

# audison



**bit Nove**  
Signal Interface Processor

bit

## PRODUCT INFORMATION

Elettromedia July 2017



[www.audison.eu](http://www.audison.eu)



ideato,  
progettato,  
costruito  
in Italia

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## bit Nove

Signal Interface Processor

# PRODUCT INFORMATION

BIT NOVE! THE NEW AUDISON BIT PROCESSOR	3
INPUT CONNECTIVITY	3
OUTPUT CONNECTIVITY	3
WIRE CONTROL	4
POWERED BY BIT DRIVE	4
DRC AB – DIGITAL REMOTE CONTROL	4
CONTROLLED BASS-BOOST	5
HEAD-UNIT GONG SIGNALS MANAGEMENT	5
PC SOFTWARE	6
SIGNAL PROCESSING	7
AUDISON BIT NOVE TECHNICAL SPECIFICATIONS	8
AUDISON DRC AB TECHNICAL SPECIFICATIONS	10
HOW TO CONNECT	11
ABOUT US	12
PRESS KIT	13

Elettromedia July 2017



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## BIT NOVE! THE NEW AUDISON BIT PROCESSOR

bit Nove is a powerhouse of technology fully dedicated to listening pleasure: since 2007, the year in which the bit One was first introduced, Audison has never stopped delivering innovation to the digital processors segment. The bit Nove was born from this unique know-how within the industry, the perfect tool to expand a car audio system maximizing its performance.



Audison bit Nove inputs panel



Thanks to the integration of the **USS technology** (Universal Speakers Simulator), the bit Nove can also be connected to head-units featuring the "speaker load detection" circuit that would otherwise mute the audio signal output.



Audison bit Nove outputs panel

### Input Connectivity

Equipped with **6 high** ( $3 \div 20V$ ) and **low** ( $1.2 \div 8V$ ) level inputs, the bit Nove can be used with any type of aftermarket and OEM source. The **auxiliary RCA input** ( $0.3 \div 5V$ ) is perfect to connect your **smartphone or tablet to the bit Nove** providing the highest possible quality.

The advanced PC software sums up the channels belonging to the same front and de-equalizes the OEM source frequency response in a few simple steps.

There are also two optical digital inputs with a maximum accepted resolution of **192 kHz/24 bit** to simultaneously connect an Audison bit DMI to the bit Nove (taking the digital audio from the car MOST bus) and the Hi-Res bit Play HD player.

### Output Connectivity

The bit Nove features **nine output channels on RCA connectors** providing a large number of active multi-amplified configurations, ensuring a wide range of set-up options to the installer. For each channel, the powerful DSP provides: a 10-pole parametric equalizer allowing for optimal adjustments, a **68 steps frequency crossover**, **Butterworth or Linkwitz-Riley type filters with slopes from 6 to 24 dB/Oct** and a **time-delay line**.

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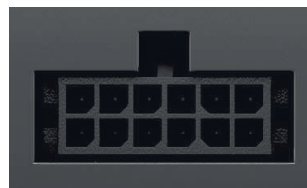
*Audison bit Nove is compatible with the bit Drive technology*



*DRC AB remote control supplied*

## Wire Control

When receiving an electrical signal from an external source, you can select the optical digital input 2 and enable the preset D saved via PC Software. For example, the seat belt sensor can be used to activate the driver and passenger optimized setup.



*Wire control (Optical input 2 and Preset D selection)*

## Powered By Bit Drive

By connecting the bit Nove to the Audison bit Tune, you can calibrate time alignment, equalization and output levels with an automated procedure, ensuring outstanding acoustic results. During this phase the diagnosis of common "connection errors" (channel/phase inversion, lack of signal on a channel, etc.) is also performed, to free the specialist from "routine" work and allow him to focus on the art of "fine-tuning". The bit Nove firmware, installed in a Flash memory, can be upgraded without disconnecting the processor from the system: upon startup, the PC software scans for the availability of updates in the Bit Drive portal (<http://bitDrive.it>) and notifies the user who will be directed to the website.

## DRC AB Digital Remote Control

The supplied DRC AB controls the system's main functions without the use of a PC. With this device, the user can remotely perform the following operations: manage the main settings (volume, balance, fader, subwoofer level), choose between the four preset configurations saved via PC software and select the source among master, auxiliary and the two optical digital inputs.

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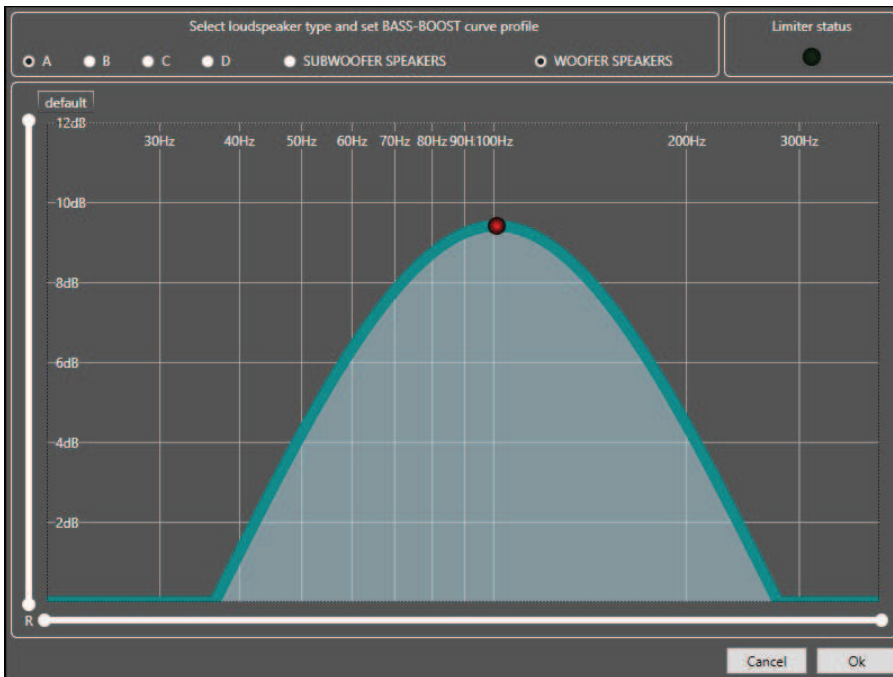
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*Controlled  
Bass-Boost  
manageable  
by DRC AB  
remote control*

## Controlled Bass-Boost

The bass boost provides further equalization for the low frequencies operating on the subwoofer and woofer channels. You can **freely select the parametric equalization pole on which to operate and change the "Q" factor** by using the mouse wheel. When strong equalizations are set up, the software will intervene via a soft clipping, eliminating the resulting distortions. A different bass boost setting can be associated with any memory preset A, B, C or D and **enabled/disabled by DRC AB remote control**.



## Head-Unit Gong Signals Management

If gong signals are present while the AUX or Optical 1/2 input is playing, **the device automatically reassigns the input to Master**, setting the volume selected by the user for this function. When the signal generated by the vehicle ends, the reproduction returns to the source previously selected and to its original volume.

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## bit Nove

## Pc Software

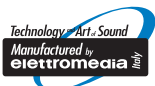
The improved PC software simplifies the user's settings for signal processing, ensuring great results with little time. In one single window you can set up levels, frequency cut-offs, time delays and equalizers for each of the nine output channels. Based on Windows platform (compatible with XP, Vista, 7, 8, 10), it can be used in **Standard or Expert mode**.

The first one is configured to manage the system in a simplified and easy way while the second one provides the ability to operate with maximum freedom on all parameters for a "full-custom" configuration. Using a wizard in just a few clicks you can map the inputs and outputs and de-equalize the signal from the OEM source. The user-selectable contextual Help displays detailed descriptions of key features in a dynamic window.

Renewed  
PC software



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## bit Nove

## Signal processing

The Audison bit Nove features a 32-bit DSP with 24-bit A/D and D/A converters. Following the conversion from analog to digital, or alternatively, starting from one of the two optical digital inputs, the bit Nove provides the ability to:

1. **automatically reconstruct a full bandwidth stereo audio signal** with the possibility of extracting the sub from the FRONT, REAR or FRONT + REAR sides;
2. **flatten (De-Eq) the frequency response**, to cancel any equalization applied by the OEM sources.

The user decides the type of system to be developed via PC Software. Each channel can:

1. be enabled alone (solo function), disabled (mute function) or **phase inverted**;
2. be filtered **with a Linkwitz or Butterworth crossover alignment**, with adjustable slopes (6- 24 dB/Oct.), in 68 steps ranging from 20 to 20,000 Hz, in Hi-Pass, Lo-Pass and Band-pass mode with separately configurable slopes on the two sides;
3. **be equalized using 10 parametric poles**, in a range of  $\pm 12$  dB;
4. **be acoustically time aligned** with up to 15 milliseconds delay, in 0.02 Ms steps, corresponding to a 510 cm virtual loudspeaker "movement". The distance setup mode eases the user in calibrating the time delays which can finally be adjusted with the "fine-tuning";
5. **adjust its output level** to further balance the system's overall response.

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## bit Nove

Signal Interface  
Processor



POWER SUPPLY	
Voltage	10.8 ÷ 15 VDC
Operating power supply voltage	7.5 ÷ 14.4 VDC
Idling current	0.53 A
Switched off without DRC	1 mA
Switched off with DRC	4.5 mA
Remote IN voltage	4 ÷ 15 VDC (1mA)
Remote OUT voltage	10 ÷ 15 VDC (130 mA)
ART (Automatic Remote Turn ON)	2 ÷ 7 VDC
SIGNAL STAGE	
Distortion - THD @ 1 kHz, 1 VRMS Output	0.005%
Bandwidth @ -3 dB	10 Hz ÷ 22 kHz
S/N ratio @ A weighted	
Master Input	102 dBA
AUX Input	101.5 dBA
OPTICAL IN1 / IN2 Inputs	110 dBA
Channel Separation @ 1 kHz	85 dBA
Input sensitivity Pre Master	1.2 ÷ 8 VRMS
Input sensitivity Speaker Master	3 ÷ 20 VRMS
Input sensitivity AUX Master	0.3 ÷ 5 VRMS
Input impedance Pre In / Speaker In / AUX	15 kΩ / 12 Ω / 15 kΩ
Max Output Level (RMS) @ 0.1% THD	4 V
INPUT STAGE	
Low level (Pre)	Ch1 ÷ Ch6; AUX L/R
High Level (Speaker In)	Ch1 ÷ Ch6
Digital	2 x Optical S/PDIF; Max 192 kHz / 24 bit
OUTPUT STAGE	
Low level (Pre)	Ch1 ÷ Ch9

CONNECTION	
From / To Personal Computer	1 x Micro USB
To Audison DRC AB / DRC MP	1 x AC Link
Optical 2 sel	Optical In 2 wire control +12 V enable
Mem D sel	Memory D wire control GND enable
CROSSOVER	
Filter type	Full / Hi pass / Low Pass / Band Pass
Filter mode and slope	Linkwitz @ 12/24 dB - Butterworth @ 6/12/18/24 dB
Crossover Frequency	68 steps @ 20 ÷ 20k Hz
Phase control	0° / 180°
EQUALIZER (20 ÷ 20K Hz)	
Analog Input Equalizer	Automatic De-Equalization
Output Equalizer	N.9 Parametrics Equalizers: ±12 dB; 10 pole; 20 ÷ 20k Hz
TIME ALIGNMENT	
Distance	0 ÷ 510 cm / 0 ÷ 200.8 inches
Delay	0 ÷ 15 ms
Step	0,08 ms; 2,8 cm / 1.1 inch
Fine SET	0,02 ms; 0,7 cm / 0.27 inch
GENERAL REQUIREMENTS	
PC connections	USB 1.1 / 2.0 / 3.0 Compatible
Software/PC requirements	Microsoft Windows (32/64 bit): Vista, Windows 7, Windows 8, Windows 10
Video Resolution with screen resize	min. 1024 x 600
Ambient operating temperature range	0 °C to 55 °C (32 °F to 131 °F)
SIZE	
W (Width) x H (Height) x D (Depth) mm/inch	130 x 34.5 x 199 / 5.11" x 1.35" x 7.83"
Weight kg/lb	0,7 / 1.5

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## bit Nove

Signal Interface  
Processor

<b>DSP AND AUDIO CONVERTERS</b>	32 bit Cirrus Logic (clock speed 147 MHz) processor and A/D D/A converters processing the audio signal in PCM at 48 kHz with 24 bit resolution.
<b>AUDIO INPUTS</b>	6 independent low-level/high-level channels with automatic summing capability and built-in USS (Universal Speakers Simulator) technology. 1 analog low-level stereo auxiliary RCA input. 2 optical digital inputs.
<b>AUDIO OUTPUTS</b>	9 independent RCA analog outputs featuring adjustable level.
<b>CONTROL CONNECTIONS</b>	1 USB /B (2.0) for PC connection. Wire control: when receiving an electric signal from an external source, the user can select between the two digital inputs available and enable the D preset previously saved via PC software. 1 connector for the DRC AB (supplied). ASC-C (Audio System Control): communication port for OEM integration with future automotive protocols.
<b>INPUTS/OUTPUTS CONFIGURATIONS</b>	Wizard enabling an arbitrary mapping of inputs and outputs.
<b>TURN-ON CONTROLS</b>	ART™ (Automatic Remote Turn on/off), automated remote turn on system through Hi-level inputs. The ART™ function is selectable from PC software. Through the Remote IN. Through the DRC AB (supplied).
<b>IN/OUT LEVELS</b>	Manual input sensitivity adjustment for the Master Hi-Level inputs (with supplied Test CD). Independent output level control for the system fine tuning (-40 ÷ 0 dB).
<b>DE-EQUALIZATION</b>	Automatic de-equalization of Master inputs signal (with supplied Test CD).
<b>EQUALIZER</b>	Each of the nine output channels has a 10-pole (± 12dB) parametric equalizer for optimal audio signal control.
<b>CROSSOVER FILTER</b>	Filter type: Hi-pass, Lo-pass, Full Range, Bandpass with asymmetrical cut-off slopes. Cut-off frequency: 68 steps available from 20 Hz to 20 kHz. Cut-off slopes: selectable, 6 to 24 dB/Oct. Selectable alignments: Linkwitz or Butterworth. Phase selectable for each output (0°/180°).
<b>TIME ALIGNMENT</b>	Possibility to time delay up to 15 milliseconds at 0.02 ms steps, corresponding to 510 cm of virtual speaker "movement". The distance setup mode eases the user in calibrating the time delays which can finally be adjusted with the "fine-tuning".
<b>DRC AB REMOTE CONTROL (supplied)</b>	Master Volume, Subwoofer Volume, Balance, Fader; inputs selection; selection of the 4 presets available.
<b>MEMORIES/PRESETS</b>	4 presets separately managed and recalled via DRC AB.
<b>PC SOFTWARE</b>	Microsoft Windows based software (XP, Vista, 7, 8, 10), manageable in "Standard" or "Expert" operating modes with 1024 x 600 px minimum screen resolution.

# bit

## DRC AB

Digital Remote Control



### CONNECTION

To Audison bit Nove: AC Link controls – cable provided (4.5 m / 177 in.)

### SIZE

W x H x D (mm/inch): 63 x 36 x 12 / 2.48" x 1.4" x 0.47"

### FUNCTIONS

Default Menu:

Master Volume, Subwoofer Volume, Fader, Balance, Source selector (Main, Aux 1, Digital Optical 1 - 2).

Audison bit Nove memories selection.

DRC AB enables the main system control (**volume, balance, fader and subwoofer volume, bass-boost**) without the use of a PC. Thanks to this device, installed in an ergonomic position within the car dashboard, the user can: **choose between the four DSP presets and select the source** among master, auxiliary and the two optical digital inputs.

# HOW TO CONNECT THE bit Nove

### 1 POWER SUPPLY and remote IN / OUT

### 2 DRC CONNECTION

### 3 PRE INPUT / SPEAKER INPUT

### 4 AUXILIARY SOURCES

### 5 DIGITAL SOURCES

### 6 OUTPUT TO AMPLIFIERS

### 7 BIT MOVE TO PC

### DEFAULT OUTPUTS CONFIGURATION

OUTPUT	TYPE	CUT FILTER	FILTER TYPE	CUT FREQUENCY	TIME ALIGNMENT
CH 1	Front Left TW	HI PASS	LINKWITZ	300Hz@2@12dB	0 cm
CH 2	Front Right TW	HI PASS	LINKWITZ	300Hz@2@12dB	0 cm
CH 3	Front Left Mid	EAND PASS	LINKWITZ	500Hz@2@12dB / 300Hz@2@12dB	0 cm
CH 4	Front Right Mid	EAND PASS	LINKWITZ	500Hz@2@12dB / 300Hz@2@12dB	0 cm
CH 5	Front Left TW	EAND PASS	LINKWITZ	80Hz@2@12dB / 300Hz@2@12dB	0 cm
CH 6	Front Right TW	EAND PASS	LINKWITZ	80Hz@2@12dB / 300Hz@2@12dB	0 cm
CH 7	Front Left TW	HI PASS	LINKWITZ	80Hz@2@12dB	0 cm
CH 8	Front Right TW	HI PASS	LINKWITZ	80Hz@2@12dB	0 cm
CH 9	SUBWOOFER	LO PASS	LINKWITZ	80Hz@12dB	0 cm

### MASTER INPUT CONFIGURATION

MASTER INPUT	ENABLED
IN 1	Front Left
IN 2	Front Right
IN 3	Front Left
IN 4	Front Right
IN 5	Not Connected
IN 6	Not Connected

### AUXILIARY INPUTS

AUXILIARY INPUT	ENABLED
OPTICAL 1 Input	ENABLED
OPTICAL 2 Input	ENABLED
USB Input	ENABLED

### MASTER SPK/PRE INPUT CONNECTION CABLE

### POWER/CONTROL CONNECTION CABLE

### Step 1

### Step 2

### Step 3

### Step 4

### Step 5

### Step 6

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## ABOUT US

Elettromedia, an Italian company, is a leader within the world-wide car Hi-Fi market. Born in 1987 in Potenza Picena by a group of friends who shared the same passion for in-car high fidelity, throughout the past years Elettromedia has been walking the path of excellence: its products are distributed in more than 60 countries; the company has received many awards and acknowledgements from the most authoritative leaders within the car audio industry; it also can boast reviews of more than 3000 pages published in 30 different languages (visit: [www.elettromedia.com/media-centre/press-review/](http://www.elettromedia.com/media-centre/press-review/)).

The Elettromedia brands are Audison, Hertz, Connection and AZaudiocomp. Through a co-branding strategy, the company offers all of the components required for a complete, top-level car audio system.

**Contacts: Elettromedia s.r.l.**

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## AWARDS

 <b>EISA AWARD Best Product 2016-2017</b> IN-CAR PROCESSOR Audison bit One HD	 <b>EISA AWARD Best Product 2016-2017</b> IN-CAR SUBWOOFER Hertz Mille Legend ML 2500.3	 <b>EISA AWARD Best Product 2015-2016</b> IN-CAR SPEAKER SYSTEM Hertz MLK 1650.3	 <b>EISA AWARD Best Product 2014-2015</b> IN-CAR HD MEDIA PLAYER Audison bit Play HD
 <b>EISA AWARD Best Product 2014-2015</b> IN-CAR INTEGRATION Audison AP8.9 bit	 <b>EISA AWARD Best Product 2013-2014</b> IN-CAR AMPLIFIER Hertz HCP 5D	 <b>EISA AWARD Best Product 2012-2013</b> IN-CAR SUBWOOFER Audison Voce AV 10	 <b>EISA AWARD Best Product 2011-2012</b> IN-CAR AMPLIFIER Audison Voce AV 5.1k
 <b>EISA AWARD Best Product 2010-2011</b> IN-CAR SPEAKER SYSTEM Audison Voce AV K6	 <b>EISA AWARD Best Product 2009-2010</b> IN-CAR INTEGRATION Audison bit one	 <b>EISA AWARD Best Product 2008-2009</b> IN-CAR SPEAKER SYSTEM Audison Thesis TH K3 orchestra	 <b>EISA AWARD Best Product 2008-2009</b> IN-CAR AMPLIFIER Audison Thesis TH due
 <b>EISA AWARD Best Product 2007-2008</b> IN-CAR SUBWOOFER Hertz ML 2500	 <b>EISA AWARD Best Product 2006-2007</b> Mobile Amplifier Audison LRx 6.9		

 THE PRODUCT OF YEAR WINNER Hertz ML 2500	 BEST OF CAR AUDIO 2007	 Winner Auto Sound West GRAND PRIX 2014	 Winner Auto Sound GRAND PRIX 2011	 Winner Auto Sound GRAND PRIX 2008	 Golden Award Auto Sound GRAND PRIX 2006
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 DESIGN & ENGINEERING SHOWCASE HONORS INNOVATIONS INTERNATIONAL CES 2009	 DESIGN & ENGINEERING SHOWCASE HONORS INNOVATIONS INTERNATIONAL CES 2007	 DESIGN & ENGINEERING SHOWCASE HONORS INNOVATIONS INTERNATIONAL CES 2006	 DESIGN & ENGINEERING SHOWCASE HONORS INNOVATIONS INTERNATIONAL CES 2005	 <b>EISA AWARD Best Product 2004-2005</b> MOBILE AMPLIFIER Audison Thesis HV Vent	 <b>EISA AWARD Best Product 2003-2004</b> MOBILE AMPLIFIER Audison SRx 3	 <b>EISA AWARD Best Product 1992-2003</b> MOBILE ELECTRONICS (SUBSPEAKER) Hertz Space GK 25
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# bit



## Press Kit

(www.elettromedia.eu, Press Room)

### bit Product Information

(PDF version, 150 dpi resolution)

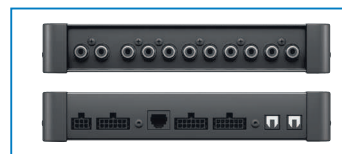
### Logos: Audison, bit Nove

(Adobe Illustrator version, 300 dpi resolution)

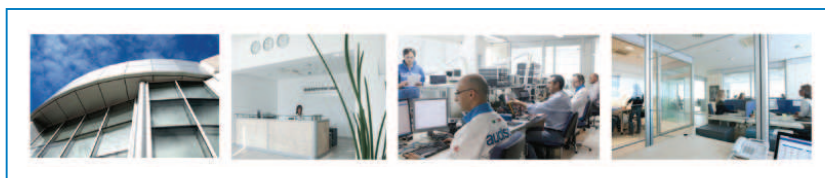
Photo (JPG version, 300 dpi resolution)



bit Nove



DRC AB



Sede Elettromedia



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