

**PIONEER**

WORLD-FAMOUS BRAND IN HI-FI REPRODUCTION

# 15" WOOFER 5-WAY SPEAKER SYSTEM

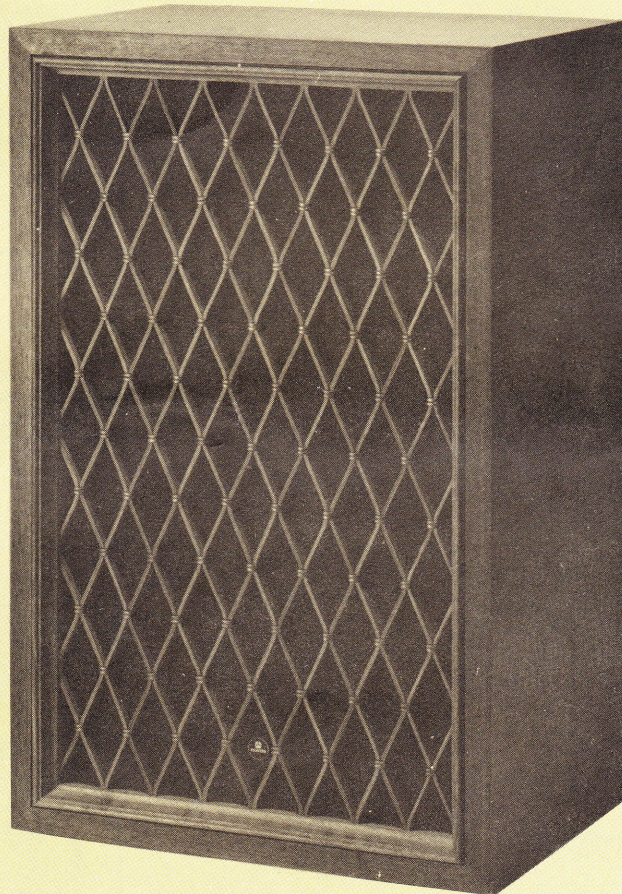
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MODEL **CS-99**

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The grille made of natural wood to match modern furniture. Impressive bass by a 15" (38 cm) woofer, and fine treble by tweeters. Model CS-99 is the highest-quality speaker system.

OPERATION GUIDE





## FEATURES

- Grille made by specially molding natural walnut and utilizing various patented techniques. Charming and harmonizing grille, a result of the research PIONEER has been making for a long time.
- Two dome-shaped super-tweeters  
In addition to a powerful 15" (38 cm) woofer, 5" (12 cm) mid-range speaker, horn tweeter, and cone tweeter, two newly developed dome-shaped super-tweeters are used. It is a five-way system consisting of six speakers.
- Fine treble, and clear mid-range and bass:  
Fine treble is produced by the newly designed dome-shaped super-tweeters. Comfortable bass and clear mid-range sound are emitted by the combination of the 15" (38 cm) woofer contained in a precision-designed closed enclosure and the mid-range speaker having a high sensitivity and low distortion factor.
- Widely usable speaker system  
The Model CS-99 has an efficiency as high as 98 dB/w, and a high maximum input of 80 watts. Combined with a high-power amplifier, it displays the full capability for high volume reproduction. Operated with an amplifier having an output of about 10 watts, it gives a sufficient sound volume. Provided with a jack for tape recorder playback, Model CS-99 can be simply used with a tape recorder.

## CONNECTION TO AMPLIFIER

Connect the INPUT terminals (see illustration) to the  $8\Omega$  output terminal of the amplifier to be used. Some transistor amplifiers do not have their output terminals marked  $8\Omega$ . However, most transistor amplifiers are designed for connection to a speaker system having an impedance of 4 to  $16\Omega$ . Therefore, Model CS-99 can be connected to such an amplifier without problem. It is important to connect the positive (+) terminal of Model CS-99 to the positive terminal of the amplifier output, and the negative (-) terminal of Model CS-99 to the negative terminal of the amplifier output. Wires of the accessory cord are colored differently to ensure correct connection of terminals.

## USE OF LEVEL CONTROL

The tone control of your amplifier is first adjusted to provide a flat frequency response. If the amplifier has the loudness contour control, turn it off. And then, the level control of the Model CS-99 may be adjusted to set the output sounds to your most pleasing tonal quality. When the level control is set to INCREASE, it provides a standard flat response and when it is set to NORMAL, it puts out a response with its highs either damped by 3dB. When it is set to DECREASE, it puts out a response with its highs damped by 6dB.

## CONNECTION TO TAPE RECORDER

The Model CS-99 is equipped with a jack for connection to a tape recorder. If the tape recorder to be used is provided with a speaker output terminal, the sound reproduced by the tape recorder can be emitted from the Model CS-99 by simply connecting them as shown in Fig. 1. Remember that the impedance of the speaker is  $8\Omega$ .

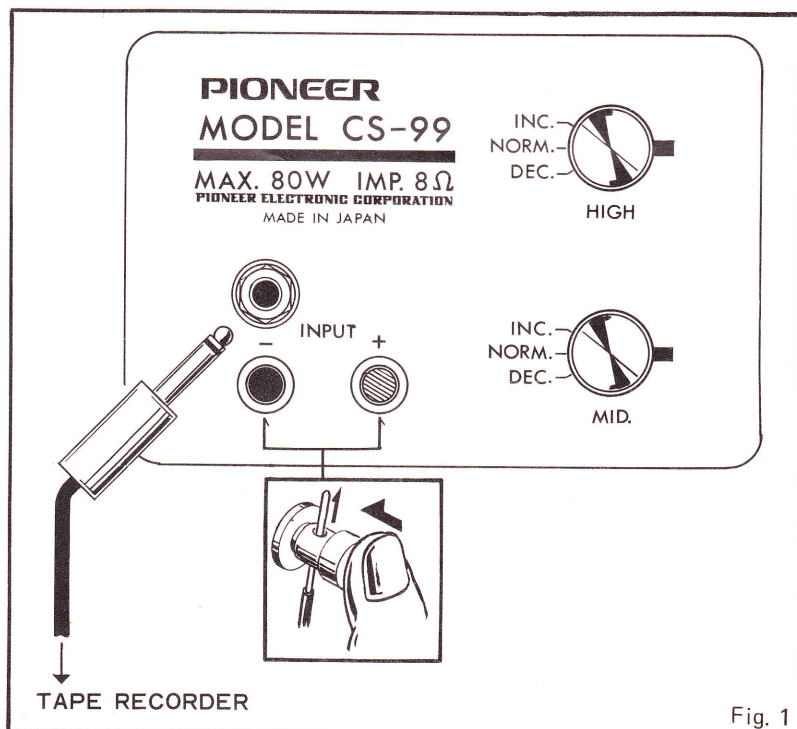
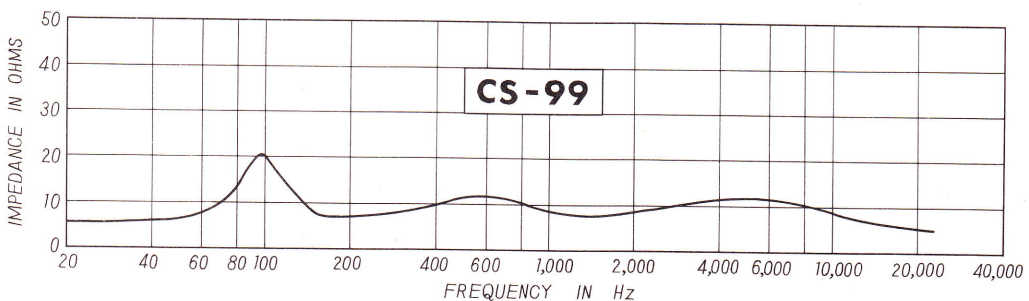
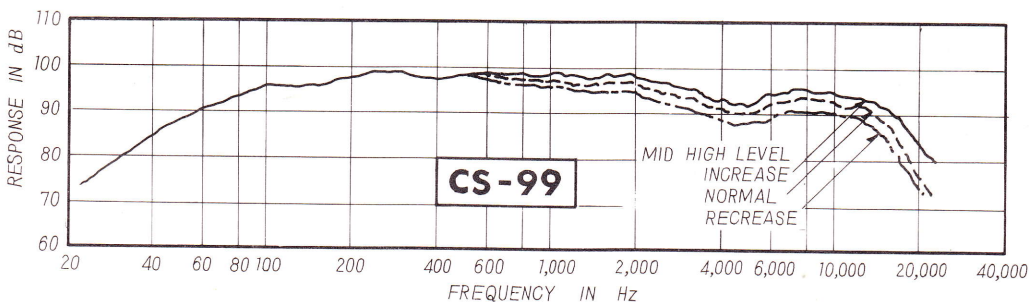
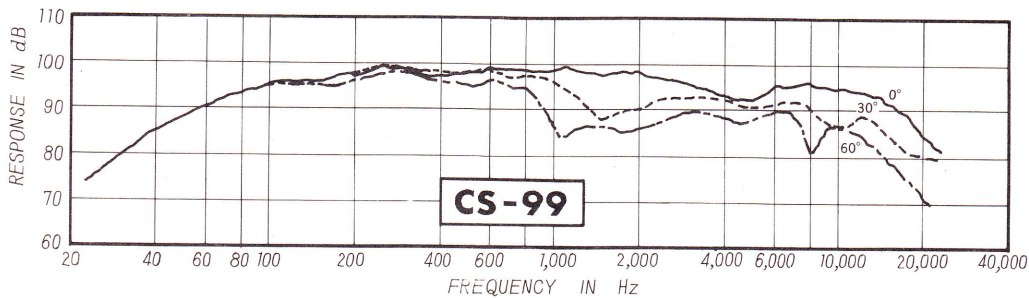


Fig. 1

## NOTE

The cabinet of the Model CS-99 is made of walnut, the same material as that of high-class furniture. It is oil-finished to make the most of the characteristics of natural walnut. The quality can be retained for long by polishing it with wax every three or four months. Evenly wax the cabinet with dry cloth. Completely wipe off excessive wax by rubbing the cabinet along the grain with a new piece of dry cloth, and polish it.

If the cabinet should be scratched, gently rub the scratched portion with steel wool or sandpaper (# 400-500), apply wax, and polish there.





## LISTENING TECHNIQUES

Better sound effect can be obtained by laying a rug on the floor and hanging a curtain on the wall which is opposite to the front of the speaker system. In stereo reproduction, the distance between right and left speakers much affects the sound emitted. It is recommended to locate the speakers 5 to 8 feet apart.

\* The sensitivity has been measured in accordance with JIS C5531 set forth in 1969. The value in parentheses is a corresponding figure measured in accordance with the superseded JIS C5501. (JIS: Japan Industrial Standards)

## SPECIFICATIONS

Type of Cabinet:	Closed type
Loudspeakers:	Woofer, 15" 1
	Mid-range 5" 1
	Cone tweeter 1
	Horn tweeter 1
	Super-tweeter dome-shaped 2
Composition:	6-speaker, 5-way
Impedance:	8 $\Omega$ .
Frequency Range:	25 ~ 22000 Hz
* Sensitivity	98 dB/w (104 dB/w)
Maximum Input;	80 watts
Crossover Frequency	600 Hz
	4000 Hz
	7500 Hz
	14000 Hz
Dimensions:	25" (635 mm) high
	15-15/16" (404 mm) wide
	11-7/16" (290 mm) deep
Weight:	Without package 53 lb (24 kg)



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