

## Overview

The DM7 is a Dante-equipped versatile digital mixing console with unparalleled sound quality, ease of operation, and high reliability that make it perfect for a wide range of applications. The DM7 is configured with 12 + 12 + 4 faders and a 2 x 12.1" + 1 x 7" multi-touch screen.



## Features

- Input mixing channels: 120 mono
- Buses: 48 Mix + 12 Matrix + 2 Stereo
- Display: 12.1" multi-touch screen x 2, 7" multi-touch screen x 1
- Faders: 28 (12 + 12 + 4)
- Analog I/O: 32 inputs / 16 outputs
- Dante: 144 in / 144 out
- AES/EBU: 2 in / 2 out (with SRC)
- Slot: PY Slot x 1
- USB Audio Interface: 18 in / 18 out
- Power supply: Redundant power supply built-in
- Power consumption: 240 W
- Dimensions (W x H x D): 793 mm x 324 mm x 564 mm (31.3" x 12.8" x 22.2")
- Net Weight: 23.5 kg (51.8 lb)

# Specifications

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## Functional Specifications

Mixing Capacity	Input Channels	120 mono	Input Channel Functions	MUTE Group	12	
	Mix Buses	48		Number of Inserts	4 slots on 1 insert point	
	Matrices	12 (Input to Matrix supported)		Dan Dugan Automixer	Yes (Up to 64ch)	
	Stereo Buses	2		Direct Out	Yes	
	Mono Buses	1 (Stereo B can be changed)		PEQ	8 Band Full PEQ	
	Cue Buses	2		GEQ	Virtual Rack (EQ Rack)	
Local Connectors	Analog Input	32	Output Channel Functions	Dynamics 1	Legacy Comp / Comp260 / Expander / Gate / Ducking / De-Esser / FET Limiter / Diode Bridge Comp	
	Analog Output	16		Output Channel Delay	Yes (0 ms to 1,000 ms)	
	Dante I/O	Primary / Secondary		MUTE Group	12	
	AES/EBU Input	2 (4ch)		Number of Inserts	4 slots on 1 insert point	
	AES/EBU Output	2 (4ch) with SRC		Premium Rack	Number of DSP Resources	64
	Expansion Slot (PY Slot)	1			Mountable Plug-ins	RND Portico5033 / RND Portico5043 / Portico 5045 / U76 / Opt-2A / Comp276/ Buss Comp 369 / MBC4 / DaNSe / EQ-1A / Equalizer601 / Dynamic EQ / Dynamic EQ4 / REV-X / OpenDeck / Analog Delay / Max100 / Vintage Phaser / Dual Phaser / HQ. Pitch
	Word Clock I/O	In / Out	Effect Rack	Number of DSP Resources	16	
	MIDI I/O	No (MIDI protocol supported on USB to HOST)		Number of Effect Programs	43	
	GPI	5 in / 5 out	EQ Rack	Number of DSP Resources	32	
	USB	2 (File Save / Load, 2 Track Rec / Play)		Mountable Device	31BandGEQ / Flex15GEQ / 8Band PEQ (RTA overlay supported)	
	USB to Host	1 (USB Type-C, USB2.0)	Dante	Number of I/O Channels	144 in / 144 out	
	Ethernet	Yes		Number of I/O devices that can be discovered from the console *1	127	
	Meter Bridge	On screen		Number of I/O devices that can be mounted	24	
	Lamp	0 (Built-in LED Strip Light)		Number of I/O devices with HA remote control	24	
	Video Out	No		Dante Patch from Console	Yes	
	TC In	Yes		USB to Host	Number of I/O Channels	18 in / 18 out
	Phones	1			USB MIDI	Yes
	AC Inlet	2 (V-Lock Type)		Monitor	Solo Mode	Yes
	External Redundant PSU	Built-in dual power supply	Oscillator		Sine Wave 1ch / Sine Wave 2ch / Pink Noise / Burst Noise	
Scene Memory	Number of Scenes	500	Other Functions	Port to Port	Yes	
	Recall Safe	Yes		Timecode Reader / Display	Yes	
	Focus Recall	Yes		Timecode Chase	No	
	Fade Time	Yes		GPI	Yes (5 in / 5 out)	
	Preview	No		MIDI	Yes (USB MIDI)	
	Selective Load / Save	Yes		OSC Server	Yes	
	Global Paste	Yes	DAW Remote	Yes		
	Event List	No	Nuendo Live: Control Integration	Yes		
	Overlay	No	Virtual Soundcheck	Yes		
	Isolate	No				
Tactile Control Keys	No					
Input Channel Functions	Input A/B	Yes				
	Gain Compensation	Yes				
	Digital Gain	Yes (-96 dB to +24 dB)				
	ATT	Yes (-96 dB to +24 dB)				
	HPF	20 Hz to 2,000 Hz, -6/-12/-18/-24 dB/oct Selectable				
	PEQ	4 Band Full PEQ (4 algorithms, RTA overlay supported)				
	LPF	20 Hz to 20 kHz, -6/-12 dB/oct				
	Dynamics 1	Legacy Comp / Comp260 / Expander / Gate / Ducking / De-Esser				
	Dynamics 2	Legacy Comp / Comp260 / Expander / Gate / Ducking / De-Esser / FET Limiter / Diode Bridge Comp				
	Input Delay	Yes (0 ms to 1,000 ms)				
	Pan	Center Nominal / LR Nominal				
	DCA Group	24 (Output DCA supported)				
	DCA Rollout	Yes				

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Other Functions	Wireless Mic Monitoring	Yes	
	RTA	Yes	
	Delay Compensation	Yes	
	Output Port Delay	Yes (Up to 20 ports) * Future Update	
	Sub In	Yes	
	User Levels	Yes	
	Channel Link	Yes	
	Temporary Channel Link	Yes * Future Update	
	Multi Language Channel Names	Yes	
	Mix / Matrix to Input	Yes	
	Split Mode	Yes	
	Assist	Yes (HA / Naming / Fader)	
	User Interface	Displays	12.1" multi-touch x 2, 7" multi-touch x 1
		Faders	24 + 4
Channel / Screen Encoders		Yes	
Channel Name / Color Displays		No (On-screen)	
Custom Fader Banks		Yes	
Shift Keys		Yes	
User Defined Keys		Surface: 12 (6 keys x 4 bank) Utility Screen (On-screen): 12 (12 keys x 4 bank)	
User Defined Knobs		Yes (by 4 encoders below the Utility screen)	
Touch and Turn Knob		Yes	
Monitor Level Knob		No	
Arm Rest		Yes	
Rack Mountable		No	
Software		Editor	DM7 Editor (Win/Mac)
		StageMix	DM7 StageMix
	MonitorMix	Yes	
	Console File Converter	Yes	
	ProVisionaire Control / Touch	Yes	
	Software Package	Broadcast Package, Theatre Package	

\*1 This is the maximum number of I/O devices shown in the ONLINE DEVICE LIST of Dante SETUP. Only devices shown in the list can be mounted from the console.

## General specifications

Mixing capacity	120 Inputs, 48 Mix + 12 Matrix + 2 Stereo	
Sampling frequency	External clock frequency range	48 kHz / 96 kHz ±200 ppm
	Internal clock frequency	48 kHz / 96 kHz
Signal delay	Less than 1.5 ms, INPUT to OMNI OUT @Fs=96 kHz	
Screens	12.1" multi-touch screen x 2, 7" multi-touch screen x 1	
Fader	100 mm touch-sensitive motorized fader x 28	
Power requirements	100-240 V, 50/60 Hz	
Power consumption	240 W	
Dimensions (W x H x D)	793 mm x 324 mm x 564 mm (31.3" x 12.8" x 22.2") including the rubber feet	
Weight	23.5 kg (51.8 lbs)	
NC value *1	Fan Speed Low	NC=20
	Fan Speed High	NC=30

Operating temperature range	Min: 0°C, Max: 40°C
Storage temperature range	Min: -20°C, Max: 60°C
Accessories	Owner's Manual, AC power cord x 2, Dust cover, Cable hook, Nuendo Live and VST Rack Elements Download Information leaflet
Optional items	PY cards, DM7 CONTROL (CTL-DM7)

\*1. Measured 30 cm horizontally away and vertically up from the unit (front pad)

## Audio characteristics

During measurement, all faders were nominal. The output impedance of the signal generator was 150Ω. The output load impedance was either 600Ω or 10kΩ (set with the Output Load Impedance button on the OMNI OUT screen).

## Frequency characteristics

@20Hz-20kHz, reference to the nominal output level @1kHz

Input	Output	RL	Conditions	Min.	Typ.	Max.	Unit
INPUT 1-32	OMNI OUT 1-16	600Ω	GAIN: +66dB	-1.5	0.0	0.5	dB

## Total harmonic distortion

Input	Output	RL	Conditions	Min.	Typ.	Max.	Unit
INPUT 1-32	OMNI OUT 1-16	600Ω	+4dBu @20Hz-20k Hz, GAIN: -6dB			0.05	%
INPUT 1-32	PHONES	40Ω	50mW @1kHz, PHONES LEVEL: Max.			0.15	%

\*1. Total harmonic distortion was measured using an 80 kHz, 18 dB/octave low pass filter.

## Hum & noise \*2

Input	Output	RL	Conditions	Min.	Typ.	Max.	Unit
INPUT 1-32	OMNI OUT 1-16	600Ω	Rs=150Ω, GAIN: +66dB		-128 EIN *1		dBu
					-62		
INPUT 1-32	OMNI OUT 1-16	600Ω	Rs=150Ω, GAIN: -6dB		-88	-85	dBu
-	OMNI OUT 1-16	600Ω	Residual output noise; Output channel is off.			-92	dBu
-	PHONES	40Ω	Residual output noise; PHONES LEVEL: Min.			-94	dBu

\*1. EIN is Equivalent Input Noise.

\*2. Hum & noise levels were measured using an A-weight filter.

## Dynamic range

Input	Output	RL	Conditions	Min.	Typ.	Max.	Unit
INPUT 1-32	OMNI OUT 1-16	600Ω	AD + DA, GAIN: -6dB		112		dB
-	OMNI OUT 1-16	600Ω	DA Converter		117		dB

\*1. Dynamic range was measured using an A-weight filter.

## Specifications

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### Crosstalk

Input	Output	Conditions	Min.	Typ.	Max.	Unit
INPUT n	OMNI IN (n-1) or (n+1)	INPUT 1-32, adjacent inputs, GAIN: -6dB			-100	dB
INPUT n	OMNI OUT (n-1) or (n+1)	Input to output			-100	dB

\*1. Crosstalk was measured using a 22 kHz, 30 dB/octave low pass filter.

### Analog input standards

Input jack	Gain	Input impedance	Source impedance	Input level: Sensitivity *1	Input level: Specified level	Input level: Maximum non-clip level	Connector	Balanced / Unbalanced
INPUT 1-32	+66dB	7.5kΩ	50-600Ω Mics & 600Ω Lines	-82dBu (61.6μV)	-62dBu (0.616mV)	-42dBu (6.16mV)	XLR 3-hole chassis *2	Balanced
	-6dB			-10dBu (245mV)	+10dBu (2.45V)	+30dBu (24.5V)		

\*1. Sensitivity is the input level needed to produce +4 dBu (1.23 V) or the specified level when all faders and level controls are set to maximum.

\*2. The connectors are balanced type (1=GND, 2=HOT, 3=COLD).

\*3. 0 dBu = 0.775 Vrms.

\*4. The INPUT 1-32 jacks have +48 VDC (phantom power) that can be set from the main unit's software for each terminal.

### Analog output standards

Output jack	Output impedance	Load impedance	Output level: Specified level	Output level: Maximum non-clip level	Connector	Balanced / Unbalanced
OUTPUT 1-16	75Ω	600Ω Lines	+4dBu (1.23 V)	+24dBu (12.3V)	XLR 3-pin chassis *1	Balanced
PHONES	10Ω	8Ω Phones	60mW *2	60mW	Stereo Phone Socket (TRS) <sup>4</sup>	Unbalanced
		40Ω Phones	60mW *3	100mW		

\*1. The connectors are balanced type (1=GND, 2=HOT, 3=COLD).

\*2. This is the value when the PHONES LEVEL knob is set to 12dB below the maximum position.

\*3. This is the value when the PHONES LEVEL knob is set to 10dB below the maximum position.

\*4. The connectors are unbalanced type (Tip = LEFT, Ring = RIGHT, Sleeve = GND).

\*5. 0 dBu = 0.775 Vrms.

### Digital I/O standards

Jack	Format	Data length	Level	Audio	Connector	Balanced / Unbalanced
Dante Primary, Secondary	Dante	24bit / 32bit	1000BASE-T	144ch input 144ch output	etherCON CAT5e *1*2	–
USB TO HOST	USB2.0	32-bit	USB2.0	18ch input 18ch output	USB C chassis	–
AES/EBU IN 1/2,3/4 *3	AES/EBU	24-bit	RS422	2ch input	XLR 3-hole chassis *4	Balanced
AES/EBU OUT 1/2, 3/4 *3	AES/EBU	24-bit	RS422	2ch output	XLR 3-pin chassis *4	Balanced

\*1. The connection cables are CAT5e or higher.

\*2. STP is recommended for the connection cables.

\*3. Built-in sampling rate converter (DM7 only), Supported input/output frequencies: 40-102kHz

\*4. The connectors are balanced type (1=GND, 2=HOT, 3=COLD).

### Control I/O standards

Jack	Format	Level	Connector	Balanced / Unbalanced
WORD CLOCK IN	–	TTL/75Ω terminated	BNC	–
WORD CLOCK OUT	–	TTL/75Ω	BNC	–
TC IN	SMPTE	0.3Vpp(min)/ 10.0Vpp(max), 10kΩ	XLR 3-hole chassis *1	Balanced
USB *2	USB2.0/1.1	USB2.0/1.1	USB A chassis	–
NETWORK	IEEE802.3	10BASE-T/ 100BASE-TX	RJ-45 CAT5 *3*4	–
GPI *5	–	–	D-SUB 15-hole chassis	–

\*1. The connectors are balanced type (1=GND, 2=HOT, 3=COLD).

\*2. The USB port can supply up to 1A for each jack.

\*3. The connection cables are CAT5 or higher.

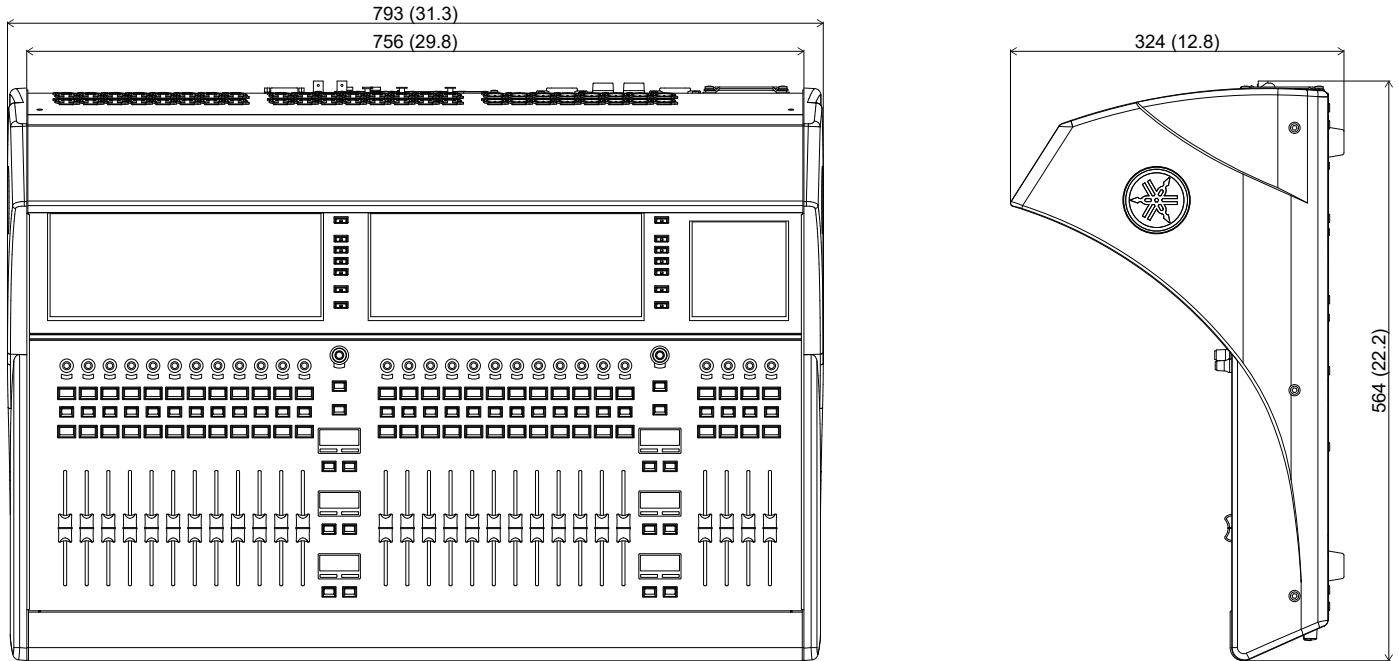
\*4. STP is recommended for the connection cables.

\*5.

- Input pins CH 1-5: TTL level (input voltage 0–5V) with internal 47kΩ pull-up resistor
- Output pins CH 1-5: Open collector output (maximum supply voltage 12V, maximum inflowing current/pin 75mA)
- Power supply pins: Output voltage 5V, maximum output current 300mA

## Dimensions

Unit: mm (inch)



## Options

- Expansion Controller      DM7 Control
- Software Package        Broadcast Package (DEK-DM7-BR)
- Software Package        Theatre Package (DEK-DM7-TH)
- Audio Interface Card     PY64-MD
- Audio Interface Card     PY8-AE
- Interface Card            PY-MIDI-GPI
- I/O Rack                  Rio3224-D2
- I/O Rack                  Rio1608-D2
- I/O Rack                  RMio64-D
- I/O Rack                  RSio64-D
- L2 Switch                 SWP2-10SMF
- L2 Switch                 SWP2-10MMF

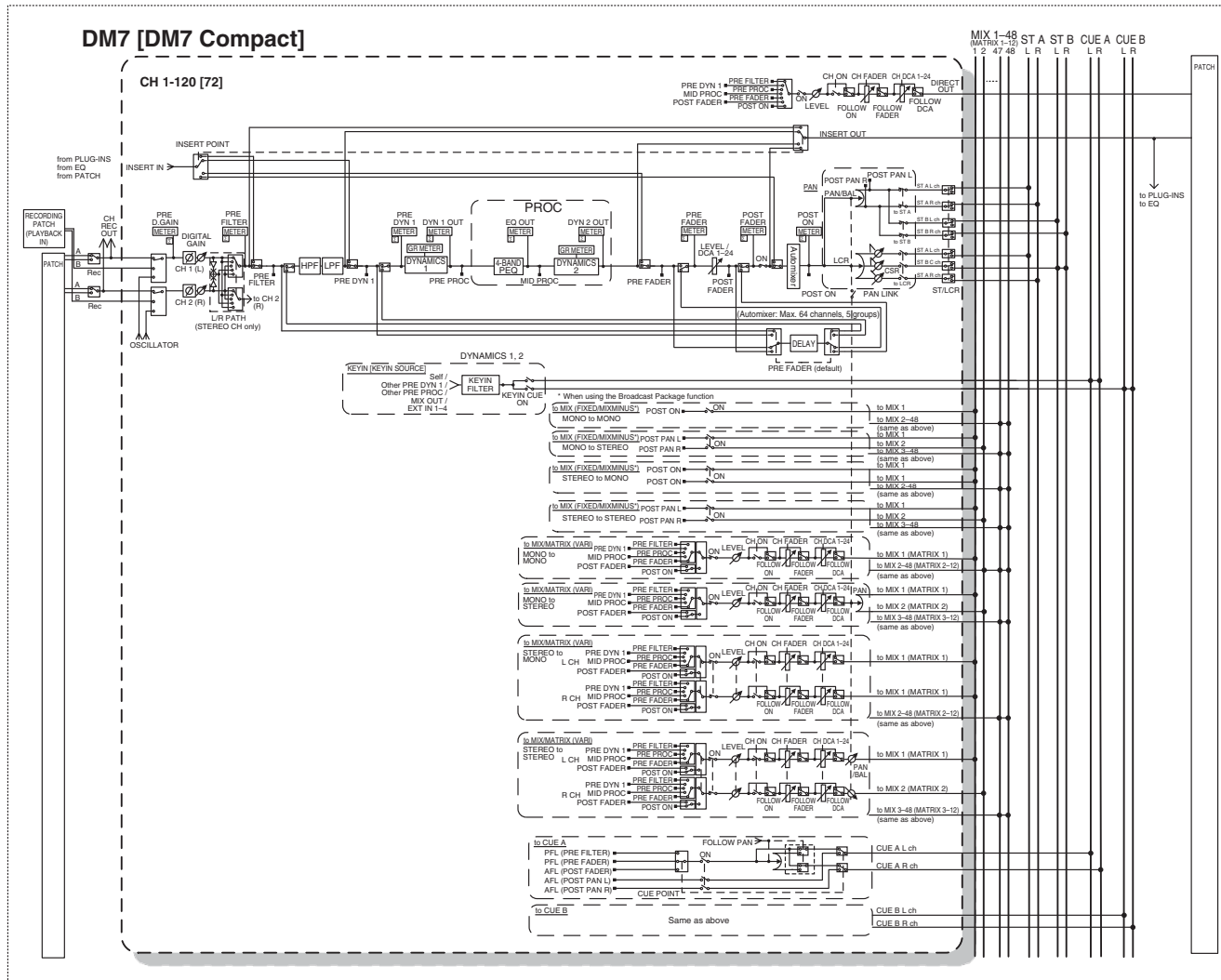
## Software

- DM7 Editor
- DM7 StageMix
- MonitorMix
- Yamaha Console File Converter
- Steinberg Nuendo Live
- VST Rack Elements

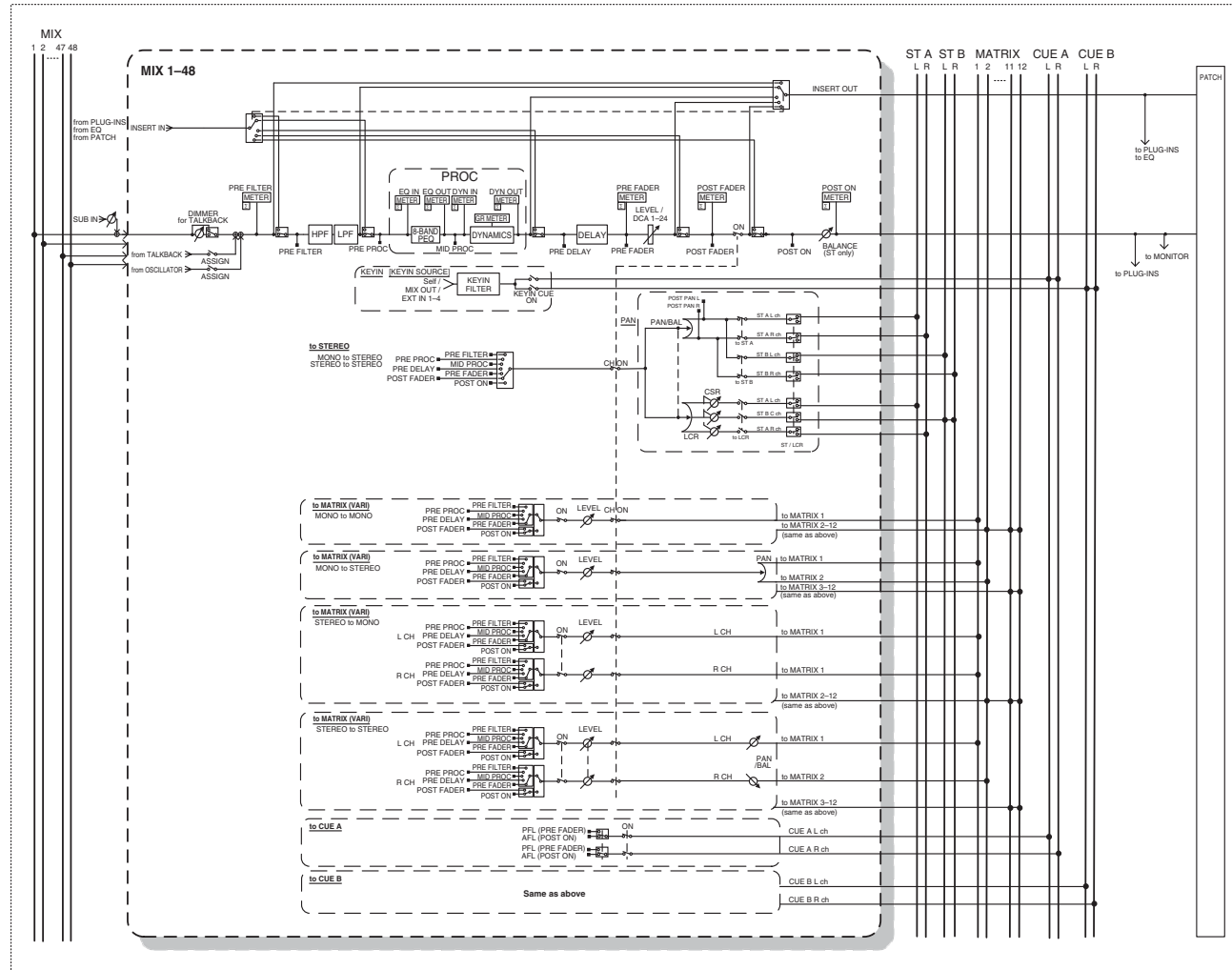
## Architectural and Engineering Specifications for DM7

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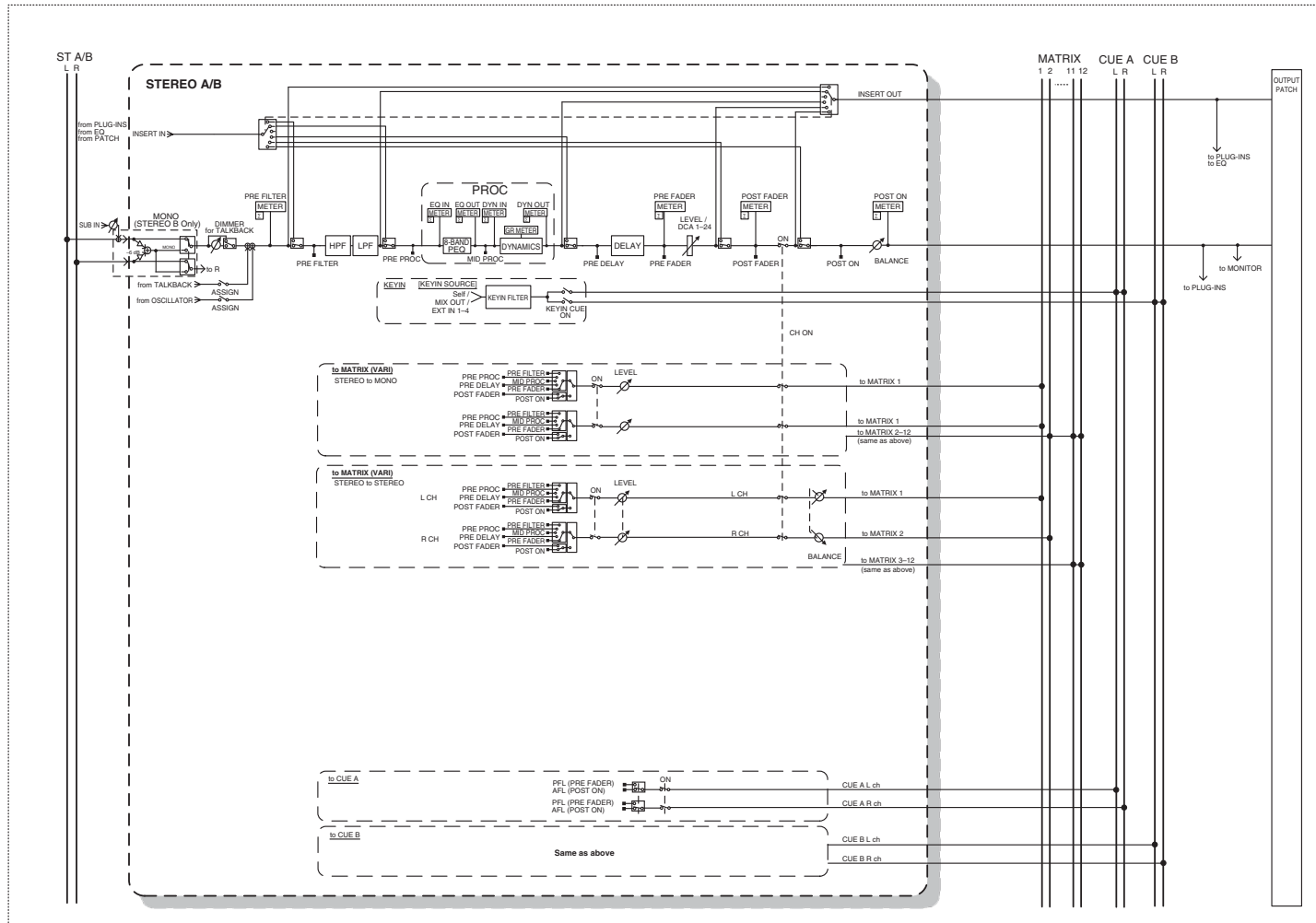
The Yamaha DM7 digital mixing console shall be intuitive and easy to operate with two 12.1-inch multi-touch screens and one 7-inch multi-touch screen. DM7 shall have two bays of 12 faders each, and an additional 4 faders, so 28 faders in total. All the faders shall be 100mm long and motorized. DM7 shall provide a mixing capacity of 120 input channels, 48 mix buses, 2 main stereo buses and 12 matrix buses. The internal signal processing shall allow operation at sample rates of 96kHz and 48kHz. The rear panel shall include XLR connections for 32 mic/line inputs with recallable pre-amp settings. It shall have 16 XLR connections for OMNI OUT, and two pairs of AES/EBU in and out with sample-rate converters. The digital mixer shall include a slot for optional cards capable of providing up to 64 channels in and out at 96kHz or 48kHz. There shall be an RJ-45 connection for networking, USB-C for computer connection capable of 18 channel multi-track recording, and a Time Code input. The rear panel Dante connections shall support 144 channels in and out for networking with various additional Dante devices. It shall include the ability to remotely control up to 24 external audio devices including R-series i/o racks, DZR-D and DXS-XLF-D powered loudspeakers, Nexo NXAMPs and Yamaha PC-D amps. The rear panel shall include lockable dual power connections for redundancy. Power consumption shall be 240W. On the top panel there shall be two USB-B sockets for portable storage devices capable of stereo audio recording and playback, and on the front panel there shall be a ¼ inch TRS headphone socket. The top panel shall also feature two TOUCH AND TURN rotary encoders, two sets of FADER BANK keys, two HOME keys and 12 USER DEFINED KEYS. DM7 shall be compatible with a range of software applications including DM7 Editor, DM7 StageMix, MonitorMix and ProVisionaire, and it shall provide remote control capability for Digital Audio Workstation software such as Cubase and Nuendo. It shall be compatible with MIDI and OSC control protocols. Dimensions shall be 793 (W) x 324 (H) x 564 (D) mm, and weight shall be 23.5kg.

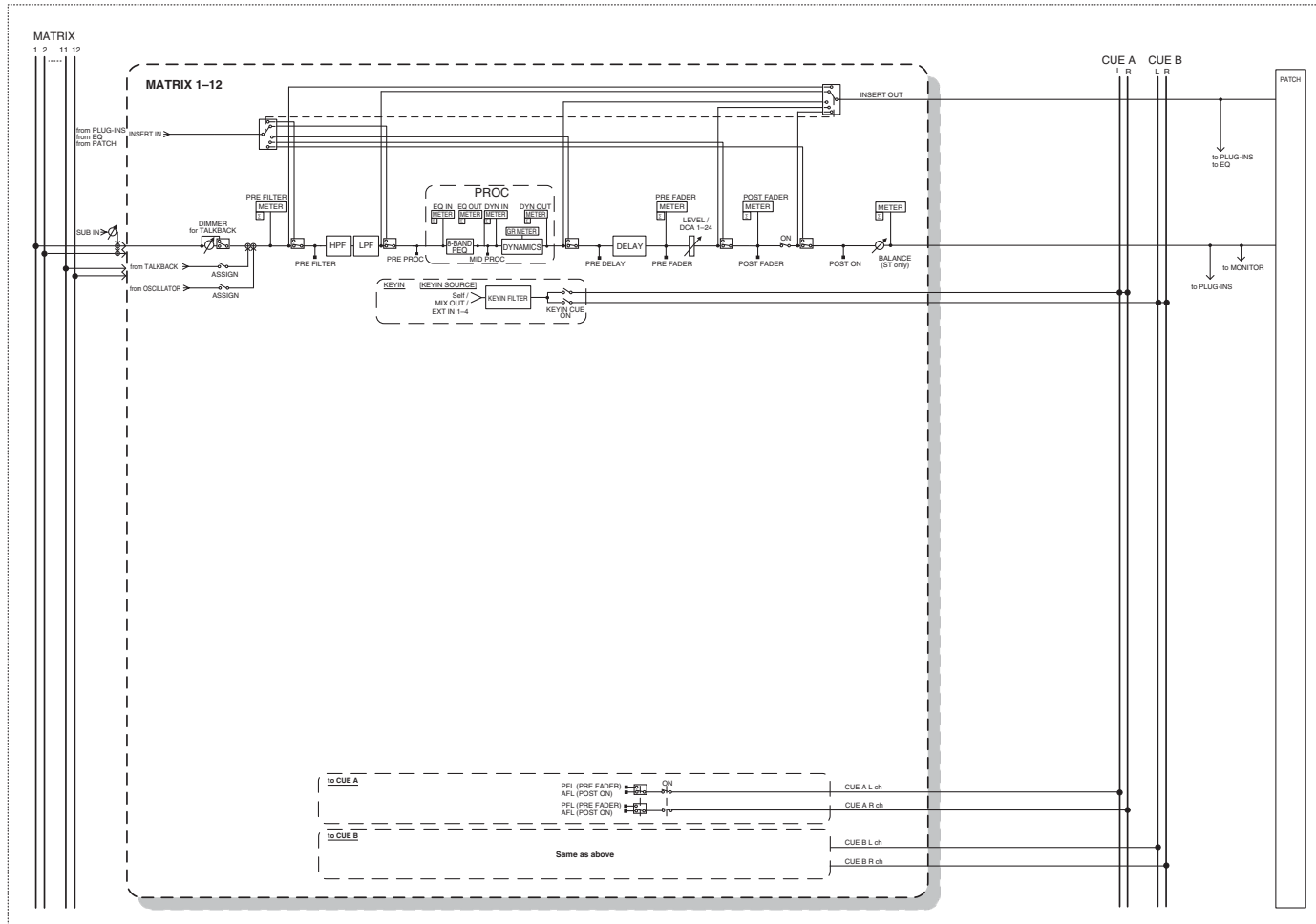
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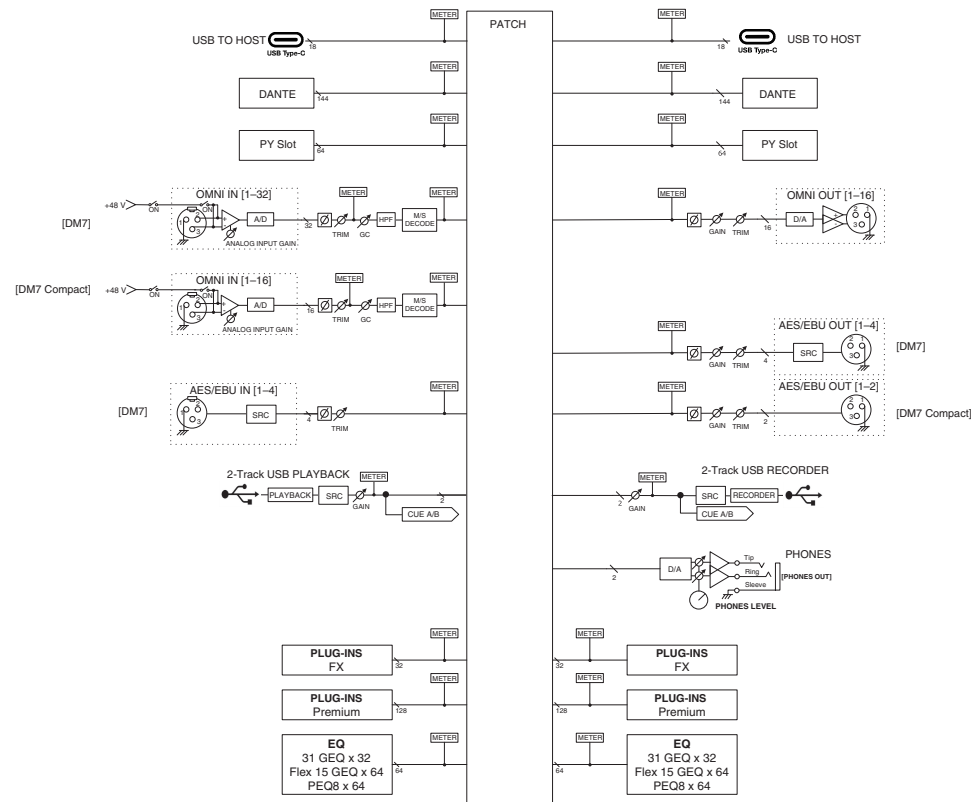
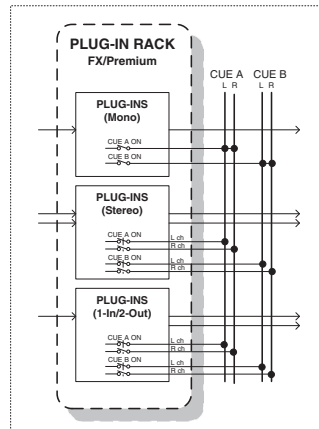
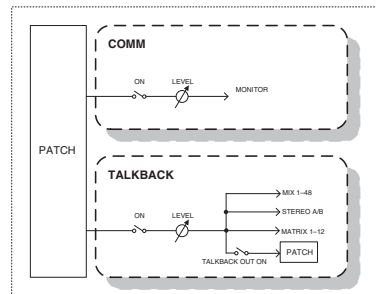
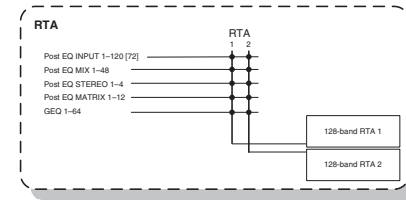
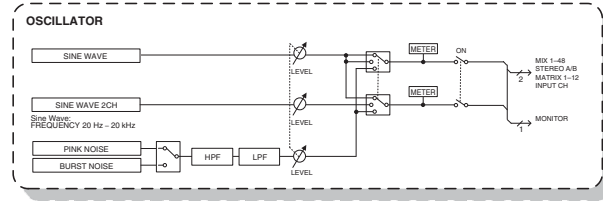
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YAMAHA CORPORATION  
P.O.BOX 1, Hamamatsu Japan