# The AES-402 - Digital Audio Switcher



#### The Switcher ...

The AES-402 is a two input switcher which can operate automatically. When placed in the automatic mode, the unit monitors the incoming audio stream and can switch to an alternate path on user selectable error flags, loss of clock or user defined silence. The unit can be commanded remotely or locally to switch as well. The silence sensor can be set for 30, 60, 90 and 120 seeconds of delay before switching. The selected channel status indicator can even be set to blink to indicate audio level under threshold or loss of audio. All automatic switching functions are user configurable. The unit can be set up for any combination of silence and/or error switching. There is even a setting to disable the front panel switcher and mode select buttons for tamper proof operation. Full GPIO and serial remote control is available on the rear panel. We even included addressable RS-485 remote control so that multiple AES-402 units can be controlled through a single RS-485 control pair.

#### The Distribution System ...

Up to four balanced 110 ohm XLR outputs are available. Heavy duty RS-422 drivers are used to insure good signal integrity over long line lengths. One output is available as a power fail feed through which passively passes audio from the A input to the output in case of power failure.

## The Diagnostic Monitor ...

The unit features complete error flag information with memory retained to aid in troubleshooting. CRC, parity, coding and unlock error status are available. Standard sample rates of 32, 44.1, 48, 96, and 192 KHz indications are available on the front panel. The unit passes all sample rates from 8-192 KHz so even non standard sample rates are covered.

#### The D/A Converter ...

The AES-402 Features up to 192 KHz sampling and D/A conversion for high quality analog balanced professional audio output. In addition to a high quality balanced output there is a headphone monitor for convenient in the rack confidence monitoring of the incomming signal. The unit also has the ability to determine audio and non audio content such as AC-3 and Dolby E. The unit can be configured to pass these AES formats but mute the analog output if desired.

The AES-402 can be used as a transmitter or studio audio switcher, digital to analog converter, or diagnostic monitor. It is well suited to broadcast and recording applications. All automatic switching functions are user programmable. Select the errors that you want to switch upon. Easy to understand front panel controls and indicators for quick installation and ease of use. Remote control functions are simple momentary ground closures for interface to most modern remote control systems. In additon to GPIO remote control we included RS-232 and RS-485 serial remote control as well. Remote status indications are via dry relay contacts or complete information about sample rate, errors, channel status and silence level are available through the serial interfaces.. Call your local broadcast distributor for pricing, call or email us with any questions that you might have. The AES-402 is the next generation of digital audio control.



## **Broadcast Devices, Inc.**

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#### Rear Panel

## Snapshot of Features:

Two Input Digital Switcher
Four Digital Outputs
Balanced Left/Right Analog Output
Power Fail Passive Bypass - A Input is hard bypassed to AES OUT #4 Upon Power Failure
Front Panel Digital Status
Headphone Confidence Monitor Output
GPIO and RS232/485 Serial Remote Control of Channel Selection
Status of Channel Position, Mode, Sample Rate and Digital Errors
Global Power Supply - works virtually anywhere in the world

## User On/Off Configurable Options:

Silence Detection of 30, 60, 90 or 120 Seconds or no silence detection at all Silence Threshold flashing indicator - flashes after 15 seconds of silence Delayed or immediate switching upon clock loss and digital errors Muting of non audio streams on analog output

# **Technical Specifications**

Number of Inputs: 2 - Switchable Conforming to the AES3 Standard
Number of Outputs: 4 - AES3 XLR, 1 - Analog Left/Right Balanced

XLR Output
Sample Rates Supported: 32 - 192 KHz
Digital Resolution: Up to 24 bits

Front Panel Switches: 7 - Channel Selection, Auto/Manual Selection,

Error Reset, Volume Up/Dn

Front Panel Monitoring: LED Indication of Sample Rate, Error Status, Power Remote

Control/Status: Open Collector Control of Channel Selection

Open Collector Output Channel, Mode and Error Status via 9 Pin D connector or RS232/485 R/C Balanced +4dBm Referenced to -20 dBFS

Analog Output: Balanced +4dBm Referenced to -20 dBFS
Headphone Monitor: 1/4" Phone Jack on Front Panel with Digital

Volume Control

Physical Dimensions: 19"W X 1.75"H X 10" D Standard EIA Rack

**Enclosure** 

Power Requirements: 100 - 240 VAC 50 -60 Hz

Environmental: 0 - 60 Degrees C. Non Condensing Atmosphere

## Authorized Distributor: