ETA SYSTEMS

IMAGENATION SERIES
MODEL MC8C, MC8CA, MC8RA, MC8FR
MICROPROCESSOR LIGHTING CONTROLLERS

OWNERS MANUAL

ETA SYSTEMS
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ETA LIGHTING SYSTEMS
MICROPROCESSOR LIGHTING CONTROLLER
MODELS MC8C, MC8CA, MC8FR

Welcome to the ever growing family of professionals who have discovered that ETA Professional Lighting Products are engineered specifically to meet the high standards expected of quality equipment.

We care about your performance; and when you look your best, so do we. With proper care and operation of your system, you and your audiences will enjoy years of spectacular, professional lighting effects.

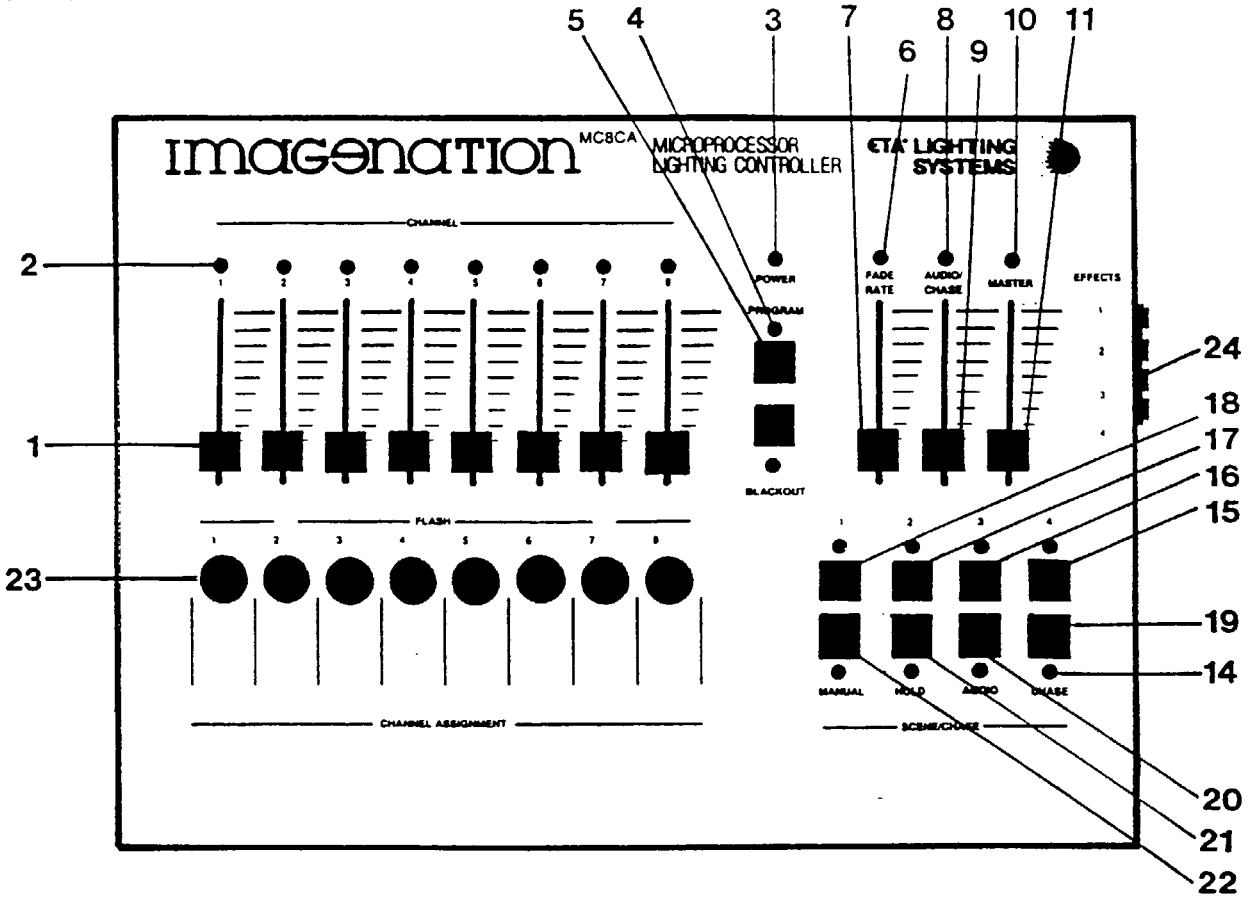
CAUTION

PLEASE READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY TO ASSURE THE SAFE USE OF YOUR NEW ETA MC SERIES LIGHTING CONTROLLER. OUR ENGINEERS HAVE CREATED A DURABLE AND SAFE SYSTEM. HOWEVER, AS WITH ALL SOPHISITICATED ELECTRONIC SYSTEMS, THIS EQUIPMENT IS ALSO POWERFUL AND, WHEN MISUSED, POTENTIALLY VERY DANGEROUS.

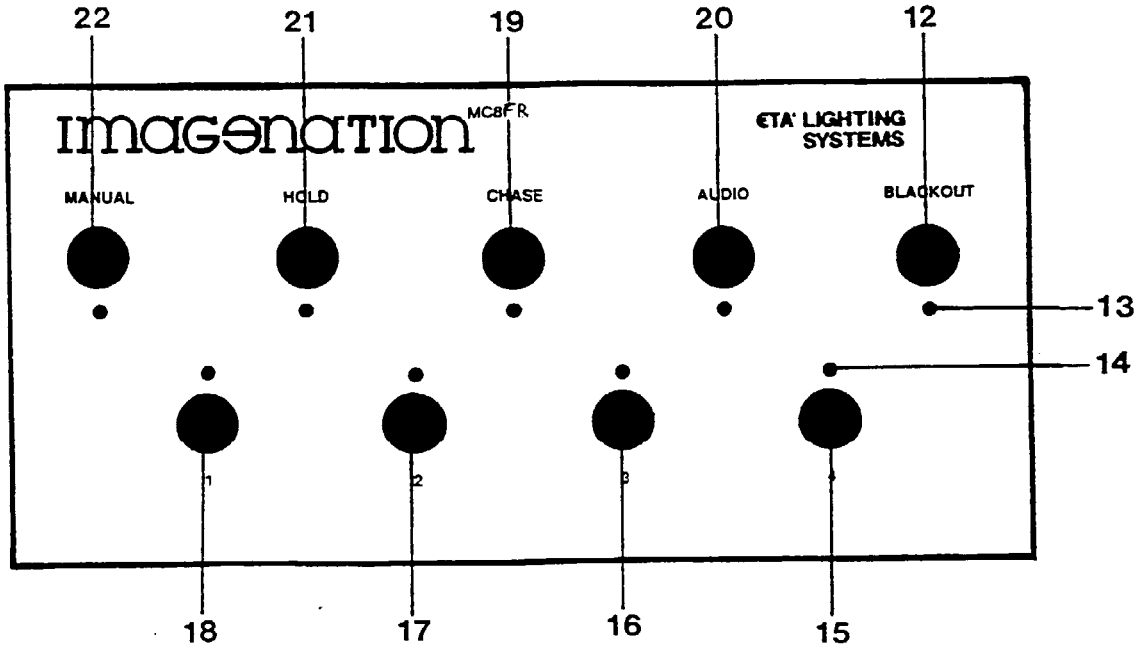
AROUND ELECTRICITY, A LITTLE KNOWLEDGE IS A VERY DANGEROUS THING. THE MORE ELECTRICAL EXPERTS KNOW ABOUT ELECTRICAL POWER, THE MORE THEY RESPECT IT. THEREFORE, IF YOU INSTALL OR USE THIS ETA SYSTEM, YOU MUST BEAR THE RESPONSIBILITY OF TAKING PROPER SAFETY PRECAUTIONS. WE HAVE MADE EVERY EFFORT TO PROVIDE YOU WITH COMPLETE AND ACCURATE INSTRUCTIONS FOR THE SAFE OPERATION OF YOUR ETA SYSTEM, BUT WE CANNOT ACCEPT ANY RESPONSIBILITY FOR INJURY DUE TO NEGLIGENCE OR FAULTY INTERPRETATION OF OUR INSTRUCTIONS.

IF YOU ARE UNCERTAIN ABOUT ANY ELECTRICAL CONNECTIONS OR USAGE, PLEASE SEEK QUALIFIED TECHNICAL ASSISTANCE FROM A LOCAL LICENSED ELECTRICIAN WHO IS FAMILIAR WITH LOCAL CODES, OR CONTACT YOUR ETA DEALER.

MC8C & MC8CA

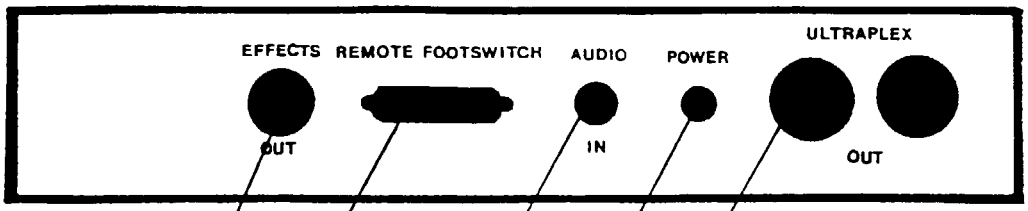


MC8FR

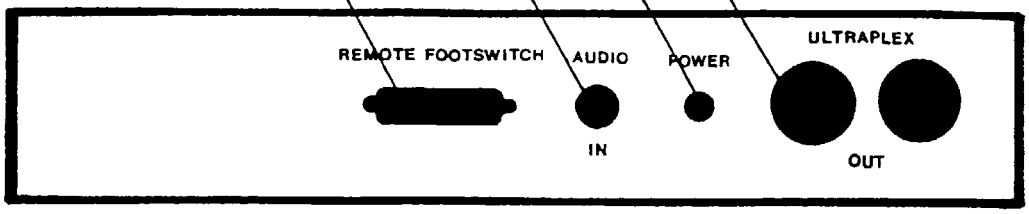


CONN. PANELS

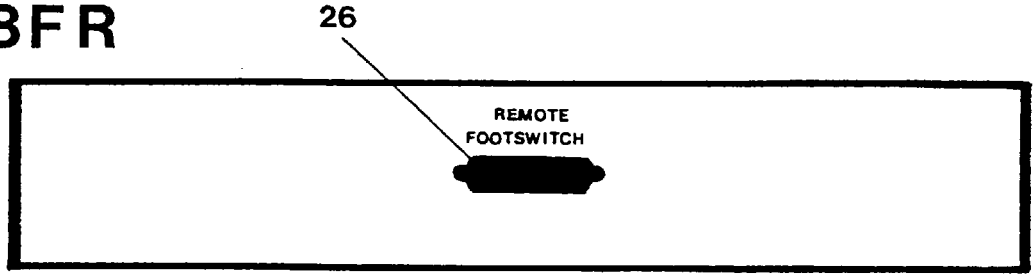
MC8CA



MC8C



MC8FR



1. CHANNEL CONTROL SLIDER
2. CHANNEL OUTPUT STATUS L.E.D.
3. POWER L.E.D. INDICATOR
4. PROGRAM STATUS L.E.D.
5. PROGRAM BUTTON
6. FADE RATE STATUS L.E.D.
7. FADE RATE SLIDER
8. AUDIO SENSITIVITY/CHASE SPEED L.E.D. INDICATOR
9. AUDIO SENSITIVITY/CHASE SPEED SLIDER
0. MASTER LEVEL CONTROL STATUS L.E.D.
1. MASTER LEVEL CONTROL SLIDER
2. BLACKOUT BUTTON
3. BLACKOUT L.E.D. INDICATOR
4. SCENE/CHASE FUNCTION STATUS L.E.D. (8 TOTAL)
15. PROGRAM MEMORY #4 SCENE/CHASE BUTTON
16. PROGRAM MEMORY #3 SCENE/CHASE BUTTON
17. PROGRAM MEMORY #2 SCENE/CHASE BUTTON
18. PROGRAM MEMORY #1 SCENE/CHASE BUTTON
19. CHASE BUTTON
20. AUDIO CHASE BUTTON
21. CONTROLLER OUTPUT HOLD BUTTON
22. MANUAL - MEMORY MODE BUTTON
23. CHANNEL BUMP BUTTONS
24. AUXILIARY EFFECTS SWITCHES, MC8CA ONLY
25. FOOTSWITCH OUT, MC8C & MC8CA ONLY
26. FOOTSWITCH IN, MC8F ONLY
27. EFFECTS OUT, MC8CA ONLY
28. AUDIO JACK SYNC CONNECTION
29. 12 VDC POWER SUPPLY JACK
30. ULTRAPLEX OUT (TO DIMMERS)

INTRODUCTION

The IMAGENATION MC8C & MC8CA are 8 Channel Microprocessor Lighting Controllers with a computerized memory that assures easy programming and use. The MC8C & MC8CA feature four programable scenes or four 20-step chase sequences which can be triggered by a speed adjustable internal timer, or external audio source. Both models have a 25 pin D-Subminiature connector to attach the MC8FR Remote Footswitch (optional accessory). The MC8FR allows remote access to all pre-programmed scenes and chase sequences, as well as the Manual, Hold, Audio and Blackout functions of the controller. The MC8CA has four additional relay channels which are activated by four rocker switches and accessed through an additional port in the rear of the unit.

POWER OPTIONS

The MC8C & MC8CA Microprocessor Controllers are powered by 12VDC which it receives from the dimmer pack source, or an optional 12VDC wallmount power supply which allows programming or demonstration of the controller without the use of dimmers or par cans. ETA's MD Series Ultraplex dimmers are the compatible power packs which feature a digitally encoded control signal that will address the 8 channels of control through an industry standard 3 pin microphone cable. Additional dimmers can be added to the system to increase power or total wattage capacity; but the control remains limited to 8 channels.

The MC8CA requires an ETA model SR410TM 4 channel Solid State relay unit to power the 4 additional on/off effects channels and uses a 4 channel remote control cable for connection.

The MC8FR Remote Footswitch receives power from the MC8 controller and cannot be used alone.

An audio input jack ($\frac{1}{4}$" mono) is provided as a means of syncing your programmed chase sequences to the beat of the music. The audio signal is a direct line feed from the amplifier.

PROGRAMMING INSTRUCTIONS FOR THE MC8C & MC8CA

When you have completed your lighting designs, which by definition, are beyond the scope of this manual, you are ready to program the controller. Programming is easy. A chart is provided at the back of this manual which can be duplicated and used to plan and record your programs.

SCENE PROGRAMMING

To program a scene, power up controller, remove from blackout and push Program Button (5). Program L.E.D. (4) will flash indicating that the controller is ready to program. The Master Controller Slider (11) is not recorded in the program, but must

be raised above zero (or bottom position) if you want to preview your scenes. Set the channel sliders for "Scene One" according to your chart. Push "Scene One" Switch (18). Scene One L.E.D. will light and the Program L.E.D. will stop flashing indicating that scene one is recorded. To program the remaining scenes, repeat the above procedure using your programming charts until all scenes are programmed. Scenes may be modified by pushing Program Button (5) and repeating recording sequence.

NOTE: The position of the Channel Slider is relative to the output of the dimmer. This may vary with dimmer used, and type of fixture used. However, in most cases, the light output (not voltage) will be linear. At the Slider's bottom position, there is a zero light output; at the top position, light output is 100%; and at the center position, light output will approximate 50%. Use these percentage settings on your charts.

CHASE PROGRAMMING

Chase programming is similar to scene programming. Each chase sequence will accept up to 20 steps. Each step in the chase is recorded the same way a scene is recorded. In other words, each sequence is a scene chase with a maximum of 20 scenes. To avoid confusion and mistakes, duplicate the chart at the back to design and record your chases. Record each channel as a percentage (i.e. 100%, 50%, 0%). With your charts complete, you are ready to program.

To program a chase sequence, push Program Button (5); L.E.D. (4) will flash. Push Chase Button (19) and its corresponding L.E.D. will flash. Now it's ready to program into memory each step in the chase sequence. Use the following steps:

One, set Channel Slider/s (1) to the particular level according to your chart for that particular step (step one is this case).

Two, depress sequence (scene) One Switch (18) and the corresponding L.E.D. will stay on momentarily indicating that the step is being recorded in memory. Then it will flash, indicating that it is ready to record the next step in the chase sequence.

Three, repeat the above procedure (one and two) for each step until that particular chase sequence being recorded is completed.

Four, move on to the next chase sequence using Sequence (scene) Two Button, and so on, until you have completed all four 20-step chase sequences.

NOTE: When you use all 20 steps in each chase sequence, the controller will not accept any more commands. However, it is not necessary to use all 20 steps in a chase sequence.

Exercise care in programming chase sequences because it is not possible to edit the chase program. If a mistake is made, the entire chase sequence must be re-programmed from the beginning.

When you have finished chase programming, push Program Button (5) and the L.E.D.'s will go off.

MASTER LEVEL CONTROL SLIDER (11)

The Master Control overrides all other level controls on the controller. It is a common mistake to have this control

set at zero and try to run the controller. There is no output with the Master Slider set at zero.

BLACKOUT SWITCH (12)

When pressed, the Blackout Switch will take any function (scene, chase or manual mode) to blackout instantaneously. Press the Blackout Switch again, and the board will return to the function in progress before blackout.

NOTE: The controller will always be in blackout mode when powering up.

OPERATING INSTRUCTIONS FOR MC8C & MC8CA

Now that you have programmed the four scenes and four chase sequences, you are ready to discover the real power of your MC8 controller.

SCENE OPERATION

To activate a programmed scene, slide Master Control (11) to up position and set Fade Rate Slider (7) to desired position. Check to be sure that all other switches are off. Then, simply press the desired scene Memory Switch (15, 16, 17 or 18; ref. 1-4), and the scene will fade to on at the rate set by the Fade Rate Slider (7). Push anther scene and the controller will automatically cross-fade to the new scene; again, at the fade rate determined by Slider (7).

To cross-fade a manual scene, set Channel Sliders (1) to the desired settings. Then press the Manual Switch (22). The controller will cross-fade to the manual scene at the fade rate determined by Slider (7). To return to memory, press any scene switch (1-4) and the controller will automatically cross-fade back at the fade rate determined by Slider (7).

CHASE OPERATION

To operate a programmed chase sequence, press Chase Button (19); then press the desired chase sequence switch (15,16,17 or 18 ref. 1-4). The controller will fade to the programmed chase sequence selected at a rate determined by the Fade Rate Slider (7). Be sure that the Master Controller Slider (11) is in up position. The Audio Chase Rate Slider (9) position controls the chase speed.

The chase will also trigger to the beat of the music by using a ½ volt signal or more (7V MAX!); i.e. speaker level, headphone or monitor out of a mixing console. Simply connect an audio input ¼" jack into the audio in at the rear of the controller. Then press the Audio Button (20), the Chase Button (19), and the desired Chase Sequence (15,16,17 or 18). Adjust the audio/chase Sensitivity Slider (9) until the sensitivity L.E.D. (8) triggers to the beat of the music.

To stop any chase, press the Chase Button (19) and the L.E.D. will go off.

NOTE: The chase will continue to run until another scene/chase Switch (15,16,17 or 18) or the Blackout Button (12) is pushed. For example, since the controller is in memory mode, when you push programmed scene 3, the controller will then cross-fade to scene 3 from the chase at a rate determined by the Fade Rate Slider (7).

MANUAL MODE OPERATION

To operate the MC8C & MC8CA as a manual controller, press Manual Mode Switch (22). Push Master Control Slider (11) to up position and check to be sure all functions are off. The controller is now "live." Moving any channel slider will cause a light to respond on stage. To cross-fade to another manual scene, push Hold Button (21). This will freeze or lock the existing scene. You can now reset the channel sliders to another manual scene without affecting the stage lights. Press Hold Button (21) again and the controller will automatically fade to the new scene at the fade rate determined by the Fade Rate Slider (7). This may be repeated, allowing you to use a single scene controller as a multi-scene controller.

OPERATING INSTRUCTIONS FOR MC8FR REMOTE FOOTSWITCH

In order to use the ETA Model MC8FR, you must have an MC8C or MC8CA Controller because the MC8FR Footswitch receives its power from them. To operate, attach cable from the Footswitch into the rear panel of the controller. After the MC8C or MC8CA has been programmed, the memory can be accessed from the Footswitch unit in the same manner as previously discussed under scene and chase operation. The manual footswitch button will access any manual combination of sliders which are currently left positioned on the controller.

NOTE: Fade Rate, Audio/Chase Sensitivity and Master Sliders must be set at the controller and cannot be changed through the Footswitch.

TO EXECUTE PROGRAM LOCK

PROGRAM LOCK is a built-in safety feature which is designed to "lock in" all programmed information and will not allow any tampering with programming. All programmed scenes and chase patterns can be accessed but not changed while the controller is in Program Lock.

The execute program lock, press Program Button (5), then Blackout Button (12) within seconds of each other; and finally press the Program Button (5) again. Now the Program L.E.D. will not flash when the Program Button is pushed; and therefore not allow programming. The same sequence is used to disengage the program lock feature.

CHANNEL BUMP BUTTONS

The channel bump buttons (23) can be used at any time to bring up a channel to full power. The bump buttons can be played during manual, scene, or scene/chase operation. By pressing bump (1) button and bump (8) button simultaneously, the unit will flash all eight channels at one time.

TO CLEAR ALL PROGRAMMED INFORMATION FROM MEMORY

This function allows you to completely erase all programmed information. When connecting power to the controller, simply hold down the Program Button. Continue holding down the Program Button until all L.E.D.s have gone dark. Unpower the unit, then repower and the microprocessor will be cleared of all memory.

TROUBLE SHOOTING

If your ETA Lighting Systems MC8C, MC8CA, or MC8FR will not operate, check the following:

1. If the controller receiving power from the dimmer or wallmount power supply? Do the L.E.D.s light?
2. Are your dimmers "live?" (see dimmer owners manual)
3. Is the Blackout Switch in the operational position?
4. Is the Master Control Slider raised above zero?
5. Is the scene or chase sequence programmed?
6. Is the Fade Rate Slider set properly?
7. Are the remote control microphone cables in good condition and connected properly?
8. Is the controller in "program lock?" (refer previous section on Program Lock)
9. Is the cable from the Footswitch to the controller connected securely?

ETA Lighting Systems
A Creative Light And Sound Company

SCENE OR CHASE PROGRAMMING CHART

SCENE or STEP No.	CHANNEL 1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
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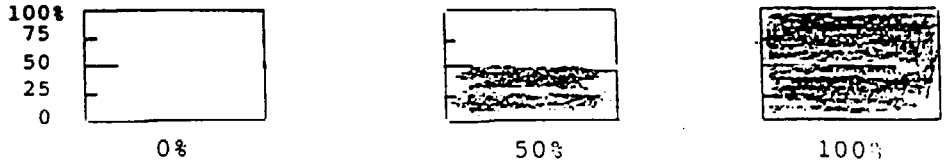
EXAMPLE: Shade the above Scene or Step blocks for each channel according to the percentage of light intensity desired from 0% to 100%