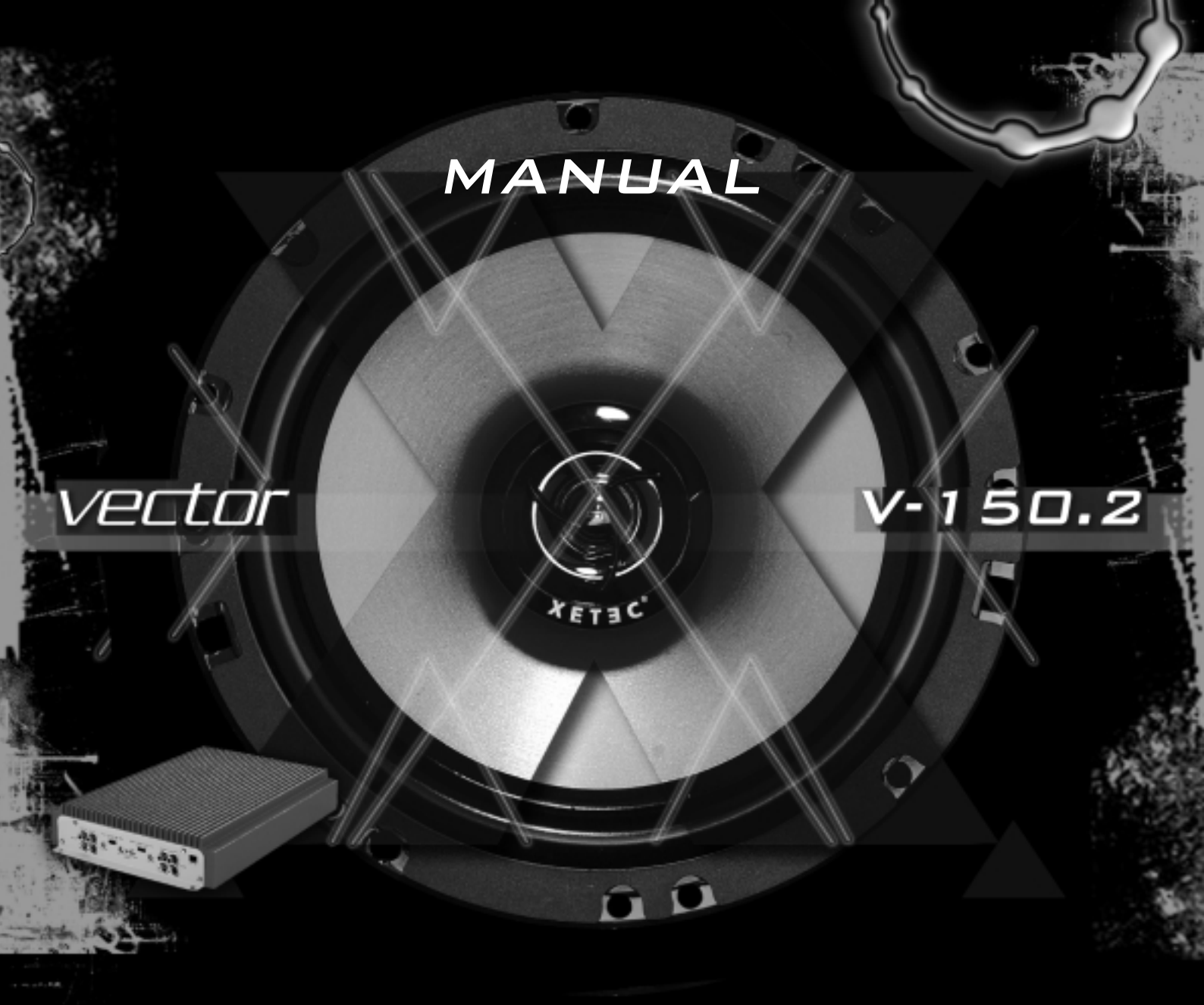
MANUAL

vector

V-150.2



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...ALWAYS AHEAD!

XETEC

designgroup

XETEC design group GmbH
www.xetec.de

05.2003

XETEC Vector V 150.2

Congratulations for buying this **XETEC** product and thank you for your confidence!
With this **XETEC amplifier** you have purchased an innovative and professional product, which will enable you to enjoy your music on a very high quality level for many years.

We have especially focused on electronic as well as product design to give you a product that will accompany you for many years, as our products are always one step ahead and will still be modern for many years.

XETEC products represent the experience our engineers have made through many years assisted by car audio magazines as well as professional installers.

Please read these instructions very carefully, to avoid unnecessary trouble and defects. In case of trouble, please contact your local dealer.

The **XETEC Vector V 150.2** is a 2-channel car audio amplifier, especially developed for top quality speaker systems and subwoofers. A perfect choice are the **XETEC Component systems** and **subwoofers.**

You can also run in bridged mode to gain more than twice the output power, in order to drive subwoofers, midbasses or high power component systems. The versatility and many adjustment options make the **XETEC V 150.2** an allround genius for car music reproduction.

Special features „Vector V 150.2 – 2-channel amplifier“:

- alu heatsink
- 2x75W
- 2 Ohms stable
- Bridged mode: 1x180W 4 Ohms stable
- HPAA technology
- Highpass, Lowpass filters with bypass function
- Input sensitivity 250 mV - 4 V
- Full protection (DC, Overheat, Shortcircuit, Overload)
- Gold plated input terminals

Properties:

- Independent high and lowpass filter can be configured either as highpass, lowpass or without filter.
- 2 channels can be run in bridged mode for higher output power.
- 2ch mode Highpass: drives 2 satellite speakers
- 2ch mode Lowpass: drives 2 (or more) subwoofers
- 1ch mode Lowpass: drives 1 subwoofers in bridged mode Protection circuit: Overload, Short-circuit, DC, Overheat

Safety:

- Before you make any connection, the battery must be disconnected!
- A main fuse must be installed into the +12 V wire within the first 12" from the + terminal of the battery (insurance regulation!).
- Please note that a minimum speaker impedance of 2 Ohms must be maintained. Do not connect speakers with lower impedance in normal as well as 4 Ohms in bridged mode!
- Make sure that you do not use defective speakers and subwoofers. They can cause damage to your amplifier!
- The fuses inside the amplifier only protects the device itself, not the battery and the car!

Important notice stability of amplifiers:

Normal operation:

Every amplifier is only capable of driving loads (speakers) up to a certain limit, which is set either by the protection circuits or the maximum power output. **XETEC amplifiers** accept loads down to 2 Ohms in normal operation.

Bridged mode:

In bridged mode each two channels of the amplifier are driving the same load, the acceptable impedance for each channel is also divided by two!

That means:

A normal amplifier „sees" 4 Ohms as 4 Ohms. In a bridged amplifier, each amplifier „sees" 2 Ohms only! That's why in bridged mode always 4 Ohms must be maintained although the amplifier might be 2 Ohms stable.

Caution

This product is capable of conducting very high sound pressure levels, and can thus be harmful to your health. Prolonged exposure to high volume levels can cause hearing loss! Please use restraint on the volume control.

XETEC wants you to enjoy your amplifier for a long time to come, and we do not take responsibility for hearing loss nor other health problems.

0. Installation:

For safety reasons, the amplifier has to be mounted properly and fixed to the car's body. Please fix the device using the screws that come with your product. Be careful when drilling holes, there might be wires, fuel lines or the gas tank behind a wall! Never drill holes when you do not know what's behind. Never install signal wires close to power cables to avoid hum and alternator noise is being induced.

1. Connections:

Before you make any connections, always disconnect the battery!

1.1 First of all, connect the RCA cables coming from the radio/head unit to the respective inputs of your amplifier. Always run signal cables in a distance to power cables and the vehicle's factory wires to avoid induction of noise.

1.2 Now the speaker wires must be connected to the respective speaker terminals. Please make sure to use speakers with the correct impe dance! Also make sure to connect all speakers with correct polarity to avoid phase problems which can spoil the sound of the whole system.

1.3 Next step is the ground connection. Check for a good grounding point using your vehicle's chassis. Make sure that this point has good electrical contact! Some parts of the chassis might only be glued and have no contact to battery (-). Run all ground cables of the system to this point to avoid alternator whine and other noise.

1.4 As the next connection the +12 V cable has to be connected to the (+) terminal of the battery. Always be careful not to run this cable around sharp edges, the insulation might be damaged. For holes always use grommets!

Always use an in-line fuse in the +12 V power cable in max. 12" from the battery's + terminal (value must meet the current requirements of the whole sound system, minimum value is 60 A).

1.5 The last connection is the remote wire. The head unit must always be turned off during this connection, as it might be damaged when remote output is shorted to ground! Now you can reconnect the battery and insert the main fuse into the power cable's fuse holder.

CAUTION: Both, the +12 V and the ground cable, must have sufficient diameter!

XETEC proposes the following minimum gauges:

Total output power of the system:		
Up to 100 W	:	6 mm2
Up to 250 W	:	8 mm2
Up to 500 W	:	10 mm2
Up to 750 W	:	25 mm2
Up to 1000 W	:	35 mm2
Up to 1200 W	:	40 mm2
More than 1200 W	:	50 mm2

Weaker Cables will reduce the performance of your system significantly, and may cause damage to your amplifiers. Weak cables also will heat-up!

Caution: Always replace fuses with same value. Higher values may cause damage to your amplifier, battery or car!

2. First power-on:

2.1 Adjust all level controls to minimum

2.2 Turn on the radio at low volume

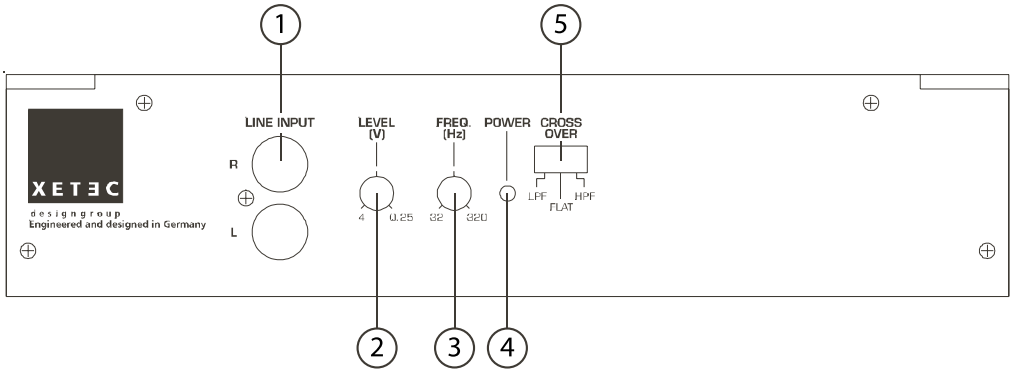
2.3 Increase the volume and adjust the front speaker's volume

2.4 Now adjust the volume ratio between front and rear speakers and subwoofer.

Xetec recommends the following crossover frequencies:

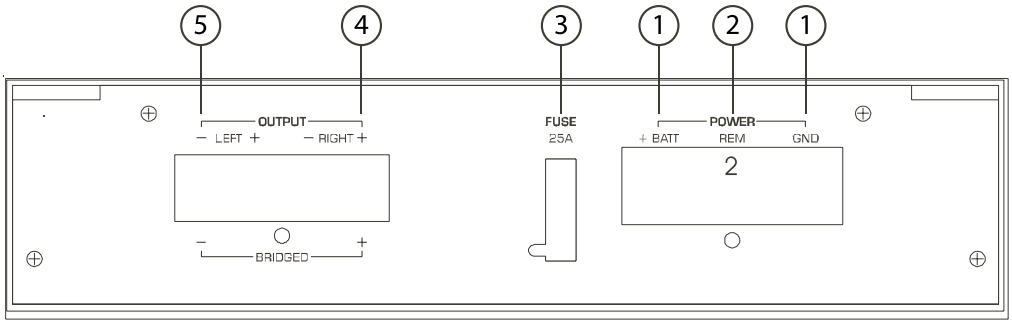
16 cm front speaker Highpass 80-100 Hz	:	16 cm rear speaker: Highpass 100-120 Hz
13 cm front speaker Highpass 100-140 Hz	:	13 cm rear speaker: Highpass 120-150 Hz
10 cm front speaker Highpass 120-200 Hz	:	10 cm rear speaker: Highpass 150-200 Hz
16 cm midbass	:	Bandpass 80/150 Hz (= Highpass 80 Hz+ Lowpass 150Hz),

Composystems then are run with Highpass 150-180 Hz!
Subwoofer: Lowpass 70-100 Hz, Subsonic 20-35 Hz



3. Controls

1. RCA line inputs (left and right channels)
2. Gain control
3. Lowpass Frequenz / Highpass Frequenz adjust
4. Power indicator LED
5. Control switch Highpass / Lowpass / Flat (without crossover)



4. Connectors:

1. +12 V and ground power input
2. Remote
3. Fuse(s)
4 . Speaker right
5. Speaker left

Optional accessory:

XETEC **„ParaQ-7"** parametric equalizer for perfect sound

Applied technologies:

- HPAA © by **XETEC design group GmbH**: „High Precision Analog Amplifier", symmetrical State-of-the-Art power amplifier.
- X-SMPS © by **XETEC design group GmbH**: „x-Switched-Mode-Power-Supply", high efficiency power supply
- VCVS-Filter © by **XETEC design group GmbH**: „Voltage Controlled Voltage Source" filters for the crossover networks
- X-protect © by **XETEC design group GmbH**: Highly sensitive protection circuits

Technical data „XETEC Vector V 150.2“:

RMS Output power @4 Ohms: 2x75W
RMS Output power @4 Ohms: 1x180W in bridged mode
RMS Output power @2 Ohms: 2x90W
Max input Current (@13,8 V): 33 A
Idle current (no signal): 1,2 A
Fuse: 2x20 A
Total Harmonic Distortion (THD): <0,10 %
SNR: >90 dB (A)
Freq.Response (bypass mode): 20 Hz-40.000 Hz (in bypass mode)
Damping Factor; 302
Stability: >2 Ohm, (>4 Ohm in bridged mode!)
Input Sensitivity: 250 mV-4 V
Crossover frequencies: highpass 32 Hz-320 Hz lowpass 32 Hz-320Hz
highpass adjustable
Warranty: 1 Year (EU 2 Years)

Troubleshooting:

Fault	Cause
1. Power indicator LED is not lit	• Main fuse or fuse in amplifier blown? • Remote wire properly connected? Is there remote voltage (12 V)? • Amplifier overheated? • Battery voltage low (<10,2 V)? • DC on one of the speaker outputs? • Overload
2. Distortions at medium level	• Please check the speaker connections for short-circuits • Are the speakers OK? • Radio volume turned up too high. Better turn up the amplifier’s level controls
3. Alternator whine and similar noise	• Bad ground connections? • Use ONE ground contact only! • RCA cables run too close to power cables?

In case of further trouble, please ask your local **XETEC** dealer for support.