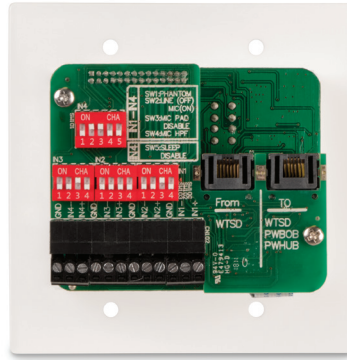


# WTSD-MIX41

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



## Features

- Indoor or Outdoor Use
- 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
- Hotels - Ballrooms
- Community Multi-use Facilities
- Industrial Facilities

## General Description

The AtlasIED WTSD (Wall Mount Time Saving Devices) family is a series of analog line level mixers that can be used for indoor or outdoor applications. The WTSD-MIX41 can be converted into Dante® Digital Network audio when interfaced with the optional AtlasIED TSD-DAC2i converter. The WTSDs are uniquely designed to fit into most two gang electrical boxes and utilize industry standard Cat5/6 cable for power, control and audio. The WTSDs deliver high quality audio over hundreds of feet by the use of a low noise / high gain preamp design and balanced audio bus. The proprietary low voltage bus is designed so that more than one WTSD mixers can be daisy chained on the same bus cable run while allowing for independent mixer operation. Each WTSD incorporates separate level controls for each input, a Local Mute, System Priority override and an Auto Sleep function.

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 1 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.

Model WTSD-MIX41 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 the 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-MIX41 is designed to be used in conjunction with the AtlasIED WTSD-XLR4 input plate or with other XLR wall plates. The WTSD-XLR4 also can be used with the WTSD-COVER accessory for outdoor environments that also need security.

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 $\Omega$ Balanced, 600 $\Omega$ 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	Output - WTSD BUS
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
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)

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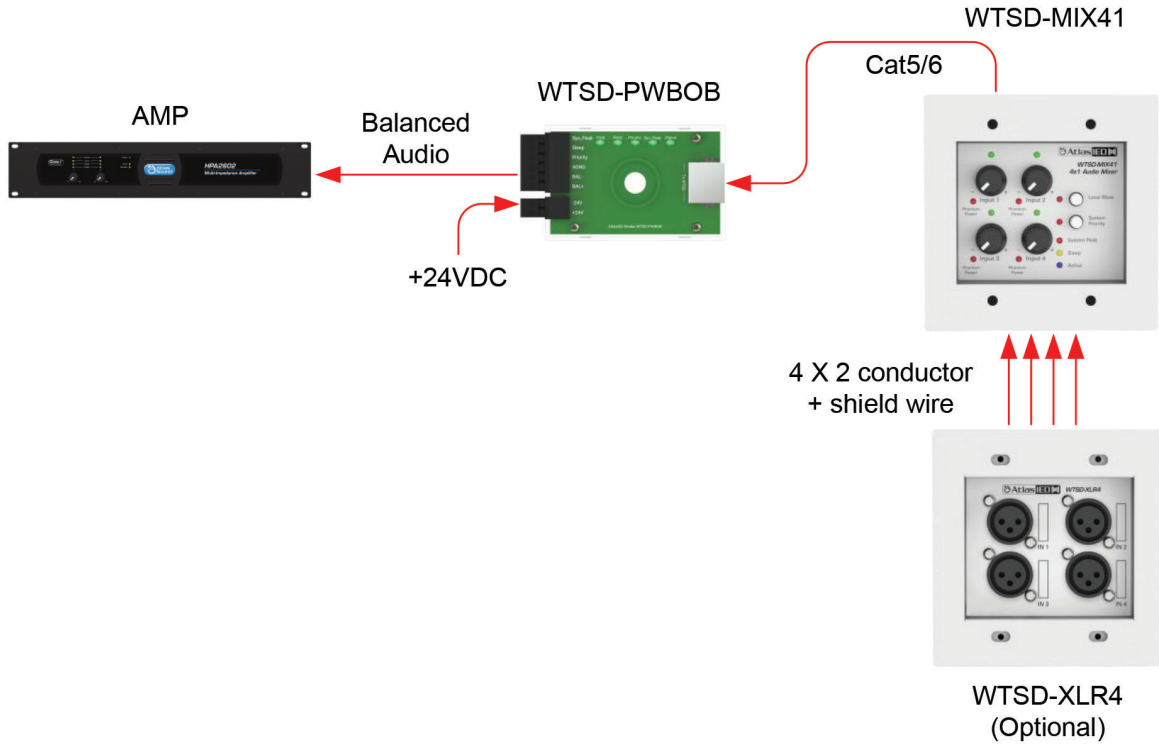
Mounting	
Wall Controller	Two Gang Electrical Box (Fits Most Standard, See Approved List and Dimensions)
WTSD-PWBOB	Screw (Center 1/4" ), Adhesive 3M® Tape
Mechanical	
Chassis Finish	White
Chassis Material	Steel
Product Dimensions (HxWxD)	4.37" x 4.34" x 2.31" (111mm x 110mm x 59mm)
Shipping Dimensions (HxWxD)	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, 2.6" Minimum Depth (Note 2)
Safety & Certifications	
Safety Listing (External Power Supply)	cUL, CE, RoHS, TUV
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.

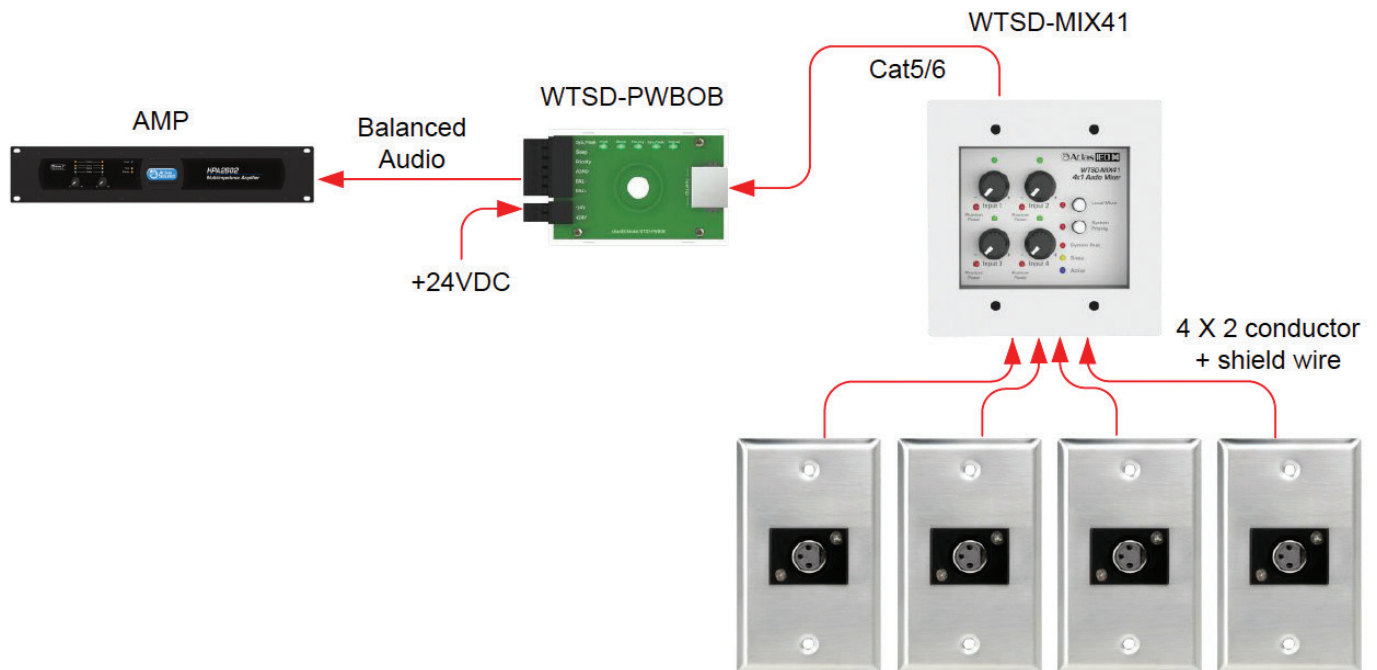
**Note 2:** Electrical box requirements - For additional information refer to manual for recommended box types.

## WTSD-MIX41 Cat5/6 Interface with a PWBOB

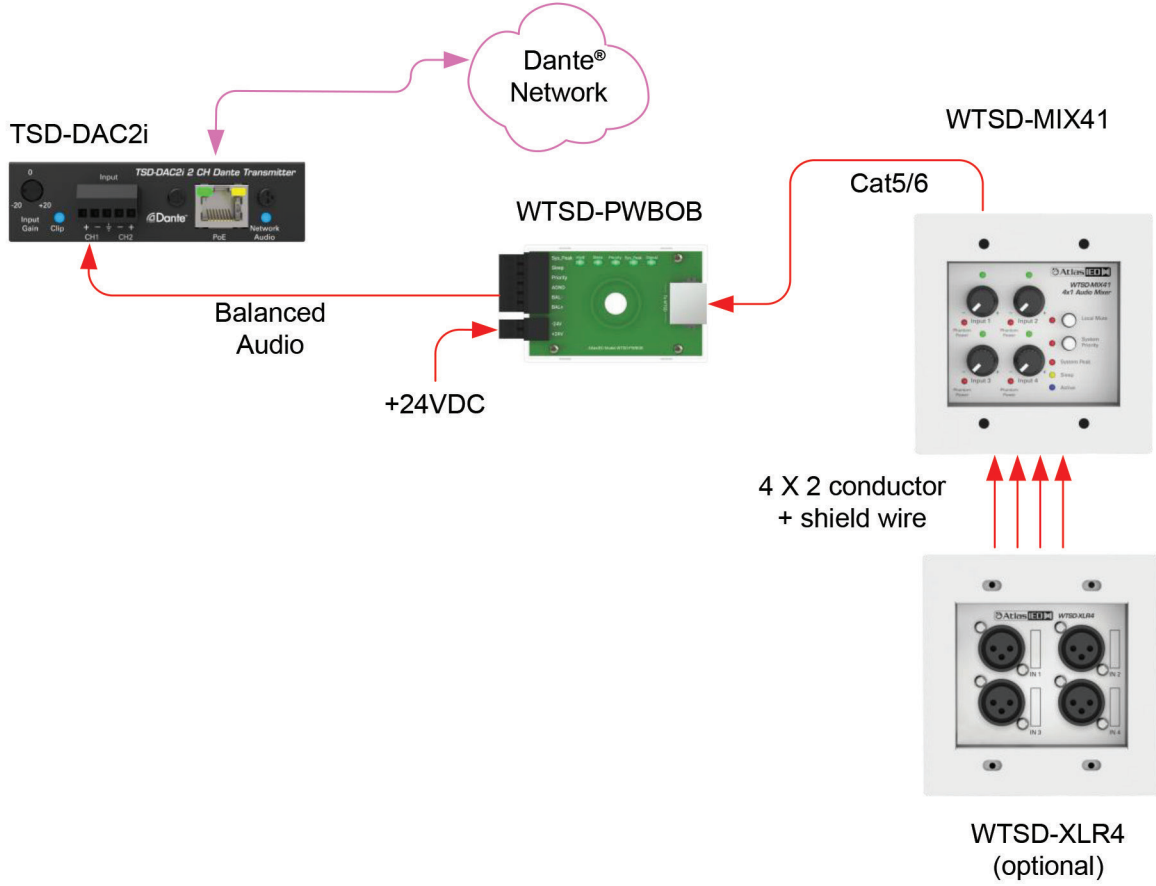
**Note:** 400ft max cable distance from WTSD-PWBOB to WTSD-MIX41.



**Note:** The WTSD-MIX41 can use standard XLR plates for separate input locations.

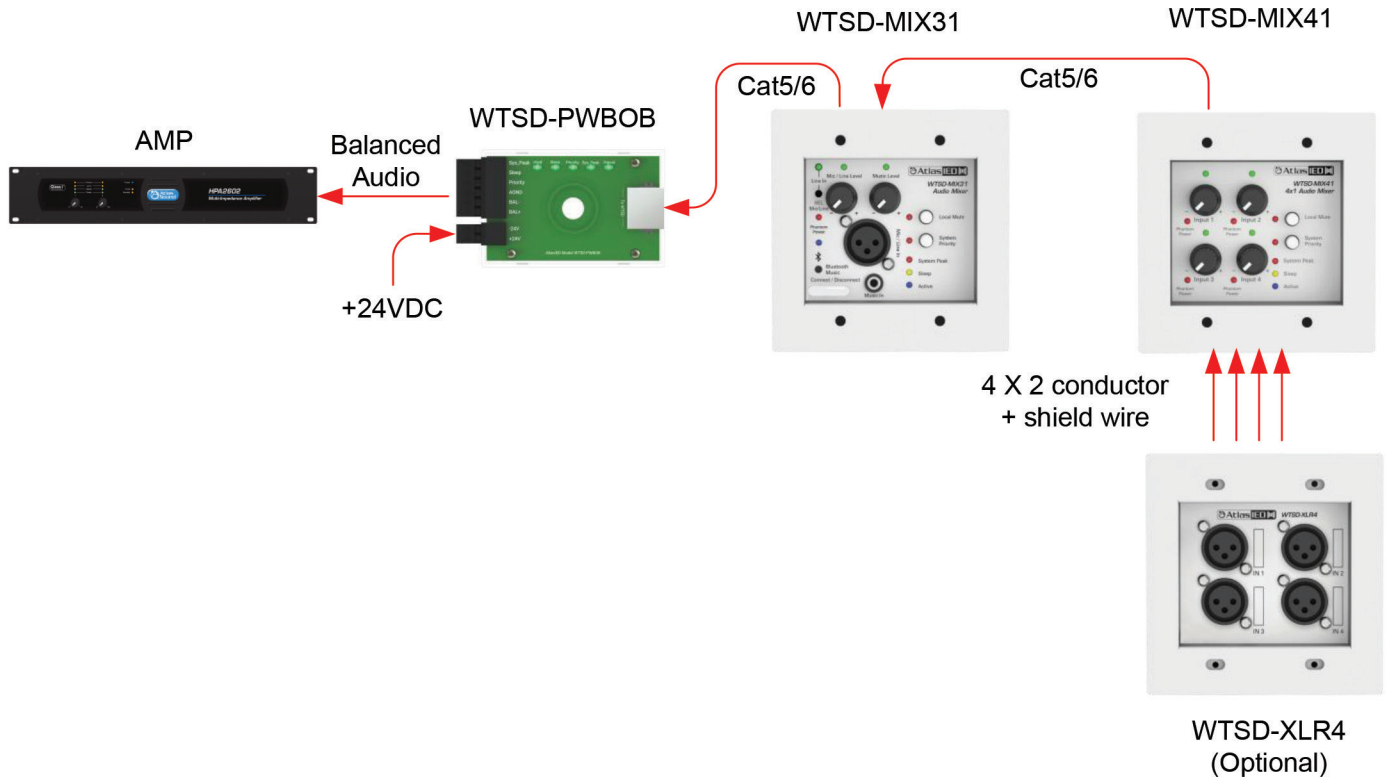


# WTSD-MIX41 With Optional TSD-DAC2i Dante® Network Audio Interface

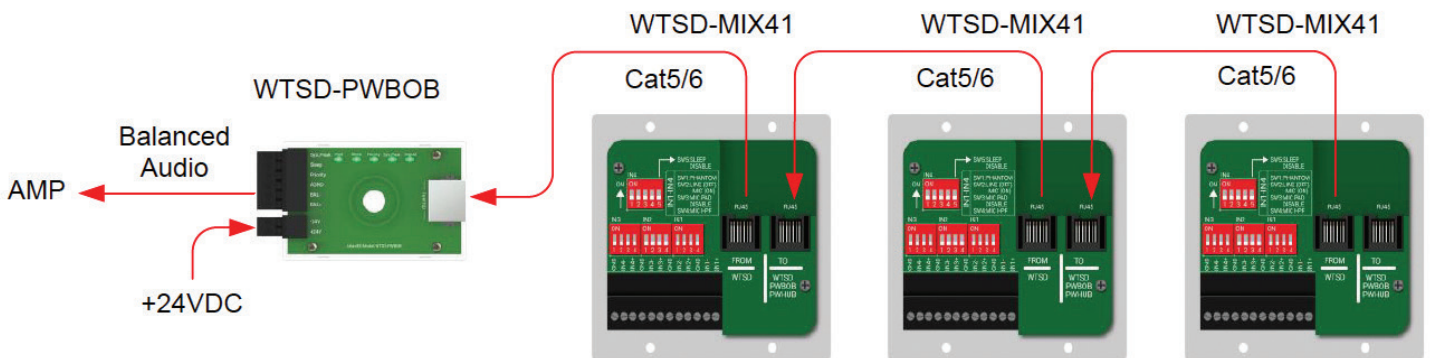


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WTSD-MIX41 In Series with a WTSD-MIX31 on the Same Cat5/6 Bus

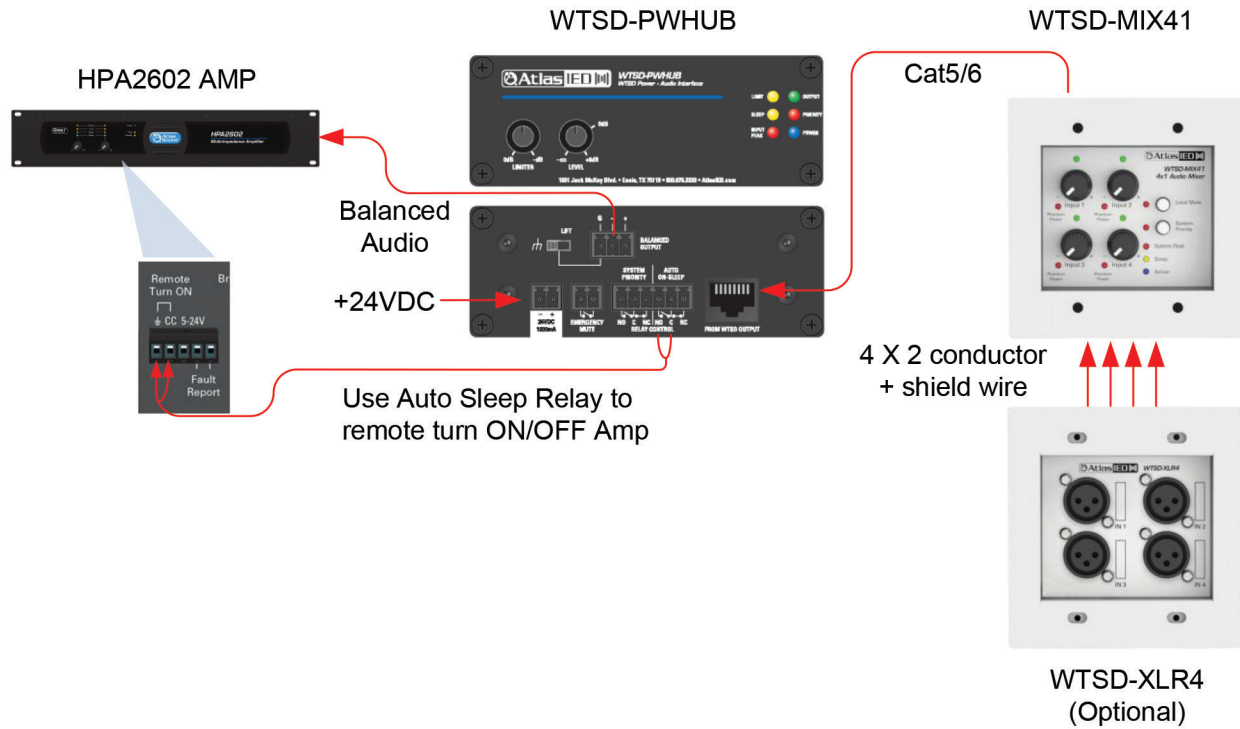


**Note:** Up to three WTSD mixers can be on the same PWBOB bus.



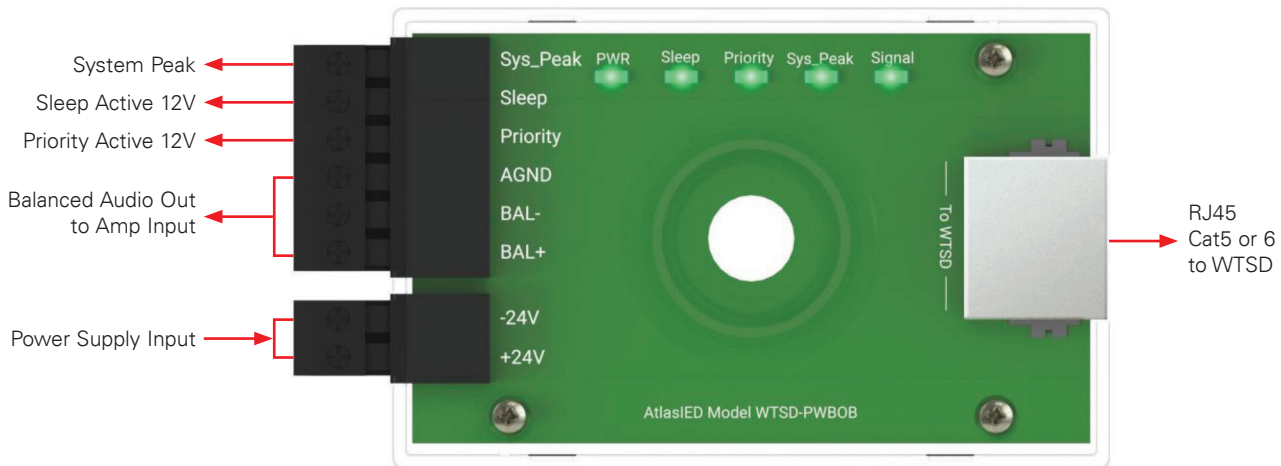
## WTSD-MIX41 with a WTSD-PWHUB

WTSD-PWHUB Auto Sleep Relay controlling power amp turn ON / OFF.



## 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.

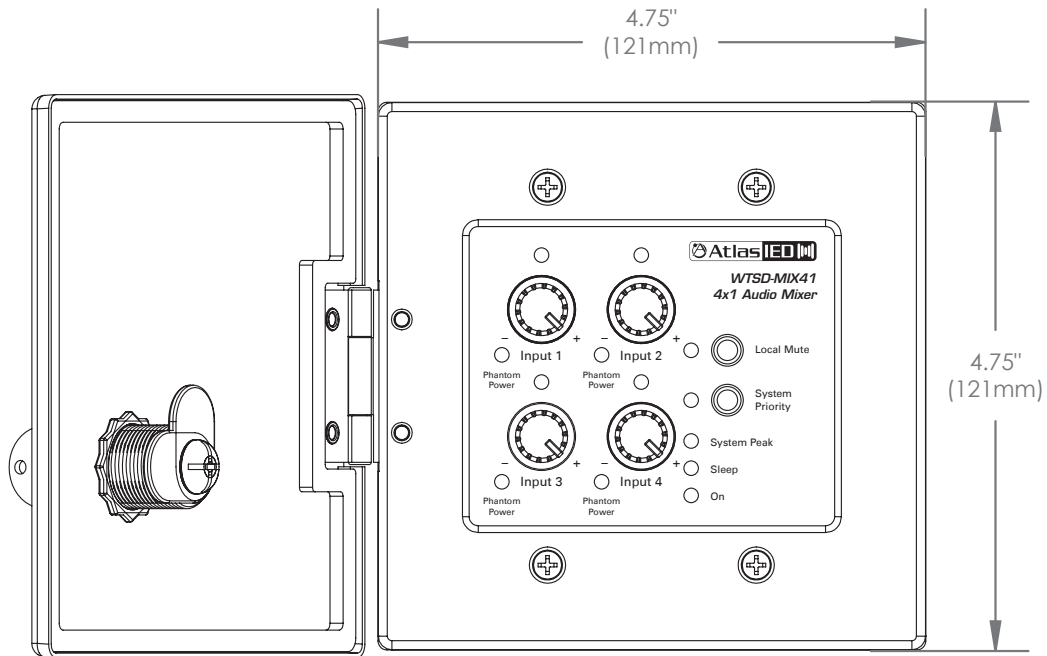
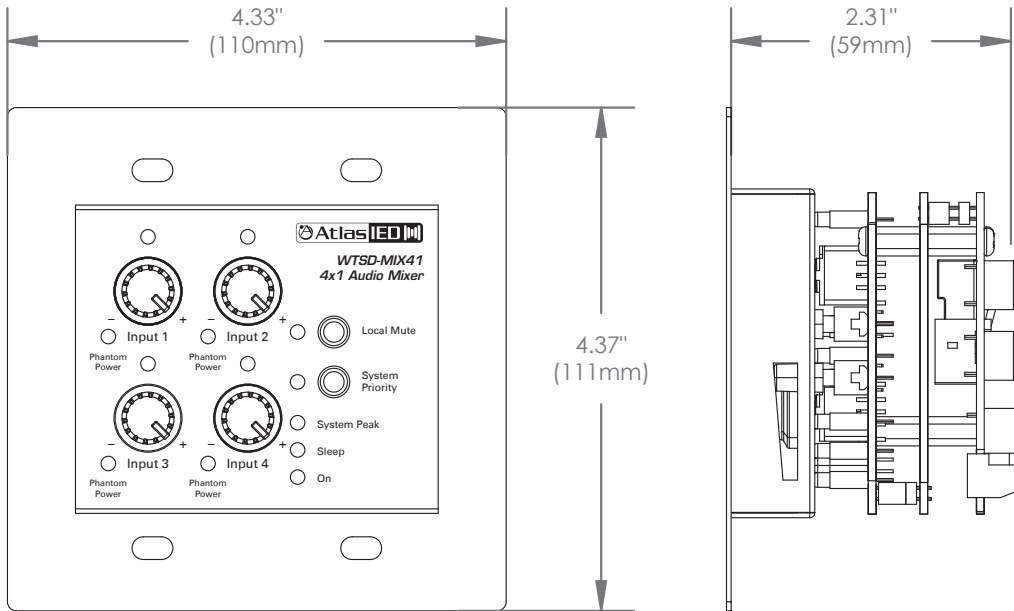


### Features

- 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

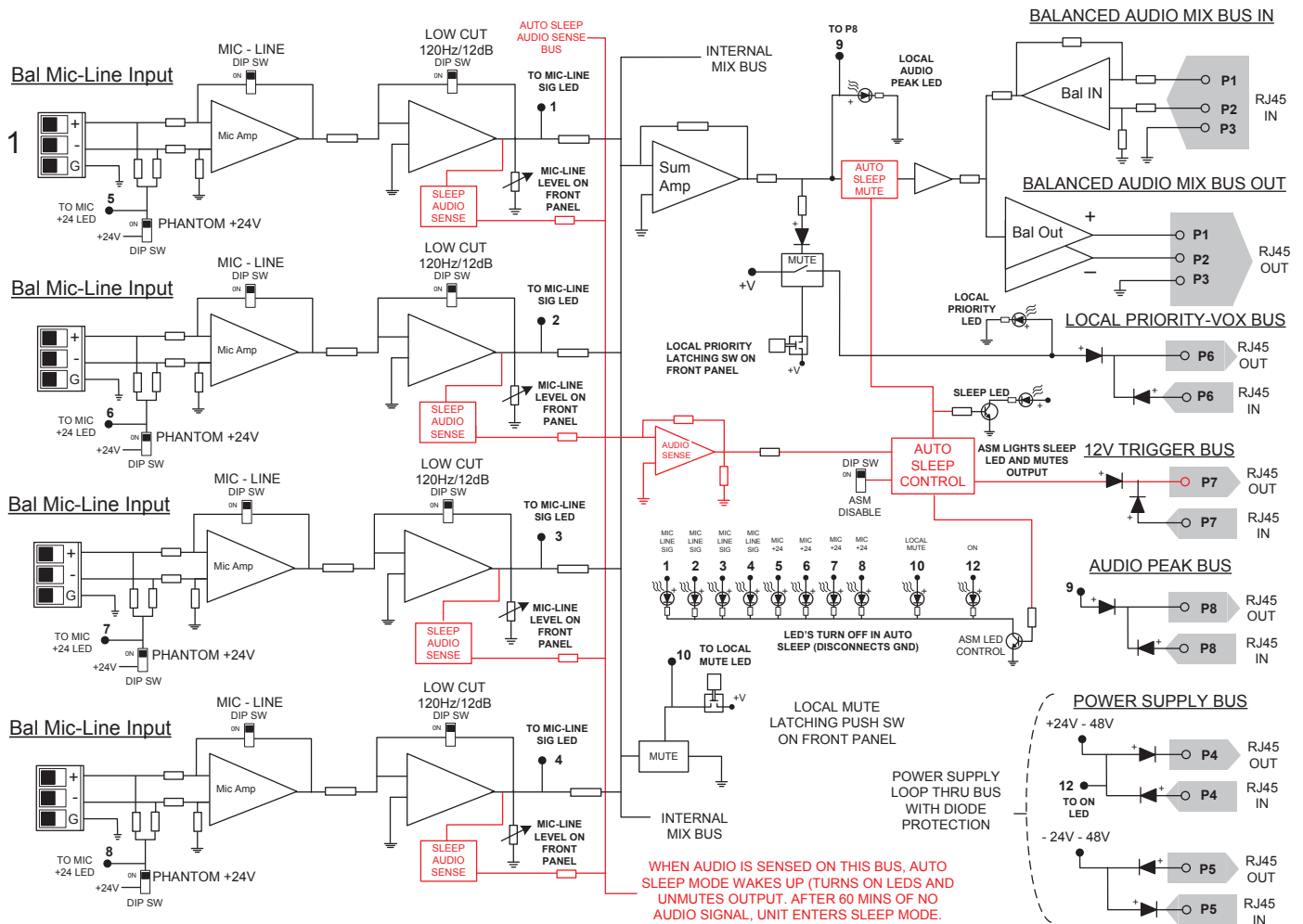


## Dimensional Drawings



Dimensions with Optional WTSD-COVER

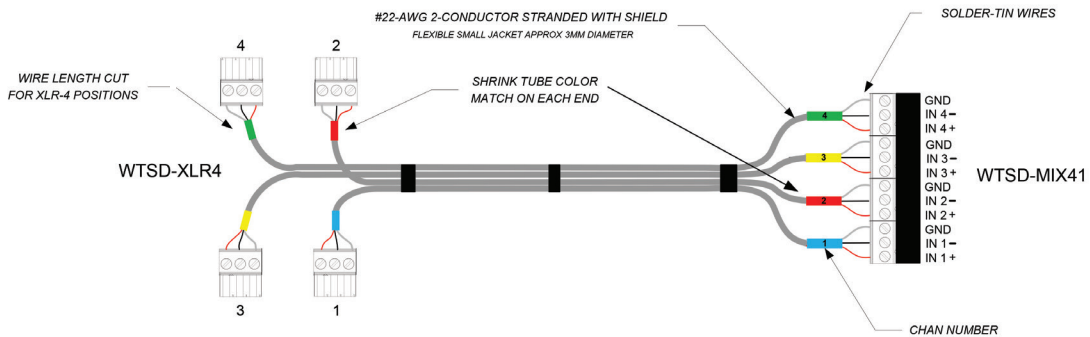
# Block Diagram



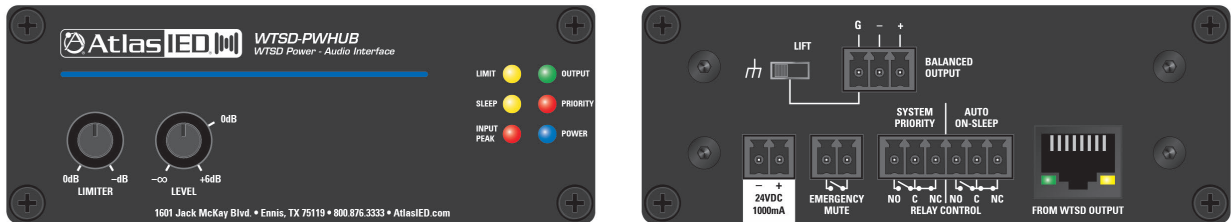
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## Accessories

### WTSD-XLR4 - Four XLR Input Wall Plate to Interface with a WTSD-MIX41, Wire Included

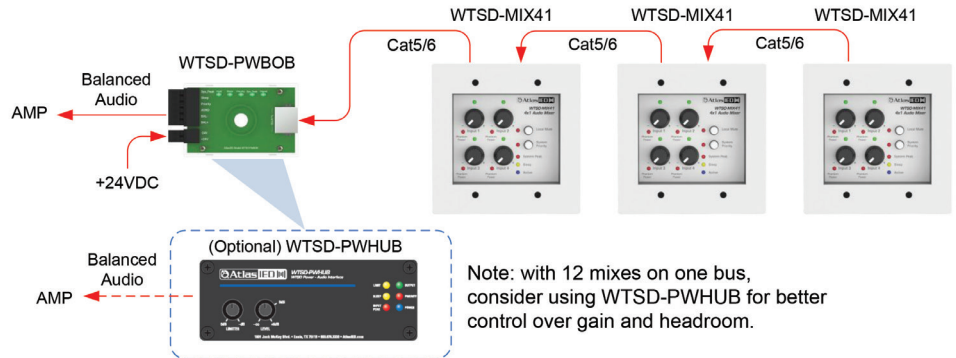


### WTSD-PWHUB - DC Power Injector / Audio Interface / Emergency Override



## Features

- Gain Adjust
- Peak Limiter Adjust
- Bus LED Indicators
- Balanced Audio Out with Ground Lift
- Emergency Override CC Mute
- System Priority Relay
- Auto Sleep Relay
- RJ45 Bus Cat5/6



## Accessories

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



## Features

- Converts Balanced Analog Audio into Dante® Digital Audio
- Two Balanced Analog Audio Inputs (Can be Used to Connect Two Separate WTSD Zones)
- Input Gain Adjustment -20dB to +20dB
- Input Clip Indicator
- PoE Powered
- Network Audio Indicator

### WTSD-COVER - Lockable Weather Resistant Stainless Steel Cover



## 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-PWB0B) that interfaces the power supply and proprietary Cat5 or Cat6 bus to Phoenix balanced audio output. The break out box shall include +12VDC 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-MIX41.