

## General Description

The AX 30 Active Crossover is a special purpose stereo electronic crossover designed specifically for the recorded music playback club or lounge, operated mainly by a live disc jockey. Other applications exist; and the Model AX 30 can be found in several fixed, live music arenas as well. The many applications and usefulness of this product are limited only by the imagination of the user. The design and construction of the Model AX 30 are to the highest standards, befitting its selection as the key ingredient in many of the top clubs in the world.

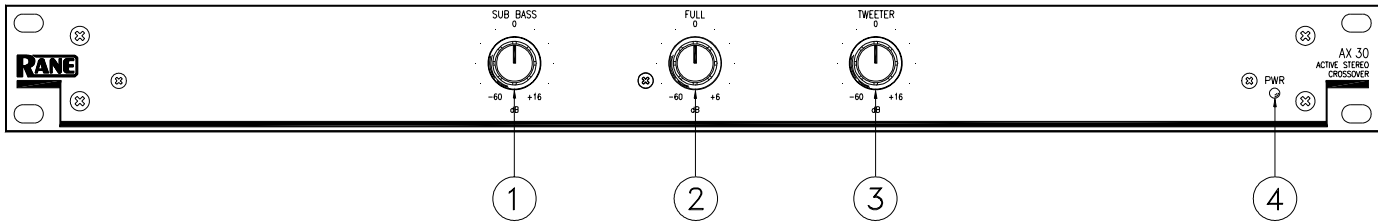
Functionally, the Model AX 30 is a two-channel, three-way electronic crossover featuring a unique set of outputs.

There is a SUB BASS OUT with a bandwidth of 20 Hz to 100 Hz; a FULL OUT with a bandwidth of 20 Hz to 65 kHz; and a TWEETER OUT with a bandwidth of 7 kHz to 65 kHz. The SUB BASS and TWEETER OUTS have front panel controls allowing 16 dB of boost and 60 dB of cut, while the FULL output has a front panel control ranging from 6 dB of boost to -60 dB cut. The Input signal is thus divided into a buffered and subsonic filtered full-spectrum output to feed the main system crossover, as well as two special purpose low and high end drive signals to feed additional power amplifiers connected to subwoofers and tweeter arrays. Additionally, the SUB BASS OUT has a pre-level SUB BASS INSERT loop.

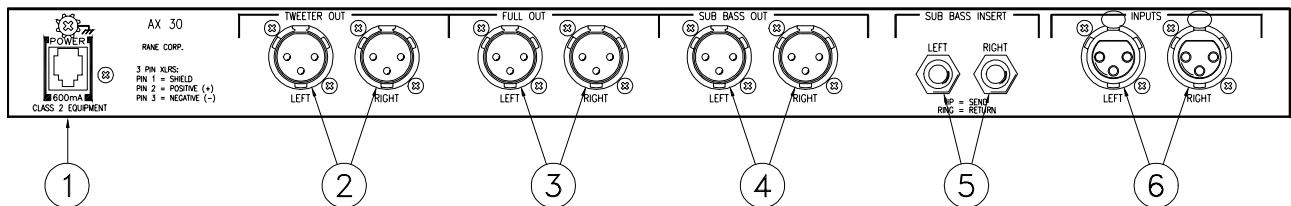
Parameter	Specification	Limit	Units	Conditions/Comments
Inputs:	XLR			pin 2 hot per AES standards
.....Impedance	20k	1%	ohms	balanced
.....Maximum Level	+22	1	dBu	
.....Common Mode Rejection	40	2	dB	1 kHz
.....RFI Filters	Yes			
Sub Bass Outputs:	XLR			pin 2 hot per AES standards
.....Frequency Range	20 Hz - 100 Hz	+0/-3	Hz	24 dB/octave upper and lower slopes
.....Gain Range	+16 to -60	1	dB	0 dB center detent
Tweeter Outputs:	XLR			pin 2 hot per AES standards
.....Frequency Range	7 kHz - 65 kHz	+0/-3	Hz	24 dB/octave lower; 6 dB/oct upper
.....Gain Range	+16 to -60	1	dB	0 dB center detent
Full Outputs:	XLR			pin 2 hot per AES standards
.....Frequency Range	20 Hz - 65 kHz	+0/-3	Hz	24 dB/octave lower; 6 dB/oct upper
.....Gain Range	+6 to -60	1	dB	0 dB center detent
Infrasonic Filter	20 Hz	3%	Hz	24 dB/octave Butterworth
Maximum Output Level	+24	1	dBu	600 ohms or greater; balanced
Output Impedance	200	1%	ohms	balanced
Signal-to-Noise Ratio	90 re +4 dBu (20 kHz BW)	2	dB	Any balanced output set unity gain
Power Supply Requirement	18 VAC w/center tap	0.1	Vrms	Model RS 1
Maximum Current	600		mA	RMS Current from Remote Supply
Unit: Construction	All Steel			
.....Size	1.75" H x 19" W x 5.3" D (1U)			(4.4 cm x 48.3 cm x 13.3 cm)
.....Weight	5 lb			(2.3 kg)
Shipping: Size	4.25" x 20.3" x 13.75"			(11.5 cm x 52 cm x 35 cm)
.....Weight	9 lb			(4.1 kg)
Note: 0 dBu=0.775 Vrms				

# AX 30

## ACTIVE STEREO CROSSOVER



- ① **SUB BASS level control:** sets the level of the left and right SUB BASS OUTs. Controls the amount of desired low end.
- ② **FULL level control:** sets the level of the left and right FULL OUTs. Affects the level of full-frequency program material.
- ③ **TWEETER level control:** sets the level of the left and right TWEETER OUTs. Controls the amount of desired high end.
- ④ **POWER INDICATOR LED:** A lit yellow LED indicates there is power to all circuitry and the unit is ready to operate.



- ① **Remote power supply input:** This unit is supplied with a Rane RS 1 Remote AC Power Supply suitable for connection to this input jack. The power requirements call for an 18 VAC center-tapped transformer. *This is not a telephone jack. Never use a power supply other than the one supplied or a replacement approved by Rane.* Using any other type of supply may damage the unit and void the warranty.  
**Chassis grounding screw:** A #6-32 screw is used for chassis grounding purposes. See CHASSIS GROUNDING below.
- ② **TWEETER OUTPUTS:** Connect to the tweeter power amplifiers. Fully differential active balanced Outputs. Bandwidth is 7 kHz to 65 kHz.
- ③ **FULL OUTPUTS:** Full frequency range Outputs available to drive subsequent crossovers or other equipment. Bandwidth is 20 Hz to 65 kHz.
- ④ **SUB BASS OUTPUTS:** Connect to the subwoofer power amplifiers. Fully differential active balanced Outputs. Bandwidth is 20Hz to 100Hz.
- ⑤ **SUB BASS INSERT JACKS:** Subwoofer insert jack wired according to the tip=send, ring=return convention. Use to add additional effects boxes in series with SUB BASS Outputs. Signal path is before the LEVEL control.
- ⑥ **INPUTS:** Balanced active differential Inputs (transformerless). Connect to the main program feed lines coming from the console or other full frequency source.

### CHASSIS GROUNDING NOTE

If after hooking up your system it exhibits excessive hum or buzzing, there is an incompatibility in the grounding configuration between units somewhere. Here are some things to try:

1. If your equipment is in a rack, verify that all chassis are tied to a good earth ground, either through the line cord grounding pin or the rack screws to another grounded chassis.
2. Units with outboard power supplies do not ground their chassis through the line cord. Make sure these units are grounded either to another chassis which is earth grounded (such as the amplifier).

Please refer to RaneNote 110, "Sound System Interconnection" (included in this manual) for further information on system grounding.