



The SOUND4 IMPACT

- Dual Power supply
- 2 Processing path: FM & HD
- Inputs: 2 AES/EBU 32 to 192 kHz, 2 analog, 2 AES-67/Livewire, 2 IP Codec (SOUND4 IP CONNECT), 2 SUB (insert for RDS/RBDS...)
- Outputs: 2 AES/EBU 32 to 192 kHz, 2 analog, 2 AES-67/Livewire, 2 IP Codec (SOUND4 IP CONNECT), 2 MPX
- Digital AES/EBU and wordclock synchronization inputs.
- 3 independent Ethernet ports: Admin, AES-67, IP-CONNECT
- GPIO: 8 inputs, 8 outputs, advanced management with scripts
- GPS Sync for System time and AoIP Sync
- Micro SD: High capacity management, SDXC compatible standard (up to 2TB), for music storage and more
- Two USB ports: front and rear (for preset & upgrade loading and other functionalities)
- Headphone output on front panel with the possibility to listen each Input or Output
- Full Routing management: Patch points with Insert and Mix on all stages, routing of signals to any Inputs and Outputs
- Automatic failover input switching with crossfade
- Diversity Delay: up to 20 seconds
- Relay switch for automatic by-pass
- Fully controllable from front Panel
- GUI remote control compatible 32 & 64 bits - Windows 7, Windows 8 & 8.1, Windows 10, 2008 R2, 2012 and Linux (Debian)



- HTML5 GUI: Inputs and outputs setup, preset change, upgrades...
- Start-up time of SOUND4 IMPACT: 2 seconds to be on air (Analog Input or AES/EBU input)
- Total DSPs computing power for audio Processing: 16,2 Giga Flops (Sharc 40 bits with floating point + other DSPs)
- Total ARMs computing power for product management and extra functions: 4 GMips

User-Friendly Control Interface

- Sound setting from one single screen - you no longer need to open and close windows to go from one function to another
- Two modes - Basic and Advanced. Basic mode provides simplicity and rapidity; Advanced mode allows you to explore all the processor functionalities. There are also ultra-rapid VU meters for true control over modulation
- Advanced meterings with FFT and MPX Power
- Unlimited “Undo/Redo” versioning function for presets with possibility of recall
- Innovative “compare to reference” function
- Log comment feature follow each preset
- A readable and interactive path diagram
- A remote connection manager to control several processors
- Works with the following operating systems - WXP SP3, W7 32& 64 bits, W8 32 & 64 bits, WS 2008 R2, WS 2012, Linux (Debian)

Processing

- HQ Sound, main sampling process frequency of 192 kHz.
- 2-band AGC
- 4-band EQ + Tone FX and Stereo FX
- Stereo enhancer
- 6-band process with Fidelity and Sound Impact System (S.I.S.)
- 3-band limiter
- 4-band EQ
- Final limiters



- FM path - Bass Clipper + FM Limiter + MPX Limiter
- HD path - Look Ahead limiter for the HD output
- Voice Smoother to avoid distortion problems on certain voices
- BS412 compliant MPX power controller
- Typical processing delay at 1 KHz:
- HD output: 15.2 ms
- FM output: 28.1 ms
- MPX output: 33.8 ms

Other key points:

- 19 kHz embedded pilot to gain close to 1 dB more in loudness!
- Auto-Mono: Switch off pilot 19 KHz on mono sources for better receiving in FM
- Stereo Matrixing for better stability in loudness and sound tone when the receiver switches from mono/stereo/mono
- Adjustable Filters Frequencies in 2-band AGC, 6-band Process and 3-Band Limiter

Extra

- Basic RDS encoder (with scrolling PS)
- Full RDS (UECP-compatible)
- IP Codec - SOUND4 IP CONNET (manage up to 32 Links!)
- Emergency Player: Audio program backup, 2 music libraries, 1 Jingle Library + rules management
- Audio streaming - 3 encoders (MP3, AAC, HE-AAC v1 & v2), compatible with all delivery servers (Icecast, Shoutcast v1 & V2, HLS, Flash, Wowza)
- Link & Share - 100% of all parameters are accessible via the telnet protocol
- Software Panels - the device allows you to create your own panels with unlimited functionality
- Preset Sharing - the ultimate solution to manage an unlimited number of processors. All of them are automatically updated if one of them is modified

Analog Input

Quantity	2 stereo
Level	2 ranges (+12 or +24 dBu - software selectable)
Impedance	10 k Ω
Connectors	1 pair of XLR female balanced, EMI suppressed; 1 pair on a DB25 female (TASCAM pinout) balanced, EMI suppressed

Digital Input

Quantity	2 stereo
Standard	AES3
Sampling Rate	32 to 192kHz, 24 bits
Connectors	1x XLR female balanced , EMI suppressed; 1 on a DB25 female (TASCAM pinout) balanced, EMI suppressed

AES/EBU Input Sync

Quantity/Connector	1 on a DB25, EMI suppressed
Sync Type	Word Clock - 32 to 192 kHz
Video	PAL or NTSC
Level	1 to 6 Volts
Impedance	75 Ω

SCA/RDS Input

Quantity/Connector	2x BNC, EMI suppressed
Type	Adder
Level	Same as MPX output (adder)
Impedance	75 Ω or 10 k Ω , jumper selectable

Analog Output

Quantity	2 stereo balanced (with automatic unbalancing)
Level	2 ranges (+12 or + 24 dBu - software selectable)
Load Impedance	10 k Ω typ. (> 300 Ω)
Connectors	1 pair of XLR male balanced, EMI suppressed; 1 pair on a DB25 female (TASCAM pinout) balanced, EMI suppressed

Digital Output

Quantity	2 stereo
Standard	AES3
Sampling Rate	32 to 192kHz, 24 bits
Connectors	1x XLR male balanced, EMI suppressed; 1 on a DB25 female (TASCAM pinout) balanced, EMI suppressed

Stereo Generator MPX Output

Quantity/Connector	2x independent BNC, EMI suppressed
Signal	MPX or 19kHz pilot
Level	2 ranges (+6 or +18dBu - software selectable)
Load Impedance	75 Ω typ. (> 35 Ω)

Audio Specifications

Processing Delay MPX	30ms
Processing Delay Analog Out (HD)	11ms
Frequency Response MPX	30Hz - 15 kHz +/-0.2dB (de-emphasized)
Frequency Response Analog Out (HD)	30Hz - 20 kHz +/-0.2dB
Signal to Noise	>90 dB
Distortion MPX	<0.018% THD
Distortion Analog	<0.006% THD
Separation	>70 dB

Audio Over IP

Live Protocol (AES67)	Ethernet 100Mbps; Compatible AES67, Ravenna, Livewire; 48kHz, 24 bits, stereo, \geq 12 samples/packet (250 μ s), delay 1ms
Transport protocol (IP)	Ethernet 100Mbps; High quality stereo codec (32 to 200kbps) or linear; 2.5s compensation buffer

Power Supply

Type	Dual Redundant
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Voltage 100 – 260 Volt AC, < 40W

Operating Conditions

Operational between 0 – 50°C

Size And Weight

Dimensions (WxHxD) 485 x 44 x 260mm

Shipping Weight 540 x 115 x 300 mm / 2.700 kg

Power Up Boot

Boot time 3s

Bypass Relay

AES AES in => AES out

Analog Analog in => Analog out

Optional Interfaces

USB 2.0, for upgrades

micro SD card for music files

RS232 DB25 standard, for RDS (shared with GPIO)

GPS input For System time and AoIP Sync. SMA connector (active antenna)

GPIO 8 inputs, 8 outputs (opto-isolated) with 5V supply (DB25 male)

SOUND4 REMOTE CONTROL Software Operating Systems

Linux Debian 32 & 64 bits

Microsoft Windows 32 & 64 bits: Windows 7, Windows 8, Windows 10, Windows Server 2008 R2, Windows Server 2012

PC To Client Communication Interface

TCP/IP Client (Remote) / Server (Impact) architecture via Ethernet 1000Mbps

Link & Share All parameters are accessible via simple Telnet protocol

SNMP Supervision with Trap Feature