DIGITAL D.A. 2X8 ™

AES/EBU DIGITAL AUDIO DISTRIBUTION SYSTEM

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DESCRIPTION

The **Digital D.A. 2X8** is a dual-mode distribution system for AES/EBU digital audio signals. It is ideally suited wherever digital audio signals must be routed to multiple destinations. The Digital D.A. 2X8 produces outputs that are exact copies of the input signal(s). There are no changes to any data or timing, and no jitter, delay, or latency is added. The unit is compatible with any sample rate up to 96 kHz.

The Digital D.A. 2X8 has two inputs and eight outputs, with two modes of operation: Single and Dual. In Single mode, unit operates as a 1-in, 8-out D.A; in Dual mode, it operates as two independent 1-in, 4-out D.A.s.

All inputs and outputs are individually transformer isolated. Input signals are conditioned to correct for low levels and high frequency rolloff caused by long cable runs. The presence of output signals is confirmed via LEDs. The unit is powered with an internal AC power supply. The Digital D.A. 2X8 is 1/3 rack-width and can be rack mounted using the optional rack shelf, or wall mounted with optional wall/cabinet mounting brackets.

INSTALLATION

The Digital D.A. 2X8 uses euroblock connectors for all I/O. Strip about 1/8" of insulation from wires, insert the wires into the mating plugs, and tighten the screws on the plugs. Be sure that no bare wires are exposed. When installing the unit, do not block the vent slots on the top cover. Ensure that adequate ventilation is provided.

Connect the input signal(s) to Input #1 and/or Input #2. Note that Input #2 is used only if the unit will be used in Dual mode. Connect output wiring to Outputs #1 through #8 as needed. It is NOT necessary to terminate unused outputs. Ground wires are normally connected at one end only to prevent ground loops.

INPUT TERMINATION

The Digital D.A. 2X8 provides termination of both inputs. If termination is *not* desired, move jumper(s) **JP1** (Input #1) and/or **JP2** (Input #2) to the OFF position(s). These jumpers are located within the unit on the PC board, near the input connector.

OPERATING MODES

The Digital D.A. 2X8 has two modes of operation: Single and Dual. The mode is selected via a recessed front panel pushbutton. A pencil or small screwdriver can be used to operate the button.

When the button is out, Single mode is selected; the MODE LED is green. In Single mode, Input #1 is reproduced on all eight outputs; Input #2 is disabled in Single mode.

Pushing the button in selects Dual mode; the MODE LED is red. In Dual mode, Input #1 is reproduced on Outputs 1 through 4, and Input #2 is reproduced on Outputs 5 through 8. There is no interaction between the output groups.

Two **OUTPUT** LEDs indicate the presence of signals on the two groups of outputs. Their brightness indicates the relative output signal level. The Digital D.A. 2X8 automatically compensates for a wide range of input levels. The outputs conform to AES/EBU standards, and can drive long lines without signal degradation, provided the wiring used is suitable for wide-bandwidth digital signals.

The Digital D.A. 2X8 does *not* alter any data in the bitstream. All audio data, copy control flags, etc, are passed through to all outputs with no added delay or latency. All outputs can be used simultaneously; each output can drive *one terminated load.* (Unlike analog audio signals, multiple terminated digital loads *cannot* be connected in parallel using "Y-cords" or "signal splitters".)

TECHNICAL SPECIFICATIONS

Sample Rate	Any, 96 kHz or less
Inputs	2, 110 ohm termination
Outputs	8, 110 ohm source impedance
Throughput Delay	80 nanoseconds or less
Power Input	115/230 VAC, 50-60 Hz, 5 Watts
Operating Temp.	0–40 Deg. C, 0–90% rel. humidity, non-condensing
Approval	City of Los Angeles Elect. Test Lab

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