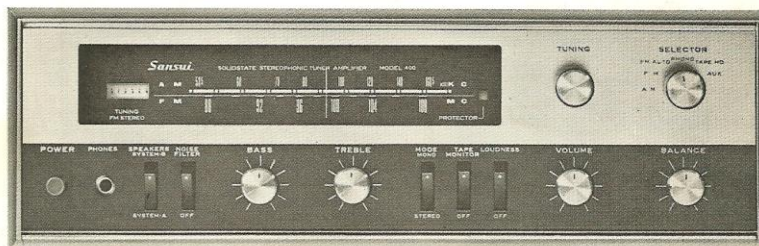


# OPERATING INSTRUCTIONS

SOLID-STATE AM/FM STEREOPHONIC TUNER AMPLIFIER

## SANSUI MODEL 400



*Sansui*<sup>®</sup>

SANSUI ELECTRIC COMPANY LIMITED



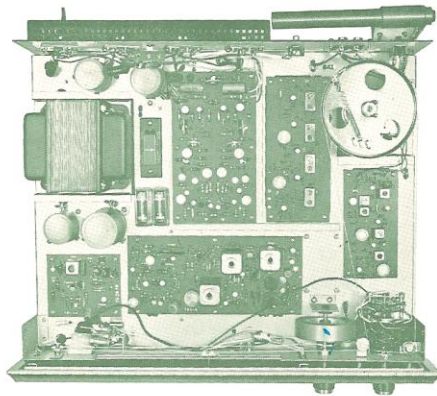
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## FEATURES

### Transistor Amplifier

Model 400 is a new 60-watt solid state AM/FM receiver designed to deliver top stereo performance from a really compact design. To accomplish this, silicon power transistors are used in a Complementary Darlington SEPP ITL-OTL circuit. Silicon transistors are also used throughout the low frequency circuits. This unique circuitry design overcomes the largest, but unpublicized shortcoming of the solid state receiver: that of distortion tending to increase at actual listening levels, rather than at higher powers where most distortion figures are rated. Model 400's unique design keeps distortion less than 1% at all power levels.



### Power Bandwidth

The power bandwidth ranges from 20 to 50,000 Hz at a rated RMS power of 20/20 watts with a distortion factor of 1% or less. Voltage negative feedback in the power stage gives the receiver an unsurpassed damping factor of more than 24.

### FM Reception

The FM frontend with silicon transistors and 3-gang variable condensers minimizes the cross modulation, noise figure and other interference, while handling strong local stations with unparalleled stability.

### FM MPX Stereo

The MPX circuit, highly stable and reliable, displays the de-emphasis characteristic of +1 dB to -3 dB at 10,000 Hz, clearly producing the highest or lowest possible tones. Switching from FM Mono to FM Stereo broadcasts is automatic when the Selector switch is in the FM Auto position. A Stereo Indicator changes from green to orange if the tuning dial crosses a station making an FM Stereo broadcast.

### Power Transformer

Model 400 incorporates a Sansui-made power transformer with excellent voltage regulation characteristics that allow only a small 3 watt difference between the maximum music power (8 $\Omega$ ) and the RMS power.

### Heat Dissipator

Model 400's heat dissipator is of aluminum extrusion, rather than the low-cost steel type and guarantees a longer transistor life. Used a full 24 hours, the ambient temperature of the dissipator never exceeds 35°C above room temperature.

### Protection Circuit

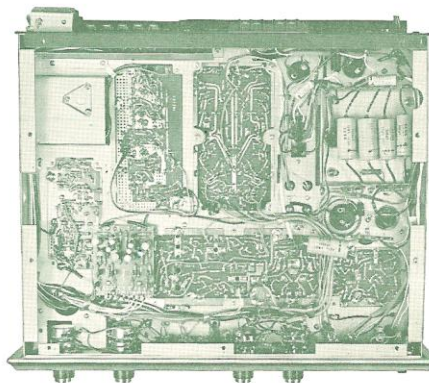
A combination of Sansui's exclusive S.C.R. protection circuit and quick-acting fuses completely eliminates the danger of short circuit damage to the power transistors.

### Speaker Selector Switch

Model 400 is provided with an A-B System selector switch that allows the installation of two sets of speakers either in the same room, or remotely.

### Other Convenient Features

Highly sensitive AM ferrite bar antenna is positioned for easy handling. Local-Distance switch for optimum FM reception. Noise filter to eliminate scratch and surface noise. Loudness control automatically compensates audible balance at low listening levels. Stereo headphone receptacle on front panel. DIN standard plug for convenient tape recorder hook-up. Built-in FM AFC for stabilized FM reception. Tape monitor circuit. Built-in SCA filter. AC outlet located on back panel is controlled by power switch on front panel. Protection circuit indicator. Heavy flywheel for smoother tuning. Fine tuning indicator. FM stereo separation control. AM and FM lead cable antennas, fuses, pin-plugs, bolts, washers and polishing cloth are provided. Wooden cabinet optional (see Model 400's Mounting Template for mounting receive in a custom case.)



## SWITCHES AND CONTROLS

### Dial Scales

Model 400 has two dial scales: the upper for AM tuning and the lower for FM tuning. Tuning for both is done with the TUNING KNOB to the right of the dial window.

### Tuning Indicator and FM-MPX Stereo Indicator

The graded scale within this window serves as the TUNING indicator. When the needle moves to the right as far as possible (but often not to the highest scale), the station is correctly tuned. (see "Tuning"—p. 14) FM Stereo indication is given by a lamp in this window. It remains green for FM monophonic broadcasts; changes from green to orange if the main tuning dial crosses a station broadcasting FM MPX Stereo.

### Power Switch

Push to turn the power on, push again to turn the power off. The AC outlet on the back of the amplifier is controlled by this switch.

### Headphone Jack

Accommodates headphones for monitoring or private listening. When used, it cuts out the speakers.

### Speaker Selector Switch

For use with two sets of speakers. Allows a choice between one set (System A) and another (System B). Speaker sets may be installed in the same room, or remotely.

### Noise Filter

High-frequency noise, such as surface noise from old or worn records, is reduced by flipping this switch to the ON position.

### Bass Tone Control

Turn clockwise to increase bass loudness, counterclockwise to decrease it.

### Treble Tone Control

Turn clockwise to increase treble loudness, counterclockwise to decrease it.

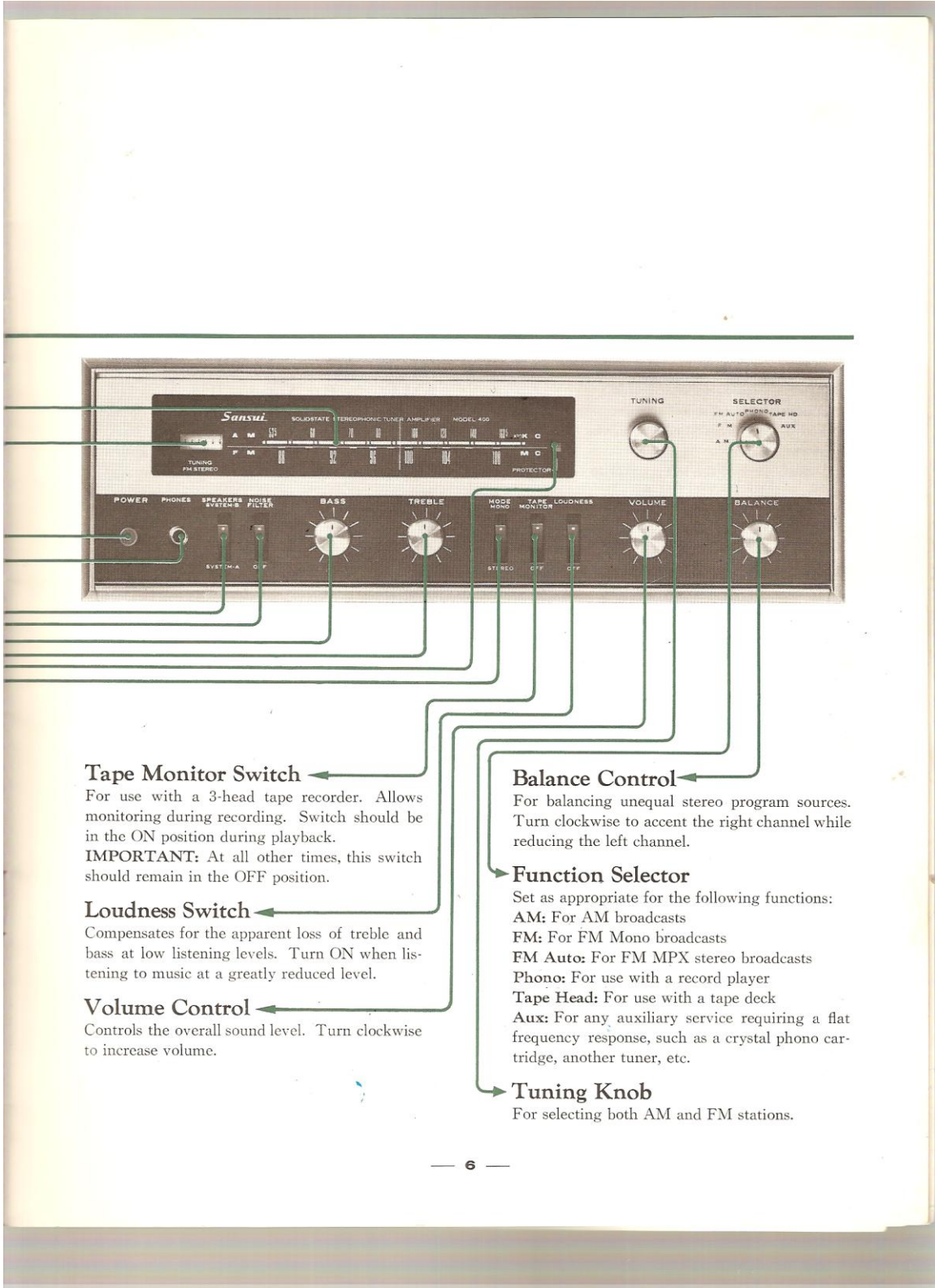
### Protector Indicator

Lights up to indicate trouble within the amplifier. If this lamp lights up, push the POWER switch off immediately, and repair.

### Mode Selector switch

In the STEREO position, this switch connects the left input to the left speaker and the right input to the right speaker.

In the MONO position, it connects the L+R (or L or R) program to both speakers.



**Tape Monitor Switch**

For use with a 3-head tape recorder. Allows monitoring during recording. Switch should be in the ON position during playback. **IMPORTANT:** At all other times, this switch should remain in the OFF position.

**Loudness Switch**

Compensates for the apparent loss of treble and bass at low listening levels. Turn ON when listening to music at a greatly reduced level.

**Volume Control**

Controls the overall sound level. Turn clockwise to increase volume.

**Balance Control**

For balancing unequal stereo program sources. Turn clockwise to accent the right channel while reducing the left channel.

**Function Selector**

Set as appropriate for the following functions:

- AM:** For AM broadcasts
- FM:** For FM Mono broadcasts
- FM Auto:** For FM MPX stereo broadcasts
- Phono:** For use with a record player
- Tape Head:** For use with a tape deck
- Aux:** For any auxiliary service requiring a flat frequency response, such as a crystal phono cartridge, another tuner, etc.

**Tuning Knob**

For selecting both AM and FM stations.

## OPERATIONS

### — SPEAKER SYSTEM — ANTENNA

#### Connecting a Speaker System

To connect a stereo speaker system:

1. Connect (+) of the left speaker to the terminal marked + LEFT SYSTEM A on the back panel of the amplifier.
2. Connect (-) of the left speaker to the terminal marked - LEFT SYSTEM A.
3. Connect (+) of the right speaker to the terminal marked + RIGHT SYSTEM A.
4. Connect (-) of the right speaker to the terminal marked - RIGHT SYSTEM A.

To avoid a short circuit caused by loose copper strands touching between the (+) and (-) terminals, be sure that all wire ends are completely secured by the terminal screws.

To add another stereo speaker system, connect it to the terminals marked SYSTEM B in the same manner as described for A.

To use a speaker system for monophonic sound reproduction, connect (+) of the speaker terminal to any corresponding (+) amplifier terminal and (-) of the speaker to any of the speaker terminals marked (-).

**IMPORTANT:** The speakers of both left and right channels must push the sound waves out together. This is called phasing. If all (+) and (-) connections have been made properly, the phasing will be correct. If the connections have not been properly made, one channel will push while the other pulls, causing sound cancellation at some frequencies or in some listening position. To correct, reverse the phase (+ and -) of either speaker system, left or right. (See "Phasing"—p. 14)

#### Antenna Connections

##### AM Ferrite Bar Antenna (Fig. 3)

To adjust the AM ferrite bar antenna for optimum AM reception:

1. Pull the bar out and down in an area until it is halfway between the receiver's top and bottom.
2. Loosen screw (S) so that the bar can be freely swung from right to left.
3. Swing the antenna in this plane until optimum reception is obtained. This antenna will perform satisfactorily except in ferroconcrete buildings and in areas remote from the broadcasting station. If the antenna is inadequate for clear AM reception, the installation of an outdoor AM antenna is required.

##### AM OUTDOOR ANTENNA (Fig. 1)

To connect an AM outdoor antenna:

1. Connect the flexible PVC wire (supplied) to the terminal screw marked AM-A on the back panel of the amplifier and install it slightly apart from your house as indicated in Fig. 1.
2. Connect a ground wire to the terminal screw marked AM-E on the back panel of the amplifier. (See "Grounding"—p. 16 for proper grounding procedure.)
3. For reasons of safety, be sure a lightning arrester.

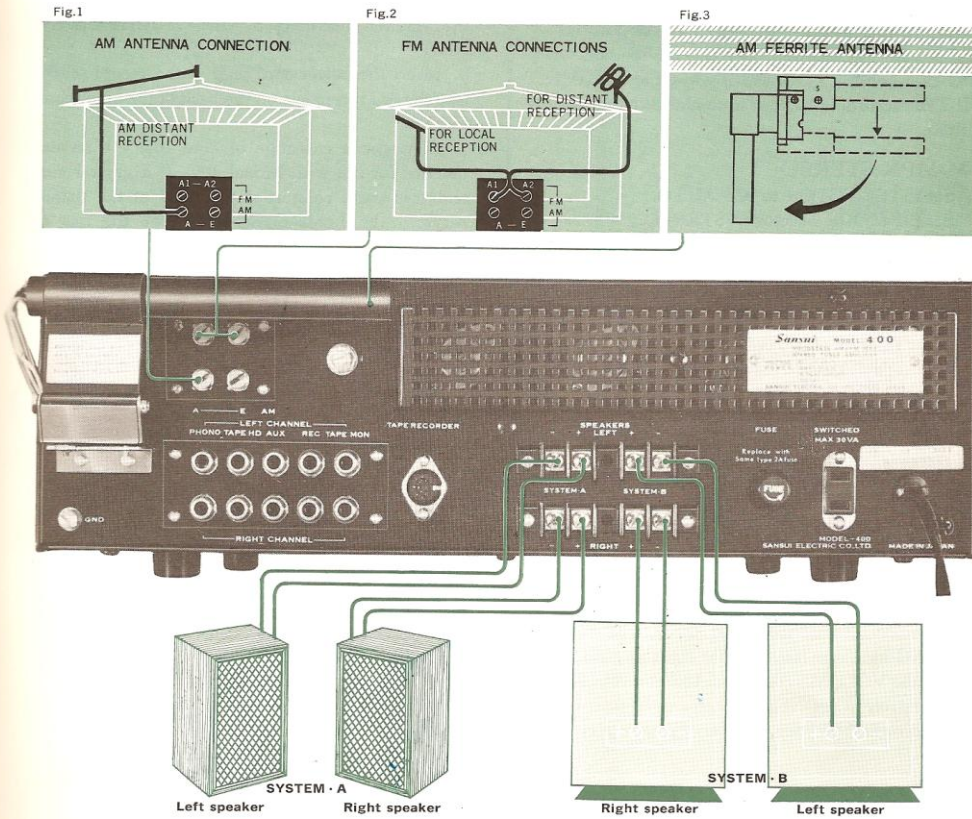
##### FM ANTENNA (Fig. 2)

In urban or high-intensity signal areas, the flexible FM antenna (supplied) is adequate for indoor use. Connect its two leads to the terminals marked FM-A 1 and A 2 (Fig. 2) and open it in the form of a "T".



Rotate it until best reception is obtained before fixing it to a wall or ceiling. Should the signal be too weak for the indoor FM antenna, install an outdoor antenna designed exclusively for FM reception as indicated in Fig. 2.

**NOTE:** Optimum FM sensitivity cannot be obtained by lengthening the antenna. The proper height and direction of the antenna determines the best reception.



## OPERATIONS

### — RADIO RECEPTION — RECORD PLAYING

#### Listening to Radio Programs

##### Monophonic FM

1. Set the SEIECTOR to FM.
2. Set the MODE selector to MONO or STEREO.
3. Turn the TUNING knob to find the station of your choice. Adjust it so that the needle of the TUNING indicator moves as far right as possible.
4. Set the VOLUME control, BASS control, TREBLE control, LOUDNESS switch and NOISE FILTER according to your taste and listening conditions.

##### FM-MPX STEREO

1. Set the SEIECTOR to FM AUTO.
2. Set the MODE selector to STEREO.
3. Turn the TUNING knob to find the station of your choice. When a stereo broadcast is received, the indicator lamp changes in color from green to orange. The needle of the TUNING indicator must be as far right as possible.
4. Adjust the BALANCE control so that equal sound comes from right and left speakers.
5. Set the VOLUME control, BASS control TREBLE control, LOUDNESS switch and NOISE FILTER according to your taste and listening conditions.

##### AM

1. Set the SEIECTOR to AM.
2. Set the MODE selector to MONO or STEREO.
3. Turn the TUNING knob to find the station of your choice. Adjust it so that the needle of the TUNING indicator moves as far right as possible.
4. Set the VOLUME control, BASS control, TREBLE control, LOUDNESS switch and NOISE FILTER according to your taste and listening conditions.

#### Connecting a Phonograph

To connect a record player:

1. Connect the left output of the record player to the input terminal marked PHONO LEFT CHANNEL on the back panel of the amplifier.
2. Connect the right output of the record player to the input terminal marked PHONO RIGHT CHANNEL.
3. Insert the power-cord plug of the record player into the AC receptacle on the back of the amplifier.

##### NOTE:

1. A magnetic cartridge of 2 to 10 mV is recommended for use with Model 400. If a crystal cartridge is used, connect the outputs of the record player to the inputs marked AUX on the rear of the amplifier.
2. If a monophonic record player is used, connect the output of the player to either PHONO LEFT or PHONO RIGHT terminal on the back of the amplifier.
3. When the power-cord plug of the record player is inserted into the AC receptacle of Model 400, the record player is controlled by the POWER switch on the front panel of the amplifier.

#### Listening to Records

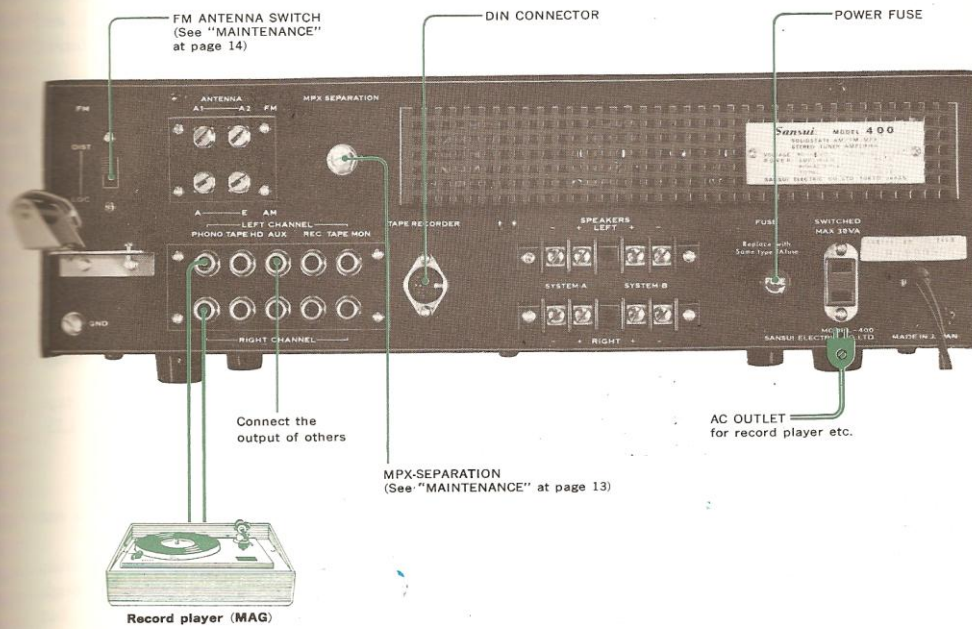
1. Set the SEIECTOR to PHONO.
2. Set the MODE selector to STEREO or MONO depending on the type of record and player.
3. Switch the record player ON at the correct r.p.m. speed.
4. Place the pickup on the record.
5. Adjust the BALANCE control so that equal sound comes from right and left speakers.
6. Set the VOLUME control, BASS control, TREBLE control, LOUDNESS switch and NOISE FILTER according to taste and listening conditions.

**NOTE:**

1. If you play a monophonic record on a stereo record player, better results are obtained by following the same procedures as for playing a stereo record.
2. To balance the stereo system, play a monophonic record just like a stereo record and adjust the BALANCE control so that the sound is heard at a point midway between the right and left speakers.

**WARNING:**

Model 400's sensitive power transistors are extremely susceptible to heat. Therefore, the receiver should never be placed directly in the sunlight or near heating appliances or radiators. Nor should it ever be installed in an air-tight box. Nothing should be placed on top of the amplifier.



## OPERATIONS

### — TAPE RECORDING — TAPE PLAYBACK

#### Connecting a Tape Recorder or Tape Deck

Model 400 is designed for use with a tape recorder for recording and playback, and with a tape deck for playback. If a three-head tape recorder is used, monitoring is also possible.

1. To use a tape recorder with a DIN (German Standard) connector, insert the connector into the receptacle marked TAPE RECORDER on the back panel of the amplifier.
2. To use a tape recorder with pin jack connectors, proceed as follows:

##### Recording

Connect the recording inputs of the tape recorder to the terminals marked REC LEFT and RIGHT (either terminal for mono) on the back of the amplifier by means of shielded wire. (See "Connecting Wire"—p. 14).

##### Playback

Connect the outputs of the tape recorder to the terminals marked TAPE MON LEFT and RIGHT (either terminal for mono) on the back of the amplifier by means of shielded wire.

3. To monitor by using a 3-head tape recorder, follow the same procedures as indicated in Step 1 or Step 2 under Recording.
4. To use a tape deck without its own playback preamplifier, connect the outputs of the tape deck to the terminals marked TAPE HD LEFT and RIGHT (either terminal for mono) on the back of the amplifier.

#### Listening to a Tape Recorder

To listen to a tape recorder with its own playback preamplifier:

1. Turn the TAPE MONITOR switch to ON.

2. Set the MODE selector to STEREO for stereo playback or MONO for monophonic playback.
3. Prepare the tape recorder for playback.
4. Set the amplifier VOLUME control, BASS control, TREBLE control, LOUDNESS switch and NOISE FILTER according to taste and listening conditions.

#### Listening to a Tape Deck

1. Set the SELECTOR to TAPE HD.
2. Set the MODE selector to STEREO for stereo playback or MONO for monophonic playback.
3. Prepare the tape deck for playback.
4. Set the amplifier VOLUME control, BASS control, TREBLE control, LOUDNESS switch and NOISE FILTER according to taste and listening conditions.

#### Tape Recording

1. Set the SELECTOR to the proper position according to the program source to be recorded.
2. Set the MODE selector to STEREO for stereo recording or MONO for monophonic recording.
3. Prepare the tape recorder for recording.
4. You may set the amplifier controls and switches to the either position. (See following section "Note 1.")
5. Operate the tape recorder.

#### Tape Monitoring

To use Model 400 as a monitor for a 3-head tape recorder, follow the same procedures as under LISTENING TO A TAPE RECORDER.

#### NOTE:

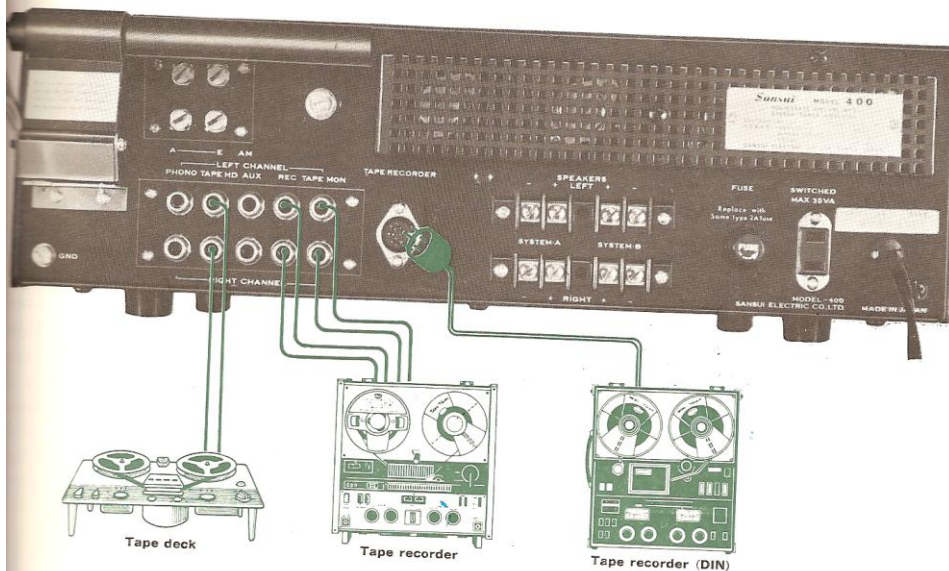
1. The sound level to be recorded on tape is not controlled by the amplifier knobs.
2. To obtain better recording results, record music, AM or FM programs should not be taped through a microphone placed in front of the speakers, but

through the Model 400.

3. Before using a tape recorder, be sure to look up the manufacturer's operating instructions.
4. The TAPE MONITOR switch must be in the OFF position except for use with a tape recorder for monitoring and playback.
5. The outputs of the tape recorder or tape player with self-contained playback preamplifier must be

connected to the terminals marked TAPE MON on the back of Model 400, and the TAPE MONITOR switch must be in the ON position.

The outputs of the tape deck must be connected to the inputs marked TAPE HD on the back of the Model 400 and the TAPE MONITOR switch must be in the OFF position.



# MAINTENANCE

## HOW TO ELIMINATE RADIO NOISE

### AM Reception

Most noise can be eliminated simply by changing the position of the antenna. In areas far from the broadcasting station, in mountainous areas, or in thick-walled buildings, waves are frequently not received well, resulting in unstable reception and increased noise. In such cases, connect the blue vinyl wire (supplied) to the terminal screw marked AM-A on the back of the amplifier and stretch it indoors in such a way that the signals come in best. If this does not reduce the noise or increase the amplifier's sensitivity, an outdoor antenna is required. (See "AM Outdoor Antenna" -p. 7)

Noise may also be heard at certain frequencies, stations or time of day. Such noise is caused by the nature of AM waves and cannot be avoided.

In some cases, it can be eliminated by grounding the amplifier or reversing the power cord plug-receptacle connections.

### FM Reception

Noise during FM reception can usually be attributed to either insufficient antenna input or interference from other electrical appliances.

Insufficient antenna input is due to an improperly installed antenna or because the receiver is too far removed from the broadcasting station. To correct this deficiency, first install the flexible FM antenna (supplied) as described on Page 7 until best reception is obtained.

If this is not effective, utilize either an indoor or outdoor TV antenna, or, if possible, an outdoor antenna designed exclusively for FM reception.

If a TV antenna is used for both TV and FM reception by means of a divider, be sure the TV reception is not affected. Remember, an excessively long antenna may cause, rather than eliminate noise.

The sensitivity of an amplifier varies according to the location from and transmitting conditions of FM broadcasting stations. Because of these factors, some stations are better received than others.

### FM MPX Reception

Noise can sometimes be heard during FM MPX stereo reception which does not accompany FM monophonic reception. This is due to a shorter transmission range for the stereo broadcast and cannot be avoided. It can, however, be reduced or eliminated by flipping the NOISE FILTER to its ON position. In some cases, it can be eliminated by setting the TREBLE control to the "flat" or lower position.

### Noise Common to Both FM and AM

Outside factors, such as the operation of other electrical appliances, often cause noise common to both AM and FM reception. This type of noise is easily distinguishable from those described above.

To eliminate, attach a noise suppressor to the electrical appliance causing the noise or to the power source of the amplifier.

### FM-MPX Separation

If the channel separation during FM MPX stereo reception is inadequate or excessive, turn the screw marked MPX SEPARATION (located on the rear panel) for natural proportions.

**IMPORTANT:** Never attempt to adjust this screw without reason: it has been properly adjusted by Sansui prior to shipment.



### Listening to FM Stereo Monophonically

When too much noise is heard during FM MPX stereo reception in fringe areas, and the steps described above do not satisfactorily reduce it, set the FUNCTION SELECTOR to the FM position. The sound from left and right channels is then mixed, but the noise is greatly reduced.

### FM Antenna Switch

For perfect FM reception in both low- and high-intensity signal areas, Model 400 is equipped with a local-distant FM antenna switch. It is located on the rear panel directly behind the AM Ferrite Bar Antenna. In areas near the broadcasting station, the switch should be set to the LOC position; in remote areas, to the DIST position.



### Tuning Indicator

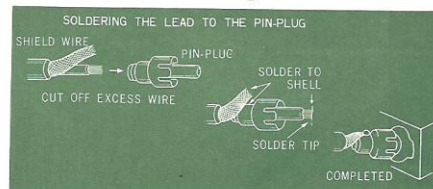
The needle movement in this indicator is not related to the receiver's sensitivity. In many cases while centering a station, the needle will not move the full range of its scale, and may only move slightly. This is normal and does not mean that the needle or amplifier is malfunctioning. The point to remember is that while the needle scale is designed from 1 to 5, any digit between these numbers may be the best indication given.

### Connecting Wire

Be sure to use adequately thick shieldwire when connecting a tape recorder, tape deck, record player or other components to Model 400's inputs. The use of an ordinary twin lead wire may cause hum or noise. Don't use shieldwire longer than 7 feet (2 meters). The use of a longer wire leads to greater attenuation at high frequencies.

### Connections

Always check to see that leads are connected firmly and properly to their corresponding output or input terminals. If the connections are loose or in touch with other parts, Model 400 will not perform normally, and may produce undesirable noise. If used in such a way for a long time, it will eventually break down. Always read the manufacturer's instructions for tape recorder, record player, tape deck, etc. before connecting.



### Phasing

The right and left speakers must be properly phased so that the two channels push the sound waves out together. If one pushes while the pulls, there is sound cancellation at some frequencies or in some listening locations. Incorrect phasing is caused by improper speaker connections and is evidenced by a loss of bass when a monophonic record is listened to on a stereo player at a point halfway between the two speaker systems. If incorrect, reverse the either speaker connection.

# MAINTENANCE

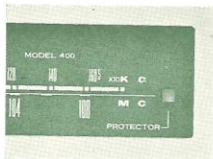
## Protector Indicator

Model 400 has a special protector circuit, which, combined with an SCR circuit and quick-acting fuses, protects the silicon power transistors from damage if a chance overload occurs. As soon as this circuit is activated, the Protector Indicator will light up and the amplifier's sound level will be markedly reduced.

As soon as this Indicator lights up, push the POWER switch off and find and eliminate the source of trouble.

**IMPORTANT:** The Indicator lamp might light up due to instantaneous overcurrent, rather than because of an internal defect. In this case, push the POWER switch off for about five seconds, then push it on again. If the lamp is illuminated this time, push the POWER switch off immediately and find and eliminate the source of trouble.

Probable cause: a shorted output circuit.



## FUSES

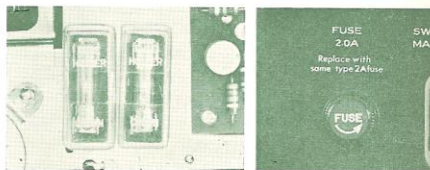
### Quick-Acting Fuses

If the dial lights up but the set does not play, it may be the result of a blown quickacting fuse in the power circuit of the power amplifier.

To replace, remove the power plug from its AC outlet. Then remove the bonnet from Model 400 and check for the blown fuse. Before replacing check for the source of trouble that has caused the fuse to blow. (See your Service Manual)

*Never use a fuse with a different capacity. The correct capacity is 1.5 amperes. (supplied)*

If the new fuse blows as soon as the POWER switch is pushed on, check for the defective power circuit. If the trouble source cannot be located, contact the nearest Sansui dealer or Service Center.



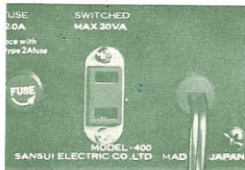
## Power Fuse

If the unit remains completely dead when the power is switched on (dial scale remains unlit), the power fuse is probably blown. In this case, remove the power plug from its AC outlet and replace the fuse after finding and eliminating the trouble that caused the fuse to blow. (Consult the Troubleshooting Section in your Service Manual) When replacing, *use only a glass-tubed 2-ampere fuse*. Never attempt to use a piece of wire or a fuse of a different capacity as a substitute.

## AC Outlet

Model 400 is provided with an AC outlet on its back panel. It is controlled by the POWER switch on the front panel.

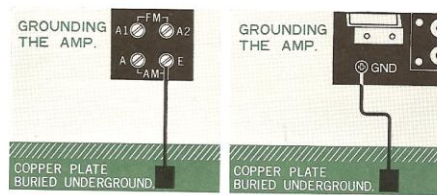
**CAUTION:** The maximum capacity of this outlet is 30 VA. Never use it beyond its rated capacity.





### Grounding

Connect one end of either vinyl or enamel wire to the terminal screw marked GND or antenna E terminal on the back of the amplifier. Attach a copper plate to the other end and bury it in the earth. When an AM outdoor antenna is used, grounding is necessary. Even when an outdoor antenna is not used, grounding is the best way to avoid hum pickup and to increase the amplifier's S/N ratio.



### Hum and Howling

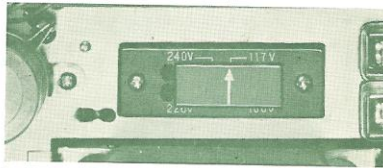
If, when using a tape recorder or record player, unpleasant humming or howling is heard, it is usually a result of the following:

The record player is placed on or near the speaker box causing sound waves to be transmitted from the speaker to the player (howling). To prevent this, place the record player away from the speaker box or put a thick cushion between the two components.

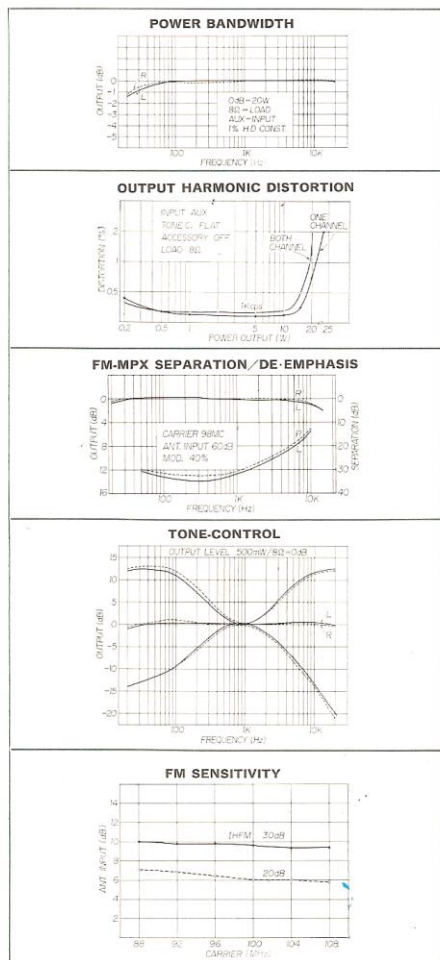
A low buzzing sound will also be produced if adequately thick shieldwire is not used for connections, or if connections have not been properly made. Be sure that the shieldwire is properly soldered to the pin-plug as illustrated before (See Connecting Wire) and that the motor and pickup arm of the record player are properly grounded.

### Voltage Selector Plug

Model 400 can operated in four different voltage: 100, 117, 220 and 240V. The voltage selector plug has been set in the 117V position for example. To change, pull the plug out, move the arrow head to the proper voltage in your area, and re-insert the plug firmly.



# SPECIFICATIONS CHARACTERISTICS



## AUDIO SECTION

### POWER OUTPUT

MUSIC POWER (IHF): 60 watts total  $\pm 1$ dB (4 $\Omega$ )  
 50 watts total  $\pm 1$ dB (8 $\Omega$ )

RMS POWER (LEFT/RIGHT): 25/25 watts  $\pm 1$ dB (4 $\Omega$ )  
 20/20watts  $\pm 1$ dB (8 $\Omega$ )

HARMONIC DISTORTION: Less than 1%

POWER BANDWIDTH (IHF): 20~50,000 Hz

FREQUENCY RESPONSE: at normal listening level

POWER AMPLIFIER 15~50,000 Hz  $\pm 1$ dB

AUX 20~30,000 Hz  $\pm 1$ dB

CHANNEL SEPARATION: PHONO 50dB, AUX 50dB

HUM AND NOISE (IHF): PHONO 70dB below rated output, AUX 80dB below rated output

OUTPUT IMPEDANCE: 4~16 $\Omega$

DAMPING FACTOR (IHF): 24 (8 $\Omega$ )

INPUT SENSITIVITY (For rated output)

PHONO (MAG): 2.2mV

TAPE HEAD: 2.0mV

AUX: 150mV

TAPE MONITOR (PIN): 150mV

TAPE MONITOR (DIN): 150mV

RECORDING OUTPUT

REC OUTPUT (PIN): 150mV

REC OUTPUT (DIN): 25mV

EQUALIZER: NF type

TAPE HEAD: NAB

PHONO (MAG): RIAA

### CONTROLS AND SWITCHES

BASS CONTROL: 50 Hz +12dB~-12dB

TREBLE CONTROL: 10,000 Hz +12dB~-13dB

LOUDNESS CONROL: 50 Hz +8dB, 10,000 Hz +5dB

NOISE FILTER: 10,000 Hz -10dB

MODE SWITCH: STEREO, MONO

SELECTOR SWITCH: AM, FM, FM-AUTO, PHONO,

TAPE HEAD, AUX

### FM SECTION

FREQUENCY RANGE: 88~108MHz

SENSITIVITY: 2.0 $\mu$ V  $\pm 3$ dB (quieting)

USABLE SENSITIVITY (IHFM): 2.5 $\mu$ V  $\pm 3$ dB

IMAGE REJECTION: 40dB at 98MHz

SELECTIVITY: 45dB at 98 MHz

SIGNAL TO NOISE RATIO: 60dB

HARMONIC DISTORTION: Less than 1.0%

**FM-MULTIPLEX SECTION**

CHANNEL SEPARATION: 35dB

HARMONIC DISTORTION: Less than 1%

**AM SECTION**

FREQUENCY RANGE: 535~1605KHz

USABLE SENSITIVITY (IHFM):  $20\mu\text{V} \pm 3\text{dB}$  at 1MHz

IMAGE REJECTION: 50dB at 1MHz

SELECTIVITY: 20dB at 1MHz

**TRANSISTORS AND DIODES**

TRANSISTORS: CT-1500×3, 2SA-234B×4, 2SA-102×1,  
2SA-101X×1, 2SA-101Y×1, 2SB-89A×2, 2SC-281×2,  
2SC-458×4, 2SC-538×2, 2SB-54×2, 2SA-49×2,  
2SB-324×1, 2SC-536×6, 2SC-650×2, 2SC-649×2,  
2SC-693×2, 2SC-244×4

DIODES: SW-1a×2, SW-0.5-2×2, SW-150×1, IS-180×4,  
OA-79×5, OA91×2, IN-60×10, V-312B×1

**POWER REQUIREMENTS**

POWER VOLTAGE: 100, 117, 220, 240 Volts, 50 and 60Hz

POWER CONSUMPTION: 85VA (MAX. Power)

**DIMENSIONS (Net)**

WIDTH:  $16\frac{1}{2}"$

HEIGHT: (Excluding rubber stands)  $5\frac{1}{8}"$

DEPTH: (Excluding knobs)  $12\frac{13}{16}"$

WEIGHT: 22.83 lbs

**DIMENSIONS: (Included Carton Box)**

WIDTH:  $19\frac{3}{8}"$

HEIGHT:  $9\frac{1}{2}"$

DEPTH:  $17\frac{1}{8}"$

WEIGHT: 27.82 lbs

CUBIC MEASURE: 1.2 cft

The logo features the word "Sansui" in a stylized, italicized serif font. It is centered between two thick, horizontal green bars. The top bar is positioned above the text, and the bottom bar is positioned below it, creating a frame for the brand name.

*Sansui*<sup>®</sup>

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Printed in Japan (O7030M4)