Film-Tech

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www.film-tech.com

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 / NEUMADE PRODUCTS
30-40 PECKS LANE
NEWTOWN, CT. 06470
1-800-526-0722
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XETRON
CEDAR KNOLLS, N. J. 07927
201 - 267-8200

MAXI-7/x M7-AP/x

ELECTRONIC GENERAL
INSTALLATION INSTRUCTIONS

1 AUGUST 1979

1. All units to be on same AC phase!

2. Do not switch xenon lamphouses directly with automation units! Use an AC contactor with contacts appropriately rated for lamphouse in use.

3. Be sure to observe notes at bottom of interface tables.

4. Use at least #18 gauge wire for circuit interface and at least #16 gauge wire for all AC (115 volt) circuits. (Both to be stranded wire.)

5. Interface cable for use between MAXI-7/x #1 and #2 is supplied.

6. Be sure that a good ground connection exists between automation units and projectors.

7. Motor, lamphouse, picture changeover, and audio changeover circuits are dry switching circuits. Non-sync is a hot switching circuit.

April 1, 1972
CABLE "CARBONINC"

CARBONS, INC. 10 SADDLE ROAD • CEDAR KNOLLS, N. J. 07927 • 201 267-8200

THE MAXI-7

(For Two Projectors)

The MAXI-7 automation system has been designed as a deluxe version of the MINI-7 two projector automation system, providing many deluxe features desired by today's finer motion picture theatres. The MAXI-7 is sure to reduce operating expenses while providing consistent screen quality.

MAXI-7 FEATURES

Controls:

- Projector drive motor
- Lamphouse
- Picture and sound changeover
- Intermission tape deck
- Readily adapted to control dimmer

Push button selector switches are illuminated to clearly indicate designated functions.

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

The MAXI-7 has been designed to automatically interface with the RC-M7 remote control module and the M7-AP auditorium programmer, providing unlimited modular capability for all applications.

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

Compact size: Two identical units, each 12" wide x 10" high x 5" deep, mounts easily on each projector or 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.

Color coordinated switches simplify operation.

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

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

Hinged top permits access to all internal hardware.

Complete with the proven XeTRON cue detector/failsafe device, pre-formed lugged interconnecting cables and comprehensive installation/operation manual.

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CEDAR KNOLLS, N. J. 07927
201 - 267-8200

MAXI-7

INSTALLATION INSTRUCTIONS

GENERAL

May 22, 1972

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" Fillister head 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, remove the four 6/32 x 3/16" pan head screws holding the top to the back box.

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

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

7. Re-install the chassis, by sliding it down in the back box until it rests on the bracket in the back box.

8. Install the top by inserting the 4 - 6/32 x 3/16" screws.

9. Insert the 4 - 8/32 x 1/4" Fillister head machine screws, loosely in the side.

10. Connect the wires to 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.

Two types of relays are used, all having 12 volt A.C. coils supplied by transformer T1. In these instructions, when describing the relay contact 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 as shown on the associated schematic diagram.

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 the K1 START relay closes and the 120 volt feed is by its #2 contacts. After a few seconds, K1 opens but, in the meantime, Cam Switch #1 has closed and supplies 120 volts to this motor and continues to do so until the cam makes a full revolution and Cam Switch #1 opens again. Cam Switch #2 determines the length of time 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.

When the START relay closes, it also closes K2, the system holding relay, which in turn disconnects the 120 volts from the tap deck and operates the power relay K3, which latches and supplies power to the projector motor and Xenon lamphouse.

Cam Switch #3 is adjusted to close about seven seconds after the START switch is pushed and remains closed for only one or two seconds as its function is to pulse the changeover relay K6 which opens the changeover dowser and, in some cases, turns on the exciter lamp. This starts the performance.

Automatic readout of 120 volts to the tape deck is provided at any time when both projectors are at rest.

In the RUN position, the RUN-INTER relay K5 is not energized and is on its upper contacts. This relay is operated and latched in its closed or INTER position by an intermission foil tab or operation of the INTER pushbutton. When in this position, the foil tab on the outboard side of the film will energize the START relay K1 and the timer motor will go thru its cycle but, as the hold relay K2 cannot be energized due to its 12 volt supply being open at K5, the power relay will not energize but the changeover relay will be pulsed by the changeover timer, Micro Switch #3.

After an intermission of this type, to start the incoming machine, it is necessary that the blue RUN portion of the status indicator be ON before pushing the START button.

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

K1	START is open
K2	HOLD is closed
K3	POWER is closed
K4	STOP is open
K5	RUN-INTER is open
K6	CHANGEOVER is open

The relays are operated by the following means:

K1	START by local or remote START button
K2	HOLD by closure of K1 and is latched by its #2 contacts
K3	POWER by closure of K2 and is latched by #2 and #3 contacts on K2
K4	STOP by operation of the failsafe switch
K5	RUN-INTER by intermission foil tab or local-remote INTER or "STATUS" pushbuttons
K6	CHANGEOVER by Cam Switch #3 or START button on opposite projector

An important feature prevents the possibility of a shutdown due to low take-up tension on the lower reel immediately after starting. For the three to four seconds that the START relay is closed, the failsafe switch is inoperative as the 12 volt supply to K4 coil is opened at the #4 contacts of the K1 START relay. This is very useful as sometimes the take-up tension can be very critical.

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1. Sound Changeover.

Please see "Installation of all V-4ES type projectors with Maxi-7 automation" dated January 15,1972 which is a part of these instructions. In this case there is an exciter lamp supply for each projector and when connected as per these instructions, the exciter lamp transformer is in parallel with the projector motor. This means that the transformer primary circuit is closed when the projector motor is started but as there is a microswitch in series with the exciter lamp, it is not turned ON until the changeover is made.

All Cinemeccanica projectors have this microswitch in the picture changeover housing and it is usually in series with the exciter lamp. In systems having a separate preamplifier for each projector, the exciter lamp is not switched. The microswitch completes the circuit between terminals U1 and U2 of the preamplifier at changeover.

In other sound equipment having a common power supply for two exciter lamps, the use of a simple latching relay across one changeover as shown in figure 1 will control both exciter lamps. The Potter Brumfield type KB17AY with a 120 volt coil is recommended.

If a separate power supply is used for each exciter lamp, the circuit shown in figure 2 is recommended. The same type of latching relay should be used.

With other types of sound systems, there are two additional sets of momentary closed contacts on K6 that may be used with or without auxiliary relays. These contacts are terminated on TB-2 10-11 and 12-13.

2. Picture Changeover

Relay K6 is operated by the closure of cam switch #3 and the #1 set of contacts are terminated on terminals 8-9 of TB-2. On an existing installation terminals #8-9 are connected across the regular picture changeover switches. On a new installation the connections should be as shown in figure 3. The 4 #14 wires must be installed between the two machines for this circuit.

Additional information relative to the picture changeover circuits are included in the "Installation of all V-4ES type projectors with Maxi-7 Automation". It is important to check the 120 Volt neutral and hot supply wires as indicated.

The incoming projector changeover dowser is always pulsed to the closed position. In the case of the first reel of the show, this is done by the extra contacts on the START switch. After the projector motor and Xenon lamp are in operation, cam switch #3 pulses the relay K6 to open the dowser. During a normal changeover the incoming dowser is pulsed to make certain it is closed. After approximately four seconds it is opened by K6.

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MAXI-7/X

SOUND & PICTURE

CHANGEOVER CIRCUITS

DATE: 1979

1. Sound Changeover

All Cinemeccanica projectors have a microswitch in the picture changeover housing and it is usually connected in series with the exciter lamp. In systems having a separate preamplifier for each projector, the exciter lamp is not switched. The microswitch completes the circuit between Terminals U1 and U2 of the POS-65 preamplifier at changeover.

In other sound equipment having a common power supply for two exciter lamps, the use of a simple latching relay across one changeover as shown on Drawing #060, top figure, will control both exciter lamps. The Potter Brumfield Type KB17AY with a 120 volt coil is recommended. DUAL COIL LATCHING RELAY

If a separate power supply is used for each exciter lamp, the circuit shown on Drawing #060, middle figure, is recommended. The same type of latching relay should be used.

With other types of sound systems, there are two additional sets of momentary closed contacts on K6 that may be used with or without auxiliary relays. These contacts are terminated on TB-2, 10-11 and 12-13.

2. Picture Changeover

Relay K6 is operated by the closure of Cam Switch #3 and the #1 set of contacts are terminated on Terminals #8-9 of TB-2. On an existing installation Terminals #8-9 are connected across the regular picture changeover switches. On a new installation the connections should be as shown on Drawing #061. The 4 #4 wires must be installed between the two machines for this circuit.

The incoming projector changeover dowser is always pulsed to the closed position. In the case of the first reel of the show, this is done by the extra contacts on the START switch. After the projector motor and Xenon lamp are in operation, Cam Switch #3 pulses the relay K6 to open the dowser. During a normal changeover the incoming dowser is pulsed to make certain it is closed. After approximately four seconds it is opened by K6.

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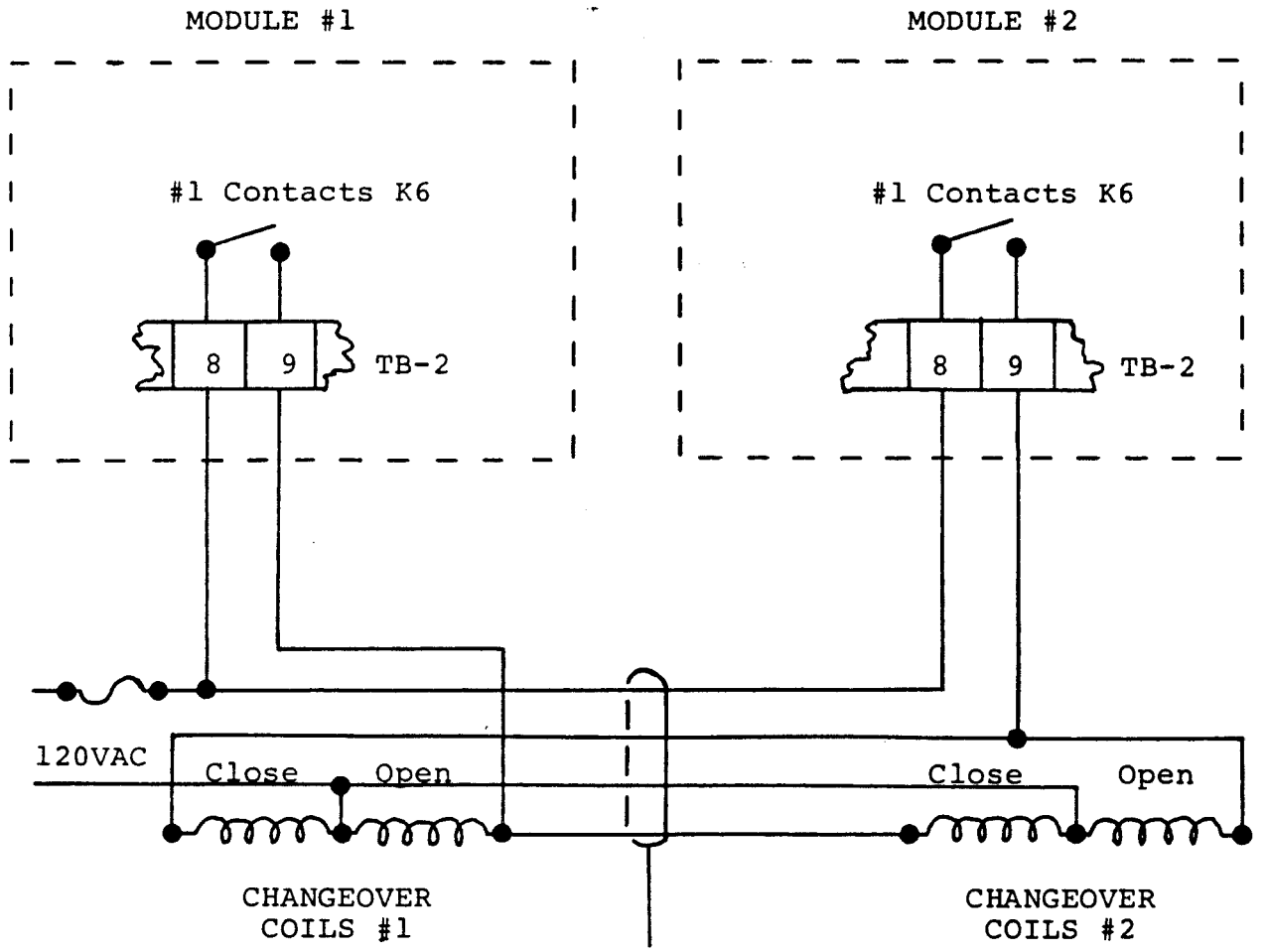
MAXI-7 AND MINI-7
CHANGEOVER CIRCUIT

Dwg. #061

Date:5/23/72



Four #14 Wires
Between Projectors

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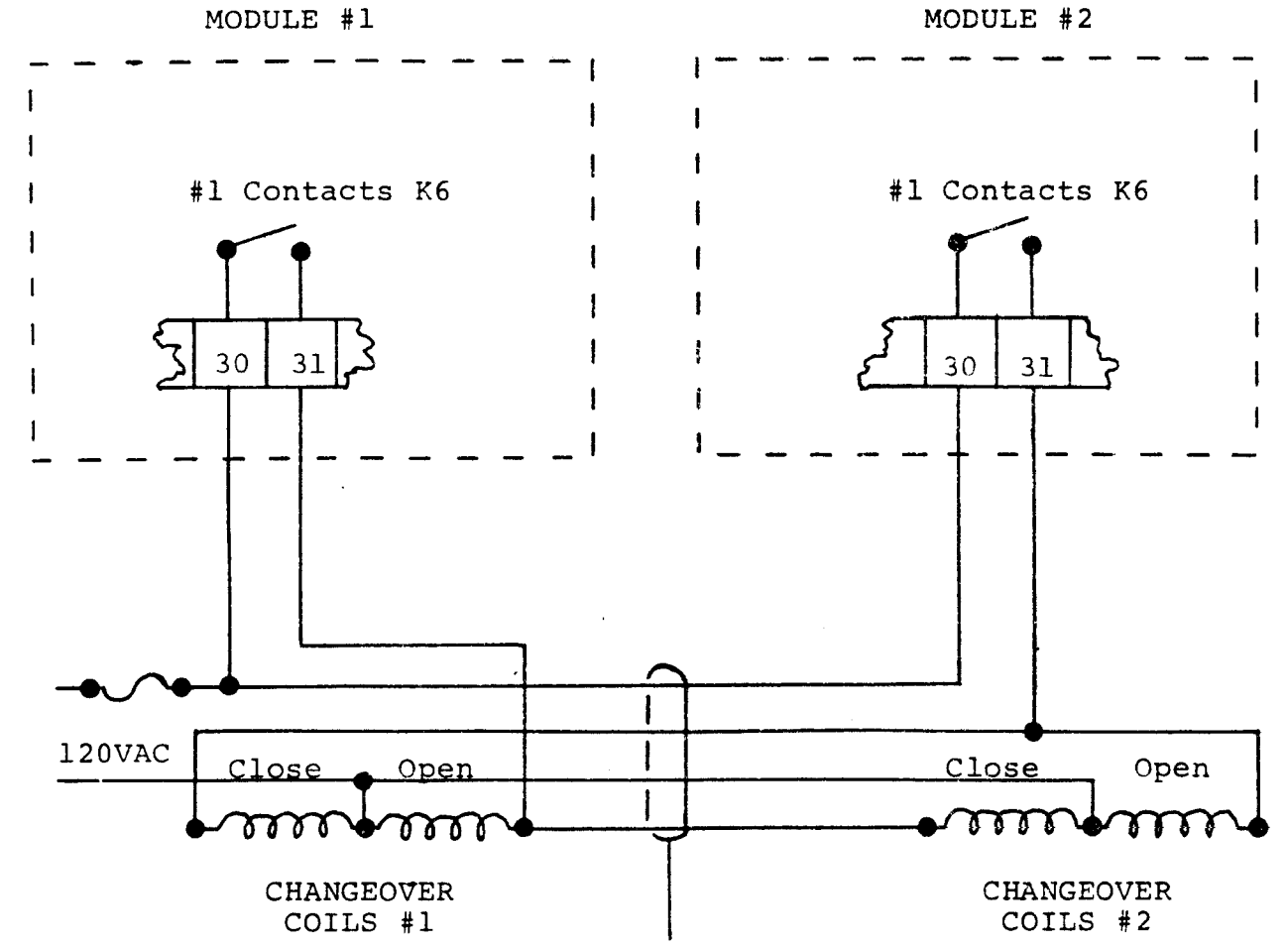
MAXI-7/X

CHANGEOVER CIRCUIT

Dwg. #061 Rev.

Date: 4/19/82



Four #14 Wires
Between Projectors

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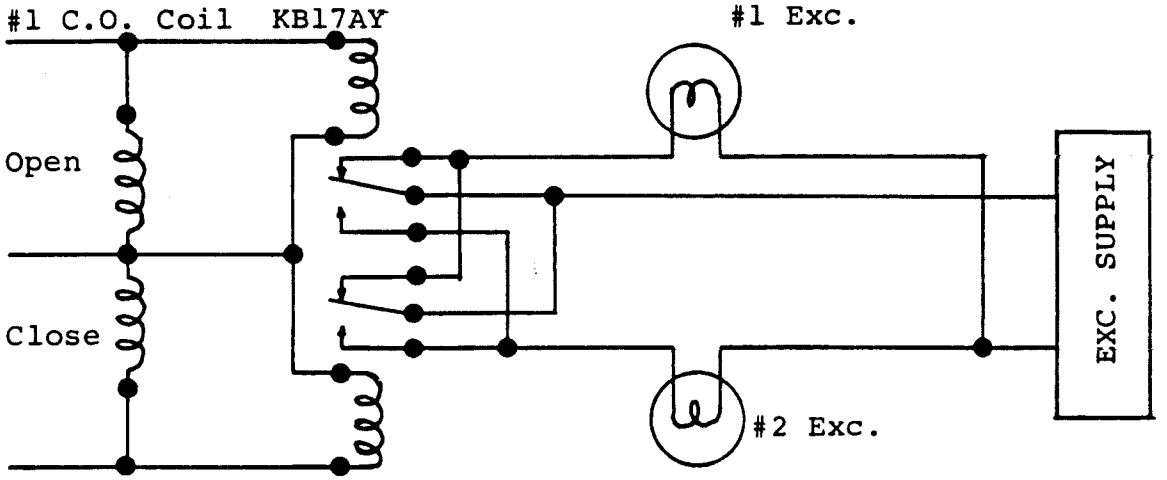
AUTOMATIC SOUND CHANGEOVER USING P&B KB17AY RELAY

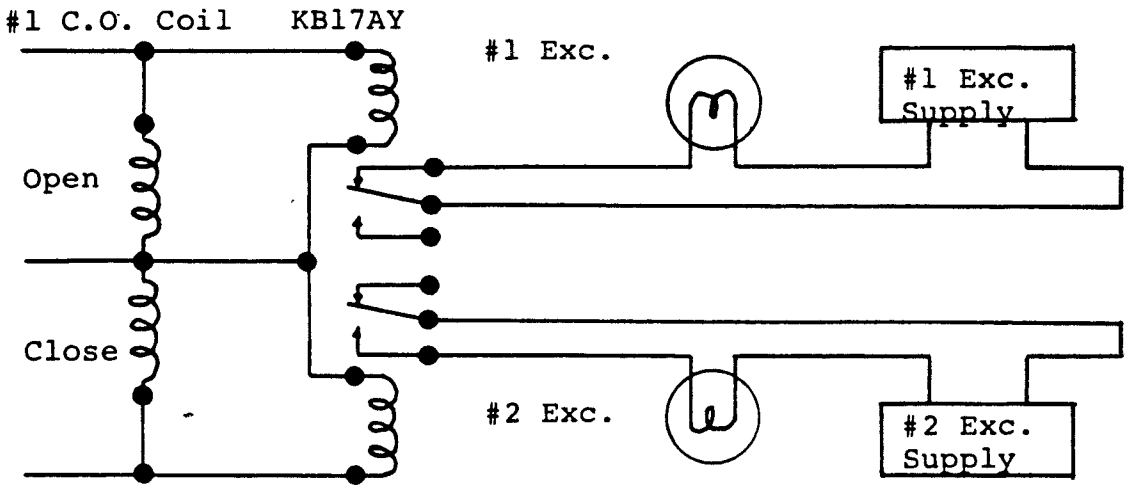
Dwg. #060

Date: 5/23/72

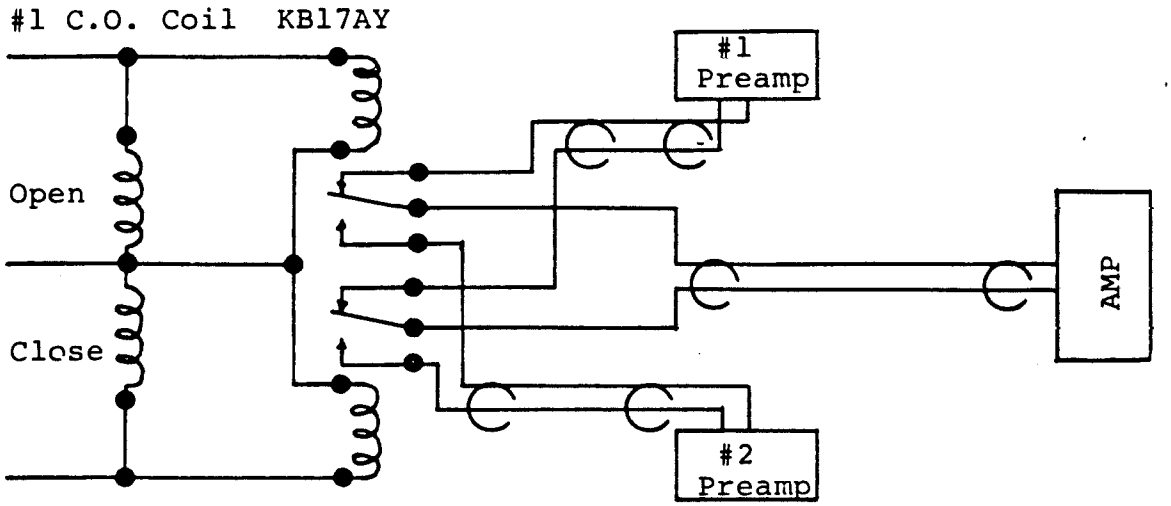
EXCITER CHANGEOVER WITH ONE EXCITER SUPPLY

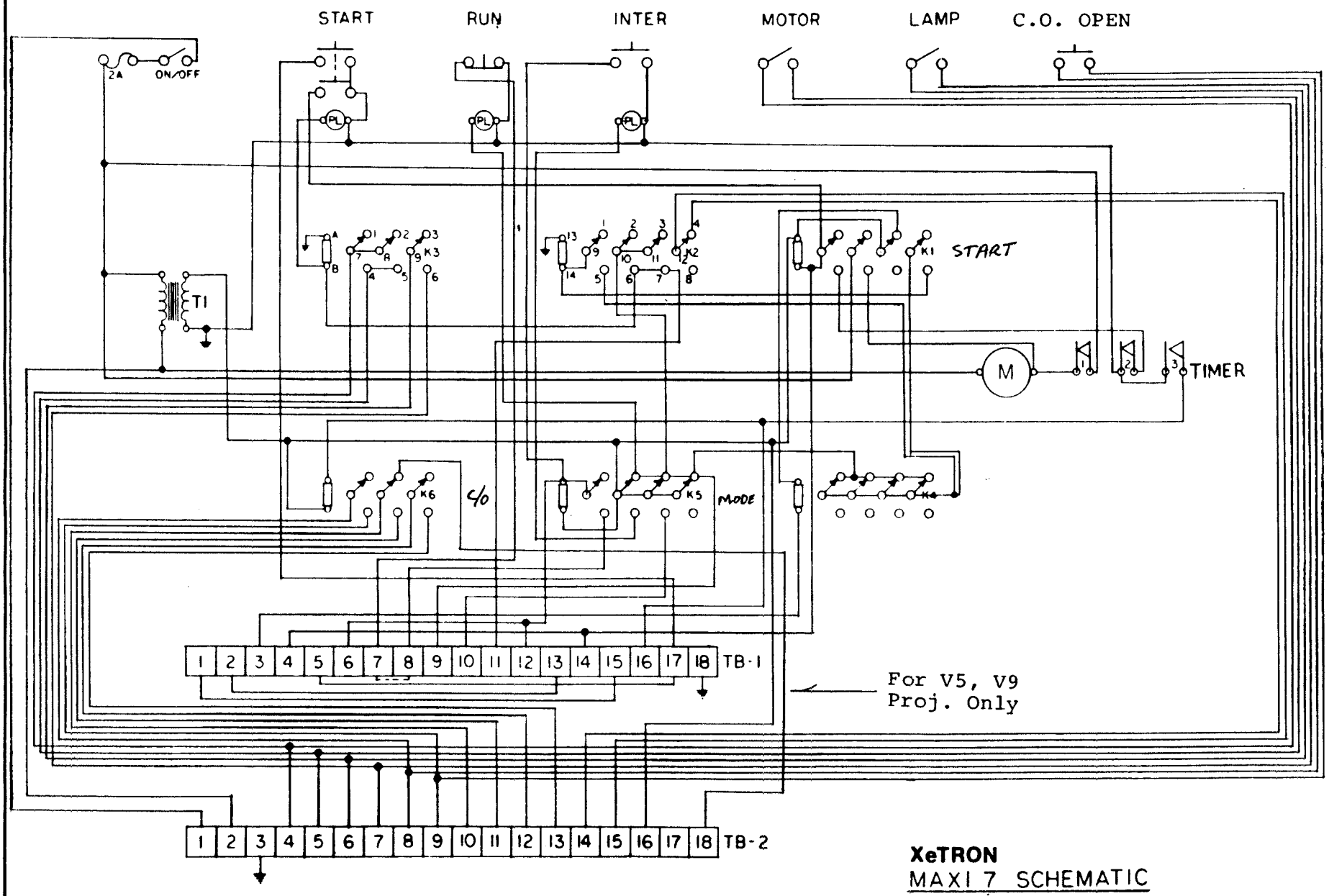


EXCITER CHANGEOVER WITH TWO EXCITER SUPPLIES



PREAMP CHANGEOVER





XeTRON

MAXI 7 SCHEMATIC

From Ser. No. 675 on

Dwg. No. 015A 30 Aug 76 TRA

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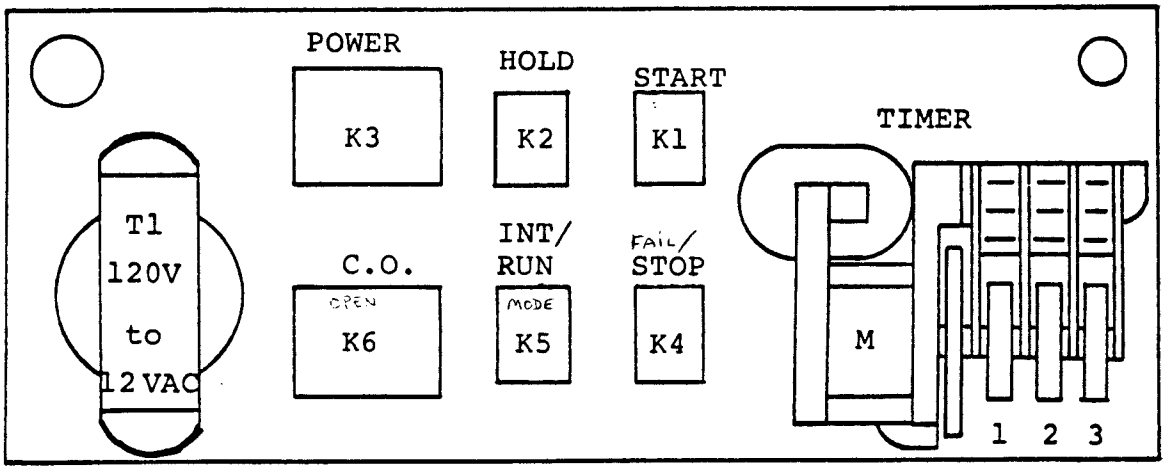
MAXI 7 CHASSIS
RELAYS AND TIMER

(Not to scale)

Drawing: #058

Date: 5/22/72

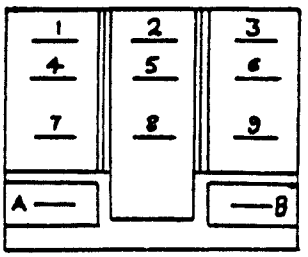
CHASSIS LAYOUT TOP VIEW



K7 UNDERNEATH CHASSIS

RELAY PIN LAYOUT BOTTOM VIEW

REPLACEMENT:
ECG RLY 1852



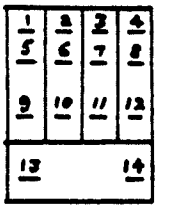
K3 & K6
DELTROL
3PDT

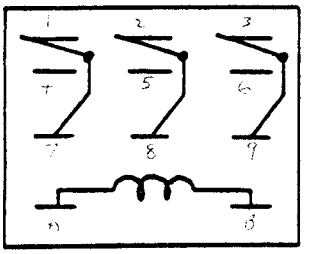
COIL
12VAC
10 AMP CONTACTS

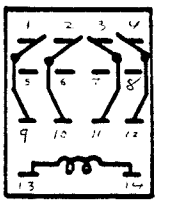
K1, K2, K4 & K5
P & B
4PDT

COIL
12VAC
3 AMP CONTACTS

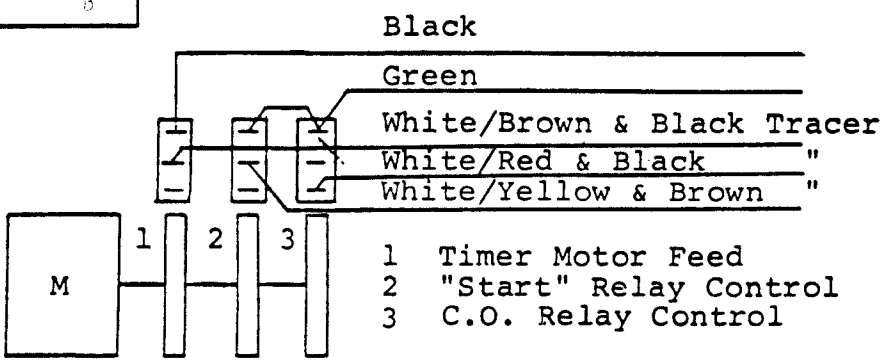
ECG RLY 2062







TIMER WIRING



1 Timer Motor Feed
2 "Start" Relay Control
3 C.O. Relay Control

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MAXI-7X CHASSIS

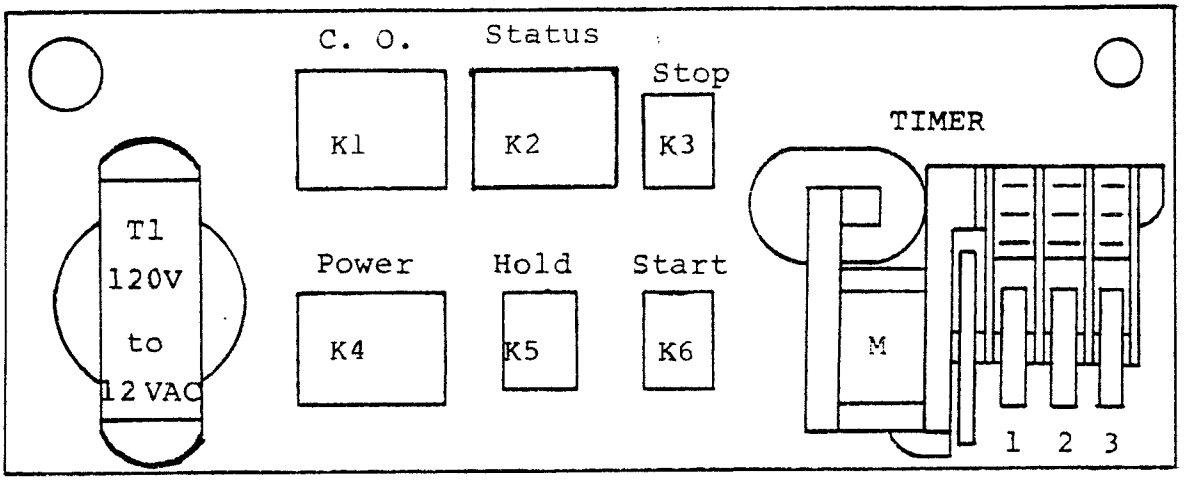
RELAYS AND TIMER

(Not to scale)

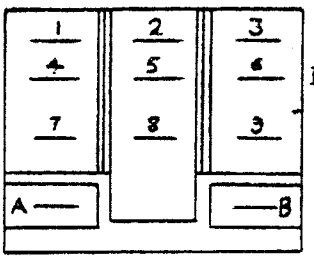
Drawing: #058 A

Date: June 14, 1979

CHASSIS LAYOUT-TOP VIEW

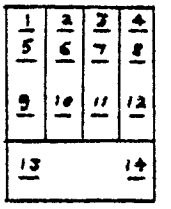


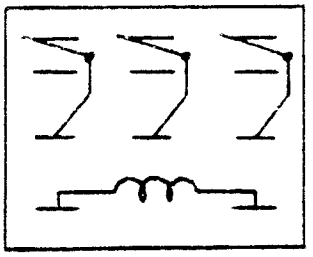
RELAY PIN LAYOUT BOTTOM VIEW

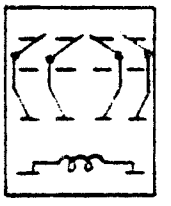


K1, 2&4
3PDT
COIL
12VAC

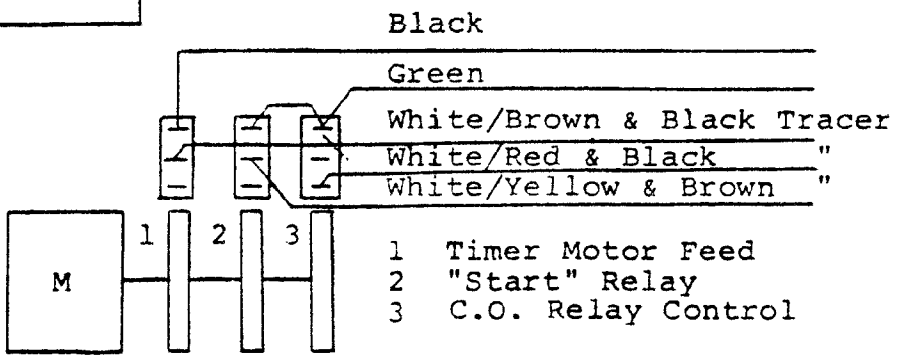
K3, 5&6
4PDT
COIL
12VAC







TIMER WIRING



1 Timer Motor Feed
2 "Start" Relay
3 C.O. Relay Control

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

Maxi-7X No. 1 Terminal No.	Interface Color	Maxi-7X No. 2 Terminal No.
TB1 #4 (4)	Red/White	TB1 #4 (4)
TB1 #5 (5)	Black/White	TB1 #5 (5)
TB1 #12 (12)	Blue	TB1 #13 (13)
TB1 #13 (13)	Blue/White	TB1 #12 (12)
TB1 #14 (14)	Black	TB1 #15 (15)
TB1 #15 (15)	White	TB1 #14 (14)
TB1 #16 (16)	Red	TB1 #17 (17)
TB1 #17 (17)	White/Black	TB1 #16 (16)
TB1 #18 (18)	Green	TB1 #18 (18)
TB2 #12 (34)	Orange/Black	TB2 #12 (34)
TB2 #13 (35)	Green/Black	TB2 #13 (35)
TB2 #14 (36)	Red/Black	TB2 #14 (36)
TB2 #17 (39)	Orange	TB2 #17 (39)

( ) Denotes New Style Maxi-7X

Spare Wires In Interface Cable: Blue/Black, Green/White

Tape Deck: 115VAC, May be connected to either Maxi-7X No. 1 or No. 2

For No. 1; Provide jumper, Maxi-7X No. 2 Terminals (41) to (37) connect tape deck to Maxi-7X No. 1 Terminals 24 & 37.

For No. 2; Provide jumper, Maxi-7X No. 1 Terminals (41) to (37) connect tape deck to Maxi-7X No. 2 Terminals 24 & 37.

Connect dimmer feed to either cabinet Terminal No. 39

Connect dimmer bright to either cabinet Terminal No. 5

Connect dimmer dim to either cabinet Terminal No. 4

Dimmer control closure is 5 seconds.

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Maxi-7X No. 1 Terminal No.	Interface Color	Maxi-7X No. 2 Terminal No.
TB1 #4 (4)	Red/White	TB1 #4 (4)
TB1 #5 (5)	Black/White	TB1 #5 (5)
TB1 #12 (12)	Blue	(20)*
TB1 #13 (13)	Blue/White	(21)*
TB1 #14 (14)	Black	TB1 #15 (15)
TB1 #15 (15)	White	TB1 #14 (14)
TB1 #16 (16)	Red	(22)*
TB1 #17 (17)	White/Black	(42)*
TB1 #18 (18)	Green	TB1 #18 (18)
TB2 #12 (34)	Orange/Black	TB2 #12 (34)
TB2 #13 (35)	Green/Black	TB2 #13 (35)
TB2 #14 (36)	Red/Black	TB2 #14 (36)
TB2 #17 (39)	Orange	TB2 #17 (39)

( ) Denotes Terminal Number For New Style Maxi-7X

( )* Denotes Terminal Used For Tie Point, On Old Maxi-7X, Splice Wire If No Terminal Available

Spare Wires In Interface Cable: Green/White, Blue/Black
Interface From M7-APX To Maxi-7X No. 2 (15 Conductor Cable)

M7-APX Terminal No.	Interface Color	Maxi-7X No. 2 Terminal No.
TB1 #1	Blue/Black	TB2 #16 (38)
TB1 #2	Green	TB1 #18 (18)
TB1 #5	Orange	TB2 #15 (37)
TB1 #6	White/Black	(42)*
TB1 #7	Blue/White	(21)*
TB1 #8	White	TB1 #13 (13)

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M7-APX Terminal No.	Interface Color	Maxi-7X No. 2 Terminal No.
TB1 #9	Black	TB1 #12 (12)
TB1 #10	Blue	(20)*
TB1 #11	Red/Black	TB1 #17 (17)
TB1 #16	Red	(22)*
TB1 #18	Orange/Black	TB1 #16 (16)
TB2 #16	Black/White	TB2 #13 (35)
TB2 #17	Red/White	TB2 #12 (34)

Spare Wires: Green/Black, Green/White

Tape Deck: Provide Jumper Maxi-7X No. 1 Terminals (41) to (37) Connect Tape Deck To Maxi-7X No. 2 Terminals (24) & (37)

System Can Be Used To Control 2 Dimmers, One Through M7-APX & The Other Through The Maxi-7X Dimmer Control Circuit.

Maxi-7X Dimmer Control, Connect To Either Maxi-7X.
Dimmer Feed (39)
Dimmer Bright (5)
Dimmer Dim (4)

M7-APX Terminations
TB2 #5 Dimmer Control Feed
TB6 #6 Dimmer Bright
TB2 #7 Dimmer Dim

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TB2 #8 Alarm Output - Provide Jumper To Terminal TB2 #3

TB2 #9 Curtain Control Feed
TB2 #10 Curtain Open
TB2 #11 Curtain Close

TB2 #12 12VAC Alarm Output To Remote

TB2 #13 Masking Control Feed
TB2 #14 Masking Scope
TB2 #15 Masking Flat

M7-APX Remote Function Terminations
TB1 #12 Remote Cycle Pushbutton (N.O.)
TB1 #13 Remote Inter. Position Indicator Light
TB1 #14 Remote Show Position Indicator Light

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

INSTALLATION OF ALL V-9S, V-5, & V-5S PROJECTORS WITH MAXI-7 AUTOMATION From Serial #675 On

2 SEPTEMBER 1976

Terminate the projector according to the Wiring Diagram #902 with the exception of the following:

1. Place a jumper across the neutral side of the projector on/off switch (CA). (Terminal #31 exciter supply to Terminal #1 main terminal block)

2. Remove jumper from Terminal #22 and #23.

3. Move Wire #23 to Terminal #28.

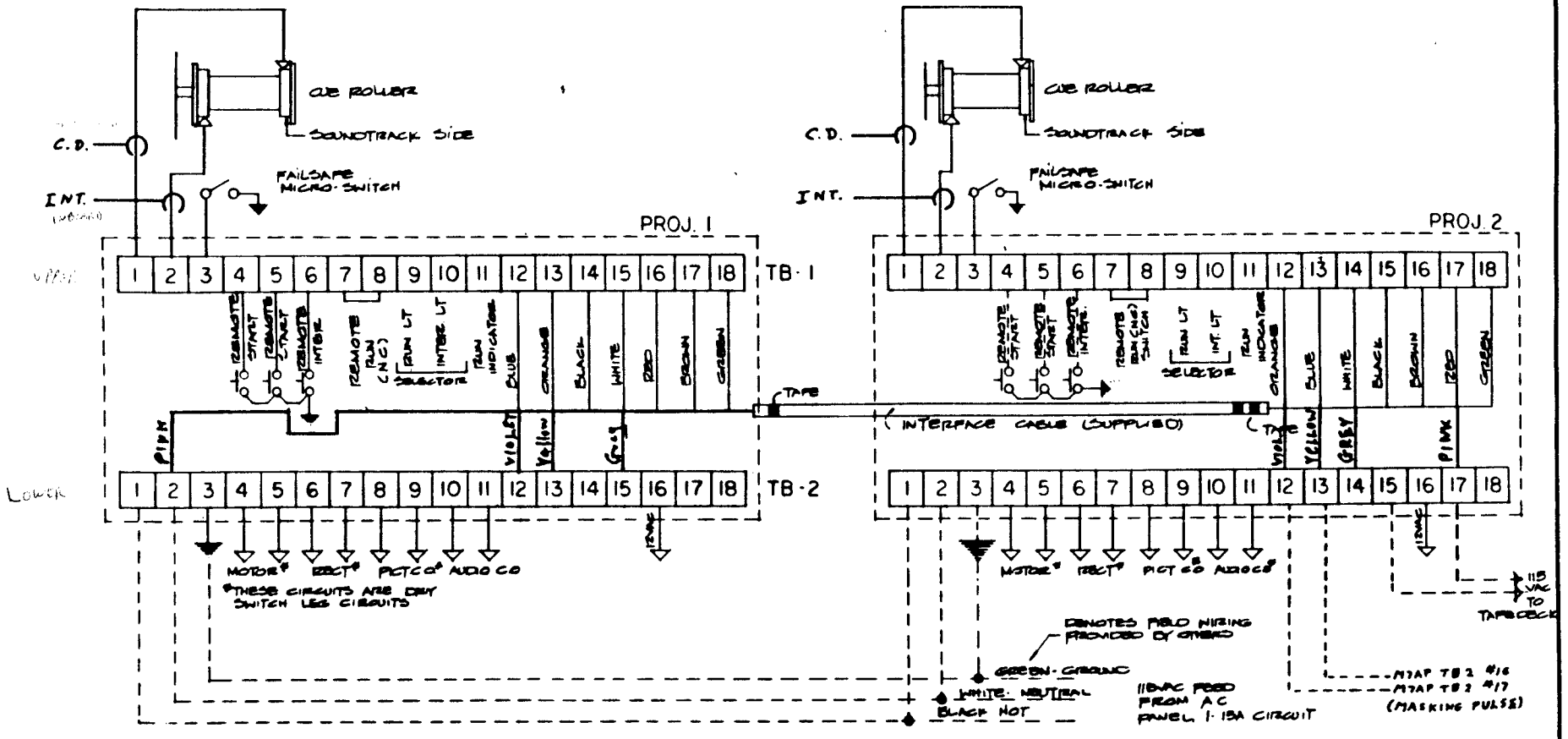
Connect the Maxi-7 Modules to the projectors as follows:

Maxi-7		To V-9S, V-5, V-5S
# 1	TB-1	Cue Detector - Outboard Side
# 2	TB-1	Cue Detector - Inboard Side
# 3	TB-1	Failsafe Switch
# 3	TB-2	Ground Lug
# 4	TB-2	#33 Exciter Supply
# 5	TB-2	# 3 Main Terminal Block
# 6	TB-2	# 5 Main Terminal Block
# 7	TB-2	# 6 Main Terminal Block
# 8	TB-2	#24 Main Terminal Block
# 9	TB-2	#25 Main Terminal Block
#10	TB-2	#23 Main Terminal Block
#18	TB-2	#28 Main Terminal Block

Connect the Xenon lamphouse remote control (Terminals #5 and #6 in XeTRON XH Series Lamphouses) to Terminals #5 and #6 on the main terminal board in projector base.

Connect the Maxi-7 interface cable (supplied) and 120VAC from the booth AC panel as shown on Dwg. #015A. For non-sync sound operation, add a jumper from Terminal #1 to #14 (TB-2 Unit #1) —take 120VAC for tape deck from Terminals #15 and #17 (TB-2 Unit #2). AC will be present on these terminals when both projectors are at rest.

Terminals 4-5 and 6-7 TB-2 (Motor and Rectifier) are normally open, latching switch loops which are latched closed during run. Terminals 8-9, 10-11, and 12-13, TB-2 (Picture Changeover, Audio Changeover and Auxiliary) are normally open momentary contact switch loops which closes momentarily during changeover. Cinemeccanica uses a changeover operated microswitch for sound changeover. If this or a similar system is not available then an external relay such as a P & B KB17AY must be used for sound changeover. SEE Dwg. #060.



* BE CERTAIN THAT A GOOD GROUND CONNECTION EXISTS BETWEEN THE AUTOMATION UNIT CHASSIS AND THE PROJECTOR.

XeTRON
MAXI 7 INTERFACE

NO SCALE DWG # 00
NOVEMBER 1971
Revised 5/29/72
8/2/72

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

Xetron AP-7X Auditorium/Alarm Module For Use With Maxi-7X.

The Xetron AP-7X auditorium alarm module is designed to add complete programmable auditorium and alarm functions to the Maxi-7X automation system, to provide complete control of curtain, two dimmers (one with regular Maxi-7X, the second via this module) masking, and a 12V alarm. A built-in auto/intermission circuit allows this module to be connected so that in the event of a film break, the lights will raise and the curtain will close. This feature can easily be defeated if desired.

~~The AP-7X module is designed to be mounted in the #1 cabinet of the Maxi-7X, in the console containing the #1 Maxi-7X or on the wall adjacent to the older style Maxi-7X.~~

Complete manual switches are provided for lights, curtain, auto masking, manual masking, timer cycle and timer position light.

Refer to Drawing #1059 (Maxi-7X schematic) and #1063 (AP-7X schematic) for installation of this module.

Certain terminals of the Maxi-7X interface terminal strips are to be used as tie points for this module. The interface harness of this module is furnished with terminals on all the wires, the wires with the spade terminals will go to the interface terminal strips of the Maxi-7X, and the wires with the splice disconnect terminals will be connected to the interface cable, remote cable or auditorium device.

The harness of the AP-7X is designed to lay over the two terminal strips of the Maxi-7X and the wires break out at the correct place along the terminal strips.

Connect this module to the Maxi-7X before connecting the interface cable.

Connect as follows:

#12 White/Orange
#13 Yellow
#16 White/Red
#17 White/Yellow
#20 Grey
#21 White/Grey
#22 White/Blue
#24 White
#25 Green
#34 Brown
#35 Red
#37 Orange
#38 Blue
#41 Black
#42 Yellow
#43 White/Yellow
#44 White/Orange

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

Connect loose wires to interface cable as follows:

AP-7X Module Wire	Interface Cable Wire
Brown	Blue
White/Brown	Red
White/Violet	White/Black
White/Black	Blue/White

Determine whether the auto/intermission circuit is to be used or not. If not, tape up white/green wire, if it is to be used, connect white/green wire to Terminal #18.

Red--Wire is alarm output 12V. If RC-M7A is used, connect to black wire of Belden 9626, connect white wire to Terminal #18.

Violet--Wire is remote cycle button, connect to black/red wire of Belden 9626 going to RC-M7A remote control (Refer to RC-M7A Connection Schedule For RC-M7A With Maxi-7X & AP-7X).

Auditorium Function Connectors

Dimmer:	Feed Terminal	#42
	Bright	#43
	Dim	#44
Curtain:	Feed	#20
	Close	#21
	Open	#22
Masking:	Feed	#39
	Scope	Orange Wire From AP-7X
	Flat	White/Orange Wire From AP-7X

Non-Sync: 115VAC For Tape Deck Line to 37, neutral to #24 jumper from 41-37 Maxi-7X number 2 only.

Interface Cable Terminations Maxi-7X #1

Terminal Number	Interface Cable Color
4	Red/White
5	Black/White
14	Black
15	White
18	Green
34	Orange/Black*
35	Green/Black*
36	Red/Black
39	Orange

*These terminals have wires from AP-7X module in addition to the interface cable.

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As a check, the following is the schedule of interface wires connected to Maxi-7X #2

Terminal Number	Wire Color
4	Red/White
5	Black/White
12	Blue/White
13	Blue
14	White
15	Black
16	White/Black
17	Red
18	Green
34	Orange/Black
35	Green/Black
36	Red/Black
39	Orange
37-41	Jumper For Non-Sync

Operation

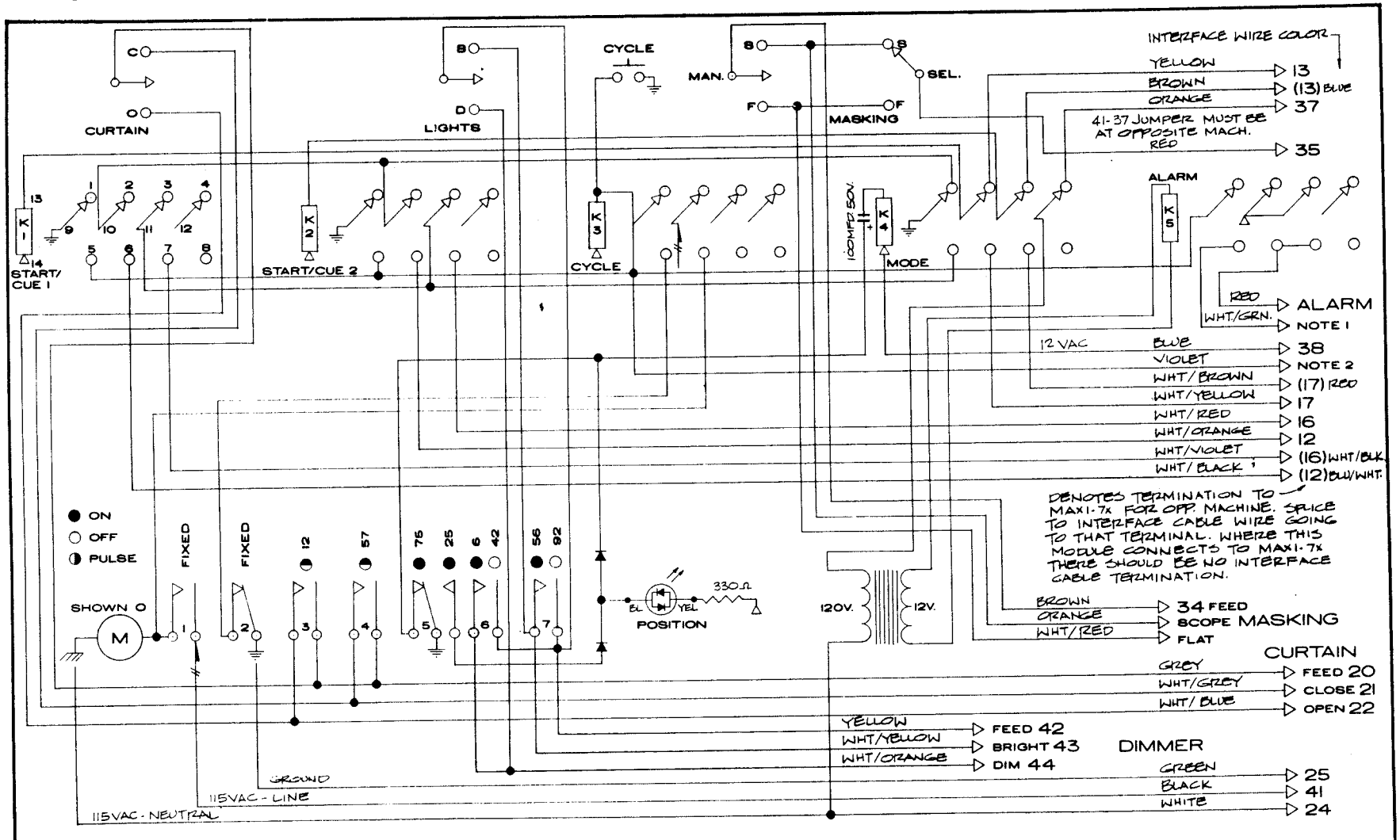
This module is triggered by the start button of either Maxi-7X or the inboard cue. To start the show, first check that the timer of this module is in the intermission mode (position light red) press the start button of the appropriate Maxi-7X, the timer of the AP-7X will cycle 1/2 rotation, lowering the lights and opening the curtain, the mode position light will change to green, indicating the the timer is in the show position. An inboard cue triggers the AP-7X and also puts the oppposite Maxi-7X in the inter- mode, the outboard cue then starts the timer of the opposite Maxi-7X and closes the changeover of the running machine. Timer of the AP-7X stops at red (intermission) position ready to be re-started.

Alarm Circuits

Cam #5 of the AP-7X timer controls the operation of Relay K4 and the timer position light. Cam #5 can be adjusted so that the alarm buzzer will sound for a short period on a normal show end sequence, or no buzzer at all unless there is a film break during the show.

Auto/Intermission Circuit

If it was elected to utilize the auto intermission circuit and there is a film break on show start, the AP-7X will cycle back to the intermission position ready for restart after repairing the break. If the auto intermission circuit has not been used, the AP-7X will stay in the show position and the show can be restarted by pressing the start button on the Maxi-7X. It should be noted that the changeover of the starting machine will not close under these conditions and should be closed manually before pressing the start button of the Maxi-7X.



MAXI-7x AUDITORIUM/ALARM MODULE SCHEMATIC

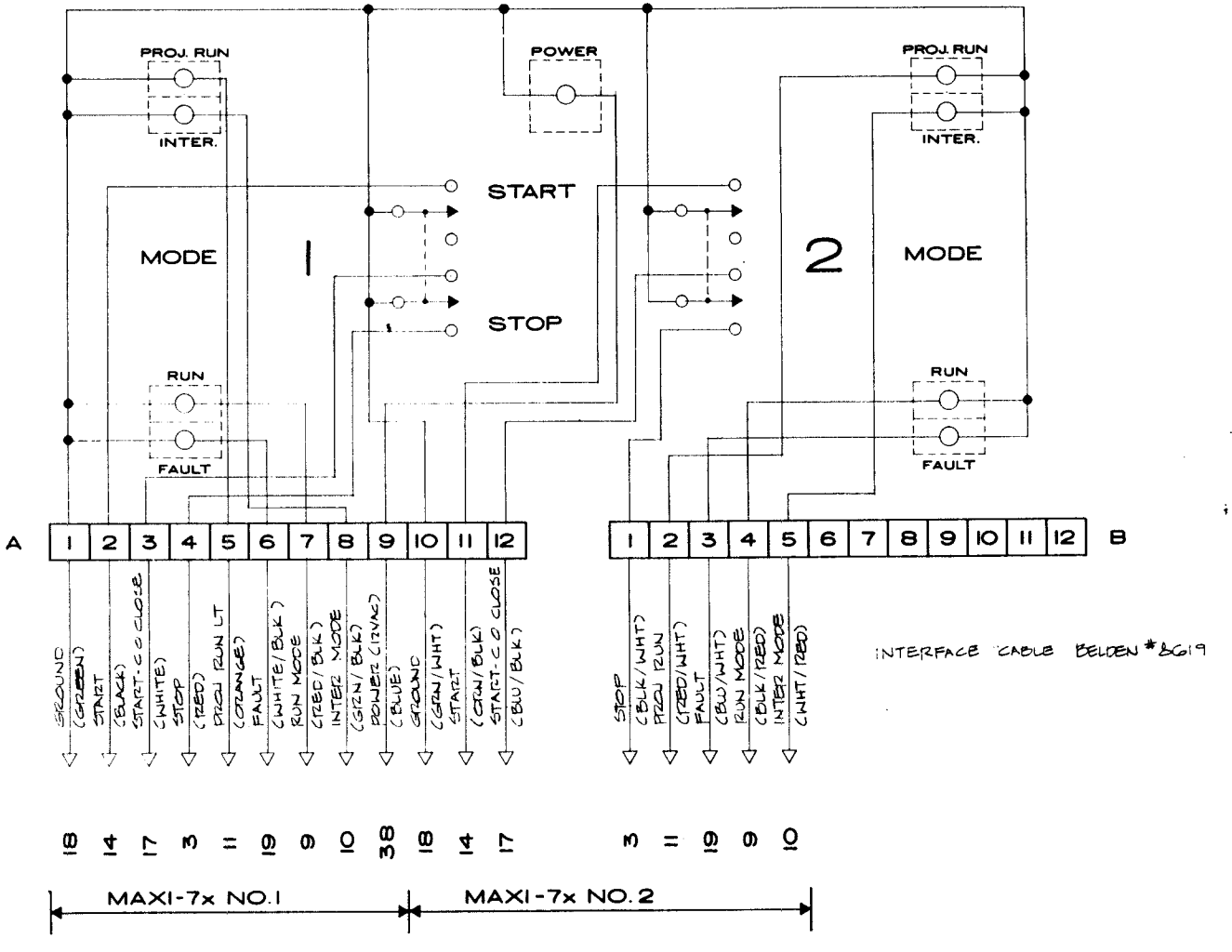
XETRON CORP. 10 SADDLE RD. CEDAR KNOLLS, NJ 07927

NOTE 1- FOR AUTO INTER. CYCLE IN THE EVENT OF A FILM BREAK CONN. WHT/GREEN WIRE TO TERM. 25 (GROUND) FOR MANUAL RESET CONN. TO N.O. BUTTON, OTHER SIDE GROUND.
NOTE 2 - VIOLET WIRE FOR REMOTE CYCLE. CONN. TO N.O. BUTTON, OTHER SIDE GROUND
NOTE 3 - MAXI-7x TERMINALS 20, 21, 22 ARE TIE POINT FOR CURTAIN, 42, 43, 44 DIMMER 34 MASKING FEED, 35 MASKING PULSE

REV. B 4-15-82
REV. A 1-5-82
11-23-81 GME

AP-7x

DWG. 1063

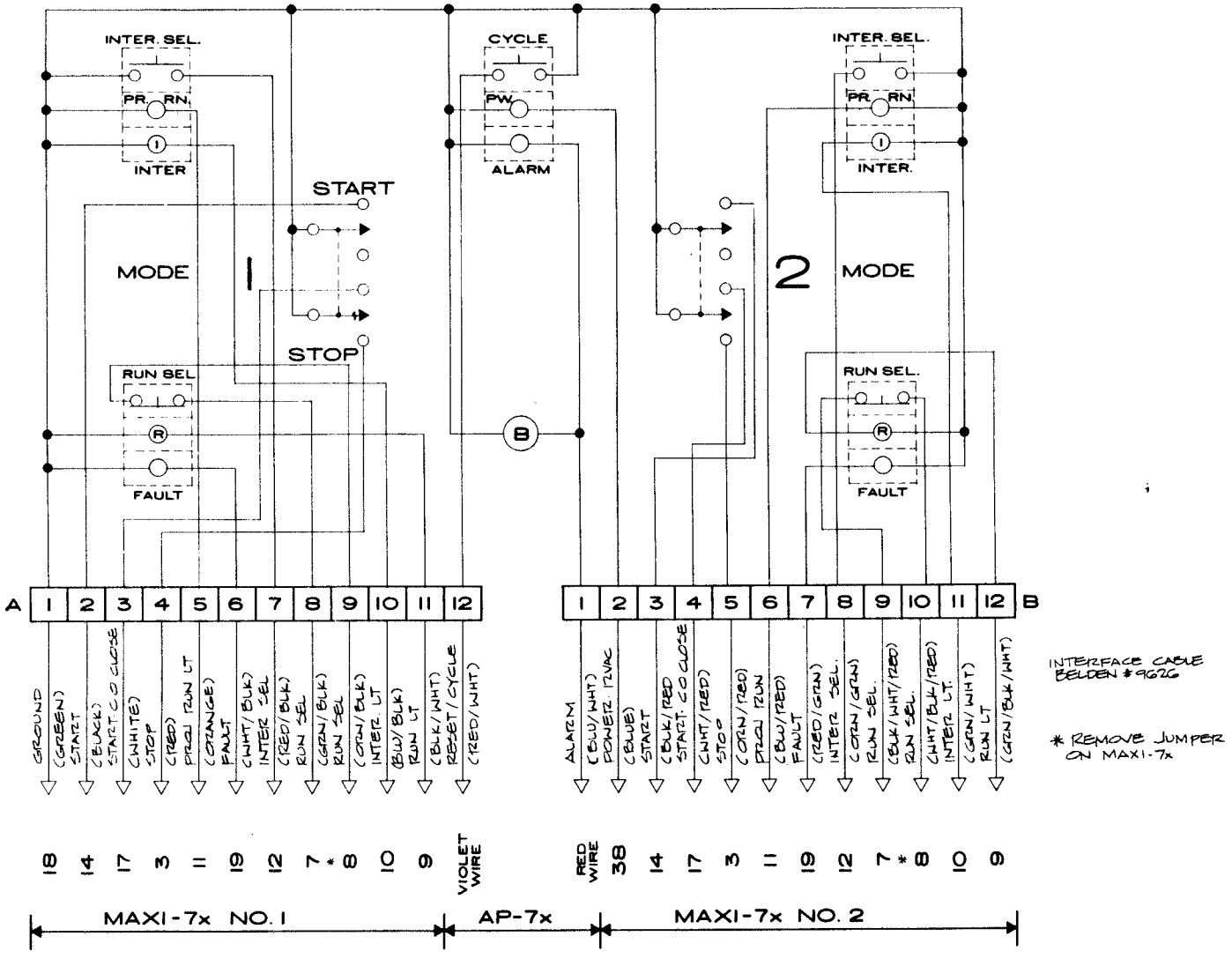


SCHEMATIC RCM-7x

XETRON

GWE 5-22-82

1107



SCHEMATIC RCM-7xAP

XETRON

GAE 5-22-82

1108

April 1, 1972

CABLE "CARBONINC"

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M7-AP AUDITORIUM CONTROL MODULE

The M7-AP auditorium control module has been designed to provide automated control of auditorium functions. This unit is available to interface with the MINI-7, MAXI-7, and MAXI-8 systems where auditorium control is required. This allows the economy-minded exhibitor to install basic automation equipment for the control of projectors now and to expand to full auditorium capability automation at a later date. XeTRON recommends the use of the 7111 automation system if a full capability system is desired at installation time.

M7-AP FEATURES

Controls:

- Curtains
- Masking
- Lighting control equipment

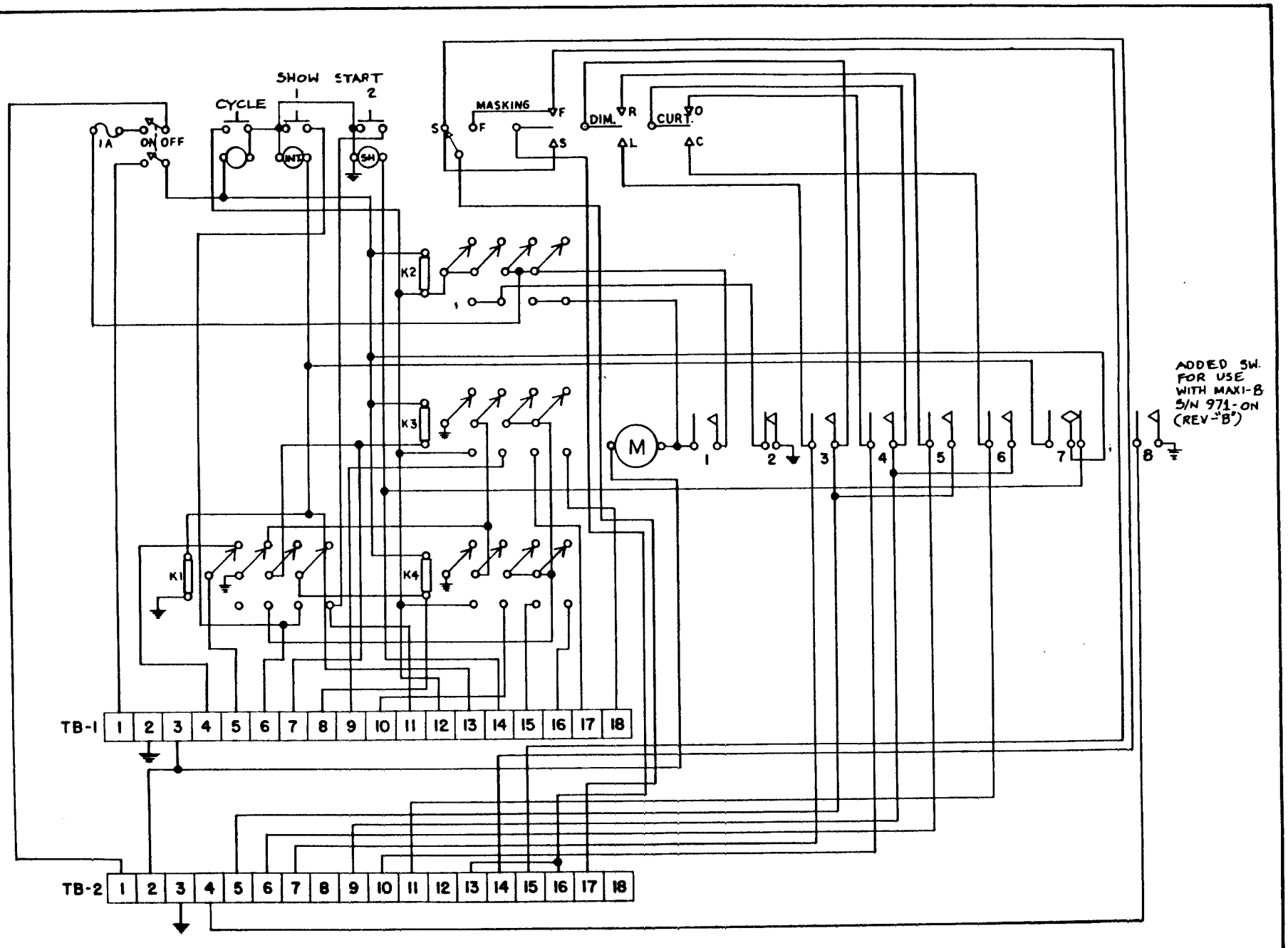
A compact, easily installed system, including a full set of manual controls, making the termination of all auditorium systems a centralized operation.

Includes a fully adjustable cam timer assembly for precision timing of all events to suit individual requirements.

A recessed control panel includes positioner lights and color coordinated switches to simplify operation and prevent accidental tripping.

Housed in a heavy duty custom enclosure, two-toned, finished in baked textured vinyl, color coordinated to match other XeTRON automation units.

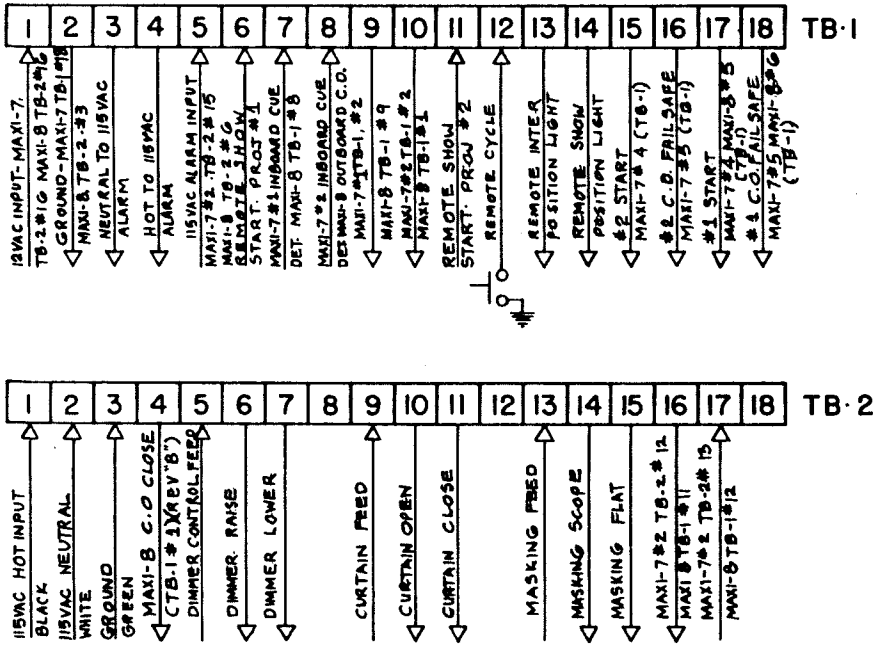
Compact size: One unit 12" wide x 10" high x 5" deep, mounts conveniently on wall.



SCHEMATIC DIAGRAM
M7-AP AUDITORIUM PROGRAMMER
DWG. NO. 037 FEB. 1972 GWE

REVISION A SER. NO. 890 ON

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

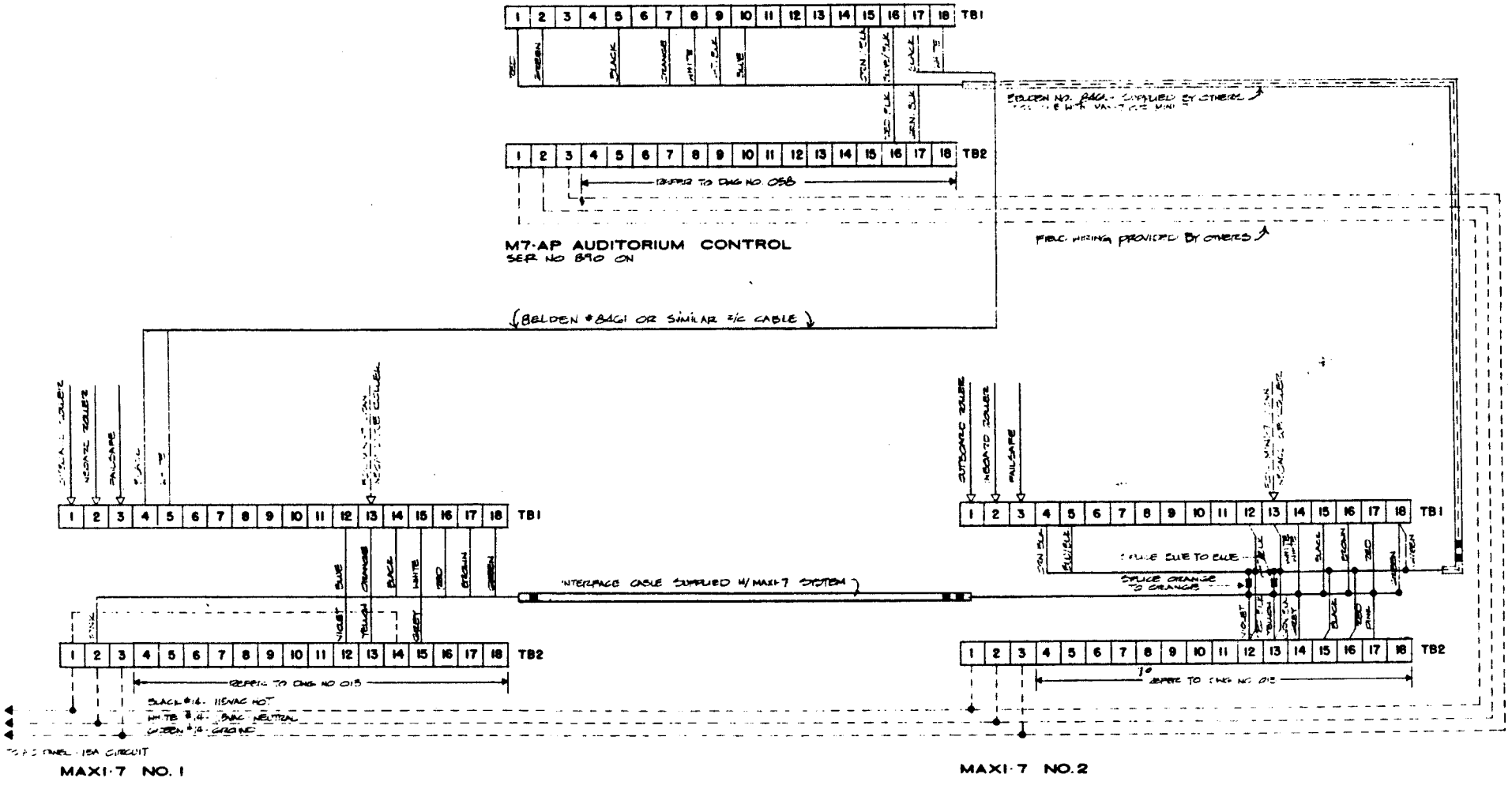


M7·AP AUDITORIUM MODULE
INTERFACE WIRING

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

REVISION A-B = SER. NO. 890 ON 972 =

DWG. NO. 058



INTERFACE FOR M7AP AND MAXI-7

XETRON, A DIVISION OF CARBONS INC. CEDAR KNOLLS, N.J. DWG NO. 076

REVISION A- SER NO 890 ON

XeTRON REMOTE CONTROL UNITS

XeTRON remote control units are professionally styled for use in public areas or in manager's offices as required. Finished in blue textured vinyl and matte white with silk screen legends, they provide logical control and display functions for automation equipment from a remote point. All units directly interface with their appropriate automation equipment via a single multi conductor control cable.

RC-M7A--For use with the 7111B, Maxi 7*, Mini-7*

Stop-start switches are provided for each projector.

*An illuminated intermission cycle button provides remote control of the intermission timer.

*Visible and audible fault indicators call attention to non-scheduled projector shutdown.

Indicator display lights include:

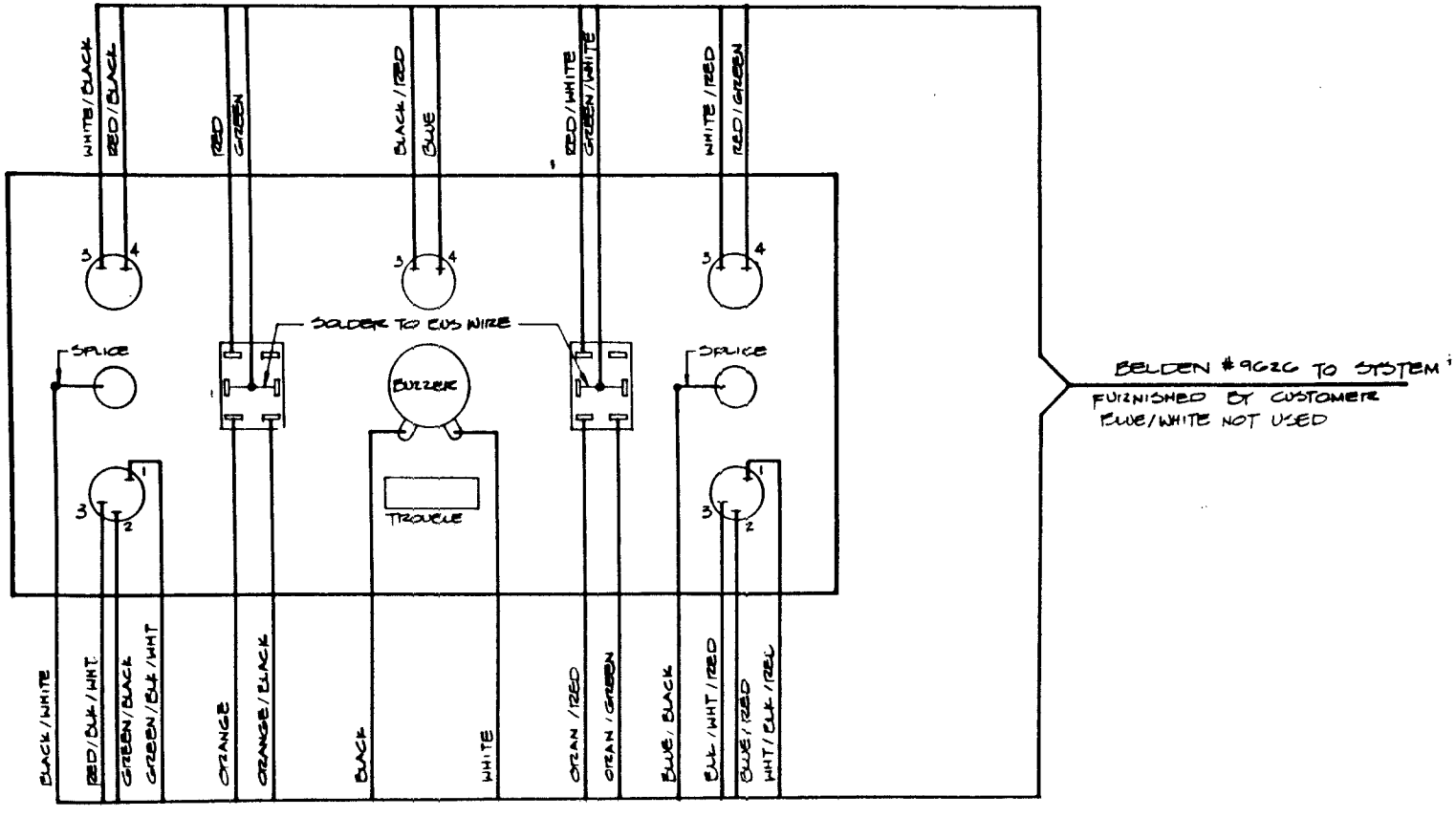
Run light for each projector
Intermission selector light
System operation indicator

Compact size: 5" high x 10" wide x 3 1/2" deep, may be surface or flush mounted.

Recessed front panel prevents accidental tripping.

*Effective only when used in conjunction with M7-AP Auditorium Programmer.

M8-AP Auditorium Programmer includes all the features of the M7-AP plus the extra function of two lens domestic type automatic turret change.

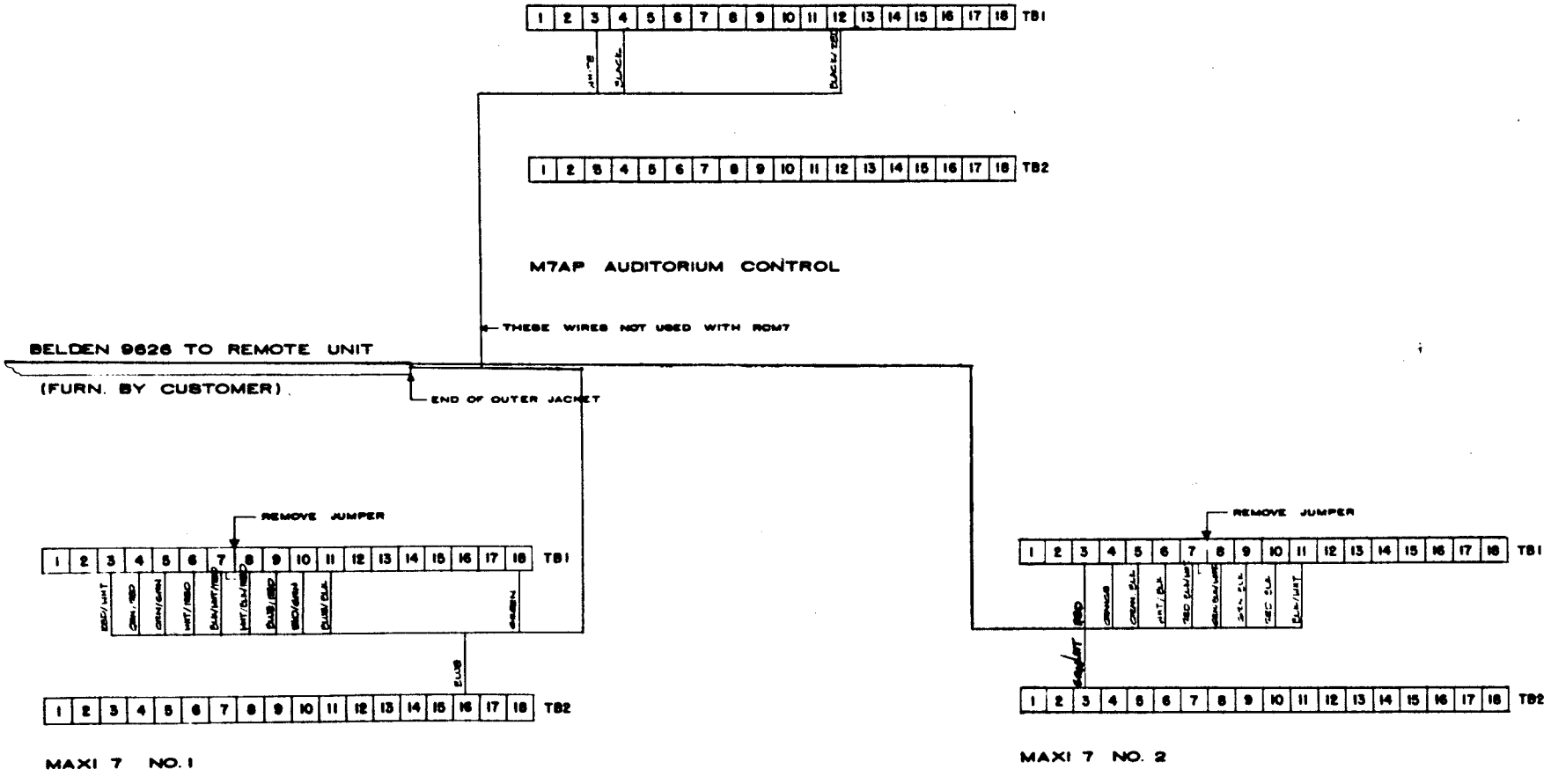


REAR VIEW RC-M7A REMOTE CONTROL UNIT
FOR USE WITH MAXI-7 AND M7AP

REFER TO DRAWING NO. 077 FOR CONNECTION TO MAXI-7 AND M7AP

REVISED

XETRON RC-M7A REMOTE CONTROL UNIT WIRING CONNECTIONS		
XETRON A DIVISION OF CARBONS INC 10 SADDLE ROAD CEDAR KNOLLS, N.J.		
DATE 2-4-72	SCALE FULL	DRN BY GME
		DWG NO. 034



RCM7, RCM7A INTERFACE

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

DWG NO. 077

XETRON
A DIVISION OF
CARBONS, INC.
CEDAR KNOLLS, N. J. 07927
201 - 267-8200

MAXI-7
OPERATION

May 22, 1972

1. Attach foil cues as required. Page two of the instructions explains this very well but some experimenting will be necessary to determine the optimum length and exact placement. Extreme care should be taken to see that the foil does not extend into the sprocket holes. Any foil extending beyond the edge of the film should be trimmed away with scissors.

2. Thread projector with leader in aperture between the 7 and 8 foot mark.

3. To start show, press start button on projector having first reel.

4. Sequence of operation will be as follows-

   A. If open, changeover dowser will close
   B. Tape deck is turned off, Projector motor starts and lamphouse lighted.
   C. Changeover opens and exciter lamp turned on.

5. At the end of the first reel, a changeover will be made if the "Run" light on the incoming machine is ON and the foil tab is at the end of the reel, outboard side.

6. A foil tab on the inboard side will always program an intermission. And the next reel can always be started by pressing the Run button, then the Start button. For continuous projection, both Run lights must be on.

7. If the program policy is such that a regular intermission cannot be scheduled, the intermission foil should not be used but the show programmed as required by the INTER push buttons.

8. If the film should break during operation, the fail safe switch operates and turns off the projector motor, Xenon lamp and exciter lamp and tape deck will be energized.

9. At the end of the show, either an intermission foil or operation of the INTER button will close down the system.

10. Manual override switches are provided for projector motor, Xenon and changeover open, when the Maxi-7 AC switch is turned OFF. With this cabinet ON, the projector motor and Xenon lamp cannot be turned OFF by these switches as they are held on by the latched power relay K3.

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.

1. Attach foil cues as required. Page 2 of the instructions explains this very well but some experimenting will be necessary to determine the optimum length and exact placement. Extreme care should be taken to see that the foil does not extend into the sprocket holes. Any foil extending beyond the edge of the film should be trimmed away with scissors.

2. Thread projector with leader in aperture between the 7 and 8 foot mark.

3. To start show, first make sure blue portion of status indicator is lit. If not, press status indicator push button and it will come on.

   a) Red portion of status indicator should be out, indicating "Go" and that film is threaded properly and failsafe is in its up position. See "Go/No Go Failsafe Indicator" page of this manual for operation and circuit description.

   Then press green start button on the MAXI-7/x unit for projector having first reel.

4. It should be noted that when an M7-AP/x auditorium module is used in connection with the MAXI-7/x system, there is a different mode of operation--refer to sheet describing MAXI-7/x M7-AP/x operation.

   Sequence of operation will be as follows:

   a) If open, changeover dowser will close.
   b) Tape deck is turned off, projector motor starts and lamphouse is lighted.
   c) Changeover opens and exciter lamp is turned on.

5. At the end of the first reel, a changeover will be made if the run portion of the status indicator on the incoming MAXI-7/x is lit, and the foil tab is at the end of the reel on the outboard side of the film, as instructed in the show make-up section of this manual.

6. A foil tab on the inboard side will <u>always</u> program the opposite MAXI-7/x into an intermission mode. The next reel can then be started by pressing the Status button, then the Start button. For continuous projection, both Status Run lights must be on.

7. If the program policy is such that a regular intermission cannot be scheduled, the intermission foil should not be used but the show programmed as required by the Inter push buttons.

8. If the film should break during operation, the failsafe switch operates and turns off the projector motor, xenon lamp and exciter lamp, and Go/No Go red portion of status indicator will be lit. The tape deck will then be energized.

9. At the end of the show, either an intermission foil or operation of the Inter button and an outboard cue will make a changeover to the other projector which remains at rest. As the film runs out, the failsafe will shut down the projector and lamp and energize the tape deck. Go/No Go status indicator will light.

10. Manual override switches are provided for motor, lamp and changeover allowing the projector to be operated manually. These switches parallel automation functions. It should be noted that if the MAXI-7/x unit is on and operating the projector, power relay K3 is controlling the projector so that the manual switches will not turn off. To shut down a machine running on automation (if required to do so), press the intermission mode button, the machine will shut down immediately. Likewise, if the manual switches are on, the failsafe will not shut the machine down on a film break. It is possible to go from manual to automation with the unit running and visa versa. If the show had been started manually (motor, lamp switch on - changeover open), to switch to automation, hold changeover device from closing, press status, then start button. Then turn off motor and lamp switches. Automation is now functioning and failsafe is operative. In a similar manner, if the machine is running on automation, the motor and lamp switches can be turned on and the MAXI-7/x can be turned off without interrupting the show. To go back to automation, SEE ABOVE.

Cues shall be placed on the film, so that contact is made between the cue roller and the associated grounding roller. Make the tabs long enough (3 to 4 inches long) to assure good contact. Place the foil on the emulsion side of the film from the edge of the perforations out to the edge. Cut off the excess over the edge of the film.

Cue Placement - The inboard side of the film is used to program an intermission at the end of a reel. This cue must always precede the outboard cue. For changeover or continuous projection, place a foil on the outboard side (soundtrack) so that it is at the cue detector while the normal motor start cues are in the aperture. This cue starts the other projector and makes the changeover. 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 two marks. Make a Dymo label for rewind table indicating this dimension. This is always the dimension for the outboard cue.

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. Use only XeTron Type "A" cue tape. The cue detector/failsafe device has two conductor wires.

The double roller cue detector has a black lead on the outboard side which goes to Terminal #1 of TB-1. This provides the changeover signal to the other projector. The inboard side has a red lead and is connected to Terminal #2 of TB-1. It supplies the intermission pulse to program an intermission at the conclusion of the reel.

The second pair has a red wire for the failsafe circuit, terminating on Terminal #3 of TB-1. The black wire provides a ground connection to the failsafe switch and the grounding roller and must be connected to Terminal #18 of TB-1.

XETRON
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CEDAR KNOLLS, N. J. 07927
201 - 267-8200

MAXI-7

SHOW MAKE-UP

Date: 5/22/72

Cues shall be placed on the film, so that contact is made between the cue roller and the associated sprocket. Make the tabs long enough (3 to 4 inches long) to assure good contact.

Place the foil on the film from the edge of the perforations out to the edge. Wrap the excess over the edge of the film.

Cue Placement - The inboard side of the film is used to program an intermission at the end of a reel. 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.

For changeover or continuous projection, place a 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 starts the other projector and makes the changeover.

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 the tape supplied by the equipment manufacturer.

The double roller cue detector has a yellow lead on the outboard side which goes to #1 terminal of TB-1. This provides the changeover signal to the other projector.

The inboard side has a blue lead and is connected to #2 terminal of TB-2. It supplies the intermission pulse to program an intermission at the conclusion of the reel rather than a changeover.

The third wire, Red, for the fail safe circuit, terminating on terminal #3 of TB-1 and a good system ground connection.

XETRON®

MAXI-7/X 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 - Back Box
CAB-101*	Front Cover
CAB-103*	Cabinet Top
CAB-104-F*	Chassis
CAB-105*	Chassis Bottom
7522*	Terminal Strip Panel
7523*	Left End Plate
7524*	Right End Plate
7848*	Control Panel
RS-1	Relay Socket 4PDT
RS-2	Relay Socket 3PDT
RLY-1	Relay 4PDT SM. AC
RLY-2	Relay 3PDT LARGE AC
TB-2	Terminal Block
TS-1	Terminal Strip
TM-6	Timer Assembly
F1	Fuseholder
SW-21	Changeover Button
PB-1	Start Push Button Switch
PB-2	Inter Push Button Switch
PB-6	Power Push Button Switch
PB-8	Status Push Button Switch
PBC-1	Start Push Button Lens (Green)
PBC-4	Power Push Button Lens (White)
PBC-5	Inter Push Button Lens (Yellow)
PBC-6	Status Push Button Lens (Red/Blue)
T1	Power Transformer
PL-73	Pilot Lamp Bulb
IC-1	Interface Cable
CON-2	Timer Connector
GR-1	Grommet - Large
GR-2	Grommet - Small
SN-1	Switch Mounting Nut

*Quoted On Request

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

XETRON
MAXI 7
MODIFIED 2/87 - FOR SINGLE MACHINE OPERATION

RELAYS:

K1 START

TURN ON FROM START BUTTON OR GROUND TO TB1-4 or TB1-14. SELF HOLD THRU CAM SWITCH 2 ON TIMER. DEFEATS FAIL SAFE RELAY K4 WHEN ON. STARTS TIMER. TURN ON HOLD RELAY K-2.

K2 HOLD Relay

TURN ON FROM K1 START RELAY; SELF HOLD FROM FAIL SAFE RELAY K4; OPENS NON SYNC CONTACTS; TURN ON POWER RELAY K3.

K3 POWER

TURNS ON AND OFF FROM HOLD RELAY. CLOSES CONTACTS FOR MOTOR AND LAMP.

K4 FAIL SAFE

TURNS ON WHEN FAILSAFE IS DOWN. BREAKS HOLD CIRCUIT FOR K2, K3, + K8, TURNS FAIL LIGHT ON.

K5 MODE RELAY

TURNS ON FROM INTERMISSION SWITCH OR GROUND TO TB1-6 OR TB1-12. I BREAKS HOLD CIRCUIT FOR K3 POWER, K2 HOLD + K8 EXCITER. TURN ON K7 C/O CLOSE.

K6 C/O OPEN

TURN ON FROM CAM SWITCH 3 ON TIMER.

OPENS C/O; TURNS ON K8 EXCITER; PULSES LIGHTS DOWN

K7 C/O CLOSE (NEW RELAY)

TURNS ON FROM START SWITCH OR K5 MODE RELAY OR GROUND TO TB1-5 OR TB1-17 OR TB1-8 (?7).

CLOSES C/O; PULSES LIGHTS UP; DROPS HOLD FOR K8

K8 EXCITER (NEW RELAY)

TURNS ON FROM K6 C/O OPEN.

SELF HOLD FROM HOLD CIRCUIT K2 THRU ~~C/O~~ N/C C/O Close Relay K7. TURNS OFF IF K7, K4, K5, are activated. TURNS ON EXCITER LAMP. OPENS CURTAIN, CLOSES CURTAIN ON RELEASE.

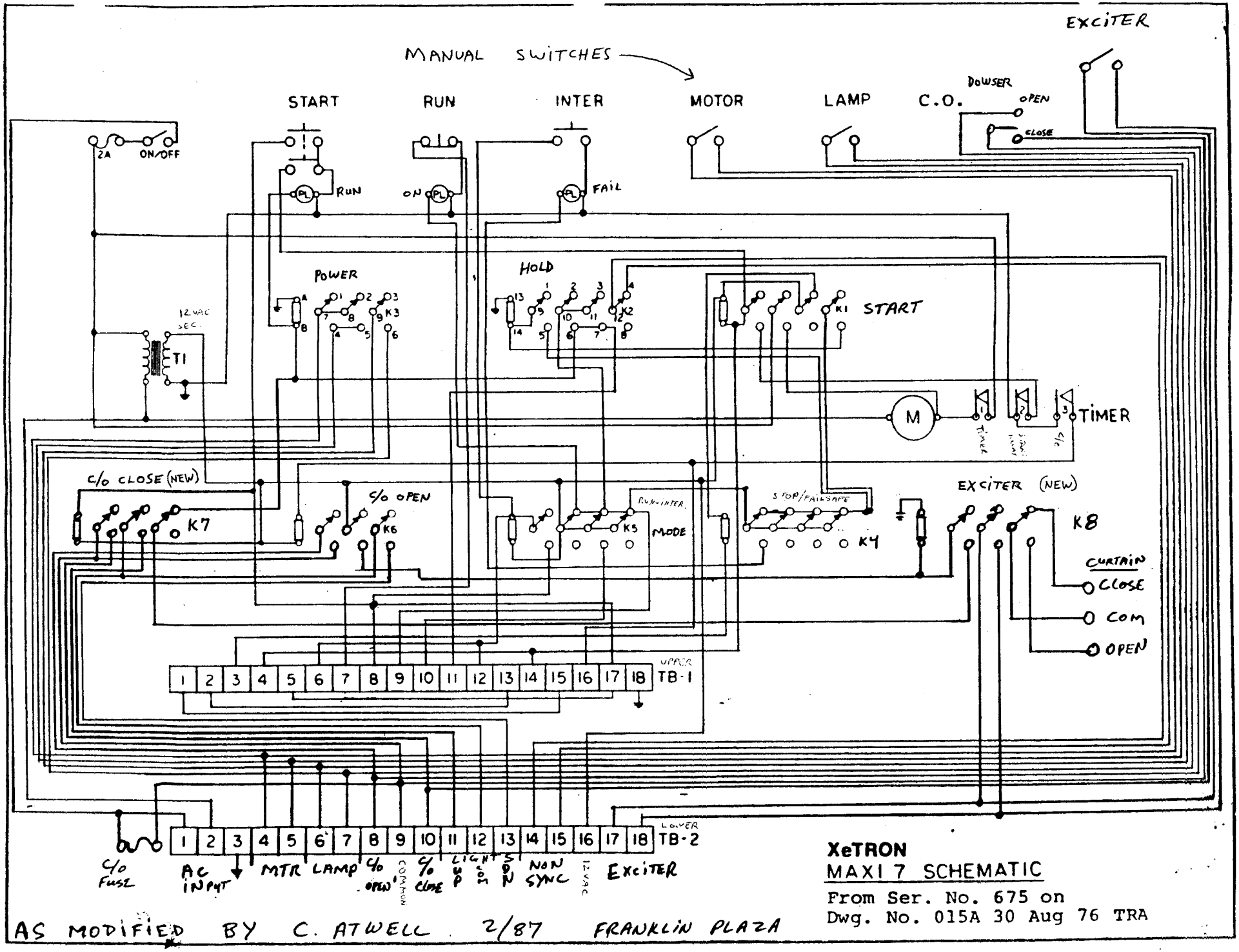
	TB 1 (upper)		TB 2 (lower)	
1	No connection (TB1-15)	1	AC HOT	120V AC POWER INPUT
2	" " (TB1-13)	2	AC NEUTRAL	
3	FAILSAFE	3	GROUND	
4	START (REMOTE) (TB1-14)	4	MOTOR SWITCH	
5	INBOARD CUE (TB1-17) TB1-8	5	" "	
6	OUTBOARD CUE (TB1-12)	6	LAMP SWITCH	
7	? THESE LEADS MAY BE SWITCHED FROM SCHEMATIC	7	" "	
8	?	8	C/O OPEN	
9	Pilot Light 12VAC except on outboard cue	9	C/O FEED	
10	12VAC ONLY ON OUTBOARD CUE	10	C/O CLOSE	
11	RUN INDICATOR	11	LIGHTS UP	
12	(TB1-6)	12	LIGHTS FEED	
13	(TB1-2)	13	LIGHTS DOWN	
14	(TB1-4)	14	NON SYNC SWITCH	
15	(TB1-1)	15	" " "	
16	Ground on C/O open	16	12 VAC	
17	Ground on Start switch	17	EXCITER SWITCH	
18	Ground.	18	" "	

Pilot Lights

14v 80ma

Type 382

MAXI-7 CONVERTED TO SINGLE PROJECTOR OPERATION



XeTRON

MAXI 7 SCHEMATIC

From Ser. No. 675 on

Dwg. No. 015A 30 Aug 76 TRA

AS MODIFIED BY C. ATWELL 2/87 FRANKLIN PLAZA