



POWERED MIXER

EMX2 Technical Specifications

ZR97880

General Specifications

0 dBu = 0.775 Vrms, Output impedance of signal generator (Rs) = 150 Ω
All level controls are at their maximum position if not specified.

Output Power	1 kHz THD+N < 10% (CEA2006)	250 W + 250 W (4 Ω) 170 W + 170 W (8 Ω)	
	1 kHz THD+N < 1%	110 W + 110 W (4 Ω) 110 W + 110 W (8 Ω)	
		Input to SPEAKERS	Input to MONITOR OUT
Frequency Response	Refer to the nominal output level @ 1 kHz	+1 dB/-4 dB (40 Hz to 20 kHz)	
Total Harmonic Distortion *1 (THD+N)		0.2% @ 13.8 W (40 Hz to 20 kHz) 0.4% @ 23.2 W (1 kHz)	0.05% @ +10 dBu (20 Hz to 20 kHz) 0.009% @ +20 dBu (1 kHz)
Hum & Noise *2	Equivalent Input Noise	-115 dBu	
	Residual Output Noise	-68 dBu (40 Hz to 20 kHz, MASTER: min)	-99 dBu (20 Hz to 20 kHz, MONITOR: min)
Crosstalk (1 kHz) *3		-80 dB	
Input Channels	TOTAL: 10 channels	Mono (MIC/LINE): 4, Stereo (LINE): 3	
Output Channels		SPEAKERS [L, R], MONITOR OUT [L,R], SUBWOOFER OUT	
Bus		Stereo: 1, Effect: 1	
Input Channel Function	PAD (CH1-4)	26 dB	
	Hi-Z (CH4)	Supported	
	EQ	HIGH: 8 kHz +15 dB / -15 dB MID: 2.5 kHz +15 dB / -15 dB LOW: 100 Hz +15 dB / -15 dB	
Level Meter		6 points (-20, -6, 0, +3, +6, LIMITER)	
Built-in Effect	SPX Algorithm	Reverb 4 programs	
Output Channel Function		MASTER EQ (SPEECH to MUSIC) FEEDBACK SUPPRESSOR	
Phantom Power Voltage	CH1, 2	+30 V	
REVERB FOOT SW		Effect Mute on/off	
Protection		Load Protection: DC-fault Amplifier Protection: Over heat protection, Over current protection	
Power Requirements		AC 100-240 V, 50 Hz/60 Hz	
Power Consumption		35 W (Idle) / 90 W (1/8 Power)	
Dimensions (W×H×D)		375 mm × 147 mm × 220 mm (14.8" × 5.8" × 8.7")	
Net Weight		4.2 kg (9.3 lbs)	
Included Accessory		AC Power Cord (2 m), Owner's Manual, Technical Specifications	
Optional Accessory		Foot Switch: FC5, Mic Stand Adaptor: BMS-10A, Rack-Mount Kit: RK-EMX2	
Operating Temperature		0 to +40°C	

*1 THD+N is measured with 22 kHz LPF.

*2 Noise is measured with A-weighting filter.

*3 Crosstalk is measured with 1 kHz band pass filter.

Analog Input Characteristics

0 dBu = 0.775 Vrms

Input Jack	MIC/LINE	Hi-Z [CH4]	Actual Load Impedance	For Use with Nominal	Input Level			Connector
					Sensitivity *1	Nominal	Max. Before Clip	
CH1 - 4 [XLR]	MIC	-	3 kΩ	150 Ω Mics	-56 dBu (1.228 mV)	-35 dBu (13.78 mV)	-10 dBu (245.1 mV)	CH1, 2 XLR-3-31 *2 (Balanced)
	LINE				-30 dBu (24.51 mV)	-9 dBu (275.0 mV)	+16 dBu (4.890 V)	
CH3, 4 [Phone]	MIC	OFF	3 kΩ	150 Ω Lines	-50 dBu (2.451 mV)	-29 dBu (27.50 mV)	-4 dBu (489.0 mV)	CH3, 4 Combo jack *3 (Balanced)
		ON	1 MΩ	10 kΩ Lines				
	LINE	OFF	3 kΩ	150 Ω Lines	-24 dBu (48.90 mV)	-3 dBu (548.7 mV)	+22 dBu (9.757 V)	
		ON	1 MΩ	10 kΩ Lines				
CH5/6 - 9/10	-	-	10 kΩ	150 Ω Lines	-24 dBu (48.90 mV)	-3 dBu (548.7 mV)	+22 dBu (9.757 V)	CH5/6 Phone jack *4 (Unbalanced) CH7/8 Phone jack *4 & RCA pin (Unbalanced) CH9/10 Phone jack *4 & Stereo mini jack (Unbalanced)

*1 Sensitivity is the lowest level that will produce an output of +0 dBu (0.775 V) or the nominal output level when the unit is set to maximum gain. (All level controls are at their maximum position.)

*2 1 = GND, 2 = HOT, 3 = COLD

*3 1&Sleeve = GND, 2&Tip = HOT, 3&Ring = COLD

*4 Tip = Signal, Sleeve = GND

Analog Output Characteristics

0 dBu = 0.775 Vrms

Output Terminal	Actual Source Impedance	For Use with Nominal	Output Level		Connector
			Nominal	Max. Before Clip	
MONITOR OUT [L, R]	150 Ω	10 kΩ Lines	+4 dBu (1.23 V)	+20 dBu (7.75 V)	Phone jack *1 (Impedance balanced)
SUBWOOFER OUT	150 Ω	10 kΩ Lines	-3 dBu (0.55 V)	+17 dBu (5.49 V)	Phone jack *1 (Impedance balanced)

*1 Tip = HOT, Ring = COLD, Sleeve = GND

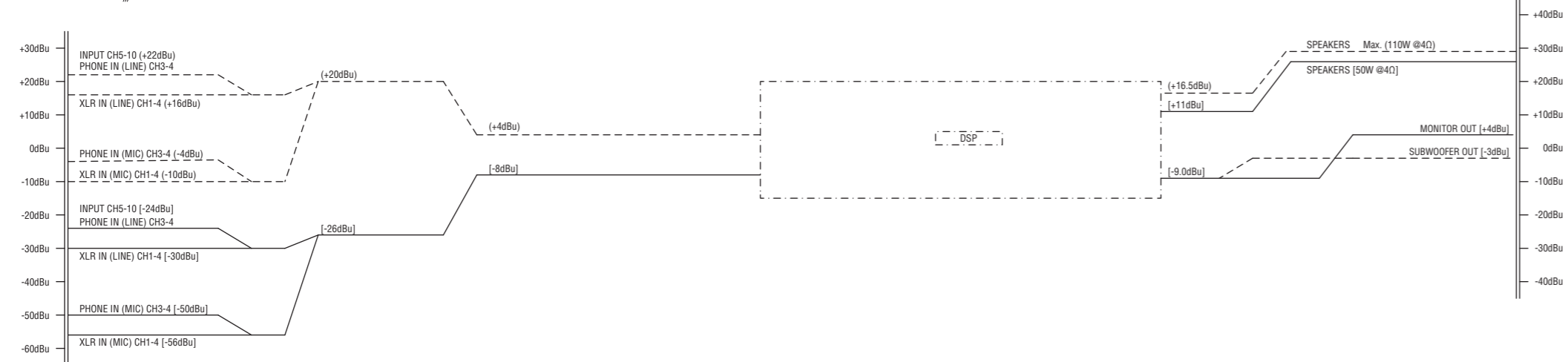
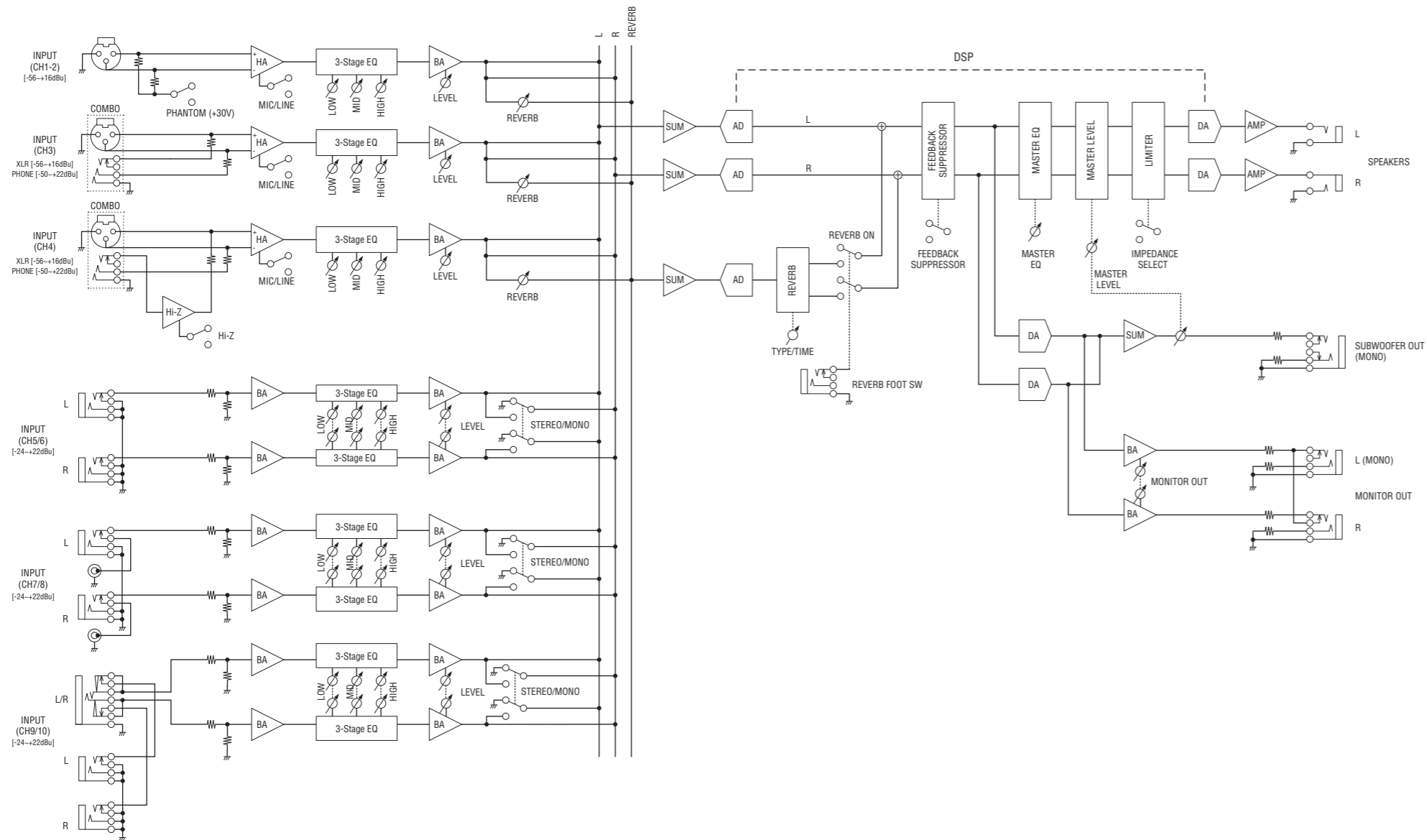
Speaker Output Characteristics

0 dBu = 0.775 Vrms

Output Terminal	Actual Source Impedance	For Use with Nominal	Output Level		Connector
			1 Hz THD+N < 1%	1 kHz THD+N < 10% [CEA2006]	
SPEAKERS [L, R]	< 0.1 Ω	4 Ω Speakers	110 W	250 W	Phone jack *1
		8 Ω Speakers	110 W	170 W	

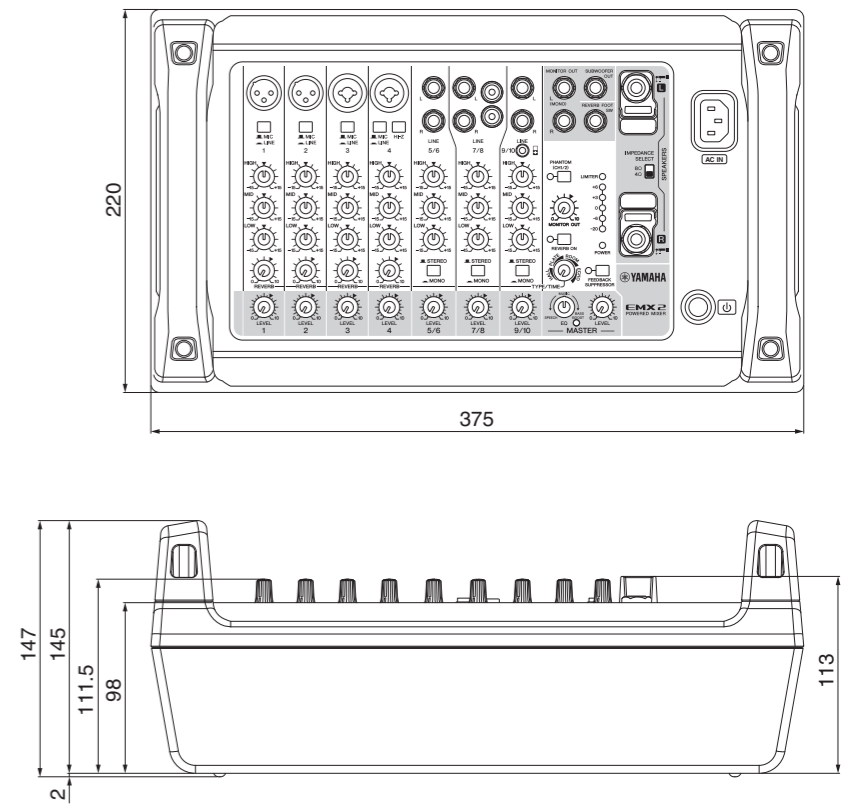
*1 Tip = Positive, Sleeve = Negative

Block and Level Diagrams



Dimensions

Unit: mm



Jack and Plug List

Jack	Polarity	Balanced/Unbalanced	Configuration
MIC/LINE	Pin 1: Ground Pin 2: Hot (+) Pin 3: Cold (-)	Balanced	XLR jack INPUT
MIC/LINE 3* MIC/LINE 4 (Hi-Z: off)*	Tip: Hot (+) Ring: Cold (-) Sleeve: Ground	Balanced	TRS phone plug Ring Sleeve
MONITOR OUT* SUBWOOFER OUT*	Tip: Hot (+) Ring: Cold (-) Sleeve: Ground	Impedance balanced	Tip Sleeve
LINE 5/6 - 9/10 MIC/LINE 4 (Hi-Z: on)	Tip: Signal Sleeve: Ground	Unbalanced	TS phone plug Sleeve Tip
SPEAKERS L/R	Tip: Positive Sleeve: Negative		

* These jacks also can be connected with TS phone plugs. If you use TS phone plugs, the connection will be unbalanced.