Operating Instructions

STEREO RECEIVER

SX-3600

KU

Walnut grained vinyl metal top and walnut grained vinyl side panels are used in the construction of this cabinet.

IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep in a secure area.
This is for your security.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

PIONEER®

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The operating instructions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING – The precautions that should be taken so that the grounding of an appliance is not defeated.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be contacted nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NEPA No. 70-1978, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS

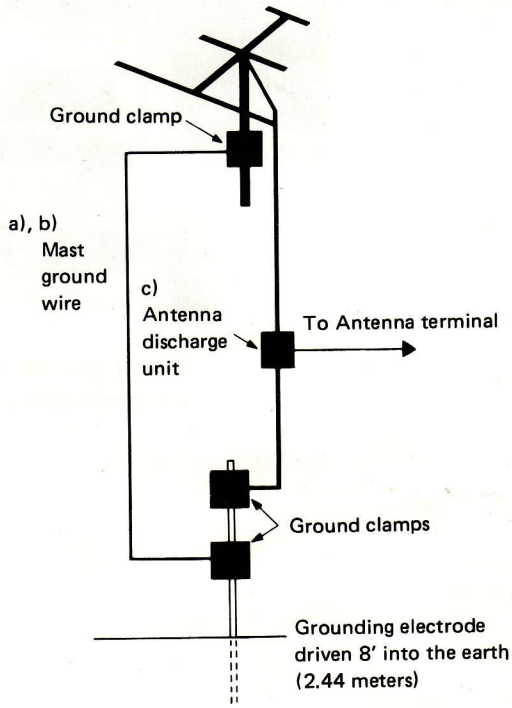


Fig. A

a) Use No. 10 AWG copper or No. 8 AWG aluminum or No. 17 AWG copper-clad steel or bronze wire, or larger as ground wires for both mast and lead-in.

b) Secure lead-in wire from antenna to antenna discharge unit and mast ground wire to house with stand-off insulators, spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.

c) Mount antenna discharge unit as closely as possible to where lead-in enters house.

CONTENTS

FEATURES

Low Distortion Power Amplifier

The power amplifier employs a first-stage differential amplifier with current mirror load and all-stage direct-coupled pure complementary OCL circuit. As a result, it delivers a

Continuous power output of 30watts* per channel, min., at 8ohms from 20Hertz to 20,000 Hertz with no more than 0.05% total harmonic distortion.

This is a power amplifier that packs an ample power punch. The tone control circuits are configured as CR-type tone controls and are inserted in the NFB circuit of the power amplifier. They vary the frequency response of the power amplifier's NFB circuit and contribute to reducing noise.

Phono Equalizer Amplifier for Faithful Sound Reproduction of Records

The low-noise transistors and low noise elements combine to produce a signal-to-noise ratio (PHONO) of 76dB (IHF-A). As a result, the RIAA deviation, which has a great bearing on the sound quality, is improved to ±0.3dB (over 30 to 15,000Hz), and the phono overload level is 140mV (1kHz, T.H.D. 0.1%) with respect to a 2.5mV rating. This is, then, a design which has plenty to spare and which permits the almost distortion-free play of records on your turntable for the best in high-fidelity.

FM Tuner for Accurate and Stable Reception

The front end employs a 3-gang variable capacitor and J-FET in order to yield a high level of sensitivity and effective interference rejection. Featured in the intermediate frequency stage is two ceramic filters with an outstanding group delay response and a quadrature detector. This configuration helps provide an excellent selectivity and distortion. The MPX section employs an IC-based phase-locked loop circuit for separation which is always amazingly clear, and it is not affected by variations in the ambient conditions in any way.

Fluorescent Display Tubes for Power Meter

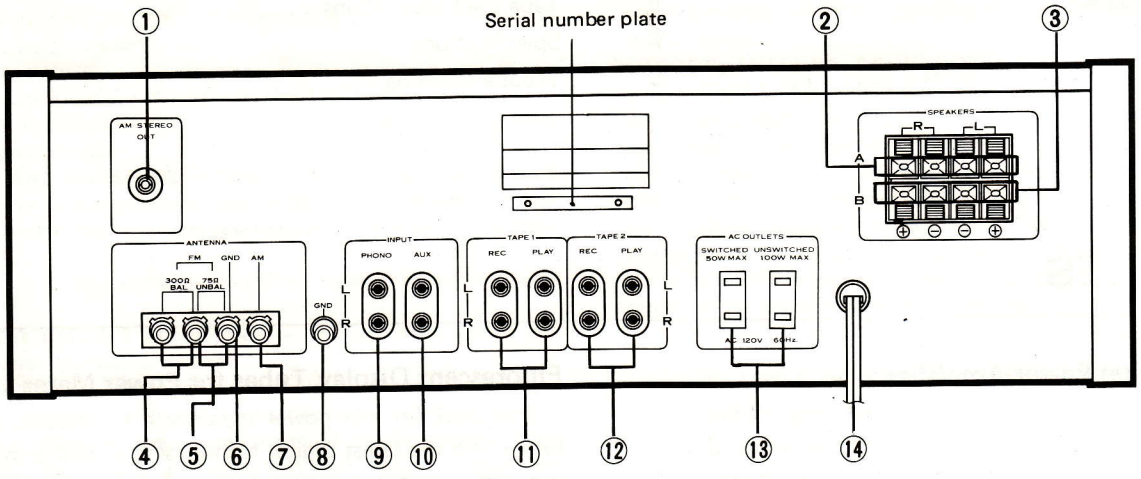
Featured for the power meter is a fluorescent display tube using the latest digital technology, a logarithmic compression circuit and a peak hold circuit. This combination allows a power output level display from 0.01 watts up to 40 watts without range selection on a bar graph display.

Full Complement of Accessory Functions

- FUNCTION, SPEAKERS indicators:
  You can find out exactly where the function selector and the speaker switch are set since the corresponding indicators light up, telling you at a glance the program source.
- Two TAPE MONITOR switches:
  These switches facilitate tape operation when you have connected two tape decks and you are playing back tapes or duplicating (dubbing).
- Two SPEAKERS terminals:
  You can connect two sets of speaker systems. This means that you can listen to the program on one set in another room.
- LOUDNESS switch:
  This gives the reproduced sound a richer tone even under low-volume listening conditions.
- AM STEREO OUTPUT jacks:
  Connect your stereo adaptor to this jack when listening to this jack when listening to AM stereo broadcasts.

**Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

REAR PANEL FACILITIES



① AM STEREO OUTPUT JACK

This jack is for AM stereo broadcasts. When listening the AM stereo broadcasts, connect the adaptor component to this jack. For further details, refer to the operating instructions of the AM stereo adaptor component.

② SPEAKERS TERMINALS A

Connect your first pair of speakers to these terminals.

③ SPEAKERS TERMINALS B

Connect your second pair of speakers to these terminals.

④ FM ANTENNA INPUT TERMINALS FOR 300-OHM TWIN-LEAD FEEDER

Connect a 300-ohm twin-lead feeder to these terminals when using it as the feeder from the FM antenna. Use these terminals when connecting the accessory T-type FM antenna.

⑤ FM ANTENNA INPUT TERMINALS FOR 75-OHM COAXIAL CABLE

Connect a 75-ohm coaxial cable to these terminals when using it as the feeder from the FM antenna.

⑥ GND TERMINAL

This is the ground terminal. From aspects of both safety and reduced noise, connect a ground lead to this terminal.

⑦ AM ANTENNA INPUT TERMINAL

When using an external AM antenna, connect it to this terminal.

⑧ GND TERMINAL

This is the ground terminal. Connect the ground wire of the turntable, etc. to this terminal.

⑨ PHONO JACKS

Connect the turntable output cords to these jacks.

⑩ AUX JACKS

These are auxiliary input jacks. Connect a TV tuner or cartridge tape player to them.

⑪ TAPE 1 JACKS

Connect the tape deck cords to these jacks.
Connect the REC (recording) jacks to the INPUT jacks on the tape deck, and the PLAY (playback) jacks to the OUTPUT jacks.

⑫ TAPE 2 JACKS

Connect your second tape deck cords to these jacks.

⑬ AC OUTLETS

These are spare power outlets. Insert the power plug on the stereo components (turntable, tape deck, etc.) into these outlets.

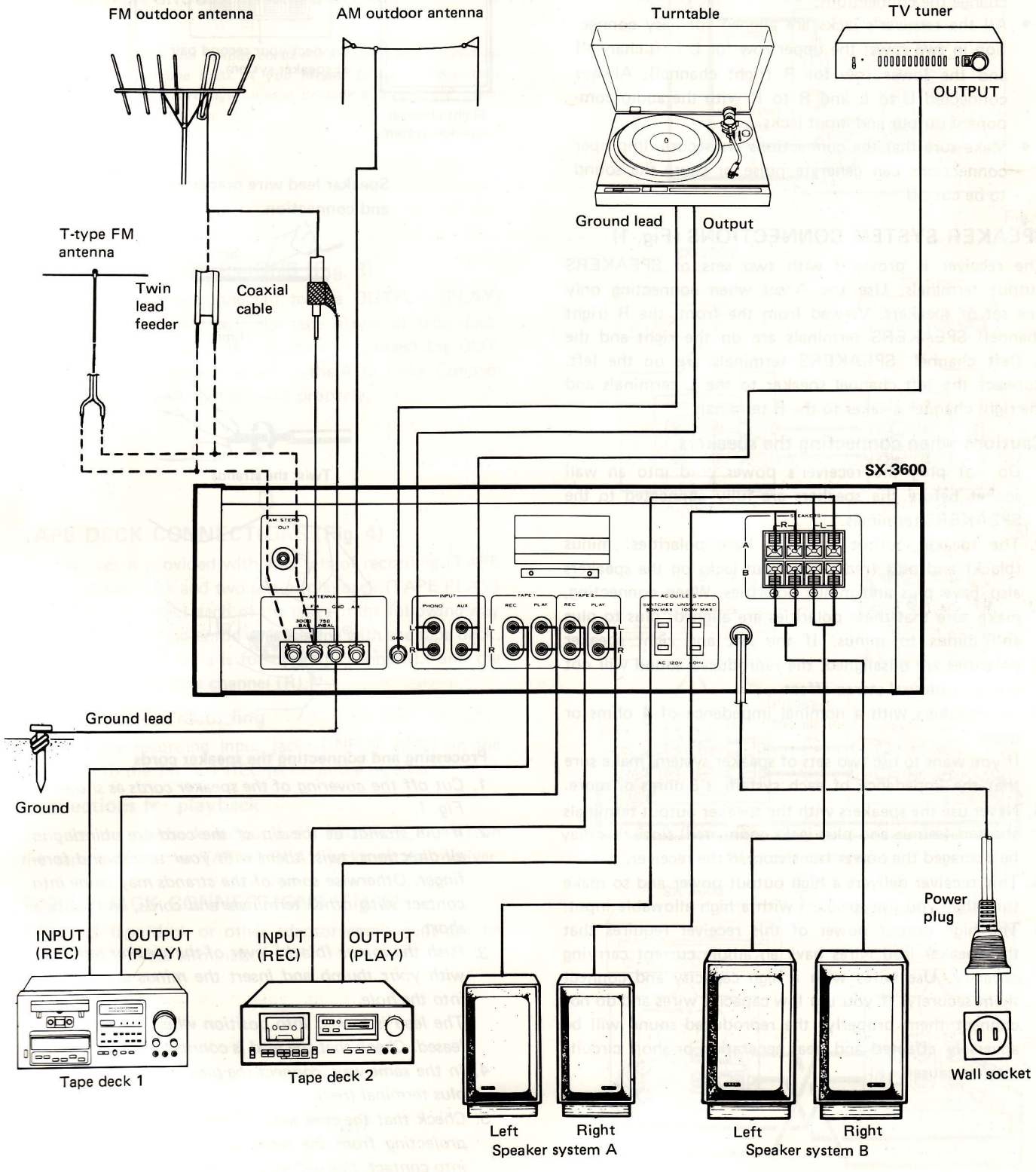
SWITCHED: The power supplied through this outlet is coupled to the operation of the receiver's power switch. The maximum power capacity which may be connected to this outlet is 50W.

UNSWITCHED: The power is always supplied through this outlet regardless of the position of the power switch. The maximum power capacity which may be connected to this outlet is 100W.

⑭ POWER CORD

Plug this into an wall socket.

CONNECTION DIAGRAM



CONNECTIONS

PRECAUTIONS

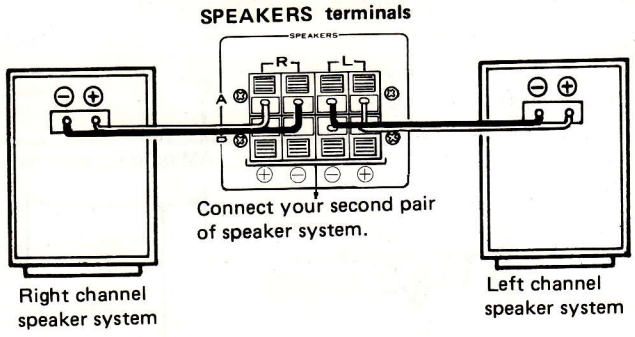
- Set the POWER switch to ON only when you have completed all the connections of the stereo system. Always set this switch to OFF position if you want to change the connections.
- All the receiver's jacks are aligned for easy connection in two rows: the upper row for L (left channel) and the lower row for R (right channel). Always connected L to L and R to R with the audio component output and input jacks.
- Make sure that the connections are secure. Improper connections can generate noise or cause the sound to be cut off.

SPEAKER SYSTEM CONNECTIONS (Fig. 1)

The receiver is provided with two sets of SPEAKERS output terminals. Use the A set when connecting only one set of speakers. Viewed from the front, the R (right channel) SPEAKERS terminals are on the right and the L (left channel) SPEAKERS terminals are on the left. Connect the left channel speaker to the L terminals and the right channel speaker to the R terminals.

Cautions when connecting the speakers

1. Do not plug the receiver's power cord into an wall socket before the speakers are fully connected to the SPEAKERS terminals.
2. The speaker output terminals have polarities: minus (black) and plus (red). The input jacks on the speakers also have plus and minus polarities. When connecting, make sure that these polarities are aligned: plus to plus and minus to minus. If the left and right speaker polarities are misaligned, the reproduced sound will not display a natural stereo effect.
3. Use speakers with a nominal impedance of 4 ohms or more.
   If you want to use two sets of speaker system, make sure that the impedance of each system is 8 ohms or more.
4. Never use the speakers with the speaker output terminals shorted (minus and plus jacks connected) since this may be damaged the power transistors in the receiver.
5. This receiver delivers a high output power and so make sure that you use speakers with a high allowable input.
6. The high output power of this receiver requires that the speaker lead wires have an ample current carrying capacity. Use wires with a high capacity and connect them securely. If you use low capacity wires and do not connect them properly, the reproduced sound will be adversely affected and heat generation or short circuits may be caused.



Speaker lead wire preparation and connection

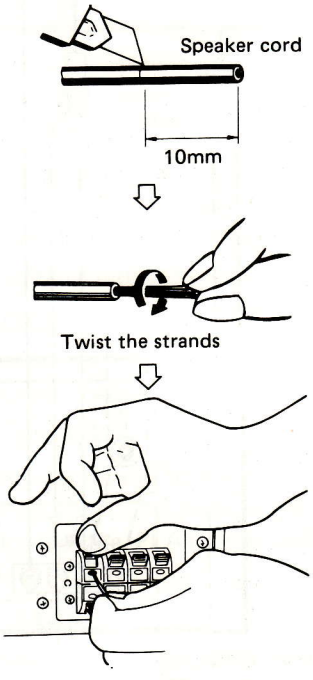


Fig. 1

Processing and connecting the speaker cords

1. *Cut off the covering of the speaker cords as shown in Fig. 1.*
2. *If the strands at the tip of the cord are pointing in all directions, twist them with your thumb and forefinger. Otherwise some of the strands may come into contact with other terminals and cords, and cause a short.*
3. *Push the minus (black) lever of the speaker terminals with your thumb and insert the minus speaker lead into the hole.*
   The lead is locked into position when the lever is released. Check that the lead is connected firmly.
4. *In the same way, connect the plus speaker lead to the plus terminal (red).*
5. *Check that the core wires of the speaker leads are not projecting from the terminals. If they should come into contact, this will give rise to a short circuit.*

TURNTABLE CONNECTIONS (Fig. 2)

Connect the output cords of a turntable to the PHONO input jacks. Be sure to connect left (L) channel and right (R) channel correctly. Connect the ground lead of the turntable to the GND terminal on the receiver.

NOTE:
The way in which the output cords are attached will depend on the type of cartridge used. If you intend to use a low-output moving coil (MC) cartridge, always provide a special MC transformer or a head amplifier.

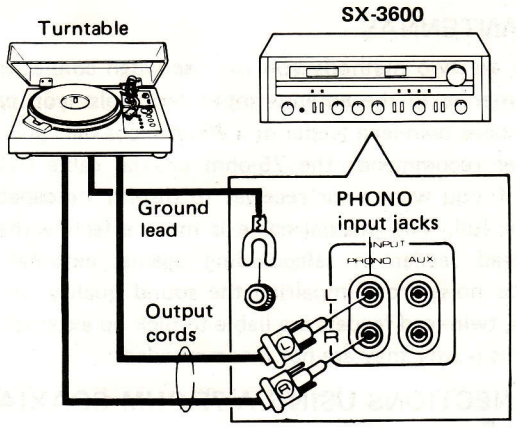


Fig. 2

AUX JACK CONNECTIONS (Fig. 3)

These jacks can be connected to the OUTPUT (PLAY) jacks on a TV tuner, cartridge tape player or tape deck. Use connecting cords with pin plugs to connect the OUTPUT jacks on the component with the AUX jacks. Connect the left channel and right channel properly.

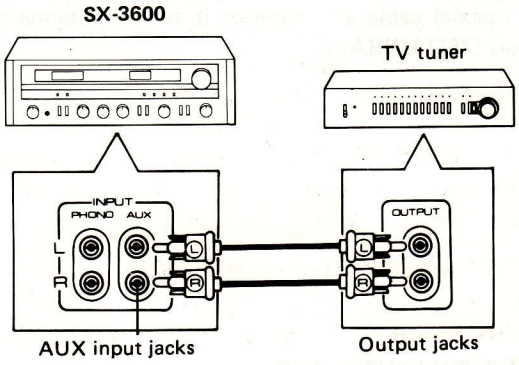


Fig. 3

TAPE DECK CONNECTIONS (Fig. 4)

The receiver is provided with two sets of recording (TAPE REC) output jacks and two sets of playback (TAPE PLAY) input jacks. Connect each of the jacks in the following way using the connecting cords which come with the tape deck. The upper row of jacks is for the left channel (L) and the lower row for the right channel (R).

Connections for recording

Connect the recording input jacks (INPUT REC) on the tape deck to the TAPE 1 REC jacks on the receiver.

Connections for playback

Connect the playback output jacks (OUTPUT PLAY) on the tape deck to the TAPE 1 PLAY jacks on the receiver.

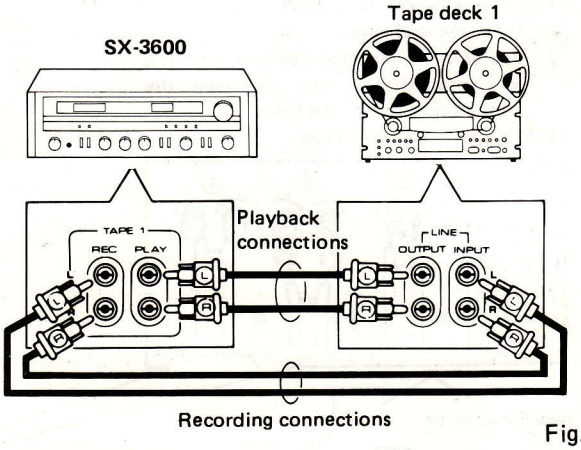


Fig. 4

TAPE 2 JACK CONNECTIONS (Fig. 5)

A second tape deck or other adaptor component can be connected to these terminals.

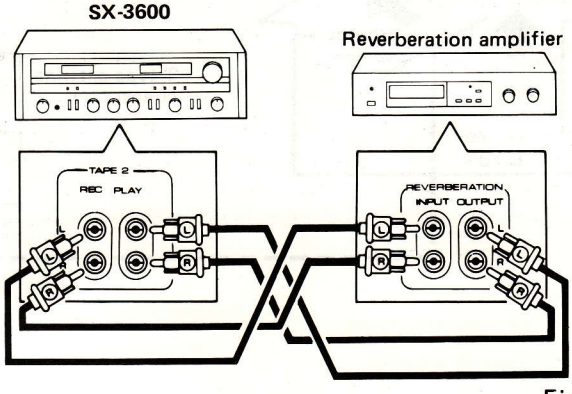


Fig. 5

ANTENNA AND GROUND CONNECTIONS

FM ANTENNAS

There are two methods you can use when connecting the FM antenna to the antenna input terminals: you can use a 300-ohm twin-lead feeder or a 75-ohm coaxial cable. Pioneer recommends the 75-ohm coaxial cable (RG59U, etc.) if you want your receiver to display its capabilities to the full. The coaxial cable is more effective than the twin-lead feeder in safeguarding against external interference noise from impairing the sound quality. In other words, twin-lead feeders are liable to pick up external noise, and this is why they are not recommended.

CONNECTIONS USING A 75-OHM COAXIAL CABLE

Refer to Fig. 6 and follow the procedure. Prepare the tip of the coaxial cable and connect it to the antenna input terminals (75Ω-UNBAL).

CONNECTIONS USING A 300-OHM TWIN-LEAD FEEDER

In cases where it is only possible to use a twin-lead feeder with a community receiving system antenna, refer to Fig. 6 and follow the procedure. Prepare the ends of the twin-lead feeder and attach them to the 300Ω-BAL antenna input terminals. Then make the twin-lead feeder as short as possible but do not bundle the wires or run them loose on the floor.

ACCESSORY T-TYPE ANTENNA

This antenna is designed to allow you to receive FM programs in areas where strong signals are beamed by broadcasting stations until you install your FM antenna. As shown in Fig. 6, attach the antenna to the 300Ω-BAL antenna input terminals and then tune into an FM station, following the instructions listed under "FM RECEPTION" on page 12. Extend both ends of the antenna horizontally, locate the optimum receiving location by moving the antenna to the left or right, or up or down, and then secure it to the ceiling or wall.

300-ohm feeder preparation

1. Cut out the center portion.
2. Twist the lead wire.
3. Unscrew the terminal cap and wind the wire around the stud, between the toothed washer and the base.
4. Tighten the terminal cap.

75-ohm coaxial cable preparation

1. Strip the end of the cable as shown in step ① .
2. Prepare the end as shown in steps ② .
3. Unscrew the terminal cap and wind the wire around the stud, between the toothed washer and the base.
4. Tighten the terminal cap.

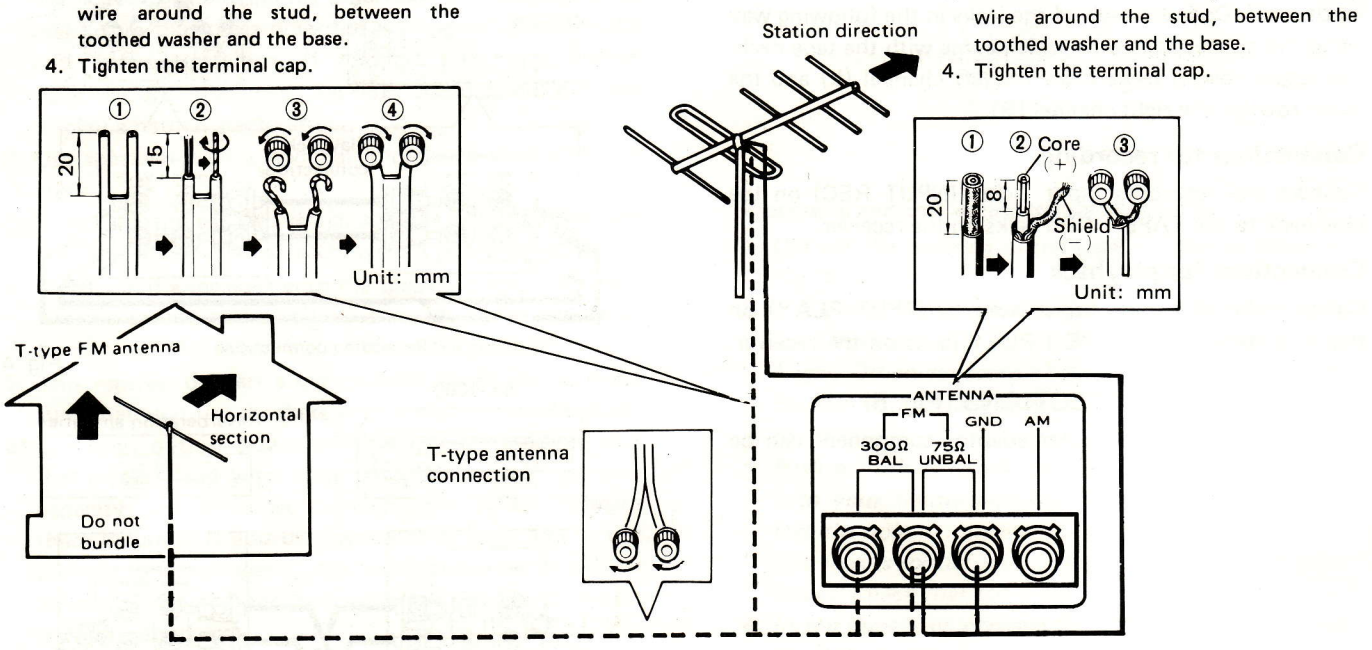


Fig. 6

AM ANTENNA

This receiver contains an AM bar antenna. When you are listening to an AM broadcast and the reception is poor, try changing the direction of the unit itself (Fig. 7).
The bar antenna which is secured inside the unit features directionality, and so install the unit in the position which provides optimum reception.

- In cases when the bar antenna is insufficient for adequate reception, an indoor AM antenna can be made from a length (5 to 6 meters) of vinyl insulated wire as shown in Fig. 8, connect one end of the wire to the AM antenna terminal and suspend the free end from an wall or ceiling at as high a location as possible.
- If reception is still difficult with an indoor antenna, use vinyl insulated wire to erect an outdoor AM antenna between two supports as shown in Fig. 8.

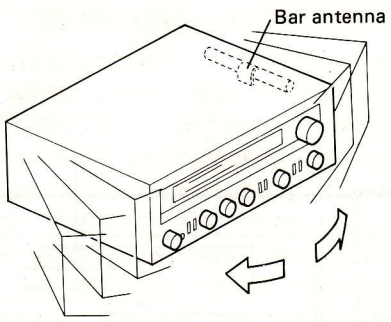


Fig. 7

GROUNDING

From the viewpoint of both safety and reduced noise, Pioneer recommends that you employ a ground as shown in Fig. 8. Connect the ground lead to the GND terminal of the receiver. Never connect it to a gas pipe or other dangerous location.

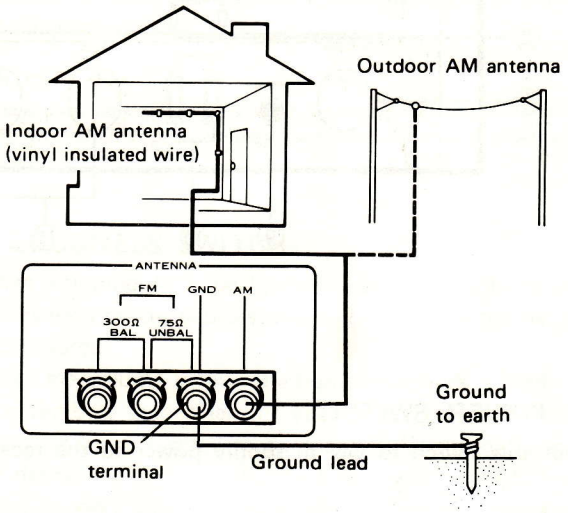


Fig. 8

FM ANTENNA LOCATION

The signals transmitted by an FM broadcasting station inevitably become weak when received behind mountains, between buildings and inside reinforced concrete structures. In weak-signal areas, signals which are reflected off mountains and other obstacles in their path may be picked up by the antenna, which causes a multipath effect. This adversely affects the sound received. This is why it is necessary to choose an antenna and installation location which are best suited to cope with the ambient conditions and the strength of the signals.
Bear in mind the following points and determine the optimum location (height and direction).

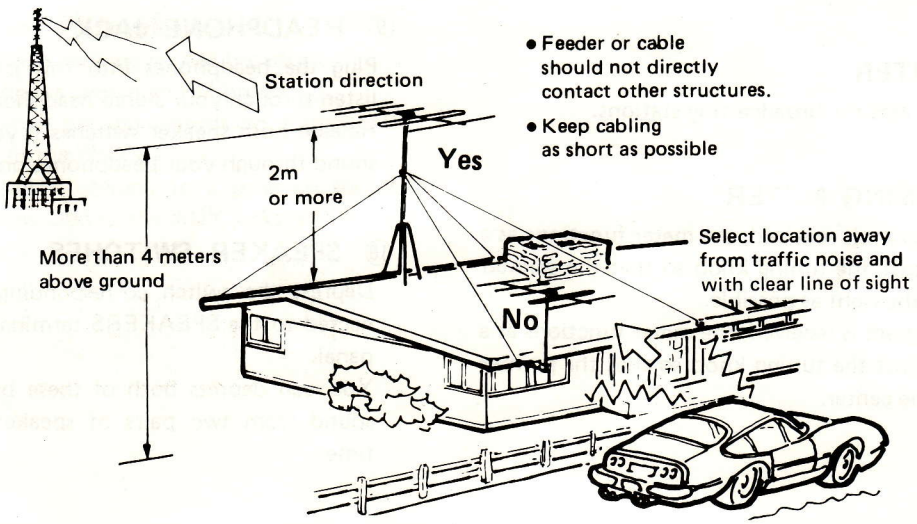
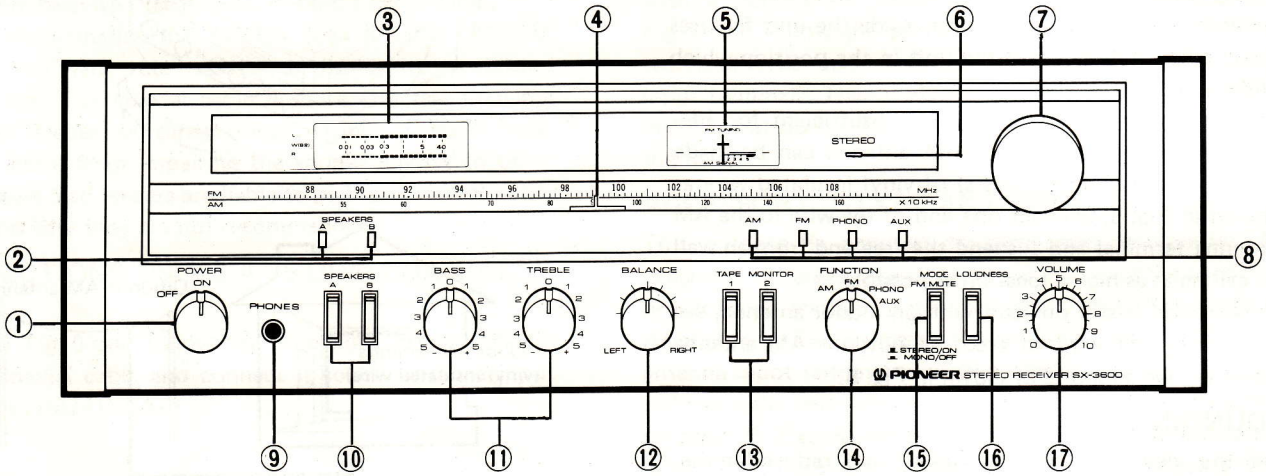


Fig. 9

FRONT PANEL FACILITIES



① POWER SWITCH

Set this switch to ON to supply power to the receiver.

② SPEAKER INDICATORS

These lamps light according to the depressed speaker switch.

③ POWER METER

This meter allows you to read out the rated power level on the fluorescent display tube when speakers with a nominal impedance of 8 ohms are connected to the speaker terminals.

④ DIAL POINTER

This pointer indicates the broadcasting stations.

⑤ AM/FM TUNING METER

When an AM program is received, the meter functions as a signal meter. Adjust the tuning knob so that the pointer deflects as far to the right as possible.

When an FM program is received, the meter functions as a tuning meter. Adjust the tuning knob so that the pointer is positioned in the center.

⑥ FM STEREO INDICATOR

This indicator lights up when receiving an FM stereo program.

⑦ TUNING KNOB

Use this knob to select the station. Observe the AM/FM tuning meter, and set the tuning knob to the optimum tuning point when aligning the target broadcast station.

⑧ FUNCTION INDICATORS

These lamps indicate the position of the function selector.

⑨ HEADPHONE JACK

Plug the headphones into this jack when you want to listen through your stereo headphones.

Release both speaker switches if you want to listen to the sound through your headphones only.

⑩ SPEAKER SWITCHES

Depress the switch corresponding to the speakers connected to the SPEAKERS terminals (A or B) on the rear panel.

You can depress both of these buttons to listen to the sound from two pairs of speaker systems at the same time.

⑪ BASS AND TREBLE CONTROLS

Use these controls to adjust the bass and the treble. If you turn the bass control to the right from its center (0) position, you will be able to emphasize the sound in the low-frequency range. Conversely, turning this control to the left from the center (0) position will attenuate the sound. You can use the treble control to adjust the sound in the high-frequency range.

⑫ BALANCE CONTROL

Use this control to balance the volume of the left and right channels. First, however, set the mode/FM muting switch to MONO/OFF. If the sound appears to be louder on the right, it means that the volume of the right channel is higher. Turn the balance control to the left and adjust. Conversely, if the sound appears to be louder on the left, it means that the volume of the left channel is higher. Therefore, turn the balance control to the right and adjust. After adjusting, return the mode/FM muting switch to STEREO/ON.

⑬ TAPE MONITOR SWITCHES

Depress the switch 1 with a tape deck which is connected to the TAPE 1 jacks (REC and PLAY) when you want to monitor the playback or recording of a tape. The tape on a deck which is connected to the TAPE 2 jacks (REC and PLAY) can be similarly monitored by depressing the switch 2.

For further details, refer to "TAPE DECK OPERATIONS" on page 13.

NOTE:
Set these switches to the released (OFF) position when you listening to records or a broadcasting.

⑭ FUNCTION SELECTOR

Use this selector to select the program source.

AM: Set here when receiving an AM broadcast.

FM: Set here when receiving an FM broadcast.

PHONO: Set here when playing records on a turntable connected to the PHONO jacks.

AUX: Set here when listening to a program source which is connected to the AUX jacks.

⑮ MODE/FM MUTING SWITCH

This switch is a combination of the FM muting switch and the mode selector switch. When the switch is left undepressed (STEREO/ON) the reproduction is in stereo mode, while the FM muting function acts to suppress unpleasant interstation noise while listening to FM broadcasting.

When the switch is depressed (MONO/OFF position), however, reproduction is in mono mode, while the FM muting function does not act, thus enabling suitable reception of weak radio stations when tuning in to the FM broadcasting station.

NOTE:
Recording stereophonically with the mode/FM muting switch in the MONO/OFF position may cause deterioration in channel separation.

⑯ LOUDNESS SWITCH

When listening to a performance with the volume control turned down, depress this switch and the bass will be accentuated.

When the volume is low, the human ear finds it harder to hear the bass than when the volume is high. The loudness switch is thus designed to compensate for this deficiency. By depressing this switch, the bass come through much more strongly and the sound takes on a punch even when the volume control is turned down.

⑰ VOLUME CONTROL

Use this control to adjust the output level to the speakers and headphones. Turn it clockwise to increase the output level. No sound will be heard if you set it to "0".

OPERATIONS

PRIOR TO SWITCHING POWER ON

Before switching the power on, set the various controls as follows;

1. Depress the speaker switch that corresponds to the speaker system which is connected to the SPEAKERS terminals on the rear panel.
2. Set the bass and treble controls to 0 position.
3. Set the balance control to the center position.
4. Release the tape monitor switches.
5. Release the mode/FM muting switch.
6. Release the loudness switch.
7. Set the volume control to 0 position.

FM RECEPTION

1. Set the function selector to FM.
2. Slightly turn the volume control clockwise direction to obtain the sound.
3. Rotate the tuning knob and tune in the station whose program you want to listen to. Adjust the knob so that the AM/FM tuning meter pointer is positioned in the center. When tuning in a station, the pointer deflects to the left or right, and perfect tuning is indicated when the pointer is positioned in the center.

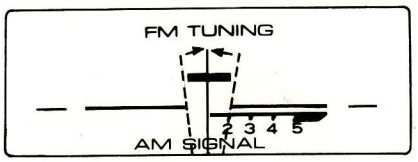


Fig. 10

- The FM stereo indicator lights with an FM stereo broadcast.
- In order to listen to weak-signal FM stations, set the mode/FM muting switch to MONO/OFF position and re-tune.

4. Adjust the volume with the volume control.
5. Set the tone controls for the preferred bass and treble levels.

AM RECEPTION

1. Set the function selector to AM.
2. Slightly turn the volume control clockwise direction to obtain the sound.
3. Rotate the tuning knob and tune in the station whose program you want to listen to. Adjust the knob so that the AM/FM tuning meter pointer deflects as far to the right as possible.

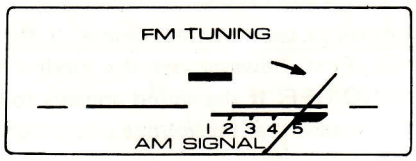


Fig. 11

4. Adjust the volume with the volume control.
5. Set the tone controls for the preferred bass and treble levels.

PLAYING RECORDS

1. Set the function selector to PHONO.
2. Operate the turntable to play the record.
3. Adjust the volume with the volume control.
4. Set the tone controls for the preferred bass and treble levels.

Precautions when playing records

- Lower the stylus gently onto the surface of the record. It is a good idea to turn the volume down when lowering the stylus onto the record.
- Do not cause the turntable to vibrate while a record is being played since this will cause the stylus to jump and scratch the record. Do not turn off the power if the stylus is still tracing grooves on the record.

PLAYING A STEREO COMPONENT CONNECTED TO THE AUX JACKS

1. Set the function selector to AUX.
2. Operate the audio component which you have connected to the AUX jacks.
3. Adjust the volume with the volume control.
4. Set the tone controls for the preferred bass and treble levels.

TAPE DECK OPERATIONS

PLAY BACK (Fig. 12)

1. Set the tape monitor switch 1 to ON if the tape deck is connected to the TAPE 1 jacks. Set the tape monitor switch 2 to ON if it is connected to the TAPE 2 jacks.
2. Operate the tape deck controls for playback.
3. Adjust the volume with the volume control.
4. Set the tone controls for the preferred bass and treble levels.

NOTES:

1. *Always release both of the tape monitor switches (OFF) when you are not playing back a tape.*
2. *As long as the tape monitor switch 1 or 2 is at ON, you will be able to play back a tape regardless of the setting of the function selector.*
3. *If you set both tape monitor switches to ON, you will hear the playback sound of the tape deck connected to the TAPE 2 jacks.*

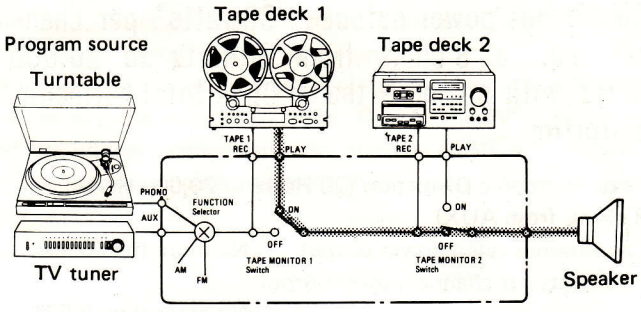


Fig. 12

RECORDING (Fig. 13)

1. Set the function selector to the program source to be recorded.
2. Play the program source (record, FM broadcast, etc.).
3. Set the recording level on the tape deck.
4. Start the recording by following the tape deck's recording procedure.

NOTES:

1. *When recording, keep the mode/FM mute switch at STEREO/ON.*
2. *The receiver's volume, bass and treble controls have no effect on the recorded sound when a recording is being made.*

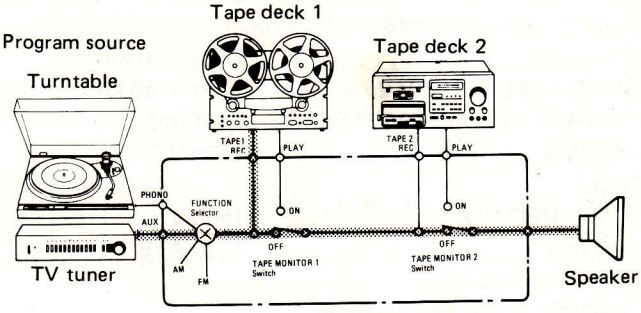


Fig. 13

Tape monitoring

If a recording is being made on a 3-head tape deck, the recorded sound can be monitored through the speaker systems if the tape monitor switch 1 or 2 is set to ON, depending on which TAPE jacks the tape deck is connected to. In this case, both recording and playback connections must be made.

NOTE:

If you have a 2-head open-reel deck or cassette deck, you will not be able to monitor the recorded sound even if you set the tape monitor switch to ON. However, you will be able to hear the sound at the playback end (program source).

NOTE:

When recording with two tape decks simultaneously, do not operate the tape monitor 1 switch as this will interrupt the signal to the TAPE 2 deck.

Duplicating and editing recorded tapes

1. As shown in Fig. 14, connect the tape decks to the receiver's TAPE 1 and TAPE 2 jacks.
2. Place the previously recorded tape on the deck connected to TAPE 1 jacks, while placing a blank tape on the other unit.
3. Set the tape monitor switch 1 to ON.
4. Play back the recorded tape on the tape deck 1 and record it on tape deck 2.
5. Set the tape monitor switch 2 to ON when you want to monitor the recorded sound.

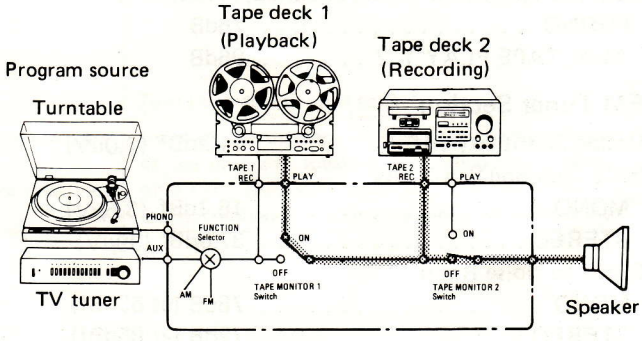


Fig. 14

NOTE:

It is impossible to duplicate from the tape deck connected to the TAPE 2 jacks to the tape deck connected to the TAPE 1 jacks.

SPECIFICATIONS

Amplifier Section

Continuous power output of 30watts* per channel, min., at 8 ohms from 20Hertz to 20,000 Hertz with no more than 0.05% total harmonic distortion.

Total Harmonic Distortion (20 Hertz to 20,000 Hertz, 8 ohms, from AUX)
- continuous rated power output . . No more than 0.05%
- 15 watts per channel power output . . . . . No more than 0.03%

Intermodulation Distortion (50 Hertz: 7,000 Hertz = 4 : 1, 8 ohms, from AUX)
- continuous rated power output . . No more than 0.05%
- 15 watts per channel power output . . . . . No more than 0.03%

Damping Factor (20 Hertz to 20,000 Hertz, 8 ohms) 35

Input (Sensitivity/Impedance)
- PHONO . . . . . 2.5mV/50 kilohms
- AUX, TAPE PLAY 1, 2 . . . . . 150mV/50 kilohms

Phono Overload Level (T.H.D. 0.1%, 1,000Hz)
- PHONO 140mV

Output
- TAPE REC 1, 2 . . . . . 150mV
- Speaker . . . . . A, B, A+B

Frequency Response
- PHONO (RIAA Equalization) . . . . . 30Hz to 15,000Hz ±0.3dB
- AUX, TAPE PLAY 1, 2 . . . . 10Hz to 50,000Hz $^{+0.5}_{-3.0}$dB

Tone Control
- BASS . . . . . ±8dB (100Hz)
- TREBLE . . . . . ±8dB (10,000Hz)

Loudness Contour (Volume control set at –40dB position) . . . . . +6dB (100Hz)

Hum and Noise (IHF, short-circuited, A network)
- PHONO 76dB
- AUX, TAPE PLAY 1, 2 . . . . . 96dB

FM Tuner Section

Usable Sensitivity (IHF) 11.2dBf (2.0μV)

50dB Quieting Sensitivity
- MONO 16.1dBf (3.5μV)
- STEREO 37.0dBf (39μV)

Signal-to-Noise Ratio
- MONO . . . . . 78dB (at 65dBf)
- STEREO . . . . . 72dB (at 85dBf)

Distortion (at 65dBf)
- MONO 100Hz 0.1%
- 1kHz 0.1%
- 6kHz 0.15%
- STEREO 100Hz 0.2%
- 1kHz 0.15%
- 6kHz 0.25%

Capture ratio 1.0dB

Alternate Channel Selectivity
- 400kHz 60dB

Stereo Separation
- 1kHz 40dB
- 30Hz to 15kHz 35dB

Frequency Response . . . . . 20Hz to 15kHz $^{+0.5}_{-1.0}$dB

Spurious Response Ratio 65dB

Image Response Ratio 65dB

IF Response Ratio 90dB

AM Suppression Ratio 55dB

Subcarrier Product Ratio 40dB

SCA Rejection Ratio 60dB

Muting Threshold 19.2dBf (5μV)

Antenna Input . . . . . 300 ohms balanced, 75 ohms unbalanced.

AM Tuner Section

Sensitivity (IHF, Ferrite Antenna) . 300μV/m
(IHF, Ext. antenna) . . . 15μV

Selectivity 27dB

Signal-to-Noise Ratio 52dB

Image Response Ratio 32dB

IF Response Ratio 40dB

Antenna . . . . . Ferrite loopstick antenna

Miscellaneous

Power Requirements . . . . . AC 120V, 60Hz

Power Consumption 200W

Dimensions . . . . . 450(W) x 142(H) x 306(D)mm
17-11/16(W) x 5-9/16(H) x 12-1/16(D)in

Weight (without package)
- Model for U.S. 8.2kg (18lb 1oz)
- Model for Canada 8.5kg (18lb 12oz)

Furnished Parts

Operating instructions 1

FM T-type antenna 1

**Measured pursuant to the Federal Trade commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.

TROUBLESHOOTING

If your stereo appears to malfunction, first check such things as the controls (power switch, function switch, tape monitor switch, etc.) and connecting cords (components connected correctly).
Noise: There are a variety of noises relating to the operation of a hi-fi unit. There are generally divided into two types: (1) the unit is faulty (a transistor or part has deteriorated), and (2) an external source is interfering with the unit.
When a hi-fi unit produces an unpleasant noise, it is often assumed that the unit is faulty; however, statistical records indicate that the majority of noise produced in hi-fi acoustic units results from external sources of noise: Due to the inherent high-sensitivity and the high-fidelity reproduction, the unit amplifies and reproduces extraneous noise, however small, into audible output noise. If your receiver produces a noise, check according to the following table and trace the source of noise for the appropriate corrective action.

	Symptom	Suspected source of noise	Diagonosis and remedy
When listening to broadcasts	Continuous or intermittent buzzing noise.	• Static (lighting) • A fluorescent lamp, motor, or thermostat may be in use in the house or in the vicinity.	In many cases, it is very difficult to remove the source of noise. In order to make the radio input larger than the noise level, set up a good outdoor antenna and make a complete grounding.
	When a station is tuned in hum is mixed in the program.	• A poor fluorescent lamp, motor, or electric heater may be in use in the house or nearby.	Reversing the power plug may occasionally alleviate this noise problem. Usually it is very difficult to eliminate the noise.
	Hissing noise an AM (medium wave) reception.	• The frequency of an adjacent station is interfering with that of the station being tuned in to (beat interference). • TV set is on in the same house with the receiver.	Impossible to remove such interference. If the cause of such noise is the TV set, increase the distance between the TV set and receiver.
	Static noise (in particular, when automobiles run close to the house).	• White noise generated from automobile engines. • High-frequency sewing machine or welding machine being used near your house.	In an area surrounded by hills or high buildings, the FM input signals are very weak. Thus the noise limiter in the circuit loses its function. Set up an FM outdoor antenna having many director elements.
	Reception of FM stereo program contains more noise than FM mono program.	• Note that the service area covered by an FM stereo broadcast is about 50% of that of a regular mono broadcast.	Increasing the FM input signal may alleviate this problem. Use an exclusive FM outdoor antenna instead of the indoor T-type antenna.
When playing records	Hum or buzz. When switched to radio reception, the noise disappears.	• Poor connection shielded wire. (a) • Jack connection is loose. (b) • Power lead of fluorescent lamp passes near the shielded wire. (c) • Poor grounding. (d) • Ham transmitting station or TV transmitting station is near your house. (e)	Correct the conditions stated in (a), (b), (c), or (d). In case of (e), report it to an official authority.
	Output tone quality is poor and mixed with noise. Treble is not clear.	• Stylus is worn. (a) • Record is worn. (b) • Dust adhering to stylus. (c) • Stylus is improperly mounted. (d) • Stylus pressure (tracking force) is not correct. (e) • The treble level is too high.	Check (a) through (e) and correct the condition. Turn the treble control to O.
	In playing a record, increasing the volume causes howling.	• Distance between the turntable and the speakers is too short. • The turntable or speakers supports are unstable.	Increase the distance or rearrange the installation of the unit and speakers. (Installing the turntable on a firm, solid stand may alleviate this problem.) Do not enhance the bass sound level excessively.

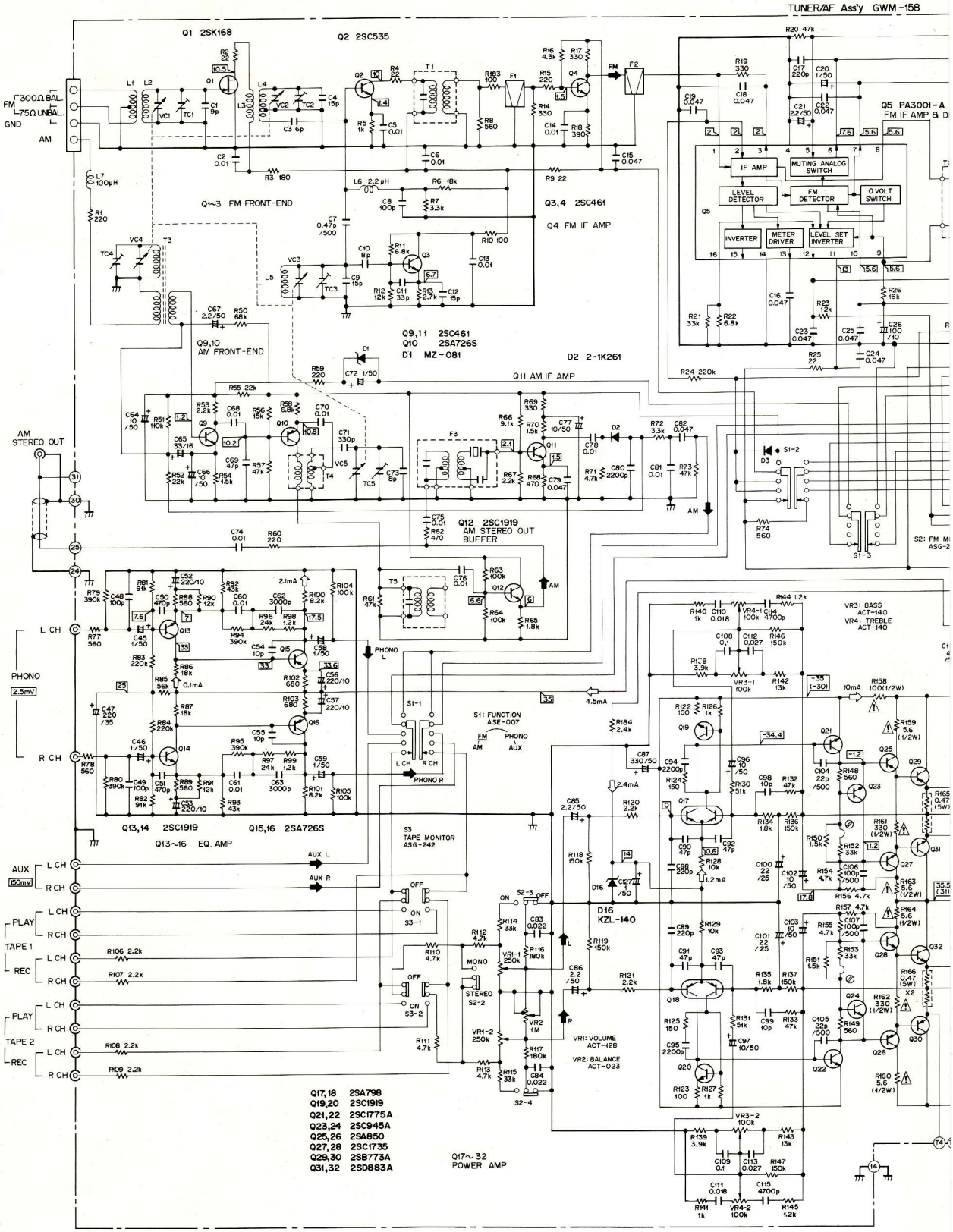
PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
U.S. PIONEER ELECTRONICS CORPORATION 85 Oxford Drive, Moonachie, New Jersey 07074, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Luithagen-Haven 9, 2030 Antwerp, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia

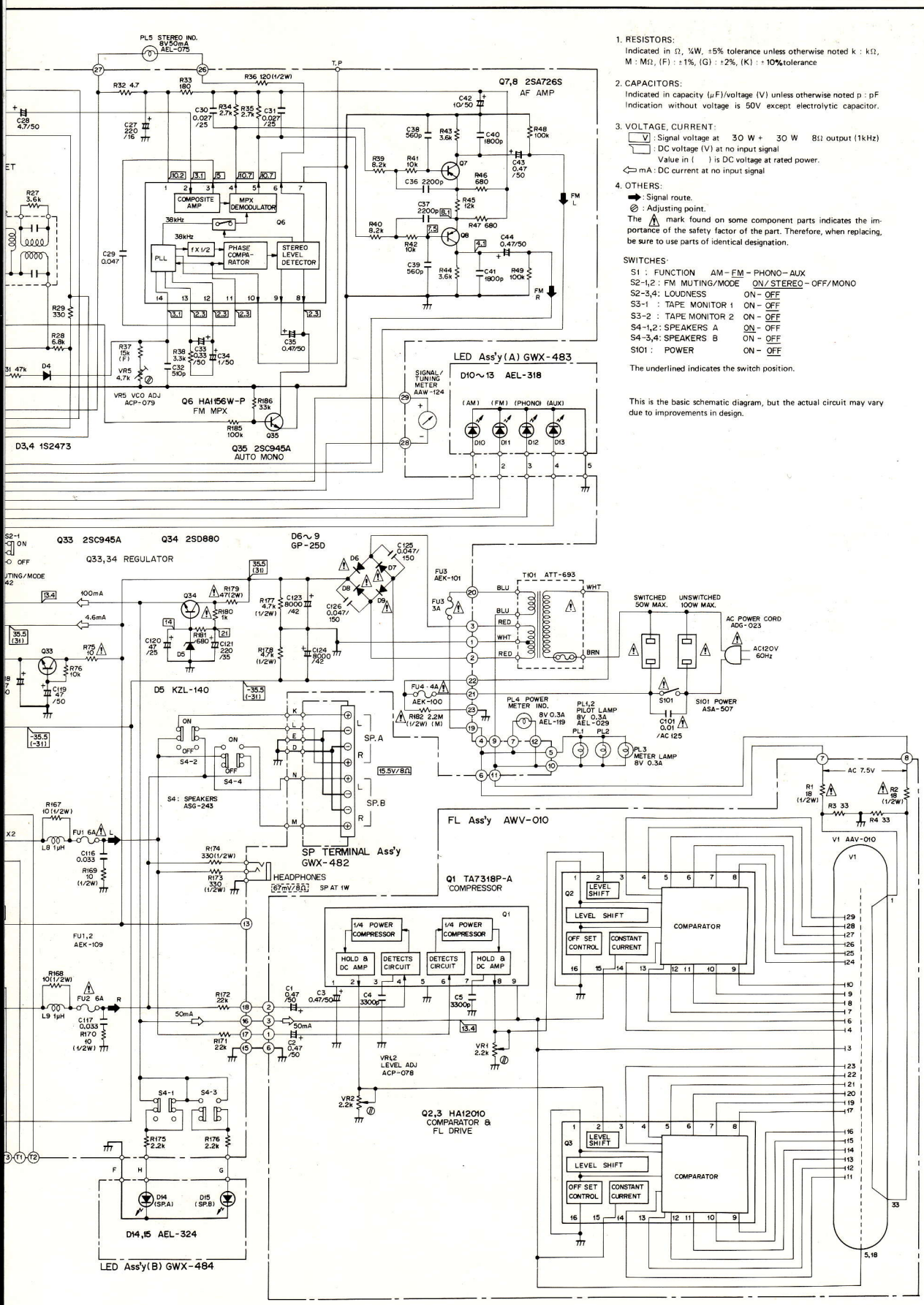
<80C14F9E02>

Printed in Japan <ARB-361-0>

SX-3600 KU

SCHEMATIC DIAGRAM





1. RESISTORS:
Indicated in Ω, ¼W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
V : Signal voltage at 30 W + 30 W 8Ω output (1kHz)
: DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.
⇦ mA : DC current at no input signal

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

SWITCHES:

S1 :	FUNCTION	AM – FM – PHONO – AUX
S2-1,2 :	FM MUTING/MODE	ON/STEREO – OFF/MONO
S2-3,4:	LOUDNESS	ON – OFF
S3-1 :	TAPE MONITOR 1	ON – OFF
S3-2 :	TAPE MONITOR 2	ON – OFF
S4-1,2 :	SPEAKERS A	ON – OFF
S4-3,4:	SPEAKERS B	ON – OFF
S101 :	POWER	ON – OFF

The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.