

# DSP5D / DCU5D

## Digital Mixing System



## DSP5D

Rear Panel



*The DSP5D provides essentially all of the functionality of a PM5D-RH minus the control surface, in a rack-mountable unit that can be seamlessly controlled from a PM5D (RH) console.*

- 48 microphone/line and four stereo inputs.
- 24 mix buses that can be cascade-connected to a PM5D V2 console.
- Comprehensive control from a computer running the DSP5D Editor.
- Remote control from a PM5D V2 via the DCU5D Digital Cabling Unit.

### OPTIONS

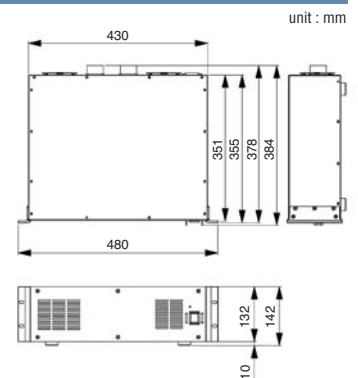
**PW800W**  
Power Supply Unit



### GENERAL SPECIFICATIONS (PW800W)

|                        |   |            |
|------------------------|---|------------|
| Power Consumption      | 1000W                                     |            |
| Dimensions (W x H x D) | 480 x 142 x 384mm (18.7" x 5.5" x 14.98") |            |
| Weight                 | 10kg (22lbs)                              |            |
| Included Accessories   | Power cord, Cord clamp, Owner's Manual    |            |
| Temperature Range      | Operating                                 | 10°C–35°C  |
|                        | Storage                                   | -20°C–60°C |

### DIMENSIONS (PW800W)



## Digital Cabling Unit

## DCU5D



Rear Panel



*The DCU5D lets you locate the DSP5D as far as 120 meters from the PM5D console, connected by a single CAT5e Ethernet cable.*

Refer to <http://www.ethersound.com/technology/compatibility.php>  
DSP5D and DCU5D utilize EtherSound technology, but because Bandwidth is fixed exclusively for DSP5D and DCU5D, they cannot be controlled by ES (EtherSound) monitor.

\* Maximum cable length will depend on the quality and performance of the cables used.

**PSL120**  
Power Supply Link Cable



# DSP5D / DCU5D

## GENERAL SPECIFICATIONS (DSP5D)

|                              |  |
|------------------------------|--|
| Internal processing          | 32bit (Accumulator=58bit)  |
| Sampling frequency rate      | Internal: 44.1kHz, 48kHz, 88.2kHz, 96kHz<br>External: 42.9975kHz to 49.2kHz<br>85.995kHz to 98.4kHz  |
| Signal Delay                 | Less than 2.5ms INPUT to OMNI OUT (@fs=48kHz)<br>Less than 1.25ms INPUT to OMNI OUT (@fs=96kHz)      |
| Total harmonic distortion *1 | Less than 0.05% 20Hz to 20kHz, (@44.1kHz, 48kHz)<br>Less than 0.05% 20Hz to 40kHz, (@88.2kHz, 96kHz) |
| Frequency response           | 0, +0.5, -1.5dB; 20Hz to 20kHz (@44.1kHz, 48kHz)<br>0, +0.5, -1.5dB; 20Hz to 40kHz (@88.2kHz, 96kHz) |
| Dynamic range                | DA: 110dB<br>AD+DA: 108dB@48kHz; 106dB@96kHz   |
| Hum & noise level *2         | -128dB equivalent input noise<br>-86dB residual output noise   |
| Crosstalk (@1kHz)            | -80 dB Adjacent Input Channels (INPUT1-48/ST IN1-4), GAIN;Min.                                       |
| Power requirements           | AC100-240V 50/60Hz and/or use PW800W   |
| Power consumption            | 300W   |
| Dimensions (W x H x D)       | 480 x 440 x 460mm (18.9" x 17.3" x 18.1")  |
| Weight                       | 38.0kg (83lbs)   |

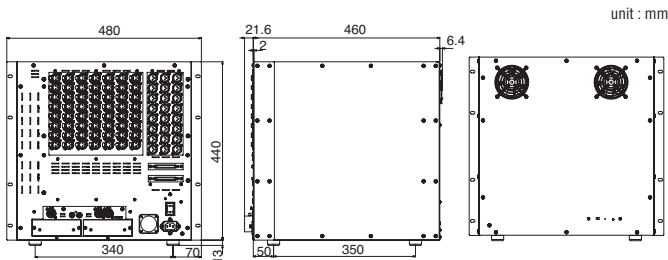
\*1. Total harmonic distortion is measured with a 18dB/Oct filter @80kHz.

\*2. Hum & noise level is measured with a 6dB/oct filter @12.7kHz; equivalent to 20kHz filter with infinite dB/Oct attenuation

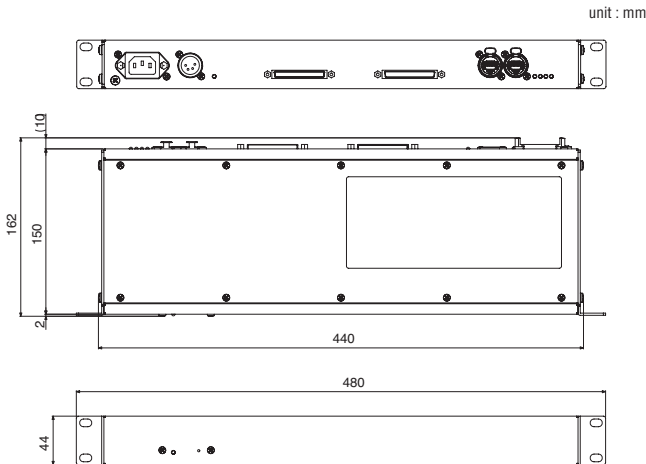
## GENERAL SPECIFICATIONS (DCU5D)

|                         |   |
|-------------------------|---|
| Sampling frequency rate | Internal: 44.1kHz, 48kHz, 88.2kHz, 96kHz<br>External: 42.9975kHz to 49.2kHz<br>85.995kHz to 98.4kHz |
| Power requirements      | AC100-240V 50/60Hz, and/or DC12V  |
| Power consumption       | 12W   |
| Dimensions (W x H x D)  | 480 x 44 x 150mm (18.9" x 1.7" x 5.9")  |
| Weight                  | 2.3kg (5lbs)  |

## DIMENSIONS (DSP5D)



## DIMENSIONS (DCU5D)



## ANALOG INPUT SPECIFICATIONS (DSP5D)

| Input terminal             |       | Actual load impedance | For use with nominal      | Input level |         |                  | Connector    |
|----------------------------|-------|-----------------------|---------------------------|-------------|---------|------------------|--------------|
| PAD                        | GAIN  |                       |                           | Sensitivity | Nominal | Max. before clip |              |
| INPUT 1-48& ST IN 1-4[L,R] | -62dB | 3kΩ                   | 50-600Ω Mics & 600Ω Lines | -82dBu      | -62dBu  | -42dBu           | XLR3-31 type |
|                            | +10dB |                       |                           | -10dBu      | +10dBu  | +30dBu           |              |

\* LS9-32: n=32, LS9-16: n=16

## ANALOG OUTPUT SPECIFICATIONS (DSP5D)

| Output terminals | Actual source impedance | For use with nominal | GAIN SW | Output terminals |                  | Connectors    |
|------------------|-------------------------|----------------------|---------|------------------|------------------|---------------|
|                  |                         |                      |         | Nominal          | Max. before clip |               |
| OMNI OUT 1-24    | 150Ω                    | 600Ω Lines           | +24dB   | +4dBu            | +24dBu           | XLR-3-32 type |
|                  |                         |                      | +18dB   | -2dBu            | +18dBu           |               |

0dB=0.775Vrms; 0dBV=1.00Vrms

## DIGITAL INPUT SPECIFICATIONS (DSP5D)

| Terminal      | Format | Data length | Level      | Connector                                 |
|---------------|--------|-------------|------------|---|
| CASCADE IN *1 | —      | —           | RS422      | D-sub Half Pitch Connector 68Pin (female) |
| CASCADE IN *2 | —      | —           | 100Base-TX | RJ-45                                     |

\*1: Max. cable length: 200m @48kHz, 50m @96kHz

\*2: Max. cable length is based on EtherSound standard

## DIGITAL OUTPUT SPECIFICATIONS (DSP5D)

| Terminal       | Format | Data length | Level      | Connector                                 |
|----------------|--------|-------------|------------|---|
| CASCADE OUT *1 | —      | —           | RS422      | D-sub Half Pitch Connector 68Pin (female) |
| CASCADE OUT *2 | —      | —           | 100Base-TX | RJ-45                                     |

\*1: Max. cable length: 200m @48kHz, 50m @96kHz

\*2: Max. cable length is based on EtherSound standard

## CONTROL I/O SPECIFICATIONS (DSP5D)

| Terminal   | Format              | Level               | Connector             |
|------------|---------------------|---------------------|-----------------------|
| WORD CLOCK | IN                  | —                   | TTL/75Ω BNC Connector |
|            | OUT                 | —                   | TTL/75Ω BNC Connector |
| Ethernet   | 10Base / 100Base-TX | 10Base / 100Base-TX | RJ-45                 |

