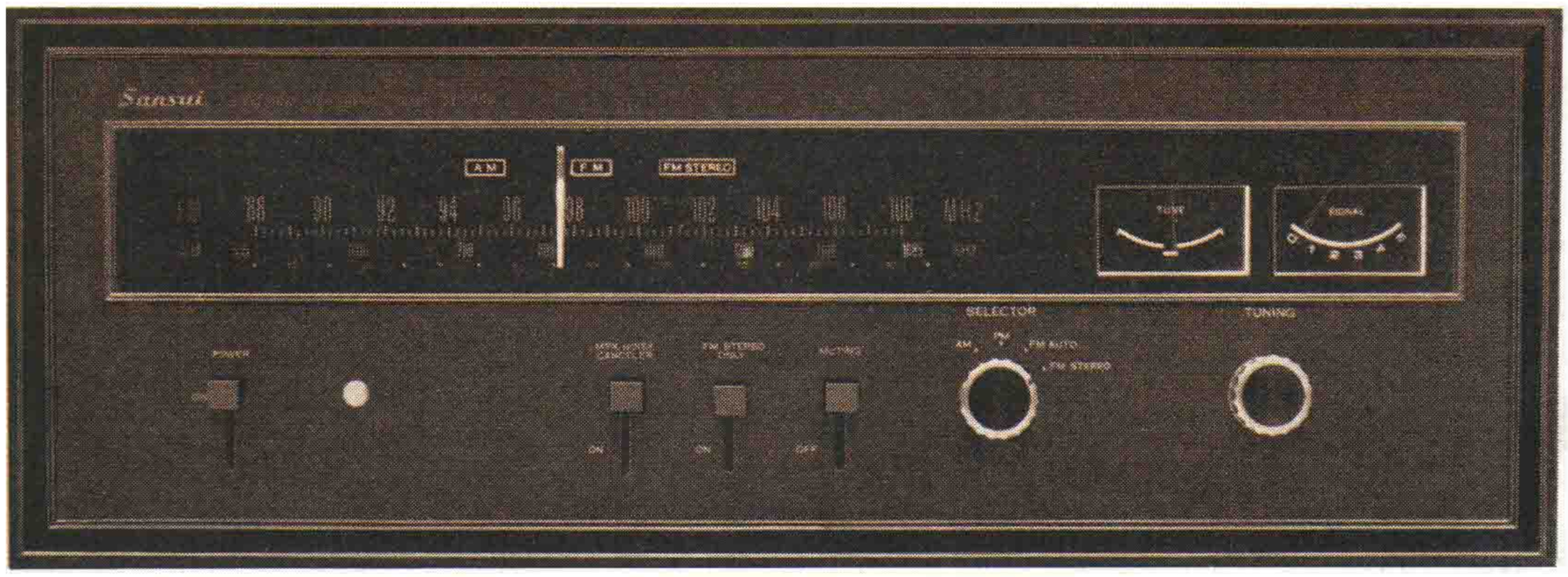
OPERATING INSTRUCTIONS & SERVICE MANUAL

SOLID-STATE AM/FM STEREO TUNER

SANSUI TU-999

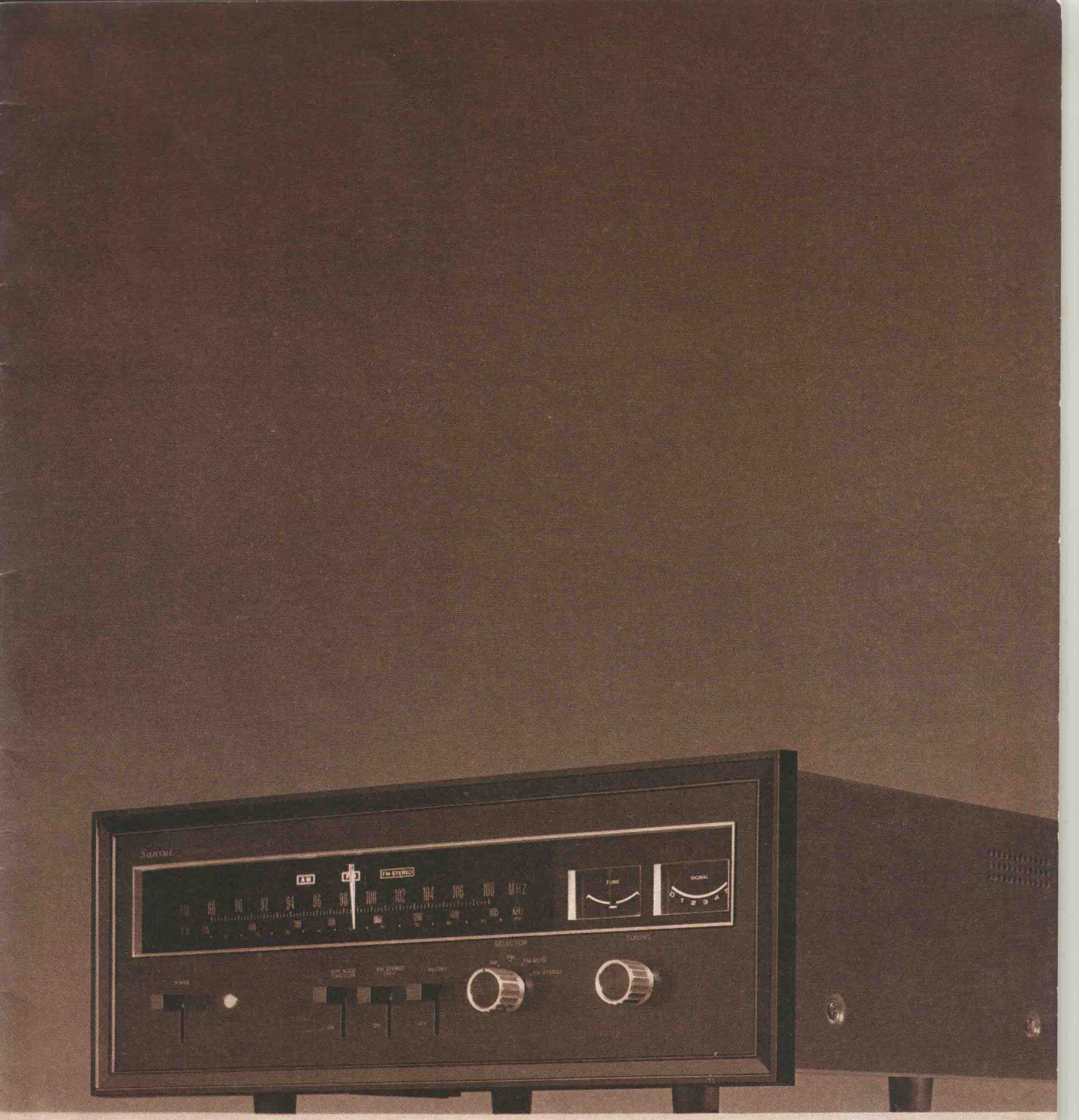


Sansui

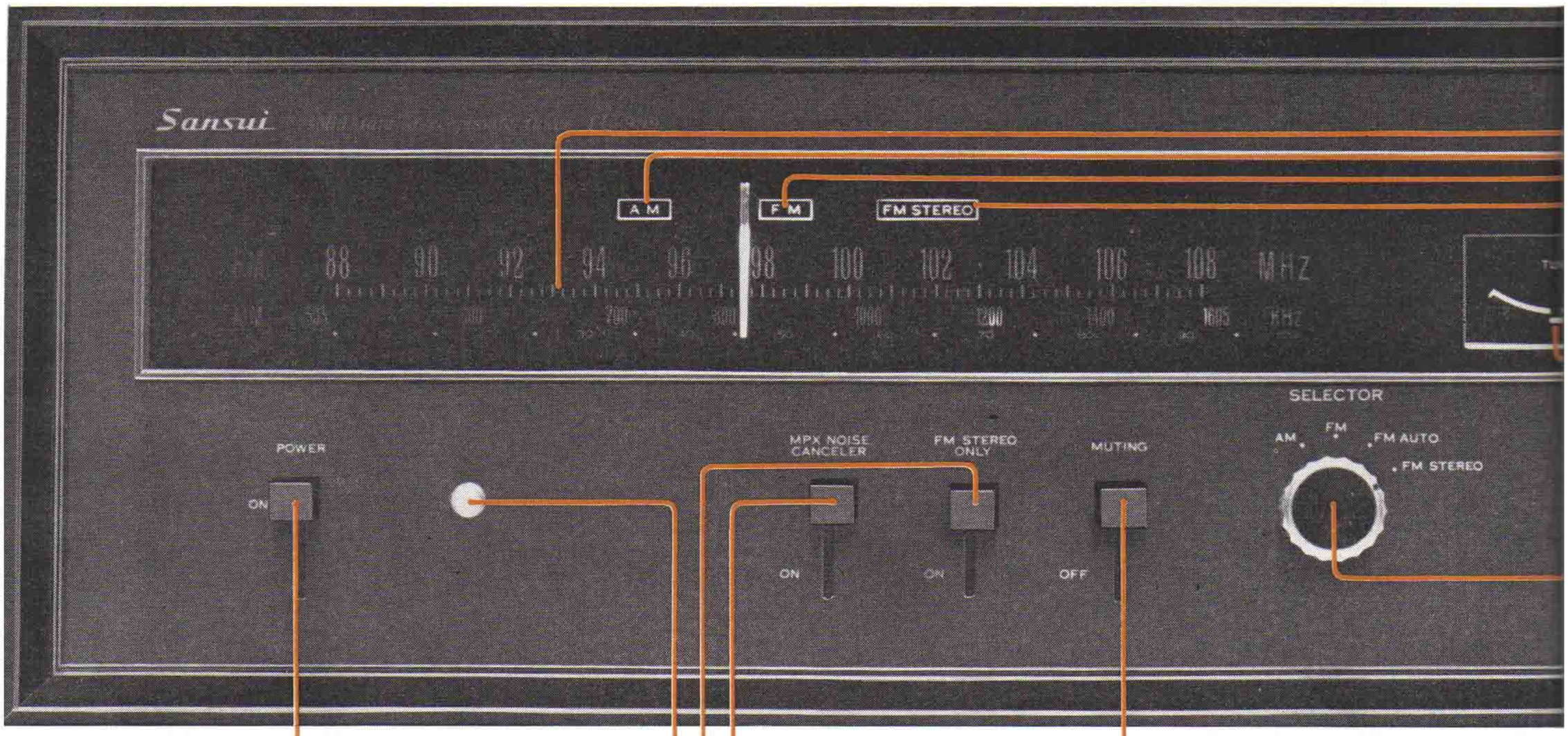
SANSUI ELECTRIC COMPANY LIMITED

Congratulations on joining the thousands of proud, satisfied owners of quality stereo compoenents from Sansui.
The TU-999 is the most advanced professional solid state AM/FM stereo tuner ever manufactured by Sansui. As such, it incorporates the cream of our technology and long experience with audio equipment. Particularly, the FM tuner section is designed with the idea that FM broadcast is becoming an important program source which rates the same consideration as tapes and discs.
The FM front end with dual gate MOS FET and the IF amplifier stage with IC, a crystal filter and block filter together allow the tuner to offer unparalleled high sensitivity and stability, superior separation and low distortion characteristics.
The TU-999 also incorporates a number of special provisions designed to insure quality reception of FM stereo broadcasts. Such as an FM only switch, MPX noise canceler and an LC type leak filter with a sharp cutoff characteristic. And, of course, it comes complete with a full assortment of accessory circuits. Among them: an FM AGC level adjust switch, muting level adjustor, output level adjustor, two output terminals, and an AM/FM/FM Stereo indicator.
The TU-999 features the refined dull black panels common to all TU series professional tuners from Sansui. Together with the wide dial with twin tuning meters, linear dial scale for the FM band and a selflighting dial pointer, they make the tuner as smooth to the eye as it is to the ear.
The TU-999 comes with the full confidence and guarantee of the manufacturer. It is now up to you to read the contents of this manual carefully in order to operate it correctly and obtain the maximum performance it is capable of offering for many years to come.

CONTENTS


Sansui
AM
FM
FM STEREO
88 90 92 94 96 98 100 102 104 106 108 MHz
TUNE
SIGNAL
SELECTOR
TUNING
POWER

SWITCHES AND CONTROLS



Power Switch

Set the lever in its up position to turn on the tuner. Set it in its down position to turn the tuner off. This switch controls not only the tuner but also the left AC outlet on the rear panel.

Power Indicator

This indicator glows when the Power switch is turned on. It remains lit while the tuner is on.

FM Stereo Only Switch

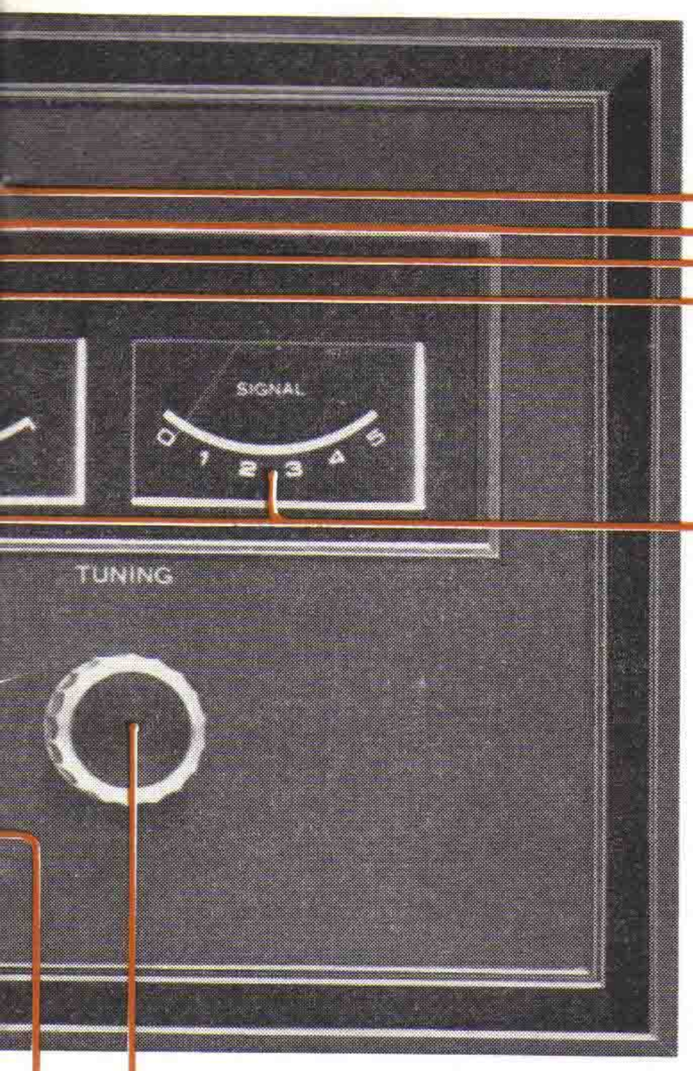
If you want to find an FM stereo station only, set this switch in its down position. The tuner receives FM stereo programs only.

Muting Switch

This switch suppresses interstation tuning noise when selecting FM stations. It should be used sparingly, particularly if the tuner is located in a weak signal area. When you want to pick up a weak station, this lever should be set to the OFF position.

MPX Noise Canceler

Noise accompanying FM stereo programs is reduced by turning this switch to the ON position. This switch should be set in its up position unless noise is heard, because it may reduce the channel separation slightly. Unlike the conventional noise filters, it does not attenuate treble tones at all.



Dial Scales

The upper large numbered dial is the FM station tuning dial. The lower small numbered dial is the AM station tuning dial. To select the desired station, turn the Tuning knob.

AM Indicator

This indicator is illuminated when the Selector switch is turned to the AM position.

FM Indicator

This indicator is illuminated when the Selector switch is turned to any FM position.

FM Stereo Indicator

This indicator lights up to give notice when a stereo program is being received. It is not illuminated for a monophonic FM program.

Tuning Knob

Turn this knob to find the desired station. The two meters at the right of the dial scales aid in pinpointing the station.

Tune/Signal Meters

These meters aid in pinpointing a station. The FM station is correctly tuned when the Signal meter needle swings as far to the right as it will go for maximum signal strength while the Tune meter is centered. For the AM stations, only the Signal meter can be used as described above.

Selector Switch

AM: Use this position for AM programs.

FM: Use this position for monophonic FM programs.

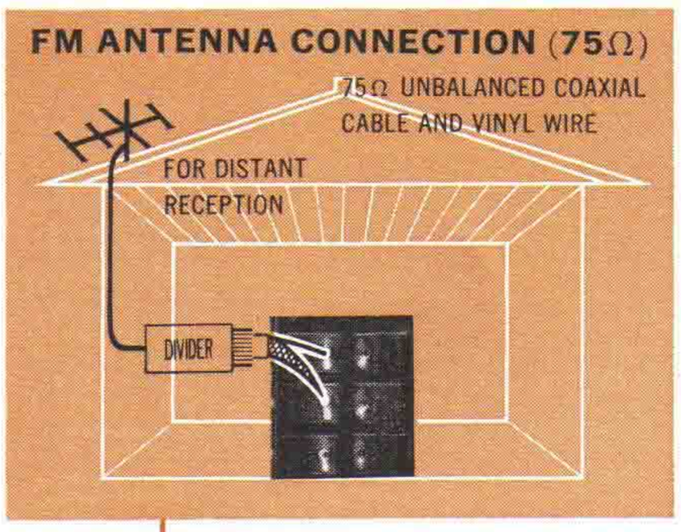
FM AUTO: With the switch in this position, the tuner selects between monophonic and stereo FM programs automatically depending on which program is being received.

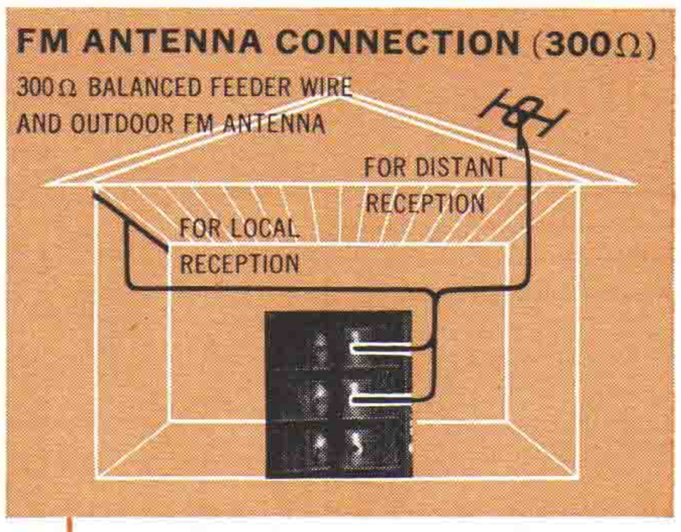
FM STEREO: Use this position if stereo signal is too weak for the automatic switching.

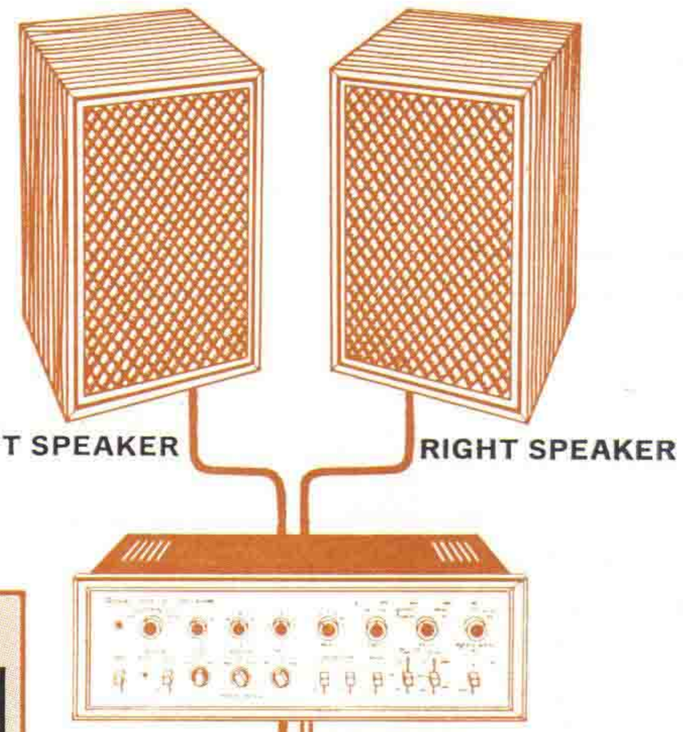
CONNECTIONS

— ANTENNA CONNECTIONS

— AMPLIFIER CONNECTIONS

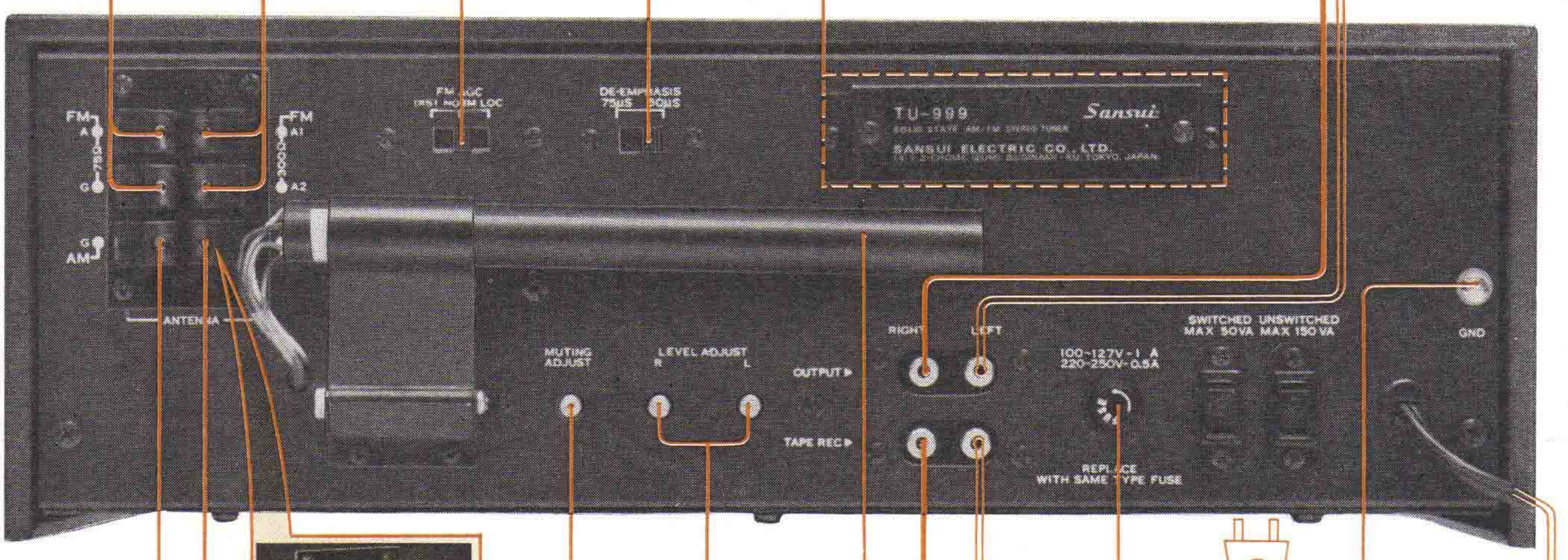






AGC CONTROL

DE-EMPHASIS SWITCH



CONNECTING TO ANTENNA TERMINALS

GROUNDING

MUTING ADJUST

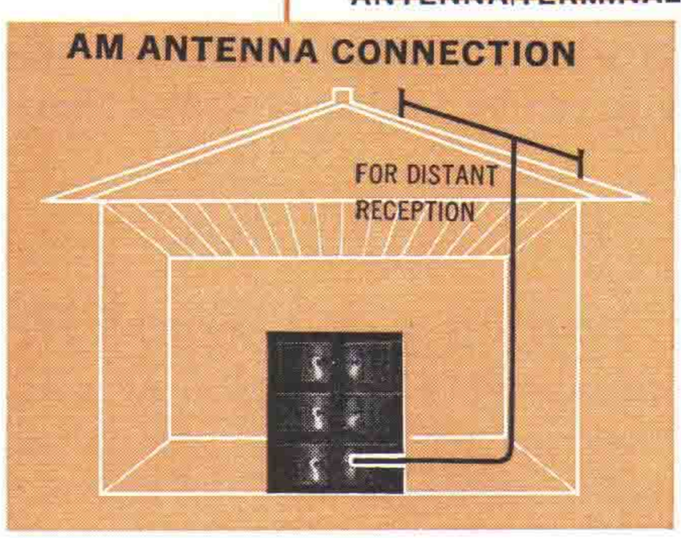
LEVEL ADJUST

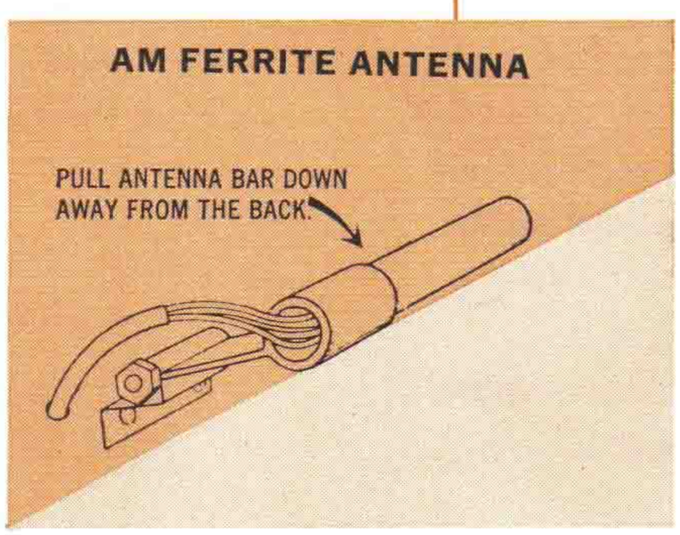
POWER FUSE

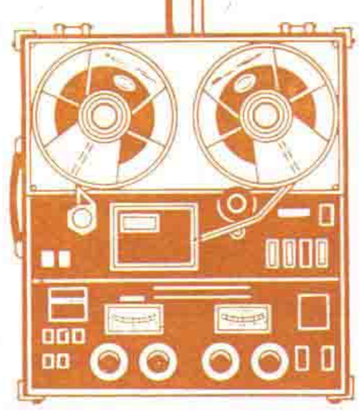
GROUNDING

TO AMPLIFIER

WALL OUTLET







TAPE DECK

ANTENNA CONNECTIONS

The quality of reception that can be expected from the TU-999 is largely dependent on the correct positioning and use of antennas. The following procedures are recommended for noise-free reception.

Built-in AM Ferrite Antenna

This sensitive antenna, located on the rear panel of the tuner, is usually adequate for strong AM reception. To use, pull it down and away from the back of the tunner until it comes to a stop halfway between the top and the bottom of the tuner.

Outdoor AM Antenna

In ferroconcrete buildings or in areas remote from the broadcasting station, the built-in ferrite bar antenna may be inadequate for strong AM reception. An outdoor antenna then becomes necessary.
This can be accomplished by connecting the PVC wire accompanying the tuner to the antenna terminal marked AM-A on the back panel. Run this wire to an antenna that has been installed outdoors and away from the building. At the same time, the unit should be grounded. Position the outdoor antenna where reception is strongest while actually receiving a broadcast. And, for reasons of safety, be sure to attach a lightning arrester to the outdoor antenna.

FM Antenna

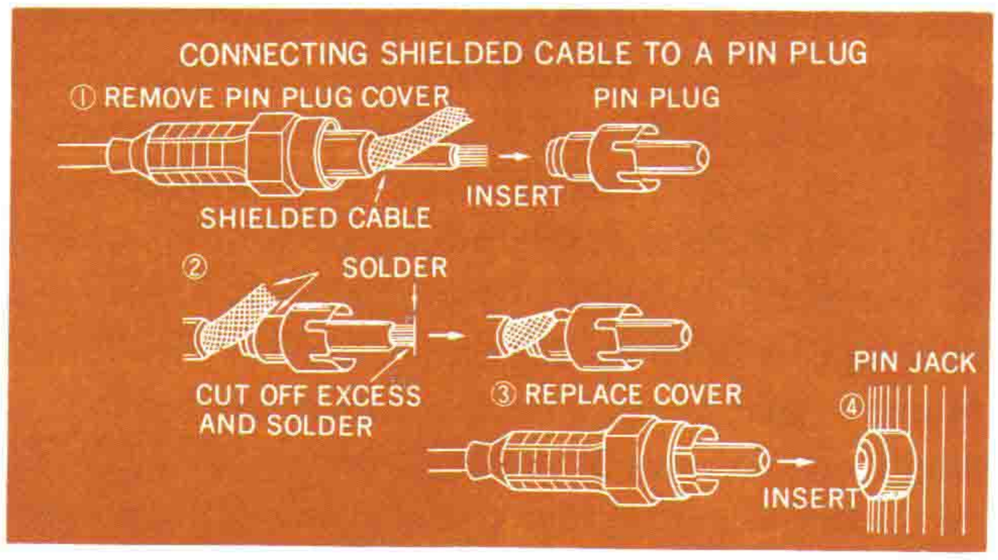
Where FM broadcasting stations are near and FM signals are strong, satisfactory FM reception can be obtained by using the dipole accompanying the tuner. Connect the two leads from the dipole to the antenna terminals marked FM-A1 and FM-A2 on the rear panel, then fully extend the wire to a T shape and fix it to a wall or ceiling where it allows the strongest reception.
If the TU-999 is used in a thick-walled building or in an area remote from FM broadcasting stations, the indoor dipole wire antenna may be inadequate for strong signal reception. An outdoor antenna designed exclusively for FM reception should then be installed.
FM antennas of the 300 ohm balanced type and 75 ohm unbalanced type can be used with the TU-999. Connect either antenna to the matching antenna terminals on the rear of the tuner. The 300 ohm dipole should be connected to the FM antenna terminals A1 and A2 as shown on peage 5.
If a 75 ohm coaxial cable is used, connect the conductor to the FM antenna terminal A, and the shielding wire to the terminal G.
NOTE: FM sensitivity cannot be raised simply by lengthening the antenna. Adjust the antenna's height and direction while actually listening to a broadcast for the best reception.

AMPLIFIER CONNECTIONS

To connect a control amplifier to the TU-999 use the two cables supplied with the tuner. Connect the R output on the rear panel of the tuner to the right channel input marked TUNER or AUX on the rear of the amplifier. The left channel connection are made between the L output of the tuner and the left TUNER or AUX input of the amplifier.

TAPE DECK CONNECTIONS

A pair of jacks marked TAPE REC allow connection of a tape deck (or tape recorder) for recordings directly from the TU-999. The connection must be made with shielded wire. If you want to monitor during the recording process, connect the playback outputs of the 3-head tape deck to a control amplifier connected to the speakers.



OPERATIONS/MAINTENANCE

OPERATIONS

To receive AM broadcasts:

1. Turn the Selector switch to AM.
2. Select thedesired AM station on the AM dial with the Tuning Knob. It is properly tuned when the needle in the Signal meter moves as far to the right as possible.

To receive FM broadcasts:

1. Turn the Selector switch to FM MONO for monophonic programs, to FM AUTO for both monophonic and stereo broadcasts, and to FM STEREO for only stereo broadcasts.

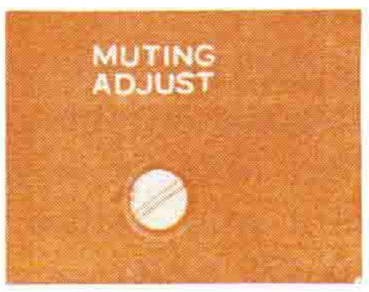
NOTE: If stereo reception is unstable with the Selector switch in the FM AUTO position, turn to FM STEREO.

If too much disturbing noise accompanies a stereo broadcast in either FM STEREO or FM AUTO positions, first switch the Noise Canceler on, and if the noise is still too disturbing, turn the Selector to FM MONO to hear the same broadcast monaurally.

2. Select the desired FM station on the FM dial with the Tuning Knob. It is properly tuned when the needle in the Signal meter moves as far to the right as possible while the Tune meter is centered. The FM Stereo Indicator glows automatically whenever an FM stereo broadcast is being received.
3. When too much interstation noise occurs during tuning, turn the Muting switch to its ON position.
4. If you want to hear FM stereo programs only, turn the FM Stereo Only switch to its ON position so that any monophonic programs are rejected.
5. It is best to adjust the output level of the tuner to match that of other components connected to the amplifier. This can be done by turning the LEVEL ADJ. control on the rear panel to either higher or lower level.

Muting Adjust Control

If a weak FM station that you want to receive cannot be heard when selecting it with the front Muting switch set in its ON position, turn this control clockwise with a screwdriver. To listen to strong FM stations only, turn it counterclockwise.



Level Adjust Controls

These controls allow separate adjustment of each channel output level of both FM and AM signals. To increase the output level, turn them clockwise with a screwdriver, and vice versa. Once these controls are set to match other components (a record player, for instance) connected to the amplifier, the Volume control on the amplifier need not be re-adjusted when the Selector switch is turned between the tuner and the record player.

FM AGC (Automatic Gain Control)

This switch is provided to automatically maintain a substantially constant output of FM signals in any area.

NORM.—Use this position if the tuner is located an average distance from the broadcasting stations.

LOC.—Use this position if the tuner is located near the broadcasting stations or in a strong signal area.

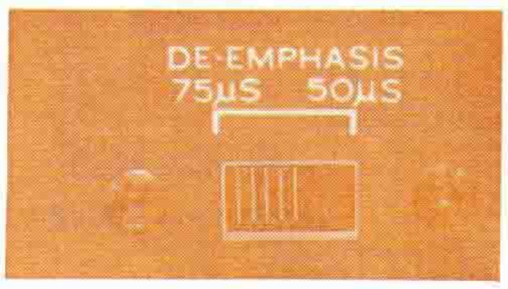
DIST.—Use this position if the tuner is located remote from the broadcasting stations or in a weak signal area.

De-emphasis Switch

This switch is provided to restore the pre-emphasised FM signal to its original form.

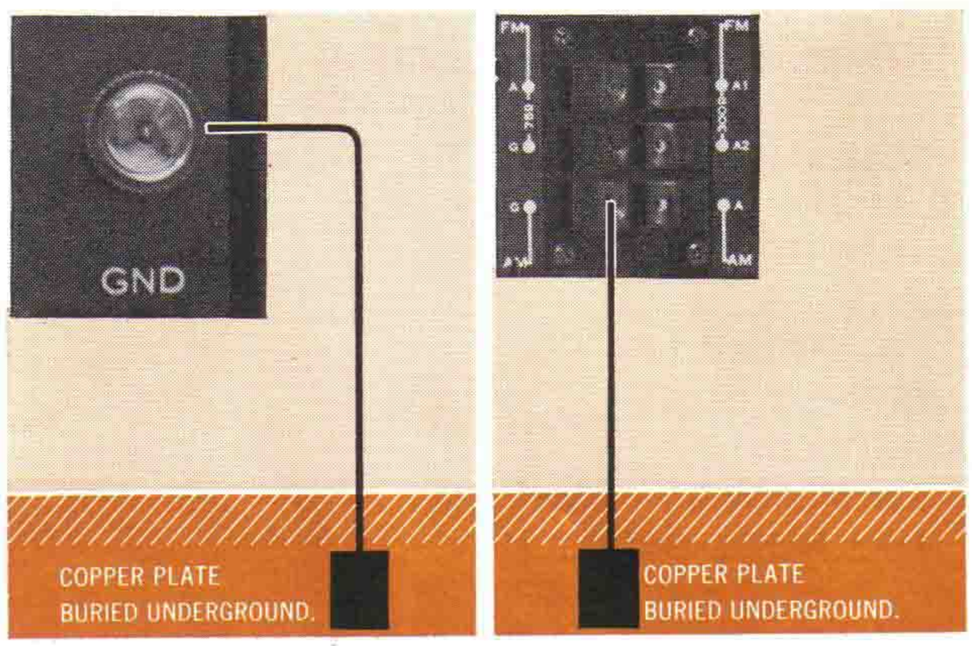
50μs—Set the switch to this position if the tuner is used in Japan or Europe.

75μs—Set the switch to this position if the tuner is used in U.S.A.



Grounding

Connect one end of vinyl or enameled wire to the terminal screw marked GND or AM-G on the rear of the tuner, attach a copper plate to the other end, and bury it underground. Whenever an outdoor AM antenna is used, grounding becomes necessary. In all cases, grounding is desirable since it allows a better SN ratio to be obtained.

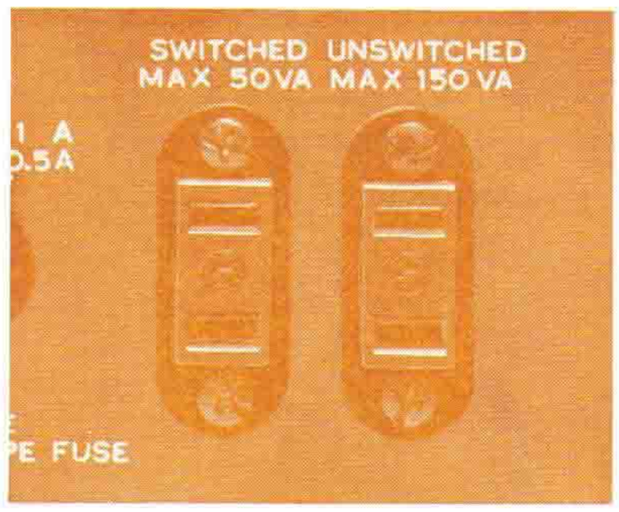


Where to Place

Since transistors are extremely susceptible to heat, the TU-999 has been designed to diffuse heat through the top and rear of its case. Therefore, special consideration should be given to where it will be used before installing the system. It should not be operated in a place where it is exposed directly to the sun, near radiators or other heat-generating sources, and it should never be mounted in an air-tight cabinet. Finally nothing should be placed on top of it.

AC Outlets

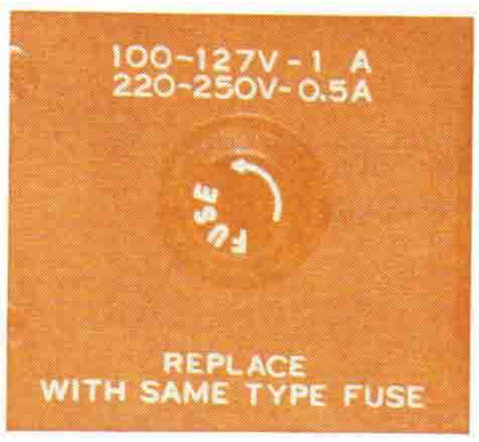
The TU-999 has been provided with two AC outlets on its rear panel. These outlets can be used as AC power sources for other components such as a turntable, but care should be taken not to use them for any component that exceeds their maximum rating. The power to the left switched outlet is controlled by the Power switch on the front panel.



Power Fuse

CAUTION: For the power supply voltage of 100 to 127 volts, use a 1 A fuse; for 220 to 250 volts, use a 0.5 A fuse.

If the tuner fails to operate when the power is switched on, its power fuse may be blown. To check, turn the fuse holder at the rear of the tuner to the left. If it is blown, disconnect the tuner from its power source and replace the fuse with an *identical 1 (or 0.5) A fuse*, after finding and eliminating the source of trouble that caused the fuse to blow. Using wire or a fuse of a different capacity as a stop-gap measure is dangerous and should be avoided. If the new fuse blows when the power is switched on again, contact your nearest Sansui dealer.



SPECIFICATIONS

FM SECTION

TUNING RANGE:	88 to 108MHz
SENSITIVITY (20 dB quieting):	1.4μV
(IHF):	1.8μV
TOTAL HARMONIC DISTORTION:	
	less than 0.5% (STEREO)
	less than 0.3% (MONO)
SIGNAL TO NOISE RATIO:	better than 65dB
SELECTIVITY:	better than 50dB
CAPTURE RATIO (IHF):	1.5dB
IMAGE FREQUENCY REJECTION:	
	better than 90dB
IF REJECTION:	better than 100dB
SPURIOUS RESPONSE REJECTION:	
	better than 100dB
STEREO SEPARATION:	better than 38dB at 400Hz
SPURIOUS RADIATION:	less than 34dB
ANTENNA INPUT IMPEDANCE:	300 ohms balanced, 75 ohms unbalanced

AM SECTION

TUNING RANGE:	535 to 1,605kHz
SENSITIVITY:	150μV at 1,000kHz (bar antenna)
SENSITIVITY (IHF):	30μV at 1,000kHz
IMAGE FREQUENCY REJECTION:	
	better than 80dB at 1,000kHz
SELECTIVITY:	better than 20dB at 1,000kHz
OUTPUT:	0 to 2V
TAPE REC:	0.4V

CONTROLS:
- FM MUTING LEVEL
- OUTPUT LEVEL

SWITCHES:

FM MUTING:	ON, OFF
MPX NOISE CANCELER:	
	OFF, ON
FM AGC:	DISTANT, NORMAL, LOCAL
SELECTOR:	AM, FM MONO, FM AUTO, FM STEREO

TRANSISTORS AND DIODES:

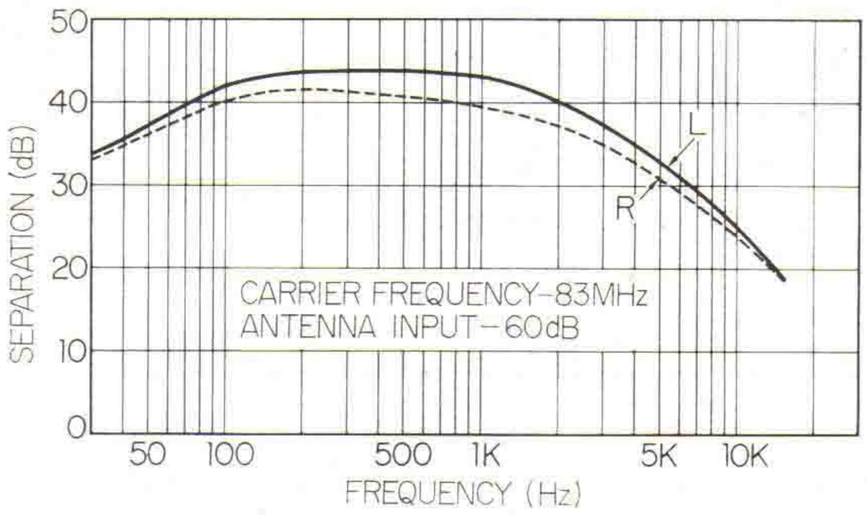
Transistors; 37 FET; 3 I.C; 3 Zener Diodes; 2 Diodes; 23

POWER REQUIREMENTS:

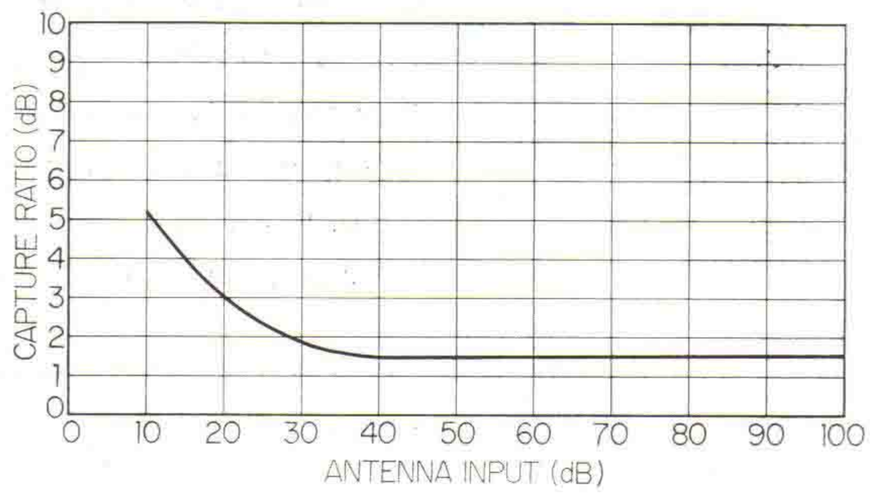
POWER VOLTAGE:	117V, 50/60Hz
POWER CONSUMPTION:	20VA
DIMENSIONS:	17-1/8″W × 6-1/8″H × 12-1/2″D
WEIGHT:	22 lbs.

CHARACTERISTICS

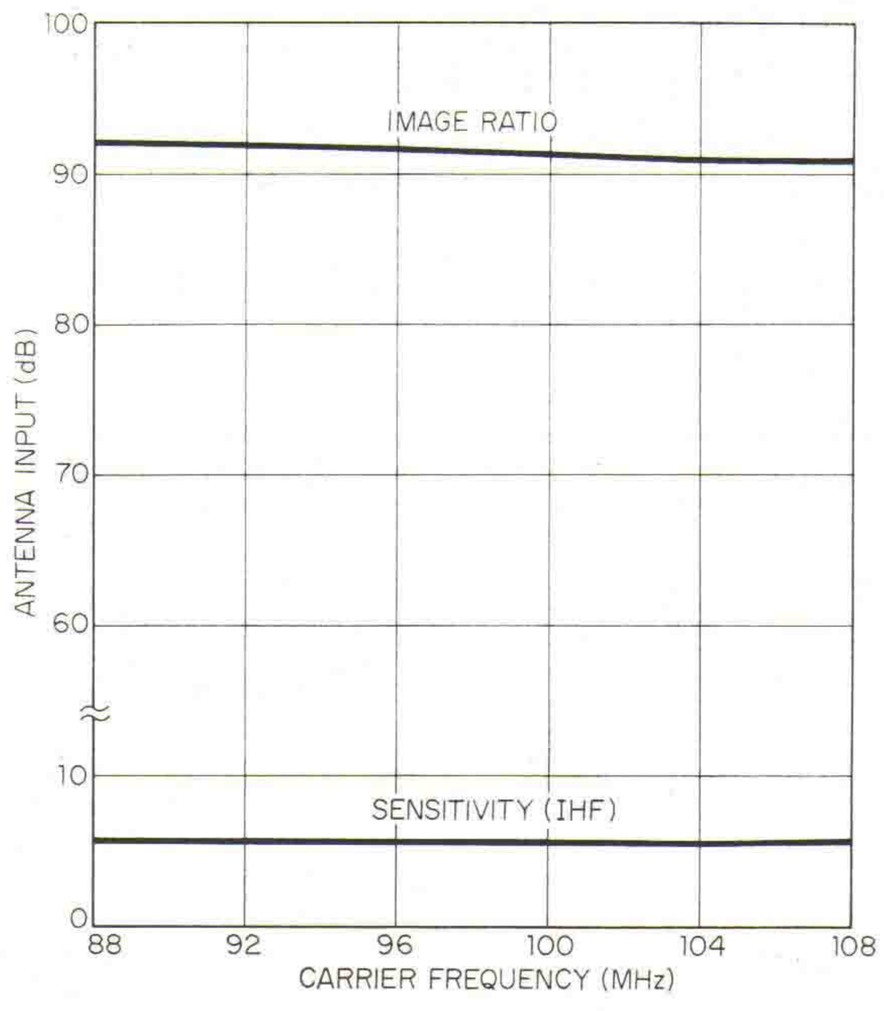
FM MPX SEPARATION



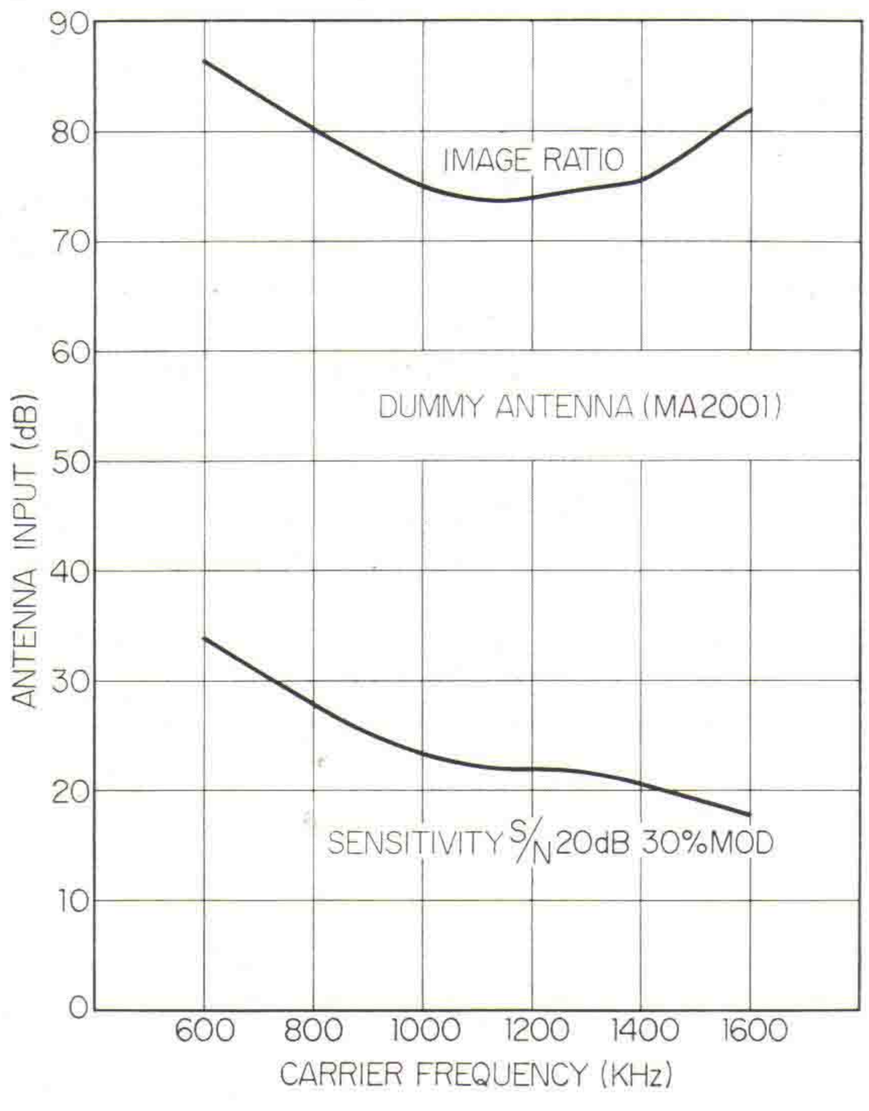
FM CAPTURE RATIO (IHF)



FM SENSITIVITY & IMAGE RATIO



AM SENSITIVITY & IMAGE RATIO



TROUBLE SHOOTING CHART

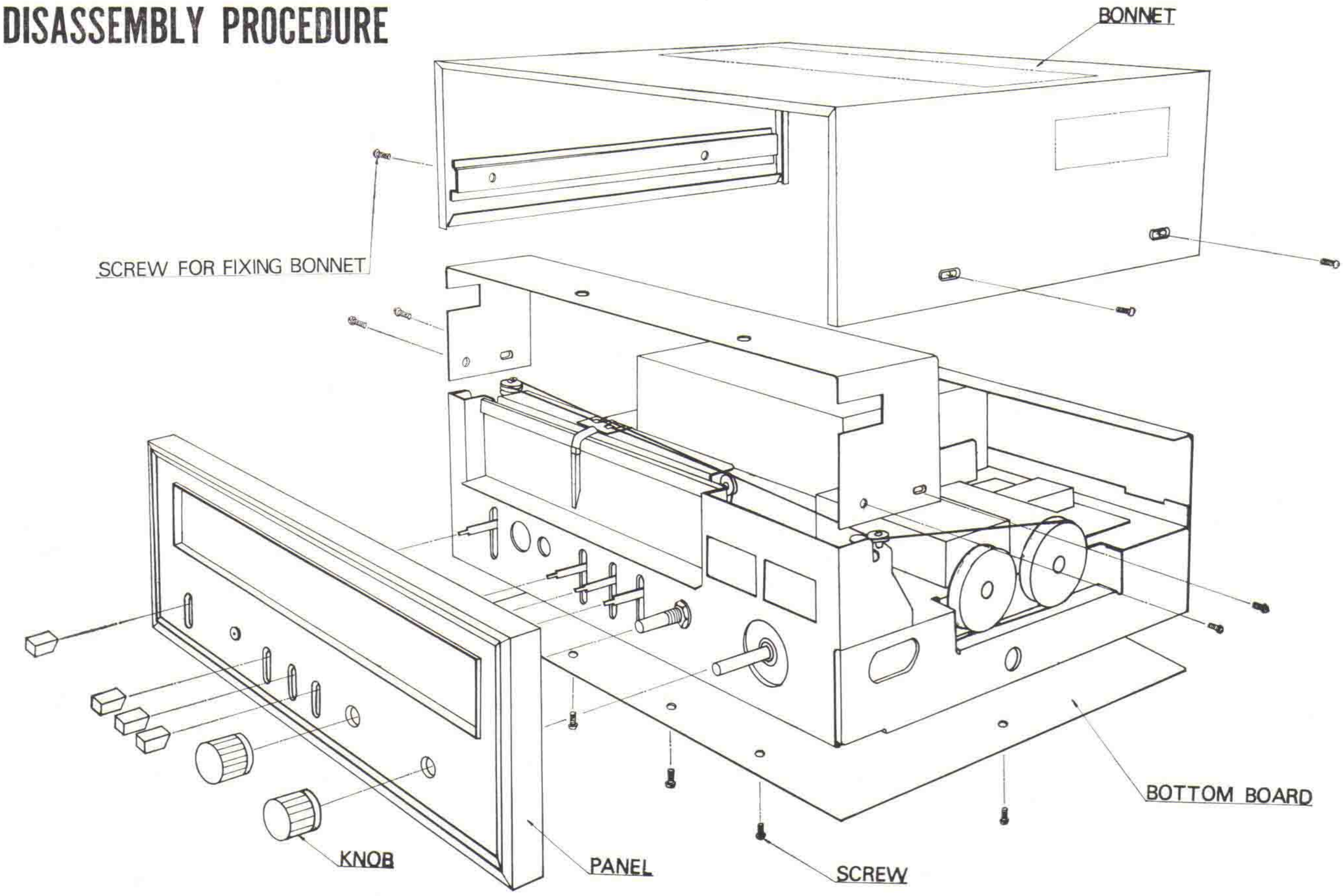
This section has been prepared to help you quickly and correctly determine the causes, reasons and remedies in situations where your tuner does not perform satisfactorily. You will note that most of the causes result from improper handling or positioning of the receiver and not from internal defects. For situations that are not covered in this section however, and in instances where you are fairly sure that a breakdown in the tuner's circuitry has occurred, please consult your nearest Sansui dealer or our Service Center.

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
AM, FM or FM stereo reception	A. Constant or intermittent noise heard at times or in a certain area.	* Discharge or oscillation caused by electrical appliances, such as fluorescent lamps, TV sets, D.C. motors, rectifier and oscillator. * Natural phenomena, such as atmospheric statics, and thunderbolts. * Insufficient antenna input due to thick reinforced concrete walls of the building or long distances from the station. * Wave interference from other electrical appliances.	* Attach a noise limiter to the electrical appliance that causes the noise, or attach it to the power source of the tuner. * Install an outdoor antenna and ground the tuner to raise the signal-to-noise ratio. * Reverse the power cord plug-receptacle connections. * If the noise occurs at a certain frequency, attach a wave trap to the ANT. input. * Keep the set at proper distance from other electrical appliances.
	B. The needle of the signal meter does not move well.	* The movement of the needle is one thing, the sensitivity of the tuner is another.	* Tune the set for maximum signal strength.
	C. The zero point of the meter diverges much.	* Regional difference in field intensity.	* The unit in not at fault.
AM reception	A. Noise heard at a particular time of a day, in a certain area or over a part of the dial.	* This results from the nature of AM broadcasts.	* Install the antenna for maximum antenna efficiency. See "ANTENNA" in the operating instructions section. * In some cases, the noise can be eliminated by grounding the tuner or reversing the power cord plug-receptacle connections.
	B. High-frequency noise.	* Adjacent-channel interference or beat interference. * TV set too close to the audio system.	* Although such noise cannot be eliminated, it is advisable to turn the amplifier's TREBLE control properly from midpoint to left and switch on the HIGH FILTER. * Keep the TV set at proper distance from the audio system.

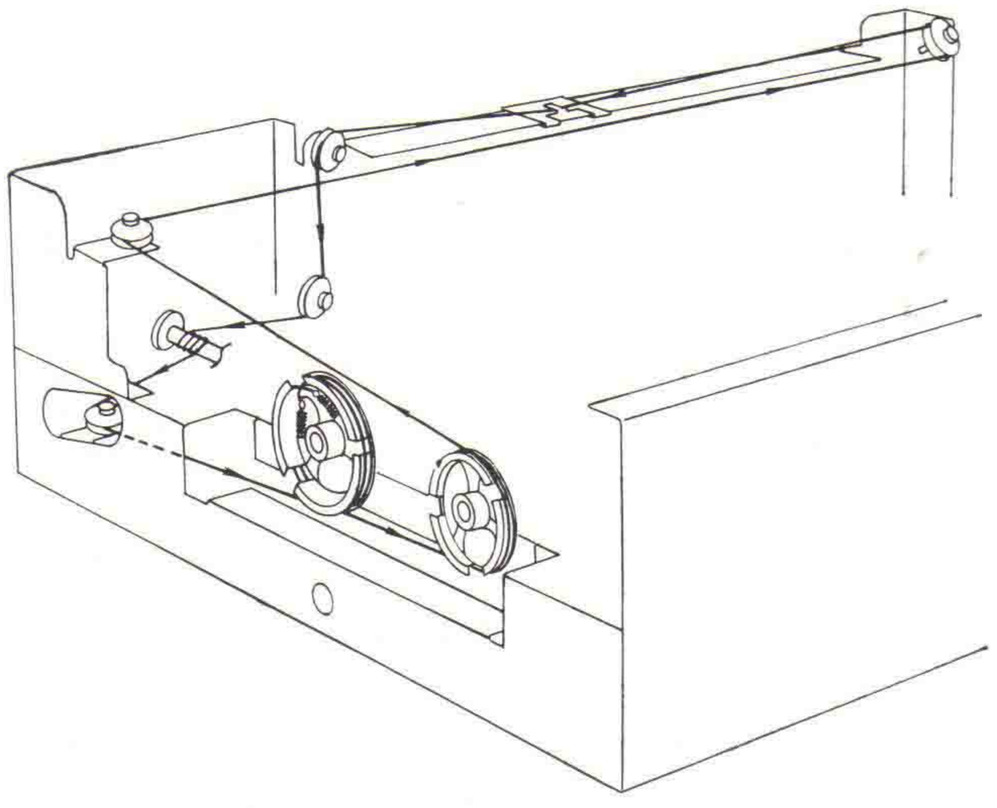
PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
FM reception	A. Noisy NOTE: FM reception is affected considerably by the conditions of transmission by stations: power and antenna efficiency. As a result, you may receive one station quite well while having difficulty in receiving another station.	* Poor noise limiter effect or too low S/N ratio due to insufficient antenna input.	* Adjust the dipole wire antenna (supplied) for maximum signal strength. * If this does not prove effective, use an outdoor antenna designed exclusively for FM. When you use a TV antenna for both TV and FM with the help of a splitter, make sure the TV reception is not affected. * An excessively long antenna may cause noise.
	B. A series of pops is heard.	* Ignition noise caused by the starting of an automobile engine and/or other motors.	* Install the antenna and its lead-in wire at proper distance from the road or raise the antenna input as described above.
	C. Tuning noise between stations.	* This noise results from the nature of FM reception. As the station signal becomes weak, the noise limiter effect is also decreased. The amplification of the limiter, in turn, is enlarged and thus a big noise is generated.	* Turn on the MUTING switch. In as much as it also reduces the sensitivity, it should be used sparingly.
FM stereo reception	A. Noise heard during FM stereo reception while not heard during FM mono reception.	* The service area of the FM stereo broadcast is only half as much as that of the FM mono broadcast.	* Install the antenna for maximum antenna input. * Switch the NOISE CANCELER to its ON position.
	B. Clearness of channel separation is decreased during the reception.	* Excess heat.	* Circulation of air is important to the tuner. Make sure that air can flow underneath.
	C. The stereo indicator blinks on and off.	* Interference	* The Indicator is not at fault. * Readjust VR_{502}.
	D. The stereo indicator blinks on and off even though a stereo station is not received.	* Interference	* The indicator is not at fault. * Readjust VR_{502}.

DISASSEMBLE PROCEDURE/DIAL MECHANISM

DISASSEMBLY PROCEDURE



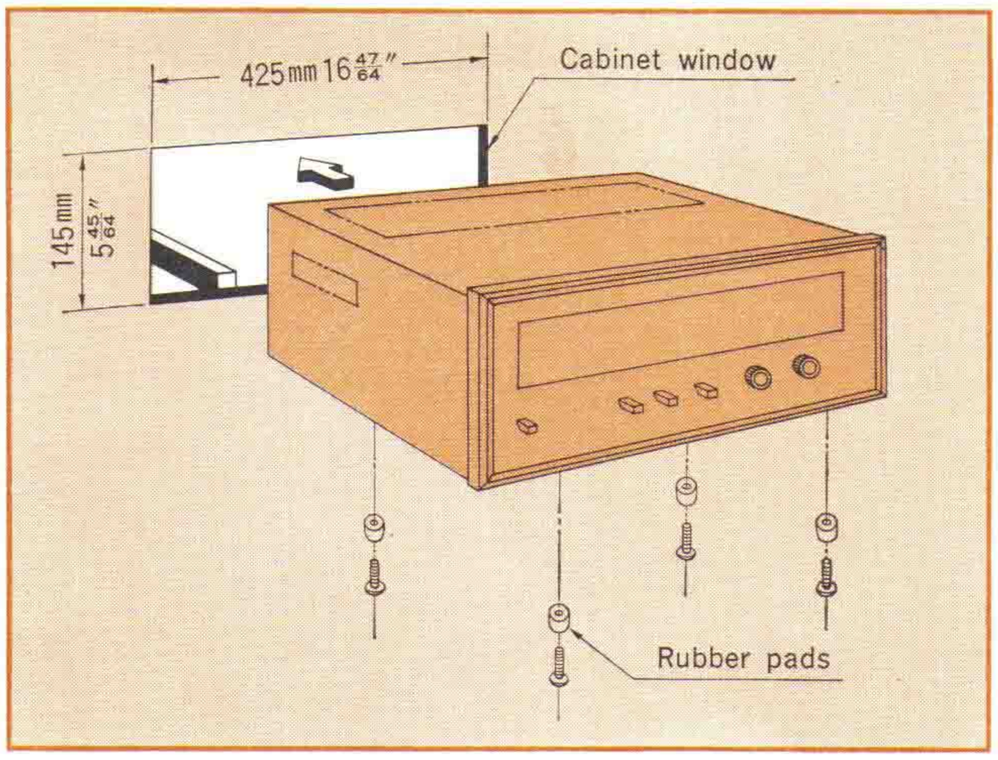
DIAL MECHANISM

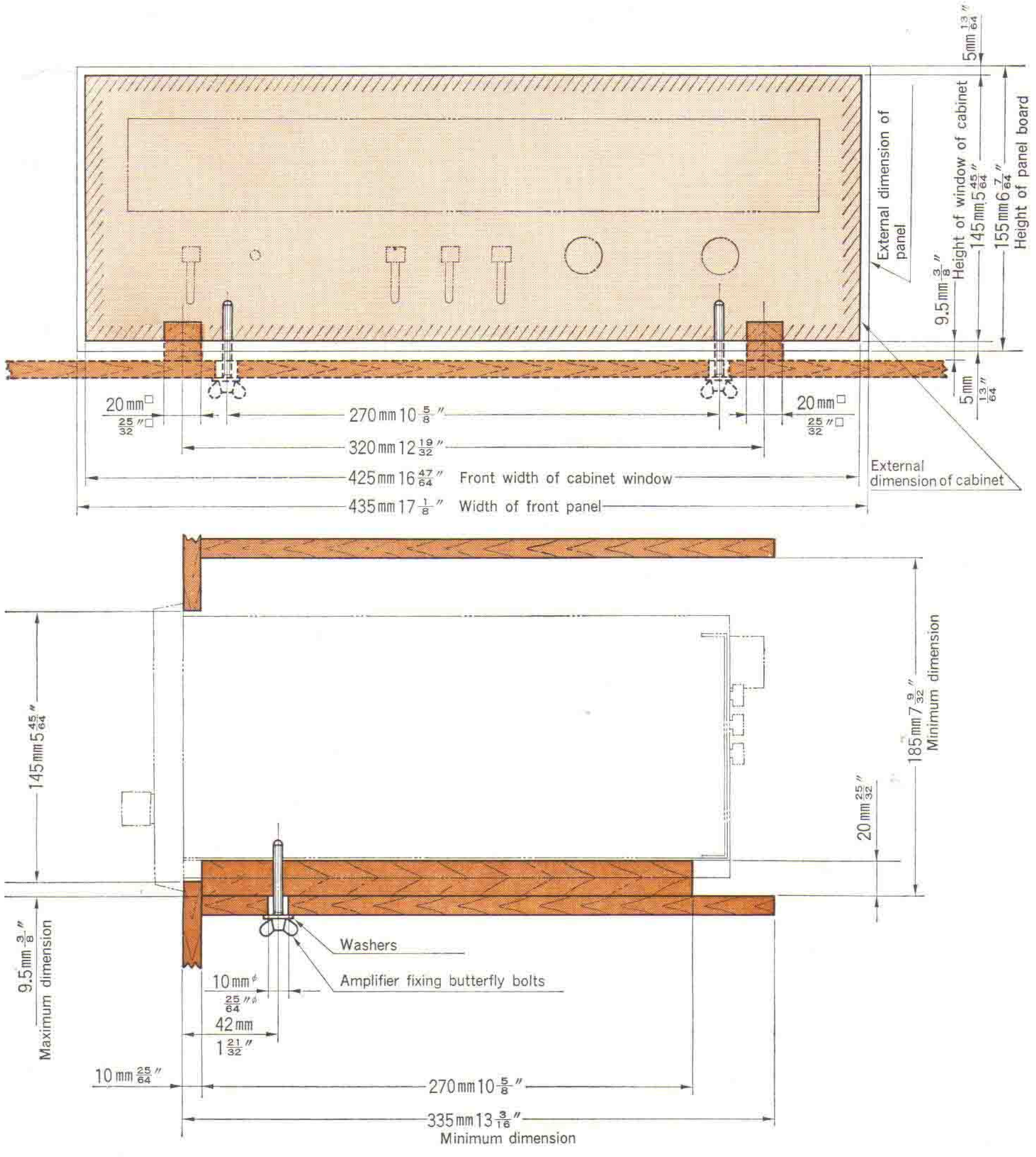


CUSTOM MOUNTING

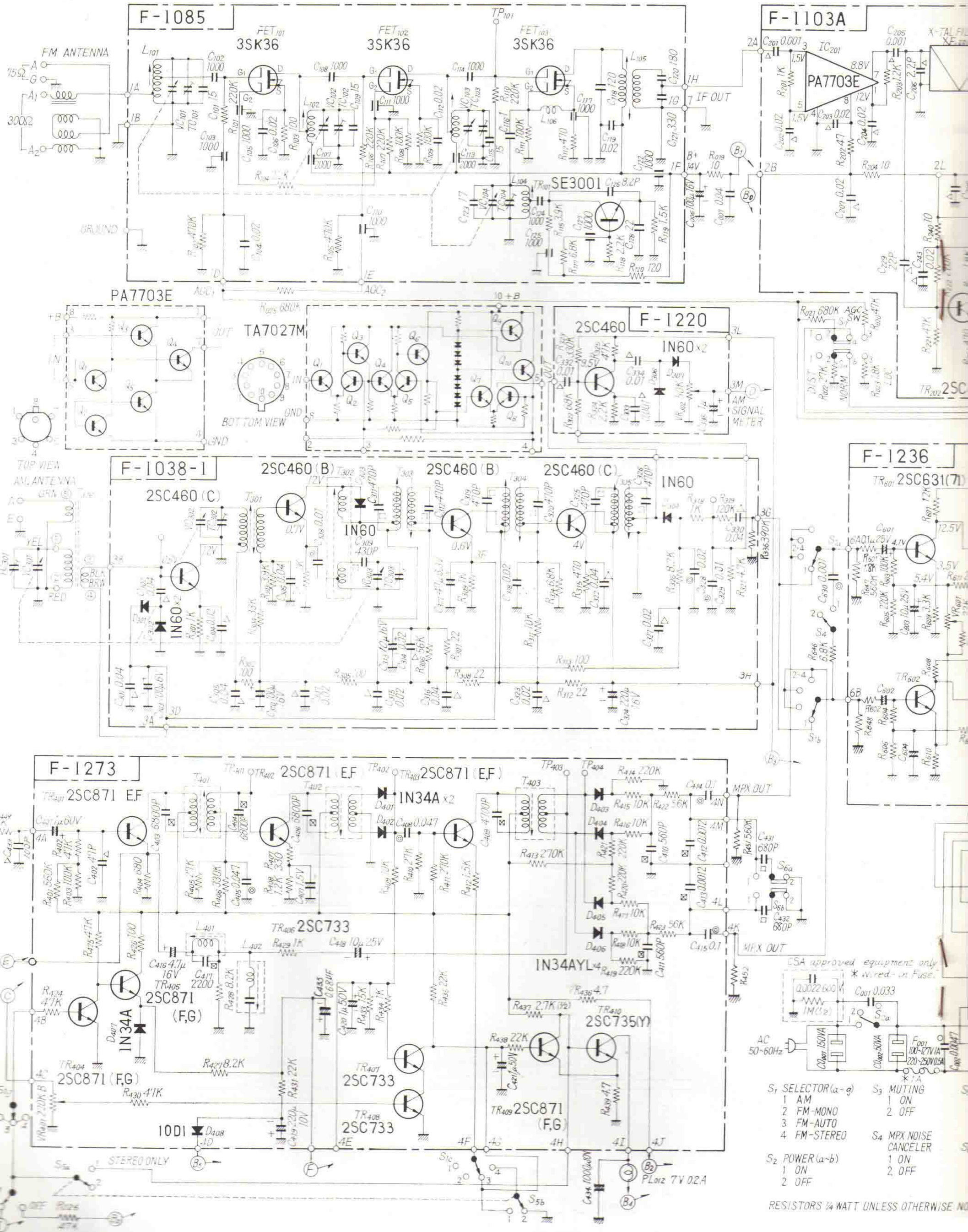
This diagram shows the size and dimensions required for mounting the TU-999 into a custom-made cabinet. Note that ample space is provided for complete air circulation above and below the tuner.

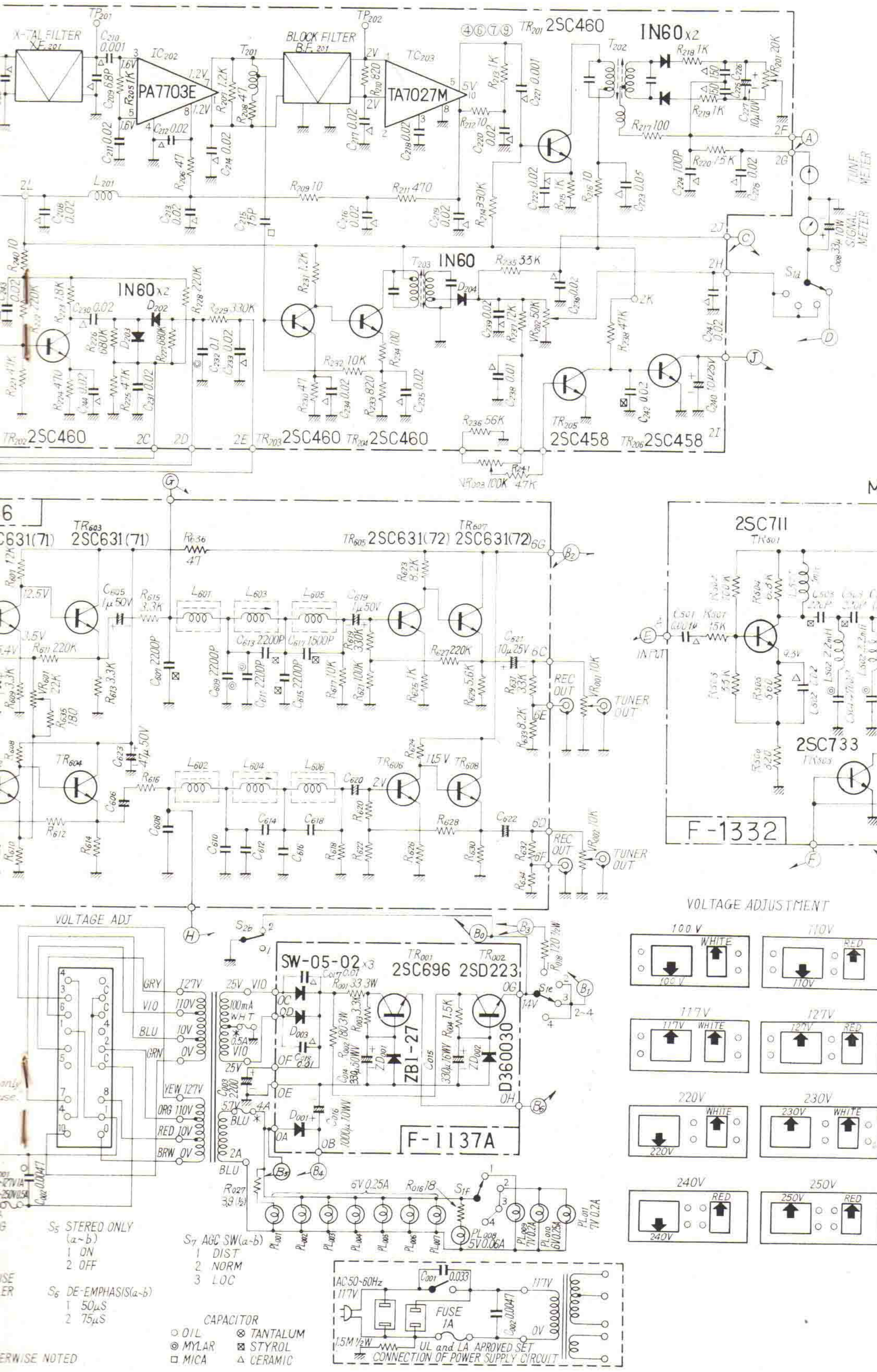
1. Be sure the cabinet window measures $16^{47}/_{64}'' \times 5^{45}/_{64}''$ as indicated in the diagram.
2. Place two boards on the floor of the cabinet as illustrated. Boards should measure $^{25}/_{32}'' \times {}^{25}/_{32}'' \times 10^{5}/_{8}''$.
3. Drill two holes in the bottom of the cabinet at points corresponding to holes in the bottom of the tuner.
4. Remove the four rubber feet from the TU-999. (Retain for future use.)
5. Slide the TU-999 into the cabinet through the window until the edge of its front panel is flush with the cabinet, and secure both tuner and cabinet with washers and butterfly bolts provided.



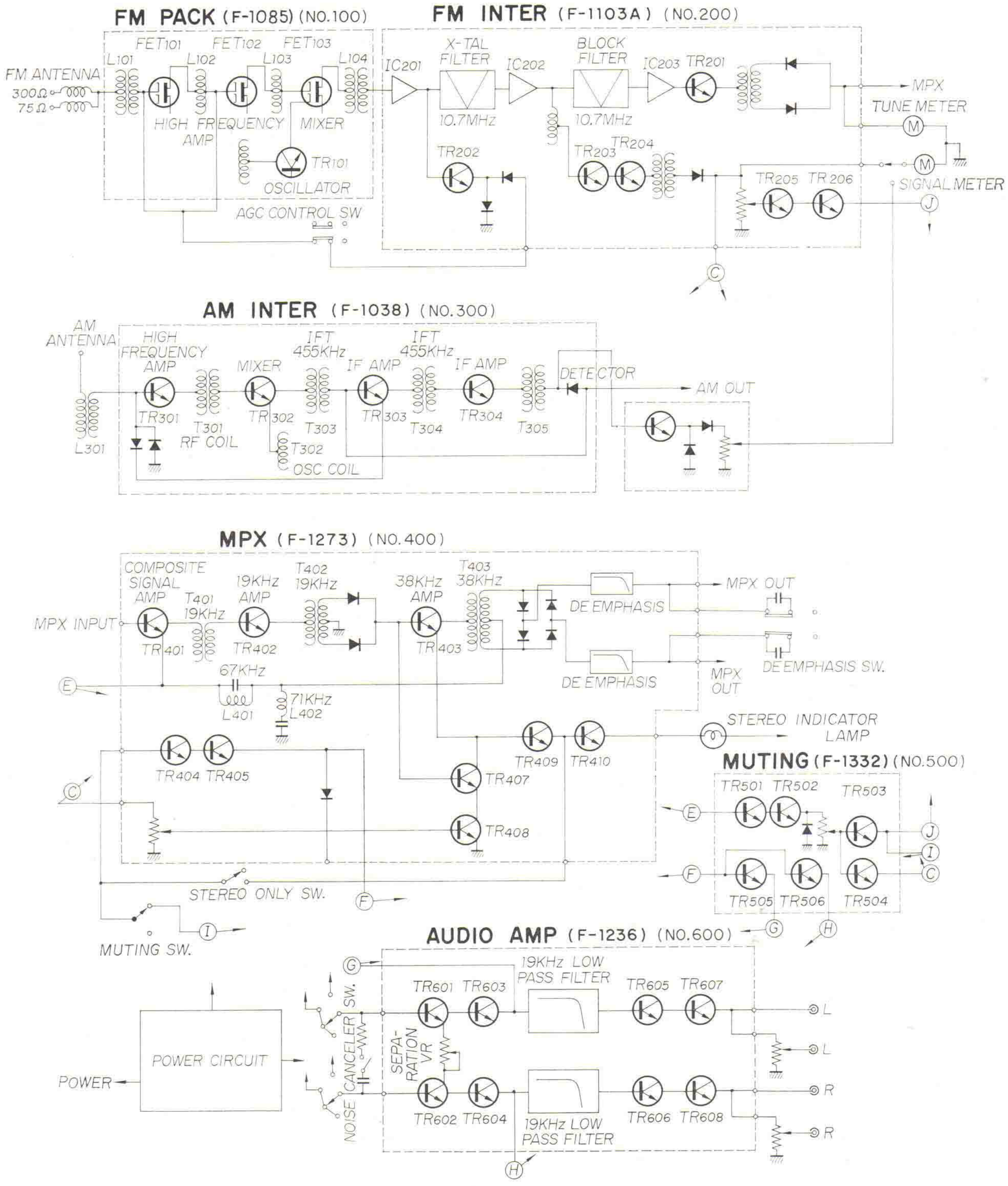


SCHEMATIC DIAGRAM



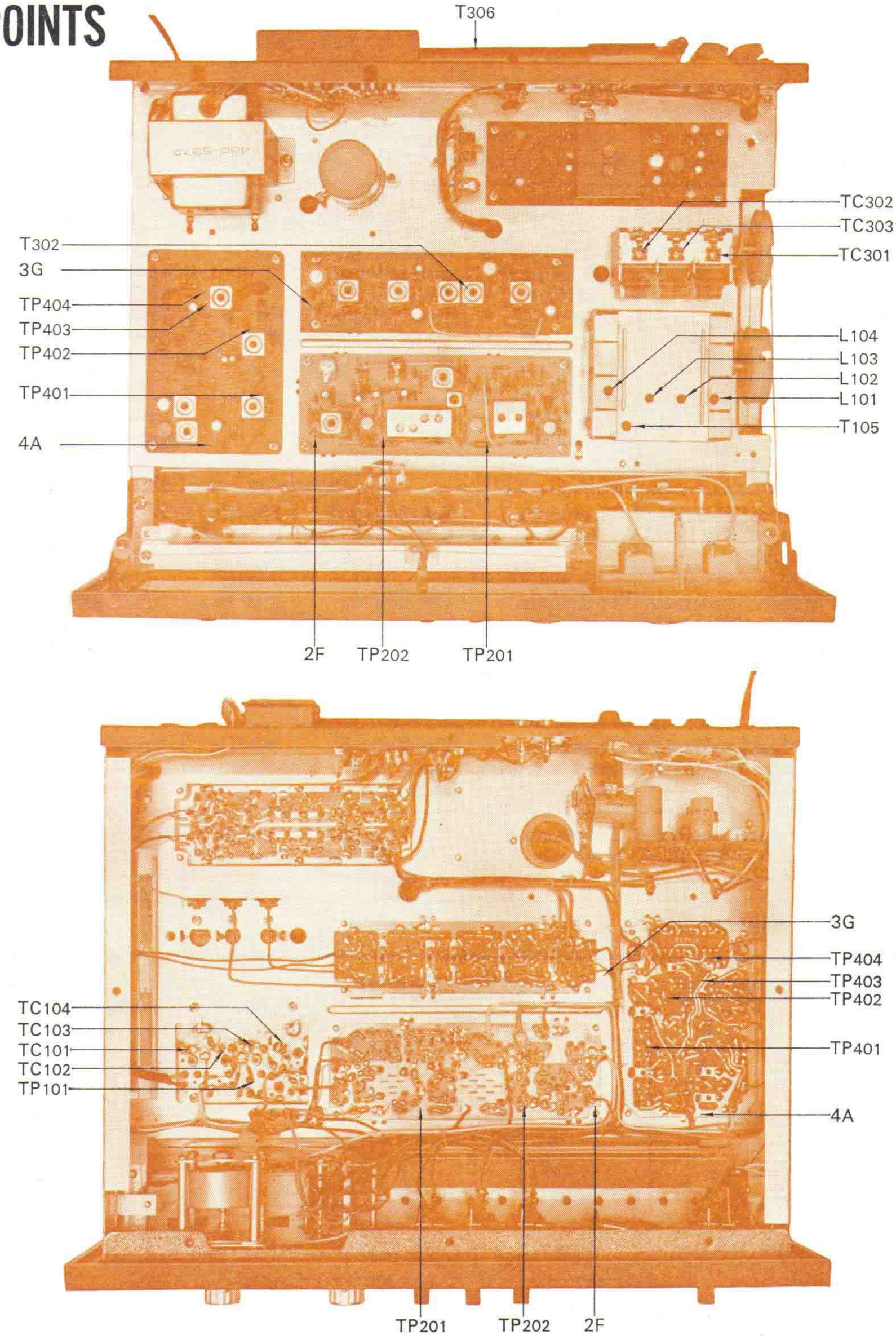

X-TAL FILTER
BLOCK FILTER
PA7703E
TA7027M
IN60 x2
IN60
2SC460
2SC458
2SC631(71)
2SC631(72)
2SC711
2SC733
MUTING CIRCUIT
INPUT
REC OUT
TUNER OUT
TUNE METER
SIGNAL METER
VOLTAGE ADJ
SW-05-02 x3
2SC696 2SD223
ZB1-27
D360030
F-1137A
F-1332
CONNECTION OF POWER SUPPLY CIRCUIT
VOLTAGE ADJUSTMENT
100V
110V
117V
127V
220V
230V
240V
250V
WHITE
RED
S5 STEREO ONLY (a~b)
1 ON
2 OFF
S6 DE-EMPHASIS(a~b)
1 50μS
2 75μS
S7 AGC SW(a~b)
1 DIST
2 NORM
3 LOC
CAPACITOR
○ OIL
◎ MYLAR
□ MICA
⊗ TANTALUM
⊠ STYROL
△ CERAMIC
ERWISE NOTED

BLOCK DIAGRAM



ALIGNMENT

TEST POINTS



ALIGNMENT

FM ALIGNMENT PROCEDURE

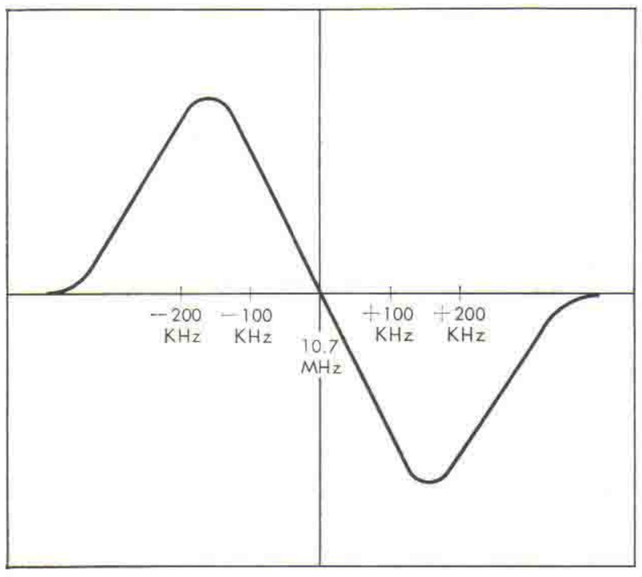
NOTE: To align, set the FM signal generator level to minimum

Any internal parts replacement or changes you make in the TU-999 requires proper adjustment again. Appropriate test points and adjustments are given on pages 18~21.

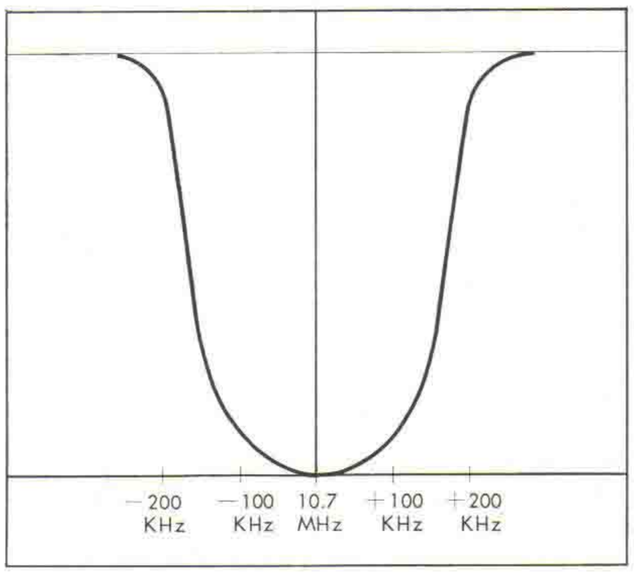
Equipment required: 1. Sweep Generator 2. Oscilloscope 3. FM Signal Generator 4. Multiplex Stereo Generator 5. AC VTVM 6. Audio Oscillator 7. AM Signal Generator

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF Transformer	10.7MHz ±200kHz Sweep generator	To TP_{101} via the 10μF ceramic capacitor	Oscilloscope is connected to TP_{202} via the 10μF ceramic by using a detector probe		Primary and secondary sides of IF Transformer (L_{105}, block filter)	Best I.F.T. wave form
2.	Discriminator	10.7MHz ±200kHz Sweep generator	To TP_{101} via the 10μF ceramic capacitor	Oscilloscope is connected to 2F.		FM Discriminator transformer T_{202} primary and secondary	S curve
3.	O.S.C.	FM signal generator 88MHz 400Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	88MHz	O.S.C. coil L_{104}	Maximum
4.	O.S.C.	FM signal generator 108MHz 400Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	108MHz	O.S.C. trimmer TC_{104}	Maximum
5.	Repeat 3 and 4						
6.	RF Amp. Circuit	FM signal generator 90MHz 400Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	90MHz	Antenna coil L_{101}, L_{102} and L_{103}	Maximum
7.	RF Amp. Circuit	FM signal generator 106MHz 400Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	106MHz	Trimmer TC_{101}, TC_{102} and TC_{103}	Maximum
8.	Repeat 6 and 7.						

FM DISCRIMINATORCHARACTERISTIC



FM IF CHARACTERISTIC



FM MULTIPLEX ALIGNMENT PROCEDURE

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	ADJUST	ADJUST FOR
1.	67 kHz Trap	67 kHz Audio Oscillator	Connect to TP_{4A}	V.T.V.M. at TP_{403}	L_{401}	Minimum output
2.	71 kHz Trap	71 kHz Audio Oscillator	Connect to TP_{4A}	V.T.V.M. at TP_{403}	L_{402}	Minimum output
3.	19 kHz Tuning coil	98 MHz FM signal generator. Stereo signal generator. Composite signal (L or R) comprising pilot signal, 30% modulation.	Antenna terminals	V.T.V.M. and Oscilloscope at TP_{401}	T_{401}	Maximum output
4.	19 kHz Tuning coil	98 MHz FM signal generator Stereo signal generator. Composite signal (L or R) comprising pilot signal, 30% modulation.	Antenna terminals	V.T.V.M. and Oscilloscope at TP_{402}	T_{402}	Maximum output
5.	38 kHz Tuning coil	98 MHz FM signal generator. Stereo signal generator. Composite signal (L or R) comprising pilot signal, 30% modulation.	Antenna terminals	V.T.V.M. and Oscilloscope at TP_{404}	T_{403}	Maximum output
6.	38 kHz Tuning coil and Separation VR	98 MHz FM signal generator. Stereo signal generator. Composite signal (L channel) comprising pilot signal, 30% modulation.	Antenna terminals	V.T.V.M. and Oscilloscope at output load.	T_{403}	Maximum output (L channel) by turning T_{402} and T_{403} Best separation by turning VR_{601}

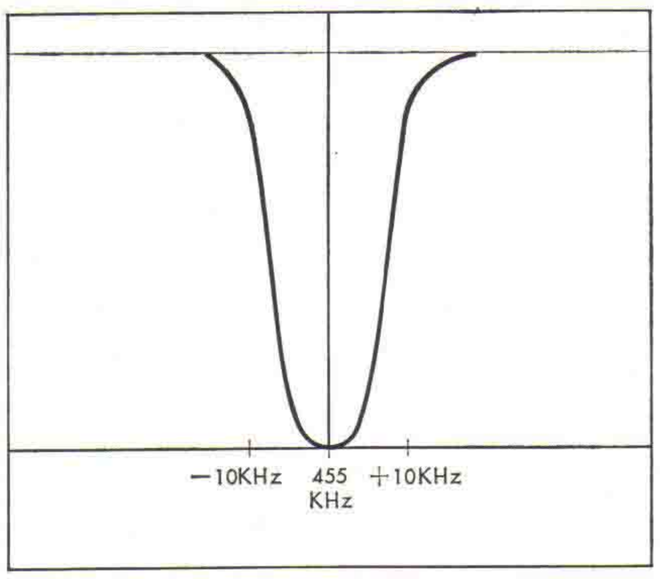
ALIGNMENT

AM ALIGNMENT PROCEDURE

NOTE: To align, set the AM signal generator level to minimum.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF. Transfor-mer	455 kHz ±30 kHz Sweep-generator	Antenna terminals	Oscilloscope and V.T.V.M. at 3G		Primary and secondary sides of I.F.T. (T_{303}~T_{305})	Best I.F.T. wave form
2.	O.S.C	AM-generator 535 kHz 400Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	535 kHz	O.S.C. Coil T_{302}	Maximum
3.	O.S.C	AM-generator 1600 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1600 kHz	O.S.C. Trimmer cap. TC_{303}	Maximum
4.	Repeat 2 and 3						
5.	RF amp.	AM-generator 600 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 kHz	RF transformer T_{301}	Maximum
6.	Antenna circuit	AM-generator 600 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	600 kHz	Ferrite bar Antenna coil T_{301}	Maximum
7.	RF amp.	AM-generator 1400 kHz 400 Hz 30% Modulation	Antenna terminals	Oscillosocpe and V.T.V.M. at output load	1400 kHz	RF Trimmer TC_{302}	Maximum
8.	Antenna circuit	AM-generator 1400 kHz 400 Hz 30% Moduration	Antenna terminals	Oscilloscope and V.T.V.M. at output load	1400 kHz	Antenna circuit Trimmer TC_{301}	Maximum
9.	Repeat 5, 6, 7, 8						

AM IF CHARACTERISTIC



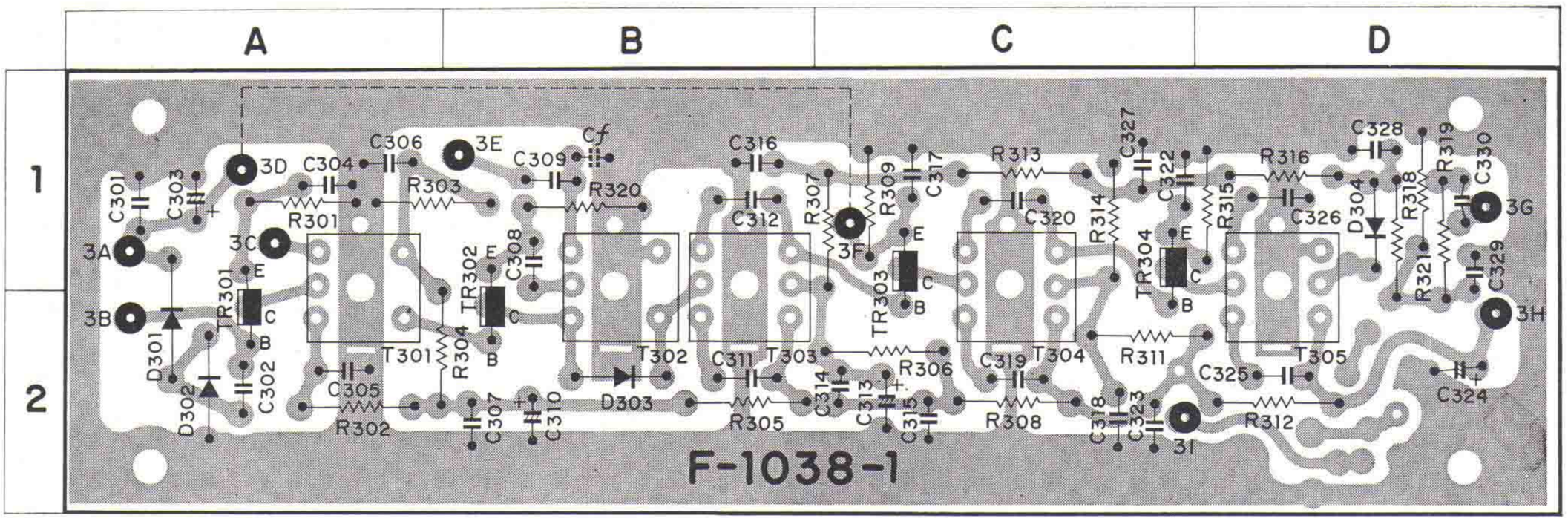
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No. **Y:** Parts Neme **Z:** Position of Parts

AM IF BLOCK 〈F-1038-1〉

X	Y	Z
R301	1kΩ ±10% ¼W Carbon Resistor	1 A
R302	100Ω ±10% ¼W Carbon Resistor	2 A
R303	3.9kΩ ±10% ¼W Carbon Resistor	1 A , B
R304	33kΩ ±10% ¼W Carbon Resistor	2 A , B
R305	100Ω ±10% ¼W Carbon Resistor	2 B
R306	56kΩ ±10% ¼W Carbon Resistor	2 C
R307	22Ω ±10% ¼W Carbon Resistor	1 C
R308	22Ω ±10% ¼W Carbon Resistor	2 C
R309	1kΩ ±10% ¼W Carbon Resistor	1 C
R311	10kΩ ±10% ¼W Carbon Resistor	2 C , D
R312	22Ω ±10% ¼W Carbon Resistor	2 D
R313	100Ω ±10% ¼W Carbon Resistor	1 C
R314	6.8kΩ ±10% ¼W Carbon Resistor	1 C
R315	470Ω ±10% ¼W Carbon Resistor	1 D
R316	8.2kΩ ±10% ¼W Carbon Resistor	1 D
R318	1kΩ ±10% ¼W Carbon Resistor	1 D
R319	120kΩ ±10% ¼W Carbon Resistor	1, 2 D
R320	1kΩ ±10% ¼W Carbon Resistor	1 B
R321	4.7kΩ ±10% ¼W Carbon Resistor	1, 2 D
C301	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 A
C302	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 A
C303	100μF 6.3 WV Electrolytic Caaacitor	1 A
C304	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 A
C305	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 A
C306	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 A
C307	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 B
C308	0.01μF ±10% 50 WV Mylar Capacitor	1 B
C309	530 pF ± 5 % 50 WV Mica Capacitor	1 B
C310	100μF 16 WV Electrolytic Caaacitor	2 B
C311	500 pF ± 5 % 50 WV Mica Capacitor	2 B
C312	500 pF ± 5 % 50 WV Mica Capacitor	1 B
C313	10μF 16 WV Electrolytic Capacitor	2 C
C314	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 C

X	Y	Z
C315	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 C
C316	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 B
C317	47μF 6.3 WV Electrolytic Capacitor	1 C
C318	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 C
C319	500 pF ± 5 % 50 WV Mica Capacitor	2 C
C320	500 pF ± 5 % 50 WV Mica Capacitor	1 C
C322	0.04μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 C
C323	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	2 C
C324	220μF 16 WV Electrolytic Capacitor	2 D
C325	500 pF ± 5 % 50 WV Mica Capacitor	2 D
C326	500 pF ± 5 % 50 WV Mica Capacitor	1 D
C327	0.02μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	1 C
C328	0.02μF $^{+80}_{-20}$% 50 WV Mylar Capacitor	1 D
C329	0.01μF ±10% 50 WV Mylar Capacitor	1 D
C330	0.04μF ±10% 50 WV Mylar Capacitor	1 D
C332	0.005μF $^{+80}_{-20}$% 25 WV Ceramic Capacitor	
T301	AM RF (421005)	1, 2 A
T302	AM OSC (422007)	1, 2 B
T303	AM IFT 455kHz (423019)	1, 2 B
T304	AM IFT 455kHz (423019)	1, 2 C
T305	AM IFT 455kHz (423018)	1, 2 D
D301	IN60 (031040)	1, 2 A
D302	IN60 (031040)	2 A
D303	IN60 (031040)	2 B
D304	IN60 (031040)	1 D
TR301	2SC460 (030535)	1, 2 A
TR302	2SC460 (030535)	1, 2 B
TR303	2SC460 (030535)	1, 2 C
TR304	2SC460 (030535)	1, 2 C

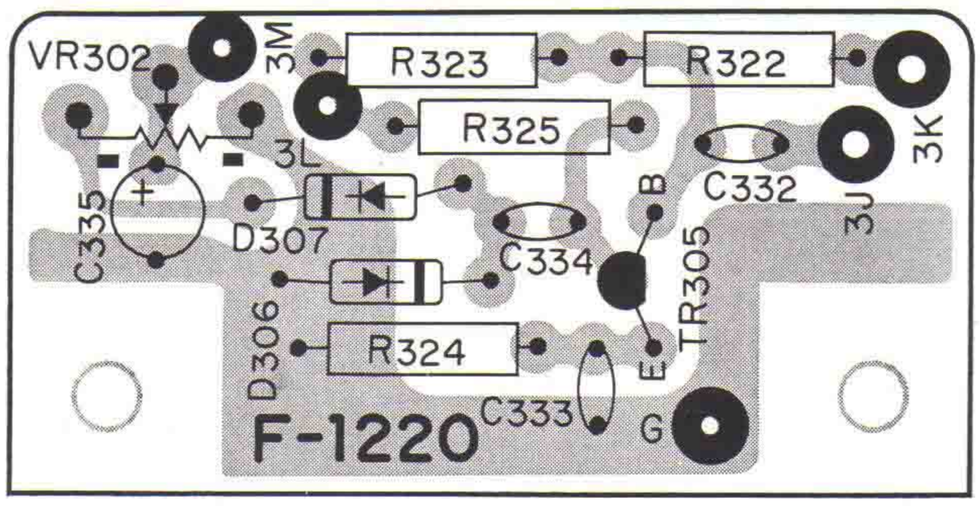


PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No. **Y:** Parts Name **Z:** Position of Parts

AM METER BLOCK 〈F-1220〉

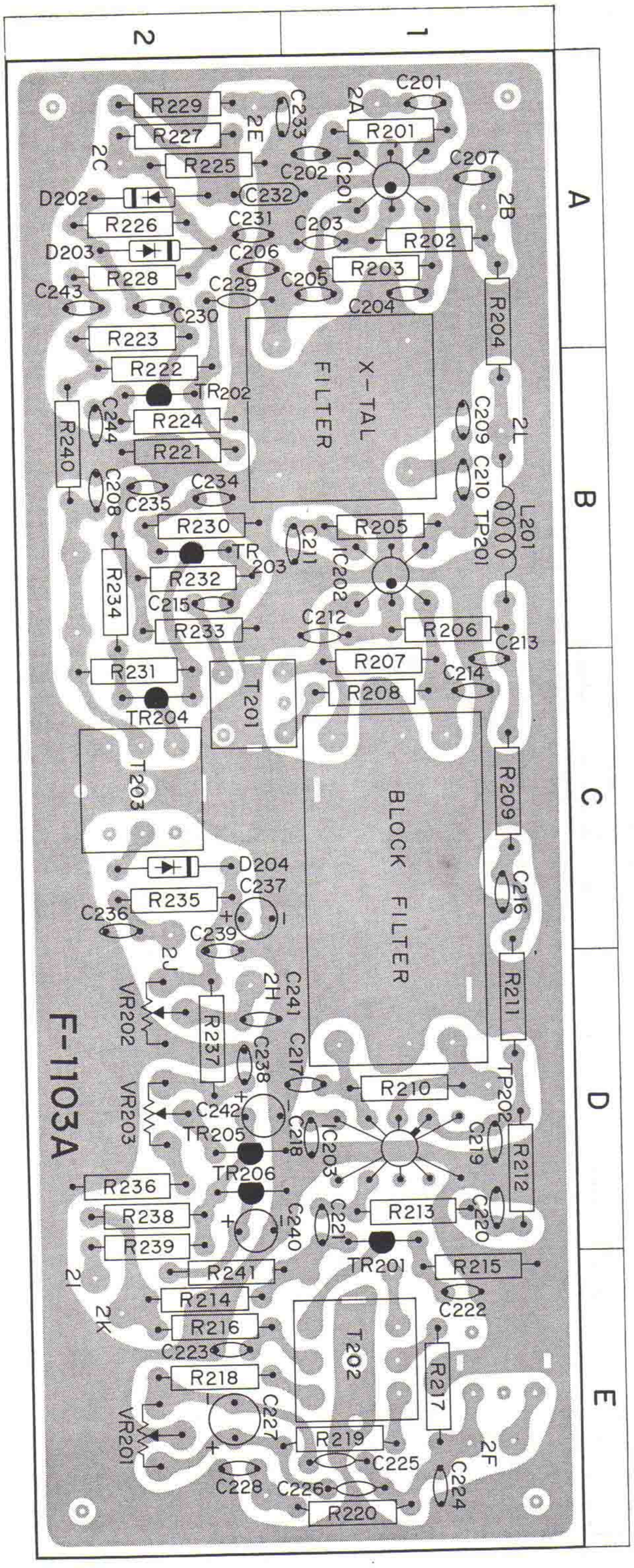
X	Y
R322	68kΩ ±10% ¼W Carbon Resistor
R323	330kΩ ±10% ¼W Carbon Resistor
R324	2.2kΩ ±10% ¼W Carbon Resistor
R325	4.7kΩ ±10% ¼W Carbon Resistor
C332	0.01μF 50 WV Ceramic Capacitor
C333	0.001μF 50 WV Ceramic Capacitor
C334	0.01μF 50 WV Ceramic Capacitor
C335	1μF 50 WV Ceramic Capacitor
VR302	50kΩB Meter Adjustment (103049)
D306	IN60 (031033)
D307	IN60 (031033)
TR305	2SC460(B) (030535～1)



FM IM BLOCK 〈F-1103A〉

X	Y	Z
R201	1kΩ ¼W ±10% Carbon Resistor	1 A
R202	47Ω ¼W ±10% Carbon Resistor	1 A
R203	1.2kΩ ¼W ±10% Carbon Resistor	1 A
R204	10Ω ¼W ±10% Carbon Resistor	1 A, B
R205	1kΩ ¼W ±10% Carbon Resistor	1 B
R206	47Ω ¼W ±10% Carbon Resistor	1 B
R207	1.2kΩ ¼W ±10% Carbon Resistor	1 C
R208	47Ω ¼W ±10% Carbon Resistor	1 C
R209	10Ω ¼W ±10% Carbon Resistor	1 C
R210	820Ω ¼W ±10% Carbon Resistor	1 D
R211	470Ω ¼W ±10% Carbon Resistor	1 D
R212	10Ω ¼W ±10% Carbon Resistor	1 D
R213	1kΩ ¼W ±10% Carbon Resistor	1 D
R214	330kΩ ¼W ±10% Carbon Resistor	2 E
R215	1kΩ ¼W ±10% Carbon Resistor	1 E
R216	10Ω ¼W ±10% Carbon Resistor	2 E
R217	100Ω ¼W ±10% Carbon Resistor	1 E
R218	1kΩ ¼W ±10% Carbon Resistor	2 E
R219	1kΩ ¼W ±10% Carbon Resistor	1, 2 E
R220	15kΩ ¼W ±10% Carbon Resistor	1, 2 E
R221	47kΩ ¼W ±10% Carbon Resistor	2 B
R222	220kΩ ¼W ±10% Carbon Resistor	2 B
R223	1.8kΩ ¼W ±10% Carbon Resistor	2 A
R224	470Ω ¼W ±10% Carbon Resistor	2 B
R225	47kΩ ¼W ±10% Carbon Resistor	2 A
R226	680kΩ ¼W ±10% Carbon Resistor	2 A
R227	680kΩ ¼W ±10% Carbon Resistor	2 A
R228	220kΩ ¼W ±10% Carbon Resistor	2 A
R229	330kΩ ¼W ±10% Carbon Resistor	2 A
R230	47Ω ¼W ±10% Carbon Resistor	2 B
R231	1.2kΩ ¼W ±10% Carbon Resistor	2 C
R232	10kΩ ¼W ±10% Carbon Resistor	2 B
R233	820Ω ¼W ±10% Carbon Resistor	2 B
R234	100Ω ¼W ±10% Carbon Resistor	2 B
R235	33kΩ ¼W ±10% Carbon Resistor	2 C
R236	56kΩ ¼W ±10% Carbon Resistor	2 D
R237	12kΩ ¼W ±10% Carbon Resistor	2 D
R238	47kΩ ¼W ±10% Carbon Resistor	2 D
R240	10Ω ¼W ±10% Carbon Resistor	2 B
C201	0.001μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C202	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C203	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C204	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C205	0.001μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C206	2.2pF 25 WV ±10% Ceramic Capacitor	2 A
C207	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 A
C208	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	2 B
C209	6.8pF 25 WV ±10% Ceramic Capacitor	1 B
C210	0.001μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 B
C211	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 B
C212	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 B
C213	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 C
C214	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 C
C215	15pF 50 WV ±10% Mica Capacitor	2 B
C216	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 C
C217	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1, 2 D
C218	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 D
C219	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 D
C220	0.02μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 D
C221	0.001μF 25 WV $^{+80}_{-20}$% Ceramic Capacitor	1 D

X	Y				Z
C_{222}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	1 E
C_{223}	0.05μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 E
C_{224}	100 pF	50 WV	±10%	Ceramic Capacitor	1 E
C_{225}	150 pF	50 WV	±10%	Ceramic Capacitor	1, 2 E
C_{226}	150 pF	50 WV	±10%	Ceramic Capacitor	1 E
C_{227}	10μF	10 WV		Electrolytic Capacitor	2 E
C_{228}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 E
C_{229}	22 pF	50 WV	±10%	Ceramic Capacitor	2 A
C_{230}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 A
C_{231}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 A
C_{232}	0.1μF	50 WV	±10%	Mylar Capacitor	1, 2 A
C_{233}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	1, 2 A
C_{234}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 B
C_{235}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 B
C_{236}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 C
C_{238}	0.01μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 D
C_{239}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 C
C_{240}	10μF	25 WV		Electrolytic Capacitor	2 D
C_{241}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 D
C_{242}	0.02μF	50 WV	±10%	Mylar Capacitor	2 D
C_{243}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 A
C_{244}	0.02μF	25 WV	$^{+80}_{-20}$%	Ceramic Capacitor	2 B
TR_{201}	2SC460	Si N-P-N		030535	1 D
TR_{202}	2SC460	Si N-P-N		030535	2 B
TR_{203}	2SC460	Si N-P-N		030535	2 B
TR_{204}	2SC460	Si N-P-N		030535	2 C
TR_{205}	2SC458	Si N-P-N		030531	2 D
TR_{206}	2SC458	Si N-P-N		030531	2 D
D_{202}	IN60			031033-1	2 A
D_{203}	IN60			031033-1	2 A
D_{204}	IN60			031033-1	2 C
IC_{201}	PA7703				1 A
IC_{202}	PA7703				1 B
IC_{203}	TA7027M				1 D
VR_{201}	20kΩB FM Tuning Meter Adjustor			103046	2 E
VR_{202}	50kΩB FM Signal Meter			103020	2 D
L_{201}	3.5μH Peaking Coil				1 B
X,F_{201}	KF-130 Crystal Filter			091008	1 B
X,B_{201}	BMZ-1A Block Filter			423559	1 C
T_{201}	FM IFT			423557	2 C
T_{202}	FM IFT			423558	2 E
T_{203}	FM IFT			423531	2 C



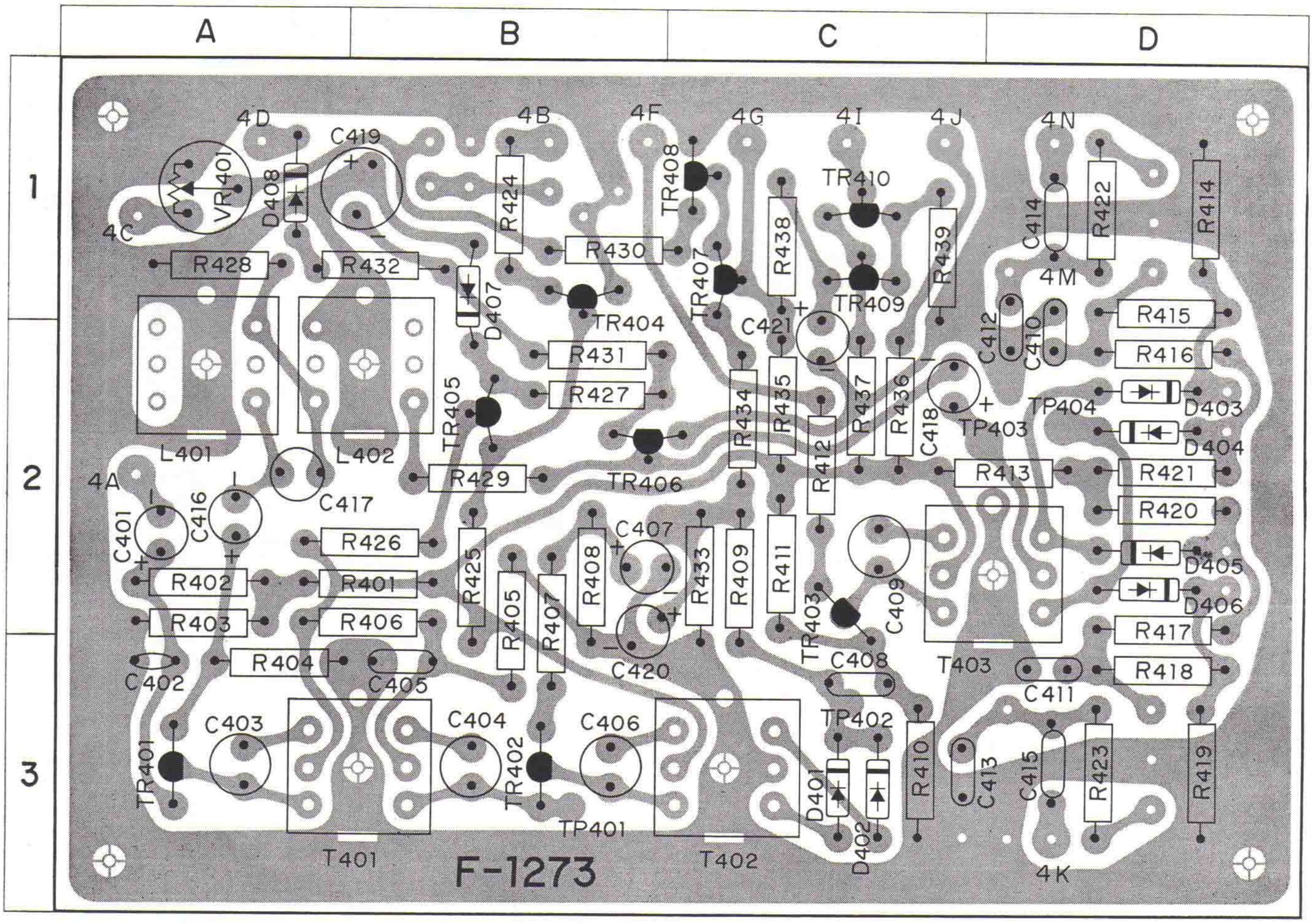
PRINTED CIRCUIT BOARDS AND PARTS LIST

X: Parts No. **Y:** Parts Name **Z:** Position of Parts

MPX BLOCK 〈F-1273〉

X	Y	Z
R401	560kΩ ¼W ±10% Carbon Resistor	2 A , B
R402	47kΩ ¼W ±10% Carbon Resistor	2 A
R403	100kΩ ¼W ±10% Carbon Resistor	2 A
R404	680Ω ¼W ±10% Carbon Resistor	3 A
R405	27kΩ ¼W ±10% Carbon Resistor	2, 3 B
R406	330kΩ ¼W ±10% Carbon Resistor	2 A , B
R407	330Ω ¼W ±10% Carbon Resistor	2, 3 B
R408	1.2kΩ ¼W ±10% Carbon Resistor	2, 3 B
R409	10kΩ ¼W ±10% Carbon Resistor	2, 3 C
R410	27kΩ ¼W ±10% Carbon Resistor	3 C
R411	270kΩ ¼W ±10% Carbon Resistor	2 C
R412	1.5kΩ ¼W ±10% Carbon Resistor	2 C
R413	270kΩ ¼W ±10% Carbon Resistor	2 C , D
R414	220kΩ ¼W ±10% Carbon Resistor	1 D
R415	10kΩ ¼W ±10% Carbon Resistor	1 D
R416	10kΩ ¼W ±10% Carbon Resistor	2 D

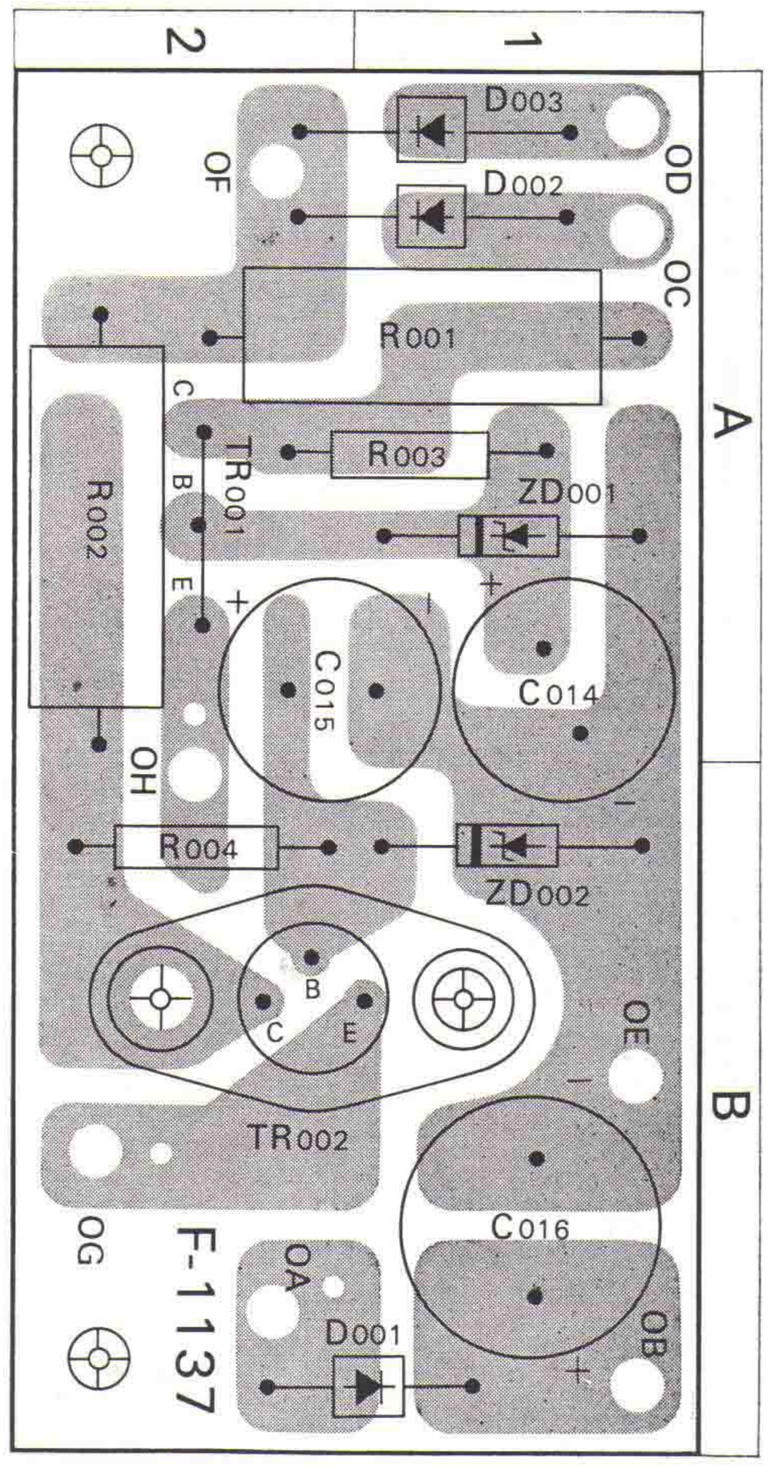
X	Y	Z
R417	10kΩ ¼W ±10% Carbon Resistor	2 D
R418	10kΩ ¼W ±10% Carbon Resistor	3 D
R419	220kΩ ¼W ±10% Carbon Resistor	3 D
R420	220kΩ ¼W ±10% Carbon Resistor	2 D
R421	220kΩ ¼W ±10% Carbon Resistor	2 D
R422	56kΩ ¼W ±10% Carbon Resistor	1 D
R423	56kΩ ¼W ±10% Carbon Resistor	3 D
R424	47kΩ ¼W ±10% Carbon Resistor	1 B
R425	47kΩ ¼W ±10% Carbon Resistor	2, 3 B
R426	100Ω ¼W ±10% Carbon Resistor	2 A , B
R427	8.2kΩ ¼W ±10% Carbon Resistor	2 B
R428	8.2kΩ ¼W ±10% Carbon Resistor	1 A
R429	1kΩ ¼W ±10% Carbon Resistor	2 B
R430	47kΩ ¼W ±10% Carbon Resistor	1 B , C
R431	22kΩ ¼W ±10% Carbon Resistor	2 B
R433	15kΩ ¼W ±10% Carbon Resistor	2, 3 C



X	Y			Z
R434	1kΩ ¼W ±10%	Carbon Resistor		2C
R435	22kΩ ¼W ±10%	Carbon Resistor		2C
R436	4.7Ω ¼W ±10%	Carbon Resistor		2C
R437	2.7kΩ ½W ±10%	Solid Resistor		2C
R438	22kΩ ¼W ±10%	Carbon Resistor		1C
R439	4.7Ω ¼W ±10%	Carbon Resistor		1C
C401	1μF 50 WV	Electrolytic Capacitor		2A
C402	47 pF 50 WV	Ceramic Capacitor		3A
C403	6800 pF 50 WV ± 5 %	Styrol Capacitor		3A
C404	6800 pF 50 WV ± 5 %	Styrol Capacitor		3B
C405	0.047μF 50 WV ±10%	Mylar Capacitor		3B
C406	6800 pF 50 WV ± 5 %	Styrol Capacitor		3B
C407	1μF 50 WV	Electrolytic Capacitor		2B, C
C408	0.047μF 50 WV ± 5 %	Mylar Capacitor		3C
C409	4700 pF 50 WV ± 5 %	Styrol Capacitor		2C
C410	560 pF 50 WV ± 5 %	Styrol Capacitor		1, 2D
C411	560 pF 50 WV ± 5 %	Styrol Capacitor		3D
C412	0.0012μF 50 WV ±10%	Styrol Capacitor		1, 2D
C413	0.0012μF 50 WV ±10%	Styrol Capacitor		3C
C414	0.1μF 50 WV ±10%	Mylar Capacitor		1D
C415	0.1μF 50 WV ±10%	Mylar Capacitor		3D
C416	47μF 16 WV	Electrolytic Capacitor		2A
C417	2200 pF 50 WV ± 5 %	Styrol Capacitor		2A
C418	10μF 25 WV	Electrolytic Capacitor		2C
C419	220μF 10 WV	Electrolytic Capacitor		1B
C420	1μF 50 WV	Electrolytic Capacitor		2, 3B
C421	1μF 50 WV	Electrolytic Capacitor		2C
TR401	2SC871 (E, F)	Si N-P-N	030547	3A
TR402	2SC871 (E, F)	Si N-P-N	030547	3B
TR403	2SC871 (E, F)	Si N-P-N	030547	2C
TR404	2SC871 (F, G)	Si N-P-N	030547	1B
TR405	2SC871 (F, G)	Si N-P-N	030547	2B
TR407	2SC733 (Y, GR)	Si N-P-N	030537	1C
TR408	2SC733 (Y, GR)	Si N-P-N	030537	1C
TR409	2SC871 (F, G)	Si N-P-N	030547	1C
TR410	2SC735 (Y, GR)	Si N-P-N	030564	1C
D401	IN34A		031040	3C
D402	IN34A		031040	3C
D403	IN34A Yellow		031040-1	2D
D404	IN34A Yellow		031040-1	2D
D405	IN34A Yellow		031040-1	2D
D406	IN34A Yellow		031040-1	2D
D407	IN34A		031040	1, 2B
D408	10D1		031034	1A
VR401	220kΩ FM Stereo Indicator Level Adjustor		103521	1A
L401	68kHz SCA Coil Trap		424047	1, 2A
L402	71kHz SCA Coil Trap		424025	1, 2A, B
T401	19kHz Tuning Transformer		424021	3A, B
T402	19kHz Tuning Transformer		424022	3C
T403	38kHz Switching Transformer		424048	2C, D

POWER CIRCUIT BLOCK ⟨F-1137A⟩

X	Y			Z
R001	33Ω 3 W ±10%	Cement Resistor		1, 2A
R002	180Ω 3 W ±10%	Cement Resistor		2A
R003	3.3kΩ ½W ±10%	Solid Resistor		1, 2A
R004	1.5kΩ ½W ±10%	Solid Resistor		2B
C014	330μF 50 WV	Electrolytic Capacitor		1A
C015	330μF 16 WV	Electrolytic Capacitor		1, 2A
C016	1000μF 10 WV	Electrolytic Capacitor		1A
TR001	2SC696 (D, A) Si N-P-N		030519	2A
TR002	2SD223 (Y, G) Si N-P-N		030823	1, 2B
D001	SW-05-02		031017	1, 2B
D002	SW-05-02		031017	1, 2A
D003	SW-05-02		031017	1, 2A
ZD001	ZB1-27		031075	1A
ZD002	CD360030		031079	1B

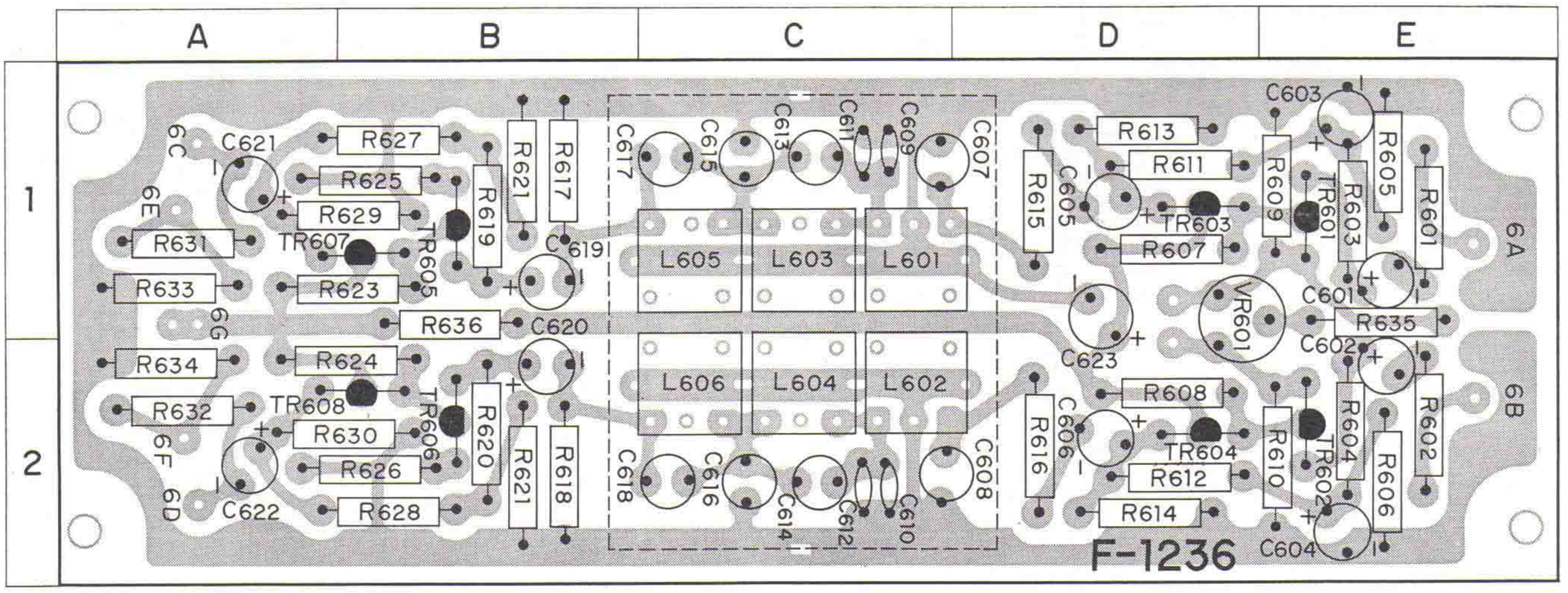


PRINTED CIRCUIT BOARDS AND PARTS LIST

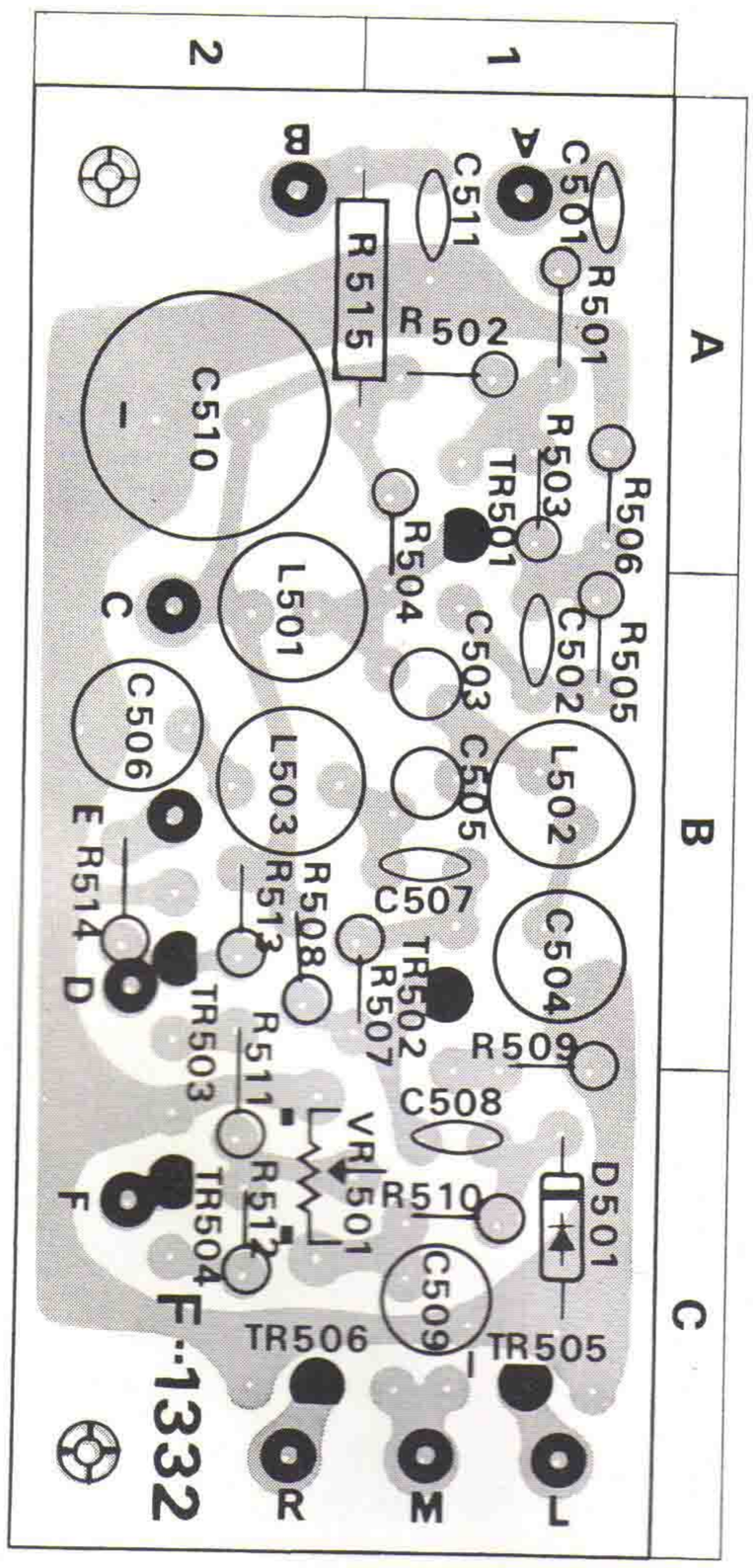
X: Parts No. **Y:** Parts Name **Z:** Position of Parts

AUDIO AMP BLOCK 〈F-1236〉

X	Y	Z
R601	1.8kΩ ¼W ±10% Carbon Resistor	1 E
R602	1.8kΩ ¼W ±10% Carbon Resistor	2 E
R603	100kΩ ¼W ±10% Carbon Resistor	1 E
R604	100kΩ ¼W ±10% Carbon Resistor	2 E
R605	220kΩ ¼W ±10% Carbon Resistor	1 E
R606	220kΩ ¼W ±10% Carbon Resistor	2 E
R607	12kΩ ¼W ±10% Carbon Resistor	1 D
R608	12kΩ ¼W ±10% Carbon Resistor	2 D
R609	3.3kΩ ¼W ±10% Carbon Resistor	1 E
R610	3.3kΩ ¼W ±10% Carbon Resistor	2 E
R611	220kΩ ¼W ±10% Carbon Resistor	1 D
R612	220kΩ ¼W ±10% Carbon Resistor	2 D
R613	3.3kΩ ¼W ±10% Carbon Resistor	1 D
R614	3.3kΩ ¼W ±10% Carbon Resistor	2 D
R615	3.3kΩ ¼W ±10% Carbon Resistor	1 D
R616	3.3kΩ ¼W ±10% Carbon Resistor	2 D
R617	10kΩ ¼W ±10% Carbon Resistor	1 B
R618	10kΩ ¼W ±10% Carbon Resistor	2 B
R619	330kΩ ¼W ±10% Carbon Resistor	1 B
R620	330kΩ ¼W ±10% Carbon Resistor	2 B
R621	100kΩ ¼W ±10% Carbon Resistor	1 B
R622	100kΩ ¼W ±10% Carbon Resistor	2 B
R623	8.2kΩ ¼W ±10% Carbon Resistor	1 A , B
R624	8.2kΩ ¼W ±10% Carbon Resistor	2 A , B
R625	1kΩ ¼W ±10% Carbon Resistor	1 A , B
R626	1kΩ ¼W ±10% Carbon Resistor	2 A , B
R627	220kΩ ¼W ±10% Carbon Resistor	1 A , B
R628	220kΩ ¼W ±10% Carbon Resistor	2 A , B
R629	5.6kΩ ¼W ±10% Carbon Resistor	1 A , B
R630	5.6kΩ ¼W ±10% Carbon Resistor	2 A , B
R631	33kΩ ¼W ±10% Carbon Resistor	1 A
R632	33kΩ ¼W ±10% Carbon Resistor	2 A
R633	8.2kΩ ¼W ±10% Carbon Resistor	1 A
R634	8.2kΩ ¼W ±10% Carbon Resistor	2 A
R635	180Ω ¼W ±10% Carbon Resistor	1 E
R636	47Ω ¼W ±10% Carbon Resistor	1 B
C601	0.1μF 50 WV Alum. Solid Electrolytic Capacitor	1 E
C602	0.1μF 50 WV Alum. Solid Electrolytic Capacitor	2 E
C603	10μF 25 WV Electrolytic Capacitor	1 E
C604	10μF 25 WV Electrolytic Capacitor	2 E
C605	1μF 50 WV Electrolytic Capacitor	1 D
C606	1μF 50 WV Electrolytic Capacitor	2 D
C607	2200pF 50 WV ± 5 % Styrol Capacitor	1 C
C608	2200pF 50 WV ± 5 % Styrol Capacitor	2 C
C609	2200pF 50 WV ±10% Mylar Capacitor	1 C
C610	2200pF 50 WV ±10% Mylar Capacitor	2 C
C611	2200pF 50 WV ±10% Mylar Capacitor	1 C
C612	2200pF 50 WV ±10% Mylar Capacitor	2 C
C613	2200pF 50 WV ± 5 % Styrol Capacitor	1 C
C614	2200pF 50 WV ± 5 % Styrol Capacitor	2 C
C615	2200pF 50 WV ± 5 % Styrol Capacitor	1 C
C616	2200pF 50 WV ± 5 % Styrol Capacitor	2 C
C617	1500pF 50 WV ± 5 % Styrol Capacitor	1 C
C618	1500pF 50 WV ± 5 % Styrol Capacitor	2 C
C619	1μF 50 WV Electrolytic Capacitor	1 B
C620	1μF 50 WV Electrolytic Capacitor	2 B
C621	10μF 25 WV Electrolytic Capacitor	1 A
C622	10μF 25 WV Electrolytic Capacitor	2 A
C623	47μF 50 WV Electrolytic Capacitor	1 D
VR601	22kΩ M.P.X. Separation Adjustor 103515	1, 2 D , E
TR601	2SC631 (71) Si N-P-N 030532	1 E
TR602	2SC631 (71) Si N-P-N 030532	2 E



X	Y		Z
TR603	2SC631 (71) Si N-P-N	030532	1 D
TR604	2SC631 (71) Si N-P-N	030532	2 D
TR605	2SC631 (72) Si N-P-N	030532	1 B
TR606	2SC631 (72) Si N-P-N	030532	2 B
TR607	2SC631 (72) Si N-P-N	030632	1 A , B
TR608	2SC631 (72) Si N-P-N	030532	2 A , B
L601	19kC Low Pass Filter Coil	424040	1 C
L602	19kC Low Pass Filter Coil	424040	2 C
L603	19kC Low Pass Filter Coil	424040	1 C
L604	19kC Low Pass Filter Coil	424040	2 C
L605	19kC Low Pass Filter Coil	424040	1 C
L606	19kC Low Pass Filter Coil	424040	2 C



MUTING ⟨F-1332⟩

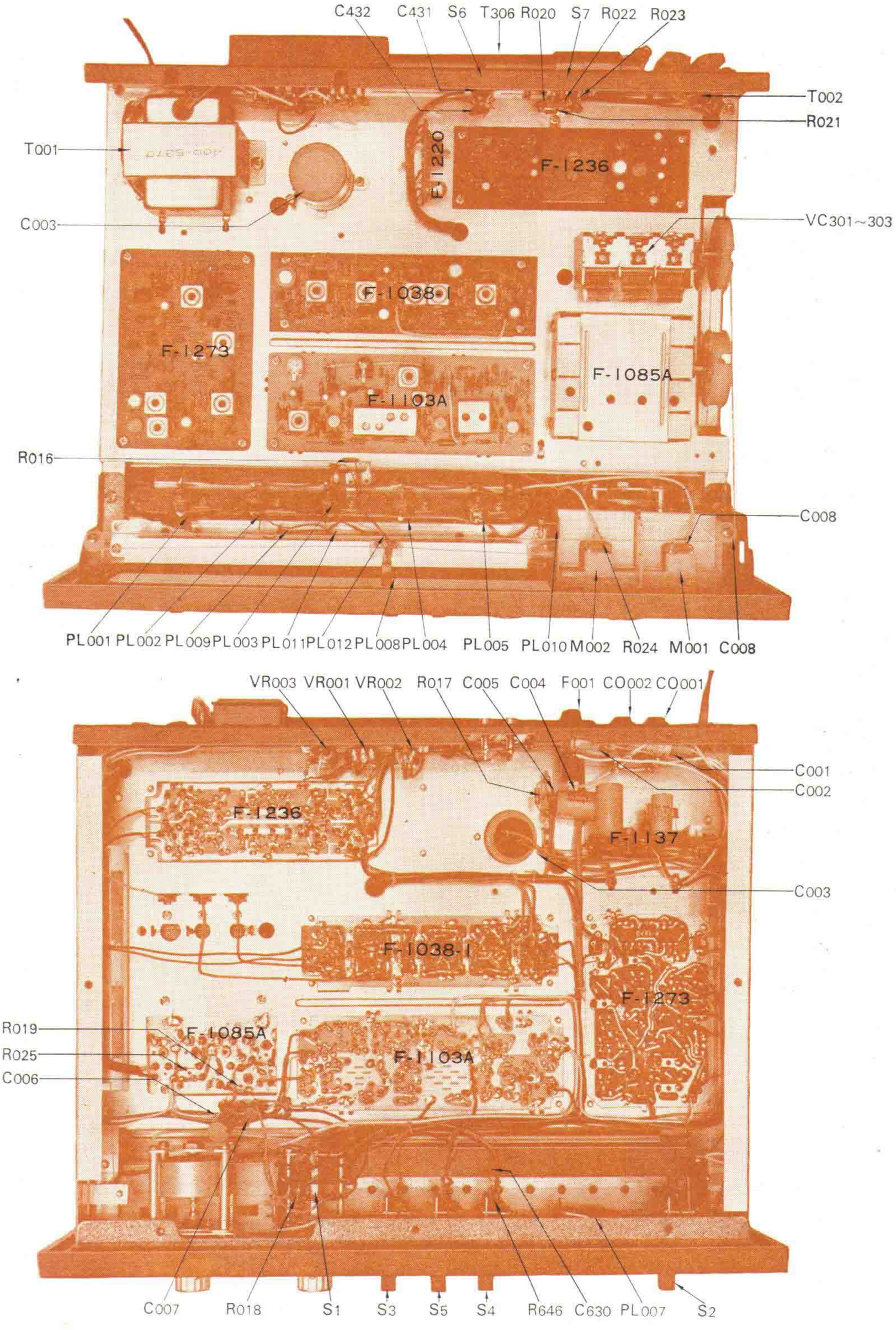
X	Y		Z
R501	15KΩ ¼W ±10% Carbon Resistor		1 A
R502	100KΩ ¼W ±10% Carbon Resistor		1 A
R503	33KΩ ¼W ±10% Carbon Resistor		1 A
R504	6.8KΩ ¼W ±10% Carbon Resistor		1 A
R505	560Ω ¼W ±10% Carbon Resistor		1 B
R506	820Ω ¼W ±10% Carbon Resistor		1 A
R507	1MΩ ¼W ±10% Carbon Resistor		1 B
R508	3.3KΩ ¼W ±10% Carbon Resistor		2 B
R509	68Ω ¼W ±10% Carbon Resistor		1 B , C
R510	3.3KΩ ¼W ±10% Carbon Resistor		1 C
R511	47KΩ ¼W ±10% Carbon Resistor		2 B , C
R512	47KΩ ¼W ±10% Carbon Resistor		2 C
R513	47KΩ ¼W ±10% Carbon Resistor		2 B
R514	22KΩ ¼W ±10% Carbon Resistor		2 B
R515	33Ω ½W ±10% Solid Resistor		1, 2 A
C501	0.001μF 25WV +80 −20% Ceramic Capacitor		1 A
C502	0.02μF 25WV +80 −20% Ceramic Capacitor		1 B
C503	220pF 50WV ± 5 % Styrol Capacitor		1 B
C504	4700pF 50WV ± 5 % Styrol Capacitor		1 B
C505	220pF 50WV ± 5 % Styrol Capacitor		1 B
C506	4700pF 50WV ± 5 % Styrol Capacitor		2 B
C507	0.02μF 25WV +80 −20% Ceramic Capacitor		1 B
C508	0.02μF 25WV +80 −20% Ceramic Capacitor		1 C
C509	0.68μF 50WV Alum. Solid Electrolytic Capacitor		1 C
C510	100μF 50WV Electrolytic Capacitor		2 A
C511	0.04μF 50WV +80 −20% Ceramic Capacitor		1 A
VR501	100kΩ (B)	103114	1, 2 C
TR501	2SC711 (E, F) Si N-P-N	030573	1 A
TR502	2SC711 (E, F) Si N-P-N	030573	1 B
TR503	2SC711 (E, F) Si N-P-N	030573	2 B
TR504	2SC711 (E, F) Si N-P-N	030573	2 C
TR505	2SC733 (O, Y) Si N-P-N	030537	1 C
TR506	2SC733 (O, Y) Si N-P-N	030537	2 C
D501	IN60	031033	1 C
L501	1mH Micro Inductor	490012	2 B
L502	2.2mH Micro Inductor	490009	1 B
L503	2.2mH Micro Inductor	490009	2 B

OTHER PARTS AND THEIR POSITION ON CHASSIS

X: Parts No. **Y:** Parts Name

X	Y
R016	18Ω ¼W ±10% Carbon Resistor
R018	120Ω ½W ±10% Solid Resistor
R019	10Ω ¼W ±10% Carbon Resistor
R020	47kΩ ¼W ±10% Carbon Resistor
R021	680kΩ ¼W ±10% Carbon Resistor
R022	27kΩ ¼W ±10% Carbon Resistor
R023	1.8kΩ ¼W ±10% Carbon Resistor
R025	680kΩ ¼W ±10% Carbon Resistor
R026	47kΩ ¼W ±10% Carbon Resistor
R027	3.9Ω ½W ±10% Solid Resistor
R241	47kΩ ¼W ±10% Carbon Resistor
R336	390kΩ ¼W ±10% Carbon Resistor
R449	560kΩ ¼W ±10% Carbon Resistor
R450	560kΩ ¼W ±10% Carbon Resistor
R646	6.8kΩ ¼W ±10% Carbon Resistor
R647	560kΩ ¼W ±10% Carbon Resistor
R648	560kΩ ¼W ±10% Carbon Resistor
C001	0.033μF 600WV Oil Capacitor
C002	0.0047μF 600WV Oil Capacitor
C003	2200μF 50WV Electrolytic Capacitor
C006	100μF 16WV Electrolytic Capacitor
C007	0.04μF 50WV Ceramic Capacitor
C008	33μF 10WV Electrolytic Capacitor
C017	0.01μF 500WV Ceramic Capacitor
C018	0.01μF 500WV Ceramic Capacitor
C431	680pF 50WV Mica Capacitor
C432	680pF 50WV Mica Capacitor
C435	0.68μF 50WV Alum. Solid Electrolytic Capacitor
C436	10μF 25WV Electrolytic Capacitor
C630	0.001μF 50WV Mylar Capacitor
PL001	6.3V 0.25A Pilot Lamp (040009)
PL002	6.3V 0.25A Pilot Lamp (040009)
PL003	6.3V 0.25A Pilot Lamp (040009)
PL004	6.3V 0.25A Pilot Lamp (040009)
PL005	6.3V 0.25A Pilot Lamp (040009)
PL006	6.3V 0.25A Pilot Lamp (040009)
PL007	6.3V 0.25A Pilot Lamp (040009)
PL008	5V 60mA Dial Pointer Lamp (040010)
PL009	7V 200mA Pilot Lamp (040015)
PL010	6.3V 0.25mA Pilot Lamp (040019)
PL011	7V 200mA Pilot Lamp (040015)
PL012	7V 200mA Pilot Lamp (040015)
M001	200μA 1200Ω Signal Meter (090031)
M002	100μA-0-100μA 1200Ω (090032)
VR001	10k(B) Output Adjustor (100502-1)
VR002	10k(B) Output Adjustor (100502-1)
VR002	100k(B) Muting Adjustor (100504-1)
S1a~f	Y-4-10-4 Rotary Switch (110419)
S2	S321-112 Power Switch (117011)
S3	S321-122 Muting Switch (117012)
S4	S321-122 Noise Canceler Switch (117012)
S5	S321-122 Stereo only Switch (117015)

X	Y
S6	SL 13-8-10H De-emphasis Switch (111004)
S7	SLB 05×23-2 AGC Switch (111011)
VC301~303	AM Variable Capacitor B6369GS-212 (120002)
F001	AC Fuse 1A 250V (043002)
CO001	AC Outlet (245001-1)
CO002	AC Outlet (245001-1)
T001	Power Transformer 400-5370 (400057)
T002	300Ω-75Ω (429002-2)
T306	AM Bar Antenna ARS 43A (420030)


C432
C431
S6
T306
R020
S7
R022
R023
T002
R021
T001
C003
VC301~303
R016
C008
VR003
VR001
VR002
R017
C005
C004
F001
CO002
CO001
C001
C002
C003
R019
R025
C006
C007
R018
S1
S3
S5
S4
R646
C630
PL007
S2
PL001
PL002
PL009
PL003
PL011
PL012
PL008
PL004
PL005
PL010
M002
R024
M001
C008
F-1220
F-1236
F-1038-1
F-1273
F-1085A
F-1103A
F-1137

Sansui

SANSUI ELECTRIC COMPANY LIMITED

Head Office: 14-1, 2-chome, Izumi, Suginami-ku, Tokyo, Japan. TEL. 323-1111

Printed in Japan (41510M5)