



ISS Integrated Simulator System

A technologically superior, completely modular audio simulator system designed for flexible, reliable, and great-sounding MTS broadcasting.

Studio Technologies, Inc. is an innovator in stereo simulation. Our products are used in numerous stations throughout the country and overseas for both production and on-air MTS broadcasting. The

extensive experience that we have gained in this field has led to the development of the ISS, an advanced, integrated simulator system for MTS broadcasting.

Great Sound—The Most Important Factor

Television broadcasters told us that they wanted a realistic simulated stereo sound. They were looking for a dramatic, full effect but wouldn't accept a simulator that made voice signals sound processed or unnatural. The ISS achieves this by using two simulator cards that incorporate our advanced, proprietary simulator circuitry. The Type I card provides a moderate amount

of simulation for all audio frequencies. The Type II card provides more dramatic simulation for low and high frequency signals. These cards work together to give a terrific stereo sound while maintaining voice centering. Of course, the simulated stereo is completely mono compatible.

Smooth Crossfades

Sometimes you don't need our simulated stereo so the ISS electronically crossfades between the audio input signals and

the simulated stereo. The ISS circuitry selects one of the three crossfade speeds for smooth, unobtrusive transitions.

Manual or Automatic Operation

The ISS is easy to operate. Through its full remote capabilities, the ISS is completely equipped to interface with a station's automation system or operator controls. Or, the ISS Recognition card can be added, enabling the ISS to precisely determine the mono/stereo status of the audio input signals and automatically switch the

simulator into the on-air audio chain upon recognition of mono. The recognition circuitry detects mono in three ways. A signal on either the left or the right channel only is recognized as mono. If there are signals on both the left and right channels, the recognition circuit accurately compares them to identify stereo or mono.

Polarity Correction

One channel phase reversals are a constant concern for MTS broadcasters. To prevent loss or degradation of audio to mono listeners, the ISS Polarity Correction card can be added. It

continuously monitors the input signals and upon recognition of a phase reversal, automatically restores signal integrity.

**STUDIO
TECHNOLOGIES
INC.**

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Nuts and Bolts

The ISS is simple to install. It's rack mountable and is wired in the audio chain prior to the transmitter. The front panel controls facilitate ISS setup and testing. LED status indicators on the front panel show exactly what the system is doing at all times. The ISS is designed to remove itself from the audio chain upon detection of

a commercial power or internal power supply failure, so that there is no loss of on-air audio. If the system ever needs to be serviced, the clearly laid out circuit cards and our complete, detailed documentation will make the job easier. We also offer an Extender card to allow active testing of any card.



ISS Specifications

Input and Output Format: discrete left and right

Input Level: 0, +4, or +8dB, switch selectable

Input Impedance: 20k ohms, electronically balanced

Output Level: 0, +4, or +8dB, switch selectable

Output Impedance: 60 ohms, electronically balanced

Maximum Output Level: +26dBu into 600 ohms

Frequency Response (Simulator VCA Bypassed): 20Hz to 20kHz, ± 0.1 dB

Signal to Noise Ratio (Simulator In Circuit): 76dB

Distortion (THD) (20Hz to 20kHz):

Simulator VCA Bypassed: less than 0.06%

Simulator in Circuit: less than 0.40%

Remote Control Inputs: optically coupled, current limited logic level, switch selectable for continuous or pulse type

Output Signal Switching: VCA based crossfade circuit

Auxiliary Relay Contacts: isolated, sealed, bifurcated type

Audio Connections:

Line Inputs: 3-pin XLR-type, female

Line Outputs: 3-pin XLR-type, male

Pin 2 audio high

Remote Control/Status Relay Connections:

25-pin D-subminiature, male

Power Requirements: 100 to 125Vac (nominal 115Vac) or 200 to 250Vac (nominal 230Vac), switch selectable, 50-60Hz, 100 watts maximum

Dimensions:

19.00" wide (48.26cm)

5.25" high (13.34cm)

13.75 deep (34.93cm)

Mounting: three standard rack spaces

Weight: 22.50 lbs. (10.2kg)

Recognition Card:

Contains circuitry to detect left only as mono, right only as mono, and mono signal on left and right as mono. Each condition is switch defeatable.

Polarity Correction Card:

Contains circuitry to detect and correct 180 degree phase reversal on input signals. Correction occurs at signal zero crossing.

Tone Detection Card (optional):

Contains circuitry to detect the presence of an audio tone when it is present only on the left or right channel. Upon detection, this tone is routed to both the left and right output channels.

Specifications subject to change without notice.

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