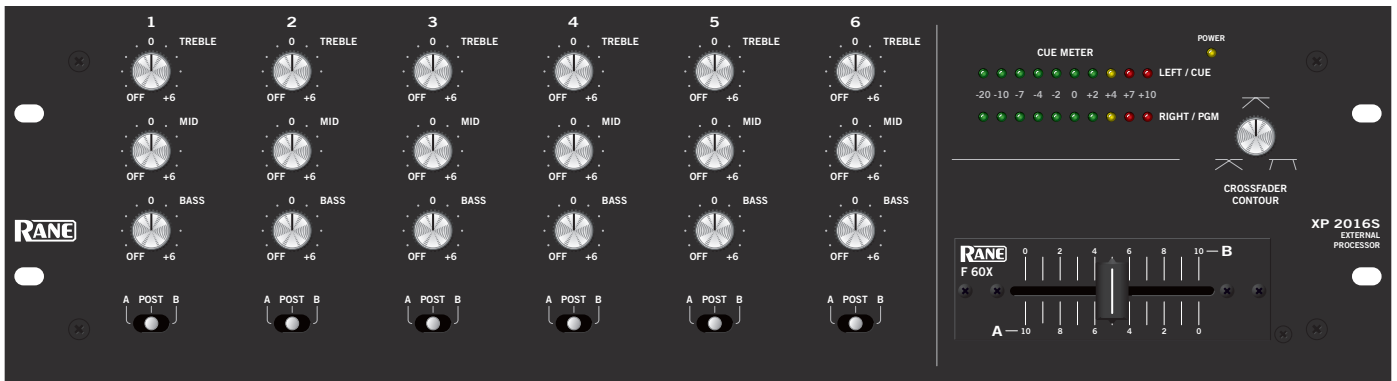


MP 2016S Mixer



Optional XP 2016S Processor

MP 2016S Features

- Six stereo Input channels
- Four dedicated stereo Phono / Line preamps
- Two dedicated Mic / Line preamps with:
 - Gain trims
 - 2-band Tone controls
 - Engage switches
 - Booth ducking
- Five stereo Auxiliary Inputs
- Input Gain controls for level matching
- Switchable Effects Loop
- Booth Output with Master / Cue source switch

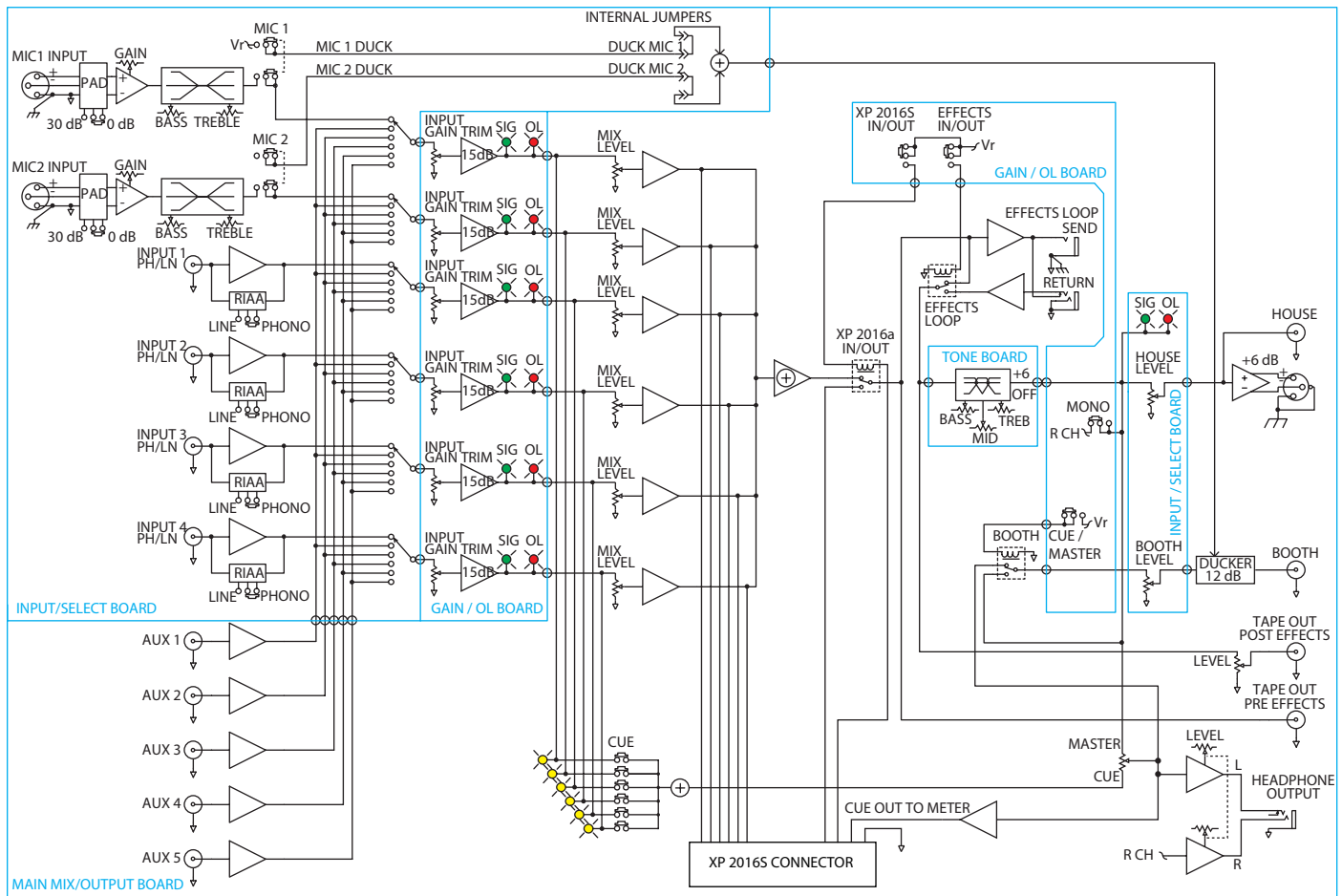
- Separate Pre- and Post-effects Tape Outputs
- Master *Accelerated-Slope™*, full-cut, 3-band Tone controls
- Audiophile / Studio sound quality; Uses highest-quality ALPS pots
- Split Cueing with high power headphone amplifier

XP 2016S Features

- *Active-Crossfader™* with full-range Contour control
- A-POST-B Crossfader assign switches
- Stereo Master / Cue Meter with peak hold
- Six channels of stereo, *Accelerated-Slope™*, full-cut, 3-band Tone controls.

NEW! Both units feature a universal internal switching power supply (100-240 VAC)

MP 2016S Block Diagram



MP 2016S General Description

The MP 2016S is a rotary-controlled mixer featuring six Input Channels, Booth and House Outputs, Pre-Effects Tape Outputs, Post-Effects Tape Outputs with Level control, switchable Effects Loop, and Headphone Cueing. Input Channels 1 through 4 feature high quality RIAA phono preamplifiers which may be switched to line input via rear panel switches. Input Channels 5 and 6 each provide a balanced mic preamp with Input Gain trim, Mic/Line switch, two-band EQ, Mic Engage switch and an internal Booth Ducking enable jumper. In addition to the six dedicated preamplifiers, all six Input channels may select any of the five stereo Auxiliary Inputs.

Each Input Channel provides a 6-position source selector, Input Gain control for matching levels, Signal/Overload indicators and a studio-grade Master Mix control.

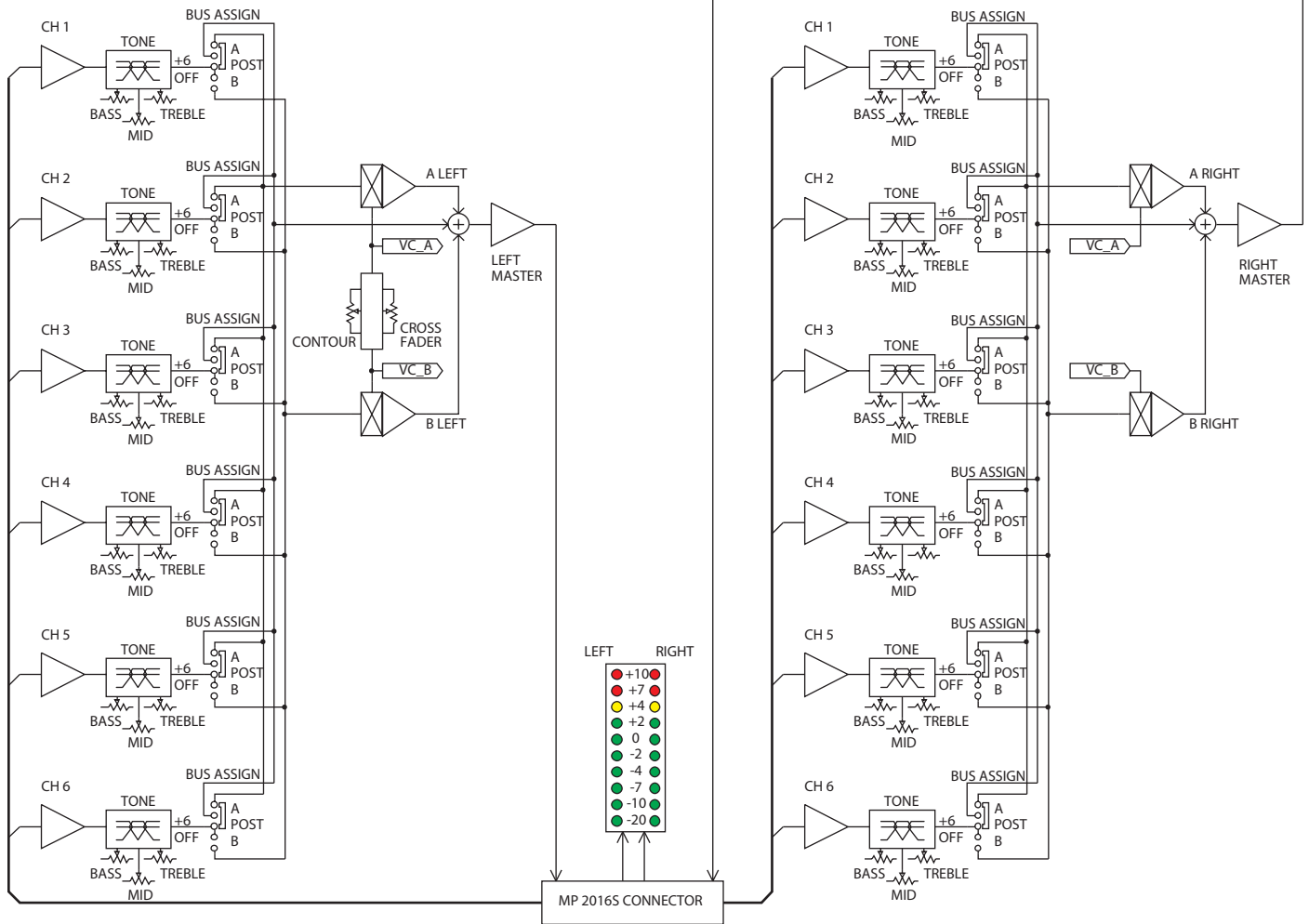
The Booth Output may select Master or Cue as its source. An ultra-low noise, high power headphone amplifier also allows monitoring the Master Mix or Cue Mix.

The MP 2016S improves on the original MP 2016 by adding Split Cue. Individual Cue switches on each channel drive a panning Master / Cue control for the Headphone output.

The Master Mix circuit provides Signal/Overload indicators, Mono switch and high-pass/rumble filters. In addition, the Master Output features patent-pending high performance 3-band, full-cut, *Accelerated-Slope™* tone controls (see page 5).

The MP 2016S provides exceptional ergonomics, good feel and a clean, intuitive layout packaged in a compact 19 inch, 3U rack mount chassis, a scant five inches deep.

XP 2016S Block Diagram



XP 2016S General Description

So you say... “Great, but to accommodate the diverse needs of all DJ mixing styles, I need dedicated high performance three-band, full-cut, *Accelerated-Slope* tone controls for *each* of the six Input Channels, high-performance *Active-Crossfader*™ with full range contour control, A-Post-B crossfader assign switches and a stereo, 10-segment, peak dBu Master/Cue meter with peak hold; all without effecting the ergonomics of my classic rotary mixer.”

We’ve got you covered! With the flip of a switch on the MP 2016S front panel, you can engage the *optional* XP 2016S External Processor and acquire all of these features.

The XP 2016S is an *optional* external processor designed specifically for use with the MP 2016S. The XP 2016S is intended to mount above or below the MP 2016S. It connects with a single 10-inch ribbon cable and is engaged with the flip of a switch on the MP 2016S front panel. If an XP 2016S is not connected, the XP 2016S engage switch on the MP 2016S has no effect.

The XP 2016S provides dedicated *Accelerated-Slope*, 3-band, full-cut tone controls for *each* of the six stereo Input channels, A-Post-B Crossfader Assign switches for all six Input channels,

a high-performance *Active Crossfader*™ with full range Contour control, and a stereo 10-segment peak dBu Master/Cue Meter with peak hold.

The six stereo, post Mix Level signals in the MP 2016S are fed to the XP 2016S. When the XP 2016S is *not* engaged, the post Mix Level signals go directly to the Master Mix in the MP 2016S. When the XP 2016S is *engaged*, the stereo Master Mix comes from the XP 2016S.

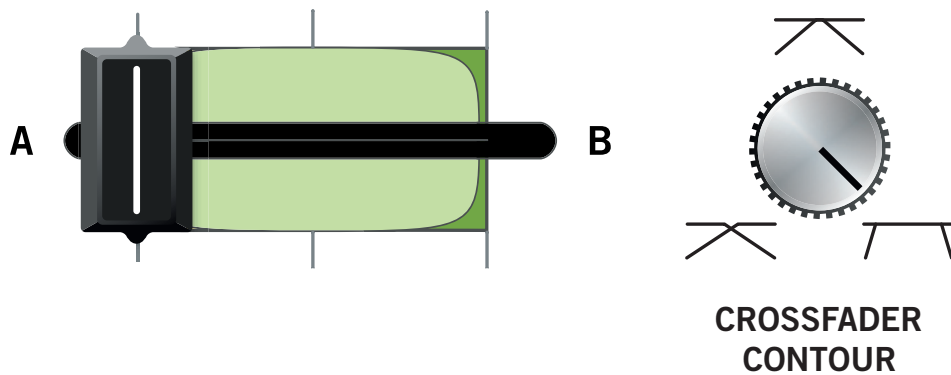
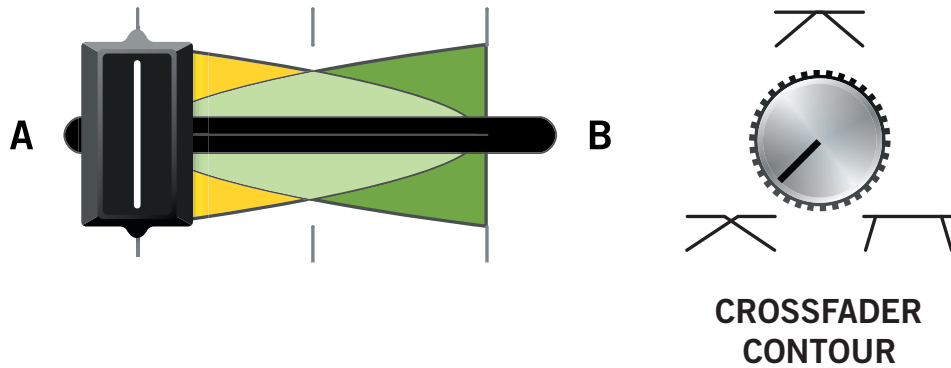
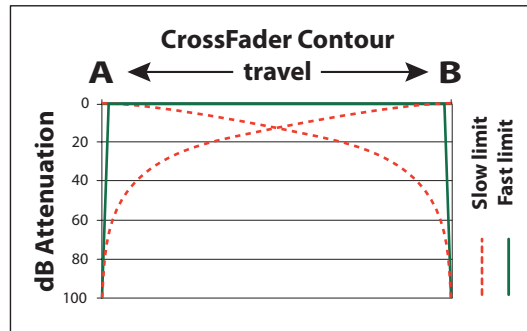
If all Input channels on the XP 2016S are assigned Post-Crossfader, the Mix will be identical to the MP 2016S (with the addition of tone controls for each Input channel). For Crossfader control, simply assign a channel to the A or B side of the Crossfader. The *Active Crossfader* features a full-range Contour control for smooth blending or ultra fast cuts.

The Master/Cue Meter follows the source selection of the headphone monitor on the MP 2016S. If Master is selected, the XP 2016S Meter monitors the pre-house-level Master signal. If Cue is selected, the XP 2016S meter monitors the Cue Source.

The XP 2016S matches the MP 2016S ergonomics, packaged in a compact 19 inch, 3U rack mount chassis, 5 inches deep.

Crossfader Response

This graph shows curves representing upper and lower limits for gain response versus fader position. Contour controls allow smooth and continuous adjustment between the two responses.



MP 2016S and XP 2016S Accelerated-Slope EQ Control Response

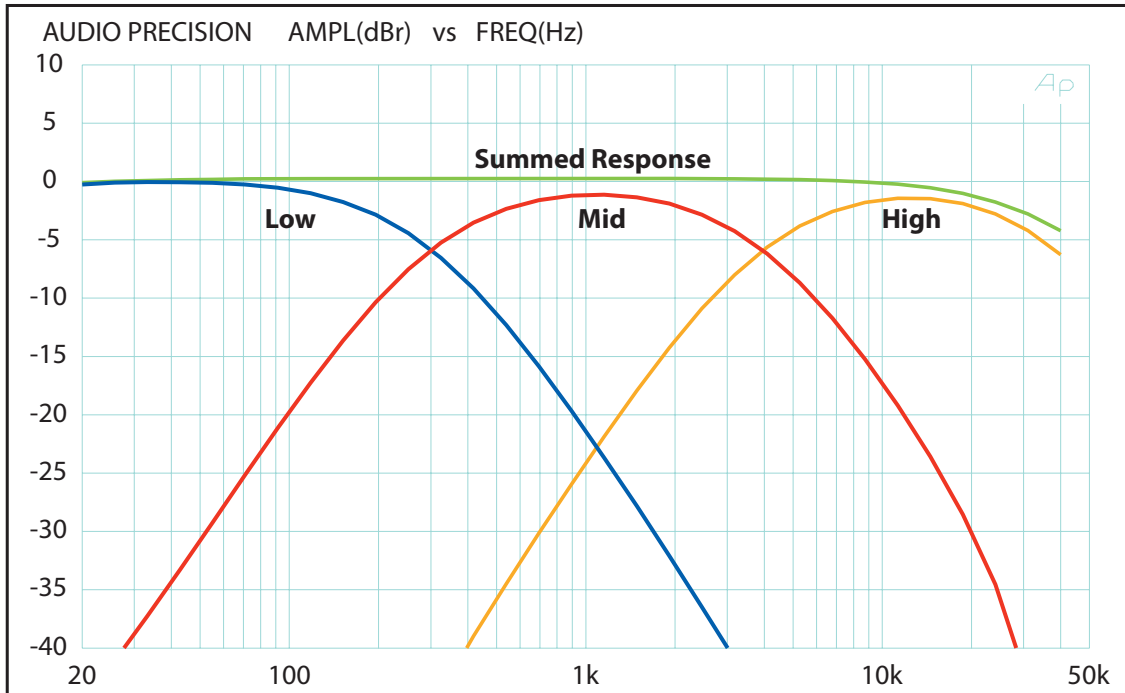


Figure 1 shows the three EQ filter bands and the flat summed response

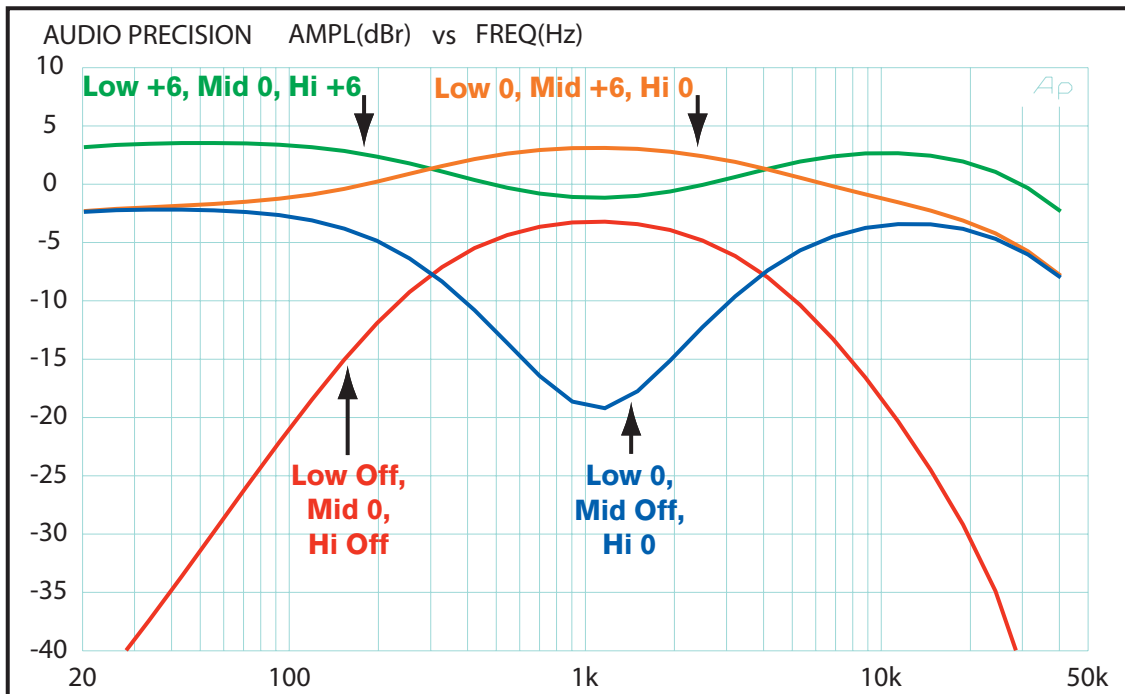


Figure 2 shows the interactive operation of the Accelerated-Slope™ EQ



MP 2016S Features and Specifications

Parameter	Specification	Limit	Units	Conditions/Comments
Gain (Unbalanced Outputs): <i>1 kHz, EQ centered, All levels max, add 6 dB for balanced output</i>				
.....Phono/Line	52 / 16	0.5	dB	
.....Aux Line	16	0.5	dB	
.....Mic/Line	66 / 36	1.5	dB	
.....XP 2016S port	0	0.5	dB	
.....House	+6	0.5	dB	
Input Impedance:				1 kHz
.....Phono/Line	47.5k	1%	Ω	Shunted by 200 pF
.....Aux Line	23k	1%	Ω	
.....Mic/Line	1.02k/29k	1%	Ω	Differential input impedance
.....Effects Return	5.11k	1%	Ω	
Max Input Level: <i>Max input before input stage overload, @ 1 kHz</i>				
.....Phono/Line	77.5	5%	mV	
.....Aux Line	+20	1	dBu	
.....Mic/Line, Max Gain	-30/0	2	dBu	
.....Mic/Line, Min Gain	0/+30	2	dBu	
Output Impedance:				@ 1 kHz
.....Balanced	150	1%	Ω	Each leg
.....Unbalanced	300 / 150	1%	Ω	Other / Booth
Max Output Levels:				@ 1 kHz
.....Balanced	+26	min.	dBu	2k Ω load
.....Unbalanced	+20	min.	dBu	2k Ω load
.....Headphone	150 / 120	min.	mW	600 / 150 Ω
Infrasonic Filter	15	5%	Hz	18 dB/octave
THD+N	.01 (Line in to unbalanced output)	typ.	%	20 to 20 kHz, 80 kHz BW
Signal-to-Noise Ratio: <i>Input gain set for unity, Tones set flat; Any one mix set to max (all others min), any unbalanced out.</i>				
.....Phono	91	1	dBu	Input shorted, "A" weighted
.....Mic	60 (Mic Gain max, Input Gain max)	1	dBu	Input terminated with 150 Ω
.....Line	94	1	dBu	Input terminated with 150 Ω
Signal Indicators: SIG / OL	-2 / +18	1	dBu	
Crosstalk	-70	max.	dB	Channel to channel, 1 kHz
Control Feed-through	-80	max.	dB	1 kHz
Master Tone Controls: Treble	4k, Shelving	5%	Hz	2nd-order, range +6 dB to full kill
.....Mid	300 to 4k, Band-pass	5%	Hz	2nd-order, range +6 dB to full kill
.....Bass	300, Shelving	5%	Hz	2nd-order, range +6 dB to full kill
Microphone Tone Controls:				
.....Bass	100, Shelving	5%	Hz	Range ±12 dB
.....Treble	5k, Shelving	5%	Hz	Range ±12 dB
Note: 0 dBu=0.775 Vrms				

XP 2016S Features and Specifications

Parameter	Specification	Limit	Units	Conditions/Comments
Gain	0	1	dB	1 kHz, tone flat
Input Impedance	20k	1%	Ω	1 kHz
Max Input Level	+20	min	dBu	Max before input stage overload @ 1 kHz
Output Impedance	100	1%	Ω	@ 1 kHz
Max Output Levels	+20	min	dBu	@ 1 kHz
THD+N: Post Crossfader	.01	typ	%	20 to 20 kHz, 80 kHz BW
.....Crossfader	.1	typ	%	20 to 20 kHz, 80 kHz BW
Noise	-82	1	dBu	Tones set flat
Meters: Type	Peak dBu			Follows MP 2016S Headphone source
Crossfader: Type	Active with Contour control			
Crosstalk	-70	max	dBu	Channel to channel, 1 kHz
Control Feed-through	-80	max	dB	1 kHz
Tone Controls: Treble	4k, Shelving	5%	Hz	2nd-order, range +6 dB to full kill
.....Mid	300 to 4k, Band-pass	5%	Hz	2nd-order, range +6 dB to full kill
.....Bass	300, Shelving	5%	Hz	2nd-order, range +6 dB to full kill
<i>Note: 0 dBu=0.775 Vrms</i>				

Agency, Power and Shipping Specifications

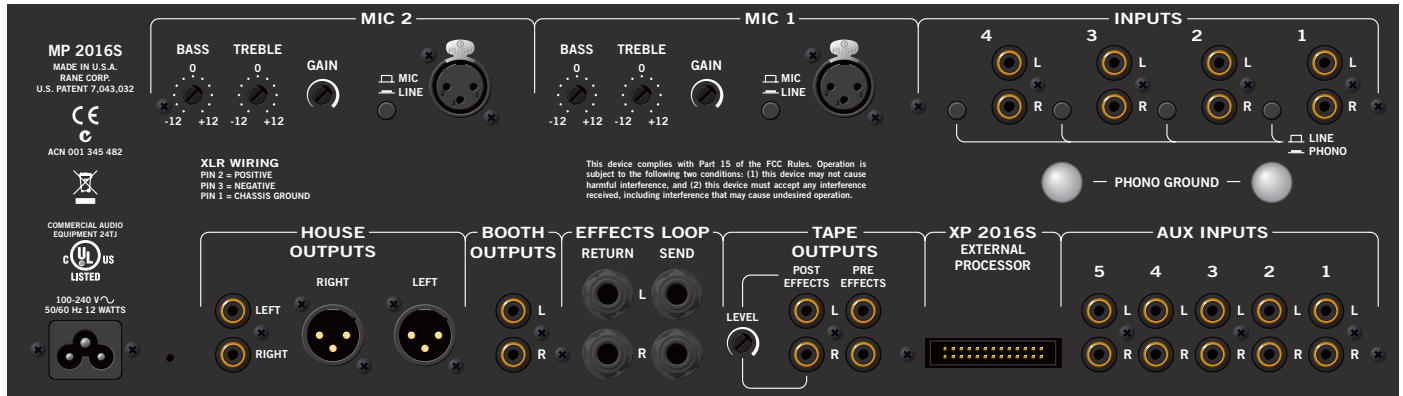
Parameter	Specification	Limit	Units	Conditions/Comments
Unit: Agency Listing	UL/cUL/CE			
Universal Line Voltage	100-240 VAC, 50/60 Hz			
Maximum Power	12		W	
Unit Construction	All Steel			
.....Size	5.25"H x 19"W x 5.3"D (3U)			(13.3 cm x 48.3 cm x 13.5 cm)
.....Weight	11 lb			(5.0 kg) Each Unit
Shipping: Size	11" x 23" x 16"			(27.9 cm x 58.4 cm x 40.6 cm)
.....Weight	18 lb			(8.1 kg) Each Unit

MP 2016S

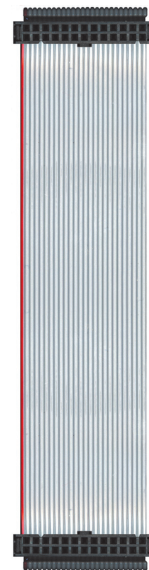
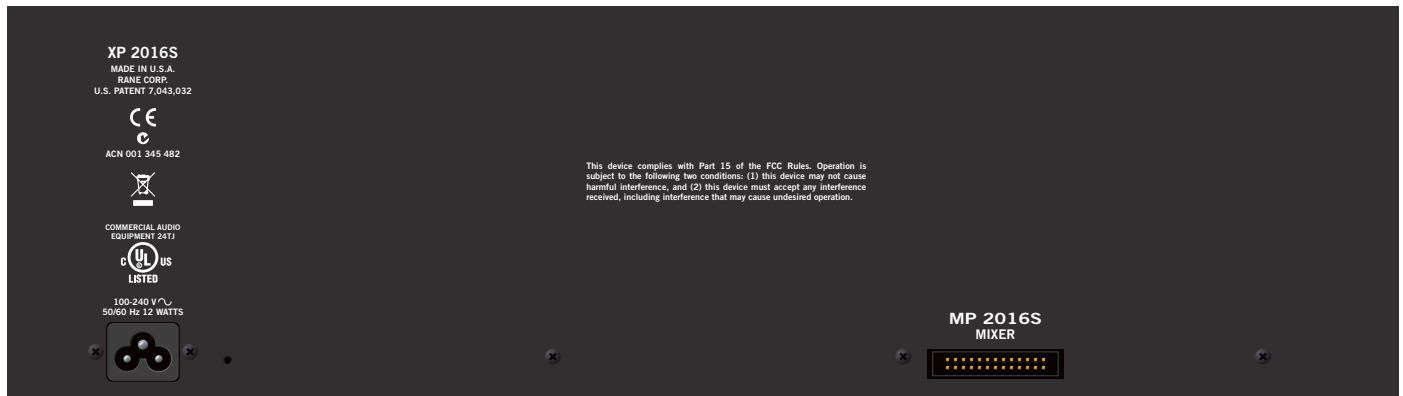
ROTARY MIXER



MP 2016S Rear Panel



XP 2016S Rear Panel



Connecting ribbon cable is included with the XP 2016S.

XP 2016S Accessories

- F 60X Fader Kit - 60 mm Crossfader Replacement

Accelerated-Slope and Active Crossfader are trademarks of Rane Corporation