

1050SW/103SW Powered Subwoofer Owner's Manual

Introduction

Congratulations on your purchase of a Kenwood Powered Subwoofer. It will bring a new level of bass and thundering effects to your stereo system.

Installing the subwoofer isn't difficult, but please read and follow all of the instructions on these pages to get maximum performance from your subwoofer.

If you're installing this subwoofer as part of a Kenwood speaker package, or if you're connecting other equipment, such as a receiver, power amplifier, or pre-amplifier, use this manual in combination with the manuals that came with those components.

Feature highlights

Remote Control lets you control key functions of your subwoofer from the comfort of your favorite chair.

Sigma Servo circuitry suppresses distortion for significantly tighter, deeper, more forceful bass response.

Dual Listening Modes allow you to change between Music and Movies modes with the push of a button. The Music mode retains the sonic balance of the original recording. The Movies mode accentuates deep bass sounds to increase the impact of film soundtracks.

Crossover and Phase Adjustments allow the subwoofer to blend well with a wide variety of main speakers.

Auto Turn-on circuitry activates the subwoofer automatically when it receives a music signal and automatically puts it into "standby" mode when it doesn't receive a signal for 7 minutes.

Unpacking

In this box you should have:

- 1 Powered subwoofer
- 1 Remote control
- 2 Batteries for the remote control
- 4 Rubber pads for the bottom of the subwoofer

Unpack the subwoofer carefully, and examine it for shipping damage. If it is damaged or fails to operate, notify your Kenwood dealer immediately. If it was shipped to you directly, notify the shipping company without delay. Only the person or company who originally received the speaker can file a claim against the carrier for shipping damage.

Keep the original carton and packing materials in case you need to transport or ship your subwoofer in the future.

What else will you need?

If your receiver or amplifier has a subwoofer preout jack, you will need an RCA-type audio cable.

If your receiver or amplifier doesn't have a subwoofer preout jack, you will need speaker wire.

For best performance, use 16-gauge (or thicker) speaker wire. (Remember, the smaller the number, the thicker the wire—so 16-gauge wire is thicker than 20-gauge wire.)

Be sure to get enough speaker wire or an RCA-type cable that's long enough to allow you to move the subwoofer around while you find the right location for it.

Before you get started

A few notes of caution about setting up and using your new subwoofer:

- Before connecting the subwoofer to your receiver or amplifier, make sure that the power cords on both units are unplugged from the wall outlet until you've finished your connections.
- To avoid damage to the subwoofer, keep the volume control of your receiver or amplifier at a moderate setting when its bass control or loudness control is activated.
- When playing a vinyl record (LP), set the receiver or amplifier volume to its minimum level before placing the stylus on the record.

Safety first

WARNING

To prevent fire or electric shock, do not expose this unit to rain or moisture.

CAUTION

To prevent electric shock, match the wide blade of the plug to the wide slot in a wall socket, and insert fully.



CAUTION

To reduce the risk of electric shock, do not remove the unit's cover. There are no user-serviceable parts inside. Have the unit serviced by qualified service personnel.

SAFETY SYMBOLS

We've placed these safety symbols on the back of the unit.



The lightning bolt symbol is to alert you to the danger of electric shock from the operating of electric parts inside the unit.



The exclamation point symbol is to let you know that there are important operating and servicing instructions in this manual that you should read before you operate this unit.

ABOUT THE POWER SUPPLY

This unit is designed for operation in the USA and Canada using a power supply of AC 120 volts only.

SAFETY PRECAUTIONS

Please read all of the safety and operating instructions before operating this unit. Adhere to all warnings on the unit and in this manual. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

1 Power sources. The unit should be connected to a power supply only of the type described in this manual or as marked on the unit. If you are not sure of the type of power supply to your home, consult your unit dealer or local power company. For units intended to operate from battery power, or other sources, refer to the instruction manual.

2 Power-cord protection. Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

3 CAUTION—Polarization. This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

4 Ventilation. Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the unit and to protect it from overheating, and these openings must not be blocked or covered. The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 4 inches away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

SAFETY PRECAUTIONS (Continued)

- 5 Water and moisture.** The unit should not be used near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- 6 Temperature.** The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +41°F.
- 7 Heat.** The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.
- 8 Electric shock.** Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.
- 9 Enclosure removal.** Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.
- 10 Cleaning.** Unplug this unit from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.
- 11 Lightning.** For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power-line surges.
- 12 Abnormal smell.** If an abnormal smell or smoke is detected, immediately turn the power OFF and unplug the unit from the wall outlet. Contact your dealer or nearest service center.
- 13 Damage requiring service.** The unit should be serviced by qualified service personnel when:
 - The power-supply cord or the plug has been damaged.
 - Objects have fallen, or liquid has been spilled into the unit.
 - The unit has been exposed to rain or water.
 - The unit has been dropped, or the enclosure damaged.
 - The unit exhibits a marked change in performance.

The unit does not appear to operate normally by following the instruction manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.

- 14 Servicing.** The user should not attempt to service the unit beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel.
- 15 Power lines.** An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 16 AC outlets.** Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.
- 17 Overloading.** Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
- 18 Attachment.** Do not use attachments not recommended by the unit manufacturer as they may cause hazards.
- 19 Replacement parts.** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 20 Safety check.** Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
- 21 Carts and stands.** Don't put this unit on a cart or stand that is unsteady or that can not support the unit's weight. If you move this unit on a cart or stand, be careful—quick stops, excessive force and pushing over or uneven surfaces, may cause the cart to overturn and damage your equipment.



FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

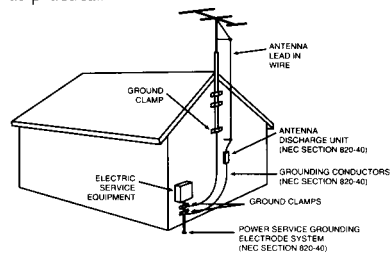
Important

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Cable System Installer Notice

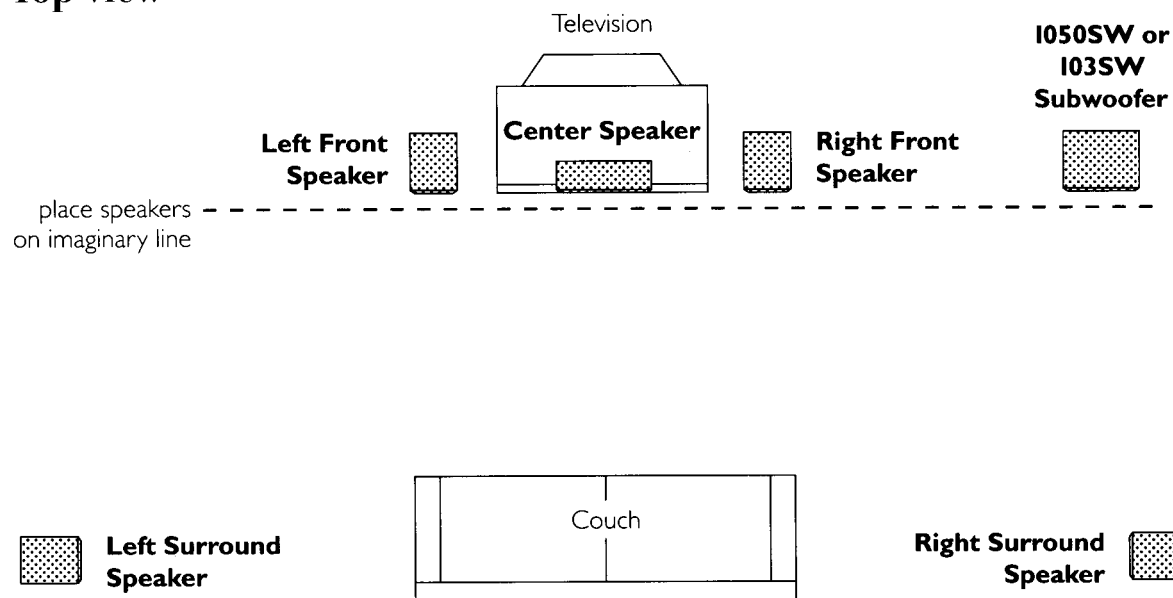
Article 820-40 of the NEC provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



Placing your subwoofer

- Apply the four rubber pads to the bottom of the subwoofer to prevent marring of wood surfaces.
- Place the subwoofer where the signal from the remote is unobstructed and where it is convenient for you to point the remote at the subwoofer. If this cannot be done, remote control repeater systems are available commercially.
- For the smoothest match between the subwoofer and the front (left and right) speakers, place the 3 of them in an imaginary straight line with each other.
- For more deep bass output, place the subwoofer next to a wall.
- For the deepest bass overall, place the subwoofer in a corner. However, this may yield uneven bass throughout the room—some areas may have too much bass, while other areas may not have enough.
- If you place the subwoofer near your TV, it may affect the picture colors. If this happens, move the subwoofer away from the TV until the picture returns to normal.
- Once you settle on a location, be sure to leave yourself some room for minor movements of a few inches—this can help fine-tune the sound in the seating area.

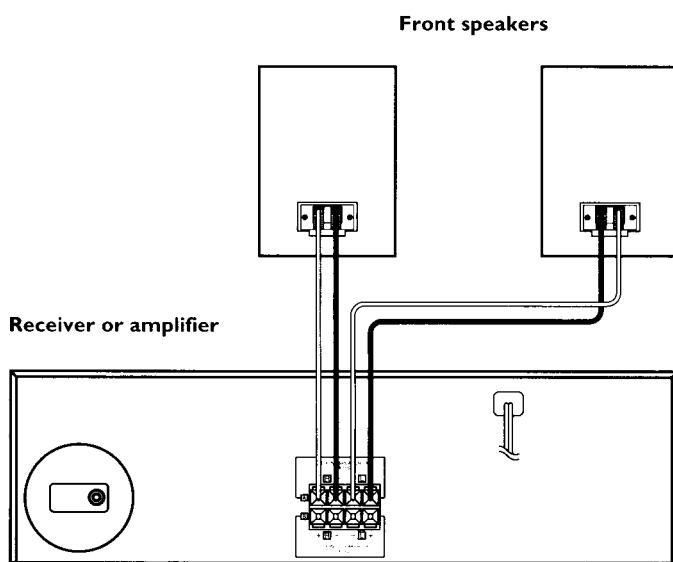
Top view



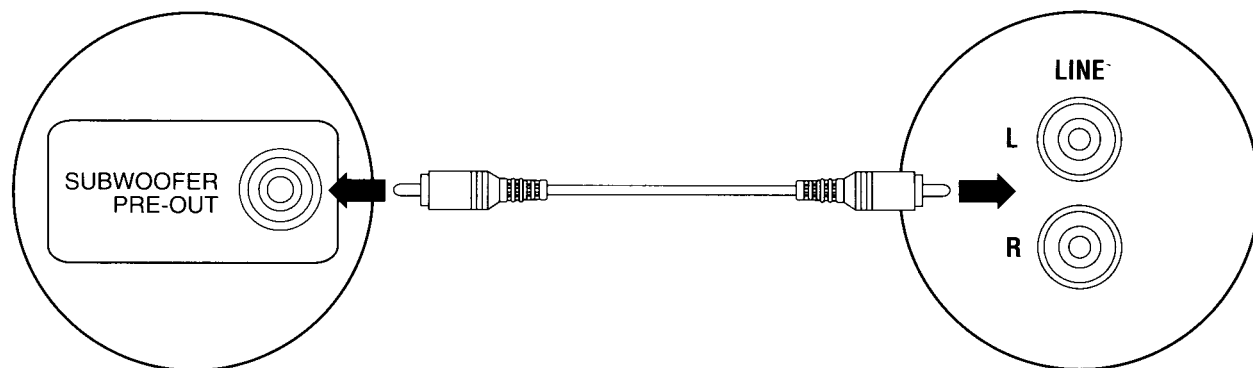
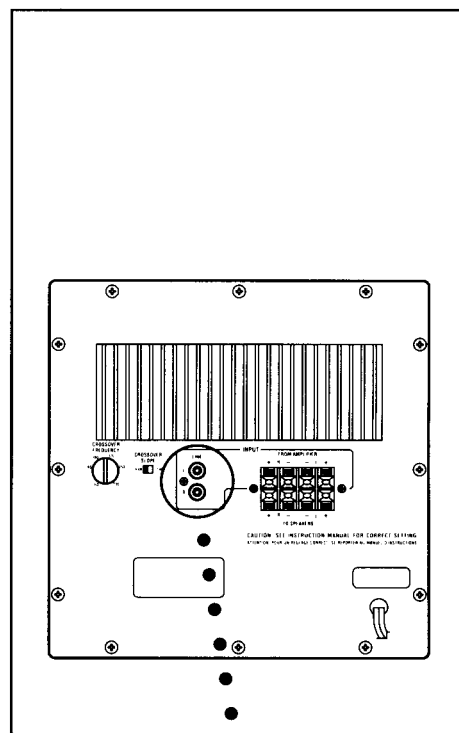
Connecting the subwoofer

If your receiver or amplifier has a subwoofer pre-amp output:

(using the pre-amp output will give you the best performance from your subwoofer)



I050SW or I03SW Subwoofer



Connect one end of an RCA-type shielded audio cable to the Subwoofer PRE-OUT connection on the receiver or amplifier.

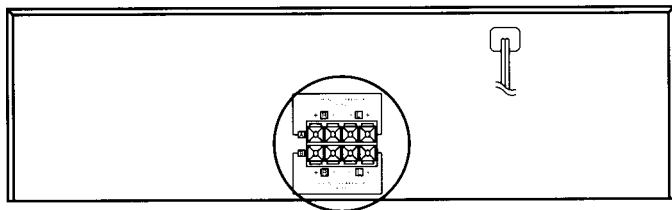
Connect the other end of the cable to either one of the Line In connections on the subwoofer.

to your audio system

If your receiver or amplifier has speaker terminal outputs only:

1050SW or 103SW Subwoofer

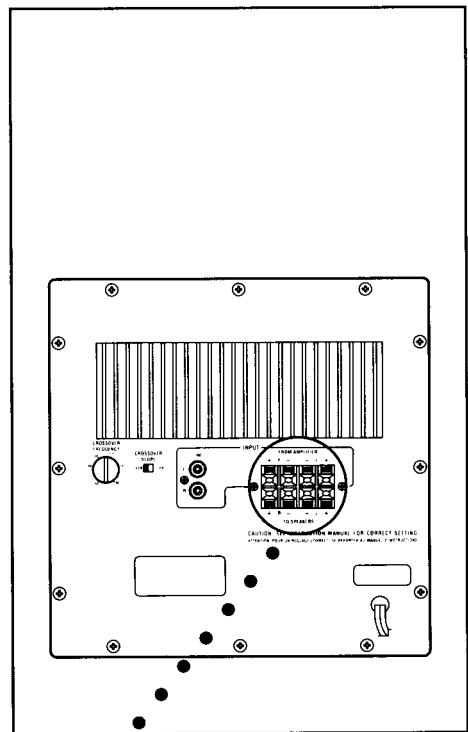
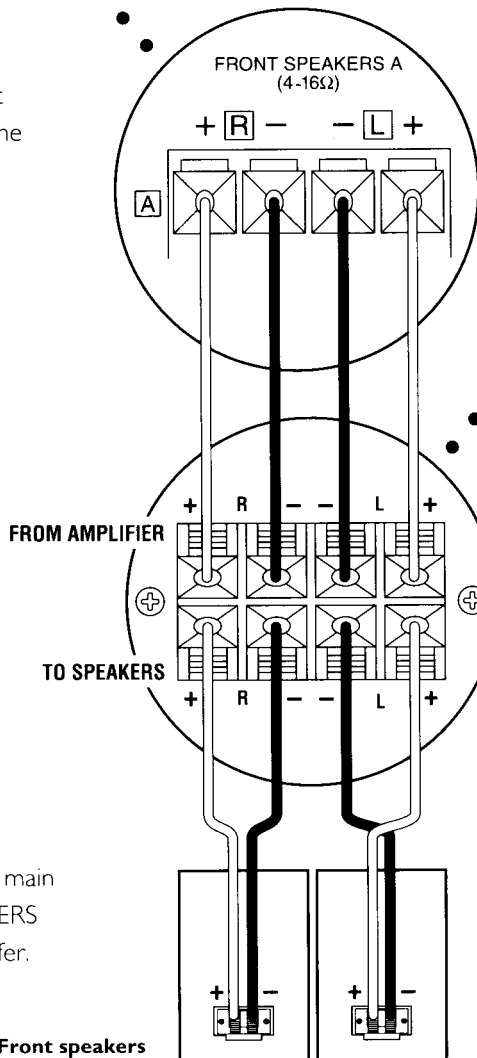
Receiver or amplifier



Connect one end of the left and right speaker wires to the LEFT and RIGHT Front speaker connectors on the receiver or amplifier.

Connect the other end of the left and right speaker wires to the left and right FROM AMPLIFIER connectors on the subwoofer.

Connect your left and right main speakers to the TO SPEAKERS connectors on the subwoofer.

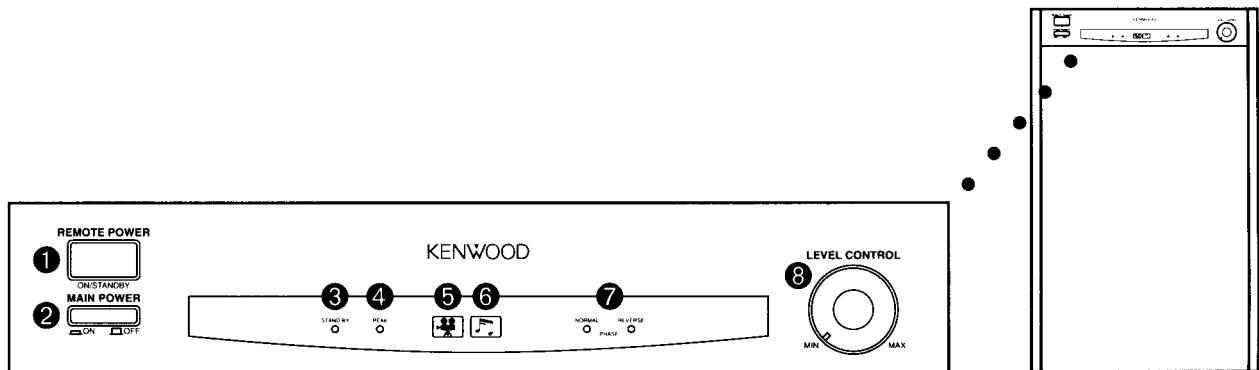


Caution: When connecting the speaker to the amplifier or receiver, be sure to always connect the positive (+) terminals to each other, and the negative (-) terminals to each other. Connecting the wrong terminals together could damage the amplifier or cause poor sound quality.

When connecting your speakers to the system, make sure that their impedance is within the allowable range specified in the instruction manual of your amplifier or receiver. If the speaker impedance is not within the range, damage may occur to your receiver, amplifier, or subwoofer.

Getting to know your subwoofer

Front



Front panel

1 REMOTE POWER

Activates the subwoofer and puts it in standby mode.

2 MAIN POWER

Press this button in to supply power to the subwoofer. Main Power should be left on all the time.

3 STANDBY indicator light

Shows that the subwoofer is in Standby mode when it is amber, and in Operating mode when it is green.

4 PEAK indicator light

Lights when the subwoofer is being overdriven.

5 MOVIES MODE indicator light

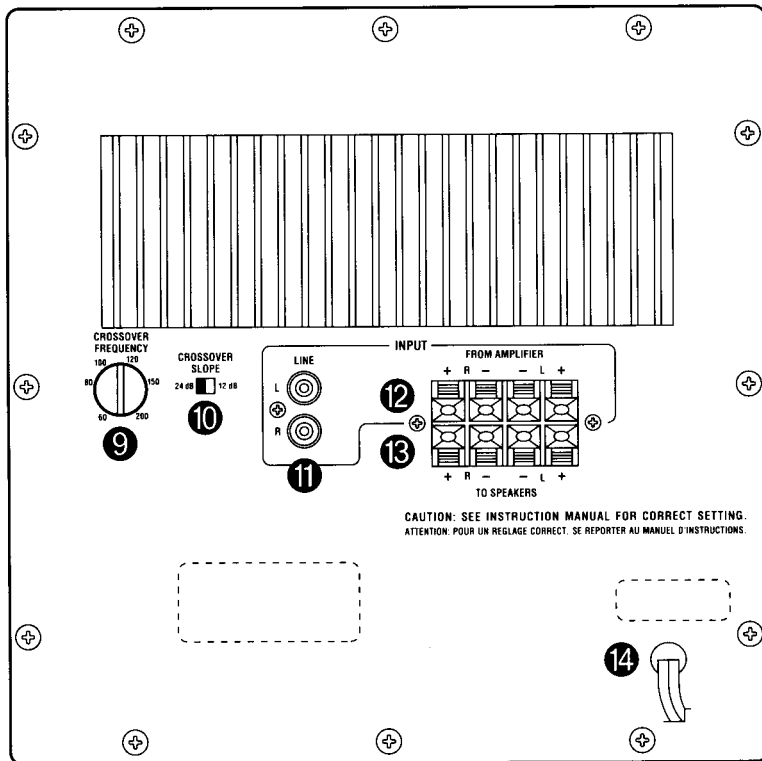
6 MUSIC MODE indicator light

7 PHASE indicator lights

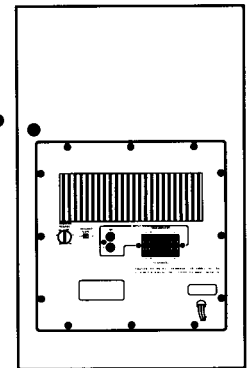
Shows the subwoofer's phase.

8 LEVEL CONTROL

Adjusts the volume level of the subwoofer (see "Setting the volume control" on page 11).



Back



Back panel

9 CROSSOVER FREQUENCY ADJUSTMENT

Adjusts the blending of sounds between the front speakers and the subwoofer.

You can adjust the frequency according to the size of the front speakers as follows:

| | |
|-------------|--------------|
| Large size | 60 ~ 80 Hz |
| Medium size | 80 ~ 120 Hz |
| Small size | 120 ~ 200 Hz |

After you initially set the crossover, you can fine-tune it later for the best match between the subwoofer and your front speakers.

10 CROSSOVER SLOPE ADJUSTMENT

Adjusts how the bass information is blended between the subwoofer and front speakers. There are two settings:

12 dB: Set the switch to 12 dB if you have small or medium-sized front speakers. This position lets the subwoofer produce more of the bass.

24 dB: Set the switch to 24 dB if you have large front speakers. This position shares more of the bass between the subwoofer and the front speakers.

11 “LINE IN” jacks (RCA-type)

Connects to the Subwoofer Pre-Amp Output jack of an amplifier or receiver.

12 “FROM AMPLIFIER” connectors

Connects to the Left and Right speaker connectors of an amplifier or receiver.

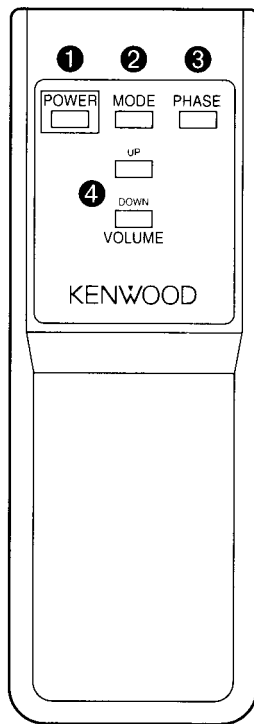
13 “TO SPEAKERS” connectors

Connects to the speaker cables from the front speakers.

14 Power cord

Connects to a 110 – 120 volt AC power outlet.

Using your remote control



1 REMOTE POWER button

Press to activate/standby the subwoofer when the MAIN POWER is on.

2 MODE button

Press to switch between Music and Movies modes.

3 PHASE button

Press to change the subwoofer's phase.

4 VOLUME CONTROL buttons

Press to raise or lower the volume.

Using the FutureSet remote to control your subwoofer

If you have Kenwood's 1090VR, 1080VR, 1070VR, or 1060VR Audio/Video Receiver, you can also use its FutureSet remote control to perform the following functions on your subwoofer:

To Switch Modes between Music and Movies:

1. Press the FUNCTION SHIFT key, then the LISTEN MODE key within three seconds.
2. The Mode will switch and the corresponding icon (Music or Movies) on the front of the subwoofer will light.

To Switch the Phase:

Press the FUNCTION SHIFT key, then the SUBWOOFER key.

To Change the Subwoofer Volume:

Press the SUBWOOFER key, then the VOLUME up/down key.

Final setup and adjustment

Setting the volume control

The peak indicator on the front panel of the subwoofer lights up when the built-in amplifier is being overdriven. Besides producing distortion that affects sound quality, overdriving could also damage your subwoofer.

To minimize the chance of overdriving the subwoofer amplifier, you need to set the system's various level controls:

1. Turn the subwoofer's volume control all the way down.
2. Play music or a movie that you know has a strong bass output.
3. Set the main volume control on the receiver or preamp to the highest setting you expect to use. (If you're adding the subwoofer to your system, you probably know how high to set the volume.)
4. If you're using a line (pre-amp) connection to the subwoofer, and the receiver or preamp has a subwoofer level control, set that level control to the middle of its range. If there is no subwoofer level control on the receiver or if you're using the subwoofer's speaker level input connections, skip this step.

5. Slowly increase the subwoofer's volume control until the peak indicator flashes on the loudest bass notes, then reduce volume until the indicator stops flashing.
6. If there is too much bass relative to the main speakers, decrease the subwoofer's volume until the balance is more to your liking.

Fine-tuning the crossover

Once you've set up the subwoofer and made the initial crossover adjustments, you can fine-tune the crossover settings to provide the best possible sound for your system and listening room.

You can fine-tune the crossover frequency, lowering it if the bass sounds too thick or boomy, or raising it if the bass sounds too thin or the music lacks body and impact.

Adjusting the phase

Since different speaker placements and room setups can affect how the subwoofer performs, you can change the subwoofer's phase to better blend it with your main speakers.

Use the remote control to change the subwoofer's phase while you listen to familiar music. Although the effect of the Phase control is subtle, you should be able to hear an improvement in the "punch" and solidity of instruments such as drums and bass guitar in one or the other of the Phase control settings.

Specifications

| | I050SW | I03SW |
|---------------------------------------|--|--|
| Amplifier | | |
| Power output | 150 watts RMS into 4 ohms, from 20 Hz to 200 Hz, with no more than 0.09% total harmonic distortion | 100 watts RMS into 4 ohms, from 20 Hz to 200 Hz, with no more than 0.09% total harmonic distortion |
| Phase switching | Normal, Reverse | Normal, Reverse |
| Input sensitivity and input impedance | | |
| RCA-type jack | 70 mV (12 k-ohms) | 70 mV (12 k-ohms) |
| Push-type terminals | 1.7 V (15 k-ohms) | 1.7 V (15 k-ohms) |
| Supply voltage | AC 110 V ~ 120 V | AC 110 V ~ 120 V |
| Rated power consumption | 150 watts | 110 watts |
| Speaker | | |
| Enclosure | Ported | Ported |
| Speaker units | 12 in (300 mm) polypropylene cone | 10 in (250 mm) paper laminate cone |
| Nominal impedance | 4 ohms | 4 ohms |
| Width | 14.3 in (363 mm) | 11.8 in (300 mm) |
| Height | 21.7 in (550 mm) | 18.9 in (480 mm) |
| Depth | 18.9 in (480 mm) with grille | 15.6 in (395 mm) |
| Net weight | 53 lb (24 kg) | 40 lb (18 kg) |

Since Kenwood follows a policy of continuous advancement in development, these specifications may change without notice.

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