

Lightboard™ M

LIGHTBOARD M
LIGHTING CONTROL
CONSOLE



Strand
Lighting

Lightboard M creates the perfect synergy of memory and manual lighting control for the mid-range user with impromptu needs — especially suitable for educational facilities.

Features

- Console surface ergonomically designed for combined manual and memory control.
- 768 dimmers on 96 or 144 control channels with optional manual channel potentiometers.
- 24 or 48 fully overlapping, individually programmable submasters plus an extra 8 which are programmed at the main console and operated remotely.

- 200 cues and special effects per shows (140 with 144 channels).
- 2 full function playback controls with time fade override.
- 4 shows of information are stored on a single 3.5" disk.
- 4 patch tables per show.
- DMX512, AMX192, and D54 output protocols. The digital and an analog multiplex protocol can operate simultaneously with programmable output strings by the user.
- Programmable Macros which can be operated remotely.
- Universal power input.

Optional Peripheral Equipment

- Handheld remote with LCD command line.
- Remote monitor.
- Hard copy printer.
- Remote interface to submasters and macros.
- Flight case.

A Preset Faders

0, 48 (pictured), 96, or 144 channels of two-scene preset faders are available.

B Flash Switches

Each channel and submaster has an associated "bump button" with LED indication for channel level.

C Disk Drive

3.5" disk allows library storage of system information.

D Submaster Faders

24 individually programmable submasters are provided (48 are provided on the 96 manual channel version).

E Grand Master

The console's entire output can be proportionally mastered.

F Blackout Switch

The console's entire output can be turned on and off.

Lightboard™ M continues Strand Lighting's tradition of user-proven, quick and simple memory+manual control styles.

SPECIFICATIONS

General Description

The Lightboard M control console shall be a lighting system designed and manufactured by Strand Lighting specifically for the control of theatrical, television, film, and architectural dimming systems. The console shall support the processing of up to 768 dimmers on up to 144 control channels, with optional manual control channels arranged in two scenes of potentiometers.

The system shall be provided with required software and output connectors to control dimmers utilizing AMX192, DMX512, or D54 output protocols. These protocols shall be available on all consoles and selectable by the user.

In the event of power loss to the console, system RAM shall be maintained for a minimum of 72 hours.

Standard Features

A. Grand Master

The Grand Master shall master output from all console sources with an associated blackout switch.

B. Channel Faders

96 electronic channels are always available. 0, 48, 96, or 144 two scene preset manual channel faders shall also be available and duplicate the electronic channels. If 144 manual channel faders are selected, there are also 144 electronic channels, and reduced preset memory, provided.

C. Submaster Faders

Either 24 or 48 fully overlapping submaster faders are provided, depending on the model of console selected.

D. Flash Switches

Each corresponding pair of channel potentiometers plus submaster faders shall have a "bump button" operating in a highest level takes precedence manner with other output sources. An associated, integral LED is also provided which lights if the channel level is above 5%.

E. Flash Switch Master

A rotary master is provided to master the output of all flash switches. In addition, a switch is provided to disable

G A-B Split Playback Control

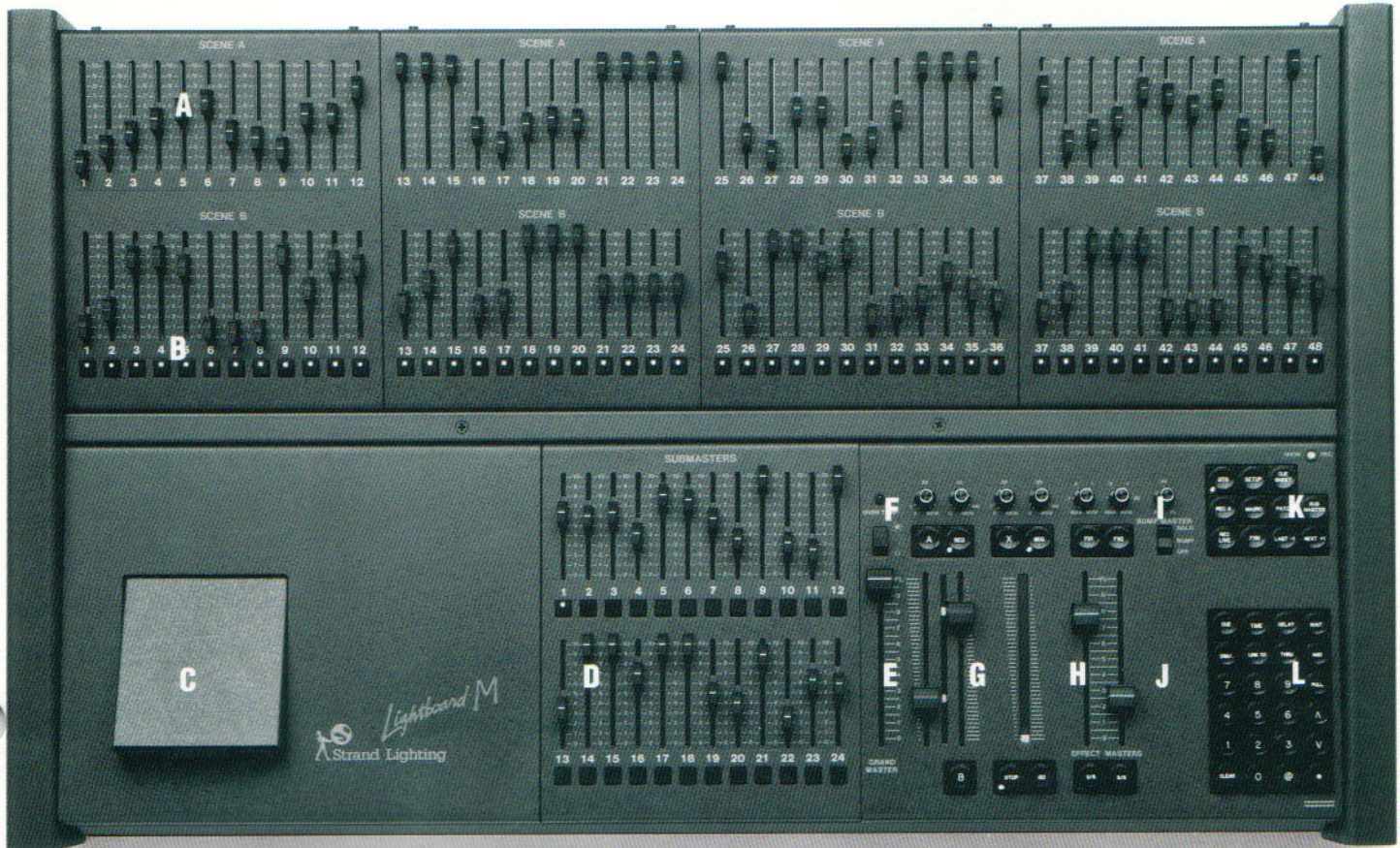
Separate incoming and outgoing split controllers provide a dipless crossfader between the two manual presets. Split tracking LED progress of crossfades with time override dials is provided. Electronic presets can also be played back on the A-B Control.

H X Electronic Playback Control

Electronic presets can be played back in a programmable show sequence. Split tracking LED progress of crossfades with time override dials and GO, STOP/BACK buttons are provided.

I Flash Switch Master

The "bump level" master and off-bump-solo toggle operation of the flash switches



J Special Effect Playbacks

Two separate special effect sequences can be played back with proportional masters, START/STOP buttons and step time override dials.

K Display Keypad

Quick configuration, manipulation, and viewing of information is provided via menu driven access.

L Record Keypad

Allows quick level setting and recording of show information with multiple parameters.

M Monitor

A dynamic CRT is provided for clear viewing of information.

N Handheld Remote

An optional handheld remote duplicate many of the functions of the main console.

the flash switches, enable the switches as "bump to master" or, enable the switches as "solo to master".

F. A-B Split Playback Control

The optional two scene preset manual channels can be mastered with the A-B Split Playback potentiometers, operating with manual time or split electronic time fades through the use of two associated rotary time selectors (0 to 4 minutes). In addition associated assign and sequence buttons are provided to allow playback of electronically recorded memories, operating with pre-recorded, manual, or split electronic time fades. At any time, the A-B Split Playback facility shall allow take control and alteration of fade times or manual take control of two-scene preset or electronically recorded memories. An associated LED split bargraph indicating the progress of the playback shall also be provided.

G. X Electronic Playback Control

Electronically recorded memories with associated time fade parameters can be played back on the X Electronic Playback Control. Associated assign and sequence buttons are provided to choose a cue (memory) list sequence where pre-recorded times are utilized and initiated with a GO button. A STOP/BACK button will stop then progressively back up through cue lists. GO can be used

to resume cue lists. At any time, the X Playback facility shall allow control and alteration of fade times for electronically recorded memories (0 to 4 minutes). An associated LED split bargraph indicating the progress of the playback shall also be provided.

H. Special Effects Playback Control

Two special effect master potentiometers with associated load and START/STOP buttons shall be available to allow simultaneous playback of two electronically recorded special effects, operating with pre-recorded step times. Two associated fade rate adjustments (0 to 3 minutes) shall allow control and alteration of step times.

I. Keypads

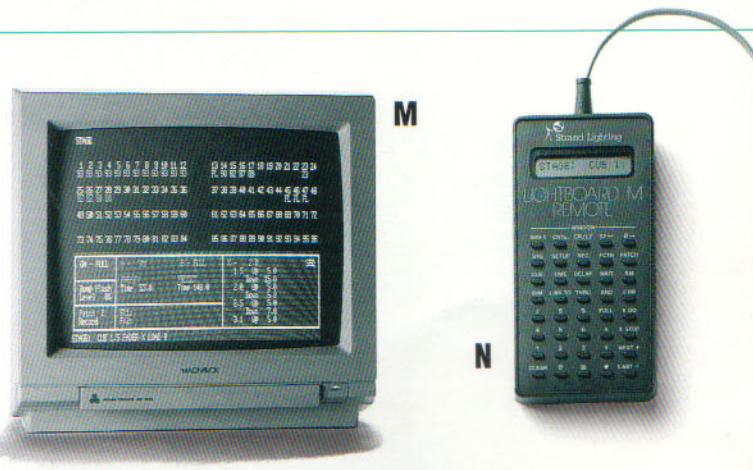
Two logically grouped keypads shall be provided to chose displays and provide electronic setting of channels plus recording of playback information.

J. Disk Drive

A 3 1/2" standard density disk drive allows library storage of user pre-recorded console information.

K. Video

System information is displayed on an optional RGB-TTL full color video monitor. A monochromatic monitor is provided as standard if the color video option is not chosen. There is an associated switch for 50HZ versus



Sizes	Width"(mm)	Depth"(mm)	Height"(mm)	Weight/Lb (kg)
0 manual channels	34.5 (876)	10.5 (269)	6 (158)	29.25 (13.3)
48 manual channels	34.5 (876)	21 (531)	8 (196)	55.12 (25.05)
96 manual channels	58.5 (1486)	21 (531)	8 (196)	87.15 (39.61)
144 manual channels	66.5 (1689)	21 (531)	8 (196)	100.72 (45.78)

60HZ monitors. The console shall also drive one detached remote monochrome video.

L. Dimmer Overtemp Indicator

A connection and associated LED indicator shall be provided to indicate if coordinating Strand Lighting manufactured dimmers are being subjected to a possible over temperature condition.

Operating Functions

The system shall provide but not be limited to:

A. Setup

The following options are available as system setup commands:

- 1 - Set desired # of Dimmers to work with.
- 2 - Set desired # of Channels to work with.
- 3 - Output protocol selection.
- 4 - Load information to disk location.
- 5 - Save information to disk location.
- 6 - Format disk.
- 7 - Reserved.
- 8 - Clear Memory.
- 9 - Clear Cues.
- 10 - Clear Patch.
- 11 - Program Macro Keys.
- 12 - Reserved.
- 13 - Print Cue Sheet.
- 14 - Print Cues.
- 15 - Print Patch.
- 16 - Print Submaster information.
- 17 - Halt Printer.
- 18 - Record Lock On/Off.
- 19 - Handheld remote On/Off.
- 20 - Diagnostics Routine.

B. Patching

4 electronic, proportional patches are available per show which can be made active at any time. Active versus inactive patches are indicated by color. The THRU and AND keys can be used in patching. The dimmer currently being patched or identified is indicated by color. It shall be possible to quickly identify all dimmers patched to a single channel.

C. Level Setting and Recording

1. Level setting is available through the optional manual channel potentiometers or through a digital keypad with the use of THRU and AND keys. All system channels can be accessed through the keypad, regardless of the number of installed manual channels. Keypad addressed channels are held as independent until restored to another output source and can be proportionally raised or lowered as a group through the use of RAISE and LOWER keys. Keypad addressed channels are immediately placed at desired levels when a two digit level is entered. Direct Dimmer Access to isolate a dimmer from its control channel until released is also available at any time.
2. Recording is available through the use of RECORD LIVE all output, RECORD A manual potentiometers

only, or blind record through the use of PREVIEW. Memories (cues) or Submasters can be directly recorded. If an active cue in the X Playback is manipulated with the keypad, holding the channel independent, a record action will immediately update the cue in the X Playback and will remove the manipulated channels from independent control. If a cue is recorded that is not active in the X Playback, the manipulated channels will remain under independent control.

3. Each Memory can be recorded with the following attributes:

- a. ###.# where "point cues" will be logically inserted into a sequenced cue list.
- b. Fade time up to 999.9 seconds with split up/down times.
- c. Delay time up to 999.9 seconds with split up/down times.
- d. Auto-follow of next cue with wait up to 999.9 seconds.
- e. Manual fade times.
- f. Link-to-Q command.

4. Individual channels can be requested to track through cue lists.

5. A CUE SHEET display shall be provided to list recorded cue and effect memories with associated attributes.

6. Submasters can be directly recorded from the stage output, loaded with a cue, recorded blind with a series of cues. Each submaster shall have an individual display and an overall SUBMASTER display will immediately identify a submaster as having unique channels loaded, a cue loaded, or a submaster where a cue was loaded then the submaster was modified. Besides the submasters present on the main console, there are 8 additional submasters which are programmed from the main console but are operated remotely. The console must be ON for these remote submasters to operate.

7. 8 Macros are provided to record commonly used keystroke sequences up to 32 keystrokes. These macros can be recalled from the main console, the handheld remote, or remotely with a contact closure. The macros are programmed through actually manipulating on the main console what is required with initiation. The console must be ON for these remote macros to operate. A macro can initiate another macro as the last action.

D. Special Effects

1. Any of the system memories can be recorded as a special effect with the following attributes:

- a. Forward channel chase.
- b. Reverse channel chase.
- c. Bounce channel chase.
- d. Forward channel chase with build.
- e. Reverse channel chase with build.
- f. Bounce channel chase with build.
- g. Forward memory chase.
- h. Reverse memory chase.
- i. Bounce memory chase.

2. Each special effect has 96 available steps and is also recorded with an electronic step time.

3. Modification to special effects in active playback is immediate.

E. Playback.

Playback is available through the A-B Split Manual Playback Control, the X Electronic Playback Control, or two independent Special Effects Generator Controls.

Optional Peripheral Equipment

Optional equipment may be added to an existing system at any time. All wiring and software provisions for optional equipment are furnished with a standard system.

A. Hard Copy Printer

This option shall allow a printed record of console information.

B. Hand Held Remote

This option mimics most of the main console operation, is powered from the console, and contains a LCD read out.

C. Remote Submaster and Macro Operation

This option allows remote control over an additional 8 Submasters and the 8 console Macros. Submaster and Macro information is recorded on the main console.

Power Requirements

The system requires 6 amps of 120 VAC, 60HZ, 2 wire and ground AC power with an IEC input connector, fuse, and integral ON/OFF switch. 3.15 amps of 220/240 VAC, 50 HZ input power is also standard, and automatically sensed. A user installable fuse is included for 220/240 VAC operation. 2 IEC convenience outlets are supplied as standard with IEC to Nema #5-15R (Edison) jumpers. An IEC to Nema #5-15P (Edison) input power cord is also supplied. Users in countries with other than Nema plug standards shall locally supply these cables.

Strand Lighting manufactures a complete range of lighting equipment which can be integrated with the Lightboard M. Contact us or your Strand Lighting dealer for your total system integration.



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