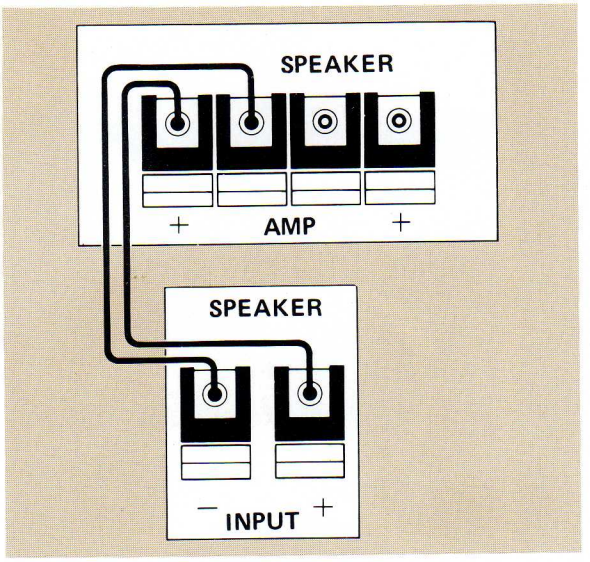
YAMAHA

NS-690II
OWNER'S MANUAL

First, connect the speakers to the amplifier. Each NS-690 II speaker features excellent characteristcs such as a maximum input power of 80 W, playback frequency band of 35-20 kHz. Therefore, it is best to connect them to a good quality, high input power amplifier that produces minimal distortion. If the amplifier's output power is between 10-20 W, the NS-690 II speakers cannot give maximum quality performance. A minimum of 30 watts RMS continuous power is required.

AMPLIFIER CONNECTION

1. Connect input terminal (INPUT) on the rear of the NS-690 II speakers and the speaker output terminal of the amplifier with good quality vinyl parallel cord.
2. Connect the left channel speaker to the amp's L output terminal. Match ⊕ and ⊖ on the speaker correctly and connect the polarity as shown in Fig. 1. To assure correct polarity connection, select a different color parallel vinyl cord or mark the cords appropriately.
3. The NS-690 II speakers feature extra-convenience push-button input terminals, color keyed for accurate polarity matiching (red for ⊕, black for ⊖).



USE OF LEVEL CONTROLS

When the front grille cloth is removed, the level control appears in the upper right section of the speaker. There are two on the NS-690 II speakers, the upper for the tweeter and the lower for the midrange. When both tweeter and midrange level controls are set to NORMAL overall response is flat. Each control can be also continuously adjusted from $-\infty$ to +3dB setting.

Adjustment should be made on the basis of room acoustic conditions, cartridge used, or amplifier characteristics.

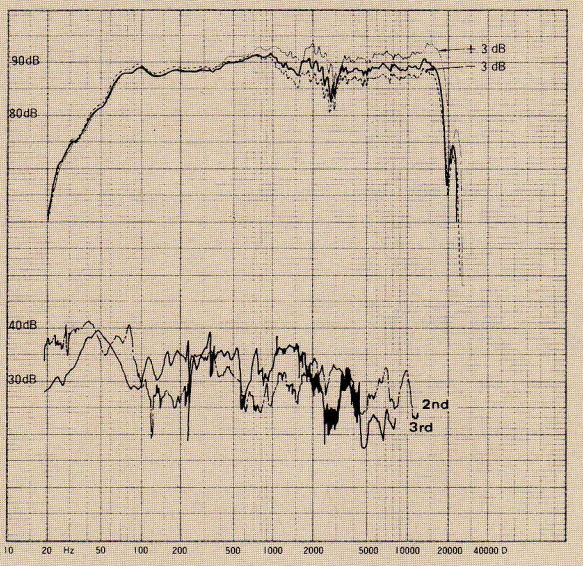
IMPEDANCE

The NS-690 II speakers have an impedance of 8Ω. If a transistor amplifier is used, it can be connected to the output terminal without giving any consideration to impedance and its 8Ω will provide higher output power than 16Ω. If you are using a tube-type amplifier, however, you should only connect it to an 8Ω output terminal.

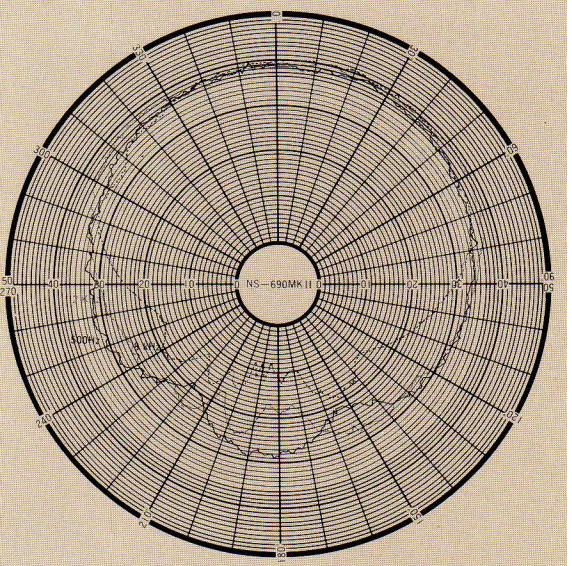
POSITIONING THE SPEAKERS

1. There is a 'best' position for your speakers in your listening room, and it is worth finding out exactly where that is. Anywhere else, and they will not be able to give the full quality of which they are capable.
2. It is wise to avoid standing them on the floor: they are better on stands at least 20" from the floor surface (Yamaha stands for the purpose are available). Mounted directly on the floor, bass response tends to be exaggerated and 'boomy.'
3. Bass response also tends to be exaggerated when they are backed flat against a wall or located right in a corner of the room. Experiment with different separations until you find the optimum.
4. Speakers should be located symmetrically with respect to the normal listening position. That means they should be at the same height, with the same kind of material immediately behind and around them (i.e. not one in front of a window and one against a wall), and with both unobstructed (i.e. not located behind any large item of furniture). Unsymmetrical location makes for poor stereo balance.
5. Avoid locations near or in front of windows. Not only may the windows rattle annoyingly, but the speakers should be protected from direct sunlight.
6. Speakers should preferably not face directly towards large areas of glass or polished wall surfaces. If your room is the usual rectangular shape, they are better pointed down the long dimensions of the room. Reflections of the high frequency sounds from such surfaces can give a false 'brilliance' to the reproduction which is best avoided. Curtains and wall hangings can make a marked improvement, too.
7. Speakers should not be mounted too close to your record player/turntable unit, and never on the same shelf or base. Neither should they face directly towards the record player unit. If the sound waves from the speakers reach the turntable and tone-arm, they can cause the loud booming roar known as 'howling.' Even if your stereo does not actually 'howl' there can still be serious degradation of the reproduction.
8. It is common sense to avoid locations close to air-conditioners or heaters (where extremes of temperature may be experienced) or where dampness or humidity may be a problem.

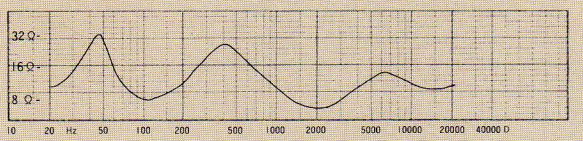
● **Frequency Response, Level Control and Harmonic Distortion Characteristics**
(Input 2.8 V, Measured at 1 m)



● **Directional Characteristic**
(Horizontal Plane)



● **Impedance Characteristic**



SPECIFICATIONS

Type	3-way acoustic-suspension
Woofer	300mmϕ cone (JA-3060)
Midrange	75mmϕ soft dome (JA-0701B)
Tweeter	30mmϕ soft dome (JA-0509B)
Crossover frequencies	800Hz, 6,000Hz (12dB/Octave)
Fundamental resonance frequency f_O	40Hz
Impedance	8Ω
Output sound pressure level	90dB/1m 1 Watt Input
Normal capacity (Maximum input capacity)	40W RMS (80W Peak)
Frequency response	35 ~ 20,000Hz
Dimensions (H x W x D)	630 x 350 x 312mm
	(24-3/4" x 13-3/4" x 12-1/4")
Weight	27kg (59 lbs 6 oz)

Specifications subject to change without notice.

SINCE 1887 YAMAHA

NIPPON GAKKI CO., LTD., HAMAMATSU, JAPAN

IMPORTANT !

Please record the serial number of your unit in the space below

Model Name **NS-690** II
Serial No. _____

The serial number is located on the rear of the cabinet.

Retain this Owner's Manual in a safe place for future reference.