

CINEMATION 2004

OPERATING & PROGRAMMING NOTES

1. Assuming the equipment is switched off prior to programming, firstly switch ISOLATE ON, then switch MAINS ON.

Note: that when the unit is on ISOLATE no function can be actioned.

2. Data is entered into the memory of the equipment by using the keypad on the front of the unit. This comprises numbers from 0-9 also letters E,M,C & R.

The memory has a battery back up to preserve the data when the unit is not in use, and the battery is automatically trickle charged whilst the unit is in use.

Numbers 0-20 represent the different functions that the unit can perform & they are listed in detail on the sheet entitled PROGRAMME FUNCTIONS.

The letters E,M,C,R are commands used when programming and their designation is as follows:-

E = ENTER
M = MEMORY
C = CANCEL
R = RESET (TO LINE 1)

Additionally, there are the symbols of upward and downward arrows. The upward arrow advances the line number indicator in an upward direction e.g. 1,2,3,4,5,6, and the downward arrow moves the line number indicator in a downward direction e.g. 6,5,4,3,2,1.

3. In addition to the keypad, the front panel of the unit also embraces a BARGRAPH numbered 1-20. Its purpose is to display the functions programmed. Alongside the BARGRAPH is the LINE NUMBER INDICATOR. This is a two digit display and runs from 0-99 indicating that any number of functions can be entered into the memory of the equipment, in any combination 99 times on line numbers 1-99.

The LINE NUMBER INDICATOR & BARGRAPH always show the **NEXT** functions to be actioned and the line number automatically advances to the next number when a pulse is received from either the running film, or from the manual PULSE BUTTON on the front of the unit, or when either of the two clocks zero out. It also advances one line automatically when the M = MEMORY is pressed on the keypad.

Before using the equipment for real, practice entering data into the memory. Here follows a simple example and it should be noted that any number of functions can be programmed onto a single line - except onto Line No.1. Only function No.1 can be programmed on this line and if additional functions are programmed in addition to No.1 they will not be actioned.

The exception being Self Pulse Function 19 which will operate.

We now require to enter Function No.1 to start the show so if not already on Line 1 set the Line No. counter to that number (note that the equipment always comes up on Line No.1 when switched on).

Now press 1 on the keypad - nothing happens.

Now press E for ENTER - No.1 now appears on BARGRAPH.

Double check - you really want No.1 and this appears OK on the BARGRAPH.

But supposing you have pressed the wrong key and No.3 appears. What now? Not to worry - just press the 'C' CANCEL button. No.3 will disappear and you now start all over again as follows:-

Press No.1 on the keypad.

Now press ENTER and No.1 appears OK on the BARGRAPH.

Now press M for MEMORY. No.1 now disappears into MEMORY and the Line No. counter has moved onto number 2 ready for you to programme that line.

If you want to double check that function No.1 really is on line 1, press the downward arrow on the keypad, the line counter will now go back to Line No.1 and function No.1 will be displayed.

Practice entering functions in this way and note that when more than one function is required on any line it is necessary to press ENTER after each number, also note that where a two digit number occurs the ENTER command is carried out after the last digit of that number.

For example, if one wanted to enter functions 2,4 and 19 the following would apply:-

Press 2 then ENTER

Press 4 then ENTER

Press 1 then 9 then ENTER

Finally press M for MEMORY to enter the total line into the MEMORY.

A final important word about the line number counter.

Apart from the number indicated this counter also indicates what mode of operation the equipment is in.

There are two states:- THE PROGRAMMING MODE & THE OPERATIONAL MODE

When the equipment is in the programming mode a small red dot appears in the display down the bottom right hand corner of the second digit.

This programming mode is called automatically as soon as the ENTER button is pushed and the red dot now shows in the display. However, this state is also automatically cancelled as soon as the M for MEMORY button is pushed.

It is important to realise that the total programme that is in the memory cannot be displayed whilst the equipment is in the programming mode and the red dot is showing. This programming mode is only for entering data into the memory. To check exactly what is in the memory one has to leave the Programming Mode by pressing the Memory button.

This normally happens automatically as the M for MEMORY button is pressed at the conclusion of the programming, then by operating the Up/Down buttons one can see everything that is in the memory and on every line.

BUT ALWAYS MAKE SURE THE EQUIPMENT IS ON ISOLATE BEFORE EVEN THINKING ABOUT PROGRAMMING OR PUSHING OF ANY BUTTONS. FAILURE TO DO THIS COULD BE BOTH SERIOUS AND COSTLY.

In conclusion attention is drawn to Function No.4 which Opens Tabs, Takes Coloured Lights Down, opens the Zippa and introduces the Alarm System. It necessarily follows that if this was to break before this function was actioned, and there was no Projectionist around, a lot of film could wind up on the floor.

It is therefore highly desirable that this function be actioned automatically and not from a mark on the film - just in case it breaks before the mark goes through.

Here follows example of a start of show programming routine to achieve this:-

- Line 1 - Function 19 Self Pulse
- Line 2 - Function 19 Self Pulse
- Line 3 - Function 1 Start Show Routine
- Line 4 - Function 19 Self Pulse
- Line 5 - Function 19 Self Pulse

Then as many Self Pulses as required to get the projector up to speed and the first frame of the picture in the gate. This will, of course, depend on what number on the final leader of the heading of the film it is laced to.

On the final No.19 Self Pulse, the No.4 function should be programmed. In this fashion the Alarm System is introduced regardless of the running film.

If electrical lens turrets are fitted, programme the Lens / Masking Change function on Line No.2 and enter as many Self Pulses as required for the Lens to complete its rotation. Needless to say an additional length of film leader will be required to accommodate this time factor. As a matter of interest the time between each self pulse is just less than one second.

We will examine the start of the show resulting from the above programming.

Firstly, the Projectionist laces up the film and pushes the "Projector Ready" button. The projector ready green status LED will show on all Cin 2004 panels. The Xenon Lamphouse front hand dowser should also be opened. All these operations are carried out manually ready for the Cin 2004 to start the show.

For example if the time is now 1300hrs and the show starts at 1330hrs the clock should be set for 30 minutes. The Projectionist now presses the green 'Start Show Time Clock' button and the clock commences to time out.

A five second safety warning buzzer sounds before the Cin 2004 actions the "Start Projector" function. As the projector starts, the "Projector Ready" green status LED is reset at all Cin 2004 panels.

When the clock has wound down it gives the Cin 2004 a pulse which reads Line No.1 - Self Pulse. This carries it onto Line No.2 - also Self Pulse. This carries it onto Line No.3 - Function No.1 (Start Show Routine and Self Pulse which actions that line and the Start Show Routine now occurs).

Now follows a number of self pulses to create a time delay for the leader to run through also to accommodate the rotation of the Lens Turret, the last Self Pulse also carrying Function No.4 on the same line which Opens Tabs, Zippa and also lowers the Coloured Lights. Note that the Houselights are lowered automatically as part of Function No.1 Start Show Routine.

The picture is now on the screen and if there is a silent censor, a mark on the film is used to choose the sound format required. If starting with adverts with no silent run into the picture, the sound format selection function can be programmed on the same line as Function No.4 and no mark on the film is required to choose the Sound Format.

Doubtless, with practice and familiarity, the Technician will devise a routine to best suit the particular requirements of his own theatres way of presentation.

NOTES RELATED TO THE OPERATION OF THE ALARM SYSTEM ALSO THE OPERATION OF THE THEATRE EVACUATION SYSTEM. (MANAGERS SHUTDOWN).

THE ALARM SYSTEM AND CINEMATION 2004

When a film breaks, or failure of the light in the lantern occurs, relays RL.F,G and V operate within Cin 2004. Relay RL.F raises the Houselights and operates Zippa Down function, whilst RL.V pulses and its contacts wired between 31 and 32 (with the link removed) break and interrupt the 230Vac supply to CN.1 and CN.2, the two main operating contactors within the Console which de-energise, and cause a total Console shutdown.

The safety relay RS within the Console does not operate however, therefore the Reset function is not necessary before the Console can be re-started.

THE THEATRE EMERGENCY EVACUATION SYSTEM

A pair of N/C contacts on one of the EPAS Contactors is wired in the Console so that if the EPAS contactors are de-energised by the operating of the Managers Shutdown Push Button, the Safety Relay RS in the Console will operate.

The Safety Relay causes a total Console shutdown together with the Reset function, so that both the Console and the EPAS contactors have to be re-set together with the cancellation of the Alarm from the Cin 2004 before the show can be resumed.

The 1st Pole of the four pole relay raises the Houselights, the 2nd Pole raises the coloured lights, the 3rd Pole switches the Dolby to Stereo sound and the 4th Pole is wired to terminals 4 & 5 on relay RL.X in the Cin 2004. It will be noted that they are in parallel with the film break wires from the film scanning unit and will, of course, cause the Cin 2004 to go into an Alarm state.

This method of connection ensures that all the Shutdown functions will still happen even if the Cin 2004 is switched off - the only item missing will be the audible and visual aspects of the Alarm function.

In addition, the method of energising the contactors by pushing the red central button has now been replaced electrically by the operation of a green illuminated push button.

Please ensure that the Technician is aware that if for any reason the EPAS contactors become de-energised, the Dolby will automatically go to Stereo and will have to be re-set to whatever sound format the film is recorded in, prior to re-starting the show.

**SUMMARY OF WIRES TO CINEMATION 2004 WHEN USED IN
CONJUNCTION WITH CINEMECCANICA CONSOLE.**

GROUP "A" LEFT HAND VERTICAL ROW OF RELAYS

RELAY	NO: OF WIRES	COLOURS (The numbers in brackets refer to the relay contact numbers on the pcb)
RL - A	4	2 - 1 - Black Houselights Down (1) 1 - Pink Common (2) 2 - Pink Start Pulsed Proj (5 & 6)
RL - C	2	2 - Red Rectifier On (7 & 8)
RL - E	6	2 - Brown Common Zippa Up (1) Brown Zippa Up (2) 1 - White -- Tabs Open (3) 1 - Red -- Tabs Open Common (4) 1 - Black -- Col Lts Down (5) 1 - Violet -- Col Lts Common (6)
RL - L	5	2 - Orange - C.D. Player off (1 & 2) 1 - White -- Dolby S.R. (3) 1 - Yellow -- Dolby Common (4)
RL - R	1	1 - Blue -- Vic % Zippa Down (2)
RL - X	2	2 - Grey -- Film Break to Console (4 & 5)

19 wires plus 1 White, 1 Black, and 1 Yellow to all other Cin 2004 units.

A total of 22 wires

GROUP "B" CENTRE ROW OF VERTICAL RELAYS

RL - F	2	1 - White	-- Houselights Up	(4)
		1 - Blue	-- Vic 5 Zippa Down	(7)
RL - J	4	2 - Violet	-- Lens Change	(1 & 2)
		1 - Orange	-- Masking Scope	(3)
		1 - Red	-- Masking Common	(4)
RL - M	1	1 - Green	-- Dolby Stereo	(3)
L.V.	2	2 - Black	-- Stop Pulsed Proj	(1 & 2)

A total of 9 Wires

GROUP "C" RIGHT HAND VERTICAL ROW OF RELAYS

RL - G	2	2 - 1 Pink	-- To extra relay contacts in	
		1 Yellow	-- Console for Dolby to Stereo	
RL - K	1	1 - White	-- Masking Wide Screen	(3)
RL - N	1	1 - Blue	-- Dolby Digital	(4)
RL - Q	3	1 - Orange	-- Dolby Non-Sync on	(1)
		2 - Pink	-- C.D. Player On	(3 & 4)
RL - T	2	1 - Black	-- Tabs Close	(1)
		1 - Grey	-- Col Lts Up	(3)

9 wires to relays plus 3 mains from Breaker Box and 2 mains to Photo Scan Unit.

A total of 14 wires plus 6 core screened wire from the Photo Scanning Unit.
In addition to the above the 20 core Multicore cable between the Cin 2004 which enters at the top of the cabinet.

CINEMATION 2004 BARGRAPH FUNCTION SUMMARY

FUNCTION No. 1	Start show routine Houselights down Projector start & Rectifier on Both time clocks re-set Amber end sequence lights off Projector run
FUNCTION No. 2	Masking & Lens turret to wide screen
FUNCTION No. 3	Masking & Lens Turret to Cinemascope
FUNCTION No. 4	Zippa open Coloured lights down Tabs open Spare function Alarm system on
FUNCTION No. 5	Dolby to digital sound format & C.D. player off
FUNCTION No. 6	Dolby to stereo sound format & C.D. player off
FUNCTION No. 7	Dolby to S.R. sound format & C.D. player off
FUNCTION No. 8	Dolby to non-sync sound format & C.D. player on
FUNCTION No. 9	Spare function
FUNCTION No. 10	<u>INTERVAL ROUTINE</u> Tabs close, coloured light up, amber LEDs. Show Time delay, then stop Projector, Rectifier off, Zippa down, Non-Sync sound on and Houselights up

FUNCTION No. 11	Tabs close & Coloured lights up
FUNCTION No. 12	Tabs open & Coloured lights down
FUNCTION No. 13	Zippa down
FUNCTION No. 14	Interval time clock on
FUNCTION No. 15	NOT TO BE USED
FUNCTION No. 16	Zippa up
FUNCTION No. 17	Spare Function
FUNCTION No. 18	Spare Function
FUNCTION No. 19	Self Pulse
FUNCTION No. 20	Re-set line counter to No. 1

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BARGRAPH FUNCTION LIST & RELAY DESIGNATION

The Cin 2004 equipment is activated either by pressing the RED film pulse push button, or by setting the start show time clock push button.

Either of these two actions will advance the line number counter and provided that the equipment is not on 'isolate' the functions displayed on the Bargraph will be actioned.

They are as follows:-

FUNCTION No. 1 - START SHOW ROUTINE

Firstly a warning buzzer sounds for approximately 5 seconds then RELAY A (4 Pole) pulses causing the following to be actioned:-

- Houselights down
- Contactor controlled Vic. 5 console projector start
- Both time clocks re-set
- Amber end sequence LED's extinguish if following an interval

At the same time RELAY B (4 Pole) latches and the non-contactor controlled Vic.8 projector starts and the rectifier is switched on.

After a delay of approximately one second RELAY C (4 Pole) latches and the non-contactor controlled Vic. 8 projector runs.

Note that if function No. 1 is programmed together with a self pulse function (No. 19) on the same line the warning buzzer will not sound.

FUNCTION No. 18 - SPARE FUNCTION

RELAY Y (2 pole) Pulses.

FUNCTION No. 19 - SELF PULSE.

FUNCTION No. 20 - RESET LINE COUNTER TO No. 1.

NOTES RELATED TO THE PRE-WIRING OF RELAY CONTACTS ON THE RELAY PCB OF THE CINEMATION 2004

Note that the linkage on the back of the board is by the PCB copper tracks and on the drawing are shown as being dotted, whilst the additional links on the front of the board are shown as solid.

Additionally, where external connection wires have to be taken to the same terminal as a common link wire, the link wire has no ferrule so that the external wire may be added to it and a ferrule put on the pair of them.

Note that insulation on the common wires without ferrules is cut back so as to leave a longer portion of bare wire. This extra length is doubled back on its self ready for trimming to fit a ferrule.

When connecting up make sure that the external wires are only connected to the contacts shown on the drawing.

1. BROWN
2. RED
3. ORANGE
4. YELLOW
5. GREEN
6. BLUE
7. VIOLET
8. GREY
9. WHITE
10. BLACK
11. PINK
12. TURQUOISE
13. RED / BROWN
14. RED / BLUE
15. RED / BLACK
16. YELLOW / RED
17. YELLOW / BLUE
18. YELLOW / GREEN
19. GREEN / BROWN
20. WHITE / RED

0v Line White / Blue

FILM PULSE / ALARM / INTERLOCK

Green

Blue - (Alarm)

White - Interlock loop

Yellow - Interlock stop

Black - Interlock start

Red

Black - (Film Pulse)