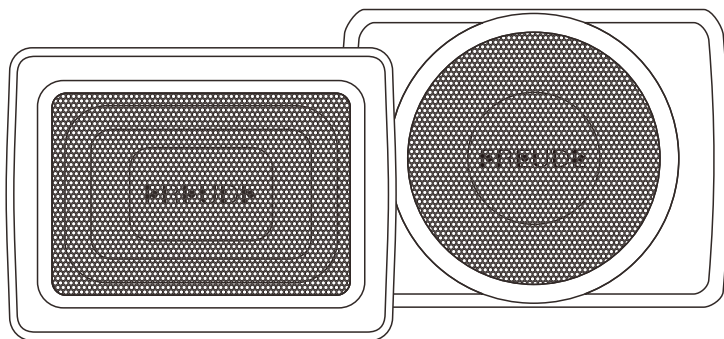


FREUDE

OWNER'S MANUAL



FED-690/FED-800

6x9" ACTIVE SUBWOOFER / 8" ACTIVE SUBWOOFER

WARNING

PLEASE READ CAREFULLY BEFORE INSTALLING OR OPERATING THIS UNIT,
AND KEEP IT WELL FOR NECESSARY REFERENCE DURING USE.

Introduction

Thank you for purchasing a FREUDE product, designed according to the highest quality standards.

To achieve the best possible performance from your new components, we recommend you follow the instructions in this manual carefully. In order to design and create top level car hi-fi systems you need to understand automobile mechanical and electrical issues very well; if you think you lack the required knowledge or the proper tools, please consult with a specialized installer.

A professional installation will ensure your system delivers all the performance you have paid for. Without affecting the safety and reliability of your vehicle.

This manual has been designed to provide you with the basic instructions required to install and use this product. For further information, please contact your authorized FREUDE dealer or after-sales service.

Precatuions

- Before making holes, check the mounting space with supplied template.
- To prevent noise keep the wiring away from motors, high-voltage leads and other potential noise sources.
- To prevent a short-circuit, keep all wiring away from moving parts and sharp edges.
- Make sure you carefully read and understand the installation instructions before installing the system in vehicle.

WARNING

- To prevent short circuit, please keep the device away from water or wet places.
- If water or any other liquid soak into the device, cut off the power immediately, and call our service engineer of inspection, in case of emergency.
- There is no repairing unit inside for user, please do not try to disassemble the bottom cover. Any problem please contact our service engineers in time.

| Packing List

The following items should be placed in the gift box according to the model you purchased. If there is any missing, please inform the seller or manufacturer as soon as possible.

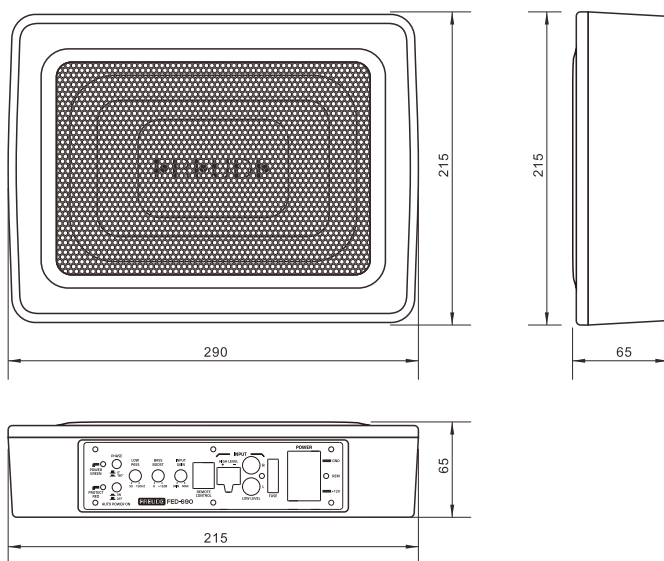
· Active Subwoofer	· 1pc
· User Manual (English)	· 1pc
· User Manual (Simplified Chinese)	· 1pc
· High level input plug	· 1pc
· Mounting Bracket	· 4pcs
· Tapping Screws	· 4pcs
· Machine Screws	· 8pcs

Specifications

· Model:	· FED-690
· Subwoofer Size:	· 6x9"
· Max Power:	· 240W
· Rms Power:	· 160W
· T.H.D.:	· <0.4%
· Signal-to-noise ratio	· >90dB
· Frequency Response:	· 20-150Hz
· High Level Input Sensitivity:	· 0.9V
· Low Level Input Sensitivity:	· 130mV
· Low Pass Filter:	· 50-150Hz
· Bass Boost:	· 0 to +12dB
· Subsonic Filter:	· 20Hz
· Fuse Rating:	· 15A
· Dimensions(LxWxH):	· 290x215x65mm

Product Dimensions

FED-690



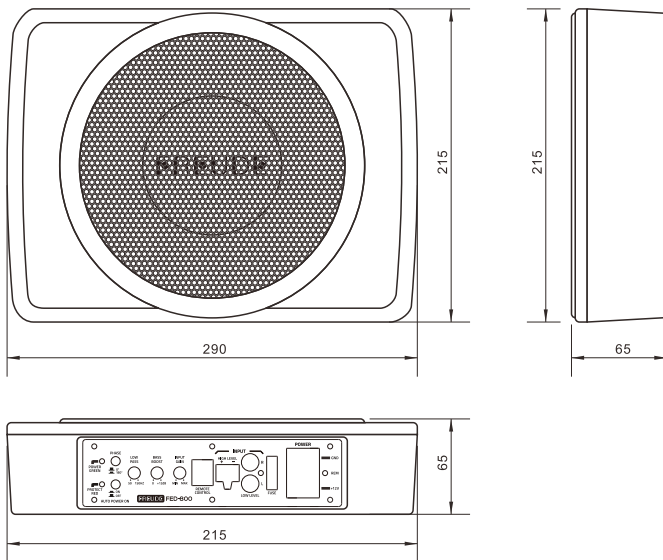
The contents of this manual and the specifications of this product are subject to change without notice. Freude Company reserves the right to make changes to the specifications and materials contained therein without notice.

Specifications

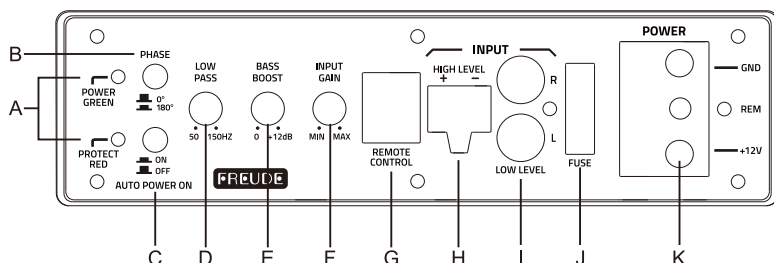
· Model:	· FED-800
· Subwoofer Size:	· 8"
· Max Power:	· 300W
· Rms Power:	· 200W
· T.H.D.:	· <0.4%
· Signal-to-noise ratio	· >90dB
· Frequency Response:	· 20Hz-150Hz
· High Level Input Sensitivity:	· 0.9V
· Low Level Input Sensitivity:	· 130mV
· Low Pass Filter:	· 50HZ-150Hz
· Bass Boost:	· 0 to +12dB
· Subsonic Filter:	· 20Hz
· Fuse Rating:	· 15A
· Dimensions(LxWxH):	· 290x215x65mm

Product Dimensions

FED-800



Panel Controls And Features



A. POWER STATUS LED

This bio-color LED glows green when power is on and no problems are present. If one of the protection circuit comes on, it will change to red.

B. PHASE SHIFT

Use this switch to help compensate for time alignment problems in the system. Such problems usually result from having the subwoofer at a different distance from the listener than the other speakers in the system.

C. AUTO POWER ON

The AUTO POWER ON(ON/OFF) is for high level (speaker-level) connections. When the switch is in the "ON" position, the subwoofer AUTO POWER ON when there is signal input. If the amplifier detected no signal input, the amplifier will auto turn off. If you prefer to use the remote turn on/off connection, the switch is in the OFF position.

Note: Please connect the remote terminal to the remote output of head unit as Fig.4. When you hear the unit turn ON/OFF POP noise from the subwoofer.

D. LOW PASS FILTER

This control permits you adjust the frequency range you want the subwoofer amplifier to receive. The subwoofer will reproduce all sound BELOW the frequency you set.

Note: The low pass filter frequency can be higher or lower than the standard. There have +/-20% tolerance.

E. BASS BOOST

The BASS BOOST feature will increase the sound level in the bass frequencies.

F. INPUT GAIN CONTROL

After you have installed your system, turn this control to minimum.

Turn the head unit on (and the subwoofer will turn on via the remote connection). Turn the head unit volume to about 2/3 full level.

Slowly turn up the subwoofer input gain control until you hear a small amount of distortion. Then reduce the level until the distortion is completely gone. Level the control at this setting.

G. REMOTE LEVEL CONTROL

Attach the included remote level control to control the volume level of the subwoofer independently.

H. HIGH LEVEL INPUTS

If your head unit does not have RCA output you can use the speaker outputs for the audio source for the subwoofer. Use the supplied cable and wire harness and connect the outputs properly as shown in the connection diagram in this manual.

I. LOW LEVEL RCA INPUTS

Low level inputs are the recommended way to introduce the audio signal to the subwoofer if RCA outputs are present on your head unit or other signal source (such as a sound processor).

J. FUSE

Do not use a fuse with a different value and NEVER replace the fuse with a wire or coin.

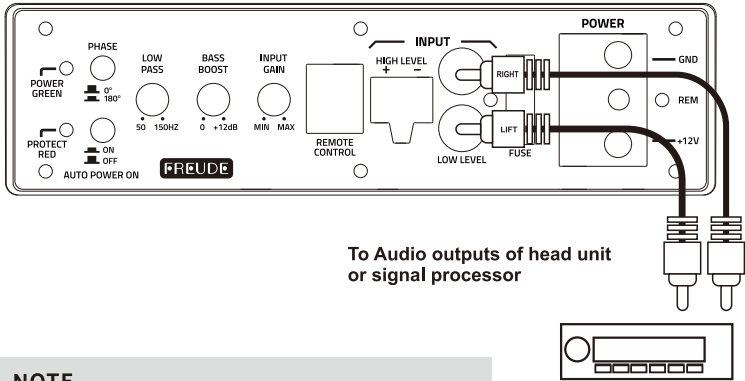
K. POWER INPUT TERMINAL

Input Signal Connection Mode

Low Level Input Wiring

Low Level Input (RCA) input wiring is preferred for best audio performance. Most trunk or hatchback installations will require a 15-20 feet RCA cable, while pick up trucks and under-seat installations will require a 6-12 feet RCA cable. Always use a high quality cable.

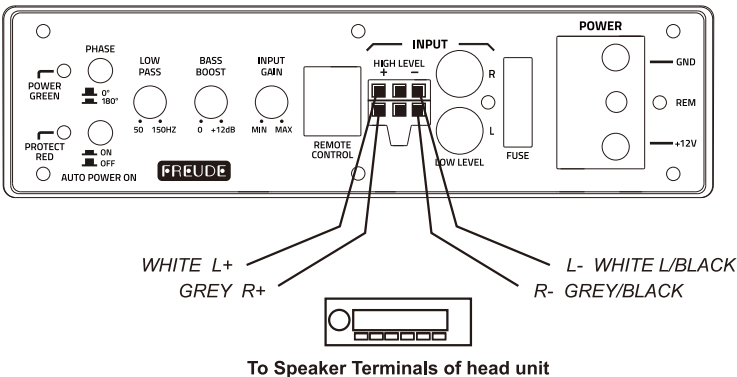
Fig.1



High Level Input Wiring

The high level input(s) should only be used when your receiver lacks RCA outputs. If the RCA outputs are not present, connect the speaker outputs from the receiver to the high level input connector of the amplifier. Be sure to observe polarity to avoid audio phase problems.

Fig.2



Power Connections

Connect the ground terminal to the closest point on the chassis of the vehicle. Keep this ground wire to less than 39"(100 cm) in length. Use 8 gauge(or heavier) wire.

Connect the remote terminal to the remote output of head unit using 18 gauge (or heavier) wire.

Connect an empty fuse holder within 40 cm of the car battery, and run 8 gauge (or heavier) cable from this fuse to the amplifier location. Then connect the fuse holder to the " BATT+"(+12V) connection on the subwoofer rear panel.

Fig.3

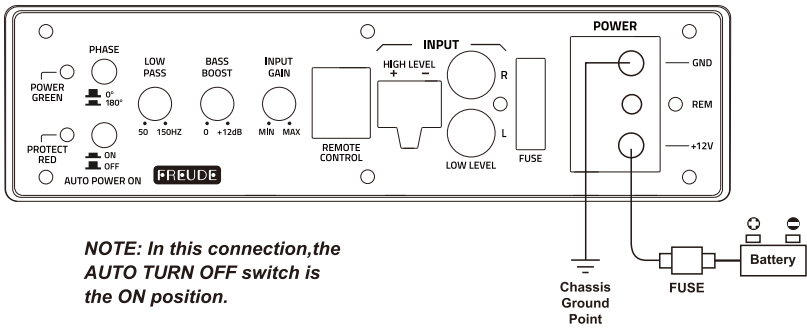
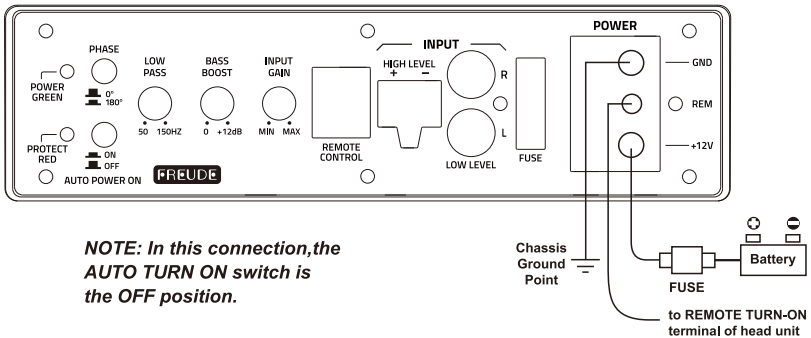
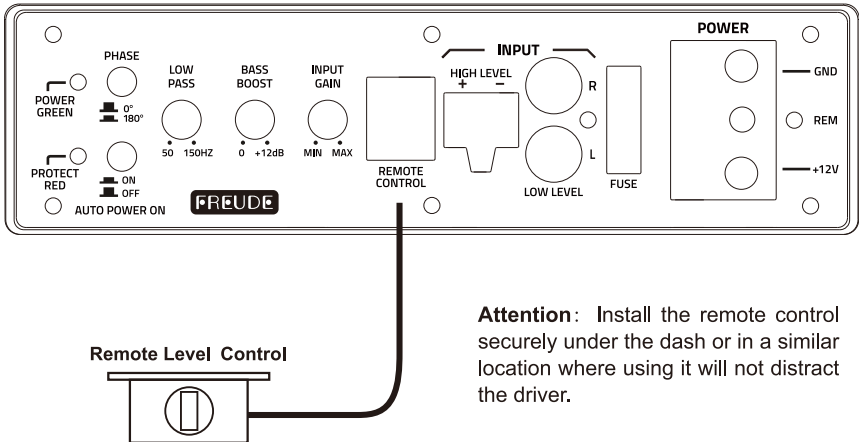


Fig.4



Remote Level Control Connection

Fig.5



| Trouble Shooting

If you experience operation or performance problems with this product, compare your installation with the electrical wiring diagram on the previous pages. If problems, please read the following trouble shooting tips which may help eliminate the problems.

Symptom Possible Remedy

Amplifier will not power up	<i>Check to make sure you have a good ground connection. Check that the Remote Input (Turn-On) has at least +12VDC. Check that there is battery power on the (+) terminal. Check that there is at least 12V. Check all fuse, replace if necessary. Make sure that the Protection LED is not illuminated. If it is lit, shut off the amplifier briefly, and then repower it.</i>
Protection LED comes on when amplifier powers up	<i>Check for shod circuits on speaker leads. Turn down the volume control on head unit to prevent overdriving. Remote speaker leads, and reset the amplifier. If the Protection LED still comes on, then the amplifier is faulty and needs servicing.</i>
No output	<i>Check that all fuses are OK. Check that unit is properly grounded. Check that the Remote Input (Turn-On) has at least +12VDC. Check that the RCA audio cables are plugged into the proper inputs. Check all speaker wiring.</i>
Low output	<i>Reset the Level Control. Check the Crossover Control settings.</i>
High hiss in the sound	<i>Disconnect all RCA inputs to the power sub's control panel. If the hiss disappears, then plug in the component driving the amplifier and unplug its inputs. If the hiss disappears at this point, go on until the faulty noise component is found. It is best to set the amplifier's input level control as low as possible. Try to set the head unit as high as possible (without distortion) and the amplifier input level as low as possible.</i>
Squealing noise is present	<i>Check for improperly grounded RCA inter connects.</i>
Distorted sound	<i>Check that the Input Level Control is setting to match the signal level of the head unit. Always try to set the Input level as low possible. Check that all crossover frequencies are properly setting. Check for short circuits on the speaker lead.</i>
Amplifier gets Over heated	<i>Check that the minimum speaker impedance for the amp model is correct. Check that there, is good all ready circulation around the amplifier In some applications, it may be necessary to add an extra cooling fan.</i>
Engine noise (static type)	<i>This is usually caused by poor quality RCA cables, which can pick up radiated noise. Use only the best quality cables, and route them away from power cables.</i>
Engine noise (alternator whine)	<i>Check that the RCA grounds are not shorted to the vehicle chassis. Check that the head unit is properly grounded.</i>



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