

Audio Exchange Media Controller



INTERTALK AUDIO EXCHANGE MEDIA CONTROLLER

Each fixed InterTalk Dispatch Console System (DCS) position includes an Audio Exchange (AUDx) device that handles all TX/RX audio and control at the position. For positions needing up to eight (8) speakers or “audio sinks”, two AUDx devices can be combined per position. The AUDx provides the Dispatch Console System’s IP streaming audio at each console, eliminating the performance and reliability limitations of standard PC sound cards. AUDx connects InterTalk’s speakers, headsets, microphones, foot switches, telephone, auxiliary audio and local I/O. Each AUDx unit supports up to four (4) speakers. InterTalk manufactures the AUDx in-house at its production facility. Each AUDx unit located at each console position also has four (4) General Purpose I/O (GPIO) inputs and four (4) switched (relays) GPIO outputs. These can be used for various functions that are tied to the position itself such as sensing an off-hook condition on a telephone deskset or controlling the busy lights. Optionally, additional AUX-I/O is available at the console positions for special purposes like controlling an external Call Check recorder.

AUTOMATIC GAIN CONTROL FEATURES

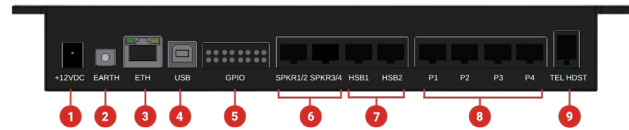
The AUDx uses advanced Digital Signal Processing (DSP) methods to set audio levels and to provide audio filters, routing, and automatic gain control (AGC) for microphone inputs, specifically designed for busy dispatch environments. The digital switch on the InterTalk speaker set allows the AUDx to ensure consistent volume control throughout the console system. This feature ensures that there are not multiple points in the audio string where the volume is set as in some other console systems. This avoids overdrive and distortion. It also allows the volume setting to be mirrored to an on-screen slider that moves in response to turning the volume knob.

ADVANCED TELEPHONY SUPPORT

The InterTalk AUDx has a port to allow it to connect to a standard telephone set as if it were the instrument’s handset. This feature connects the console’s hands-free headset to the telephone set when it is off-hook. An off-hook indicator input is provided on the AUDx. When the telephone set goes off-hook, this input is made active by the set. This causes the AUDx to switch the headset’s earpiece and microphone to the telephone set. The SELECT incoming RX stream, normally appearing in the headset earpiece, is temporarily redirected to a speaker for the duration of the phone call. When in a telephone call, the headset is connected to the telephone caller allowing the operator full, handsfree operation. If the operator presses any PTT button during the phone call, the headset’s mic is switched away from the telephone caller and to the appropriate TX line allowing him/her to speak to a radio user. The incoming radio traffic remains and is heard in one of the speakers at the console position. The AUDx is carefully designed to ensure that the audio from the operator intended for the radio user is not overheard by the telephone caller.



Audio Exchange (AUDx) Specifications



CONNECTIONS	
1	+12VDC barrel adapter
2	Earth GND
3	Ethernet port
4	USB port
5	GPIO
6	Speaker 1/2, 3/4
7	Headset box 1-2
8	Ports 1 - 4
9	Telephone headset port

GENERAL	
Dimensions (h x w x d)	1.5" x 9.75" x 6.25"
Weight	1.36 lbs
Power Consumption	12 Vdc @ 2.5 A
Temperature	0°C to +50°C [0°F to 122°F]
Speakers	1 Select, 1 Unselect (standard), expandable to 4 speakers per AUDx
Desktop Microphone	Supported, Optional, COTS
Footswitch	Supported, Optional, Single or Dual Pedal supported
Headset / Handset	Supported, Optional, COTS
Jackbox	PJ327 Jacks, 4-wire or 6-wire (automatic detection)
AUX I/O / GPIO	4 relay outputs Up to 8 opto-isolated outputs/inputs
PC Interface	Ethernet
Audio Stream	RX & TX audio
Volume control	Single-point Audio string control
Audio Amplifier	Internal Class-D audio amplifier
Required Cooling	Convection
LED Indicators	Status, PTT, Link, Act
Longitudinal Balance	At 10dBm, -57dBm @ 1.1 kHz
Mounting Hardware	4 anchor points



FLEXIBLE MOUNTING OPTIONS

Each fixed InterTalk Dispatch Console System (DCS) position includes an Audio Exchange (AUDx). These units can be placed on a desk, or mounted below, to a wall, etc. via the mounting tabs included on the hardware. The nature of the COTS equipment we utilize also affords some design flexibility if space is tight or unique in its configuration on the end-user's desk.

AUDx