

# MIXING CONSOLE

## MG20XU / MG20

### Technical Specifications

#### General Specifications

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

Frequency Response	Input to STEREO OUT	+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min	
Total Harmonic Distortion (THD+N)	Input to STEREO OUT	0.03 % @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min 0.005 % @ +24 dBu (1 kHz), GAIN knob: Min	
Hum & Noise *1 (20 Hz to 20 kHz)	Equivalent Input Noise	-128 dBu (Mono Input Channel, Rs: 150 Ω, GAIN knob: Max)	
	Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: Min)	
Crosstalk(1 kHz) *2		-78 dB	
Input Channels		20 channels: Mono [MIC/LINE]: 12, Mono/Stereo [MIC/LINE]: 4, Stereo [LINE]: 0	
Output Channels		STEREO OUT: 2, PHONES: 1, MONITOR OUT: 1, AUX SEND: 4, GROUP OUT: 4	
Bus		STEREO: 1, GROUP: 4, AUX: 4 (MG20XU: incl. FX)	
Input Channel Function	PAD	CH 1 – CH 12	26 dB
	HPF	CH 1 – CH 12, CH 13/14 (MIC) – CH 19/20 (MIC)	80 Hz, 12 dB/oct
	COMP	CH 1 – CH 8	1 knob compressor (Gain/Threshold/Ratio) Threshold: +22 dBu to -8 dBu, Ratio: 1:1 to 4:1, Output level: 0 dB to 7 dB, Attack time: approx. 25 msec, Release time: approx. 300 msec
	EQ	CH 1 – CH 12	HIGH: Gain: +15 dB/-15 dB, Frequency: 10 kHz shelving MID: Gain: +15 dB/-15 dB, Frequency: 250 Hz to 5 kHz peaking LOW: Gain: +15 dB/-15 dB, Frequency: 100 Hz shelving
		CH 13/14 – CH 19/20	HIGH: Gain: +15 dB/-15 dB, Frequency: 10 kHz shelving MID: Gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking LOW: Gain: +15 dB/-15 dB, Frequency: 100 Hz shelving
PEAK LED	CH 1 – CH 19/20	LED turns on when post EQ signal reaches 3 dB below clipping level.	
Level Meter	Pre Monitor LEVEL	2 x 12 -segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Built-in Effect (MG20XU)	SPX Algorithm	24 programs, PARAMETER control: 1, FOOT SW: 1 (FX RTN CH on/off)	
USB Audio (MG20XU)	2 IN / 2 OUT	USB Audio Class 2.0 compliant, Sampling Frequency: Max 192 kHz, Bit Depth: 24-bit	
Phantom Power Voltage		+48 V	
Power Requirements		AC 100-240 V, 50 Hz/60 Hz	
Power Consumption		36 W	
Dimensions (W x H x D)		444 mm x 130 mm x 500 mm (17.5" x 5.1" x 19.7")	
Net Weight		MG20XU: 7.1 kg (15.7 lbs), MG20: 6.9 kg (15.2 lbs)	
Included Accessory		AC Power Cord, Rack-Mount Kit, CUBASE AI DOWNLOAD INFORMATION (MG20XU), Owner's Manual, Technical Specifications (this leaflet)	
Optional Accessory		Foot Switch: FC5 (MG20XU)	
Operating Temperature		0 to +40 °C	

\*1 Noise is measured with A-weighting filter.  
\*2 Crosstalk is measured with 1 kHz band pass filter.

The contents of this manual apply to the latest specifications as of the publishing date. To obtain the latest manual, access the Yamaha website then download the manual file.

#### Analog Input Characteristics

0 dBu = 0.775 Vrms

Input Jack	PAD 26 dB	GAIN Trim Position	Actual Load Impedance	For Use with Nominal	Input Level			Connector
					Sensitivity *1	Nominal	Max. Before Clip	
MIC/LINE 1 - 12	OFF	+64 dB	3 kΩ	50–600 Ω Mics/Lines	-80 dBu (0.077 mV)	-60 dBu (0.775 mV)	-40 dBu (7.75 mV)	Combo jack *2 (Balanced)
		+20 dB			-36 dBu (12.3 mV)	-16 dBu (122.8 mV)	+4 dBu (1.228 V)	
	ON	+38 dB			-54 dBu (1.55 mV)	-34 dBu (15.46 mV)	-14 dBu (154.6 mV)	
		-6 dB			-10 dBu (245 mV)	+10 dBu (2.451 V)	+30 dBu (24.51 V)	
MIC 13/14 - 19/20	—	+64 dB	3 kΩ	50–600 Ω Mic	-80 dBu (0.077 mV)	-60 dBu (0.775 mV)	-40 dBu (7.75 mV)	XLR-3-31 *3 (Balanced)
LINE 13/14, 15/16	—	+38 dB	10 kΩ	600 Ω Lines	-36 dBu (12.3 mV)	-16 dBu (122.8 mV)	-6 dBu (388.2 mV)	Phone jack *4 (Unbalanced)
		-6 dB			-10 dBu (245 mV)	+10 dBu (2.451 V)	+30 dBu (24.51 V)	
LINE 17/18, 19/20	—	+38 dB	10 kΩ	600 Ω Lines	-54 dBu (1.55 mV)	-34 dBu (15.46 mV)	-14 dBu (154.6 mV)	RCA pin (Unbalanced)
		-6 dB			-10 dBu (245 mV)	+10 dBu (2.451 V)	+30 dBu (24.51 V)	

\*1 Sensitivity is the lowest level that will produce an output of +4 dBu (1.228 V) or the nominal output level when the unit is set to maximum gain. (All level controls are at their maximum position.)  
\*2 1&Sleeve = GND, 2&Tip = HOT, 3&Ring = COLD  
\*3 1 = GND, 2 = HOT, 3 = COLD  
\*4 Tip = Signal, Sleeve = GND

#### Analog Output Characteristics

0 dBu = 0.775 Vrms

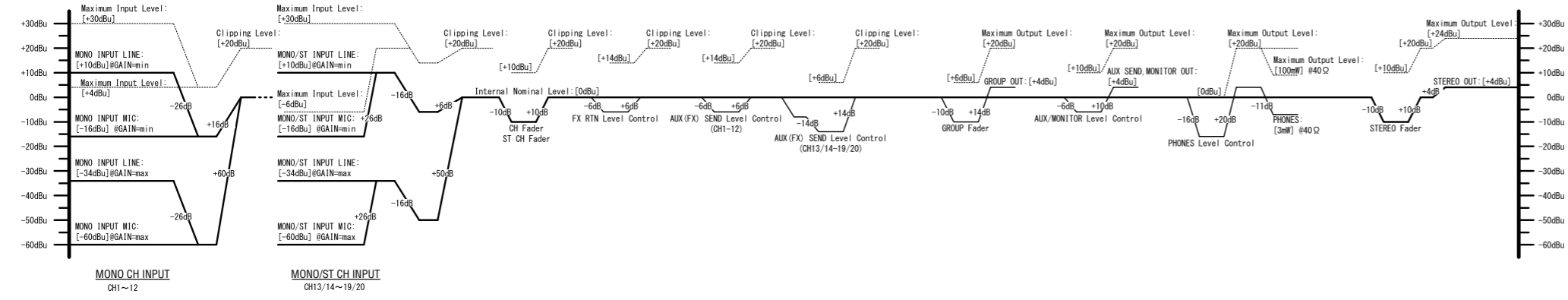
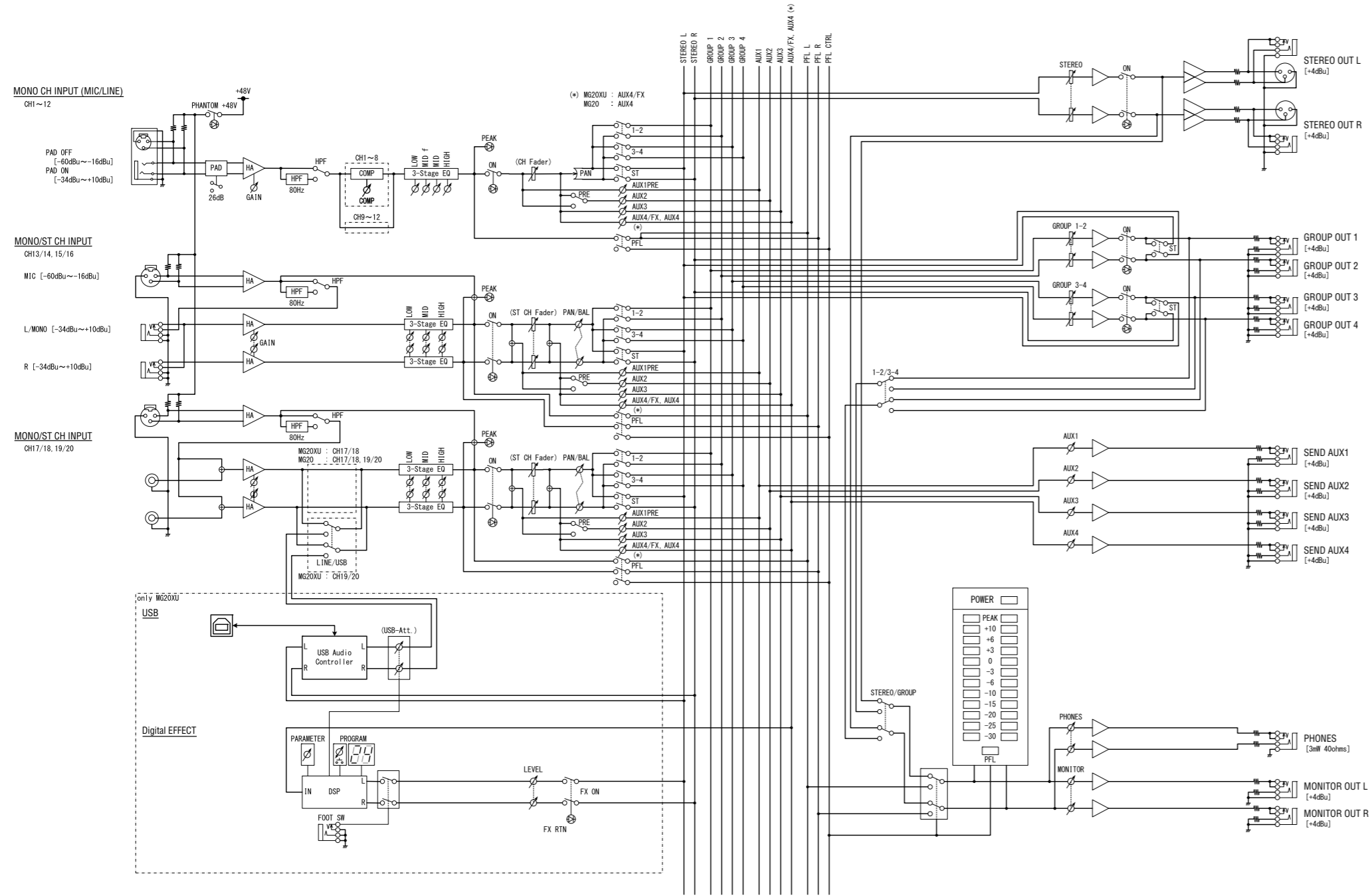
Output Terminal	Actual Source Impedance	For Use with Nominal	Output Level		Connector
			Nominal	Max. Before Clip	
STEREO OUT [L, R]	75 Ω	600 Ω Lines	+4 dBu (1.228 V)	+24 dBu (12.28 V)	XLR-3-32 *3 Phone jack *5 (Balanced)
MONITOR OUT [L, R] GROUP OUT [1 - 4] AUX SEND [1 - 4]	150 Ω	10 kΩ Lines	+4 dBu (1.228 V)	+20 dBu (7.750 V)	Phone jack *5 (Impedance Balanced)
PHONES	110 Ω	40 Ω Phones	3 mW + 3 mW	100 mW + 100 mW	Stereo phone jack

\*3 1 = GND, 2 = HOT, 3 = COLD  
\*5 Tip = HOT, Ring = COLD, Sleeve = GND

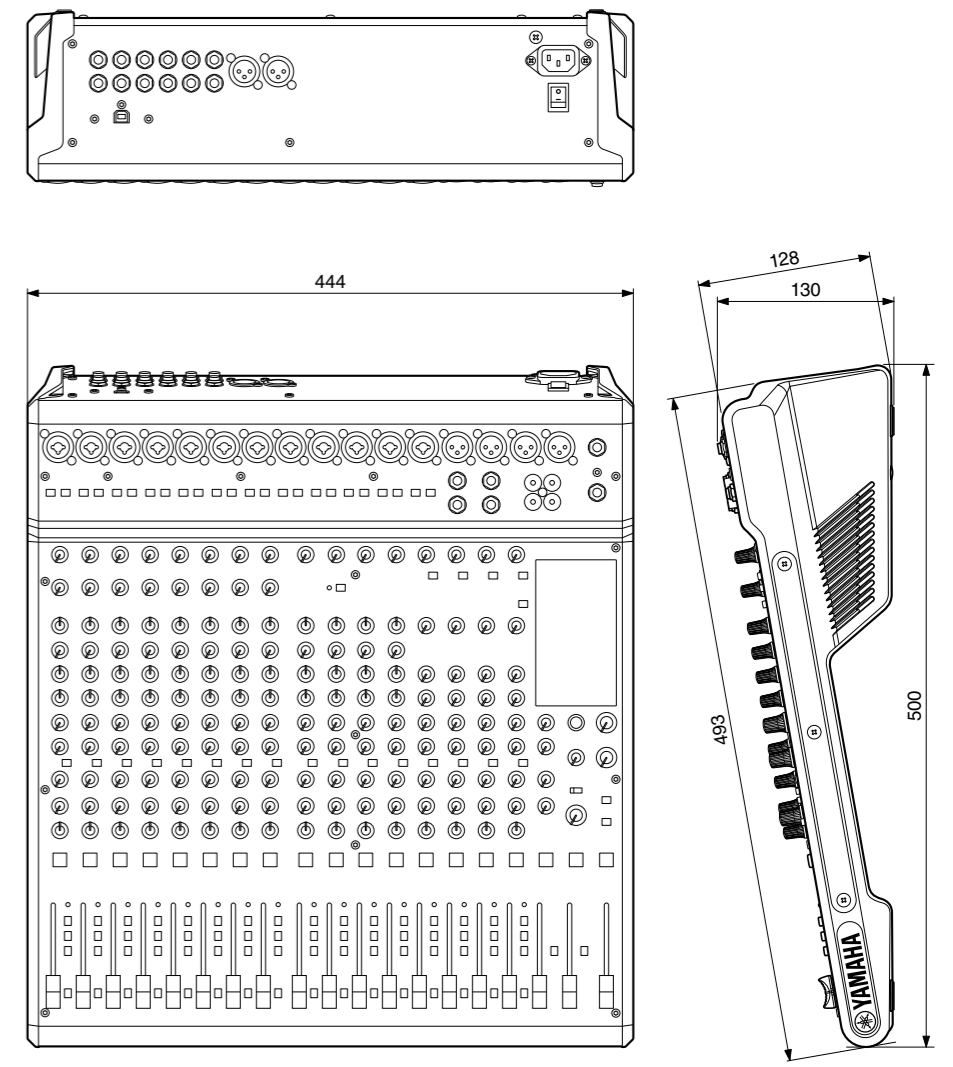
#### Digital Input / Output Characteristics (MG20XU)

Terminal	Format	Data Length	Sampling Frequency	Connector
USB	USB Audio Class 2.0	16-bit/24-bit	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz	USB Standard-B

# Block and Level Diagrams



# Dimensions



Unit: mm  
This illustration shows the MG20XU.