Digital Production Console

DM1000 Version2

DM1000 13U
MB1000 3U

Rear Panel

**Peak Meter Bridge MB1000 & Wood Side Pad SP1000 are options.*

19-inch Digital Production Console for professionals in the studio or on the road.

- Precise 24-bit/96-kHz audio and high-performance head amps.
- Generous mixing capacity with up to 48 simultaneous inputs and 20 mix buses in a compact rack-mount size console.
- Powerful channel functions with flexible control and digital patching capability.
- Four advanced multi-effect processors include surround effects.
- Scene memory and auto-mix functions for efficient workflow.
- Versatile pairing and grouping functions enhance mixing efficiency.
- Comprehensive interface with 17 touch-sensitive 100-mm motor faders.
- A generous selection of control interfaces: MIDI, USB, REMOTE, SMPTE, and word clock.
- Two mini-YGDAI expansion slots for easy I/O expansion in a variety of formats.
- Advanced Studio Manager application for Windows or Macintosh computers supplied.
- Easy integration with computer-based DAWs (Digital Audio Workstations) or digital recorders to create an advanced digital production environment.
- A comprehensive range of features for surround production, including an enhanced surround monitoring environment with bass management,

OPTIONS

MB1000 Peak Meter Bridge **SP1000** Side Pad **RK-1** Rack-mount Kit

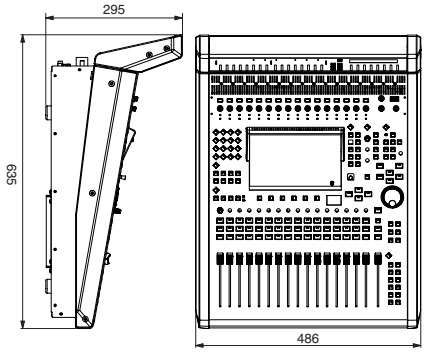
GENERAL SPECIFICATIONS

Internal processing	32bit (Accumulator=58bit)
Number of scene memories	99
Sampling frequency	Internal: 44.1kHz,48kHz,88.2kHz,96kHz External: Normal rate 44.1kHz(-10%) to 48kHz(+6%) Double rate 88.2kHz(-10%) to 96kHz(+6%)
Signal Delay	≤ 1.6 ms CH INPUT to OMNI OUT (fs=48 kHz) ≤ 0.8 ms CH INPUT to OMNI OUT (fs=96 kHz)
Total harmonic distortion*1 Input Gain=Min.	CH INPUT to OMNI OUT ≤ 0.05%, 20Hz to 20kHz @+4dBu into 600Ω ≤ 0.01%, 1kHz @+18dBu into 600Ω (@Sampling frequency=44.1/48kHz) ≤ 0.05%, 20Hz to 40kHz @+14dBu into 600Ω ≤ 0.01%, 1kHz @+18dBu into 600Ω (@Sampling frequency=88.2/96kHz)
Frequency response	CH INPUT to OMNI OUT 0.5, -1.5dB 20Hz - 20kHz @+4dBu into 600Ω (@Sampling frequency=44.1/48kHz) 0.5, -1.5dB 20Hz - 40kHz @+4dBu into 600Ω (@Sampling frequency=88.2/96kHz)
Dynamic range (maximum level to noise level)	110dB typ, DA Converter (OMNI OUT) 106dB typ, AD+DA (to OMNI OUT)
Hum & noise level*2 (20Hz to 20kHz) Rs=150Ω Input Gain=Max Input Pad=0dB Input Sensitivity=-60dB	-128dBu Equivalent Input Noise -86dBu residual output noise, OMNI OUT STEREO OUT off -86dBu(90dB S/N), OMNI OUT STEREO fader at nominal level and all CH INPUT faders -64dBu(68dB S/N), OMNI OUT Master fader at nominal level and one CH INPUT fader
Crosstalk(@1kHz) Input GAIN=min	80dB adjacent input channels (CH1-16) 80dB input to output
Power requirements	Japan: AC100V 50/60Hz, 135W North America: AC120V, 60Hz, 135W Other Areas: AC220-240V, 50/60Hz, 135W
Dimensions (W x H x D)	DM1000: 436 x 200 x 585 mm (17.1" x 7.8" x 23.0") With MB and SP: 486 x 295 x 635 mm (19.1" x 11.6" x 25.0")
Weight	20.0kg (75lbs)

*1 Total Harmonic Distortion are measured with a 6dB/octave filter @80kHz
*2 Hum&Noise are measured with 6dB/octave filter @12.7kHz;equivalent to a 20kHz filter with infinite dB/octave attenuation.

DIMENSIONS

unit : mm



ANALOG INPUT / OUTPUT SPECIFICATIONS

Input Terminal	Pad	Gain	Actual Load Impedance	For Use With Nominal	Input Level			Connector
					Sensitivity*1	Nominal	Max. before Clip	
CH INPUT 1-16	0	-60dB	3kΩ	50-600ohm Mics & 600ohm Lines	-70dBu	-60dBu	-40dBu	XLR3-31 type*2 (Balanced)
					-26dBu	-16dBu	+4dBu	
	20	-16dB			-6dBu	+4dBu	+24dBu	
OMNI IN 1-4			10kΩ	600ohm Lines	+4dBu	+4dBu	+24dBu	

* 0dBu=0.775 Vrms.
* 0dBV=1.00 Vrms.
* +48V DC(phantom power) is supplied to CH INPUT(1-24) XLR type connector via each individual switch.
*1 Sensitivity is the lowest level that will produce an output of +4 dB (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).
- In these specifications, 0 dBu = 0.775 Vrms.
- All input AD converters (INPUT 1~16, OMNI INPUT 1~4, TALKBACK) are 24-bit linear, 128-times oversampling. (@fs=44.1, 48 kHz)
- +48 V DC (phantom power) is supplied to CH INPUT (1~16) XLR type connectors via individual switches.

Output Terminal	Actual Source Impedance	For Use With Nominal	Gain SW	Output Level		Connector
				Nominal	Max. before Clip	
OMNI OUT 1-12	150Ω	600kΩ Lines	-	+4dBu	+24dBu	XLR3-32 type*1 (Balanced)
PHONES	100Ω	8Ω Lines	-	4mW	25mW	ST Phone jack*2 (Unbalanced)
		40Ω Lines	-	12mW	75mW	

* 0dBu=0.775 Vrms.
* 0dBV=1.00 Vrms.
*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).
- In these specifications, 0 dBu = 0.775 Vrms, 0 dBV=1.00 Vrms.
- All output DA converters (OMINI OUT 1~12, PHONES) are 24-bit, 128-times oversampling. (@fs=44.1, 48 kHz)

DIGITAL INPUT / OUTPUT SPECIFICATIONS

Terminal		Format	Data Length	Level	Connector
2TR IN DIGITAL	1	AES/EBU	24bit	RS422	XLR3-31 type*4 (Balanced)
	2	IEC-60958	24bit	0.5Vpp/75Ω	RCA pin jack

Terminal		Format	Data Length	Level	Connector
2TR OUT DIGITAL	1	AES/EBU (Professional use)	24bit	RS422	XLR3-32 type (Balanced)
	2	IEC-60958 (Consumer Use)	24bit	0.5Vpp/75Ω	RCA pin jack

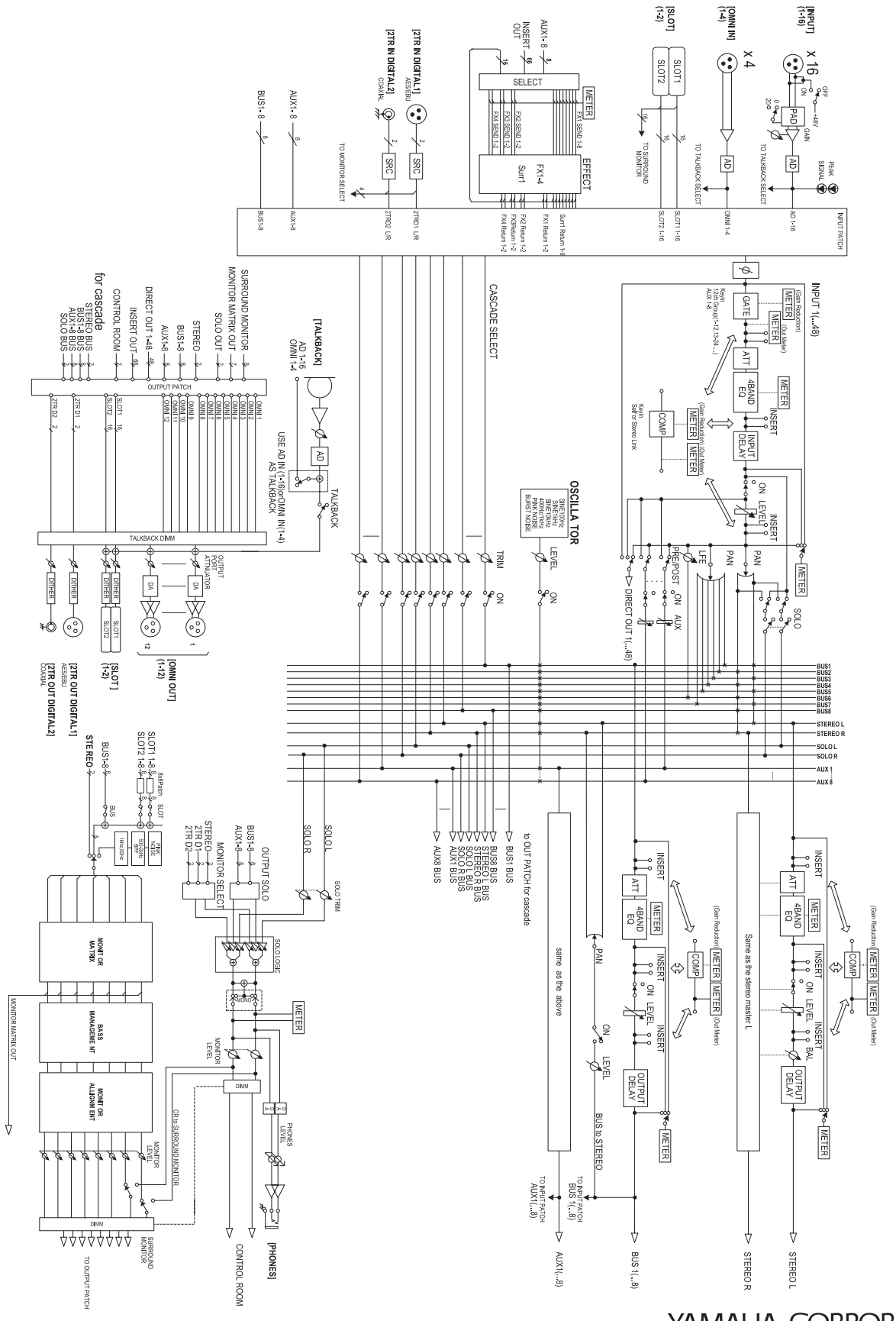
0dBu=0.775Vrms; 0dBV=1.00Vrms
*1 channel status of 2TR OUT DIGITAL 1...type: linear PCM, emphasis: NO, sampling rate: depends on the internal configuration.
*2 channel status of 2TR OUT DIGITAL 2...type: linear PCM, category code: Digital signal mixer, copy prohibit: NO, emphasis: NO, clock accuracy: Level II (1000 ppm), sampling rate: depends on the internal configuration.
*3 dither: word length 16/20/24 bit
*4 XLR-3-32 type connectors are balanced. (1=GND,2=HOT,3=COLD)

CONTROL I/O SPECIFICATIONS

I/O Port		Format	Level	Connector in Console
TO HOST USB		USB	0V ~ 3.3V	B type USB Connector
MIDI	IN*1	MIDI	-	DIN Connector 5P
	OUT			
TIME CODE INPUT		SMPTE	Nominal - 10dB/10kΩ	XLR-3-31 type (Balanced)*2
WORD CLOCK	IN	-	TTL/75Ω	BNC Connector
	OUT			
CONTROL			C-MOS IN, Open Collector OUT 1pin: 150mA, 8pin total: 500mA	D-SUB Connector 25P (Female)
REMOTE			RS422	D-SUB Connector 9P (Male)
METER				D-SUB Connector 15P (Female)

*1 MIDI IN can use as TIME CODE IN MTC.
*2 XLR-3-31 type connectors are balanced. (1=GND, 2=HOT, 3=COLD).

BLOCK DIAGRAM



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