



# YAMAHA

## OWNER'S MANUAL

# NS-90

GTR

## Speaker System

Thank you for selecting this YAMAHA NS-90 speaker system.

### PRECAUTIONS

Read these precautions carefully before using your speaker.

- Any time you note distortion, reduce the volume control on your amplifier to a lower setting. Never allow your amplifier to be driven into "clipping". Otherwise the speaker may be damaged.
- When using an amplifier with a rated output power higher than the nominal input power of the speaker, care should be taken never to exceed the speaker's maximum input.
- Do not attempt to clean the speaker with chemical solvents as this might damage the finish. To clean, wipe with a dry, soft cloth.
- To prevent the enclosure from warping or discoloring, do not place the speaker where it will be exposed to direct sunlight or excessive humidity.
- Do not place the speaker where it is liable to be knocked over or struck by falling objects. Stable placement will also ensure better sound performance.
- Placing the speakers on the same shelf or rack as the turntable can result in feedback.
- Secure placement or installation is the owner's responsibility. YAMAHA shall not be liable for any accident caused by improper placement or installation of the speaker.

### PLACING THE SPEAKERS

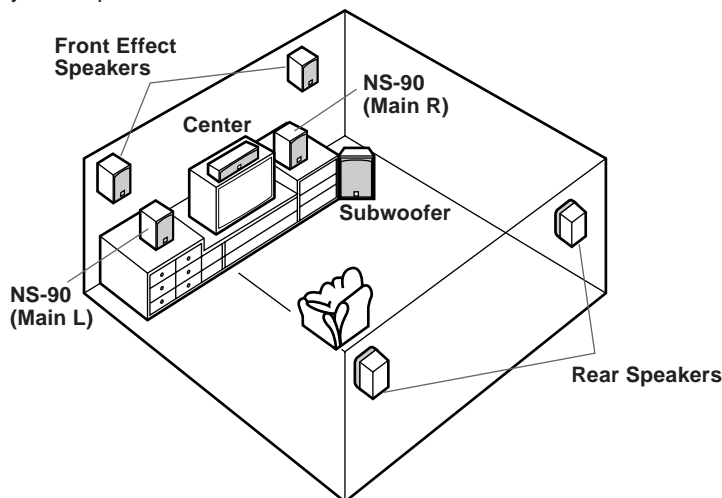
Place the speakers on a sturdy, vibration-free surface, on a well-built stand.

#### ■ Using as 2ch stereo speakers

Better stereo images will be obtained when the speakers are slightly angled in towards the listeners.

#### ■ Using as main speakers in a multi channel system

Position the speakers on both sides of the TV. The positioning of speakers is important, because it controls the whole sound quality of a multi channel system. Set up the speakers on the basis of your listening position by following the owner's manual supplied with your amplifier.

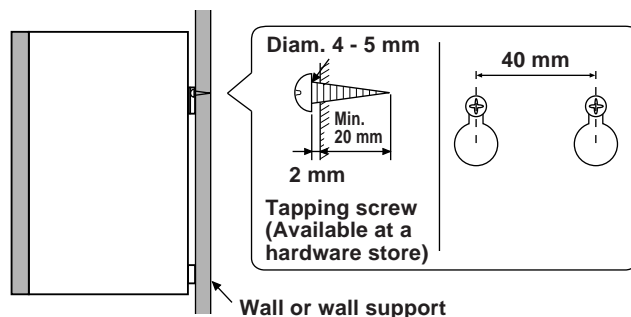


#### ■ Using as front effect or rear speakers

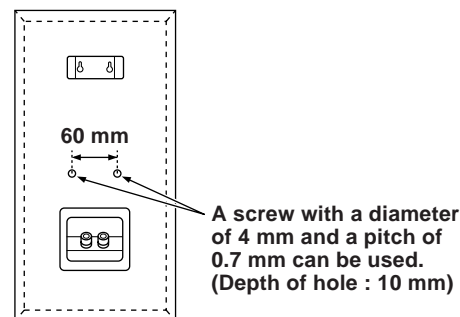
Install on a wall or place on a shelf and angle toward the main listening position for a fuller surround sound in a multi channel system. Determine the best position and angle for the speakers by following the guidelines in the owner's manual supplied with your amplifier.

#### • Mounting the speaker on a wall

Mount the speakers on a wall by using the bracket provided on the back of the speaker. Fasten screws into a firm wall or wall support as shown in the diagram, and hang the holes of the mounting bracket on the protruding screws.



You can also use the screw holes on the back of the speaker to mount the speakers on a wall.

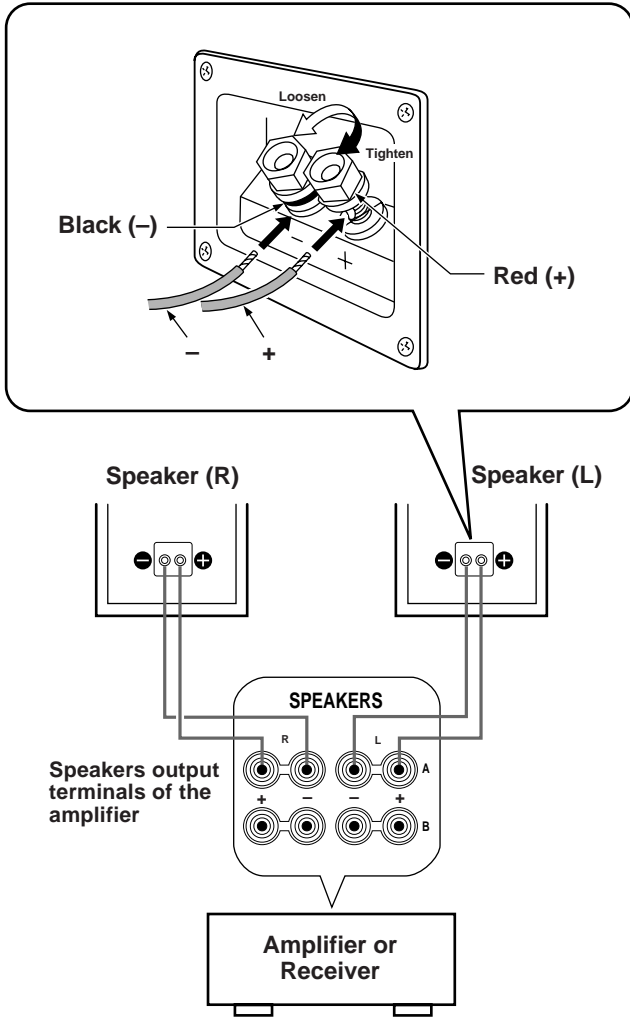


#### Notes

- Be sure to check the wall before attempting to mount these speakers on a wall. If necessary, please consult an installation specialist or the shop where the speakers were purchased.
- Wall hanging screws are not supplied with these speakers. When installing, please only use screws that are appropriate for the weight of the speakers, the thickness of the wall, etc.

## CONNECTIONS TO YOUR AMPLIFIER

Before making connections, make sure that the amplifier is switched off.



### Connections

- Connect the screw-type input terminals at the rear of the speakers to the speaker output terminals of your amplifier with the speaker cables.
- Connect the (+) terminals on both the amplifier and the speakers using one side of the cable. Connect the (-) terminals on both components using the other side of the cable.
- Connect one speaker to the left (marked L) terminals of your amplifier, and another speaker to the right (marked R) terminals, making sure not to reverse the polarity (+, -). If one speaker is connected with reversed polarity, the sound will be unnatural and lack bass.

### Procedure:

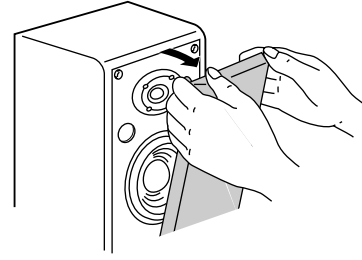
- ① Loosen the terminal knob.
- ② Remove approx. 10 mm insulation from the speaker cable and insert the bare wire end properly into the terminal hole.
- ③ Tighten the knob.
- ④ Test the security of the connection by tugging lightly on the cable at the terminal.

### Note

Do not let the bare speaker wires touch each other as this could damage the speaker and/or the amplifier.

## REMOVING THE FRONT COVER

The front cover is fastened to the enclosure at four points, and can be removed if desired. To remove the cover, hold on to both sides and slowly pull straight away from the speaker. To reattach, line up the four pegs on the inside surface of the cover with the four corresponding holes on the speaker and push gently.



### Note

When the cover is removed, take care not to touch the speaker units with your hands or to exert excessive force with tools.

## SPECIFICATIONS

Type .....	2-way 2-speaker bass reflex speaker system (Magnetically-shielded type)
Driver .....	13 cm cone woofer 3 cm dome tweeter
Nominal Impedance .....	6 ohms
Frequency Response .....	60 Hz – 35 kHz
Nominal Input Power .....	60 W
Maximum Input Power .....	200 W
Sensitivity .....	89 dB/2.83 V/m
Crossover Frequency .....	3 kHz
Dimensions (W x H x D) .....	168 x 310 x 177 mm
Weight .....	4 kg

- Specifications subject to change without notice due to product improvements.
- Care should be taken not to exceed the input power values noted above.