

# 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 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.