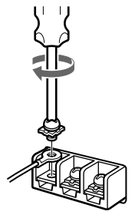
Connections

Caution

- Before making any connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Be sure to use speakers with an adequate power rating. If you use small capacity speakers, they may be damaged.
- Do not connect the ⊖ terminal of the speaker system to the car chassis, and do not connect the ⊖ terminal of the right speaker with that of the left speaker.
- Install the input and output cords away from the power supply lead as running them close together can generate some interference noise.
- This unit is a high-power amplifier. Therefore, it may not perform to its full potential if used with the speaker cords supplied with the car.
- If your car is equipped with a computer system for navigation or some other purpose, do not remove the ground wire from the car battery. If you disconnect the wire, the computer memory may be erased. To avoid short circuits when making connections, disconnect the +12 V power supply lead until all the other leads have been connected.

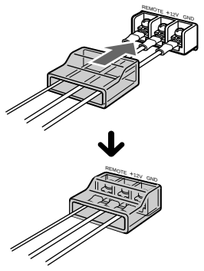
Make the terminal connections as illustrated below.



Note

Tighten the screws firmly, but be careful not to apply too much force as doing so may damage the screws.*

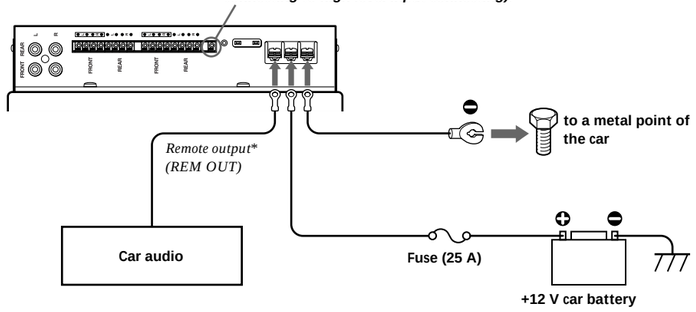
** The torque value should be less than 1 N • m.*



Pass the leads through the cap, connect the leads, then cover the terminals with the cap.

Power Connection Leads

When using a car audio without a remote output on the amplifier, connect the accessory power supply of the car to the ACC ***(When connecting to high level input connecting)****.*



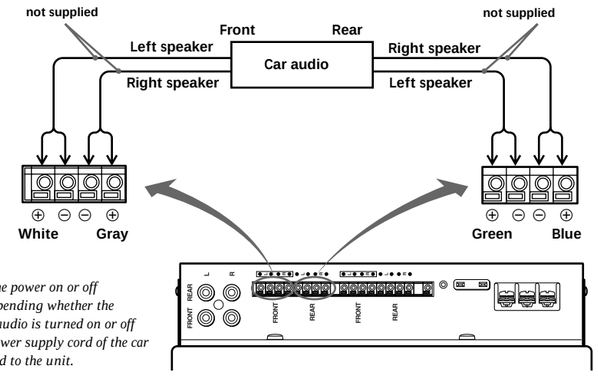
** When using a car audio without a remote output on the amplifier and when making a high level input connection, connect the accessory power supply of the car to the ACC. When the unit receives a signal, the power of the unit turns on automatically. If the unit does not receive a continuous signal for approximately 10 seconds, the power of the unit turns off automatically.*

Notes on the power supply

- *Connect the +12 V power supply lead only after all the other leads have been connected.*
- ***Be sure to connect the ground lead of the unit securely to a metal surface of the car. A loose connection may cause the amplifier to malfunction.***
- *Be sure to connect the remote control lead of the car audio to the remote terminal.*
- *Use the power supply lead with a fuse attached (25 A).*
- *Place the fuse in the power supply lead as close as possible to the car battery.*
- *Make sure that the leads to be connected to the* ***+12 V*** *and* ***GND*** *terminals of this unit are larger than 10-Gauge (AWG-10) or have a sectional area of more than 5 mm².*
- *When using the optional RC-46 power amplifier connecting cord, consult that manual for proper use.*

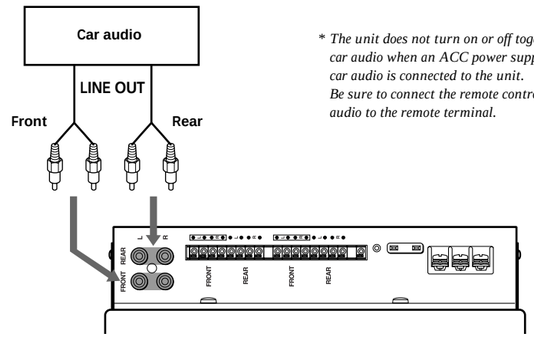
Input Connections

High Level Input Connection



** The unit turns the power on or off automatically depending whether the power of the car audio is turned on or off when an ACC power supply cord of the car audio is connected to the unit.*

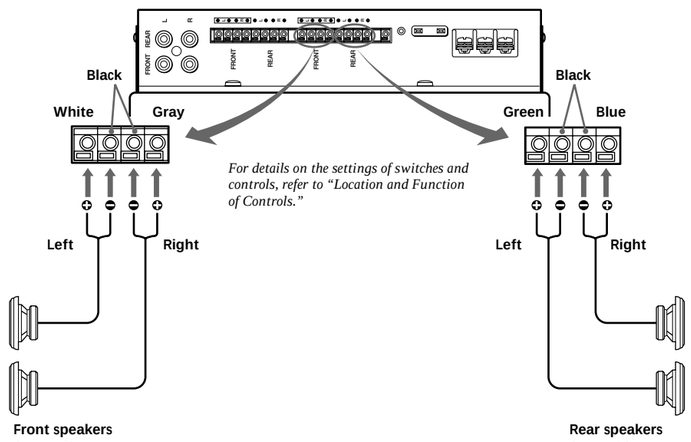
Line Input Connection



** The unit does not turn on or off together with the car audio when an ACC power supply cord of the car audio is connected to the unit. Be sure to connect the remote control lead of the car audio to the remote terminal.*

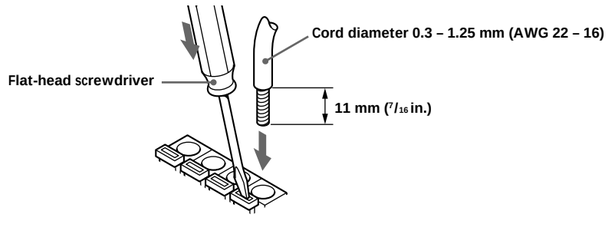
Speaker Connections

4-Speaker System



For details on the settings of switches and controls, refer to "Location and Function of Controls."

Direct speaker cord connection



SONY

3-866-441-**11** (1)

5 channel Active Subwoofer

Operating Instructions

Owner's Record

The model and serial numbers are located on the bottom of the unit.
Record the serial number in the space provided below.
Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. XS-AW850 Serial No. _____

XS-AW850

Features

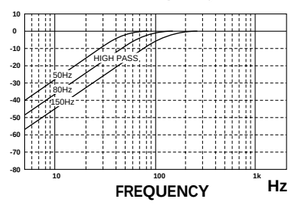
- Maximum power output of 50 watts × 4 (at 4 ohms) + 120 watts (at 6 ohms, subwoofer).
- Direct connections can be made with the speaker outputs of your car audio if it is not equipped with the line output (High level input connection).
- High-pass filter circuit built-in.
- Protection circuit provided.
- Pulse power supply* for stable, regulated output power.

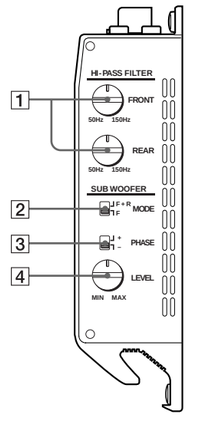
* ***Pulse power supply***
This unit has a built-in power regulator which converts the power supplied by the DC 12 V car battery into high speed pulses using a semiconductor switch. These pulses are stepped up by the built-in pulse transformer and separated into both positive and negative power supplies before being converted into direct current again. This is to regulate fluctuating voltage from the car battery. This light weight power supply system provides a highly efficient power supply with a low impedance output.

Location and Function of Controls

1 Cut-off frequency adjustment control
Sets the cut-off frequency (50–150 Hz) for the high-pass filters.

Cut-off frequency



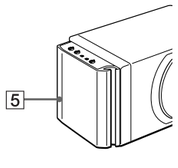


2 MODE select switch
The switch can be used to change the subwoofer output as follows.
FRONT : Outputs the input signal to the FRONT input jack.
F+R : Outputs the input signal to the FRONT and REAR input jacks.

3 PHASE select switch (Subwoofer only)
Use this switch to change the phase of the reproduced sound to match your audio system.

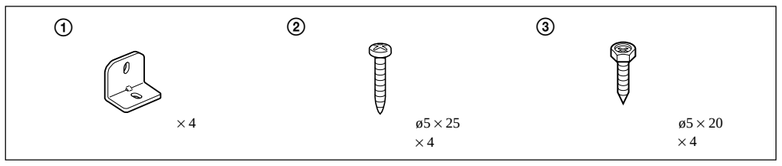
4 LEVEL control
Turn this control to adjust the subwoofer output level.

5 POWER/PROTECTOR indicator
Lights up in green while the unit is in operation. The color will change from green to amber and the unit will shut down when the protection circuit is activated if a DC current is generated.



Installation

Parts list



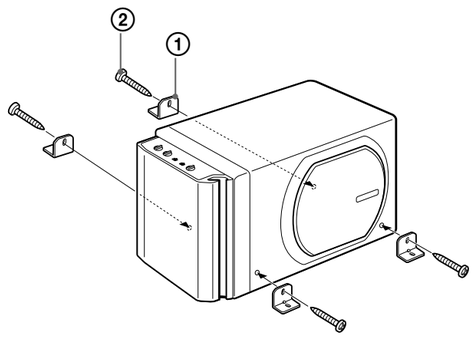
Before installation

- Choose the installation location carefully so that the unit does not interfere with driving and / or visibility.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or heater exhaust, or where it would be subject to dust, dirt, or excessive vibration.
- This unit may cause interference in the car audio or other A / V devices. If this occurs, relocate the unit at least 50 cm from the affected device.
- Use only the supplied mounting hardware for a safe and secure installation.
- Consult your nearest Sony dealer for the location of an authorized installer if you require assistance.

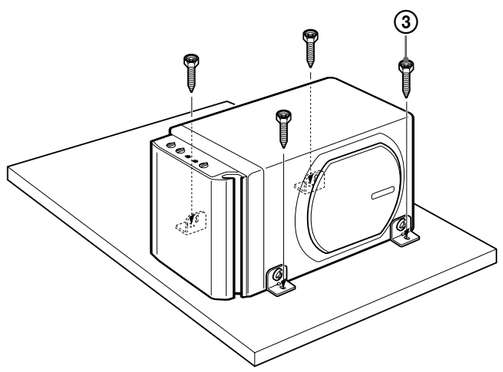
Note on mounting board (not supplied)

It is recommended that a mounting board be used for safe installation. The board should be thicker than 18 mm (3/4 in.) to accept the supplied mounting screws.

1 **Fasten the fittings ① securely to the unit with the screws ②.**

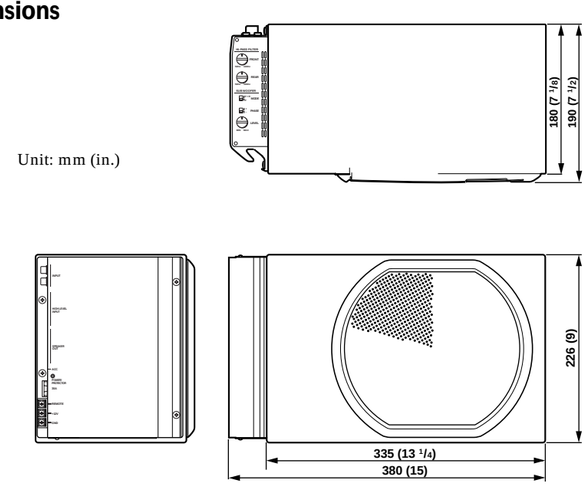


2 **Fasten the unit securely to the mounting board with the screws ③.**



Dimensions

Unit: mm (in.)



Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

22 watts per channel minimum continuous average power into 4 ohms, both channels driven from 100 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

Speaker section

Woofer	20 cm, cone type
Impedance	6 ohm

Power amplifier section

Circuit system	OTL (output transformerless) circuit Pulse power supply
Inputs	RCA pin jacks High level input connector
Outputs	Speaker connector
Speaker impedance	4 Ω (stereo)
Maximum outputs	Front / Rear outputs: 50 watts × 4 (at 4 ohms) Subwoofer output: 120 watts × 1 (at 6 ohms)
Rated outputs (supply voltage at 14.4 V)	Front / Rear outputs: 22 watts × 4 (100 Hz – 20 kHz, 1 % THD, at 4 ohms) Subwoofer output: 60 watts (100 Hz, 1 % THD, at 6 ohms)
Frequency response	Front / Rear outputs: 50 Hz – 50 kHz (±3 dB)
Harmonic distortion	Front / Rear 0.1 % or less (at 1 kHz) Subwoofer 0.05 % or less (at 100 Hz)
Input sensitivity	0.7 V (RCA pin jacks) 8.0 V (High level input)
High-pass filter	50 – 150 Hz, –12 dB / oct

System Section

Power requirements	12 V DC car battery (negative ground)
Power supply voltage	10.5 – 16 V
Current drain	at rated output: 19 A Remote input: 1.5 mA
Dimensions	Approx. 380 × 226 × 190 mm (w / h / d) (15 × 9 × 7 1/2 in.) not incl. projecting parts and controls
Mass	Approx. 6.4 kg (14 lb.) not incl. accessories
Supplied accessories	Mounting screws (ø5 × 20: 4, ø5 × 25: 4), Fittings (4), Terminal Cap
Optional accessories	Connecting cord for power amplifier RC-46

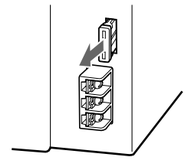
Design and specifications are subject to change without notice.

Precautions

- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with an impedance of 4 ohms.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit in areas subject to:
  - — high temperatures such as from direct sunlight or hot air from the heater
  - — rain or moisture
  - — dust or dirt.
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool down before use.
- Be sure to install the unit horizontally so that the air duct of the cooling fan or its fin will not be covered with carpet etc.
- If this unit is placed too close to the car radio or antenna, interference may occur. In this case, relocate the amplifier away from the car radio or antenna.
- If no power is being supplied to the master unit, check the connections.
- This power amplifier employs a protection circuit* to protect the transistors and speakers if the amplifier malfunctions. Do not attempt to test the protection circuit by covering the heat sink or overloading the circuit.
- Do not use the unit on a weak battery as its optimum performance depends on a good power supply.
- For safety reasons, keep your car audio volume moderate so that you can still hear sounds outside your car.

Fuse Replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.



Warning

When replacing the fuse, be sure to use one matching the amperage stated above the fuse holder. Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

**Protection circuit*

This amplifier is provided with a protection circuit that activates when a DC current is generated.
The color of the POWER/PROTECTOR indicator will change from green to amber, and the unit will shut down.
If this happens, turn off the connected equipment, take out the cassette tape or disc, and determine the cause of the malfunction. If the amplifier has overheated, wait until the unit cools down before use.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Troubleshooting Guide

The following checklist will assist in the correction of most problems which you may encounter with your unit. Before going through the checklist below, refer to the connection and operating procedures.

Problem	Cause/Solution
The POWER/PROTECTOR indicator does not light up.	The fuse is blown. → Replace the fuse with a new one.
	The ground lead is not securely connected. → Fasten the ground lead securely to a metal point of the car.
	The voltage going into the remote terminal is too low. • The connected master unit is not turned on. → Turn on the master unit. • The system employs too many amplifiers. → Use a relay.
	Check the battery voltage (10.5 – 16 V).
	The remote control lead of the car audio is not connected to the remote terminal when making a line input connection. → Be sure to connect the remote control lead of the car audio to the remote terminal.
• The POWER/PROTECTOR indicator flashes. **• The unit heats up abnormally.**	Use speakers with suitable impedance (4 Ω).
	The speaker outputs are short-circuited. → Rectify the cause of the shortcircuit.
Alternator noise is heard.	The power connecting leads are installed too close to the RCA pin cords. → Keep the leads away from the cords.
	The ground lead is not securely connected. → Fasten the ground lead securely to a metal point of the car.
	Negative speaker leads are touching the car chassis. → Keep the leads away from the car chassis.
The subwoofer sound is too low.	The level adjustment control is set to the “MIN” position.