Lightronics
Stage Control

TL - 3256

MEMORY LIGHTING CONTROL CONSOLE

OWNERS MANUAL

VERSION 2.0

Contents

Throughout this user's guide, text printed on the console is shown in braces such as: {2x16}. Text displayed on the Liquid Crystal Display is shown in single quotes such as: 'CHANGE'. Names of keys are shown in square brackets such as: [MENU]. The letter "n" is used to indicate where a number is displayed.

DESCRIPTION OF CONTROLS

A complete description of each of the following can be found elsewhere in this manual.

FADERS - Used to set the levels of channels and other functions.

BUMP BUTTONS - Momentarily activate associated channel or scene. The bump buttons are "momentary on" push buttons. Pressing a bump button causes the channel or scene (depending on current mode) associated with it to light at the level set by the {BUMP FADER}.

X-Y FADER - Crossfades between upper and lower scene when in {2x16} channel mode.

BUMP FADER - Sets the level of the bump buttons.

GRAND MASTER FADER - Master level control of channels and scenes. It does not affect house master or chase levels.

HOUSE MASTER FADER - Console channel #99. Any dimmer assigned to this channel number will be controlled by this fader. This fader is independent of all other console functions including grand master.

AUDIO INPUT FADER - Adjusts the level of the audio input to the console when using audio to trigger chase. The chase rate fader should be set to zero when using audio input.

CHASE RATE FADER - Controls the rate of the chase.

CHASE MASTER FADER - Controls the chase level.

MODE INDICATOR LED - Indicates the current operating mode.

SOLO KEY - Toggles on/off solo mode. When in solo mode, pressing a bump button will light the associated channel or scene and black out all other active channels or scenes. When not in solo mode the scene or channel will be added to the current scene or channels.

BANK KEY - Selects the scene bank. There are 8 scene banks, each containing 16 scenes.

STATUS LED - Flashes to indicate when console status and other data is written to memory. This data is used to power up the console in the same mode it was in when power was removed.

SCENE CONTROL FADER - Controls the level of the current scene in the CUE.

GO KEY - The GO key initiates the fade out of the current scene in the cue and the fade in of the next scene in the cue. The foot switch connector on the rear of the console can also be used to activate the "GO" feature.

DATA FADER - Controls the crossfade rate of the chase. If this fader is all the way down, lights will instantly go from off to on during a chase. Raising this fader causes lights to fade on and off during a chase.

SNAPSHOT KEY - Saves a "snapshot" of the current channel and/or scene levels into memory. This snapshot can be copied to a scene later.

MENU KEY - This key is used to step through menu choices. Press the [MENU] key until the menu selection you wish to choose is flashing

SELECT KEY - This is used to select a menu item. Press the [SELECT] key to select a menu item that is flashing.

RECORD KEY - Used for recording a scene or chase step into memory. See RECORDING SCENES or RECORDING CHASES.

TAP/STEP KEY - When the chase rate control fader is all the way down, pressing the tap step key will cause the chase pattern to advance one step.

KEYPAD - Used to select a chase pattern or the next cue entry and for entering soft patch information.

OPERATION

MODES OF OPERATION

The SC-2356 has 3 modes of operation. The desired mode is chosen by pressing the [SELECT] key. **The faders on the lower row must be all the way down to change modes.** This avoids the sudden changes that would occur if scenes or channels were active while their associated faders were assigned new functions. In all modes, channels 1-16 are accessible on the upper row of faders and momentary "bump" buttons.

The three modes are:

{2x16 CH}   2 SCENES x 16 CHANNELS

In this mode, only channels 1-16 are accessible. You can create one 16 channel scene on the upper row of faders and another scene on the lower row. The X-Y FADER will crossfade between these two scenes. In this mode, you may use either the upper or lower row of bump buttons to flash a corresponding channel.

{1x32 CH}   1 SCENE x 32 CHANNELS

In this mode all 32 control channels are accessible. Channels 1-16 are on the upper row of faders and channels 17-32 are on the lower row. This mode is useful for creating and saving scenes (See RECORDING SCENES).

{16C/16S} 16 CHANNELS + 16 SCENES

This mode gives you access to channels 1-16 and 16 of the 128 recorded scenes simultaneously. The upper faders are channels 1-16. The lower faders are scenes 1-16. There are 8 banks of scenes, giving you a total of 128 scenes. Press the [BANK] key to select a bank of scenes. The current bank is indicated in the upper left of the status display. When banks are switched, any currently active scene remains active until its' fader is lowered to full off. The scene from the new bank is then assigned to this fader.

USING THE MENU SYSTEM

The display normally shows the current scene bank, chase, patch page, current cue number and next cue number. This is called the STATUS DISPLAY. Pressing the [MENU] key, located just under the display, gives you access to various functions. To use the menu system: press the [MENU] key until the desired function blinks. Then press the [SELECT] key to select the function. Some selections will show a sub-menu to choose from. An arrow at the display lower right means that there is another menu page available if you continue pressing the [MENU] key. Selecting 'EXIT' will exit the current menu mode and return to the status display. Menu mode will also be exited if no action is taken for 15 seconds. Menu CHOICES such as chase record and soft patch will not be exited automatically.

MENU FUNCTIONS

Pressing [MENU] from the status display will display these choices:

'CHANGE'   'CHASER'
'SOFTPATCH'   'EXIT'

The following menu choices are on the second page of the main menu (press [MENU] 5 times from status display).

'SNAPSHOT'   'Q-EDIT'
'SETUP'   'EXIT'

'CHANGE'

While 'CHANGE' is blinking, pressing [SELECT] from the main menu will display these choices:

'MODE'   'CHASE-01'
'PAGE-1'   'EXIT'

While 'MODE' is blinking, pressing the [SELECT] key will select the mode of operation for the console. This is the same as pressing SELECT when not in menu mode (See "MODES OF OPERATION").

While 'CHASE - nn' is blinking, pressing the [SELECT] key will select a chase pattern. Pressing [SELECT] will increment the chase number. After chase #16, the chase number loops back to #1. NOTE: A more direct method of selecting a chase is by using the keypad instead of the menu system. Simply enter the number of the chase pattern you wish to select followed by the [#] key.

While 'PAGE-n' is blinking, pressing the [SELECT] key will select a patch page. A patch page is an area in memory where the console fader to dimmer number assignment is stored. The number of patch pages available is determined by how many dimmer channels are being transmitted as shown below. (See "SETUP, DIMMERS")

Channels	512	256	128	64	32
Pages	1	2	4	8	8

While 'EXIT' is blinking, pressing the [SELECT] key will return you to the status display screen.

'CHASER'

While 'CHASER' is blinking, pressing [SELECT] will display these choices:

'EXIT'   'RECORD'
                'CHASE-nn'

While 'EXIT' is blinking, pressing the [SELECT] key will return you to the status display screen.

While 'RECORD' is blinking, pressing the [SELECT] key will select the chase record mode allowing you to record a chase into the currently selected chase pattern. (See "RECORDING CHASE PATTERNS")

While 'CHASE -nn' is blinking, pressing the [SELECT] key selects one of the 16 chase patterns.

'SOFTPATCH'

While 'SOFTPATCH' is blinking, pressing [SELECT] will display these choices:

'EXIT'   'REPATCH'
'COPY'   'RESET'

While 'EXIT' is blinking, pressing [SELECT] will return you to the status display.

While 'REPATCH' is blinking, pressing [SELECT] will select the dimmer to fader patch mode. This is where you can re-assign dimmer numbers to console channels. (See "USING SOFT PATCH")

While 'COPY' is blinking, pressing [SELECT] will select the patch page copy mode. Copy allows you to copy the contents of one patch page to another.

While 'RESET' is blinking, pressing [SELECT] will display these choices:

'EXIT'   CLEAR'
'PATCH-1to1'

While 'EXIT' is blinking, pressing [SELECT] will return you to the status display.

While 'CLEAR' is blinking, pressing [SELECT] will clear the current patch page. After a "clear", none of your dimmers will be assigned to any of the console faders. A re-patch (or "patch 1 to 1") must be done after a clear or there will be no output from the console.

While 'PATCH 1 to 1' is blinking, pressing [SELECT] will cause dimmer 1 to be patched to console fader 1, dimmer 2 to fader 2 and so on. After console channel 32, dimmer 33 will be patched to console channel 1, etc.

The following menu choices are on the second page of the main menu (press [MENU] 5 times from status display).

'SNAPSHOT'

While 'SNAPSHOT' is blinking, pressing [SELECT] will select the snapshot copy mode. Choosing snapshot allows you to copy a previously saved snapshot of channel levels to a scene. Enter a scene bank number (1-8), then enter a scene number (1-16). Pressing the [*] key will toggle between 'BANK' and 'SCENE' . Press the [#] key to save your selection. Press [MENU] to return to the status display without saving the snapshot to a scene fader.

'Q-EDIT'

While 'Q-EDIT' is blinking, pressing [SELECT] selects the cue edit mode. This allows you to select a sequence of scenes and "stack" them in a list called a "cue". After you have created the cue list you can move from one scene to the next one in the cue by pressing the [GO] button. See EDITING THE CUE.

'SETUP'

While 'SETUP' is blinking, pressing [SELECT] will display these choices:

'EXIT'   MIDI'
'ERASEall'   DIMMERS'

While 'EXIT' is blinking, pressing [SELECT] will return you to the status display.

While 'MIDI' is blinking, pressing [SELECT] will select the MIDI channel select mode. The current MIDI channel is shown. Press [MENU] until the desired channel is indicated then press [SELECT] to choose this MIDI channel.

While 'ERASEall' is blinking, pressing [SELECT] will erase all scenes, chase patterns and cues and will reset the soft patch to a 1 to 1 patch. CAUTION! ERASEall can NOT be undone. (Note: a simple chase will be loaded in chase #1)

While 'DIMMERS' is blinking, pressing [SELECT] will select the dimmer number selection mode. Press [MENU] to step through the choices of 32, 64, 128, 256, or 512 dimmers. Choose the lowest number that is equal to or greater than the number of dimmer channels connected to the console. Press [SELECT] to choose the number. Transmitting more dimmer channels than necessary slows the response time slightly and can cause some older dimmers to work improperly.

RECORDING SCENES

1)   Choose a scene bank where the scene is to be stored by pressing the [BANK] key until the desired bank is shown in the upper left of the status display.

2)   Create the scene you wish to store using any combination of channel fader, crossfader, scene and grand master levels in any of the three operating modes.

3)   Press the [RECORD] key. The record LED will flash and the display will read 'SELECT A SCENE, press a button'. To abort record mode, press [RECORD] again or wait 5 seconds.

4)   Press the momentary button below the fader on the bottom row where you wish to assign the scene.

The scene is now assigned to the selected bank and fader.

USING SCENES

1) Choose {16C/16S} operating mode by pressing the [SELECT] key. NOTE: All 16 lower faders must be ALL THE WAY DOWN before operating mode can be switched.

2) Select the scene bank where a scene is stored by pressing the [BANK] key until the desired bank is shown in the upper left of the status display.

3) Raise a fader or press a bump button (on the lower row) that has a scene assigned to it. The {GRAND MASTER} fader affects the level of the scene faders and the {BUMP FADER} affects the level of the bump buttons.

RECORDING CHASE PATTERNS

1) Select 'CHASER' then 'RECORD'. The {RECORD} LED will blink indicating that you are ready to begin recording a chase pattern. If you enter this mode accidentally and do not wish to record a chase pattern, press [MENU] to return to the status display leaving the chase unchanged.

2) Select the chase pattern number you wish to record (enter the chase number on the keypad and press the [#] key).

The display will show the current chase pattern and the current step in the pattern. You can record up to 32 steps for each pattern. Each chase step can consist of as few as 0 channels to as many as 32. Chase steps may include any combination of individual channels and/or scenes.

3) Choose either the {2x16ch} {1x32ch} or {16ch/16s} mode using the [SELECT] key. If you choose scene mode, entire scenes can be included in the steps of the chase pattern. You may change modes while recording a chase pattern.
4) Bring the channel and/or scene fader(s) you want for the first step of the chase to full.

5) Press the {RECORD} button.

Repeat steps 4 & 5 until you reach a total of 32 steps. If you wish to record a pattern having less than 32 steps, press the [MENU] button to quit recording and return to status mode.

USING CHASE PATTERNS

1) From the status display, enter a chase number on the keypad and press the [#] key.

2) Set the rate using the {CHASE RATE} fader. The green LED above the {CHASE MASTER} will flash at the chase rate.

3) Raise the {CHASE MASTER} fader to the desired level.

4) The {DATA} fader can be used to control the crossfade rate of the chase. What this means is that you can choose to have each step of a chase crossfade into the next step. When the {DATA} fader is all the way down, each step of the chase changes from full off to full on instantly. With the {DATA} fader all the way up, each step does not come to full on until the end of the step. Placing the {DATA} fader at intermediate positions will result in corresponding fade rates.

USING SOFT PATCH

You can reassign console channels to dimmer numbers. For example you may wish to have the lights connected to dimmers #1 and #2 controlled by console fader #3. (You may have several dimmers patched to a single console channel, but you can not patch a dimmer to more than one console channel at a time.) This patch information is saved as a "patch page". You can store multiple patch pages in memory. The number of patch pages available is determined by how many dimmers are chosen in 'SETUP'. The 32 and 64 channel modes allow 8 pages, 128 channel mode allows 4 pages, 256 channel mode allows 2, and 512 channel mode allows 1. In situations where a console is used repeatedly for different shows, multiple patch pages can save much time that would otherwise be spent re-patching.

1) From the status display, choose 'SOFT PATCH' then 'REPATCH'.

Press the [SELECT] key if you wish to change a patch page other than the current one.

2) Using the [KEYPAD], enter a dimmer number and press [*] on the keypad (NOTE: You cannot enter a dimmer number greater than the maximum number of dimmers chosen in 'SETUP'). When you press [*], the corresponding dimmer will turn on at full intensity while the key is pressed. This allows you to verify that you have assigned the correct dimmer number to the fader.

3) Enter a console channel (1-32 or {HOUSE MASTER} channel 99) and press [#] on the keypad. The specified dimmer is now assigned to this console channel.

When using soft patch, the [TAP/STEP] key will increase the dimmer number by one. The [RECORD] key will decrease by it by one. You can change to the next or previous dimmer number this way instead of entering it on the keypad as explained in step #2 above. This is also useful for viewing patch information.

Repeat steps 2 & 3 until all dimmer channels are assigned. Press [MENU] when done to exit to the status display.

If you want a "1 to 1" patch (Console fader #1 to dimmer #1, fader #2 to dimmer #2 etc.) choose 'SOFT PATCH', 'RESET', 'PATCH-1to1' from the menu. Dimmer numbers greater than 32 will "wrap" back to channel 1 (dimmer #33 will be on fader #1, #34 on #2, etc.).

USING SCENE CUE

After you have created and saved scenes (see "RECORDING SCENES"), you can put them into a scene cue list. Once the cue has been created, pressing the [GO] button will cause the scene in the current cue entry to fade out as the scene in the next cue entry fades in. Each entry in the cue list contains the bank number of the scene (1-8), its' number in that bank (1-16), FADE IN time, and FADE OUT time. The fade out time in each cue entry is the time the scene in the PREVIOUS cue takes to fade out as the new one fades in. The level of the {SCENE CONTROL} fader is the master level control for scenes accessed using the [GO] button. When at the status display, you can choose a cue entry to be next by entering the number on the keypad and pressing [*]. The status display indicates the next cue number at the lower right of the display following 'N- '.

CREATING / EDITING THE CUE LIST

1)   From the status display, press the [MENU] button until 'Q-EDIT' is blinking (6 key presses) then press [SELECT].

The upper left of the display shows the cue list entry to be edited.

2)   Using the keypad, enter the number of the cue list entry you wish to edit and press the [#] key. If you are creating a new cue, you should start with cue number 1.

3)   The number following 'FI' will blink. This is the FADE IN time. Enter a new value (in seconds) using the keypad and press [#] or just press [#] by itself to accept the current value.

4)   The number following 'B' will blink. This is the SCENE BANK number. Enter a new bank number using the keypad and press [#] or just press [#] by itself to accept the current number.

5)   The number following 'S' will blink. This is the SCENE number. Enter a new scene number using the keypad and press [#] or just press [#] by itself to accept the current number.

6)   The number following 'FO' will blink. This is the FADE OUT time. **The fade out time is for the scene that will fade OUT as the scene you are editing fades IN.** Enter a value (in seconds) using the keypad and press [#] or just press [#] by itself to accept the current value.

After entering the fade out time, the cue list entry number at the upper left of the display will be incremented.

Repeat steps 3 - 6 until all of your cues are entered. You may enter up to 255 cues.

If you wish to jump to a specific entry, press [SELECT]. When the number after 'Q' is blinking, enter the number of the entry you wish to modify using the keypad and press [#].

To stop editing the cue list, press [SELECT] to get back to the upper line on the display. Press [MENU] 3 times, then press [SELECT].

INSERTING A CUE ENTRY

1)   Select 'Q-EDIT' from the main menu.

2)   Use the keypad to choose the number of the entry you want to insert and press [*]. The cue entry previously assigned this number and all entries above it will increase by one number.

3)   Press [MENU] 4 times and 'INSERT' will be displayed at the upper right of the display. Press [SELECT] while 'INSERT' is displayed. The new cue entry is inserted and can now be edited.

DELETING A CUE ENTRY

1)   Select 'Q-EDIT' from the main menu.

2)   Use the keypad to choose the number of the entry you want to delete and press [*]. The number of all entries above the deleted entry will decrease by one.

3)   Press [MENU] 5 times and 'DELETE' will be displayed at the upper right of the display. Press [SELECT] while 'DELETE' is displayed to delete the entry.

VIEWING THE CUE LIST

Select 'Q-EDIT' from the main menu. Choose the number of the entry you want to view and press [*]. To advance to the next entry press [MENU] once and 'Q+' will flash. Press [SELECT] and the entry number will increase by one. To view the previous entry, press [MENU] two times and 'Q-' will flash. Press [SELECT] to decrease the entry number by one.

USING MIDI

The SC-2356 can be used with a MIDI sequencer to record and playback scene changes performed using the "GO" button. NOTE: Only CUE entries 0 through 127 are accessible using MIDI.

Create and record scenes as described in the "RECORDING SCENES" section of this manual.

Create a CUE list as described in the "USING SCENE CUE" section of this manual.

BASIC MIDI OPERATION:

Connect "MIDI OUT" from the console to "MIDI IN" on your sequencer. Connect "MIDI OUT" from your sequencer to "MIDI IN" on the SC-2356 console.

The SC-2356 defaults to MIDI channel 16. If you wish to change the MIDI channel, choose "MIDI" from the "SETUP" menu on the console display. Press the "SELECT" button to increment the MIDI channel number until the desired channel number is displayed. Press the "MENU" button to save this channel selection.

Begin recording on your sequencer. As you activate the "GO" button, data is recorded into the MIDI sequencer. When done, play back the sequence you recorded and the console will repeat the recorded operation and timing of the "GO" button. NOTE: The SCENE CONTROL fader controls the overall level of any scenes activated using the "GO" button or under MIDI control. The "GO" button can only be operated when the MAIN MENU is displayed.

ADVANCED MIDI OPERATION:

You can use your MIDI sequencer or other MIDI device to directly activate scenes. Scenes are activated by sending "MIDI Program Change" commands in the range of 0 through 127 (Cue 0 is used for blackout.). The Program Change commands correspond to CUE LIST numbers NOT the scenes directly (You must first save scenes then create a cue list containing scene/bank numbers and fade in/out times). When a command is received, the scene associated with the given CUE number will fade in and the current scene will fade out at the rates in the CUE entry.

MAINTENANCE AND REPAIR

TROUBLESHOOTING

Make sure you have power to the unit

Check that the multiplex cable is not defective.

To simplify troubleshooting - Reset the unit using 'ERASE ALL' to provide a known set of conditions.

Make sure that dimmer address switches are set to the desired channels.

OWNER MAINTENANCE

The best way to prolong the life of your controller is keep it dry, clean, cool, and covered when not in use.

There are no user servicable parts in the unit. Service by other than authorized agents will void the warranty.

The unit exterior may be cleaned using a soft cloth dampened with a mild detergent/water mixture or a spray-on type cleaner. DO NOT SPRAY ANY LIQUID directly on the unit. DO NOT IMMERSE the unit in any liquid or allow liquid to get in the unit or the controls. DO NOT USE any solvent based or abrasive cleaners on the unit.

OPERATING AND MAINTENANCE ASSISTANCE

Dealer and factory personnel can help you with operation or maintenance problems. Please read the applicable parts of this manual before calling for assistance.

If service is required - contact the dealer from whom you purchased the unit. If that is not possible - contact Lightronics, Service Dept., 509 Central Drive, Virginia Beach, VA 23454   Tel: 757 486 3588.

UNIT SERIAL NUMBER

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

SERIAL NUMBER: _____