

# 525

# ELECTRONIC CROSSOVER



## FEATURES:

Front Panel mode switch for stereo 2-way or 3-way, or mono 4-way or 5-way operation.

18 dB/octave slopes for unity summing and maximally flat response.

Built-in frequency counter measures and displays crossover frequencies with 1 Hz resolution.

Mute switches for each output allow easy setup and operation.

Output transformers are standard.

Recessed mode switch and frequency controls prevent unintended changes of critical settings.

Security cover available.

The Model 525 Electronic Crossover was designed with the versatility required for use in professional sound systems. Whether in a fixed installation or in a portable system, it provides the frequency bands and signal levels necessary for well balanced multi-amplification. The Model 525 is an ideal choice for such applications as studio monitoring, live concert systems, discos, and sound reinforcement in theaters, churches, and schools.

A unique feature of the Model 525 is the built-in frequency counter which provides an accurate display of the actual crossover frequency during adjustment. Whenever the frequency adjust control of any of the four crossover filters is depressed, the filter will oscillate at the frequency to which it is tuned. The counter measures and displays this frequency with a resolution of 1 Hz. Simultaneously, this signal is reproduced at a low

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level through the loudspeaker as an additional aid for tuning. With a simple front panel control the crossover may be switched from stereo 2-way or 3-way to single channel 4-way or 5-way mode. LEDs indicate which frequency and level controls are active for a selected mode. The counter also accepts an external audio signal to measure and display its frequency from 1 Hz to 9999 Hz.

The crossover filters are 3rd order Butterworth-state variable with 18 dB/octave slopes that provides unity summing, i.e. maximally flat response when combined. Each filter is tunable over a 100:1 range. The two inputs are bridging and balanced, and the six outputs are transformer isolated.

All crossover frequency controls and the mode selector switch are recessed. This reduces the possibility of accidental changes of these critical settings while still providing convenient access to the controls. The output level controls with output mute switches are front panel mounted, allowing easy access during set-up and in emergencies. A front panel security cover is available for the Model 525 Electronic Crossover to protect control settings from tampering or inadvertent disturbance.

## SPECIFICATIONS

### ELECTRICAL:

INPUTS (2):	Balanced bridging differential amplifier.
Input Impedance:	40 kohms balanced, 20 kohms unbalanced.
Maximum Input Level:	+20 dB
Gain:	Unity, $\pm 1$ dB

CROSSOVER FILTERS (4):	3rd order Butterworth, 18 dB/octave.
Tuning Range:	Filters 1 and 3 continuously variable from 50 Hz to 500 Hz ( $\times 1$ range) and 500 Hz to 5 kHz ( $\times 10$ range); filters 2 and 4 continuously variable from 100 Hz to 1 kHz ( $\times 1$ range) and 1 kHz to 10 kHz ( $\times 10$ range).

FREQUENCY COUNTER:	
Range:	1 to 9999 Hz.
Resolution:	1 Hz.
Accuracy:	0.1%, $\pm 1$ Hz.
External Input:	-10 dB to +20 dB (0.245 V to 7.75 V rms).

OUTPUTS (6):	Floating, transformer isolated.
Output Load:	600 ohms or greater.
Power Output:	+20 dBm into 600 ohm load
Distortion:	Less than 0.5% THD, 30 Hz to 15 kHz at maximum rated output.

Frequency Response:	$\pm 1$ dB, 20 Hz to 20 kHz.
Output Noise:	Less than -90 dBm (15.7 kHz bandwidth, input and output terminated with 600 ohms, controls set for unity gain).
Level Controls:	From more than 30 dB attenuation to unity gain. Mute switches for each output.

Indicators:	Four-digit frequency display. Nine pinhead LEDs show crossover points and output combination.
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Power Requirements:	Less than 10 W, 100-125 V AC or 200-250 V AC, 50/60 Hz, switch selectable.
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Environment:	Operating 0°C to +50°C Storage -20°C to +60°C.
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### PHYSICAL:

Connections:	Inputs and outputs on rear panel barrier strips and XLR/QG connectors. Power through 3-wire IEC style connector.
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Dimensions:	483 $\times$ 89 mm rack panel, depth behind panel 248 mm (19 in $\times$ 3 1/2 in $\times$ 9 3/4 in).
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Finish:	Panel is 3.18 mm (1/8 in) brushed clear anodized aluminum in 2 shades. Chassis is cadmium plated steel.
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Weight:	4.54 kg (10 lb).
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Shipping Weight:	6.35 kg (14 lb).
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Accessory:	SC 2 Security Cover smoke gray transparent plastic; covers all operating controls.
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NOTE:	0 dBm = 0.775 volt/600 $\Omega$ = 1mW 0 dBu = 0.775 volt/load not specified
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