then type CAC<Ret> Projectors to Start and Memory Clear.

Here is what an Alternate looks like Programmed for a System cycle (3 Projectors), on Dove 1:

AT 1<Ret>(2) Alternate 1 A comes ON at CUT speed

AT 1<Ret>(2) Alternate 1 A OFF, No Advance
B ON at CUT Speed

AT 1<Ret>(2) Alternate 1 A OFF, No Advance
C ON at CUT Speed

AT 1<Ret>(2) Alternate 1 C OFF, No Advance
A ON at CUT Speed

By simply designating a single projector, A, B, or C, we can apply Alternates to a single projector. This is how we Flash an image.

AT A<Ret>(2)	Alternate	A	A OFF, No Advance
AT A<Ret>(2)	Alternate	A	A comes ON at CUT Speed

This single Cue can be repeated as many times as you wish to continue Flashing the image in the A projector. In a minute we will do this effect automatically and continuously, but first let's look at an Alternate Dissolve.

2.10 ALTERNATE DISSOLVES

Again, by simply adding a Rate of Speed to the A in Alternate, we create a Dissolve with NO ADVANCE, or, an Alternate Dissolve. A should be ON.

2A A<Ret>(2)	2 Sec Alt	A	A OFF in 2 Sec. No Advance
6A A<Ret>(2)	6 Sec Alt	A	A ON in 6 Sec.

4A A<Ret>(2)	4 Sec Alt	A	A OFF in 4 Sec. No Advance

Once more, by designating only a Dove number and no projector letter, we can perform Alternate Dissolves using an entire System.

3A 1<Ret>(2)	3 Sec Alt	1	A ON in 3 Sec.
2A 1<Ret>(2)	2 Sec Alt	1	A OFF in 2 Sec. No Advance B ON in 2 Sec.
6A 1<Ret>(2)	6 Sec Alt	1	B OFF in 6 Sec. No Advance C ON in 6 Sec.
16A 1<Ret>(2)	16 Sec Alt	1	C OFF in 16 Sec. No Advance A ON in 16 Sec.

This style of Programming is effective while learning, but will soon give way to the next Functions we will cover.