

PIONEER®



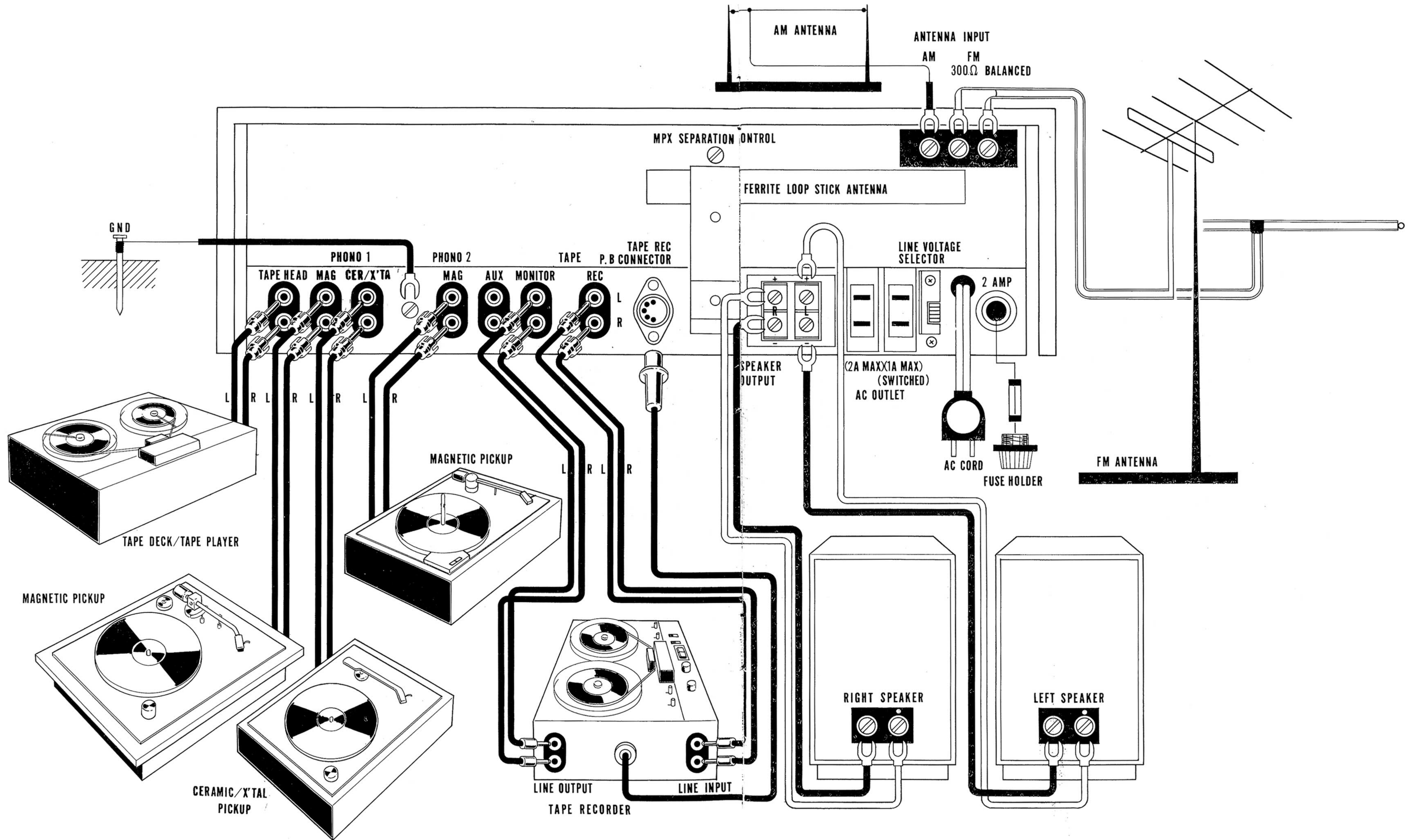
**SOLID STATE
STEREO RECEIVER**

MODEL SX-1000TA

OPERATING INSTRUCTIONS



PIONEER ELECTRONIC CORPORATION



FUNCTIONS OF CONTROLS AND SWITCHES ON FRONT PANEL

1. POWER

This is the main power switch. Turning it to the right and setting it to the ON position switches on the receiver.

2. FM STEREO INDICATOR

This is an indicator lamp that goes on when the FM station is broadcasting stereo.

NOTE: With the SELECTOR (5) set to the FM-AUTO position, even if a broadcast being received is a stereo broadcast, there may be times when the indicator lamp may not go on, and in such cases, the broadcast will be reproduced as a monaural broadcast.

3. TUNING INDICATOR

This is a meter that indicates the tuning points for stations. The point of maximum swing for any station is the tuning point for that station.

4. TUNING

This is the control that tunes the receiver in to the desired AM, FM, or FM stereo station.

5. SELECTOR

This is the control switch that selects the program material to be reproduced: the type of radio broadcast, or phono or tape playback.

Its positions are as follows:

- AMFor reception of AM (Broadcast Band) stations
- FM-MONO.....For reception of FM monaural stations
- FM-AUTOFor reception of FM broadcasts, with automatic switching between FM monaural and stereo.
- PHONOFor playback of disc records
- TAPE HEAD...For playback of tapes, deriving signal directly from tape heads. The 9.5/3³/₄ position provides proper equalization for tapes recorded at 9.5 cm./3³/₄" per second, and the 19/7¹/₂ position provides proper equalization for tapes recorded at 19 cm./7¹/₂" per second.
- AUX.....For reproduction of auxiliary signals fed to the AUX position

6. PHONES

This is a jack that accommodates the plug of a pair of stereo headphones, available separately. This jack remains 'live' at all times.

7. SPEAKER

This is a switch that shuts off the sounds from the loudspeakers. By setting it to the OFF position and listening through a pair of stereo headphones, it will be possible to enjoy reproduction of program material without bothering the people around you.

8. BASS

This is the control that adjusts bass response of the receiver. Turning it to the right (clockwise) will boost, and turning it to the left will reduce bass response. Of the two-section control, the fore section adjusts the left channel and the rear section adjusts the right channel.

9. LOW FILTER

Setting this switch to the ON position will eliminate low frequency noises, such as phonograph motor rumble or hum.

10. HIGH FILTER

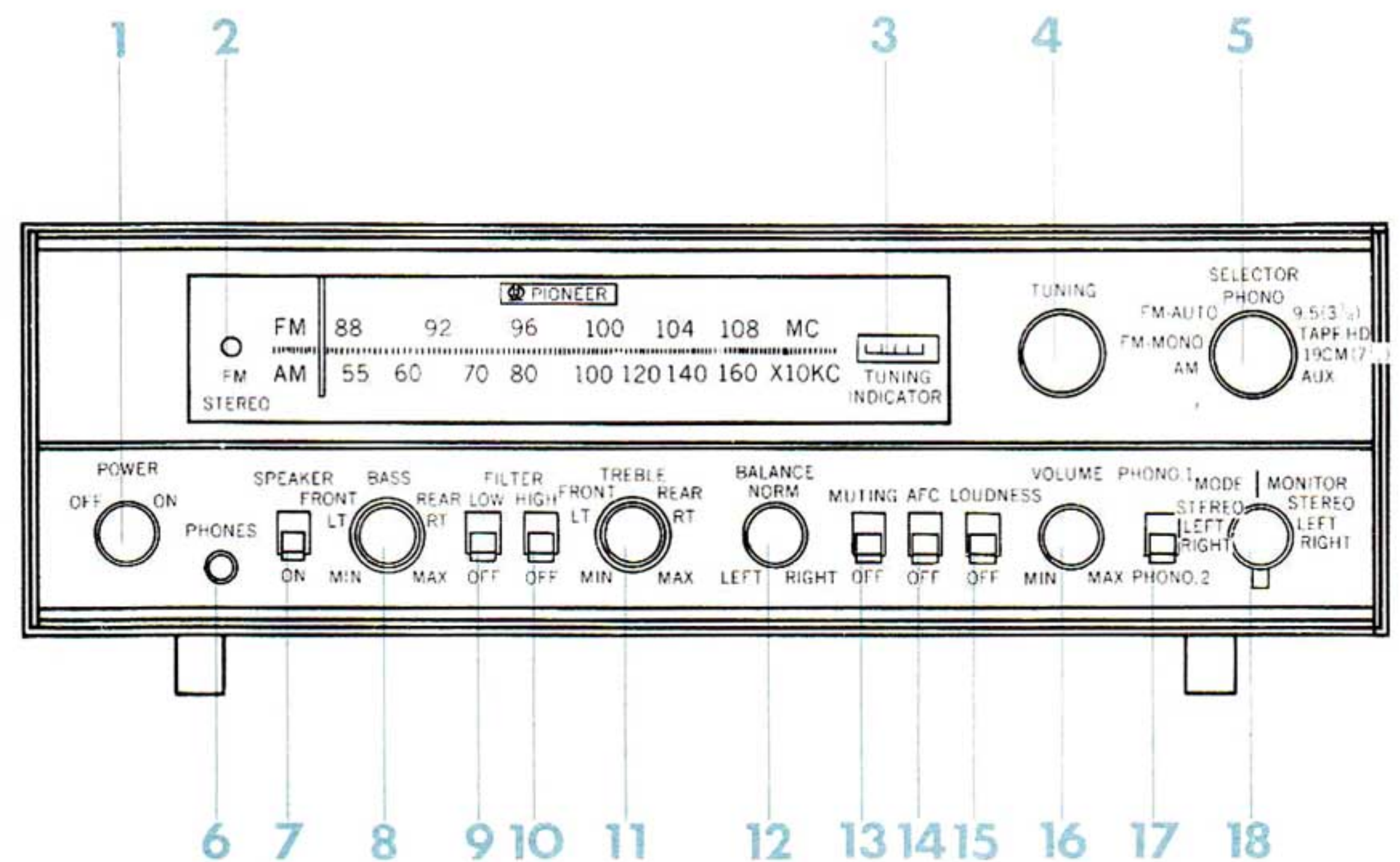
Setting this switch to the ON position will eliminate high frequency noise, such as record scratch, hiss, or other interference.

11. TREBLE

This is the control that adjusts treble response of the receiver. Turning it to the right (clockwise) will boost, and turning it to the left will attenuate treble response. Of the two-section control, the fore section adjusts the left channel and the rear section adjusts the right channel.

12. BALANCE

This control serves to balance the volume level of the left and right channels. Turning it to the right (clockwise) will move the center of sound to the right, and turning it to the left will move the center of sound to the left.



13. MUTING SWITCH

Setting this switch to the ON position will eliminate the noise or crackle that is heard between stations as you tune across the FM band. However, for reception of extremely weak signals, this switch should be set to the OFF position.

14. AFC SWITCH

FM broadcasts are conducted at VHF, and so even if they are tuned in accurately initially, as time passes, there are times when tuning drift arises. To compensate automatically for any such tuning drift is the function of the AFC (automatic frequency control) circuit. This switch should be set to the OFF position when tuning in a station, and after the station has been tuned in accurately, it should then be set to the ON position.

15. LOUDNESS CONTOUR

At low sound levels, the sensitivity of the human ear to low and high frequencies deteriorates. The function of the LOUDNESS CONTOUR circuit is to compensate for this deficiency in the extreme bass and treble range. For listening at low volume settings, set this switch to the ON position.

16. VOLUME

This is the control that adjusts the volume level of the receiver. Turning it to the right will increase the volume level, and turning it to the left will lower volume level.

17. PHONO SELECTOR SWITCH

- PHONO 1.....This switch should be set to this position when using the PHONO 1-MAG (23) or PHONO CER/XTAL (24) inputs
- PHONO 2.....This switch should be set to this position when using the PHONO 2-MAG (26) inputs

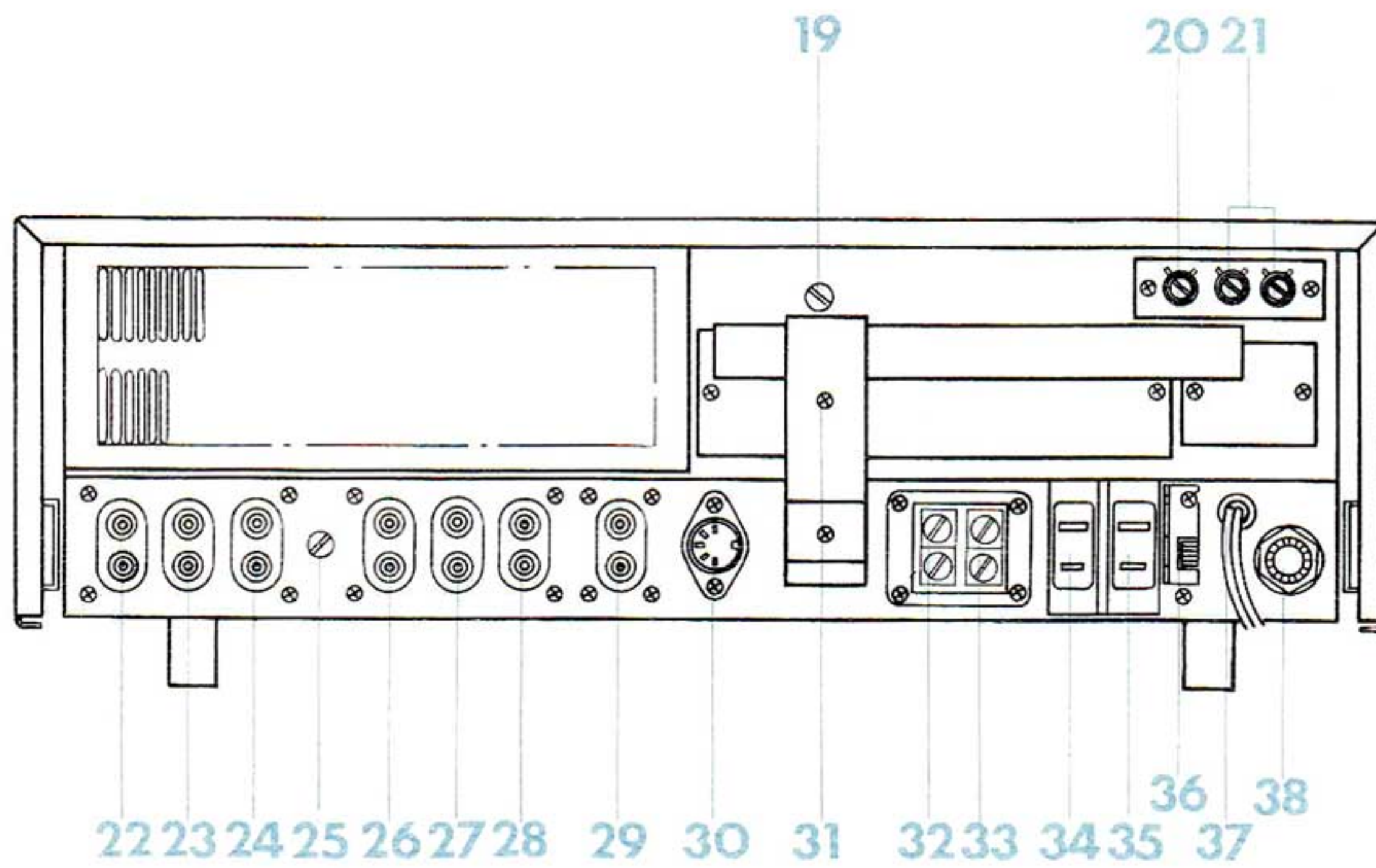
18. MODE/MONITOR

This switch is the selector for stereo/mono and tape monitor settings. Its positions are as follows:

- MODE-RIGHTFor reproduction over both left and right loudspeakers of program material being fed to any of the right channel inputs.
- MODE-LEFTFor reproduction over both left and right loudspeakers of program material being fed to any of the left channel inputs.
- MODE-STEREOFor stereo reproduction
- MONITOR-STEREO...For stereo reproduction of program material fed to the TAPE MONITOR inputs (28).
- MONITOR-LEFTFor reproduction over both left and right loudspeakers of program material being fed to the left channel TAPE MONITOR input.
- MONITOR-RIGHT ...For reproduction over both left and right loudspeakers of program material being fed to the right channel TAPE MONITOR input.



FUNCTIONS OF TERMINALS, JACKS, AND SWITCHES ON REAR PANEL



19. MPX SEPARATION CONTROL

This control adjusts the channel separation of FM multiplex stereo broadcasts. It has already been adjusted fully at the factory, and normally there should be no need for any further adjustments, which are extremely critical.

20. AM (Broadcast Band) ANTENNA TERMINAL

This is the terminal for the AM (broadcast band) antenna. The lead cable provided may be used as an indoor antenna, or the lead from an outdoor antenna, if you plan to use one, should be connected to this terminal.

21. FM ANTENNA TERMINALS

These are the terminals for the FM antenna. The leads from the indoor T-shaped antenna, or the leads from an outdoor antenna, if you plan to use one, should be connected to these terminals.

22. TAPE HEAD

When using a tape deck that is not equipped with a playback equalization amplifier or when deriving program material signals directly from the heads of a tape player, the output cables should be connected to these input jacks.

23. PHONO 1-MAG

When using a turntable that is equipped with a magnetic cartridge, the output cables should be connected to these input jacks.

24. PHONO 1-CER/XTAL

When using a turntable that is equipped with a ceramic or crystal cartridge, the output cables should be connected to these input jacks.

NOTE: The PHONO 1-MAG and PHONO 1-CER/XTAL inputs cannot be used simultaneously.

25. GROUND

When using a ground for the receiver, the lead from the ground is connected to this terminal. If the turntable is equipped with a ground lead, then it should be connected to this terminal also.

26. PHONO 2-MAG

When using a turntable equipped with a magnetic cartridge, the output cables should be connected to these input jacks.

27. AUX

These are input jacks for auxiliary inputs, such as a TV sound channel.

28. TAPE MONITOR

When playing back tape recordings using a tape deck equipped with pre-amplifiers, the outputs from the LINE OUTPUTS of the tape recorder should be connected to these input jacks.

29. TAPE REC

To make tape recordings of program material, the LINE INPUTS of the tape recorder are connected to these recording output jacks.

30. TAPE REC/P.B. CONNECTOR (D.I.N. STANDARDS)

When using a tape recorder equipped with a tape recording/playback connector socket identical to this one (and conforming to West Germany's D.I.N. standards), the recording/playback connector cable that will usually be provided with the tape recorder is connected between this socket on the receiver and its counterpart on the tape recorder. This single multi-conductor cable will complete all connections required for stereo recording and playback.

31. AM FERRITE LOOPSTICK ANTENNA

This is a loopstick antenna for the reception of AM (broadcast band) stations. In areas relatively close to the transmitting sites, this antenna alone will provide perfectly satisfactory reception. This antenna has directional properties, so it should be moved about while listening to a station and set at the position providing best reception.

32. RIGHT CHANNEL LOUDSPEAKER TERMINALS

The righthand loudspeaker is connected to these terminals. The upper terminal is the positive (+) terminal. The loudspeaker should have an impedance rating of 8 to 16 ohms. This loudspeaker terminal section can be detached, and, with the loudspeaker leads attached to the terminals, used as a plug.

33. LEFT CHANNEL LOUDSPEAKER TERMINALS

The lefthand loudspeaker is connected to these terminals. The upper terminal is the positive (+). The loudspeaker should have an impedance rating of 8 to 16 ohms.

34. AC OUTLET

This is an AC outlet that provides a convenient source of power for your turntable or tape deck or recorder. It has a maximum capacity of 2 amperes. It is not controlled through the POWER SWITCH (1), and remains live at all times.

35. AC OUTLET (SWITCH CONTROLLED)

This is another AC outlet that may be used to provide AC power. This one has a maximum capacity of 1 ampere, and is controlled through the POWER SWITCH (1).

36. LINE VOLTAGE SELECTOR

This switch should be set to the position conforming to the AC mains voltage in your area. It has two positions, 115 volts and 230 volts. To reset the switch, first loosen the upper machine screw and disengage the securing tab. Then set the switch to the desired position, and once again engage the securing tab. The upper position is for 230 volts and the lower position is for 115 volts.

37. AC CORD

This is the AC power cord.

38. FUSE

This is the fuse holder. Should replacement become necessary, always use a glass-tube enclosed fuse. In 115 volt areas, use a 2 ampere fuse, and in 230 volt areas, use a 1 ampere fuse.

THE SX-1000TA-ITS SUPERB FEATURES

Extremely Sensitive FM Tuner Circuitry

The FM front end provides outstanding sensitivity through the use of the latest space-age high efficiency triodes designed expressly for use in the VHF band.

Time-Switching Multiplex Circuit

A proven time-switching circuit, renowned for its excellent separation and lasting stability, is used for wide bandwidth stability featuring maximum separation at all times.

Electronic STEREO-MONO Automatic Switching

The use of a Schmidt electronic circuit provides reliable automatic switching between stereo and mono operation. This circuit is furthermore coupled to a stereo indicator lamp as an added measure.

Easy Tuning By Precise Tuning Indicator

A well-illuminated and easy-to-read tuning indicator helps greatly to simplify the tuning in of the weakest signals.

Efficient AM Tuner Circuitry

For high sensitivity reception of AM broadcasts, a well-designed AM tuner section using a precision 3-gang tuning capacitor is provided. It is equipped with a Loopstick ferrite antenna, thus eliminating the need for an external aerial in the vicinity of the station.

High Efficiency Audio Circuitry

The final stages use complimentary direct-coupled circuits, for full bandwidth reproduction at low distortion with a high damping factor.

Full Range Of Inputs For Maximum Versatility

Maximum versatility for every conceivable application is provided by a range of inputs that include two pairs of low level inputs providing equalization for magnetic type pickups, tape head inputs providing equalization for both 7 1/2 and 3 3/4 inches per second tape speeds, and a TAPE MONITOR circuit for added convenience when using a tape recorder.

LOCATION OF RECEIVER

The SX-1000TA is a solid state transistorized receiver. Therefore, in choosing the place to be located, the following points should be reminded in mind.

- The location should be dry and free of dust, and also well ventilated.
- It should not be exposed to the direct ray of the sun.
NOTE: Transistors are susceptible to heat. Therefore, exceptional care should be taken to ensure adequate ventilation. Never place objects on top of the receiver nor place it in crowded corners where there is no circulation of air.
- The location should be relatively close to a power outlet, and also conveniently situated for antenna and ground connections.

LOCATION OF LOUDSPEAKER SYSTEMS

- The loudspeaker systems should be placed anywhere from 5 to 9 feet apart. Optimum stereo effect is obtained at or beyond the apex of an equilateral triangle formed using an imaginary line connecting the two loudspeaker systems as the base. If the floor surface in front of the loudspeaker systems is of hardwood or of concrete that reflects sound, a carpet or other sound-absorbing material should be laid down to prevent bounce of sound. Ideally, the areas directly opposite the loudspeaker systems should also be of sound-absorbing materials such as heavy curtains or drapes.



CONNECTING LOUDSPEAKER SYSTEMS

1. The leads from the righthand loudspeaker system are connected to the RIGHT LOUDSPEAKER TERMINALS (32).
 2. The leads from the lefthand loudspeaker system are connected to the LEFT LOUDSPEAKER TERMINALS (33).
- For both pairs of loudspeaker terminals, the upper terminals are the positive (+) terminals.
 - The loudspeaker systems should have impedance ratings of 8 to 16 ohms.

TAPE DECK AND TAPE PLAYER CONNECTIONS

1. When using a tape deck or tape player not equipped with a playback equalizer preamplifier, the outputs from the tape heads should be connected to the TAPE HEAD INPUTS (22).
- The upper of these two TAPE HEAD INPUTS is for the left channel, and the lower for the right channel.
 - When using a monaural tape deck or tape player, it does not matter which of the two TAPE HEAD INPUTS is used.

MAGNETIC PICKUP TURNTABLE CONNECTIONS

1. When using a turntable equipped with a magnetic type pick-up cartridge, the output leads may be connected to either the PHONO 1-MAG inputs (23) or the PHONO 2-MAG inputs (26). When using two turntables, the outputs for each turntable are connected to each of the inputs.

- Here again, the upper of these two sets of inputs are for the left channel and the lower for the right channel.
- When using monaural turntables, it does not matter which of the two jacks are used.

CERAMIC/CRYSTAL PICKUP TURNTABLE CONNECTIONS

1. When using a turntable equipped with either a ceramic or crystal pickup cartridge, the output leads are to be connected to the CER/XTAL inputs (24).

- The upper of the two terminals is for the left channel and the lower is for the right channel.
- When using a monaural turntable, it does not matter which of the two inputs the output cable is connected to.

TAPE RECORDER CONNECTIONS

For Making Recordings

1. The signals of the program material to be recorded are taken from the TAPE REC jacks (29) and connected to the LINE INPUTS of the tape recorder. The TAPE REC jacks are always 'live', that is, the program material being reproduced through the receiver is always available here.

- The upper jack is for the left channel, and the lower jack is for the right channel. When using a monaural tape recorder, the signal may be derived from either of the two jacks.
- The signals available at the TAPE REC jacks are not controlled by any of the controls of the receiver, namely, the VOLUME (16), the BASS and TREBLE (8 and 11), the LOUDNESS (15), or the LOW and HIGH (9 and 10) filter switches. Therefore, adjustment of the recording level should be handled by the controls of the tape recorder.

TAPE PLAYBACK AND MONITOR CONNECTIONS

1. The program material to be reproduced through the receiver is derived from the LINE OUTPUTS of the tape recorder or deck and connected to the TAPE MONITOR inputs (28).

- The upper of the two TAPE MONITOR inputs is for the left channel and the lower is for the right channel. When using a monaural tape machine, the signals from the tape machine may be fed to either of the two channels.

RECORDING/PLAYBACK CONNECTOR (DIN STANDARDS CONNECTOR)

When using a tape recorder equipped with a recording/playback connector socket conforming to West Germany's DIN standards, a single multi-conductor cable (usually supplied with the tape recorder) will suffice to make all connections for stereo recording and playback.

ANTENNA AND GROUND CONNECTIONS

AM (Broadcast Band) Antenna

In regions relatively close to the transmitting site, the built-in LOOPSTICK FERRITE ANTENNA (31) will provide satisfactory reception without the need for an external antenna. However, it should be adjusted for optimum reception.

- If there is excessive static or other noise in reception when receiving AM stations with the loopstick ferrite antenna alone, attach the antenna lead to the AM ANTENNA TERMINAL (20), and then attach the length of the lead to a suitable wall or ceiling area. In areas that are a long distance from the transmitting site and signal strength is very weak, erect an outdoor AM antenna, and connect the lead from the antenna to the AM ANTENNA TERMINAL (20).

FM And FM Multiplex Stereo Antenna

- In regions that are relatively close to the transmitting site and that the structure the receiver is housed in is a wooden structure, the simple T-shaped indoor antenna will suffice to provide satisfactory reception. The two leads from the antenna should be connected to the FM ANTENNA TERMINALS (21), and then the direction of the antenna elements adjusted to the direction and height providing optimum reception and then secured in position using adhesive tape or thumb tacks.
- In regions that are some distance away from the transmitting sites and signal strength is weak, or in ferro-concrete structures, erect an outdoor FM antenna. The leads from the antenna are connected to the FM ANTENNA TERMINALS (21).

GROUNDING

The receiver is grounded by connecting the ground lead to the GROUND TERMINAL (25). Secure the lead from the ground firmly to the terminal.

GENERAL NOTES ON HANDLING

1. Never short the loudspeaker terminals while the receiver is switched on. Before switching the receiver on, it is always a good idea to check the loudspeaker connections and ascertain that they are neither loose nor shorted.
2. Avoid moving the SELECTOR (5) or MODE/MONITOR (18) switches with the VOLUME (16) which are set to high settings, as this will apply large impulses to the circuitry with adverse effects.



OPERATION

Reception Of FM Broadcasts

1. Whether you plan to listen to FM monaural or FM stereo broadcasts, first set the SELECTOR (5) to the FM-AUTO position, and the MODE/MONITOR (18) to the MODE-STEREO position.

●The SX-1000TA is equipped with an FM mono/stereo automatic switching circuit which serves to identify an FM signal automatically as either a mono or a stereo signal. Monaural signals are reproduced in mono, and stereo signals are automatically reproduced in stereo. When a stereo signal is being received and reproduced in stereo, the stereo indicator lamp will go on.

2. Set the AFC switch (14) to the OFF position, and then tune in the desired station by the TUNING control (4) while observing the TUNING INDICATOR (3) for pinpoint accuracy in tuning.

●If you wish to eliminate the crackle that is heard between stations as you tune across the FM band, set the MUTING switch (13) to the ON position.

3. After the desired station has been tuned in accurately, the AFC switch is set to the ON position to activate the automatic frequency control circuit.

NOTES:

1. With the SELECTOR (5) set to the FM-AUTO position, if an extremely weak stereo broadcast is received but there is excessive noise prevalent, the receiver will automatically switch to mono operation.

2. If you wish to reproduce FM stereo broadcasts in mono, or if there is excessive noise with the SELECTOR (5) set to the FM-AUTO position and tonal quality is impaired, set the SELECTOR (5) to the FM-MONO position. The MODE/MONITOR switch (18) may be set to the MODE STEREO, MODE LEFT or MODE RIGHT positions.

3. When the MUTING switch is set to the ON position, it may be difficult to catch a weak station. Therefore, for the reception of weak stations, it is recommended that the MUTING switch be set to the OFF position.

Reception Of AM Broadcasts

1. The SELECTOR (5) is set to the AM position. The MODE/MONITOR switch may be set to the MODE-STEREO, MODE LEFT, or MODE-RIGHT positions.

2. The desired station is tuned in by means of the TUNING control (4) while observing the TUNING INDICATOR (3).

Reproduction Of Disc Records

1. The SELECTOR (5) is set to to the PHONO position.

2. The MODE/MONITOR switch (18) is now set to the appropriate position. When using a stereo turntable, it should be set to the MODE-STEREO position, and when using a monaural turntable, it should be set to either the MODE-LEFT or MODE-RIGHT positions, depending upon which channel input the output cable of the turntable is connected to.

3. The PHONO SELECTOR SWITCH (17) is set to the PHONO-1 position when the turntable is connected to the PHONO-1 inputs, and to the PHONO-2 position when the turntable is connected to the PHONO-2 inputs.

Reproduction Of Tape

Using Tape Deck Or Tape Player

1. The SELECTOR (5) is set to either the TAPE HD-9.5/3 $\frac{3}{4}$ or TAPE HD-19/7 $\frac{1}{2}$ position, depending upon the speed the tape is to be played back at.

2. The MODE/MONITOR switch (18) is now set to the appropriate position. When playing back tapes recorded in stereo on a stereo tape deck or tape player, the MODE/MONITOR switch should be set to the MODE-STEREO position. When using a monaural tape deck or tape player, it should be set to either the MODE-LEFT or MODE-RIGHT position, depending upon which of the two input channels the output cable from the tape deck is connected to.

●When playing back monaural tapes using a stereo tape deck or tape player, the MODE/MONITOR switch should be set to the MODE-LEFT or MODE-RIGHT, depending upon which track the mono material is recorded on.

Recording And Playback Using Tape Recorder

Recording

1. Set the SELECTOR(5)to the position providing reproduction of the program material that is to be recorded: AM, FM-AUTO, PHONO, or TAPE HEAD.

NOTE: 1. When making monaural recordings by using a monaural or stereo tape recorder, connect the input of the tape recorder to one of the two TAPE REC outputs.

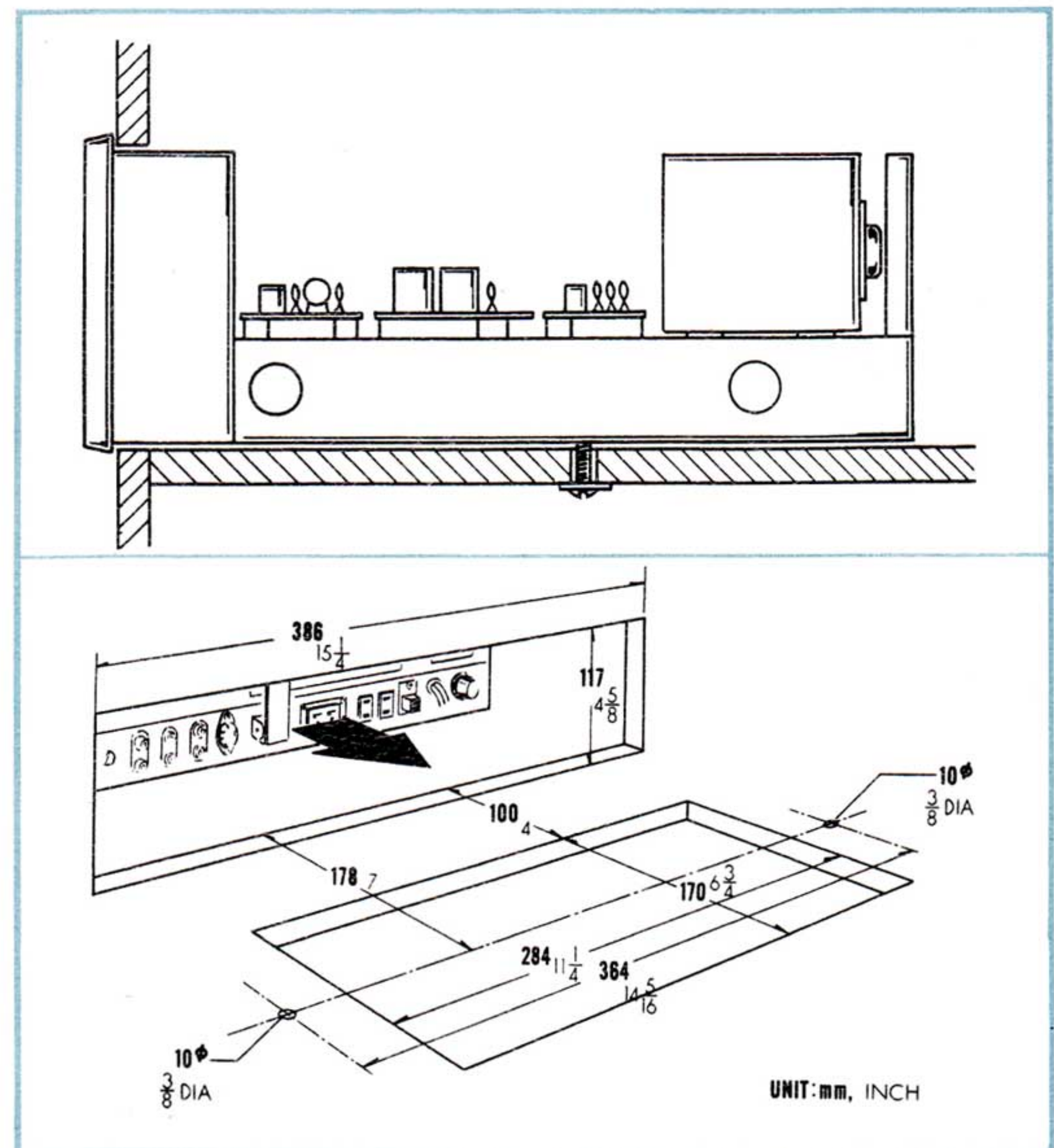
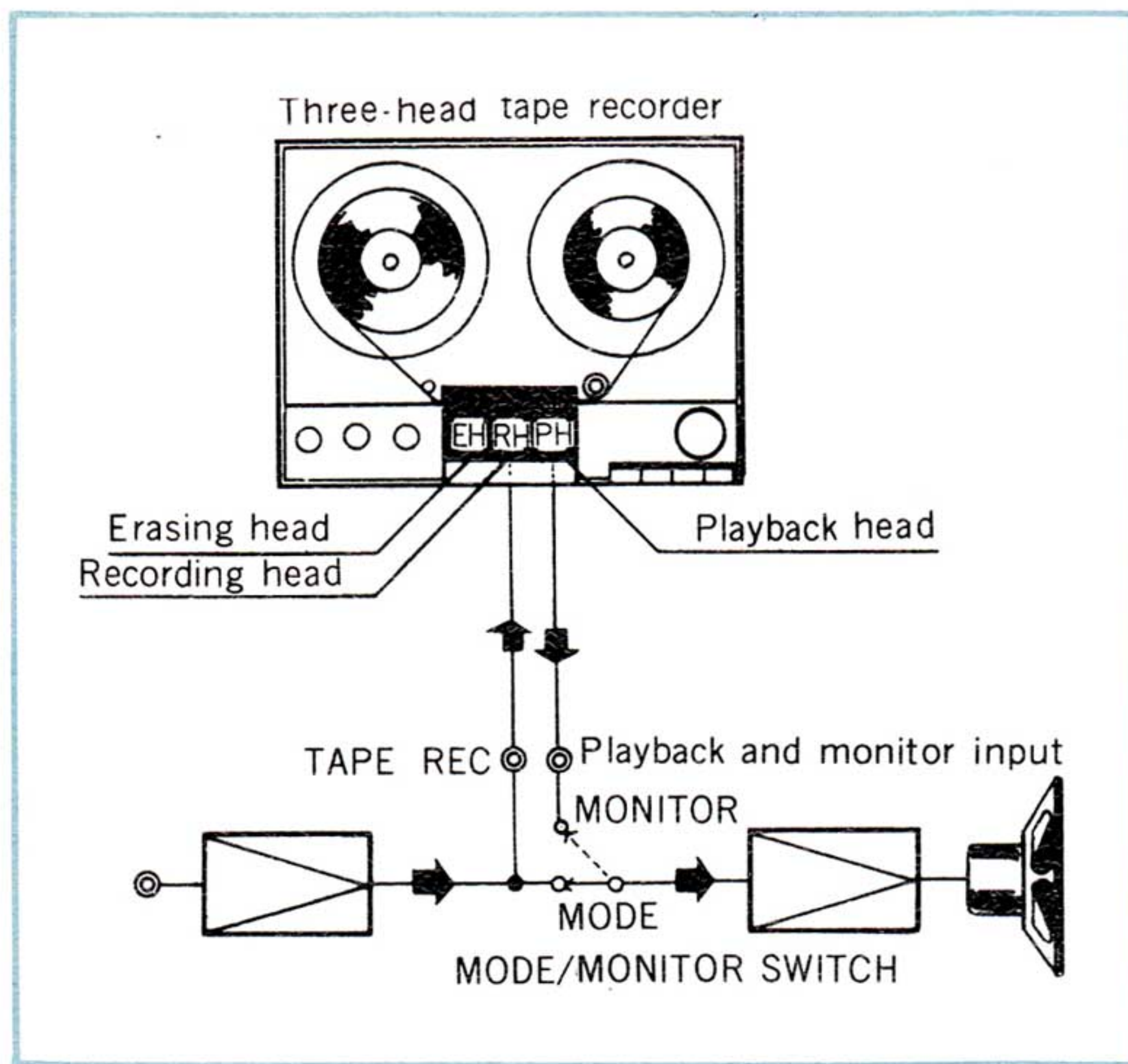
2. The settings of the MODE/MONITOR switch(18), the VOLUME control (16), the TREBLE controls(11), the BASS controls (8), or the LOW/HIGH filters (9 and 10) do not affect the sounds being recorded. The recording level should be adjusted with the level controls of the tape recorder.

Playback

1. For stereo playback, the MODE/MONITOR switch (18) should be set to the MONITOR-STEREO position. For playback of mono material using a mono or stereo tape recorder, the MODE/MONITOR switch (18) should be set to either the MONITOR-LEFT or MONITOR-RIGHT, depending upon which track the material is recorded on.

TAPE MONITORING

When using a 2-head or 3-head tape recorder equipped with a monitor circuit, by making all connections for recording and playback, it will be possible to monitor the state of a recording in progress by moving the MODE/MONITOR switch (18) back and forth between the MODE-STEREO/MODE-RIGHT/MODE-LEFT and MONITOR-STEREO/MONITOR-RIGHT/MONITOR-LEFT positions. In the case of a 2-head tape recorder, the signal being fed to the recording head will be monitored, and in the case of a 3-head tape recorder, the signals recorded on the tape will immediately be monitored by the playback head picking up the recorded signals.



ALIGNMENT INSTRUCTION

Alignment of AM Section

Position of Switch: SELECTOR.....AM
Volume Control Setting: Fully Counterclockwise

STEPS	Input			Dial Setting	Output Equipment & Coupling	Alignment	
	Equipment & Coupling	Freq	Level			Adjust	Remarks
1	Sweep Generator TP ₃	455KC	80dB	Point of no interference as near as 535KC	Oscilloscope OUT	T ₅₀₅	Adjust to get maximum sensitivity and symmetry
2	" TP ₂	"	60dB	"	"	T ₅₀₄ T ₅₀₅	"
3	" TP ₁	"	50dB	"	"	T ₅₀₃ T ₅₀₄ T ₅₀₅	"
4	Signal Generator Antenna terminal through dummy	600KC	70dB (400% 30%)	600KC	AC VTVM OUT	T ₅₀₂	Adjust to get maximum deflection
5	"	1,400KC	"	1,400KC	"	CT ₃	"
6	Repeat STEPS 4 and 5 several times						
7	"	600KC	30dB	600KC	"	T ₅₀₁ Ferrite Antenna (Adjusting core)	"
8	"	1,400KC	"	1,400KC	"	CT ₁ CT ₂	"
9	Repeat STEPS 7 and 8 several times						



Alignment of FM Section

Disconnect output terminal of frontend (1.2) from IN terminal of IF unit

Position of Switch: SELECTOR.....FM MONO

AFC.....OFF

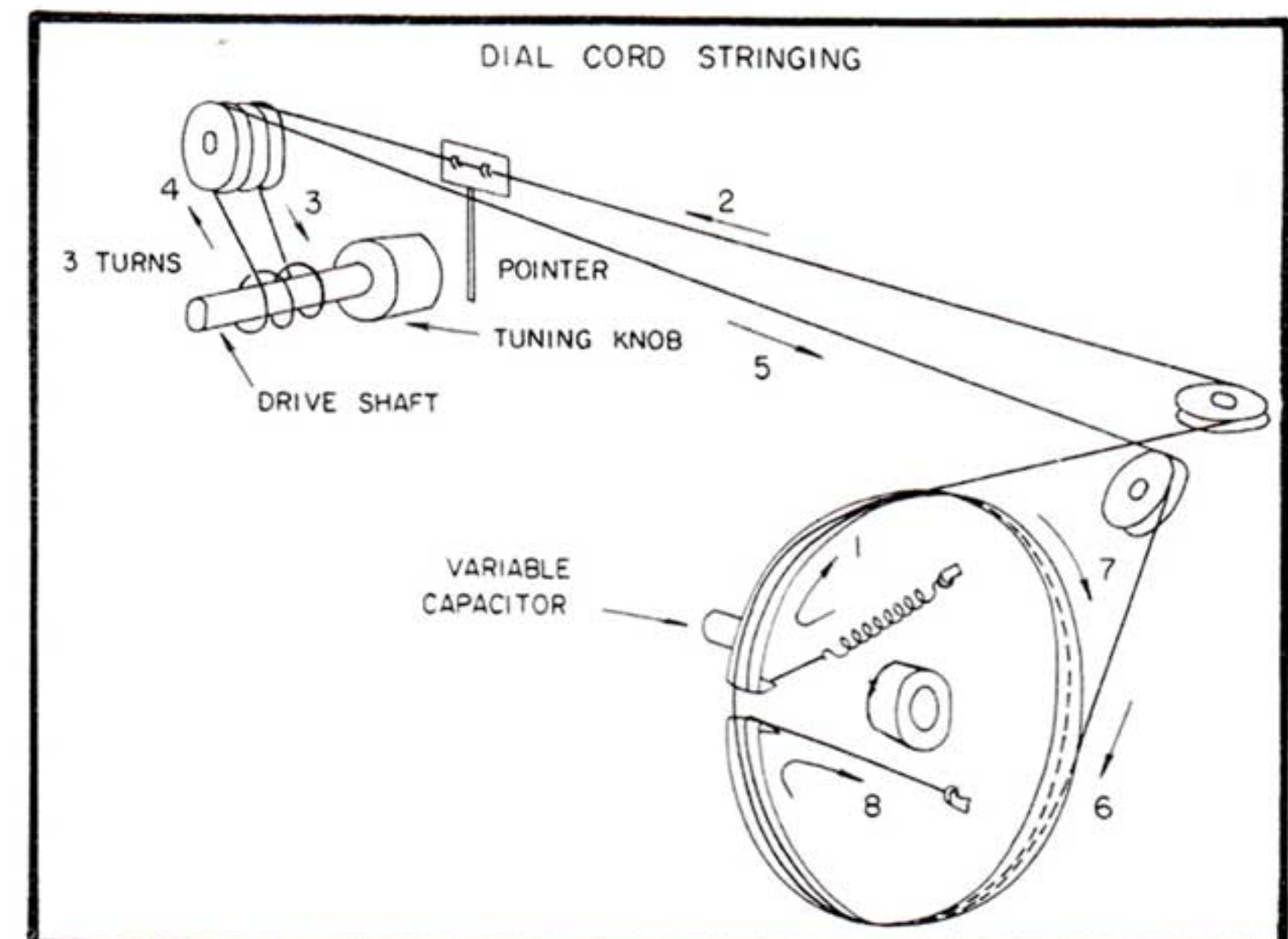
Volume Control Setting: Fully Counterclockwise

STEPS	Input			Dial Setting	Output Equipment & Coupling	Alignment	
	Equipment & Coupling	Freq	Level			Adjust	Remarks
1	Sweep Generator	10.7MC	40dB		Oscilloscope	T ₂₀₁	Adjust to get maximum sensitivity and symmetry
	IN				TUNE	T ₂₀₂ T ₂₀₃	
2	"	"	80dB		"		Check symmetry of curve
	"				"		
3	Remove electrolytic capacitor C ₂₃₀ (5 μ F) in detector circuit						
4	"	"	40dB		Oscilloscope	T ₂₀₄	Adjust primary side of T ₂₀₄ , so that incline of straight part of "S" curve will be steepest; adjust secondary side so that center of "S" curve will coincide with center of marker
	"				OUT		
5	Connect output terminal of frontend (1,2) to IN terminal of IF unit						
6	"	"	40dB	Point of no interference as near as 88MC	"	Top of T ₃₀₂ T ₂₀₁ T ₂₀₂ T ₂₀₃	Adjust to get maximum sensitivity and symmetry
	TP of Frontend				TUNE		
7	"	"	80dB	"	"		Check symmetry of curve
	"				"		
8	"	"	40dB	"	"	T ₂₀₄	Adjust similarly STEPS 4
	"				"		
9	Connector electrolytic capacitor C ₂₃₀ (5 μ F)						
10	Signal Generator	90MC	20dB	90MC	Oscilloscope VTVM	L ₃₀₃	Adjust to get maximum deflection
	FM Antenna terminal		(400% 30%)		OUT		
11	"	106MC	"	106MC	"	CT ₃₀₁	"
	"		"		"		
12	Repeat STEPS 10 and 11 several times						
13	"	90MC	"	90MC	"	T ₃₀₁ L ₃₀₁ L ₃₀₂	"
	"		"		"		
14	"	106MC	"	106MC	"	CT ₃₀₂ CT ₃₀₃	"
	"		"		"		
15	Repeat STEPS 13 and 14 several times						

Alignment of MPX Section

Position of Switch: SELECTOR.....FM AUTO
 AFC.....OFF MUTING.....OFF
 Volume Control Setting: Fully Counterclockwise
 Input Signal: Main (L+R) 40.5kc Deviation (60%) 19kc Pilot 7.5kc
 Deviation (10%)

STEPS	Circuit to be adjusted	Signal Generator Input		Connect VTVM	Alignment	
		Coupling	Input Signal		Adjust	Remarks
1	SCA Filter	Audio Oscillator to IN	66KC 170mV	AC VTVM TP ₃	L ₇₀₄	Adjust to get minimum deflection
2	"	"	68KC 170mV	"	L ₇₀₅	"
3	19KC Stage	MPX Generator to FM Antenna terminal	Main (L+R)	DC VTVM TP ₂	L ₇₀₁ L ₇₀₂	Position of VR ₇₀₂Max. Adjust to get minimum deflection
4	38KC Stage	"	Sub (L-R)	AC VTVM Lout or Rout	L ₇₀₃	Adjust to get maximum deflection
5	Separation Control	"	L	AC VTVM Rout	VR ₇	Position of VR ₇₀₁Central point. Adjust to get minimum deflection
6	"	"	R	AC VTVM Lout	VR ₇	"
7	"	"	Main (L+R)	Lout Rout	VR ₇₀₁	Adjust to less than 1dB in the difference of output
8	Repeat STEPS 5, 6 and 7 several times					
9	Stereo indicator light	"	" 18dB	"	VR ₇₀₂	Adjust to light stereo ind. lamp when MPX Signal is applied
10	Muting	Signal Generator to FM Antenna terminal	98MC (400% _s 30% MOD) 13dB Dial Setting: 98MC	AC VTVM Lout or Rout	VR ₇₀₃	Adjust so that output can be -45dB with S ₉ ON
11	"	"	98MC (400% _s 30% MOD) 18dB Dial Setting: 98MC	"	"	Confirm output difference within 3dB with S ₉ ON/OFF alternately





PARTS LIST OF THE SX-1000TA

CAPACITORS

P = $\mu\mu\text{F}$

Symbol	Description				Part No.
C 1	Mica	150P	10%		
C 2	"	"	"		
C 3	Mylar	0.01 μ	"	50V	
C 4	"	"	"	"	
C 5	"	0.2 μ	"	"	
C 6	"	"	"	"	
C 7	Electrolytic	1000 μ		100V	
C 8	"	"		"	
C 9	"	100 μ		150V	
C10	"	"		"	
C11	"	"		180V	
C12	Ceramic	0.02 μ		1.4KV	
C13	"	"		"	
C14	Electrolytic	50 μ		15V	
C15	"	200 μ		"	
C16	Ceramic	0.01 μ	20%	400V	
C17	Ceramic	10P	10%	50V	
C18	Styrol	2000P	10%	"	
C19	Electrolytic	1000 μ		"	
C20	"	"		"	
C21	"	100 μ		15V	
C22	Mylar	0.5 μ	20%	50V	
C23	"	0.1 μ	10%	"	
C24	"	"	"	"	
C25	"	"	"	"	
C26	"	"	"	"	
C27	"	2.2 μ	"	"	
C28	"	"	"	"	
C30	Mica	220P	10%		
C31	"	"	"		
VC1	Variable Capacitor				C64-030
VC2	"				"
VC3	"				"

RESISTORS

K = Kilohm M = Megohm

Symbol	Description				Part No.
R 1	Carbon film	68K	10%	1/4 W	
R 2	"	"	"	"	
R 3	"	1M	"	"	
R 4	"	"	"	"	
R 5	"	100K	"	"	
R 6	"	"	"	"	
R 7	"	68K	"	"	
R 8	"	"	"	"	
R11	"	100K	"	"	
R12	"	"	"	"	
R13	"	150K	"	"	
R14	"	"	"	"	
R15	"	68K	"	"	
R16	"	3.3K	"	"	
R17	"	15K	"	"	
R18	"	"	"	"	
R19	"	27K	"	"	
R20	"	"	"	"	
R21	"	150	"	"	
R22	"	"	"	"	
R23	"	"	"	"	
R24	"	"	"	"	
R25	Wire Wound	0.7	"	1W	
R26	"	"	"	"	
R27	"	"	"	"	
R28	"	"	"	"	
R29	"	"	"	"	
R30	"	"	"	"	
R31	"	150	"	2W	
R32	"	"	"	"	
R33	Composition	330	"	1/2 W	
R34	"	330	"	"	
R35	"	6.8K	"	"	
R36	"	1K	"	"	
R37	"	1M	"	"	
R38	Carbon film	220K	"	1 4 W	
R39	Composition	22K	"	1 2 W	
R40	"	47	"	"	

Symbol	Description				Part No.
R41	Carbon film	47K	"	1/4	
R42	"	"	"	"	
R43	"	"	"	"	
R44	"	"	"	"	
R45	"	27K	"	"	
R46	"	"	"	"	
R47	"	47K	"	"	
R48	"	"	"	"	
R49	"	"	"	"	
R50	"	"	"	"	
R52	"	2.2K	"	"	
R53	"	"	"	"	

POTENTIOMETERS

Symbol	Description	Part No.
VR1	500K dual. Volume	C85-054
VR2	100K dual. Treble	C87-018
VR3	100K dual. Bass	"
VR4	50K dual. Balance	C85-052
VR5	300 Ω Current control	C92-026
VR6	"	"
VR7	10K MPX Separation Control	C92-004

COILS AND TRANSFORMERS

Symbol	Description	Part No.
L1	AM Ferrite Loopstick antenna coil Power transformer	T42-014 T52-063

DIODES AND TRANSISTORS

Symbol	Description	Part No.
D1	SE05C Silicon Rect.	
D2	"	
D3	OA79 Diode	
D4	"	
D5	IN34	
Q1	2SC793 Transistor	
Q2	"	
Q3	"	
Q4	"	
Th1	D-22A Thermistor	
Th2	"	

SWITCHES

Symbol	Description	Part No.
S1	Selector Switch	S16-037-C
S2	Mode Selector Switch	S16-038
S3	Toggle Switches	S42-001
S4	"	"
S5	"	"
S6	"	"
S7	"	"
S8	"	"
S9	"	"
S10	Slide Switch	S41-022A
S11	Power Switch	S11-014

MISCELLANEOUS

Symbol	Description	Part No.
	FM Frontend	W11-013-B
	FM IF unit	W12-006-D
	MPX Unit	W13-019-0
	AM Unit	W14-004-C
	Pre amp Unit	W15-005-D
	Control amp Unit	W15-006-D
	Main amp Unit	W15-007-D
	Power Supply Unit	W16-006-A
	P.T.F Unit	W15-010-0
	Front Panel	M21-060-0
	Metal Case	M33-082-E
	Foot	M61-003-0
	Screw, to fix metal cover	B11-022-B
	Dial Scale	A33-023-0
	Dial Pointer	A31-080-0
	Dial Pulley (for tuning capacitor)	M42-027-0
	Dial Pulley	M42-009-0
	Dial spring	E41-002-0
	Knob, Selector	A11-109-0
	Knob, Tuning	A11-119-0
	Knob, Mode	A11-115-0
	Knob, Volume, Balance, Power	A11-112-0
	Knob, Bass, Treble(L)	A11-135-0
	Knob, Bass, Treble(R)	A11-138-0
	Tuning Meter	A91-005-D
	Bracket (Orange)	A59-030-0
	Pilot Lamp	E22-012-0
	Pilot Lamp Socket	K41-002-0
	Pilot Lamp for FM Stereo	E22-011-A
	Fuse 2A	E21-005-0
	Fuse Holder	K96-006-C
	Head phone jack	K72-004-0
	Connector 5P for Tape Recorder	K93-003-0
	AC Conent	K82-009-0
	Concent for Speaker	K54-003-0
	Terminal 6p	K22-013-0
	Terminal 2p	K21-009-0
	Terminal 3p	K31-011-0
	Pilot Lamp 8V	E22-002-0

W14-004-C (AM UNIT) CAPACITORS

Symbol	Description				Part No.
C501	Ceramic	0.04 μ		25WV	
C502	"	"		"	
C503	"	"		"	
C504	"	"		"	
C506	"	0.01 μ		"	
C507	Styrol	410P	10%	50V	
C508	Ceramic	0.04 μ		25WV	
C509	"	"		"	
C510	Electrolytic	10 μ		15WV	
C511	Ceramic	5P	5%	50V	
C512	"	0.04 μ		25WV	
C513	"	"		"	
C514	Electrolytic	10 μ		15WV	
C515	Ceramic	0.04 μ		25WV	
C516	"	0.04 μ		"	
C517	"	2P		50V	
C518	"	0.04 μ		25WV	
C519	"	30P		50V	
C521	Electrolytic	200 μ		15WV	
C522	Ceramic	0.01 μ		25WV	
C523	"	0.005 μ		"	

RESISTORS

Symbol	Description				Part No.
R501	Carbon film	330K	10%	1/8 W	
R502	"	2.2K	"	"	
R503	"	47K	"	"	
R504	"	1K	"	"	
R505	"	2.2K	"	"	
R506	"	3.3K	"	"	
R507	"	27K	"	"	
R508	"	1K	"	"	
R509	"	2.2K	"	"	
R510	"	470	"	"	
R511	"	220	"	"	
R513	"	47K	"	"	
R514	"	220K	"	"	
R515	"	2.2K	"	"	
R516	"	1K	"	"	
R517	"	2.2K	"	"	
R518	"	12K	"	"	
R519	"	8.2K	"	"	
R520	"	8.2K	"	"	
R521	"	47K	"	"	
R522	"	1K	"	"	
R524	"	100	"	"	
R525	"	2.2K	"	"	
R526	"	470	"	"	
R527	"	22K	"	"	

COILS AND TRANSFORMERS

Symbol	Description	Part No.
T501	MW RF Coil	T41-004
T502	OSC Coil	T43-003
T503	IF Transformer	T71-014A
T504	IF Transformer	T71-018
T505	IF Transformer	T72-012A

DIODES AND TRANSFORMERS

Symbol	Description	Part No.
D501	IN60 Diode	
D502	"	
D503	"	
D504	"	
Q501	2SC372 Transistor	
Q502	"	
Q503	"	
Q504	"	

W11-013-B(FM FRONT END) CAPACITORS

Symbol	Description				Part No.
C301	Ceramic	1,000P	10%	250V	
C302	"	1.8P	"	500V	
C303	"	5P	"	250V	
C304	"	"	"	"	
C305	"	"	"	"	
C306	"	1.8P	"	500V	
C307	"	10P	"	50V	
C308	"	8P	"	"	
C309	"	3P	"	"	
C310	"	2.7P	"	500V	
C311	"	1,000P	"	250V	
C312	Feed Through	"			C47-002-
C313	"	"			"
C314	"	"			"
C315	"	"			"
C316	"	"			"
C317	"	"			"
C318	"	2P			C47-003-
C319	Ceramic	"	10%	50V	
CT301	Cylinder Trimmer				C45-004-
VC301	Variable Capacitor				C64-033-



RESISTORS

Symbol	Description				Part No.
R301	Composition	4.7K	10%	1/4 W	
R302	"	1K	"	1/2 W	
R303	"	1M	"	1/4 W	
R304	"	47K	"	"	
R305	"	1K	"	"	
R306	"	100K	"	"	
R307	"	22K	"	"	
R308	"	2.2K	"	1/2 W	
R309	"	10K	"	"	
R310	"	220	"	"	
R311	"	"	"	"	

COILS AND TRANSFORMERS

Symbol	Description	Part No.
T301	Antenna Coil	T23-025-
T302	IF Transformer	T81-017-
L301	RF Coil	T23-026-
L302	"	"
L303	OSC Coil	T23-027-
L304	RF Choke Coil	T24-027-
L305	"	"

TUBES AND DIODE

Symbol	Description	Part No.
V301	6HA5	
V302	6CW4	
V303	"	
D301	1S85	

W12-006(IF UNIT)

CAPACITORS

Symbol	Description				Part No.
C201	Ceramic	0.01 μ F	± 80%	10%	25V
C202	"	"	"	"	"
C203	"	"	"	"	"
C204	"	"	"	"	"
C205	"	"	"	"	"
C206	"	0.01 μ F	"	"	50V
C207	"	0.01 μ F	± 80%	10%	25V
C208	"	"	"	"	"
C209	"	5PF	± 10%	"	50V
C210	"	0.01 μ F	± 80%	10%	25V
C211	"	"	"	"	"
C212	"	"	"	"	"
C213	"	"	"	"	"
C214	"	"	"	"	"
C215	"	"	"	"	"
C216	"	"	"	"	"
C217	"	"	"	"	"
C218	"	"	"	"	"
C219	"	"	"	"	"
C220	"	"	"	"	"
C221	"	"	"	"	"
C222	"	"	"	"	"
C223	Mylar	0.1 μ F	± 10%	"	50V
C224	Ceramic	0.01 μ F	± 80%	10%	25V
C225	"	5PF	± 10%	"	50V
C226	"	100PF	"	"	50V
C227	"	0.01 μ F	± 80%	10%	25V
C228	"	300PF	± 10%	"	50V
C229	"	0.01 μ F	± 80%	10%	25V
C230	Electrolytic	5 μ F	"	"	10WV
C231	Electrolytic	3 μ F	"	"	6WV

RESISTORS

Symbol	Description				Part No.
R201	Carbon film	100	10%	1/8 W	
R202	"	1.5K	"	"	
R203	"	470	"	"	
R204	"	100	"	"	
R205	"	33K	"	"	
R206	"	1.5K	"	"	
R207	"	4.7K	"	"	
R208	"	2.2K	"	"	
R209	"	4.7K	"	"	
R210	"	100	"	"	
R211	"	1K	"	"	
R212	"	100	"	"	
R213	"	100	"	"	
R214	"	1.5K	"	"	
R215	"	47K	"	"	
R216	"	2.2K	"	"	
R217	"	100K	"	"	
R218	"	1K	"	"	
R219	"	22K	"	"	
R220	"	22K	"	"	
R221	"	2.2M	"	"	
R222	"	100K	"	"	
R223	"	100	"	"	
R224	"	1K	"	"	
R225	"	1K	"	"	
R226	"	100	"	"	
R227	"	1.5K	"	"	
R228	"	4.7K	"	"	
R229	"	1K	"	"	
R230	"	1K	"	"	
R231	"	"	"	"	
R232	"	15K	"	"	
R233	"	1K	"	"	
R234	"	10K	"	"	
R235	"	2.2K	"	"	
R236	"	100	"	"	
R237	"	100K	"	"	
R238	"	33K	"	"	
R239	"	33K	"	"	

COILS AND TRANSFORMERS

Symbol	Description	Part No.
T201	IF Transformer	T81-018-
T202	"	T81-019-
T203	"	T81-018-
T204	"	T82-016-

Symbol	Description	Part No.
D201	IN60 Diode	
D202	"	
D203	"	
D204	"	
D205	"	
D206	"	
Q201	2SC460A Transistor	
Q202	"	
Q203	"	
Q204	"	
Q205	2SC372 Transistor	

COMPOUND PARTS

Symbol	Description	Part No.
W201	Discriminator	W53-032-0

W13-019-(MPX UNIT) CAPACITORS

Symbol	Description				Part No.
C701	electrolytic	1 μ		10V	
C702	styrol	0.02	$\pm 10\%$	50V	
C703	electrolytic	10 μ		15V	
C704	"	5 μ		10V	
C705	"	3 μ		"	
C706	styrol	0.005	$\pm 10\%$	50V	
C707	"	"	"	"	
C708	"	0.001	"	"	
C709	"	"	"	"	
C710	electrolytic	10 μ		10V	
C711	"	"		"	
C712	"	"		15V	
C713	"	"		"	
C714	"	3 μ		10V	
C715	styrol	0.001	$\pm 10\%$	50V	
C716	"	200p	"	"	
C717	electrolytic	1 μ		10V	
C718	"	10 μ		15V	
C719	mylar	0.004	$\pm 10\%$	50V	

RESISTORS

Symbol	Description				Part No.
R701	Carbon film	6.8K	10%	1/8W	
R702	"	2.2K	"	"	
R703	"	47K	"	"	
R704	"	22K	"	"	
R705	"	12K	"	"	
R706	"	10K	"	"	
R707	"	"	"	"	
R708	"	"	"	"	
R709	"	100	"	"	
R710	"	3.3K	"	"	
R711	"	47K	"	"	
R712	"	10K	"	"	
R713	"	1K	"	"	
R714	"	22K	5%	"	
R715	"	"	"	"	
R716	"	"	"	"	
R717	"	"	"	"	
R718	"	220K	10%	"	
R719	"	"	"	"	
R720	"	330K	"	"	
R721	"	68K	"	"	
R722	"	"	"	"	
R723	"	330K	"	"	
R724	"	8.2K	5%	"	
R725	"	1.5K	10%	"	
R726	"	"	"	"	
R727	"	8.2K	5%	"	
R728	"	82K	10%	"	
R729	"	220K	"	"	
R730	"	47K	"	"	
R731	"	33K	"	"	
R732	"	100	"	"	
R733	Composition	3.3K	"	1/2W	
R734	Carbon film	10K	"	1/8W	
R735	"	"	"	"	
R736	"	1.5K	"	"	
R737	"	100K	"	"	

POTENTIOMETERS

Symbol	Description	Part No.
VR701	1K, L and R Level adjust	C92-022-0
VR702	300 Ω Auto Level adjust	C92-026-0

COILS AND TRANSFORMERS

Symbol	Description	Part No.
L701	19 kHz Transformers	T98-018-A
L702	19 kHz doubler Transformer	T98-019-A
L703	38 kHz Transformer	T98-023-A
L704	SCA Filter Coil	T98-021-A
L705	"	T98-022-A

Diodes and Transistors

Symbol	Description	Part No.
D701	OA79 Diode	
D702	"	
D703	"	
D704	"	
D705	"	
D706	"	
Q701	2SC458 (B) Transistor	
Q702	"	
Q703	"	
Q704	"	
Q705	"	
Q706	"	
Q707	"	
Q708	2SC372 Transistor	

COMPOUND PARTS

Smybol	Description	Part No.
F701	38kHz Filter	W53-041-0
F702	"	"

W15-005- (HEAD AMP UNIT) CAPACITORS

Symbol	Description				Part No.
C101	Electrolytic	10 μ		10V	
C102	"	"		"	
C103	Styrol	500P	10%	50V	
C104	"	"	"	"	
C105	Electrolytic	10 μ		10V	
C106	"	"		"	
C107	Styrol	100P	10%	50V	
C108	"	"	"	"	
C109	Electrolytic	100 μ		25V	
C110	"	"		"	
C111	"	"		3V	
C112	"	"		"	
C113	"	10 μ		15V	
C114	"	"		"	
C115	Mylar	0.01 μ	10%	50V	
C116	"	"	"	"	
C117	"	0.003 μ	"	"	
C118	"	"	"	"	
C119	"	"	"	"	
C120	"	"	"	"	



RESISTORS

Symbol	Description				Part No.
R101	Carbon film	270K	10%	1/4 W	
R102	"	"	"	"	
R103	"	390	"	"	
R104	"	"	"	"	
R105	"	100K	"	"	
R106	"	"	"	"	
R107	"	330K	"	"	
R108	"	"	"	"	
R109	"	33K	"	"	
R110	"	"	"	"	
R111	"	330K	"	"	
R112	"	"	"	"	
R113	"	27K	"	"	
R114	"	"	"	"	
R115	"	1M	"	"	
R116	"	"	"	"	
R117	"	15K	"	"	
R118	"	"	"	"	
R119	"	"	"	"	
R120	"	"	"	"	
R121	"	2.2K	"	"	
R122	"	"	"	"	
R123	"	10K	"	"	
R124	"	"	"	"	
R125	"	220	"	"	
R126	"	"	"	"	
R127	"	1K	"	"	
R128	"	"	"	"	

RESISTORS

Symbol	Description				Part No.
R601	Carbon film	47K	10%	1/4 W	
R602	"	"	"	"	
R603	"	150K	"	"	
R604	"	"	"	"	
R605	"	33K	"	"	
R606	"	"	"	"	
R607	"	1.5K	"	"	
R608	"	"	"	"	
R609	"	3.9K	"	"	
R610	"	"	"	"	
R611	"	1K	"	"	
R612	"	"	"	"	
R613	"	8.2K	"	"	
R614	"	"	"	"	
R615	"	10K	"	"	
R616	"	"	"	"	
R617	"	"	"	"	
R618	"	"	"	"	
R619	"	4.7K	"	"	
R620	"	"	"	"	
R621	"	330K	"	"	
R622	"	"	"	"	
R623	"	150K	"	"	
R624	"	"	"	"	
R625	"	2.2K	"	"	
R626	"	"	"	"	
R627	"	10K	"	"	
R628	"	"	"	"	
R629	"	15K	"	"	
R630	"	"	"	"	
R631	"	1K	"	"	
R632	"	"	"	"	

TRANSISTORS

Symbol	Description				Part No.
Q101	2SC369				
Q102	"				
Q103	"				
Q104	"				

TRANSISTORS

Symbol	Description				Part No.
Q601	2SC369 Transistor				
Q602	"				
Q603	2SC369				
Q604	"				

W15-006- (CONTROL AMP UNIT) CAPACITORS

Symbol	Description				Part No.
C601	Electrolytic	10 μ		10V	
C602	"	"		"	
C603	"	50 μ		3V	
C604	"	"		"	
C605	"	100 μ		15V	
C606	"	"		"	
C607	"	10 μ		10V	
C608	"	"		"	
C609	Mylar	0.003 μ	10%	50V	
C610	"	"	"	"	
C611	"	0.05 μ	"	"	
C612	"	"	"	"	
C613	"	"	"	"	
C614	"	"	"	"	
C617	Electrolytic	10 μ		10V	
C618	"	"		"	
C619	"	100 μ		3V	
C620	"	"		"	
C621	"	1 μ		10V	
C622	"	"		"	
C623	"	100 μ		25V	
C624	"	"		"	
C625	Mylar	0.05 μ	10%	50V	
C626	"	"	"	"	

W15-007- (MAIN AMP UNIT) CAPACITORS

Symbol	Description				Part No.
C801	Electrolytic	10 μ		10V	
C802	"	"		"	
C803	"	"		"	
C804	"	"		"	
C805	Mylar	0.05 μ	10%	50V	
C806	"	"	"	"	
C807	Electrolytic	5 μ	20%	25V	
C808	"	"	"	"	
C809	"	"	"	"	
C810	"	"	"	"	
C811	Mylar	0.05 μ	10%	50V	
C812	"	"	"	"	
C813	Electrolytic	50 μ		"	
C814	"	"		"	
C815	Ceramic	100P	10%	"	
C816	"	"	"	"	
C817	Electrolytic	100 μ		3V	
C818	"	"		"	

RESISTORS

Symbol	Description				Part No.
R801	Carbon film	100K	10%	1/4 W	
R802	"	"	"	"	
R803	"	68K	"	"	
R804	"	"	"	"	
R805	"	47K	"	"	
R806	"	"	"	"	
R807	"	4.7K	"	"	
R808	"	"	"	"	
R809	"	1K	"	"	
R810	"	"	"	"	
R811	"	150	"	"	
R812	"	"	"	"	
R813	"	470K	"	"	
R814	"	"	"	"	
R815	"	150K	"	"	
R816	"	"	"	"	
R817	"	220	"	"	
R818	"	"	"	"	
R819	"	4.7K	"	1/2 W	
R820	"	"	"	"	
R821	"	150K	"	1/4 W	
R822	"	"	"	"	
R823	"	180K	"	"	
R824	"	"	"	"	
R825	"	3.3K	"	"	
R826	"	"	"	"	
R827	"	10K	"	"	
R828	"	"	"	"	
R829	"	10	"	1/2 W	
R830	"	"	"	"	
R831	"	8.2K	"	1/4 W	
R832	"	"	"	"	
R833	"	2.2K	"	"	
R834	"	"	"	"	
R835	"	5.6K	"	"	
R836	"	"	"	"	
R837	"	33K	"	"	
R838	"	"	"	"	
R839	"	2.2K	"	"	
R840	"	"	"	"	
R841	"	150	"	"	
R842	"	"	"	"	
R843	"	220	"	"	
R844	"	"	"	"	
R845	"	33	"	"	
R846	"	"	"	"	
R847	"	220	"	"	
R848	"	"	"	"	

W16-006-A (POWER SUPPLY UNIT) CAPACITORS

Symbol	Description				Part No.
C901	electrolytic	100 μ		50V	
C902	"	10 μ		"	
C903	"	100 μ		"	
C904	"	200 μ		25V	
C905	"	"		15V	

RESISTORS

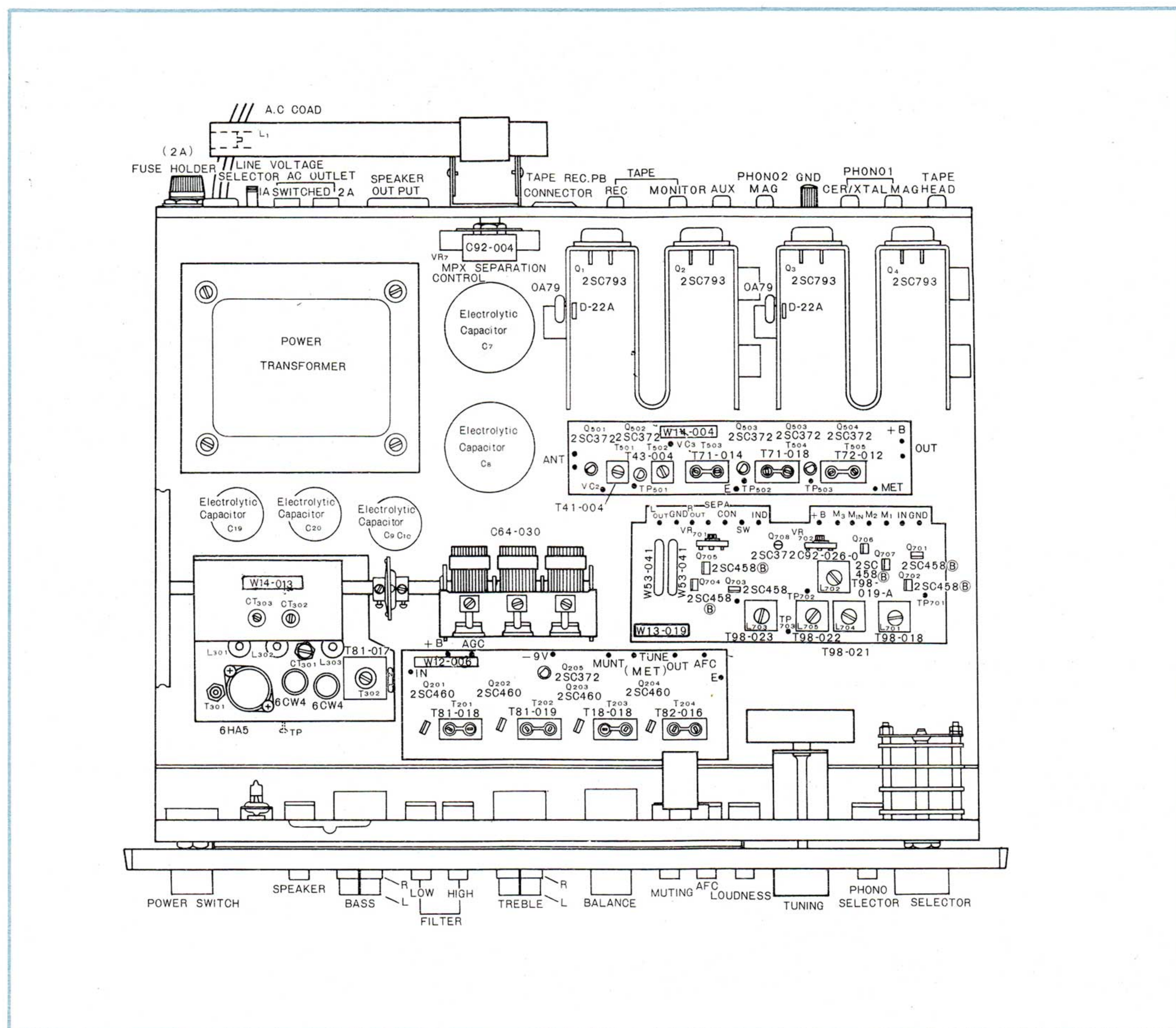
Symbol	Description				Part No.
R901	wire wound	820	10%	2W	
R902	Carbon film	22K	"	1/2W	
R903	"	33K	5%	"	
R904	"	18K	"	"	
R905	"	3.3K	10%	"	
R906	"	47	"	"	
R907	"	680	"	"	

DIODES AND TRANSISTORS

Symbol	Description	Part No.
D901	SW-1-02 Diode	
D902	"	
D903	"	
D904	"	
D905	SH-1S Diode	
D906	"	
D907	SZ-200-13 Zener Diode	
Q901	2SC627 Transistor	
Q902	2SC620 Transistor	
Q903	2SC367 Transistor	

DIODES AND TRANSISTORS

Symbol	Description				Part No.
D803	IN60				
D804	"				
D805	0A79				
D806	"				
Q801	2SC283				
Q802	"				
Q803	2SC627				
Q804	"				
Q805	2SC458				
Q806	"				
Q809	2SC291				
Q810	"				
Q811	2SC283				
Q812	"				



MODEL SX-1000TA TECHNICAL SPECIFICATIONS

Tubes Transistors & Diodes

Tuner Section

1.....	6HA5	(FM Frontend)
2.....	6CW4	(Nuvistors; FM Frontend)
4.....	2SC460A	(FM IF Stage)
6.....	2SC372	(FM AGC, MPX Stage, AM RFamp, Conv. IFamp)
7.....	2SC458(B)	(MPX Stage)
1.....	1S85	(Variable capacitance diode; AFC)
10.....	1N60	(Diodes; Discriminator, AGC, AMDet)
6.....	0A79	(Diodes; MPX Stage)

Audio Section

8.....	2SC369	(Equalizer amp, Control amp)
2.....	2SC283	(Driver)
2.....	2SC627	(Driver)
2.....	2SC485	(Driver)
2.....	2SB421	(Driver)
4.....	2SC793	(Power amp)
2.....	2SC291	(Protection circuit)
3.....	2SC283	(Filter circuit, Protection circuit)
1.....	2SC367	(Filter circuit)
7.....	0A79	(Diodes; Protection circuit, Thermal compensation)
2.....	1N60	(Diodes; Protection circuit)
4.....	SW-1-02	(Diodes; Rectifier)
2.....	SH-1S	(Diodes; Rectifier)
2.....	SE05C	(Diodes; Rectifier)
1.....	SZ-200-13	(Zener diode)

Temperature Sensitive Resistors

2.....	D-22A	(Thermistors)
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FM Section

Circuitry	Frontend using 3gang variable air capacitor 4dual-tuning IF stages equipped with muting circuit
Frequency Range	87-108 MHz
IHF Usable Sensitivity	2.2 μ v
Image Rejection	55 db
Signal to Noise Ratio	60 db
Antenna Input	300 ohms (balanced)

Multiplex Section

Circuitry	Time Switching Circuit equipped with automatic MONO-STEREO Switch
Channel Separation	38 db (at 1000 Hz)

AM Section

Circuitry	Superheterodyne circuit with tuned RF-Stage
Frequency Range	525-1,605 kHz
IHF Usable Sensitivity	18 μ v
Antenna Input	Built-in Ferrite loopstick antenna with terminal for external antenna

Audio Section

Circuitry	Single Ended push-pull circuit OTL
Music Power Output	90 watts total (IHF rating) (8 Ω loads) 120 Watts (4 Ω loads)
RMS Rated Power Output	40 watts per channel 0.5% H.D. (8 Ω load) 50 Watts per channel
Harmonic Distortion	0.5% (at 1kHz at rated output)
Frequency Response	20-60,000 Hz (Over-all)
Power Bandwidth	15-40,000 Hz (IHF)
Dumping Factor	30 (8 Ω loads)
Hum & Noise (at rated output) (IHF rating)	TAPE HEAD: better than 60 db MAG: better than 70 db AUX: better than 85 db
Inputs and Audio Sensitivity (for rated output)	MAGnetic PHONO: 2.5 mv. CERamic PHONO: 55 mv. TAPE HEAD: 1.5 mv. TAPE MONITOR: 200 mv. AUXiliary: 200 mv.
Input Impedance	MAGnetic PHONO: 50k Ω (1kHz) CERamic PHONO: 90k Ω (1kHz) TAPE HEAD: 120k Ω (1kHz) AUX: 200k Ω (1kHz) TAPE MONITOR: 200k Ω (1kHz)
Output Terminals and Jacks	Speakers: 8-16 ohms Stereo head- phone jack Simultaneous tape Record- ing jacks equipped with TAPE MONI- TOR switch Tape recording/playback jack (DIN standards)
Equalization Curves	PHONO: RIAA TAPE: NAB
Tone Controls (each channel)	BASS: boost 13 db, cut 14 db (at 50 Hz) TREBLE: boost 10 db, cut 12 db (at 10,000 Hz)
Filters	LOW: cut 9 db (at 50 Hz) HIGH: cut 11 db (at 10,000 Hz)
Loudness Contour	Switchable to ON-OFF boost 13 db at 50 Hz , with boost 9 db at 10,000 Hz VOLUME control set at -40 db
Power Supply Etc.	
Protection Circuit	Electronic Switch
Line Requirements	115/230 volts, 1.8/0.9 amp. (switchable), 50-60 Hz . 175 watts (Max)
Dimensions	Overall 16"/405 mm (width) x5 $\frac{7}{16}$ "/137 mm (height) x13 $\frac{3}{16}$ "/350 mm (depth)
Weight	Net 25 lbs. 5 oz/ 11.5 kg



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