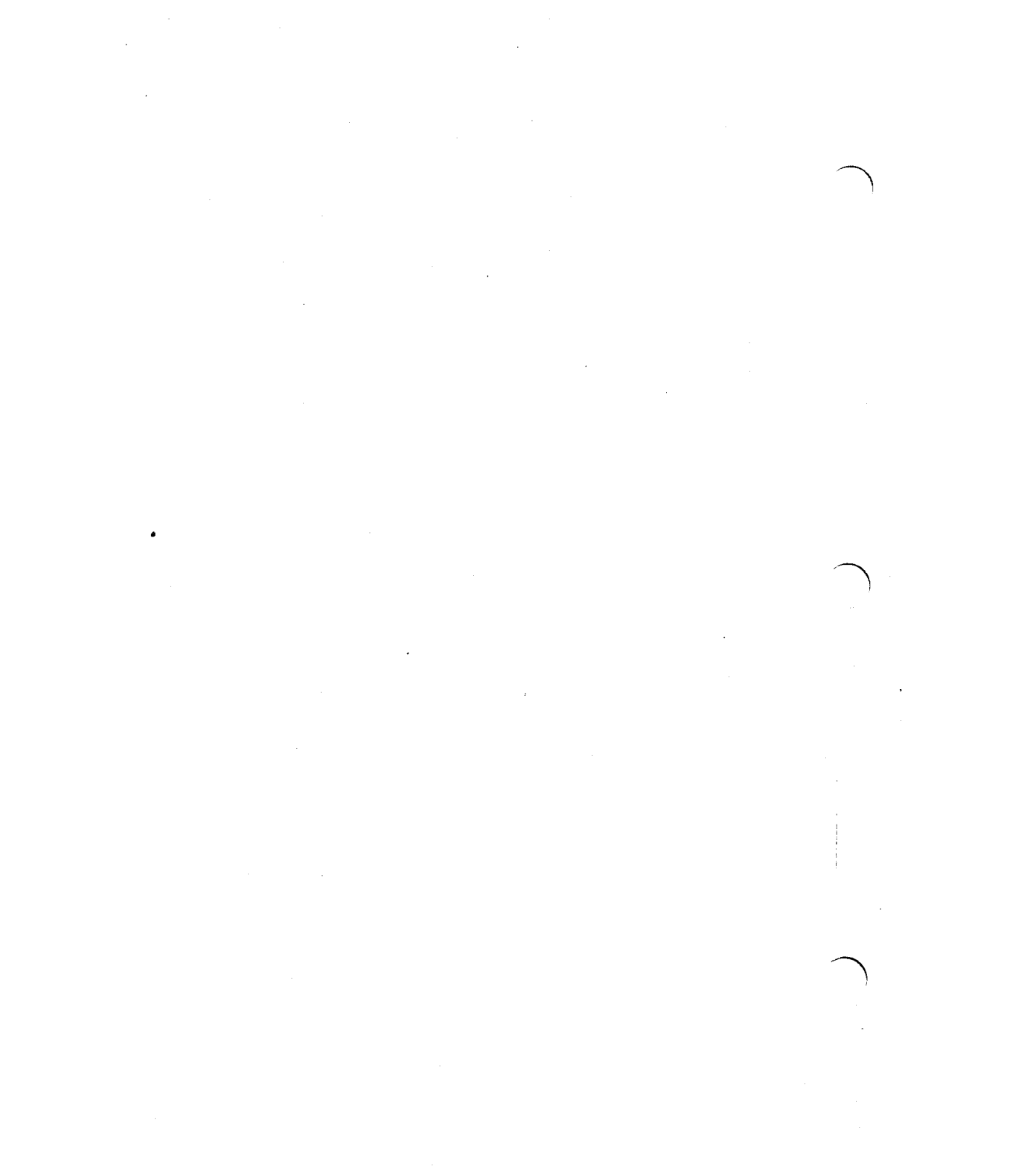


**AVL GENESIS**

**PROCALL-5**

**USER'S GUIDE**

**Audio Visual Laboratories, Inc.**



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## CHAPTER 1

### INTRODUCTION

#### 1.1 GENERAL

This User's Guide is designed to assist users of AVL Eagle's PROCALL Version 5 software in understanding and using the new AVL Genesis PROCALL-5.

If you are a new Genesis computer user, not familiar with the Eagle's PROCALL Version 5, use PROCALL-X software.

This User's Guide describes the additional and modified features of PROCALL-5. Also included is a listing of all valid command entries and instructions for creating, accessing, and restarting formats.

#### 1.2 PROCALL-5 FEATURES

AVL Genesis PROCALL-5 is the same as Eagle's PROCALL Version 5 except for the following:

- a. The Screen Status fields are displayed between the Control Command and the Programming fields.

- b. Special characters and use of the space bar are not permitted in file names.
- c. SMPTE is now offered as a timing code in addition to Clock-Trak.
- d. A HELP feature is offered as a listing of PROCALL-5 Commands and their use.
- e. Scrolling has been enhanced for a faster viewing of cues.

Paragraphs 1.3, 1.4, and 1.5 describe SMPTE, HELP, and Scrolling, respectively. Paragraphs 1.6 through 1.10 clarify descriptions of Showtime, Escape, Freeze/Preset, Mag Tape Bypass, and Status Line Display.

### 1.3 SMPTE OPTION

AVL's GENESIS now offers the option of being compatible with SMPTE.

The SMPTE (Society of Motion Pictures and Television Entertainment) time code is the standard timing and control code used by the motion picture and television industries today. SMPTE is used to mark and drive video tape decks,

audio tape decks, and other electronic devices that interface with video, and was primarily designed to control film and video editing. It provides for:

- \* Running Shows at speeds up to 30 frames per second.
- \* Running shows using video decks as well as the multi-image computer system.
- \* Running shows with all the components synchronized to one timing and control code.

SMPTE is like AVL's Clock-Trak in that it is a digital timing code which can be used to time cues. All rules concerning AVL Clock-Trak programming apply to SMPTE.

AVL's GENESIS will accept SMPTE input and generate SMPTE output, but it will not convert SMPTE to AVL Clock-Trak or vice versa.

To change the Clock Output Mode to SMPTE, enter the Control Command field and type SMPTE and press RETURN. On the Status line, AVL C will change to SMPTE.

#### 1.4 HELP FEATURE

Use of HELP provides a quick reference of commands. Included are Programming Commands, Editing Commands, Memory/Disk Data Transfer Commands, Mag Tape Control Commands, Editing, Print Commands, and X-15 Programming Commands.

To access HELP, at any point in the program, press the F1 key. To return to the program, press ESC.

#### 1.5 SCROLLING

The GENESIS permits scrolling at a rate of 10 lines per second through the cues in memory in both forward and reverse directions. Depressing the F10 key will initiate scrolling in the forward direction and the cues will move from bottom to top on the monitor. Depressing the F9 key will initiate scrolling in the reverse direction and the cues will move from top to bottom on the monitor. This replaces the REPEAT key not found on GENESIS.

Scrolling can also be started in the forward direction by depressing the Q (letter) key in a repeated manner. Likewise, reverse scrolling is obtained by depressing the Control key and then pushing the Q key. The message STANDBY

FOR GOTO will appear in the Status area indicating that scrolling has begun. A change of direction can be accomplished instantly as long as this message is displayed.

The GENESIS does not attempt to update Projector Status while scrolling is taking place. As soon as scrolling is terminated the GENESIS will update the Projector Status area and then send out the cues necessary to bring the lamp status and projector tray position up to date.

#### 1.6 SHOWTIME

The Showtime feature makes it possible to load a program from a disk into memory and come up ready to run a show just by turning the GENESIS computer on.

To use this feature simply save a copy of your program as "SHOWTIME" on the PROCALL disk. Thereafter, whenever the GENESIS is turned on and PROCALL is loaded, the GENESIS will take note of the SHOWTIME file and load it automatically. This will bypass the introductory sequences of PROCALL, and all of the program parameters, such as projector labeling and sequence 2/3 selection, will be set in accordance with the information stored as "SHOWTIME".

## 1.7 ESC (ESCAPE)

While in the Control Command field, depressing the CONTROL and P keys (CTRL/P) will return you to the programming field. However, AVL recommends the ESC (ESCAPE) key be used to return to the programming field from the Control Command field, to reduce the possibility of confusion with the Projector Disconnect command.

## 1.8 FREEZE/PRESET DISPLAY

To provide even more information to the user, current presets and freezes are displayed in the Status area. Similar to the case with loops and blinks, when there is a preset or freeze in effect, the first digit of the tray position will be blanked and a P displayed indicating a preset or an F indicating a freeze on that particular projector. Naturally, several letters cannot be displayed simultaneously in the same block so there is an order of precedence. A Loop or Blink status display will override a Preset status display and a Preset status display will override a Freeze status display.

## 1.9 MAG TAPE BYPASS

This is the normal default mode of the GENESIS. Whenever Genesis PROCALL-5 is loaded into the GENESIS it will automatically come up in Mag Tape Bypass and a message announcing this will be displayed on the screen.

If you decide to load a program which was saved on tape, the GENESIS will automatically switch modes and load the program into memory and then when the program is loaded it will revert to the Mag Tape Bypass mode.

In a similar manner the GENESIS will switch from Mag Tape Bypass to Clock Edit Mode automatically upon receipt of Clock Trak. When the Clock-Trak input stops it will remain in CEM mode until it receives data at the input, and at that point switch back to Mag Tape Bypass. If the GENESIS has been set up for a Mag Tape Load (SHOW PRO V compatible), touching any of the keys after the load is completed will return the GENESIS to the Mag Tape Bypass mode.

**NOTE:** The previous Control Command entries of MTB (Mag Tape Bypass) and MTN (Mag Tape Normal) are no longer necessary.

## 1.10 STATUS LINE

There is now a line in the program heading for Status. In some versions of PROCALL this line is left blank, except for an occasional comment. Now this line is shared by the Status comments, e.g: RCF, POF, PIF, and so on.

## CHAPTER 2

### GENESIS PROCALL-5 COMMANDS

#### 2.1 GENERAL

This chapter lists and describes the commands valid under AVL's Genesis PROCALL-5 software.

#### 2.2 PROGRAMMING COMMANDS

The subparagraphs that follow describe the Programming Commands used with AVL Genesis PROCALL-5.

##### 2.2.1 COMMANDS ENTERED UNDER THE CODE HEADING

###### CT (CUT)

A cut turns the lamp ON or OFF quickly. If the lamp is already ON, this will turn the lamp OFF and initiate a tray advance. If the lamp is OFF, it will then be turned ON. If you wish to cross from one visual to another quickly, a CUT will turn the ON lamp OFF and the OFF lamp ON, and the projector with the down-going lamp will perform a tray advance. A cut employs the after burner effect as described in the note below.

NOTE: A projector lamp does not turn on or off instantly with the application or removal of power. The lamp actually requires a fraction of a second to heat up or cool down. This is called the "thermal lag" of the lamp, and the lag is different for turning the lamp ON than it is for turning the lamp OFF. All AVL computerized dissolve controls automatically compensate for this effect.

Cuts and Alternates employ an "After-burner Effect" which allows the lamp to reach full intensity. Because of the time involved due to the lamp lag, the after burner does not allow the lamp to flash ON and OFF at 20 cues per second. Therefore, the Fast Alternate was created to defeat the after burner and to allow solo flashing and movement of visuals at 20 cues per second.

#### HC (HARD CUT)

A hard cut creates a sharper, harder image change on the screen. A hard cut closes the gate of the slide projector which shuts off the light before the lamp is turned OFF. The tray advances

to the next image and that projector is now ready to be turned ON again with the next slide. When HARD CUTS are used to make a transition between 2 visuals the change is much crisper than a CUT. This can be used to simulate the flicker of an old time movie when moving through many visuals rapidly.

#### SC (SOFT CUT)

A soft cut is a compromise between a cut and a one second dissolve. The projector with a down-going lamp will do a tray advance.

#### DISSOLVES

A Dissolve turns a projector lamp ON or OFF in a designated amount of time in seconds, creating a dissolve or a fade effect, e.g. 2D is a two second dissolve. You can create a cross-fade or dissolve from one visual to another using a dissolve in conjunction with two or more projectors. Again, the projector with the down-going lamp will have a tray advance.

1 D	6 D
2 D	8 D
3 D	16 D
4 D	32 D

## DISSOLVE ALTERNATES

These commands are equivalent to the Dissolves above but the tray is not advanced for the down-going projector. Dissolve alternates are also entered in a designated amount of time in seconds.

1 A	6 A
2 A	8 A
3 A	16 A
4 A	32 A

## AT (ALTERNATE or LT)

An Alternate turns the lamp ON or OFF with no tray advance. An ALT looks like a CUT on the screen.

## FA (FAST ALTERNATE)

A Fast Alternate turns the lamp ON or OFF as fast as the lamp allows. It is used to do alternates at 20 cues per second and roughly equates to a HARD CUT with no tray advance.

## FZ (FREEZE)

The AVL Genesis has the ability to stop any dissolve alternate while it is in progress and hold the light level at any light intensity. Freeze also allows

you to continue the dissolve in the same direction at the same rate or change the rate. You are also permitted to change directions using the same rate or a different rate. Only dissolve alternates should be used with a FREEZE.

**BG (BLINK GO)**

A Blink Go is used to initiate BLINKING in DOVE D'S and X's.

**BS (BLINK STOP)**

A Blink Stop is used to terminate a BLINKING sequence.

**AX (AUXILIARY FOR DOVES)**

This command is used with a screen and projector designation to obtain a momentary contact closure for control of auxiliary devices.

**HOME (PROGRAMMABLE RETURN TO BEGINNING OF PROGRAM)**

Home is used as a program function to return the program, slide trays, and lamp statuses to the home (cue #1) position. Home brings the lamps down and sends the trays to their original starting position by the shortest route.

NOTE: When HOME is part of a RUN sequence in the program, the program will assume it is to continue to run. The program will execute cue #1 and all subsequent cues in memory until it encounters a STOP command.

LDxx (PROGRAMMABLE LOAD OF FILE xx)

This cue automatically executes load from the disk into memory. When the LOAD FILE cue is executed in a RUN mode, the system will load the file xx. The program file system will then reset itself to cue number one and continue to run from that point. The tray and lamp status of the projectors will stay exactly the way they were before the load. Keep in mind that while the system is loading the file it is totally occupied. Pick a convenient slow period when no projector action is needed such as a wait or long dissolve.

LG (LOOP GO)

A Loop Go (LG) with DOVE X and D dissolves will cause all specified LOOPS to be repeated until told to STOP.

LL (LOAD LOOP)

Loop Load (LL) is used to instruct DOVE X's and D's to store a series of cues (ACTION CUES) in their memory as a routine that will be repeated.

LS (LOOP STOP)

Loop Stop (LS) will cause all LOOPS in progress on the designated DOVES to stop.

N (NO OPERATION)

This has no effect on the screen action. It equals a .1 second wait at 10 cues per second and a .05 second wait at 20 cues per second. N is also used as a convenient location for a RUN or STOP separate from any screen action.

PF (PROJECTOR FORWARD)

This cue, used with a projector and screen designation, will move the assigned projector tray forward one position without effecting the lamp status. Note that if you use PF with a screen number designation without specifying a projector, the system will assume that you want all projectors in the screen to move forward one position.

## PR (PROJECTOR REVERSE)

This command functions the same as the PROJECTOR FORWARD command except that it will reverse the trays one position.

## PS (PRESET)

This command Presets specific projectors to respond to the next action cue issued to the corresponding dissolve unit. This allows you to access projectors that do not have like projector assignments at the same time without the normal .1 or .05 seconds between cues. Preset allows simultaneous action on the assigned preset projectors when cued. Preset can also be used to deselect. In this case, you would select the projectors you do not want to respond. When a lamp command is executed on that screen the preset projectors will not respond.

## RPO (REPEAT UNTIL TERMINATED)

This cue is used if an undetermined number of REPEATS is desired. The RPO can be terminated by pressing the CUE (F10) key or using a REMOTE CUE. This command is useful when you are doing "live" portions of your program and the length of a sequence is not known.

## RPX (REPEAT X)

RPX allows you to let the AVL GENESIS determine the number of times the sequence has to repeat. It is used while you are in the RUN mode and actually viewing the sequence. Enter the RPX into the program and start the sequence running, when the desired number of repeats have taken place on the screen press the F10 (CUE) key to move on to the next part of your program. The AVL GENESIS will resolve the X to the number of times the sequence is repeated.

**NOTE:** When you press the CUE (F10) key to resolve the RPX, the system will finish the sequence in progress before moving on.

## RPxx (REPEAT xx)

This command is used to repeat a series of cues that have a RUN embedded in the first cue to that sequence. The number (xx) of times to be repeated can be from 1-255. Up to 10 consecutive (Nested) RP commands are allowed.

**NOTE:** When you repeat a sequence 23 times the sequence will actually

take place 24 times. The sequence will take place once and then be repeated 23 times.

Using Nested (consecutive RP) commands it is possible to create a sequence that has billions of cues. Use nesting with extreme care.

**S10 (SPEED = 10 CUES PER SECOND)**

S10 is used to shift speed from 20 cues per second to 10 cues per second. The AVL GENESIS will automatically select 10 cues per second when the system is first LOADED, when you CLEAR ALL CUES from the Control Command mode, or when you perform a HOME.

**S20 (SPEED = 20 CUES PER SECOND)**

S20 is used to increase the running speed to 20 cues per second.

**NOTE:** The AVL GENESIS can execute a program (run sequence) at 10 cues per second or at 20 cues per second. Either speed may be selected by embedding speed change cues in the program. At 10 cues per second the AVL GENESIS will wait .1 seconds between the time a cue is issued and the time a

subsequent cue is issued. At 20 cues per second the system will wait .05 seconds between cues.

A Run Sequence is initiated by using a RUN command (stopped by a STOP command) or with the use of time cues from the Clock-trak or SMPTE. A RUN sequence will execute until it encounters a STOP or the next time cue. Run sequences are used to fire a series of cues rapidly with precise timing.

#### SG (SMOOTH GO)

A Smooth Go (SG) is a DOVE D or DOVE X command which allows direction change at any point in a dissolve curve. This feature enables the programmer to produce a rippling effect by cueing other dissolves BEFORE the completion of the previous dissolve. If this procedure were done without SMOOTH GO, the previous dissolve would move to its ending state when another dissolve is cued in, giving a popping effect.

#### SS (SMOOTH STOP)

A Smooth Stop (SS) is used to return all DOVES to normal from SMOOTH state.

**TBxx (TAB xx)**

This is a label which may be nested in the program to mark different sections of the show, where xx may be any two characters.

**TMxx (TIME hh:mm:ss:ff)**

Time cues in .01 second steps may be located in the program at any desired point. In this format "hh" is hours, "mm" is minutes, "ss" is seconds and "ff" is hundredths of seconds. You do not have to enter unused fields. For example:

10	Becomes 10 Seconds
10:	Becomes 10 Minutes
10: :	Becomes 10 Hours

The maximum value for a time cue is approximately 11 hours and 39 minutes. A time cue of 0.00 is not valid. If you should attempt to enter a time cue less than or equal to the current time, the system will reject the cue and issue a message on the status line. A time cue is essentially a null cue, that is, nothing goes out the mag tape channel when it is executed. When a MAG TAPE SAVE (MSV) operation is performed the time cues are recorded on the tape. A time cue takes less than .01 seconds to execute.

When PROCALL encounters a time cue while in the RUN mode, it will cause the program to stop. PROCALL will then wait until the clock equals the value of the time cue and then put the program into the RUN mode again.

#### TX (TIME X)

TX is used to mark the beginning of a timed (RUN) sequence using the Clock-trak or SMPTE. The X value is resolved when you press the F10 (CUE) key.

#### W.05 thru W10 (WAIT TIMES)

Waits are computer-generated timing links that allow you to time out action sequences precisely. These times are entered into the program in the form of wait cues ranging from .05 seconds up to 10 seconds. If a wait time longer than 10 seconds is desired, you may use consecutive wait cues to achieve the desired wait time.

**NOTE:** Because of the convenience of using Clock-trak or SMPTE, we strongly suggest that you use it instead of WAIT commands for times in excess of 2.0 seconds.

## WX (WAIT X)

This cue is used when the proper timing of a sequence has not been determined before programming. The WX cue is resolved to the nearest .05 second when you are operating at 20 cues per second and to the nearest .1 second when you are operating at 10 cues per second. The WAIT X is resolved by pressing the F10 (CUE) key during the running of the particular section.

### 2.2.2 COMMANDS ENTERED UNDER THE SCREEN HEADING

#### G (GO)

The GO command is used in the screen area of the display line to designate one of the following:

1. To mark the beginning of a REPEAT sequence.
2. To initiate a RUN sequence.
3. As a reference point.

#### S (STOP)

A stop command is used in the screen area of the display line to designate one of the following:

1. To mark the end of a RUN sequence.
2. To stop the screen action when using Clock-trak or SMPTE.

## P (PROCEED)

When running 20 cues per second, this is a 1/40th second link between two cues referencing different Banks. Its purpose is to approximate being able to make two separate cues happen at the same time. For example:

AT	ALT	1234	P
2D	2 SEC DIS		

## SCREEN NUMBERS

Possible screen numbers on OUT 1 (BANK A) and OUT 2 (BANK B) are 123456789.

## PROJECTOR NAMES

ABC	Projector names A, B, and C.
LCR	Projector names left, center, and right.
TCB	Projector names top, center, and bottom.

### 2.2.3 COMMANDS FOR EDITING PROGRAMS

Editing is a very important part of programming. The commands described below will assist you in editing your program quickly and easily.

Certain keys have dual functions and some keys are used in conjunction with the Ctrl key. For purposes of notation, to indicate that two keys are to be pressed simultaneously, a slash (/) is inserted between the names of the keys, e.g: CTRL/A.

#### CTRL/A (ADD A CUE)

This allows you to open up the memory and insert a cue into your program. This will move all subsequent cues down one cue number in the memory. Same as Ins (Insert) key.

#### CTRL/B (REVERSE TO PREVIOUS TAB)

This functions the same as CTRL/TAB.

#### CTRL/C (CONTROL COMMAND)

This is the way to enter the Control Command mode.