



The Car Audio Forge.



VE1000.2
VE1800.2

VE800.4
VE1200.4

BEDIENUNGSANLEITUNG / OWNER'S MANUAL

VISION² SERIES

OWNER'S MANUAL

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SPECIFICATIONS

	VE1000.2	VE1800.2	VE800.4	VE1200.4
Channels	2	2	4	4
Watt RMS @ 4 Ohm	2 x 175	2 x 400	4 x 80	4 x 125
Watt RMS @ 2 Ohm	2 x 300	2 x 700	4 x 140	4 x 225
Watt RMS @ 1 Ohm	2 x 500	2 x 900	4 x 200	4 x 300
Watt RMS @ 4/2 Ohm mono bridged	1 x 600 / 1000	1 x 1400 / 1800	2 x 280 / 400	2 x 450 / 600
Watt MAX. @ 4 Ohm	2 x 350	2 x 800	4 x 160	4 x 250
Watt MAX. @ 2 Ohm	2 x 650	2 x 1400	4 x 280	4 x 450
Watt MAX. @ 1 Ohm	2 x 1000	2 x 1800	4 x 400	4 x 600
Watt MAX. @ 4/2 Ohm mono bridged	1 x 1200 / 2000	1 x 2800 / 3600	2 x 560 / 800	2 x 900 / 1200
Efficiency Factor @ 4 Ohm	64 %	68%	64%	65%
Maxi-Fuse*	70 A	2 x 70 A	70 A	2 x 60 A
Damping Factor	> 400	> 400	> 400	> 400
Signal to Noise Ratio	> 100 dB	> 100 dB	> 100 dB	> 100 dB
Channel Separation	> 90 dB	> 90 dB	> 90 dB	> 90 dB
Harmonic Distortion (THD&N)	< 0,05 %	< 0,05 %	< 0,05 %	< 0,05 %
Input Impedance	> 40 kOhm	> 40 kOhm	> 40 kOhm	> 40 kOhm
Operation Voltage	12 - 16 V	12 - 16 V	12 - 16 V	12 - 16 V

CH1 & CH2

Variable Highpass 12dB/24dB	10Hz - 2500Hz	10Hz - 2500Hz	10Hz - 1000Hz	10Hz - 1000Hz
Variable Lowpass 12dB/24dB	40Hz - 4000Hz	40Hz - 4000Hz	—	—
Bass-Boost @ 45Hz	0 - 18 dB	0 - 18 dB	—	—
Phase Shift	0 - 180	0 - 180	0 - 180	0 - 180
Input Sensitivity	0,15 - 9 V	0,15 - 9 V	0,15 - 9 V	0,15 - 9 V

CH3 & CH4

Variable Highpass 12dB/24dB	10Hz - 2500Hz	10Hz - 2500Hz
Variable Lowpass 12dB/24dB	40Hz - 4000Hz	40Hz - 4000Hz
Bass-Boost @ 45Hz	0 - 18 dB	0 - 18 dB
Input Sensitivity	0,15 - 9 V	0,15 - 9 V

Dimensions in mm

Width x Height	257 x 60	257 x 60	257 x 60	257 x 60
Length Heatsink	455	535	445	505

All specifications are subject to change without notice

* suitable for 4 / 2 ohm operation (1 Ohm Mode only for music playback)

INSTALLATION

VE1000.2 / VE1800.2 / VE800.4 / VE1200.4

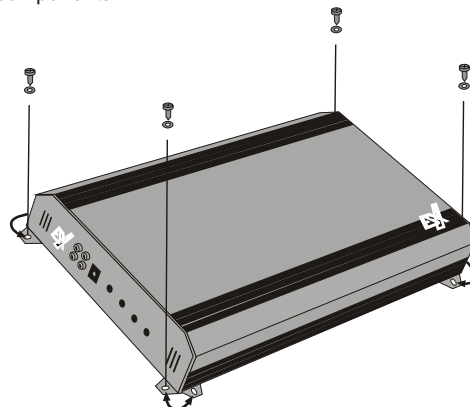
General Installation Notes

The amplifier is generally mounted in the rear trunk area but can be mounted in any convenient area such as beneath a seat. Please be sure to locate this unit where you have reasonable air circulation and protection from moisture. When considering the mounting location you should minimize the length of the power and speaker leads. Minimizing both leads will yield a more reliable installation. It is also important to ensure that the heat sink fins are not against a panel or a surface, preventing air circulation. Do not install the amplifier on a subwoofer box or on vibrating parts of the vehicle, since the vibrations can cause damages to the amplifier's electrical components.

Installation of the amplifier

Mark the location for the mounting screw holes by using the amplifier as a template. Drill holes at the marked locations and firmly fasten the amplifier in place with the mounting screws supplied in the accessory kit. Before drilling or cutting any holes, investigate the layout of your automobile thoroughly:

Take care when working near the gas lines, the hydraulic lines or the electrical wiring at your car.



Electrical Connection

Ground (GND)

This wire is the electrical ground and must be fastened securely to the vehicle chassis.

The best method is to use a threading sheet metal screw since the threads cut into bare metal. Ensure that all paint or other insulation is removed around the hole area, and using self tapping screw, securely affix the bare wire ends to the vehicle chassis. Use a piece of cable which is as short as possible - use the same gauge as used for the +12V cable. Make sure that the connection is safe, a loose connection may result in amplifier noise and fault condition.

Remote (REM)

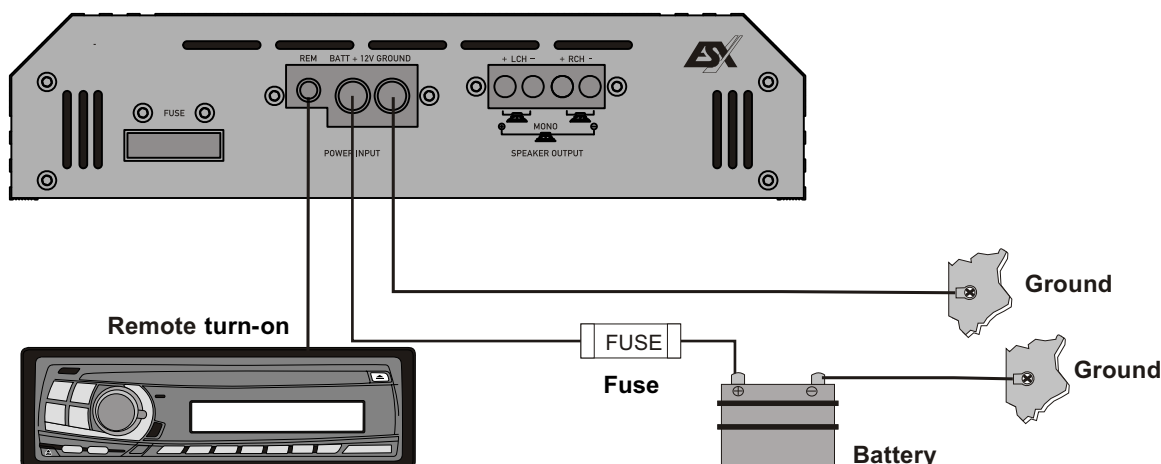
Many music sources have an output terminal for connection of the remote turn-on of the power amplifier. If a radio doesn't have a remote turn-on feature, then you can use the antenna relay wire, which activates the antenna motor. Please note, if the power antenna retracts when the radio is operating, then you cannot use the antenna relay wire to operate the remote turn-on.

Battery Connection (+12V)

This wire is usually connected directly to the positive battery terminal. Ensure that the + power supply wire is fused via an assigned fuse in line with the + power supply wire. Please use a sufficient gauge for the installed amplifiers (min 16-25 mm). This connection must be completed using spade plug with insulating sleeve. The ESX VE Vison amplifiers are optimized for a operating voltage of 12-16 Volts.

Maxi-Fuse (FUSE)

The mounted Maxi-Fuses protects the amplifier of short circuit and overload. If you have to replace the Fuses, only replace with a equivalent valued Fuse. The original installed Fuse is optimized for a 4 / 2 Ohm operation and 1 Ohm operation only for musical playback. In the 1 Ohm operation under constant load the current consumption is increased, this means you have to replace the original Fuse by a appropriate Fuse with a higher Value (Ask your retailer).



FUNCTIONS & CONTROLS TOP-PANEL

2-Channel Amplifier VE1000.2 / VE1800.2

F1 — LINE OUTPUT

Provides a full range line level (RCA) output that allows you to trigger additional amplifiers.

F2 — LINE INPUT

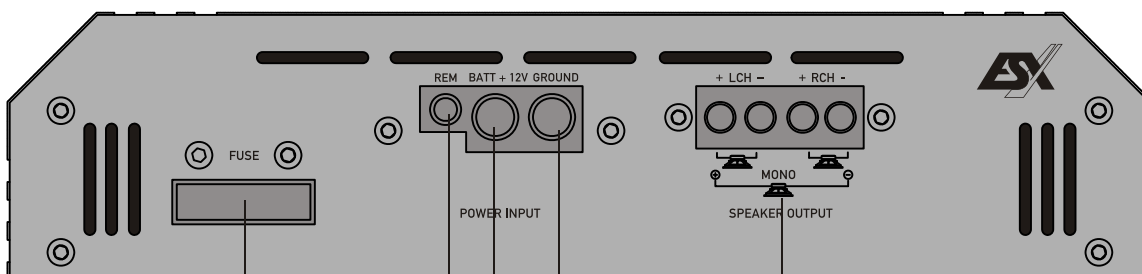
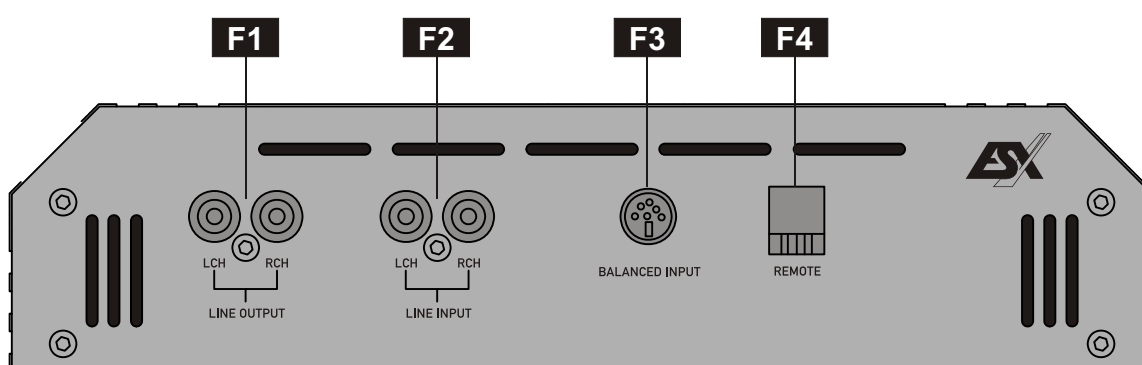
This allows you to connect the head unit outputs (CH 1/2 or CH 3/4) by appropriate RCA cables.

F3 — BALANCED INPUT

Accepts a balanced symmetrical line signal from an appropriate Signal Transmitter. (See page 32)

F4 — REMOTE

Terminal for the included REMOTE CONTROL to adjust the Bass Level.



R1 — FUSE

Fuse block to prevent damages of the amplifier (See page 20).

R2 — BATT +12V

Terminal for the plus connection (See page 20).

R3 — REM

Terminal for remote turn-on of the head unit (See page 20).

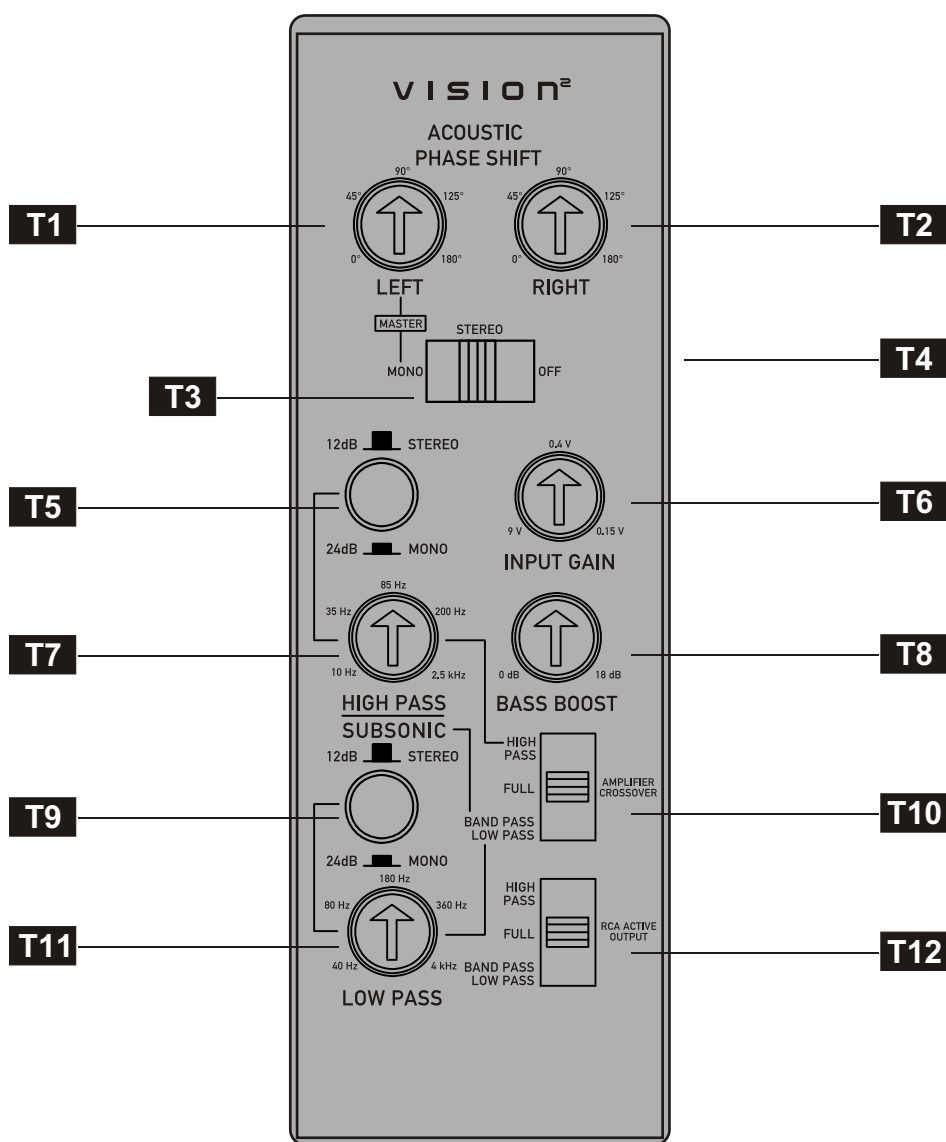
R4 — GROUND

Terminal for the ground/minus connection (See page 20).

R5 — SPEAKER OUTPUT

Terminal for the left and right speaker or bridged subwoofer (MONO mode).
Attend the several examples for Loudspeaker Wiring on the following pages!

FUNCTIONS & CONTROLS TOP-PANEL **2-Channel Amplifier VE1000.2 / VE1800.2**



NOTE: If the amplifier's top-panel is white illuminated, the amplifier is in power mode. If the display is red illuminated, the protection mode of the amplifier is activated caused by a malfunction (See page 33)

CAUSES: Overheating, short circuit on the speakers, overload (caused by low-impedance or low-power) or damage .

FUNCTIONS & CONTROLS TOP-PANEL

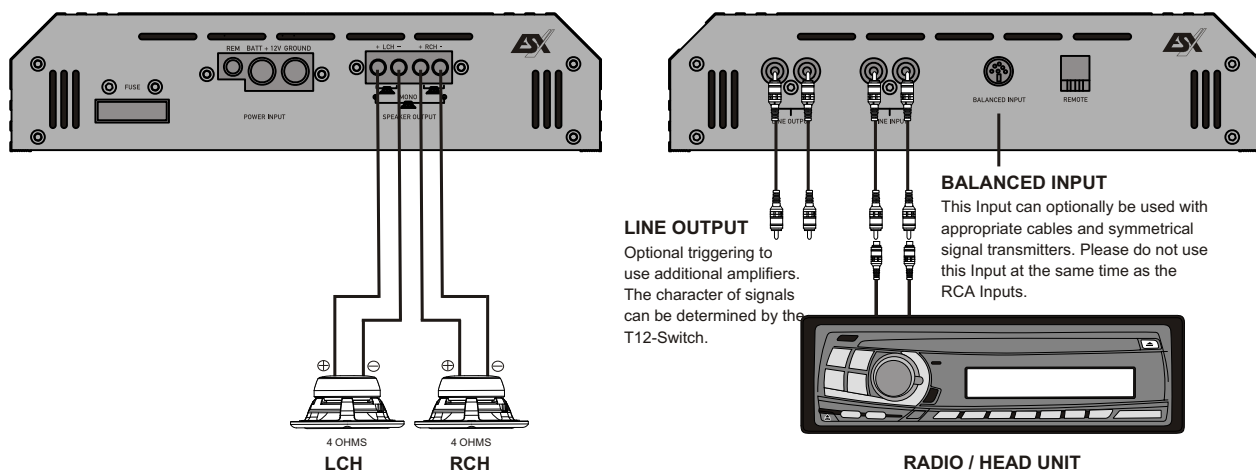
2-Channel Amplifier VE1000.2 / VE1800.2

- T1** — **ACOUSTIC PHASE SHIFT LEFT**
Allows to adjust the phase modulation (acoustical center) of the left channel between 0 - 180 degrees.
- T2** — **ACOUSTIC PHASE SHIFT RIGHT**
Allows to adjust the phase modulation (acoustical center) of the right channel between 0 - 180 degrees.
- T3** — **MONO** – In this position the phase modulation is only mono (for a bridged Subwoofer).
It is adjustable between 0 - 180 degrees by the T1 switch (See page 32).
STEREO - In this position the phase modulation is adjustable for each channel separately (T1 and T2).
OFF - In this position phase modulation is not activated. T1 and T2 are out of function.
- T4** — **DISPLAY** – If the display lights up white, the amplifier is in operation mode.
If this display lights up red, the integrated protection circuit is activated.
- T5** — **12dB STEREO / 24dB MONO**
If this pushbutton pressed, the slew rate of the HIGH PASS-Filter in mono mode will be raised to 24 dB. In this pushbutton the slew rate is limited to 12 dB in stereo mode (See page 32).
- T6** — **INPUT GAIN**
This controller allows to adjust the volume (input sensitivity) of the input signal from 0,15 up to 9 Volts.
- T7** — **HIGH PASS / SUBSONIC**
Allows to adjust the threshold frequency of the HIGH PASS-Filter and the frequency response is limited downwards. The threshold frequency is continuously variable from 10Hz up to 2500Hz.
If T10 is set to BAND PASS / LOW PASS, you can adjust the subsonic frequency. (See page 32)
- T8** — **BASS BOOST**
This controller allows you to adjust the Bass Boost from 0 to 18dB.
Please use the Bass Boost carefully.
- T9** — **12dB STEREO / 24dB MONO**
If this pushbutton pressed, the slew rate of the LOW PASS-Filter in mono mode will be raised to 24 dB. In this pushbutton the slew rate is limited to 12 dB in stereo mode (See page 32).
- T10** — **CROSSOVER SELECTOR**
HIGH PASS – In this position the HIGH PASS-Filter is activated. This mode is required for speakers with a diameter from 8,7 cm up to 16 cm.
FULL □ In this position a full range signal is conducted to the speakers. It is required for speakers with a diameter over 20 cm. T5 / T7 / T9 / T11 are out of function.
BAND PASS / LOW PASS □ In this position Lowpass-Filter is activated. This operation mode is required for subwoofers. By using T7 and T11 the subsonicfilter can be adjusted (See page 32).
- T11** — **LOW PASS**
Allows to adjust the threshold frequency of the LOW PASS-Filter and the frequency response of the Loudspeaker Signal is limited upwards. The threshold frequency is variable from 40Hz up to 4000 Hz.
- T12** — **OUTPUT SELECTOR**
HIGH PASS – In this position the HIGH PASS-Signal controlled by T5 & T7 is conducted to F1.
FULL □ In this position a FULL RANGE-Signal is conducted to the RCA Outputs F1.
BANDPASS / LOW PASS □ In this position a LOW PASS-Signal controlled by T9 / T11 and T5 / T7 is conducted to the RCA Outputs F1.

LOUDSPEAKER WIRING & CONNECTION

2-Channel Amplifier VE1000.2 / VE1800.2

2-CHANNEL-MODE: 2 Speakers / Stereo



CONNECTIONS

- Connect the head unit line outputs (FRONT or REAR L & R) with the RCA LINE INPUTs of the amplifier with appropriate RCA cables.
- Connect the speakers with SPEAKER OUTPUT - LEFT + and - RIGHT + of the amplifier.
- The final speaker impedance should not be lower than 1 Ohm per channel. Too low speaker loads result in too high heat dissipation and may cause the amplifier run into protection mode.

CONFIGURATION

- For bigger speaker systems (Ø20cm plus), T10 should be set to FULL (Full Range-Signal).
- For smaller speaker systems (Ø8.7cm - Ø16cm), T10 should be set to HIGH PASS, because the loudspeakers could get damaged by too low frequencies. The threshold frequency should be between 60Hz - 150Hz depending on speakers sizes and is adjustable by the T7.
In this configuration Lowpass (T11) should not be used.
- The pushbuttons T5 & T9 should be set to 12dB-Position (not pressed).
- When PHASE SHIFT is activated by the T3 (STEREO) the acoustical center is separately adjustable by T1 and T2 (See page 32).

INPUT GAIN

- Turn the INPUT GAIN - control (T6) on the amplifier to 9V-Position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT GAIN - control (T6) clockwise until you hear some distortion.
- Then turn back the INPUT GAIN - control (T6) slightly until you can hear clean sound.

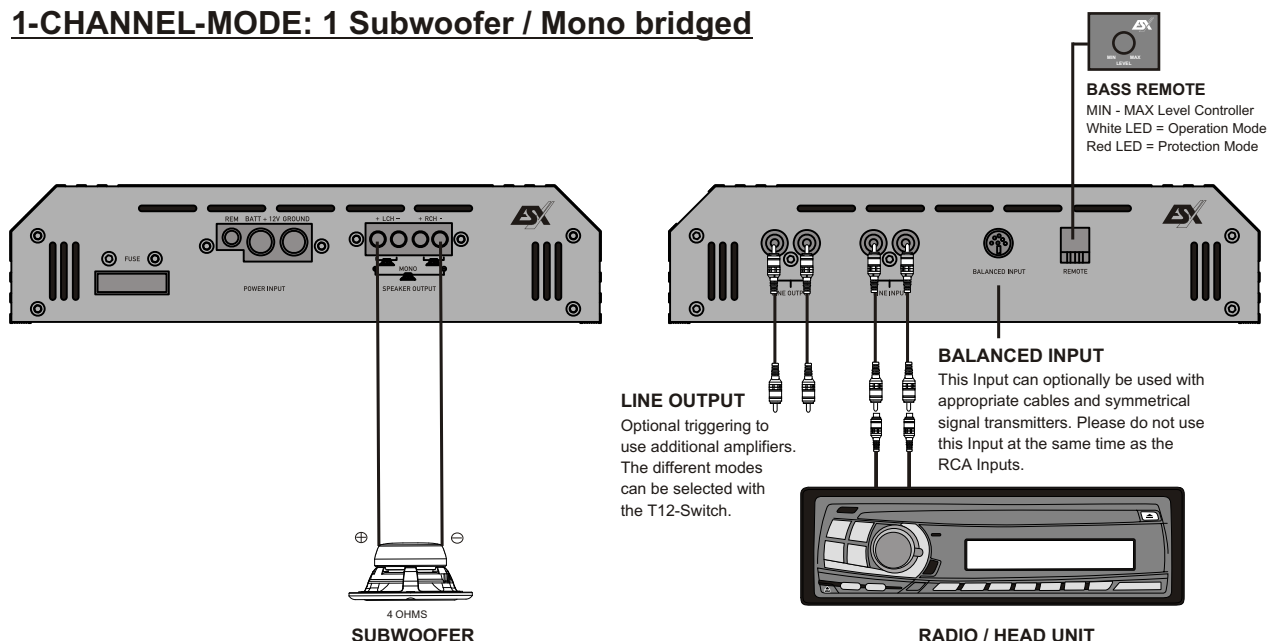
Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.
Please observe speaker channel and polarity as printed by the speaker terminal block.
Incorrect phasing of the speakers results in total loss of bass response.

LOUDSPEAKER WIRING & CONNECTION

2-Channel Amplifier VE1000.2 / VE1800.2

1-CHANNEL-MODE: 1 Subwoofer / Mono bridged



CONNECTIONS

- Connect the head unit line outputs (REAR L & R or SUBWOOFER L & R) with the RCA LINE INPUTs of the amplifier with appropriate RCA cables.
- Connect the Subwoofer with SPEAKER OUTPUT + LCH and RCH - of the amplifier by using appropriate cables.
- The final speaker impedance should not be lower than 2 Ohms per channel. Too low speaker loads result in too high heat dissipation and may cause the amplifier run into protection mode.

CONFIGURATION

- Set T10 to BANDPASS / LOWPASS. The upper threshold frequency should be between 60Hz and 150Hz depending on subwoofer size and it is adjustable by T11. In this mode T7 (lower frequencies) and T11 (upper frequencies) can be used as SUBSONIC FILTER (See page 32).
- When the pushbuttons T5 & T9 are pressed the slew rate of frequency response is raised up to 24 dB.
- When PHASE SHIFT is activated by T3 (MONO) the acoustical center is adjustable by T1 (See page 32.)

BASS BOOST & BASS REMOTE

- T8 allows you to adjust the BASS BOOST between 0 and 18 dB. Please use the BASS BOOST carefully. The included BASS REMOTE allows you to adjust BASS LEVEL from the driver's seat.

INPUT GAIN

- Turn the INPUT GAIN - control (T6) on the amplifier to 9V-Position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT GAIN - control (T6) clockwise until you hear some distortion.
- Then turn back the INPUT GAIN - control (T6) slightly until you can hear clean sound.

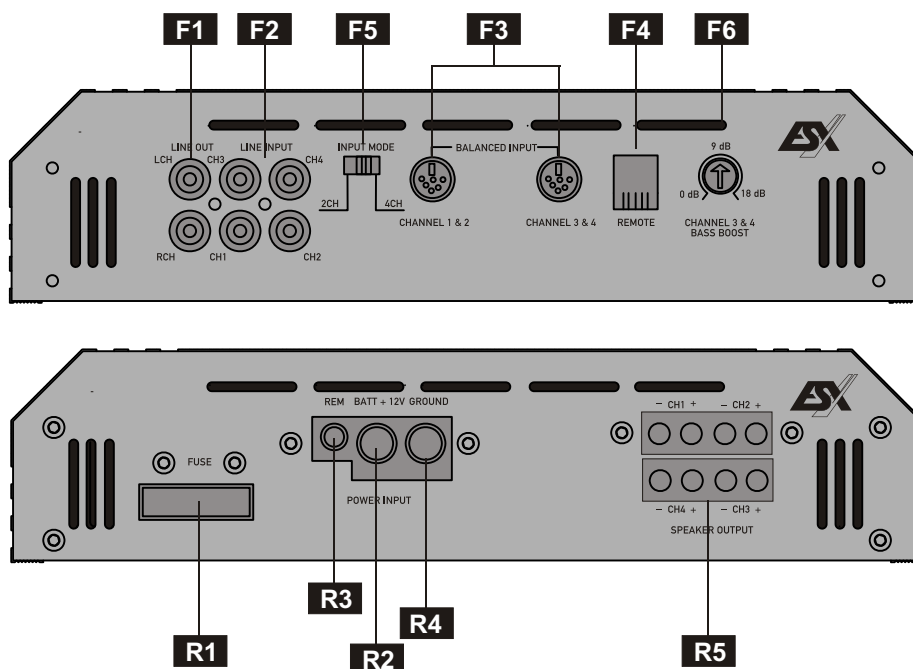
Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.
Please observe speaker channel and polarity as printed by the speaker terminal block.
Incorrect phasing of the speakers results in total loss of bass response.

FUNCTIONS & CONTROLS FRONT-PANEL / REAR-PANEL

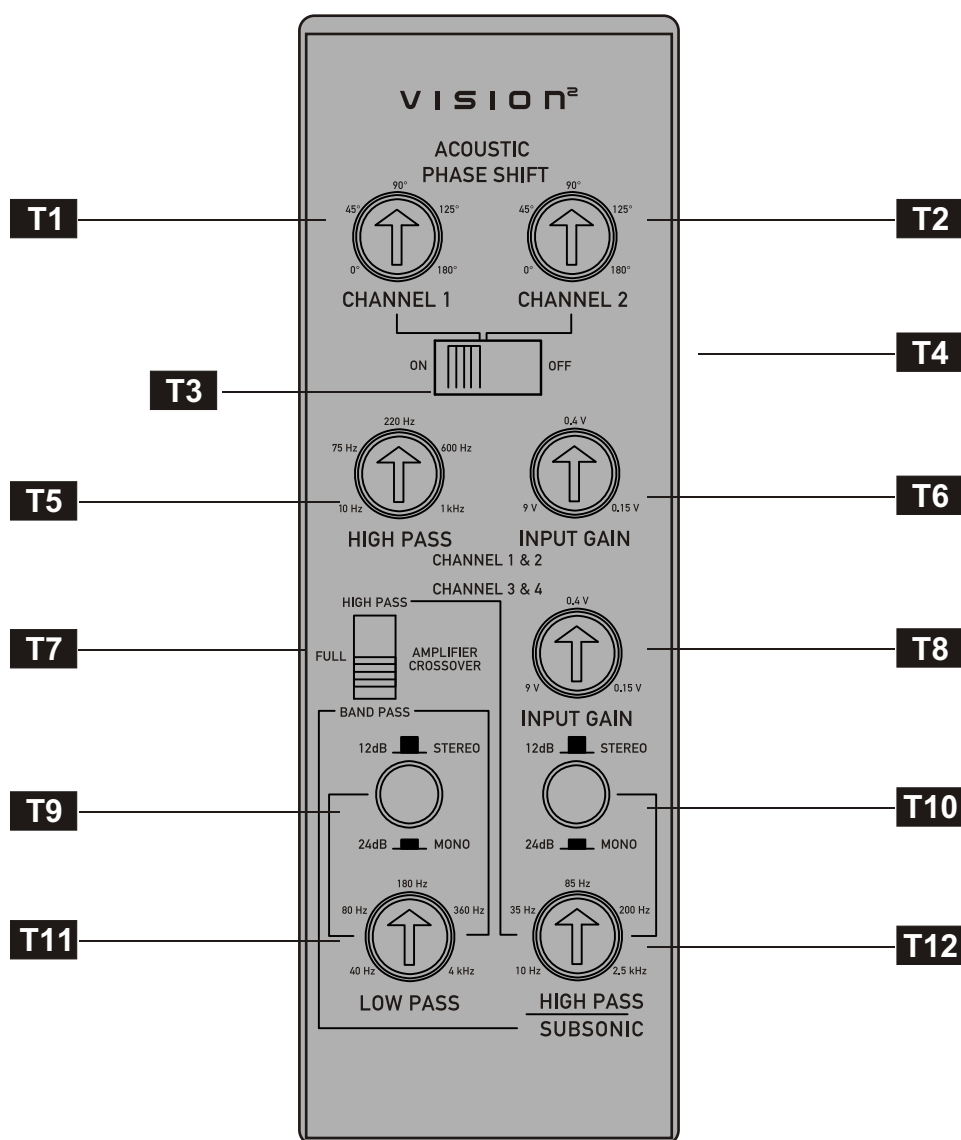
4-Channel Amplifier VE800.4 / VE1200.4

- F1** — **LINE OUT**
Provides a full range line level (RCA) output that allows you to trigger additional amplifiers.
- F2** — **LINE INPUT**
This allows you to connect the head unit outputs (CH 1/2 / CH 3/4) by appropriate RCA cables.
- F3** — **BALANCED INPUT CHANNEL 1 & 2 / CHANNEL 3 & 4**
Accepts a balanced symmetrical line signal from a appropriate Signal transmitter. (See page 32)
- F4** — **REMOTE**
Terminal for the included REMOTE CONTROL to adjust the Bass Boost.
- F5** — **INPUT MODE**
Selector for 2- or 4- Channel-Input Mode.
- F6** — **CHANNEL 3 & 4 BASS BOOST**
This controller allows you to adjust the BASS BOOST of Channel 3 & 4 from 0 up to 18 dB. Please use the Bass Boost carefully.



- R1** — **FUSE** - Fuse block to prevent damages of the amplifier (See page 20).
- R2** — **BATT +12V** - Terminal for the plus connection (See page 20).
- R3** — **REM** - Terminal for remote turn-on of the head unit (See page 20).
- R4** — **GROUND** - Terminal for the ground/minus connection (See page 20).
- R5** — **SPEAKER OUTPUT**
Terminal for loudspeakers or a bridged subwoofer (MONO mode).
Attend the several examples for Loudspeaker Wiring on the following pages!

FUNCTIONS & CONTROLS TOP-PANEL 4-Channel Amplifier VE800.4 / VE1200.4



NOTE: If the amplifier's top-panel is white illuminated, the amplifier is in power mode. If the display is red illuminated, the protection mode of the amplifier is activated caused by a malfunction (See page 33)

CAUSES: Overheating, short circuit on the speakers, overload (caused by low-impedance or low-power) or damage .

FUNCTIONS & CONTROLS TOP-PANEL

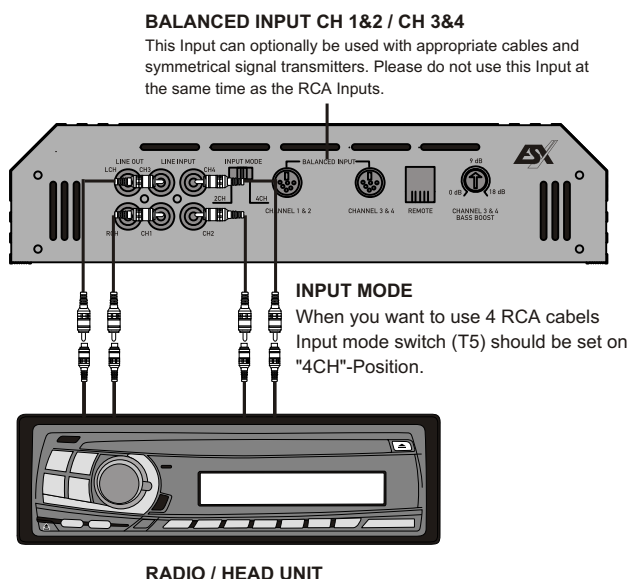
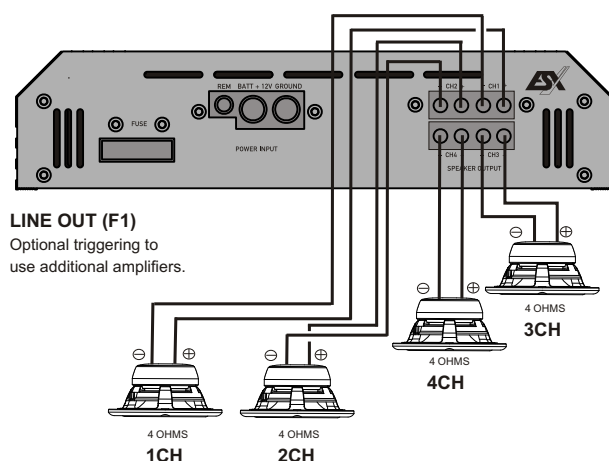
4-Channel Amplifier VE800.4 / VE1200.4

- T1** — **ACOUSTIC PHASE SHIFT LEFT**
Adjust the phase modulation (acoustical center) of the Channel 1 between 0 - 180 degrees.
- T2** — **ACOUSTIC PHASE SHIFT RIGHT**
Adjust the phase modulation (acoustical center) of the Channel 2 between 0 - 180 degrees.
- T3** — **ON** - In this position the phase modulation is activated and can be separately adjusted with T1 and T2 (See page 32).
OFF - In this position the phase modulation is deactivated. T1 and T2 are out of function.
- T4** — **DISPLAY** – If the display lights up white, the amplifier is in operation mode.
If it lights up red the integrated protection circuit is activated.
Possible reasons: Overheating, Speaker Shorts, Overloading (etc by too low impedance or less power) or the amplifier is damaged. (See chapter Troubleshooting at page 33)
- T5** — **HIGH PASS**
Allows to adjust the threshold frequency of the HIGH PASS-Filter of Channel 1/2 and the frequency response is limited downwards. The threshold frequency is continuously variable from 10Hz up to 2500Hz.
- T6** — **INPUT GAIN**
This controller allows to adjust the volume (input sensitivity) of Channel 1 & 2 of the input signal, variable from 0,15 up to 9 Volts.
- T7** — **CROSSOVER SELECTOR**
HIGH PASS – In this position the HIGH PASS-Filter of Channel 3 & 4 is activated. This mode is required for speakers with a diameter from 8,7 cm up to 16 cm.
FULL – In this position full range signal is conducted to the speakers. It is required for speakers with an diameter about 20 cm. T9 / T10 / T11/ T12 are out of function.
BAND PASS – In this position the LOW PASS-Filter of Channel 3 & 4 is activated. This mode is required for subwoofers. By using T11 and T12 the subsonicfilter can be adjusted(See page 32).
- T8** — **INPUT GAIN**
This controller allows to adjust the volume (input sensitivity) of Channel 3 & 4 of the input signal if F2 is set to 4-CH-position, variable from 0,15 up to 9 Volts.
- T9** — **12dB STEREO / 24dB MONO**
If this pushbutton pressed, the slew rate of the LOW PASS-Filter of Channel 3 & 4 in mono mode will be raised to 24 dB. Is this pushbutton the slew rate is limited to 12 dB in stereo mode (See page 32).
- T10** — **12dB STEREO / 24dB MONO**
If this pushbutton pressed, the slew rate of the HIGH PASS of Channel 3 & 4 in mono mode will be raised to 24 dB. Is this pushbutton the slew rate is limited to 12 dB in stereo mode (See page 32).
- T11** — **LOW PASS**
Allows to adjust the threshold frequency of the LOW PASS-Filter and the frequency response of the Loudspeaker Signal is limited upwards. The threshold frequency is variable from 40Hz up to 4000 Hz.
- T12** — **HIGH PASS / SUBSONIC**
Allows to adjust the threshold frequency of the HIGH PASS-Filter of Channel 3 & 4 and the frequency response is limited downwards. The threshold frequency is continuously variable from 10Hz up to 2500Hz.
If T7 is set to BAND PASS / LOW PASS, you can adjust the subsonic frequency (See page 32).

LOUDSPEAKER WIRING & CONNECTION

4-Channel Amplifier VE800.4 / VE1200.4

4-CHANNEL-MODE: 4 Speakers / Stereo



CONNECTION

- Connect the head unit line outputs (FRONT or REAR L & R) with the RCA LINE INPUTs of the amplifier with appropriate RCA cables.
- Connect the speakers with SPEAKER OUTPUT CH1 – and +, CH2 – and +, CH3 – and +, CH4 – and + of the amplifier.
- The final speaker impedance not be lower than 1 Ohm per channel. Too low speaker loads results in too high heat dissipation and may cause the amplifier run into protection mode.

CONFIGURATION CHANNEL 1 & 2

- The threshold frequency should be between 60Hz - 150Hz, depending on the size of the speakers, adjustable by T5.
- When PHASE SHIFT is activated by T3 (Position ON) the acoustical center is adjustable by T1 and T2.

CONFIGURATION CHANNEL 3 & 4

- For bigger speaker systems (Ø20cm plus) T7 should be set to FULL (Full Range-Signal).
- For smaller speaker systems (Ø8.7cm - Ø16cm), T7 should be set on HIGH PASS because the loudspeakers could get damaged by too low frequencies. The threshold frequency should be between 60Hz - 150Hz depending on speakers sizes and is adjustable by T5.
- The pushbuttons T9 & T10 should be set on 12dB-Position (not pressed).
- In this configuration LOW PASS (T11) and BASS BOOST (F6) should not be used.

INPUT GAIN - Control

- Turn the INPUT GAIN - control (T6 & T8) on the amplifier to 9V-Position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT GAIN - control (T6 & T8) clockwise until you hear some distortion.
- Then turn back the INPUT GAIN - control (T6 & T8) slightly until you can hear clean sound.

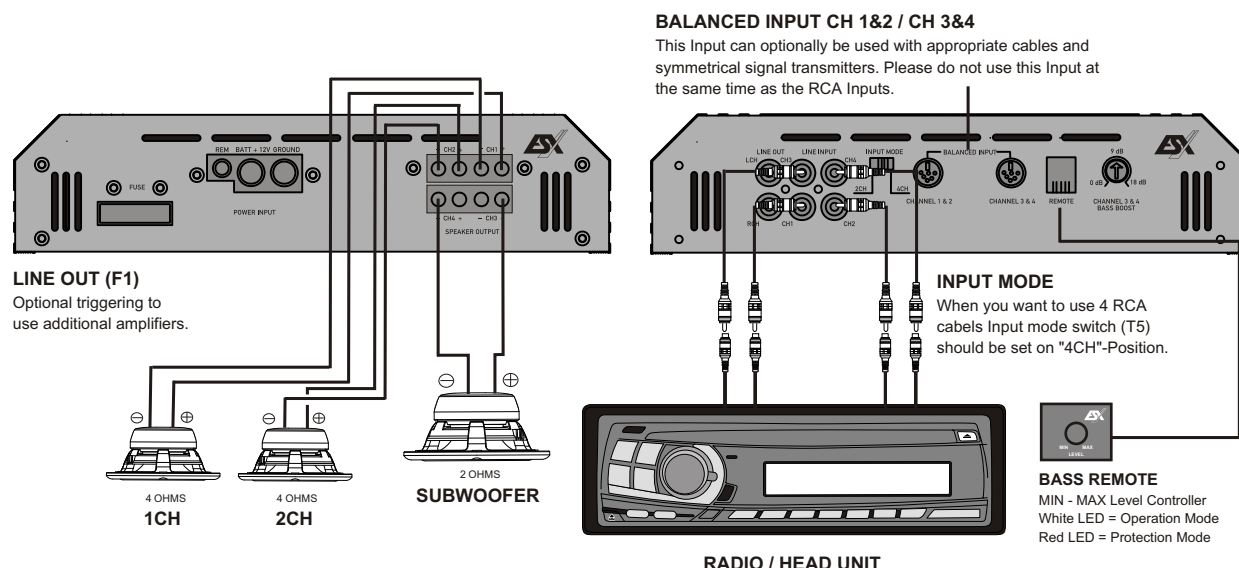
Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.
Please observe speaker channel and polarity as printed by the speaker terminal block.
Incorrect phasing of the speakers results in total loss of bass response.

LOUDSPEAKER WIRING & CONNECTION

4-Channel Amplifier VE800.4 / VE1200.4

3-CHANNEL-MODE: 2 Speakers / Stereo & 1 Subwoofer / Mono bridged



CONNECTION

- Connect the head unit line outputs (FRONT L & R and REAR L & R) with the RCA LINE INPUTs of the amplifier with appropriate RCA cables.
- Connect the speakers with SPEAKER OUTPUT CH 1 (- / +), CH 2 (- / +) and the subwoofer with SPEAKER OUTPUT CH 4 - and CH3 + of the amplifier.
- The final speaker impedance should not be lower than 1 Ohm (or 2 Ohm for the Subwoofer) per channel.

CONFIGURATION CHANNEL 1 & 2

- The threshold frequency for the HIGH PASS should be between 60Hz - 150Hz, depending on the size of speakers and is adjustable by T5.
- When PHASE SHIFT is activated by T3 (Position ON) the acoustical center is adjustable by T1 and T2.

CONFIGURATION SUBWOOFER

- T7 should be set to BAND PASS. The upper threshold frequency of the LOW PASS should be between 60Hz - 150Hz, depending on size of the subwoofer and is adjustable by T11. The lower threshold frequency (Subsonicfilter) is adjustable by T12 (See page 32).
- When the Pushbuttons T9 & T10 are pressed, the slew rate of the frequency response is raised up to 24dB in Mono mode (See page 32).

BASS BOOST

- F6 allows you to adjust the BASS BOOST between 0 and 18 dB. Please use the BASS BOOST carefully.

INPUT GAIN - Control

- Turn the INPUT GAIN - control (T6 & T8) on the amplifier to 9V-Position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT GAIN - control (T6 & T8) clockwise until you hear some distortion.
- Then turn back the INPUT GAIN - control (T6 & T8) slightly until you can hear clean sound.

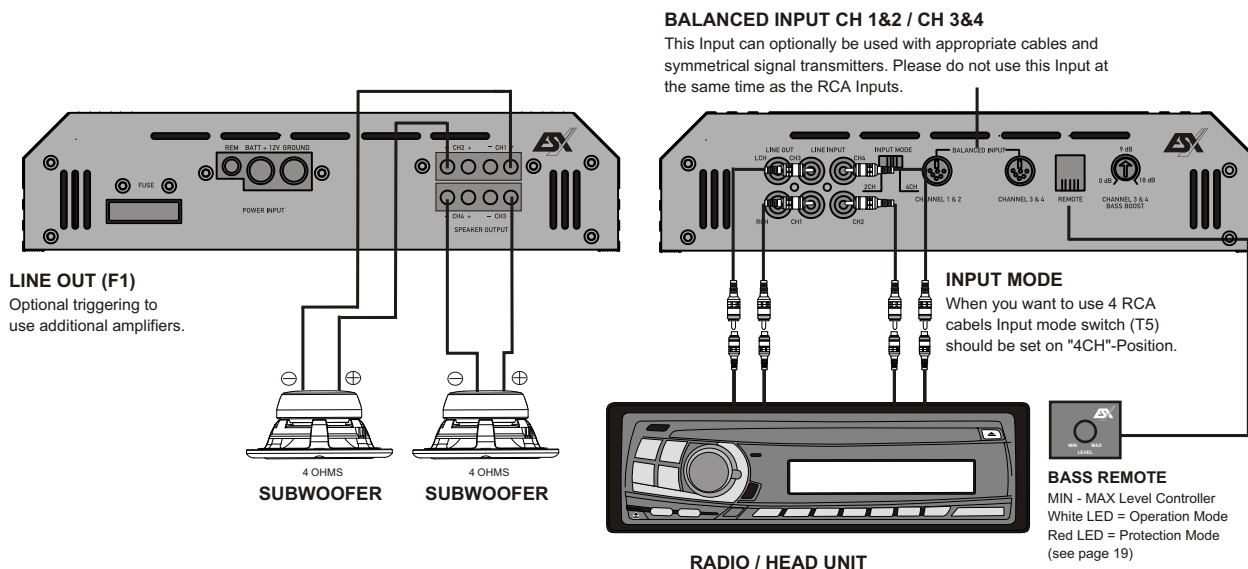
Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.
Please observe speaker channel and polarity as printed by the speaker terminal block.
Incorrect phasing of the speakers results in total loss of bass response.

LOUDSPEAKER WIRING & CONNECTION

4-Channel Amplifier VE800.4 / VE1200.4

2-CHANNEL-MODE: 2 Subwoofers / Mono bridged



CONNECTIONS

- Connect the head unit line outputs (FRONT L & R and REAR L & R) with the RCA LINE INPUTs of the amplifier with appropriate RCA cables.
- Connect subwoofer 1 with SPEAKER OUTPUT CH 2 – and CH 1 + and subwoofer 2 with SPEAKER OUTPUT CH 4 – and CH 3 + of the amplifier.
- The final speaker impedance should not be lower than 2 Ohm per Subwoofer.

CONFIGURATION SUBWOOFER 1 & 2

- T7 should be set to BAND PASS. The upper threshold frequency of the LOW PASS should be between 60Hz - 150Hz, depending on size of the subwoofer and is adjustable by T11. The lower threshold frequency (Subsonicfilter) is adjustable by T12 (See page 32).
- When the Pushbuttons T9 & T10 are pressed, the slew rate of the frequency response is raised up to 24dB in Mono mode (See page 32).

BASS BOOST & BASS REMOTE

- Both features should not be used in this configuration.

INPUT GAIN - Control

- Turn the INPUT GAIN - control (T6 & T8) on the amplifier to 9V-Position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT GAIN - control (T6 & T8) clockwise until you hear some distortion.
- Then turn back the INPUT GAIN - control (T6 & T8) slightly until you can hear clean sound.

Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.
Please observe speaker channel and polarity as printed by the speaker terminal block.
Incorrect phasing of the speakers results in total loss of bass response.

SPECIAL FEATURES

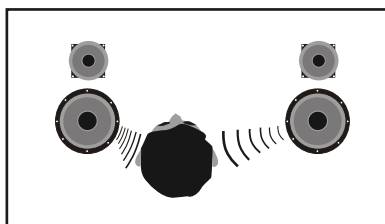
VE1000.2 / VE1800.2 / VE800.4 / VE1200.4

Balanced Inputs

Balanced inputs have been used for many years in professional sound studios and high end home stereo systems. Unlike the unbalanced RCA's Balanced wires are insusceptible against interferences. But therefor an signal transmitter with specific wires is required. Ask your specialist dealer for the required equipment.

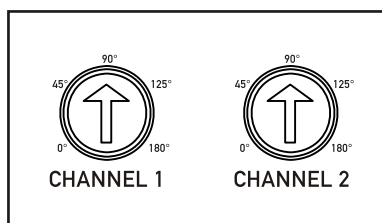
Acoustic Phase Shift

The ESX-VISION VE Series Amplifiers have an integrated channel separated Phaseshift Control. By controlling the phase, perfect soundstaging is realisable.



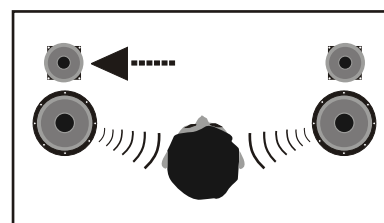
Conventionally Systems without Acoustic Phase Shift

In vehicles the listener is located in principle outside the acoustical center. The stereo sound seemed to diffused and unnatural. The sound doesn't seem to be well-defined because the distance between the listener and speakers is much shorter on the left side.



Acoustic Phase Shift (APS) of ESX

With the Phase Shift Control of the ESX VISION VE Series the stage's acoustical center can be adjusted. It is continously variable between 0 - 180 degrees.

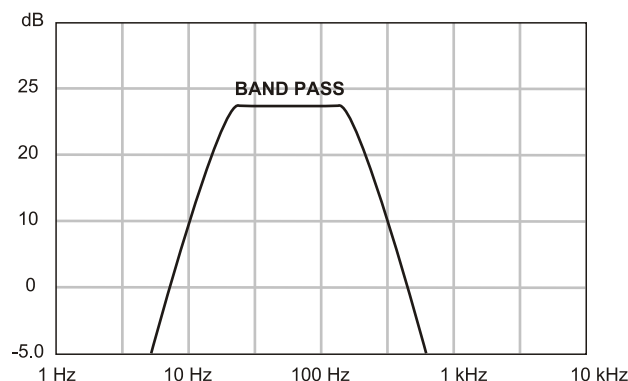
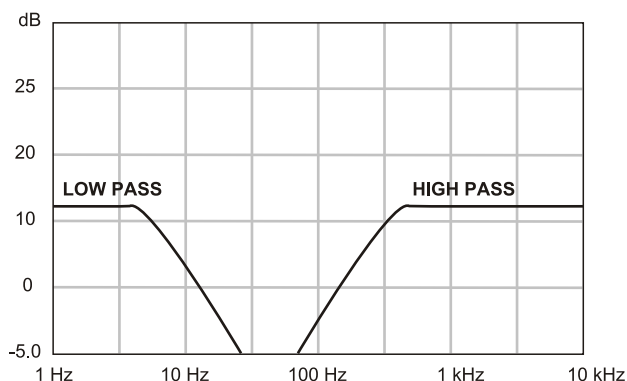


Car Audio Systems with Acoustic Phase Shift

By changing the Phase you can virtually move your speakers to the left side and the signal arrives later, for instance on the left ear of the listener and the acoustical center stage is recovered. The sound characteristics will be played acoustical correct.

Band Pass - Function (Subsonicfilter)

By using the HIGH PASS / SUBSONIC controller you are able to adjust the lower threshold frequency of the subwoofer signal. The upper threshold frequency is adjusted by the LOWPASS Controller. Both filters together generate an spectrum which is called BAND PASS-SIGNAL. Now the frequency signal looks figurative like a trapeze which harmonize very well with an subwoofer enclosure and disturbing frequencies in the lowpass-range are limited. The related 12dB STEREO / 24dB MONO pushbutton (pressed) raises the slew rate up to 24 dB in Mono mode .



TROUBLE SHOOTING

System does not turn on

1. Check all fuses.
2. Check all connections.
3. Measure the +12 volt and remote turn on voltages at the amplifier terminals. If these are non-existent or too low, take voltage measurements at fuse holders, distribution blocks, the head unit's +12 volt and remote leads to localize the problem.

Noise problems

1. Check the speaker wiring
2. Speakers are damaged

No Signal at Channels

1. Set Balance and Fader from head unit on Zero-Position
2. Check wiring (Amplifier, Speakers)
3. Speakers are damaged

Hiss or white noise

1. Speakers are overload
2. High levels of white noise usually occurs when amplifier level controls are turned up too high.
3. Another major problem that can cause excessive hiss, is a noisy head unit - unplug the amplifier input RCA cables, and if the hiss level reduces, the source unit is at fault.

No Stereo-Sound or Low Output

1. Check speaker wiring (- and +)

Amplifier Protect-Mode (the Display lights up red)

1. Speaker cables are shorted
2. Inadequate cooling - relocate or remount to provide better natural airflow. Driving high power levels into low impedances -back off on the volume control, and/or make sure you are not loading the amplifier with less than the recommended loudspeaker impedance.
3. Make sure that the battery voltage, as measured at the amplifier's +12 volt and ground terminals, is 11 volts or more.

Electrical Interferences

The inside of an automobile is a very hostile electrical environment. The multitude of electrical systems, such as the ignition system, alternator, fuel pumps, air conditioners to mention just a few, create radiated electrical fields, as well as noise on the +12 volt supply and ground. Remember to isolate the problem - first unplug amplifier input RCA cables, if the noise is still present, check the speaker leads, if not, plug the RCA's back, and investigate the source driving the amplifier, one component at a time.

A ticking or whine that changes with engine RPM:

1. This problem could be caused by radiation pickup of RCA cables too near to a fuel pump or a distributor, for instance, - relocate cables.
2. Check that the head unit ground is connected straight to the vehicle chassis, and does not use factory wiring for ground.
3. Try to supply the head unit with a clean +12 volt supply directly from the battery +, instead of using a supply from the in dash Wiring/fusebox. This type of noise can be more difficult to pinpoint, but is usually caused by some kind of instability, causing oscillations in the system.

A constant whine:

1. Check all connections, especially for good grounds.
2. Make sure that no speaker leads are shorting to exposed metal on the vehicle chassis.
3. RCA cables are notorious for their problematic nature, so check that these are good, in particular the shield connections.

Caution!

In your amplifier are protection circuits integrated. Short Circuit Protection engaged: The amplifier will turn off and try to come back immediately. The amplifier will cycle like this indefinitely, with "blips" of sound each time. If this is the case, check your speakers and wiring for low impedance and short circuits. Thermal Protection engaged: The amplifier will turn off and several minutes later will come back on. In this case, ensure that there is nothing blocking the normal convective airflow of the amplifier. If the display is still lighting up red, the amplifier is damaged.

NOTES

NOTES



The Car Audio Forge.



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