# ETA

# PROFESSIONAL LIGHTING CONTROLLER

## Owners Manual

*Cover*

# ONE-YEAR LIMITED WARRANTY

ETA warrants each new product to be free from defects in material or workmanship for a period of one year from the date of purchase, except Triacs, which shall be warranted only for the first 60 days after purchase. ETA will, within the warranty period, repair or replace, at its discretion, any ETA product which in the judgment of ETA has proven to be defective.

This warranty is voided if any portion of an ETA system or product has been altered or has been repaired by anyone other than ETA or one of its authorized service representatives. This warranty does not cover any incidental or accessory items used in conjunction with any ETA products.

This warranty does not apply to any ETA product or system damaged by improper installation, improper operating practices, improper line voltage, misuse, abuse, accident, fire, lightning, flood or acts of God.

ETA shall not be liable for any damage or loss of equipment due to shipping.

It is the responsibility of the owner to retain the original sales receipt or sales invoice showing the date of purchase, dealer's name, purchaser's name, serial number, and model number in order to verify warranty status.

All transportation is the responsibility of the owner.

This warranty is non-transferable and applies to the original purchaser only.

This warranty is in lieu of any and all other warranties expressed or implied, including any implied warranty of merchantability. No person is authorized to assume for ETA any other liability in connection with the sale of the product.

## CAUTION
### RISK OF ELECTRIC SHOCK

#### DO NOT OPEN UNIT

**Never attempt to disassemble the controller.**

Removing the cabinet and/or tampering with the inside of the controller can be dangerous to you and may cause serious damage to the unit. There are NO USER SERVICEABLE PARTS INSIDE.

**Protect the controller.**

Do not set drinks, ashtrays or any spillable items on the console. The most vulnerable parts of the controller are the channel slider pots. Keeping them clean and free from debris will assure trouble-free operation. Protect the controller from violent shocks or sudden impacts. Use of a protective road case is recommended when the unit is not in use.

# ETA PROFESSIONAL DUAL SCENE LIGHTING CONTROLLER SERIES
## ETA Models 1612, 1618, and 1624

Welcome to the ever-growing family of professionals who have discovered that ETA's Professional Lighting products are engineered specifically to meet the very high standards expected from 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 yourself the full and safe use of your new ETA 1600 Series Lighting Controller. Our engineers have created a durable and safe system. However, as with sophisticated electronic systems, this equipment is also powerful and, potentially, very dangerous.

Around electricity, a little knowledge is a very dangerous thing. The more electrical experts know about this power, the more they respect it. Therefore, if you install or use this ETA system, you 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.
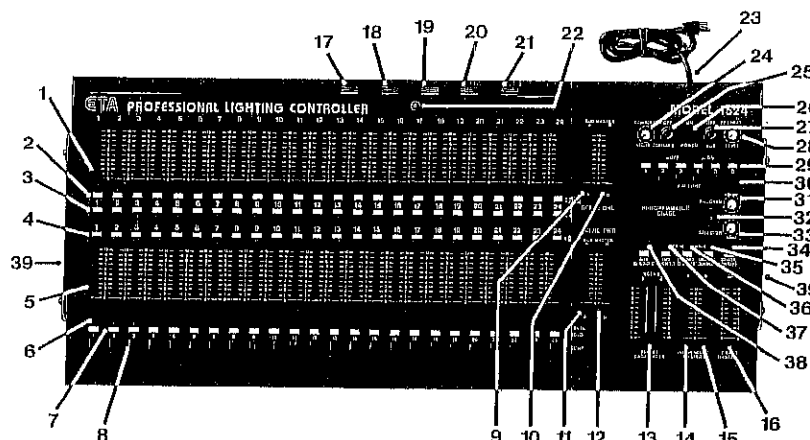
# 1600 CONTROLLER COMPONENTS AND FUNCTIONS



**FIGURE 1**

1. **Scene 1 individual channel fader**—each channel fader controls the intensity of lights assigned to that channel at the dimmer.

2. **Independent/Preset selector button**—assigns each channel to either Independent Masters or Preset Masters. The intensity of a channel assigned to Independent mode can only be controlled by Scene 1 channel fader.

3. **Scene 1 A/B Submaster selector button**—selects A or B Submaster control of a channel in Preset mode or A or B Independent Master control of a channel in Independent mode.

4. **Scene 2 A/B Submaster selector button**—selects A or B Submaster control of a channel for Scene 2. Does not affect channels in Independent mode.

5. **Scene 2 individual channel fader**—controls intensity of lights assigned to its channel in Scene 2.

6. **Output level L.E.D.**—indicates output level of each channel.

7. **Solo pushbutton**—momentarily overrides all functions of console by bringing its channel to full intensity while blacking out everything else in operation.

8. **Channel bump button**—momentarily adds channel at full intensity to anything else in operation.

9. **Scene 1 Submaster A**—overall output control of all channels in Scene 1 assigned to the Preset mode and to Submaster A. Individual channel faders must be set at desired amount.

10. **Scene 1 Submaster B**—overall output control of all channels in Scene 1 assigned to the Preset mode and to Submaster B. Individual channel faders must be set at desired amount.

11. **Scene 2 Submaster A**—overall output control of all channels in Scene 2 assigned to the Preset mode and to Submaster A. Individual channel faders must be set at desired amount.

12. **Scene 2 Submaster B**—overall output control of all channels in Scene 2 assigned to the Preset mode and to Submaster B. Individual channel faders must be set at desired amount.

13. **Preset crossfader** (Scene 1-2 level controls—both faders)—smooth dipless crossfading between Scene 1 and Scene 2 is accomplished by sliding these faders *together;* up, for Scene 1, or down, for Scene 2. Notice that the intensity scales are calibrated in opposite directions.

14. **Independent Master A level fader**—overall level control of all channels in the Independent mode assigned to Independent Master A. Individual channel faders in Scene 1 must be set at desired amount.

15. **Independent Master B level fader**—overall level control of all channels in the Independent mode assigned to Independent Master B. Individual channel faders in Scene 1 must be set at desired amount.

16. **Grand Master level fader**—overall level control of all functions on the console except the Programmable Chase and Auxiliary functions.

17. **Channels 1-6 output control connector**—receptacle for control cable to Model 1661 or 1662 Professional Series Dimmer. Supplies control voltage to dimmer channels 1-6.

18. **Channels 7-12 output control connector**—same as number 17 above for channels 7-12.

19. **Channels 13-18 output control connector**—same as number 17 above for channels 13-18 (not necessary on Model 1612).

20. **Channels 19-24 output control connector**—same as number 17 above for channels 19-24 (not necessary on Models 1612, 1618).

21. **Auxiliary function output control connector**—receptacle for control cable to Model 1641 Relay Pack for auxiliary functions, also called non-dim or on/off functions.

22. **Console light socket**—BNC-type socket for "little lite" type gooseneck console light, available from ETA. Internal power supply has 12 volts DC available at this socket.

23. **AC input cord**—input power at 120 volts AC—100 watts.

24. **Console light intensity control**—adjusts output of console work light.

25. **Console on/off key switch**—allows console to be locked OFF, guarding against unauthorized use. Must be unlocked for normal operation.

26. **Console on/off rocker switch and indicator**—turns the console on or off when key switch, number 25 above, is unlocked. Illuminates when switched ON.

27. **Auxiliary function on/off key switch**—allows Auxiliary functions control section to be locked OFF, guarding against unauthorized use.

28. **Preheat level control**—controls amount of voltage to all dimming channels simultaneously. This allows the operator to warm-up all bulbs, making response time faster during performance.

29. **Auxiliary function on/off button and indicator**—turns Auxiliary function channel on or off. L.E.D. illuminates when channel is ON.

30. **Auxiliary function momentary button**—momentarily turns Auxiliary function channel on when pressed. Channel turns off when button is released.

31. **Chase intensity level control**—controls intensity of all channels in the chase patterns.

32. **Chase selector switch and indicator**—selects any one of the 16 pre-programmed chase patterns numbered from 0 through 15. The button marked with a plus sign (+) allows the operator to move to the next higher numbered chase, and the button marked with with a minus sign (−) allows a move to the next lower numbered chase. The number of the chase shows in the central window of the switch.

33. **Chase speed control**—controls the speed of the chase sequence.

34. **Chase on/off switch and indicator**—turns the Chase function on or off. The chase does not override other console functions, but is added to anything already in operation. However, the Master Blackout does not affect the chase and may be used to cancel other functions if desired. L.E.D. illuminates when chase is ON.

35. **Master Blackout switch and indicator**—cancels power to all console functions except the Programmable Chase and Auxiliary functions. L.E.D. illuminates when console is in Blackout mode.

36. **Preset Blackout switch and indicator**—cancels power to all channels assigned to the Preset mode in both scenes. L.E.D. illuminates when Preset channels are in Blackout mode.

37. **Independent Blackout switch and indicator**—cancels power to all channels assigned to the Independent A and B Master faders. L.E.D. illuminates when these channels are in Blackout mode.

38. **Auxiliary Blackout switch and indicator**—cancels power to Auxiliary functions section. L.E.D. illuminates when this section is in Blackout mode.

39. **Handle**—on each end of console for ease of transportation.

# ETA 1600 Series Dual Scene
## Professional Lighting Controller
# CONTROL DESCRIPTION

### Dual Scene

The word "scene" refers to the stage lighting presentation, or effect, made by your stage lights. The ETA 1600 Series Professional Lighting Controller allows you to create two *user-programmed* lighting arrantements (two scenes), using, in each scene, any or all of your stage lights. In each scene, you can present the intensity of every lighting group, from full on to off or anywhere in between.

### Channel Capability (12, 18, or 24)

ETA 1600 Series Dual SCR Dimmer Packs are energized by 110 volts or 220 volts AC. This input power is divided in the Dimmer Pack into six 110-volt output channels. Each channel feeds power to the stage lights that are plugged into its electrical outlet on the Dimmer Pack. The stage lights that plug into Channel One on the Dimmer Pack are turned on and off and dimmed by the Channel One faders located on the ETA 1600 Series Controller. Similarly, the lights plugged into Channel Two on the Dimmer Pack are controlled by the Channel Two faders, and so forth for each of the six channels on that Dimmer Pack.

The ETA Model 1612 Professional Lighting Controller has 12-channel capability. The ETA Model 1618 Professional Lighting Controller has 18-channel capability, requiring three ETA 1600 Dual SCR Dimmer Packs. Similarly, the ETA Model 1624 Professional Lighting Controller requires four 1600 Series Dimmer Packs for its 24 channels of control.

# ETA 1600 Series Dual Scene
## Professional Lighting Controller
# OPERATIONAL INSTRUCTIONS

### Console Power Cord (Figure 1, No. 23)

ETA 1600 Series Dual Scene Professional Lighting Controllers are self-powered. The input power cord can be plugged into any standard 120-volt AC outlet. The Console will draw a maximum of 100 watts.

Plug-in the Controller and continue reading instructions.

### Console Key Lock Switch (Figure 1, No. 25)

This is a two-position, key-operated switch which, when unlocked, permits the power to be turned on to the Lighting Controller Console. The OFF, or locked, position overrides the Power on/off Rocker Switch and safely locks out power from the console to prevent unauthorized use of the Lighting Controller Console. Keys are provided.

Turn Key Lock Switch to ON position and continue with next instruction.

### Power on/off Rocker Switch (Figure 1, No. 26)

With the Console Key Lock Switch in the ON position, the Power on/off Rocker Switch will activate the Lighting Controller Console. This Power on/off Rocker Switch illuminates when it is in the ON position.

Turn the Lighting Controller Console ON. If any red L.E.D.s illuminate, press the button directly beneath them and continue reading.

### Output Panel (Figure 1, No. 17-21)

Control cables from ETA 1600 Series Dimmer Packs are connected to these 10-pin receptacles which have locking rings to assure a solid electrical connection. The control cable from the Auxiliary Function's Relay Pack can also be connected to its receptacle on this Output Panel.

### Output Panel Optional Features

1. For a professional and neat appearance, especially where the ETA 1600 Professional Lighting Controller is in public view, ETA offers a modified Output Panel that has only one output cable receptacle, which eliminates the need for many cords attached to the controller. A single Multi-Channel Snake is available that connects to the optional output panel.

2. ETA will customize the output panel of your new ETA 1600 Series Professional Lighting Controller to adapt to your present stage lighting and Dimmer Pack cable connectors. Notify your ETA Dealer or directly contact ETA for details.

   It is not necessary to hook-up your Dimmer Packs just for these instructions, although it may be helpful to see working lights as you test each console feature. If you wish to use Dimmer Packs and lighting fixtures, hook them up according to their instructions, or you may simply watch the console operations as shown by the Output Level L.E.D. (Figure 1, No. 6) for each channel. Continue with next instruction.

### Preheat Level Control (Figure 1, No. 28)

The Preheat Level Control is used to keep lighting filaments warm between scenes. This Preheat feature can dramatically increase the life of your expensive stage lamps by preventing heat surges. The Preheat feature can also be used to light the stage without disturbing individual channel preset intensities. Preheat does not affect the Auxiliary functions. The amount of Preheat can be varied up and down by the Preheat Level Control.

Turn the Preheat Level Control knob clockwise, and all channels will illuminate as shown by the Output Level L.E.D.s. Turn the knob counter-clockwise until it clicks off.

### Grand Master (Figure 1, No. 16)

The Grand Master controls all stage lights, but does not affect the Chase or Auxiliary functions. The Grand Master allows "dusk to dawn" lighting shifts as at the beginning or ending of scenes. Before any lights will illuminate, the Grand Master must be raised to some level above 0 on its calibrated scale. Normally, you may wish to operate with the Grand Master raised to position 10, so set it to that point now.

You are now ready to learn console operations, but to make the instructions more clear, please raise the Independent Masters A and B ( Figure 1, No. 14 and 15) to full intensity. Also raise the Scene 1 Preset Crossfader (Figure 1, No. 13) and Scene 1 and 2 Submasters A and B (Figure 1, No. 9, 10, 11, and 12) all to full intensity. These will be explained in full detail later, but are required now only for the clarity of following instructions.

### Scene One and Scene Two Channel Faders (Figure 1, No. 1 and 5)

Each lighting channel is controlled by its own Channel Fader located on the ETA 1600 Series Controller Console. Damped Alps 60mm Professional Faders are used for their long-term relia- bility, smooth glide and road toughness. ETA's control system gives you complete control of your lights. There will be no unexpected jumps in light intensity or dimming with an ETA lighting system.

Sliding a Channel Fader from 0 to 10 on its scale increases the intensity of your stage lights on that channel. On the upper bank of faders (Scene One) set Channel 1 at level 3 on its scale, Channel 2 at level 5, Channel 3 at level 7, and Channel 4 at level 9 on its scale (see Figure 2). You will be able to observe the different intensities shown by the Output Level L.E.D.s (Figure 1, No. 6). Now, set Channels 5 and 6 on the lower bank of faders (Scene Two) to levels 3 and 7 respectively (Figure 2). The Output Level L.E.D. may not illuminate for these channels if they are in the Independent mode which is controlled only by Scene One Faders. The next section will explain and remedy this situation.

### Independent/Preset Pushbuttons (Figure 1, No. 2)

Each channel is controlled by its own Independent/Preset Pushbutton so that each channel can be placed in either the Independent mode or the Preset mode. Channels are in the Independent mode when the red line on the face of the button is visible—the button is up. Channels are in the Preset mode when the buttons are depressed and the red line is no longer visible.

### Independent Mode

With the Independent/Preset Pushbutton up (red line visible), the channel is in the Inde- pendent mode and is controlled by the Independent Master A/B Faders (Figure 1, No. 14 and 15). A channel in the Independent mode is no longer controlled by Scene One or Scene Two Submasters or Crossfaders; therefore, independent of either scene. The intensity of a channel in Independent mode can only be controlled by Scene One Channel Faders.
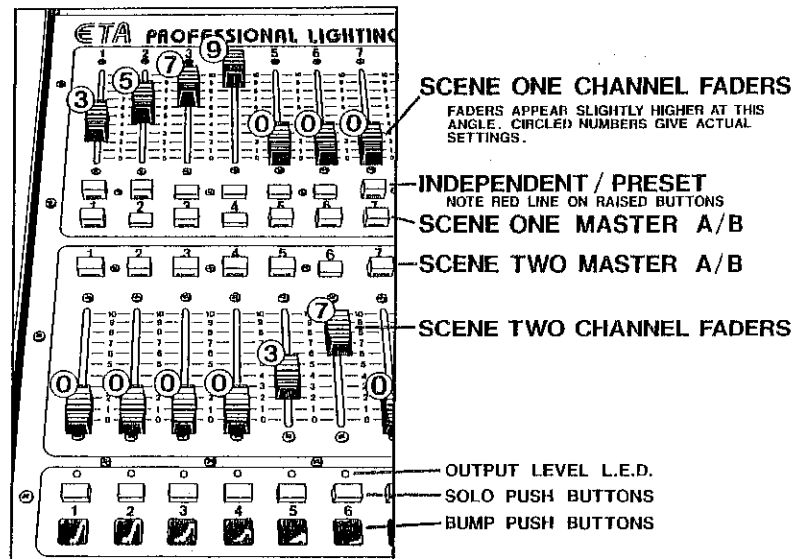
FIGURE 2

## Preset Mode

By depressing the Independent/Preset Pushbutton, so that it locks down with the red line hidden, the channel governed by that pushbutton will be in the Preset mode. Preset channels are controlled by both Scene One and Scene Two controls. Any or all of the channels can be set for the Preset mode, but for the purpose of explanation you will set only Channels 3, 4, 5, and 6 in the Preset mode and Channels 1 and 2 in the Independent mode (Figure 2). The red line on buttons 1 and 2 should be visible, but on buttons 3, 4, 5, and 6 should be hidden.

At this point, the first six Output Level L.E.D.s on your console should be illuminated at various intensities. The same is true for any lamps you may have hooked up.

## Master A/B Pushbuttons (Figure 1, No. 3 and 4)

In addition to selecting Independent or Preset mode for each channel, it is also necessary to place the channel in either Master A mode or Master B mode. For Independent channels and Scene One Preset channels, use the upper row of buttons, and for Scene Two Preset channels use the lower row of buttons. On both rows of buttons, Master A mode is indicated by the red line showing (button up), and Master B mode is achieved by depressing the button until the red line is hidden.

All Independent channels in the Master A mode are controlled by the Independent Master A level fader (Figure 1, No. 14). Independent channels in the Master B mode are controlled by the Independent Master B level fader (Figure 1, No. 15). Naturally, Preset channels in each scene in either Master A or B mode are controlled by that scene's Submaster A or B fader of the corresponding letter. Now, if you would like to see how this works, set Channels 2 and 4 on the upper row of A/B pushbuttons in the Master B mode (red line hidden), and leave the other channels in that row in Master A mode; be sure the red line shows on Channels 1, 3, 5 and 6, but is hidden on Channels 2 and 4 (refer to Figure 2). Now, on the lower row of buttons, depress only the button for Channel 6 until its red line is hidden, but be certain that the red line shows on the other buttons of that row (Figure 2). Channel 6 is now in Master mode.

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There has been no noticeable change in the lights, but you have actually assigned each of the six channels in the example to a separate master control on the console as shown by the diagram in Figure 3.

As you can see by looking at the diagram, Channels 1 and 2 are in the Independent mode. This is confirmed by checking their Independent/Preset Pushbuttons. Channel 1 is assigned to Independent Master A, and Channel 2 is assigned to Independent Master B. Similarly, Channel 3 is assigned to Scene One Submaster A, Channel 4 is assigned to Scene One Submaster B, Channel 5 to Scene 2 Submaster A, and Channel 6 to Scene 2 Submaster B, all of which are in the Preset mode. Every channel must be assigned to at least one of these positions. (Preset channels can be utilized in both Scene 1 and 2.) This allows nearly endless variations of organization and control of your stage lighting.
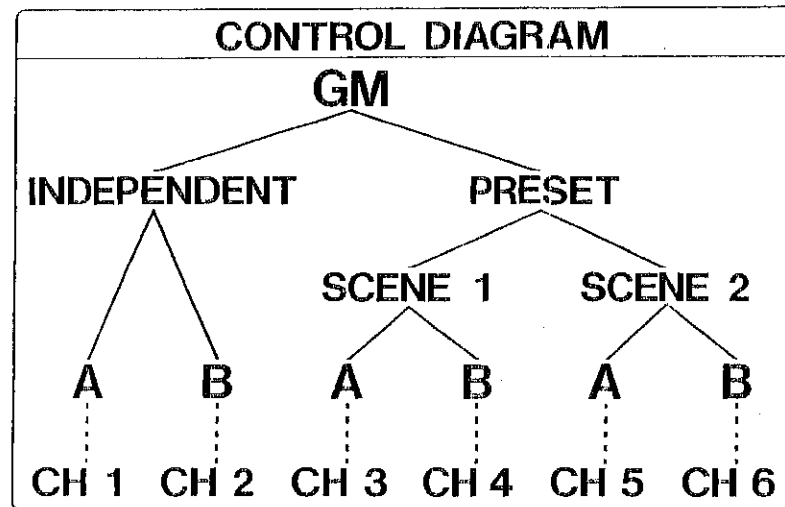
## CONTROL DIAGRAM



FIGURE 3

### Independent Master A and B level faders (Figure 1, No. 14 and 15)

These faders control the channels that you decide to place in the Independent mode by using the Independent Preset Pushbutton discussed earlier. In our example, sliding Independent Master A up and down will cause the lights on Channel 1 to brighten and dim only to the intensity already selected by the Channel 1 fader in Scene One. Independent Master B fader controls Independent channels in the Master B mode (Channel 2 in this case). Any channel may be assigned to these faders by selecting the Independent mode and Master A or B mode on the pushbuttons in Scene One.

### Scene One and Scene Two Submaster A and B Faders (Figure 1, No. 9-12)

Scene One Submaster faders are adjacent to the upper bank of channel faders and control only those Scene One Channels. Scene Two Submaster faders are adjacent to the lower bank of channel faders and control only those Scene Two Channels. Both Scene One and Scene Two Submasters control only those channels that are in the Preset mode as governed by.the Independent/Preset Pushbuttons. As Figures 2 and 3 show, Channels 3, 4, 5, and 6 in our example are in the Preset mode.

In Scene One, only Channels 3 and 4 are raised to a level above 0 on their scales, so only the lights on those channels will be affected by sliding the Scene One Submasters up and down. Also, Channel 3 has been placed in the Master A mode by the Master A/B Pushbutton, and Channel 4 has been placed in the Master B mode, so that Channel 3 will only be affected by Scene One Submaster A and Channel 4 is only controlled by Scene One Submaster B.

Notice that the Submasters do not affect channels in the Independent mode, but only control Preset channels in their own scene with a Master A/B mode which corresponds to the Submaster's own letter. Therefore, Scene Two Submaster A will only control a Preset channel in Scene Two with a Master A mode setting on its Master A/B Pushbuttons. This description fits Channel 5 in our example which is, in fact, controlled by Scene Two Submaster A. For the same reasons, Scene Two Submaster B controls Channel 6 which has a Master B mode setting signified by its depressed pushbutton and hidden red line.

Sliding any of the Submasters up its scale will bring the lights on its assigned channels up to their predetermined intensities shown by the Individual Channel faders. Sliding the Submaster down will dim all assigned lights until they are finally turned off when the Submaster is at 0.

Submasters may be used to adjust certain lights in a scene without disturbing the other lights, or they may be used to creater smaller sub-scenes.

**Scene One and Scene Two Preset Crossfaders** (Figure 1, No. 13)

The purpose of these Preset Crossfaders is to make a smooth transition from Scene One stage lighting to Scene Two stage lighting, and vice versa. The Preset Crossfaders affect only those channels in the Preset mode, and do not affect the Independent channels in any way. To make the transition from one scene to another, the crossfaders are moved together along opposing scales. This causes one scene to fade out as the other is brought to full intensity, in one simple motion.

To begin, place both Scene One and Scene Two Preset Crossfaders at the top of their scales (10 on the Scene One scale, 0 on the Scene Two scale). This causes Scene Two lights to turn off while Scene One lights remain at their predetermined intensities on the Individual Channel faders. Make sure the Submasters in both scenes are raised to level 10. Now, you have Scene One lighting; Channels 3 and 4 (Figure 3). You will also have the Independent Channels 1 and 2 if the Independent Masters A and B are still at level 10.

To crossfade into Scene Two, simply slide both Preset Crossfaders, side by side, to the bottom of their scales. Watch the Output Level L.E.D.s or your lights as you do this, and you will see the smooth transition from one scene to the other. This transition does not affect channels in the Independent mode. Independent channels may be used for constant light during scene changes, or they can be used to create additional Independent scenes.

**Output Level L.E.D.** (Figure 1, No. 6)

Below each Scene Two channel fader is a small Light Emitting Diode (L.E.D.) which monitors the electrical output of its own channel. As the intensity of a channel's output varies, the brightness of the L.E.D. will vary accordingly.

**Solo Pushbuttons** (Figure 1, No. 7)

Below each Output Level L.E.D. is a spring-loaded pushbutton which, when depressed, will bring the lights on its own channel up to full intensity while causing the other channel lights to blackout. Designed for momentary use, the Solo Pushbutton must be held in the depressed position to activate this function. When this button is released, each channel returns to previous settings.

Depress the Solo Pushbutton for Channel 7 and hold it down. Notice how all of the Output Level L.E.D.s blackout, except for Channel 7, which comes on at full intensity. Release the button and all the channels return to their previous settings. Any channel may be *isolated*, momentarily and at full intensity, with the Solo Pushbutton.

**Bump Button** (Figure 1, No. 8)

Located below each Solo Pushbutton is a spring-loaded, manual override button that brings the lights on its channel, regardless of previous setting, up to full intensity without affecting the other channels. The Bump Button is activated as long as it is depressed. When released, all lights on that channel return to the previous setting.

Press the Bump Button for Channel 5, and the Output Level L.E.D. will brighten to full intensity while the other channels remain unchanged. Release the button and the L.E.D. for Channel 5 will return to its previous setting. Any channel may be *added*, momentarily and at full intensity, with the Bump Button.

**Auxiliary Function on/off Key Switch** (Figure 1, No. 27)

In addition to the 12, 18, or 24 channels of dimmable stage lighting, the 1600 Professional Lighting Controller also provides a six-channel section of Auxiliary functions also called non-dims, which control simple on/off functions. The Auxiliary Function on/off Key Switch protects the Auxiliary Functions from unauthorized use by locking out power to that section of the console. In the OFF position, no Auxiliary functions can be operated. Simply unlocking this Auxiliary Key Switch will permit the use of Auxiliary function controls. Keys are provided.

**Auxiliary Function on/off Button and Indicator** (Figure 1, No. 29)

Each of these six Auxiliary on/off buttons are used to switch on or off an individual function which does not require dimming, such as pyrotechnics, strobes, fog machines, curtain controls, etc. The switches are ON when the button is depressed and the L.E.D. is illuminated. The L.E.D. will not illuminate unless the Auxiliary function output control (Figure 1, No. 21) is connected to an ETA Model 1641 6-Channel Relay Pack, which is necessary for operation of the Auxiliary function.

**Auxiliary Function Momentary Button** (Figure 1, No. 30)

Each of these six, spring-loaded buttons will momentarily turn on an Auxiliary channel when the button is held down. Releasing the Auxiliary Function Momentary Button turns off that channel.

**Auxiliary Blackout Switch and Indicator** (Figure 1, No. 38)

This pushbutton switch cancels power to the Auxiliary function when depressed. The L.E.D. illuminates to signify blackout. Pressing the button again restores power to Auxiliary functions. L.E.D. illuminates whether Auxiliary is operational or not.

**Independent Blackout Switch and Indicator** (Figure 1, No. 37)

This pushbutton switch cancels power to the channels in Independent mode when depressed. The L.E.D. illuminates to signify blackout. In our example, pressing this button will blackout Channels 1 and 2. Pressing the button again turns off the L.E.D. and restores power to the Independent channels.

### Preset Blackout Switch and Indicator (Figure 1, No. 36)

This pushbutton switch cancels power to the channels in Preset mode when depressed. The L.E.D. illuminates to signify blackout. In our example, pressing this button will blackout Channels 3, 4, 5, and 6. Pressing the button again turns off the L.E.D. and restores power to the Preset channels.

### Master Blackout Switch and Indicator (Figure 1, No. 35)

This pushbutton switch cancels all power to channels in both the Preset and Independent modes, but does not affect the Chase or Auxiliary functions. L.E.D. illuminates to signify blackout. In our example, pressing this button will black out all channels. Pressing the button again turns off the L.E.D. and restores power to all channels.

### Chase on/off Switch and Indicator (Figure 1, No. 34)

This pushbutton switch, when depressed, activates the Programmable Chase Function. The L.E.D. illuminates to signify Chase mode. The Chase Intensity Control must be turned up (clockwise) to permit viewing the chase sequence. This Chase function works along with anything already operating on the console, so certain lights which are on may not appear to chase. These, and any other channels already on, will not appear to chase like the other channels. To avoid this, simply depress the Master Blackout Button or decrease the light levels with the Grand Master; neither control affects the Chase itself.

### Chase Selector Switch and Indicator (Figure 1, No. 32)

The ETA Professional Lighting Controller allows you to create spectacular lighting effects by using the multi-channel chase feature. When the chase feature is on, the lights in the system will flash on and off according to patterns stored in the memory of the PROM programmable memory chip. The term "chase" refers to the replacement of one channel's lighting with the next channel's as if the lights from one channel are racing to catch the lights of another channel—chasing. We are very proud of this special PROM chase feature.

The Programmable Chase Selector is a dual pushbutton switch with 16 positions (from 0 to 15). The top pushbutton, identified with a negative sign (−), turns the switch position backwards, as from position 3 back to position 2. The bottom pushbutton, identified with a plus sign (+), advances the switch position, as from position 3 forward to position 4.

Each of the 16 switch positions (including position 0) establishes a different channel chase pattern, so you can change the chase with a push of the button.

The Programmable Chase Selector is controlled by PROM Programmable chips that are coded at our factory. If you would like to customize your ETA 1600 Professional Lighting Controller to Channel Chase in a pattern that we have not included in the standard 16 programs, you may contact ETA about the charge for reprogramming a PROM chip for your special features.

### Chase Intensity Control (Figure 1, No. 31)

This control uniformly varies the intensity of the lights in the chase sequence from full on to full off, allowing you to have a dim, subtle chase or a bright, dramatic chase.

### Chase Speed Control (Figure 1, No. 33)

This control regulates the speed of the chase from very slow (approximately one step every three seconds) to very fast (approximately 12 steps every second).

### Console Light Intensity Control (Figure 1, No. 24)

This control adjusts the brightness of a gooseneck light, not provided, which can be attached to a BNC connector on the console (Figure 1, No. 22). The light makes operation of your console easier in dimly-lit situations.

# CARE AND MAINTENANCE

Your ETA System is constructed of heavy gauge metal for durability. But your ETA System is also a delicate, precision electronic, computerized instrument that deserves special care.

As with all electronic equipment, keep your ETA System dry and dirt-free.

### CAUTION

Your ETA 1600 Series Professional Lighting Controller is very durable, but if it should need repair, DO NOT ATTEMPT TO REPAIR IT YOURSELF. This will void your Limited Warranty.

# TROUBLESHOOTING

If your ETA 1600 Series Controller will not operate:

1. Is the Controller plugged into a 120-volt outlet?
2. Is your electrical outlet a "live" circuit? Check with an ETA test lamp.
3. Is the Grand Master fader raised above 0?
4. Are the Blackout Pushbuttons in the NORMAL position?
5. Is the Key Switch in the ON position?