

**TL - 1640 CONTROL CONSOLE**

Version 2.0

04/23/2000

**IMPORTANT**

Please read this manual before operating the TL-1640.

**UNIT DESCRIPTION**

The microprocessor based TL-1640 features 16 control channels, 24 programmable scenes, 3 eight step programmable chases, 40 dimmer soft-patch, audio input, and MIDI compatibility. The memory for the scenes, chase and patch is retained in EEPROM memory when power is switched off.

**INSTALLATION**

The TL-1640 is to be connected to a Lightronics dimmer pack via the XLR connector on the rear of the console. The display will show that the connection has been made. The TL-1640 is compatible with dimmers using Lightronics, NSI, and compatible multiplex protocols, however the TL-1640 must have an internal power supply installed for use with NSI dimmers and for use with the Lightronics RM series of dimmers. Contact Lightronics service department for further information.

CAUTION - The TL-1640 should not be placed near any direct sources of heat. Keep away from liquids that could be spilled into the unit. As with any electrical equipment - PLEASE USE COMMON SENSE!

**CONTROLS AND OPERATION****RESETTING THE UNIT**

The TL-1640 has channel patching memory, chase pattern memory, and scene memory which can be used by the operator. Resetting the unit will set the patch configuration to 1 to 1 and a restore a basic set of scenes and chases. The contents of these memories can be restored to the default (factory set) condition as follows:

1. Remove power from the unit.
2. Hold down the PATCH, RECORD, and CHASE PROGRAM buttons while re-applying power to the unit. Continue to hold the buttons down for approx. 5 seconds.

GRAND MASTER: This fader controls the output level of the console. Bringing it all the way down will prevent output of any/all channel and scene levels.

MOMENTARY INTENSITY: Controls the intensity of the channels or scenes activated by the momentary buttons.

MODES: The TL-1640 has the following 3 modes of operation:

- 2 SCENES x 8 CHANNELS
- 1 SCENE x 16 CHANNELS
- 8 CHANNELS & 8 SCENES

TO CHANGE MODES, ALL EIGHT FADERS ON THE BOTTOM ROW MUST BE SET TO ZERO. This prevents abrupt mode switching of while scenes are active. Press the red "MODE" button change modes.

2 x 8 CHANNEL MODE: When you power up the console, it is in this mode. You can create 2 scenes of eight channels using the upper and lower rows of sliders. You can then fade back and forth between them using the CROSS FADE SLIDER at the lower right of the console.

1 x 16 CHANNEL MODE: This mode provides you with access to all 16 channels. The upper row of sliders remains channels 1-8 and the lower row becomes channels 9-16.

1 x 8 / 8 SCENE MODE: In this mode, the upper row of sliders remains channels 1-8 and the lower row becomes SCENES 1-8. Entire scenes of up to 16 channels may be assigned to each of these sliders.

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NOTE: When in the 2 X 8 CHANNEL mode and the 1 X 16 CHANNEL mode, the upper row of CHANNELS is activated by the momentaries. When in the 1 X 8/8 SCENE mode, the bottom row of SCENES is activated by the momentaries.

**SCENES**

**RECORDING SCENES:** Select the 1 X 16 CHANNEL mode. This gives access to all sixteen channels. Create the scene you wish to record. Press the RECORD button (center button beneath the display). The LEDs below the lower row of sliders will flash. Press the momentary button below the slider to which you wish to assign this scene. If you press the record button by mistake, do not press any of the momentary buttons - The LEDs will stop blinking after a few seconds and none of the current scenes will be changed.

**SCENE BANKS:** To the left of the display, you will find a black button labeled SCENE BANK. Pressing this button selects one of three scene banks. The number on the left of the display shows the active SCENE BANK. The three scene banks hold up to eight scenes each. You access the first eight scenes from SCENE BANK #1, the second eight from SCENE BANK #2, and the last eight from SCENE BANK #3.

**RECALLING A SCENE:** Select the 1 x 8 / 8 SCENE mode. Select the SCENE BANK where the scene is stored. To recall a scene, just move the corresponding slider up, or press its momentary button. If the bank selector is changed while a scene is up, that scene will stay in its original bank until the slider is moved to zero intensity. This allows you to combine any of the 24 total scenes. Activating several scenes at once produces more information for the CPU to process and can result in slower response.

**CHASES**

You can create 3 chase patterns of up to 8 steps each. Each step may consist of from 0 to 16 channels on at once. Entire scenes may be assigned to a single chase step. You can adjust the intensity and rate of the chase and select audio control of the rate.

**CHASE PROGRAM:** Press the CHASE PROGRAM button located next to the RECORD button. The number "1" will be displayed indicating that chase memory is ready for the first step in the sequence. When chase record mode is selected, the console is put into the 1 X 16 mode providing access to all 16 channels for recording into the chase sequence. Bring the channel(s) you wish to include in the first step to FULL ON. Press the RECORD button. This will record the first step of the chase sequence. The display now reads "2" for step number 2. You may record up to 8 steps. After step 8 the chase program mode is automatically exited. Press the CHASE PROGRAM button to manually exit the chase programming mode if less than 8 steps are desired.

In addition to recording channels into chase steps you may record SCENES by pressing the MODE select button to select the 1 X 8/8 SCENE mode and using the scene faders (lower row) in chase steps. Like the scenes, the chase sequences will stay in memory when power is removed. The TL-1640 is shipped from the factory with chase patterns in memory. If you wish to reload them, hold down the RECORD button while plugging in the console.

**CHASER OPERATION:** The CHASE INTENSITY slider activates the chaser and controls the intensity of the chase. The display will show the current rate. The rate is controlled either by the CHASE RATE control or audio input. Set the CHASE RATE control to zero to activate audio input. Adjust the AUDIO INPUT slider so that the audio level LED is blinking with the music. This will set the gain for optimum level. Audio input may be line or speaker level.

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**BUMP / SOLO**

The BUMP/SOLO button at the bottom right hand of the board will turn this function on and off. When this function is on, the LED will light and any momentary button pressed will cause the scenes and channels to black out. Only the channel or scene for that momentary will be on. When in the BUMP mode the momentary will add to the existing scenes already on.

**PATCHING CHANNELS**

Patching allows you to assign a dimmer to a console channel. The TL-1640 can patch up to 40 dimmer channels into the 16 console channels. You can patch more than one dimmer to a console channel. To enter PATCH mode, press the PATCH button located next to the RECORD button and the patch LED will light. In PATCH mode, the SCENE BANK button becomes the DIMMER NUMBER button and the CHASE PATTERN button becomes the CONSOLE ASSIGN button as indicated below the buttons. Press the DIMMER NUMBER button until the desired dimmer number appears on the left of the display. Then press the CONSOLE ASSIGN button until the desired console channel appears on the right of the display. Press the red PATCH button to record the assignment. A dimmer may be assigned only once to a console channel. The unit is shipped with a one to one patch in its memory. This means dimmer 1 is assigned to console channel 1, dimmer 2 is assigned to console channel 2 and so on.

NOTE: The default dimmer patch may be reloaded into memory by unplugging the XLR cable (or the power cord on consoles with an internal power supply) and then holding the PATCH button down while plugging the XLR cable or power cord back in.

WHERE TO PATCH DIMMERS: When patching it is helpful to remember that the dimmers controlling your special lights should be assigned to console channels 1-8, since these channels are accessible in every mode. Console channels 9-16 are recommended for general coverage.

**MIDI OPERATION**

The TL-1640 can be used with MIDI sequences to record and playback the operation of the console. Simply connect the TL-1640 to the MIDI system as though it were a keyboard. Start your sequencer and operate the console as usual. When the sequence is played back, the lights will respond as they did when the sequence was recorded. The TL-1640 defaults to MIDI channel 16. The MIDI channel may be changed using patch mode. Press the PATCH button and step through the dimmer channels using the SCENE BANK button. After dimmer 40, "CH:16" will be displayed. A different MIDI channel may now be selected using the CHASE PATTERN button. Press the PATCH button when the desired channel is displayed. The TL-1640 will now operate on this channel.

**IN CASE OF DIFFICULTY:**

- Check that the GRAND MASTER fader is not down.
- Make sure that power is applied to the console (The LCD display should be on).
- Check that all the channels of the dimmers are functional.
- Check the channel assignment and patch of the dimmers.
- Check that all lighting fixtures are functional.
- Check your control cables.

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**REPAIR SERVICE AND TECHNICAL SUPPORT**

Contact the dealer where you purchased the console. If that is not possible, contact Lightronics Service Department, 509 Central Drive, Virginia Beach, VA 23454. (804) 486-3588.

**LIMITED WARRANTY**

For one year from the date of purchase, Lightronics will repair for the original owner any defect in materials or workmanship that occurs in normal use, without charge for parts or labor. Your responsibilities are to use the console according to the instructions supplied, to provide transportation to the authorized Lightronics service representative who will perform warranty service, and to present proof of purchase in the form of your sales slip when requesting service. Excluded from this warranty is damage that results from abuse, misuse, accidents, shipping, and repairs or modifications by anyone other than an authorized Lightronics service representative. This warranty is void if the serial number has been removed or defaced. This warranty gives you specific legal rights. You may also have other rights that vary from state to state.

**UNIT SERIAL NUMBER**

Lightronics recommends that you record the serial number of your unit for future reference.

SERIAL NUMBER \_\_\_\_\_