Performance Controls

Features

- High Speed Processing Power
  For consistent, reliable operation of up to 400 control channels
- Super VGA Graphics Display
  Special format displays easy access to status of controls
- Unique Cursor Control Commands
  For ease in the set-up and fast access to edits in commands
- Alpha Numeric Label Capacity
  For quick identification on all recorded information
- Eight Pages x 24 Manual or Timed Playbacks
  192 playbacks for channel, group, submaster or cue information
  24 tri-colored LEDs with bump buttons to indicate status
- Four Pages of Patch Tables
  Custom Alpha Patch available
- Programmable Macros
  For customizing complicated command sequences
- Unique Cue Tracking Screen
  Including the capacity for real time edits with global effects
- Exclusive Auto-Record Selection
  For automatic recording of information in random access memory to disk, based on user-selectable time intervals
- Integrated Systems Control
  CC Coded Control of SubCommander and ISC remotes

EnAct 400 Control Console

Enhancements

- Midi In & Out Communications Ports
  For remote access and operation of recorded information
- SMPTE Input Port
  A frame reference input for precise control from an outside source
- Designer's Remote/Backup
  For designer's convenience and redundancy

Description

The **EnAct 400** offers a new level of affordable performance controls for any facility. The **EnAct 400** controls up to 1000 channels in a clear display for easy operation. Shows with up to 1000 units of memory can be stored on a single 3.5" disk. The setup screen allows the user access to the system parameters, disk functions and and ISC download and control options for SubCommander remote control.

Designed for simplicity, **EnAct 400** offers innovative cursor controls for positioning in screens and edit functions as well as recording information for cues, groups and submasters. Information can be introduced in either a *highest takes precedence* or *last action* format when organizing cues.

High speed entry is enhanced in the **EnAct 400** with 999 user-addressable macro functions which reduce common keystrokes to a single button selection. This allows the user to customize the features of the console and assign them to the disk.

The **EnAct 400** offers flexibility with four principal faders and four phantom faders for playback of recorded cue information. The status of the faders is always present, with the active cue as well as the next cue line displayed in the playback window on the CRT. With cue information as well as names present on the cue sheet, it's easy to find information and track the progress of the performance.

The power in **EnAct 400** comes from the eight pages of 24 programmable linear playbacks which can store channels, groups, or cue information. The associated bump buttons and tricolor LED's indicate the type of information loaded in the playback and provide the operator with multiple "GO" options. The 24 playbacks can operate manually or with timed information consisting of *up, down* and *dwell* times. The playbacks also support alpha-numeric labels.

The safety features of the **EnAct 400** are integrated in the design. The *auto-record* feature allows memory to be automatically recorded to the disk in a timely and continuous manner. The discrete *disk control* features allow individual record and recall of cues, groups, submasters, patch, and configuration changes to assure that the information being transferred is up-to-date and accurate.

The preferred fader feature allows the user to assign a cue to a specific playback fader so that the cue will always appear on the same fader in the same sequence.

EnAct 400...Engineered to Perform!

Order Information:

- ❒ EnAct 400 Console
- ❒ SVGA Monitor
- ❒ Dust Cover

Options:

- ❒ Hand-Held Remote
- ❒ High Speed Printer
- ❒ Designer's Remote
- ❒ Expanded Memory
- ❒ Alpha-numeric Keypad
- ❒ Enhanced Performance Package
- ❒ Fully Redundant Tracking Back-up
- ❒ Tracking Back-up
- ❒ Second SVGA Monitor

JOB NUMBER:

JOB NAME:

CUSTOMER:

P. O. #

APPROVAL STAMP

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PRODUCT DATA SHEET
P452

Specifications — EnAct 400

I. Description:

A. The EnAct 400 control console shall be a high-speed microprocessor-based lighting control system designed specifically for theatrical and television dimming systems. The system shall have the capacity to address up to 1000 control channels and 1024 dimmers incorporating USITT standard DMX-512 protocol. It shall be possible to expand the number of channels and dimmers with the use of additional plug-in control electronics.

B. All principal control electronics shall be of plug-in design, with locking connectors as required, housed within the low-profile console. Not including SVGA drivers and channel cards, the maximum number of printed circuit boards shall be two. All control outputs shall be based on locking-style connectors, insuring positive connection. Console dimensions are: 34½"L x 15½"W x 5"H (without CRT).

C. The console shall be designed to generate a graphic quality SVGA output signal for a detached color CRT for display of all control functions and information status. Display colors shall alert the operator to active operating conditions. The system shall require only one CRT for operation. The SVGA driver card shall be of standard computer design and plug-in replaceable.

D. The system shall be capable of adding an additional monitor without the addition of control electronics or software with the exception of the standard PC compatible SVGA card.

E. The controls in the console shall be logically grouped into keypads, push buttons and linear potentiometers designed for numeric input, function selection, and manual controls for automated playback. All controls shall be clearly presented for easy selection in a low-light setting.

F. The console shall not require the use of any periphery device for operation. The operating program shall be stored in a modular programmable read-only memory. In the event of power failure, random access memory shall be retained by a ten-year lithium battery.

G. The console shall be equipped with a 3.5" high-density disk drive for recorded information storage. The setup menu shall allow the user to access disk functions; including individual sections of memory and a selectable auto-record feature, permitting the user to select an interval when the console will automatically record all updated information.

H. The console shall operate in the Integrated Systems Control environment for direct control of SubCommander's mode, remotes, and memory downloads through Control Console (CC) commands.

I. The program for the system shall be located in a user accessible plug-in EPROM to allow for ease of system software update.

II. Standard Features:

The console shall be provided with the following as standard features for consistent operation:

A. One high-resolution Super VGA graphic quality detached color CRT for display of, and access to, the addresses of system parameter screens, while displaying fader and cue status information to include:

1. Stage: for channel, fader, and cue information. At minimum, the screen shall display 200 control channels; eight playback fader operations; three lines of cue information including cue number, cue name, type of cue, up time, down time, up delay time, down delay time, preferred fader, macro activation information, effects activation information, and system identification.
2. Preview: for review and address of recorded cue information without affecting the existing stage picture. Screen shall allow for revision of cue type, channel levels, up time, down time up delay time, down delay time, preferred fader, macro activation information and effects activation information.
3. Group: for review and address of group information.
4. Submaster: for review and modification of submaster information. Screen shall allow for modification of channel levels, submaster type (manual, timed, advancing,), up time, dwell time, and down time.
5. Playback: for status of submasters in progress. Display shall include percentage completion of submaster, page designation of submaster, name of submaster, up, dwell, and down times, and source of submaster information.
6. Live: for display of all cue command line information. Display shall present cue number, cue name, up and down times, up and down delay times, cue link information, effects activation and macro activation.
7. Track: for display of cues and levels in a spreadsheet type format.

B. Additional displays:

1. Patch: for organization and review of dimmer-to-channel at-level assignments. Patch shall have two styles of display, patch by dimmer and patch by channel. Patch shall allow the designation of a dimmer as a non-dim. The Patch shall allow such selected dimmers to be given a specific 'switch-on' level. Patch shall allow the designation of a dimmer as a constant. Patch shall allow the assignment or "parking" of dimmers to a submaster handle. Dimmers so designated will not be recorded in any cue action. The system shall have four distinct patch tables.
2. Profile: up to fifteen profiles shall be selectable and assignable to dimmers. Profile shall allow the shape of the fade to be altered and assigned to the individual dimmer via the Patch screen.
3. Setup: for selection of system parameters. Setup shall allow the establishment of defaults parameters such as default tracking, default preset, default playback times. Setup will allow the activation of SMPTE format and MIDI format inputs. Setup will allow the initiation of remote monitors, designers remotes, hand-held remotes, and initiate actions at additional system compatible memory units such as SubCommander dimmer electronics and stage manager's panels. The Setup shall also allow the deactivation of editing features to assure consistency of playback.
4. Source: to provide information on a channel by channel basis as to source of the level information. Channel levels can be from Submasters, faders, manual selection, or effects.
5. Cue: for a summary of cue names and numbers.

C. Additional Keys:

1. Cursor position keys and a numeric keypad shall be used to enter information to create channel, group, submaster, cue, effects lists and command line information. These keys shall have the capacity to select or edit information in the primary screens.
2. The system shall include display keys, which quickly access a minimum of ten distinct screens for console status. The active cue and fader status along with the current and next cues shall be present in any active display.
3. Information keys shall offer direct access to commands and routines used in the organization and replay of recorded information to include:

Merge:	Adds channels and levels on "highest takes precedence" basis.
Insert:	Adds channels on last action basis.
Restore:	for return to status prior to last entry.
Update:	for immediate rerecording of cue level information from any stage composition.
Rem Dim:	to force non-selected channels to zero.
Select:	for recording options.
Flash:	for channel identification.
Jump:	for pre-programmed cursor movement.
Up/Down:	for channel level default address.
Next/Last:	for CRT repositioning.
Macro:	for displaying Macro screen for editing or input.
Macro#:	for executing Macro called.
Cue Only:	Shall record information in stage picture into the current cue on a "this cue only" basis.

D. The system shall include a command keypad to address the attributes of cues, groups, and submasters. These keys present information on either a last action or highest-takes-precedence basis.

E. An action keypad shall include oversized GO and STOP buttons, as well as GO TO and RATE keys which initiate or modify actions.

F. There shall be a principal playback fader section, which includes four playback faders, fader takeover push buttons, and a master with blackout switch.

G. The system shall include a submaster section with twenty-four linear sliders with bump buttons and tricolored LEDs, which can be assigned to operate in either pile-on or inhibitive status. Submasters can contain specific groups, cues, channels, or any combination thereof, with a manual or timed status. The color of the LEDs shall indicate the status and type of record loaded without the CRT.

H. The system shall offer a dedicated HELP key.

I. There shall be a high-inertia proportional rotary encoder with a textured surface, which can address or take control of channel levels or fade rates, for individual or mastered control of input or output information.

J. The record function may be defeated by a key switch on the control surface.

III. Operating Functions:

The control console shall provide the functions outlined for minimal operation:

A. There shall be a configuration setup menu to display options for operation to include: user specific clear commands, load and save functions, activation of remote inputs, bump button operation, real-time clock, submaster functions, standard level adjustments, basic disk and print functions, and diagnostic functions. Operating parameters shall be changeable without clearing memory assignments.

B. A patch feature shall allow the user to assign one or more dimmers to a channel at a specified level. Any dimmer may be assigned as a non-dim. Fifteen user programmable profiles can be assigned, which allow actual outputs to be programmed with a minimum of twenty steps. Dimmers may be isolated from assigned channels and held at user-specified levels where outputs are exempt from the recording cue process.

C. Control channel lists can be constructed by cursor positioning, and the use of: and, thru, except, at, full, clear and enter keys, in combination with numeric values. Level adjustments can occur through the up and down keys. It shall be possible to restore a channel list to established levels immediately prior to the last entered command.

D. It shall be possible to capture the current stage output or contents of selected channels, or cue blocks for modification, on the wheel. Selected channels may be held at existing values while others are forced to zero. Channel levels shall be altered in a single cue only, or may track through a series of cues. The display shall indicate the status of any channel addressed or recorded.

Channel levels may be set, modified, or displayed in either stage or preview modes. It shall be possible to determine the source of the channel output by selecting the source display.

E. Channels shall be assignable to groups for recall of repeatable proportional relationship. There shall be the capacity for a minimum of 999 groups, which support alpha-numeric labels. Groups can be recorded independently or captured from the stage display.

F. Channels shall be assignable to playbacks in either a group or cue configuration, or a direct basis without any other record feature. Information assigned to playbacks can be played back by either manual or timed modes. Timed playbacks can be stopped and restarted. An overall dwell time as well as up and down times can be defined in timed playbacks. Displays shall support an alphanumeric label.

G. Any combination of selected channels, groups, and playback inputs can be recorded into a cue action. Cue actions can have separate up and down times, with delays up to 100 minutes. Cues can be recorded in any order. Up to nine cues can be inserted between any two whole numbers. Each cue can contain up to 25 parts with an individual start and duration time assignment. Each cue can be assigned an alpha-numeric label. Attributes assignable to cues are: auto start, manual, multipart, preset, track, link to, profile, and a preferred fader status.

H. A track sheet display shall identify any channel addressed in a cue as either active or passive. It shall be possible to edit cue name, type, and time information with global effect in the track sheet. Additionally, it shall be possible to edit channel levels.

I. A cue sheet display shall be provided which lists cues in numeric order with command line and label information.

J. Recorded information may be played back on the principal faders in either a manual or timed mode by selecting the GO command. Timed cues assigned to a fader may be stopped, reversed, or converted to manual on command. The time values may be adjusted by the encoder wheel. The status of the eight primary faders is displayed at all times.

K. Submasters: Submasters may be initiated in manual or timed mode. Active Playback/Submaster controlling channels shall be identified by a tricolor LED.

Green LED shall indicate that the Playback/Submaster contains manual channel levels.

Amber LED shall indicate that the Playback/Submaster contains timed channel levels.

Red LED shall indicate that the Playback/Submaster has been designated as an "inhibitive" submaster with channel information.

L. The channel lists contained in a playback can be viewed in the sub display with current fader information present. The submaster playbacks shall support a minimum of four pages (96 records) of information. A display shall identify the labeled information and the status of any playback at any time.

M. There shall be the capacity to initiate a series of up to 100 key strokes which define an action through a macro command. Macros shall be initiated by start-up, or direct key input with a capacity for 999 recorded sequences.

N. Macros can be initiated by either inputting the Macro number through keystroke action or a Macro may be activated as part of a cue

O. Effects:

1. Each effect shall contain up to 100 steps which are made up from recorded groups. Each group designated as a step in an effect can have an individual step time. If no time is designated, the effect step time is the default time selected for the effect.
2. Each effect can be recorded with any combination of attributes, including chase, bounce, random, and invert.
3. Additional Effects can be activated through cue action. Effects may be given a channel designation as the "master" for the effect, allowing the effect to be faded as part of normal crossfader action, loaded to the effects masters, or loaded to a Playback/Submaster.
4. It shall be possible to run two distinct special effects simultaneously on dedicated effects faders with separate control of both level and rate.

P. Internal diagnostics routines shall be available in the setup screen. The diagnostics shall test memory, disk read and write functions, key inputs and video drivers.

IV. Enhancements:

A. High Speed Printer (Port Standard)
B. Hand-held Controller
C. Midi In & Out Communications Ports
D. SMPTE Input Port
E. Designers Remote/Backup
F. Rack Mount Show Controller

V. Manufacturer:

The console shall be the EnAct 400, as manufactured by Electronics Diversified, Inc., Hillsboro, OR 97124, U.S.A.

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