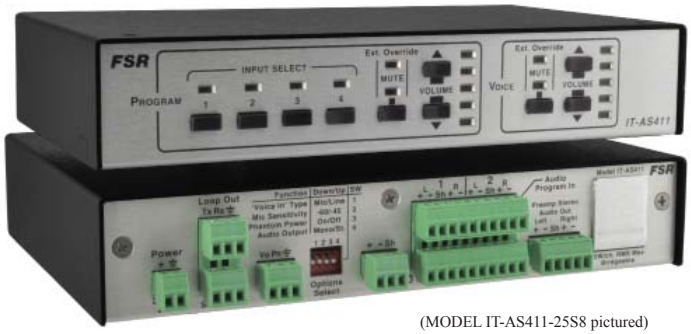
IT-AS411 SERIES

AUDIO SWITCHER / AMPLIFIERS

(COVERS MODELS IT-AS411, IT-AS411-25M70 AND IT-AS411-25S8)

INSTALLATION AND OPERATING GUIDE



(MODEL IT-AS411-25S8 pictured)

PROPRIETARY INFORMATION

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Operators Safety Summary

The general safety information in this summary is for operating personnel.

Read Instructions Read and understand all safety and operating instructions before using this equipment. Keep the instructions handy.

Do Not Remove Covers or Panels There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source This product is intended to operate from the specified wall plug-in transformer. Do not use any other power source.

Use the Proper Power Cord Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Do Not Operate in Explosive Atmospheres To avoid explosion, do not operate this product in an explosive atmosphere.

INTRODUCTION

The IT-AS411 Series Audio Switchers are 4x1 audio switchers that have an extra line/mic level input for a voice lift system or direct microphone input. All models have four switched line level inputs and an independent mic or line level input that is summed (mixed) with the selected active program audio. Automatic gain control and noise gating are incorporated to ensure consistent voice and program audio levels with a minimum of unwanted ambient noise.

All models have balanced or unbalanced input and output capability. DIP switches are provided to set the voice input level to mic or line, adjust microphone sensitivity, set phantom power and select mono or stereo operation. They also have adjustable volume control buttons and mute for both the program and voice inputs. Switching, muting and gain can be executed locally by front panel push buttons, muting by external dry contact closure and additional commands via RS-232 serial control. On board LED's monitor; input select, volume levels and muting status.

All models have line level inputs and outputs. They can be controlled by the front panel and via pass through RS-232 control.

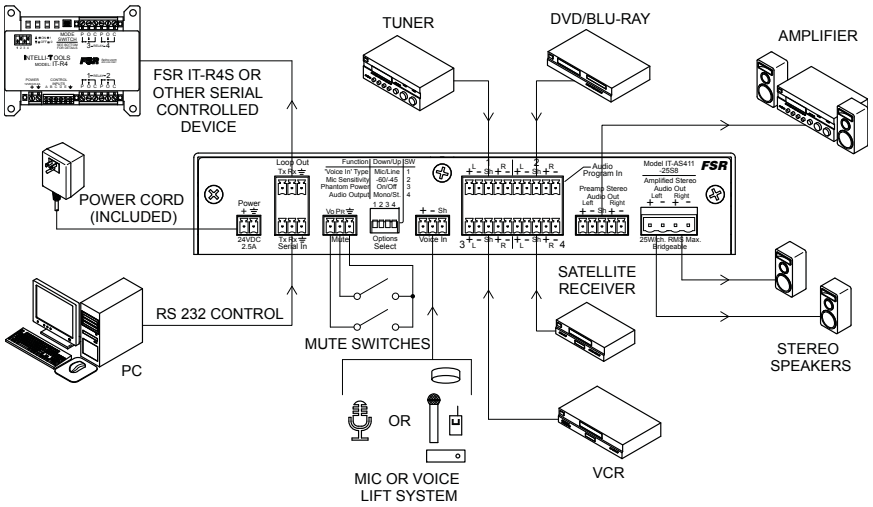
The IT-AS411-A25M70 features a 25Wrms mono internal amplifier to drive either a 4 to 8 ohm speaker or a 70V line output.

The IT-AS411-A25S8 features a 25Wrms stereo output to drive a 4 to 8 ohm speaker.

FEATURES:

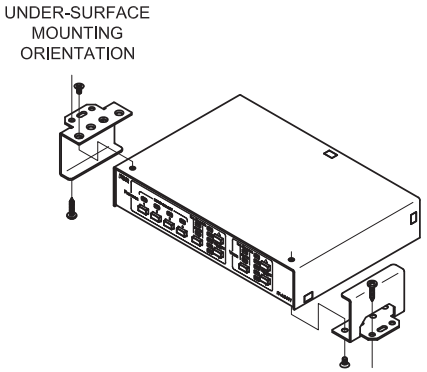
- Mic / line level voice lift input
- Program audio / voice lift mixing
- Program audio inputs and outputs
- Serial control with serial pass-through
- Terminals for remote muting of voice and/or program audio via dry contact closure
- On board LED's monitor; input select, volume level and muting status
- Current limited remote LED output terminal for program audio and voice (mute) status
- Integrated audio amplifiers on A25-M70 and A25-S8 models
- Program audio trim (gain)
- Automatic gain control and noise gating
- Preamplifier output

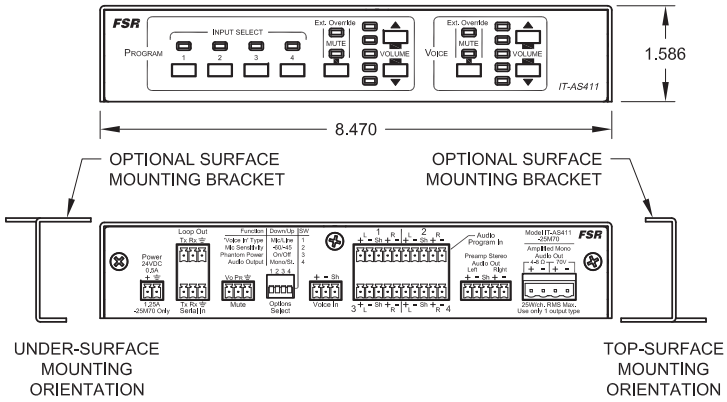
TYPICAL APPLICATION

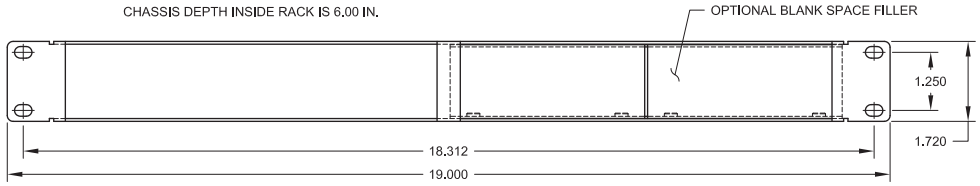


INSTALLATION AND OPERATION

All models have rubber feet attached and can be placed on a desktop. There is also a rack kit or surface mount kit available from FSR for stationary mounting. See “accessories” in the specification section for FSR part numbers and ordering information.







OPTIONAL RACK MOUNT KIT

FRONT PANEL

FRONT PANEL LED STATUS INDICATION	
INPUT SELECT	Indicates selected audio input source when each input button is selected
EXT. OVERRIDE	Indicates the muting state as controlled by the external mute input connector
MUTE	Indicates state of local muting when mute buttons are used
VOLUME BAR GRAPHS	Displays the current program and voice audio output levels in 10 dB increments.

IT-AS411 FRONT PANEL OPERATION

Source Selection
The source audio input are selected by pressing one of the 4 source buttons located on the left side of the front panel. A single lamp will be illuminated to indicate the selection.

Audio Level Adjustment
The audio output level may be adjusted via the up and down buttons located on the right side of the front panel.
The audio range may be adjusted in 1 dB increments from a floor of –45 dB to +5 dB by either pressing and
holding the Vol Up or Down button or by discrete button presses. Each discrete press adjusts audio in 1dB
steps. When continuously pressing a volume up or down button,

the audio output level will be ramped in 1
dB increments, traversing the entire range from –45 to +5 dB in approximately 6 seconds. The 5 audio output
lamps are illuminated accordingly to reflect 6 ranges (including all OFF).
Audio mute may be toggled on and off by pressing the Audio Mute button to the immediate left of the audio
output level lamps. The user may adjust the audio output volume down while remaining in mute state.
However, if the user presses the volume up button while muted then the audio will be unmuted and the audio
output level will be adjusted accordingly.

Audio Trim Adjustments
The audio trim may also be adjusted for each of the 4 audio sources via the front panel. This is done by first
pressing and holding the desired audio source input button and then simultaneously pressing the volume up
or down buttons to adjust the trim for the selected source. Note that the lamps will not be illuminated to reflect
the adjusted trim and will remain illuminated to reflect the audio output level as may have been adjusted as above.
The audio trim may be ramped up or down by holding both the audio source button and the respective trim
direction button and will traverse the –5 dB to +15 dB range in approximately 2-3 seconds. Or the user can
adjust in discrete 1 dB increments by discrete volume up or down presses. When the audio source button is
released, the audio trim adjustment is terminated.

Audio Voice Adjustments
The audio VOICE output level may be adjusted via the up and down buttons located on the far right side of the
front panel. The audio range may be adjusted in 1 dB increments from a floor of –45 dB to +5 dB by either pressing
and holding the Vol Up or Down button or by discrete button presses. Each discrete press adjusts audio in 1dB

steps. When continuously pressing a volume up or down button, the audio VOICE output level will be ramped in 1 dB increments, traversing the entire range from –45 to +5 dB in approximately 6 seconds. The 5 audio output lamps are illuminated accordingly to reflect 6 ranges (including all OFF).
Audio VOICE mute may be toggled on and off by pressing the Audio VOICE Mute button to the immediate left of the audio VOICE output level lamps. The user may adjust the audio VOICE output volume down while remaining in mute state. However, if the user presses the volume up button while muted then the audio VOICE will be unmuted and the audio VOICE output level will be adjusted accordingly.

Power Up / Failure Operation
The IT-AS411 is capable of detecting imminent power failures and stores any configuration parameters to FLASH memory before complete power failure in order to restore the most recent operating configuration on start-up.
A 5 second delay period upon power up allows for the power to stabilize. The user should wait 5 seconds after power up before operating or trying to send any serial commands to the unit.

Default Factory Settings
The IT-AS411 can be returned to its default factory settings by first pressing and holding the Audio Mute button and then simultaneously pressing the Volume Up button. The default settings configure the default audio output to port one, the audio output level to –30 dB and the audio trim levels for each audio input to 0 dB.

REAR PANEL

Mute Switch Input:
Provide a dry contact or low leakage open collector closure to mute the amplifier. No connection, or an open circuit provides normal operation. The IT-AS411 switcher / amplifier provides pop-free transitions in and out of mute mode.

Audio Input:
NOTE: See Option DIP Switch table for proper settings and additional information.

Connect a balanced or unbalanced audio source to this point. Unbalanced signals should be connected between “Hi” and “Lo.”

- ***For IT-AS411-25M70 only:***
  Connect mono sources to the RIGHT or LEFT audio input terminals
- ***For IT-AS411-25S8 only:***
  Connect mono sources to the RIGHT or LEFT audio input terminals.

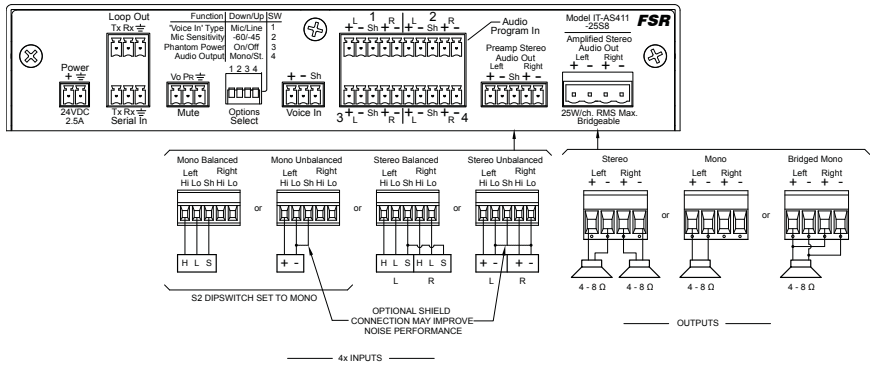
Audio Out:
- ***For IT-AS411-25M70 only:***
  Provides a choice of either 4-8 ohm or 70V mono output for flexibility in interfacing to the room speakers. Connections should be made to only one output type in a particular installation.

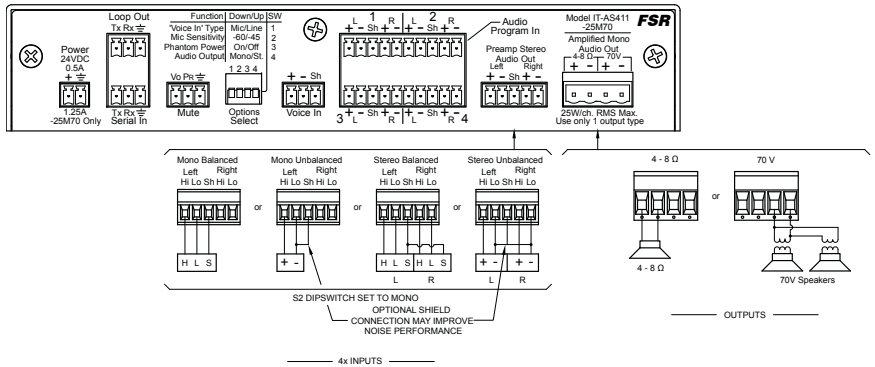
- ***For IT-AS411-25S8 only:***
  Provides connection to 4-8 ohm stereo speakers. Outputs may be bridged (connect + to + and connect - to - . When bridging, be sure to set front panel switch 2 to “mono” mode to double the output power. Use 4 ohm speaker, or parallel combination of 8 ohm speaker to achieve full power when bridging outputs.

Power Input:
Connect to supplied 24V external power supply

OPTION DIP SWITCHES AND INTERNAL JUMPER	
SWITCH 1 “VOICE IN” TYPE	Up= LINE Down= MIC
SWITCH 2 MIC SENSITIVITY	Up= -45dB Down= -60dB
SWITCH 3 PHANTOM POWER	Up= OFF Down= ON
SWITCH 4 MONO / STEREO	Up= Stereo Down= Mono When in Mono mode, the Left and Right audio inputs are actively summed together and fed to both the Left and Right output channels. When in stereo mode, Left and Right inputs are independent. NOTE: The IT-AS411-M70 mono version of the product requires this switch to be set to mono mode when using stereo sources. When operating the IT-AS411-S8 in bridged output mode, this switch should also be set to mono mode.
JP2 (INTERNAL JUMPER) USER MIC SENSITIVITY ADJUSTMENT	Open jumper: 0dB. mic sensitivity (default) Closed jumper: -6dB mic attenuation

AUDIO PINOUT





NOTE: When in MONO mode, either left or right inputs and outputs can be used.

TECHNICAL SPECIFICATIONS

PROGRAM AUDIO INPUT	IT-AS411	IT-AS411-25M70	IT-AS411-25S8
Input	4, Stereo balanced/unbalanced		
Connector type	Pluggable screw terminal		
Maximum Input Level	7.5dBV		
Input Sensitivity	NA	-20dBv with 8Ω or 70V load	-20dBv with 8Ω load
Input Impedance	20kΩ balanced/unbalanced		

MICROPHONE INPUT	IT-AS411	IT-AS411-25M70	IT-AS411-25S8
Input	1		
Connector type	Pluggable screw terminal		
"Voice In" type	Microphone/Line		
Microphone Sensitivity	-43/-35dB		
Maximum Input Level	1dBV		
Low cutoff	200Hz		
Phantom power	24V		

PRE-AMP AUDIO OUTPUT	IT-AS411	IT-AS411-25M70	IT-AS411-25S8
Connector type	Pluggable screw terminal		
Number of outputs	1 Stereo or 2 Mono (L + R program audio input summed)		
Signal Output	Balanced/unbalanced		
Frequency Response	20Hz – 20kHz (+/- 0.5dB)		
THD + N	<0.09% @ 1kHz; 11dBV with 600Ω load (balanced)		
Signal to Noise Ratio	>80dB @ 1kHz; rated output (unweighted)		
Output Impedance	50Ω		

AMPLIFIER AUDIO OUTPUT	IT-AS411	IT-AS411-25M70	IT-AS411-25S8
Connector type	Pluggable screw terminal		
Number of outputs	NA	2 Mono[1]	Stereo or 2 Mono (L + R program input summed)
Frequency response	NA	100Hz – 20kHz (+0, -1dB) -3dB @ 50Hz	20Hz – 20kHz (+0, -1dB)
THD + N	NA	<0.8% @ 1kHz 25Wrms 70V <0.7% @ 1kHz 25Wrms 8 Ω	<0.7% @ 1kHz 25Wrms 8 Ω
Signal to Noise ratio	NA	>80dB @ 1kHz; rated output (unweighted)	
Load impedance	NA	4 to 8Ω or 70V	4 to 8Ω
Power output	NA	25Wrms @ 4 to 8Ω 25Wrms @ 70V	25Wrms @ 4 to 8Ω

[1] Use only one output type (4-8Ω or 70V) in a particular installation.

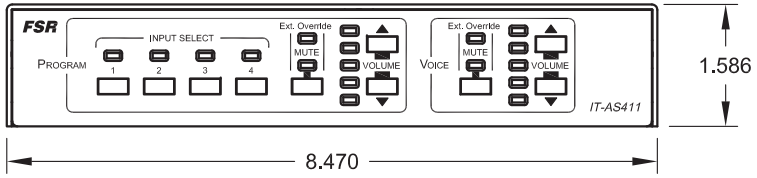
POWER REQUIREMENTS	IT-AS411	IT-AS411-25M70	IT-AS411-25S8
Power input requirement	24VDC @ 0.5A	24VDC @ 1.25A	24VDC @ 2.5A

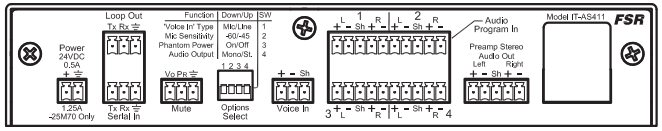
MECHANICAL	Model	Dimensions (inches)	Shipping weight.
	IT-AS411	8.5 x 5.875 x 1.5625	4 lbs.
	IT-AS411-25M70		
	IT-AS411-25S8		

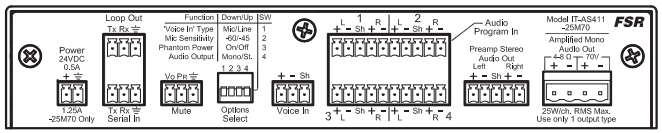
ACCESSORIES	DESCRIPTION
RK-1	Front accessible rack mount kit
RK-2	Shelf style rack mount kit

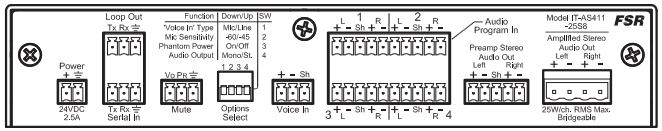
DIMENSIONS

All models have the same front panel appearance.
The depth on all models is 6”. Allow clearance for connectors and cables.









REGULATORY COMPLIANCE

The Power Adapter has been tested for compliance with: UL, CSA and CE.

WARRANTY POLICY

This product is warranted against failures due to defective parts or faulty workmanship for a period of three years after delivery to the original owner. During this period, FSR will make any necessary repairs or replace the unit without charge for parts or labor. Shipping charges to the factory or repair station must be prepaid by the owner, return-shipping charges, via UPS / FedEx ground, will be paid by FSR.

This warranty applies only to the original owner and is not transferable. In addition, it does not apply to repairs done by other than the FSR factory or Authorized Repair Stations.

This warranty shall be cancelable by FSR at its sole discretion if the unit has been subjected to physical abuse or has been modified in any way without written authorization from FSR. FSR’s liability under this warranty is limited to repair or replacement of the defective unit.

FSR will not be responsible for incidental or consequential damages resulting from the use or misuse of its products. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty claims should be accompanied by a copy of the original purchase invoice showing the purchase date (if a Warranty Registration Card was mailed in at the time of purchase, this is not necessary). Before returning any equipment for repair, please read the important information on service below.

SERVICE

Before returning any equipment for repair, please be sure that it is adequately packed and cushioned against damage in shipment, and that it is insured. We suggest that you save the original packaging and use it to ship the product for servicing. Also, please enclose a note giving your name, address, phone number and a description of the problem.

NOTE: All equipment being returned for repair must have a Return Authorization (RMA) Number. To get a RMA Number, please call:

FSR Service Department (973-785-4347).

Please display your RMA Number prominently on the front of all packages.

Contact Information:
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