nWall 0.2

MediaMatrix®
Peavey Electronics Corporation

Audio Network In Wall Interface Panel **Data Sheet**

DESCRIPTION

The MediaMatrix nWall 0.2 is a surface mount CobraNet interface panel with two analog line level output channels. The device converts a CobraNet audio stream to analog audio. The stream is received via CobraNet bundle receivers over a local area switched network using CAT5e UTP cable.

The unit features two balanced XLR line level outputs, plus 1/8" (3.5mm) TRS mini jacks. The XLR connectors can be configured for multiple audio output levels using rotary switches on the front panel.

The nWall eliminates the need for long runs of analog cables terminated in racks of patch bays. As the connection to the nWall uses CAT5e UTP cable with network standard RJ45 crimp connectors, the installation time, number of terminations required and associated cost are all minimized. A MediaMatrix nWall fits within a standard 2 gang North American NEMA back box and is powered over the attached network cable from a network PoE capable switch that conforms to IEEE 802.3af.

FEATURES & BENEFITS

- 2 balanced XLR outputs - output level selectable via front panel 3 step rotary switch allows quick source setup at the wall panel. Latchless connection minimizes mechanical damage.
- 2 unbalanced TRS 1/8th inch (3.5mm) mini jack outputs - for PC and Aux consumer line level audio products using off the shelf consumer audio cables.
- CobraNet audio transport - via switched network and RJ45 crimp connectors greatly reduces critical path delivery time and costs, replacing the need to solder/terminate analog interface panels.
- Electronic patching - using MediaMatrix NWare any number of nWall panels can be patched on the fly to any number of NIONs, eliminating the need for expensive patch panels and greatly reducing setup time between events.
- Digital to analog conversion at the wall panel - reduces problems with buzz, hum, ground loops and other cable issues. It also eliminates the need for isolation and impedance matching interfaces.

APPLICATIONS

- Civic & convention centers
- Hotel ballroom, function and meeting rooms
- Stadiums, arenas, performing arts centers
- Schools, universities
- Auditoriums & theaters
- Paging systems
- Airports
- Mass rapid transportation systems
- Theme parks
- Houses of worship
- Teleconferencing
- Cruise ships & tour boats
- Medical centers / hospitals

Specifications

Front Panel Connections

2 x balanced XLR3 (M) outputs (latchless).

Rotary (3 step) switch supports each adjacent XLR. Selectable output level: -8dBu (nominal)/+12dBu (peak), -6dBu nominal/+18dbu (peak) and +4dBu (nominal)/+24dBu (peak).

2 x unbalanced TRS (F) 1/8th inch mini jack output -8dBu (nominal) +12 dBu (peak).

2 x blank label boxes for custom labeling of each output channel.

Rear Panel Connections

LAN: RJ-45 socket for CobraNet and control communications on 100Base-T Ethernet. Requires Power-over-Ethernet (PoE) via an IEEE 802.3af capable network switch.

Digital Audio Performance

Frequency response: +/- 1dB 20Hz to 20kHz nominal level

THD+noise: Less than 0.1% 20Hz to 20kHz nominal level

Hum & Noise / EIN, 150 Ω: -126 dBm at max gain, 20Hz - 20kHz

Dynamic Range: 98 dB (gain min)

CMRR: 65 dB

Nominal / Max Output Level

XLR connectors:
Position 1 -8dBu / +12dBu
Position 2 -2dBu / +18dBu
Position 3 +4dBu / +24dBu

TRS connectors:
-8dBu / +12dBu
(Impedance line = 100Ohm)

CobraNet Performance

2 audio sub channels at 48 kHz sample rate, 5.33ms latency to CobraNet transmit bundles.

System Configuration

Audio interface panel IP settings, CobraNet bundle settings and subchannel mapping assignments are remotely accessible via the Ethernet network.

CobraNet Discovery can be used for basic set up. Advanced and dynamic set up via NWare requires an nTouch 180 or nControl.

Power / Data requirements & connection

Requires IEEE 802.3af PoE compliant network switch that provides up to 15.4 W of DC power (minimum 44V DC and 350 mA) from each individual port over CAT5e UTP cable.

Power over Ethernet (PoE):
Consumption = 350 mA (Max)

Mechanical Specification

Dimensions: 4.57" (116mm) W x 2.0" (51mm) D x 4.5" (114mm) H
Net Weight: 1.54 lb. (0.70 kg)
Mounting: North American NEMA 2-gang finish plate, requires 2.25" clearance depth minimum. Mount in metal box coupled to EMT conduit.

NOTE: Take care to ensure that back box and conduit coupling hardware, wire or other terminating devices do not obstruct the installation of the nWall circuit assembly.

Finish

Grey powder coat on 18 gauge CRS.

NOTE: The nWall can only be powered via an IEEE 802.3af PoE compliant network switch. This must provide up to 15.4W of DC power (minimum 44V DC and 350mA) from each individual port over CAT5e UTP cable. Although any 802.3 compliant network switch should work with CobraNet, less expensive switches cannot operate at wire speed or have limited queue buffer sizes and can cause problems when a large amount of network traffic is present.

Architect's & Engineer's Specifications

Audio Network In Wall Interface Panel

The audio network interface panel shall be an in wall surface mount panel housed within a North American NEMA 2-gang back box designed for fixed installation in engineered audio and communication systems. It shall provide up to 4 output analog audio channels supporting both line level balanced and unbalanced audio connections with output levels being selectable from rotary switches located on the front panel. The audio network interface shall be powered from Power-over-Ethernet according to standard IEEE802.3af. The audio interface panel shall be a 2 channel device. Each channel shall be received over an audio network. The audio network shall be CobraNet™, operating on a 100Base-T Ethernet physical interface. The network interface panel Ethernet port shall be side mounted to ensure connected network cable has sufficient bend radius. Remote set up and control via Ethernet shall be possible for CobraNet settings. A software device to control the audio network interface panel shall be available for integration into the NWare configuration file. The audio network interface panel shall be the MediaMatrix nWall 0.2 or approved equal.

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