Ultra Deluxe Automation

FEATURES—WHAT MAKES IT BETTER ?

* Built-in SYNC Interlok System with improved failsafe circuit
* Built-in SHOW START/INTERMISSION Timer
* SHOW START Pre-Select Switches for AUDIO & FORMAT
* FEATURE Pre-Select Switches for AUDIO & FORMAT
* 5-Position AUDIO selection
* Panel-mounted CUE switches for Testing & Overide
* Full compliment of Manual Switches
* Panel mounted "Feature On" & "Sync Fault" LED indicators
* 3 Separate FORMAT circuits for: Lens, Masking, Option
* Low Voltage ONLY on P.C. Board
* Built-in Piezo Alarm buzzer
* Illuminated Push Button Control Switches
* Multiple Status System Interface.
* Reliable PROXIMITY Digital Cue System
* 1-piece REMOVEABLE Chassis & Control panel
* Designed for SIMPLE Installation, Operation and Service

FEATURES CONTROL OF:

* Projector Drive Motor
* Xenon Lamp
* Exciter Lamp
* Changeover Dowser
* Audio System Processor
* House Light Dimmer (3-position)
* Stage Light Dimmer (2-position)

* Screen Curtain
* Masking
* Lens Turret
* Option
* Lights up early
* Full Remote Control Capability

MANUAL CONTROL SWITCHES PROVIDED FOR:

* Projector Drive Motor
* Xenon Lamp
* Changeover Dowser
* Exciter Lamp
* House Light Dimmer
* Stage Light Dirnrner

* Curtain
* Format
* Option

SEQUENCE OF OPERATIONS

A. SHOW START (START Button or START Timer)
 1. Changeover CLOSE
 2. Motor & Lamp ON
 3. Non-Sync OFF
 4. House Light Dimmer MID
 5. Stage Light Dimmer OFF
 D E L A Y..
 6. Changeover OPEN
 7. Exciter ON
 8. Audio to Pre-Select
 9. Format to Pre-Select
 10. Curtain Open

B. CROSS (Feature) CUE:
 1. House Light Dimmer DOWN
 2. Audio to Pre-Select
 3. Format to Pre-Select
 4. Feature LED ON

C. INBOARD CUE:
 1. House Light Dimmer MID

D. OUTBOARD CUE:
 1. House Light Dimmer UP
 2. Stage Light Dimmer UP
 3. Curtain Close
 D E L A Y..
 4. Changeover CLOSE
 5. Exciter OFF
 6. Non-Sync ON
 7. Audio NON-SYNC
 8. Motor & Lamp OFF (Selectable)

CONTACT:

Kelmar Systems Inc.
284 Broadway
Huntington Station, NY 11746
Phone (516) 421-1230
FAX   (516) 421-1274

INSTALLATION INSTRUCTIONS

GENERAL
The Kelmar Ultra Deluxe Automation system is contained in one Steel Wall mount enclosure with dimensions as follows:

WIDTH =   19-1/4"
HEIGHT =   19-1/2"
DEPTH   =   6-3/4"

UNPACKING
The Ultra Deluxe Automation has been designed so that the chassis and control panel are 1 assembly that can be easily removed from the enclosure, and stored safely during the rough electrical installation. To do this, remove the front cover by loosening the 2 screws on each side and then pulling the cover off with the screws still in the cover. Tighten the 4 screws so that they do not get lost. Loosen the 3 nuts in the bottom of the enclosure that secure the bottom of the chassis to the rear of the enclosure. Remove the 3 screws at the top of the control panel and slide the Control Panel/chassis out of the enclosure. Replace the 3 screws that held the control panel back into the enclosure and tighten, then tighten the 3 nuts at the bottom of the enclosure that held the chassis so that they do not become lost. Place the Control Panel/chassis assembly and the front cover back into the shipping carton and store in a safe place. The enclosure may be mounted, conduits installed, and ALL wires pulled without any damage to the Automation.

LOCATION
The enclosure is designed to be mounted below the Observation Port window, with the LEFT side of the Enclosure ALIGNED with the LEFT side of the Observation Port window opening. The TOP of the Enclosure should be mounted at 3'-6" AFF (Above Finished Floor). The Top of the Projection Room wireduct should be mounted 1'-6" AFF to allow for proper clearance of the Automation enclosure.

CONDUITS
The enclosure should be connected to the wireduct with three (3) 1" conduits and two (2) 3/4" conduits using the knockouts provided in the bottom of the enclosure. This will permit sufficient raceway area for all of the various cables and interface wires. Additional 3/4" knockouts are also available.

WIRING
All wire should be Stranded, Copper, 600 Volt Insulation. When the wires are being pulled in, please allow sufficient slack to reach the termination points. These are located along the bottom of the chassis and both sides.

PHASE NOTE
The Kelmar Ultra Deluxe Automation system contains a built in Sync Interlock system, and outputs for the various Kelmar Remote Status Systems. **ALL AUTOMATION SYSTEMS IN THE COMPLEX MUST BE POWERED FROM THE SAME A.C. PHASE**. To accomplish this, it is suggested that 1 phase; 'A" for example be selected, and ALL A.C. panels in the Projection Room use the SAME circuit number for the Automation power feed.

POWER NOTE

The Kelmar Ultra Console Automation provides DRY CONTACT closure for ALL devices controlled by the Automation. CAUTION: Chassis Mounted Power strip TBX is the termination point for ALL LINE VOLTAGE/POWER CONSUMPTION Devices. The balance of the termination points (P.C. Board) are designed and intended for low current (Less than 1 AMP), low-Voltage (less than 30 Volts) CONTROL CIRCUITS ONLY. Please verify the Voltage and current for ALL items that are to be connected to this unit. Connection of items not in accordance with the above requirements can cause damage to the equipment and possible personal injury. There are certain Projectors that use Line Voltage for Lens Turret control. It is the responsibility of the user, to provide and install external relays to control these devices, and connect only the low voltage coils of these relays to the Automation.

SHOW START AUDIO SELECT

The Kelmar Ultra Console Automation provides a Show Start Audio Pre-Select Switch (S12). As shipped, this switch selects the following: A = MONO, B = STEREO. These positions can be user assigned. At P.C. Board TD there are 2 wires which are the Output of S12. The WHITE/BLACK Wire is the A switch output and the WHITE/BROWN Wire is the B switch output. The following is a list of terminals provided for connection of these outputs.

TB7-8	MONO
TB7-10	STEREO
TB7-12	STEREO SR.
TB7-14	STEREO SRD.
TB7-16	STEREO (Other - User Assigned)

TERMINATIONS

Refer to the termination schedule for terminal functions. The following is a guide to the terminals where the devices are to be connected.

DEVICE	TERMINALS
Motor	TB1-4, 5
Xenon Lamp	TB1-6, 7
Changeover	TB1-8, 9, 10, 11
Exciter Lamp	TB1-12, 13, 14
Curtain	TB2-1, 2, 3
Masking	TB2-4, 5, 6
Lens Turret	TB2-7, 8, 9
Format Option	TB2-10, 11, 12
House Lt Dimmer	TB3-1, 3, 5, 7, 9
Stage Lt Dimmer	TB3-11, 13, 15
Audio Processor	TB4-1, 3, 4, 5, 6, 7, 8

OPTION 1 CIRCUIT

This circuit is intended to control a Slide Projector Contactor. DO NOT ATTEMPT TO CONNECT A SLIDE PROJECTOR DIRECTLY TO THESE TERMINALS. The relay contacts provided are not designed for this load. This circuit is activated opposite of the Exciter Lamp. TB1-15 and TB1-16 is the switch leg for the Option 1 circuit. Connect the coil of the Slide projector Contactor through these contacts. Manual switch S9 controls these terminals for ON-OFF-AUTO. function. ON = ON at all times, OFF=OFF at all times, AUTO. = ON During Intermission, OFF During Show.

OPTION 2 CIRCUIT

This circuit is user assigned and provides contact closure with the changeover function. TB1-17 is the feed, TB1-18 closes when the Changeover Opens and TB1-19 Closes when the Changeover closes.

INTERLOCK INTERFACE

The built-in Sync Interlock connects between the Interlocked Automation systems via 2 wires. These are connected to TB5-15 (Start Bus) and TB5-16 (Failsafe Bus) . For Interlock of 2 Automations Systems, connect TB5-15 of system 1 to TB5-15 of system 2, TB5-16 of system 1 to TB5-16 of system 2. If more than 2 Automation systems are to be connected, an Optional Sync Selector Module is available from Kelmar. This provides for complete Interlock flexibility.

CUE DETECTOR/FAILSAFE

The Kelmar Ultra Console Automation utilizes the reliable Proximity Cue Detection system. A Separate Cue Decoder P.C. Board connects between the Proximity Detector and the Main Automation P.C. Board. There are 2 Cue systems available - the standard 2-3 system with 2 proximity heads and the expanded 3-7 system with 3 proximity heads and 7 outputs. The Kelmar Ultra Console Automation requires 3 cue functions. The 2-3 system has NO optional cue functions while the 3-7 system provides 4 User Assignable Optional Cue functions. Please refer to the sheets provided with the Cue system for connection of the Cue Detector/Failsafe to the decoder board. Please Note: The 2 wires of the Failsafe Switch circuit terminate at the separate terminal block located at the Decoder Board.

For assistance with terminations, CONTACT:

> Kelmar Systems Inc.
> 284 Broadway
> Huntington Station, NY 11746
> Phone (516) 692-6131
> FAX (516) 421-1274

CONTROL PANEL

The following is a list of the switches and buttons located on the control panel and their operation.

AUTOMATION CONTROL:

SHOW START/INTERMISSION TIMER

Located on the left side of the panel serves 2 functions. 1. To Start the show after a pre-set interval and 2. To time a programmed Intermission. In addition to the Timer, the following control panel switches are connected with the Timer operation:

> S10   Mode Select Switch
> PB-2   Stop Button
> S15   Show End Mode

S10 TIMER MODE SELECT SWITCH

Has 3 positions; Center = OFF (Normal), Down = Intermission Timer Mode, UP (Momentary) = TM ON (Show Start Mode).

PB-2 STOP BUTTON

Resets TM timer to change setting, or to cancel timer start operation. Basically used when using TM timer in Show Start Mode.

S15 SHOW END MODE

For TM to be used as Intermission Timer, S15 must be set to INTER. position and S10 must be set to INTERMISSION TIMER.

The Timer has various time ranges that are adjustable with a screwdriver, from outside the case in the upper right hand corner. The time ranges are: 6 Seconds, 6 Minutes, 60 Minutes, and 6 Hours. As shipped it should be in the 60 Minute setting. There should be NO reason to use a setting other than 60 minutes.

There are 2 pointers on the time face, the knob should be rotated to the desired time setting and start switch S10 pressed UP to start the timer. As the timer counts down the inner pointer will move indicating the time remaining until show start. When S10 is activated the RED "UP" indicator on the timer face will light indicating that the timer is energized and counting down.

DO NOT CHANGE THE SETTING WITH THE TIMER ENERGIZED. TO CHANGE SETTINGS; PRESS THE STOP BUTTON, CHANGE THE SETTING, THEN ACTIVATE S10 TO RE-START.

DO NOT SET THE TIMER LOWER THAN 2 MINUTES, IMPROPER OPERATION OF THE AUTOMATION WILL RESULT.

PB-1 START BUTTON
Used to START the show at the Automation. Contains 2 status lights, The TOP light indicates Projector RUN and the bottom light indicates that the Cam Timer is in CYCLE. Automation WILL NOT start with FAULT light ON, refer to PB-2.

PB-2 STOP BUTTON
Used to STOP the show if desired. Also is the Stop button for the Show Start/Intermission Timer, refer to details above. Contains 2 status lights. The TOP light indicates that the Projector is Stopped, the Bottom light indicates FAULT (Failsafe Down). Automation WILL NOT START with FAULT light on.

S11 SHOW START FORMAT SELECT
Selects FORMAT at Show Start. Set to desired format. As Changeover Opens, Lens, Masking and Option will be directed to the proper Format.

S12 SHOW START AUDIO SELECT
Selects Audio system Format for Show Start. May be user assigned, refer to instructions in Installation section.

S13 FEATURE FORMAT SELECT
Selects FORMAT for Feature. Cross Cue Sets Lens, Masking and Option to selected Format.

S14 FEATURE AUDIO SELECT
Selects FEATURE Audio system Format. Activated by Cross Cue.

PL-1 FEATURE ON LED
Indicates that Cross Cue has been decoded and all items are set to Feature Mode. Stays on until end of show.

S15 SHOW END MODE
Selects end of show Projector Stop. In NORMAL position, the Projector Stops as the film runs through and the Failsafe arms drop. In INTER. Mode the Projector Stops as the Changeover Dowser Closes.

S16 MANUAL CUE - FEATURE / LIGHTS UP
Used for testing or override FEATURE = CROSS CUE, LIGHTS UP   INBOARD CUE.

517 MANUAL CUE - OUTBOARD / RE-START
Used for testing or override of Outboard Cue functions. RE-START position is used when running SYNC I/L, to Re-Start after a film break. Refer to Sync I/L operation.

PB-3 ALARM RESET
Used to reset alarm Piezo buzzer after a film break. Press to reset.

PD-4 SYNC INTERLOCK ON-OFF
Selects SYNC I/L Operation. Press in to activate SYNC IL Mode, top light will come on indicating SYNC Operation. Bottom light indicates that Failsafe is connected to Failsafe Bus. USE ONLY WHEN RUNNING INTERLOCK.

518 POWER ON-OFF
Turns power to Automation ON or OFF. Manual switches* still function with power OFF. * Manual Format Switch powered through Automation.

PL-2 SYNC FAULT LED
Indicates a Shutdown when running SYNC I/L. Will go off as show is Re-Started.

FI - MAIN FUSE
Main fuse protection for Automation Circuits. Refer to fuse replacement caution on panel.

MANUAL CONTROL SWITCHES:

S1 MOTOR
Turns Projector Drive Motor ON and OFF manually. Leave in Auto. position for Normal Operation.

52 LAMP
Turns Xenon Lamp Control ON and OFF manually. Leave in Auto. position for Normal Operation.

S3 CHANGEOVER
Opens or Closes 2 coil type Changeover Dowser Manually. For 1 coil type, S3 will Open but WILL NOT Close this type, Automation circuit WILL operate this type of changeover.

S4 EXCITER
Turns Exciter Lamp On and Off manually. Leave in Auto. position for Normal Operation.

S5 HOUSE LIGHT DIMMER
Provides Manual Up and Down commands for House Light Dimmer.

S6 STAGE LIGHT DIMMER
Same as S5 for Stage Light Dimmer. S7 CURTAIN - Opens or Closes Curtain Manually.

S8 FORMAT
Manually activates FLAT or SCOPE commands for Lens Turret, Masking and Option. Requires Automation Power to be ON for operation of this switch. This is the only manual switch that requires the Automation Power to be ON.

OPERATION

For Normal operation, refer to the show make-up section of these instructions. Once the print has been properly cued and has been loaded onto the platter, Thread the film through the Projector, Soundhead, Cue Detector/Failsafe and back to the platter. Set the platter for take-up and remove the slack from the take-up by rotating the platter BY HAND until the take-up platter starts and then stops. Observe that the FAULT light in the STOP button is OFF. The show should be threaded with the 8 foot mark at the Aperture. Set the 2 Show Start Pre-Selects and the 2 Feature Pre-Selects. Set the Show End Mode to Normal. Press the START Button. The following will happen:

1. The Picture Changeover will CLOSE
2. The CYCLE light will come ON
3. Motor and Lamp will come ON
4. The Picture Changeover will OPEN
5. Curtain will OPEN
6. Exciter Lamp will come ON
7. House Lights go to MID
8. Stage Lights go to OFF
9. Format to Pre-Select
10. Audio to Pre-Select

PRE-SHOW/TRAILERS RUNNING

As the CROSS CUE is detected:

1. Format to Feature Pre-Select
2. Audio to Feature Pre-Select
3. House Lights go to Down
4. PL-1 Feature light comes On.

FEATURE RUNNING

As the INBOARD CUE is detected:

1. House Lights go to MID CREDITS RUNNING

As the OUTBOARD CUE is detected:

1. Curtain will CLOSE
2. House Lights go to UP
3. Stage Lights go to UP
4. Changeover will CLOSE
5. Audio system will go to NON-SYNC
6. Film Runs Through - Motor & Lamp OFF

END OF SHOW—INTERMISSION

SYNC I/L OPERATION

The Kelmar Ultra Deluxe Automation contains a built-in SYNC I/L control circuit assembly. This is used to run the same show in 2 or More separate Auditoriums at the same time. The show should be made up in the standard fashion as outlined above. An ADDITIONAL OUTBOARD CUE is placed on the Interlock leader so that it is detected 10.5 feet prior to the first frame of the Show. This Cue acts to direct the Automation for a Show Start sequence.

1. Thread the special Interlock leader completely through the system making certain that loop accumulator are included to keep proper tension on the film and through the failsafes.

2. Set the Show Start and Feature Pre-Select Switches on BOTH Automations.

3. Turn on the SYNC IL system on each automation, verify that both FAULT lights are OFF. Show is now READY to Start.

4. Press a Start button on either Automation, Both Motors and Lamps will come on. After 5 seconds, the Failsafe Parallel lights will come ON indicating that the Failsafes are active and paralleled together. As the Outboard INTERLOCK start cue is detected, the Ultra Deluxe Automation Timer will start to cycle a show start sequence.
5. The Cue will travel through and provide a show start sequence at the other Ultra Deluxe Automation.

SHOW IS NOW RUNNING IN 2 AUDITORIUMS WITH FAILSAFES PARALLEL

6 The CROSS CUE will pass through each System and Activate the FEATURE Mode.

7. The Inboard Cue will pass through each System and activate a lights UP during the credits.

8. The OUTBOARD cue will pass through the First system and activate a Show End Sequence. As the C. O. Dowser closes on the first machine, that Failsafe Parallel light will go Of f, indicating that the Failsafe for that machine is No Longer connected

to the Failsafe Bus. The film can run through and the machine can shut of f without shutting off the second machine. The Outboard Cue does the same sequence at the second machine.

END OF SHOW—INTERMISSION

Please note that the film can still be run in 1 Auditorium by threading up the Projector AFTER the OUTBOARD - INTERLOCK START CUE.

INTERLOCK FILM BREAK
If there is a film break during Interlock Operation, both Automations will shut down and go through an Auto. Intermission Cycle. To re-start, repair the break, re-thread the film through the system, adjust the film tension and platter take-up by hand. Verify that the Status lights on both Automation systems are correct. The SYNC FAULT light will go out as the show is Re-Started. Press either Start Button, as soon as the film is up to speed, Activate the Outboard Cue Switch at each automation to the Re-Start position. This will place the show back on the screens and the Operation back to Normal.

CUE PLACEMENT - SHOW MAKE-UP

GENERAL
The Kelmar Ultra Deluxe Automation utilizes 3 different Cues:
   1.   CROSS CUE - FEATURE   [#7]
   2.   INBOARD CUE - LIGHTS UP   [#1]
   3.   OUTBOARD CUE - SHOW END   [#4]
                     INTERLOCK START   [#4]

Foil Cues may be applied to the film with the Kelmar Cue Applicator.

FOR PRESENTATIONS WITH SHOW START TRAILERS AND 1 FEATURE:

1.   Place a CROSS CUE Between the Trailers and the Feature. Locate this Cue 30" BEFORE the Feature.

2.   Place an INBOARD CUE at the Start of the Credits.

3.   Place and OUTBOARD CUE 10.5 feet BEFORE the Last Frame of the Show.

FOR PRESENTATIONS WITH 2 FEATURES (NO INTERMISSION BETWEEN)

1.   Place a CROSS CUE between the Trailers and the First Feature. Locate this Cue 30" BEFORE Feature 1.

2.   Place an INBOARD CUE at the Start of Feature 1 Credits.

3.   Place a CROSS CUE 30" BEFORE the Start of Feature 2.

4.   Place an INBOARD CUE at the Start of Feature 2 Credits

5.   Place an OUTBOARD CUE 10.5 feet BEFORE the last frame of Feature 2.

When Feature 1 is Running, Re-Set Feature Format and Audio Pre Select Switches for Feature 2.

FOR 2 FEATURES ON 1 PLATTER WITH AN INTERMISSION CUE THE FILM AS THOUGH THERE WERE 2 SEPARATE 1 FEATURE SHOWS.

For Assistance CONTACT:

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Huntington Station, NY 11746
Phone (516) 692-6131
FAX (516) 421-1274

TERMINATION SCHEDULE

TB1 CHASSIS TERMINAL STRIP - FIELD TERMINATIONS

TB1-1	120 VAC INPUT FEED TO THIS UNIT *	
TB1-2	120 VAC NEUTRAL FEED TO THIS UNIT	
TB1-3	GROUND	
TB1-4	PROJECTOR MOTOR IN	[DRY CIRCUIT]
TB1-5	PROJECTOR MOTOR OUT	
TB1-6	LAMP CONTROL IN	[DRY CIRCUIT]
TB1-7	LAMP CONTROL OUT	
TB1-8	C.O. DOWSER FEED	[DRY CIRCUIT]
TB1-9	C.O. DOWSER OPEN	
TB1-10	C.O. DOWSER CLOSE	
TB1-11	C.O. DOWSER CLOSE NORMALLY CLOSED	[SPECIAL]
TB1-12	EXCITER LAMP IN	[DRY CIRCUIT]
TB1-13	EXCITER LAMP OUT	
TB1-14	- TIE POINT	
TB1-15	OPTION 1 FEED	[DRY CIRCUIT]
TB1-16	OPTION 1 OUTPUT	
TB1-17	OPTION 2 FEED	[DRY CIRCUIT]
TB1-18	OPTION 2 (C$_1$0. OPEN)	
TB1-19	OPTION 2 (C,Oe CLOSE)	
TB1-20	- TIE POINT	
TB1-21	12 VAC CONSTANT	
TB1-22	GROUND - SWITCHING CONSTANT	

TERMINATION SCHEDULE

TB2 P.C. BOARD - FIELD TERMINATIONS

TB2-1	CURTAIN CONTROL FEED	[DRY CIRCUIT]
TB2-2	CURTAIN CONTROL OPEN	
TB2-3	CURTAIN CONTROL CLOSE	
TB2-4	FORMAT 1 FEED	[DRY CIRCUIT]
TB2-5	FORMAT 1 FLAT	
TB2-6	FORMAT 1 SCOPE	
TB2-7	FORMAT 2 FEED	[DRY CIRCUIT]
TB2-8	FORMAT 2 FLAT	
TB2-9	FORMAT 2 SCOPE	
TB2-10	FORMAT 3 FEED	[DRY CIRCUIT]
TB2-11	FORMAT 3 FLAT	
TB2-12	FORMAT 3 SCOPE	
TB2-13	FIRE ALARM 1 IN	[DRY CIRCUIT]
TB2-14	FIRE ALARM 1 OUT	
TB2-15	FIRE ALARM 2 IN	[DRY CIRCUIT]
TB2-16	FIRE ALARM 2 OUT	
TB10	CONSOLE MODEL FOR DIMMER PANIC CIRCUIT - ALTERNATE SWITCH	
TB10-1	DIMMER PANIC FEED	[WHITE/BLACK]
TB10-2	DIMMER PANIC ON	[WHITE/BROWN]
TB10-3	DIMMER PANIC OFF	[WHITE/RED]

TERMINATION SCHEDULE

TB3 P.C. BOARD - FIELD TERMINATIONS

TB3-1	HOUSE LIGHT DIMMER FEED	[DRY CIRCUIT]
]		
TB3-2	HOUSE LIGHT DIMMER FEED	
TB3-3	HOUSE LIGHT DIMMER SHOW START OUT	[MID]
]		
TB3-4	HOUSE LIGHT DIMMER SHOW START OUT	
TB3-5	HOUSE LIGHT DIMMER INBOARD CUE	[MID]
]		
TB3-6	HOUSE LIGHT DIMMER INBOARD CUE	
TB3-7	HOUSE LIGHT DIMMER FEATURE	[DOWN]
]		
TB3-8	HOUSE LIGHT DIMMER FEATURE	
TB3-9	MOUSE LIGHT DIMMER SHOW END	[UP]
]		
TB3-10	HOUSE LIGHT DIMMER SHOW END	
TB3-11	STAGE LIGHT DIMMER FEED	[DRY CIRCUIT]
]		
TB3-12	STAGE LIGHT DIMMER FEED	
TB3-13	STAGE LIGHT DIMMER OFF	[DOWN]
]		
TB3-14	STAGE LIGHT DIMMER OFF	
TB3-15	STAGE LIGHT DIMMER BRIGHT	[UP]
]		
TB3-16	STAGE LIGHT DIMMER BRIGHT	

]   DENOTES 2 TERMINALS CONNECTED ON BOARD - USE EITHER

TERMINATION SCHEDULE

TB4 P.C. BOARD - FIELD TERMINATIONS

TB4-1	AUDIO SWITCHING FEED	[DRY CIRCUIT]
]		
TB4-2	AUDIO SWITCHING FEED	
TB4-3	AUDIO NON-SYNC	
TB4-4	AUDIO MONO	
TB4-5	AUDIO STEREO	
TB4-6	AUDIO STEREO SR	
TB4-7	AUDIO STEREO SRD	
TB4-8	AUDIO STEREO - OTHER	[USER ASSIGNED]
TB4-9	NON-SYNC IN	[DRY CIRCUIT]
TB4-10	NON-SYNC OUT	
TB4-11	EXCITER LOGIC IN	(CONTACTS CLOSED WHEN EXCITER ON)
TB4-12	EXCITER LOGIC OUT	
TB4-13	FORMAT FLAT RELAY COIL	N.O. TO GROUND
TB4-14	FORMAT SCOPE RELAY COIL	N.O. TO GROUND
TB4-15	FIRE ALARM RELAY COIL	N.O. TO GROUND
TB4-16	GROUND - SWITCHING COMMON	

TERMINATION SCHEDULE

TB5 P.C. BOARD - FIELD TERMINATIONS

TB5-1	FAILSAFE	N.O. TO GROUND
TB5-2	REMOTE START	N.O. TO GROUND
TB5-3	REMOTE STOP	N.O. TO GROUND
TB5-4	12V REMOTE RUN INDICATOR	
TB5-5	12V REMOTE STOP INDICATOR	
TB5-6	12 REMOTE FAULT INDICATOR	
TB5-7	12V ALARM OUTPUT	

                            ]FOR STANDARD STATUS SYSTEM

TB5-8	12V STATUS OUTPUT ($\pm$)	
TB5-9	STATUS SYSTEM FEED [DRY CIRCUIT FOR SERIAL SYSTEM]	
TB5-10	RUN	
TB5-11	FAULT	
TB5-12	ALARM	
TB5-13	ALARM RESET CIRCUIT	N.O. TO GROUND
TB5-14	GROUND - SWITCHING COMMON	
TB5-15	INTERLOCK START BUS	[INTERFACE]
TB5-16	INTERLOCK FAILSAFE BUS	[INTERFACE]

TERMINATION SCHEDULE

TB6 P.C. BOARD - HARNESS - CONTROL PANEL INTERFACE

TB6-1	GROUND - SWITCHING COMMON	
]		
TB6-2	GROUND - SWITCHING COMMON	
TB6-3	12 VAC FEED	
]		
TB6-4	12 VAC FEED	
TB6-5	START BUTTON	N.O. TO GROUND
TB6-6	CYCLE LIGHT	TO K31 COIL
TB6-7	RUN LIGHT	TO K33 COIL
TB6-8	STOP BUTTON	
TB6-9	STOP LIGHT	
TB6-10	FAULT LIGHT	
TB6-11	OUTBOARD CUE OUT TO MODE SWITCH	
TB6-12		
TB6-13	CUE RETURN - AUTO. STOP	
TB6-14	ALARM RESET BUTTON	N.O. TO GROUND
TB6-15	MANUAL CUE - CROSS - FEATURE	N.O. TO GROUND
TB6-16	MANUAL CUE - INBOARD - LIGHTS UP	N.O. TO GROUND

TERMINATION SCHEDULE

TB7 P.C. BOARD - HARNESS - CONTROL PANEL INTERFACE

TB7-1	FORMAT —FLAT RELAY COIL
TB7-2	FORMAT—SCOPE RELAY COIL
TB7-3	FORMAT PULSE—SHOW START PRE-SET
TB7-4	FORMAT PULSE—FEATURE PRE-SET
TB7-5	AUDIO PULSE—SHOW START PRE-SET
TB7-6	AUDIO PULSE—FEATURE PRE-SET
TB7-7	AUDIO—MONO 3

]

TB7-8	AUDIO—MONO
TB7-9	AUDIO—STEREO

]

TB7-10	AUDIO—STEREO
TB7-11	AUDIO—STEREO S.R.

]

TB7-12	AUDIO—STEREO S.R.
TB7-13	AUDIO—STEREO S.R.D.

]

TB7-14	AUDIO—STEREO S.R.D.
TB7-15	AUDIO—STEREO - OTHER

]

TB7-16	AUDIO—STEREO - OTHER

]DENOTES 2 TERMINALS CONNECTED ON BOARD - USE EITHER

TERMINATION SCHEDULE

TB8 P.C. BOARD - HARNESS - CONTROL PANEL INTERFACE

TB8-1	START LOGIC OUTPUT TO AUDITORIUM DELUXE MODULE	
	]*	
TB8-2	START LOGIC RETURN FROM AUDITORIUM DELUXE MODULE	
TB8-3	OUTBOARD CUE - SHOW END	
TB8-4	INBOARD CUE - LIGHTS UP	
TB8-5	CROSS CUE - FEATURE	
TB8-6	GROUND - SWITCHING COMMON	
TB8-7	SYNC I/L ON - OFF SWITCH	
TB8-8	SYNC I/L ON INDICATOR P.L.	12VAC TO K30
TB8-9	FAILSAFE PARALLEL INDICATOR P.L.	
TB8-10	RE-START FEED TO OUTBOARD CUE SWITCH	
TB8-11	SYNC I/L FAULT LED	
TB8-12	SWITCHED GROUND TO AMPERITE (K30)	
TB8-13	SWITCHED GROUND RETURN FROM AMPERITE (K30)	
TB8-14	SWITCHED GROUND TO C.O. OPEN RELAY COIL (K34)	
TB8-15	SWITCHED GROUND TO C.O. CLOSE RELAY COIL (K35)	
TB8-16	SWITCHED GROUND TO EXCITER/OPTION RELAY (K36)	

]* JUMPER, PROVIDE IF AUDITORIUM DELUXE MODULE IS NOT USED

TERMINATION SCHEDULE

TB9 P.C. BOARD - HARNESS - CONTROL PANEL INTERFACE

TB9-1	HOUSE LIGHT DIMMER SWITCH—FEED
TB9-2	HOUSE LIGHT DIMMER SWITCH—UP
TB9-3	HOUSE LIGHT DIMMER SWITCH—DOWN
TB9-4	STAGE LIGHT DINNER SWITCH—FEED
TB9-5	STAGE LIGHT DIMMER SWITCH—UP
TB9-6	STAGE LIGHT DIMMER SWITCH—DOWN
TB9-7	CURTAIN CONTROL SWITCH—FEED
TB9-8	CURTAIN CONTROL SWITCH—OPEN
TB9-9	CURTAIN CONTROL SWITCH—CLOSE
TB9-10	MANUAL CUE RETURN—OUTBOARD/RE-START
TB9-11	FEATURE ON LED
TB9-12	START TIMER ON PULSE FROM AUTO-STOP RELAY TO SEL. SW,
TB9-13	HOLD FROM TM2 TO START TIMER RELAY
TB9-14	START PULSE IN FROM SHOW START TIMER
TB9-15	12 VAC TO START TIMER RELAY (K32) VIA STOP BUTTON
TB9-16	12 VAC ALARM TO ALARM RESET BUTTON

****PLEASE NOTE: CONSOLE MODEL HAS ALTERNATE TB10 FOR DIMMER PANIC CIRCUIT LOCATED ON CHASSIS - REFER TO PAGE 2 FOR TERMINATIONS****

RELAY SCHEDULE

P.C. BOARD RELAYS—4PDT—12VAC

I.D.	FUNCTION
K1	START
K2	START LATCH
K3	SHOW START
K4	SHOW END
K5	AUTO-STOP
K6	AUTO-FAULT
K7	HOLD
K8	STOP/FAILSAFE
K9	ALARM ON-OFF
K10	ALARM RESET
K11	ALARM LATCH
K12	STATUS (RUN/FAULT)
K13	ISOLATION (STATUS, ALARM, ALARM RESET)
K14	OUTBOARD CUE—CURTAIN CLOSE—SYNC START
K15	INBOARD CUE - LIGHTS UP
K16	CROSS CUE - FEATURE—LTS. DN.—AUDIO—FORMAT
K17	FEATURE ON LATCH
K18	C.O. CLOSE LOGIC
K19	C.O. OPEN LOGIC
K20	EXCITER LOGIC

RELAY SCHEDULE

P.C. BOARD RELAYS—4PDT—12VAC CONTINUED

I.D.	FUNCTION
K21	FORMAT - FLAT
K22	FORMAT - SCOPE
K23	SYNC I/L ON-OFF
K24	SYNC I/L START
K25	SYNC I/L CUE TRANSFER
K26	SYNC I/L MODE
K27	SYNC I/L FAILSAFE TRANSFER
K28	SYNC I/L FAULT LATCH
K29	FIRE ALARM PANIC INTERFACE
B1	SONALERT PIEZO ALARM BUZZER

CHASSIS MOUNTED RELAYS

I.D.	FUNCTION	TYPE
K30	TD#1 SYNC TRANSFER	1 POLE AMPERITE #12N05B
K31	TIMER CYCLE	4PDT
K32	SHOW START TIMER	4PDT
K33	POWER	3PDT
K34	C.O. OPEN	3PDT
K35	C.O. CLOSE	3PDT
K36	EXCITER/OPTION	3PDT

SWITCH SCHEDULE

AUTOMATION CONTROLS - SWITCHES

TM	SHOW START/INTERMISSION TIMER	
S10	START TIMER ON/INTERMISSION	SPDT ON/OFF/ON*
PB-1	START BUTTON	1 POLE, 2 LIGHT
PB-2	STOP BUTTON	2 POLE, 2 LIGHT
S11	SHOW START - FORMAT - PRE-SELECT	SPDT
S12	SHOW START - AUDIO - PRE-SELECT	SPDT
S13	FEATURE - FORMAT - PRE-SELECT	SPDT
S14	FEATURE - AUDIO - PRE-SELECT	1 POLE 5 POSITION
PL-1	FEATURE ON LED	GREEN
S15	SHOW END MODE - NORMAL/AUTO.STOP	SPST
S16	MANUAL CUE - FEATUREILIGHTS UP	SPDT*
S17	MANUAL CUE - OUTBOARD/RE-START	SPDT*
PB-3	ALARM RESET	1 POLE, 1 LIGHT
PB-4	SYNC IIL ON - OFF	1 POLE A.A., 2 LT.
S18	POWER ON - OFF	SPST
PL-2	SYNC IIL FAULT LED	RED
F1	MAIN FUSE	3 AG, 3 AMP

MANUAL CONTROL SWITCHES

S1	MOTOR	SPST
S2	LAMP	SPST
S3	CHANGEOVER	SPDT*
S4	EXCITER	SPST
S5	HOUSE LIGHT DIMMER	SPDT*
S6	STAGE LIGHT DIMMER	SPDT*
S7	CURTAIN	SPDT*
S8	FORMAT	SPDT*
S9	OPTION (SLIDE PROJECTOR)	SPDT

*DENOTES MOMENTARY SWITCH