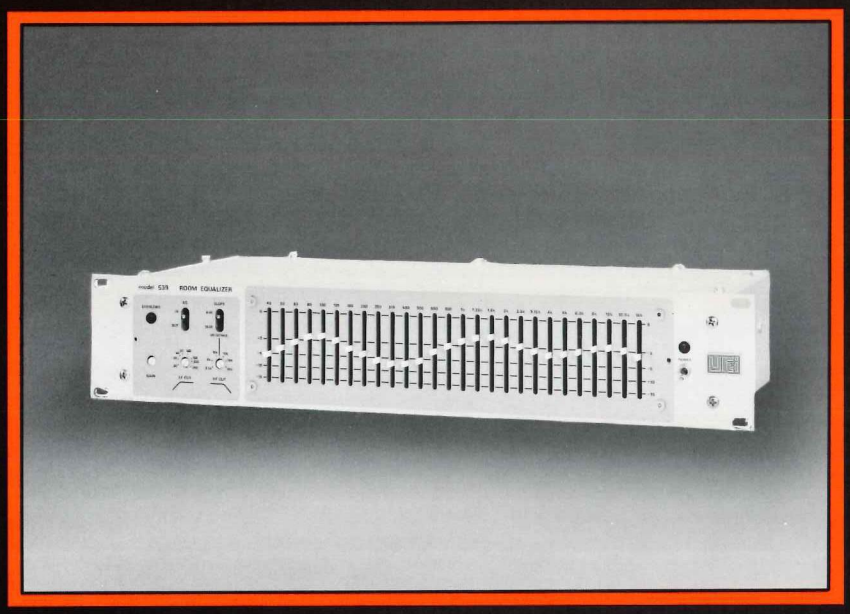
539 ROOM EQUALIZATION FILTER SET



FEATURES:

True L-C derived filters for low noise and high reliability.

Independent, adjustable high pass and low pass filters with slope select.

E.Q. bypass and gain adjustment for easy setup.

Transformer Isolated Output.

Model 539 is an active filter set specifically designed for room "equalization" or tuning. Successor to the highly popular UREI Model 529, the 539 utilizes advanced circuit technology and latest state-of-the-art components to achieve quantum improvements in performance, and added features at lower cost.

Signal-to-noise ratio is better than 110 dB at maximum output. Filter parameters have been optimized to produce excellent combining and minimum phase shift. Output capability of +24 dBm combined with this exceptional noise figure provides widest dynamic range. Band-end tunable hi-pass and lo-pass filters are -12 dB/octave, with the lo-pass (H.F. cut) switchable to 6 dB/octave to

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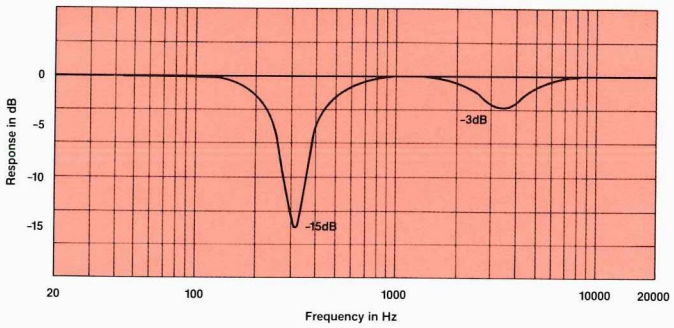
permit more accurate control of band-end contouring and "house curve" rolloff.

The 539 provides 0 - 15 dB of attenuation at each of its 27 frequencies. The 27 vertical stepless controls vary the depth of active filters which are centered on standard IOS 1/3-octave frequencies from 40 Hz to 16 kHz. Hi-pass and lo-pass filters are screwdriver adjustable from the front panel. The hi-pass (low cut) filter is continuously tunable from 20 to 250 Hz; the lo-pass (high cut) filter tunes from 3.5 kHz to 20 kHz (-3 dB points).

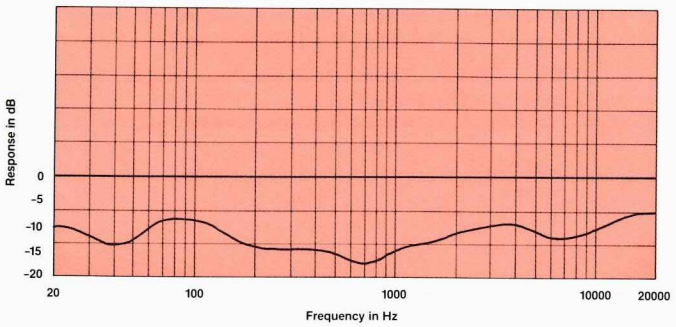
The 27 band-reject filters are active, minimum-phase L-C networks, whose skirts properly combine for minimum ripple and phase shift when used in combination. An adjustable front panel gain control provides up to 20 dB gain to make up attenuation of the filters and to establish maximum gain before feedback of the equalized system. A bypass switch permits switching the 539 out of the system, restoring unity gain. An optional accessory SC-1 Security Cover may be installed over the front panel to protect all operating controls against inadvertent disturbance or tampering in fixed installations.

Model 539 is completely self-contained with regulated power supply, and operates from either 100-125 or 200-250 VAC, 50/60 Hz.

Individual Filters, Attenuated 15dB and 3dB.



Combing Action of Filters at Typical E.Q. Setting.



SPECIFICATIONS:

ELECTRICAL:	
Input:	Balanced, bridging differential amplifier.
Input Impedance:	40 kohms, used as balanced input. 20 kohms, used as unbalanced (single ended) input.
Maximum Input Level:	+20 dBu.
Equivalent Input Noise:	Less than -90 dBm. (15.7 kHz bandwidth) with all controls set flat, output terminated with 600 ohm load.
Gain:	EQ out - unity, ±1 dB; EQ in - from unity to + 20 dB.
Frequency Response:	±1 dB, 20 Hz - to 20 kHz, EQ out; +1, -3 dB, 20 Hz - 20 kHz, EQ in.
Output:	Floating, transformer isolated.
Output Load:	150 ohms load or greater.
Power Output:	+24 dBm +20 dBu into 150 ohm load
Distortion:	Less than 0.5% THD, 30 Hz - 15 kHz, at maximum rated output.
Power Requirements:	100 - 125 VAC, or 200 - 250 VAC, 50/60 Hz switch selectable less than 10 W.
Environment:	Operating 0°C to +50°C. Storage -20°C to +60°C.
FILTER CHARACTERISTICS:	
Graphic Section:	27 individual 1/3 octave LC-type active filters, (1/3 octave at -3 dB points with 8 dB cut).
Center Frequencies:	Standard ISO, (Hz) 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1k 1.25k 1.6k 2k 2.5k 3.15k 4k 5k 6.3k 8k 10k 12.5k 16k.
Frequency Accuracy:	±3% of center frequency.
Attenuation Range:	0 to -15 dB, single filter section.
Band Limit Filters:	Low Cut -12 dB/octave, Butterworth, -3 dB point continuously adjustable from 20 Hz to 250 Hz. High Cut -6 dB or 12 db/octave, switch selectable, Butterworth, -3 dB point continously adjustable from 3.5 kHz to 20 kHz.
CONTROLS:	
Equalization:	27 vertical slide controls, continuously variable 0 to -15 dB.
L.F. Cut:	Screwdriver adjustable, 20 Hz - 250 Hz.
H.F. Cut:	Screwdriver adjustable, 3.5 kHz to 20 kHz.
H.F. Slope:	Toggle Switch selects 6 dB or 12 dB/octave below -3 dB point.
Gain:	Screwdriver adjustable from unity to +20 dB (EQ in).
EQ In/Out:	Front panel toggle switch.
Power:	Front panel toggle switch.
Indicators:	LED, power ON LED, overload condition, level monitored at input and output.
Mains Voltage:	Rear panel slide switch, 115/230 V.
Connections:	Input and output, through rear chassis barrier strip; power through 3-wire power cable.
PHYSICAL:	
Dimensions:	483 x 89 mm rack panel, depth behind panel 203 mm (19 in. x 3½ in. x 8 in.).
Finish:	Panel is 3.18 mm (⅛ in.) brushed clear anodized aluminum in two shades. Chassis is cadmium plated steel.
Weight:	5.00 kg (11 lbs.)
Shipping Weight:	7.23 kg (16 lbs.)
Accessories:	Model SC-1 Security Cover; smoke gray transparent plastic; covers all operating controls. Knob set, 539 K Model 301 XLR/QG Adapter for input and output.
NOTE:	0 dBm = 0.775 Volt/600Ω = 1mW 0 dBu = 0.775 Volt/Load not specified

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