

COYOTE

USER'S GUIDE

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INTRODUCTION

The COYOTE is a unique new memory programmer with a built in dissolve unit for three (3) projector shows.

The COYOTE's 900+ cue memory, intelligent alphanumeric display and special programming features such as WAIT X, REPEAT X, SMOOTH and BLINK, make this a truly professional unit.

The alphanumeric Display Line, shows the cue that has been entered, such as 001 32D ABC (CUE number 001, 32 second dissolve, projectors A, B, and C). The display line also indicates special conditions such as SAVE, LOAD, VERIFY or STANDBY.

The COYOTE's tactile response keyboard is flexible, color coordinated and labeled with both commands and codes. Simple to complex sequences can be programmed in leisure time; using BLINK, SMOOTH, CUT, ALT, FAST ALT, FREEZE, ADD CUE, DEL CUE, REV Q, and other AVL programming features. These effects can be recorded with Positrak for reliable playback through the all current AVL PROCALL 5 compatible products.

For those of you that have never used AVL equipment, we advise that you take the

time to read this manual before you program a show. The COYOTE is an easy programmer to work with once you have an understanding of its functions.

USING THE COYOTE AS A PLAYBACK UNIT

The COYOTE can be used as a dissolve unit in place of a DOVE for shows programmed with more than three (3) projectors. You will notice the ASSIGN SCREEN button on the keyboard, this is used like the screen select switch on the front of the DOVE. The COYOTE will automatically playback screen #1 but you can assign it to playback screens 2 through 5. This is done by pushing the ASSIGN button along with the correct screen number. To change screen assignment press RESET and CLEAR and make the necessary change.

When the COYOTE is being used for play-back you can "daisy chain" the dissolve units being used in the same manner as you would DOVES. You might need to use a "Y" cord to do this depending on which screen the COYOTE is assigned to.

NOTE: The memory must be clear before you ASSIGN SCREEN on the COYOTE.

MAG TAPE BYPASS MODE

NOTE: The COYOTE will automatically be in the MAG TAPE BYPASS condition. This allows you the following flexibility:

- 1. Run a show that has the Data Trak on tape through the COYOTE and bypass loading the program into memory.
- 2. LOAD a program directly into the memory, then run the taped show with a Data Trak allowing you to mix "-live" from the memory and "canned" from Data Trak.

PHYSICAL DESCRIPTION

This section will describe the physical characteristics of the COYOTE and the intended use for each. The programmer has three (3) areas; the KEYBOARD, DISPLAY PANEL (located just above the keyboard), and the REAR PANEL.

KEYBOARD

The keyboard is the communication path to the COYOTE. The buttons are flexible and the functions are color coordinated for ease of operation. A breakdown of the colors and their functions is as follows:

RED: MEMORY, CUE, and MAG

TAPE COMMANDS

BLUE: PROJECTOR ACTION COM-

MANDS

GREEN: DIGITAL PAD .

YELLOW: PROJECTOR DESIGNATION

and DOVE EFFECTS

Each button is imprinted with the command and the compatible PROCALL 5 code.

DISPLAY PANEL (LEFT)

Three LEDs (light emitting diodes) with the following functions:

20 CPS (RED) 20 CPS - Lights when the unit is operating at 20 cues per second. When LED is off the unit is operating at 10 cues per second.

AMP OK (GREEN) AMPLITUDE OK - Lights when the PLAY IN jack on the rear panel is receiving a good Mag Tape signal.

MT ERR (RED) MAG TAPE ERROR - Lights when an error has been detected in the MAG TAPE signal being received. A blinking lamp indicates that only one pass has been received. The LED remaining lit indicates that a cue was dropped.

DISPLAY LINE (CENTER)

The Display Line is the COYOTE's communication path to you, with 12 alphanumeric characters. It displays the cue you are presently programming or previews the next cue when in a RUN mode. It allows you to view the CUES and CODES while they are entered. The operating mode of the COYOTE is also displayed.

1. PROGRAMMING In this mode the display line may look like this:

001 32D ABCG

001 represents the CUE NUMBER. 32D is the CODE ENTRY and in this case represents a 32 second dissolve. ABC is the designation of the projectors. G at the end of the assignment area is GO and-tells the COYOTE to enter the RUN mode.

2. DISPLAY This mode indicates a special condition in the operation of the COYOTE. MEM SAVE and VERIFY are for memory to mag tape transfer; MEM LOAD, for mag tape to memory transfer. STANDBY and ASSIGN SCREEN indicate projector disconnect and screen selection respectively.

DISPLAY PANEL (RIGHT)

A, B, C, these three red light emitting diodes represent the projector assignments and lamp status. The LED will-light when you program the COYOTE to turn the projector lamp on.

REAR PANEL

Facing the REAR PANEL the features from left to right.

DISSOLVE CABLES

Three-seven pin cables, labeled C, B, A to connect the projectors:

PLAY IN

The PLAY IN RCA jack is used for receiving all DATA information. e.g. to LOAD in pro-

gram information stored on mag tape, VERIFY or SAVE tapes and play DATA information through the COYOTE without entering it into memory.

REC OUT

The RECORD OUT RCA jack is used for all outgoing DATA information. e.g. to record for storage or program information in real time.

REM CUE

The REMOTE CUE jack is a KODAK female 5 pin. It is used to CUE and REVERSE CUE the COYOTE from a remote location. This connector is also the AUX RIGHT output.

POSITRAK ON/OFF

Positrak locks your program to the audio track and will automatically resync your show should any showtime mishap occur. This switch turns Positrak output and input, on or off.

SEQUENCE 2/3

In SEQUENCE 3 the COYOTE will access

all three projectors in this order A, B, C. In SEQUENCE 2 the COYOTE will access two projectors the A and C (left and right) only. The B (Center) projector can be accessed by assigning it independently with the command and projector designation (B).

POWER CORD & ON/OFF SWITCH

Always make sure the POWER switch is turned OFF before plugging the unit in.

115/220 SWITCH

This switch is located UNDER the unit and is used to select the proper line voltage of either 115 or 220 VOLTS AC. The unit can operate at 50 or 60 Hz with no switching required.

HOOK UP

- 1. Check that the power switch on the COYOTE is in the off position. (Red Dot showing).
- 2. Set the 115/220 switch to the proper

voltage setting. NOTE: the COYOTE will sense 50 or 60 Hz and automatically compensate the dissolve curves for Ektagraphic projectors. SAV, QBC or Buhl Hilite projectors require special adapters made for the COYOTE.

- 3. Connect the three 7 pin dissolve cables from the back of your COYOTE to the three Kodak Ektagraphic projectors. Cable A to projector A (left or top), Cable B to projector B (center), and-Cable C to projector C (right or bottom).
- 4. Plug the AC power cords from all three projectors and the COYOTE into the same AC receptacle, by using a multiple outlet extension cord or strip. This will eliminate phasing difficulties. It is very important to check that the AC outlets are wired properly using an AC receptacle tester.
- 5. Switch all projectors to FAN position on the rear of the projectors.
- 6. On the rear panel of the COYOTE set the sequence switch to three projectors.
- 7. Turn the COYOTE on, unit will disp-lay 001.
- 8. Place trays on projector, align and focus.
- 9. Now set trays to the positions you want as the home tray position.

Now you are ready to start programming.

PROGRAMMING THE COYOTE

With the slide projectors now in use by the AV industry, we can do these 4 major functions:

- 1) turn the lamp on
- 2) turn the lamp off
- 3) forward the tray position
 - 4) reverse the tray position

With the technology of the microprocessor computers and the versatility of the COYOTE, you as a programmer will be able to do much more with your projectors and therefore improve the end results. For best results we recommend using glass mounted slides and the 80 slide universal trays.

It is easy to program a cue (command) into the COYOTE's memory. The COYOTE's commands are English based Procall 5 (also used in programming the ROADRUNNER EAGLE and GENESIS units) and the KEYBOARD spells out the function with the CODE above as it appears on the DISPLAY LINE. An example: press ALT, then press the CUE button and the A projector lamp is lit. Also notice that the DISPLAY LINE shows 002, which indicates you are on cue #002. In the center of the COYOTE KEYBOARD is a decimal pad. Use this pad to enter any number into the memory of the COYOTE as you would a calculator. For example to

program a 32 second dissolve, press the #3 and the #2, then DISS and now press the CUE button. On the screen is a 32 second dissolve between the A and B projector. To program a WAIT of 5 seconds press the WAIT button, then the #5 and press CUE.

Following page is an exercise which will demonstrate most of the COYOTE's functions.

Enter the CUES shown into the COYOTE's memory by pressing the appropriate buttons and then the CUE button. If you have any questions about the terms used, there is a GLOSSARY in the back of the manual. The GLOSSARY has definitions and the descriptions of the codes and commands and what they mean to you in terms of time and versatility. The best way to learn is to use the computer and see how easy programming can be.

CUE	# COI		YBOARD TRY
001	CT	CU	r
002	1D	1	DISS (DISSOLVE)
003	2D	2	DISS
004	3 D	3	DISS
005	4 D	4	DISS
006	6D	6	DISS
007	8 D	8	DISS
800	16D	16	DISS
009	32D	32	DISS
010	HC	HAH	RD CUT

011	\mathtt{AT}	ALT (ALTERNATE)
012	1A	1 ALT
013	2A	2 ALT
014	3A	3 ALT
015	4A	4 ALT
016	6A	6 ALT
017	8A	8 ALT
018	16A	16 ALT
019	32A	32 ALT
020	FA	FAST ALT
.021	G	GO
022	S	STOP
023 .	FZ	FREEZE
024	PF	P FWD (PROJECTOR
		FORWARD)
025	S10	SPEED 10
026	S20	SPEED 20
027	WX	WAIT X
028	RPX	REPEAT X
029	BG	BLINK GO
030	BS	BLINK STOP
031	SG	SMOOTH GO
032	SS	SMOOTH STOP

To get back to the beginning of this exercise there are many methods, the first is to press RESET and wait for projectors to Home. Second REV Q through the cues entered one at a time or by pressing the REV Q button and the RUN button at the same time. This allows you to reverse to a certain cue when that becomes necessary.

Now that you are back at the beginning, CUE each dissolve and watch the screen. You will notice two things: first, that you are required to press the CUE button

for each command, second, in SEQUENCE 3 the COYOTE will acess all three projectors in order A, B, C and then repeats the pattern. In SEQUENCE 2 the COYOTE will access two projectors the A and C (left and right) projectors only. You can still access the "B" projector by assigning it independently with the command and projector designation. In this manual, we will use SEOUENCE 3.

INDEPENDENTS:

Special note should be given to Independents. Independents directly assign the projector(s) on which a particular action will take place rather than the normal sequencing of projectors. The projectors will always sequence in the normal manner (A to B to C back to A etc) if not assigned independently.

The projector FORWARD command uses Independents differently. When unassigned, Projector FORWARD advances all three projectors. The Independent causes only the assigned projector(s) to advance.

Enter these commands to review the normal sequence.

	CONDITION	CUE	RESULT
1.	No lamps on A lamp on		A lamp on. A lamp off, B lamp on.
3.	B lamp on	Press ALT	B lamp off, C lamp on.

- 4. C lamp on Press ALT C lamp off, A lamp on Enter these commands to use Independents and FORWARD:
- All lamps A lamp on Press ALT BC 5. on All lamps Press P.FWD All pro-6. jectors on advance Only pro-All lamps Press P.FWD A ₄7. jectors

Press HOME, all lamps will go to black, trays will return to original position.

advance

BASIC PROGRAMMING STEPS

Our intention in this section is to il-lustrate some of the approaches to programming, by covering most of the basic kinds of entries. The best way to work the exercises, is to review them with whatever slides you have available. Place them in the trays and enter the commands as you proceed. If you reach a section of the exercise that requires different slides, take the time to change them, so you can view the effects properly.

Before we start if there are cues in the memory of the COYOTE you have to RESET/CLEAR first. To do so, first press RESET and wait until all the projectors are home. If you do not, the projectors will have established a new home point.

on

Now press and hold RESET, press CLEAR and release, that will clear the memory.

NOTE: If while programming you press CLEAR accidently, you can REV Q. Then CUE and the command will be there again. CLEAR does not wipe out the memory, only clears the DISPLAY LINE. But if you enter another cue on that line, it will replace what was previously in memory.

Now you are ready to program a RUN sequence. The difference between the sequence you programmed above and the RUN sequence, is that every command in the previous sequence required you to press the CUE button. The WAIT and the REPEAT had no function as they require a GO command to start.

Enter to	he foll CODE	_	commands:
001	2 D	G	2 DISS GO
002	W2		WAIT 2
003	2D		2 DISS
004	W2		WAIT 2
005	\mathtt{CT}	S	CUT STOP

After entering the commands, press REV Q. The DISPLAY LINE shows that it is back on CUE #001 and projectors are HOME. In a RUN sequence, when you REV Q the COYOTE will reverse to the nearest GO. Which in this case was CUE #001. This is an example of a RUN sequence with WAITS. Press CUE and review your program on the screen.

EXPLANATION:

CUE	#	COM	IAND	DESCRIPTION ENTRY
001		2D	G	2 Second dissolve on the A projector. The GO starts a run se- quence.
002		W2		In the run sequence the wait stops the COYOTE from executing any cues for a period of two seconds before
		•		going to the next cue.
003		2D W2		This 2 second dissolve causes the A projector to fade down to black and advance the tray and the B projector to fade up. Again in the run sequence, it causes a wait period of 2 seconds before exe-
				cuting the next cue.
005	,	CT	S	This CUT causes the B lamp to turn OFF and advance the projector turn ON the C lamp. The STOP ends the run sequence.

The next exercise shows a REPEAT sequence.

006	1A G	1 second alternate fades down the C pro- jector and fades up the A projector with- out a tray advance.
007	W.9	Wait of 9/10th of a second before executing the next cue.
008	RP8	REPEAT cues 006 and 007 eight (8) times to create an animation type sequence. Causing a fade from A to B to C projector etc. until all 8 repeats have occurred and you are on C projector.

The REPEAT will begin at the nearest GO and execute all the cues back to the RE-PEAT. This will continue until all the repeats are executed. The sequence repeated 9 times because the COYOTE runs the sequence a first time and repeats 8 times for a total of 9.

NOTE: You will notice that we used WAIT .9 here instead of WAIT 1, this is because we are running at 10 CPS and the combination of .9 and .1 reading time is enough to achieve the full dissolve.

Try changing the WAIT .9 at #007 to change the tempo. To change a cue, press

CLEAR and enter the new command. Next replace the 1 second ALT with a different rate and increase the wait time.

The next exercise moves through a number of visuals rapidly, and will demonstrate another use of the REPEAT function. Make sure you have the cues we have programmed so far in the memory.

Now enter the following cues:

009	W.9	WAIT .9
010	AT C	AT C
011	HC G	HARD CUT GO
012	W.35	WAIT .35
013	RPX	REPEAT X
014	HC S	HARD CUT STOP

EXPLANATION:

009	W.9	Wait 9/10th second allows the previous dissolve to finish.
010	AT C	ALT C brings all lamps to black.
011	HC G	Hard Cut brings the A lamp on, the GO marks the begin point of the REPEAT sequence.
012	W.35	Wait .35 seconds before REPEAT X.
013	RPX	Repeat X times, resolved by returning

to #011 Press Cue, allow sequence to run desired number of passes. Press CUE, X will change to the number of passes completed.

014 HCxxS

Hard Cut on xx, Stop. The A, B or C lamp will be On, depending on the number of Repeats completed. To start the next exercise the B lamp should be on. If the A lamp is On, xx This should be AB. will bring A lamp down and B lamp On. If the B lamp is On, press Stop only. If the C lamp is On, xx should be BC. will bring B lamp On and C lamp Off. Stop, the Run ends sequence.

REV Q back to cue #011 and press CUE, the sequence will run in real time.

This exercise shows how to FREEZE a dissolve in progress, so we can superimpose a title slide over it. Program the following commands, then REV Q., you should be at cue 015.

015 N G (NO OPERATION GO)

016 017	2D AC CT B	2 DISS A C CUT B
018 019	W.9 FZ C	WAIT 9/10 FREEZE C
EXPLANATIO	ON:	
015	NO G	No operation Go, the No Op is used as a space holder. The Go starts the next sequence.
016	2D AC	2 second dissolve on A and C projector cause a superimposition on the screen. The A and C are independents and override the normal sequencing of projectors. In this case dissolve up both projectors.
017	CT B	Cut of B projector to black. Again an independent is used to direct the CUT to the B projector.
018	W.9	Wait of 9/.10 of a second is used to allow time for C projector to reach a level of light intensity.

NOTE: Total time before C projector is frozen is 1.1 second. Add the 9/10 WAIT with a 1/10 for the CUT on cue 017 and a 1/10 for the FREEZE command, that totals 1.1 second.

019 FZ C

Freeze to stop the 2 second dissolve (in cue #016) C projector from continuing to dissolve up.

To change the effect, have B projector fade down at the same rate as A and C projector fade up. REV Q to cue #016, press B then CUE. Use the STEP REV Q four times to end at cue 016. If you just press REV Q, you would be back on cue #015, because the program is in a RUN sequence.

Now that you are on cue #016; press B, press STEP and CUE together to advance one cue. Since the program is in RUN pressing only cue would start the sequence. To move forward one cue at a time in a run sequence press STEP and CUE together.

Cue #017 is no longer needed, because B is added to cue #016. Press DEL CUE-which erases the CUT B from memory and pushes all the cues in memory back of cue

#017 down one cue. Cue #018 is now cue #017 etc.

BLINKING:

BLINKING allows you to blink a projector or a series of projectors at 2 different rates with one Cue. To start the BLINK-ING you enter a BLINK GO command and select the lamps to dissolve up or down.

To stop the BLINKING you have to enter a BLINK STOP.

Here we will try the BLINK effect while dissolving down C and B projectors.

019	Wl	WAIT 1
020	8D BC	8 DISS B C GO
021	BG	BLINK GO
022	WX	WAIT X (Wait for the
		lamps to dissolve
		off before resolving
		this cue.)
023	BS	BLINK STOP

After entering the commands press REV Q. You will be on cue #015 (nearest GO). Press CUE and watch the screen when the dissolve is completed press CUE to resolve the WAIT X on cue #022.

EXPLANATION:

019 W1 WAIT of 1 second to allow time of last effect to be seen.

		,
020	8D B C	8 second dissolve on B and C projector to
		fade to black. You will notice the C lamp faded down before B did. The C projector was frozen and did not require the same time to dissolve down.
021	BG	BLINK GO starts the B and C lamps blinking on and off while dissolving down.
022	wx	WAIT X is used to allow enough time for the dissolve to complete before the BLINK STOP is executed.
023	BS	BLINK STOP used to stop the blinking effect. Even though the lamps are not blinking we want to stop them before next effect begins. Otherwise, the next lamp up will start blinking.

Enter the following commands into memory:

024 8A ABC 8 SEC ALT A B C

025 BG -

BLINK GO starts flashing the lamps every 1/10 second in the following Sequence:

1 A goes off. 1st 10th

2nd 10th 1 A comes on and 1 B goes oir.
3rd 10th 1 B comes on and 1 C goes off.

1 C comes on and 1 A goes off. 4th 10th 5th 10th

1 A comes on and 1 B goes off.

Continues until stopped.

If you blink only two of the projectors on the screen the COYOTE will cause each to be flashing on for 2/10th of a second and off for 1/10th of a second, where the first is on for 2/10th of a second, the second projector on for 2/10th of a second (overlapping the first 1/10th after the first comes on) then back to thefirst.

Enter the following cues into memory:

026 . W8 WAIT 8 027 AT B ALT B

8 SEC ALT A C 028 8A AC

In this example only the A and C projectors will be BLINKING as they dissolve down. The A projector will come on for 1/10th of a second, 1/10th later the C projector will come on, 1/10th later the A will go off, 1/10th later the C will go off and the A will come on, then back through the cycle again until terminated by a BLINK STOP.

EXPLANATION:

026	WAIT 8	WAIT 8 seconds for the last sequence to be on the screen and then start this sequence.
027	ALT B	The ALT on the B pro-

jector was used to eliminate the B lamp from flashing in this sequence.

The BLINK command only blinks projectors that are on or are dissolving up or down. When the lamp dissolves completely off the lamp will stop blinking. If the lamp comes on again the blinking will start.

028	8A A C	An 8 second dissolve alt on the A and C projectors starts the dissolve down. Using one projector we can set up a flashing effect.
		effect.

029	W8	WAIT 8
030	4A A S	4 ALT A STOP

In this case the A projector will be ON for 2/10th of a second and OFF for 1/10th of a second.

Running at 20cps (cues per second) will

give the same effects only faster.

031	S20 G	SPEED 20 GO
032	6A BC	6 ALT B C
033	W6	WAIT 6
034	BS	BLINK STOP
035	W.1	WAIT . 1
036	1D ABCS	1 DISS A B C STOP

EXPLANATION:

In this example we have B and C projector dissolve up in six seconds, while the A projector is at full intensity. All-three projectors are flashing for six seconds and then stop. Wait a 1/10 of second then dissolve down all three projectors in 1 second and advance one.

The next effect is a three step animation that dissolves in and out again while blinking.

037 038	CT AC G W1	CUT A C GO WAIT 1
039	BG	BLINK GO
040	3D ABC	3 DISS A B C
041	WX	WAIT X
042	3D A .	3 DISS A
043	WX	WAIT X
044	3D B	3 DISS B
045	WX	WAIT X
046	3D C	3 DISS C
047	WX	WAIT X Wait for the
		lamp to go OFF
		before resolving.
048	BS	BLINK STOP

EXPLANATION:

This exercise illustrates starting an animation sequence with the lamps off, dissolve the lamps on while blinking the three lamps. Time the animation to dissolve off at the series of WX cues, that dissolve the projectors off individually and stop the animation (BLINKING) with the last WX cue.

The BLINK GO can be used either before or after the dissolve for the controlled projectors. The difference depends on what you want the lamp status to be when you assign the BLINK STOP. The BLINKING projectors will always assume the status of the memory when the BLINK GO was assigned.

Go back and reverse the order of cues #039 and #040. Now A, B and C will come on after the BLINK STOP.

Dissolving while flashing an animation sequence can be programmed without a-BLINK command using the FAST ALT and RE-PEAT. FAST ALT is similar to BLINK with the exception that with FAST ALT it is necessary to repeat the cue the number of times you want it to flash on and off.

With FAST ALT, to do an intensity controlled dissolve you have to REPEAT the FAST ALT. To sue BLINK enter a dissolve and BG (BLINK GO), an intensity control-

led dissolve will occur with no further commands from the COYOTE except to stop the BLINKING.

050	S20 G	SPEED 20	GO
051	3D A C	3 DISS A	С
052	FA	FAST ALT	
053	FA A CG	FAST ALT	A C GO
054	RPX	REPEAT X	
055	HC A C	HARD CUT	A C
056	HC A C	HARD CUT	A C
057	WX	WAIT X	
058	3D A	3 DISS A	
059	W3	WAIT 3	

EXPLANATION:

The two projectors are told to dissolve on, and FAST ALT between the two, A amount of times. When the light intensity reaches full brilliance or whenever you want the flashing to stop, terminate the REPEATING by pressing CUE to resolve the REPEAT X. After the repeat is complete, the animation sequence will HARD CUT, allowing the last slide to remain on the screen.

The WAIT cue at #059 allows the dissolve to finish and be ready to start a new sequence. The lamps must be told to come on all at the same time or go off at the same time in order for the effect to work properly.

FREEZING:

FREEZING a dissolve to control the brig-

htness of the lamp (and therefore the brightness of the slide) for looks, Supers or to create other special effects.

CODE	SCREEN	
060 061 062 063 064 065	3D A G WX FZ A 1D B WX 1D	3 DISS GO WAIT X FREEZE A 1 DISS B (SUPER) WAIT X 1 DISS (This can be another FZ if you wish to continue the dissolve at the

same rate.
066 WX

EXPLANATION:

The FREEZE is used to freeze the dissolve in progress, you assign a dissolve to the projector you wish to FREEZE, then waiting the amount of time to get the lamp to the proper intensity (if you use a WX you will be able to see the lamp fade to the point you want, then press CUE to resolve it) then assign the FREEZE.

To have the lamp continue in the same direction it was going when told to FRE-EZE, and at the same rate you can just assign it to FREEZE again (with projector assignment), actually telling it to release the FREEZE.

SMOOTH allows two new effects. First the SMOOTH is a change in the way the

lamp of the projector is Ramped on and off. Without SMOOTH the lamp will ramp on faster at first to allow light to reach the screen faster and to make a smooth transition between the oncoming and the outgoing slides. With SMOOTH the lamp no longer has this fast start up and therefore has a smooth start up and follow through for the entire dissolve.

Second, in SMOOTH the lamp will no longer come to full brilliance on an oncoming dissolve when you tell it to go off before it has reached its full intensity or all the way off when you are doing a dissolve off and tell it to come on again. This now allows you to do a ripple dissolve effect of what is termed a continuous dissolve effect.

EXAMPLE: If you do a 4 SEC ALT and a WAIT 2 SEC than another 4 SEC ALT and another 2 SEC WAIT etc. the effect that will occur on the screen will be onewhere the lamp stats on with a 4 second dissolve and after 2 seconds will change directions and begin to dissolve OFF then after 2 seconds begin to dissolve ON again and so on. To return back to normal dissolve, program a SMOOTH STOP.

067	SG	SMOOTH GO
068	4A ABCG	4 SEC AT A B C GO
069	BC	BLINK GO
070	W2	WAIT 2 SEC
071	RP12	REPEAT 12 TIMES

EXPLANATION:

In this example you will see the dissolve never reaches full brilliance on thescreen and has a rippling effect and a Blinking at the same time.

NOTE: Whenever you press STEP by itself, this will execute an ESCAPE. ALL action will stop and the status of the projectors will take the status at the time of the escape.

Our last cue to program is a HOME cue to return all projectors to home tray position.

This section illustrated the basic approach to programming and the COYOTE features of Blink, Smooth, Freeze and Independents. The next section will deal with transferring the program from COYOTE memory to mag tape.

STORING COYOTE PROGRAMS ON MAG TAPE

After you have created a program in memory, you will want to store that program on mag tape. There are two methods for storing the program. One method is designed to let you reload the COYOTE with the same information that was in the original program or directly from a ROAD-RUNNER. The second method is to create a show tape for real time playback. In either case, you must be at cue #001 to Store the whole program or at the cue number that begins the section you wish to store.

Below are outlined the basic set ups for both procedures and an explanation of the differences.

SET UP FOR STORING PROGRAMS ON MAG TAPE:

To set up for storing the memory, you will need a tape reorder, a good quality audio tape and two RCA phono cables.

- 1. Connect one end of one RCA cable to the "RECORD OUT" jack on the Rear Panel of the COYOTE and the other end to the "line input" of your tape recorder.
 - 2. Connect the other RCA cable to the "PLAY IN" jack on the COYOTE and to the corresponding "line output" jack on the tape reorder. NOTE: Some tape decks allow an input signal to go directly out the "line output", this causes the COYOTE to return to MAG TAPE BYPASS, and makes it impossible to process the information. If the AMP LED on the Display Panel stays on after connecting the second RCA cable, remove the cable and connect only one at a time.
 - 3. Press Clear to adjust the input levels of the tape recorder to between +1 and +3db.
 - 4. Press Reset to return the Display Line to the first cue.
 - 5. After Resetting, you will press one of the following commands depending on

the type of store you want to create. As soon as you press MEM SAVE the COYOTE will start saving the memory onto tape. Therefore, you want to have your tape recorder running when you press MEM SAVE.

METHODS OF STORING THE PROGRAM:

- 1. MEM SAVE This method will SAVE the program just as it appears in the COYOTE memory. When a SAVE tape is played back into the COYOTE it will fill the same amount of cue space. After pressing MEM SAVE the Display Line will read SAVE and start to read the cues as they are saved onto the tape. This method also codes the tape to automatically return to the MAG TAPE BYPASS condition after the program is loaded into the memory.
- 1A. MEM VERIFY Once you have saved your memory with the SAVE method, you can VERIFY to confirm that what you recorded on the tape is the same as what is in memory (program). Return the tape to the starting position of the SAVE on that tape. Press the MEM VERIFY button and VERIFY will be displayed at cue #001. Start the tape reorder and watch the cue numbers count down. If the COYOTE stops before it reaches the end of the program, you have a bad cue at that point. The red MT ERR LED will light and the Display Line will display the Cue # and BAD. If this happens, start the SAVE routine over.
 - 2. Show Tapes for Real Time Playback

This method will store the program for playback and can be synchronized to the audio track. By pressing Cue the COYOTE will send out the correct Data and timing for each cue or Run sequence. Positrak is also sent out with the Data.

Positrak is digital information that is generated constantly to continually update the projector status. This information is layed down between cues as in the following diagram:

P = Positrak Q = CUES PPPQQPPPPQQPQPQQQQQQPQPQPQPQPQPQPQQQQ QPQQQPPPPQQQQQPPPPP

When the COYOTE has no cues going out, the entire signal will be Positrak. When running at 20 cps and cues are constantly going out there will be no Positrak until a break in the program data is reached.

LOADING PROGRAMS INTO THE COYOTE:

Loading existing programs from compatible AVL computers into COYOTE memory can be accomplished two ways. Any program that was stored on mag tape with the SAVE-method will be coded so it can be loaded directly into the "Play In" jack on the Rear Panel without further instruction to the COYOTE.

MEM LOAD For programs that were stored as show tapes, you will have to tell the COYOTE to load the program by turning off

the MAG TAPE BYPASS. This is done by pressing MEM LOAD, LOAD will be displayed at cue #001. The COYOTE will have to be reset to MAG TAPE BYPASS, by pressing STEP (ESC). The exception is tapes with a Home cue, this will set the cue counter to 001, display the first cue and return to MAG TAPE BYPASS.

MARRYING THE PROGRAM TO THE SOUND TRACK:

To synchronize the program to the soundtrack, you can press the CUE button at the appropriate time. However, for you to make an adjustment to the starting time of that sequence requires you to do the following:

- 1. Search for the starting point on tape.
- 2. Rerecord over the section without erasing the previous section.
- 3. Pressing the Cue button to try to resync the section.
- 4. Having to resync, if any changes have been made to memory.

An easier way to sync the program to the soundtrack is to use the AVL SYNCHRONIZ-ER. The SYNCHRONIZER is used in place of the CUE button. Every time you press the sync button a 1000Hz tone is produced and put on tape. When the tape is played back into the SYNCHRONIZER, a 1000Hz tone is received and the SYNCHRONIZER remote

cues the COYOTE. The advantages of using the SYNCHRONIZER are:

- 1. Ease of syncing the soundtrack.
- 2. Ease of editing a high speed run sequence without losing the start point.
- 3. Ease of editing the starting point of the run sequence.
- 4. You always will have first generation data track tapes.

EQUIPMENT SETUP:

- 1. Using one of the open tracks on your tape deck, connect "line in" to the RE-CORD jack on the SYNCHRONIZER using an RCA cable. Connect another audio cable between the tape deck "line out" and the PLAY jack on the SYNCHRONIZER. NOTE: Recommended set up of tape; audio ischannel 1 and 2, channel 3 for the synctone and channel 4 for the Data Trak.
- 2. Set level to Odb on the VU meter. To obtain a constant tone from the SYNCH-RONIZER, switch to the NORMAL position and press the SYNC button with the tape recorder in record mode.
- 3. Switch synchronizer to pulse position.
- 4. Switch the audio channels of the tape deck to simulsync or sync mode in order to have the sync pulse respond at

the same moment as you hear the sound track. It is recommended that you press the sync button before the actual time. This allows you to edit the wait time between the sync pulse and the first command.

- 5. Note that every time you hit the SYNC button the COYOTE will run the sequence and continue until a stop is encountered.
- 6. Now, return to cue #001 and start the tape deck with channel 3 in record, press the sync button each time you want to start a cue or sequence.
- 7. Editing a late sync pulse on the show tape requires rerecording the sync pulse earlier. It is simpler to record the sync pulse early and insert wait cues in the memory to correct the time. The cues in memory could look like this:

001	N G	NO OP WITH A GO
002	W.2	WAIT 2/10
003	CT G	CUT. GO
004	W.4	WAIT 4/10
005	RP5	REPEAT 5 TIMES
006	1D S	1 DISSOLVE, STOP

Cue #002 is added to delay the action by 2/10 second. If more or less time is needed add or subtract time to cue #002.

8. For reviewing a section, it is recommended that you write down the cue # and the tape counter reading for each sync pulse. Then you can REV Q the COYOTE and rewind the tape deck to the correct tape reading. Also switch the audio channel back to normal from simulsync. Press the play button the deck to review or edit that sequence.

- 9. After you have synced the show it is a simple matter to record the data on channel 4. First switch channels 1, 2 and 3 into simulsync, channel 4 is in record mode.
 - 10. Press play button on tape deck and the data is automatically recorded on tape with Positrak.
 - 12. Programming note: The COYOTE has a crystal controlled clock and the computer generated waits are extremely accurate. It is therefore recommended not to have a high speed run last more than 30 seconds. Because the tape deck may not run at same speed each time. Also you should not CUE, less than 1/2 second between cues with sync pulses, use wait cues if less than a half second is needed. If you don't know the amount of time needed, program WAIT X.

PLAYBACK OF THE DATA TRAK:

Now that the show has been recorded on to tape in real time, you will want to check that the show is in sync with the sound trak, and that all cues have been recorded properly on tape.

- 1. All projectors are on their home tray position.
- Plug channel 4 of tape deck "line out" into "PLAY IN" jack of the COYOTE.
- 3. Start the tape, when data is being received the green LED will light indicating that amplitude is OK. If the red LED marked MT ERR (mag tape error) flashes, that indicates only one pass of data is being received, if the LED latches on, this indicates a cue has been dropped.

NOTE: If a COYOTE program is to be run from the memory of a SHOW PRO 5, it will be necessary to save the program using the SAVE procedure. The information must then be loaded into a ROADRUNNER or an EAGLE (using VERSION 5) in order to make a compatible MAG TAPE DUMP. The reasons for this step are:

- 1. The SHOW PRO 5 will not accept a SAVED program.
- 2. The SHOW PRO 5 will interpret any wait commands put out by the COYOTE as 2 second waits.

MERGING TWO OR MORE PROGRAMS WITH POSITRAK:

In show situations two or more programs may be loaded into the same trays. If for some reason two producers are used, we can assume that their shows were programmed to begin on tray position number

- one. When the shows are run the second production's Positrak information will reset the trays to the incorrect position. In order to prevent this from happening the following steps must be carried out.
- 1. Program all shows with a SYNCHRONIZ-ER. Use channel 3 of the deck to record the sync tape.
- 2. Load the first section into the COY-OTE's memory. (This can be either canned or live).
- 3. Run to the end of memory and record the Positrak information only.
- 4. Reset the COYOTE, and wait until all the projectors are home, then RESET and CLEAR the memory.
- 5. LOAD the data of second show into the COYOTE's memory.
- 6. Reset to cue #001, then run the portion of Positrak that was just recorded, off of the first section, into the PLAY IN of the COYOTE. Note that projectors go to the correct tray position by the shortest route.
- 7. Now that memory and Positrak information are loaded into the COYOTE (and if you have used a SYNCHRONIZER while programming), it will be easy to adjust the Positrak information to the new tray positions.

- 8. Recording new Positrak information with the DATA on to tape requires the following steps:
- A. Connect the data channel (4) "line in" of the tape deck to COYOTE RECORD OUT jack.
- B. Place this data channel (4) of tape deck into the record/pause mode.
- C. Plug sync channel (3) "line out" into SYNCHRONIZER PLAY jack.
- D. Plug SYNCHRONIZER CUE OUT into REMOTE CUE of COYOTE.
- E. Set channel (4) levels on tape deck.
- F. Press play on tape deck and the DATA plus the new Positrak information will be automatically layed down on tape for you.
- 9. Additional sections can be added to the program by repeating steps 4 through 8 again.

GLOSSARY OF TERMS

Α

Projector designation for top or left projector. See INDEPENDENTS.

ASSIGNMENT

Designates which projectors are to go on/off. This is done by selecting A, B, or C.

AΤ

ALTERNATE or ALT Visually like a CUT on the screen, except there is NO tray advance. See FAST ALT, DISSOLVE ALT.

ADD CUE

ADD CUE allows you to "open up" the memory to insert a cue into your program by moving all cues down one cue number in the COYOTE memory.

AUX AX AUX is an auxiliary. The COYOTE has one AUX built in, AUX right. The AUX can be used to turn on a 16mm projector, house lights, or for any purpose. The AUX is a logic level output of 5 volts, which will trigger an auxiliary box for a momentary contact closure.

This AUX function requires an AVL COYOTE AUXILIARY BOX. AUX LEFT can be programmed for a TRAVLER or DOVE.

В

Projector designation for the center projector. See INDEPENDENTS.

BLINK BG BS BLINKING allows you to flash a projector or a series of projectors at 10 or 20 cues per second. The BLINK command allows the lamps to flash while dissolving up or down, while lamp intensity is frozen, or while the lamp is on. To program a BLINK, requires a lamp command and BLINK with a GO. To stop a BLINK requires a BLINK STOP.

C

Projector designation of right or bottom projector. See INDEPENDENTS.

CLEAR

Pressing CLEAR, will clear the display line but will not destroy the memory. CLEAR can be used to change a cue in memory. See RESET and CLEAR.

CUT CT This command turns the lamp ON or OFF instanc-

ously. If the lamp is ON, CUT will turn the lamp OFF and advance the tray 1. If the lamp is OFF, CUT will bring the lamp ON. When sequenced to cross from one visual to another. A cut will turn the ON lamp off and the OFF lamp on. The projector with the lamp going off will do a tray advance.

CUE

Used to command the COYOTE to execute a command from memory or enter a cue into memory. If hand cuing or remote cuing the COYOTE, CUE will move one cue at a time or start a RUN sequence if the cue has a GO embedded with it.

DELETE CUE

Deletes (removes) the cue that is being viewed and closes up the memory.

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

DISSOLVES this command turns the lamp ON or OFF in a designated amount of time (in seconds) creating a fade effect (ex. 2D is a 2 second dissolve). To create a cross fade or dissolve from one visual to another using 2 or more projectors. Again, the projector with the going

off will advance tray when the lamp is completely off.

DISSOLVE ALTERNATES 1A to 32A

Visually identical to DIS-SOLVES, without a tray advance. Dissolve rates are the same, but ALTERNATE command is used.

ESCAPE ESC (STEP) Stops the program when in a RUN mode. ESCAPE is also used to stop a SAVE and to clear LOAD and VER-IFY if entered by mistake. See STEP.

F.ALT

FΑ

FAST ALTERNATE Same dissolve time as HARD CUT without a tray advance. A FAST ALERNATE used at 20 cues per second (20CPS) allows solo flashing and blinking effects.

FREEZE

Like the SHOW PRO V, EAGLE, and ROADRUNNER, the COYOTE has the ability to stop any dissolve alternate alternate in progress and hold the lamp intensity. FREEZE also allows the lamp(s) to continue the dissolve in the same direction at the same rate, or change directions at the same or a different rate. NOTE: Only

solve Alternates should be used with a FREEZE.

GO G Used in the "projector 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 when running manually out of memory using a CUE or a reremote cue to control the COYOTE.
- (3) As a reference point when programming a long sequence to be accessed quickly with the REVERSE CUE button.

HARD CUT H.CUT HC

A HARD CUT was designed with two things in mind; move images faster, and create sharper, harder image change on the screen A HARD CUT works by closing the gate of the slide projector shutting off the light before the lamp is turned OFF. Advancing the tray to the next image, allowing that projector to be ready to be turned ON again with the next slide. When HARD CUT's are used make transition to а

between 2 visuals the abruptness of the change is much crisper than a CUT (this can be used to create the flicker of oldtime movies when moving through many visuals rapidly).

HOME

Programmable return to the beginning of the program. HOME can be entered into the program to return the COYOTE to the first (001). HOME brings lamps down, returns memory to cue #1 and trays to their original starting position by the shortest route. When HOME is used in a RUN sequence the program will continue to run and start over at #1 and continue program until a STOP command is reached.

INDEPENDENTS

COYOTE will cycle The through projectors from A (top or left), to B (Center), to C (bottom or right) without making any projector selection. With the INDEPENDENT function normal sequence can overridden and projectors can be accessed any order with proper projector designa

tion.

LEISURE TIME

LEISURE TIME programming allows you to edit the program as you go, also using the X programming functions such as WAIT X or REPEAT X. The COYOTE's 900+ cue memory makes it a LEISURE TIME PROGRAMMER.

LOOP

A DOVE effect which will playback through a COYOTE. This effect is not programmable by the COYOTE.

LOAD

Allows external cues to be loaded into the memory of the COYOTE from mag tape or directly from the EAGLE However, when you use LOAD a program the load COYOTE will NOT automaticmatically return to the normal MAG TAPE BYPASS mode and you will have to tell the COYOTE to return TAPE MAG BYPASS pressing the RESET button. It is NOT necessary to use reload a COYOTE LOAD to program that was stored with the SAVE method. COYOTE codes the tape and recognizes the stored information as a LOAD. COYOTE also codes the end of the SAVE to tell it to automatically return to the MAG TAPE BYPASS mode after completing the LOAD.

NO OPERATION N

This denotes no operation and will appear on the display line when a GO or STOP is entered without any other command. To clear N from the display line pressing the CLEAR button.

PROJECTOR FORWARD P.FWD PF

Used in conjunction with a projector assignment will move the tray forward one position without changing the lamp status. PRO-JECTOR FORWARD designation without projector assignment will move all trays forward ONE position.

RESET

By pressing the RESET button all projectors return home and lamps off. RESET has the same definition as HOME. HOME is programmaable and RESET is not.

RESET and

RESET and CLEAR By pressing both buttons simultaneously, allows you to clear ALL cues from the memory. NOTE: Use this command with caution. Make certain you have stored the information or

that you do NOT, in fact, want the information.

REVERSE CUE REV O

When pressed, this button will move the program (memory) in the REVERSE direction: (1) To the previous cue if not in a RUN mode. (2) To the previous GO in a RUN mode. The COYOTE will move the trays to the proper location and update the lamp status. See STEP and RUN.

REPEAT RPxx

Used to repeat a series of cues that start with a GO embedded with the first cue. The xx equals number of times to be repeated. The REPEAT cue has zero cue time.There are no limits to the number of or type of cues in a RE-PEAT. REPEAT can be used to repeat a sequence from 1 to 255 times and will allow up to 10 consecutive (nested) RP commands to be used. Bear in mind that if you have a sequence repeated 23 times the sequence will actually happen 24 times due to the one time the sequence occurred during the set up. This also applies to REPEAT X.

CAUTION: With the use of nesting, it is possible to create sequences with millions of cues or wait periods of hours.

REPEAT X

Like the WAIT X, the REPEAT X allows you determine the number times the sequence has repeat while you are the RUN mode and viewing the sequence as it will appear in your show. You simply enter the RPX into the program, start the sequence running and when the correct number of repeats have gone by you press the CUE button to move on to the next part of your program. The COYOTE will resolve the X to the appropriate number of times the sequence repeated. (ex. RPX becomes RP23). NOTE: When you press the CUE button to resolve the RPX, the COYOTE will finish the sequence in progress before moving on.

REPEAT 0

REPEAT UNTIL TERMINATED Used when an undetermined number of REPEATS is desired. The RPO can be resolved by pressing the

CUE button or a REMOTE cue. This command will be most useful for "live" portions of your program when the length of a sequence is not predetermined.

RUN

RUN has two functions: (1) By holding down the RUN and CUE button, this funcallows you to tion through your program rapidly in the forward direction with the cues numbers moving past on the DISPLAY LINE at 20 CPS. To stop, remove your finger from the CUE button. In this mode the COYOTE will run at 20 CPS and not stop if a STOP is incurred or wait for any WAIT cues. The lamp status will be maintained and tray position will be updated at the speed of the projector.

(2) By holding down the RUN and REV Q button, you will be able to move rapidly in the reverse direction and see the cue numbers moving past on the DISPLAY LINE at 10 CPS. To stop, remove your finger from the REV Q button. The trays

and lamp status will wait until you have stopped moving to update to the present status.

MEM SAVE

Allows you to SAVE the contents of the COYOTE memory onto mag tape for storage. SAVE will save the program in the ROAD-RUNNER/EAGLE format but will not be able to be loaded into a SHOW PRO V.

SEQUENCE

The order in which projectors are accessed. With the COYOTE, you have choice of either SEQUENCE 2 or SEQUENCE 3. In SEQUENCE 3 the COYOTE will access all three projectors in this order A, B, C. In SEQUENCE 2 the COYOTE will access the A and C projectors (left and right) only. NOTE: You can still access the "B" projector by assigning it independently with the command and projector designation (B). To switch from SEQUENCE there is a switch on the back of the COYOTE marked SEQUENCE 2/3.

SPEED 10 S10 Normal running speed for the COYOTE is 10 CUES PER SECOND (CPS). The SPEED 10 is used to decrease the speed from 20 CPS to 10 CPS. The COYOTE will be at 10 CPS in the following conditions: When first LOADED, when ALL CUES are RESET and CLEARED or when you do a HOME.

SPEED 20 S20 Used to increase the runing speed to 20 CPS. The COYOTE has the capability of running at 10 CPS or 20 CPS (cues per second). 10 CPS (normal run speed) the COYOTE waits 1/10th of second between the time one cue is issued till the next cue is issued. Τo run at the higher speed of 20 CPS, you must tell the COYOTE by entering a speed change into the program. Likewise, if you wish to return to 10 CPS you must Again program this change. At 20 CPS the COYOTE wastes 1/20th of a second between the time one cue is issued until the next cue is issued. Either of these cues can be used at any point in the program.

STEP (ESCAPE) STEP can be used in three ways:

- (1) STEP CUE Steps through the program one cue at a time in the FORWARD direction each time you push the button while holding down the STEP button. The projectors will respond to each cue as it executed.
- (2) STEP REVERSE CUE Steps through the program in the REVERSE direction one cue each time the REV CUE button is pressed while holding down the STEP button.
- (3) STEP by itself will stop any action that is being carried out by the COYOTE. While in the RUN mode pressing STEP will stop the COYOTE at that point in memory. If in LOAD, SAVE or VERIFY mode pressing STEP will return you to MAG TAPE BYPASS mode.

STOP S Used in the "projector area" of the DISPLAY LINE, to mark the end of a RUN sequence.

SMOOTH DISSOLVE SG SS SMOOTH allows you to do one of two (or both) things. First the SMOOTH is a change in the way the lamp in the projector is ramped on and off. Without SMOOTH the lamp will ramp on faster at first to allow light to reach the screen faster and to make smooth transition tween the oncoming and the outgoing slides. With SMOOTH the lamp no longer has this fast start up.

Second, in SMOOTH the lamp will no longer come brilliance on full an oncoming dissolve when you tell it to go OFF before it has reached its full intensity or all the way OFF when you are doing a dissolve OFF and tell it This to come ON again. now allows you to do a ripple dissolve effect what is termed a continuous dissolve effect.

STANDBY

Will bring down the lamps of all projectors that are ON and the display line will display STANDBY. The projectors will still respond to advances and reverses and keep track of the lamp and tray status. To return to the normal lamp status, press STANDBY again.

VERIFY

Allows you to verify the information that has been SAVED (using the SAVE method) onto mag tape for storage before clearing the program from memory.

WAIT TIMES

WAIT W.05

W.1

W.15

W.2

W9.90

W9.95

Waits are computer generated timings that allow timing out action sequences precisely to accommodate your specific designs. These times arentered into the program in the form of wait times ranging from .05 seconds to 9.95 seconds in increments of .05 seconds. If a time of 10 seconds or longer is needed, use additional wait cues to accommodate the longer time.

WAIT X

Used when the proper timing of a sequence has not been determined before programming. The WX cue is entered into the program and resolved during the running of that particular section. When the

COYOTE sees the WX it starts timing out the wait, until you press the CUE button. The COYOTE resolves the WX to the nearest 1/20 of a second and enters that time in the X slot of the memory.

