

H8 DSP

DIGITAL INTERFACE PROCESSOR



POWER SUPPLY

Operating power supply voltage	10.8 ÷ 14.4 VDC
Power supply	7.5 ÷ 15 VDC
Idling current	0,4 A
Switched off without DRC	2,5 mA
Switched off with DRC	4 mA
Remote IN voltage	6,5 ÷ 15 VDC (1,3 mA)
Remote OUT voltage	12 VDC (130 mA)

SIGNAL STAGE

Distortion - THD @ 1 kHz, 1V RMS Output	0,005%
Bandwidth @ -3 dB	10 ÷ 22k Hz
S/N Ratio @ A weighted	
Digital input	105 dBA
Master Input	95 dBA
AUX Input	96 dBA
Channel Separation @ 1 kHz	85 dB
Input sensitivity (Speaker In)	2 ÷ 15 V RMS
Input sensitivity (AUX In)	0,6 ÷ 5 V RMS
Input impedance (Speaker In)	2,2 kΩ
Input impedance (AUX)	15 kΩ
Max Output Level (RMS) @ 0.1% THD	4 V RMS

INPUT STAGE

High Level (Speaker)	FL - FR - RL - RR
Low Level (Pre)	AUX IN
Digital Optical IN (S/PDIF max 96 kHz/24bit)	OPTICAL IN

OUTPUT STAGE

Low Level Pre (default)	FRONT TW L/R, FRONT WF L/R REAR L/R, SUB, CENTER
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CONNECTIONS

From / To Personal Computer	1 x USB / B
DRC HE	Audio controls and Memory / Inputs selection
Optical / AUX select	Optical In / Aux wire control +12V / GND enable
Memory A / Memory B	Memory A / B wire control +12V / GND enable

CROSSOVER N.8 (one for each output channel)

Filter Type	Full / High 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

On Hi-Levels input (Speaker In)	Automatic De-Equalization On
Outputs	N.8 Graphic: ±12 dB @ 31 Band ISO 1/3 Oct. 20 ÷ 20k Hz

TIME ALIGNMENT

Distance	0 ÷ 510 cm / 0 ÷ 200.8 inch
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 Microsoft Windows (32/64 bit): XP, Vista, Windows 7, Windows 8, Windows 10
Software/PC requirements:	
Graphic card min. resolution:	800 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	191 x 34 x 131 / 7.51" x 1.33" x 4.76"
Weight kg/lb	0,6 / 1.322

AUDIO DSP AND CONVERTERS

32 bit Cirrus Logic (Clock speed: 147 MHz) Digital Signal Processing chip and A/D D/A converters working in PCM at 48 kHz with 24 bit resolution. The processor speed allows the user to hear and verify in real time the changes applied during the tuning.

AUDIO INPUTS

4 independent high-level channels with built-in USS technology (Universal Speakers Simulator) and automatic summing capability.

1 analog low-level stereo auxiliary input.
1 optical digital input.

AUDIO OUTPUTS

8 independent analog PRE channels featuring adjustable level.

CONTROL CONNECTIONS

1 USB / B (2.0) connector for PC connection.
Optical In / Aux Wire control +12V/GND.
Wire control Memory A/B.
1 Connector for DRC HE.

CONFIGURATION

Guided procedure which, thanks to a wide range of default settings, provides the ability to assign each component to the H8 DSP connections and automatically coordinate their functions.

TURN-ON CONTROLS

ART™, Automatic Remote Turn on/off, selectable from Hi-Level Front L.
The ART™ function can be enabled through an external switch, the Remote IN, the vehicle ignition key with memory function, the DRC HE (optional).

IN/Out VOLUME

Manual input sensitivity adjustment for the Master Hi-Level inputs (with supplied Test CD).
Manual input sensitivity adjustment for auxiliary inputs.
Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB).

DE-EQUALIZATION

Automatic de-equalization of the high-level inputs signal (with supplied Test CD) if necessary. It can also be performed without the PC.

EQUALIZERS

31-band graphic equalizer (1/3 Oct.; ±12dB) for each analog and digital output channel.

CROSSOVER FILTER

Filter typology: Hi-pass, Lo-pass, Full Range or Band-pass with independent selectable cut-off slope.
Cut-off frequency: 68 steps available from 20 Hz to 20 kHz.
Cut-off slope: 6 to 24 dB/Oct.

Filter alignment: Linkwitz or Butterworth.
Mute function: selectable for each output (on/off).
Phase: selectable for each output (0° / 180°).

SIGNAL CHANNELS RECONSTRUCTION

It can reconstruct a stereo output signal from a multi-channel input signal.
In addition it can also reconstruct rear, centre and subwoofer output channels from a stereo input.

TIME ALIGNMENT

Guided procedure for the speaker distance data entry with an automated calculation (distance to time) for each channel accurate time delays.
"Fine-tuning" can also be manually applied (0.02 ms fine set).

REMOTE CONTROL

Master Volume, Subwoofer Volume, Balance and Fader controls, Input selection, Memory selection.

MEMORY

2 presets separately managed and recalled via DRC HE and wire control.

PC SOFTWARE

Microsoft Windows (XP, Vista and 7,8,10) based software with "Standard" and "Expert" operating modes; screen resolution: 1024 x 600 px min.