

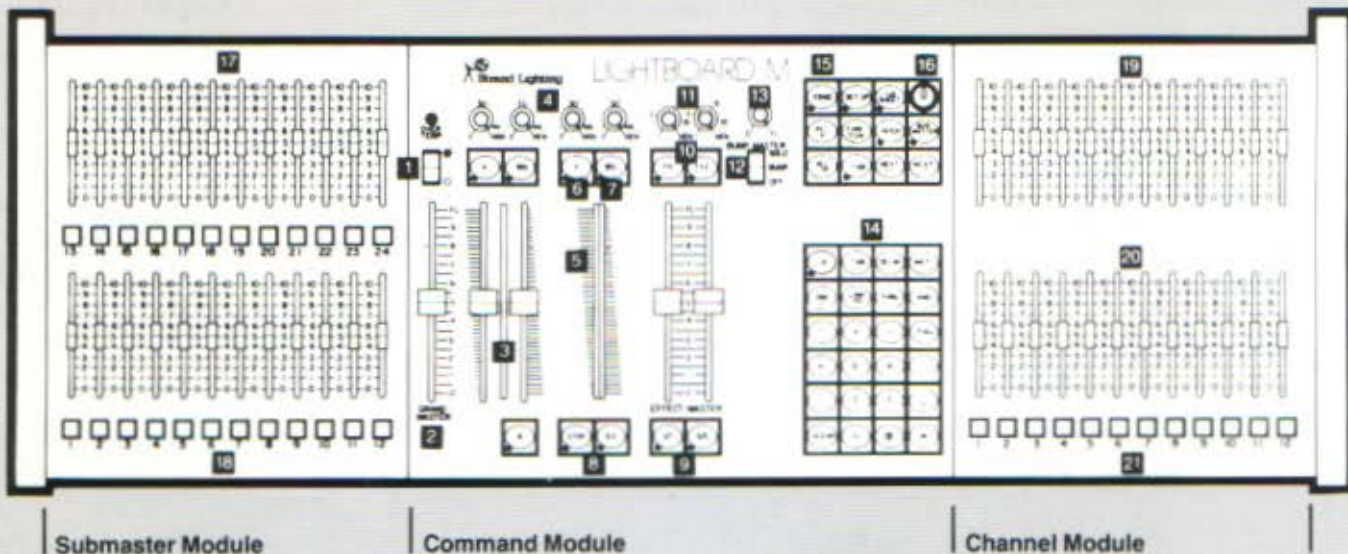
Lightboard M

A memory console with multilevel channel control — simple to operate with sophisticated capabilities.

- ◀ Controls 384 dimmers, expandable to 768
- ◀ Two scenes of manual control, up to 96 channels
- ◀ Up to 48 overlapping submasters
- ◀ 200 memories
- ◀ Special effects package
- ◀ Channel and submaster bump buttons with on, off, solo and bump level control
- ◀ Remote submasters and function keys
- ◀ Grand master
- ◀ Two split-timed crossfaders
- ◀ Two levels of backup available
- ◀ RGB video output
- ◀ 3½" disk drive standard
- ◀ Optional remote focus and printer available



Lightboard M



1. Blackout switch
2. Grand master
3. A/B crossfader with assign and sequence buttons
4. Fade time controls
5. X fader with tracking LED bar graph
6. X fader assign button
7. X fader sequence button

8. Cue go/stop buttons
9. FX faders with stop/start buttons
10. FX load buttons
11. FX step time control
12. Bump selection switch (on, solo, off)
13. Bump level control
14. Command keypad

15. Function keypad
16. Three-position key switch
17. Submaster potentiometers
18. Submaster bump buttons
19. Preset A channel potentiometers
20. Preset B channel potentiometers
21. Channel bump buttons

Note: All 96 channels accessible via command keyboard regardless of number of installed channel potentiometers.

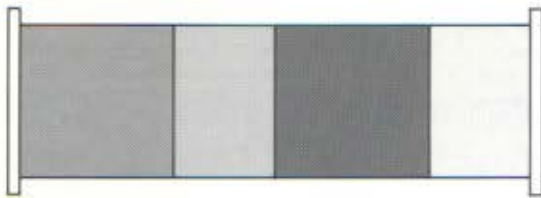
Lightboard M:

All consoles are provided with command module, library module with retractable 3 1/2" disk drive, adjustable worklight power cable, two control cables and 10 diskettes.

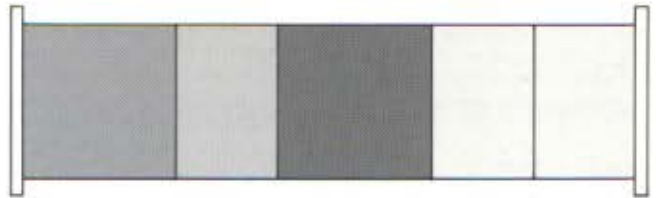
Catalog Number	Submasters	Channels	Size
8810	24		41 1/2" single tier
8811	24	12	41 1/2" single tier
8812	24	24	49 1/2" single tier
8813	24	36	33 1/2" double tier
8814	24	48	33 1/2" double tier
8815	24	60	45 1/2" double tier
8816	24	72	45 1/2" double tier
8817	24	84	45 1/2" double tier
8818	24	96	53 1/2" double tier
8820	48		41 1/2" single tier
8821	48	12	49 1/2" single tier
8822	48	24	33 1/2" double tier
8823	48	36	33 1/2" double tier
8824	48	48	45 1/2" double tier
8825	48	60	45 1/2" double tier
8826	48	72	45 1/2" double tier
8827	48	84	53 1/2" double tier
8828	48	96	53 1/2" double tier

Optional Accessories:

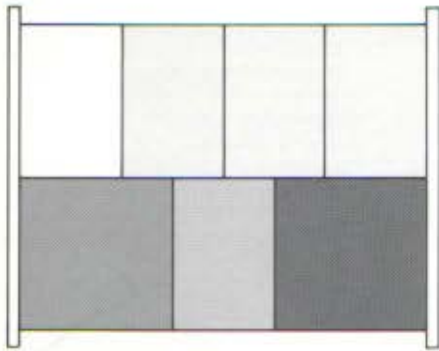
Cat. No.	Description
8891	Vinyl cover for 41 1/2" single tier. Fits consoles 8810, 8811
8892	Vinyl cover for 49 1/2" single tier. Fits consoles 8812, 8821
8893	Vinyl cover for 33 1/2" single tier. Fits consoles 8813, 8814, 8822, 8823
8894	Vinyl cover for 45 1/2" double tier. Fits consoles 8815, 8816, 8817, 8824, 8825, 8826
8895	Vinyl cover for 53 1/2" double tier. Fits consoles 8818, 8827, 8828
8881	Flight case for 41 1/2" single tier console
8882	Flight case for 49 1/2" single tier console
8883	Flight case for 33 1/2" double tier console
8884	Flight case for 45 1/2" double tier console
8885	Flight case for 53 1/2" double tier console
8886	Monitor flight case
8017	72" wide castered stand
8018	72" wide castered stand
8019	36" wide castered stand
8020	48" wide castered stand
8022	Work light



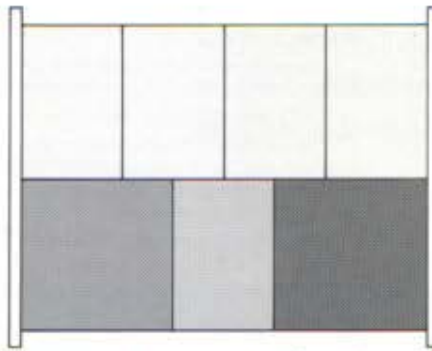
No. 8811 — 24 Submasters, 12 Channels
41½" Single Tier



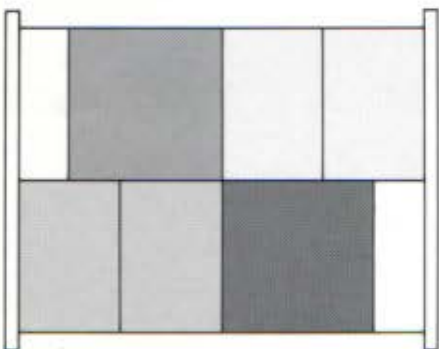
No. 8812 — 24 Submasters, 24 Channels
49½" Single Tier



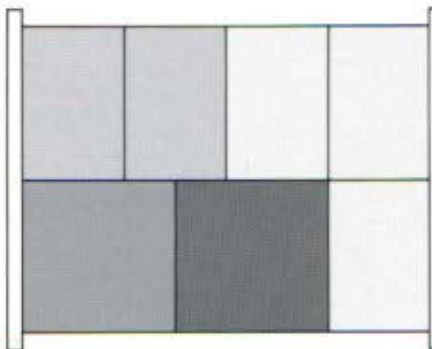
No. 8813 — 24 Submasters, 36 Channels
33½" Double Tier



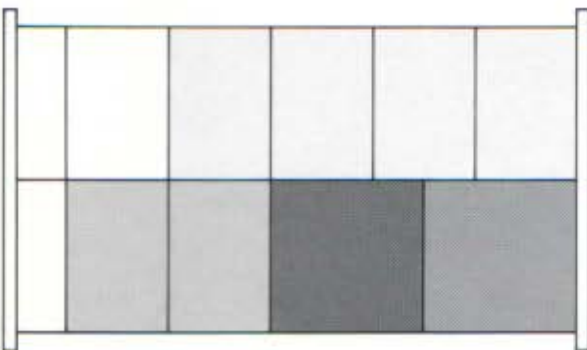
No. 8814 — 24 Submasters, 36 Channels
33½" Double Tier



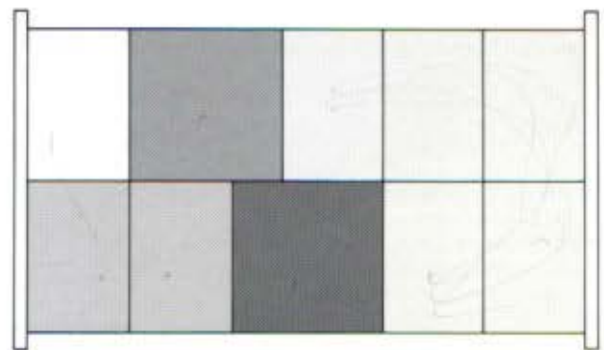
No. 8822 — 48 Submasters, 24 Channels
33½" Double Tier



No. 8823 — 48 Submasters, 36 Channels
33½" Double Tier








No. 8824 — 48 Submasters, 48 Channels
45½" Double Tier



No. 8825 — 48 Submasters, 60 Channels
45½" Double Tier

Coded Key

-  Library
-  Submasters
-  Command Module
-  Channel Module
-  Auxiliary or Blank Module

Lightboard M Specifications:

The system as described below is manufactured by Strand Lighting. The lighting control system shall be microprocessor-based, specifically designed to control theatrical, television and motion picture dimming systems.

Basic Console Description

The control system shall contain, but not be limited to, the following minimum requirements:

- A. Cue Storage — 200 cues for 96 control channels.
- B. Dimmers — The system shall be capable of driving 384 2.4kw dimmers as standard, with an optional expansion to drive 768.
- C. Remote Submaster Inputs — Minimum of eight analog 0-5 volt inputs for external submaster controls or other devices.
- D. Memory Retention — When disconnected from AC power input, the control system RAM (Random Access Memory) shall retain all data for a minimum of three days with a maintenance-free capacitor.
- E. Modularity — The system shall be modular-based with the capability for user service and expansion. The system shall accept up to eight manual channel modules and two submaster modules.
- F. Diagnostics — The system shall include a diagnostic program to test RAM, PROM, displays and all control elements.
- G. Remote Function Inputs — There shall be remote control of eight special function keys.
- H. Special Effects — The system shall have a minimum of two special effects generators that shall be capable of either channel or memory chase, with programmed or manual step times.
 - I. Patch Tables — There shall be a minimum of four independent electronic proportional patch tables.
 - J. The system shall incorporate, as standard, a backup power supply that is always on-line. In the event that the main power supply fails, the system shall automatically switch to the secondary supply. LED status indicators shall be provided to display on-line or failure status of main and secondary supplies.

Control signals shall be multiplexed, with no more than four twisted pairs of wires necessary for a maximum of 384 2.4kw dimmers. Systems requiring a separate control wire for each dimmer shall not be acceptable.

The control system shall not require an interactive disk or cassette drive to operate. Such devices shall be for library storage purposes only.

Control surfaces shall be textured neutral finish with identification in ivory. Channel controllers shall be color coded to respective split crossfaders. The console shall be factory-wired with receptacles for the plug-in dimmer cables.

An AC power cable and a set of 25' control cables shall be included.

Standard Operating Features

The control console shall provide, but shall not be limited to, the following operating features:

- A. Each of the four patch tables shall have the facility to electronically patch any dimmer to any control channel, with proportional level assignments.
- B. The digital dimmer control shall make it possible to directly set dimmer levels.
- C. It shall be possible to access all 96 channels, regardless of the number of physical channel potentiometers present on the console.

D. Each channel potentiometer shall have an associated bump button, which may be disengaged or operated as pile-on or solo, with a bump level control.

E. The A/B crossfader shall act as preset masters or as memory playback faders, with recorded crossfade, split fade, delay and wait time values. Immediate manual override and time adjustment shall be possible.

F. The X playback fader shall have recorded crossfade, split fade, delay and wait time values. It shall be possible to halt, reverse, resume, and manually override a cue.

G. Fade progress shall be indicated on the display and on the 21-segment LED bar graph associated with each fader.

H. It shall be possible to record blind by digital address or through the A channel potentiometers.

I. The console shall have Link to Cue capability.

J. The system shall have a minimum of eight field programmable "learn" sequences that can be programmed to remotely activate any series of pushbutton actions, up to 32 keystrokes.

K. There shall be a maximum of 48 submaster potentiometers, which may control any system memory.

L. Digital modification to memories that are active in the submaster stores shall be immediate.

M. It shall be possible to record any system memory as an effect memory. Each effect shall have 86 steps.

N. For ease of operation, the effects playback stores may be loaded in advance. The Stop/Start and master fader shall allow smooth entrance and exit from effects memories.

O. Modification to effects memories active in playback shall be immediate.

P. It shall be possible to clear the entire system memory, or to selectively clear only the cue store or patch tables.

Basic Control Elements

The Lightboard M control console shall consist of, but not be limited to, the following elements and controls:

- A. Command Module (one required)
 1. Grand master
 2. Blackout switch
 3. Three-position "Bump" select switch, which assigns channel and submaster bump action to On, Solo, or Off
 4. A rotary "Bump" level control
 5. Command keypad for entry and modification of data
 6. A/B split diplex crossfader for A/B presets or recorded memories, with associated "assign" and "sequence" pushbuttons, and tracking bar graph
 7. X crossfader for playback of memories with Go, Stop, and Sequence pushbuttons and dual-tracking bar graphs
 8. Internal effects generator for playback of special effects
 9. Two effects playback faders, with associated "assign" pushbuttons and Stop/start pushbuttons
 10. Four fade rate adjustment controllers to manually adjust the fade times from 0 to 4 minutes of the A/B and X crossfaders
 11. Two fade rate adjustment controllers to adjust effect step rates from 0.1 to 0.3 seconds
 12. One three-position keyswitch that shall select console operation of Off, Show, and Record

13. Associated with the command module, there shall be an integral video driver for local RGB color and remote composite monochromatic monitors, as well as a worklight control switch.

B. Channel Module (____ required)

The channel module shall provide for independent manual control. Each module shall include, but shall not be limited to:

1. Manual Controllers — provide 24 linear controllers per module, two for each of 12 channels. Each linear fader shall have no less than two 1/16" travel with associated scale of "0" to "10" calibrated in half steps.

2. Bump Buttons — Each channel shall have an associated bump button with integral LED. It shall be possible to connect up to eight channel modules to the system.

C. Submaster Module (____ required)

The submaster module shall provide proportional, overlapping and pile-on control of user-selected memories. Each submaster module shall include, but shall not be limited to, the following:

1. 24 Submasters — Each linear fader shall have no less than two 1/16" travel with associated scale of "0" to "10" calibrated in half steps.
2. Bump Buttons — Each submaster shall have an associated bump button.

D. Auxiliary Module (optional)

This module shall contain houselight, worklight and additional controls as required. This unit shall be contained within the main body of the console.

E. Library Module (optional)

Included in the standard console, but not required for operation, this module shall provide, but shall not be limited to the following operational features:

1. One 3 1/2" floppy disk drive for memory storage — The system shall facilitate the use of commercially available disks, with initial disk formatting provided as a console function.
2. One printer interface and receptacle on the rear of the module
3. One designer's/focus remote receptacle

F. Designer/Focus Remote (optional)

Provides for remote activation of specific functions of the main system.

G. Hard Copy High-Speed Printer (optional)

Provides a printed record of cue level information, the complete cue sheet, patch assignments and effects.

H. Color Monitor (optional)

13" RGBI-TTL, full color, with 16MHz bandwidth, 15.75KHz horizontal frequency, 60Hz vertical frequency

I. Monochromatic Monitor (optional)

13" composite video, 16M Hz bandwidth, 15.75 KHz horizontal frequency, 60 Hz vertical frequency

J. Dimmer Expansion (optional)

The dimmer expansion feature will allow the console to drive up to 768 dimmers.

K. Immediate Backup System (optional)

Provides a secondary set of electronics that stores patch information, 24 system memories and provides a two-scene preset operation.

L. Full Tracking Backup (optional)

Duplicates system operation.

M. General Requirements

The power consumption of the console shall not exceed 120V 60 Hz, 10 watts



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