PRO PALETTE

An Updated Classic in Lighting Control

Strand Lighting

Pro Palette

The proven technology and reliability of Light Palette in a table-top console.

Features

- Support of 768 dimmers on 512 control channels
- AMX192 and DMX512 dimmer protocol
- Dual, detached high-resolution CRTs
- Compact control surface with separate processing tower
- 6 playback faders
- 9 submasters with overrange
- Electronic patch
- Hand-held backup terminal

Peripheral Equipment

- Hand-Held Remote Control — This unit allows access to many functions of the main console
- Hard-Copy Printer — Provides a record of any or all recorded information for easy and quick reference
- Remote CRTs — Monochromatic remote displays

Guide to the Console

A Two CRT displays provide clear and concise system information. The left CRT provides a cue sheet listing and fader status display. The right CRT displays a system setup menu, live mode and preview operation, submaster, group, patch and effect data.

B Nine submasters allow manual pile-on of channels at recorded levels. Each submaster has 50% overrange capability.

C Six playback faders are provided. 1 through 4 are single crossfaders; 5 and 6 are split crossfaders. Any fade can be programmed for manual operation; or, if timed, can be taken over manually without need for matching.

D The rate wheel allows proportional modification of recorded fade rates. The ALL MAN button can take control of all running fades for manual completion.

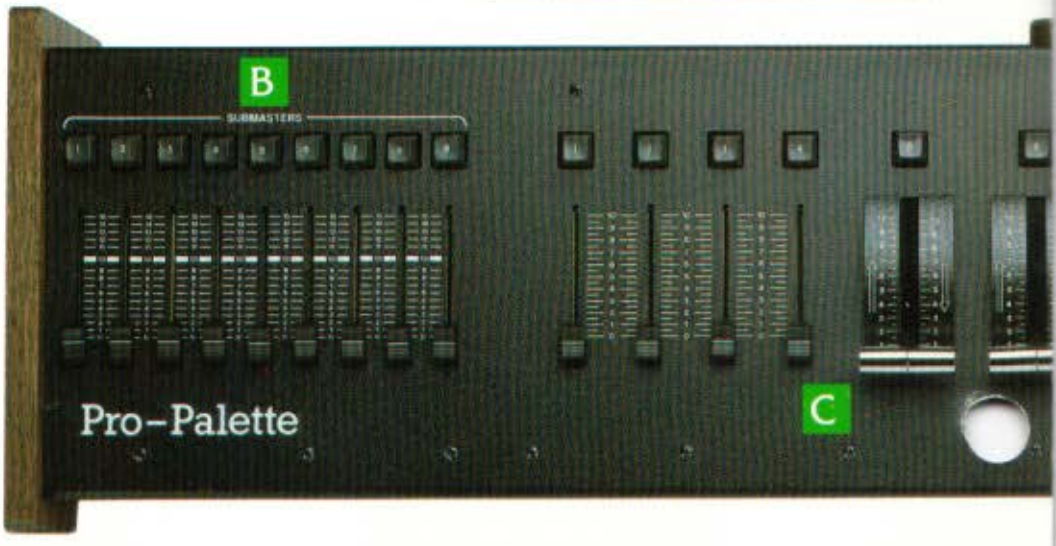
E Go and Stop/Back buttons activate cues in pending, halt cues in progress, and step back through the cue sheet listing.

F The level wheel is used to adjust selected channel and group levels, on a proportional basis. Channels set at zero or "full" will regain proportional difference as required. This wheel is also useful as a grand master.

G The commands keyboards are used to enter, modify and record all intensity and cue sheet information, as well as patching, submaster, group, effects and profile assignments.

H The display keyboard provides immediate access to stage or preview display of cues and cue parts, dimmer-to-channel assignments, effects, profiles and setup information.

I The processing tower contains the system keyswitches, data input and output connectors, disk drive and all electronics. The unit is designed for quick and easy access to all components.



Pro Palette Specifications

GENERAL DESCRIPTION

The Professional Palette console shall be a microcomputer-based lighting control system specifically designed and constructed for the control of theatrical and television dimming systems. The control console shall utilize high-speed random access memory for the processing of up to 768 solid state dimmers on a maximum of 512 user-selectable control channels.

All major electronic components shall be housed within a stand-alone electronic crate, providing ease of access for maintenance and repair. The console desk shall be engineered to provide instantaneous and explicit operation, incorporating two detached monochromatic displays to inform the operator of lighting and console status at all times.

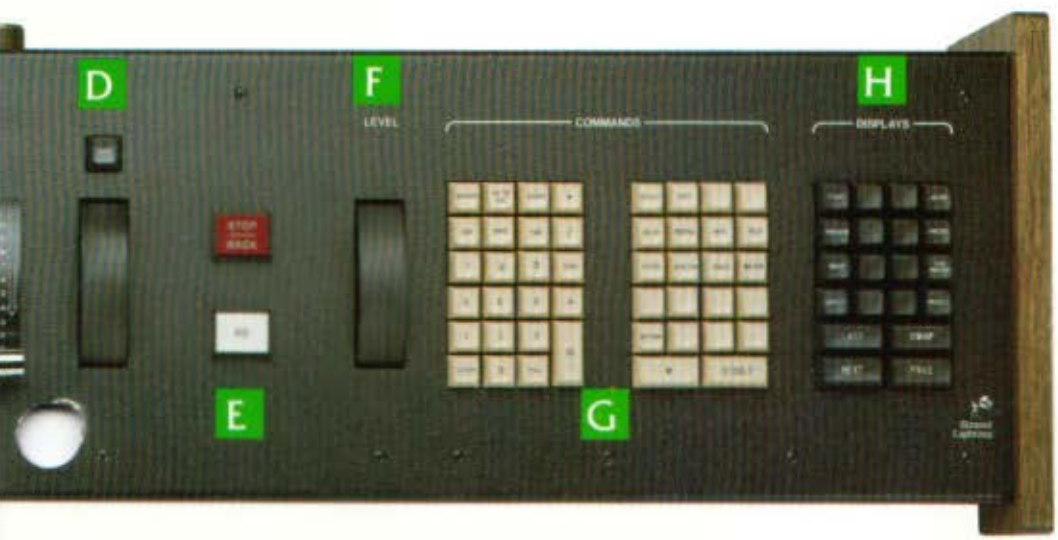
The operative data processing program shall be a non-volatile read-only-memory. The control console shall not require the use of any peripheral storage/retrieval devices such as disk drive or cassette to function. Such equipment shall be for library storage only. In case of power failure, the random access memory shall be retained by a battery backup power supply for 30 days.

The control surface shall be of desk-top construction. The desk shall be constructed of code-gauge steel and finished in black. The dimensions shall not exceed 46" wide × 13" deep × 7" high.

STANDARD FEATURES

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

1. 3 24-way keypads controlling all functions of set-up, intensity setting and recording, cue sheet composition, playback, disk recording and print out.
2. 2 detached, high-speed, dynamic CRTs for display of and access to all of the above functions and information.
3. 1 level wheel, for intensity control of a channel, group of channels, or the entire stage output without need for matching.
4. 1 "Go" button for activating cues, each of which may contain up to six parts, and an automatic follow-on.
5. 1 "Stop/Back" button for halting active cues and reversing cue action.
6. 1 rate wheel for direct modification of running fades and effects.
7. 2 split-handle crossfaders for timed or manual control of increasing and decreasing channel levels.
8. 4 single-handle crossfaders, timed or manual.
9. 9 submasters with over-range capability of up to 150% of recorded values.
10. 1 disk recording unit for library storage of all recorded information
11. 2 keyswitches for system on/off and record/lock.
12. Memory backup system comprising a control unit, a separate power supply, microprocessor and memory cards so that cues may be loaded from the main memory and played back if required. The back-up tracks the main system so that the next cue is automatically ready to run when the back-up is switched on.



OPERATING FUNCTIONS

The system shall provide at least, but not be limited to, the following functions:

A. Set-Up

1. Display of percentage of remaining cue capacity. Percentage of memory remaining shall be determined by number of moving channels recorded in each cue.
2. Assignment of dimmers to control channels through electronic matrixing on a one-to-one basis, or in any combination.
3. Designation of the submasters as inhibitive, additive or split (submasters 1–6 additive and 7–9 inhibitive).
4. Programming of up to nine non-linear fade profiles.
5. Designation as standard display or channel format, whereby only channels that have been set to a level in a cue, group or submaster, or on stage will be displayed.
6. Memory-to-disk and disk-to-memory transfer.
7. Control of various peripheral equipment.
8. Selection of DMX512 and/or AMX192 dimmer output protocol.

B. Level Setting and Recording

1. A channel, several channels, a group or series of groups may be addressed using "Thru" and "And." Levels may then be set digitally and on the level wheel.
2. Any or all channels may be recorded into a group, a cue or a cue part, regardless of the level origin.
3. Levels may be modified proportionally by the level wheel or submasters, even after they reach a level of full.
4. All l evel settings may be accomplished "live" or "blind."
5. A specified channel, list of channels or groups of channels, may be held at their levels while all others are driven to zero using "Remainder Dim."
6. "Return" may be used to restore a channel or group of channels to levels prior to modification.
7. The "move" instructions for a selected channel may be displayed and modified through a series of cues without disturbing stage output, using the "Search" function.
8. Cues may be recorded in any order. Up to nine cues may be inserted between any two numerically sequential cues.
9. Each cue may contain up to six parts.

10. Cues may be copied into new cues or deleted in live and blind modes.
11. Groups may be copied into new groups or deleted in live and blind modes.
12. Each cue may be recorded with the following information:
    a. Fade time of up to 999 seconds, with split up and down as required
    b. Delay time of up to 999 seconds, with split up and down delay as required
    c. Manual fades times
    d. Special effects assignment
    e. Profile assignment
    f. Link-to-cue command
    g. Automatic follow of a next sequential cue in up to 999 seconds
13. Cue timing information may be modified live or blind with a simple command line address, without affecting stage levels.

C. Playback

1. One button starts an entire cue, comprising up to six parts.
2. Display of running fade times and delays are dynamic.
3. Cues assigned to faders may be stopped, reversed or converted to manual at any time. The recorded time value may be proportionally adjusted with the rate wheel.
4. Cues may be played back out of sequence in a specified time or manually operated.
5. A channel or group may be stopped, held out of a running cue and controlled independently.
6. Cues and submasters shall interact in a highest-takes-precedence manner.
7. Dimmers may be substituted or unpatched at any time.
8. Submasters are always on line for modification at any time.
9. Non-moving channels will "track through" without requiring duplication into each cue. "Move" instructions may be placed in a single cue, inhibiting the track function.

D. Special Effects

Up to 100 effects may be defined. The effect may be assigned to any cue for automatic playback. The same effect may be called any number of times from any place in the cue sheet and up to six (6) effects may be run simultaneously. The rate of an effect running in the cue sheet may be modified by the rate wheel.

The effect steps and other attributes are defined in the Effect display. Channel lists of up to eight elements each may be specified for up to 80 steps. Channel "high" and "low" levels may be set, and any combination of effect attributes may be specified.

If no attributes are set, the step list is considered "positive" and executed in order from step 1 through the last step specified. At the completion of the last step, the step list is executed again. This continues as long as the controlling submaster is active, or until the cue completes.

Other chase attributes, if selected, affect the execution as follows:

1. Negative — At the beginning of each pass through the step list, all channels in the effect are activated to the specified high level. Each step will force its associated channels to the specified low level and restore channels forced out by the previous step.
2. Alternate — Each pass through the step list alternates the chase output from positive to negative.
3. Reverse — Causes the step list to be executed in reverse order, beginning with the last step specified.
4. Bounce — Each pass through the step list alternates the chase output from forward to reverse.
5. Build — Prevents channels in the previous step from returning to the low level. Each channel activated remains on until the entire step list is executed. If the list is performed in a negative sense, each channel forced to the low level remains so until the entire step list is run.
6. Random — All steps in the effect are executed, but in a random order.

E. Diagnostics

There shall be a self-test diagnostic program provided as standard. The diagnostic program shall test memory, disk and video operations.

1. Memory Test — All locations in memory are sequentially written and read with various test patterns.
2. Disk Test — All locations on the diskette are written with test data, then read. Failure can occur if the disk drive is open, no disk is inserted, or the disk is write-protected.
3. Video Test — All dot positions are tested for visibility, viability of character locations, and legibility.

F. Back-Up System

After cues have been transferred from the main memory, the back-up system is ready for use. During normal playback, the back-up tracks the main system so that should a problem occur, it is only necessary to turn the keyswitch to "back-up." The lighting on stage will be maintained, one CRT will be activated and the next back-up cue will be loaded onto the manual fader. Subsequent fades will then playback the back-up cues in sequence and display the information on the CRT. Also, channels may be set and new back-up cues recorded from the control module.

PERIPHERAL EQUIPMENT

Optional peripheral equipment may be added to an existing system at any time. All wiring and software provisions are furnished in the system on its initial delivery.

1. Hard Copy High-Speed Printer — Provides a printed record of cue level information, the complete cue sheet, patch, submaster assignments and effects.
2. Remote Video — Output jacks are provided for remote CRT displays.
3. Remote Control Module — This shall be a hand-held module containing a keypad controlling dimmer, channel, group and cue access, level setting, and cue activation. It shall be provided with a 6′ control cable and one 25′ extension cable. The module shall plug directly into the processing tower or into remote receptacle stations as required. Receptacle stations shall be provided as required in the bill of material.

POWER REQUIREMENTS

The standard control system shall operate on 120 volts, 60 Hz, two-wire and ground AC power. 220/240 volt, 50 Hz is also available. The console shall be provided with one 6″ power cord, 25′ data control and overtemperature cables.

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