

5003 — in wooden cabinet is 5003W, in metal case, 5003M.

# **INSTRUCTION MANUAL**

## **AM/FM/FM STEREO RECEIVER**

### **WITH S.E.A. SYSTEM**

### **MODEL 5003W, 5003M**

# DIRECTIONS BEFORE USING

**VOLTAGE SELECTION:** The set is designed to operate on all AC line voltages and frequencies from 100 to 240V, 50 or 60Hz. Before plugging in the power cord, make sure that the voltage indicated on the tag of the cord agrees with the voltage requirements of your area.

To select voltages, loosen the four screws which hold the set cover in position and remove the cover. If the case is wooden, loosen the six screws on the bottom of the cabinet and remove the cabinet by pulling it forward. Connect the voltage selecting plug at the left corner of the chassis, after making sure that the voltage indicated on the plug agrees with the voltage of your AC power requirements, Fig. 1, 2.

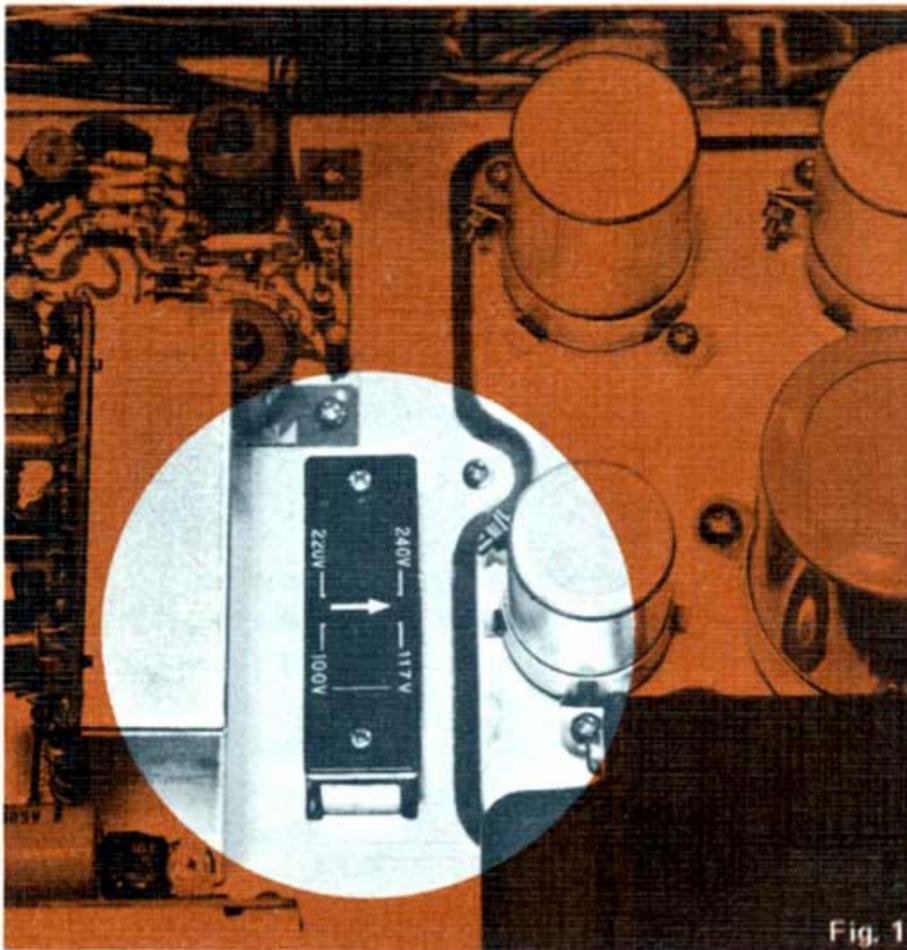


Fig. 1

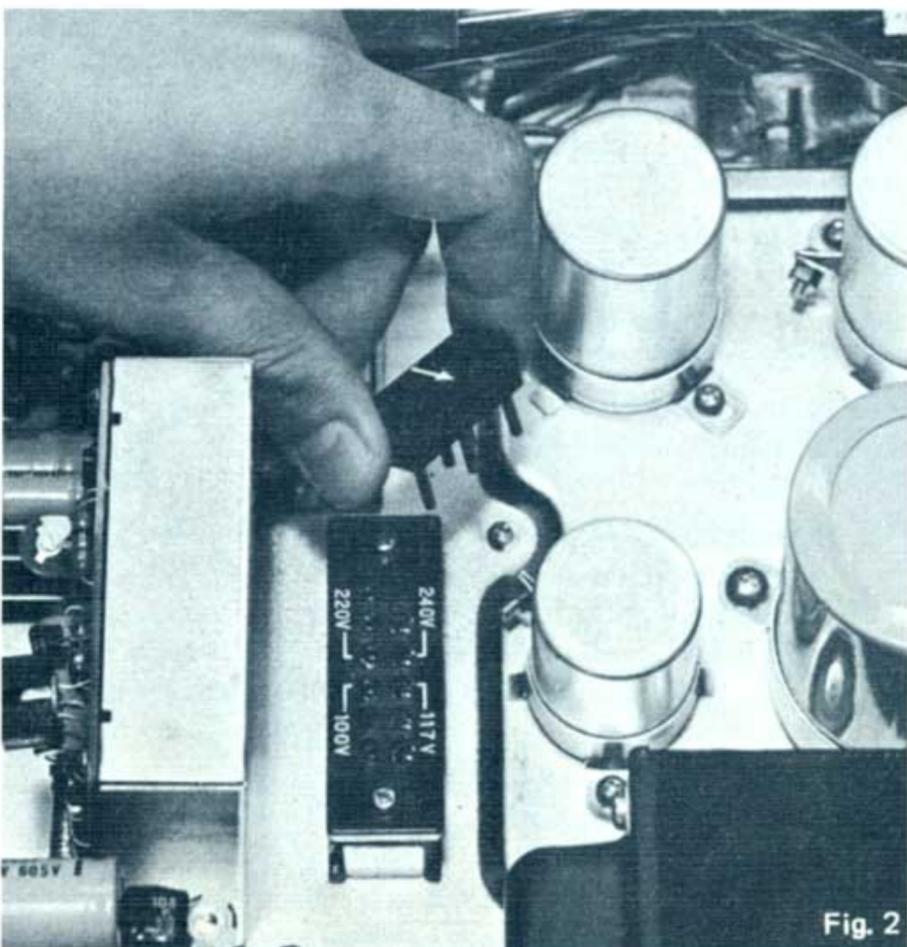


Fig. 2

**MUTING ADJUSTMENT:** Limited inter-station noise may sometimes be heard during FM reception. To correct this, use the FM muting adjustor-(26) in Fig.6—located on the back of the set. Connect either the feeder antenna (supplied), or an outdoor antenna to the FM ANTENNA terminal-(27) in Fig. 6. Tune to a position where the maximum amount of noise can be heard. Then set the muting switch-(11) in Fig. 5—to MUTING. Use a screwdriver to turn the FM muting adjustor, Fig. 3, until the inter-station noise is reduced.



Fig. 3

**THE BAR ANTENNA:** A highly sensitive bar antenna for AM reception is located at the back of the set. In areas with weak radio signals, proper reception depends on the direction of this bar antenna. Before using the set, extend the bar antenna outward, Fig. 4. When the set is being carried, put the antenna back into position.

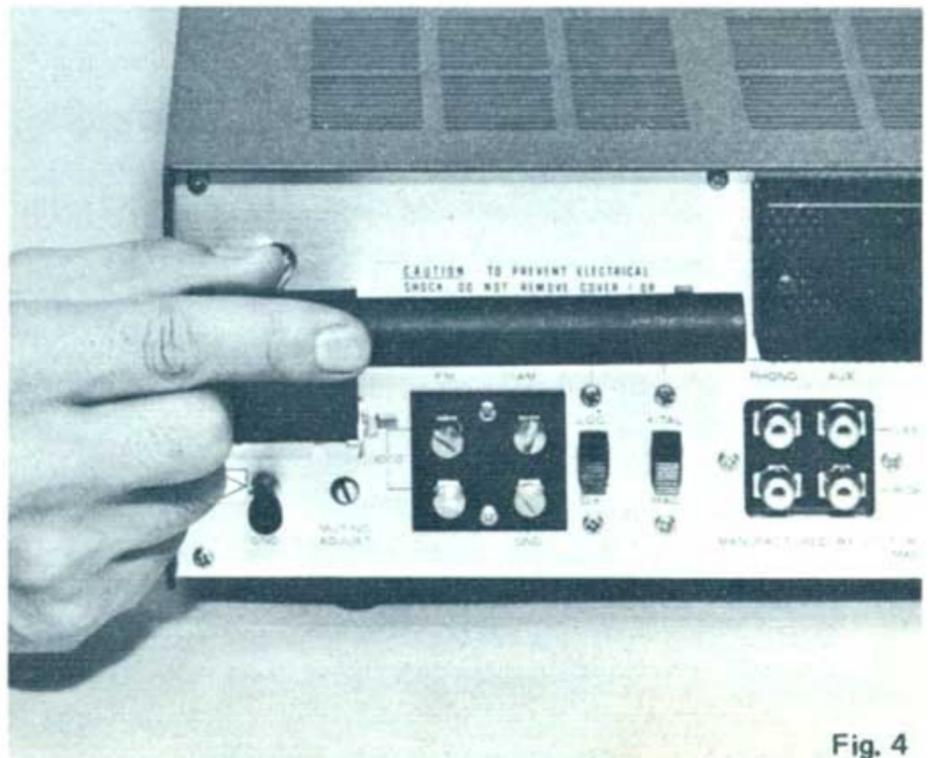


Fig. 4

# THE FRONT PANEL CONTROLS AND INDICATORS

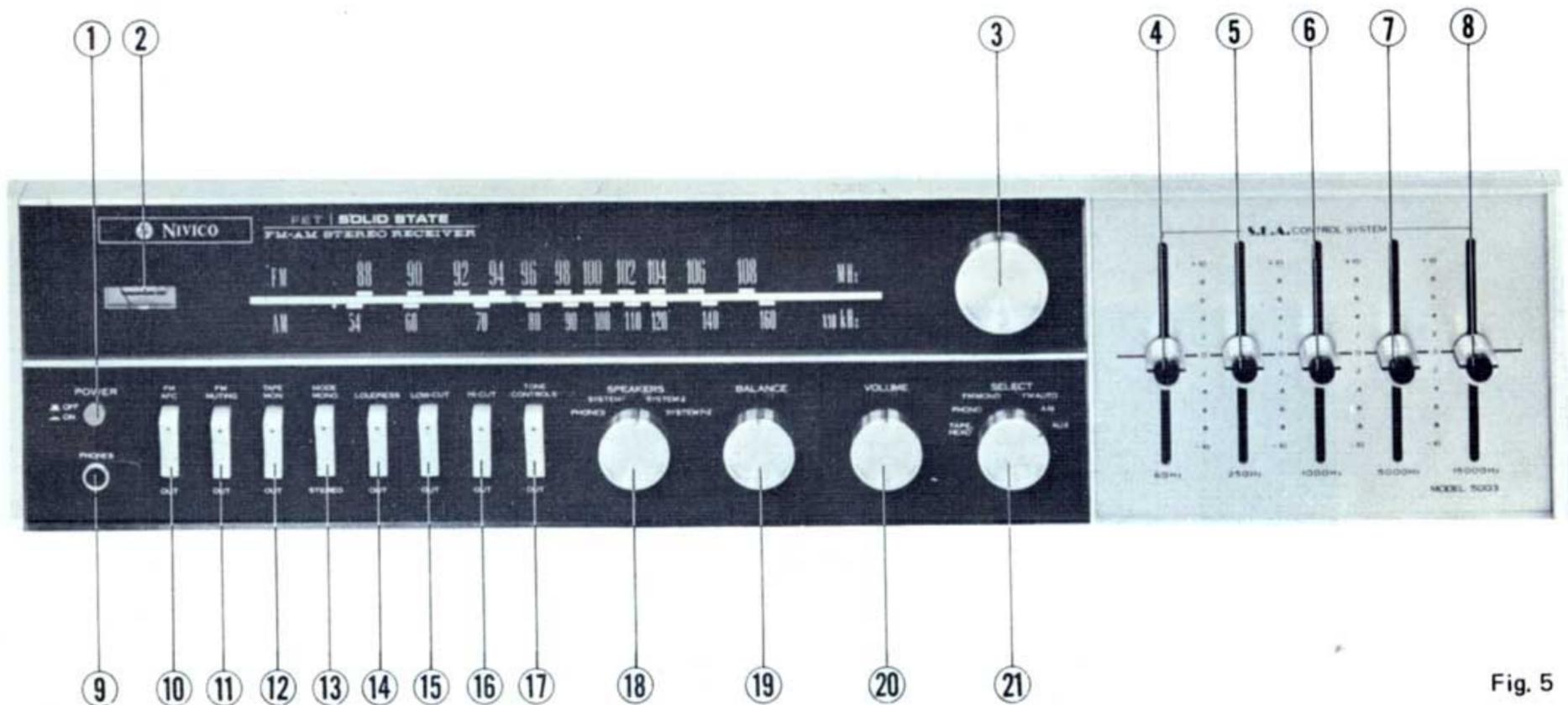


Fig. 5

**(1) Power Switch.** When this switch is pressed, power is supplied, the pilot lamp goes on and the dial scale is illuminated. When it is pressed again, the pilot lamp goes out and the dial scale is again darkened.

**(2) Tuning Indicator.** For pinpoint station reception, watch the movement of the needle in this indicator. Best tuning is obtained when the needle makes the biggest swing clockwise.

**(3) Tuning Knob.** This knob is used for the tuning of FM, FM Stereo and AM broadcasts.

**(4) 60Hz SEA Knob.** With this knob set at "0", low frequency characteristics are flat. To emphasize a heavy, low sound, move the knob toward "plus" (+). To deemphasize it, move the knob toward "minus" (-).

**(5) 250Hz Knob.** At position "0", the sound characteristic in this frequency zone remains flat. To reduce reverberation, move the knob toward "minus" (-).

**(6) 1KHz Knob.** The characteristic remains flat at position "0", and the sound is of standard quality.

**(7) 5KHz Knob.** If you hear a metallic reverberation, set this knob at "0" or move it toward "minus" (-).

**(8) 15KHz Knob.** With this knob at "0", the high frequency characteristics are flat. Sharp sounds are emphasized when this knob is moved toward "plus" (+), and deemphasized when it is moved toward "minus" (-).

**(9) Head Phone Terminal.** To avoid disturbing others and to get maximum enjoyment yourself, plug the JVC NIVICO stereo head phone STH-2E | 5950 into this terminal.

**(10) FM AFC (Automatic Frequency Control).** This provides stable FM reception. The FM AFC automatically adjusts frequency variation for stable tuning during FM broadcasts. With very weak stations, however, the FM AFC will emphasize the tuning of a stronger station. In such cases, do not use the FM AFC.

**(11) FM Muting Switch.** This switch eliminates interference between FM stations. For very weak stations, the switch should be set at the "out" position.

**(12) Tape Monitor.** Set this switch at "out" usually. At the "monitor" position, speakers do not produce sound. The "monitor" position is used only when reproducing recorded sounds with a tape recorder.

**(13) Mode.** Set this switch at "mono" for monaural reproduction, or at "Stereo" for stereo reproduction.

**(14) Loudness.** This switch controls sound tone at lower levels. Set it at "LOUDNESS" when listening to soft music.

**(15) Low Cut Filter.** Eliminates low frequency noises, such as record rumble, motor noise, humming, etc.

**(16) High Cut Filter.** Eliminates high frequency noise, such as record scratch, hiss static, etc.

**(17) Tone Controls.** By pushing this switch, the SEA controller, (4), (5), (6), (7), (8) of Fig. 5, is put into operation.

**(18) Speaker Selection.** Turn this knob to "phone" to use the head phones. Turn it to "System 1" when using the right speaker terminals and to "System 2" when using the left speaker terminals. When using "System 1" and "System 2" together, turn the knob to the "System 1+2" position.

**(19) Balance Control.** This knob balances the sound volume between left and right channels. The sound is increased toward the left channel when the knob is turned left, and vice versa.

**(20) Volume Control.** A counter-clockwise turn will lower the volume. A clockwise turn will raise it.

**(21) Selector: TAPE HEAD.** This position is used when using a tape player with a tape head without an equalizer. FM AUTO. At this position, FM Stereo is automatically reproduced whenever the stereo signal is broadcast. If a station switches from mono to stereo broadcasts, the 5003 will also switch when the selector is in this position.

be connected to speakers with impedances from 4  $\Omega$  to 16  $\Omega$ . The terminal marked "L" is connected to the speaker cord on the left side. The one marked "R" is connected to the speaker cord on the right side. Make sure that the terminal marked (+) is connected to the plus side of the speaker, and the one marked (–) is connected to the minus side of the speaker.

**(40) Output Impedance Selector (For System 1.)** Set the

switch to 4  $\Omega$  or 8-16 $\Omega$  position, according to the impedance of the speaker used.

**(41) Speaker Terminal "System 2."**

**(42) Output Impedance Selector (For "System 2.")**

**(43) AC Power Cord (AC 100-240V)**

**(44) Fuse Socket.** This socket contains a 3.3A (AC 100-120V) or a 1.8A (AC 200-240V) fuse. To replace a broken fuse, turn the fuse knob counter-clockwise.

## PREPARATIONS FOR RECORD PLAYING

1. Plug in the power cord—see (43) in Fig. 6.
2. Set the tape monitor switch (12) to the "out" position.
3. Set the mode switch (13) to the "stereo" position, except when playing a monaural record. In that case, set the switch to the "mono" position.
4. Press the power switch (1) to supply power to the set. The pilot lamp on the front panel will go on and the dial scale will be illuminated.
5. Set the select knob (21) to the "phono" position.
6. Turn the sound volume control knob (20) clockwise.
7. Refer to the record player instruction manual for directions on operating the record player.
8. Knobs (20) and (19) control the sound volume. To increase the volume, turn knob (20) clockwise. To decrease sound, turn this knob counter-clockwise. To balance sound volume between the left and right channels, use the sound

volume balance knob (19). A clockwise turn will increase the volume in the right channel and a counter-clockwise turn will increase the volume in the left channel. To obtain a balanced and comfortable soft sound, turn the loudness switch (14) to the "loudness" position. This automatically controls the sound volume.

9. Adjust knobs (4), (5), (6), (7) and (8) to get the precise sounds you prefer. See the "SEA System Control" for details.

10. If you are listening to recorded music late at night or in a place where others might be disturbed, insert the JVC NIVICO STH-2E/5950 into the headphone terminal.

11. After use, press the power switch (1). This will raise the button to the "off" position, turn off the pilot light, and darken the panel. Be sure to cut off the power after use.

## PREPARATIONS FOR RADIO RECEPTION

Follow the same steps 1 through 4 as for record playing. Then set the select knob (21) to AM or FM, depending on the type of broadcast you wish to hear.

Turn the station select knob (3) until you have reached the frequency of the desired station. The tuning meter pointer (2) will reach its furthest point right when the tuning is correct.

Then follow steps 8 through 11 listed above for record playing.

# FOR RECORDING

1. Connect the recording-reproducing cord between the recording-reproducing terminal under the DIN standard (36) in Fig. 6—and the DIN terminal of the tape recorder.
2. Plug the power cord—(43) in Fig. 6—in the AC outside power source (23) or (24) in Fig. 6—or in an AC socket in your house.
3. Set the tape monitor switch (12) to the "out" position.
4. If a stereo tape recorder is used, set the mode switch (13) to "stereo." If a monaural tape recorder is used, set the switch to "mono."
5. If you are recording an FM broadcast, set the select knob (21) to FM. If it is an AM broadcast, set the knob at "AM."
6. See the tape recorder instruction manual for details on the recording operations of your tape recorder.

# FOR REPRODUCING

Follow the first two steps listed under Directions for Recording. Then set the monitor switch (12) to the "MON." position. With a stereo tape recorder, set the mode switch (13) to "stereo;" with a monaural tape recorder, set it to "mono."

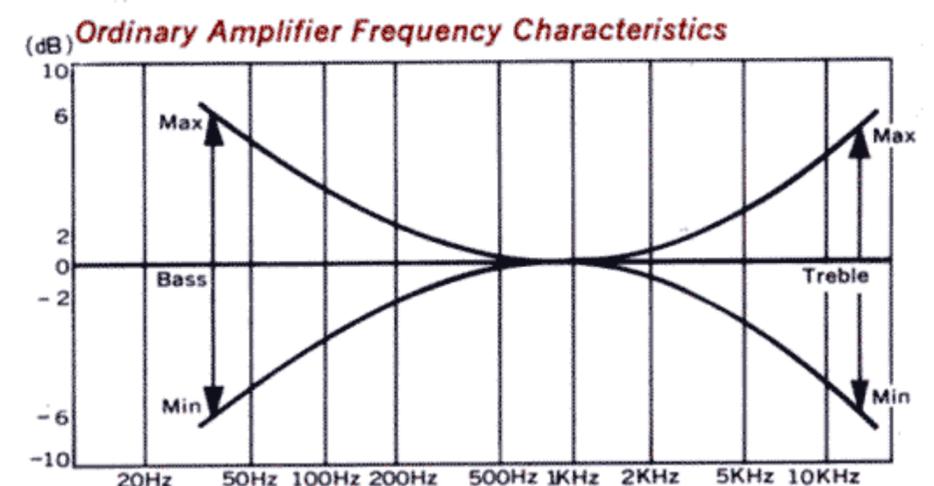
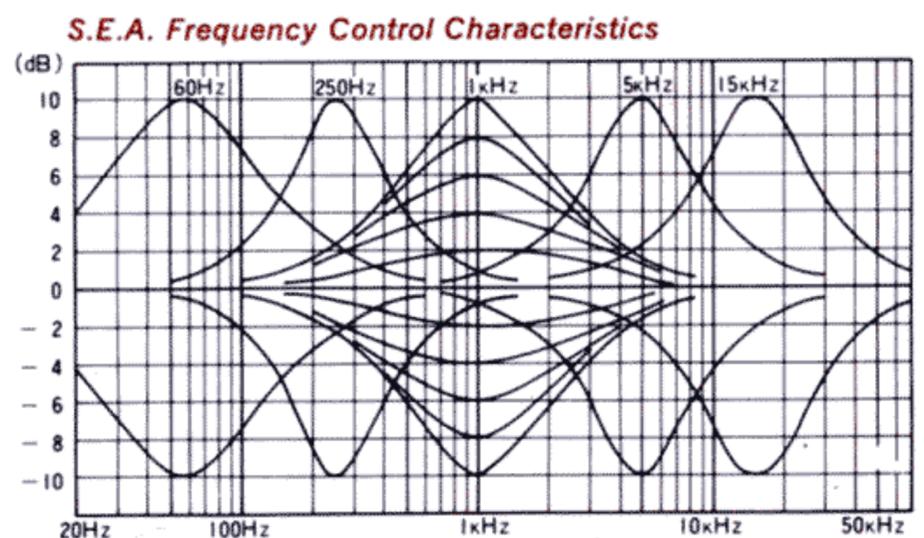
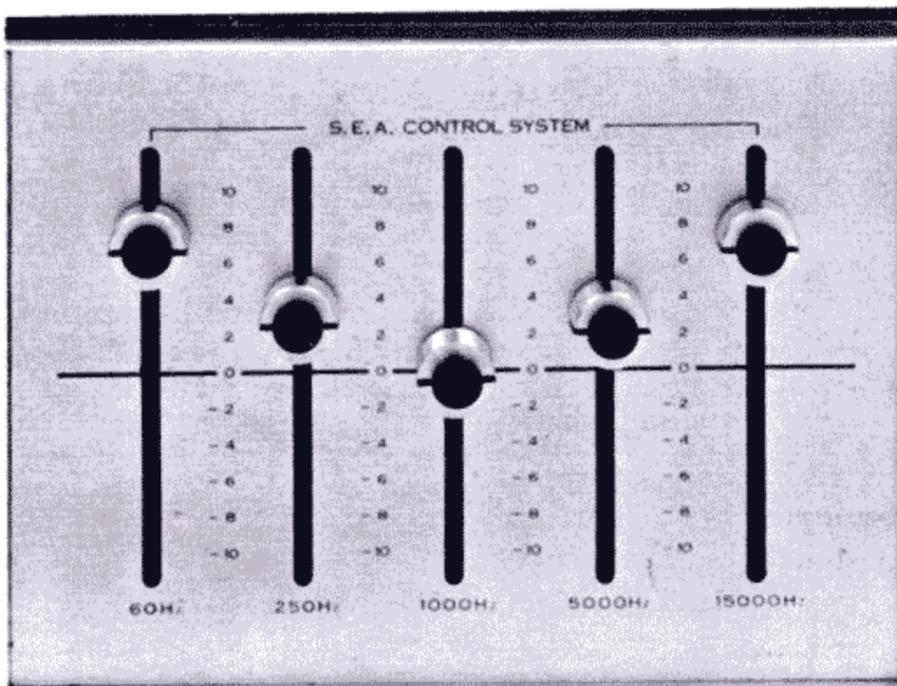
Refer to the tape recorder manual for information covering the reproducing operations of the tape recorder.

For sound volume and tone control, see steps through 11 under Preparations for Record Playing.

# WHAT IS SEA?

Basically, the NIVICO Sound Effect Amplifier, or SEA, is a super tone controller that divides the audio frequency range into 5 or 7 segments. You may adjust the level of each frequency segment to compensate for a number of factors that affect the tone of your stereo system. These factors may include room acoustics or the frequency characteristics of speakers and turntable.

With the tone controls on conventional amplifiers, you are not able to control sound this closely—you can only adjust sound over the entire frequency range. But with SEA, you are now able to control and create sounds with absolute freedom. In short, a whole new world of stereo is yours to explore and enjoy.



# SPECIFICATIONS

## AUDIO SECTION

Total Dynamic Power: 140W (70W+70W) IHF Standard

Continuous Power: 100W (50W+50W) IHF Standard

Matching Impedance: 4~16Ω

THD at Rated Power: 0.5% at 1KHz

IM Distortion at Rated Power:  
Less than 1%

Power Bandwidth: 7Hz~30,000Hz

Input Sensitivity for Rated Output:

Phono (Mag.) 1.5mV

Phono (X'tal) 250mV

Tape Head 1.8mV

Tape Play 150mV

Aux. 180mV

Equalizer: Mag. RIAA

Tape Head NAB

Signal to Noise Ratio: Mag. -70db

Tape Head -70db

Aux. -75db

## S.E.A. SECTION

S.E.A. Center Frequency:

60Hz, 250Hz, 1KHz, 5KHz, 15KHz

S.E.A. Control Range:

±10db

Gain: 0db

## FM TUNER SECTION

Tuning Range: 88~108MHz

Usable Sensitivity: 1.8μV (IHF Standard, 30db S/N,  
30% Mod.)

IF Stages: 5 stages

Image Rejection: 70db at 88MHz

THD: 0.5% at 1KHz, 100% Mod.

Frequency Response: 10~20,000Hz ±1db

## FM MULTIPLEX SECTION

Type: Switching system

Separation: Better than 35db at 1KHz

Distortion: Less than 1%

Detector Type: Balanced type

Filter: SCA Filter

## AM TUNER SECTION

Tuning Range: 535~1,605KHz

Usable Sensitivity: 20μV (IHF Standard)

Image Rejection: 50db at 600KHz

IF Stages: 3 stages

Antenna: Built-in ferrite bar antenna

**INDICATORS:** Tuning Meter

FM stereo indicator

**POWER SOURCE:** AC 100~240V

Selectable, 50~60Hz

## POWER CONSUMPTION:

13W, 30VA at 1W output

245VA, 230W, at max. output

**DIMENSIONS:** Height 4<sup>2</sup>/<sub>5</sub>"

Width 20"

Depth 13<sup>1</sup>/<sub>5</sub>"

**WEIGHT:** 30.8 lbs (w/wooden cabinet)

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