

- **EIGHT NONVOLATILE PRESETS**
- **CAN BE COMPUTER CONTROLLED**
- **TWO-LEVEL PASSWORD SECURITY**
- **CONSTANT-Q, 1/3 OCTAVE FILTERS**
- **PA-422 COMMUNICATION INTERFACE**
- **FILTERS ADJUSTABLE IN 1/2 dB STEPS**
- **PRESETS MAY BE INDIVIDUALLY LOCKED**
- **SWEEPABLE LOW- AND HIGH-PASS FILTERS**

The DEQ-I and DEQ-II High Resolution Programmable Equalizers utilize 29 constant-Q, minimum-phase 1/3-octave combining filters on ISO centers. Filter and output gain adjustments are precisely executed in 1/2 dB steps over a  $\pm 12$  dB range. Second-order low- and high-pass filters, sweepable on 1/6-octave frequency spacings, provide additional system control.

Both models offer uncompromised audio performance for the most demanding professional sound applications and a host of advanced operating features. These include eight nonvolatile Presets for storage of filter settings, easy on-board or remote programmability and a security system that protects far better than a removable front cover.

### SYSTEM SECURITY

An important feature built in to both the DEQ-I and the DEQ-II is an advanced, two-level Password Security System that insures maximum security against unauthorized tampering. Two passwords, one for System level and the other for User level, allow a System Administrator to prevent access to some or all of the equalizer's functions. At the User level, the operator may not lock or unlock Presets, set or edit passwords or name an equalizer.

### FLEXIBLE CONTROL

The contents of any DEQ-II Preset may be modified by either its own control panel or by a remote controlling device, such as an IBM compatible or Macintosh computer or another DEQ-II.

Programming the single rack-space DEQ-I is accomplished either through its Communications Port, using a PC or a DEQ-II, or through the DEQ-I's internal controls.

In a large system, one DEQ-II may serve as a "Master Controller" with DEQ-I's operating as "Slaves." Or, if the system is spread out to include equalizers in multiple locations, the use

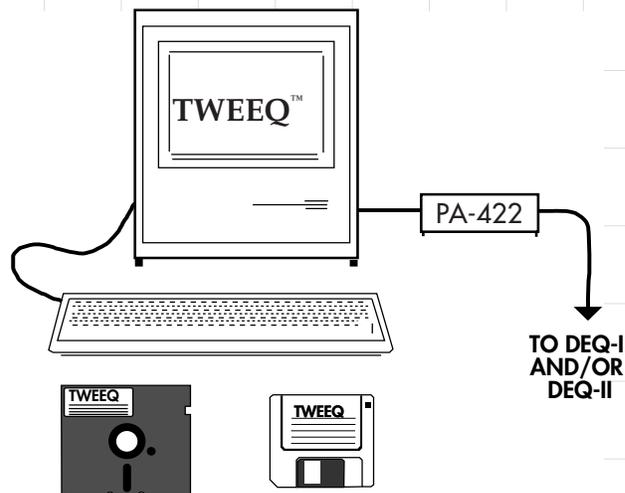
of multiple DEQ-II's will provide the flexibility of total control from each one.

Communications between all DEQ's and any other controllers in the system complies with PA-422 protocol.

### TWEEQ<sup>TM</sup> SOFTWARE CONTROL

Optional TWEEQ software, available for both IBM compatible and Macintosh computers, makes remote control of both models simple. While presenting a visual control interface with a similar appearance and operation to the DEQ-II's front panel controls, Oxmoor's TWEEQ software offers enhanced resolution for maximum adjustment precision. Another significant advantage of using TWEEQ is that multiple curves may be stored on disk.

The accessory TWEEQ software package includes software, a serial protocol conversion box that makes your computer PA-422 compatible, and a cable to interconnect your computer and the conversion box.



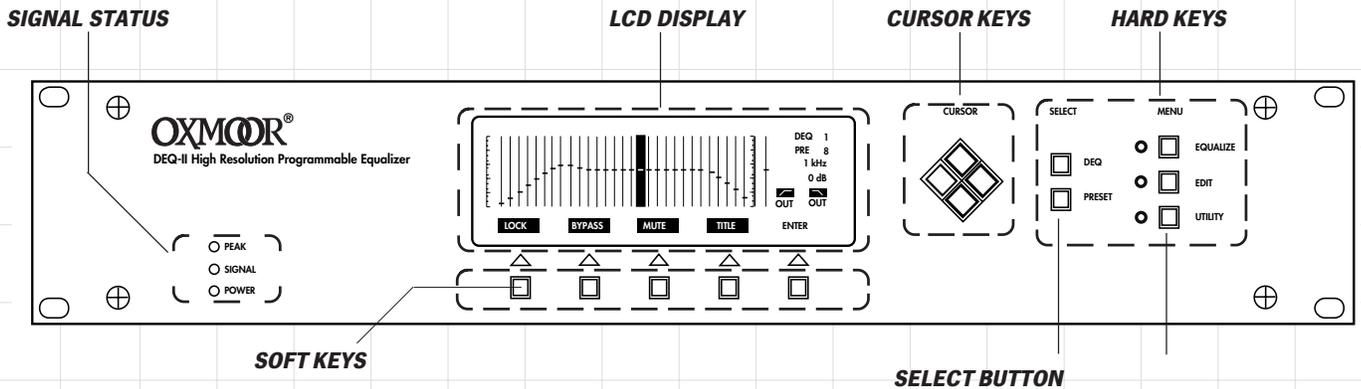
**TWEEQ<sup>TM</sup> SOFTWARE FOR  
MACINTOSH OR IBM COMPATIBLE COMPUTER**

## DEQ-II CONTROLS AND FEATURES

The full-featured control panel of the two-rack-space DEQ-II offers push-button parameter entry and a large LCD display that provides setting and status information.

LCD screen. Each mode change brings up its own Menu Screen. The user may “Log On” to the DEQ-II in any of the three modes.

In the “Equalize” mode, the user may modify Presets, adjusting the settings of third-octave



**DEQ-II FRONT PANEL**

Filter settings are easily selected, displayed and stored as Presets. In addition, the control panel of one DEQ-II may be used to view and program the settings of multiple DEQ-II and DEQ-I equalizers, interconnected through their PA-422 communications ports.

filters, high- and low-pass filters and output gain. At System level, the operator may lock or unlock Presets, Name an equalizer or Title a Preset.

A group of “Hard Keys” include two “select” buttons. “DEQ Select” accesses the DEQ mode, in which the user can select which port-connected DEQ is to be controlled. “Preset” accesses the Preset mode in which the user can select the Preset which is to be viewed and used or edited. Preset selection is quick and easy, allowing rapid “toggling” between Presets for audible comparisons.

While in the Edit mode, the user may Copy and Paste equalization curves from one Preset to another or even to a different DEQ. Curves stored in Presets may be erased in this mode and descriptive Titles may be assigned to Presets for later identification.

Presets that have been programmed into the DEQ-II may also be selected externally by utilizing simple contact closures wired to the DEQ-II’s Preset Port on the rear panel.

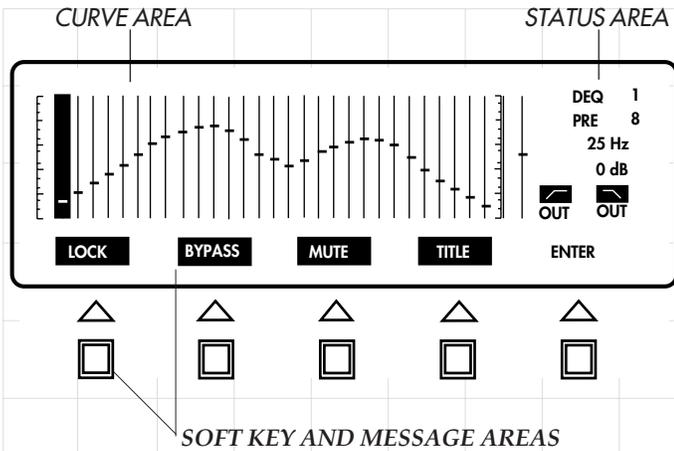
The Utility mode allows “Logging Out,” or terminating an equalization session, setting Passwords for security, adjusting the contrast of the LCD display and naming the equalizer, for multiple-unit operation.

Three additional Hard Keys access the “Equalize,” “Edit” and “Utility” modes. An LED adjacent to each button indicates the current mode. Selection of the different modes with the Hard Keys will alter the appearance of the

### VERSATILE LCD DISPLAY

The DEQ-II’s LCD display is divided into three areas. The Curve Area, the Soft Key and Message Area and the Status Area.

The Curve Area gives a quick graphical view of the filter settings; it has the familiar appearance of slide faders on the face of a conventional 1/3-octave equalizer. To the right of the



**DEQ-II LCD DISPLAY**

gain slider. The user simply moves a solid “bar” cursor over a filter or the output fader to select which one is to be controlled.

Below the Curve Area, the Soft Key and Message Areas provide labels for the current functions of the Soft Keys beneath each one. This area will also display messages, such as error announcements. In addition, depending upon the action being performed, the Soft Key and Message Areas are used to display and edit the Name or Passwords of the equalizer, or the Titles given to Presets.

The Status Area displays the number, or “address,” of the active equalizer, the one with which the controlling DEQ-II is currently communicating. It similarly displays the number of the active Preset. Also displayed are the center frequency and the exact setting of the active bandpass filter. The last two displays in the Status Area show the settings of the high- and low-pass filters.

**DEQ-I OFFERS PERFORMANCE**

There’s no sacrifice in audio performance in the Oxmoor DEQ-I. And while it occupies half the rack space of the DEQ-II, the DEQ-I offers excellent programming and security features.

The front panel of the DEQ-I exhibits the same Signal Status indications as the DEQ-II. These include a Peak LED to indicate maximum output, a Signal Presence LED which is illuminated when a signal is present at the unit’s output and a Power On LED.

A seven-segment LED display shows clearly which of the eight Presets is active.

The DEQ-I is most often used in multiple-equalizer systems in which it functions as a “slave” unit that is programmed by a DEQ-II or a PC. It may be programmed without the aid of a sophisticated controller, however. The controls for doing this are located inside the DEQ-I, below the top panel, for maximum system security.

These internal controls allow the user to select Presets as well as to select and adjust frequency bands. Such high-level functions as setting Passwords, Names and Titles cannot be performed through these controls.

As with the DEQ-II, Presets that have been programmed into the DEQ-I may also be selected externally through simple contact closures wired to the Preset Port on the DEQ-I’s



**DEQ-I FRONT PANEL**

# OXMOOR DEQ-I AND DEQ-II SPECIFICATIONS

<b>FREQUENCY RESPONSE</b> .....	20 Hz to 20 kHz .....	+0, - 0.3 dB
	- 3 dB Points, Ref.1 kHz .....	4 Hz to 60 kHz (+4 dBm output)
<b>HUM AND NOISE</b> .....	Ref. +4 dBm Output @ Unity Gain .....	- 85 dB (20 Hz to 20 kHz BW, unweighted)
<b>DISTORTION</b> .....	Ref. +4 dBm Output @ Unity Gain	
	THD + NOISE .....	- 80 dB/0.01% (20 Hz to 20 kHz BW)
	SMPTE IMD .....	- 80 dB/0.01% (60 Hz + 7 kHz, mixed 4:1)
	Transient Intermodulation .....	- 80 dB/0.01% (3.15 kHz SQ + 15 kHz probe)
<b>1/3 OCTAVE FILTERS</b> .....	Type .....	Constant Q, minimum phase, combining
	Number .....	29
	Frequencies .....	25 Hz through 16 kHz
	Centers .....	ISO 1/3 octave standard
	Bandwidth & Center Freq. Tolerance .....	± 5%
	Combining Ripple .....	1.5 dB max
<b>FILTER CONTROLS &amp; GAIN CONTROL</b> .....	Range .....	±12 dB
	Step Size .....	0.5 dB
	Step Size Tolerance .....	± 0.05 dB
<b>HIGH-PASS FILTER</b> .....	Slope Rate .....	12 dB/octave
	-3 dB Point .....	Selectable on 1/6 octave spacings from 20 Hz to 200 Hz
<b>LOW-PASS FILTER</b> .....	Slope Rate .....	12 dB/octave
	-3 dB Point .....	Selectable on 1/6 octave spacings from 2 kHz to 20 kHz
<b>AUDIO INPUT</b> .....	Type .....	Electronically balanced (RF suppressed)
	Connector .....	Female XLR
	Pin Out .....	Pin 1 shield (chassis), pin 2 +, pin 3 -
	Input Impedance .....	80 k ohms
	Nominal Input Level .....	0 dBu
	Maximum Input Level .....	+20 dBu
	Common Mode Rejection Ratio .....	50 dB @ 1 kHz
<b>AUDIO OUTPUT</b> .....	Type .....	Electronically balanced, (unbalancing jumpers provided)
	Connector .....	Male XLR
	Pin Out .....	Pin 1 shield (chassis), pin 2 +, pin 3 -
	Source Impedance .....	150 ohms (75 ohms/side)
	Recommended Load Impedance .....	600 ohms or greater
	Nominal Output Level .....	0 dBu (w/EQ flat, 0 dBu input)
	Maximum Output Level ( Ref. 1 kHz @ Rated THD )	
	Terminated w/600 Ohms .....	+18 dBm
	Unterminated .....	+20 dBu
<b>PRESET SELECT PORT</b> .....	Input Type .....	Active low, internal pull-ups, diode isolation
	Tally Out .....	Binary out, 3-digit encoded preset number
	Preset Select Logic Action .....	Latching, mutual release; uses momentary closure
	Mute & Enable Logic Action .....	Nonlatching; requires maintained closure
	Connector .....	Female 15-pin Std. D-sub w/locking screws
<b>SAFETY LISTING</b> .....	UL .....	1419
<b>MECHANICAL</b> .....	DEQ-I Packaging .....	44 H x 483 W x 343 D mm ..... (1.72 H x 19 W x 13.5 D in)
	DEQ-II Packaging .....	88 H x 483 W x 343 D mm ..... (3.5 H x 19 W x 13.5 D in)
<b>PROGRAMMING PORT</b> .....	Serial Interface .....	PA-422
<b>OPTIONAL ACCESSORY</b> .....	TWEEQ Software .....	Specify TWEEQ™-IBM or TWEEQ™-Macintosh
	Includes software, PA-422 conversion box, PC-to-converter cable	