



DIGITAL MIXING CONSOLE
M7CL

M7CL Specifications

General Specifications

Sampling Frequency	Internal:	44.1 kHz, 48 kHz
	External:	Normal rate 44.1 kHz (-10%) to 48 kHz (+6%)
Signal Delay		Less than 2.5 ms INPUT to OMNI OUT (@ Sampling frequency = 48 kHz)
Fader		100mm motorized x 62 (46)
Touch Screen LCD		800 x 600 dot TFT LCD
Total Harmonic Distortion * Input Gain = Minimum Master fader at nominal level and one input fader at nominal level		INPUT to OMNI OUT Less than 0.05% 20 Hz - 20 kHz @ +4 dBu into 600 Ω
Frequency Response Input Gain = Max Master fader at nominal level and one input fader at nominal level		INPUT to OMNI OUT 0.5, -1.5 dB 20 Hz - 20 kHz @ +4 dBu into 600 Ω
Dynamic Range Input Gain = Minimum Master fader at nominal level and one input fader at nominal level		110 dB typ. DA Converter (OMNI OUT) @ fs=48 kHz
		108 dB typ. AD + DA (to OMNI OUT)
Hum & Noise ** Input Gain = Max Master fader at nominal level and one input fader at nominal level		-128 dBu typ. Equivalent Input Noise -86 dBu residual output noise (OMNI OUT) STEREO Master off
Maximum Voltage Gain		86 dB INPUT1-48 to OMNI OUT
Crosstalk (@1 kHz)		-80 dB adjacent input channels (INPUT1-48, ST IN 1-4 [L, R], OMNI OUT 1-16)
Phantom Power		48V
Dimensions (W x H x D mm)		M7CL-32: 1,060 x 286 x 701 (Included MBM7CL: 340)
		M7CL-48: 1,274 x 286 x 701 (Included MBM7CL: 340)
Net Weight		M7CL-32: 42 kg
		M7CL-48: 50 kg
Power Requirements		AC100-240V 50 Hz / 60 Hz

Power Consumption	M7CL-32: 250W M7CL-48: 300W
Operation free-air Temperature Range	10 - 35 °C
Storage Temperature Range	-20 - 60 °C

*Total Harmonic Distortion is measured with a 18 dB/octave filter @80 kHz

**Hum & Noise is measured with 6 dB/octave filter @12.7 kHz; Equivalent to a 20 kHz filter with infinite dB/octave attenuation.

Analog Input Characteristics

Input Terminals	GAIN	Actual Load Impedance	For Use With Nominal	Input Level			Connector
				Sensitivity *1	Nominal	Max. Before Clip	
INPUT 1-32 <M7CL-32> INPUT 1-48 <M7CL-48>	-62 dB	3 k Ω	50-600 Ω Mics & 600 Ω Lines	-82 dBu (61.6 μV)	-62 dBu (0.616 mV)	-42 dBu (6.16 mV)	XLR-3-31 type (Balanced) *2
	+10 dB			-10 dBu (245 mV)	+10 dBu (2.45 V)	+30 dBu (24.5 V)	
ST IN 1-4 [L, R]	-62 dB	3 k Ω	50-600 Ω Mics & 600 Ω Lines	-82 dBu (61.6 μV)	-62 dBu (0.616 mV)	-42 dBu (6.16 mV)	XLR-3-31 type (Balanced) *2
	+10 dB			-10 dBu (245mV)	+10 dBu (2.45V)	+30 dBu (24.5V)	
TALKBACK	-60 dB	3 k Ω	50-600 Ω Mics & 600 Ω Lines	-70 dBu (0.245 mV)	-60 dBu (0.775 mV)	-40 dBu (7.75 mV)	XLR-3-31 type (Balanced) *2
	-16 dB			-26 dBu (36.8 mV)	-16 dBu (0.123 V)	+4 dBu (1.23 V)	

*1. Sensitivity is the lowest level that will produce an output of +4 dBu (1.23 V) or the nominal output level when the unit is set to maximum gain. (all faders and level controls are maximum position.)

*2. XLR-3-31 type connectors are balanced. (1 = GND, 2 = HOT, 3 = COLD)

*3. In these specifications, 0 dBu = 0.775 Vrms.

*4. All input AD converters are 24bit linear, 128times oversampling.

*5. +48V DC (phantom power) is supplied to INPUT (1-48), ST IN 1L-4R, TALKBACK XLR type connectors via each individual software controlled switches.

Analog Output Characteristics

Output Terminals	Actual Source Impedance	For Use With Nominal	GAIN SW *5	Output Level		Connector
				Nominal	Max. Before Clip	
OMNI OUT 1-16	75Ω	600 Ω Lines	+24 dB (default)	+4 dBu (1.23V)	+24 dBu (12.28V)	XLR-3-32 Type (Balanced) *1
			+18 dB	-2 dBu	+18 dBu	

				(616 mV)	(6.16 V)	
PHONES	15Ω	8 Ω Phones	-	75 mW *6	150 mW	Stereo Phone Jack (TRS) (Unbalanced) *2
		40 Ω Phones	-	65 mW *6	150 mW	

*1. XLR-3-32 type connectors are balanced. (1 = GND, 2 = HOT, 3 = COLD)

*2. PHONES stereo phone jack is unbalanced. (Tip = LEFT, Ring = RIGHT, Sleeve = GND)

*3. In these specifications, 0 dBu = 0.775 Vrms.

*4. All output DA converters are 24bit, 128times (@48 kHz) oversampling.

*5. There are switches inside the body to preset the maximum output level.

*6. The position of the level control is 10 dB lowered from Max.

Digital Output Characteristics

Terminals	Format	Data Length	Level	Connector
2TR OUT DIGITAL	AES / EBU Professional Use	24-bit	RS422	XLR-3-32 type (Balanced)*

*XLR-3-32 type connectors are balanced. (1 = GND, 2 = HOT, 3 = COLD)

Control Input / Output Characteristics

Terminals	Format	Level	Connector	
MIDI	IN	MIDI	-	DIN Connector 5P
	OUT	MIDI	-	DIN Connector 5P
WORD CLOCK	IN	-	TTL/75 Ω Terminated	BNC Connector
	OUT	-	TTL/75 Ω	BNC Connector
REMOTE	-	RS422	D Sub Connector 9P (Male)	
Ethernet	Ethernet	100Base-T	RJ-45	
LAMP 1, [2]	-	0V-12V	XLR-4-31 type *1	
USB	USB 1.1 Host	USB	A type USB Connector (Female)	
DC POWER INPUT	-	-	JL05 Connector	

*1. 4pin = HOT, 3pin = COLD, lamp rated powered 5W Voltage can be adjust by a software.