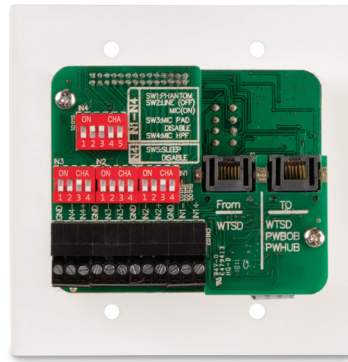


WTSD-MIX41K

4x1 Mic/Line Mixer with Optional Dante® Audio Network Interface



Features

- Indoor or Outdoor Use
- Power Supply and WTSD-PWBOB Interface Included
- XLR Balanced Mic or Line Input with Individual Level Controls
- Wall Plate Mounted, Fits Into Most 2 Gang Boxes
- Uses Industry Standard Cat5/6 Wire
- Linkable with Other WTSD Units on the Same Bus
- High Gain Balanced Line Output for Long Distance Applications up to 400ft
- 120Hz / 12dB Low Cut Filter for Mic / Line
- Local Mute Switch
- Remote Trigger Output for Remote Amplifier Turn On
- System Priority Mute Function
- Input Signal & Peak Indicators
- Energy Saving Auto Sleep Mode
- WTSD-XLR4 XLR Input Plate (Optional)
- WTSD-COVER Water Resistant Stainless Locking Cover (Optional)
- WTSD-PWHUB Receiver with Limiter and Isolated Relays & Emergency Mute (Optional)
- TSD-DAC2i Analog to Dante® Digital Audio Transmitter (Optional)

Applications

- Indoor / Outdoor Sports Complexes
- Schools - Gymnasiums, Rally Areas
- Hotel Ballrooms
- Community Multi-use Facilities
- Industrial Facilities

General Description

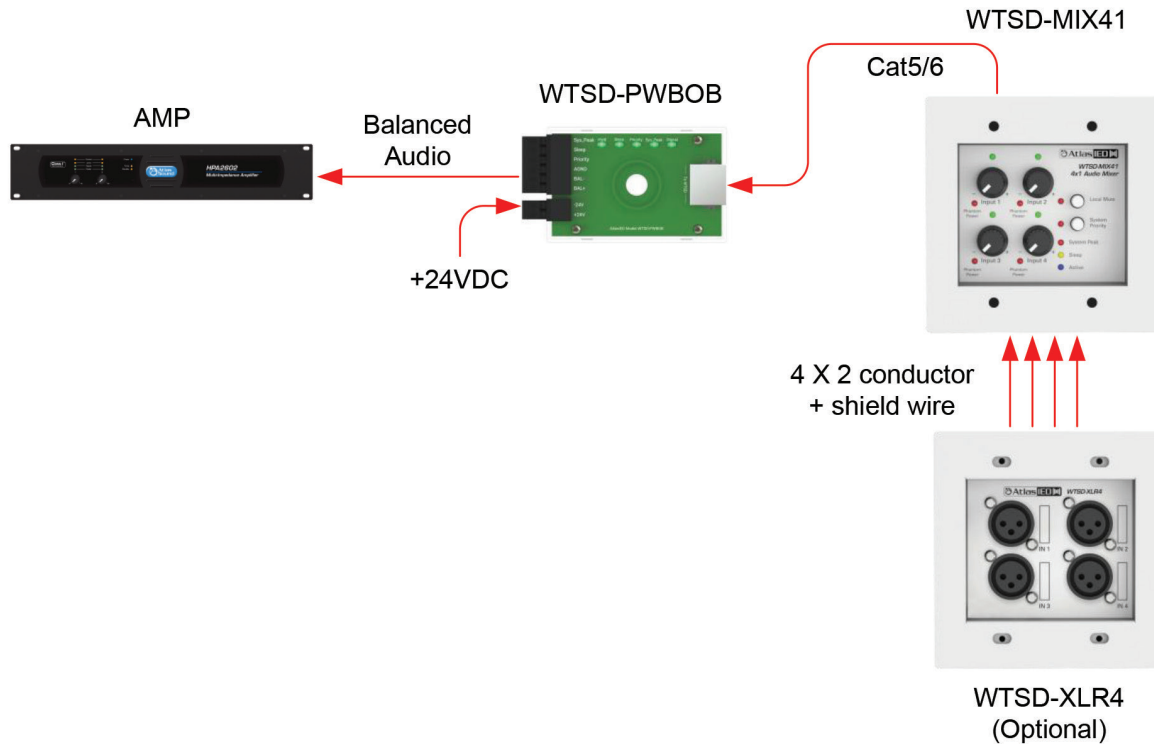
Model WTSD-MIX41K is a 4x1 mic / line analog mixer that features 4-balanced microphone / line inputs and a balanced line output. Selection between mic or line level is done via DIP switch on the rear panel. The high gain mic inputs incorporate user enabled phantom power for condenser microphones and a 120Hz low cut filter to eliminate unwanted low frequency interferences. A local mute button mutes output to the bus and a system priority button can mute building wide BGM systems to isolate the room. Separate level controls for each input provide control for the audio mix needed. Input peak and signal indicators give visual reference needed to set the gain structure for maximum performance. Mic / line inputs are via a Phoenix type connector on the rear of the WTSD. The WTSD-MIX41K is designed to be used in conjunction with the AtlasIED WTSD-XLR4 input plate or with other XLR wall plates.

A basic WTSD system consists of four elements, a WTSD-Mixer, Cat5/6 cable, in-line 24V DC Power Supply and an end point break out board / hub. All four are included with the purchase of a WTSD mixer except for the Cat5/6 cable. A two-gang box is all that is needed to complete an installation. There are two versions of the WTSD end points offered. The WTSD-PWBOB comes with each unit and features a balanced audio output with signal, mute, system priority and power LEDs and 12V DC logic output for remote system muting or power sequencing. The WTSD-PWHUB is sold separately and features level control at the system head end, input limiting, isolated relay outputs to trigger system priority muting or system power activation, and an emergency mute port. The WTSD features an energy saving auto sleep function that can shut Off the audio system when not in use after approximately one hour. As soon as the WTSD mixer senses an audio signal, the WTSD sends a command down the bus to wake the system up.

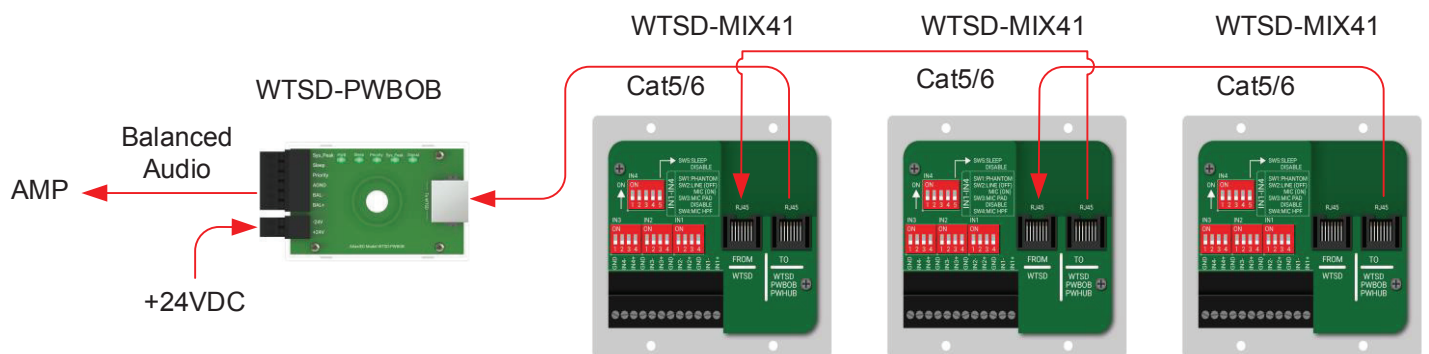
The optional WTSD-COVER stainless steel weather resistant locking security cover with gaskets is available for tamper proof indoor or outdoor applications. The PCBs are weather treated to reduce corrosion in damp environments. With the PCB treatment and the WTSD-COVER accessory, the installation will have protection against the environment and tamper protection for years of continuous operation.

WTSD-MIX41K Cat5/6 Interface with a PWBOB

Note: 400ft max cable distance from WTSD-PWBOB to WTSD-MIX41K.

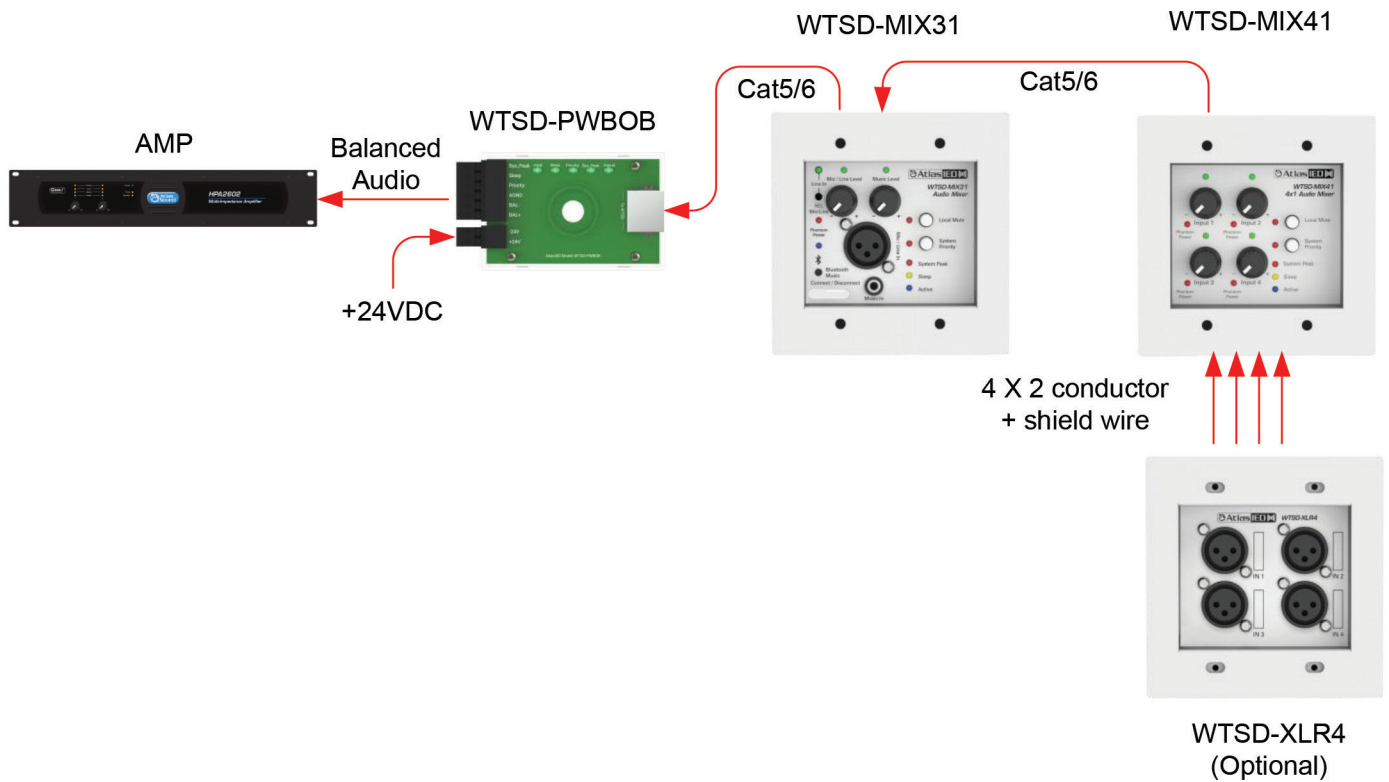


Note: Up to three WTSD mixers can be on the same PWBOB bus.

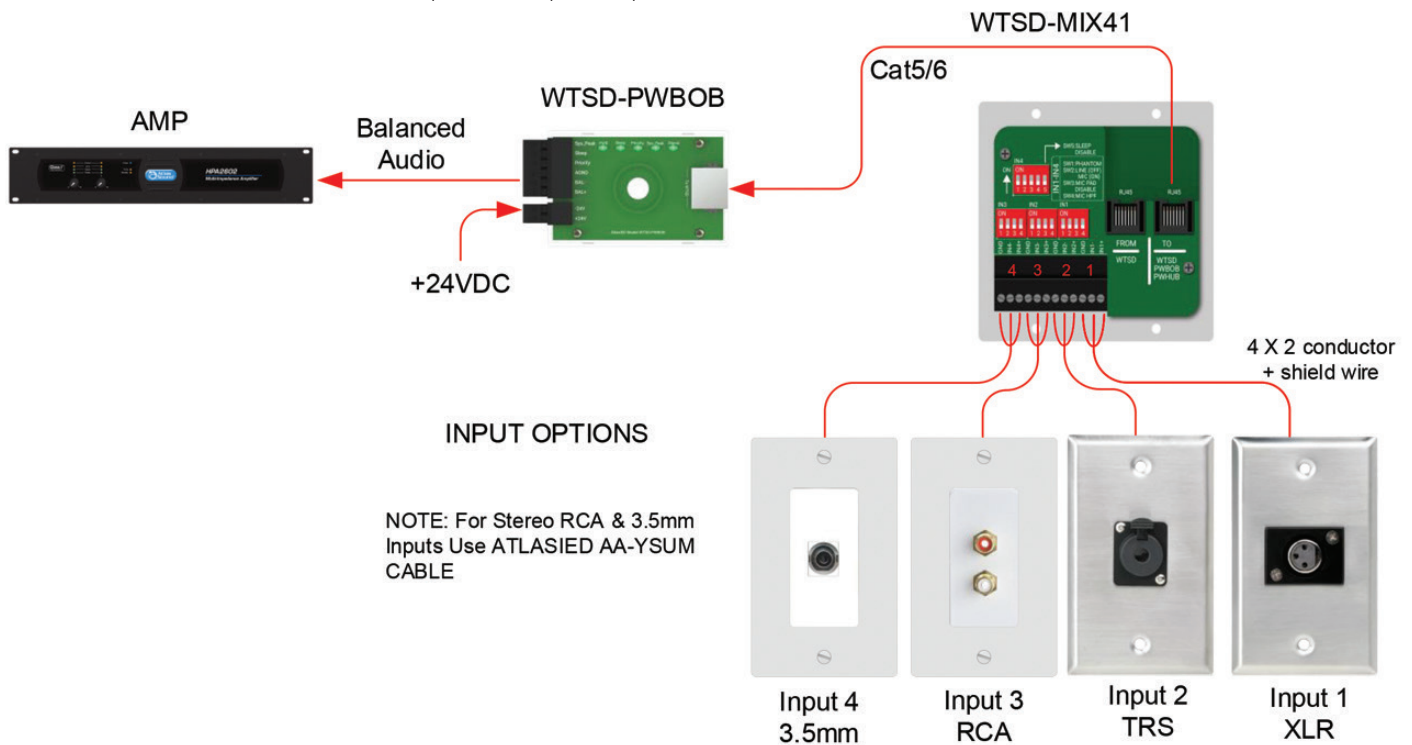


WTSD-MIX41K In Series with a WTSD-MIX31K on the Same Cat5/6 Bus

Note: The WTSD-MIX31K & WTSD-MIX41K can be combined onto the same bus. Maximum bus combine length is 400 ft.

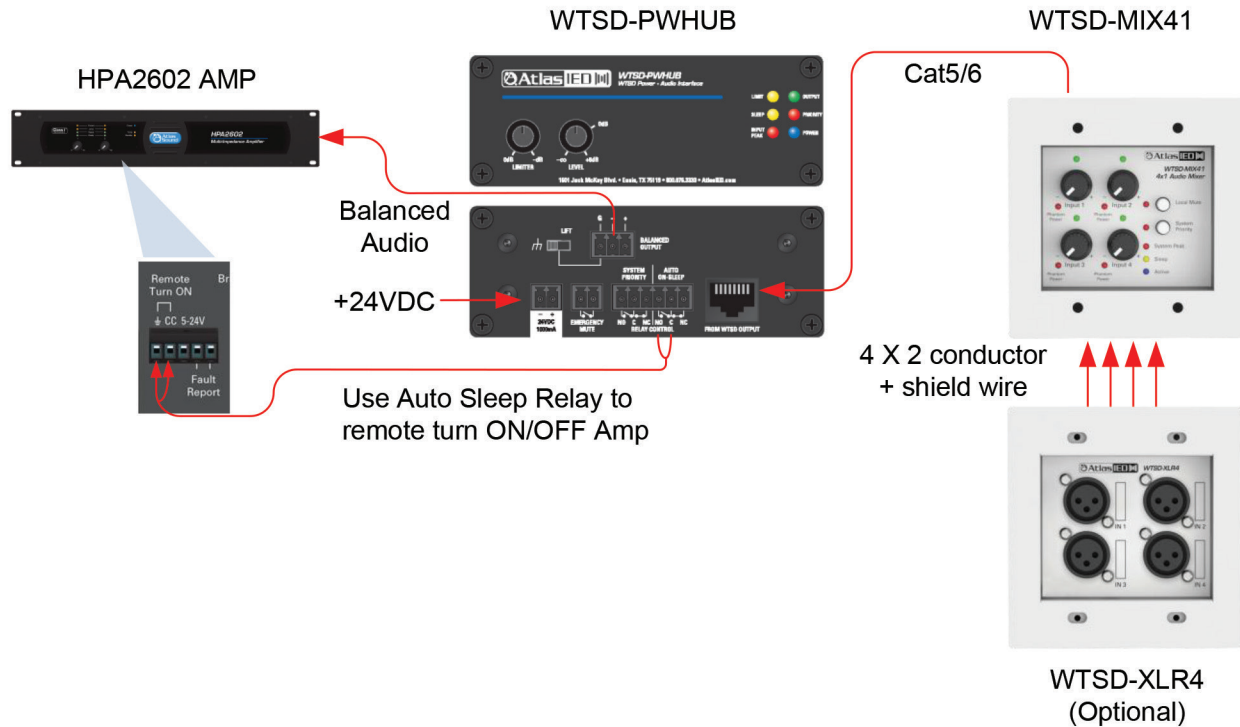


Note: The WTSD-MIX41K can use standard XLR plates for separate input locations.



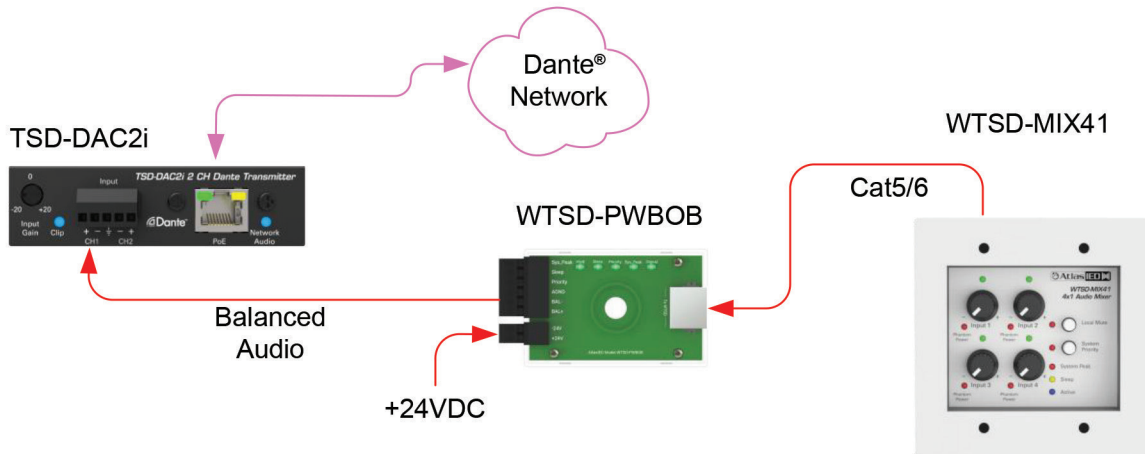
WTSD-MIX41K with a WTSD-PWHUB

In some applications, the WTSD-PWHUB can be used in place of a WTSD-PWBOB. The advantage of using a WTSD-PWHUB over a WTSD-PWBOB is that the WTSD-PWHUB has a variable gain control at the rack, a variable hard limiter, auto sleep and system priority override relay contacts instead of voltage triggers. It also provides an emergency override GPIO port to interface with fire / evacuation systems. In this example, the WTSD-PWHUB uses the auto sleep relay to turn the main room amplifier On / Off.



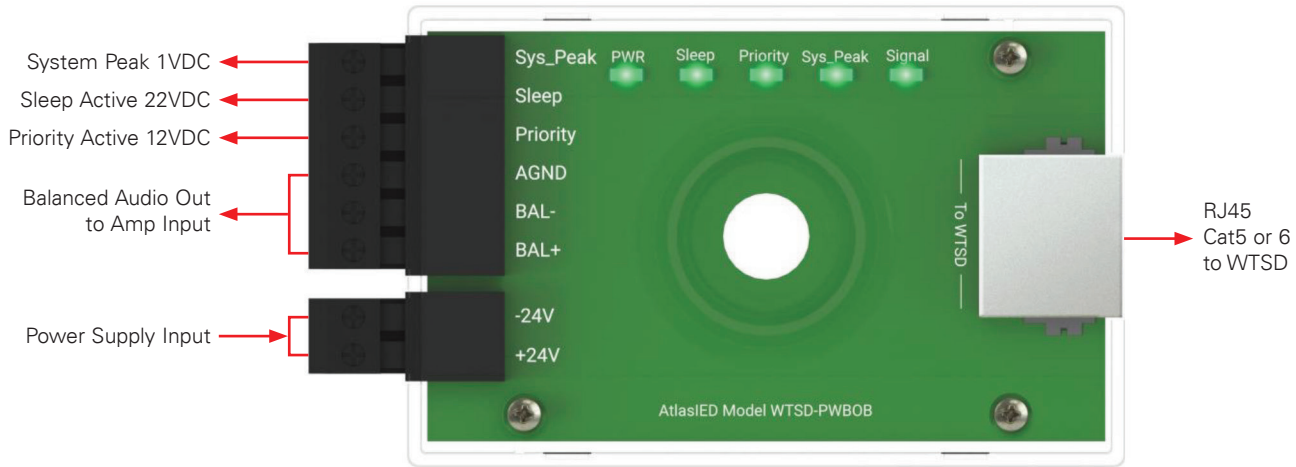
WTSD-MIX41K With Optional TSD-DAC2i Dante® Network Audio Interface

The WTSD analog audio BUS can easily be converted to an Audinate Dante® digital signal by interfacing a WTSD-PWBOB or WTSD-PWHUB with the optional AtlasIED TSD-DAC2i. The PoE powered TSD-DAC2i transceiver has two channels of network audio and will support two separate WTSD systems.



WTSD-PWBOB Features - DC Power Injector / Trigger Control / Audio Interface

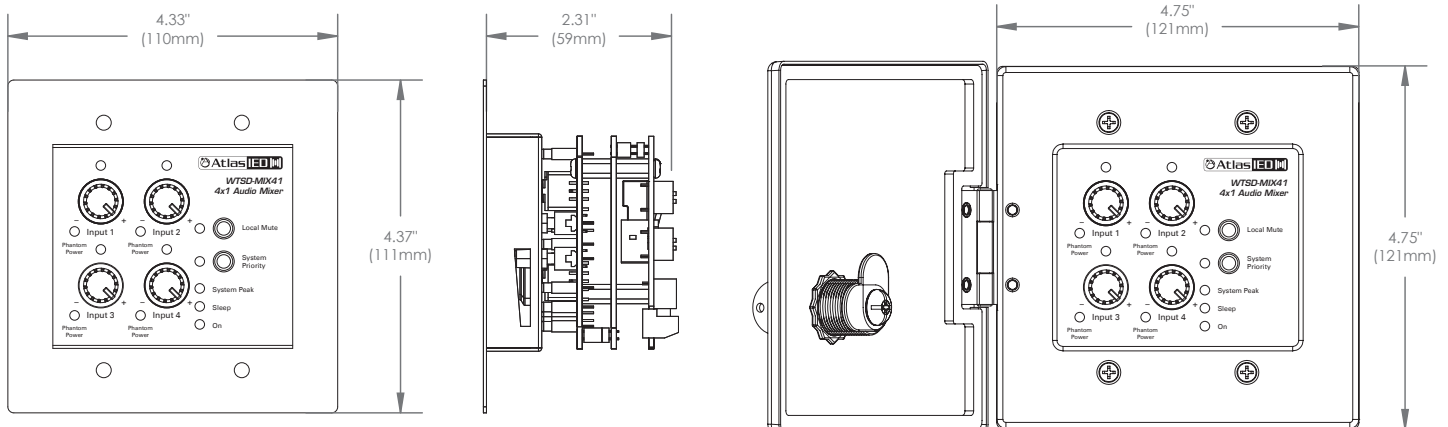
This module is the interface between WTSD mixers and supplies DC power to the WTSD bus.



Features

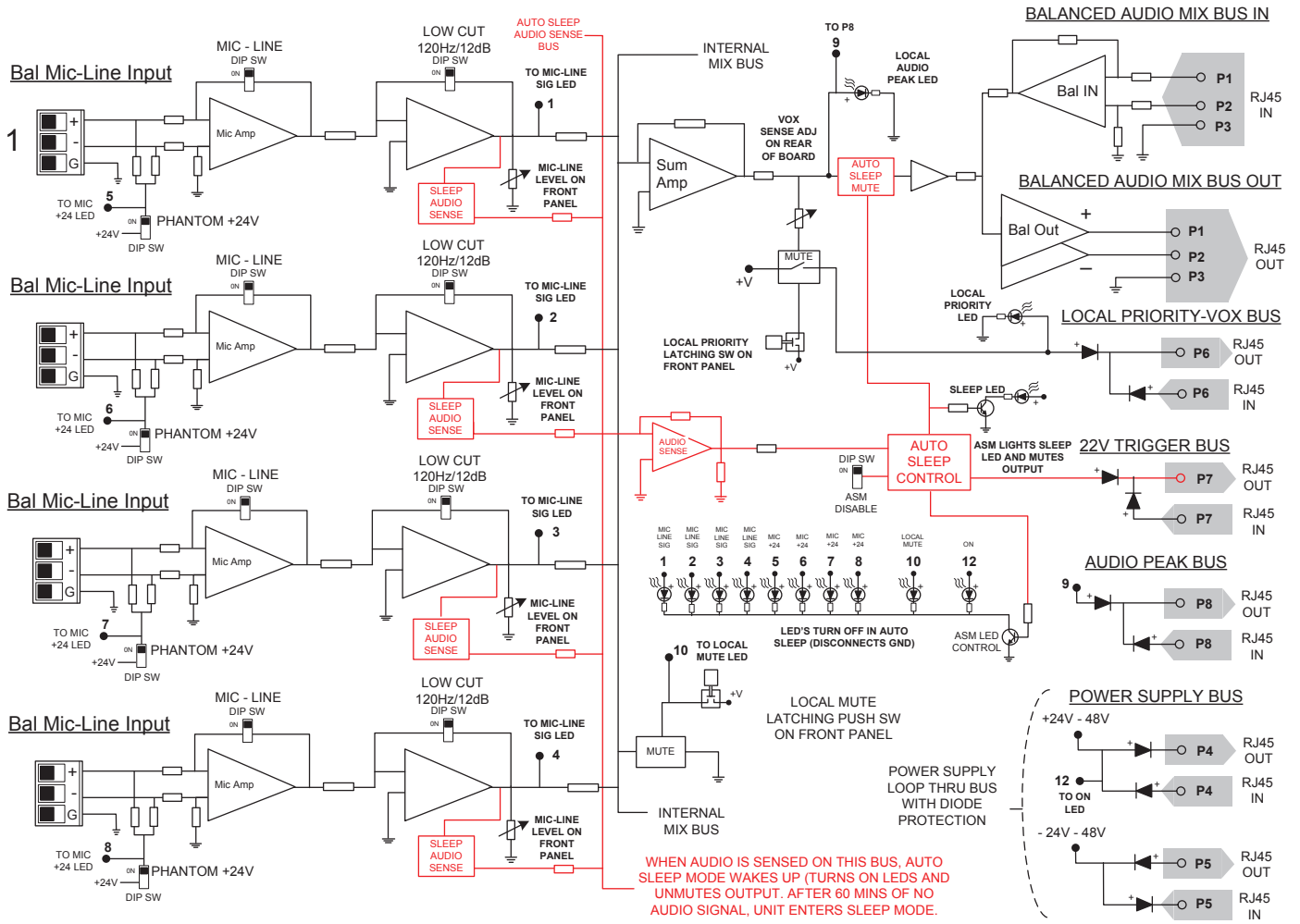
- Balanced Audio Output
- Power Supply 24VDC Injector
- System Peak GPIO
- Sleep Mode GPIO
- Priority GPIO
- RJ45 - Cat5 or Cat6 Interconnect
- On Indicator
- LED Indicators for Sleep Mode, Priority, System Peak, Signal Indicator
- Din-rail Mounting

Dimensional Drawings



Dimensions with Optional WTSD-COVER

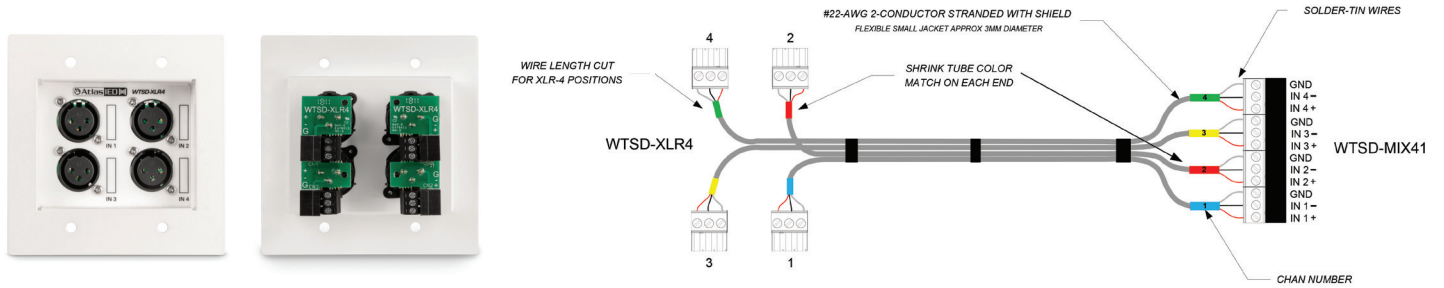
Block Diagram



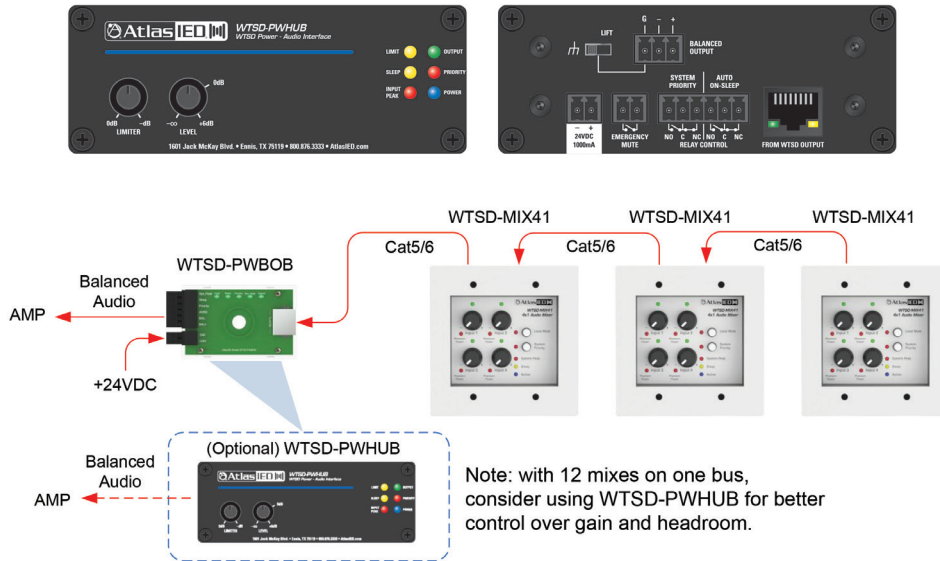
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Accessories

WTSD-XLR4 - Four XLR Input Wall Plate to Interface with a WTSD-MIX41K, Wire Included



WTSD-PWHUB - DC Power Injector / Audio Interface / Emergency Override



TSD-DAC2i - Balanced Analog Audio to Dante® Digital Audio Converter



WTSD-COVER - Lockable Weather Resistant Stainless Steel Cover



System	
Type	4x1 Mic / Line, Wall Plate Audio Mixer
Inputs	
Input Type	Balanced, Qty 4
Connection	3 Way Phoenix
Location	Rear Panel
Impedance	1.2K Ω Balanced, 600 Ω Unbalanced
Phantom	24VDC Defeatable Rear Panel DIP Switch
Low Cut Filter	125Hz / 12dB Defeatable Rear Panel DIP Switch
Line Input Level	500mV (-6dBV) Balanced = 2V (+6dBV) Balanced Output, Maximum Input 6V (6dBV)
Mic Input Level	1. No Pad Applied = 5mV (-46dB) = 2V (+6dBV) Balanced Output 2. 10dB Pad Applied = 15mV (-36dB) = 2V (+6dBV) Balanced Output 3. Maximum Input 40mV (-27dBV) 4. Mic On Indicator Front Panel, Green
Input Type	Input - WTSD BUS
Connection	RJ45
Location	Rear Panel
Outputs	
Output Type	Interfaced with the WTSD-PWBOB or WTSD-PWHUB
Connection	RJ45
Audio	Analog Balanced Line (Part of BUS)
Logic	Auto Sleep, System Mute, System Priority
Location	Rear Panel
Controls	
Mic / Line Level Control	Mixes the Levels of Mic Input or Line, Front Panel, Qty 4 Knobs
Mic / Line Switch	DIP Switch, Rear Panel
System Priority Switch	Latching Push Switch, Front Panel
Local Mute Switch	Latching Push Switch, Front Panel
DIP Switch	4 Position, Mic / Line, Phantom, 125Hz HPF, Mic PAD, Rear Panel
Indicators	
Mic / Line	Green LED When Line Mode, Front Panel, Qty 4
Phantom	Red LED When in Mic Mode, Front Panel, Qty 4
Sleep	Yellow LED When in Auto Sleep Mode, Qty 1
Power	Blue LED When the DC Bus is Active, Qty 1
Technical Data	
Frequency Response	20Hz - 20kHz \pm 1dB
THD	0.06% @ 1kHz
Audio Output	Balanced Line, Max Output 6V (+15dBV)
Logic Output	12V DC
DCV BUS	24V DC
Signal To Noise	Line to Line: 85dBV Mic to Line: 70dBV
Cable Distance	Maximum Cable Length is 400ft
Cable Type	Suggested Cable is Cat5/6
Sleep Mode	After 1 Hour with No Audio Activity, Audio BUS is Muted, Sleep BUS 22V Logic is Activated, WTSD Wake Up Voltage Threshold 3mV
VOX Threshold Range	Off to 500mV
Mic / Line Signal Indicator On Threshold	Input Voltage, Mic 300uV No PAD, Mic 2mV with 10dB PAD, Line 30mV
Music Signal Indicator On Threshold	10mV
System Peak Indicator On Threshold	Input Voltage, Mic 20mV No PAD, Mic 110mV with 10dB PAD, Line 2V, Music 3.5mm / Bluetooth 1V
Mic / Line Hi-Pass Filter	12dB per Octave, Butterworth

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Ambient Operating Conditions	
Maximum Temperature	104°F / 40°C
Minimum Operating Temperature	14°F / -10°C
Maximum Humidity	90%
Mounting	
Wall Controller	2-Gang Electrical Box (If Mounting in an Electrical Box, a Deep Box with a Minimum of 3" is Required. See Manual for Suggested Mounting Options)
WTSD-PWBOB	Screw (Center 1/4"), Adhesive 3M® Tape
Power Requirements	
Voltage	24V DC
DC Current Draw	100mA (Note 1)
AC Power Supply Consumption Current	50mA (Note 1)
AC Power Supply Consumption Watts	2.4W (Note 1)
BTU	8.1 BTU (Note 1)
Ambient Operating Conditions	
Maximum Temperature	104°F / 40°C
Minimum Operating Temperature	14°F / -10°C
Maximum Humidity	90%
Mechanical	
Chassis Finish	White
Chassis Material	Steel
Product Dimensions (HxWxD)	4.37" x 4.34" x 2.31" (111mm x 110mm x 59mm)
Shipping Dimensions (HxVxD)	3.34" x 8.2" x 5.4" (85mm x 209mm x 138mm)
Unit Weight	0.53 lbs. (0.24kg)
Shipping Weight	1.3 lbs. (0.61kg)
Electrical Box Required	2-Gang, Deep Box Required, 3" Minimum Depth (Note 2)
WTSD-PWBOB (Included with WTSD-MIX41K)	
Type	WTSD Interface Module
Input Connection	RJ45 From WTSD BUSS
Input Connection	2 Position Phoenix 3.5mm Pitch, DC Input 24V
Output Connection	6 Position Phoenix 3.5mm Pitch, Balanced Audio Output, System Priority Logic 12VDC, 2mA Sleep Mode Logic 22VDC, 2mA System Peak Logic 1VDC, 2mA
Indicators	Power, Green LED Sleep Mode, Green LED System Priority, Green LED System Peak, Green LED Signal, Green LED
Safety & Certifications	
Safety Listing (External Power Supply)	cUL, CE, RoHS, TUV
Package Contents	
WTSD-MIX41	Qty 1
WTSD-PWBOB Power Supply	Qty 1, 24V DC, 2500mA, In Line Design
Hardware	Qty 4, Screws 5/32 x 1" Pan Head White
Manual	Qty 1
Optional Accessories	
WTSD-COVER	Locking, All Weather Stainless Steel
WTSD-PWHUB	Audio / Power Interface with Level Control, Limiter, Emergency Mute Override, Auto Sleep, System Priority GPIO Ports
TSD-DAC2i	Analog to Dante® Digital Audio Transmitter

Note 1: Current draw, watts and BTU is based on 1 WTSD. For each additional WTSD added in series, add the additional draw.
Example: 2 WTSD = 104mA, 3 WTSD's = 156mA of DC Current draw.

Note 2: Electrical box requirements - For additional information refer to manual for recommended box types.

Architect and Engineer Specifications

The wall mount mixer shall control and mix 4 input signals and deliver an audio balanced line output to an RJ45 terminated Cat5 or Cat6 cable up to 400 feet to feed a remote head end amplifier.

The wall mount mixer shall have 4 DIP switch selectable 3 way Phoenix Balanced Microphone or Line Inputs on the rear panel. These Mic / Line balanced inputs shall be designed to connect to any balanced line 3-wire shielded cable or to our WTSD-XLR4 optional XLR wall mount plate with optional locking all weather stainless steel cover. Each of the four inputs shall have a DIP switch selectable Phantom Power with front panel indication, PAD Disable, and 125Hz low cut (HPF) filter. The wall mount mixer shall have separate level controls with signal LEDs for each input to control the audio mix needed. The wall mount mixer shall have a Frequency Response of 20Hz - 20KHz +/- 1dB; THD .06% @1KHz; Signal to Noise: Line to Line -85dBV; Mic to Line -70dBV.

The wall mount mixer shall be capable of being combined with up to three WTSD family mixers using the RJ45 Cat5 or Cat6 proprietary bus loop-thru connectors. The output bus shall have a System Peak LED to indicate when the total system mix headroom is exceeded. The wall mount mixer shall have a front panel latching local output Mute with indicator. The wall mount mixer shall have a DIP switch defeatable automatic Master Sleep function with Active or Sleep front panel indication. The Sleep function shall engage when an audio signal is not present on any local input for approximately one hour.

The wall mount mixer shall include one 24VDC-1A power supply along with one RJ45 break out box (WTSD-PWBOB) that interfaces the power supply and proprietary Cat5 or Cat6 bus to Phoenix balanced audio output. The break out box shall include signal outputs with LED indicators for Priority Active, Sleep Active, and System Peak, to use for external device control.

The wall mount mixer shall have dimensions (HxWxD) shall be 4.37" x 4.34" x 2.31" (111mm x 110mm x 59mm) and fit a standard 2 gang wall plate fastener pattern. The wall mount mixer shall have an optional stainless steel all weather locking security cover (WTSD-COVER).

The wall mount mixer shall be the AtlasIED Model WTSD-MIX41K.