MAINTENANCE AND OPERATION INSTRUCTION MANUAL

SOUND4 IMPACT

Advanced 6-Band processing with a 3-Band Limiter and back-up capabilities

SOUND

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Introduction

More than 30 Years of Experience

Delivering the best at all times is not an easy task but the team of SOUND4 makes it seem effortless thanks to over 30 solid years of experience in the field. What we excel at, above everything else, is audio signal processing. Launched back in 2007, SOUND4 began with analog technologies and went on to achieve groundbreaking results in the digital world as well, having an instant impact on the market with a string of innovative products. The launch of a set of FM/HD processing tools was quickly followed by the release of networking audio-over-IP solutions.

2010 was significant in the company's illustrious history as SOUND4's very first multichannel voice processor was introduced on the market and the company integrated the Livewire Audio IP standard, which most of our equipment today is compatible with. This revolutionary product immediately received the acknowledgement of the industry in the form of two prestigious prizes – The 2010 Innovation Trophy in Paris and the Pick Hit Award at the 2012 NAB Show in Las Vegas. Further recognition came in 2012 with the release of our Web Radio product range which received a Cool Stuff Award upon its presentation at NAB 2012.

Today, SOUND4 is a household name in the competitive, fast-developing world of broadcasting technology and enjoys a deserved reputation for proven quality and reliable service.

The SOUND4 – DEVA Partnership

2016 was a landmark year as two of the most respected companies in the industry – SOUND4 and DEVA Broadcast, joined forces, forming a powerhouse team dedicated to delivering broadcasting excellence. Adding to the equation its own expertise and years of experience at the top level, DEVA brings to the table its considerable resources and knowledge of hardware development to ensure unparalleled quality of the finished product.

A Wealth of Engineering Talent

What our merchandise owes its massive appeal to is the creativity of a highly-skilled team of engineers responsible for bringing bright, fresh ideas to life through vast know-how in their respective fields. We pride ourselves on not allowing any compromises with quality and laying great emphasis on fine-tuning each detail, which we believe is the key to the overwhelming success of our products.

What SOUND4 Guarantees

Besides a combination of creativity and technical expertise, SOUND4 also relies heavily on versatility. Products are developed to serve multiple purposes and offer a number of functions for even better performance. The company provides solutions that are cost-effective, reliable, fully upgradable and very compact in terms of design. Another important advantage is heat reduction, as well as the intelligent interconnection with the rest of the chain, especially where music programming is concerned.

Perfect Sound Quality

Perfect clarity of sound is the signature asset of our products and the reason why SOUND4 today stands for unrivalled audio quality. This is a brand that is recognizable all over the world for affordable excellence, dependability and constant innovation.

Reliable Technical Support

As we appreciate the importance of each product's flawless operation, we guarantee dependable technical support by a team of engineers whose job it is to answer all your questions, provide you with detailed information on device features and capabilities, and guide you through using our products to your best advantage. Expert advice is there for you whenever you need it.



Typographic conventions

This manual uses the following typographic conventions:

Style	Used for
NOTE	Important notes and recommendations
Example	Used when example text is cited
"Menu" on page XX.	References
[OK]	Interface Interactive buttons.
Settings	Menu paths are represented as follows: <i>Settings> General> Backup</i>



General Information

SOUND4 IMPACT is sound processing technology at its best. No small detail is overlooked in this product which delivers innovation, multifunctionality and dependability in equal measure to produce the consistently loud and clear sound you need. It has a powerful processing chain which includes 2-band input Automatic Gain Control, based on signal strength and no longer on electrical average values. It automatically detects differences in levels to smooth out variations in sound perception. Its structure ensures perfect stability and enhanced vocals combined with a good bass presence.

The SOUND4 IMPACT introduces an innovative process - mono and stereo parts of the signal are processed separately to obtain perfect consistency in terms of both sound and level. Therefore, in moving reception, when the FM receiver switches from stereo to mono and back to stereo, the sound variations and changes in level are reduced by over 90%. In the SOUND4 IMPACT processing chain, the stereo expander can be used substantially without any limitations.

With the 6-band processor, a single algorithm guarantees the gain in each of the bands in order to complete sound stability. "Coloring" is controlled by the Fidelity parameter, which means that it is possible to have a "purist" and a "colored" sound texture. The 3-band limiter prepares the work of the final limiter and is provided with a very powerful algorithm, simplified to the maximum, so that it is not encumbered with useless parameters.

One of the most significant features of the SOUND4 IMPACT is the 4-band parametric equalizer, which is not there to "build a sound" but rather allows some final little touch-up that may be required before the final limiting section.

What is more, this tool has reliable backup capabilities and a number of options. These include Basic and Full RDS, Streaming Extension, IP TX + RX and Dual IP TX + RX to name but a few. It can also perform Internet radio streaming and has six fully configurable encoders supporting MP3, AAC and HE-AAC v1 and v2.

SOUND4 IMPACT comes in a convenient, compact 1U case and has a dual power supply, which is a standard feature of all SOUND4 In-box products and provides constant, uninterrupted operation of your unit. Combined with an affordable price and the easy-to-use remote control interface, this is the ultimate sound processing tool.



TECHNICAL SPECIFICATIONS

ANALOG INPUT	
Quantity	2 stereo
Level	2 ranges (+12 or +24 dBu - software selectable)
Impedance	10 kΩ
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
Туре	Adder
Level	Same as MPX output (adder)
Impedance	75 Ω or 10 kΩ, jumper selectable
ANALOG OUTPUT	
Quantity	2 stereo balanced (with automatic unbalancing)
Level	2 ranges (+12 or + 24 dBu - software selectable)
Load Impedance	10 kΩ 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 N	APX 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 SPECIFICATION	S
Processing Delay MPX	30ms
Processing Delay Analog	11ms
Out (HD)	
Frequency Response MPX	30Hz - 15 kHz +/-0.2dB (de-emphasized)
Frequency Response	30Hz - 20 kHz +/-0.2dB
Analog Out (HD)	
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, >= 12 samples/packet (250µs), delay 1ms
Transport protocol (IP)	Ethernet 100Mbps;
	High quality stereo codec (32 to 200kbps) or linear;
	2.5s compensation buffer
POWER SUPPLY	
Туре	Dual Redundant
Voltage	100 - 260 Volt AC, < 40 W
OPERATING CONDITIO	
Operational between	$0-50^{\circ}\mathrm{C}$
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 INTERFACE	
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)
	FROL 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 COMMU	
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



Before you start

SAFETY WARNING

- The servicing of electronic equipment should be performed only by qualified personnel;
- Before removing the covers the SOUND4 IMPACT must be switched off and the mains cable unplugged;
- When the equipment is open, the power supply capacitors should be discharged using a suitable resistor;
- Never touch the wires or the electrical circuits;
- Use insulated tools only;
- Never touch the metal semiconductor. They might carry high voltages;
- For removing and installing electronic components, follow the recommendations for handling MOS components

ATTENTION: SOUND4 IMPACT has an internal Lithium battery. Do not try to re-charge this battery! Please contact us for detailed instructions in case the battery should be changed.

OPERATING RECOMMENDATIONS

For the normal operation of SOUND4 IMPACT, we recommend following the instructions listed below.

- Install the unit in places with good air conditioning. The SOUND4 IMPACT is designed to operate within the ambient temperature range of 10 to 50°C. The equipment rack should be ventilated in order for the device to keep its internal temperature below the maximum ambient temperatures;
- We do not recommend installation in rooms with high humidity, dusty places or other aggressive conditions;
- Locate the device away from abnormally high RF fields;
- Use only checked power supply cables. We strongly recommend the usage of shielded cables;
- Connect SOUND4 IMPACT only to reliable power supply sources. In case of unstable power supply, please use Uninterruptible Power Supply (UPS);
- Use the device only with its top cover on to avoid electromagnetic anomalies. Otherwise, this may cause problems with the normal functionality of the unit;
- For the normal remote operation of the unit, connect SOUND4 IMPACT to a good quality Internet connection;
- For the normal operation of SOUND4 IMPACT, check if the network settings past through all the required data traffic.

SOURCE MATERIAL QUALITY

The SOUND4 IMPACT is designed to achieve perfect sound quality, regardless of the source material. Though, it is very important that the source audio to be as clean as possible, as upon processing the poor-quality source material will cause distortion and unpleasant audio defects.



UNPACKING AND INSPECTION

Upon receipt, the equipment should be inspected for possible shipping damages. If such are found or suspected, notify the carrier at once and contact SOUND4 Ltd. The original shipping carton box and packing materials should be kept for possible reuse, in case of return for Warranty repair, for example. Shipping damages as a result of improper packing for return may invalidate the Warranty!

IT IS VERY IMPORTANT that the <u>"Product Registration Card"</u> included in the Manual be completed accurately and returned. This will assure coverage of the terms of the Warranty and it will provide a means of trace in case of lost or stolen equipment. In addition, the user will automatically receive SERVICE OR MODIFICATION INSTRUCTIONS from SOUND4 Ltd.

The SOUND4 IMPACT set includes:

- 1. SOUND4 IMPACT device;
- 2. Power supply cables x2;
- 3. Pouch with documents Declaration of Conformity and Approval Information, Warranty terms and conditions, Product registration card, Waste form.

RADIO FREQUENCY INTERFERENCE

Although we have made provision for SOUND4 IMPACT installation in the immediate proximity of broadcast transmitters, please do practice some care using the unit near abnormally high RF fields.



Mounting

RACK REQUIREMENTS

The SOUND4 IMPACT mounts in a standard 19-inch equipment rack and requires only $1\frac{3}{4}$ inches (1U) of vertical rack space. In order the painted finish around the mounting holes to be protected, the use of plastic washers is recommended.

HEAT DISSIPATION

Having very low electricity consumption, the SOUND4 IMPACT itself generates negligible heat. The unit is intended for operation within an ambient temperature range, extending from freezing to 120°F/50°C. But because adjacent, less efficient equipment may radiate substantial heat, be sure that the equipment rack is adequately ventilated to keep its internal temperature below the specified maximum ambient.

FUSE HOLDER

The fuse holder is placed inside the unit, next to the voltage selector. Apply downward pressure and pull the cap outward to access the 5mm mains fuse. The reverse process will release the cap.



Panel Indicators, Switches and Connectors

FRONT PANEL



PHONES – Stereo 1/4" (6.3 mm) jack output for headphones.

Status indicators – indicates that the following sources are active - Analog, Digital, AES 67. IP connect, Playout, Auto Mono.

LED Meters – The full-time LED meters allow quick and easy monitoring of the metering, making the setup, adjustment and programming easy. **OLED Display** with scales;

Context-Sensitive Soft Buttons

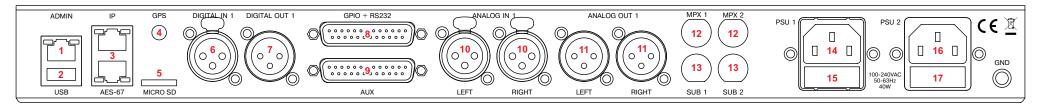
Navigational Buttons

USB Communication Port



REAR PANEL





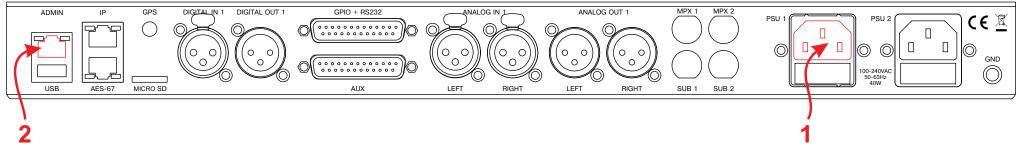
- 1. Ethernet T-BASE10/100 RJ45;
- 2. USB communication port;
- 3. Ethernet T-BASE10/100 RJ45;
- 4. Consumer-standard SMA connector for GPS Antenna Input;
- 5. Micro SD card
- 6. Digital Audio Input (XLR)
- 7. Digital Audio Output (XLR)
- 8. GPIO + RS232
- 9. AUX Auxiliary Audio Inputs and Outputs
- 10. Analog Audio Input 1 Left and Right (XLR)
- 11. Analog Audio Output 1 Left and Right (XLR)
- 12. MPX 1 and MPX 2 (BNC) Outputs
- 13. SUB 1 and SUB 2 (BNC)
- 14. Mains connector 1, 110-240VAC, IEC-320 C14 type;
- 15. Fuse holder;
- 16. Mains connector 2, 110-240VAC, IEC-320 C14 type;
- 17. Fuse holder;



CONNECTING THE SOUND4 IMPACT

For the initial set-up of the device you will only need to connect:

- 1. One of the power cables to PSU 1 socket;
- 2. SOUND4 IMPACT to the TCP/IP network using a direct network cable, connected to the ADMIN port of the device NOT to the IP ports.



3. Connect all the additional cables to the device in order for it to be properly integrated into your existing network.



Operation

The SOUND4 IMPACT can be operated via the front panel menu, Software and WEB Interface. The WEB Interface of the device provides limited options but is of great use for monitoring purposes or when fast switch of the preset should be made, and the user does not have access to the Software. The WEB interface also allows you to update the firmware of your device quick and effortlessly.

Local operation via OLED front panel menu

You can use the front panel knobs and buttons to set operating modes and make adjustments.

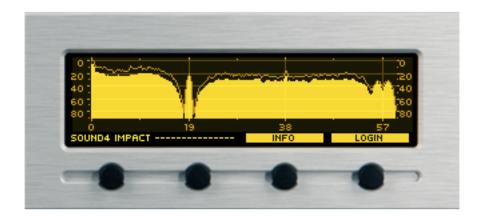
THE BASICS

Upon power-up, the OLED Screen shows the Company Logo and model of the device. After the Initial screen disappears (in a few seconds), it will be replaced by the Main Menu readings. This is the starting point of the navigation process.

Prior to proceeding further in the menu structure, it is important to note the basic functionality - the keyboard (placed on the right of the OLED Screen) consists of [Up], [Down], [Left], [Right] and [OK] buttons. The Main Menu structure has an up-and-down basis, expanded with left-to-right branches.



MENU PAGES



This is how the main window will look like once the device is powered up.

Info

The basic/general information on the device is found here. For example:

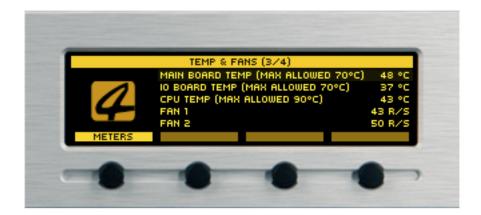


Section General - product name, version, serial number and preset in use.

	IP (2	(4)
HETERS	REMOTE IP RES67 IP IP CONNECT IP	[FIKED] 192.168.4.21 [FIKED] 192.168.5.21 [DHCP] 192.168.4.121

Section IP - contains information as regards the Remote IP, AES67 IP and IP connect IP.





Section Temperature & Fans - contains information on the Main Board Temperature, IO Board Temperature, CPU temperature, Fan 1 and Fan 2.

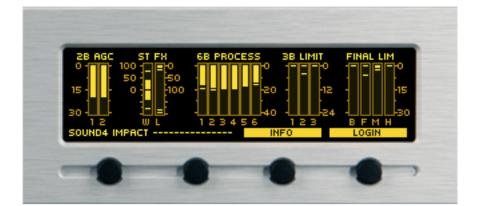


Section Power Supply - contains information as regards the Power Supply 1 & 2 state.



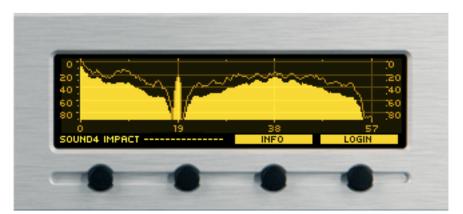
Meters

All the important meters/indicators are available in this section of the menu. When on Main page, the meters can also be switched using the [Up] and [Down] buttons.











Log in

5001	ID4 IMPACT	
USER NAME ADMIN		
PIN CODE		
METERS	CLEAR	LOGIN

The SOUND4 IMPACT requires username and password to be entered in order for the device to be accessed via the front panel. If used for the first time, please note that the SOUND4 IMPACT is not protected with PIN code. To enter the device, just pres [LOGIN].

If you have set a password, enter the digits using the [Up] and [Down] buttons to change the symbols, and [Left] and [Right] to change the position.

Preset

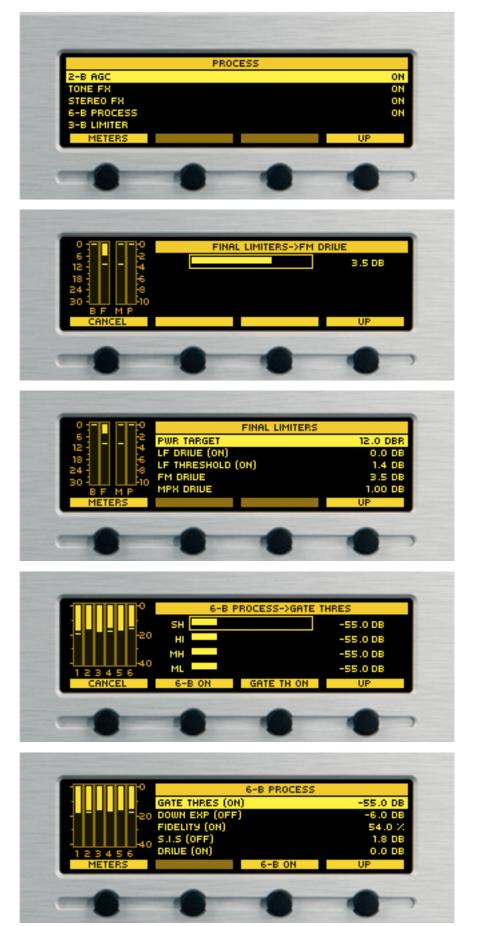
Lists all the available presets.

ONAIR: 12.0 DBR 12.0 DBR - DANO			
12.0 DBR - DAN		00	
12.0 DBR - JA22			
12.0 DBR - JA22 12.0 DBR - NATU			ONAIR
METERS	LOAD	SAUE	UP



Process

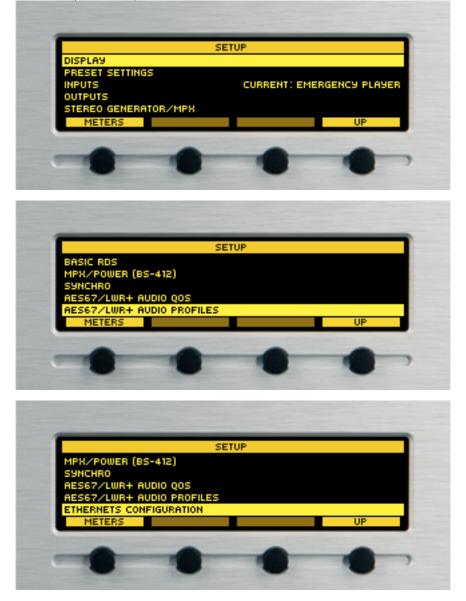
Gathers all the processing parameters, hence allowing changes to the current values to be made.





Setup

The Setup menu is organized into a hierarchical tree menu and all similar parameters are grouped into sections (branches).



The Setup menu contains the following submenus:

- Display
- Preset settings
- Inputs
- Outputs
- Stereo Generator MPX
- Basic RDS
- MPX/Power (BS-412)
- Syncro
- AES67/LWR+Audio QOS
- AES67/LWR+ Audio Profiles
- Ethernets configuration

Each menu allows you to apply the needed settings to the Device. To enter the menu, just press [OK] once the desired menu is illuminated.



Example for similar parameters grouped into sections (branches).



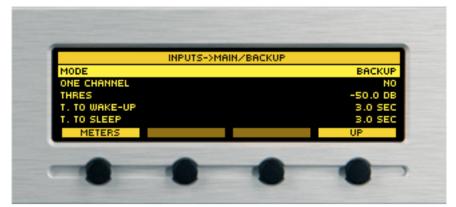
Display



Outputs > Livewire 1

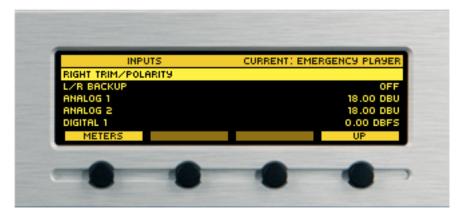
11124	OUTPUT->A	NALOG 1
1-1-E	RANGE	12 DBU
30	FS REF	0.00 DBU
	APPLICATION	HD
66	DE-EMPHASIS	AUTO
L R METERS		UP
-	-	

Output > Analog 1



Inputs > Main/Backup





Inputs > Current

ETHERNETS CON	
ETHERNET: REMOTE	[DHCP] 192.168.4.21
ETHERNET: AES67/LWR+	[UNPLUG]
ETHERNET: IP CONNECT	[DHCP] 192.168.4.121
METERS	UP
	Contraction of the local division of the loc

Ethernets configuration



Ethernet: Remote



More

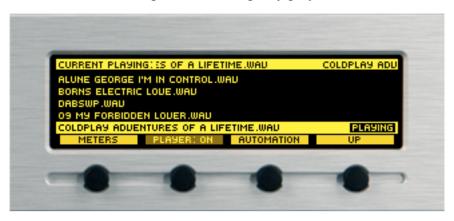
Provides you with quick access to the following parameters:

- Presets
- Process
- IP connect
- Streaming
- Emergency player
- Setup

PRESETS PROCESS IP CONNECT STREAMING			
EMERGENCY PLA SETUP METERS	LOGOUT	INFO	
-		•	•

Emergency player

All the needed information as regards the Emergency player is found here:



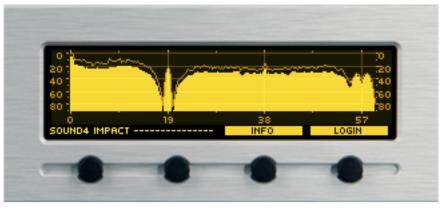
Using the navigational menu you can also make the necessary adjustments of the emergency player.



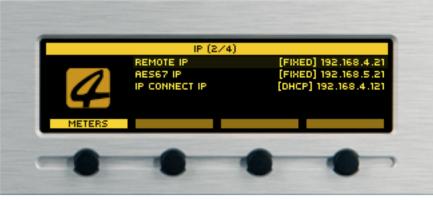
WEB Interface

IP ADDRESS IDENTIFICATION AND WEB INTERFACE ACCESS

Once the device is connected to a local network or to the Internet by the applied LAN cable, through the front panel navigational menu press the soft button labeled [Info] (Picture 1), then using the [Up] and [Down] buttons navigate to IP (2/4) (Picture 2).



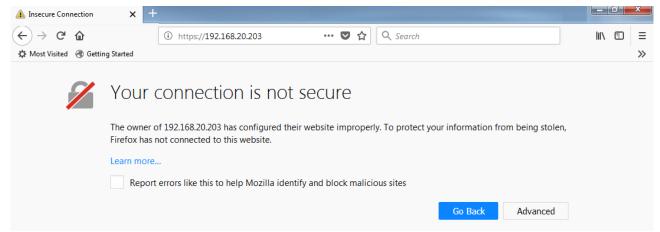
Picture 1



Picture 2

Open a WEB browser of choice and enter the IP address of the device. Please note that https:// must be entered prior to the IP address of the device, otherwise you will not be able to establish a connection. For example (as depicted below) https://192.168.20.203.

Once the IP address is correctly written, press Enter on your keyboard. If the following message appears, please complete the steps listed below:





To open SOUND4 IMPACT's WEB interface you have to add the connection as secure. To do that, follow the steps listed below:

- 1. Press [Advanced];
- 2. Once the below message appears, press on [Add Exception];

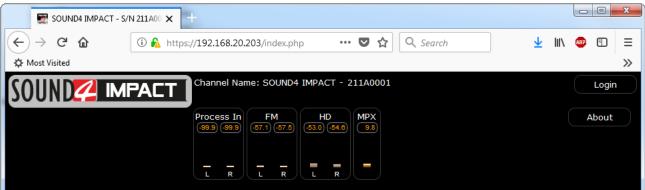
Your connection is not secure
The owner of 192.168.20.203 has configured their website improperly. To protect your information from being stol Firefox has not connected to this website.
Learn more
Report errors like this to help Mozilla identify and block malicious sites
Go Back Advanced
192.168.20.203 uses an invalid security certificate.
The certificate is not trusted because it is self-signed. The certificate is not valid for the name 192.168.20.203. The certificate expired on Friday, December 28, 1984, 2:00 AM. The current time is Tuesday, March 27, 2018, 10:23 AM.
Error code: SEC_ERROR_UNKNOWN_ISSUER
Add Exception

3. An Add Security Exception window will appear. Press [Confirm Security Exception].

	Add Security Exception	
	You are about to override how Firefox identifies this site.	
	Legitimate banks, stores, and other public sites will not ask you to do this.	
	Server	
Your cor	Location: https://192.168.20.203/	cate
rour cor	Certificate Status	
The owner of 192	This site attempts to identify itself with invalid information.	being stoler
Firefox has not co	Warna Cita	being stoler
Learn more	The certificate belongs to a different site, which could mean that someone is trying to impersonate this site.	
Report error	Outdated Information	
	The certificate is not currently valid. It may have been stolen or lost, and could be used by	
	someone to impersonate this site. Unknown Identity	Advanced
	The certificate is not trusted because it hasn't been verified as issued by a trusted authority a secure signature.	using
	Permanently store this exception	
192.168.20	<u>C</u> onfirm Security Exception Car	ncel
The certific	ate is not trusted because it is sen-signed.	
	ate is not valid for the name 192.168.20.203.	
The certific 2018, 10:23	ate expired on Friday, December 28, 1984, 2:00 AM. The current time is Tuesα β AM.	lay, March 27,
Error code	SEC_ERROR_UNKNOWN_ISSUER	
		Add Exception
		Add Exception



4. Once the process is completed, SOUND4 IMPACT's WEB interface will be opened.



- 5. To Login, press [Login] and enter the user credentials requested. The default values are:
- User Name *admin*;
- Password *admin*.
- 6. This will open the Main application window.

<u>Sound</u>

MAIN APPLICATION WINDOW

JUND		OnAir Preset:	12.0 dBr - AC		-	mport Preset								About	Setup	Disconne
			- Process In		areo FX	68 Process		imiter	Final Limiter	FM		D MPX				
Inputs Routing			LR	H L DA	н на н	MH ML	LO SL H	<u>и с</u>	BASS FM MPX P	NR L	RL					
Analog 1	Analog 2	Digital 1	Digit	tal 3	LIVEWIRE		LIVEWIRE 2		IP Connect 1		IP Connect	• >	Emore	ency Player		
Main Source		- 1st Backup		•								•		rency mayer		
Inputs Levels Full-sca	cale Reference															
Analog 1		Analog 2		Digital 1			Digital 2			LIVEWIR	1E 1			LIVEWIRE 2		
-96.9	LR	-50 9 -90 9	L S			L	49.9		LR	(99.9) (99.9)			LR	(49.9) (49.9)		
						- 0.00			0.00				12.00			- 0.
IP Connect 1		IP Connect 2		EPlayer												
-40.9	L	-00-0		-52 mm		 										
-35.9 -49.9	R 0.00	-93.9 -93.9 				I R										
	R 0.00				0											
Outputs Levels Full-s	R 0.00 scale Reference	Analog 2		Digital 1		- 0.00	Digital 2			LIVEWIR				LIVEWIRE 2		
Outputs Levels Full-s	R 0.00			Digital 1			Digital 2				ег 1 '					
Outputs Levels Full-s	R 0.00 scale Reference	Analog 2				L R										<u></u>
000 Outputs Lavels Full-s Analog 1 (200) (R 0.00 scale Reference L R 0.00	Analog 2 (33) 1 (32) 1 IP Connect 2	, 0.00	d3	•	L R -1.00			R				R			
000 Outputs Levels Full-so Analog 1 (200) (200)	R 0.00 scale Reference	Analog 2	, 0.00	 d3 mm <lid< td=""><td>•</td><td>L R</td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td></td><td></td><td>-0 (-1.4</td></lid<>	•	L R			R				R			-0 (-1.4
003) Outputs Levels Full-s vnalog 1 0030 4030 P Connect 1 0043 I	R 0.00 scale Reference L R 0.00 L	Analog 2 	, 0.00	33 1 0		L R 0.00			R				R			-0 (-1.
995) Outputs Levels Ful-sa Analog 1 925 935 945 9 9 Connect 1 1 413 1	R 0.00 scale Reference R 0.00 L R	Analog 2 		33 1 0		L L R L R L R			R				R			- (· L
005 Outputs Levels Full-se Analog 1 005 005 005 005 005 005 005 005 005 00	R 0.00 scale Reference R 0.00 L R	Analog 2 		33 1 0		L L R L R L R			R				R			-0 -1
005 Outputs Levels Full-se Analog 1 005 005 005 005 005 005 005 005 005 00	n 0.00 scale Reference L n 0.00 L n 1.00 L n 1.00	Analog 2 		33 1 0		L L R L R L R			R				R			
Contputs Levels Fulf-se Contputs Levels Fulf-se Analog 1 2007 200 200	n Cool scale Reference L n Cool L n L n L n Auto Mono	Analog 2 (33) (42) (4		33 1 0	t Level	L R R	RDS Level		×				R			
95 Outputs Levels Ful-se Analog 1 43 P Connect 1 45 1 45 1 MPX Outputs Storeo mode	n Cool scale Reference L n Cool L n L n L n Auto Mono	Analog 2 Image: 1 Image: 2 Image: 3 Image: 3 <t< td=""><td></td><td>bigital 1 bigital 1</td><td>·</td><td>L L R L R L R</td><td></td><td></td><td>R</td><td></td><td></td><td></td><td>R</td><td></td><td></td><td></td></t<>		bigital 1 bigital 1	·	L L R L R L R			R				R			

Contains all the basic settings and mandatory information as regards the work of the device. From here you can set:

- Input Routing

					L Est Lin	О н н мн	ML LO	<u> </u>	ML	BASS FM MPX PM	RUL				
 Inputs Routing 															
Analog 1	Analog 2		Digital 1	Digital 2		LIVEWIRE 1		LIVEWIRE 2		IP Connect 1		IP Connect 2	Emergenc	cy Player	
Main Source			 1st Backup 												
	Main Source														
 Inputs Levels Full-scal 															
	2nd Backup														
Analog 1	3rd Backup	20	g 2		Digital 1			Digital 2			LIVEW			LIVEWIRE 2	
Analog 1					-93.9			-99.9			-99.9			-99.9	

Allows source priority of the Analog and Digital Inputs, Liwevire, IP Connect and Emergency player to be set.

- Input Levels Full-Scale reference

Inguta Levels Full-scale Reference												
Analog 1 (303) (305) R (18.00)	Analog 2	Digital 1 	Digital 2 	LIVEWIRE 1 (393) (393) R (12.00)	LIVEWIRE 2 (0) (0) (0) (0) (0) (0) (0) (0)							
IP Connect 1	IP Connect 2 	EPlayer										

Level settings to the Left and Right Audio Channels of the Analog and Digital Inputs, Liwevire, IP Connect and Emergency player (EPlayer) are applied trough this menu.



- Outputs Levels Full-Scale reference



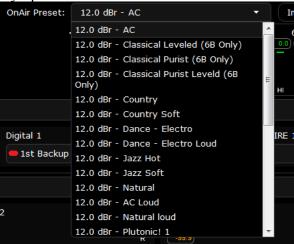
Level settings to the Left and Right Audio Channels of the Analog and Digital Outputs, Liwevire, IP Connect and Stream are applied trough this menu.

- MPX Outputs			
Stereo mode Auto Mone	•		
TX1 75kHz Ref	TX2 75kHz Ref	19kHz Pilot Level	RDS Level
	.72 2.40	(<u>7.5</u>)	(<u>3.0</u>)

You can turn [On] or [Off] the Stereo mode and Auto Mono. This section also allows you to ser rge TX1 and TX2 Ref levels, as well as the 19 kHz Pilot and RDS levels.

The [Load preset] button allows you to upload a new preset.

OnAir preset menu contains information as regards the preset in use. With a click on the button a list with all available presets will be opened. To load a new preset just press on the one desired, and it will be automatically uploaded.





Pressing [About] will open a window containing all the needed information as regards the device's current status:

- Impact firmware version;
- Serial number;
- Main Board Temperature;
- IO Board Temperature;
- CPU Temperature;
- Fan speed 1;
- Fan speed 2;
- Power Supply 1 status;
- Power Supply 2 status.

SOUND	IMPACT
IMPACT:	1.29
IMPACT Serial:	211A0001
Main Board Temp (Max Allowed 70°C):	50
IO Board Temp (Max Allowed 70°C):	41
CPU Temp (Max Allowed 90°C):	42
Fan 1 (r/s):	42
Fan 2 (r/s):	44
Power Supply 1:	Running
Power Supply 2:	Failure Or Unplugged



SETUP

Pressing the [Setup] button will open the basic set-up menu. Hence allowing some primary settings to be applied to the device. For detailed set-up, we recommend you to use the dedicated software.

Tools

▼ Tools	
Link&Share: Access Network Diagnostic: Access	
▶ Maintenance	
Licenses / System	

Link & Share

This tool is designed to allow remote control and monitoring of the devices across the network, using simple text commands via Telnet. The list of commands is available by clicking on [Access], then downloading the files to a directory of choice.

The file contains all commands, necessary syntax and parameters applicable to this device and its current version. Using Telnet access by port 3002, it is possible to type commands directly and see the values or change the parameters necessary, or it is possible to use various automation or script APIs to execute these commands to fully integrate SOUND4 products into your facility control and monitoring network.

Network diagnostics

Will open a window allowing the following diagnostics to be made: - PING, DNS, TRACEROUTE.

▼ PING		
Host:		Run Test
▶ DNS		
► TRAC	CEROUTE	



Maintenance

SETUP		×
▶ Tools		
- Maintenance		
Logs:	Logs .tgz Logs .zip Direct Access	
Remote Assistance:	off -	
Reboot system:	Reboot	
Restart Server:	Restart	
Restart Stream:	Restart	
→ Licenses / System		

Allows you to download the Logs in .tgz and .zip files, as well as to access directly the *Index of /log* by pressing the [Direct Access] button. This is how the index will look like:

SOUND4 IMPACT - S/N	1211A00 × Inde	ex of /log	×	+	
\leftrightarrow \rightarrow C \textcircled{a}	🛈 🔒 https://1	.92.168.20.203/log	g/	🛡	🗘 🔍 Sea
A Most Visited					
Index of /log					
 <u>Parent Directory</u> <u>apache2/</u> <u>audit/</u> <u>crond.log</u> <u>log/</u> <u>messages</u> <u>messages.0</u> <u>messages.1</u> <u>messages.2.gz</u> <u>messages.3.gz</u> <u>messages.4.gz</u> <u>messages.6.gz</u> <u>messages.7.gz</u> <u>messages.7.gz</u> <u>mpd.log</u> 					
 <u>pppoe-server-log</u> <u>sa/</u> sdcard.log 					
• <u>sound4/</u> • test system.log					
• <u>upgrade.log</u> • usb manage.log					
• <u>usb_manage.log</u> • <u>work/</u>					

From here you can also enable the Remote assistance option, Reboot the System, Restart the Server and Restart the Stream.



Licenses/System

SETUP	×
▶ Tools	
• Maintenance	
- Licenses / System	
Licenses:	Licenses
Services:	Services
Upgrade system:	Upgrade

This section of the Setup menu allows you to:

Licenses

- review the currently used licenses and if needed update them by pressing the [Load license] button. Please note that the files should be unzipped when [Load License] option is used;

LICENSES Load Licence		×	
License	Validity	Time Left	
Demo License - Option AES67	2018-03-31	4 days 12 hours	
Demo License - Option Basic RDS	2018-03-31	4 days 12 hours	
Demo License - Option Commercial Audio Player	2018-03-31	4 days 12 hours	
Demo License - Option Emergency Audio Player	2018-03-31	4 days 12 hours	
Demo License - Option Full RDS/UECP	2018-03-31	4 days 12 hours	
Demo License - Option IP Connect RX1	2018-03-31	4 days 12 hours	
Demo License - Option IP Connect RX2	2018-03-31	4 days 12 hours	
Demo License - Option IP Connect Rx to Tx Pass- thru	2018-03-31	4 days 12 hours	
Demo License - Option IP Connect TX1	2018-03-31	4 days 12 hours	
Demo License - Option IP Connect TX2	2018-03-31	4 days 12 hours	
Demo License - Option Livewire+	2018-03-31	4 days 12 hours	
Demo License - Option Streaming Extension	2018-03-31	4 days 12 hours	
Demo License - SOUND4 FIRST	2018-03-31	4 days 12 hours	
Demo License - SOUND4 IMPACT	2018-03-31	4 days 12 hours	
Demo License - SOUND4 PULSE	2018-03-31	4 days 12 hours	
Demo License - URLPLAY	2018-03-31	4 days 12 hours	
IMPACT Serial: 211A0001			



Services

- allows you to turn ON or Off the Stream and Full RDS services;

ГИР					×
SERVICES				×	
SOUND4 Stream:	On	•			
SOUND4 Full RDS:	Off	•			
-r-s	s,	Ok	Cano	cel	
	SOUND4 Stream:	SOUND4 Stream: On SOUND4 Full RDS: Off	SOUND4 Stream: On SOUND4 Full RDS: Off Ok	SERVICES SOUND4 Stream: On • SOUND4 Full RDS: Off • Ok Can	SERVICES SOUND4 Stream: On SOUND4 Full RDS: Off Ok Cancel

Upgrade

- allows you to upgrade the system to the latest version available. Please note that the files should be unzipped when upgrading the device;



Software

UNIVERSAL INSTALLER

The Universal Products Installer is the complete installation kit for all SOUND4 Products. The program is provided free of charge and can be downloaded from <u>www.sound4.com/downloads</u>. Installation packages for MS Windows and Linux Ubuntu OS are available.

Windows users

Upon entering the section, click on and download Universal All Products Installer. Once the process is completed install the .exe file. SOUND4's products are compatible with the Microsoft Windows Operating Systems listed below:

- Windows 7 32 & 64 bits
- Windows 8 32 & 64 bits
- Windows 10 32 & 64 bits
- Windows Server 2008 R2
- Windows Server 2012

IMPORTANT NOTE: Due to Microsoft security changes, your operating system must be upto-date, if not SOUND4 Driver will be locked by Microsoft and you will be not able to run the SOUND4 Remote Control Software.

Linux Ubuntu OS

SOUND4 proposes you to install the software package under your own Ubuntu. Compatibility with Ubuntu distributions:

- Lucid Lynx 10.04 LTS
- Precise Pangolin 12.04 LTS
- Trusty Tahr 14.04 LTS
- Xenial Xerus 16.04 LTS

Installation For a PC hosting SOUND4 card and running compatible Ubuntu version:

- 1. Click on the following link to add SOUND4 repository <u>www.sound4.biz/repository/ubuntu/sound4-repository.deb</u>
- 2. Then install the driver with following link <u>apt://sound4exp1?refresh=yes</u>
- 3. Finally, install the SOUND4 server with following link <u>apt://sound4server</u>

If you also want to install:

- the SOUND4 Remote Control, please use the following link apt://sound4remote
- the SOUND4 Stream, please follow the link apt://sound4stream

If you prefer to manage package installation by yourself, please follow the instructions below: 1. Add the following source to your Ubuntu repository list (example for lucid) -

- deb http://www.sound4.biz/repository/ubuntu lucid non-free
- 2. Then get the SOUND4 GPG signature key -
- wget -q http://www.sound4.biz/repository/sound4.gpg -O- | sudo apt-key add -
- 3. Install required packages -

sudo apt-get update && sudo apt-get install sound4exp1 sound4server sound4remote sound4stream

- 4. Add the user to the audio group (needed for Alarm Stacker GUI) sudo adduser \$USER audio
- 5. Log off and on to make the settings effective.

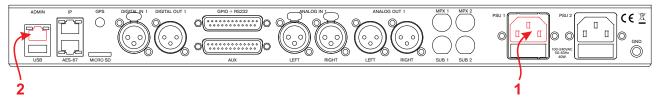


CONNECTION

As explained, for the initial set-up of the device you will only need to connect:

- 1 of the power cables to PSU 1 socket;

- Connect SOUND4 IMPACT to the TCP/IP network using a direct network cable, connected to the **ADMIN port** of the device **NOT to the IP ports**.





SOFTWARE

Double click on the software will open the main control window. The Remote control software can maintain several devices at once.

SOUND REMOT	re control		X
Launch Scan	New Edit D	elete Shortcut View Icor	Sort More
Remote Connection List (Sorted By Co	onnection Name):		
Search : All	D X in Conn	ection Name	About
Remote Connection Info:			
Product :		IP :	
Connection Name :		Port :	
Radio Name :		User Name :	
City :		Last Connection :	

There are two options of adding a new device:

Scan interactive button.

- 1. Press [Scan];
- 2. Select the depicted IP address, and run [Scan];

Networ	ks			X
Network	Interface:			
Selected			Subnet Mo	ask
~	127.0.0.1		255.0.0.0	
<u> </u>	192.168.20.55		255.255.25	5.0
Deat				
Port	3001			
Refresh	Interface	Add Custor	n	Run Scan

3. Wait until the process is completed;





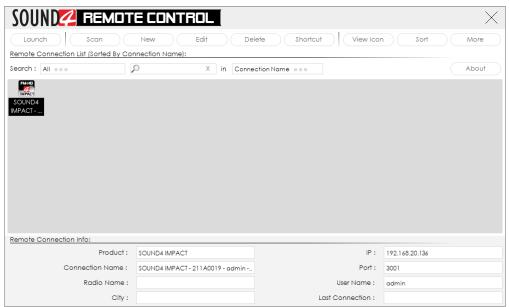
4. Upon completion of the scan, the following window will appear:

Add Custom Network	\times
Product Found:	
Selected Product	
SOUND4 IMPACT - 211A0019 - admin - SN211A0019	
	ncel

5. To add the device to the list, select the connection and press [OK];

Add Custom Network	\times
Product Found: Selected Product Soundation Soundation Soundation	
Ok Ca	ncel

6. The device will be added automatically. Double click on the icon will open the device's interface.





Add Device manually

- 1. Press the [New] button.
- 2. A new screen requiring the following information will appear:

New	X
Connection Name	Enter Connection Name
Radio Name	Enter Radio Name
City	Enter City
Num / IP	localhost
Port	3001
User Name	Enter Name
Password	Enter Password
	Ok Cancel

3. If you are not aware of SOUND4's IP address, it can be seen via the front panel. When the Main screen is on, press the soft button labeled [INFO]. Then using the [Up] and [Down] buttons navigate to IP (2/4) where the IP address of the device will be depicted. **NOTE:** The numbers included in the IP Address must be written without leading zeros. For

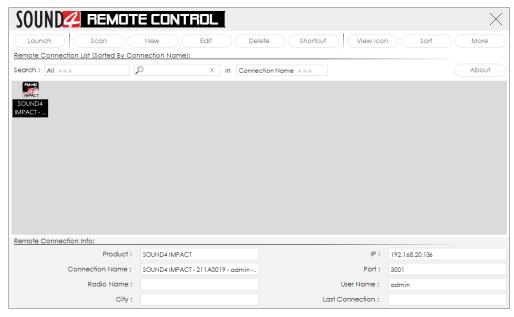
example: 192.168.020.136 must be written as 192.168.20.136

- 4. Enter the required information. If not changed by the user, use the default value of the Port (3001). The username and password are as follows:
 - User name admin;
 - Password pass.

New	X
Connection Name	SOUND4 IMPACT
Radio Name	POWER FM
City	Bourgas
Num / IP	192.168.20.136
Port	3001
User Name	admin
Password	*****
	Ok Cancel



5. Press [OK]. A new device will be added. Double click on the newly added icon will open the control interface.



6. A successful log-in the system will open SOUND4 IMPACT's main control window:

UND🚄 IMPA	LCT .	M	sters — Default	Custom 1 Custom 2	Custom 3	Custom 4			8	- 0
Dig In (dBfs)	4. 44. 44. (2. () 8. 010 C	Dur (dBh) (000)						1.	700 Power: -8.1 db Peck of 1e-5.7.5 kHz Time: 1160m33 s	Reset Ref
Ana in [d8fs]	44444	ment PS	12 42 42 4	150			ED.	1		
	Workspace -	I/O Routing & Levels	Main Processing	HD Processing	IP Connect	Streami		rgency Player		
ANALOG 1 + FAULT	Process in (d8fs)		* * * * * * * * *	Channel SOUND4 IMPACT	211A0001			*** Un	Save Save As	New Ab
IP CONN1 → FAUJ EPLAYER → FAUJ			6 6 6 1 6 6 6 6	Preset dBr - Natura				Rec	10 Preset C Compare	Histo Set
8	2-Rond AGC -	Bosic Advanced								
In Att.	H (200 - 48 - 48 - 48 - 12 , 0	Gate Threshold ===	Drive ===	Attock ===		Release	Fidelity			
-15-	L 0000 da da da da d		0 35	0.0 d8	2.0 db/		1.0 d8/s		81.0 %	
	• Tone FX -	Bosic Advanced								
Enh.		Fot EQ ===	Low EQ	Mid EQ		High EQ	Boss FX		Treble FX ===	
Um.			0 05	0.0 d5	0.0 d8		0.0 45		32 0	1,4 00
8 -25	 Stereo FX — 	Bosic Advanced								
Att.	FX (000 + + + + + + + + + + + + + + + + +	Stereo Link ===	Width ===	Limiter ===						
00		(On		24.0 %	10.0					
-24	6-Band Process —	Basic Advanced								
TO HD PROCESS	SH (2000)	Gate Threshold ===	Down Expand	Fidelity ===		Sound Impact System				
0 	SH (200) HI (200)		0 05	-6.0 05	54.0 %	0	1.8 dB			
	HI 2000 00 MH 2000 00 ML 2000 00	Drive ===	Affock ===	Release ===		_				
0=-=0 0=-=0	ML 🞯 🖣		0.63	361 38/5						
Elitar in cita inali in cita. 9 decimiente interneti	LO (222)	Mix \$L (dB) ===	Mix LO (dB) ===	Mix ML (d8) =		Mix MH (dB) ====		(8)	Mix \$H (dB) ===	
EASS FM MPX PWR TX1 + MPX	51. 0000 - 		9 68	0.0 08	0.0 %		0.0 00		0.0 08	0.0 ab
 TX2 → MPX 	3-Band Limiter -	Bosic Advanced								
	H (999)	Drive ===								
	H 9929 00		10 dB							
		Mix L (dB) ===	Mix M (d8) ===	Mix H (dB) =						
Monitor -	44 18 12 18 0		0.08	0.0 08	0.0 08	-				
outed to : Phone Out		Bosic Advanced						_		
		Fot EQ	Low EQ	Mid EQ		High EQ				
IN			0.0	00.05	00.05	_	0.0.08			

SOUND

BASIC SET-UP

If not already done that, connect all the additional cables to the device in order for it to be properly integrated into your existing network.

Inputs and Outputs Set-up

The basic set-up of the inputs and outputs can be easily made via the I/O Routing and Levels section of the Software.

The management section is placed on the left part of the screen and is divided in two parts -Inputs to Patch Point Management (1) and Outputs to Patch Point Management (2). Both sections allow application of the inputs and outputs to be assigned as well as their range and levels.

UUNL	💋 IMPAC	LL _{ers}	Default	Custom 1	Cust	om 2	Custom (3 Cu	stom (B)			\times
Dig In	[dBfs] (999.9 L (999.9 R	Dig Out [dBfs]	97.9] L 97.9] L 97.9] L	0 -10 -20 -30 -40 -50		4			VU+Peo	k le le	000 001 Power: -1 Peak of 1 1002 Time: 2h3	0.0 Reset e-5 Reset 35m24 s	Ref 1e-5
Ana In	[dBfs]	Current PS		-60 -70 -80 -90 0	10.0k	206	30k	40x	50k	le	004 005 -100 -75	- I	751
_ //O	Routing & Levels	Main Proce	ssing	HD Proc	essing	γ	IP Con	nect	γ	Strean	ning	Er	nerger
Process In	[dBfs]	-24 -12 0 R CI	nannel sou	JND4 IMPACT-	211A0001				Save	Save	As N	ew	About
MPX	[kHz] 6.0 H	45 60 75 90	Preset	dBr - Natural					Preset (Comp	are H	isto (Setup
						Main Proc	essing	HD Proces	sing				
puts To Pata	ch Point Management		Failover: Ba	ckup	Direct	Direct	Direct	Direct	Direct	Direct	Direct		
/pe	Application			cess Input	In	In	In	In	In	In	In		
nalog 1	Main			Main									
nalog 2	2nd Backup												
gital 1	1st Backup ····		-	1st Backup									
igital 2		\bigcirc											
VEWIRE 1		(1)											
VEWIRE 2													
Conn 1													
Conn 2													
Player					30	9) 6 F	n e X F	re B X			n f N (F n	it.	NP: nit
utputs To Po	itch Point Managemen	ıt											
pe	Application		Re	plicate		Out	Out	Out	Out	Out	Out	Out	Out.
alog 1	HD Out												
-	HD Out												
gital 1 ••• gital 2 •••	HD Out												
/EWIRE 1		(2)											
VEWIRE 2		\mathbf{E}											
Conn 1													
Conn 2	HD Out												
ream	HD Out												

The set-up process is different for each parameter, but quite simplified and explained in details below:

Inputs Set-up

1. Click on the name of the desired Input;



2. The respective set-up window will appear. Apply the desired settings and press [X]. The changes will be automatically saved.

For the Analog inputs - set Input Range and Input full-scale Reference:

Analog 1 Input level			\times
Input Range		12 dBu	
Input full-scale Reference [dBu]		18.00 dBu	
Meter [dBfs]	-93.4 -5 -60 -5	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	

For the Digital Inputs and the Emergency Player Input level - set Input full-scale Reference:

Digital 2 Input level	×
Input full-scale Reference [dBfs]	0.00 dBfs
Digital Aux In [dBfs] (No signal) 😚 🕴	4 -48 -42 -26 -20 -24 -18 -12 -6 0
Emergency Player Input level	×
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	4 -48 -42 -36 -30 -24 -18 -12 -6 0

For the LIVEWIRE inputs - Enable the input by selecting [ON] with a click, then select LAN mode by clicking on [LIVEWIRE ...], number of channels, From/To Source, Primary Source Name, Local Name, Stream mode, Status and Input full-scale Reference:

LIVEWIRE 1 Input level	×
Enable	Off
LAN Mode	LIVEWIRE = = =
Channel	0 ===
From/To Source	From Source
Primary Source Name	
Name (local)	Chl
Stream Mode	Unknown
Status	Disabled
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	54 - 45 - 42 - 26 - 20 - 24 - 18 - 12 - 5 - 5 - 12 54 - 4842 - 26 - 20 - 24 - 18 - 12 - 5 - 5 - 7

- 3. To assign application of the Input, press on the Process Input label or on ... (if such is not assigned to the input);
- 4. A window with the possible options will appear. Click on the one preferred and the window will disappear, automatically assigning the chosen value.

Inputs To Patch Point Management		Failover: Backup	Direct
Туре	Application	Process Input	In
Analog 1	Main	(3) Main	 Main Source (4)
Analog 2	2nd Backup		1st Backup Source
Digital 1	1st Backup ····	(3) 1st Backup 	2nd Backup Source
Digital 2			3rd Backup Source
LIVEWIRE 1	•••		



Outputs Set-up

- 1. Click on the name of the desired Output;
- 2. The respective set-up window will appear. Apply the desired settings and press [X]. The changes will be automatically saved.

For the Analog Outputs - set Output range, select Application from the drop-down menu, then Auto De-empahis and Output full-scale Reference:

Analog 1 Output level	×
Output Range	12 dBu ===
Application	HD
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBu]	0.00 dBu
Meter [dBu]	

For the Digital Output level - select Application from the drop-down menu, then Auto De-Emphasis, Sampling Frequency, AES In Sync, AES 2 In Sync, Use External Word clock, Ext. Video Sync and Output full-scale Reference:

Digital 1 Output level	×
Application	HD
Auto De-Emphasis	Auto ===
Sampling Frequency	48 kHz
AES In Synch (No signal)	No
AES2 In Synch (No signal)	No
Use External Word clock (No signal)	No
Ext. Video Synch (No signal)	No
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs] (48.0 kHz) [48k]	4 -48 -42 -36 -30 -24 -18 -12 -6 1

For the LIVEWIRE Output level - Enable the output by selecting [ON] with a click, select profile by clicking on [Livewire Live Audio...], number of channels, Name, Label, Status, Configure GPO, select Application from the drop-down menu, then Auto De-Emphasis, and Output full-scale Reference:

LIVEWIRE 1 Output level	×
Enable	Off
Profile	Livewire Live Audio
Channel	0 ===
Name (local)	Ch1 ===
Label (local)	Ch1 ===
Status	Disabled
Cfg GPO	
Application	HD
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs]	-54 -48 -42 -36 -30 -24 -18 -12 -6 0 R



For the IP Connect level and Stream Output level - select Application from the drop-down menu, then Auto De-empahis and Output full-scale Reference:

IP Connect 1 Output level	×
Application	HD = = =
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs]	44 -48 -42 -36 -20 -24 -18 -12 -6 0 R
Stream Output level	×
Application	HD = = =
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs]	44 -48 -42 -26 -20 -24 -18 -12 -6 12 -4 14 -18 -12 -6 14 -14 -14 -14 -14 -14 -14 -14 -14 -14

- 3. To assign Replicate of the Output, press on the Replicate label or on ... (if such is not assigned to the output);
- 4. A window with the possible options will appear. Click on the one preferred and the window will disappear, automatically assigning the value chosen.

Outputs To Po	atch Point Management		
Туре	Application	Replicate	
Analog 1	AGC In replicate Out jkhjkhjk 🚥	(3) AGC In	(4)
Analog 2	HD Out		AGC In
Digital 1	HD Out	(3)	Ana1
Digital 2	HD Out		Ana2
LIVEWIRE 1	HD Out		Dig1 Dig2
LIVEWIRE 2	HD Out		LIVEWIRE 1
IP Conn 1	HD Out		LIVEWIRE 2
IP Conn 2	HD Out		IP Conn 1
Stream	HD Out		v
Stream	HD Out		· ·



Preset selection

To select a preset, press on [Preset] button (1), and list of all presets will appear on the screen.

SOUND IMPAC	Default	Custom 1 Custom	2 Custom 3 Cust	tom i	—	\times
Dig In [dBfs] 692.9 (, L 692.9 (, R	Dig Out [dBfs] -60.1 L -600 -60.1 R	0 -10 -20 -30 -40 -40		le	000 001 Power: -10.0 Reset Reset Peak at 1e-5. cometra 002 Time: 3h06m24 s	ef 1e-5
Ana In [dBfs] 693.9 (, L 693.9 68 94.0 (, R	Current PS	-60 -70 -70 -80 -90 0 10.0k 20	Ne 30k 40k	1e	004 005 	75100
e — I/O Routing & Levels	Main Processing	HD Processing	IP Connect	Stream	ning Eme	rgency
Process In [dBfs]	²²⁴ ⁻¹² ⁰ ^R Channel S	SOUND4 IMPACT - 211 A0001	Undo	Save Save	As New A	bout
MPX [kHz] 6.2	45 60 75 90 Preset	dBr - Natural	Red	Preset 🙄 Comp	are Histo Se	etup

Double click on the desired preset will load it automatically to the device.

Preset				\times
Save Save As New Delete Rename Sec	curity Import	Export		
януари 2018 (26) —		Preset Log:		
👷 😺 dBr - Natural	A B			
4 🖉 dBr - Rock hot	â 🖪			
4 🐺 dBr - Rock	ê 🖴			
4 🐺 dBr - Plutonic! 4	🔒 🖴			
4 🐺 dBr - Plutonic! 3	🔒 🚍			
4 🐺 dBr - Plutonic! 2	ê 🖴			
4 🐺 dBr - Plutonic! 1	ê 🖴			
4 🌆 dBr - Natural Ioud	ê 🖴			
4 🐺 dBr - Jazz Soft	ê 🖴			
4 🐺 dBr - Jazz Hot	ê 🖴			
4 🌠 dBr - Dance - Electro Loud	ê 🖴			
4 🌠 dBr - Dance - Electro	ê 🖴			
4 🌠 dBr - Country Soft	â 🖴			
4 🐺 dBr - Country	â 🖴			
4 藜 🛛 dBr - Classical Purist Leveld (6B Only)	ê 🖴			
4 🌠 dBr - Classical Purist (6B Only)	ê 🚍			
4 🄝 dBr - Classical Leveled (6B Only)	ê 🖴			
4 🐺 dBr - CHR 3				
4 🐺 dBr - CHR 2		•		4
4 🐺 dBr - CHR 1		Preset Details:		Functions:
4 🐺 dBr - BYPASS				
4 🐺 dBr - All Program Loud		Created On	2018-01-18 10:12:18	✓ 2-Band AGC
4 🖉 dBr - All Program		Saved On	2018-01-18 10:12:51	✓ Tone FX
4 🖉 dBr - AC Soft		From Factory	High Power/12.0 dBr - N.,	✓ Stereo FX
4 🖉 dBr - AC Loud		From Facility	High Power/12.0 dbr - N	 Stereo FX
4 🐼 dBr - AC		6 Bands Proc Freq	90-290-1060-3790-8740	✓ 6-Band Process
		3 Bands Lim Freq	60-2030	✓ 3-Band Limiter
		Matricing	Off	✓ EQ
Sort By: Last Saved Last On Air	Name			✓ EQ HD



Operating Guide

)UND🚄 IMPAI	CT		Meters - Dataut C	ustom 1 Custom 2	Custom 3 Cus	stom 4				\otimes	- 0	1 >
Dig In [d8fs]	0. 40 44 42 6 0 C	Out (d8fs)	****	4				VU+Peok	1e-00 1e-00 1e-00 1e-00 Time: 3P	8.1 dðr 1e-5.7.5 kHz 06m24 s	(te	oet Ref Le
Ana in (d8/s)		Current PS	**** *** ***	16.0x 20x	10s	604	804		1e-004 1e-005 1e-005			71
	Workspace -	I/O Routing & Levels	Main Processing	HD Processing	IP Connect	Streamin	9	Emergency P	layer			
ANALOG 1 → FAUU DIGITAL 1 → FAUU IGONN 1 → FAUU	Process In [d8fs] 0000	-61 -68 -68 -62 -69 -68 -69 -69 -67	4444444	hannel SOUND4 IMPACT- 211	A0001				Undo	Save Save As	New	Abo
EPLAYER + FAUL				Preset dBr+ Natural (not	(oved)				Redo	reset C) Compar	e Histo	Setu
	6-Band Process —	Basic Advanced										
In AH,		Gote Threshold ===	Down Expand ===	Fidelity ===		ound impact System						
e de la	SH 000 10,48,44,44,42,0 10,42,42,44,45,0 10,42,42,44,4,5,0		-55.0 00	-6.0 05	54.0 %		1.8 d8					
-10-04	140 122 124 118 18 0	MH	-55.0 00	-60 0	54.0		1,8 d0 1,8 d0					
arar trana	HE 100 -40 -40 -44 -12 - 9	M	-55.0	-6.0 00	54.0 1		1.8 d8					
N Bnh.	40142142142141410	10	-55.0 1	-60 -8	54.0		1.8 -15					
0 80 100 80 0 Lim.	MH (100)	SL	-55.0	-6.0	54.0		1.8 00					
-B -ap- 1 1 1 1 1 1 ap	401421441441416	ALL THE REPORT OF	-55.0 cm	-60 -	54.0 1		1.8 dl					
Att.	ML	Drive	Threshold ===	Attock ===		eleose		6x				
00	ML (100)	SH CONTRACTOR	0.0 08	0.0	361 08/1	e.eose	4.0 c8/r		0.0 -			
HB HI2CH HINHIZ MM HINHI HINHI HINHI	LO 0000 10000000000000000000000000000000	H	0.0 05	0.0	361 08/1		4.0 c8/1	_	0.0			
44	LO (000) -401-441-461-4110	MH	0.0 08	0.0	361 08/1		4.0 dB/n		0.0			
TO HD PROCESS		M	0.0 00	0.0 00	361 08/1		4.0 d8/n		0.0			
EQ 15	SL 0000 -00.000.000.000.000 000	10	0.0 08	0.0 08	361 08/1		4.0 d8/s		0.0			
40 - 0 - 0 - 0 - 0	40 102 104 116 16 10	8	0.0 00	0.0 0	361 00/1		4,0 d8/s		0.9 dl			
nal -1515		All	0.0 cm	0.0	361 08/1		4.0 d8/1		0.1 🕫			
EASS FM MPX PWR	3-Band Limiter —	Basic Advanced										
TX1 → MPX TX2 → MPX	-0, -0, -0, -0, -0, -12, 0	Drive ===										
	H (99.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		0.0 08									
			Mix M (dB) ===	Mix H (dB) ===								
	L (99.9)		0.0 0.0	0.0 05	0.0 05							
	4-Band Param EQ —	Bosic Advanced										- I
Monitor -		Fot EQ	Low EQ	Mid EQ	н	igh EQ						_
Routed to : Phone Out			0.0 08	0.0 0	0.0 -		0.0 00					
	Place and the state of the second						_	_	_			<u> </u>
ICN (HD	Final Limiters —	Basic Advanced										

TITLE BAR CONTENT

The title bar menu is constant part of each tab. Thus, allowing reading at a glance of all the mandatory parameters. The title bar can be hidden by clicking on Meters.

It's content can be customized as per the user's requirements. The interface allows you to choose between several layouts - *Default*, *Custom 1* to *Custom 4*. The visual content of each is customizable and the possible options are depicted below.

NOTE: A click on Meters will hide the title bar.

	Meters —	Defeult Custom 1	Custom 2 Custom 3	Custom 4		8	_	
Dig in (d8fs) 000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dig Out (d8/s))			VU+Peak	1e-00 Power: 8.1 db 1e-01 Peck ct 1e-5: 7.5 kHz 1e-00 Time: 3106m24 s		Reset Ref 1e-5
Ana in (dth) 200	Current PS	40 40 40 9 16 0k	200	20x 40x	lix six	1+000 1+000 1+000 1+000 1+000 1+000 1+000	0	78 1
Custom 1								
	Meters —		Custom 2 Custom 3	Custom 4		8	-	
Dig In (dBfs)	Dig Out (dBh) (00) 40 40 44 41 (1	0 -10 -00 -00			VU+Peok	1e-000 1e-001 Power: -8.1 cBr Peck of 1e-5: 7.5 kHz Tme: 3105m24 s		(Reset) (Ref1e-5
Ana in (d8fs)	Ana Out (dBu)	40 40 40				1+02		
E Player in (dBfs)	Current PS	-70 -40 -40 -40 -10 0	20	10 10	50 50	1+005		78 . 1
Custom 2								
	Melen —		Custom 2 Custom 3	Custom 4		8	_	
	Dig Out (d8(s) (00) + + + + + + + + + + + + + + + + + +	Defouit Custom 1	Custom 3 Custom 3	Custom 4		۲	_	VU-Pack
	Dig Out (d8(s) (00) + + + + + + + + + + + + + + + + + +		**************************************	Custom 4	jā,	۲		VU+Feck
	Dig Out (d8(s) (00) + + + + + + + + + + + + + + + + + +		**************************************		10	٢		Vurfeek V
SOUND IMPACT	Dig Out (step)	Defouit Custom 1	Custom 2 Custom 3	.0x 10x	jb.	® ®	10	vurfex
SOUND IMPACT	Dig Out (step)		Custors 2 Contorn 3	.0x 10x	b	é).	534	Virfax
SOUND IMPACT	Dig Out (set)	Defouit Custom 1	di di di di di di di di di di di di di d	.0x 10x	30	é).		



Custom 4

SOUND MPACT	Metera - Default Custom 1 Custom 2 Custom 3 Custom 4	🛞 – 🗆 🗙
Dig in [dih]	In jalih) (20) (Powrin jalih) (20) (Powrin jalih) (20) (Powrin jalih) (20) (20) (20) (20) (20) (20) (20) (20	

Customized title bar

Each layout displays several interactive indicators represented as follows:

Dig In [dBfs]	-99.9 -99.9	-60	-54		48	-42	-3	6	-30	4	4	-18	1	12	1	-6	R
Ana In [dBfs]	-94.1 -93.4	-60	-54		48	-42	-3	6	-30	-2	4	-18		12	1 1 1	-6	R
E Player In [dBfs]	-99.9 -99.9	-60	-54	1	48	-42	-3	6	-30	4	4	-18	-	2	1 1 1	-6	R

To change the content, click on one of the indicators. Then from the menu, select the content from one of the following groups:

Input/Output

	Input/Output	>	AGC In [dBfs]
	Phys. Input	>	FM [dBfs]
	Phys. Output	>	HD [dBfs]
4	Limiters	>	MPX Out [kHz]
	MPX Power	>	D-MPX [dBfs]
5	RDS	>	Preset dBr - Country Sott
	Clear VuMeter		

Phys. Input

Input/Output	>	
Phys. Input	>	Ana In [dBfs]
Phys. Output	>	Ana Aux In [dBfs]
Limiters	>	Dig In [dBfs]
MPX Power	>	Dig Aux In [dBfs]
RDS	>	LIVEWIRE 1 [dBfs]
Clear VuMeter		LIVEWIRE 2 [dBfs]
		IP Connect 1 In [dBfs]
	Attack ===	IP Connect 2 In [dBfs]
0.0 dB		Emergency Player In [dBfs]
0.0 dB		Commercial Player In [dBfs]

Phys. Output

Input/O	utout	>	90 10.0k
Phys. In	1.1	>	IP Connect
Phys. O	utput	≥	
Limiters		>	Ana Out [dBu]
MPX Po	wer	>	Ana Aux Out [dBu]
RDS		>	Dig Out [dBfs]
Clear V	uMeter		Dig Aux Out [dBfs]
		Atte	LIVEWIRE 1 [dBfs]
	0.0 dB	-	LIVEWIRE 2 [dBfs]
	0.0 dB		IP Connect 1 Out [dBfs]



	Input/Output		>	-90 -90 0 10.0k
	Phys. Input		>	a IP Connect
	Phys. Output		>	A D
	Limiters		>	LIVEWIRE 1 [dBfs]
	MPX Power		>	LIVEWIRE 2 [dBfs]
78	RDS		>	IP Connect 1 Out [dBfs]
	Clear VuMeter			IP Connect 2 Out [dBfs]
17			At	TX1 Out [kHz]
		0.0 dB		TX2 Out [kHz]
		0.0 dB		v

Limiters

	Input/Output Phys. Input	>	-80-	
l	Phys. Output	>	1D Processing	IP (
2	Limiters	>	FM Bass Limiter	_
Ĩ	MPX Power	>	FM Limiter	D(
	RDS	>	MPX Limiter	
1	Clear VuMeter		HD Limiter	

MPX Power

	Input/Output	>	-90	1		
	Phys. Input	>	cessing	IP Conne		
3	Phys. Output	>				
	Limiters	>	SOUND4 IMPACT - 211A0001			
	MPX Power	>	Predic PWR	-		
	RDS	>	Norm PWR			
	Clear VuMeter		PWR Red			

RDS

	Input/Output	>		-80-		
	Phys. Input	>		0		
1	Phys. Output	>	HD Proc	cessing		
1	Limiters	>				
1	MPX Power	>	Channel	SOUND4 IMPACT - 2117		
	RDS	>	 Current 	PS		
1	Clear VuMeter		Current RT			

Clear VuMeter will leave the parameter space blank:

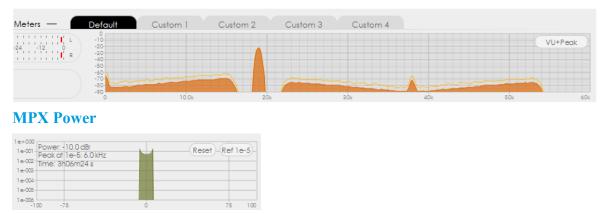
To change the measuring limits of the indicator, when clicking on such a window allowing not only change of the content, but also of the range or measurement units will appear. Select the preferred value, and it will be automatically applied to the indicator.

	Dig	Out [dBfs]	-50.	7 -90	mþun		11111 1 72	m			1 I 1 I	1	1 1	I, I	
				-51.	4) u	mþun	uļum	ļumķi	11	-30 de -60 de						Y.
	Proce	ess In (dBfs]		-ao	-27	7 -2	4 -	2	 -90 di 						
				-94.	8	1		1	1	Input,	/Outp	out			>	Y.
										Phys.	Input	ł			>	h
										Phys.	Outp	out			>	2
1/0	Rout	ina 8	lev	/els			Mai	in Pi		Limite	rs				>	ssi
<u> </u>	1	1.90		1 1			l			MPX F	Powe	r			>	-
48 -45	5 -42 -	39 -36	-33	-30 -21	-24	-21	-18	-15	•	RDS					>	OU
1.1		· .			· .	Ľ.	· .	. ' .		Clear	VuM	leter				E
	- i		i.		i				_	1 1	1			Pres	set	

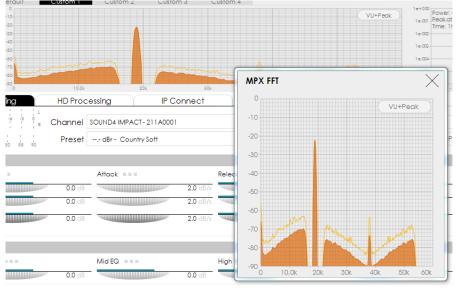


Depending on the chosen layout, the following graphics may be available:

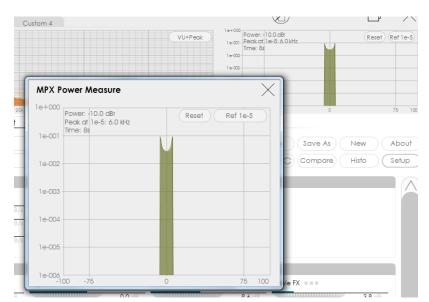
FFT MPX



Double click on a peak or at a specific place on the graphic will open a magnified window of the selection, hence allowing detailed reading of the parameters.



FFT MPX magnified



MPX Power magnified



MAIN PROCESSING

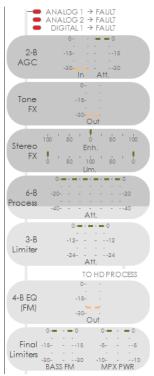
UND🚄 IMPA	ET	Me	ters - Default	Custom 1 Custom 2	Custom 3 Custom 4			B	—	
Dig In (d8fs) 0000 1		Cut (d8/s) 6000					VU+Peck	1e-000 1e-001 Power -8.1 dbr Peok of 1e-5.7.5 kP 1e-002 1e-004	2	Reset Ref
Ano In (dBfs)		ment PS	49 93 9 9 9 2 1	Via Ia		0		1+004 1+000 1+000		74
	Workspace -	VO Routing & Levels	Main Processing		IP Connect	Streaming	Emergency P			
ANALOG 1 → FAUU DIGITAL 1 → FAUU IP CONN 1 → FAUU	Process In (d8fs) 0020 00 -07 -04 -	n nên nên nêz der der der der der der d	1 de de da és de de de	Channel SOUND4 IMPACT- 211	40001			Undo Save	Save As Ne	ew Ab
P CONN1 → FAUU E PLAYER → FAUU	MPX [kHz]			Preset dBr - Natural (not	aved)			Redo Preset G	Compare His	sto Set
	• 2-Band AGC -	Basic Advanced								
-30	H (970)	Gate Threshold ===	Drive ===	Attock ===	Release		Fidelity			
-18-		-50	0 08	0.0 08	2.0 08/4	1.0	08/1	81.0 %		
	• Tone FX	Basic Advanced								
Enh. 0 1 s0 1 s0 1 0		Fat BQ	Low EQ	Mid EQ	High EQ		Boss FX ===	32 Treble I	FX	14-5
0	 Stereo FX — 									
40	EX (00)	Basic Advanced Stereo Link ===	Width ===	Limiter						
00	PX (00) UM (00) 0 0 0 0 0 0 0 0 0	On		24.0	10.0 %					
-2424 Att.	6-Band Process —	Basic Advanced								
TO HD PROCESS	SH (999)	Gote Threshold ===	Down Expand ===	Fidelity ===		npoctSystem ===				
-16-1	SH (973) 000 H (973) 000 MH (973) 000	-55	0 d8	-6.0 08	\$4.0	• 1.8				
40 M	MH (993) ML (993)	Drive	Attack ===	Release	4.0 08/1					
0	ANL 0999 000	Mix SL (dB) ===	Mix LO (dB)	Mix ML (dB)		d8)	Mix HI (dB)	Mix SH	(d8)	
80-10-10-10-10 BASS FM MPX PWR TX1 → MPX	LO 6973 SL 6973 -Jo -Jo -Jo -Jo - Jo - Jo	0	9 08	0.0 al	0.0	0.0		0.0 cit		0.0 cli
TX1 → MPX TX2 → MPX	3-Band Limiter —	Basic Advanced								
	H (999)	Drive ===								
	M (999)	0	0 08							
	1. 000 1 -de 1-de 1-de 1-de 1-de 1-de 1-de 1-de 1	Mix L (dB) ===	0 c0	0.0 05	0.0					
	4-Band Param EQ —	Basic Advanced								
		Fot EQ ====	Low EQ ===	Mid EQ ===	High EQ					
		0	0 38	0.0 00	0.0 -8	0.0	db			
	Final Limiters —	Basic Advanced								
	BASS (00) 40 44 49 49 4	MPX Power Target ===	FMLimiterDrive ===	3.5						
Monitor -	FM (00) 40 44 44 44 4		0 dk	3.5 05	1.00 08					
	MPX (00)	MPX Power StandBy ===	0 db							
-60.0 -5		10	AF 0.0							
N HD										

Contains all the important processing parameters. As each block of settings is set individually, a combination of basic and advanced settings can be made. Below you will find explanation on the processing functions and meters.

We will start with explanation of the options placed on the left part of the interface:

Meters

- depicts the current values of each parameter, and the Inputs in use.





Monitor

Monitor —	-
Routed to : Phone (Dut ===
	-73.2 dB

The content of the section is user-defined. By default it is set to Phone Out. It can be changed with a click on the [...] symbol. A new window with the available options will appear.

	(^)
	AGC IN
	ANA IN
	ANAAUX IN
	DIG IN
	DIGAUX IN
Mon	LIVEWIRE 1 IN
Routed to : I	LIVEWIRE 2 IN
	IP Conn 1 IN
AGCIN	v
AGCIN	

Each parameter can be individually customized also if the [...] symbol is available against the labeled menu.



Meters and Settings

Workspace — I/O Routing & Levels Main Processing		gency Player
Process In (dBfs)	Channel SOUND4IMPACT-211A0001	Undo Save Save As New About
MPX (<u>1412)</u> 653 jamija	Preset dBr - Country Soft (not saved)	Redo Preset C Compare Histo Setup

This menu is constant part of the Main and HD Processing, and contains the following options: 1. Process and MPX interactive LED meters;

Process In [dBfs] Proces

2. Channel name and preset in use (customizable);

Channel	SOUND4 IMPACT- 211 A0001	
Preset	dBr - Country Soft (not saved)	

3. Interactive buttons - are generally related to the Presets.

Undo	Save	Save As	New	About
	Preset 🙄	Compare	Histo	Setup

[Undo]/[Redo] - will undo or redo the settings applied to the Main or HD processing settings. [Preset] - To select a preset, press on [Preset] button, and list of all presets will appear on the screen.



Double click on the desired preset will load it automatically to the device.

Preset				/
Save Save As New Delete Rename Security	Import	Export		
нуари 2018 (26) —		Preset Log:		
Beryopu 2018 [24) Image: Server and Serv		 m Preset Details: Created On Saved On From Factory 	2018-01-18 10:12:18 2018-01-18 10:12:51 High Power/12.0 dBr - N 90-290-1060-37908740 60-2030	Functions: ✓ 2-Band AGC ✓ Tone FX ✓ Stereo FX ✓ 6-Band Process ✓ 3-Band Limiter
		Matricing		✓ EQ

The preset can be used as it is, or some changes to the parameters can be applied.

[Save] - If changes to the parameters involved in the current preset are made, upon pressing the [Save] button, the changes will be saved to the currently loaded preset.

[Save as] - Allows the user to create a new preset if changes to the parameters involved in the current preset are made. User defined name could also be set.

[Compare] - A list of presets will be loaded. Then you can click on a preset of choice and then on [Reference]. Upon pressing the button, the software will toggle between the settings of the two presets allowing a comparison to be made.



[New] - Allows new preset to be created. For detailed information on the process, please refer to <u>"How a preset can be made" on page 75</u>.



[History] - Will open a window with list of the presets used.

Highlight						
n2 —						
Preset Name	Date	Time	Origin	Origin Name	Date	Time
12.0 dBr - Country Soft 2	2018-02-05	17:11:36	saveas	12.0 dBr - Country Soft	2018-02-05	17:11:18
12.0 dBr - Country Soft	2018-02-05	17:11:18	continue	12.0 dBr - Country Soft	2018-02-05	17:11:09
12.0 dBr - Country Soft	2018-02-05	17:11:09	continue	12.0 dBr - Country Soft	2018-01-18	10:12:18

[About] - Will open a window with the following options.

About	About
Download L&S doc	
S Download MIB	Setup

SOUND4 provides great feature throughout its product line: Link & Share. This tool is designed to allow remote control and monitoring of the devices across the network, using simple text commands via Telnet. The list of commands is available by clicking on About in the remote control window, then choosing **Download L&S doc**. The Resulting XML file contains all commands, necessary syntax and parameters applicable to this device and its current version. Using Telnet access by port 3002, it is possible to type commands directly and see the values or change the parameters necessary, or it is possible to use various automation or script APIs to execute these commands to fully integrate Sound4 products into your facility control and monitoring network.

Download SNMP MIB File - The MIB file may vary from one firmware revision to another. Downloading this file from the device, guarantees that you have the proper MIB file.

[Set-up] - will open the set-up menu. For detailed information on the process, please refer to <u>"Setup" on page 78</u>.

How a parameter can be set

Each individual parameter can be set and generally turned ON or OFF. This is made by the interactive sliders or by pressing on:

- 1. The [...] symbol, and a set-up window will appear;
- 2. Turn the parameter [ON] or [OFF];
- 3. Set the de desired values.

The applied changes will be automatically saved.

20 25 30 35 40 45 50		ate Thres	hold dB		X]
Basic Advanced	2		Or	ı		
Gate Threshold ■■■	1) [Factory	Saved	Last	А
н	-50.0 🖉	Н	-50.0	-50.0	-50.0	1
	-50.0 3	L	-50.0	-50.0	-50.0	Ч
-L	-50.0 dB	ALL	-50.0	-50.0	-50.0	ч



Basic and Advanced AGC

The first processing stage is AGC - automatic gain control that works across large band of frequencies. It is intended to bring to normal the differences in the audio levels applied at the input. It corrects strong sound variations without pumping effects.

Basic AGC

2-Band AGC —	Basic Advanced										
H (953)	Gate Threshold ===		Drive		Attack ===		Release		Fidelity ===		
1 0000 da da da da d		-50.0 dB		0.0 d8		2.0 dB/s		3.6 d8/s		21.0 %	
Advance	dACC										
Advance	d AGC										
2-Band AGC —	d AGC										
 2-Band AGC — 40, -18, -18, -12, -1 40, -18, -18, -12, -1 			Drive ===	_	Attock ===	_	Release ===	_	Fidelity		
2-Band AGC —	Basic Advanced	-50.0 00	Drive ===	0.0 dB	Affock	2.0 d8/s	Release ===	3.6 d8/s	Fidelity	21.0 %	
 2-Band AGC — 40, -18, -18, -12, -1 40, -18, -18, -12, -1 	Basic Advanced		Drive	0.0 d8 0.0 d8	Attock	2.0 d8/s 2.0 d8/s		3.6 d8/s 3.6 d8/s		21.0 % 21.0 %	

Gate Threshold – When the audio drops below the user-defined limit, the threshold will freeze the processors' operation. This function limits the floor noise when the signal is low.

Drive – increases or decreases the gain at the AGC input. Increasing the drive will make up for very low levels, and decreasing it (very low drive) will prevent low level corrections at the processor input.

Attack – To adjust the AGC reactivity speed to a volume increase, adjust the attack in dB per second.

Release – sets the AGC correction speed in dB per second. As the AGC itself is very powerful tool, it is not necessary to use high Release speeds. For example, we recommend using 1 and 1.5 for classical music and 2 for other programs.

Fidelity – is intended to maintain the fidelity and spectral balance of the original input signal. If turned [Off], the bands will be working independently.



Basic and Advanced Tone FX

Enriches the sound color before dynamic processing. There are two modes - Basic and Advanced Tone FX. The spectral display (placed on the left of the settings) illustrates in real time the general correction applied by the parametric equalizer.

Basic Tone FX

• Tone FX -	Bosic Advanced					
	Fat EQ ===	Low EQ	Mid BQ ===	High EQ ===	Bass FX ===	Treble FX ===
	0.0 d5	0.0	d8	0.0 d5	0.0 d8 8.6 d8	3.8 08

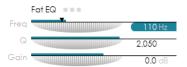
In this mode the only adjustable options are:

- For Fat EQ, Low EQ, Mid EQ, High EQ is the gain;
- For Bass FX and Treble FX only one effect variable is available.

Advanced Tone FX



All the parameters of the parametric equalizer are available In Advanced Tone FX mode:



Freq - Parametric band center frequency; Q - Applied filter quality (parametric band "width");

Gain – Gain of the parametric band.



Basic and Advanced Stereo FX

The role of the Stereo FX (stereo enhancer) is to improve the existing stereo image. While enhancing the stereo image, the Stereo FX can also work to control the energy transmitted by the stereo subcarrier at 38 kHz with stereo image limiter.

The FX VU meter (placed on the left of the settings) illustrates the enhancement rate generated by the processor. The indicator moves from the middle to the outside borders of the meter. The LIM VU, on the other hand, depicts the limitation percentage on the subcarrier at 38 kHz.

Width – sets the stereo enhancement rate. Setting it to 20 and 40% is usually a sufficient value. Limiter – sets the stereo image reduction compared to a 100% max rate. If the option is used, the recommended percentage value is between 10 and 15%.

Basic Stereo FX

Stereo FX —	Basic Advanced	
FX 000 táo áo ý áo táo	Width ===	Limiter == =
LIM (00)	28.0 %	20.0 %

Advanced Stereo FX

 Stereo FX — 	Basic Advanced			
	Width ===	Limiter ===		
FX 000 100 50 0 50 100		28.0	20.0	
······································			20.0 %	
			20.0 %	
H 00 MH 00			20.0 %	
ML (00 +			20.0	
LO 000 SL 000 50 50 50 50 50 50 50 50 50 50 50 50			20.0 %	
0 80 100 80 0			20.0 %	



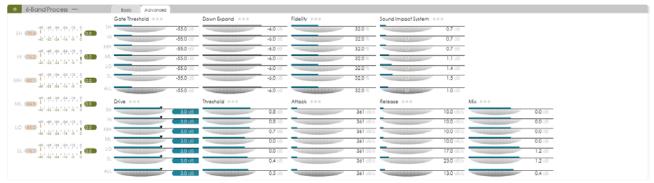
Basic and Advanced 6-Band Process

The multi band process is the core of the SOUND4 IMPACT. A unique set of options controls each band, hence ensuring perfect sound stability.

Basic 6-Band Process

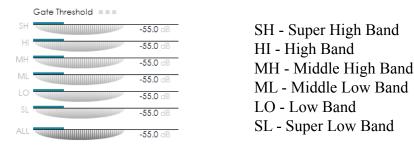
• 6-Band Process —	Bosic Advanced					
SH (712)	Gate Threshold ===	Down Expand ===	Fidelity ===	Sound Impact System ===		
H 9773	-55.0 68	-6.0 08	32.0 %	1.0 dB	-	
MH (798)	Drive	Attack ===	Release ===			
ML	3.0 dB	361 d8/s	13.0 d8/s			
LO 🚳 1	Mix SL (dB) ===	Mix LO (dB)	Mix ML (dB) ===	Mix MH (dB) ===	Mix HI (dB)	Mix SH (dB) ===
SL (800)	1.2 08	1.2 08	0.0 d8	0.0 d8	0.0 88	0.0 d8

The basic mode applied the same setting to all 6 bands used in the process. The settings are explained in details below.



Advanced 6-Band Process

When used in advanced mode, the 6-Band Process allows different settings for each band to be applied. The bands are always organized as follows:



Gate Threshold – freezes the operation when the audio drops below the defined limit. When the signal is too low, the Gate Threshold function will limit the floor noise.

Down Expand – the option works only when the corresponding band is frozen by Gate Threshold. It is intended to retain the attenuation on the user-defined value. Then, according to the set attack and release timed, the Down Expand automatically returns to the configured value. The combination Gate Threshold + Down Expand is very useful when noisy sources such as microphones are evident.

Fidelity – controls the spectral balance between the bands. For example:

- If Fidelity is set to 0, the sound will be more rich as the bands will work independently;
- If Fidelity is set to 100, the sound will be purer as the bands are linked to the spectral distribution at the input.

Sound Impact System – maintains the authenticity of the original sound attacks. Pay special attention when using the Sound Impact System with values higher than 6 as the average power of the sound will significantly increased. In this case you may need to lower the Band Limiter or Final Limiter drive.

Drive – creates more or less gain at the band's input. The band process power allows for gain control within the bands without the use of wide band AGC. If the AGC is not used, we recommend the drive to the bands to be "pushed" so that the reduction could be sufficient enough to correct the low levels. generally speaking:

- increasing the drive will lead to reduction in the gain created by the band process, hence making-up for the very low levels;
- a very low drive will prevent low level corrections.

Threshold – sets the working limits of a band. It can also be used to bring bands from the background to the foreground and vice versa.

Attack – Adjust in dB per second to set the processor's reaction speed for each band. Lower value will slow the processor's reaction, and vice versa - the higher the value, the faster will the processor reacts, hence controlling the rapid variations.

Release – (often associated with density). The higher the release, the higher will the spectrum density within the band be. As the Band processor is very powerful tool, it is not necessary high release times to be set in order for higher density levels to be obtained.

Mix – If considering the signal as a quantitative value, the Band Mix function gives control over the amount of each band that participates in the signal. The preferred values are set via the relative Gain sliders (in dB). An option to disable a particular band for the currently selected preset is also available.

Basic and Advanced 3-Band Limiter

The SOUND4 IMPACT has a 3-Band Limiter that uses a powerful predictive algorithm and is intended to prepare the audio for the final limiter.

The VU meters are placed on the left side of the parameters, and show the gain reduction of each band.

Basic 3-Band Limiter



Advanced 3-Band Limiter

3-Band Limiter —	Basic Advanced								
H (67)	Drive ===		Threshold ===		Fidelity ===		Mix ===		
-da 1-fa 1-fa 1-fa 1-6	H	1,8 d8		0.5 68		36.0 %		0.0 dB	
-60 -48 -36 -24 -12 0		1.8 dB		0.2 d8		36.0 %		0.0 dB	
M 97660		1.8 08		-0.8 -8		36.0 %		0.0 dB	
AL		1.8 dB		-0.0 dii		36.0 %		0.0 d8	

Drive – creates more or less gain at the 3-Band Limiter's input.

Threshold – sets the working limits of each limiter band.

Mix – used to define the output level for each band so as to obtain the best sound balance.



Basic and Advanced 4-Band Program EQ

The four separate sections of 'parametric' equalization can be attributed to any combination of **Freq** (frequency), **Q Factor** (bandwidth) and **Gain** (amplitude). These may be assigned to any combination of Fat EQ, Low EQ, Mid EQ and High EQ.

Within each section of parametric equalization, the **Freq**, **Q Factor** and **Gain** are individually adjustable. As each EQ slider is moved, the resultant change in response, both in that EQ section and its overall contribution, is shown on the graph. The graph placed on the left of the parameter, displays the individual frequency response of each of the four equalizer bands and the summary frequency response of the entire EQ section, including pre-emphasis.

Fat EQ – represents the lowest band, and is very useful for eliminating problematic rumble or hum frequencies, or making the low end "punch" pop through.

Low EQ – used for cutting some of the typical low midrange "mud" caused by the proximity effect or to help enhance the classic sound.

Mid EQ – adds intelligibility and clarity in the critical midrange frequencies. High EQ – will enhance the top end.

Basic 4-Band Program EQ



Advanced 4-Band Program EQ

 4-Band Param EQ — 		Basic Advanced							
		Fat EQ ===		Low EQ ===		Mid EQ		High EQ	
	Fred		60 Hz		150 Hz		1410Hz		10930 Hz
			3.320		2.060		1.220		2.390
			0.0 dB		0.0 d8		0.0 d8		0.0 🕫



Basic and Advanced Final Limiter

Allows setting of the final peak limiting stages. The Final Limiter detects and removes (almost) any distortion that is audible by the human ears. This results in an extremely clean sound.

Basic Final Limiter

Final Limiters —	Basic Advanced	
BASS DO do da da da da M	IPX Power Target === FM Limiter Drive ===	MPXLimiterDrive
FM (00)	12.0 dBr -4	4.9 08 1.00 08
MPX (00)	IPX Power StandBy ===	
PWR 💶 🛔 🛔 🛔 🛔 🕴 🖬 🗮	-10.0 dB	

Advanced Final Limiter

Final Limiters —	Basic Advanced								
BASS 00 44 18 12 4	MPX Power Target	LF Clip Drive	LF Clip Threshold ===		FMLimiterDrive ===		MPXLimiterDrive ===		Embed Pilot ===
FM (00) 30 34 38 32 4	FM 12.0 dBr	0	0.0 -68	4,4 08		-4,9 d8		1.00 dB	On
MPX (00)	MPX Power StandBy ===								
	FM -18.0 dB								

MPX Power Target – controls the amount of limiting performed by the MPX Power limiter in the range of 12.0 dBr.

LF Clip Threshold – sets the threshold of the LF Clip (the level at which the clipper will start working). Increasing the threshold reduces the amount of clipping performed by the LF Clip. Lowering the threshold will bring more bass clipping, which may result in low frequency distortion if set too low.

FM Limiter Drive – This extremely powerful clipper works at 1.5 MHz sampling frequency. It is intended to control the gain at the FM Limiter Input. Pay special attention when increasing the FM limiter drive as this may lead to significant distortion. Note that the more you load the final limiter, the more the MPX power will be increased. The regulation level must be strictly observed when MPX power control is activated, as otherwise the MPX power level may attenuate as you increase the limiter drive.

MPX Limiter Drive – The complex process works directly on the audio signal. It is intended to obtain the positive effects of the MPX limiter (loudness) without the bad side effects (uncontrolled noise levels).

Embed Pilot – Enables/Disables the option.

MPX Power StandBy – adjustment of the MPX clipper. Set in dB.



I/O ROUTING & LEVELS

		40	1988¢		4					VU+Peck	1e-000 p 1e-000 p 1e-000 m 1e-000 m	ower -8.1 d8r eak at 1e-5.7.5 ki me: 3106m24 s	2	Rese	et) Ref 1
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· · · · · · · · ·			Preset dBr+ N	tural (not saved)								Preset C	Compare	Histo	Set
		Moin Processing HDP	rocessing												
	Direct	Direct	Direc		Direct		Direct		Direct		Direct				
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 2nd Bockup 															
 3rd Backup 		2-Band ···· AGC	Tone FX	Stereo FX		6-Band Process		3-Bond Limiter		Parametric		FM Limiter		MPX Limiter	
Replicate		Out	Out_		Out		Out_		Out		Out		Out		0
***															· ·
	Current PS Workspace - VOT Follower: Bockup Follower: Bockup Honore Next Main - - - - - - - - - - - - - - - - -	Current PS Workspace - VORwing AL Fellower Backson Direct Bockson Direct Bockson Cord Bockson Direct Bockson Cord Bockson Direct Bockson -	Current Ps Workspace - VO Roufing & Levels Moin Pro- Moin Processing Moin Palaces Routo - Trainces	Current P3 Workspace - VO Routing & Levels Moin Processing HD Workspace - VO Routing & Levels Moin Processing D0 Preset code - Ik Preset code - Ik Pres	Current P3 Workispose - VO Routing & Loves Mode Processing Workispose - VO Routing & Loves Mode Processing Channel Double INPACT-211A001 Processing Processing Tolower Route Processing Defet Resource Route Processing Defet Resource Route Processing Defet Resource Route Resource Route R	Current Pa Workspace - VO Routing & Levels Main Processing HD Processing Main Processing Characterist 11.0001 Preser Social Preserved Processing Proces	Current P3 Workingoze - VO Routing & Levels Main Processing HD Processing IP Connect Workingoze - VO Routing & Levels Main Processing HD Processing IP Connect Charmel Source Voltage And Andrew Preset - Voltage Andrew	Current Main Vorkspoce VO Routing & Levels Main Processing IP D Processing IP Connect Workspoce VO Routing & Levels Main Processing IP D Processing IP Connect Channel Source Preset	Current PB Moln Processing HD Processing IP Current Steaming Workspace VO Routing & Leves Moln Processing IP Current Steaming Workspace VO Routing & Leves Moln Processing IP Current Steaming Workspace VO Routing & Leves Moln Processing IP Connect Steaming Moln Processing IP Set Direct IP Set IP Connect IP Set Moln Processing IP Set IP Set	Current Main Vorkspone Vorkspone Vorkspone PC connect Streaming Workspone Vorkspone Vorkspone Vorkspone PC connect Streaming Workspone Vorkspone Vorkspone PC connect Streaming Channel Soutick MPActi-21/Accol Preset	Current P3 Workingoze - VO Routing & Leves: Main Processing Workingoze - VO Routing & Leves: Main Processing Charmel Sounder MACI: 211 A0001 Preset Preset Non Processing Preset Non Processing Preset Prese	Current Par Workspace - VORUNINg & Lavesh Main Processing HD Processing P Connect Streaming Emergency Player Workspace - VORUNINg & Lavesh Main Processing HD Processing P Connect Streaming Emergency Player Channel Social All All All All All All All All All A	Current P2 Workspace - VORcuting & Levels Moln Processing HD Processing PC onnect Streaming Emergency Ployer Channel Dollbol MPACT-2110001 Protect Protection Protect Direct	Current PB Mon Processing HD Processing P Connect Streaming Emergency Ployer Workspace VOR Numerica & Levels Mon Processing HD Processing P Connect Streaming Emergency Ployer Workspace VOR Numerica & Levels Mon Processing HD Processing P Connect Streaming Emergency Ployer Workspace Vorte Dred Preset	Current Pis Mon Processing HD Processing P Connect Streaming Emergency Player Workspace UO Routing & Levels Mon Processing HD Processing P Connect Streaming Emergency Player Workspace UO Routing & Levels Mon Processing HD Processing P Connect Streaming Emergency Player Workspace UO Routing & Levels Mon Processing P Connect Streaming Emergency Player Workspace Mon Processing Processing P Connect Streaming Emergency Player Workspace Mon Processing Processing Processing Processing Emergency Player Mon Processing Mon Processing Processing Processing Processing Emergency Player Mon Processing Index Ind

Allows set-up of the Inputs and Outputs to be made. You can change the Application and Preset Input of each Input and Output by pressing on the relevant menu option.

The management section is placed on the left part of the screen and is divided in two parts -Inputs to Patch Point Management (1) and Outputs to Patch Point Management (2). Both sections allow application of the inputs and outputs to be assigned as well as their range and levels.

JUUNL	🚧 Impac		Custom 1	Cust	om 2	Custom	3 Cu	stom &)	—		\rightarrow
Dig In	(dBfs) 9779 [L 9779 [R	Dig Out [dBfs]	L -10					VU+Pec	10	000 001 Power: -1 Peak at 1 002 Time: 2h	0.0 Reset e-5 Reset 35m24 s	Reflect
Ana In	(dBfs) (723) (L (733) (R	Current PS	40 470 40 40 40 40	10.0%	204	90k	404	504	10	-004 -005 -006 -100 -75	0	75
_ I/C	Routing & Levels	Main Processing	HD Proc	essing		IP Con	nect	γ	Stream		Er	merge
Process In	[dBfs] 000 48 48	24 12 channe	SOUND4 IMPACT-	211A0001				Save	Save	As N	lew	Abou
MPX	[kHz] 60 #	45 60 75 90 Prese	t dBr - Natural					Preset (Comp	are H	isto (Setup
					Main Pro	cessing	HD Proces	sing				
nuts To Pat	ch Point Management	Foilor	ver: Backup	Direct	Direct	Direct	Direct	Direct	Direct	Direct		1
ype	Application	1000	Process Input	In	In	In.	In.		In	In		
nalog 1	Main		- Main									
nalog 2	2nd Backup ····											
igital 1	1st Backup		 1st Backup 									
igital 2		\bigcirc										
VEWIRE 1		(1)										
VEWIRE 2		-										
Conn 1												
Conn 2												
Player				8		n X I	re	a B c(1	a iit	m	M iit	NP. mil
outputs To Po	atch Point Managemen	it								·		
ype	Application		Replicate		Out	Out	Out	Out	Out	Out	Out	Out
nalog 1	HD Out											
nalog 2	HD Out											
igital 1	HD Out											
igital 2	HD Out	(2)										
VEWIRE 1												
VEWIRE 2												
Conn 1	HD Out											

The set-up process is different for each parameter, but quite simplified and explained in details below:



Inputs Set-up

- 1. Click on the name of the desired Input;
- 2. The respective set-up window will appear. Apply the desired settings and press [X]. The changes will be automatically saved.

For the Analog inputs - set Input Range and Input full-scale Reference:

Analog 1 Input level		X
Input Range Input full-scale Reference [dBu]	12 dBu	3u
Meter [dBfs]	0, -54, -48, -42, -36, -30, -24, -18, -12, -5, 0	L R

For the Digital Inputs and the Emergency Player Input level - set Input full-scale Reference:

Digital 2 Input level	×
Input full-scale Reference [dBfs]	0.00 dBfs
Digital Aux In [dBfs] (No signal)	-54 -48 -42 -36 -30 -24 -18 -12 -6 -0 R
Emergency Player Input level	X
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	-54 -48 -42 -36 -20 -24 -18 -12 -6 0

For the LIVEWIRE inputs - Enable the input by selecting [ON] with a click, then select LAN mode by clicking on [LIVEWIRE ...], number of channels, From/To Source, Primary Source Name, Local Name, Stream mode, Status and Input full-scale Reference:

LIVEWIRE 1 Input level	×
Enable	Off
LAN Mode	LIVEWIRE ===
Channel	0 ===
From/To Source	From Source
Primary Source Name	
Name (local)	Ch1
Stream Mode	Unknown
Status	Disabled
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -

3. To assign application of the Input, press on the Process Input label or on ... (if such is not assigned to the input);



4. A window with the possible options will appear. Click on the one preferred and the window will disappear, automatically assigning the chosen value.

Inputs To Pate	ch Point Management	Failover: Backup	Direct	
Туре	Application	Process Input	In	
Analog 1	Main ····	(3) Main	🗢 Main	Source (4)
Analog 2	2nd Backup		1st Bo	ckup Source
Digital 1	1st Backup ····	(3) 1st Backup 		ackup Source
Digital 2			3rd B	ackup Source
LIVEWIRE 1				

Outputs Set-up

- 1. 1. Click on the name of the desired Output;
- 2. 2. The respective set-up window will appear. Apply the desired settings and press [X]. The changes will be automatically saved.

For the Analog Outputs - set Output range, select Application from the drop-down menu, then Auto De-empahis and Output full-scale Reference:

Analog 1 Output level	×
Output Range	12 dBu
Application	HD
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBu]	0.00 dBu
Meter [dBu]	-54 -48 -42 -36 -30 -24 -18 -12 -6 0 6 12 18 24 R

For the Digital Output level - select Application from the drop-down menu, then Auto De-Emphasis, Sampling Frequency, AES In Sync, AES 2 In Sync, Use External Word clock, Ext. Video Sync and Output full-scale Reference:

Digital 1 Output level	×
Application	HD = =
Auto De-Emphasis	Auto ===
Sampling Frequency	48 kHz
AES In Synch (No signal)	No
AES2 In Synch (No signal)	No
Use External Word clock (No signal)	No
Ext. Video Synch (No signal)	No
Output full-scale Reference [dBfs]	-1.00 dB†s
Meter [dBfs] (48.0 kHz) [48k]	54 -48 -42 -26 -20 -24 -18 -12 -6 0

For the LIVEWIRE Output level - Enable the output by selecting [ON] with a click, select profile by clicking on [Livewire Live Audio...], number of channels, Name, Label, Status, Configure GPO, select Application from the drop-down menu, then Auto De-Emphasis, and Output full-scale Reference:



LIVEWIRE 1 Output level	×
Enable	Off
Profile	Livewire Live Audio
Channel	0
Name (local)	Ch1 ===
Label (local)	Ch1 ===
Status	Disabled
Cfg GPO	
Application	HD ===
Auto De-Emphasis	Auto = = =
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs] (-58.3) + (-59.9) ↓	54 -48 -42 -26 -20 -24 -18 -12 -6 0 R

For the IP Connect level and Stream Output level - select Application from the drop-down menu, then Auto De-empahis and Output full-scale Reference:

IP Connect 1 Output level	×
Application	HD = =
Auto De-Emphasis	Auto
Output full-scale Reference [dBfs]	-1.00 dBfs
Meter [dBfs]	$ \begin{smallmatrix} & & & & & \\ & & & & & & \\ & & & & & &$
Stream Output level	X
Application	HD ===
Auto De-Emphasis	Auto ===
Output full-scale Reference [dBfs]	-1.00 dBts
Meter [dBfs]	54 -45 -42 -26 -20 -24 -18 -12 -5 0 R

- 3. To assign Replicate of the Output, press on the Replicate label or on ... (if such is not assigned to the output);
- 4. A window with the possible options will appear. Click on the one preferred and the window will disappear, automatically assigning the value chosen.

Outputs To Po	atch Point Management		
Туре	Application	Replicate	
Analog 1	AGC In replicate Out jkhjkhjk 🚥	(3) AGC In	(4)
Analog 2	HD Out		AGC In
Digital 1	HD Out	(3)	Anal
Digital 2	HD Out		Ana2
LIVEWIRE 1	HD Out		Dig1 Dig2
LIVEWIRE 2	HD Out		LIVEWIRE 1
IP Conn 1	HD Out		LIVEWIRE 2
IP Conn 2	HD Out		IP Conn 1
Stream	HD Out		v



HD PROCESSING

		rs - Default Custom 1 Custom 2 Custom	3 Custom 4		8	-	- 0	
Dig In [d8fs] 6720 48 48 44 12	big Out (dB(s) (00) 48 44 44			VU+Peok	1e-000 1e-001 Peck of 1e-5, 7,5 kt 1e-002 Time: 3h06m24 s	R2	Rese	et) (Ref 1e
Ana in (d6/s)					1+004 1+005 1+005			
			nnect Streaming	Emergency Pla	yer			78
ANALOG 1 -> FAULT Process In [dBfs] DIGITAL 1 -> FAULT		18 -18 -12 - 2 - 4 - 4 - 4			Undo Save	Save As	New	Abou
DIGITAL1 -> FAULT P CONN1 -> FAULT EPLAYER -> FAULT MPX [HHz]	and the second s	Preset			Redo Preset C	Compare	Histo	Setup
a -1818 • 4-Band Par	ram EQ (HD) - Basic Advanced							
	Fat BQ ====	Low BQ Mid BQ	High EQ ===					
	0.0	00 08	0.0 0.0	0.0 dlb				
HD Limiter	-							
18 18 18 18 18 HD 000 1 1	HD LimiterDrive ===	HD Limiter Release = = =						
Enh12 -10	à à à à à HD 00	Medium slow ===						
1 4 4 4 4 4 4 4 4	0.0	SS MEDICITIEDW IIII						
i in the in the								
0								
8 40 40								
- 48								
-20								
1 - 420 20 								
Att.								
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- 23								
42								
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1 d3 d4								
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4								
40								
1 40								
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40								
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1								
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AT								
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A A A A A A A A A A A A A A A A A A A								
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Just as the Main Processing, the HD Processing is divided to Basic and Advance. Both options can be generally turned ON or OFF by pressing the button placed in front of the name.

Basic

• 4-Band Param EQ (HD) —	Basic Advanced	0.0 d8	Low EQ	0.0 d8	Mid EQ	0.0 d8	High EQ	0.0 d8			
HD Limiter —											
HD III I I I I I I I I I I I I I I I I I	HD Limiter Drive	0.0 dB	HD Limiter Release === Medium slow ===								
Advanced											
Advanced											
	Basic Advanced		Low EQ		Mid EQ		High EQ ====		_	_	
• 4-Band Param EQ (HD) —		60 Hz	Low EQ	150 Hz	Md B0	1410Hz	High EQ	10930 Hz	_	_	
4-Band Param EQ (HD) — Free	Fot EQ ===	60 Hz 3.320 0.0 d8	Low EQ ===	150 Hz 2.060 0.0 dB	Md ED	1410 Hz 1.220 0.0 d8	Keh BO	10930 Hz 2,390 0.0 dB			_
4-Band Param EQ (HD) — Free	Fot EQ	3.320	Low BQ	2.060	Md 80	1.220	High EQ	2.390			

We recommend you to pay special attention when adjustments to this section are made, as too much level from any of the bands could cause an excessive amount of final limiter activity to this particular range of frequencies. These controls are intended to optimize the overall frequency balance for the HD channel.

Fat EQ – represents the lowest band, and is very useful for eliminating problematic rumble or hum frequencies, or making the low end "punch" pop through.

Low EQ – used for cutting some of the typical low midrange "mud" caused by the proximity effect or to help enhance the classic sound.

Mid EQ – adds intelligibility and clarity in the critical midrange frequencies.

High EQ – will enhance the top end.

The HD processing uses a look-ahead limiter for peak control. Instead, they It is adjustable by the Final Limiter Drive control. Reducing limiter drive reduces the amount of limiting and makes the sound more open, but this will affect the overall loudness. Increasing the limiter drive will result in more limiting and a louder output, but will affect the dynamics. The HD Limiter Release is also customizable.



IP CONNECT

Ana in (döfs) (729)		Out [dBfs]		204 20	, ,	1 e 32 1 e 32 1 e 32 1 e 33 1 e 35 1 e 55 1 e 55	6 75
	Workspace -	I/O Routing & Levels	Main Processing HD Pro	cessing IP Connect	Streaming	Emergency Player	
Status:Unplug IP IP :Error						Save Configuration Load Configura	fion Setup Ab
Public:Unknown	Board IP Setup -	Status Unplug	IP Addr Error	Gateway Error	IP Mask Error	DNS Srv Unknown	Public IP Unknown
		DHCP Mode :	IP Addr :	IP Default Gateway :	IP Mosk :	DNS Server :	Default GOS :
oder as	Audio (P)	Off .	No config ===	Default ===	Auto ===	None ===	34 AF41 Assured Forwarding Clas
	Vetworking	Backup Threshold :	Time To Wake-up :	Time To Foll Asleep :	Timeout for broken :		
der 2	6		3.0	1.0		1.0 :	
cer 2 -00- cefive -00-	• Freedow	Notes to collect					
NO	Encoder	- Status Inactive	Bitrate :				
oder 30		Codec: LD v3 ===	128.0				
cive do		10.43	1280				
	Encoder 2	- Status Inactive					
der 2		Codec :	Bitrate :				
-60	aaa 1	LD v3 ===	128.0	kops			
	• Decoder	— Status Inactive	Backup No	Codec	Bitrate 0.0	Average Jitter 0.0	Pic Jitter 0.0
	·····	Source :	Backup 1 :	Bockup 2 :	Backup 3 :	Jitter :	
NR 1 -00- 1 -00- 1	40 44 44 44 44 44 45 5		Not used ===	Notused ===	Notused ===	50 m	-
RX TX	Decoder 2	- Status Inactive	Backup No	Codec	Bitrate 0.0	Average Jitter 0.0	Pk Jitter 0.0
		Source :	Backup 1 :	Bockup 2 :	Backup 3 :	Jitter :	
			Not used ===	Not used ===	Notused ===	50 m	-
) (-
	Link Management	Search : All	D _{R R R} X in	Alias === Print			
	• LINK 1 ===	- Status Inactive	Error No	Bockup No	Line Delay 0		
	RX TX	Is TX Follbock Of :	Mode :	TX Source :	TX Bockup :	Recover Mode :	
	0.0 kbps 0.0 kbps	Notused ===	TX ====	Encoder	Encoder	Aggressive	
	L L	Local Part :	Gateway IP :	Remote IP :	Remote Port :	Allow Port Nat :	QOS :
	Tanana R. Tanàna R	4401 ===	Default ===	No config ===	4401 ===	No	Board Default ===
			You currenth	use 1 Link on 32 available, click h	are to add some		
			100 Conterning				
	ously you are at 8.07 dBr. On last mini						

[Save configuration] – Will export the current IP connect configuration so that it could be stored for future references or if need be, reloaded to the device. Select the preferred folder where the file should be stored and then press [OK] to export it.

[Load configuration] – Allows already created configuration to be uploaded to the device. Select the file and then press [OK] to upload it.

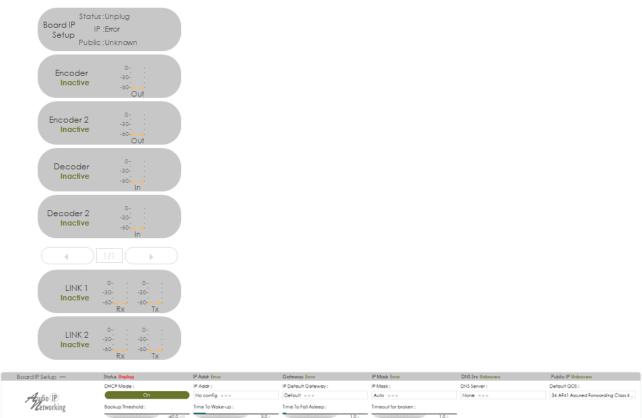
[Set-up] – will open the set-up menu. For detailed information on the process, please refer to <u>"Setup" on page 78</u>.

[About] – Will open a window with the following options.



Meters

- depicts the current values of each parameter.



The network addresses could be set manually (static IP) or automatically via a *DHCP Server*. To set static *IP Address*, *IP Default Gateway*, *IP Mask*, *DNS Server* and *Default QCS*, the DHCP should be disabled.

DHCP Mode – In order for the built-in DHCP client to be activated, the function should be enabled.

Backup Threshold – if the level of the Audio fails below this threshold it will immediately switch the backup player on.

You can also customize as per your requirements the *Time to Wake-up*, *Time to Fall Asleep* and *Timeout* for broken settings.



STREAMING

Ana In (dBfs)							.da(a)	229												1=02- 1=024 1=025				
		1::1.	Com	ent PS				40		10 Dx		ibs		10s		45		BÓN		1+00				71
		Workspr	ace —	I/O F	outing & I	evels.	Main	Processing	Υ.	HD Process	ing (IF	Conne	ect		Stre	aming	Em	ergency F	layer				
General																\$¢	rve Stream) (Savi	All Stream	0 (1000	d Preset Stream	n	(setup	
	Genere	a —		Stat	us Running	-		Audio OK																
				1.1	Status	Ador	tive Process	Streaming Ou	hugh															
Metadata				2	Off																			
	4	Audio		-	OH																			
Configuration	1 2	Streaming		4	Off																			
				5	Off																			
				6	Off																			
	 Metad 	lata —		Stat	us Off																			
					Status	On	Script	Mod	ie i		Locafic	n			Port	User	Possw	ord Politin	e Station Logo					
				1	Off			File							8080			2.0						
	Contra		_	_	_		_	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_
		uration —		84	Ados			Mount//D	Port			1	Samala					1		Econom	ent Frogment	Classing	Multicost	Meto
	0n	Protocol	Encoder	rote	Proc	e15	Host/Path	Basename	0=defoult	User	Pwd		Rote			Nome	Description	Gerre	URL	Time	Count	File Path	Src Addr	Delo
	1	IceCost2 IceCost2	MP3 MP3	128	0				Default Default					X										0.0
	2	IceCost2	MP3	128	0				Defoult			ă	Auto	Ż										0.0
	4	IceCost2	MP3	128	0				Defoult				Auto											0.0
	5	IceCost2 IceCost2	MP3 MP3	128	0				Defoult Defoult					¥										0.0
	-	108-0612	MP3	120					Derout				Auto	×	υ.									0.0
	۰			-	-							-		-	-	-		-		-	-	-		

Allows all the mandatory settings to the Streamer option to be applied. The tab is visually divided into three parts - General, Metadata and Configuration.

[Save Stream] – Saves the applied settings.

[Save All Stream] – Exports the list of streams.

[Load Preset Stream] – Will load an already set stream preset.

General – depicts the current status of each stream, if enabled.

Metadata – A double click with the mouse cursor on the ON box will enable the option. The following script options are available via the interactive drop down menu: Http Request, Jazler, MasterControl, Nexgen Audio Sense, WinMedia, Zetta.

🔹 Metadata —	Sto	itus Off														
		Status	On	Script	Mod	•		Locatio	n		P	ort Use	er Passw	ord Poll Tim	e Station Logo	
	1	Off	\mathbf{V}	Http Request 🛛 👻	File						80	80		2.0		
				Http Request												
				Jazler MasterControl												
Configuration —				Nexgen Audio Sense												
On Protocol En	coder Bit rate	Adap Proce	100		ount/ID sename	Port 0=default	User	Pwd	Mono	Sample Rate	HQ Public	Name	Description	Genre	URL	Fragn Tim

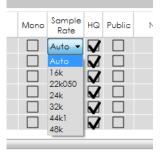


Configuration – Combination of multiple parameters. A double click with the mouse cursor on the ON box will enable the currently selected streamer.

Configuration —									
On	Protocol	Encoder							
1	lceCast2 🔻	MP3							
2	lceCast2	MP3							
3 🗌	ShoutCast V1 ShoutCast	MP3							
4	RTMP	MP3							
5	RTMPE	MP3							
6	RTMPT RTMPS	MP3							
•	RTMPTE								
	RTSP								
	RTP mcast								
	HLS file								
	HLS sftp								
	HLS ftp								
	HLS (sync)								

ration —		
Protocol	Encoder	Bit rate
lceCast2	MP3 🔻	128
lceCast2	MP3	128
lceCast2	AAC HE-AAC	128
lceCast2	HE-AAC V2	128
lceCast2	PCM S16BE	128
lceCast2	MP3	128

Bit rate	Adaptive Process	Host/
128	Off 🔹	
128	Off	1
128	HE-AAC - 16kbps	
128	HE-AAC - 24kbps HE-AAC v2 - 16kbps	
128	HE-AAC v2 - 24kbps	
128	Off	



The following protocols are available from the "Protocol" dropdown menu:

IceCast2, ShoutCast V1, ShoutCast, RTMP, RTMPE, RTMPT, RTMPS, RTMPTE, RTMPTS, RTSP, RTP mcast, HLS file, HLS sftp, HLS ftp, HLS (sync).

The following encoder options are available from the "Encoder" drop-down menu: MP3, AAC, HE-AAC, HE-AAC v2, PCM S16BE.

The following options are available from the "Adaptive Process" drop-down menu: Off, HE-AAC - 16kbps, HE-AAC - 24kbps, HE-AAC v 2 - 16kbps, HE-AAC v 2 - 24kbps

Sample rates available from the "Sample Rate" drop-down menu: Auto, 16k, 22k050, 24k, 32k, 44k1, 48k.

EMERGENCY PLAYER

Auto Scheduler		14. 14. 14. 14. 14. 14	Dig Out [d8fs] 000		· · · ·								• 02 Tme: 3106m			
Ale Scheduler Im Im Early Next (j) Image: For	Ana in (dBfs)	* * * * *	Current PS			16 dk	25	10		c.	804		+ 005			
Add Schedder Male Ulear Male		Workspace	 I/O Routing & L 	evels Main Pro	ocessing	HD Processi	ng lé	PConnect	St	eaming	Emerg	ency Player				
Mail blow Men Maic 1 Ment Aligies Berry Ment Aligies Berry Bite: Prov [Series] Bite: Prov [Se	Auto Scheduler		M	Early Next (s)	0 Fe	or Music Jingles			-45 -42	- 4- 4	4 4	4 4	4 4	4 4	1	
Rule: Ray 8 *** Ten 1 *** And 3 *** Mothe Scheduler How Action: Clear Selected Clear All Tele Curation Ovectory Multi: Ubrary [finite: 7/21 Go / Available: 7.20 Go] = Multi: 1-0 Imment: -0 minutes 0 secondes Multi: Ubrary [finite: 7/21 Go / Available: 7.20 Go] = Jagles -0 Imment: -0 minutes 0 secondes Multi: 1-0 Imment: -0 minutes 0 secondes Multi: 2-0 Emment: -0 minutes 0 secondes Dester All Files Uplood File Cleare All Files Uplood File	Music Library	Auto Scheduler []	-													
Actors Clear Selected Title Duration Duration Directory.					ery	Make Schedule I	Now									
Notice Duration Directory Title Duration Directory																
Male 1-0 Bements - Ominutes 0 secondes Male 2-0 Bements - Ominutes 0 secondes Jarges - 0 Bements - Ominutes 0 secondes Delete Selected Delete AI Riss Upload Rie Delete Selected Delete AI Riss Upload Rie		Actions		2		Duration Direc	fory									_
Mails 1-0 Elements - Ominutes 0 secondes Male 2-0 Elements - Ominutes 0 secondes Jargies - 0 Elements - Ominutes 0 secondes Delete Salected Delete All Res Uplood Re Oelete Salected Delete All Res Uplood Re Uplood Re <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>																
Mails 1-0 Bernents - Ominutes 0 secondes Mails 2-0 Bernents - Ominutes 0 secondes Jargies - 0 Bernents - Ominutes 0 secondes Dealers selected Dealers All Res Uplood Re Oelers All Res Uplood Re Dealers All Res Uplood Re																
Marie 1-9 Bernents - Ominutes 0 secondes Marie 2-0 Bernents - Ominutes 0 secondes Jargies - 0 Bernents - Ominutes 0 secondes Dealers selected Dealers All Res Uplood Re Oealers All Res Uplood Re Dealers All Res Uplood Re Uplood Res																
Mails 1-0 Bernents - Ominutes 0 secondes Mails 2-0 Bernents - Ominutes 0 secondes Jargies - 0 Bernents - Ominutes 0 secondes Dealers selected Dealers All Res Uplood Re Oelers All Res Uplood Re Dealers All Res Uplood Re																
Marie 1-9 Bernents - Ominutes 0 secondes Marie 2-0 Bernents - Ominutes 0 secondes Jargies - 0 Bernents - Ominutes 0 secondes Dealers selected Dealers All Res Uplood Re Oealers All Res Uplood Re Dealers All Res Uplood Re Uplood Res																
Mails 1-0 Elements - Ominutes 0 secondes Male 2-0 Elements - Ominutes 0 secondes Jargies - 0 Elements - Ominutes 0 secondes Delete Salected Delete All Res Uplood Re Oelete Salected Delete All Res Uplood Re Uplood Re <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																
Mails 1-0 Elements - Ominutes 0 secondes Male 2-0 Elements - Ominutes 0 secondes Jargies - 0 Elements - Ominutes 0 secondes Delete Salected Delete All Res Uplood Re Oelete Salected Delete All Res Uplood Re Uplood Re <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																
Mails 1-0 Elements - Ominutes 0 secondes Male 2-0 Elements - Ominutes 0 secondes Jargies - 0 Elements - Ominutes 0 secondes Delete Salected Delete All Res Uplood Re Oelete Salected Delete All Res Uplood Re Uplood Re <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																
Mails 1-0 Elements - Ominutes 0 secondes Male 2-0 Elements - Ominutes 0 secondes Jargies - 0 Elements - Ominutes 0 secondes Delete Salected Delete All Res Uplood Re Oelete Salected Delete All Res Uplood Re Uplood Re <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>																
Male 1-0 Bements - Ominutes 0 secondes Male 2-0 Bements - Ominutes 0 secondes Jarges - 0 Bements - Ominutes 0 secondes Delete Selected Delete AI Riss Upload Rie Delete Selected Delete AI Riss Upload Rie																
Delete AT The Upload Re																
		Music Library (Total:	121 Go / Available:7:20	Go] —												
Tife Duration Size Tife Duration Size Tife Duration Size				Go] —	Muric 2	-0 Bernents - O minutes	10 secondes			Jingles -) Bemenis - O m	inules 0 secon	des			
		Music 1 - 0 Bements - 0 minute	s 0 secondes						ood Re) (uplos	od File	
		Music 1 - 0 Bements - 0 minute	s O secondes Delete All Files	Upload File												
		Music 1 - 0 Bements - 0 minute	s O secondes Delete All Files	Upload File												
		Music 1 - 0 Bements - 0 minute	s O secondes Delete All Files	Upload File												
		Music 1 - 0 Bements - 0 minute	s O secondes Delete All Files	Upload File												

Allows all the needed settings to the Emergency player to be applied. The tab is visually divided into two parts - Auto Scheduler and Music Library.

This is how the player works - There are three directories that allow jingles and music of two different genres to be uploaded (*Music 1* and *Music 2*). Once the files are uploaded, you just need to define the parameters under which a jingle will be played (after how many songs). The rules are explained in details below.

The player can be manually started or automatically by pressing [Auto Start]. Once the option is enabled, you will have at your disposal the controls for music playback, as well as interactive levels indicators and the *Early Next* option.

Early Next – The currently played song will be gradually mixed with the next one.

[playing] - Kalimba (Kalimba.mp3) - 5:48/4:08																								
AutoStart	100			II		PH	Early Next (s)	1	For	Music Jingles														

The Auto Scheduler allows you to define the parameters under which a scheduler will be created. You can customize the following **Rules**:

From Music 1 – Play - the number of the song to be played first;

From Music 2 – Then - the number of the next song;

Insert Jingles Every – Specifies at what interval a jingle will be played.

The **Music Library** section is divided in three subsections Music 1, Music 2 and Jingles. The supported formats are - MP3, wav and etc.

To add a new MP3 file, follow the instructions below:

- 1. Press [Upload file];
- 2. Go to the directory where the files are stored;
- 3. Select the desired file and press [Upload];
- 4. Wait until the file is uploaded.

Based on the files loaded in the Music Library and the Auto Scheduler Rules, a schedule can be created by pressing [Make Schedule Now].

[Delete Selected] – will delete the selected file;

[Delete All Files] – will delete the entire list of files.



HOW A PRESET CAN BE MADE

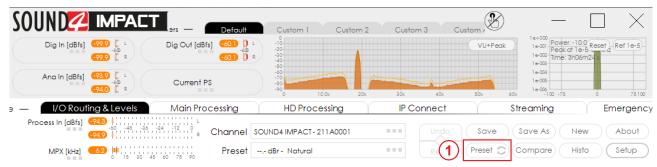
The SOUND4 IMPACT has a set of several factory presets. In order for a preset to be selected/ used, the [Load] button should be pressed (the active preset is illuminated in green). Each of the factory presets can be used as a basis for creation of new user-defined preset. Once you are satisfied with the result all the changes could be saved.

IT IS RECOMMENDED:

- 1. The user presets to be created prior to the installation of the SOUND4 in the broadcasting chain. Otherwise, any drastic changed of the audio quality and enhancements will be audible for the listeners.
- 2. Unless the new preset is created by a qualified/experienced broadcaster, it is recommended that no general changes to the base preset (if such is used) to be applied, as this can lead to unwanted signal distortion.

The procedure is quite simple. Below you will find a step-by-step description of the process:

1. Press on [Preset] and choose a factory preset that you would like to use for a basis of the new one. It will be automatically uploaded in the device;



- 2. Modify the parameters that you think would improve the enhancement of your signal and will make your station's sound unique;
- 3. Once you are satisfied with the result, go back to the Presets page. You will notice that after the currently selected preset, a the following message indicating that some changes are being made will appear:

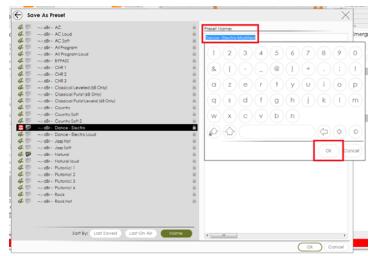
Workspace —	I/O Routing & Levels	Main Processing	HD Processing	IP Connect	Streaming	Emergency Player
 ANALOG 1 → FAULT DIGITAL 1 → FAULT 	Process In [dBfs]	-60 -48 -36 -24 -12 0 -77.8	Channel SOUND4 IMPA	CT-211A0001	Undo Save	Save As New About
2-B -1515 AGC15	MPX [kHz]	0 15 20 45 60 75 90	Preset dBr - Dan	ce - Electro (not saved) ===	Redo Preset C	Compare Histo Setup

4. In order to save the changes select one of the user presets and press the [Save as] button.

	Workspace —	I/O Routing & Levels	Main Processing	HD Proc	cessing	IP Connect	Y	Stree	iming	Emerg	ency Player
	 ANALOG 1 → FAULT DIGITAL 1 → FAULT 	Process In [dBfs]	-977.9 -60 -48 -36 -24 -12 0 -97.8	Channel	SOUND4 IMPA	CT-211A0001		Undo	Save	Save As	New About
2- AG		MPX [kHz]	(10.0) (15 20 45 d0 75 90	Preset	dBr - Dana	e - Electro (not saved)		Redo	Preset 🔿	Compare	Histo Setup



5. The following window will appear:



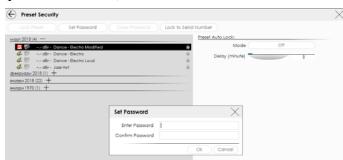
Specify the preset name and press [OK]. When specifying the name, you can either use the interactive keyboard, or write in the field directly.

6. The newly created preset will be automatically chosen as 'active preset'.

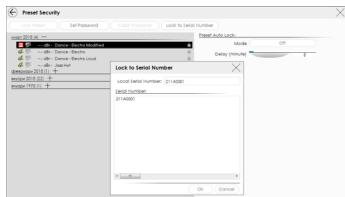
Preset Security

As many of the stations prefer to use the services of qualified personnel when creating the perfect preset, the SOUND4 IMPACT supports the function the newly created preset to be secured. Menu path *Presets* > *Preset Security*. The following options are available:

[Set password] – the preset will be locked with a key known only by the creator. Thus, only users familiar with it would be able to import it into devices different than the one used for the purposes of creation;



[Lock to Serial Number] – you can specify the serial number of the device on which the preset can be used. Only the unit with this serial number will be able to import this preset.



Depending on your preferences, both, one or none of the above explained options can be used.



Preset Export

In order for a user preset to be exported the following procedure should be completed:

- 1. Open the [Preset] menu;
- 2. Select the preset to be exported and then press the [Export] button.
- 3. Select directory and confirm with [OK] to save the file on your computer.
- 4. Once the process is completed, the following message will appear:

Preset 12.0 dBr - Dance - Electro Modified exported successfully
Ok

Presets Import

- 1. Open the [Preset] menu;
- 2. Press the [Import] button;
- 3. Select the .s4imp file of the preset to be imported and press [OK] to confirm;
- 4. Once the process is completed, the following message will appear:

All Presets were successfully imported
Ok

Presets Delete

- 1. Open the [Preset] menu;
- 2. Select the preset to be deleted and then press the [Delete] button;
- 3. Confirm that you want to delete the preset:

Do you really want to delete Preset "12.0 dBr - Dance - Electro Modified (1)"								
	Yes	No						

4. The preset will be deleted.



SETUP

The menu is divided into several sections - *Settings*, *IP Connect*, *Advanced*. Each section includes several subsections, thus allowing complete set-up of the device.

Settings

General

Allows set-up of the following parameters - Channel name, Display, Application Auto Exit, Preset Security, Process Autolock, Audio IP Autolock and Streaming Autolock.

SETUP Print Settings		(
Settings -	CHANNEL NAME -	
General	Name Edit	SOUND4 IMPACT- 211A0001
Users	AE\$67/Livewire+ host name	IMPACT-A67-211A0 ===
Preset Settings	IP Connect host name	IMPACT-IP-211A00
Inputs	DISPLAY -	
Outputs	Themes	SOUND4 (Default)
Stereo Generator & MPX Output Basic RDS Encoder	Language	English
MPX Power Control (BS-412)	Show Bubble Values	On
Ethernet: AES67/LIVEWIRE+	Show Virtual Keyboard	On
Ethernet: IP CONNECT	Virtual Keyboard Type	Azerty
GPIO	VU Meters Speed	25 %
Synchro	APPLICATION AUTO EXIT -	20 %
Preset Sharing	Mode	off
IP CONNECT +	Delay (minute)	5
ADVANCED +		5
	PRESET SECURITY	Off
	Auto Lock	
	Delay (minute)	5
	PROCESS AUTOLOCK -	
	Auto Lock	Off
	Delay (minute)	5
	AUDIO IP AUTOLOCK -	
	Auto Lock	Off
	Delay (minute)	5
	STREAMING AUTOLOCK -	
	Auto Lock	Off
	Delay (minute)	5

NOTE that the Software provides two types of themes, depending on the user's requirements - black and grey.



Users

Allows set-up of the user accounts. Only the users acquaint with the admin credentials will be allowed to apply changes to the device's parameters and settings.

S	ETUP Print Settings					\times
<u>s</u>	ettings -	New Edit				
	General	Users List:				
	Users	Activate Name	Туре	Remote	Front Panel	
	Preset Settings		Super Administrator	Password ok	PIN code	
	Inputs	PresetSharing	Preset Sharing	none		
	Outputs		-			
	Stereo Generator & MPX Output					
	Basic RDS Encoder					
	MPX Power Control (BS-412)					
	Ethernet: AE\$67/LIVEWIRE+					
	Ethernet: IP CONNECT					
	GPIO					
	Synchro					
	Preset Sharing					
IF	CONNECT +					
A	DVANCED +					
		Current User Info: —				
		Туре	Super Administrator			
		iype	soper Administrator			



Preset Settings

All Preset related settings are gathered in this section, thus allowing set-up of the Process General gate, Input High-Pass Filter, Output High-Pass Filter, Matrixed mode, 2-Band AGC Frequency, 6-Band Processor Frequencies, 3-Band Limiter Frequencies.

SETUP Print Settings			$ > \times $
Settings —	PROCESS GENERAL GATE -		
General	Gate	On	
Users	Gate Threshold [dB]		-55.0 dB
Preset Settings	INPUT HIGH-PASS FILTER -		
Inputs	Input Highpass Filter	On	
Outputs	Input Highpass Frequency [Hz]		10 Hz
Stereo Generator & MPX Output	OUTPUT HIGH-PASS FILTER -		
Basic RDS Encoder MPX Power Control (BS-412)	Output Highpass Filter	On	
Ethernet: AES67/LIVEWIRE+	Output Highpass Frequency [Hz]		10 Hz
Ethernet: IP CONNECT			IU HZ
GPIO	MATRIXED MODE — Matrixed Mode		
Synchro		On	
Preset Sharing	2-BAND AGC FREQUENCY -		
IP CONNECT +	Frequency [Hz]		1530 Hz
ADVANCED +	6-BAND PROCESSOR FREQUENCIES -		
ABWARDED			8740 Hz
	The surger size (1) (s)		3790 Hz
	Frequencies [Hz]		1060 Hz
			90 Hz
	3-BAND LIMITER FREQUENCIES -		70112
			2030 Hz
	Frequencies [Hz]		60 Hz
	OUTPUT DELAYS INFO +		

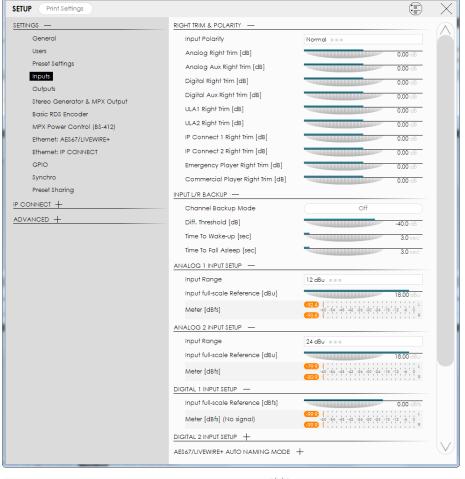
The Output delays info is also available on the bottom of the page, upon pressing the + button placed next to the name of the option.

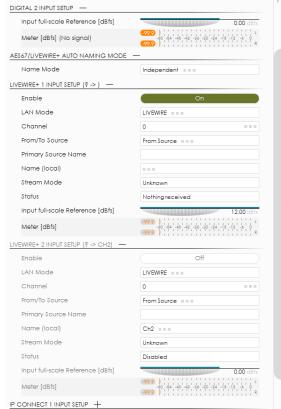
Í	SETUP Print Settings			\times
	SETTINGS -	PROCESS GENERAL GATE +		
	General			
l	Users	OUTPUT HIGH-PASS FILTER +		
1	Preset Settings	VOICE SMOOTHER +		
	Voice/Mono Detect	MATRIXED MODE +		
	Inputs	2-BAND AGC FREQUENCY +		
	Outputs Stereo Generator & MPX Output	· · · · · ·	1	
	Basic RDS Encoder	6-BAND PROCESSOR FREQUENCIES	+	
	MPX Power Control (B\$-412)	3-BAND LIMITER FREQUENCIES +		
	Ethernet: AE\$67/LIVEWIRE+			
	Ethernet: IP CONNECT			
	GPIO			
1	Synchro			
	Preset Sharing	OUTPUT DELAYS INFO -		
	IP CONNECT +	Analog output delay [ms]	0.01 ms	
	ADVANCED +	Analog Aux output delay [ms]	10.92 ms	
		Digital output delay [ms]	11.33 ms	
		Digital Aux output delay [ms]	11.33 ms	
		ULA1 output delay [ms]	10.92 ms	
		ULA2 output delay [ms]	10.92 ms	
		IP Connect 1 output delay [ms]	10.92 ms	
		IP Connect 2 output delay [ms]	10.92 ms	
		Streamoutput delay [ms]	10.92 ms	
		Watermarkoutput delay [ms]	10.92 ms	
		MPX output delay [ms]	30.92 ms	



Inputs

This section allows you to customize all the Input settings as per your requirements. Depicted below are the available menu options:





LIVEWIRE+ 1 INPUT SETUP (?->) +	
LIVEWIRE+ 2 INPUT SETUP (? -> CH2) +	
IP CONNECT 1 INPUT SETUP -	
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	-50 -54 -48 -42 -26 -30 -24 -18 -12 -6 0 -57.9 -80 -24 -18 -12 -6 0
IP CONNECT 2 INPUT SETUP -	
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	-60 -54 -48 -42 -36 -30 -24 -18 -12 -6 0 -99.9
EMERGENCY PLAYER INPUT SETUP	
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	00 μαλαιματιμόμα μαλαματιμά μαλαμάτα -60 -54 -48 -42 -26 -20 -24 -18 -12 -6 0 00 μαλαιματιμά μαλαμά μαλαμά μαλαμάτα μαλαμάτα και και και και και και και και και κα
COMMERCIAL PLAYER INPUT SETUP -	
Input full-scale Reference [dBfs]	0.00 dBfs
Meter [dBfs]	9999 -60 -54 -48 -42 -26 -20 -24 -18 -12 -6 0 9999



Outputs

This section allows you to customize all the Output settings as per your requirements. Depicted below are the available menu options:

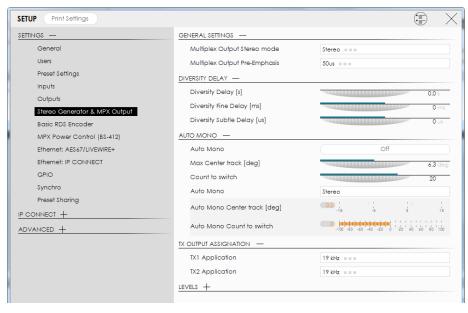
SETUP Print Settings		
SETTINGS —	ANALOG 1 OUTPUT SETUP -	0
General	Output Range	12 dBu ===
Users	Output full-scale Reference [dBu]	0.00 dBu
Preset Settings	Application	Ana2 replicate
Inputs	Auto De-Emphasis	Auto ===
Outputs	Meter [dBu]	-66 -48 -30 -12 6 24
Stereo Generator & MPX Output Basic RDS Encoder		-602
MPX Power Control (BS-412)	ANALOG 2 OUTPUT SETUP	
Ethernet: AES67/LIVEWIRE+	Output Range	12 dBu
Ethernet: IP CONNECT	Output full-scale Reference [dBu]	0.00 dBu
GPIO	Application	HD ===
Synchro	Auto De-Emphasis	Auto ===
, Preset Sharing	Meter [dBu]	-66 -48 -20 -12 6 24
P CONNECT +	DIGITAL 1 OUTPUT SETUP -	
advanced +	Application	HD = = =
	Auto De-Emphasis	Auto ===
	Sampling Frequency	48 kHz ===
	AES In Synch (No signal)	No
	AES2 In Synch (No signal)	No
	Use External Word clock (No signal)	Νο
	Ext. Video Synch (No signal)	Νο
	Output full-scale Reference [dBfs]	-1.00 dBfs
	Meter [dBfs] (48.0 kHz) [48k]	-00 -54 -48 -42 -36 -30 -24 -18 -12 -6 0
	DIGITAL 2 OUTPUT SETUP	
	AES67/LIVEWIRE+ AUTO NAMING MODE +	-
	LIVEWIRE 1 (HD -> ?)	
	LIVEWIRE 2 (HD -> ?) +	

ANALOG 2 OUTPUT SETUP			AES67/LIVEWIRE+ AUTO NAMING MODE	+
DIGITAL 1 OUTPUT SETUP +			LIVEWIRE 1 (HD -> ?)	
DIGITAL 2 OUTPUT SETUP -			LIVEWIRE 2 (HD -> ?) -	
Application	HD ===		Enable	Off
Auto De-Emphasis	Auto		Profile	Livewire Live Audio
Sampling Frequency	48 kHz		Channel	0 ===
AES In Synch (No signal)	No		Name (local)	Ch2
AES2 In Synch (No signal)	No		Label (local)	Ch2
Use External Word clock (No signal)	No		Cfg GPO	
Ext. Video Synch (No signal)	No		Application	HD ===
Output full-scale Reference [dBfs]	-1,00 dBfs		Auto De-Emphasis	Auto ===
Meter [dBfs] (48.0 kHz) [48k]	-50 -54 -48 -42 -26 -30 -24 -18 -12 -6 0		Output full-scale Reference [dBfs]	-1.00 dBfs
			Status	Disabled
AES67/LIVEWIRE+ AUTO NAMING MODE			Meter [dBfs]	-99.9 -60 -54 -48 -42 -26 -20 -24 -18 -12 -6 0 -99.9
Name Mode	Independent		IP CONNECT 1 OUTPUT SETUP -	(-99.9)
Label Mode	Independent		Application	HD
LIVEWIRE 1 (HD -> ?) -			Auto De-Emphasis	Auto
Enable	Off			
Profile	Livewire Live Audio		Output full-scale Reference [dBfs]	-1.00 dBfs
Channel	0 ===		Meter (dBfs)	997.9 -60 -54 -48 -42 -26 -30 -24 -18 -12 -6 0 997.9
Name (local)	Ch1 ===		IP CONNECT 2 OUTPUT SETUP -	
Label (local)	Ch1 ===		Application	HD = = =
Cfg GPO			Auto De-Emphasis	Auto = = =
Application	HD ===		Output full-scale Reference [dBfs]	-1.00 dBfs
Auto De-Emphasis	Auto = = =		Meter [dBfs]	
Output full-scale Reference [dBfs]	-1.00 dBfs			69919
Status	Disabled		PHONE OUTPUT SETUP -	
Meter [dBfs]	-99.9 -60 -54 -48 -42 -36 -30 -24 -18 -12 -6 0 -99.9		Phone Gain [dB]	-73.2 dB
	-99.9 I	1	Application	HD output
LIVEWIRE 2 (HD -> ?) +		$\mathbf{\nabla}$	Phone Auto De-Emphasis	Auto ===



Stereo Generator & MPX Output

This section gathers all the mandatory settings applied to the Stereo Generator and MPX Output.



General settings allows control over the Multiplex Stereo mode and the Multiplex Output Pre-Emphasis. Another important option is that via Diversity delay you can set the Delay in seconds, the Fine Delay in ms and the Subtle delay in us.

AUTO MONO subsection is intended to provide you with access to the Auto Mono settings (that can be turned On and Off) and the Count to switch option. As an addition, you can also set the Auto Mono to the desired value. The applied settings will be visualized by the interactive meters.

TX OUTPUT ASSIGNATION - is used to assign the TX1 and TX application as per the user's requirements.

SETTINGS
Users AUTO MONO + Preset Settings TX OUTPUT ASSIGNATION + Inputs IEVELS - Outputs IEVELS - Stereo Generator & MPX Output TX 1 Add Sub1 Basic RDS Encoder TX1 Output Range MPX Power Control (BS-412) TX1 Add Sub2 Ethernet: AES67/LIVEWIRE+ TX2 Add Sub2 Ethernet: P CONNECT TX2 Output Range GPIO TX2 75kHz Ref (BBU) Synchro Master TX Level [kHz] Preset Sharing Multiplex 19kHz Pilot Level [kHz] MUltiplex RDS Level [kHz] G0.0Hz TX1 Out [kHz] C30 bits TX1 Out [kHz] C30 bits
L-R [dB]

LEVELS - gathers all the additional settings that need to be applied to TX 1 and TX 2 - namely Add Sub, Output Range and 75kHz Ref. You can also use this submenu to set the Master TX level in kHz, the Multiplex 19 kHz Pilot Level and Multiplex RDS level. As an addition, the applied settings will be visualized by the interactive meters.



Basic RDS Encoder – General settings

All the mandatory settings to be applied to the basic RDS/RBDS encoder incorporated in the device are available in this subsection of the SETUP menu.

SETUP Print Settings			\times
settings -	GENERAL SETTINGS -		\bigcirc
General	RDS Mode	Off	
Users	RDS Program Identification (PI)	0000 = = =	
Preset Settings	RDS Traffic Program (TP)	Yes	
Inputs	RDS Program Type Norm	RBDS ===	
Outputs	RDS Program Type (PTY)	00- None ===	
Stereo Generator & MPX Output Basic RDS Encoder	Send Alternative Frequencies (AF)	Yes	
MPX Power Control (BS-412)	AF - Syntax 87.6;107.9;		
Ethernet: AE\$67/LIVEWIRE+	Use Radio Text (RT)	No	
Ethernet: IP CONNECT	RDS Radiotext (RT)		
GPIO	RDS Phase offset [deg]	90.0 deg	
Synchro	MAIN PS -		
Preset Sharing	PS Use Wide Mode	No	
IP CONNECT +	RDS Program Service Name (PS)		
ADVANCED +	RDS Program Service Name (PS) Wide		
	SCROLLING PS -		
	Word/Char Mode	By Fitting Words	
	Word align	Center ===	
	Can word be scrolled	Yes	
	Scroll by # chars	1	
	Char Scroll Time [sec]	1.3 sec	
	Word Scroll Time [sec]	1.3 sec	
	SCROLLING PS - SCENARIOS +		
	STATIC LABELS +		
	DYNAMIC LABELS +		
	DYNAMIC RT +		
	METADATA +		\mathbf{V}
			\checkmark
	METERS -		
	RDS Program Service Name (PS)		
	RDS Radio Text (RT)		

RDS Mode – can be turned [On] or [Off].

RDS Program Identification (PI) – The PI code is your station's 'digital address'. It is a hexadecimal code that is assigned by an appropriate broadcasting authority in most countries, but in the United States the PI code is numerically calculated from the station's call sign.

RDS Traffic Program (TP) – The TP flag identifies the station as one that routinely broadcasts traffic bulletins for motorists as part of its normal, everyday programming. When the TP flag is displayed on the receiver faceplate, the radio is searching for traffic announcements. The radio keeps track of TP stations offering this service to speed up the search-and-switch process.

RDS Program Type Norm – Both the RDS and RBDS standards are supported. Select the proper one from the menu.

RDS Program Type (PTY) – The PTY data flag identifies the station format from a pre-defined categories. Many RDS receivers are able to seek the listener's preferred format automatically. This means that a car radio can switch from a fading station to a stronger one that carries the same variety of music, though not the very same program, as provided by AF switching. The PTY function of RDS helps a broadcaster catch 'transient audience' share. The PTY code is not meant to change from song to song or to accommodate a top-of-the-hour newscast, however.

Send Alternative Frequencies – A network broadcaster, or one with low-power rebroadcast transmitters (translators) to fill holes in his coverage area, can include a list of all frequencies where the identical program can be heard simultaneously. The RDS receiver (particularly the upscale car radio) constantly searches for the best signal that carries the very same program. When a better signal is found, the radio re-tunes with no noticeable interruption. The principal utility of this RDS



function is with European radio networks and US stations with 'translators.'

AF Syntax 87.6; 107.9 – Defines the range of the AFs.

Use Radio text (RT) – To turn the option ON, press [Yes].

RDS Radio Text (RT) – This is a 64-character block of plain text that the listener can select for visual display on the faceplate of the radio by pressing an INFO button on the receiver. This function is not available on many automobile radios for safety reasons, which has precipitated the frowned-upon practice of scrolling the PS field instead. The *Radio Text* can announce song titles and performers, run special promotions or contests, or broadcast sponsors' messages.

RDS Phase offset (deg) – Allows Phase offset to be set.

Basic RDS Encoder – Main PS

PS Use Wide Mode – To turn the option ON, press [Yes].

RDS Program Service Name (PS) – This is the station's "street name" that will appear on the receiver faceplate display. The PS can be up to eight characters in length (including spaces) and can be as simple as the station's call letters: KWOW or KWOW FM, or a slogan: NEWSTALK or LIVE 95.

RDS Program Service Name (PS) Wide - Allows wider name to be set.

Basic RDS Encoder – Scrolling PS - Scenarios

SETUP Print Settings		÷	\times
Settings	MAIN PS +		
General	SCROLLING PS +		/ \
Users	SCROLLING PS - SCENARIOS -		
Preset Settings	PS Use Wide Mode	No	
	PS Use Static Labels	No	
Outputs Stereo Generator & MPX Output	PS Use Dynamic Labels	No	
Basic RDS Encoder	Main PS Repeat Mode	Once	
MPX Power Control (BS-412)	RDS Dynamic labels repeat Count [#]	Unlimited #	
Ethernet: AE\$67/LIVEWIRE+	RDS Main PS Time [sec]	3.0 sec	
Ethernet: IP CONNECT	RDS Alternative PS Time [sec]	2.0 sec	
GPIO	Concate Mode	No	
Synchro	PS Alternate Concate string		
Preset Sharing	STATIC LABELS -		
IP CONNECT +	PS Use Static Labels	No	
ADVANCED +	Static Labels Source Mode	User ===	
	Static Label 1		
	Static Label 2		
	Static Label 3		
	Static Label 4		
	Static Label 5		
	Static Label 6		
	Static Label 7		
	Static Label 8		
	DYNAMIC LABELS +		
	DYNAMIC RT +		
	METADATA +		
	ADVANCED +		
			v
	METERS -		
	RDS Program Service Name (PS)		
	RDS Radio Text (RT)		

PS Use Wide Mode – To turn the option ON, press [Yes].

PS Use Static Labels – To turn the option ON, press [Yes].

PS Use Dynamic Labels – To turn the option ON, press [Yes].

Main PS Repeat Mode – Select one of the following options: Once, Every Two Labels, Every Three Labels and Never.



RDS Dynamic Labels repeat Count [#] – Set the repeat count number via the interactive slider.

RDS Main PS Time [sec] – Set the Main PS time via the interactive slider. RDS Alternative PS Time [sec] – Set the Alternative PS Time via the interactive slider. Concate Mode – To turn the option ON, press [Yes]. PS Alternative Concate string – set the Concate string.

Basic RDS Encoder – Static and Dynamic Labels

PS Use Static/Dynamic Labels – To turn the option ON, press [Yes]. **Static Labels Source Mode** – Select the desired mode - User or File. **Static/Dynamic Label 1 to 8** – Specify Static/Dynamic label

SETUP Print Settings			X
Settings -	SCROLLING PS +		\bigcirc
General	SCROLLING PS - SCENARIOS +		/ \
Users	STATIC LABELS +		
Preset Settings	DYNAMIC LABELS -		
Inputs	PS Use Dynamic Labels	No	
Outputs	Dynamic Labels Source Mode	User	
Stereo Generator & MPX Output	Dynamic Label 1	User	
Basic RDS Encoder			
MPX Power Control (BS-412)	Dynamic Label 2		
Ethernet: AE\$67/LIVEWIRE+ Ethernet: IP CONNECT	Dynamic Label 3		
GPIO	Dynamic Label 4		
Synchro	Dynamic Label 5		
Preset Sharing	Dynamic Label 6		
	Dynamic Label 7		
	Dynamic Label 8		
ADVANCED +	DYNAMIC RT -		
	RT Use Dynamic	No	
	RT Dynamic Labels Source Mode	User = = =	
	Dynamic RT		
	METADATA —		
	Metadate source kind	Off = = =	
	Metadata parsers script	Nexgen Audio Sense	
	ADVANCED -		
	DI Stereo	Yes	
	DI Art. Head	No	
	DI Compressed	No	
	DI Dyn. PTY	Static PTY	
	RDS Music/Speech (M/S)	Music ===	
			V
	METERS -		
	RDS Program Service Name (PS)		
	RDS Radio Text (RT)		

Basic RDS Encoder – Dynamic RT

RT Use Dynamic – To turn the option ON, press [Yes]. **RT Dynamic Labels Source Mode** – Select the desired mode - User or File. **Dynamic RT** - Specify Dynamic RT

Basic RDS Encoder – METADATA

Metadata source kind – Select the desired option - Off, File/URL, TCP Server **Metadata parsers script** – Select one of the available automation softwares.

Basic RDS Encoder – Advanced

DI Stereo – To turn the option ON, press [Yes]. **DI Art. Head** – To turn the option ON, press [Yes]. **DI Compressed** – To turn the option ON, press [Yes].



DI Dyn. PTY - Select one of the available options - Static PTY, Dynamic PTY.

RDS Music/Speech (M/S) – This flag simply indicates whether music or speech is the primary broadcast programming. Select the appropriate value.

Basic RDS Encoder – Meters

Will depict the current RDS Program Service Name (PS) and RDS Radio Text (RT).

MPX Power Control (BS-412)

Limits the MPX Power as per the ITU BS412 directive. The BS412 standard states that the integrated MPX power in any arbitrary 60-second time period cannot exceed the average power of the sinewave that produced ± 19 kHz carrier deviation. Meaning that you must not exceed the total integrated power limit over the following 60 seconds. The authorities in each country have set different parameters that should be observed. It is recommended your local authorization to be checked.

For your convenience, the option can be generally turned [Off] or [On]. The Meters sections depicts the current status of the Predic PWR, Norm PWR, Integration Time and PWR Red.

SETUP Print Settings							(Ð	X
Settings -	MAIN SETTINGS -								
General	MPX Power Limit (BS-412)					Off			
Users	MPX Power Limit (BS-412) [dB	ir]						6.0	dBr
Preset Settings	CALIBRATION -								
Inputs	Pwr corr [dB]					-		0.00	dB
Outputs								0.00	ub .
Stereo Generator & MPX Output									
Basic RDS Encoder									
MPX Power Control (BS-412)									
Ethernet: AE\$67/LIVEWIRE+									
Ethernet: IP CONNECT									
GPIO									
Synchro									
Preset Sharing	METERS -								-
IP CONNECT +	Predic PWR [dBr]	10.01			-	1			12
ADVANCED +	Norm PWR [dBr]	(10.01)				1			12
					0	а	6	9	
	Integration Time [s]	60	10	20	30	40		50	60
	PWR Red [dB]	0.0	-8	-6		-4	-2		è



Ethernet: AES67/LIVEWIRE+

Allows basic setup of the Ethernet: AES67/LIVEWIRE+ and displays the current state of the device. You can specify Network host name, DHCP, IP Address, IP Default Gateway, IP Mask, IP Broadcast, DNS Server and DNS Server 2.

The current values will be displayed below - section CURRENT.

SETUP Print Settings		
Settings -	BASIC -	
General	Network host name	IMPACT-A67-211A0 ===
Users	DHCP	On
Preset Settings	IP Address	
Voice/Mono Detect	IP Default Gateway	
Inputs	IP Mask	
Outputs	IP Broadcast	
Stereo Generator & MPX Output	DNS Server	
Basic RDS Encoder MPX Power Control (BS-412)	DNS Server 2	
Ethernet: AE\$67/LIVEWIRE+		
Ethernet: IP CONNECT		
GPIO		
Synchro		
Preset Sharing		
IP CONNECT +		
ADVANCED +		
	CURRENT (DISPLAY ONLY) -	
	IP Status	Unplug
	Network host name	IMPACT-A67-211A0
	IP Address	Error
	IP Subnet Mask	Error
	IP Gateway	Error
	IP Broadcast	Error
	DNS Server	Unknown
	DNS Server 2	Unknown



Ethernet: IP CONNECT

All the mandatory IP Connect settings are available in this menu. You can specify Network host name, DHCP, IP Address, IP Default Gateway, IP Mask, IP Broadcast, DNS Server and DNS Server 2. The current values will be displayed below - section CURRENT.

ettings —	BASIC -	
General	Network host name	IMPACT-IP-211A00 = = =
Users	DHCP	On
Preset Settings	IP Address	
Voice/Mono Detect	IP Default Gateway	
Inputs	IP Mask	
Outputs	IP Broadcast	
Stereo Generator & MPX Output	DNS Server	
Basic RDS Encoder	DNS Server 2	
MPX Power Control (BS-412) Ethernet: AE\$67/LIVEWIRE+	DNS Server 2	
GPIO Synchro		
Synchro Preset Sharing P CONNECT +	CURRENT (DISPLAY ONLY)	
Synchro Preset Sharing © CONNECT +	CURRENT (DISPLAY ONLY) — Network host name	
Synchro Preset Sharing © CONNECT +	· · · · · · · · · · · · · · · · · · ·	
Synchro Preset Sharing © CONNECT +	Network host name	IMPACT-IP-211A00
Synchro Preset Sharing © CONNECT +	Network host name	IMPACT-IP-211A00 Error
Synchro Preset Sharing P CONNECT +	Network host name IP Adress IP Subnet Mask	IMPACT-IP-211A00 Error Error
Synchro	Network host name IP Adress IP Subnet Mask IP Gateway	IMPACT-IP-211A00 Error Error Error

GPIO

The general purpose inputs and outputs settings are applied through this page.

SETUP Print Settings					\rightarrow
SETTINGS -	Running	Master GPI			
General					
Users	Unused O	GPI 1 (Pin 13)	No Action	No Action	
Preset Settings	Ununed O	GPI 2 (Pin 12)	No Action	No Action	
Inputs	Unosed O	GPI 2 (PIN 12)	NO ACION	NO ACION	
Outputs	Unused O	GPI 3 (Pin 11)	No Action	No Action	
Stereo Generator & MPX Output					
Basic RDS Encoder	Unused O	GPI 4 (Pin 10)	No Action	No Action	
MPX Power Control (BS-412)					
Ethernet: AE\$67/LIVEWIRE+		GPI 5 (Pin 9)	No Action	No Action	
Ethernet: IP CONNECT	Unused O	GPI 6 (Pin 8)	No Action	No Action	
GPIO					
Synchro	Unused O	GPI 7 (Pin 22)	No Action	No Action	
Preset Sharing					
IP CONNECT +	Unused O	GPI 8 (Pin 6)	No Action	No Action	
ADVANCED +					
	Running	Master GPO			
	Unused O	GPO 1 (Pin 15)	No Action		
	Unused O	GPO 2 (Pin 16)	No Action		
	Unused O	GPO 3 (Pin 17)	No Action		
	Unused O	GPO 4 (Pin 18)	No Action		
	Unused O	GPO 5 (Pin 19)	No Action		
	Unused O	GPO 6 (Pin 20)	No Action		
	Unused O	GPO 7 (Pin 21)	No Action		
	Unused O	GPO 8 (Pin 23)	No Action		



Synchro

All synchronization related settings are available in this section of the Setup menu.

SETUP Print Settings				\rightarrow
SETTINGS —	GENERAL -			
General	Reference Clock		LIVEWIRE = = =	
Users	LIVEWIRE+ SYNCHRO -			
Preset Settings	Livewire+ clock master pr	riority	1	
Inputs	Std clk ip		Default ===	
Outputs	Live clk ip		Default ===	
Stereo Generator & MPX Output	Std clk port		Default ===	
Basic RDS Encoder MPX Power Control (BS-412)	Live clk port		Default	
Ethernet: AE\$67/LIVEWIRE+	AES67 SYNCHRO —			
Ethernet: IP CONNECT	Always Slave		Yes	
GPIO	Domain		0 - Default	
Synchro	Priority 1		128	
Preset Sharing	Priority 2			
P CONNECT +			128	
ADVANCED +	Sync Delay [s]		1.000 = = =	
	SYNCHRONISATION -			
	Sync Src Mode	Internal		
	Livewire Sync State	Asynch		
	Livewire Sync IP	None		
	AES67 Sync State	Asynch		
	AES67 Sync IP	None		

The Reference Clock can be synced either to the LIVEWIRE, Internal or AES67.

LIVEWIRE+ SYNCRO is used to set the Livewire+ clock master priority from the available options. You can also set the Studio (std) and Live clk (clock) ip and port.

AES37 SYNCRO allows you to enable or disable (Yes/No) the Always Slave option. As an addition you can also set the Domain, Priority 1 & 2 and Sync Delay.

SYNCHRONISATION contains information as regards the currently applied settings.



Preset Sharing

A newly created preset can be shared with other devices. All the needed settings for the Preset Sharing option are applied through this menu page.

Users Users Preset Settings Inputs Outputs Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (85-412) Ethermet: AES67/UVEWIRE+ Ethermet: IP CONNECT OBIO	Add Network Edit Delete Run Scan Network List: - - P Port Preset Sharing: Mode Off Follow OnAir Preset Off Product List: Sharing Processor Name Board Serial IP
Users Preset Settings Inputs Outputs Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (BS-412) Ethernet: AES67/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Preset Sharing IP CONNECT +	P Port Preset Sharing: — Mode Off Follow OnAir Preset Off Product List:
Users Preset Settings Inputs Outputs Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (BS-412) Ethernet: AES67/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Preset Shoring IP CONNECT +	P Port Preset Sharing: — Mode Off Follow OnAir Preset Off Product List:
Inputs Outputs Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (BS-412) Ethernet: AES67/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Presel Shoring IP CONNECT +	Mode Off Follow OnAir Preset Off
Outputs Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (BS-412) Ethernet: AES&7/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Presel Sharing IP CONNECT +	Mode Off Follow OnAir Preset Off
Stereo Generator & MPX Output Basic RDS Encoder MPX Power Control (BS-412) P Ethernet: AES67/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Preset Shoring IP CONNECT +	Mode Off Follow OnAir Preset Off
Batic RDS Encoder MPX Power Control (85-412) Ethemet: AES67/L/VEWIRE+ Ethemet: IP CONNECT GPIO Synchro Preset Shoring IP CONNECT +	Mode Off Follow OnAir Preset Off
MPX Power Control (85-412) P Ethernet: AE567/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Synchro P IP CONNECT + IP	Mode Off Follow OnAir Preset Off
Ethernet: AES67/LIVEWIRE+ Ethernet: IP CONNECT GPIO Synchro Preset Shoring IP CONNECT +	Mode Off Follow OnAir Preset Off
Ethernet: IP CONNECT GPIO Synchro Preset Sharing IP CONNECT +	Product List:
GPIO Bynchro Preset Sharing IP CONNECT +	
GPIO 5 Synchro Presel Sharing IP CONNECT +	
Synchro Presel Shoring PCONNECT +	
P CONNECT +	
advanced +	



IP Connect

All the IP connect related settings are applied via this menu.

The Links menu allows you to specify the number of links to be used.

SETUP Print Settings			X
settings +	links —		
IP CONNECT -	Quantity	2	
Links			
Recover			
ADVANCED +			

Recover – allows user-defined settings to be applied to SOUND4's RELAX MODE.

SETUP Print Settings)			\times
SETTINGS +		RELAX MODE -		
IP CONNECT -		Stop sending after this time, when broken	30	s
Links		Space between checks, when broken	15	min
Recover				
ADVANCED +				



Advanced

Upgrade/License

Allows easy upgrade of the license.

SETUP Print Settings					\times
SETTINGS +	Load License				
	Licenses List:				
ADVANCED -	License		Validity	Time left	
Upgrade / Licenses	Demo License - Option AES67		2018-03-31	38 days 9 hours	
Backup / Restore	Demo License - Option Basic RDS		2018-03-31	38 days 9 hours	
	Demo License - Option Commercial		2018-03-31	38 days 9 hours	
Test Generator	Demo License - Option Emergency A Demo License - Option Full RDS/UEC		2018-03-31 2018-03-31	38 days 9 hours	
Calibrate	Demo License - Option Full RDS/UEC		2018-03-31	38 days 9 hours	
Hardware/Supervision	Demo License - Option IP Connect IP Demo License - Option IP Connect IP			38 days 9 hours 38 days 9 hours	
Maintenance	Demo License - Option IP Connect IP Demo License - Option IP Connect R		2018-03-31 2018-03-31	38 days 9 hours 38 days 9 hours	
	Demo License - Option IP Connect R		2018-03-31	30 days 9 hours 38 days 9 hours	
AE\$67/Livewire+ Audio QO\$	Demo License - Option IP Connect R		2018-03-31	30 days 9 hours 38 days 9 hours	
AES67/Livewire+ Audio Profiles	Demo License - Option IP Connect K	X TO IX POSS-TIPU	2018-03-31	38 days 9 hours	
	Demo License - Option Streaming Ex	tanian	2018-03-31	38 days 9 hours	
	Demo License - SOUND4 FIRST	alension.	2018-03-31	38 days 9 hours	
	Demo License - SOUND4 IMPACT		2018-03-31	38 days 9 hours	
	Demo License - SOUND4 PULSE		2018-03-31	38 days 9 hours	
	Demo License - URLPLAY		2018-03-31	38 days 9 hours	
	Version Info: —				
	IMPACT Version	1.14			
	IMPACTSerial	211A0001			

There are two options of loading a new license/s. Both are explained in details below.



Option 1 – Expired License

Your main license has expired ! Please contact SOUND4 for renew your main license
Ok

To upload a new license follow the steps listed below:

1. Press [OK]. The following screen will appear;

Load License Licenses List: License Volidity Time left	
License Validity Time left	
Version Info: —	
IMPACTVersion 1.14	
IMPACTSerial 211A0019	

- 2. Press [License upload] and a new window requiring license file to be selected will open;
- Go to the file directory, select the license and press [Open].
 NOTE: All licenses are sent/provided in a ZIP file. It is not needed the file to be unzipped prior to their upload. They will be accepted by the program as they are.
- 4. Wait until the licenses are loaded;

Please, Wait... Loading licences

5. Once the process is completed, the following message will appear:

16 Licenses loaded with success
Ok

6. Press [OK] and the Main control window will appear.



Option 2 – NEW License

- 1. Open the Main control window and click on [Setup]. The setup menu will appear;
- 2. Scroll down with the cursor to the ADVANCED settings and press Upgrade Licenses. The Following window will appear:

SETUP Print Settings)
Basic RDS Encoder	\bigcirc	Load License				
MPX Power Control (BS-412)		Licenses List:				
Ethernet: AE\$67/LIVEWIRE+		License		Validity	Time left	
Ethernet: IP CONNECT		Demo License - Option AES67		2018-03-31	72 days 13 hours	
		Demo License - Option Basic RDS		2018-03-31	72 days 13 hours	
GPIO		Demo License - Option Commercia	al Audio Player	2018-03-31	72 days 13 hours	
Synchro		Demo License - Option Emergency	Audio Player	2018-03-31	72 days 13 hours	
Preset Sharing		Demo License - Option Full RDS/UE	CP	2018-03-31	72 days 13 hours	
r totor on dan ig		Demo License - Option IP Connect	IP TX1	2018-03-31	72 days 13 hours	
IP CONNECT -		Demo License - Option IP Connect	IP TX2	2018-03-31	72 days 13 hours	
Links		Demo License - Option IP Connect	RX1	2018-03-31	72 days 13 hours	
Recover		Demo License - Option IP Connect	RX2	2018-03-31	72 days 13 hours	
1000761		Demo License - Option IP Connect	Rx to Tx Pass-thru	2018-03-31	72 days 13 hours	
ADVANCED -		Demo License - Option Livewire+		2018-03-31	72 days 13 hours	
Upgrade / Licenses		Demo License - Option Streaming B	Extension	2018-03-31	72 days 13 hours	
		Demo License - SOUND4 FIRST		2018-03-31	72 days 13 hours	
Backup / Restore		Demo License - SOUND4 IMPACT		2018-03-31	72 days 13 hours	
Test Generator		Demo License - SOUND4 PULSE		2018-03-31	72 days 13 hours	
Calibrate		Demo License - URLPLAY		2018-03-31	72 days 13 hours	
Hardware/Supervision		Version Info: —				
Maintenance						
AE\$67/Livewire+ Audio QO\$		IMPACT Version	1.14			
		IMPACTSerial	211A0001			
AES67/Livewire+ Audio Profiles	(\vee)	INFACTSend	211A0001			

- 3. Press [Load Licenses];
- Go to the file directory, select the license and press [Open].
 NOTE: All licenses are sent/provided in a ZIP file. It is not needed the file to be unzipped prior to their upload. They will be accepted by the program as they are.
- 5. Wait while the licenses are loaded;
- 6. Once the process is completed, press [OK] and close the Setup window so that the Main control can appear.



Backup/Restore

This section is dedicated to the Backup, Restore and Restore to Factory processes. To ease the completion of each option, thorough information as regards each opportunity can be found in the right part of the screen.

SETUP Print Settings	
Settings +	Backup Restore Restore To Factory
IP CONNECT +	Information:
ADVANCED — Upgrade / Licenses	 The "Backup" function will save all your processor data. Your Presets, history, access rights and Settings will be compacted into a backup file that you may store wherever you want.
Backup / Restore Test Generator Calibrate	 The "Restore" function will fully restore your processor from a backup file. Your Presets, history, access rights and current Settings will be replaced by the values contained in the file.
Hardware/Supervision Maintenance	 The "Restore To Factory" will to completely re-initialize your processor. All of your data (Presets, history, accessrights and Settings) will be erased and replaced by Factory values.
AES67/Livewire+ Audio QOS AES67/Livewire+ Audio Profiles	- A backup file can also be used to duplicate a configuration on multiple processors.
AES6//LIVEWIRE+ AUGIO Profiles	Warning:
	when the backup file was created. Without those passwords it will be impossible for you to access the processor after the restore function is complete.

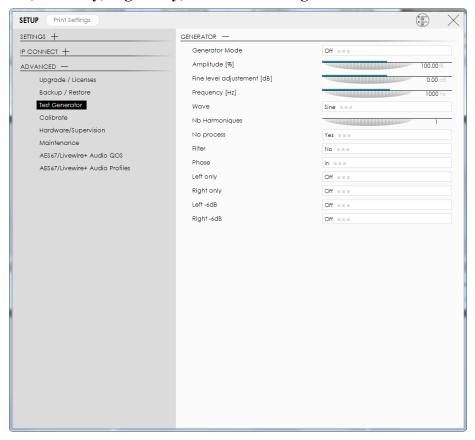


Test Generator

All the mandatory settings for the Test Generator are available here.

Generator Mode – can be turned [On] or [Off];

You can also set the desired **Amplitude** in %, the **Fine level adjustment** in db and **Frequency** in Hz. As an addition you can select the desired **Wave** type and using the interactive slider to set the **Nb Harmoniques**. The following parameters are also user-selectable - **No process**, **Filter**, **Phase**, **Left only**, **Right only**, **Left -6dB** and **Right -6dB**.





Calibrate

To calibrate the device, follow the process by applying the needed settings and clicking [Next] on each tab until the procedure is completed. The software will guide you through the Calibration process.

CALIBRATE
You will need a meter with assymmetrical (for TX) and symmetrical (for Analog output) inputs. You will also need a pair of symetrical XLR cable for linking analog output to input, You will also need a pair of assymetrical BNC cable for linking TX to Sub, Don't do this if you are on air.
Sine waves will be output to all I/O.
Clicking 'Next' button will enter in calibrate mode.
Clicking 'Restore Factory Calibration' button will restore Factory Calibration.
Restore Factory Calibration
Next Cancel



Hardware/Supervision

Allows set-up of the **Display**, **SNMP** and **Windows share** options. This section also provide all the needed information for the **Temperature**, **Main CPU Usage** and **FAN**.

SETUP Print Settings		(
Settings —	DISPLAY —		
General	LED PWM [%]	100 %	
Users	Screen brightness [%]	100 %	
Preset Settings	SNMP —		
Voice/Mono Detect	SNMP	On	
Inputs	SNMP Port	161	
Outputs	SNMP RO Community	public	
Stereo Generator & MPX Output	SNMP RW Community	poore	
Basic RDS Encoder			
MPX Power Control (BS-412)	SNMP Trap Host		
Ethernet: AES67/LIVEWIRE+	SNMP Trap Port	162	
Ethernet: IP CONNECT	WINDOWS SHARE -		
Synchro	Windows Share	On	
Preset Sharing	Windows Share Description		
IP CONNECT +	Windows Share Workgroup		
	POWER SUPPLY -		
ADVANCED -	P\$U1	Running	
Upgrade / Licenses Backup / Restore	P\$U2	Failure Or Unplugged	
Test Generator	Analog Power	ОК	
Calibrate			
Hardware/Supervision			
Maintenance			
Services Management	FAN +		
AE\$67/Livewire+ Audio QO\$	REMOTE ASSISTANCE +		
AE\$67/Livewire+ Audio Profiles			
Livewire+/AES67 Advertisement			

Display – set the desired LED PWM (power meters) and Screen brightness in %.

SNMP – turn the option [ON] or [Off] and specify SNMP Port, SNMP RO Community, SNMP RW Community, SNMP Trap Host and SNMP Trap Port.

Windows Share – turn the option [ON] or [Off] and specify Windows Share description and Windows Share Workgroup.

Power Supply - displays the current status of the PSU1 and PSU2 and Analog Power.



		Ű	/
ETTINGS -	DISPLAY +		
General	SNMP +		
Users	WINDOWS SHARE +		
Preset Settings	POWER SUPPLY +		
Voice/Mono Detect	TEMPERATURE -		
Inputs	Temperature Board [°C]	39 °C	
Outputs	Temperature CPU [°C]	37 °C	
Stereo Generator & MPX Output			
Basic RDS Encoder	Temperature Sharc1 [°C]	46 °C	
MPX Power Control (BS-412)	Temperature Sharc2 [°C]	45 °C	
Ethernet: AE\$67/LIVEWIRE+	Temperature Sharc3 [°C]	46 °C	
Ethernet: IP CONNECT	Temperature Sharc4 [°C]	50 °C	
Synchro	Temperature IO Board [°C]	28 °C	
Preset Sharing	MAIN CPU USAGE -		
-	CPU [%]	25.5 %	
P CONNECT +	FAN -		
ADVANCED —	FAN1 Rotate per Sec [r/s]	98 r/s	
Upgrade / Licenses	FAN2 Rotate per Sec [r/s]	19 r/s	
Backup / Restore			
Calibrate	REMOTE ASSISTANCE -		
Hardware/Supervision	Remote Assistance access	Off	
Maintenance			
Services Management			
AES67/Livewire+ Audio QOS			
AES67/Livewire+ Audio Gos			
Livewire+/AE\$67 Advertisement			

Temperature – displays the current temperature (in Celsius) of the Board, CPU, Sharc1 to 4 and IO Board.

Main CPU usage – displays the current CPU usage in %.

Fan – displays the current status of FAN 1 & 2 in rotations per second.

If Remote Assistance is needed, the option can be turned [On] or [Off].



Maintenance

Information as regards the available options can be found in the right part of the screen. Upon selecting any of the reset options, a warning message will appear. To continue with the process, press OK.

SETUP Print Settings			\times
settings +	Reset Board Reset A	ES67/LIVEWIRE+ Reset IP CONNECT	
IP CONNECT +	Log Server Log AB	ES67/LIVEWIRE+ Log IP CONNECT	
ADVANCED -	Information:		
Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS AES67/Livewire+ Audio Profiles	Reset BOARD: Reboot fiming: If you are using Ethernet (Audio I 30 sec to restart. If you are not using Ethernet, the Reset Ethernet Reboot iming:	P, Livewire, Ravenna), the card will neer card will need less than 5 sec to restart. P, Livewire, Ravenna), the card will neer	



AES67/Livewire+Audio QOS

All the mandatory settings to be applied to the AES67/Livewire+Audio QOS are available in this section of the menu.

TUP Print Settings		
ettings +	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV	E AUDIO —
CONNECT +	Receive Buffer Size [ms]	LIVEWIRE+ QOS (802.1p 802.1Q) / LIVE AUDIO
DVANCED -	802.1 Tagging	On
Upgrade / Licenses	802.1 VLAN ID	0 = = =
Backup / Restore	802.1 Priority	6 Internetwork Control (recommended)
Test Generator	DSCP Class of Service	46 Expedited Forwarding (recommended)
Calibrate	Time To Live (TTL)	2 ===
Hardware/Supervision	LIVEWIRE+ QOS (802.1P 802.1Q) / STA	NDARD AUDIO -
Maintenance	Receive Buffer Size [ms]	100.00 ===
AE\$67/Livewire+ Audio QO\$ AE\$67/Livewire+ Audio Profiles	802.1 Tagging	On
AES6//LIVEWIRE+ AUGIO Profiles	802.1 VLAN ID	0 ===
	802.1 Priority	5 Voice, 10 ms latency (recommended)
	DSCP Class of Service	34 AF41 (recommended)
	Time To Live (TTL)	2
	AES67 QOS (802.1P 802.1Q) / VERY L	
	Receive Buffer Size [ms]	0.00 = = =
	802.1 Tagging	Off
	802.1 VLAN ID	0
	802.1 Priority	6 Internetwork Control (recommended)
	DSCP Class of Service	46 Expedited Forwarding (recommended)
	Time To Live (TTL)	2 ===
	AES67 QOS (802.1P 802.1Q) / LOW D	
	AES67 QOS (802.1P 802.1Q) / STAND	ARD +
TUP Print Settings	AES67 QOS (802.1P 802.1Q) / PTP +	
TINGS +	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV	E AUDIO +
TINGS + CONNECT +	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA	E AUDIO +
TTINGS + CONNECT + JVANCED -	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI	e audio + Indard audio + Ow delay +
TTINGS + CONNECT + VVANCED — Upgrade / Licenses	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D	E AUDIO + INDARD AUDIO + OW DELAY + ELAY -
TTINGS + CONNECT + VVANCED - Upgrade / Licenses Backup / Restore	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VORY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms]	E AUDIO + ANDARD AUDIO + OW DELAY + ELAY - 500 ===
TTINGS + CONNECT + VVANCED — Upgrade / Licenses	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging	E AUDIO + NIDARD AUDIO + OW DELAY + ELAY - 5.00 === Off ===
TTINGS + CONNECT + VVANCED Upgrade / Licenses Backup / Restore Test Generator	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LU AES67 QOS (802.1P 802.1Q) / UOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID	E AUDIO + NIDARD AUDIO + OW DELAY + ELAY - 5.00 Off 0
TTINGS + CONNECT + VVANCED - Upgrade / Licenses Backup / Restore Test Generator Calibrate	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LU AES67 QOS (802.1P 802.1Q) / VORY LU Receive Buffer Size [ms] 802.1 Togging 802.1 VLAN ID 802.1 Priority	E AUDIO + NDARD AUDIO + OW DELAY + ELAY - 5.00 === 0 ff === 0 ff === 5 Voice, 10 ms latency (recommended) ===
TINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI Receive Buffer Size [ms] 802.1 Togging 802.1 VLAN ID 802.1 Priority DSCP Class of Service	E AUDIO + ANDARD AUDIO + OW DELAY + ELAY - Sum - Off S Voice, 10 ms latency (recommended) 34 AF41 (recommended)
TINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LU AES67 QOS (802.1P 802.1Q) / VORY LU Receive Buffer Size [ms] 802.1 Togging 802.1 VLAN ID 802.1 Priority	E AUDIO + NDARD AUDIO + OW DELAY + ELAY - 5.00 === 0 ff === 0 ff === 5 Voice, 10 ms latency (recommended) ===
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND	E AUDIO + NDARD AUDIO + OW DELAY + ELAY - 500 === Off === 0 === 5 Voice, 10 ms lotency (recommended) === 34 AF41 (recommended) === 2 ===
TINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AE\$67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TTL)	E AUDIO + NDARD AUDIO + OW DELAY + ELAY - 500 === Off === 0 === 5 Voice, 10 ms lotency (recommended) === 34 AF41 (recommended) === 2 ===
TINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AE\$67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND	E AUDIO + NDARD AUDIO + OW DELAY + ELAY - 500 === Off === 0 === 5 Voice, 10 ms latency (recommended) === 2 === ARD -
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / UOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms]	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - 5.00 5.00 5.00 5.00 2 ARD - 50.00 50.00
TINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AE\$67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / UOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 Pintity DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND. Receive Buffer Size [ms] 802.1 Tagging	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - 5.00 0 5 Voice, 10 ms lotency (recommended) 34 AF41 (recommended) 2 ARD - Cff 50.00 0 50.00 0
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 Tub	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - S Voice, 10 ms latency (recommended)
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Togging 802.1 Togging 802.1 Priority	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - Solver -
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	UVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (0TL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 Priority DSCP Class of Service	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - Subscriptson Subscriptson Subscriptson ELAY - Subscriptson Sub
TTINGS + CONNECT + Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	UVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / UOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Triority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 Triority DSCP Class of Service Time To Live (TL)	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - Subscriptson Subscriptson Subscriptson ELAY - Subscriptson Sub
TTINGS + CONNECT + DVANCED - Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 Tagging 802.1 Togging 802.1 Togging 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 Transf 802.1 Transf 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / PTP —	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - Subscriptson Subscriptso
TTINGS + CONNECT + DVANCED - Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 Togging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Tagging 802.1 Togging 802.1 Triority DSCP Class of Service Time To Live (TL) AES67 QCS (802.1P 802.1Q) / PTP — 802.1 Tragging	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - S00 SVoice. 10 ms latency (recommended) ARD - S000 S000 Off S000 Coff
TTINGS + CONNECT + DVANCED Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LOW D Receive Buffer Size [ms] 802.1 Tagging 802.1 Togging 802.1 Togging 802.1 Togging 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / STAND Receive Buffer Size [ms] 802.1 Tagging 802.1 VLAN ID 802.1 Togging 802.1 VLAN ID 802.1 Priority DSCP Class of Service Time To Live (TL) AES67 QOS (802.1P 802.1Q) / PTP — 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 VLAN ID	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - S00 S00 SVoice. 10 ms latency (recommended) ARD - S000 Svoice. 10 ms latency (recommended) Svoice. 10 ms latency (recommended) Coff
Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LIV AES67 QOS (802.1P 802.1Q) / LIV AES67 QOS (802.1P 802.1Q) / LIV B02.1 Tagging 802.1 Tagging 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND. Receive Buffer Size [ms] 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / PTP — 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / PTP — 802.1 Tagging 802.1 VLAN ID 802.1 Priority	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - S00 - Off - SVoice, 10 ms latency (recommended) - ARD - S00 - Off -
TTINGS + CONNECT + DVANCED Upgrade / Licenses Backup / Restore Test Generator Calibrate Hardware/Supervision Maintenance AES67/Livewire+ Audio QOS	LIVEWIRE+ QOS (802.1P 802.1Q) / LIV LIVEWIRE+ QOS (802.1P 802.1Q) / STA AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / VERY LI AES67 QOS (802.1P 802.1Q) / LIV B02.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / STAND. Receive Buffer Size [ms] 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tagging 802.1 Tourity DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / PTP — 802.1 Priority DSCP Class of Service Time To Live (TTL) AES67 QOS (802.1P 802.1Q) / PTP — 802.1 Tagging 802.1 VLAN ID 802.1 Priority DSCP Class of Service	E AUDIO + NNDARD AUDIO + OW DELAY + ELAY - S00 - Off - S Voice. 10 ms latency (recommended) - 34 AF41 (recommended) - ARD - S00 - Off - Color - Off - Off<



AES67/Livewire+Audio Profiles

All the mandatory settings to be applied to the AES67/Livewire+Audio Profiles are available in this section of the menu.

SETUP Print Settings			\times
SETTINGS +	AES67 PROFILE / VERY LOW DELAY -		
IP CONNECT +	Sample Format	L24 ===	
ADVANCED -	Packet Len	12	
Upgrade / Licenses	AES67 PROFILE / LOW DELAY -		
Backup / Restore	Sample Format	L24 ===	
Test Generator	Packet Len	48 = = =	
Calibrate	AES67 PROFILE / STANDARD —		
Hardware/Supervision	Sample Format	L24 ====	
Maintenance AE\$67/Livewire+ Audio QO\$	Packet Len	120 ===	
			_
AE\$67/Livewire+ Audio Profiles			



Livewire+/AES67 Advertisement

This section allows you to turn [On] or [Off] the MDNS Advertisement option.

SETUP Print Settings			\times
settings +	ACCEPT ADVERTISEMENTS -		
IP CONNECT +	MDNS Advertisement	On	
ADVANCED -			
Upgrade / Licenses			
Backup / Restore			
Test Generator			
Calibrate			
Hardware/Supervision			
Maintenance			
Services Management			
AES67/Livewire+ Audio QOS			
AE\$67/Livewire+ Audio Profiles			
Livewire+/AES67 Advertisement			



WARRANTY TERMS AND CONDITIONS

I. TERMS OF SALE: SOUND4 Ltd. products are sold with an understanding of "full satisfaction"; that is, full credit or refund will be issued for products sold as new if returned to the point of purchase within 30 days following their receipt, provided that they are returned complete and in an "as received" condition.

II. CONDITIONS OF WARRANTY: The following terms apply unless amended in writing by SOUND4 Ltd.

A. The Warranty Registration Card supplied with this product must be completed and returned to SOUND4 Ltd. within 10 days of delivery.

B. This Warranty applies only to products sold "as new." It is extended only to the original end-user and may not be transferred or assigned without prior written approval by SOUND4 Ltd.

C. This Warranty does not apply to damage caused by improper mains settings and/or power supply.

D. This Warranty does not apply to damage caused by misuse, abuse, accident or neglect. This Warranty is voided by unauthorized attempts at repair or modification, or if the serial identification label has been removed or altered.

III. TERMS OF WARRANTY: SOUND4 Ltd. products are warranted to be free from defects in materials and workmanship.

A. Any discrepancies noted within FIVE YEARS of the date of delivery will be repaired free of charge, or the equipment will be replaced with a new or remanufactured product at SOUND4 Ltd. option.

B. Parts and labor for factory repair required after the five-year Warranty period will be billed at prevailing prices and rates.

IV. RETURNING GOODS FOR FACTORY REPAIR:

A. Equipment will not be accepted for Warranty or other repair without a Return Authorization (RA) number issued by SOUND4 Ltd. prior to its return. An RA number may be obtained by calling the factory. The number should be prominently marked on the outside of the shipping carton.

B. Equipment must be shipped prepaid to SOUND4 Ltd.. Shipping charges will be reimbursed for valid Warranty claims. Damage sustained as a result of improper packing for return to the factory is not covered under terms of the Warranty and may occasion additional charges.



PRODUCT REGISTRATION CARD

• All fields are required, or warranty registration is invalid and void

Your Company Name		
Contact		
Address Line 1		
Address Line 2		
City		
State/Province	ZIP/Postal	Code
Country		
E-mail	Phone	Fax
Which SOUND4 Ltd. product did y	you purchase?	
Product Serial #		
Purchase date / /	Installation date/	/

Your signature*

Privacy statement: SOUND4 Ltd. will not share the personal information you provide on this card with any other parties.

^{*}Signing this warranty registration form you are stating that all the information provided to SOUND4 Ltd. are truth and correct. SOUND4 Ltd. declines any responsibility for the provided information that could result in an immediate loss of warranty for the above specified product(s).