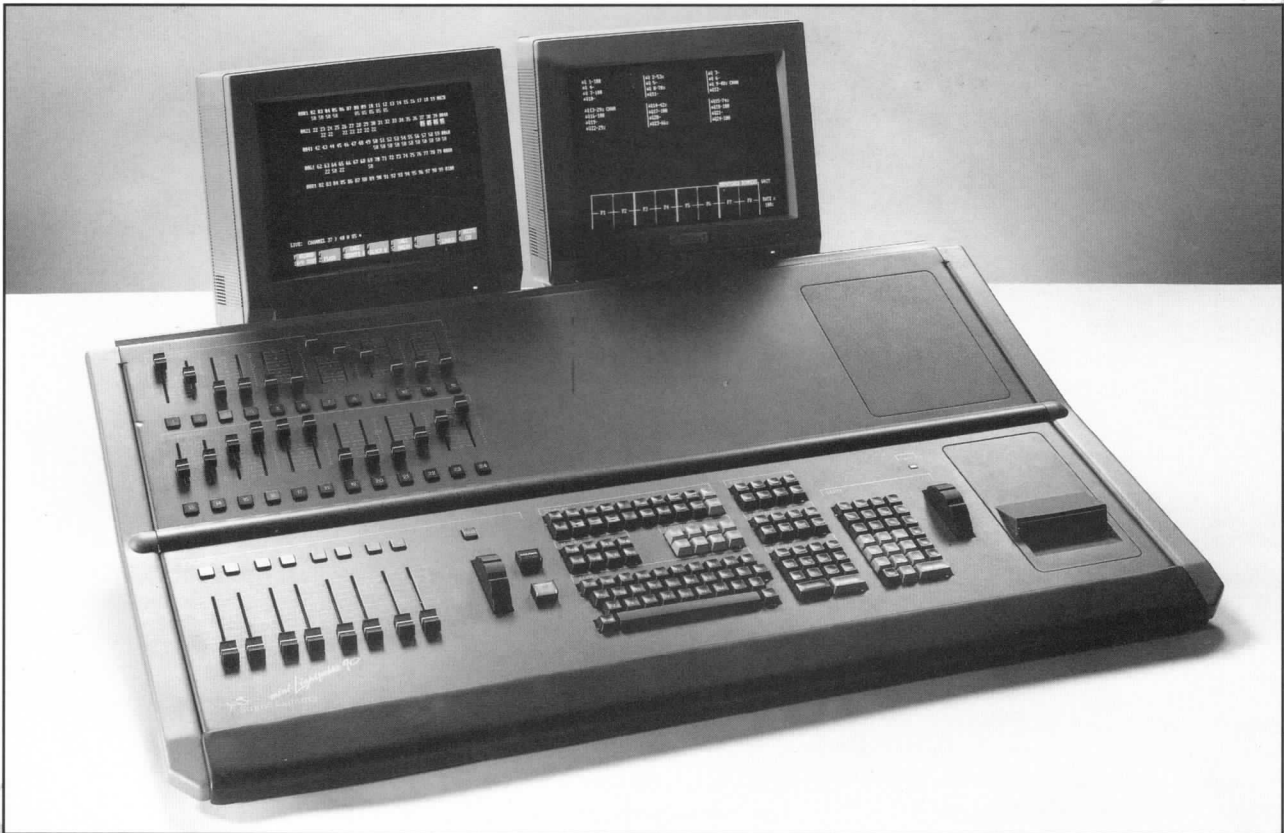**Strand Lighting**
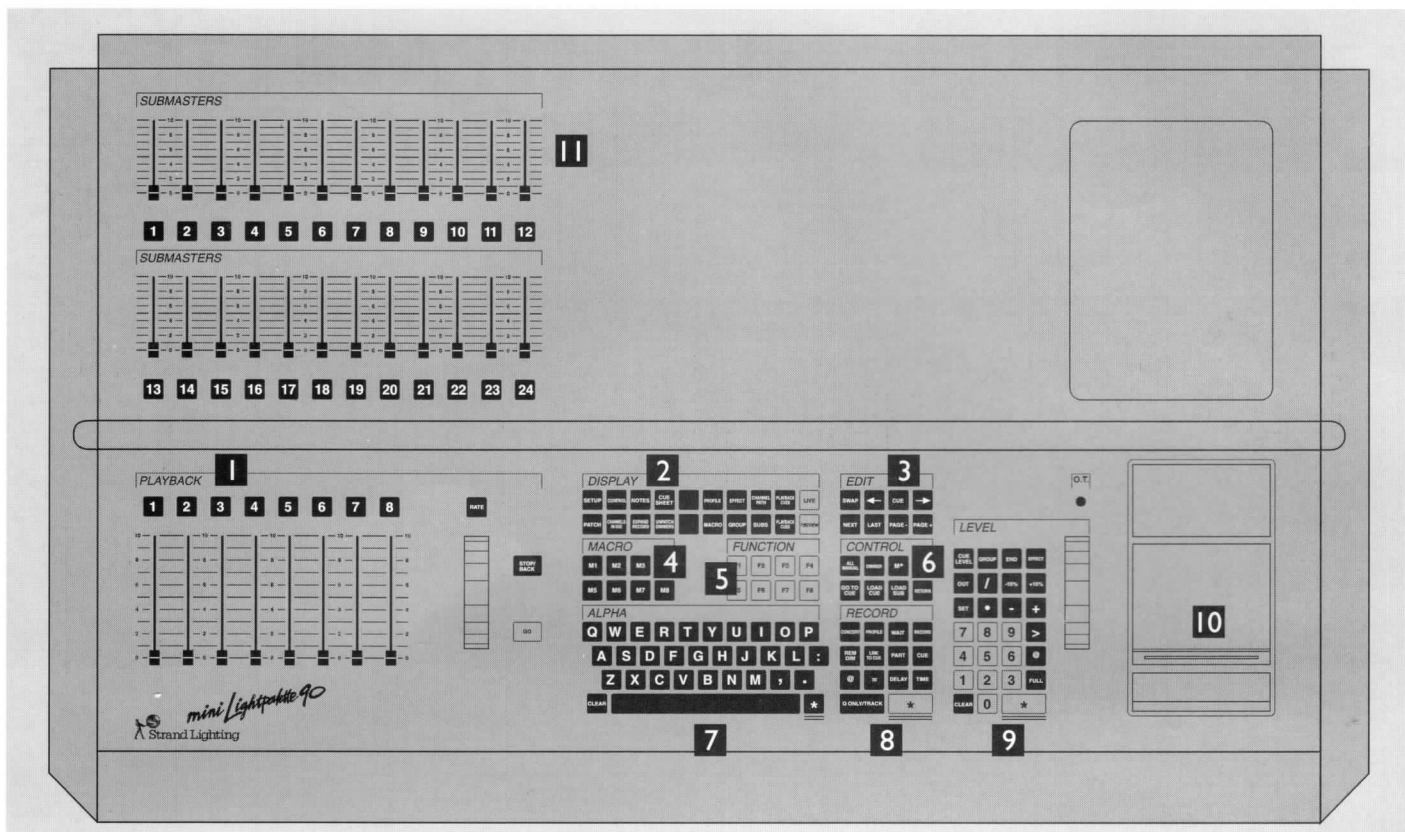
# MINI
# LIGHTPALETTE 90
## MEMORY LIGHTING CONSOLE



**F**ollowing the world-wide success of Lightpalette 90, Strand Lighting introduces the mini Lightpalette 90® Developed for medium range memory control installations and touring shows, this lighting console is destined to become the mainstay of professional entertainment lighting control needs throughout the world.

- Console and operational design for optimum ease of use
- 576 channels, 1024 dimmers
- 24 fully overlapping, individually programmable submasters
- Programming of submasters by flash button
- Bank loading of submasters
- Average 600 memories per show
- Eight timed or manual playbacks
- Up to 128 simultaneous fades
- DMX 512 dimmer output protocol
- Integral alphanumeric keyboard

- Submaster control of effects
- Programmable macros
- Up to 999 effects, individually programmable steps, including fade in, dwell and fade out steps
- Up to 999 channel groups with user programmable names
- Notepad display for message and reminders
- Function keys and many programmable defaults
- Full proportional dimmer patching
- Up to 64 user definable dimmer profiles
- User programmable dimmer names
- Two high resolution monitors
- Remote monitor capability
- Up to two full function handheld remote control units with LCD displays

*mini Lightpalette 90*®

# mini Lightpalette 90® Memory Lighting Console



**A Guide to the Console**

1 **Playback** – 8 playback faders are logically grouped in pairs for split fades or 8 part cues. A rate wheel allows control over individual or global fade times. 128 simultaneous cues are possible.

2 **Display** – The mini Lightpalette 90® offers fast access to information such as Channel Path, Playback Submasters, Channels In Use, and Unpatched Dimmers.

3 **Edit** – Allows command strings to be edited, including Last, Next, Page -, Page+ keys for quick information access.

4 **Macros** – 8 user programmable macros containing up to 32 keystrokes provide for automatic execution of setup and playback information. Macros can be executed from cues.

5 **Functions** – 8 keys drive screen-based legends for direct access to commands.

6 **Control** – Take Control, Manual Override, and Load functions are immediate actions.

7 **Alpha** – Alphanumeric access to dimmers and labelling plus a Notes display.

8 **Record** – Allows quick recording of cues with multiple parameters.

9 **Level** – Channel, cue, group, submaster, and effect information can be brought instantly on stage and manipulated, all in the same command string. -10%, +10% keys and a level wheel are provided.

10 **Disk Drive** – 3.5" disk drive for library storage of all system information.

11 **Submasters** – 24 submasters with programmable bump buttons.

# Specifications

**General Description**

The mini Lightpalette 90® is designed and manufactured by Strand Lighting for the control of performance lighting equipment. The system supports up to 1024 dimmers on 576 control channels.

Each console is furnished with command keypads, playback controls and 24 submasters.

The internal data processing programme is stored in non-volatile Read-Only-Memory. The system does not require the use of any peripheral storage or retrieval device to function. User programmed information is stored in Random-Access-Memory and is held for 30 days by a battery.

# Specifications Continued

**Standard Features**

● **Console Surface** The console consists of logically grouped keypads, level wheel and key switches. The keypads include display, edit, macro, function, control, alpha, record level and numeric groups.

● **Playback Controls** The playback controls include a set of positive action GO and STOP/BACK keys, eight playback faders logically grouped in pairs, eight playback manual override keys and a rate wheel with associated TAKE CONTROL key.

● **Submaster Controls** The system supports 24 linear fader submasters. Each submaster is provided with a key that is user programmable to perform a variety of functions.

● **Disk Drive** The console has one 3.5" disk drive.

● **Color Monitors** Each console drives two detached high resolution color monitors.

**Operating Functions**
**Setup**

● **Main setup Menu** Allows access to sub-menues. In this display the title of a show may be entered via the alphanumeric keypad.

● **System Parameters Sub-Menu** Allows definition of the number of dimmers and channels in the system. Changing these parameters does not erase memory.

● **Console Definition Menu** Any peripheral equipment may be fully locked out, record functions may be locked out or playback locked out.

● **Submaster Menu** Provides the means to define an individual submaster as pile-on or inhibitive, normal or over-ranging. In this menu, the button associated with each submaster may be programmed to act as flash on, flash out or be inactive. The button may also be assigned to act as an alternate action device to force the associated submaster into independent mode.

● **Defaults Menu** Defines operator selectable system parameters including track vs. cue-only, set level value, default profile and default fade timer.

● **Disk Menu** Permits access to disk commands including selective loading of cue, patch and profile information. Individual items or ranges may be loaded into an active system without overwriting existing data.

● **Clear Functions Menu** Provides access to functions permitting individual cues, patch or the entire system may be cleared.

● **Printer Requests Menu** Accesses printer commands for cue sheet, cues, groups, effects, submasters, patch, profile and note information. The system remains operative for any other commands during a print operation.

● **Channel Format** When activated, the function permits display of only active channels used in the cue list.

**Operating Functions**
**Patching**

● Each dimmer may be assigned an alphanumeric name of up to five characters and is addressable by this alphanumeric name.

● Patch information may be displayed by dimmer number, channel number or name. The display of each may be suppressed if desired.

● Any dimmer may be assigned a profile number to adjust both the end level (proportional patch) and the dimmer output curves. Profiles may be used to instruct a dimmer to act as an artificial non-dim or according to a custom curve created by the user.

● Up to sixty-four profiles may be created and used either as dimmer output curves or fade profiles. Endpoints (0 and 100%) may be specified as well as up to 19 intervening points (5% to 95%).

The system may be instructed to calculate intermediate levels between any two points or reset any curve to linear on command. A PROFILES display screen is available to create and preview these output and fade curves.

● Direct Dimmer Access permits individual dimmers to be temporarily isolated from their channels assignment and brought to a specified level for focusing or adjustment. Any dimmers isolated in such a manner may be previewed in the UNPATCHED DIMMER display. Dimmer levels controlled in this manner are not included in record commands.

**Operating Functions**
**Level Setting and Recording**

● Channel lists, recorded groups, submasters contents and cue contents may be used to construct a command line for setting channels at specified levels or controlled proportionally. All levels are collected on a "Highest-Takes-Precedence" manner. List combinations may be constructed using AND THRU and MINUS keys, and terminated using the * key.

● Command line channel lists may be edited using cursor keys and entries may be modified, deleted or inserted.

● All channel levels addressed via the command line may be controlled proportionally via a level wheel. The wheel is a velocity sensitive device such that the more rapidly it is moved by the operator, the greater the incremental change in level,

conversely, the slower it is moved, the more sensitive the wheel and therefore the more subtle the change.

● Direct action keys are provided to being selected channels to levels without the need for the @ or * push. Channels may be set to full, or any desired default level through use of the SET key, or may taken to 0% with the OUT key. Additionally, selected levels may be raised or lowered a point through use of dedicated direct action + 10% and -10% keys.

● Selected channels may be held at current levels or set to a specified level while all other channels are driven to 0 using REMAINDER DIM.

● RETURN may be used to restore channels to levels prior to the last command entered.

**Operating Functions**

**Level Setting and Recording continued**

● A selected channel or dimmer may be flashed between 15% and full for rapid identification or checking.

● A maximum of 999 groups may be recorded for fast recall of commonly used stage looks. groups may be recorded directly from the live output or created blind. Each group may be assigned an alphanumeric name which will appear in the PLAYBACK SUBS display when a named group is loaded onto a submaster.

● Cues may be recorded in any order and up to 9 cues may be inserted between any two in numeric sequence. Cues may have up to eight parts, each will separate starting points, fade times and end points. In addition to lighting fades, the initiation of a cue may begin an effect, a macro and an automated fixture console cue.

● Each cue may be recorded with the following information :

- Fade time up to 999 seconds, with split up/down times

- Delay time up to 999 seconds, with split up/down times

- Manual fade times

- Default fade times

- Special effects assignment

- Profile assignment

- Auto-follow of next cue with wait of up to 999 seconds

- Macro command activation

● The system may be selected to operate in TRACK mode, whereby channel modification track into following cues; or in cue-only mode, whereby the desk acts as a crossfade system. This selection may be made in the SETUP display, or chosen on a cue by cue basis. Additionally, a BLOCK CUE command is provided to prevent tracking of channel modifications past the specified point.

● A channel may be selected for viewing and modification in the CHANNEL PATH display.

The selected channel's level is shown for each cue in which it has been recorded. Modifications are recorded directly in this display; no record command is required.

● A CUE SHEET display is provided to permit manipulation and editing of cue data. Active, next and previous cue are indicated by color coding.

● The CHANNELS IN USE display provided the total number of cues in which each channel has been used.

● A CONTROL display provides immediate reference for the origin of each channel's level, whether cue, submaster or wheel. If the level is being contributed by a submaster, the number of submaster will be indicated.

● Eight function keys are provided which change their operation with change of display and operating mode. This techniques serves to reduce the total number of surface controls and therefore operational confusion.

● Any cue may be used as the basis for another cue through use of the COPY TO CUE and COPY FROM CUE commands found on the function keys in the PREVIEW display.

● The live output may be recorded without the contribution of active submasters using the RECORD WITHOUT SUBS command in the LIVE display.

● The movement of a selected channel may be previewed through a series of cues through use of the SEARCH command in the LIVE display.

● The contents of a submaster may be re-recorded into the assignment group or simply recollected by the submaster after adjustment by the level wheel through use of the UPDATE SUB + GROUP and UPDATE SUB commands in the SUBMASTER display.

● An on-line NOTEPAD display is available at all times for the recording of messages and reminders via the alphanumeric keypad. The notepad will be held in system memory and the notes may be printed out.

**Operating Functions**

**Playback**

● A single GO push is capable of starting an entire cue, composed of up to eight parts. Manual override of a recorded time is available on an associated linear fader. Proportional rate control of an active cue or cue part is available via the rate wheel.

● System architecture permits a maximum of 128 simultaneous fades, including fades on manual playbacks which are available for manual override, "phantom" or active but inaccessible fades, and fades within effects.

● A cue or cue part of a fader may be stopped, reversed or converted to manual at any time while the fades is active.

● A group, effect, or series of channels may be assigned to a submaster for proportional level control and playback. Multiple submasters may be loaded using a command string or by use of a pre-programmed macro key. Output levels may be transferred to control of a submaster directly using a RECORD SUB command.

● A load command to an active submaster will not occur until the submaster fader is brought to 0.

● Group, effect, or channel information loaded to submasters, as well as submaster levels are available for preview on the PLAYBACK SUBS display.

● Eight user programmable macro keys are available to permit single key execution of command strings. Each macro may contain up to 32 keystrokes. Macros may be executed by a cue number.

## Operating Functions
## Special Effects

● A total of 999 special effects may be recorded. Any effect may be activated or ended by a cue, or may be loaded to a submaster for manual control of levels.

● Each effect may contain up to 99 steps. Each step may be comprised of cue memories, groups, or individual channels at levels.

● Fade in, dwell and fade out times may be recorded for each step. Each step may contain overall high and low levels applied proportionally to all levels within the step.

● Function keys are provided to permit default times and attributes to be applied to all steps in an effect.

● Command lines used in programming effects steps may be edited using <, > and HOME keys. Entries may be modified, deleted or inserted.

● An effect may be assigned any combination of attributes which control its direction, including positive, negative, reverse, bounce, build and random.

● An effect may be assigned an alphanumeric title which aids identification when previewing or when the effect is loaded to a submaster.

● A test function is provided to instantly stop and start an effect for creation and preview purposes.

## Operating Functions
## Diagnostics and Key Substitution

● A macro key may be programmed to substitute for any key on the console surface in the event that a key is damaged or becomes inoperative. The code for this function may be entered at any time, even after the key has ceased to function.

● Memory diagnostics sequentially write and read all locations in memory with various test patterns and report any failures to the operator.

● Disk diagnostics write and read all locations on disk with test data and report any failures to the operator.

● Video diagnostic test all dot positions for visibility, viability of the character locations and legibility.

# Peripheral Equipment

● **Hard Copy Printer** Permits a printed record of cue, group, effect, patch, submaster and notepad programmed information. Printing is a background task and the system will operate normally while printing occurs.

● **Hand-Held Remote Control** A maximum of two hand-held remote controls may be connected to the mini Lightpalette 90®. Each control contains a 14 character LCD for command line and level control. The hand-held control may be used to facilitate luminaire focus without affecting other activities. Alternatively, the control may be used to execute cues, effects and macro commands.

The Main Control provides lock-out facilities to prevent interference by hand-held controls when desired.

● **Express-Track** Off line editing programme for use on Apple® Macintosh® computers. Screens include CHANNEL VIEW, CUE LIST, INFO VIEW, TRACK LIST, OVERVIEW and JOURNAL. Channels may be viewed as STAGE, PREVIEW, GROUP and SUBMASTER. The programme offers full patching and system setup facilities. The mini Lightpalette 90® display is enhanced to show direction of moves, hidden commands, parts, unused channels and more, using a friendly mouse driven style of operation.
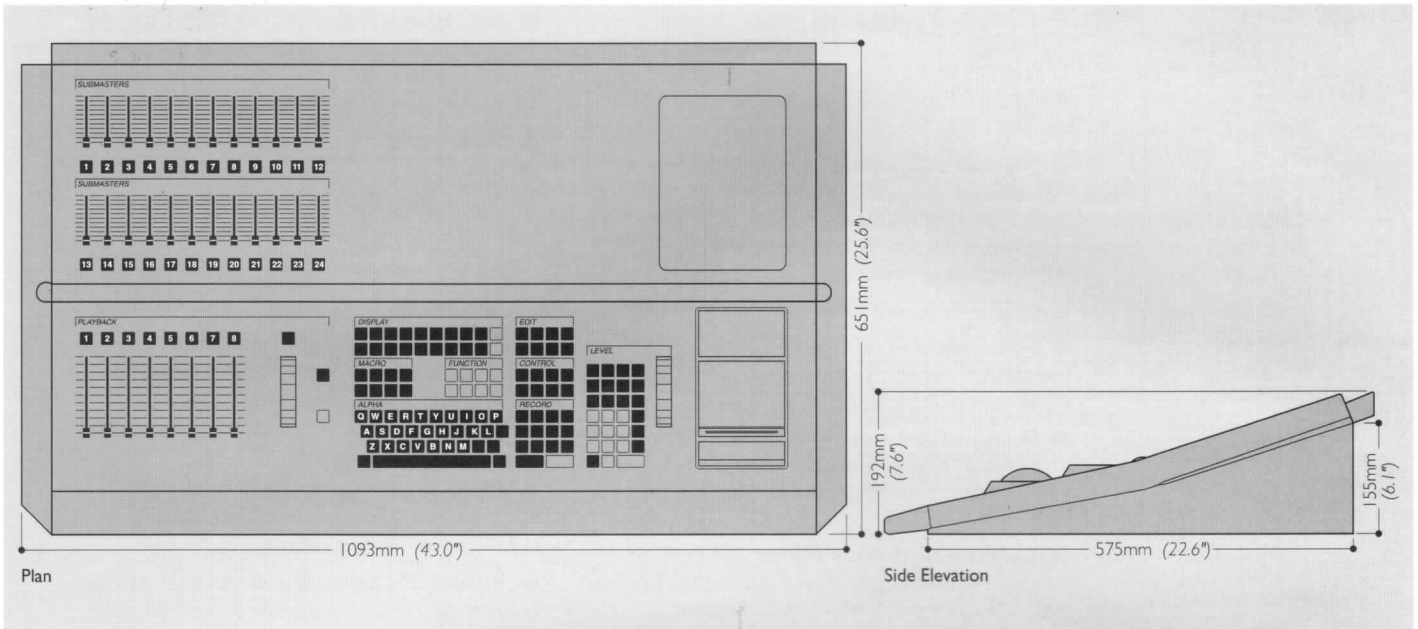
# Technical Specifications

**Mains Supply :**
- 90-130V ac or 180-260V ac 50/60 Hz, 10A
- voltage auto sensing
- three convenience mains outlets

**Video :**
- two RGB TTL Video signals, compatible with IBM EGA
- remote color video capability, max 10 dual monitor locations

**Remote Control :**
- two hand held remote control input connections
- one remote device control output, to synchronise with control devices not manufactured by Strand Lighting

**Dimmer Output :**
- two outputs of DMX 512 on USITT standard 5-pin XLR male connector

**Printer :**
- RS-232, D9 male connector, 1200 baud, 8 bit, 1 stop bit, no parity, busy indicated by MARK level on SSD.

# Dimensional Drawings



Plan — 1093mm (43.0")

Side Elevation — 575mm (22.6")

651mm (25.6")
192mm (7.6")
155mm (6.1")

# Ordering Information

| Product | Item Number | |
| --- | --- | --- |
| | Europe | US |
| mini Lightpalette 90® Console | 73 092 00 | 9200 |
| Single colour monitor, 120V 60 Hz | – | 9425 |
| Single colour monitor, 220 V 50 Hz | 73 088 50/B | – |
| Hand held remote focus | 73 081 66 | 8166 |
| 80 column printer with signal cable | 73 088 52/B | 8940 LP |
| Vinyl dust cover for console | 73 094 31 | 9430 |
| Remote video interface, 120V 60Hz | – | 8335 |
| Remote video interface, 220V 50Hz | 73 083 35 | 8335-220 |

# Strand Lighting®