

FILM-TECH

THE INFORMATION CONTAINED IN THIS ADOBE ACROBAT PDF FILE IS PROVIDED AT YOUR OWN RISK AND GOOD JUDGMENT.

THESE MANUALS ARE DESIGNED TO FACILITATE THE EXCHANGE OF INFORMATION RELATED TO CINEMA PROJECTION AND FILM HANDLING, WITH NO WARRANTIES NOR OBLIGATIONS FROM THE AUTHORS, FOR QUALIFIED FIELD SERVICE ENGINEERS.

IF YOU ARE NOT A QUALIFIED TECHNICIAN, PLEASE MAKE NO ADJUSTMENTS TO ANYTHING YOU MAY READ ABOUT IN THESE ADOBE MANUAL DOWNLOADS.

WWW.FILM-TECH.COM

CHRISTIE

AM-5 AUTOMATION

OPERATION, INSTALLATION AND MAINTENANCE

INSTRUCTIONS

AM-5 AUTOMATION SYSTEM

Manufactured by

CHRISTIE ELECTRIC CORP.
3410 W. 67th Street
Los Angeles, California 90043
Telephone (213) 750-1151

TD-218

TABLE OF CONTENTS

	<u>PAGE</u>
I. CHRISTIE AM-5 AUTOMATION SYSTEM, DESCRIPTION	1
II. INSTALLATION	1
III. TEST PROCEDURE	2
IV. CUEING AND SHOW MAKE-UP	3
V. TERMINAL BOARD TERMINATIONS	4
VI. FRONT PANEL LAYOUT	5
VII. CONTROL PANEL SWITCHES	6
VIII. RELAYS	8
IX. TIMER ADJUSTMENTS	9
X. REPLACEMENT PARTS LIST	
XI. SCHEMATIC	

I. CHRISTIE AM-5 AUTOMATION SYSTEM, DESCRIPTION

The AM-5 automation unit is mounted entirely in the Christie Console, and is prewired for simple installation.

The AM-5 has been designed to work with most types of projectors and sound reproducers.

The AM-5 controls the theatre lighting dimmer. A 15 second travel motor driven type is recommended, such as Superior Luxtrol #15MD-2000 or #15MD-5000.

Curtain and masking motors used with the AM-5 should be fitted with momentary contact type control circuits. Other types will require the addition of a 2 coil latching relay, similar to Potter & Brumfield #KB-17AG.

II. INSTALLATION

1. Install the module in the console on the slider brackets. (Note: Unit should be factory mounted.)
2. Connect external equipment as indicated in the termination schedule. Most circuits of the AM-5 are dry control circuits. It is therefore necessary to check that all feed wires are terminated.
3. Verify that all jumpers are installed for the type of audio system. If a remote control has been provided, check that it has been terminated and the necessary jumpers have been removed.
4. Conversion for pulse audio switching (Electrosound or Century):
 - A. Connect switching common to #38 and #40.
 - B. Remove jumper on #40.
 - C. Remove strap 41-42 and install strap to 42-43.
 - D. Remove strap 44-45.
 - E. Connect film on to 41.
 - F. Connect off or non-sync. to 39.
 - G. Remove wires from manual exciter switch (no longer used).

III. TEST PROCEDURE

1. Before turning on automation, turn on dimmer control, curtain and masking motors. Test these using the manual control switches S5, S6 and S7.
2. Turn on power to Xenon and test for proper operation with toggle switch on Xenon lamp control panel.
3. Turn on motor circuit and test operation with S1.
4. Turn on circuit breaker controlling changeover dowser and test with S3.
5. Turn on audio system and test for operation of exciter lamp using S2.
6. Now turn on automation unit and press Inter and No Inter buttons. Each should light when pressed.
7. Holding onto failsafe arm, press the start button. The following should take place simultaneously:
 - Picture changeover dowser will close
 - Motor will start
 - Xenon will ignite
 - Dimmer will lower
 - Masking will move to position set on S4
 - Tape player or non-sync will turn offAfter 7 seconds, the following will take place:
 - Picture dowser will open
 - Exciter lamp will come on
 - Curtain will open
8. Now let go of the failsafe arm. The motor will stop, exciter lamp will go off, Xenon will go out, and non-sync will come on.
9. Using a piece of wire, set the failsafe arm so that it is held in the normal film position. Skin both ends of a piece of wire (to be used for checking cues).
10. Press start button and wait until unit goes through cycle. Press No Inter Selector (S11) and ground inboard side of cue roller. Nothing should happen.
11. Now press Inter Selector (S10) and ground inboard cue roller. The unit should:
 - Raise dimmer
 - Close curtainThen after 7 seconds:
 - Close dowser
 - Turn off exciter lamp
 - Turn off Xenon
 - Turn off motor
 - Turn on non-sync

12. Restart using the Start Button (S8). After timer completes its cycle (30 seconds), ground outboard cue roller. The unit should do the same as in step 11, except that the motor and Xenon will remain on after the dowser closes. Remove wire holding failsafe arm. Motor and Xenon will then stop.

This completes the testing of the automation. Refer to schematic for relay designations, timer adjustments, etc.

IV. CUEING AND SHOW MAKE-UP

1. Foil cues are to be placed on the film so that they make continuity across the cue detector as the normal motor start cues are viewed in the aperture.
2. To determine the distance ahead of the motor start cue, thread the projector with blank film. Place a mark at the aperture and a mark at the cue roller. Remove the film and measure the distance between the marks.
3. Always place one foil cue in the above position, on the sound track side of the film, at the end of the platter. This will trigger the end of the show by raising dimmer, closing curtain, etc., except that, as dowser closes and exciter is turned off, the motor and lamp will stay on until the film runs out, then non-sync will come on.
4. For mid-platter intermissions, place foil cue on inside edge of film 10-1/2 feet from end of feature, which will trigger the mid-platter intermission. It is recommended that 10-1/2 feet of blank film be placed between the features for restart after the mid-platter intermission. This will provide a nice changeover between shows when the mid-platter intermission is bypassed.

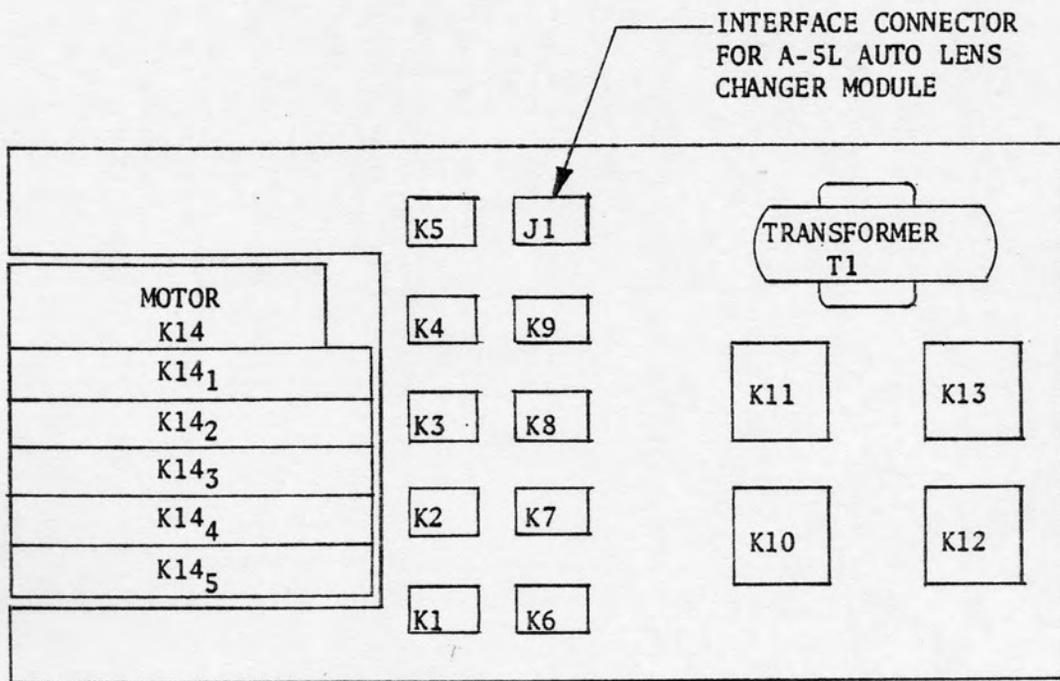
V. TERMINAL BOARD TERMINATIONS (REFER TO SCHEMATIC FOR USE WITH CHRISTIE S73
OR SC73 AUDIO SYSTEM) SERIAL #562 ON

<u>TB-1</u>	<ul style="list-style-type: none"> 1. REMOTE START 2. REMOTE INTER ON 3. REMOTE NO INTER (N.C.) 4. REMOTE NO INTER 5. REMOTE INTER ON INDICATOR LIGHT 6. REMOTE NO INTER INDICATOR LIGHT 7. REMOTE RUN INDICATOR LIGHT 8. REMOTE SHOW CLOSE CYCLE 9. REMOTE ALARM RESET (N.C.) 10. REMOTE ALARM RESET 11. 12V ALARM TO REMOTE 12. FAILSAFE SHUNT (INTERLOK) 13. START LATCH (INTERLOK) 14. LENS FEED* 15. LENS SCOPE* 16. LENS FLAT* 17. TAPE DECK (DRY CIRCUIT) 18. TAPE DECK 19. DOWSER FEED 20. DOWSER OPEN 21. DOWSER CLOSE 22. INBOARD CUE DETECTOR 23. OUTBOARD CUE DETECTOR 24. FAILSAFE 25. GROUND (SWITCHING COMMON) 	<u>TB-2</u>	<ul style="list-style-type: none"> 26. MOTOR IN (TO CIRCUIT BREAKER) 27. MOTOR OUT (TO MOTOR) 28. DIMMER CONTROL FEED 29. DIMMER CONTROL LOWER 30. DIMMER CONTROL RAISE 31. CURTAIN CONTROL FEED 32. CURTAIN CONTROL OPEN 33. CURTAIN CONTROL CLOSE 34. MASKING CONTROL FEED 35. MASKING CONTROL SCOPE 36. MASKING CONTROL FLAT 37. 12 VAC CONSTANT 38. EXCITER INPUT 39. EXCITER OUTPUT 40. SWITCHING INPUT 41. AUDIO ON 42. K12 ON 43. CHANGEOVER PULSE OUT 44. K12 HOLD 45. K12 HOLD 46. C.O. CLOSE (INTERLOK) 47. REMOTE STOP INDICATOR LIGHT 48. XENON 49. XENON 50. GROUND (SWITCHING COMMON)
-------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

* WITH OPTIONAL AUTO LENS UNIT

VI.

FRONT PANEL LAYOUT



FRONT PANEL

VII. CONTROL PANEL SWITCHES

1. S1 Manual Motor Switch
Controls projector drive motor. To be used for manual operation of motor. Should be left in off position when running automation.
2. S2 Manual Exciter Lamp Switch
Controls exciter lamp. To be used for manual operation or testing only. Should be left in normal position when running automation.
3. S3 Manual Changeover Dowser Switch
Controls picture changeover dowser. Operates up to open dowser, down to close. To be used for manual operation of the dowser. Not used when running automation.
4. S4 Masking Pre-Select
Automation pre-select for screen masking. Sets masking to proper format when start button (S8) is pressed. Should be set after threading projector.
5. S5 Manual Masking Switch
Controls screen masking. Operates up for scope, down for flat. To be used for manual operation of the masking. Not used when running automation.
6. S6 Manual Dimmer Switch
Controls dimmer. Operates up for dimmer raise, down for lower. Provides manual operation of the dimmer. Not used when running automation.
7. S7 Manual Curtain Switch
Controls curtain. Operates up for open, down for close. Provides manual operation of the curtain. Not used when running automation.
8. S8 Automation Start Button
Used to start show when running automation. Thread projector with 8 foot mark in aperture. Press start button, dowser will close, lamp will ignite, motor will start, dimmer will lower, non-sync will turn off, 7 seconds after pressing start button, dowser will open, exciter lamp will come on, curtain will open. Button will light when projector is running.
9. S9 Automation Stop Button
Emergency stop when running automation. Not used for normal operation. When pressed, motor will turn off, lamp will turn off, exciter will turn off, motor will stop, and non-sync will turn on. Alarm buzzer in optional remote control will sound. This sequence is the same if the film should break and the failsafe would trip.

10. S10 Inter Select Button

Used to select an intermission during the running of the platter. Used where different formats are combined onto a single platter. When intermission button is pressed and a foil is placed on the inside edge of the film, as the cue is detected, the dimmer will raise, curtain will close. After 7 seconds, the dower will close, exciter will turn off, projector motor will stop and lamp will turn off. To restart show after intermission, press S8 start button.

11. S11 No Inter Button

Used to cancel a previously cued intermission. When pressed, foil cue referred to above will pass through without being detected.

Note: If no inside cue is applied to film, either of the above may be pressed.

12. S12 Power Switch

Main power switch. Used to turn automation system on and off.

VIII. RELAYS

1. K1 START RELAY
2. K2 START LATCH
3. K3 SHOW CLOSE
4. K4 INTERMISSION
5. K5 ALARM
6. K6 HOLD
7. K7 FAILSAFE
8. K8 DIMMER LOWER
9. K9 MODE
10. K10 POWER
11. K11 DOWSER OPEN
12. K12 DOWSER CLOSE
13. K13 EXCITER SUPPLY
14. K14 TIMER
15. K14₁ MOTOR
16. K14₂ HOLD CIRCUIT, ALARM LATCH
17. K14₃ DOWSER PULSE
18. K14₄ CURTAIN CLOSE
19. K14₅ HOLD FOR K3, K4, AND K8

IX. TIMER ADJUSTMENTS

1. TIMER SWITCH #1 (K14₁)
 - A. OFF - DIAL SETTING 0 - 5
 - B. ON - DIAL SETTING 5 - 100

2. TIMER SWITCH #2 (K14₂) (HOLD CIRCUIT, ALARM LATCH)
 - A. ON - DIAL SETTING 0 - 20
 - B. OFF - " " 20 - 65
 - C. ON - " " 65 - 100

3. TIMER SWITCH #3 (K14₃) (DOWSER PULSE)
 - A. OFF - DIAL SETTING 0 - 25
 - B. ON - " " 25 - 27-1/2
 - C. OFF - " " 27-1/2- 100

4. TIMER SWITCH #4 (K14₄) (CURTAIN CLOSE)
 - A. OFF - DIAL SETTING 0 - 5
 - B. ON - " " 5 - 7-1/2
 - C. OFF - " " 7-1/2- 100

5. TIMER SWITCH #5 (K14₅) (HOLD FOR K3,K4,K8)
 - A. ON - DIAL SETTING 0 - 57-1/2
 - B. OFF - " " 57-1/2- 85
 - C. ON - " " 85 - 100

WARRANTY

COVERING

XENOLITE THEATRE PRODUCTS

Manufactured by: CHRISTIE ELECTRIC CORP.
(herein referred to as "Christie")

Christie warrants the apparatus sold to the extent of the parts necessary to correct any defect in workmanship or materials which may develop under proper or normal use for a period of one (1) full year (90 days on electric motors) from date of installation (except as noted below) but not to exceed eighteen (18) months from date of shipment from Christie Electric Corp. Christie reserves the right to have the apparatus returned, freight prepaid, to the Christie factory to effect the warranty repairs.

Replacement parts for warranty repairs will be shipped promptly by Christie f.o.b. factory, and invoiced to the customer. Credit will be issued upon return of the defective part or parts, prepaid, to the Christie factory.

The above shall constitute a fulfillment of all Christie liabilities in respect to said apparatus.

This warranty does not cover the following items:

Special customer specified purchased parts or materials; also, xenon, mercury and other types of lamps (bulbs).

Christie shall not be liable for any consequential damages except:

Christie will replace standard Christie glass reflectors under warranty in XENOLITE lamphouse damaged by failure of a Christie xenon bulb during its warranted life and if properly operated, under the following terms and conditions: If the original reflector installed is less than one year old, full credit will be issued. If the original reflector is more than one year, but less than two years old, one half credit will be issued. If the original reflector is more than two years, but less than three years old, one quarter credit will be issued. After three years from date of original installation, no credit will be issued. (Mirror castings must be returned to Christie to receive credit.)

CHRISTIE

SINCE 1929

CHRISTIE
ELECTRIC CORP.

3410 W. 67th Street, Los Angeles, California 90043 Tel: (213) 750-1151 TWX 910-321-3867