

SONIFEX

Manufacturers of Audio & Video
Products For Radio & TV Broadcasters

Pro Audio Streamers October 2011



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Pro Audio Streamers

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IP Streamers

The Pro Audio Streamers are a range of three IP to audio and audio to IP streamers which have professional analogue and digital inputs and outputs. They allow audio to be streamed around a building, wan or lan using IP audio and CAT5 cabling infrastructure. Typical applications include:

- As a backup STL (studio to transmitter link).
- For audio confidence monitoring in remote locations, such as at a radio transmitter site.
- For distribution of audio and music around a building, such as for passing audio to speakers in a conference room.
- As an internet-based IP music distribution system.
- As a tannoy, paging or IP based public address system.
- For in-house audio applications and distribution.
- For streaming internet radio in bars and clubs.
- For radio and music channels in hotel rooms distributed via an IP network.
- For playing audio from a PC, a jukebox application, or from a USB stick.

There are three products in the range providing encoding/decoding and streaming:

The **PS-SEND** converts an audio input to an IP stream.

The **PS-PLAY** reads an IP stream and outputs to balanced and unbalanced audio line levels.

The **PS-AMP** reads an IP stream and outputs audio to stereo speakers.



PS-SENDS Audio to IP Streaming Encoder



PS-PLAYS IP to Audio Streaming Decoder



PS-AMPS IP to Speakers Streaming Decoder

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PS-SEND Audio to IP Streaming Encoder

The PS-SEND is a freestanding audio to IP converter which is also available in a 1U rack-mount as the PS-SENDS.

It receives audio from a number of user selectable external stereo sources including balanced and unbalanced analogue audio, AES/EBU, S/PDIF & Toslink digital audio. Once an audio source is selected, the unit encodes the audio in real time and sends it to the network as an encoded stream. The audio stream can be distributed over an IP-based network to one or more PS-PLAY or PS-AMP units or other proprietary servers such as those for Icecast or Shoutcast.

All the configuration settings for the unit are accessed via a local web-server built into it. The type of encoding and the transport mechanism are defined by selecting the connection from a pre-defined list. The PS-SEND encodes an audio source into an MP3 (from analogue or digital inputs), G.711 or PCM (from analogue inputs only) audio stream using HTTP, RTP, raw UDP or raw TCP protocols, including multicast support and the following encoder types are available: Mpeg1 & 2 Layer3, PM3 VBR (variable bit-

rate), PCM linear and A-law, U-law, with 8kHz-48kHz sample rates. The unit can configure its own IP address using DHCP/BOOTP, IPzator or AutoIP. A readout of the set IP address can be heard on every reset using SONICIP technology, if selected. Remote level monitoring is also possible using SNMP traps.

Two red and green front panel LEDs indicate what state the unit is currently in, be it normal operational mode or bootstrap mode, and also indicates the current network connection status. A blue LED denotes power to the unit. The input being routed to the IP stream can be monitored on the front panel 1/4" (6.35mm) stereo jack socket in combination with a headphone volume knob.

The rear panel has 2 x RJ45 connectors, one for the 10/100Mbit Ethernet interface and one for GPI connections. The PS-SEND has 6 x GPIs which can be used to trigger the sending of the audio stream and which can also be used to trigger remote events using an output relay on the PS-PLAY and PS-AMP. There is a 9 way D-type RS232 serial connection for control of the unit by automation systems and firmware updates. The unit can be remote controlled via serial connection, TCP or UDP.

Power to the unit is via a universal supply 85V - 264V fused IEC mains socket.



PS-SEND Audio to IP Streaming Encoder

Technical Specification for PS-SEND

Analogue Inputs:	2 x XLR 3 pin (balanced)(L&R) 2 x RCA phono (unbalanced)(L&R)
Analogue Max Input Level:	18dBu XLR balanced 8dBu RCA phono unbalanced
Input Impedance:	20kΩ bridging (analogue balanced)
Input Impedance:	20kΩ (analogue unbalanced)
Analogue Input SNR:	74dB
Input THD:	0.02% Relative
Interchannel Isolation (Cross Talk):	80dB (Ref FSD)
Digital Inputs:	1 x AES/EBU XLR 3 pin female 1 x S/PDIF RCA phono 1 x Toslink optical input
Analogue Outputs:	1 x 6.35mm (1/4") jack headphone socket
Headphones Output:	Drives 150mW into 32Ω to 600Ω stereo headphones
GPIs (General Purpose Inputs):	6 x GPIs, selectable via webpage control on RJ45 socket
Serial Port:	1 x 9 way D-type socket, used to send control commands and update firmware
Ethernet Port:	1 x RJ45 socket. Remote control commands can be sent via TCP or UDP as well as firmware updates
Mains Input:	Filtered IEC, 85 - 264VAC, 47 - 63 Hz, 10W, max
Fuse Rating:	Anti-surge fuse 1A 20 x 5mm

Audio Codec Specifications PS-SEND

G.711 (U Law/A Law 8kHz to 48kHz sampling rate)
WAV (IMA ADPCM+ 16bit PCM uncompressed: 8kHz to 48kHz)
MP3 Layer 1 (32, 44.1 and 48 kHz, CBR +VBR +ABR)
MP3 Layer 2 (16, 22.05 and 24 kHz, CBR +VBR +ABR)

General Features

Supported network transport protocols
RTP - UDP
HTTP - TCP
SIP
Raw UDP
Raw TCP
Can also act as Icecast/Shoutcast source
SNMP - traps for remote management
DHCP, BOOTP, IPzator or AUTOIP - Dynamic IP address resolution
SonicIP IP Address readout

Physical Specification

PS-SEND	Dimensions	22cm (W) x 13.7cm (D) x 4.3cm (H)
	(Raw):	8.67" (W) x 5.39" (D) x 1.7" (H)
	Dimensions (Boxed):	34cm (W) x 27cm (D) x 6cm (H)
	(Boxed):	13.4" (W) x 10.6" (D) x 2.4" (H)
	Weight:	Nett: 0.84kg Gross: 1.64kg
		Nett: 1.85lbs Gross: 3.6lbs
PS-SENDS	Dimensions	48.3cm (W) x 13.7cm (D) x 4.3cm (H)
	(Raw):	19" (W) x 5.39" (D) x 1.7" (H)
	Dimensions (Boxed):	58.8cm (W) x 27cm (D) x 6.8cm (H)
	(Boxed):	23" (W) x 10.6" (D) x 2.7" (H)
	Weight:	Nett: 1.34kg Gross: 2.14kg
		Nett: 2.95lbs Gross: 4.7lbs

Pro Audio Streamers PS-PLAY IP to Audio Streaming Decoder

The PS-PLAY is a freestanding IP to audio converter which is also available in a 1U rack-mount as the PS-PLAYS.

It takes an IP audio feed and converts it to one of a number of different stereo outputs: balanced and unbalanced analogue audio, AES/EBU, S/PDIF & Toslink digital audio outputs.

As for the PS-SEND, all the configuration settings for the unit are accessed via a local web-server built into it. The unit can decode one of a number of audio streams, such as those generated by the PS-SEND (MP3, G.711 and PCM) and including AAC+V2, Ogg Vorbis and WMA audio files from external USB as well as from sources such as Shoutcast, Icecast (Internet radio), VLC and from RTP servers. The unit can receive streams from HTTP (TCP/IP) and RTP (UDP) protocols, as well as raw TCP and UDP packets. The unit can also configure its own IP address using DHCP/BOOTP, IPzator or AutoIP. A readout of the set IP address can be heard on every reset using SONICIP technology, if selected.

Two red and green front panel LEDs indicate what state the unit is currently in, be it normal operational mode or bootstrap mode, and also indicates the current network connection status. A blue LED



PS-PLAY IP to Audio Streaming Decoder

denotes power to the unit. The audio output can be monitored on the front panel 1/4" (6.35mm) stereo jack socket in combination with a headphone volume knob. The analogue audio outputs can be switched to be either a fixed level output or to be controlled by the front panel volume knob. The volume can also be adjusted, as well as many other features, using an infra-red remote control (available separately).

The PS-PLAY can be configured with up to 3 sources. The sources are prioritized in number order. If one has failed, the next one will attempt to play. If all fail, an external USB drive will be used as a back-up source. The external USB plugs into the USB socket on the front of the unit. This enables the PS-PLAY to act as a USB audio player,

playing any of the audio formats previously mentioned.

The rear panel has 2 x RJ45 connectors, one for the 10/100Mbit Ethernet interface and one for GPIO connections. The PS-PLAY has 2 output relay contacts which can triggered remotely over IP from a connected PS-SEND unit. There is a 9 way D-type RS232 serial connection for control of the unit by automation systems and for firmware updates. The unit can be remote controlled via serial connection, TCP or UDP and remote management of the unit is also possible using SNMP traps.

Power to the unit is via a universal supply 85V - 264V fused IEC mains socket.

Technical Specification for PS-PLAY		
Analogue Outputs:	2 x XLR 3 pin (balanced)(L&R) 2 x RCA phono (unbalanced)(L&R) 1 x 1/4 inch (6.35mm) stereo jack headphone socket	GPOs (General Purpose Outputs): 2 x switchable relay contacts (simultaneously switched) controlled from PS-SEND
Analogue Max Output Level:	18dBu XLR balanced 8dBu RCA phono unbalanced	Serial Port: 1 x 9 way D-type socket, used to send control commands and update firmware
Input Impedance:	<50Ω (analogue balanced)	Ethernet Port: 1 x RJ45 socket. Remote control commands can be sent via TCP or UDP as well as firmware updates.
Input Impedance:	<75Ω (analogue unbalanced)	IR Remote Receiver: Remote commands can be sent using optional remote control via built in IR sensor
Output SNR:	94dB	Mains Input: Filtered IEC, 85 - 264VAC, 47 - 63 Hz, 10W, max
Output THD:	0.03% Relative	Fuse Rating: Anti-surge fuse 1A 20 x 5mm
Interchannel Isolation (Cross Talk):	80dB (Ref FSD)	Audio Codec Specifications PS-PLAY
Analogue Output Gain Range:	-60dB to 18dB via front panel control knob, or optional IR controller	G.711 (U Law/A Law 8kHz to 48kHz sampling rate)
Digital Outputs:	1 x AES/EBU XLR 3 pin female 1 x S/PDIF RCA phono 1 x Toslink optical input	WAV (IMA ADPCM+ 16bit PCM uncompressed: 8kHz to 48kHz)
Headphones Output:	Drives 150mW into 32Ω to 600Ω stereo headphones	MP3 Layer 1 (32, 44.1 and 48kHz, CBR +VBR +ABR)
USB Port:	1 x USB A socket	MP3 Layer 2 (16, 22.05 and 24kHz, CBR +VBR +ABR)
		AAC+ (HE-AAC v2 Level 3, incl.SBR and PS)
		Ogg Vorbis (floor 1)
		WMA 4.0/4.1/7/8/9 all profiles (5-384kbps)
		General Features
		Supported network transport protocols
		RTP - UDP
		HTTP - TCP
		SIP
		Raw UDP
		Raw TCP
		SNMP - traps for remote management
		DHCP, BOOTP, IPzator or AUTOIP - Dynamic IP address resolution
		SonicIP IP Address readout
		Physical Specification
		Dimensions (Raw): 22cm (W) x 13.7cm (D) x 4.3cm (H) 8.67" (W) x 5.39" (D) x 1.7" (H)
		Dimensions (Boxed): 34cm (W) x 27cm (D) x 6cm (H) 13.4" (W) x 10.6" (D) x 2.4" (H)
		Weight: Nett: 0.84kg Gross: 1.64kg Nett: 1.85lbs Gross: 3.6lbs

Pro Audio Streamers



PS-AMP IP to Speakers Streaming Decoder

The PS-AMP is a freestanding unit which converts an IP audio stream directly to speaker outputs.



PS-AMP IP to Speakers Streaming Decoder

It is also available in a 1U rack-mount as the PS-AMPS. The PS-AMP has the same feature-set as the PS-PLAY except that there are no individual audio outputs other than the speaker terminals. The PS-AMP uses an integrated 2 x 15W D-class amplifier to deliver audio directly to a pair of connected speakers.

For further information on features please refer to the PS-PLAY.

Technical Specification for PS-AMP

Analogue Outputs:	2 x speaker connectors (2 each black and red terminals) 1 x ¼" (6.35mm) stereo jack headphone socket
Headphones Output:	Drives 150mW into 32Ω to 600Ω stereo headphones
Headphone Level Range:	-60dB – 18dB via front panel control knob or optional IR controller
USB Port:	1 x USB A socket
GPOs (General Purpose Outputs):	2 x switchable relay contacts (simultaneously switched) controlled from PS-SEND
Serial Port:	1 x 9 way D-type socket, used to send control commands and update firmware
Ethernet Port:	1 x RJ45 socket. Remote control commands can be sent via TCP or UDP as well as firmware updates.
IR Remote Receiver:	Remote commands can be sent using optional remote control via built in IR sensor
Speaker Power:	15W per channel into 8Ω @ 10% THD+N
Mains Input:	Filtered IEC, 85 - 264VAC, 47 - 63 Hz, 60W max
Fuse Rating:	Anti-surge fuse 1A 20 x 5mm

Audio Codec Specifications PS-AMP

G.711 (U Law/A Law 8kHz to 48kHz sampling rate)
WAV (IMA ADPCM+ 16bit PCM uncompressed: 8kHz to 48kHz)
MP3 Layer 1 (32, 44.1 and 48kHz, CBR +VBR +ABR)
MP3 Layer 2 (16, 22.05 and 24kHz, CBR +VBR +ABR)
AAC+ (HE-AAC v2 Level 3, incl.SBR and PS)
Ogg Vorbis (floor 1)
WMA 4.0/4.1/7/8/9 all profiles (5-384kbps)

General Features

Supported network transport protocols
RTP - UDP
HTTP - TCP
SIP
Raw UDP
Raw TCP
SNMP - traps for remote management
DHCP, BOOTP, IPZator or AUTOIP - Dynamic IP address resolution
SonicIP IP Address readout

Physical Specification

Dimensions (Raw):	22cm (W) x 13.7cm (D) x 4.3cm (H)
	8.67" (W) x 5.39" (D) x 1.7" (H)
Dimensions (Boxed):	34cm (W) x 27cm (D) x 6cm (H)
	13.4" (W) x 10.6" (D) x 2.4" (H)
Weight:	Nett: 0.84kg Gross: 1.64kg
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