

audison



bit Nove
Signal Interface Processor

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PRODUCT INFORMATION

Elettromedia July 2017

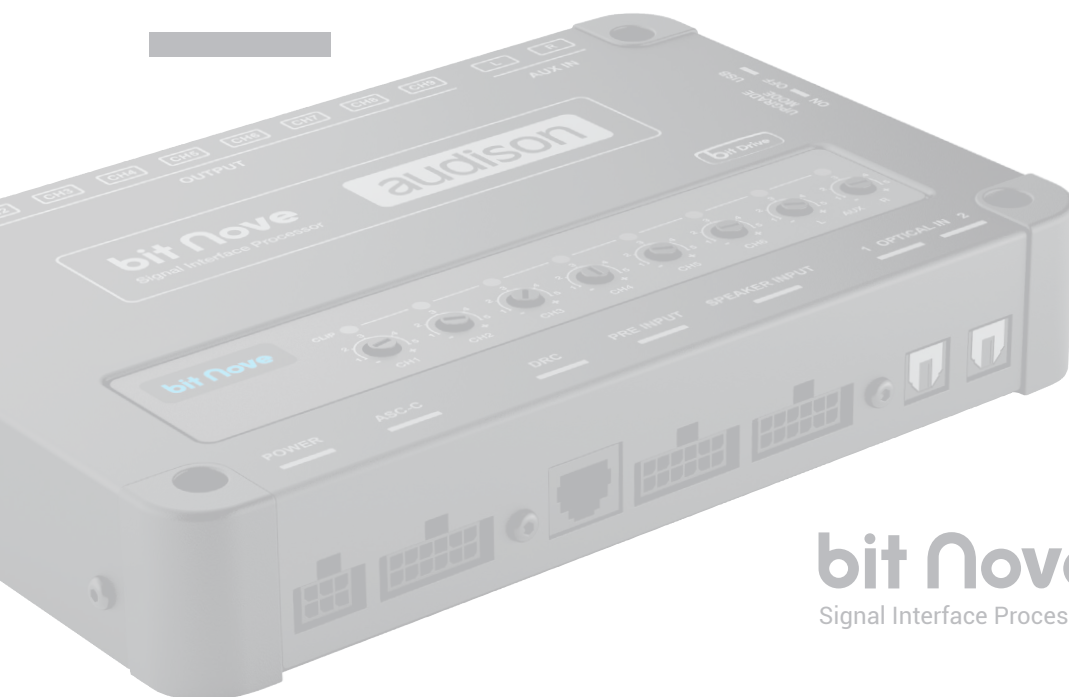


www.audison.eu



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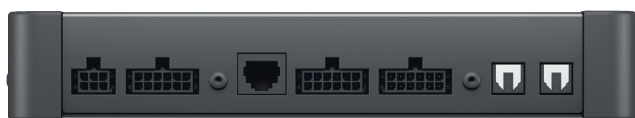
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BIT NOVE! THE NEW AUDISON BIT PROCESSOR

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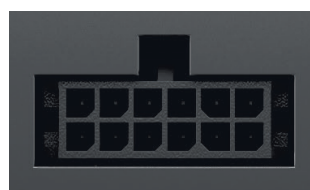
*Audison bit Nove
is compatible
with the bit Drive
technology*



*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.

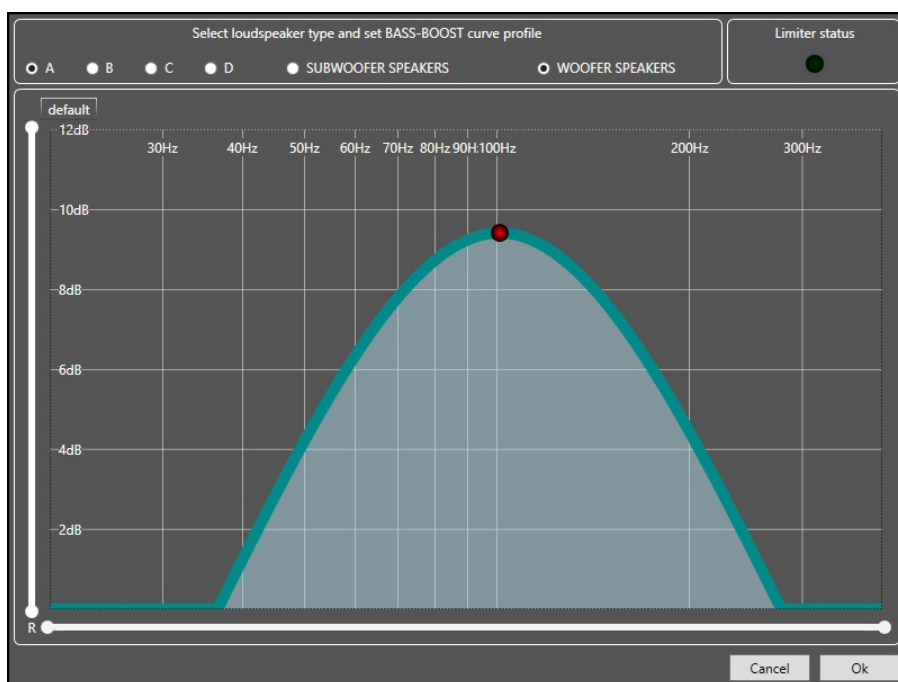
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*Controlled
Bass-Boost
manageable
by DRC AB
remote control*

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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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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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 ± 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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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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Signal Interface
Processor

| DSP AND AUDIO CONVERTERS | 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. |
|----------------------------------|--|
| AUDIO INPUTS | 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. |
| AUDIO OUTPUTS | 9 independent RCA analog outputs featuring adjustable level. |
| CONTROL CONNECTIONS | 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. |
| INPUTS/OUTPUTS CONFIGURATIONS | Wizard enabling an arbitrary mapping of inputs and outputs. |
| TURN-ON CONTROLS | 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). |
| IN/OUT LEVELS | 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). |
| DE-EQUALIZATION | Automatic de-equalization of Master inputs signal (with supplied Test CD). |
| EQUALIZER | Each of the nine output channels has a 10-pole (± 12 dB) parametric equalizer for optimal audio signal control. |
| CROSSOVER FILTER | 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°). |
| TIME ALIGNMENT | 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". |
| DRC AB REMOTE CONTROL (supplied) | Master Volume, Subwoofer Volume, Balance, Fader; inputs selection; selection of the 4 presets available. |
| MEMORIES/PRESETS | 4 presets separately managed and recalled via DRC AB. |
| PC SOFTWARE | Microsoft Windows based software (XP, Vista, 7, 8, 10), manageable in "Standard" or "Expert" operating modes with 1024 x 600 px minimum screen resolution. |

All specifications subject to change without notice_17.A

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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

6 OUTPUT TO AMPLIFIERS

4 AUXILIARY SOURCES

7 BIT MOVE TO PC

5 DIGITAL SOURCES

3 PRE INPUT / SPEAKER INPUT

2 ORC CONNECTION

1 POWER SUPPLY and remote IN / OUT

6 AUXILIARY INPUTS

| OUTPUT | TYPE | CUT FILTER | FILTER TYPE | CUT FREQUENCY | TIME ALIGNMENT |
|--------|------------------|------------|-------------|------------------------------|----------------|
| CH 1 | Front Left | HI PASS | LINKWITZ | 3000Hz @ 12dB | 0 cm |
| CH 2 | Front Right | HI PASS | LINKWITZ | 3000Hz @ 12dB | 0 cm |
| CH 3 | Front Left Mid | BAND PASS | LINKWITZ | 500Hz @ 12dB / 3000Hz @ 12dB | 0 cm |
| CH 4 | Front Right Mid | BAND PASS | LINKWITZ | 500Hz @ 12dB / 3000Hz @ 12dB | 0 cm |
| CH 5 | Front Left Low | BAND PASS | LINKWITZ | 80Hz @ 12dB / 800Hz @ 12dB | 0 cm |
| CH 6 | Front Right Low | BAND PASS | LINKWITZ | 80Hz @ 12dB / 800Hz @ 12dB | 0 cm |
| CH 7 | Front Left High | HI PASS | LINKWITZ | 800Hz @ 12dB | 0 cm |
| CH 8 | Front Right High | HI PASS | LINKWITZ | 800Hz @ 12dB | 0 cm |
| CH 9 | SUBWOOFER | LO PASS | LINKWITZ | 80Hz @ 12dB | 0 cm |

MASTER INPUT CONFIGURATION

| MASTER INPUT | ENABLED |
|-----------------|---------|
| OPTICAL 1 Input | ENABLED |
| OPTICAL 2 Input | ENABLED |
| AUX Input | ENABLED |

MASTER SPK/PRE INPUT CONNECTION CABLE

POWER/CONTROL CONNECTION CABLE

6 STEP 1

6 STEP 2

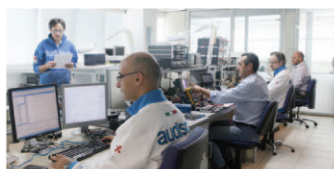
6 STEP 3

6 STEP 4

6 STEP 5

6 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/).

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.

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AWARDS



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Press Kit

(www.elettromedia.eu, Press Room)

bit Product Information

(PDF version, 150 dpi resolution)

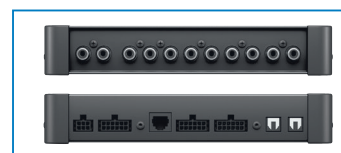
Logos: Audison, bit Nove

(Adobe Illustrator version, 300 dpi resolution)

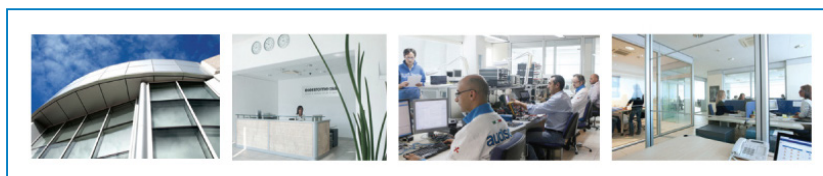
Photo (JPG version, 300 dpi resolution)



bit Nove



DRC AB



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