Film-Tech

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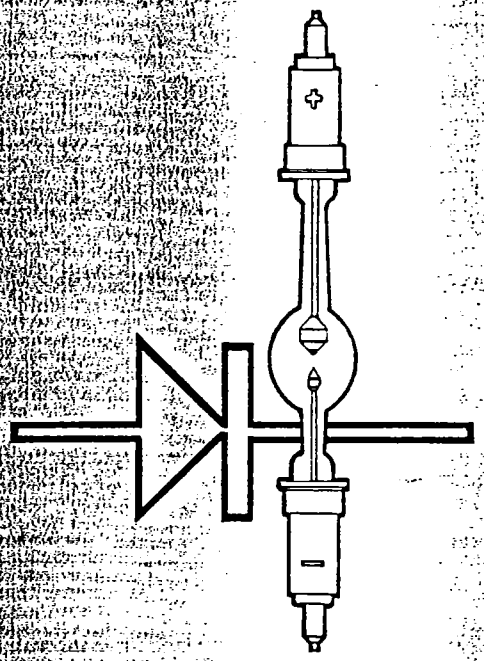
BRIGHT STAR SYSTEMS CORP.
7 Wheeling Avenue
WOBURN, MASSACHUSETTS 01801

MAXI-8 AUTOMATION

XETRON®

PRODUCTS



A DIVISION OF

CARBONS, INC.

CEDAR KNOLLS, N. J., U. S. A.

XeTRON®
DIVISION OF CARBONS, INC.
CEDAR KNOLLS, N. J. 07927
201 – 267-8200

MAXI-8

FOR ONE PROJECTOR

1 OCTOBER 1978

The Maxi-8 system has been designed as a single projector automation unit incorporating all the deluxe features of the MAXI-7. The MAXI-8 can be used with a V-18M Cinemeccanica/XeTRON projector or a single 35mm projector with a film transport system, or a professional 16mm projector.

MAXI-8 Features

Controls: Projector Drive Motor
Lamphouse
Picture Changeover Dowser
Exciter Lamp
Intermission Tape Deck
Dimmer

Included are heavy duty built-in control switches for local or manual operation of the projector motor, lamphouse, changeover and exciter lamp.

The MAXI-8 has been designed to automatically interface with the RC-M8A remote control module and the M7-AP auditorium programmer, providing unlimited modular capability for all applications.

A deluxe economical system, simple, rugged and compact, for single projector indoor or drive-in use.

Will accept cues at any point during the show for a programmed intermission.

Compact size: One unit, 12" wide x 10" high x 5" deep, mounts easily on projector or wall.

All controls are recessed providing protection from accidential tripping.

A unique failsafe circuit closes the dowser and turns off sound prior to lamp ignition, eliminating annoying pre-start flashes on the screen.

Interchangeable plug-in relays, heavy duty, dust covered.

Custom heavy duty enclosure, finished in two tone baked textured vinyl.

Hinged top permits access to all internal hardware.

Complete with the proven XeTRON split film cue detector/failsafe device and comprehensive installation/operation manual.

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MAXI-8
MAXI-7
INSTALLATION INSTRUCTIONS

1 OCTOBER 1978

1. The mini/maxi series cabinets have been designed to simplify installation. The back box can be mounted on the wall, or the projector pedestal.

2. The unit has been designed so that the top and chassis can be removed as a unit, permitting installation of the back box, conduits, wiring, etc.

3. To open box, remove 2 Phillips head sheet metal screws in top and each side. Remove the 2 - 8/32 x 1/4" machine screws in each side.

4. Hinge the top up, remove the blue front cover and lay aside. Holding the top up in the left hand, loosen the four 6/32 nuts holding the top to the back box.

5. Remove the chassis. Store the chassis, top and front cover in a safe place.

6. Mount the back box, install conduits. Pull in all wires.

7. Re-install the chassis by sliding it into the back box with 4 #8132 screws.

8. Install the top by sliding it down over the studs.

9. Tighten the 4 #6132 nuts.

10. Connect the wires to the terminal strips in accordance with the interface drawings.

11. After all wires are connected, check all relays to see that they are firmly seated in their sockets.

12. Turn unit on and test operation.

13. Complete installation by installing the front cover and fastening the top down secure.

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SHOW MAKE-UP

MAXI-8

1 OCTOBER 1978

Cues shall be placed on the film so that contact is made between the cue roller and the grounding roller. Leave enough length of foil to assure good contact.

Place the foil on the film emulsion side from the edge of the perforations out to the edge.

Cue Placement - The inboard side of the film is used to program intermissions in the middle of the show. Place cue on film so that contact is established at the cue detector when shutdown for intermission is desired. To measure this distance, place a piece of scrap film in the projector. Place a mark at the cue detector and at the aperture. Remove the film and measure the distance between the 2 marks. Make a Dymo label for rewind table indicating this dimension.

Place 1 foil on the outboard side (soundtrack) so that it is at the cue detector while the last few frames of the show are in the aperture. This cue closes the dowser and turns off exciter lamp.

Some types of foil have proven to be unsatisfactory especially where extended run programs are involved. If the metallic material starts flaking off, poor contact will result. Other tapes may not have the required flexibility and cracks or breaks will appear causing inconsistent operation. Always use XeTRON Type A cue tape.

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MAXI-8

OPERATION

1 OCTOBER 1978

1. Thread projector with leader in aperture between 7 and 8 feet.

2. If intermission programming in the middle of the platter is desired, place selector switch in "INTER" position - machine will run to cue on inboard side and shut down.

   If intermission programming in the middle of the platter is not desired, place selector switch in "RUN" position. The Maxi-8 will by-pass all the inboard cues.

3. To start show - press start button, since start button applies power to changeover coil, press momentarily only.

4. Sequence of operation:

   a) Changeover dowser will close
   b) Motor will start
   c) Lamp will ignite
   d) Tape deck will turn off
   e) After seven seconds, picture changeover will open and exciter lamp will come on.

   Machine will continue to run until a programmed intermission or the end of the show, depending on which, is selected.

5. If film should break during operation, the machine will shut down, lamp will turn off, exciter lamp will turn off, and tape deck will come on. If an auditorium programmer and a remote is used, the trouble buzzer will sound at the remote.

   After repairing the break, re-start the show as detailed above.

6. At the end of the show, the picture dowser will close and the exciter lamp will turn off. The projector motor will continue to run and lamp will remain on until the film runs through, at which time the motor and lamp will turn off.

7. If system is to be operated from a remote point, follow instructions above.

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MAXI-8

CIRCUIT DESCRIPTION

1 OCTOBER 1978

Two types of plug-in relays are used, all having 12 volt coils supplied by Transformer T1. In these instructions, when describing the relay contacts and functions, we do not refer to the contacts and numbers shown on the relay base or socket. As each relay has either 3 or 4 sets of single pole, double throw contacts, our reference is to these SPDT devices reading left to right.

The timer motor is operated from the 120 volt source. Cam Switch #1 must be open when the cam assembly is at rest and the initial timer motor start is made when START relay closes, the 120 volt feed is via K3 contacts #3. After a few seconds, K3 opens but in the meantime Cam Switch #1 has closed and supplies 120 volts to this motor. Cam Switch #2 determines the length of time that the START relay is closed. This is accomplished by the adjustment of the red plastic cams. It is necessary that this relay be closed for only 3 or 4 seconds.

Cam Switch #3 is adjusted to close about 7 seconds after operating the START button but remains closed for only one or two seconds as it closes relay K1 to operate the changeover to OPEN and close and latch K5 which switches the exciter lamp power.

Automatic readout of 120 volts for the tape deck is provided when the power relay (K4) is not energized and its #2 contacts supply the 120 volts to Terminal #6 of TB-2.

The projector is started by pressing the START button and its associated pilot light stays ON during the projector operation as this light is in parallel with the coil on K4.

The red power ON pilot light also serves the function as a STOP switch. When it is pressed it operates the STOP relay but only after the START relay is in its non-operated position. This is done so the fail-safe switch will be inoperative until the projector reaches speed.

Action is started by pressing the START switch. This closes K2-K3-K4. The timer starts, projector starts and Xenon lamphouse comes on. K3 releases after about four seconds but K4 remains latched. As long as K4 is operated, the 120 volts is supplied to the projector motor rather than the tape deck.

About seven seconds after starting, as determined by the adjustment of #3 cam, Cam Switch #3 operates and stays closed for about one second. This operates K1 which does not latch but via its #1 contacts, opens the changeover contacts and via #2 contacts operates K5 which latches and turns on the exciter lamp. After one revolution of the cams, in fifteen seconds, the cam comes to a stop as Cam Switch #1 opens.

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MAXI-8

CIRCUIT DESCRIPTION

1 OCTOBER 1978

With the projector in operation the relay status is as follows:

K1. Show ON is open
K2. Show OFF is open
K3. Start is open
K4. Power is closed
K5. Exciter lamp is closed
K6. Stop is open

Operation of relays:

K1. Can be operated only by Cam Switch #3
K2. Can be operated by START button, intermission foil tab on inboard side of film, or remote start button.
K3. Is closed by START button.
K4. Is operated and latched by momentary closing of #2 contacts on K3.
K5. It operates and latches when pulsed by #2 contacts of K1.
K6. Is operated by the STOP button or the fail-safe switch.

The RUN-INTER switch has single throw double pole contacts and is open in the RUN position. This means that with an intermission foil on the film, this signal will not be accepted and the projector will continue to operate. When closed to the INTER position, the intermission foil completes the circuit between the inboard sensor and ground and completes the circuit to K2 coil. When K2 operates, it closes the changeover dowser and turns OFF the exciter lamp and shuts down the projector and lamp. It should be noted that an outboard cue will have the same effect if the switch is in the inter position.

On TB-1 there are provisions for operating an auxiliary cabinet such as would be required with the use of a projector using a three phase motor and its associated step type starter. Terminals 15-16 will supply a mementary contact via K3 Contacts #4 to the (START) circuit. Terminals 17-18 can be connected in series with the normally closed STOP switch.

Dimmer Control:

The Maxi-8 circuitry provides momentary closures for dimmer control. Connect dimmer to Maxi-8 as called for on Drawing #028. Note that the lower command can be selected at dowser opening or as start button is pressed.

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MAXI-8

CIRCUIT DESCRIPTION

1 OCTOBER 1978

After the installation the relays should be firmly seated in their sockets. Before the changeover circuit is connected, the cam motor should be operated for one cycle by pushing the start button. This is a precautionary measure as the cams could have stopped in such a position that the 120 volt could be applied to the changeover coil for a period long enough to burn out the coil. After, connect the picture changeover feed from the distribution panel to 12 of TB-2.

Another precaution is to use an AC voltmeter connected between Terminals 2 and 13. As the cams go thru the cycle you should get a 120 volt readout for about one second indicating changeover open. If these readouts are normal, there will be no problem with the changeover after it is connected.

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M7-AP & MAXI-8

MID-PLATTER INTERMISSION

JUNE, 1979

1. Place cues on film per cue placement instructions.
2. Place mode pre-select switch on Maxi-8 to the "Inter" position.
3. When cue hits cue detector, lights will come up, curtain will close, and X seconds later, dowser will close and non-sync will come on, and machine will shut down.

   X = Setting of Cam #8 on M7-AP timer

   7 Second setting will give 1 second alarm buzz
4. To bypass intermission, turn power switch to off on M7-AP. Return to on position after cues have passed.
5. After mid-platter intermission, return mode pre-select on Maxi-8 to run position.
6. Mode pre-select switch on Maxi-8 must be in "Inter" position for mid-platter intermission. If in "Run" position, lights will come up, the curtain will close, dowser will close, non-sync will come on, but machine will keep running.

NOTE: Maxi-8 & M7-AP must be on same AC phase!

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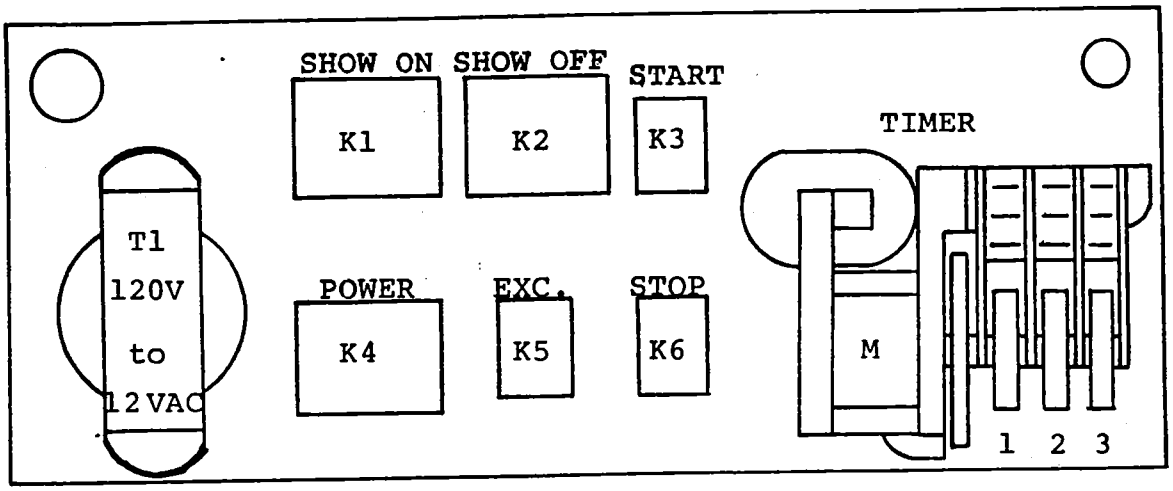
MAXI 8 CHASSIS
RELAYS AND TIMER

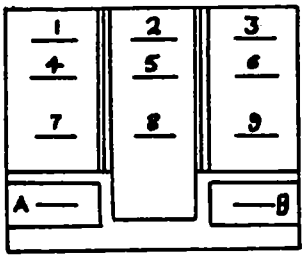
(Not to scale)

1 OCTOBER 1978
REVISED
5/15/72
DWG. #057

CHASSIS LAYOUT--TOP VIEW



RELAY PIN LAYOUT BOTTOM VIEW

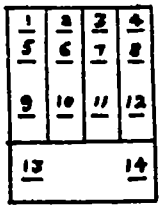


K1, K2 & K4

3PDT

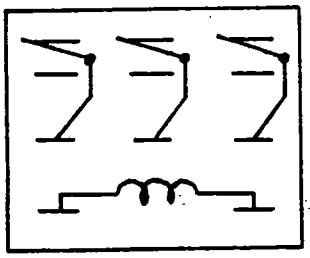
COIL
12VAC

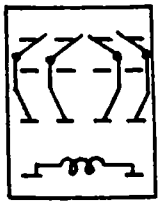
K3, K5 & K6



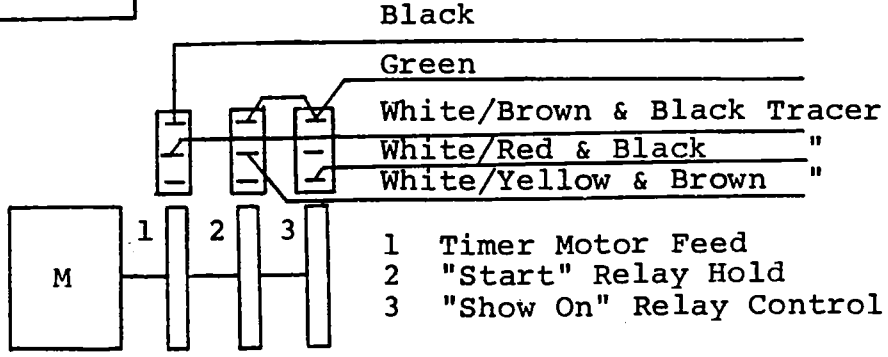
4PDT

COIL
12VAC

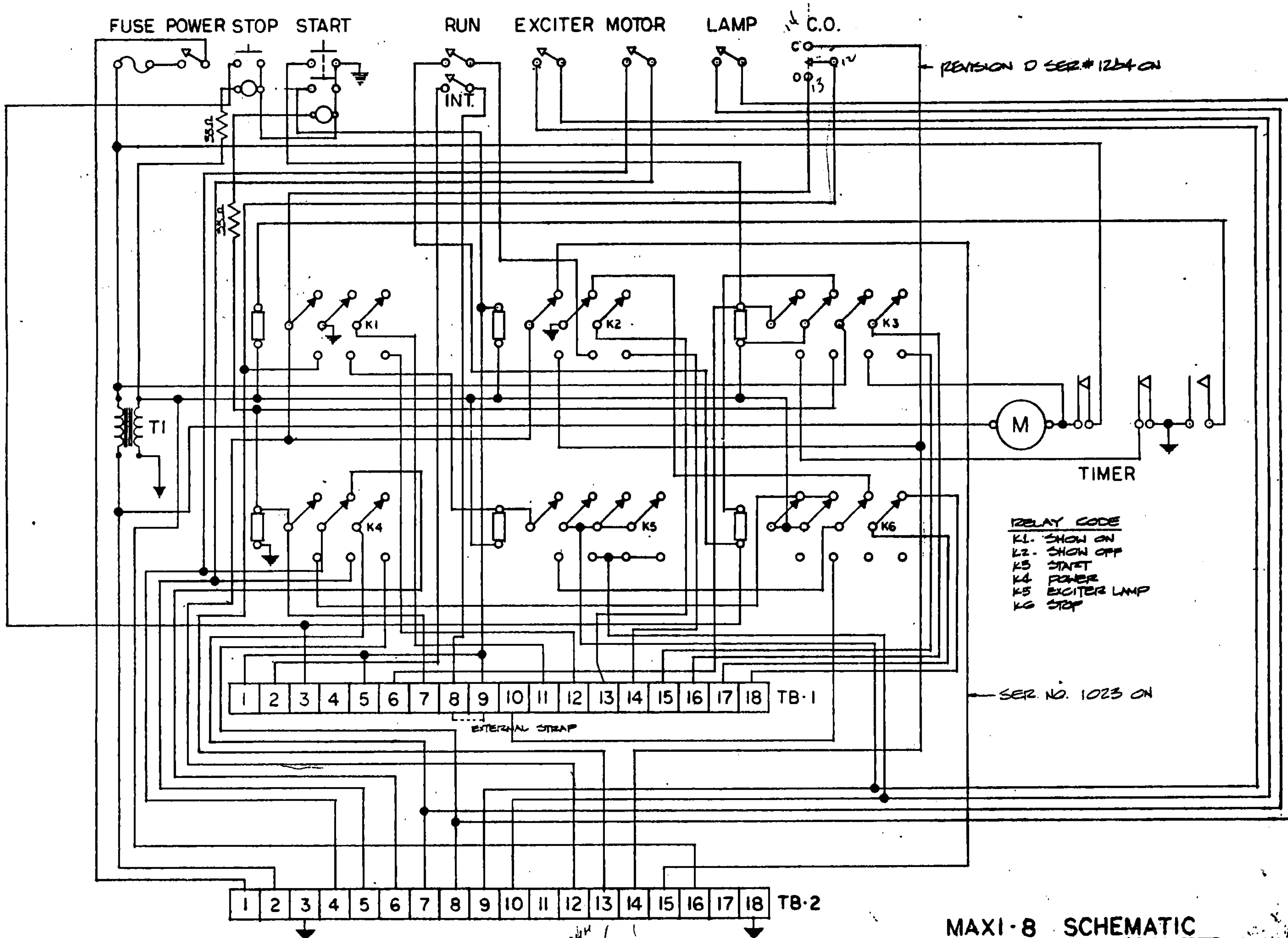




TIMER WIRING

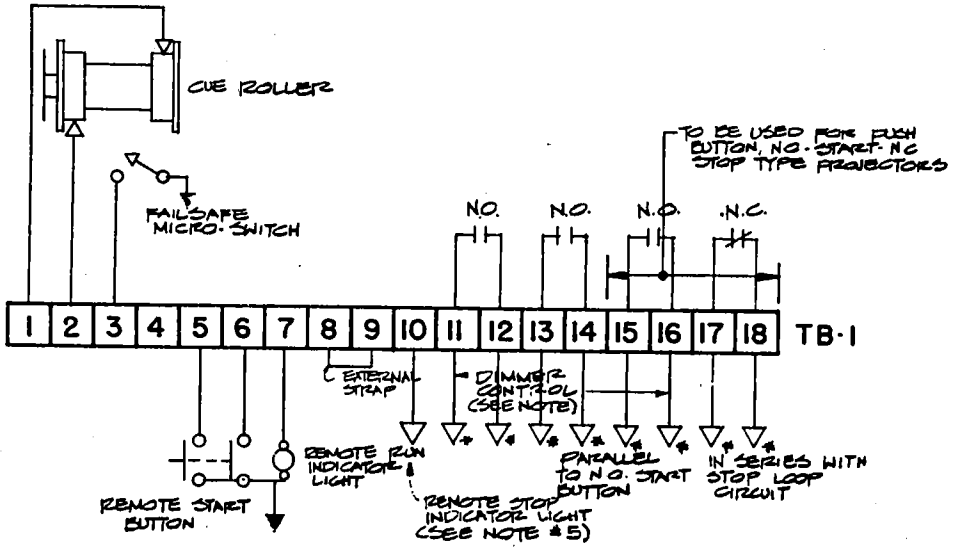


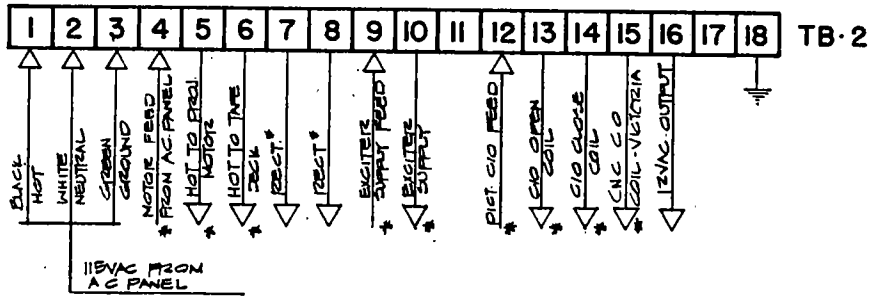
1 Timer Motor Feed
2 "Start" Relay Hold
3 "Show On" Relay Control



MAXI-8 SCHEMATIC

JAN 1972





DIMMER CONTROL NOTE

1. CONTACTS PROVIDE MOMENTARY CLOSURE
2. FOR LOWER COMMAND AS START BUTTON IS PRESSED, CONNECT FEED TO 15 AND 13, CONNECT LOWER TO 16, RAISE TO 14.
3. FOR LOWER COMMAND AS DOUSER OPENS, CONNECT FEED TO 11 AND 13, CONNECT LOWER TO 12 RAISE TO 14.
4. IF 15-18 ARE USED FOR MOTOR CIRCUIT CONNECT DIMMER AS CALLED FOR IN NOTE 3
5. 12VAC IS PROVIDED BETWEEN TB-1 #10 AND GROUND WHEN FAILSAFE IS DOWN.

* THESE ARE DRY SWITCH CIRCUITS ONLY. NO VOLTAGE IS PROVIDED BY THE MAXI-8 UNIT.

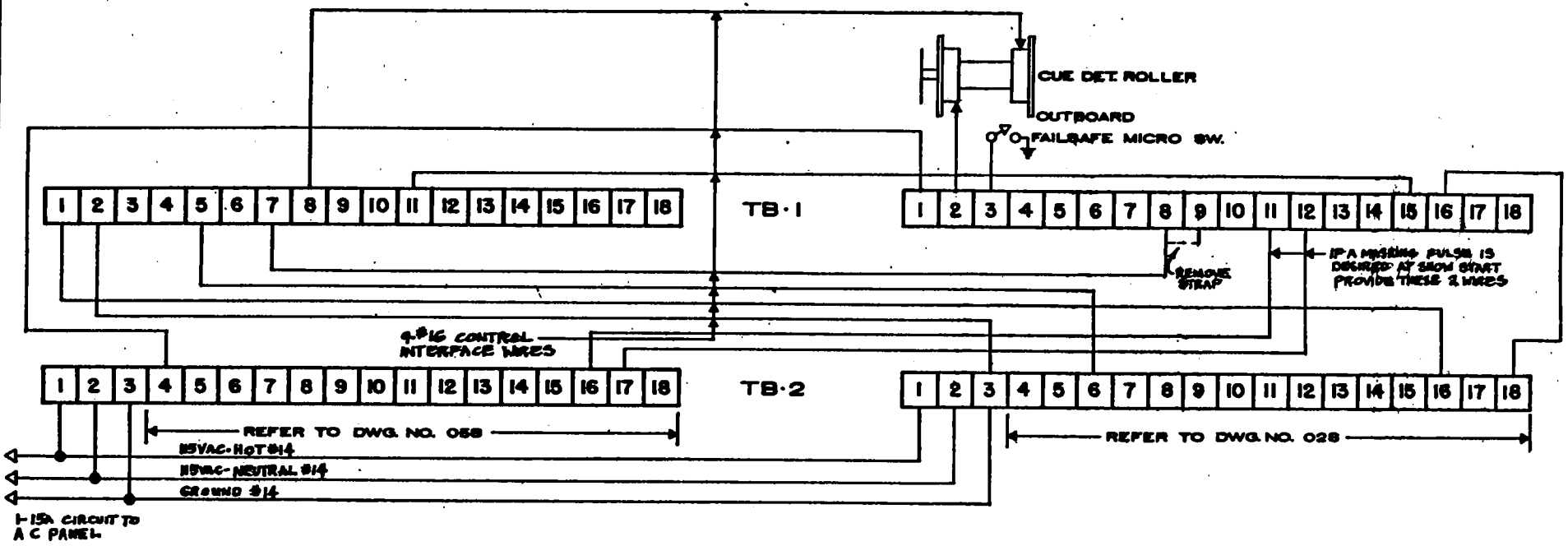
CONNECT TAPE DECK TO NEUTRAL AND #6, OF TB-2

MAXI-8 CONNECTION DIAGRAM

DWG NO 028, JAN 1972 GME

XETRON, A DIVISION OF CARBONS INC. 10 SADDLE RD. CEDAR KNOLLS, N.J.

REVISED S/N 1228 ON 1978
REVISED S/N 023 ON



M7·AP AUDITORIUM MODULE
SER NO. 972 ON

MAXI·8 SINGLE PROJ. CONTROL

INTERFACE FOR MAXI·8 AND M7·AP AUDITORIUM MODULE

REVISED

XETRON, A DIVISION OF CARBONS INC. CEDAR KNOLLS, N.J.

DWG. NO. 062

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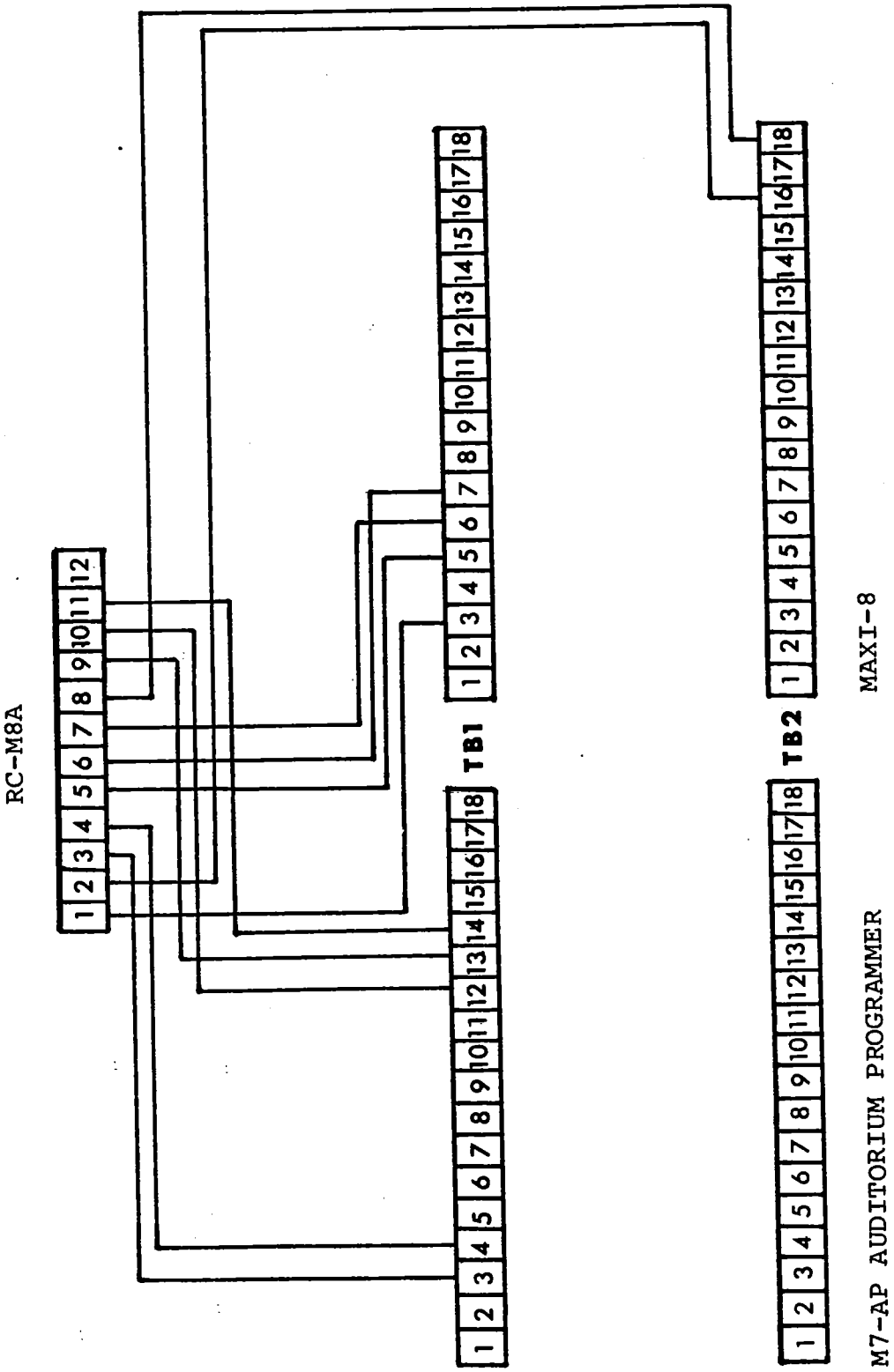
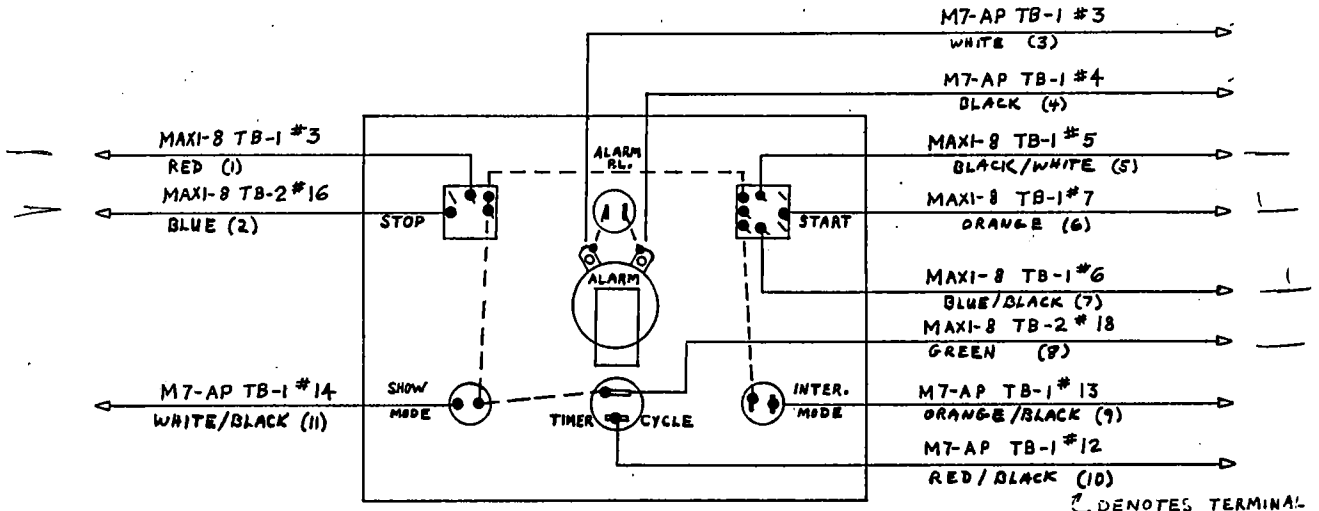
RC-M8A WIRING CONNECTIONS

DATE: 30 OCT. 1978

DWG.NO. 061-A





REAR VIEW RC-M8A

BELDEN #8466 INTERFACE CABLE (GREEN/BLACK NOT USED)

NOTE:

(WHEN USED WITH M8AP AND MAXI-8)

RC-M8A	M8AP	MAXI-8
(3)	TB2-2	(SAME AS ABOVE)
(4)	TB1-7	
(9)	TB1-10	
(10)	TB1-9	
(11)	TB1-11	

B-TERMINAL NOS. 7-13-78
REV. A BELDEN CABLE 5-11-78

XETRON A DIVISION OF CARBONS INC. CEDAR KNOLLS, N.J.

DWG. NO. 304

12-2-77 GWE

XETRON®

MAXI-8 AUTOMATION

SPARE PARTS

20 MARCH 1980

REPLACES

1 OCTOBER 1979

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Part #	Description
CAB-100*	Sheet Metal - Cabinet
CAB-101*	Front Cover
CAB-105*	Chassis Bottom Cover
CAB-103*	Hinged Cabinet Top
CAB-103-1*	Control Panel
CAB-104-F*	Chassis
7522*	Terminal Strip Panel
7523*	Left End Plate
7524*	Right End Plate
NP-1	Nameplate
RS-1	Relay Socket 4PDT
RS-2	Relay Socket 3PDT
RLY-1	Relay 4PDT
RLY-2	Relay 3PDT
TB-3	Terminal Strip
TM-6	Timer Assembly
F1	Fuseholder
SW-10	Power Switch, Motor Switch, Exciter Switch, Lamp Switch
SW-12	Mode Switch
SW-33	Stop Switch Assembly
SW-31	Start Switch
PBC-1	Start Button (White/Blue)
SW-21	C.O. Button
SN-1	Switch Mounting Nut
T1	Power Transformer
TS-1	Tie Strip
CON-2	Timer Connector
GR-1	Grommet - Large
GR-2	Grommet - Small

USA
PB1X 3450-4 235 1.35 38.20
PBCIK
XD19-5

*Quoted On Request

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201 – 267-8200

AUTOMATION

CONNECTION CHART

OCTOBER, 1978

Installation of V-5, V-5S & V-9S with 7111-B, Maxi-7, Mini-7, Maxi-8 & Maxi-10.

Projector Wiring Changes:

1. Connect a jumper from Terminal #1 to Terminal #31 on the Cinemeccanica AC or DC exciter supply.
2. Move either wire on Terminal #8 to Terminal #7.
3. Move Wire #29 to Terminal #7.
4. Move Wire #30 to Terminal #8.
5. Remove the jumper between Terminals #22 & #23 if present.
6. Move Wire #16 to Terminal #18.
7. Move Wire #17 to Terminal #20.
8. Move Wire #27 to Terminal #28.

Note: For automatic sound changeover, the exciter switch must remain in the "On" position.

Automation Changes:

For #7111-B only, rewire sockets K6 & K12 as shown in 7111-B instruction manual.

PROJECTOR TO AUTOMATION TERMINAL NUMBERS							
V-5/V-5S/V-9S		7111-B		MAXI-7	MINI-7	Maxi-8	Maxi-10
MACHINE	MACHINE			UNIT	UNIT		
#1	#2	TB-1	TB-2	#1	#2		
#3		#3		#4 TB-2		#5 TB-2	#27
	#3		#3		#4 TB-2		
#31*		#2		#5 TB-2		#4 TB-2	#26
	#31*		#2		#5 TB-2		
#24		#6		#8 TB-2			#34
	#24		#6		#8 TB-2		
#25		#7		#9 TB-2		#13 TB-2	#35
	#25		#7		#9 TB-2		
#27		#17		#10 TB-2			
	#27		#17		#10 TB-2		
#28		#18		#18 TB-2			
	#28		#18		#18 TB-2		
#22						#12 TB-2	#34
#23						#15 TB-2	#37

*CINEMECCANICA EXCITER SUPPLY

XETRON®

MAXI-8X

FOR ONE PROJECTOR

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

The Maxi-8X system has been designed as a single projector automation unit. The Maxi-8X can be used with a single 35mm projector with a film transport system, or a professional 16mm projector.

Maxi-8X Features

Controls: Projector Drive Motor
Lamphouse
Picture Changeover Dowser
Exciter Lamp
Intermission Tape Deck
Dimmer
Manual Mask Control

Included are heavy duty built-in control switches for local or manual operation of the projector motor, lamphouse, changeover, exciter lamp and masking.

Two model remote controls can be used with the Maxi-8X. The first is the RCM-8X which is the more simple of the two and is to be utilized only with the Maxi-8X with no additional equipment such as the AP-8X auditorium programmer. The RCM-810X deluxe remote control is to be utilized with the Maxi-8X only when it is used with the AP-8X auditorium programmer. Do not use the RCM-810X with the Maxi-8X only as you cannot utilize totally the design features of the RCM-810X.

It will accept cues at any point during the show for a programmed intermission.

Compact size: One unit, 12" wide x 20" high x 5 1/2" deep, mounts easily on projector wall.

All controls are recessed providing protection from accidental tripping.

A unique failsafe circuit closes the dowser and turns off sound prior to lamp ignition, eliminating annoying pre-start flashes on the screen.

Interchangeable plug-in relays, heavy-duty, dust covered.

Slide out chassis permits access to all internal hardware.

Complete with the proven Xetron split film cue detector/failsafe device and comprehensive installation/operation manual.

GO-NO-GO FAILSAFE INDICATOR

When failsafe is down, red indicator light will be on, on stop pushbutton. When failsafe is up, i.e., film threaded in machine, red indicator light on stop pushbutton will be off.

XETRON®

MAXI-8X

MAXI-7X

INSTALLATION INSTRUCTIONS

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

1. The Maxi-7X and Maxi-8X cabinets have been designed to simplify installation. The back box can be mounted on the wall, or the projector pedestal.

2. The unit has been designed so that the chassis can be removed as a unit, permitting installation of the back box, conduits, wiring, etc.

3. To open box, remove two Phillips head screws in top. Slide the chassis out by sliding straight up.

4. By removing two screws on each side and disconnecting the fuse holder, the terminal block assembly can be removed.

5. Mount the back box--install conduits. Pull in all wires.

6. Re-install the chassis by sliding it into the back box. Re-install the terminal block assembly and reconnect the fuse holder.

7. Connect the wires to the terminal strips in accordance with the interface drawings and charts.

8. After all wires are connected, check all relays to see that they are firmly seated in their sockets.

9. Turn unit on and test operation.

10. Complete installation by installing the front cover and fastening the top down secure.

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Cues shall be placed on the film so that contact is made between the cue roller and the grounding roller. Leave enough length of foil to assure good contact.

Place the foil on the film from the edge of the perforations out to the edge and fold over.

Cue Placement - The inboard side of the film is used to program intermissions in the middle of the show. Place cue on film so that contact is established at the cue detector when shutdown for intermission is desired. To measure this distance, place a piece of scrap film in the projector. Place a mark at the cue detector and at the aperture. Remove the film and measure the distance between the 2 marks. Make a Dymo label for rewind table indicating this dimension.

Place 1 foil on the outboard side (soundtrack) so that it is at the cue detector while the last few frames of the show are in the aperture. This cue closes the dowser and turns off exciter lamp.

Some types of foil have proven to be unsatisfactory especially where extended run programs are involved. If the metallic material starts flaking off, poor contact will result. Other tapes may not have the required flexibility and cracks or breaks will appear causing inconsistent operation. Always use Xetron Type "A" cue tape.

XETRON®

OPERATION

XETRON MAXI "X" AUTOMATION SYSTEMS

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

General

All of the new Xetron Maxi "X" Automation Systems now use momentary and alternate action pushbuttons that also indicate system status and various modes of operation and circuit conditions. Be sure to read circuit descriptions and operation for a complete understanding of the various functions and indications.

In operating an automation system, it is important that certain good habits are developed which will insure proper operation at all times.

Keep the film path of the projector and sound reproducer clean at all times. It is recommended that before each reel is threaded, brush out the gate with a toothbrush, clean off the cue roller with a rag. We recommend the use of Xekote as a cleaning and lubricating agent for the cue roller, plastic rollers and film.

The Allen cap screw in the end of the cue roller must be tight for proper cue sensitivity.

After each reel is threaded, check the console to be certain that the auto/masking selector is set to the proper format, check that the proper mode and/or status (run or intermission) of the incoming machine has been selected.

Before starting a show, verify that the auditorium timer is in the "Inter" position. If not, press the cycle button to reset it to close curtain and bring up lights. Observe 'Go/No Go" indicator to be sure failsafe is up and properly threaded.

If foil cues are poorly applied or break, they will not trigger the automation properly. This will cause missed changeovers, etc. Develop a habit of inspecting the foil cues as you rewind the film.

Manual auditorium switches are not intended for general operation. If curtain did not open, or lights did not lower, check the auditorium timer position lights first. Then press cycle button if out of sequence.

If trouble develops, try to determine the exact problem before proceeding. If a changeover was missed, check cues and cue roller first. If projector did not start, was mode selector set properly?

With any automation equipment, it is very important that good splices be made and, with extended run programs, these splices must be checked frequently. It is just as important to look for any type of film damage such as cracked out sprocket holes or tears in the sprocket hole areas.

Please do not be guilty of failing to remove your cues as they can be a great problem to the next projectionist to use the film. Some projection people have used a graphite base or silver type paint for the cues with little thought as to the problem of its removal. Careful inspection of each print for such cues before your first performance is very necessary.

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1. a) Thread projector with leader in aperture between 7 and 8 feet.
   b) When film is threaded through failsafe unit correctly, red stop light ("FAILSAFE GO-NO-GO") on Maxi-8/X will be out. If remote unit is used, the same will happen.

2. a) If intermission programming in the middle of the platter is desired, press mode select pushbutton to inter (out position) for yellow indication. Machine will run to cue tab on film and then shut down for intermission. Red "FAILSAFE GO-NO-GO" indicator will pulse on momentarily at the time cue tab passes cue detector, but will remain off as long as film is threaded through failsafe and failsfae is up.
   b) If intermission is to be bypassed, press mode select switch to run (in position) for blue indication and intermission will be bypassed.

3. To start show - press green start button firmly. Since start pushbutton applies to power to changeover coil, press momentarily only. Green start indicator will come on and remain on until intermission or show end.

4. Sequence of operation:
   a) Changeover dowser will close.
   b) Motor will start.
   c) Lamp will ignite.
   d) Non-sync will go off.
   e) After seven seconds, picture changeover will open and exciter lamp will come on. Machine will continue to run until a programmed intermission or the end of show, depending on which is selected.

5. If film should break during operation, the machine will shut down, Xenon lamp will turn off, exciter lamp will turn off, and tape deck will come on. Red "FAILSAFE GO-NO-GO" indicator will come on, on Maxi-8/X and on remote unit if used. If an auditorium programmer and a remote unit are used, the trouble buzzer will sound at the remote.

   After repairing the break, restart the show as detailed above.

6. At the end of the show, the picture dowser will close and the exciter lamp will turn off. The projector motor will continue to run and the Xenon lamp will remain on until the film runs out of projector and failsafe. When failsafe drops, motor and Xenon lamp will turn off and red "FAILSAFE GO-NO-GO" indicator light will come on.

7. If system is to be operated from a remote unit, follow all instructions above.

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Two types of plug-in relays are used, all having 12 volt coils supplied by Transformer T1. In these instructions, when describing the relay contacts and functions, we do not refer to the contacts and numbers shown on the relay base or socket. As each relay has either three or four sets of single pole, double throw contacts, our reference is to these SPDT devices reading left to right.

The timer motor is operated from the 120 volt source. Cam Switch #1 must be open when the cam assembly is at rest and the initial timer motor start is made when START relay closes, the 120 volt feed is via K3 contacts #3. After a few seconds, K3 opens but in the meantime Cam Switch #1 has closed and supplies 120 volts to this motor. Cam Switch #2 determines the length of time that the START relay is closed. This is accomplished by the adjustment of the red plastic cams. It is necessary that this relay be closed for only three or four seconds.

Cam Switch #3 is adjusted to close about seven seconds after operating the START button but remains closed for only one or two seconds as it closes relay K1 to operate the changeover to OPEN and close and latch K5 which switches the exciter lamp power.

Automatic readout of 120 volts for the tape deck is provided when the power relay (K4) is not energized and its #2 contacts supply the 120 volts to Terminal #6 of TB-2.

The projector is started by pressing the START button and its associated pilot light stays ON during the projector operation as this light is in parallel with the coil on K4.

The white power switch provides AC power to Maxi-8/X when pressed in and white indicator is on.

a) The red stop pushbutton is the "FAILSAFE GO-NO-GO" indicator. When failsafe is down, red indicator will be on. When film is threaded and failsafe is up, red "FAILSAFE GO-NO-GO" indicator will be out, indicating safe to start show. This same logic will also be fed to remote unit if used.

b) The red stop pushbutton also operates the STOP relays, but only after the START relay is in its non-operated position. This is done so that the failsafe switch will be inoperative until the projector reaches speed.

Action is started by pressing the START switch. This closes K2-K3-K4. The timer starts, projector starts and Xenon lamphouse comes on. K3 releases after about four seconds but K4 remains latched. As long as K4 is operated, the 120 volts is supplied to the projector motor rather than the tape deck.

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About seven seconds after starting, as determined by the adjustment of #3 cam, Cam Switch #3 operates and stays closed for about one second. This operates K1 which does not latch but via its #1 contacts, opens the changeover contacts and via #2 contacts operates K5 which latches and turns on the exciter lamp. After one revolution of the cams, in fifteen seconds, the cam comes to a stop as Cam Switch #1 opens.

With the projector in operation the relay status is as follows:

K1. Show ON is open.
K2. Show OFF is open.
K3. Start is open.
K4. Power is closed.
K5. Exciter lamp is closed.
K6. Stop is open.

Operation of relays:

K1. Can be operated only by Cam Switch #3.
K2. Can be operated by START button, intermission foil tab on inboard side of film, or remote start button.
K3. Is closed by START button.
K4. Is operated and latched by momentary closing of #2 contacts on K3.
K5. It operates and latches when pulsed by #2 contacts of K1.
K6. Is operated by the STOP button or the failsafe switch.

The RUN-INTER, mode select, alternate action pushbutton switch/split indicator is a 4-pole switch connected with its normally open contacts when pushbutton is in out position. Yellow indicator will be on when switch is in "INTER", out position. Blue indicator will be on when switch is in "RUN", in position. Position of switch can be observed at a distance from light color indication.

a) The normally open contacts in the run position mean that with an intermission foil on the film, this cue signal will not be accepted and the projector will continue to operate. When the switch is pressed to its in position with yellow indication, the intermission foil completes the circuit between the inboard sensor and ground, and completes the circuit to K2 coil. When K2 operates, it closes the changeover dowser and turns OFF the exciter lamp and shuts down the projector and Xenon lamp. It should be noted that an outboard cue will have the same effect if the switch is in the inter position.

On TB-1 there are provisions for operating an auxiliary cabinet such as would be required with the use of a projector using a three phase motor and its associated step type starter. Terminals 15-16 will supply a momentary contact via K3 Contact #4 to the (START) circuit. Terminals 17-18 can be connected in series with the normally closed STOP switch.

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Dimmer Control:

The Maxi-8X circuitry provides momentary closures for dimmer control. Connect dimmer to Maxi-8/X as called for on Drawing #1058. Note that the lower command can be selected at dowser opening or as start button is pressed.

After the installation, the relays should be firmly seated in their sockets. Before the changeover circuit is connected, the cam motor should be operated for one cycle by pushing the start button. This is a precautionary measure as the cams could have stopped in such a position that the 120 volt could be applied to the changeover coild for a period long enough to burn out the coil. After, connect the picture changeover feed from the distribution panel to #34.

Another precaution is to use an AC voltmeter connected between Terminals #24 and #35. As the cams go through the cycle you should get a 120 volt readout for about one second indicating changeover open. If these readouts are normal, there will be no problem with the changeover after it is connected.

XETRON®

M7-APX & MAXI-8X

MID TRANSPORT INTERMISSION

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

1. Place cues on film per cue placement instructions.
2. Place mode pre-select switch on Maxi-8X to the "Inter" position.
3. When cue hits cue detector, lights will come up, curtain will close, and X seconds later, dowser will close and non-sync will come on, and machine will shut down.

   X = Setting of Cam #8 on M7-APX timer.

   7 Second setting will give one second alarm buzz.
4. To bypass intermission, turn power switch to off on M7-APX. Return to on position after cues have passed.
5. After mid-platter intermission, return mode pre-select on Maxi-8X to run position.
6. Mode pre-select switch on Maxi-8X must be in "Inter" position for mid-platter intermission. If in "Run" position, lights will come up, the curtain will close, dowser will close, non-sync will come on, but machine will keep running.

NOTE: Maxi-8X & M7-APX must be on same AC phase!

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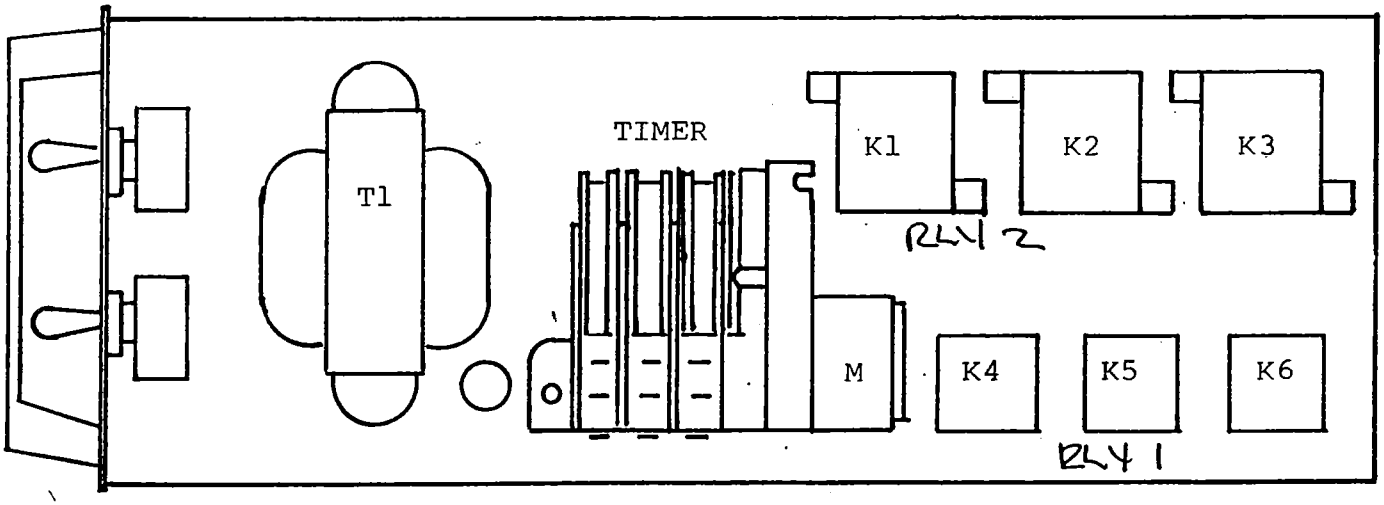
MAXI-8X CHASSIS

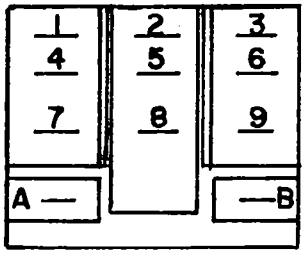
RELAYS AND TIMER

DATE: 8 FEB 83

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

CHASSIS LAYOUT





K1, K2, & K3

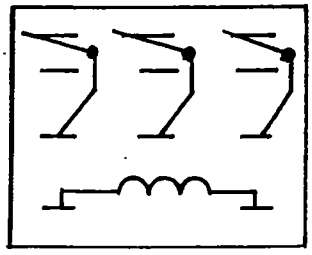
3PDT

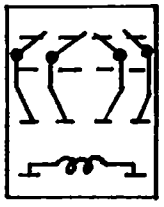
COIL
12 VAC

K4, K5 & K6

4PDT

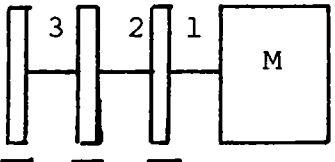
COIL
12 VAC

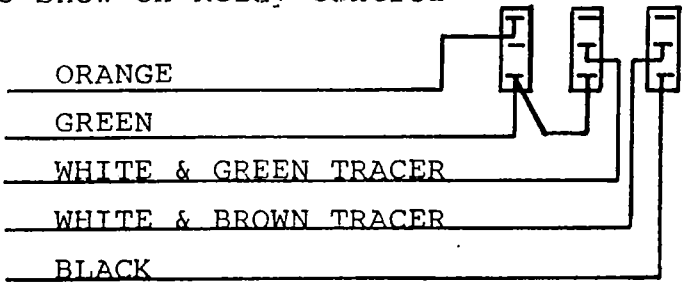


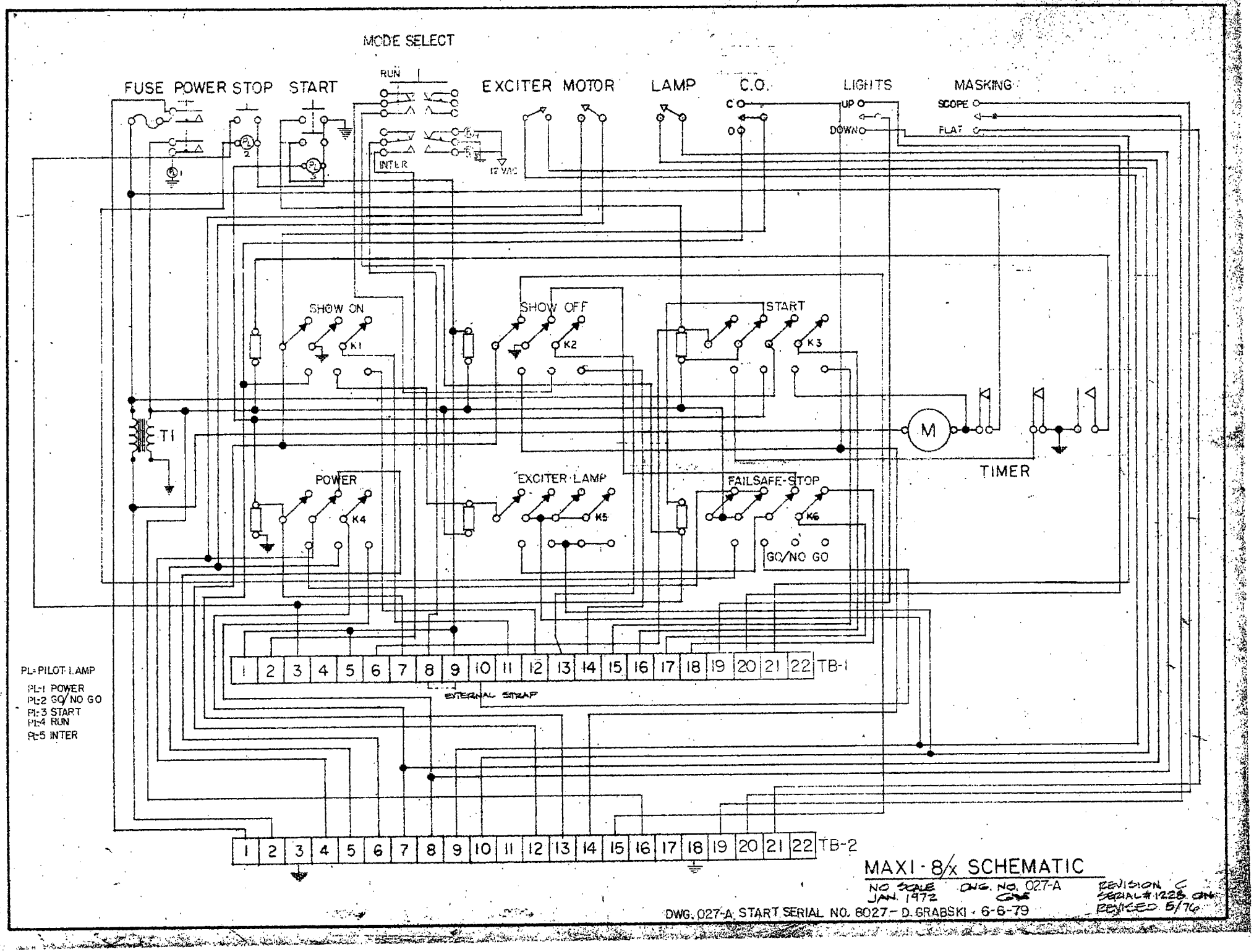


TIMER WIRING

1 Timer Motor Feed
2 Start Relay Hold
3 Show On Relay Control



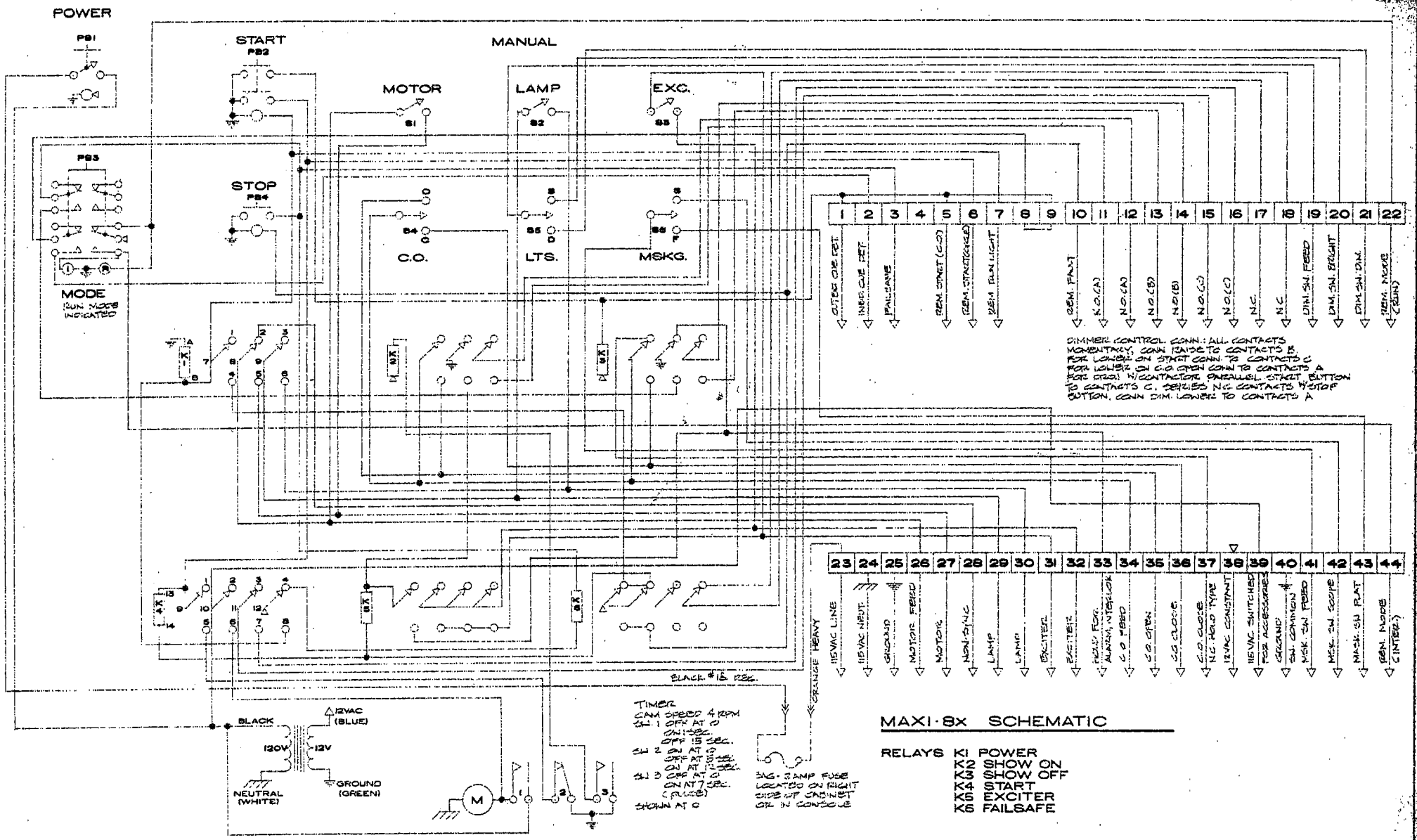




MAXI-8/x SCHEMATIC

NO SCALE DWG. NO. 027-A REVISION C
JAN. 1972 SERIAL #1228 ON
REVISED 5/76

DWG. 027-A START SERIAL NO. 8027 – D. GRABSKI - 6-6-79



MAXI·8x SCHEMATIC

RELAYS K1 POWER
K2 SHOW ON
K3 SHOW OFF
K4 START
K5 EXCITER
K6 FAILSAFE

E-K5 HOLD 5-27-82 GME
A START LOCKOUT 2-9-82 GME
REVISIONS
GME 11·9·81

XETRON CORP. 10 SADDLE ROAD, CEDAR KNOLLS, NJ. 07927 (201) 267·8200

DWG. NO. 1058

XETRON®

MAXI-8X

TERMINATIONS

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Terminal		Terminal	
1.	Outboard Cue Detector	23.	AC Hot
2.	Inboard Cue Detector	24.	AC Neutral
3.	Failsafe	25.	Ground
4.	No Connection	26.	Motor Feed
5.	Remote Start) 2 Pole Start	27.	Motor Out
6.	Remote Start) Switch	28.	AC Hot To Non-Sync
7.	Remote Start Indicator	29.	Xenon Feed
8.)	External Strap When	30.	Xenon Out
9.)	M7AP Not Being Used	31.	Exciter Feed
10.	Remote	32.	Exciter Out
11.	Dimmer**--See Note Below	33.	No Connection
12.	Dimmer**--See Note Below	34.	C.O. Feed
13.	Dimmer**--See Note Below	35.	C.O. Open
14.	Dimmer**--See Note Below	36.	C.O. Close
15.	Dimmer**--See Note Below	37.	N.C.--For C.O. Coil Victoria
16.	Dimmer**--See Note Below	38.	12 VAC Out
17.)	N.C. Stop	39.	No Connection
18.)	Loop Ckt.	40.	Ground
19.	Dimmer Feed)	41.	Masking Feed)
20.	Dimmer Raise) Manual Function	42.	Masking Scope) Manual Function
21.	Dimmer Down)	43.	Masking Flat)
22.	Remote "Run" Pre-Select Status Indicator*	44.	Remote "Inter" Pre-Select Status Indicator*

* For Future Use W/RC-810/X.

** a) Contacts provide momentary closure only!

b) For dimmer lower pulse as start pushbutton is pressed, dimmer feed is Terminals #13 and #15 strapped together with dimmer feed. Dimmer lower is Terminal #16. Dimmer raise is Terminal #14.

c) For lower command as dowser opens, dimmer feed is Terminals #11 and #13 strapped together with dimmer feed. Dimmer lower is Terminal #12. Dimmer raise is Terminal #14.

XETRON®

MAXI-8/X AUTOMATION

SPARE PARTS

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Part #	Description	
CAB-100*	Sheet Metal -	Cabinet
CAB-101*		Front Cover
CAB-103*		Hinged Cabinet Top
CAB-104-F*		Chassis
CAB-105*		Chassis Bottom
7522*		Terminal Strip Panel
7523*		Left End Plate
7524*		Right End Plate
7843*		Control Panel
RS-1	Relay Socket 4PDT	
RS-2	Relay Socket 3PDT	
RLY-1	Relay 4PDT - Small	
RLY-2	Relay 3PDT - Large	
TB-2	Terminal Strip	
TM-6	Timer Assembly - XAK075	
F1	Fuseholder	
SW-10	SPST Switch - Motor, Exciter, Lamp	
SW-11	SPDT Momentary Switch - C.O., Lights, Masking	
PB-1	Start Pushbutton Switch XAK078	
PB-2	Stop Pushbutton Switch - XAK079	
PB-6	Power Pushbutton Switch - XAK080	
PB-7	Mode Select Pushbutton Switch - XAK081	
PBC-1	Start Pushbutton Lens (Green) - XAK082	
PBC-2	Stop Pushbutton Lens (Red) - XAK083	
PBC-3	Mode Select Pushbutton Lens (Yellow/Blue) - XAK084	
PBC-4	Power Pushbutton Lens (White) - XAK085	
T1	Power Transformer	
PL-73	Pilot Lamp Bulb XD1905	
TS-1	Tie Strip	
CON-2	Timer Connector	
GR-1	Grommet - Large	
GR-2	Grommet - Small	
SN-1	Switch Mounting Nut	

*Quoted On Request

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Xetron AP-8X Module For Use With Maxi-8X Automation.

The Xetron AP-8X module is designed to provide curtain and alarm logic to the Maxi-8X automation system. In addition, this module provides a delay in the closing of the changeover dowser so that the lights in the auditorium start to raise prior to the close of the show. A built-in selectable auto/intermission circuit is also provided so that in the event of a film break, the lights would raise and the curtain would close.

The AP-8X module may be mounted in one of three ways:

1. Inside the cabinet of the Maxi-8X
2. In the console containing the Maxi-8X
3. On the wall adjacent to an older style Maxi-8X

A manual switch is provided for the curtain, all of the other manual switches are provided on the Maxi-8X control panel.

Refer to Drawing #1058 (Maxi-8X Schematic) and #1064 (AP-8X Schematic) for installation of this module.

The harness of the AP-8X contains break outs at the points along the terminal strips where the AP-8X will be connected to the Maxi-8X. In addition, some loose wire fitted with disconnect crimp splices are provided for connection to the curtain control circuit, alarm, and auto/intermission circuit. The harness of the AP-8X is to enter the terminal strips of the Maxi-8X from the left.

Connect as follows:

Maxi-8X Terminal #	AP-8X Wire Color
8	Violet (Remove Jumper Maxi-8X 8-9)
9	Brown
11	Green
12	Yellow
19	Grey
20	White/Black
21	White/Yellow
24	White
25	Green
28	Orange
38	Blue
39	Black

Connect outboard cue to Terminal #8, inboard to Terminal #2. Terminal #1 is not used.

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Operation

As shipped, this module is set to open the curtain and lower the lights as the changeover dowser opens. If it is desired to have the lights dim as the start button is pressed, make the following changes.

1. Remove white/yellow* wire of AP-8X from Terminal #21 of the Maxi-8X and tape.
2. Add a jumper from 15-19 and a jumper from 16-21 of the Maxi-8X. The dimmer will now lower as the start button of the Maxi-8X is pressed and the curtain will open with the changeover dowser.

Auto/Intermission Circuit

If it is desired to have an automatic intermission cycle in the event of a film break, terminate the white/green wire to Terminal #40 of the Maxi-8X. If it is desired to have a manually reset alarm, connect the white/green wire to one side of a normally open pushbutton, the other side of the button to Terminal #40. In the event of a break, the alarm will sound until the button is pressed and for 7 seconds after the button is pressed. In the auto/intermission mode, the alarm will sound for 7 seconds and then reset automatically.

Alarm Output

The red wire is the 12VAC alarm output. A 12VAC buzzer can be connected to this wire, other side to Terminal #40.

Curtain Control Interface

Connect the white/blue wire to the curtain control feed, the white/red to the curtain control close and the white/orange to the curtain control open.

For installation with curtains of long travel times, Cam Switch #2 of the AP-8X may be adjusted for a longer period between the cue and the dowser close. Adjust bright speed of Xetrol dimmer for a slow travel as well.

Operation With AP-8X

The cue should be placed on the film so that it is detected 7 seconds prior to the end of the show for the outboard cue or before the intermission for the inboard cue. This is approximately 10 1/2 feet plus the distance of the cue detector to the aperture. As this cue is detected, the lights will raise and the curtain will close, after 7 seconds the changeover dowser will close. The same sequence will take place with an inboard cue with the mode switch of the Maxi-8X in the intermission position.

XETRON®

M7-AP/X AUDITORIUM PROGRAMMER

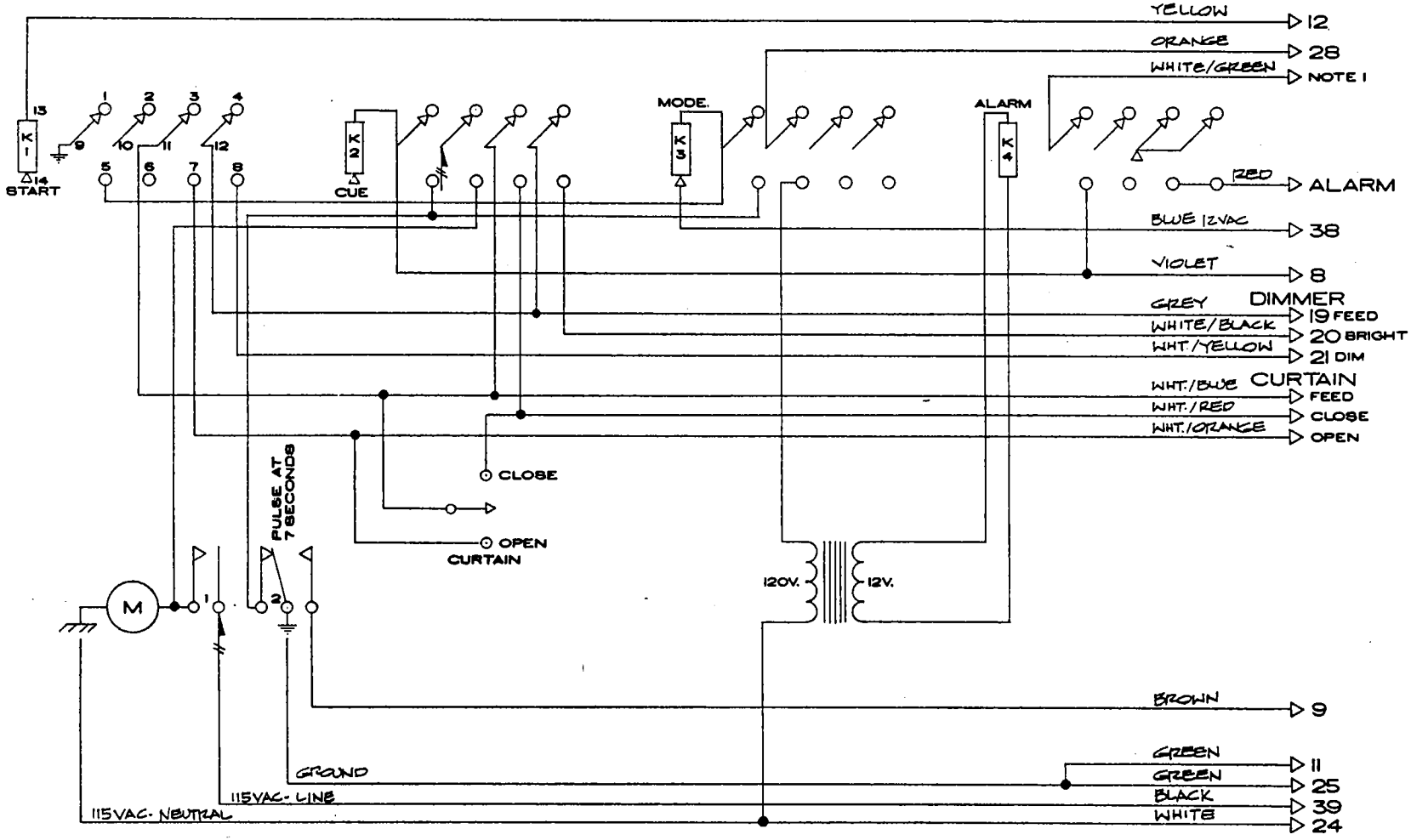
SPARE PARTS

1 FEBRUARY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

Part #	Description
CAB-100*	Sheet Metal - Cabinet
CAB-101*	Front Panel
CAB-103*	Hinged Cabinet Top
CAB-104-G*	Chassis
CAB-105*	Chassis Bottom
7522-1*	Terminal Strip Panel
7523*	Left End Plate
7524*	Right End Plate
7844*	Control Panel
RS-1	Relay Socket 4PDT
RLY-1	Relay
TB-2	Terminal Strip
TM-5	Timer Assembly
F1	Fuseholder
F2	Fuseholder
SW-11	Manual Function Switch
SW-13	Masking Pre-Select Switch
PB-6	Power Pushbutton Switch
PB-8	Timer Cycle Pushbutton Switch
PBC-3	Timer Cycle Pushbutton Lens (Yellow/Blue)
PBC-4	Power Pushbutton Lens (White)
CON-2	Timer Connector
GR-1	Grommet - Large
SN-1	Switch Mounting Nut

*Quoted On Request



MAXI-8x AUDITORIUM/ALARM MODULE SCHEMATIC

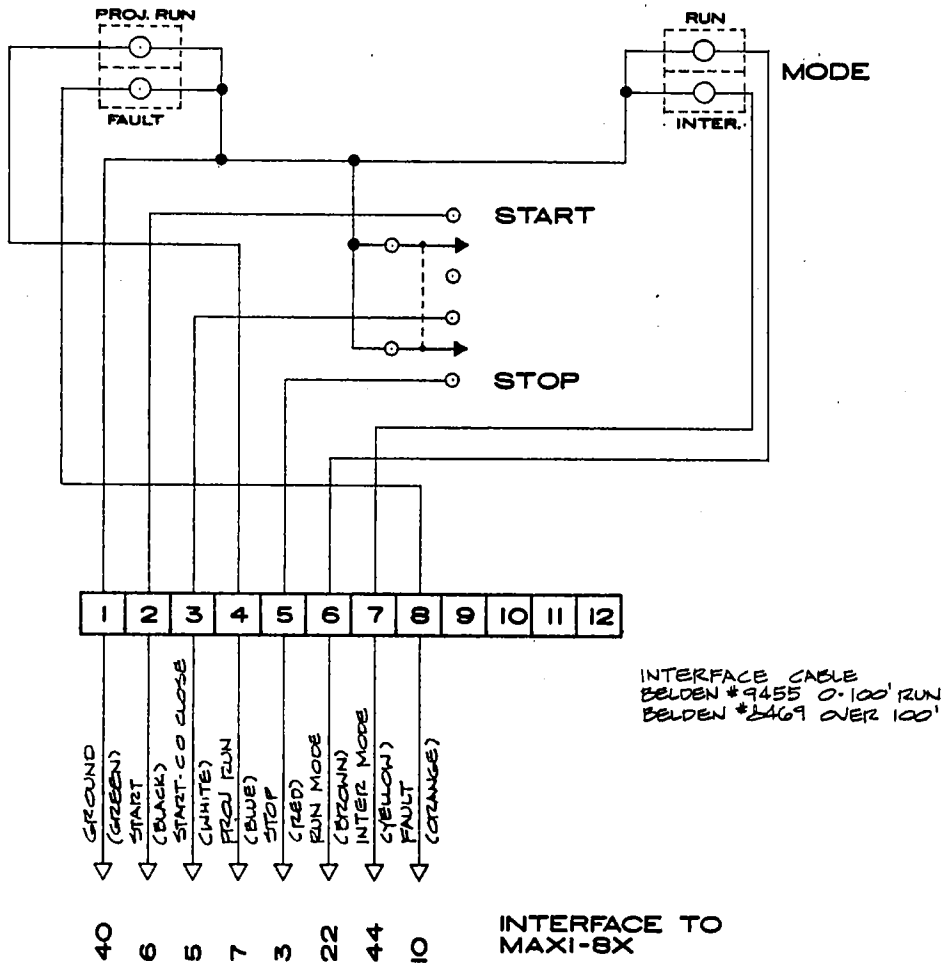
XETRON CORP. 10 SADDLE RD. CEDAR KNOLLS, NJ 07927

NOTE 1 RESET IN EVENT OF FILM BREAK. FOR AUTO INTER. CYCLE CONN. WHT/GREEN TO TERM. NO. 25 (GROUND) FOR MANUAL RESET CONN. TO N.O. BUTTON.
NOTE 2 REMOVE STRAP FROM 8-9. CONNECT OUTBD. CUE DETECTOR ROLLER TO TERM. #8, INBD TO TERM. #2

AP-8x

REV A 4-15-82
11-23-81 GAE

DWG. 1064



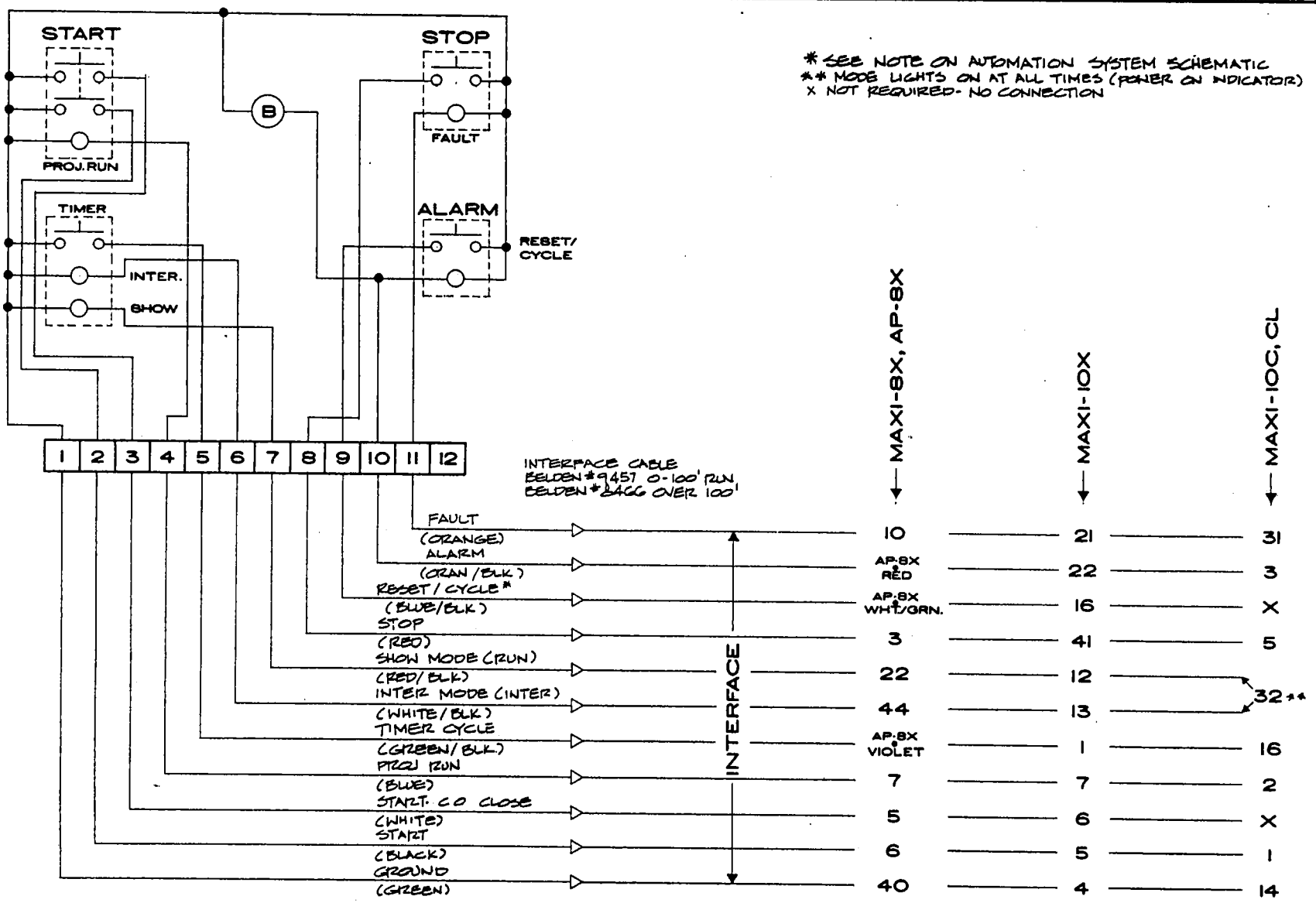
INTERFACE CABLE
BELDEN #9455 0-100' RUN
BELDEN #9469 OVER 100'

SCHEMATIC RCM-8x

XETRON

GAE 5-21-82

NO.1105



* SEE NOTE ON AUTOMATION SYSTEM SCHEMATIC
** MODE LIGHTS ON AT ALL TIMES (POWER ON INDICATOR)
X NOT REQUIRED- NO CONNECTION

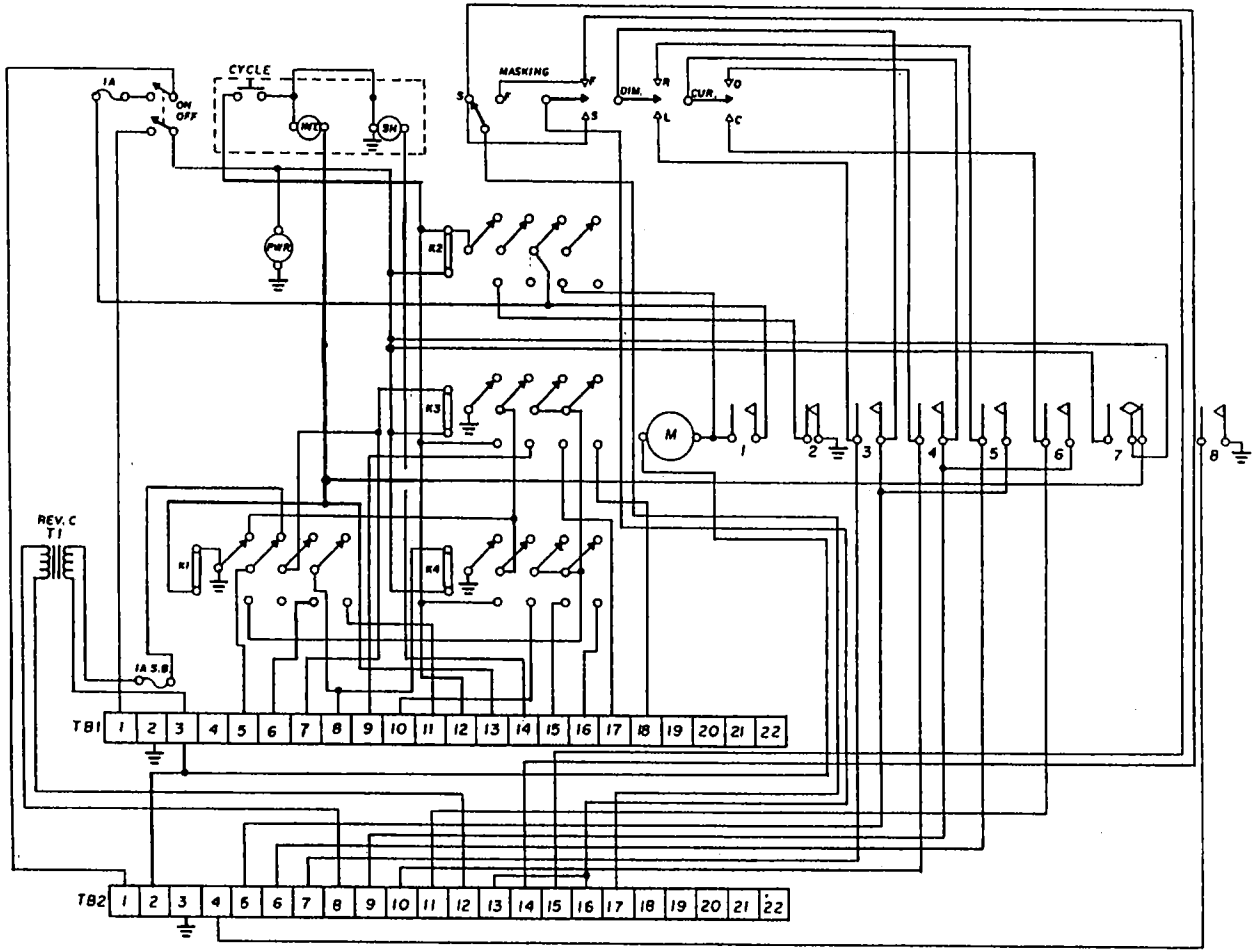
SCHEMATIC RCM-810

XETRON

GWE 5-21-82

1106

Obsolete



ADJED SW FOR USE WITH MAXI-8 S/N 971-ON (REV B)

REVISIONS

"A" SER NO 890-ON

"B" SER NO. 971-ON

"C" SER NO 1112-ON

"D" DATE 10-20-80 SCHEMATIC DIAGRAM REDRAWN.

E 11-30-81

DWG NO. 037A START SERIAL NO. 2001

	MT-AP/X AUDITORIUM PROGRAMMER		JR
	SCHEMATIC DIAGRAM		
10-20-80	037A		

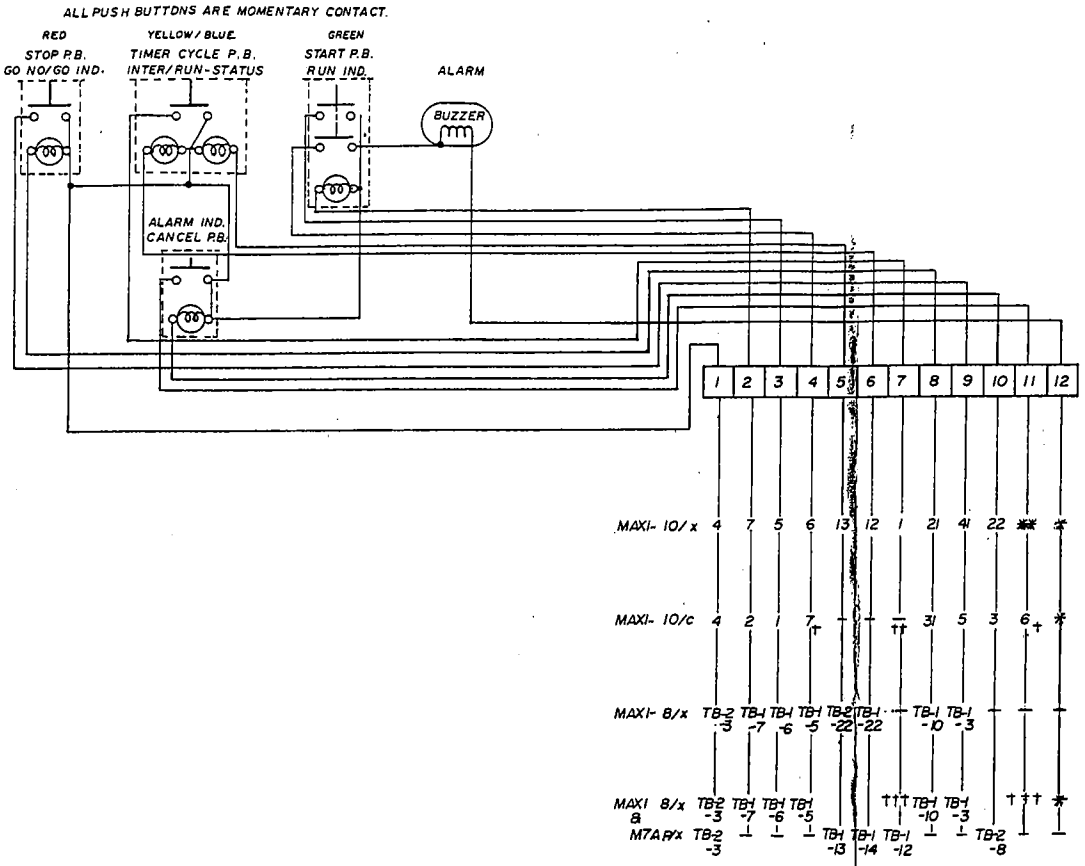
XITRON CORPORATION

MAXI-8/x - M7-AP/x - REMOTE INTERFACE

Terminal No.	MAXI-8/x TB-1	MAXI-8/x TB-2	M7-AP/x TB-1	M7-AP/x TB-2	REMOTE* Terminal
1	M7-AP/x TB-2-4	AC Hot	MAXI-8/x TB-2-16	AC Hot	MAXI-8/x TB-1-10
2	Inboard Cue	AC Neutral	MAXI-8/x TB-2-18	AC Neutral	MAXI-8/x TB-1-3
3	Failsafe Remote Terminal 3	Ground	-	Ground	M7-AP/x TB-2-8
4	-	-	-	MAXI-8/x TB-1-1	MAXI-8/x TB-1-5
5	Remote Terminal 4	-	MAXI-8/x TB-2-6	-	M7-AP/x TB-1-14
6	Remote Terminal 9 M7-AP/x TB-1-6	M7-AP/x TB-1-5	MAXI-8/x TB-1-6	-	M7-AP/x TB-1-12
7	Remote Terminal 10	-	MAXI-8/x TB-1-8	-	M7-AP/x TB-1-13
8	M7-AP/x TB-1-7	-	Outboard Cue	Remote Terminal 3	M7-AP/x TB-2-12 and To Ground
9	Remove Strap	-	-	-	MAXI-8/x TB-1-6
10	Remote Terminal 1	-	-	-	MAXI-8/x TB-1-7
11	M7-AP/x TB-2-16	-	-	-	
12	M7-AP/x TB-2-17	-	Remote Terminal 6	Remote Terminal 8 and To Ground	
13	-	-	Remote Terminal 7	-	
14	-	-	Remote Terminal 5	-	
15	-	-	-	-	
16	-	M7-AP/x TB-1-1	-	MAXI-8/x TB-1-11	
17	-	-	-	MAXI-8/x TB-1-12	
18	-	-	-	-	
19	-	-	-	-	
20	-	-	-	-	
21	-	-	-	-	
22	-	-	-	-	

*Either RC-M8A or RC-M10 can be used.

NOTE: See termination sheet for all other connections.



* Place jumper wire from Terminal #12 to Terminal #10 on the RC-810X if the buzzer is desired.

** Alarm reset is automatic when using the RC-810X with the MAXI-10/X automation system.

† If remote reset of alarm is required, make the following circuit changes:

On the RC-810X, cut the buss wire going to the switch common on the alarm pushbutton (make sure the green (ground) wire from harness is attached to the pilot lamp terminal and not on the switch common). Move the brown wire from the normally open (N.O.) terminal to the normally closed (N.C.) terminal. Remove the red wire from the start switch and connect it to the switch common of the alarm pushbutton.

On your MAXI-10C, disconnect either wire from the alarm pushbutton and connect it to Terminal #6 on the interface terminal block on your MAXI-10C (you will have to carefully splice a length of #18 or #20 wire to this wire). Then connect a wire from Terminal #7 to the empty terminal on the alarm reset pushbutton. Use interface chart for connection of the RC-810X.

†† The timer cycle pushbutton can be connected to any one momentary function on the MAXI-10C. We suggest "house lights raise".

††† Terminal #11 on the RC-810X can be jumped to Terminal #7 on the RC-810X. When this is done, pressing the alarm pushbutton will cycle the M7AP/X timer and cancel the alarm light and buzzer.

— Indicates No Connection

XETRON

TOLERANCES	PROJECT	SCALE	DRAWN BY	APPROVED
			JK	
	TITLE: RC 810x SCHEMATIC REMOTE CONTROL			
DATE: 10-30-80	DRAWING NUMBER: 387			

XETRON CORPORATION, Two Seddon Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-4000