

# THESIS

## HV venti

### Power Supply

Power supply voltage:	11 ÷ 16 VDC	
Idling current when off:	0.006 mA	
Minimum idling current:	Hi Curr.	Hi Pow.
Low BIAS	4.2A	5.6A
High BIAS	6.5A	10.4A
Consumption @ 13.8 VDC	90A(1Ω)	100A(2Ω)

### Amplifier stage

Distortion - THD (1kHz):	<0.05%	
Distortion - IMD (IHF):	<0.05%	
Bandwidth (-3 dB):	4Hz ÷ 75 kHz	
S/N Ratio (A weighed @1 V):	100 dB	
Damping factor (1kHz, 4 Ohms):	80	
Slew rate	>20V/μs	
Input sensitivity (high):	0.25 ÷ 1.6 VRMS	
Input sensitivity (low):	1 ÷ 7 VRMS	
Input impedance:	22 kΩ	
Load impedance:	Hi Curr.	Hi Pow.
Stereo	4 - 2 - 1Ω	4 - 2Ω
Mono	4 - 2Ω	4Ω
OUTPUT POWER (RMS) @13.8 VDC; THD 1%:		
Load (dual power)	Hi Curr.	Hi Pow.
2ch 4Ω	200W	400W
2ch 2Ω	400W	800W
2ch 1Ω	650W	/
Mono 4Ω	800W	1600W
Mono 2Ω	1300W	/

### Filters / inputs

Pre IN:	L/R (ABS)
Pre OUT (pre in bypass):	L/R (ABS)
Crossover frequencies	High pass & Low pass stereo 45 - 55 - 65 - 80Hz, 12dB/oct.
	Lo-pass mono 45 - 55 - 65 - 80Hz, 24dB/oct.

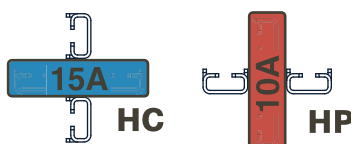
### Other functions

Remote In:	7 ÷ 16 VDC - 1 mA
Demo mode ext. supply:	12 VDC - 600 mA
Cap terminals:	18 VDC cap min
Fuse (strip):	100 A

MAX SIZE (L x H x D):	510 x 85 x 280 mm
WEIGHT:	15 Kg



- Innovative “Dual Power” function allows to configure the amplifier for two output power sets: Hi Current or Hi Power.
- “Dual Bias” selectors permit to change Class A percentage and the amplifier related idling current.
- Crossover module with selectable cut-off frequency provided as accessory. In order to insert it, bypass module has to be removed, so that when the crossover isn't used, signal path is minimized.
- Cooling system realized with heatsink, natural convection, and a pair of fans for each heatsink side which let air flow within side cooling ducts.
- ASC (Amplifier Status Control): microprocessor based unit designed to manage every amplifier operations. It shows amplifier temperature, protection and others important information about its the status.
- Innovative output power stage topology, discrete IGBT, realized with a complementary pair of Hitachi DMOS driving two pair of complementary Sanken power BJT, each rated for 30A peak current and 200W dissipation.
- Balanced Class A biased driver with separate 150V Flyback power supply.
- Thermally stabilized with central fan independent from the others on the side ducts.
- Fully balanced JFET differential input preamplifier with output buffer for control unit.
- ABS inputs and ABS bypass outputs, decoupled through two audio-grade polypropylene capacitors per channel.
- Four Synchro-PWM power supplies allow to obtain very fast transient current response and to realize Dual Mono configuration.
- Wide range of protections: power limiter in case of loudspeakers shortcircuit or overload, over 90°C thermal protections, power output terminals shortcircuit to vehicle chassis, battery protection operating with voltage lower than 11V or higher than 16V, DC at output terminals, power supply fuse.



### Dual Power configuration

In order to set the amplifier in Hi Power or Hi Current mode you need to change position of the four minifuses located on four jumpers that are next to each transformer.