



bit One

Signal Interface Processor

bit One.1 Version



Power Supply

Voltage	11 ÷ 15 VDC
Idling current	0.45 A
Switched off without DRC	< 0.5 mA
Switched off with DRC	< 1.8 mA
Remote IN voltage	7 ÷ 15 VDC (1.3 mA)
Remote OUT voltage	12 VDC (130 mA)

Signal Stage

Distortion - THD @ 1 kHz, 1 V RMS Output	0.002 %
Bandwidth	4.5 ÷ 21k Hz
S/N Ratio @ A weighted	102 dBA
Channel Separation (@1 kHz)	77 dB
Input sensitivity (Low Level)	0.3 ÷ 5 V RMS
Input sensitivity (High Level)	1.2 ÷ 20 V RMS
Max Output Levels	4 V RMS
Input impedance (Low Level)	20 kΩ
Input impedance (High Level)	5 kΩ

Input Stage

Low Level (Pre In)	Ch 1 ÷ Ch 6, AUX1 L/R, AUX2 L/R
High Level (Speaker In)	Ch 1 ÷ Ch 8, Phone In
Coaxial and Optical	S/PDIF Max 48kHz / 24 bit, PCM

Output

Analog Pre Out	Ch 1 ÷ Ch 8
Digital Out 48kHz - 24 bit AD Link	Ch 1 ÷ Ch 8

Crossover

Type	12 / 24 / 36 / 48 dB Linkwitz 6 / 12 / 18 / 24 / 30 / 36 / 42 / 48 dB Butterworth
Mode	Full / Hi-Pass / Low Pass / Band Pass

Equalizer

Type	31 Band, ISO 1/3 Oct, 20 Hz ÷ 20k Hz
Gain	±12 dB

Time Alignment

Delay	0 ÷ 22 ms in 0,02 ms steps (748 cm / 294.5 in.)
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Size

W x H x D (mm / in.)	225 x 32,3 x 150 / 8.85 x 1.27 x 5.90
Weight (kg / lb.)	1,345 / 2.965

Audio DSP and converters

32-BIT floating point Analog Devices Sharc (Clock speed: 266MHz) Digital Signal Processing chip and Wolfson A/D D/A converters working in PCM at 48kHz with 24 Bit resolution. Tuning functions can be heard in real time due to processing speed.

Audio Inputs

8 independent high-level channels (with automatic summing capability) or 6 independent analog low-level channels;
2 analog low-level stereo auxiliary inputs;
1 optical digital input;
1 electric coaxial digital input;
1 high-level momentary audio interrupt input (with Mute IN) for use with mobile phone or navigation systems.

Audio Outputs

8 independent low-level analog channels featuring adjustable level and 1 AD Link output (8 independent digital audio channels through a single CAT 5.S LAN cable for use with AD Link provided amplifiers).

Digital Control System

1 USB / B (2.0) connector for PC connection;
2 AC Link control bus connectors for DRC and AC Link amplifiers.

Configuration

Guided procedure that, thanks to a wide range of set names, provides the ability to assign each component to the bit One connections and automatically coordinate their functioning.

Turn-on Controls

ART automatic remote turn on/off circuit;
Through the car ignition key with memory function;
Through the DRC;
Automatically through the hands-free phone kit.

In/Out Volume

Input sensitivity automatically adjusted for the main inputs (with supplied Test CD and DVD);
Manual input sensitivity adjustment for auxiliary inputs;
Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB).

Dynamic Equalizer

System automatically self-adjusts through an equalization between low and high listening levels that can be set by the user and controlled by the DRC.

De-equalization and calibration

Automatic de-equalization of signal fed into the high-level inputs (with supplied Test CD or DVD) and levels calibration.

Equalizers

One 31-band graphic equalizer (1/3Oct.; ±12dB) for each one of the 4 auxiliary input;
One 31-band graphic equalizer (1/3 Oct.; ±12dB) for each one of the 8 output channels.

Crossover Filter

Filter typology: Selectable; Hi-pass, Lo-pass, Bandpass, Full Range;
Cut-off frequency: 70 steps available from 10 Hz to 20 kHz;
Cut-off slope: Selectable; 6 to 48 dB/Oct.;
Alignments: Selectable; Linkwitz or Butterworth;
Mute: Selectable for each output (On/Off);
Phase: Selectable for each output (0°/180°).

Signal channels reconstruction

It can reconstruct a stereo signal from a multi-channel signal. In addition it can reconstruct a centre channel and subwoofer channels from a stereo input alone.

Time Alignment

Guided procedure for the speaker distance data entry with an automated calculation of proper delay times for each channel for accurate time alignment set-up. System also provides for manual fine tuning of delay (0 ÷ 22 ms max).

Auto Restart

Automatic turn Off/On, if the DSP locks up.

DRC Master Volume control, Subwoofer Volume control, Balance control, Fader control, Input selection, Memory selection, Dynamic Equalizer On/Off, Adjustable display brightness, Access to digital features of Audison TH amps if connected.

Memory

4 presets separately managed and recalled by the DRC Remote Control.

Bit One software

Windows (Win 2000, XP, Vista, 7) based software with "Standard" and "Expert" operating modes; Screen resolution: 1024 x 768 px min.

