



Show Pro III Multi-Image AV Computer



Operator's Manual

The professional team in multi-image programming systems.

INTRODUCTION

The AVL SHOW PRO III is a totally new concept in multi-image programming systems: All dissolves and program operations built into a single computer-controlled package. And its advantages are immense.

The computer generates all cuts and dissolve blends, and additionally keeps track of all aspects of the program, including slide projector tray positions and lamp status. In effect, the computer does the "bookkeeping," allowing the operator to spend his time perfecting the artistic and creative elements of a show.

Until now, a completely computerized programmer/dissolve system was merely an idea entertained by many professionals in the AV field. The prospects for production of such a system remained dim, however, until the recent introduction of high technology micro-processor integrated circuits.

With their advent, AVL designed the SHOW PRO III System to take full advantage of the new technology. As a result, multi-image programs can now be generated, reviewed and edited more simply and far faster than ever before.

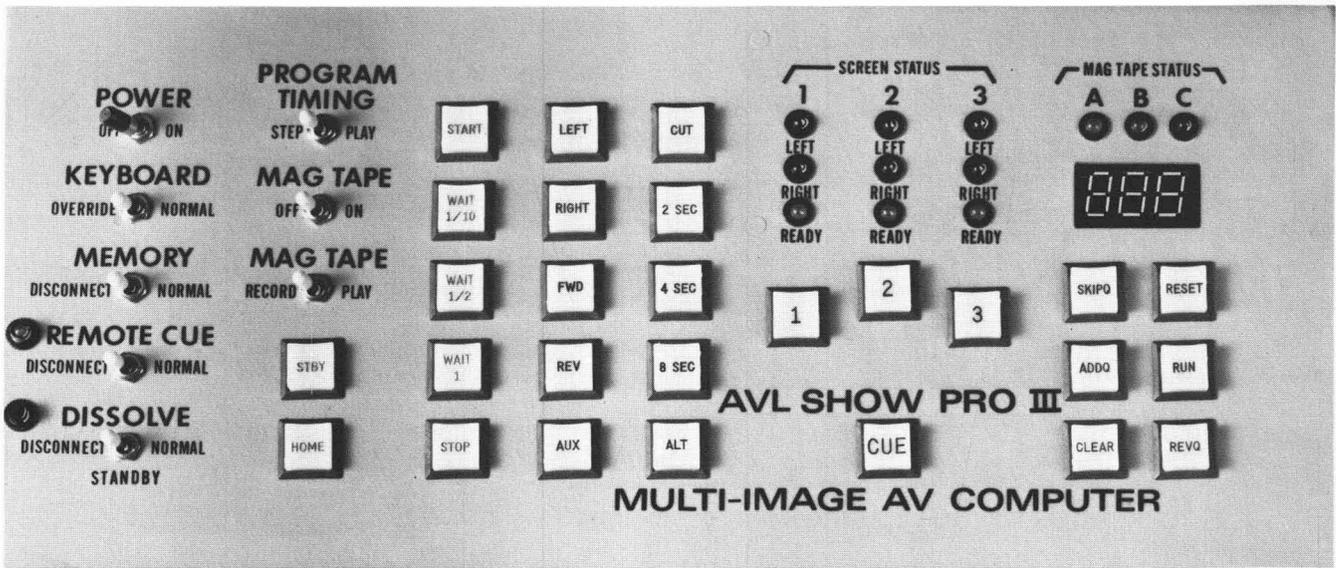
The SHOW PRO III is designed to control a number of slide show formats, including the most popular, three screens with two projectors focused on each. The descriptions in this manual are based on this standard format.

Our completely new system also has three auxiliary channels for controlling additional equipment, such as supplementary slide projectors, a 16 mm projector, or room lighting.

Each projector in the SHOW PRO III System may be controlled independently, allowing sophisticated split-screen and overlapping image effects. The result: Shows with motion and rich visual effects that an audience may well assume are produced by film... produced instead with the simplicity and economy of slides!

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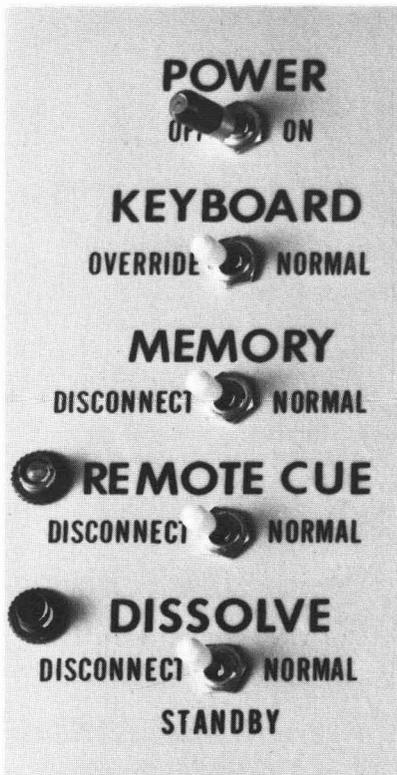
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FRONT PANEL

The keyboard controls of your SHOW PRO III are designed for simple, trouble-free editing and programming, with all phases of operation apparent at a glance, all command functions at your fingertips. Here are the specific functions of each keyboard control:

CONTROL TOGGLE SWITCHES



Power

Activates the system in the **On** position. This switch must be pulled outward before changing positions, a safety feature that prevents accidental interruption of a program.

Keyboard

Should be in **NORMAL** position during most operations. During "canned" presentations, the **OVERRIDE** position allows the operator to override the program directly from the keyboard without interfering with the show's continuity. The **OVERRIDE** position is also used to set record levels during magnetic tape recording (See High Speed Dumping of Memory).

Memory

Should be in **NORMAL** position during programming and while loading or unloading memory with magnetic tape. The **DISCONNECT** position is used to prevent keyboard commands or canned presentations from entering memory.

Remote Cue

Should be in **NORMAL** position during most operations, allowing cue commands by remote control. The red light to the left of the switch will come on whenever a remote hand control is activated, regardless of whether the switch is in **NORMAL** or **DISCONNECT**. In **DISCONNECT**, a remote cue will not activate the programmer.

Dissolve

This is a three-position switch. In **DISCONNECT** (left position) the switch disconnects all outputs to projectors and auxiliaries. A red light to the left of the switch remains on as a reminder to the operator. Use **DISCONNECT** with care. When the **DISSOLVE** switch is in this position, program memory responds to commands as if it's advancing or reversing trays. As a result, it will lose track of projector tray status. In **NORMAL** (right position) all dissolves are connected and will respond to commands. In **STANDBY** (center position) all projector lamps are turned off but dissolves are connected and will respond to commands.



Program Timing

This switch will undoubtedly be used more than any other during programming. In the STEP position it allows step-by-step programming. In the PLAY position it allows playback of single cues as well as pre-programmed high speed sequences.

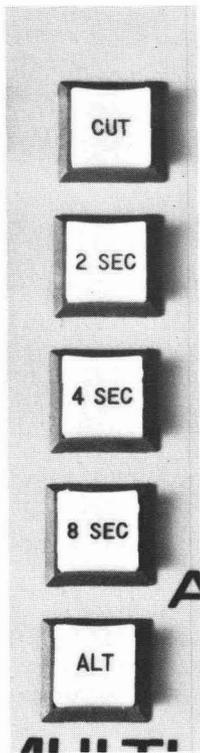
Mag Tape Off/On

In the OFF position, both MAG TAPE RECORD and MAG TAPE PLAY are disconnected.

Mag Tape Record/Play

This switch should be in the RECORD position when recording a program on sound track. It should be in the PLAY position when playing a recorded program.

DISSOLVE SPEED CONTROLS



Cut

Commands an instantaneous switch from one projector to another. Any projector going off will automatically advance.

(For further details see High Speed Programming)

2 Second (2 SEC)

4 Second (4 SEC)

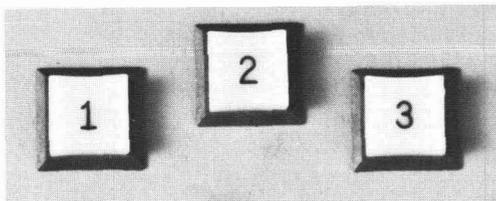
8 Second (8 SEC)

These buttons are used to select the timing for blends from one projector to another. Any projector going off will automatically advance.

Alternate (ALT)

Switches status of lamps between projectors. Similar to CUT but without tray advance.

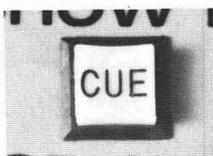
SCREEN COMMANDS



- 1
- 2
- 3

Designate which "screen" (projector pair) is to receive commands. These can be operated singly, simultaneously, or in any combination in conjunction with black-lettered command buttons.

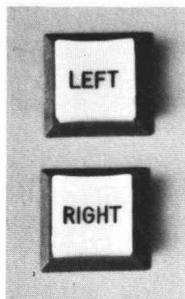
CUE COMMAND



Cue

This button is the final command to execute, and must be cued before the computer will act on any function entered.

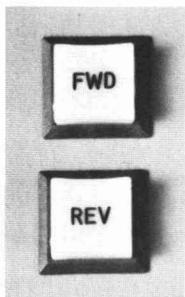
INDIVIDUAL PROJECTOR CONTROLS



Left Right

Designate the specific projector(s) to be commanded. These buttons can be used independently or simultaneously. System logic always starts with the left projector in a pair and functions in a L-R-L-R sequence unless commanded by these individual projector controls.

ADVANCE AND REVERSE PROJECTOR CONTROLS



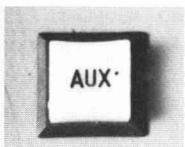
Forward (FWD)

In conjunction with the appropriate screen numbers, this button commands both projector trays to advance simultaneously. Used in conjunction with SCREEN NUMBERS and LEFT and RIGHT buttons it will advance only the projector tray(s) selected.

Reverse (REV)

In conjunction with the appropriate SCREEN NUMBERS, this button commands both projector trays to back up simultaneously. Used in conjunction with SCREEN NUMBERS and LEFT and RIGHT buttons it will reverse only the projector tray(s) selected.

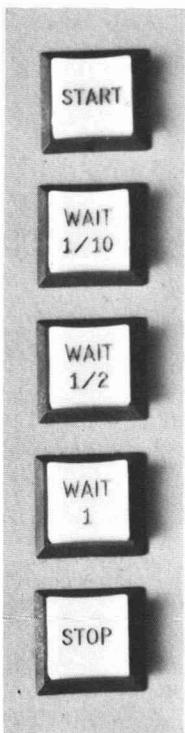
AUXILIARY FUNCTION CONTROL



Auxiliary (AUX)

In conjunction with the appropriate SCREEN NUMBERS, this button controls three auxiliary channels. Momentary closures on the Rear Panel of the programmer accommodate connections from peripheral equipment such as three additional slide projectors (forward only), a movie projector, or room lighting. On SHOW PRO IIIs equipped with AUX O, a fourth channel is available. This channel responds when AUX is programmed with no screen numbers. The first command turns AUX O on, the second command turns AUX O off.

HIGH SPEED TIMING CONTROLS



Start

This cue must be entered alone with the switch in the STEP position to start any high speed run or sequence. With the switch in the PLAY position, the computer will begin a high speed sequence when START is commanded, executing instructions at ten cues a second until WAIT or STOP is commanded.

Wait 1/10

Wait 1/2

Wait 1

These buttons establish waiting time between commands during a high speed run. They can be used simultaneously or consecutively in any combination to set waiting time between screen actions. When a WAIT is commanded, the computer waits the designated time, then continues at ten cues per second until WAIT or STOP is commanded.

Stop

Dictates the end of a high speed sequence and must be cued alone.

PROGRAMMABLE PUSHBUTTONS



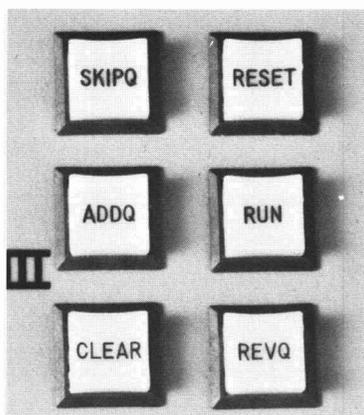
Standby (STBY)

Puts the system in standby mode with all projector lamps off.

Home

Brings memory and all projector trays to their starting points by the shortest route and leaves the system in standby. Similar to RESET except HOME becomes a part of the program and is stored in memory.

EDITING CONTROLS



Skip-A-Cue (SKIPQ)

Eliminates a cue at any point in the program memory and moves all subsequent cues forward.

Add-A-Cue (ADDQ)

Inserts new instructions at any point in the program by opening memory and moving all subsequent cues backward.

Clear

Clears keyboard.

Reset

Takes computer memory and all projector trays back to start. Similar to HOME, except RESET may be used at any point in the program without affecting program memory. Note: If RESET and CLEAR are pushed simultaneously, memory is erased. To return trays to the start position, push RESET only and wait for trays to home, indicated by appearance of green ready lights. Then, to erase memory, push RESET and CLEAR simultaneously.

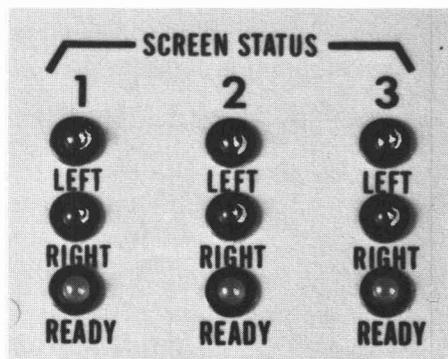
Run

Steps program forward to any selected point at a rate of ten cues per second. Tray positions will follow computer memory. Allow time for projectors to catch up, indicated by appearance of green ready lights. This button is also used for a high speed memory dump onto magnetic tape.

Reverse Cue (REVQ)

With the PROGRAM TIMING switch in the STEP position, this button reverses CUE COUNTER, trays and lamps one program step each time it is pushed. With the PROGRAM TIMING switch in PLAY position, the button will cause a high speed sequence to reverse to the start of the sequence.

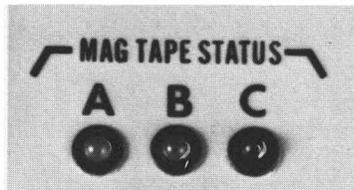
PROJECTOR AND LAMP STATUS LIGHTS



Screen Status

Red Lights - indicate which projector is on. Green Lights - true "ready" lights that indicate the previous screen action is completed and additional commands may be given to the corresponding pair of projectors.

MAGNETIC TAPE STATUS LIGHTS

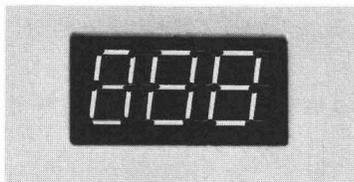


Mag Tape Status

Indicate the condition of magnetic tape memory during playback. These status indicators provide a continuous grading of the quality of the magnetic tape.

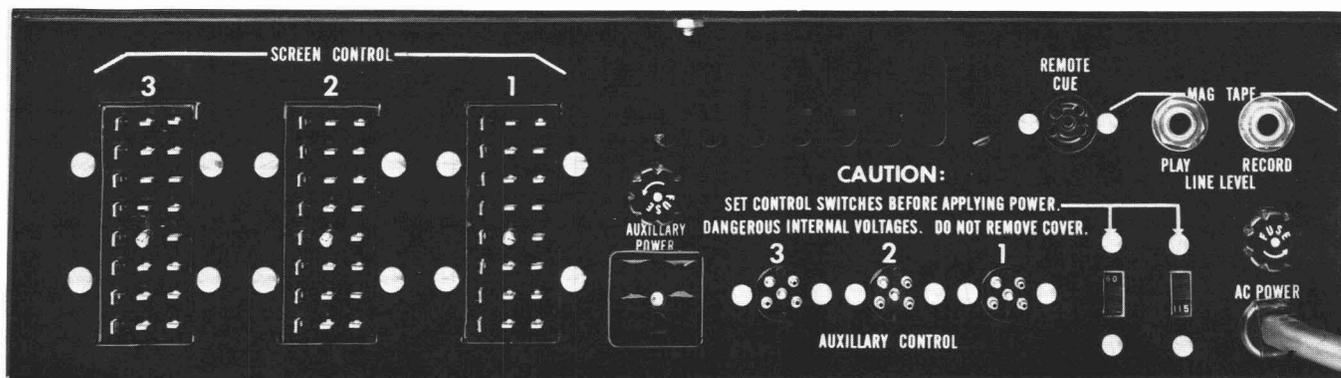
A (green)	Perfect
AB (green & yellow)	Fair to Good
ABC (green, yellow & red)	Poor
C (red)	Unacceptable

DIGITAL CUE COUNTER



Digital Cue Counter

Records each cue as it is entered, beginning with 001. At any point in the program the CUE COUNTER and control console preview the next cue to be executed.



REAR PANEL

Screen Control 3 2 1

Jones plugs for each screen number (projector pair) receive grey MARK IV Power Pack extension cables.

Auxiliary Control 3 2 1

Momentary closures that accept standard five-pin Kodak cables for peripheral equipment such as additional slide projectors or 16 mm projector. On SHOW PRO IIIs so equipped, AUX O is sequence latching (ON/OFF). 25 Volt AC/DC, 1 Amp max. Contact closure: Pin 2 to Pin 5.

Remote Cue Input

Receives Kodak remote hand control for remote cueing of program each time FORWARD button (Pin 2 to Pin 5) is pushed.

Mag Tape Receptacles

To Record: Connect phone plug from Record jack of SHOW PRO III to Line Level In on tape deck.

To Playback: Connect phone plug from Play jack of SHOW PRO III to Line Level Out on tape deck.

Note: Both Record and Play may be connected simultaneously during programming.

International Voltage Change Switch

(Also appears on front of Power Packs)
Changes voltage from 115 to 230.

Important: Always set switches before applying power.

Note: At 50 cycles, we recommend SAV type projectors; at 60 cycles, standard Ektagraphic projectors are recommended for best screen effects.

HOOKING UP YOUR SYSTEM

Preparing your SHOW PRO III System for operation requires relatively little time. Here's a step-by-step run-through for the standard three-screen format. To be sure you have everything properly connected, refer to the diagram in Figure 1, page 9.

1. The SHOW PRO III System incorporates three MARK IV Power Packs, one for each projector pair. Each Power Pack has two black cords with seven-pin plugs. Insert the left plug into the rear of the left projector, the right plug into the rear of the right projector. Then plug the projectors' AC cords into the AC outlets of the respective Power Packs.
2. Now take the grey extension cables from the Power Packs and plug them into the proper screen control outlets on the rear panel of the SHOW PRO III.
3. There's a voltage control switch near the Off/On switch of each Power Pack. Check to be sure it's set for either 115 or 230 according to the voltage being used. (230 is common in Europe).
4. Plug MARK IV Power Pack AC cords into power outlet.
5. Now check the voltage control switch on the rear panel of the SHOW PRO III programmer to be sure it, too, is in the proper position.
6. Plug the SHOW PRO III's AC cord into power outlet.
7. Now pull the POWER toggle switch of the SHOW PRO III outward and push it to the right or ON position. Lights will flash momentarily on the keyboard and then clear. The DIGITAL CUE COUNTER will indicate 001, SCREEN STATUS red lights will be off, green ready lights will be on.
8. Next, move the Power Packs' Off/On switches to On.
9. That's it. Your SHOW PRO III System is hooked up and ready to use.

SCREEN FORMATS

Because of the SHOW PRO III's flexibility and independent projector control, you have a choice of screen formats for your shows.

The standard format consists of three screens with two projectors focused on each. **(Figure 1, page 9)**

Others include:

- Two screens with three projectors each **(Figure 2, page 10)**
- Two screens with four projectors on one, two projectors on the other **(Figure 3, page 11)**
- One screen with up to six projectors focused on it **(Figure 4, page 12)**
- Overlapping screen areas using masked slides **(Figure 5, page 13)**

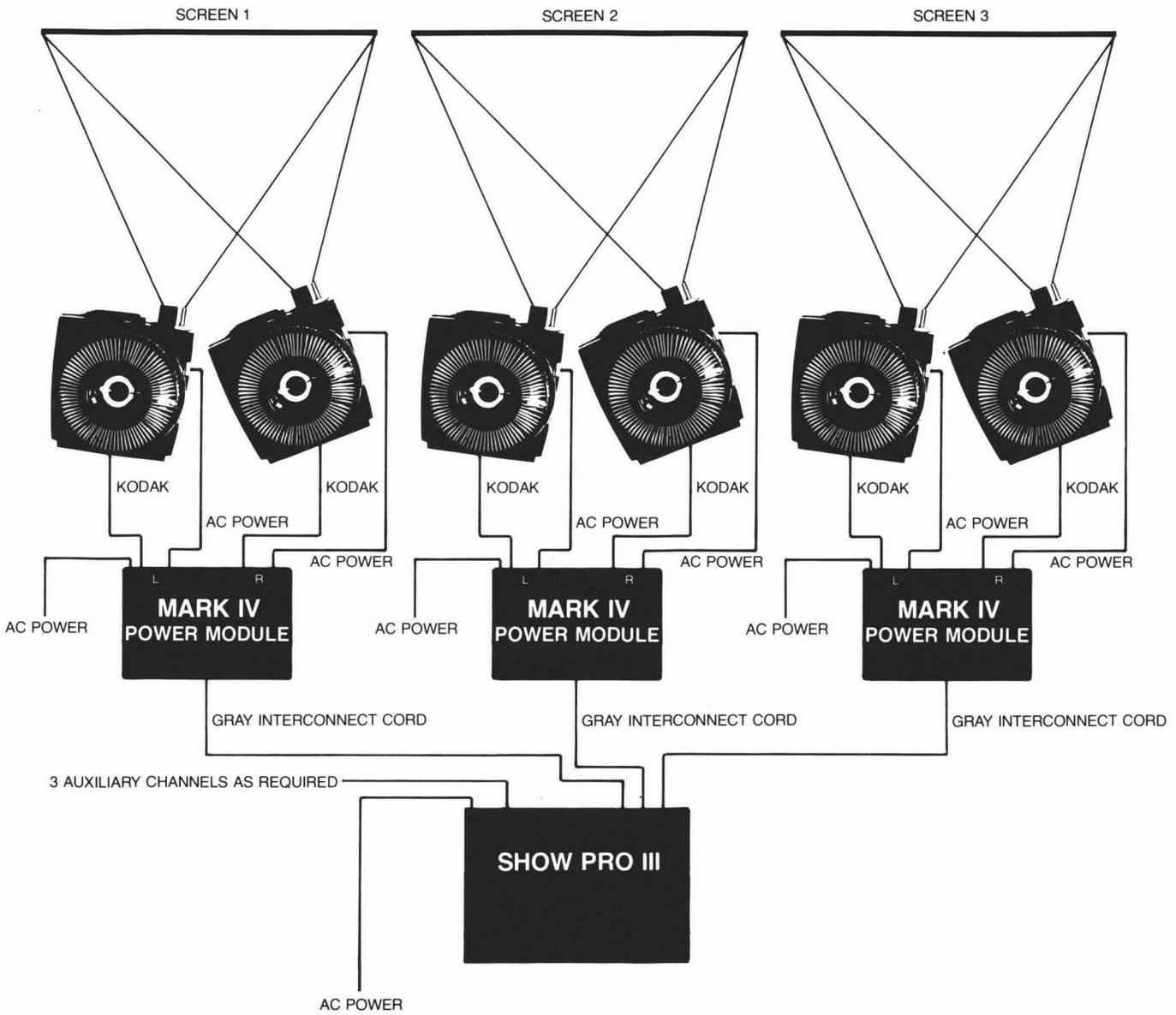


Figure 1

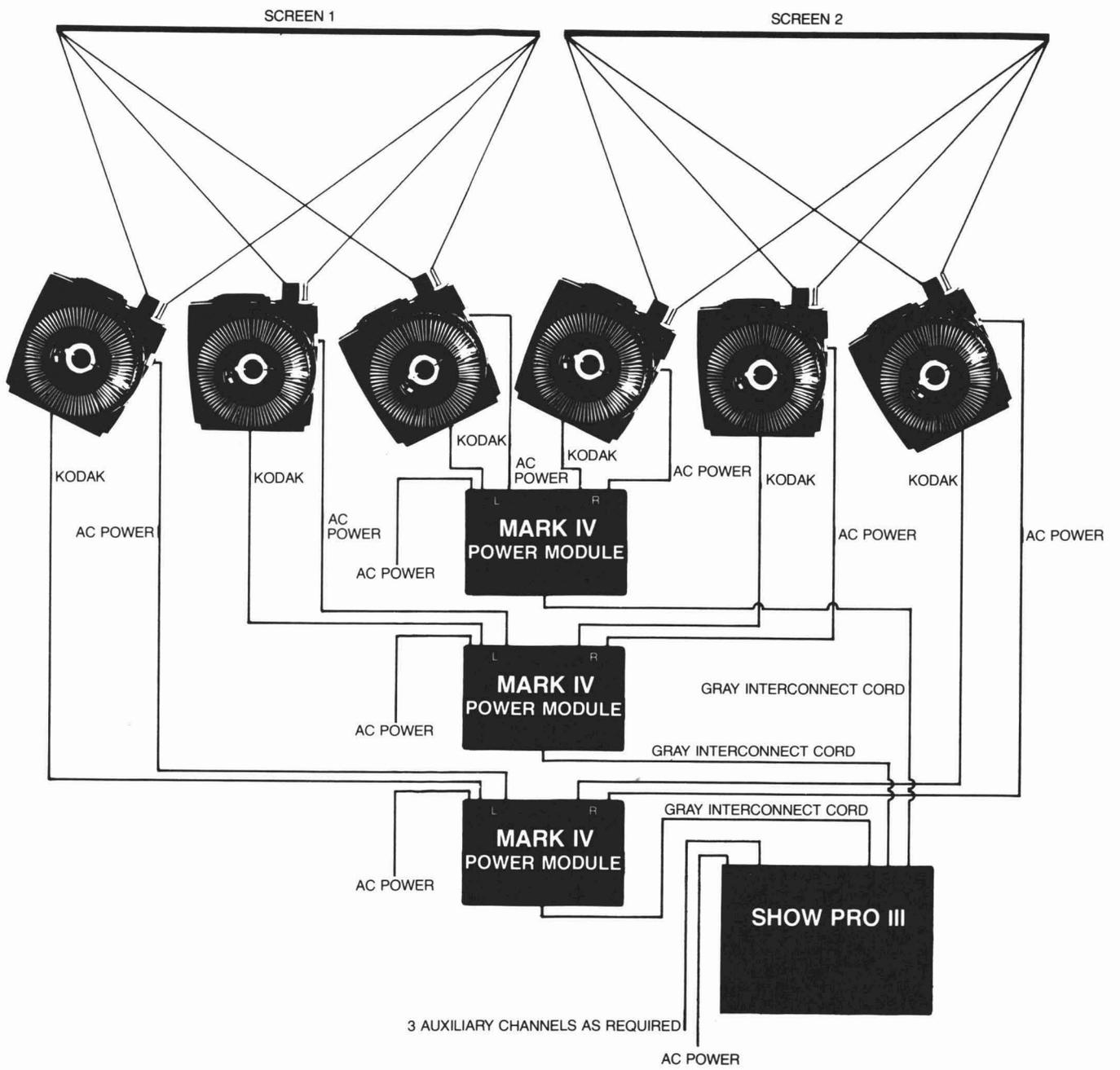


Figure 2

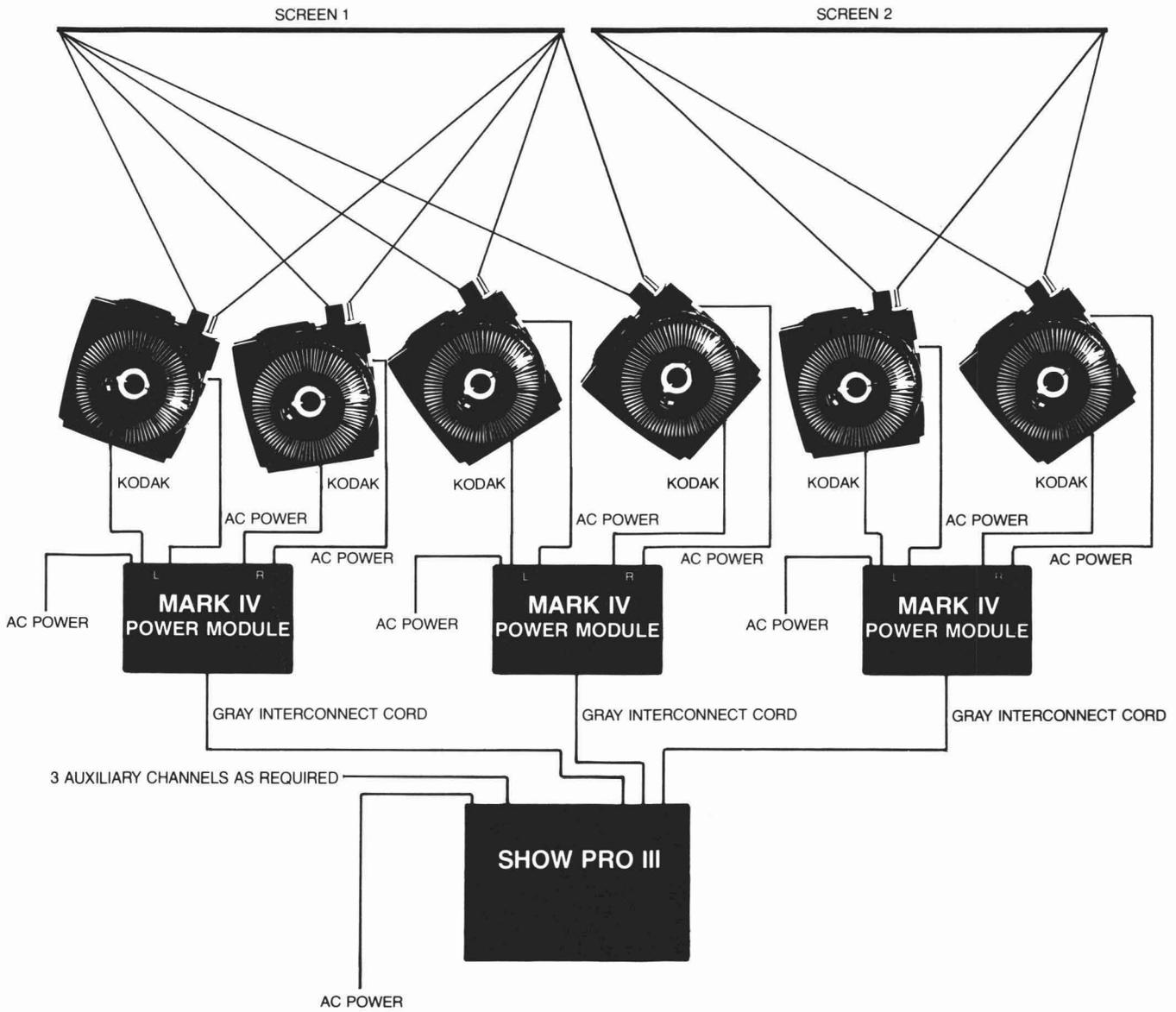


Figure 3

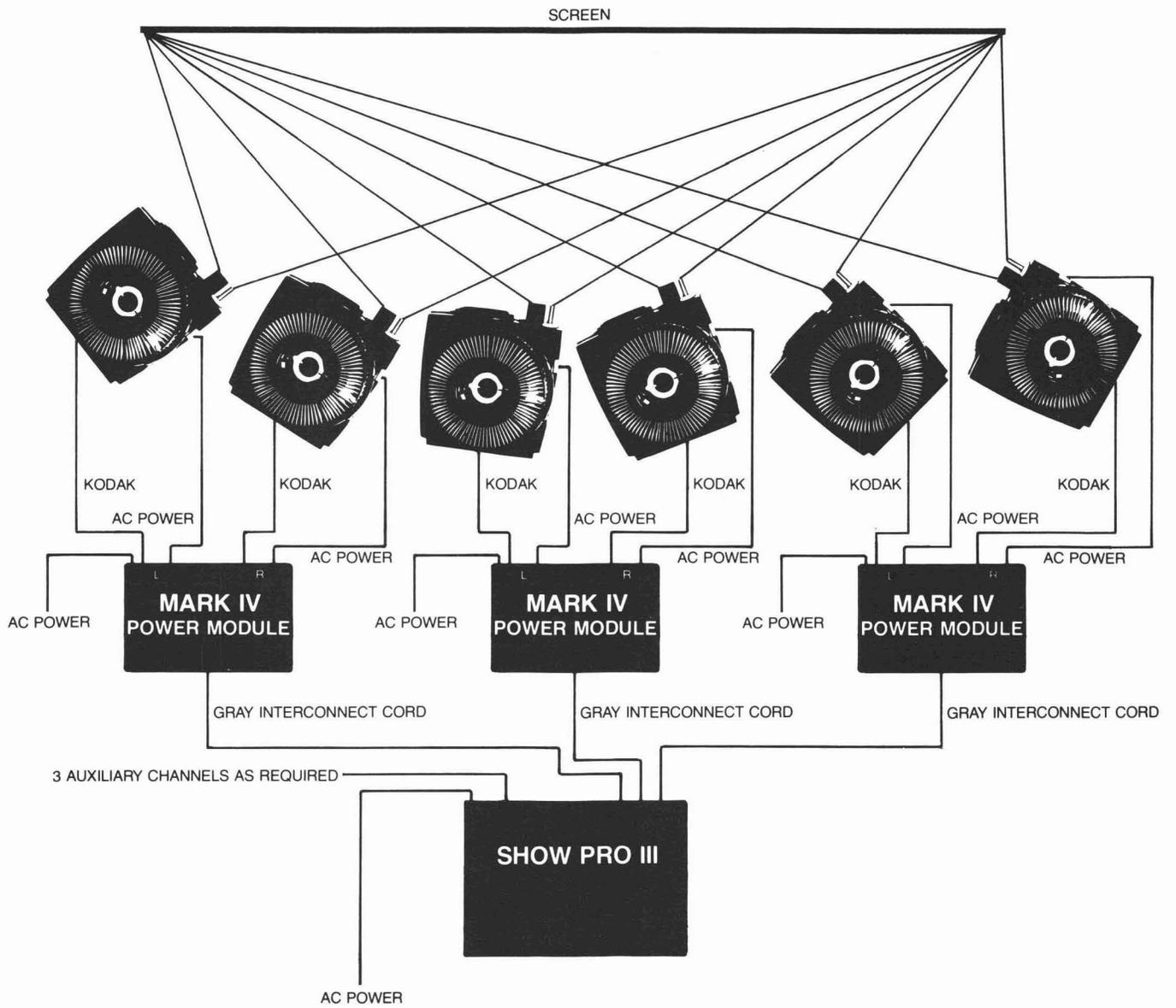


Figure 4

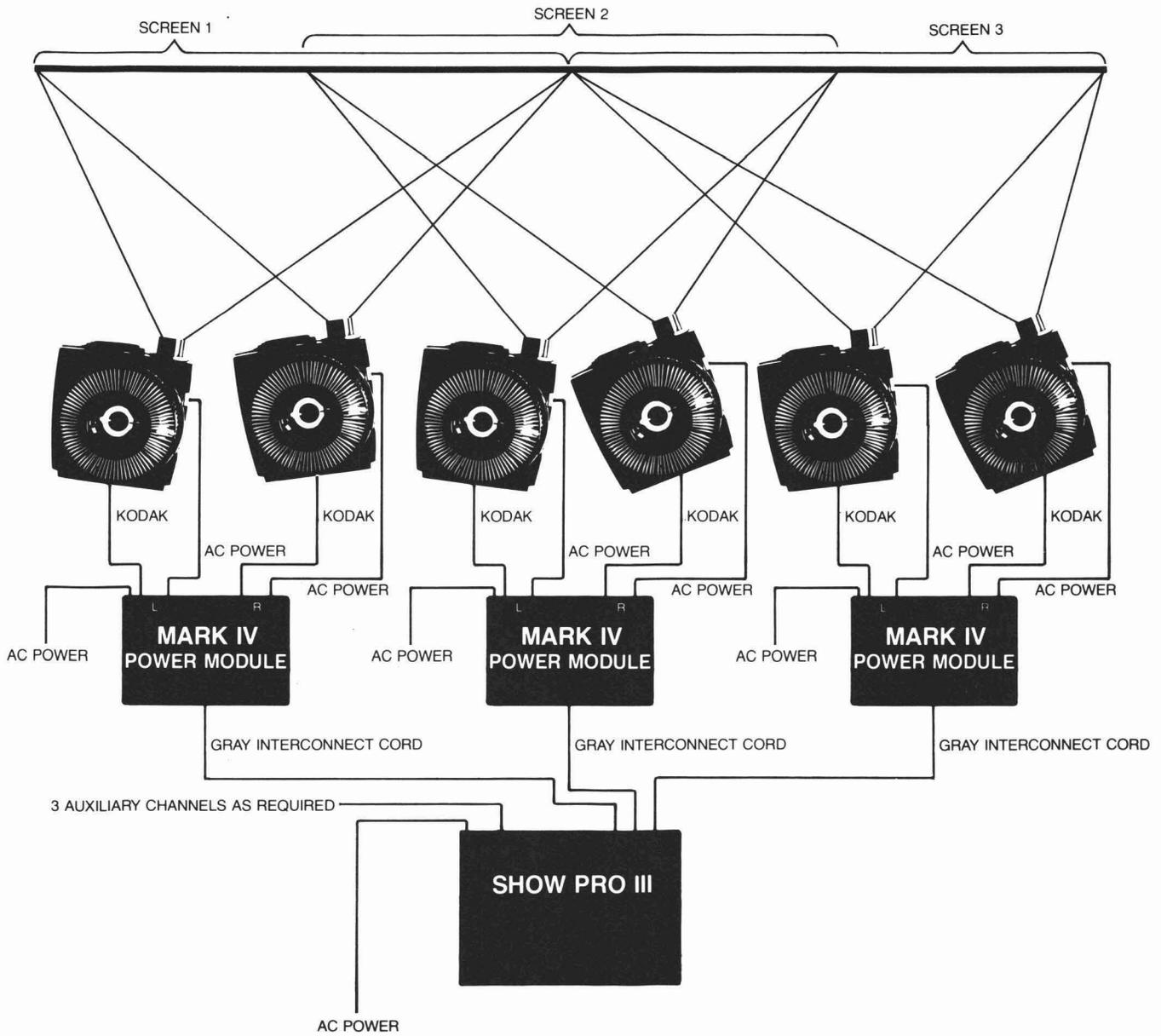


Figure 5

BEFORE YOU PROGRAM . . .

In the preparation of Tiger Stew, the most difficult step is the first one: "Catch a tiger."

Before you can take advantage of the electronic wizardry built into your SHOW PRO III, your first step is preparation of a show . . . script and slides. In short, your creativity comes into play before ours goes to work for you.

Normally, the script comes first. When it says what you want it to, preparation of a storyboard is your next step. This is a series of rough drawings arranged in comic strip sequence that suggests the visuals you'll employ to illustrate the script. And it serves as a guide to collating your slides.

When you have the slides you'll need, prepare a sound track. Determine what screen effects you want to use and note them on a "Cue" or "Dope" sheet. Once your slides have been collated and trayed, the cue sheet will be your programming guide.

A practical tip for best performance: We recommend using glass-mounted slides and the grey, 80-slide universal trays.

Done? Good. Now you're ready to sit down and begin programming. And to explore the amazing capacities of the SHOW PRO III.

PROGRAMMING WITH YOUR SHOW PRO III

Note: These directions are based on the standard screen format described in the Introduction and illustrated in Figure 1, page 9.

1. Place slide trays on projectors, align and focus.
2. Now set the trays in the exact positions you want as the "home" or starting positions. Your first slides should be in the left projectors' gates, your second slides in the right projectors' gates. (A unique feature of the SHOW PRO III is the fact that once you've established home for your program, the computer will always keep track of tray positions and lamp status).
3. All keyboard toggle switches should be to the right except the PROGRAM TIMING switch, which should be to the left or STEP position.
4. You're ready to program.

A "GET ACQUAINTED" PROGRAM

Perhaps the best way to become familiar with programming techniques on your SHOW PRO III is to run through a simple, normal speed program using four dissolve speeds. A normal speed program will not call for the use of the START, TIMING, WAIT or STOP buttons. Here is how you proceed, step by step:

STEP	ACTION	PROJECTOR STATUS	LIGHTS	CUE COUNTER READS
1	Push 8 SEC 1 2 3 CUE	All left projectors dissolve on in eight seconds	When complete, red status lights show left projectors on; green ready lights come back on, indicating the system is ready for your next command.	002
2	Push 4 SEC 1 2 3 CUE	Left projectors dissolve off, right projectors dissolve on	Red status lights show right projectors on. After down-going projectors advance, green ready lights come on.	003
3	Push 2 SEC 1 2 3 CUE	Right Projectors dissolve off, left projectors dissolve on	Red status lights show left projectors on. After down-going projectors advance, green ready lights come on.	004
4	Push CUT 1 2 3 CUE	Left projectors cut away as right projectors cut on	Red status lights show right projectors on. After down-going projectors advance, green ready lights come on.	005
5	Push ALT 1 2 3 CUE	Right projectors cut off (without tray advance) as left projectors cut on.	Red status lights show left projectors on. Since there was no projector advance, the green ready lights remain on.	006

As you went from Step 1 to Step 5, you started with all lamps off. With the first command (8 SEC, 1, 2, 3, CUE), the left projectors came on. Your next command activated the right projectors. And subsequent commands continued this alternating, left - right - left - right sequence. The SHOW PRO III will automatically operate in this L-R-L-R sequence until you command it to do otherwise by using the LEFT and RIGHT buttons.

Want to see what you've programmed so far? Here's how: Push RESET. Wait for the projectors to home, indicated by the green ready lights. Now repeat your program simply by pushing the CUE button one step at a time. (Wait for the green ready light to come on before each push). When the Cue Counter reaches 006 the left projectors will be on and you're ready to proceed with further programming.

STEP	ACTION	PROJECTOR STATUS	LIGHTS	CUE COUNTER READS
6	Push RIGHT 2 SEC 1 2 3 CUE	Right projectors dissolve up while left projectors remain on	All red status lights are on. Green ready lights will also come on.	007
7	Push LEFT RIGHT CUT 1 2 3 CUE	All projectors cut off and advance	After the advance, green ready lights come on.	008

The LEFT and RIGHT buttons may be used singly or together in conjunction with any of the Dissolve Speed buttons to command any projector (or pair of projectors) on or off at the rate selected. Using LEFT or RIGHT in conjunction with FORWARD (FWD) or REVERSE (REV) will cause any projector (or pair of projectors) to move trays forward or backward. If, by mistake, you punch an invalid combination such as LEFT - RIGHT - AUX, the last button pushed will automatically clear the invalid portion of the command.

VALID COMBINATIONS

CUT	With any combination of 1 2 3
2 SEC	With any combination of 1 2 3
4 SEC	With any combination of 1 2 3
8 SEC	With any combination of 1 2 3
ALT	With any combination of 1 2 3
AUX	With any combination of 1 2 3
LEFT CUT	With any combination of 1 2 3
LEFT 2 SEC	With any combination of 1 2 3
LEFT 4 SEC	With any combination of 1 2 3
LEFT 8 SEC	With any combination of 1 2 3
LEFT ALT	With any combination of 1 2 3
RIGHT CUT	With any combination of 1 2 3
RIGHT 2 SEC	With any combination of 1 2 3
RIGHT 4 SEC	With any combination of 1 2 3
RIGHT 8 SEC	With any combination of 1 2 3
RIGHT ALT	With any combination of 1 2 3
LEFT & RIGHT CUT	With any combination of 1 2 3
LEFT & RIGHT 2 SEC	With any combination of 1 2 3
LEFT & RIGHT 4 SEC	With any combination of 1 2 3
LEFT & RIGHT 8 SEC	With any combination of 1 2 3
LEFT & RIGHT ALT	With any combination of 1 2 3
FWD	With any combination of 1 2 3
LEFT FWD	With any combination of 1 2 3
RIGHT FWD	With any combination of 1 2 3
LEFT & RIGHT FWD	With any combination of 1 2 3
REV	With any combination of 1 2 3
LEFT REV	With any combination of 1 2 3
RIGHT REV	With any combination of 1 2 3
LEFT & RIGHT REV	With any combination of 1 2 3

Notes

1. The following buttons must be cued alone:

START
STOP
STANDBY (STBY)
HOME

2. The Timing buttons (WAIT 1/10, WAIT 1/2, WAIT 1) may be cued alone or in any combination. They are used in conjunction with the START and STOP buttons during high speed programming, as explained in the next section.

HIGH SPEED PROGRAMMING

Now let's look at high speed programming and your SHOW PRO III's capacity to produce sophisticated screen effects. In normal speed programming, each cue is a single step, and you provide synchronization through use of the CUE button. High speed is also programmed a step at a time. The big difference between the two programming modes is the fact that in high speed the SHOW PRO III will automatically activate cues at speeds up to ten per second!

A high speed sequence is begun by pushing the START button, concluded by pushing the STOP button. Timing within the sequence is dictated by your use of the WAIT buttons. When the START cue tells the SHOW PRO III a high speed sequence is about to be entered, the programmer is prepared to accept ten cues per second. But you still determine the intervals between screen actions by means of the WAIT cues you enter.

When the SHOW PRO III is playing back a high speed section or synchronizing a high speed portion, the CUE button is pushed at the beginning and the programmer automatically performs the timing until it reads a stop.

In regard to timing, it's important to note that when commands are given to a specific screen (projector pair), timing must be added to allow for the transition time of the dissolve plus time for the down-going projector to advance. (Projector advance time = 1 second). Therefore, certain minimum intervals are necessary for smooth visual-to-visual transitions.

For example, after a CUT command is given to a pair of projectors, you should allow 1-6/10 seconds for the pair to execute. How? By pressing WAIT 1/10, WAIT 1/2, WAIT 1, and CUE (the programmer accepts the total of your WAIT commands as a single cue).

Other minimum intervals:

- After 2 SEC, allow three seconds

Method: Press WAIT 1, WAIT 1/2, CUE; repeat

- After 4 SEC, allow five seconds

Method: Press WAIT 1, WAIT 1/2, CUE: repeat twice; press WAIT 1/2, CUE

- After 8 SEC, allow nine seconds

Method: Press WAIT 1, WAIT 1/2, CUE, six times in succession

- After ALT there's no need to make allowance for a time interval. Alternate can be cued as fast as ten times per second because it doesn't involve the advance of the down-going projector.

Ready to try your hand at high speed? Here's a program prepared to familiarize you with this SHOW PRO III feature.

A "GET ACQUAINTED" HIGH SPEED PROGRAM

We'll begin with basic set-up, just as we did in normal speed programming:

- Place your slide trays on projectors, align and focus
- Set trays in "home" or starting positions . . . first slides in left gates, second slides in right gates
- All keyboard toggle switches to right except PROGRAM TIMING, which should be in the left, or STEP, position

OK, you're ready to program.

1. Push START, CUE
2. Push 8 SEC, 1, 2, 3, CUE
3. Push WAIT1, WAIT 1/2, CUE
4. Repeat Step 3 five more times
5. Push 4 SEC, 1, 2, 3, CUE
6. Push WAIT 1, WAIT 1/2, CUE
7. Repeat Step 6 twice
8. Push WAIT 1/2, CUE
9. Push 2 SEC, 1, 2, 3, CUE
10. Push WAIT 1, WAIT 1/2, CUE
11. Repeat Step 10
12. Push CUT, 1, 2, 3, CUE
13. Push WAIT 1/10, WAIT 1/2, WAIT 1, CUE
14. Push CUT, 1, 2, 3, CUE
15. Push STOP, CUE

CUE COUNTER Reads: 021

This is a good point at which to check results. Here's how to review:

- Move the PROGRAM TIMING switch to PLAY position
- Push REVQ. Notice all projectors are going back to the starting position. With the Program Timing switch in PLAY, REVQ reverses program memory and all projectors to the last START cue. Green ready lights tell you when projector trays have reached the starting point.
- Push CUE

Result: Left projectors dissolve on in eight seconds. After one second they dissolve off and the right projectors dissolve on in four seconds. Another one-second pause for projector advance, the right projectors dissolve off and the left projectors dissolve back on in two seconds. One second later the left projectors cut off while the right projectors cut on. After a final one-second interval the right projectors cut off, the left projectors cut on and the programmer stops.

Now that you've reviewed your program to this point, let's continue. The next commands will create a screen wipe effect. Put PROGRAM TIMING Switch to STEP.

1. Push START, CUE
2. Push 2 SEC, 1, CUE
3. Push WAIT 1/2, CUE
4. Push 2 SEC, 2, CUE
5. Push WAIT 1/2, CUE
6. Push 2 SEC, 3, CUE
7. Push STOP, CUE

CUE COUNTER Reads: 028

Review time again:

- Program TIMING SWITCH to PLAY
- Push REVQ, wait for Green ready lights
- Push CUE

Result: Screen 1 does a two-second dissolve from left projectors to right. A half second after Screen 1 starts dissolving, Screen 2 begins a two-second dissolve from left to right. And a half second after that, Screen 3 begins its two-second dissolve from left projector to right. Then the programmer stops.

You've reviewed your screen wipe and you're ready to proceed. The next commands will create a 1/2 second alternate, then speed up until you're alternating ten times per second. Put PROGRAM TIMING to STEP

1. Push START, CUE
2. Push ALT, 1, 2, 3, CUE
3. Push WAIT 1/2, CUE
4. Push ALT, 1, 2, 3, CUE
5. Push WAIT 1/2, CUE
6. Push ALT, 1, 2, 3, CUE
7. Push WAIT 1/2, CUE
8. Push ALT, 1, 2, 3, CUE
9. Push WAIT 1/2, CUE
10. Push ALT, 1, 2, 3, CUE
11. Push WAIT 1/2, CUE
12. Push ALT, 1, 2, 3, CUE
13. Push WAIT 1/10, CUE
14. Push WAIT 1/10, CUE
15. Push ALT, 1, 2, 3, CUE
16. Push WAIT 1/10, CUE
17. Push WAIT 1/10, CUE
18. Push ALT, 1, 2, 3, CUE
19. Push WAIT 1/10, CUE
20. Push WAIT 1/10, CUE
21. Push ALT, 1, 2, 3, CUE
22. Push ALT, 1, 2, 3, CUE
23. Push ALT, 1, 2, 3, CUE
24. Push ALT, 1, 2, 3, CUE
25. Push ALT, 1, 2, 3, CUE
26. Push ALT, 1, 2, 3, CUE
27. Push CUT, 1, 2, 3, CUE
28. Push STOP, CUE

CUE COUNTER Reads: 056

OK, let's review that section.

- Put PROGRAM TIMING switch to PLAY
- Push REVQ. Wait for green ready lights
- Push CUE

Result: The projectors start alternating from right to left to right every half second. After alternating six times, they speed up, alternating left to right to left every 3/10 second. After three of these, they speed up even further, alternating left to right every 1/10 second. At the conclusion, the right projectors advance on the Cut command and the programmer stops.

That reviews your standard alternate. The next commands will create wipe alternate. Put PROGRAM TIMING switch to STEP.

1. Push START, CUE
2. Push ALT, 1, CUE
3. Push ALT, 2, CUE
4. Push ALT, 3, CUE
5. Push WAIT 1/2, CUE
6. Push ALT, 1, CUE
7. Push ALT, 2, CUE
8. Push ALT, 3, CUE
9. Push WAIT 1/2, CUE
10. Push ALT, 1, CUE
11. Push ALT, 2, CUE
12. Push ALT, 3, CUE
13. Push WAIT 1/2, CUE
14. Push ALT, 1, CUE
15. Push ALT, 2, CUE
16. Push ALT, 3, CUE
17. Push WAIT 1/2, CUE
18. Push ALT, 3, CUE
19. Push ALT, 2, CUE
20. Push ALT, 1, CUE
21. Push WAIT 1/2, CUE
22. Push ALT, 1, CUE
23. Push ALT, 2, CUE
24. Push ALT, 3, CUE
25. Push WAIT 1/2, CUE
26. Push CUT, 3, CUE
27. Push CUT, 2, CUE
28. Push CUT, 1, CUE
29. Push STOP, CUE

CUE COUNTER: Reads: 085

Now watch the results of this section.

- Put PROGRAM TIMING switch to PLAY
- Push REVQ
- Push CUE

Result: The projectors will alternate from left to right, starting on Screen 1 and progressing through Screens 2 and 3 at 1/10 second intervals. Then the same sequence repeats itself four more times with a half-second pause between repetitions. Then the sequence repeats in the opposite direction, that is, Screens 3-2-1, pauses one half second, repeats again on Screens 1-2-3, then cuts through Screens 3-2-1, advancing the down-going left projector.

You've reviewed alternate wipes. Now try dissolves, alternate and independent commands in combination. Put PROGRAM TIMING switch to STEP.

1. Push START, CUE
2. Push LEFT, 2 SEC, 1, 2, 3, CUE
3. Push WAIT 1, WAIT 1/2, CUE
4. Push WAIT 1, WAIT 1/2, CUE
5. Push WAIT 1, CUE
6. Push LEFT, ALT, 1, 2, 3, CUE
7. Push WAIT 1/2, CUE
8. Push LEFT, 2 SEC, 1, 2, 3, CUE
9. Push WAIT 1, WAIT 1/2, CUE
10. Push LEFT, ALT, 1, 2, 3, CUE
11. Push WAIT 1/2, CUE
12. Push LEFT, 2 SEC, 1, 2, 3, CUE
13. Push WAIT 1, WAIT 1/2, CUE
14. Push LEFT, ALT, 1, 2, 3, CUE
15. Push WAIT 1/2, CUE
16. Push LEFT, 2 SEC, 1, 2, 3, CUE
17. Push WAIT 1, WAIT 1/2, CUE
18. Push WAIT 1, WAIT 1/2, CUE
19. Push WAIT 1, WAIT 1/2, CUE
20. Push WAIT 1, WAIT 1/2, CUE
21. Push LEFT, RIGHT, 4 SEC, 1, 2, 3, CUE
22. Push STOP, CUE

CUE COUNTER Reads: 107

Time for another review.

- Put PROGRAM TIMING switch to PLAY
- Push REVQ
- Push CUE

Result: Left projectors dissolve up in a superimposition over the right projectors. Two seconds after the dissolve the left projectors alternate off for a half second come back on for two seconds alternate off for a half second dissolve back on in two seconds alternate off for a half second followed by a two-second dissolve on that lasts for six seconds. Then both left and right projectors dissolve off and the program stops.

How about a look at your high speed sequence, now, from start to finish?

- Put PROGRAM TIMING switch to PLAY
- Push RESET (Wait for projectors to home, indicated by green ready lights)
- Push CUE each time the programmer comes to a stop (Wait for green ready lights before pushing CUE)

There. That's an example of what can be done with your SHOW PRO III. Many other effects are possible. Don't be afraid to experiment as you're getting acquainted with your programmer. Because nothing you program is necessarily final. Any effect can be erased or modified by editing, the subject of our next section.

PROGRAM EDITING

The editing controls of the SHOW PRO III are the red-lettered buttons at the far right of the keyboard. The specific function of each button is explained in the Editing Controls section of the manual, page 6 .

Editing is the process of making revisions, additions or deletions in a program sequence that's been entered into memory. To reach the point you wish to edit you simply place the PROGRAM TIMING switch in the STEP position, then

- Move forward one cue each time you press the CUE button - or -
- Move forward rapidly by pushing the RUN button, which advances cues at a rate of ten per second
- To reverse a cue at a time, push the REVERSE CUE button

Using the cue-at-a-time procedure, you'll notice that the keyboard previews your next screen action or timing code. And if the DISSOLVE SWITCH is in NORMAL, the slide projectors will also move forward or backward with the program memory.

When using the RUN button, be sure to allow time for the projectors to catch up with memory, indicated by the green lights.

The best way to understand editing is by entering a brief program into memory, then making changes.

1. All keyboard switches to the right except PROGRAM TIMING switch, which should be in the left or STEP position. All trays at starting point and memory clear.

2. Push 8 SEC, 1, 2, 3, CUE

3. Push 4 SEC, 1, 2, 3, CUE

4. Push 2 SEC, 1, 2, 3, CUE

5. Push CUT, 1, 2, 3, CUE .

6. Push 4 SEC, 1, 2, 3, CUE

7. Push 2 SEC, 1, 2, 3, CUE

8. Push CUT, 1, 2, 3, CUE

CUE COUNTER Reads: 008

9. Push RESET

Note that memory and all projectors return to the starting position. The keyboard is previewing your first cue (8 SEC, 1, 2, 3,).

10. Push CUE

Result: The left projectors dissolve on in eight seconds and the keyboard previews the next screen action (4 SEC, 1, 2, 3).

Now let's change the 4 SEC, 1, 2, 3 to a CUT, 1, 2, 3.

- Push CUT. Notice that 4 SEC cleared and the keyboard now reads CUT, 1, 2, 3.
- Push CUE. Result: You've changed the 4 SEC, 1, 2, 3 to a CUT, 1, 2, 3.

Want to change only the speed of a dissolve? Pushing the new dissolve speed clears the old. These changes are typical of basic editing, requiring none of the red editing buttons.

Now that you've changed the 4 SEC, 1, 2, 3 to CUT, 1, 2, 3, you're previewing cue 003, a 2 SEC, 1, 2, 3. Change it to a 2 SEC, 2 only by doing the following:

- Push CLEAR
- Push 2 SEC, 2 CUE

Result: When you pushed CLEAR you cleared the keyboard, allowing you to change cue 3 to a two-second dissolve on Screen 2. Use CLEAR when you wish to change the Screen Numbers, or to change Left or Right, since they do not automatically cancel each other out.

You're now previewing cue 004 (CUT, 1, 2, 3). At this point you want to "Add a cue" before doing CUT, 1, 2, 3 . . . say a four-second dissolve on Screens 1 and 3.

- Push CLEAR
- Push 4 SEC, 1, 3
- Push ADDQ

Result: Cue 004 has now become 4 SEC, 1 and 3, and this cue has been inserted between cue 003 (2 SEC, 2) and what used to be cue 004 (CUT, 1, 2, 3). The cue you added (4 SEC, 1 and 3) has become cue 004 and CUT, 1, 2, 3 . . . now previewing . . . has become cue 005.

Let's continue by keeping cue 005 (CUT, 1, 2, 3).

- Push CUE

Result: CUT, 1, 2, 3 stays in your program. You are now previewing cue 006 (4 SEC, 1, 2, 3).

Now eliminate cue 006 from your program. Here's how:

- Push SKIPQ

Result: The keyboard is now previewing cue 006 (2 SEC, 1, 2, 3). You have taken the old cue 006 out of your program and moved all other cues forward one slot, converting 2 SEC, 1, 2, 3 into cue 006.

Keep the new cue 006 by doing the following:

- Push CUE

Result: 2 SEC, 1, 2, 3 stays in your program and you are previewing cue 007 (CUT, 1, 2, 3), the last cue in your program. Notice all the left projectors are on. To end the program, change cue 007 (CUT, 1, 2, 3) to a dissolve, and fade the projectors off in a four-second dissolve.

At this point stop and look at your keyboard. Try to figure out how to do it. Have you got it? If not, ask yourself this question: What do I want to happen? Answer: I want the left to go off in a four-second dissolve on all screens. And you do it this way.

- Push 4 SEC

- Push LEFT

- Push CUE

Result: The left projectors fade off in a four-second dissolve. When you pushed the 4 SEC button it cleared the CUT button. Then because you did not want them to dissolve to the right projectors, you pushed LEFT, thereby telling the left projectors only to dissolve off.

Now let's look at your edited show.

- Push RESET

Result: Memory and all projectors go to the starting point. Now . . . waiting for the green ready lights each time . . . push the Cue button when you want to see the next screen action.

Ready for more editing? Push RESET again and wait for your projectors to home. Then push RESET and CLEAR together. This clears the programmer's memory so you can start a new program.

One of the most significant advantages of your SHOW PRO III System is its capability to edit while keeping track of memory and projector status. It means changes can be made while you're programming. And instant replay of a high speed sequence can tell you if an effect you programmed is what you really want. If not, it can be changed immediately. Each section of a show can be programmed, reviewed and edited before you continue. And it's all done without ever touching a slide projector.

OK. Here's our new program.

1. All switches to the right except the PROGRAM TIMING switch, which should be in the left or STEP position.
2. Push 4 SEC, 1, 2, 3, CUE
3. Push START, CUE
4. Push 2 SEC, 1, CUE
5. Push WAIT 1/2, CUE
6. Push 2 SEC, 2 CUE
7. Push WAIT 1/2, CUE
8. Push 2 SEC, 3, CUE
9. Push STOP, CUE

CUE COUNTER reads: 009

Result: You have programmed a two-second dissolve wipe on the screen. Since you've done this one step at a time, you don't know if it's the effect you wanted. Check by doing this:

- Put PROGRAM TIMING switch to PLAY

- Push REVQ

Result: Program memory and projectors go back to the start, cue 002

- Push CUE and watch the screen effect

Now that you've seen it, let's say you don't like it. You decide to substitute a four-second wipe with longer intervals between screen changes. Here's the way to do it.

Result: You have changed the two-second dissolves to four-second dissolves, and the waiting time between dissolves to one and a half seconds.

Now review the change.

- Put PROGRAM TIMING switch to PLAY
- Push REVQ

Result: Again, memory and projectors go to the start cue

- Push CUE and watch the screen effect

Let's say now your effect is fine. (If you wanted to try others, you could continue editing). Here's additional input for your program.

Result: Starting with the right projectors you alternate left-right-left with a half-second wait between alternates, ending on the right projectors.

To review, do this:

- Put PROGRAM TIMING switch to PLAY
- Push REVQ
- Push CUE

After reviewing, you want to increase the delay between alternates by 2/10 of a second. Edit this in this way.

1. Push REVQ
2. Put PROGRAM TIMING switch to STEP
3. Push CUE (Keeping the START cue)
4. Push 4 SEC (Changing 2 SEC to 4 SEC)
5. Push CUE (Entering 4 SEC into memory)
6. Push WAIT 1 (Making the waiting time 1-1/2 seconds)
7. Push CUE (Entering your new timing)
8. Repeat Steps 4 and 5
9. Repeat Steps 6 and 7
10. Repeat Steps 4 and 5
11. Push CUE (Keeping the STOP cue)

1. Put PROGRAM TIMING switch to STEP
2. Push START, CUE
3. Push ALT, 1, 2, 3, CUE
4. Push WAIT 1/2, CUE
5. Repeat steps 3 and 4, in order, ten times
6. Push ALT, 1, 2, 3, CUE
7. Push STOP *Cue 4?*

CUE COUNTER Reads: 034

1. Push REVQ
2. Put PROGRAM TIMING switch to STEP
3. Push CUE (keeping the START cue)
4. Push CUE (keeping the ALT, 1, 2, 3, cue)
5. Push WAIT 1/10, CUE (Adding 1/10 second to your half-second wait)
- Note:** The keyboard now reads ALT, 1, 2, 3, but you want to increase the wait by another 1/10 second. Step 6 does it.
6. Push WAIT 1/10, ADDQ
- Note:** When you pushed WAIT 1/10, the ALT, 1, 2, 3, cleared and the WAIT 1/10 button lit. Then, when you pushed ADDQ, you added a 1/10-second wait into memory, and the ALT 1, 2, 3, previews once more on the keyboard.
7. Continue stepping through your program, changing the WAIT 1/2 to a WAIT 1/2 plus 1/10, cueing that into memory, then pushing WAIT 1/10, ADDQ in between each ALT, 1, 2, 3, until the keyboard reads STOP.
8. Push CUE to enter the STOP cue. Notice the Cue Counter now reads 045. You used the ADDQ button 11 times.

Once again, let's review.

- Put PROGRAM TIMING switch to PLAY
- Push REVQ
- Push CUE and watch screen effects

Now you decide you've made the waits between alternates are too long. You want to edit again to reduce them by 1/10 second. Take these steps.

1. Push REVQ
2. Push PROGRAM TIMING switch to STEP
3. Push CUE (keeping the START cue)
4. Push CUE (keeping the ALT, 1, 2, 3, cue)
5. Push CUE (keeping the WAIT 6/10)
6. Push SKIPQ (taking the WAIT 1/10 out of memory)
7. Continue stepping through your program. Each time WAIT 1/10 comes on the keyboard by itself, push SKIPQ
8. When keyboard reads STOP, push CUE to keep the STOP cue

CUE COUNTER Reads: 034

To review:

- Put PROGRAM TIMING switch to PLAY
- Push REVQ
- Push CUE and watch screen effects. The result is now an alternate every 6/10 seconds.

These exercises have introduced you to a few editing features. They demonstrate that it's not only easy to change dissolve speeds, but also to insert new cues or delete cues from your program using the ADDQ and SKIP buttons.

You will find these buttons most helpful in changing timing during high speed sequences. Here again, remember your SHOW PRO III System has a basic logic. Each button does exactly what it says. So when programming or editing, ask yourself the question, "What do I want to do?" Once you answer it, you should be able to push the right buttons. And if you should make a mistake, don't worry, your REVQ will back up through mistakes as well as it does through good cues.

Now you've used the SKIPQ, ADDQ, CLEAR, RESET and REVQ buttons. What about the RUN button? This button advances memory at ten steps per second to any cue number and also brings the slide projectors to that spot in the program automatically.

At this point, you have 34 cues in memory. Remember the slides you have on the screen at cue 034. Then do this.

- Push RESET
- Put PROGRAM TIMING switch to STEP
- Wait for all projectors to home.
- Push RUN and hold it down until the Counter gets to cue 034 again.

Result: When the screen status ready lights come on, the visuals that were on for cue 034 are there again. This method lets you get to any cue number very quickly. If you don't want the projectors to flash on the screen as you're reaching a program point, put the DISSOLVE SWITCH to STANDBY until the Green Ready lights come on. And if you pass the cue number you want, use the REVQ button to back up.

HIGH SPEED DUMPING OF MEMORY ONTO MAGNETIC TAPE

To RECORD
Monitor on source
Rec mode
on R

The SHOW PRO III System lets you store program memory on magnetic tape by means of high speed dump of the information, or by synchronizing information stored in memory to a sound track. The information can be replaced in memory by playing back the recorded tape. So you can store memory temporarily during programming, or permanently for a "canned" show. And changes can still be made by re-entering memory into the programmer.

Here's how to store your program . . . temporarily or permanently . . . on magnetic tape.

1. Push RESET. Wait for memory and projectors to home, indicated by green ready lights.
2. All switches should be to the right except MAG TAPE RECORD/PLAY, which should be in RECORD position. (If you want projectors to remain homed, push DISSOLVE switch to DISCONNECT).
- 3. Interconnect from Record Mag Tape Receptacle on rear panel of programmer to Line Level In on tape deck.
4. Put tape deck in Record and start.
5. Move KEYBOARD switch to OVERRIDE. Note: In Record, with KEYBOARD switch in OVERRIDE, a tone is generated to set tape deck level, which should play back at zero VU. We have found many tape decks recording at +3 DB will play back at zero. To check your tape deck, play back the tone recorded. If it reads approximately zero, proceed with the next step. If it does not, change the record level and try again. Once you have established a record level, you should not have to change the setting during programming.
6. After level is set, return KEYBOARD switch to NORMAL.
7. Push RUN. Hold until DIGITAL CUE COUNTER stops. Your program is now recorded on magnetic tape at ten cues per second.

Note: Do not enter a HOME cue at the end of a program when high speed dumping or it will cause the program to record continuously.

8. Stop tape deck.

MEMORY RE-LOADING FROM MAGNETIC TAPE

Monitor on tape
Rec mode off

1. All switches should be to the right. If you want projectors to stay homed, however, push DISSOLVE switch to DISCONNECT.
- 2. Interconnect from the Playback Mag Tape Receptacle on the rear panel of the programmer to Line Level Out on the tape deck.
3. Find the level-setting override tone on the tape. This can be determined by tape deck counter or the appearance of a steady green MAG TAPE STATUS light on the keyboard.
4. Run tape deck. DIGITAL CUE COUNTER will show program cues loading and keyboard lights will flash.
5. When Cue Counter stops, program is loaded in memory.
6. Stop tape deck.
7. Push RESET.
8. Move the DISSOLVE switch to NORMAL.

Now memory is loaded back into the programmer, and all projectors, as well as memory, are in home position.

RECORDING CUES TO SOUND TRACK

1. Push RESET. Wait for memory and projectors to home, indicated by green ready lights on keyboard.
- 2. All switches should be to the right except MAG TAPE RECORD/PLAY, which should be in RECORD position.
- 3. Interconnect from Record Mag Tape Receptacle on rear panel of programmer to Line Level In on the #2 track of the tape deck.
4. Put tape deck in Record on #2 track and Play on #1 track and start.
5. If you have not set your record level, see Step 5 of High Speed Dumping section. If you have previously set your record level, collect \$200 and proceed immediately with the next step.

6. After level is set, move KEYBOARD switch to NORMAL.
7. Now you're ready to cue your show to the sound track. This is done by pushing the CUE button at the point in the sound track at which you wish the next screen action to occur.
8. Continue until entire show is recorded to sound track.
9. Stop tape deck.

PLAYING BACK YOUR SYNCHRONIZED, RECORDED SHOW

1. Push RESET. This brings memory and projectors to home.
2. All switches to the right. (Put MEMORY switch to DISCONNECT unless you want to reload memory).
3. Interconnect from Mag Tape receptacle on rear panel of programmer to Line Level Out on tape deck. Both Record and Playback cords may be connected during programming if desired.
4. Set both tracks of tape deck to Play. Find line level override tone on tape. This can be determined by tape deck counter or appearance of steady green MAG TAPE STATUS light.
5. Let tape deck run.
6. Your show should now run exactly as programmed. If your MEMORY switch was in NORMAL, note that your program has also been loaded into memory in case you want to edit and re-cue.
7. At end of recorded show, stop tape deck.

SHOWING A "MIXED" SHOW

There may be times when you want to incorporate a "live" speaker or narrator into your "canned" show, or to inject a manually-controlled segment. The SHOW PRO III System makes it easy to do, because it lets you pre-load memory for the live portion, then switch to canned at the appropriate time. There are two basic ways of doing it.

Primary Method

Loading Memory

1. All switches should be to the right except DISSOLVE, which should be on DISCONNECT.
2. Start tape deck and load memory.
3. Stop tape deck after memory load.
4. Push RESET.

Playing "Canned" Show

1. Move DISSOLVE switch to NORMAL.
2. Move MEMORY switch to DISCONNECT.
3. Start tape deck for canned portion.
4. Stop tape deck at end of canned portion.

Cueing The Speaker

1. Push CLEAR.
2. Move MEMORY switch to NORMAL.
3. Move DISSOLVE switch to DISCONNECT.
4. Push RESET.
5. Return DISSOLVE switch to NORMAL.
6. Cue to speaker.

Note: We recommend that memory for the live speaker be placed between two leaders on your tape. This gives the operator a clear indication that memory has been loaded.

With the DISSOLVE switch in DISCONNECT, by pushing RESET, you re-establish home for your live show. This also allows you to REVERSE CUE if necessary, during the "live" presentation.

Alternate Method

Playing Canned Show

1. All switches to right except MEMORY, which should be in DISCONNECT.
2. Start tape deck for canned show.
3. Stop tape deck at end of canned show.
4. Push CLEAR.

Loading Memory for Speaker

1. All switches to right except DISSOLVE, which should be in DISCONNECT.
2. Start tape deck and load memory.
3. Stop tape deck after memory load.
4. Push RESET.

Cueing Speaker

1. Move DISSOLVE switch to NORMAL
2. Cue to speaker.

Note: There are other methods that achieve the same results, but to minimize the risk of operator error, we strongly recommend you employ one of those outlined.

CONCLUSION

Now you're acquainted with the features of your SHOW PRO III System.

As you become increasingly familiar with it, and more confident in your use of it, you'll find the SHOW PRO III will encourage your best creative efforts.

We recognize that no manual, regardless of how comprehensive it may be, can cover every aspect of a system with such a broad range of capabilities.

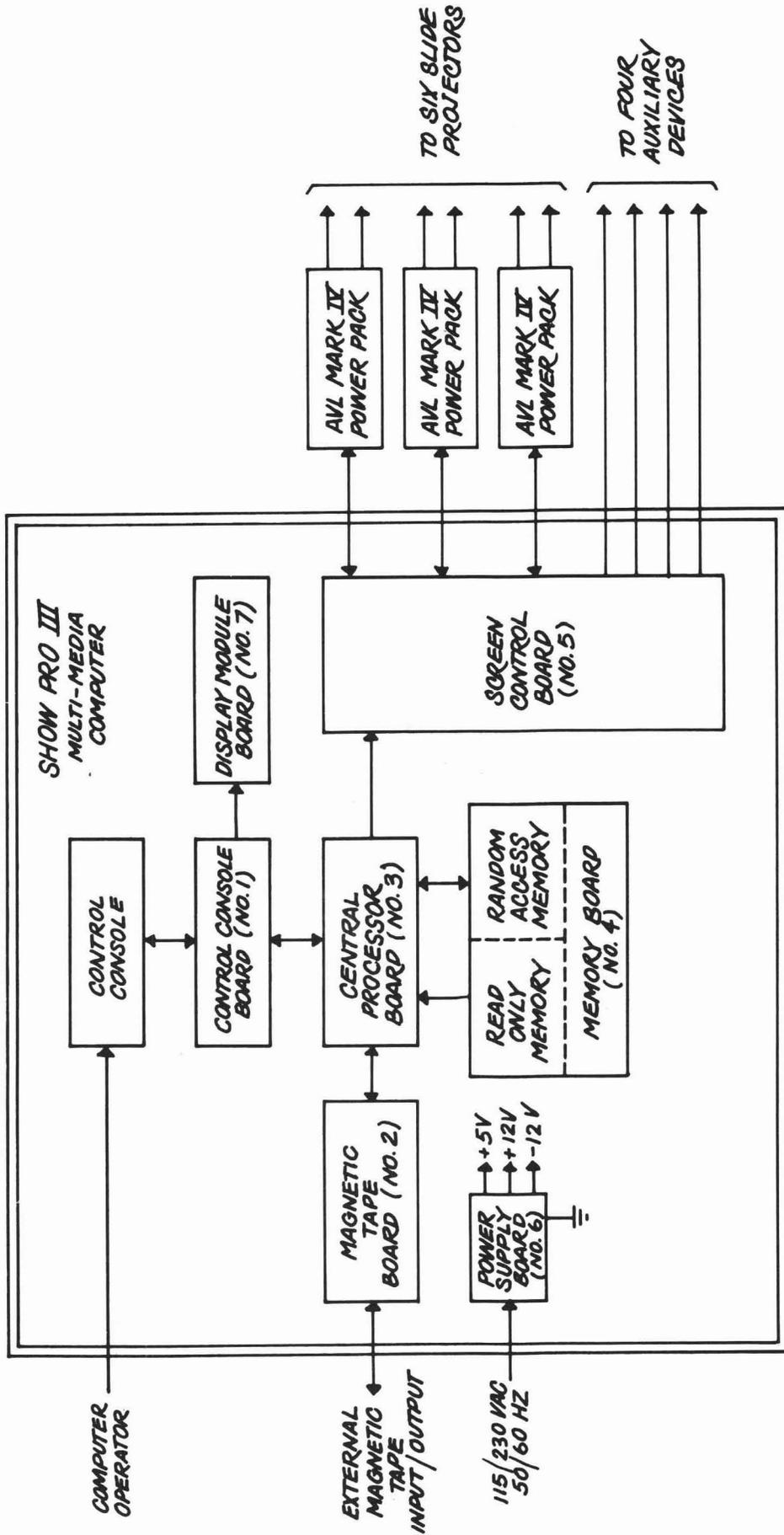
Don't be afraid to experiment. The system's tolerant of errors.

Don't hesitate to contact us if you have comments, questions, or need assistance of any sort.

Your SHOW PRO III is your means of exploring a whole new universe of multi-image techniques.

Enjoy it.

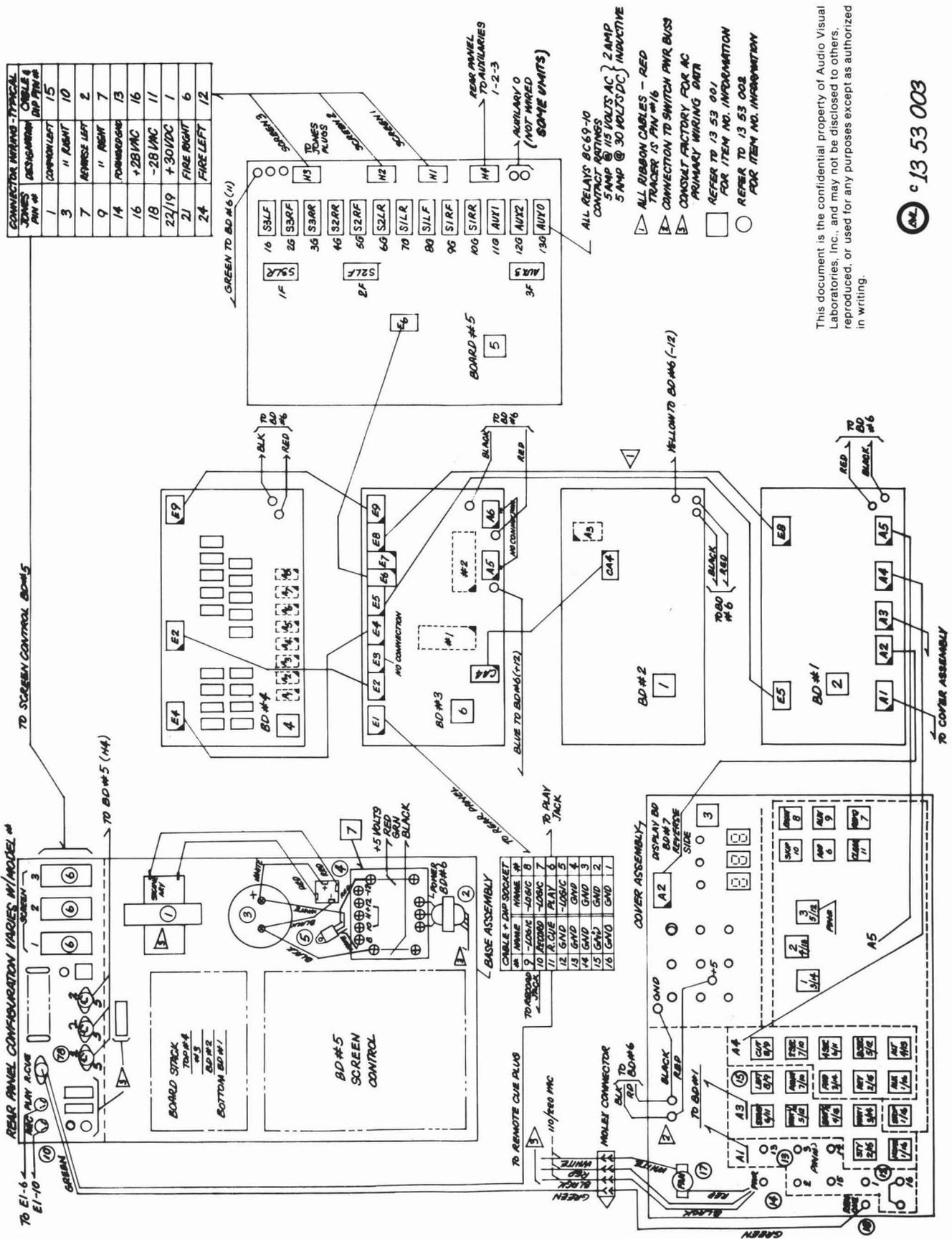
APPENDIX SHOW PRO III SYSTEM BLOCK DIAGRAM



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SHOW PRO III INTERCONNECTION DIAGRAM



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SHOW PRO III SPARE PARTS LIST

MECHANICAL PARTS

ITEM NO.	QTY.	DESCRIPTION
1	1	Transformer, EG-495
2	1	Transformer, 7549
3	1	Capacitor, Sprague 36D or Mallory CGS (Specify)
4	1	Rectifier Bridge, MDA - 980 - 1
5	1	Transistor, Power, Tip-35 (Incl. MTG. PKG)
6	1	Plug, P324 - AB, (24 Pin male)
7	1	Plug, 119 - 5F (5 pin female)
8	1	Plug, 119 - 5M (5 pin male)
9	1	Fuse holder, LF - 342004
10	1	Jack, Audio, HHS - 275
11	5	Fuse, AG-2 (2 AMP)
12	1	Switch, 3 Position, JMT - 121
13	1	Switch, 2 Position, JMT - 123
14	1	Switch, Power, LL - 123
15	1	Switch, Pushbutton, LUS - 05 - 1
16	10	Bulb, Incandescent, CM - 7 - 7945
17	1	Fan, BT2A - 1
18	1	Lamp, Led Assembly, 2L5SRTL - FL5/33
19	2	Clip, Flat Cable, 4J10
20	4	Spacer, 88 - 4344/FF
21	4	Spacer, 18 - 4343/MF
22		Assorted Hardware Package

PRINTED WIRING BOARD

PART NO.	QTY.	DESCRIPTION
13 33 001	1	Magnetic Tape PWB Assembly
13 33 002	1	Control Console PWB Assembly
13 33 003	1	Display Module PWB Assembly
13 33 004	1	Memory PWB Assembly
13 33 005	1	Screen Control PWB Assembly
13 33 006	1	Central Processor PWB Assembly
13 33 007	1	Power Module PWB Assembly

SHOW PRO III SPECIFICATIONS

Dissolve Control: One 24-pin Jones plug for each of three MARK IV Power Packs. Each Power Pack controls two slide projectors.

Auxiliary Channels: See Rear Panel section of Manual.

Magnetic Tape: Line Level record and playback. Time Division Multiplex (Digital), multiple pass with cyclic redundancy check (CRC) characters and computer analysis on playback.

Electrical: 115/230 VAC, 50/60 Hz switchable.

Size: H x W x D = 4½ x 15 x 16 inches.

Weight: 17 pounds.

Origin: Manufactured in U.S.A.



Audio Visual Laboratories, Inc.

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