



We are grateful for your choice of the TU-9500 AM/FM Stereo Tuner.

For over a quarter of a century, Sansui has been building hi-fi audio equipment, and nothing else. Our mission is very old and at once ever new to use: to bring the reproduced sound closer and closer to the original.

The TU-9500 now in your hands is one answer from us to this never-ending quest. It is a product of the cream of highly advanced modern audio-electronics knowhow, coupled with our long experience. As such, we present it to you with our full confidence. It offers a multitude of high-performance features, among which are: a sensitive FM frontend utilizing 3 dual-gated MOS FET's and a 5-gang variable capacitor; a low-distortion FM IF amplifier with four bi-resonator ceramic filters and three IC's; a multiplex circuit employing a differential demodulator for improved separation and phase linearity; a sensitive and selective AM tuner with an RF stage and a ceramic filter; a multi-path terminal for correct installation of an FM antenna, and a discriminator output terminal for receiving future discrete 4-channel broadcasts. It also has such refinements as an FM muting switch, an FM/AM noise suppressor switch, two large tuning meters, an FM muting level control, and an FM-75Ω COAXIAL CABLE terminal.

This manual has been prepared to guide you in operating and caring for the tuner correctly, so that you will obtain the most out of its built-in high performance.

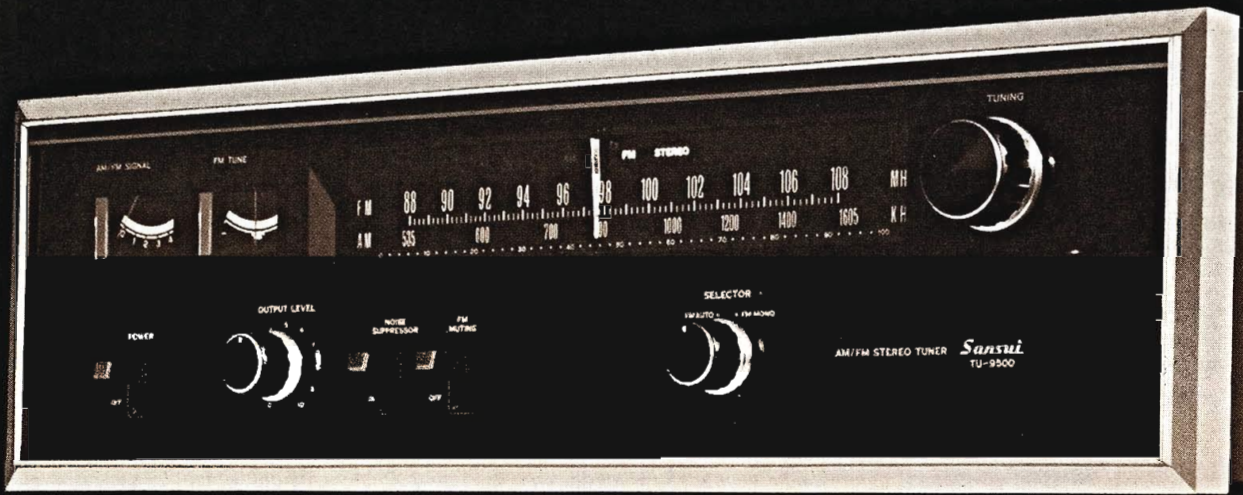
May we suggest that you read it once carefully?

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# SWITCHES AND CONTROLS

## Signal and Tuning Meters

Tune in the desired station while watching these meters.

### If you are tuning in an FM station:

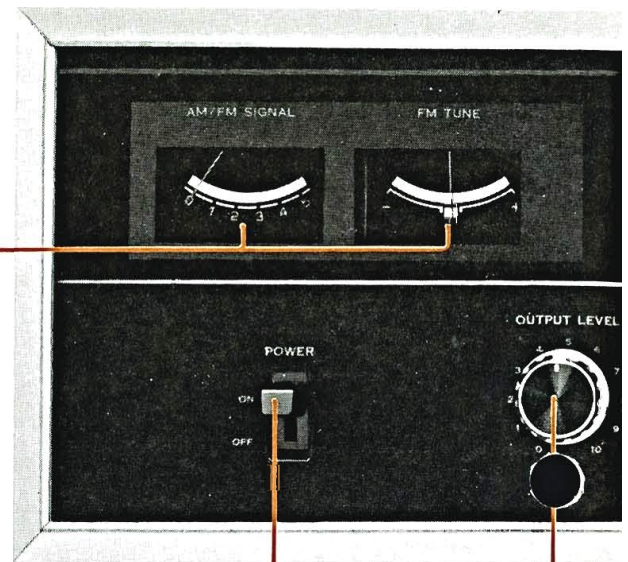
Adjust the Tuning Control first for maximum deflection of the Signal Meter on the left. Then adjust it so that the Tuning Meter on the right will indicate the exact center. The tuner will pinpoint the station and receive it with the best tone quality.

### If you are tuning in an AM station:

Simply adjust the Tuning Control for maximum deflection of the Signal Meter. Ignore the Tuning Meter when tuning on AM.

## AM Indicator

Lights when the Selector Control is set to AM.



## Power Switch

Pull up to ON to turn on the tuner.

## Output Level Control

Adjusts the output signal level of the tuner. Turn clockwise to increase it.

### Important

As a rule, it is better to use the Output Level Control to match the tuner's output signal level with those of your turntable and tape deck, then adjust the over-all volume with the volume control of your amplifier.

## Noise Suppressor Switch

Push down to IN if loud noise is mixed with an FM stereo or AM broadcast. Noise will be suppressed and the broadcast will sound more pleasant to hear.

If you hear no noise, be sure to keep it at OUT.

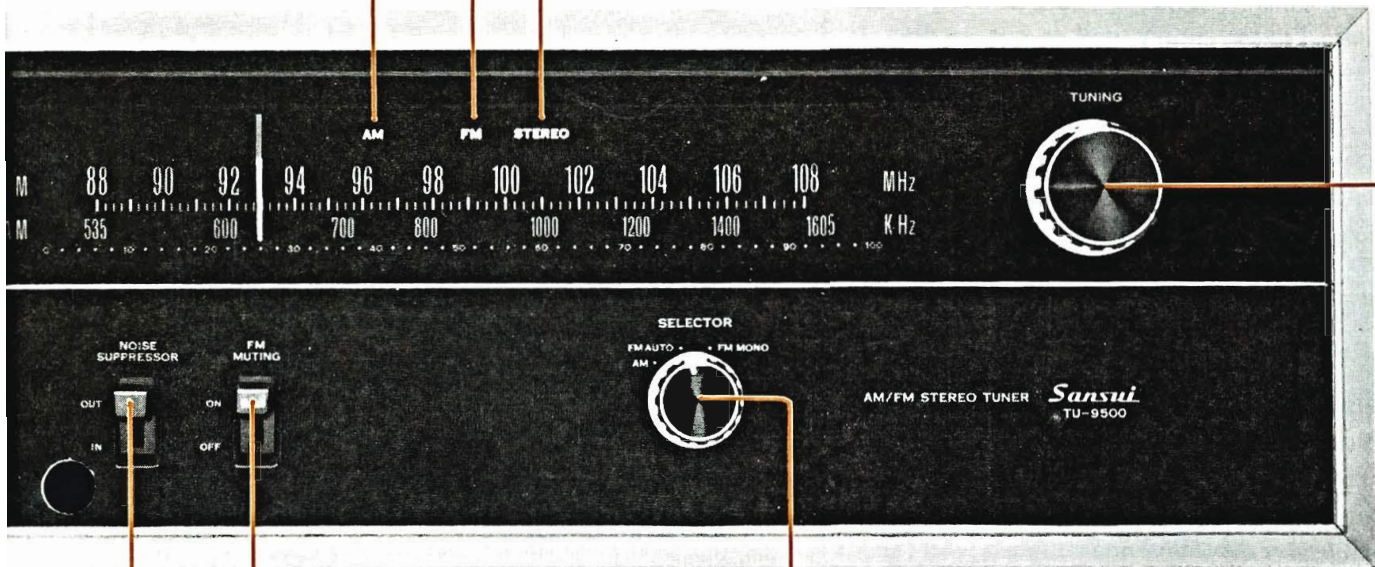


### FM Indicator

Lights when the Selector Control is turned to FM AUTO or FM MONO.

### FM Stereo Indicator

Lights when the tuner is tuned in on an FM station broadcasting in stereo.



### Tuning Control

Tune in the desired station by turning this control.

### FM Muting Switch

When tuning on the FM band, noise is usually heard between stations which is peculiar to FM. Setting this switch to ON cuts off that noise and lets you tune quietly.

If you are trying to tune in a weak station, however, setting the switch to ON may cause the tuner to miss it. In that case, it is better to push the switch down to OFF and then tune.

### Selector Control

**AM:** To receive AM broadcasts.

**FM AUTO:** To receive FM broadcasts, whether stereo or mono. When the broadcast signal changes from mono to stereo, the tuner will automatically switch itself to stereo reception.

**FM MONO:** If the FM stereo reception is too noisy for pleasant listening, set the control to this position. The broadcast will be received in mono but the noise will substantially decrease.

## Connecting Antennas

The quality of reception depends pretty much on the effectiveness of the antennas. Connect and install them correctly for noise-free pleasant reception.

### AM Antennas

#### AM Ferrite Bar Antenna

The sensitive AM ferrite bar antenna provided on the tuner's rear panel provides a clear AM reception in most areas. To use, simply pull it out as illustrated.

#### Outdoor AM Antenna

Should the bar antenna fail to give you a clear reception, however, connect a piece of polyvinyl wire supplied to the AM-A terminal on the tuner's rear panel and stretch it outside a window or on the roof. Still better results would be obtained by grounding the tuner.

### FM Antennas

#### T-shaped Feeder Cable Antenna

If you live relatively close to FM stations, quality reception can be usually achieved by just installing the T-shaped feeder cable antenna supplied with the tuner. Connect it to the tuner's FM 300 $\Omega$  terminals, referring to the diagram at right. Stretch the antenna to a complete T shape, then prepare the tuner for FM reception. Adjust the height and direction of the antenna while actually listening to your favorite FM station.

#### Outdoor FM Antenna (also see page 7)

If the T-shaped feeder antenna fails to eliminate noise and otherwise give you good sensitivity, install an exclusive FM antenna outdoors. Such an antenna is usually available with either 3, 5 or 7 elements. Generally speaking, the more elements an antenna has, the more sensitive and more directional it is. The rule of thumb is to select one that best suits the needs of your area, and it is recommended to consult your electric appliance dealer. When setting up the antenna, observe the following precautions:

1. As an antenna is directional, adjust its direction while actually listening to your favorite FM station and fix it where it offers the best reception (refer to pages 9 and 10).

2. In order to avoid automobile ignition noise, set it up as far away from streets as possible.

3. Be absolutely sure that it does not contact electric cable and other objects.

4. Be also sure to secure the antenna firmly with the help of the accessory parts supplied with the antenna.

Connect the outdoor antenna to the tuner with feeder cable, connecting the cable to the FM-300 $\Omega$  terminals on its rear panel. Keep the cable as short as possible, and secure it with clamps and standoffs at proper points. Try to keep away from metallic objects.

If automobile traffic is heavy around your house and the antenna picks up the ignition noise, it is recommended to use coaxial cable instead of feeder. Refer to pages 7 and 8 for connecting instructions.

## Connecting to an Amplifier

Connect the OUTPUT terminals of the tuner with the TUNER or AUX terminals of your amplifier (integrated amplifier or preamplifier), using the pair of pin plug cables supplied, as illustrated.

## FM Reception

1. Set the Selector Control to FM AUTO.

2. Tune in the desired station by turning the Tuning Control. It is pinpointed when the Signal Meter pointer has swung as far to the right as possible and the Tuning Meter pointer is accurately centered.

3. If a stereo broadcast is too noisy, push the Noise Suppressor Switch down to IN. If noise still persists, turn the Selector Control to FM MONO and hear the broadcast in mono.

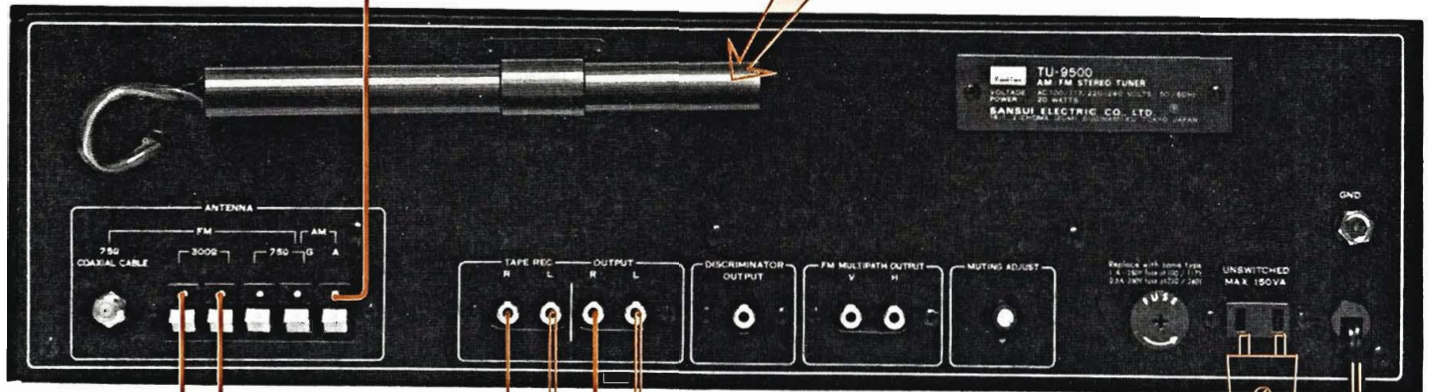
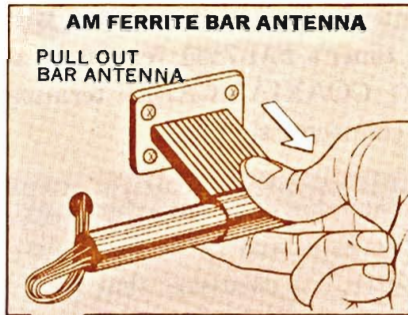
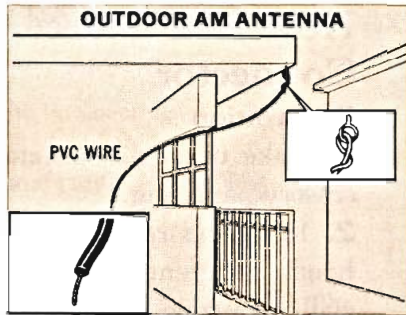
## AM Reception

1. Set the Selector Control to AM.

2. Select the desired station by adjusting the Tuning Control so that the Signal Meter pointer will swing as far to the right as it will go near the frequency of that station.

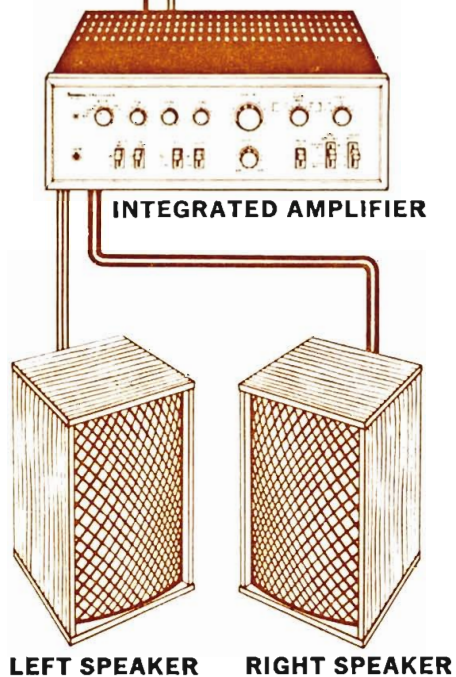
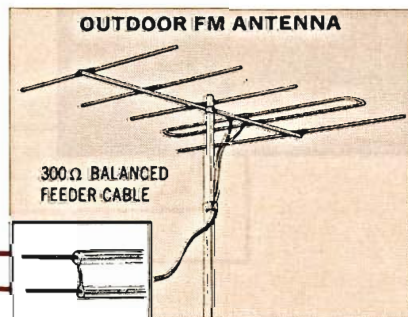
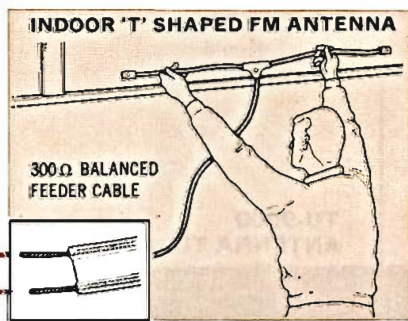
3. If the broadcast is too noisy, push the Noise Suppressor Switch down to IN.





RECORDING OUTPUT TERMINALS (SEE p. 11)

TO TAPEDECK, ETC.  
**CAUTION:**  
Never connect equipment with greater power requirements than specified maximum rating.





# CONNECTING OUTDOOR FM ANTENNA WITH COAXIAL CABLE

An outdoor FM antenna may be connected with coaxial cable to the tuner's FM-75Ω terminals, or to its exclusive 75Ω COAXIAL CABLE terminal utilizing the special connector supplied.

An FM antenna may have an impedance of 300Ω or 75Ω. Since coaxial cable itself has an impedance of 75Ω, it is necessary that your antenna has the same impedance. If it is a 300Ω type, an impedance matching transformer (commercially available) that reduces 300Ω to 75Ω needs to be inserted between the antenna and the coaxial cable.

## FM-75Ω Terminals

Connect the shield of the coaxial cable to the G terminal.

## 75Ω COAXIAL CABLE Terminal

Use the special connector supplied to connect coaxial cable to this terminal.

## How to Connect Coaxial Cable to Connector

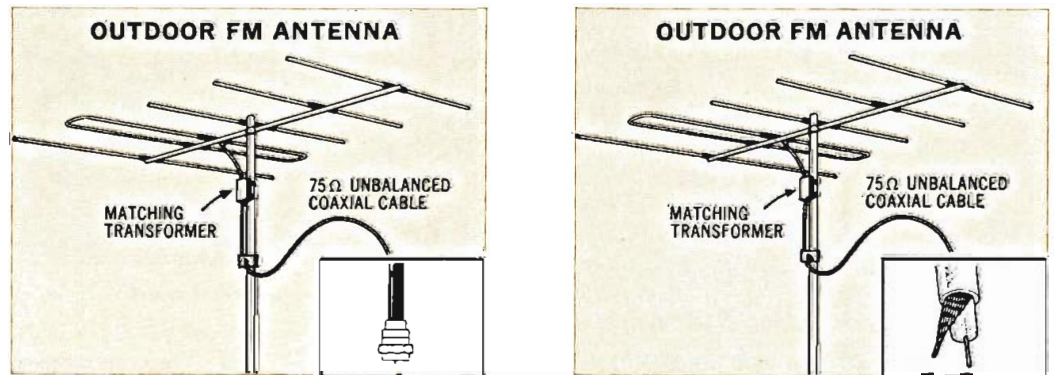
### Preparation

1. Take out the connector and ring from the accessory parts bag.
2. Keep the required length of coaxial cable on hand. Different types of coaxial cable are commercially available, but use the type called the 3C-2V. This type is sometimes available either with a stranded core wire or a single core wire, but be sure to use the latter kind.
3. Prepare a knife, nippers and pliers.

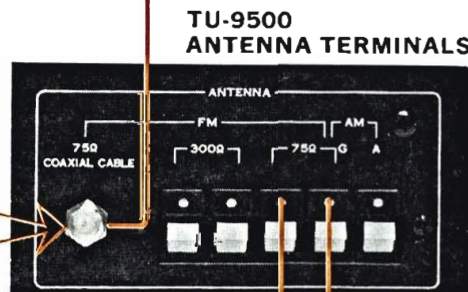
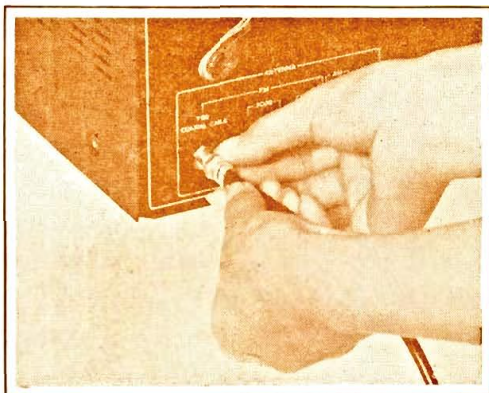
### Procedure

Connect the coaxial cable to the connector as instructed in the diagram at right.

**Note:** When connecting the connector to the 75Ω COAXIAL CABLE terminal, hold the coaxial cable still with fingers of one hand and turn the tightening nut with the other hand.

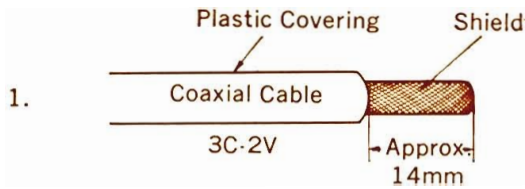


**Note:** No matching transformer is needed if using a 75Ω antenna.

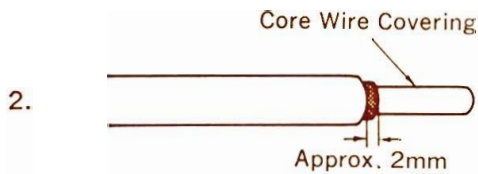




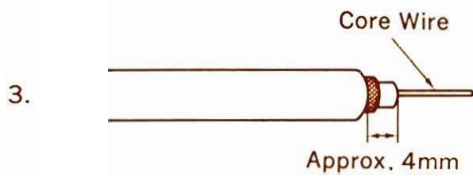
## HOW TO CONNECT COAXIAL CABLE TO CONNECTOR



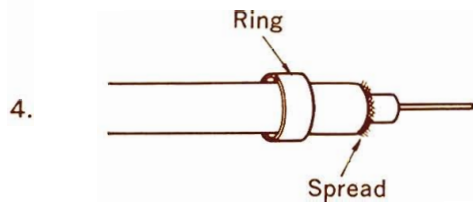
**Remove plastic covering and expose shielded cable**



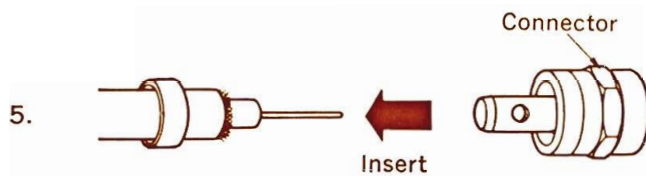
**Remove shield, leaving only about 2mm of it**



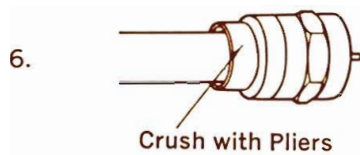
**Remove core wire covering, taking care not to scrape core wire**



**Pass cable through ring, then spread shield**



**Firmly insert cable into connector**



**Pushing ring toward connector, crush ring with pliers to fix cable to connector**



# HOW TO INSTALL OUTDOOR FM ANTENNA CORRECTLY

## How to Use Multi-Path Terminals

As the radio wave used for FM broadcast is of high frequencies, it possesses a natural tendency to advance straight ahead and be reflected by various obstacles just as a light beam does. As a result, an antenna receives both the radio wave arriving directly from the broadcast station and the waves reflected by nearby mountains, tall buildings and so forth. This phenomenon is called a multi-path reception.

When this condition is present, the radio waves interfere with one another and cause amplitude and phase modulations, which result in distortion and reduced separation. To minimize this condition, it is necessary to select an antenna with good directionality and also direct it correctly.

The multi-path condition can be visually observed by connecting an oscilloscope to the FM MULTIPATH OUTPUT terminals on the rear panel of the tuner, so that you may install the antenna in the correct direction.

The two terminals (indicated as V and H) deliver the output signals described below:

**V:** Delivers the detector output of signals amplitude-

modulated by the multi-path phenomenon, if any. If no multi-path phenomenon exists, no output will be provided.

**H:** Delivers the tuner's discriminator output signal, whose level changes with the level of the original audio signal.

## How to Connect and Operate an Oscilloscope

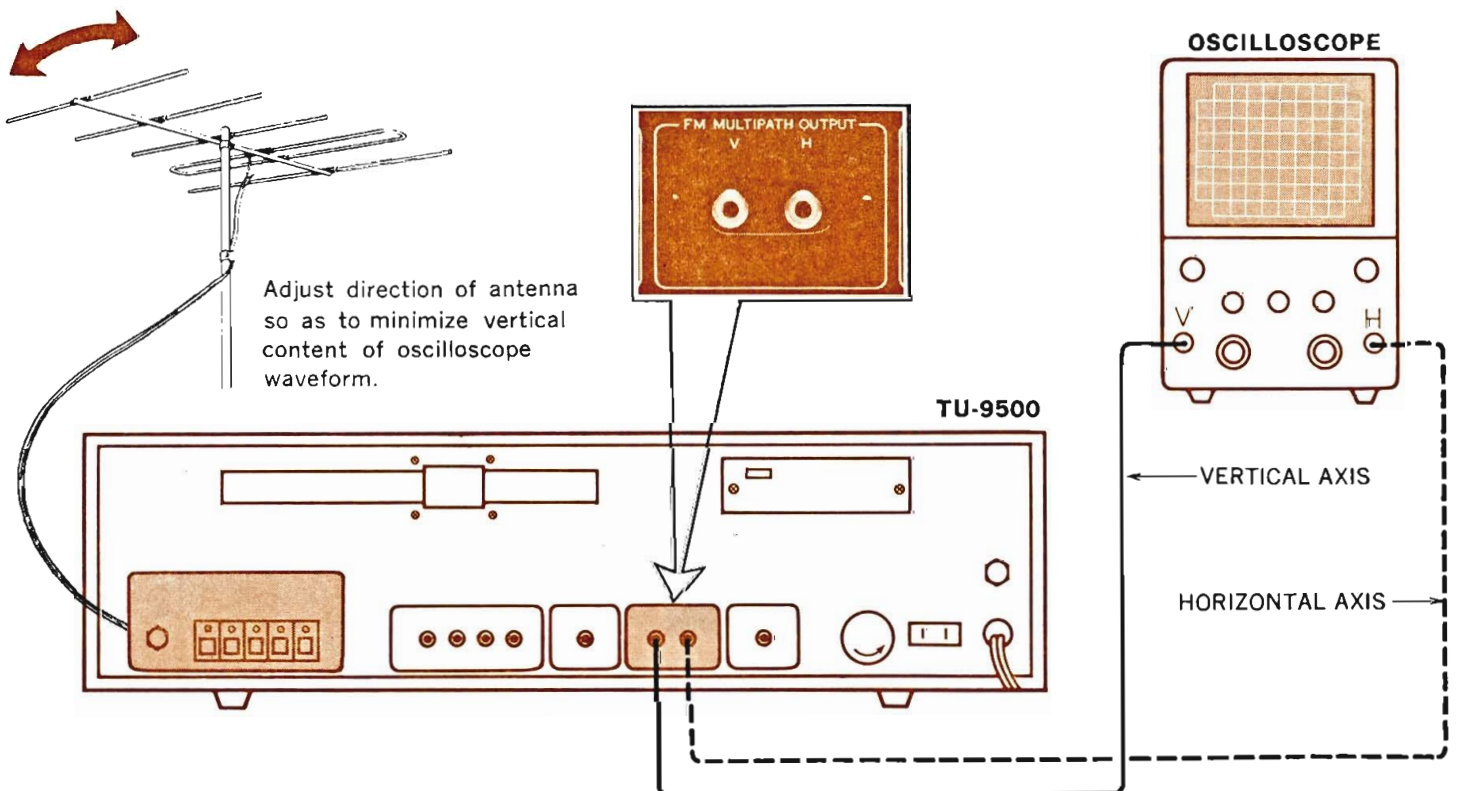
**1.** Connect the oscilloscope to the FM MULTIPATH OUTPUT terminals as indicated in the diagram below—namely, its vertical axis to the V terminal and its horizontal axis to the H terminal.

**2.** Tune in your favorite FM station accurately while watching the two tuning meters, and actually receive it.

**3.** Observe the waveform on the oscilloscope. Set the horizontal axis sensitivity of the oscilloscope to 10mV/cm while raising its vertical axis sensitivity to an optimum level.

**4.** Adjust the position and direction of the antenna and fix it where the height of the waveform is minimized.

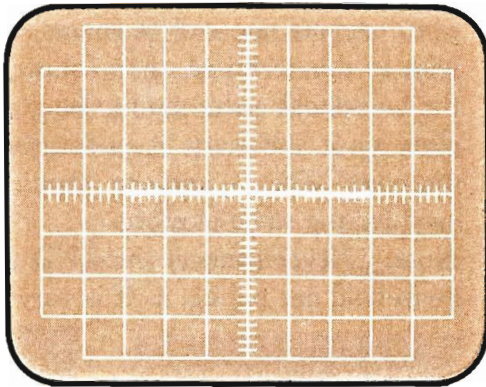
See a sample oscilloscope waveform on the next page.



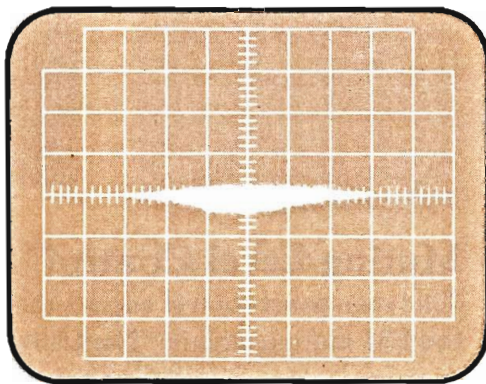


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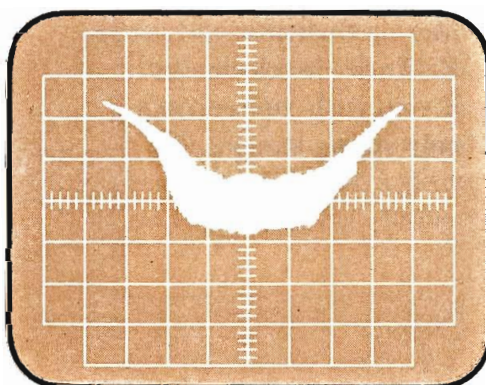
## SAMPLE OSCILLOSCOPE WAVEFORMS OF MULTI-PATH PHENOMENON



**When no multi-path phenomenon exists**



**When a slight multi-path phenomenon exists**



**When a serious multi-path phenomenon exists**

# SIMPLE MAINTENANCE HINTS

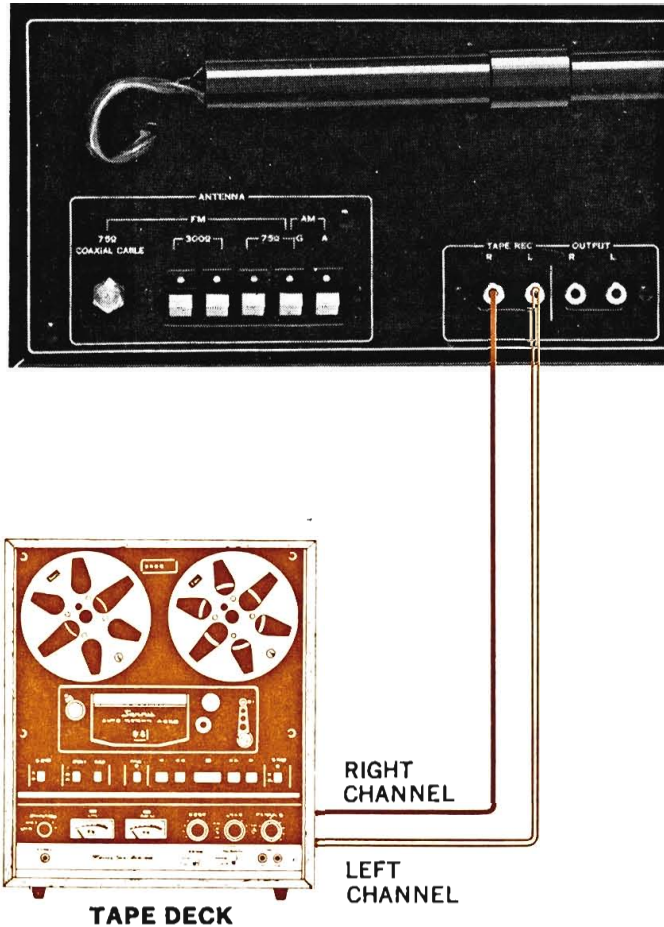
## Recording into a Tape Deck

Radio broadcast can be recorded by connecting a tape deck to the tuner.

Connect the TAPE REC terminals on the rear panel with the recording inputs of a tape deck (often indicated as LINE INPUT), utilizing shielded cables with pin plugs.

## How to Record

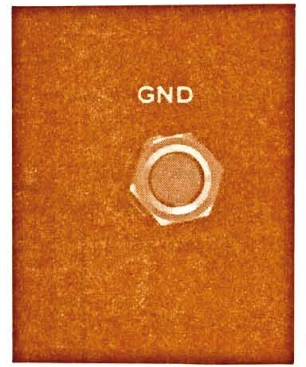
1. Tune in the desired station.
2. Engage the tape deck in the recording mode. The signal level at the TAPE REC terminals is constant regardless of the OUTPUT LEVEL control on the front panel. Adjust the recording level with controls on your tape deck.



## GND Terminal

Normally it is unnecessary to connect anything to the GND terminal on the rear panel. If considerable noise or hum is heard with the reception, however, connect one end of enameled or vinyl-coated wire to this terminal, then connect its other end to the household water piping (lead) or attach a copper plate to it and bury it underground. Noise may decrease. The G antenna terminal may also be used for the same purpose.

**Note:** Never connect the GND terminal with the household gas piping, as it is very dangerous.



## Muting Level Control

This rear-panel control adjusts the working level of the FM muting circuit. Normally there is no need to touch it, but adjust it in these instances:

1. Turn it counterclockwise if the desired FM station(s) is cut off and cannot be received when you turn on the FM Muting Switch.
2. Turn it clockwise if you wish to receive only strong stations.





## Discriminator Output Terminals

Four-channel stereo is fast becoming popular as a means of reproducing the live sound field. Four-channel stereo FM broadcasts are already underway in some areas of the world using matrix four-channel systems, but the discrete 4-channel system will also be introduced to FM in the future.

To receive discrete 4-channel stereo FM broadcasts, you will need an adaptor in addition to the TU-9500. The DISCRIMINATOR OUTPUT terminal on the tuner's rear panel is for connecting such adaptor.



## Should the Power Fuse Blow

If the dial fails to glow and the tuner remains dead when you turn on the Power Switch, it is possible that its power fuse has blown.

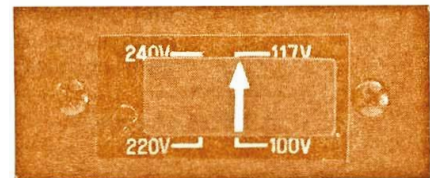
Should this happen, disconnect the power cord from the wall AC outlet at once and examine the power fuse on the rear panel. If you find it blown, find out the cause of the blowout and eliminate it, then replace the blown fuse with a new glass-tubed fuse of the rated capacity (1-ampere for 100/117 volt operation, 0.5-ampere for 220/240 volt operation). Never use a fuse of a different capacity or a piece of wire, even as a stopgap measure, or serious danger could result.



## Voltage Adjustment

The TU-9500 is equipped with a Voltage Selector so that it may be used anywhere in the world. It is set to the correct voltage of your area prior to shipment from our factory, and there is no need to touch it. But if you move after purchasing the tuner and find the power supply voltage is different, reset the selector as follows:

1. Remove the two screws securing the name plate on the rear panel, then remove the name plate.
2. Unplug the Voltage Selector once, and reset it so that the arrow mark on it faces the correct voltage indication.
3. Change the power fuses as well whenever the voltage has changed. For 100-117 volt operation, use a 1-ampere glass-tubed fuse. For 220-240 volt operation, use a 0.5-ampere one.
4. Where the power supply voltage considerably fluctuate, the Voltage Selector may be reset to avoid the unpleasant side effects of such fluctuation. Reset it to the voltage immediately higher than the peak of the fluctuation.



## Servicing

Should anything ever go wrong with your TU-9500 or if you have any question about it, please contact the Sansui dealer from whom you purchased it or your nearest Authorized Sansui Service Station.

# GENERAL TROUBLESHOOTING CHART

Many of the troubles which seem to be a fault of the tuner may be caused by wrong operation or by outside devices. These can be easily corrected by simple checking and easy remedies. If you notice a condition which looks like a breakdown of the tuner, examine the various connections and your operat-

ing procedure once, then look up the condition in the following chart to see if it cannot be easily removed. If this fails to improve the situation and the tuner definitely seems faulty, please contact the Sansui dealer from whom you purchased the tuner or your nearest Authorized Sansui Service Station.

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
AM, FM or MPX reception	<ul style="list-style-type: none"> <li>• Constant or intermittent noise heard at times or in certain areas.</li> </ul>	<ul style="list-style-type: none"> <li>* Discharge or oscillation caused by electrical appliances, such as fluorescent lamp, TV set, D.C. motor, rectifier or oscillator.</li> <li>* Natural phenomena, such as atmospheric, static or thunderbolts.</li> <li>* Insufficient antenna input due to ferroconcrete wall or long distance from station.</li> </ul>	<ul style="list-style-type: none"> <li>* Attach noise limiter to electrical appliance producing noise, or attach it to tuner's power source.</li> <li>* Install outdoor antenna and ground tuner to raise S/N ratio.</li> <li>* Reverse power cord plug/receptacle connections.</li> <li>* If noise occurs at certain frequency, attach wave trap to input.</li> <li>* Keep tuner at proper distance from other electrical appliances.</li> </ul>
FM reception	<ul style="list-style-type: none"> <li>• Noisy.</li> </ul> <p>Note: FM reception is affected considerably by transmitting conditions of station, such as power and antenna efficiency. As a result, you may receive one station quite well while receiving another station poorly.</p>	<ul style="list-style-type: none"> <li>* Poor noise limiter effect or too low S/N ratio due to insufficient antenna input.</li> </ul>	<ul style="list-style-type: none"> <li>* Install antenna (supplied) for maximum signal strength.</li> <li>* If this does not prove effective, use exclusive FM outdoor antenna.</li> <li>* Excessively long lead-in wire of antenna may cause noise.</li> </ul>
	<ul style="list-style-type: none"> <li>• A series of pops.</li> </ul>	<ul style="list-style-type: none"> <li>* Ignition noise caused by starting of nearby automobile engine.</li> </ul>	<ul style="list-style-type: none"> <li>* Install antenna and its lead-in wire at proper distance from street or increase antenna input.</li> </ul>
	<ul style="list-style-type: none"> <li>• Tuning noise between station.</li> </ul>	<ul style="list-style-type: none"> <li>* Results from nature of FM reception.</li> <li>* FM Muting Switch at OFF.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn on FM Muting Switch.</li> <li>* Ditto.</li> </ul>
FM-MPX reception	<ul style="list-style-type: none"> <li>• Noise heard during FM-MPX reception but inaudible during FM mono reception.</li> </ul>	<ul style="list-style-type: none"> <li>* Weaker signal because service area of FM-MPX broadcast is only half that of FM mono broadcast.</li> </ul>	<ul style="list-style-type: none"> <li>* Orient antenna for maximum antenna input.</li> <li>* Set Noise Suppressor Switch to IN position.</li> </ul>
AM reception	<ul style="list-style-type: none"> <li>• Noise heard at particular time of day, in certain area or over part of dial.</li> </ul>	<ul style="list-style-type: none"> <li>* Peculiar to AM broadcasts.</li> </ul>	<ul style="list-style-type: none"> <li>* Install antenna for maximum antenna efficiency. See 'AM Antennas'.</li> <li>* Set Noise Suppressor Switch to IN position.</li> <li>* In some cases, noise can be eliminated by grounding tuner or reversing power cord plug/receptacle connections.</li> </ul>
	<ul style="list-style-type: none"> <li>• High-frequency noise.</li> </ul>	<ul style="list-style-type: none"> <li>* Beat interference by adjacent station.</li> <li>* TV set too close to stereo systems.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn on amplifier's High Filter.</li> <li>* Set Noise Suppressor Switch to IN position.</li> <li>* Keep TV set at proper distance from stereo system.</li> </ul>



# SPECIFICATIONS / ACCESSORIES

## FM SECTION

TUNING RANGE:	88 to 108MHz
SENSITIVITY (IHF):	1.7 $\mu$ V
QUIETING SLOPE:	40dB 1.7 $\mu$ V, 50dB 3 $\mu$ V, 60dB 10 $\mu$ V, 70dB 50 $\mu$ V
TOTAL HARMONIC DISTORTION	
(MONO):	less than 0.2%
(STEREO):	less than 0.3%
SIGNAL TO NOISE RATIO:	better than 75dB
SELECTIVITY:	better than 80dB
CAPTURE RATIO(IHF):	1.5dB
IMAGE FREQUENCY REJECTION:	better than 100dB
IF REJECTION:	better than 100dB
SPURIOUS RESPONSE REJECTION:	better than 100dB
STEREO SEPARATION:	better than 40dB at 400Hz, better than 30dB at 10,000Hz
SPURIOUS RADIATION:	less than 34dB
ANTENNA INPUT IMPEDANCE:	300 $\Omega$ balanced, 75 $\Omega$ unbalanced
FREQUENCY RESPONSE:	30 to 15,000Hz +0.5dB, -2.0dB

## AM SECTION

TUNING RANGE:	535 to 1,605kHz
SENSITIVITY (Bar Antenna):	46dB/m
SELECTIVITY :	better than 25dB
IMAGE FREQUENCY REJECTION:	better than 100dB/m at 1,000kHz
IF REJECTION:	better than 100dB/m at 1,000kHz
OUTPUT:	0 to 1V
REC OUTPUT:	0.4V
CONTROL AND SWITCHES:	
SELECTOR:	AM, FM AUTO, FM MONO
FM MUTING:	ON, OFF
NOISE SUPPRESSOR:	OUT, IN
SEMICONDUCTORS:	44 Transistors, 5 FETs, 28 Diodes, 3 ICs
POWER REQUIREMENTS:	
POWER VOLTAGE:	100, 117, 220, 240V 50/60Hz
POWER CONSUMPTION:	25VA (Max.) 20W (Rated)
DIMENSIONS:	500mm, 19 $\frac{1}{16}$ " W. 140mm, 5 $\frac{9}{16}$ " H. 347mm, 13 $\frac{1}{16}$ " D.
WEIGHT:	9.5kg (20.8 lbs)

## ACCESSORIES

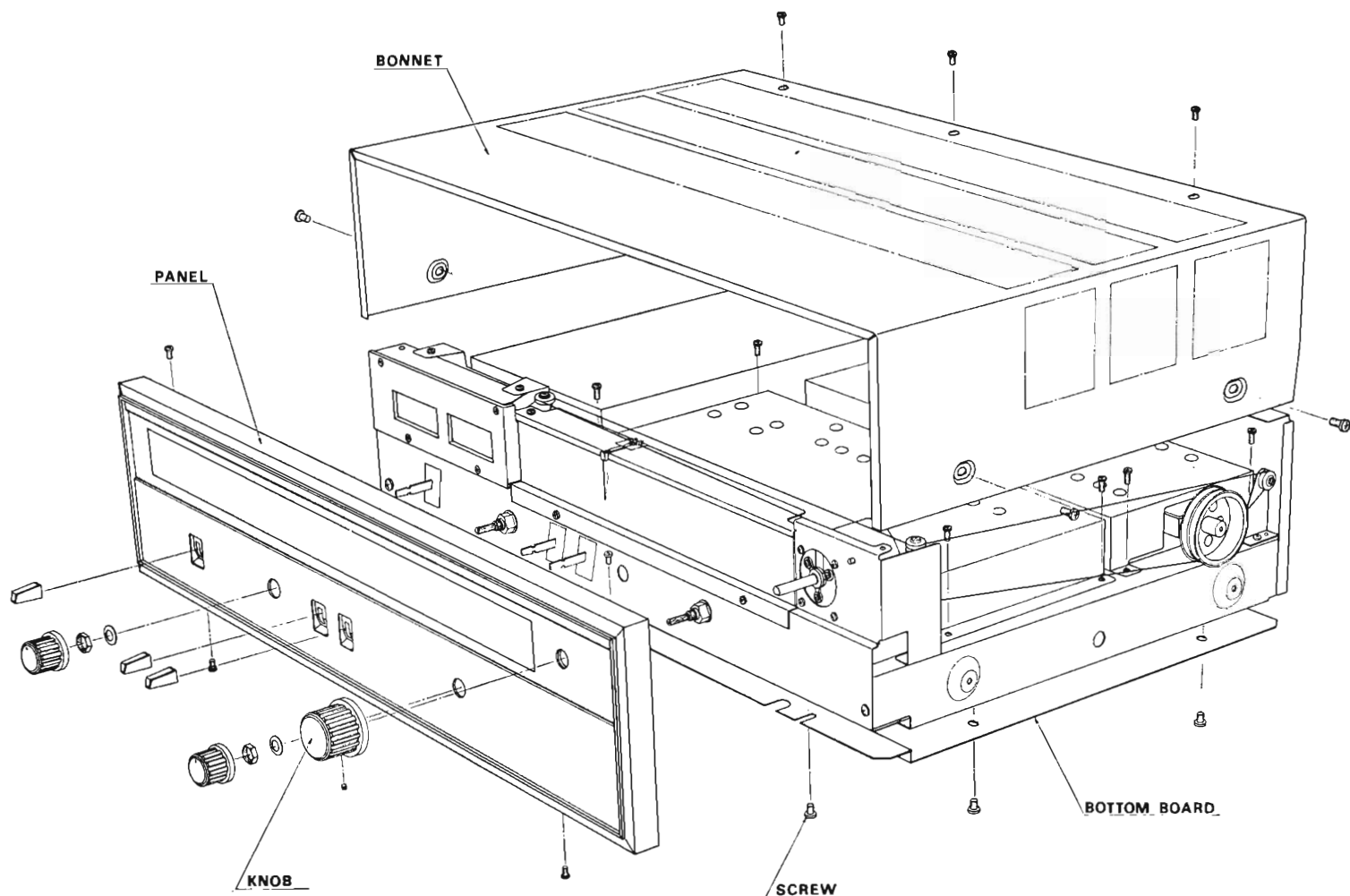
1. FM Antenna.....	1
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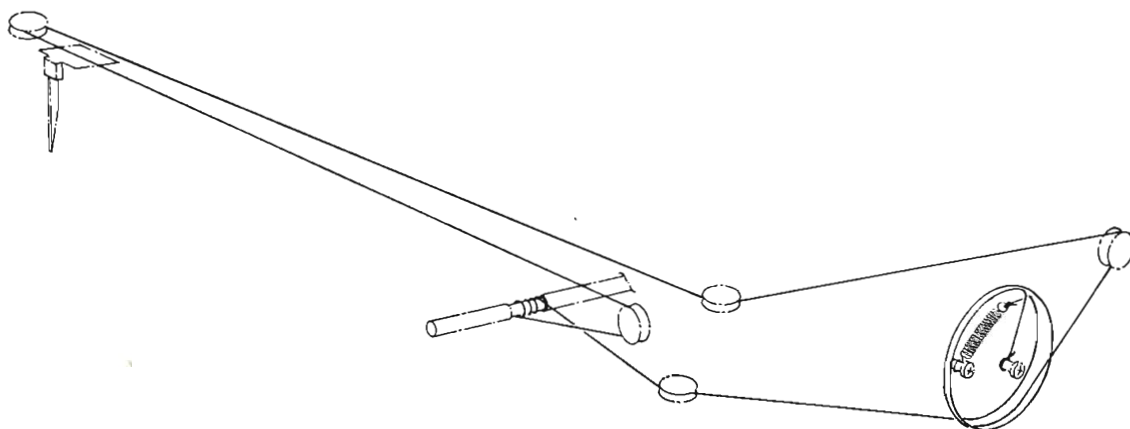


# DISASSEMBLY PROCEDURE

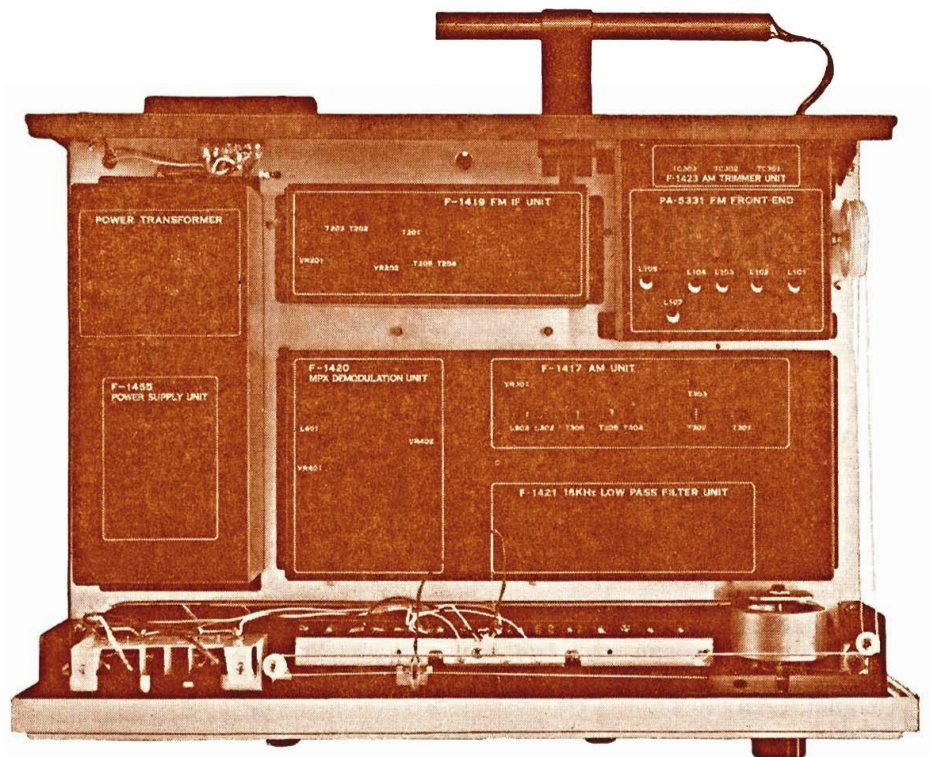
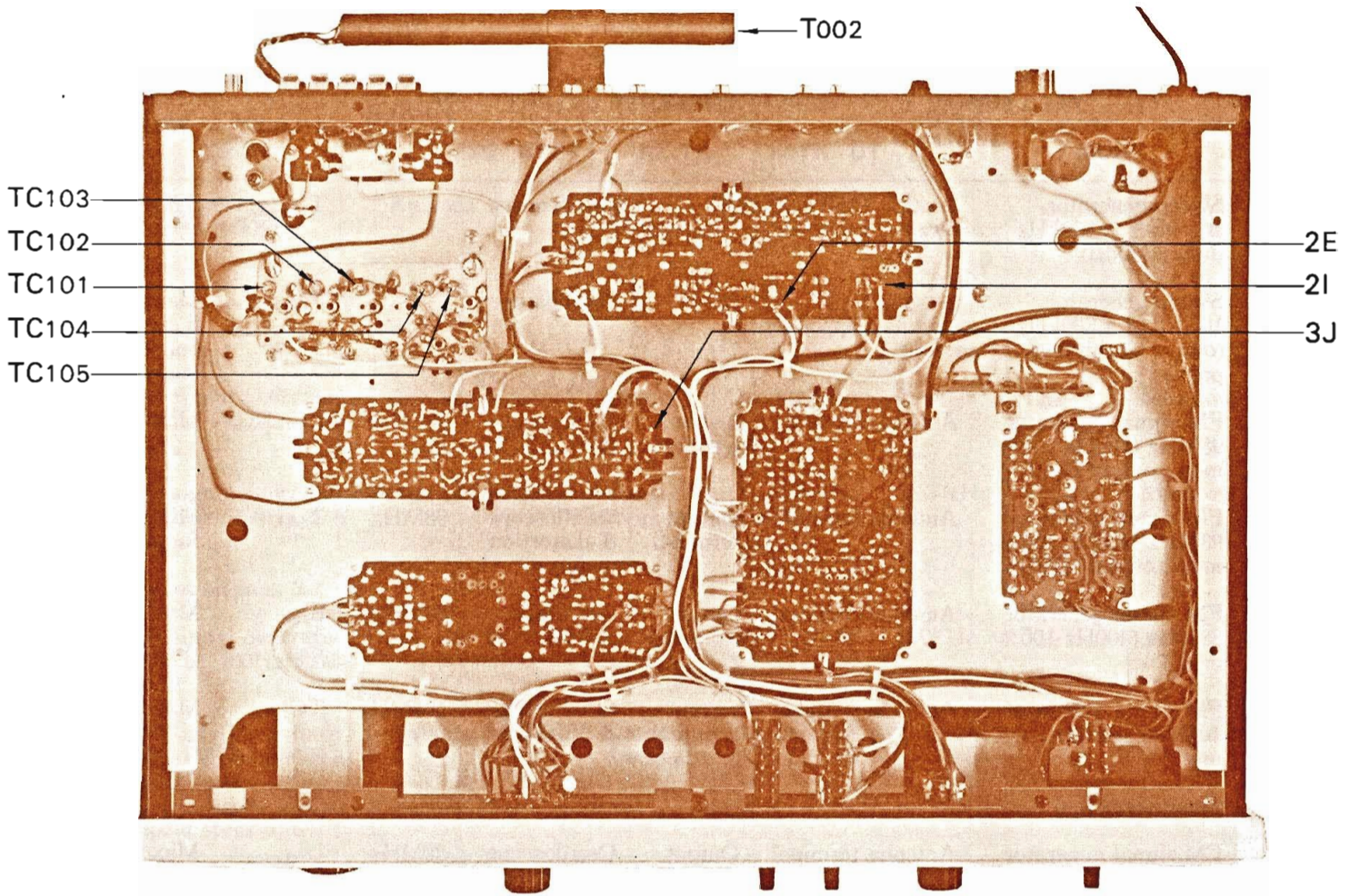
## REMOVING FRONT PANEL, BONNET AND BOTTOM BOARD



## DIAL MECHANISM



# TEST POINTS



It is unnecessary to remove cover for printed circuit board when making alignments. Part numbers required for making alignments are indicated on cover.



# ALIGNMENT

## FM TUNER SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	Sweep generator 10.7MHz $\pm$ 200kHz (output 60dB)	2A (via 10pF ceramic capacitor)	2I	Oscilloscope		T <sub>202, 203</sub>	S curve
2.	Sweep generator 10.7MHz $\pm$ 200kHz (output at limiter point)	2A (via 10pF ceramic capacitor)	2E	Oscilloscope		T <sub>204, 205</sub>	Match centers of S curve and out- put waveform of meter(see Fig. 1)
3.	FM signal generator 98MHz (400Hz 100% mod., output 60dB)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	98MHz	L <sub>107</sub> , T <sub>201</sub>	Max. output
4.	FM signal generator 98MHz (400Hz 100% mod., output : 60dB)	Antenna terminal	Output terminal	Oscilloscope & distortion meter	98MHz	T <sub>202</sub>	Min. distortion factor
5.	FM signal generator 88MHz (400Hz 100% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	88MHz	L <sub>105</sub>	Max. output
6.	FM signal generator 108MHz (400Hz 100% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	108MHz	TC <sub>105</sub>	Max. output
7.	Repeat steps 5, 6						
8.	FM signal generator 90MHz (400Hz 100% mod., output at limiter point)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	90MHz	L <sub>101, 102</sub> 103, 104	Max. output
9.	FM signal generator 106MHz (400Hz 100% mod., output at limiter point)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	106MHz	TC <sub>101, 102</sub> 103, 104	Max. output
10.	Repeat steps 8, 9						

## FM MPX SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	FM signal generator 98MHz & stereo signal generator (composite signal containing pilot signal, L ch. 40% mod.)	Antenna terminal	Output terminal (L ch.)	Oscilloscope V.T.V.M. & distortion meter	98MHz	L <sub>401</sub>	VR <sub>401</sub> Center. Max. output, Min. distortion in L ch.
2.	FM signal generator 98MHz & stereo signal generator (composite signal containing pilot signal, L ch. 40% mod.)	Antenna terminal	Output terminal (R ch.)	Oscilloscope & V.T.V.M.	98MHz	VR <sub>401</sub>	Min. output in R ch.

# AM TUNER SECTION

STEP	FEED SIGNAL		MEASURE OUTPUT		SET TUNING CONTROL TO	ADJUST	ADJUST FOR
	FROM	TO	AT	WITH			
1.	Sweep generator 455kHz $\pm$ 30kHz	Antenna terminal	3J (F-1417A)	Oscilloscope	Any frequency not occupied by broadcast stations	T <sub>302, 304, 305, 306</sub>	Best AM IF waveform (set Noise Suppressor SW to OUT)
2.	AM signal generator 535kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	535kHz	T <sub>303</sub>	Max. output
3.	AM signal generator 1600kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	1600kHz	TC <sub>302</sub>	Max. output
4.	Repeat steps 2, 3						
5.	AM signal generator 600kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	600kHz	T <sub>002, 301</sub>	Max. output
6.	AM signal generator 1400kHz (400Hz 30% mod.)	Antenna terminal	Output terminal	Oscilloscope & V.T.V.M.	1400kHz	TC <sub>301, 303</sub>	Max. output
7.	Repeat steps 5, 6						

## FM DISCRIMINATOR WAVEFORM

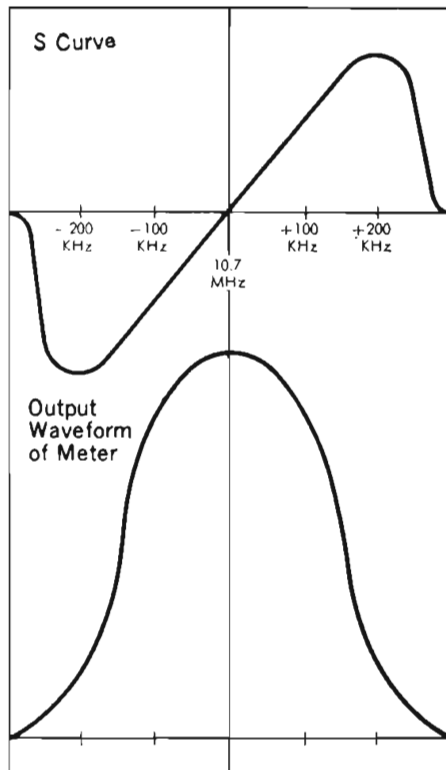


Fig. 1

## OUTPUT WAVEFORM OF METER

## AM IF WAVEFORM

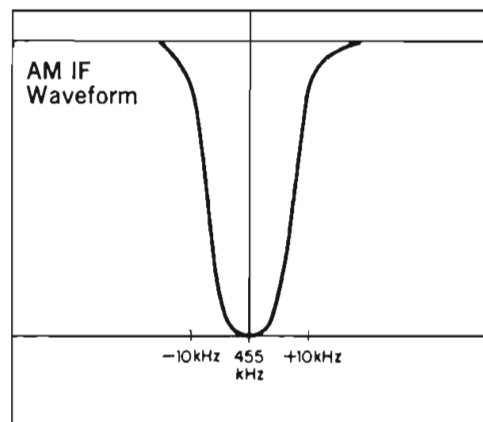


Fig. 2



# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## FM IF BLOCK <F-1419>

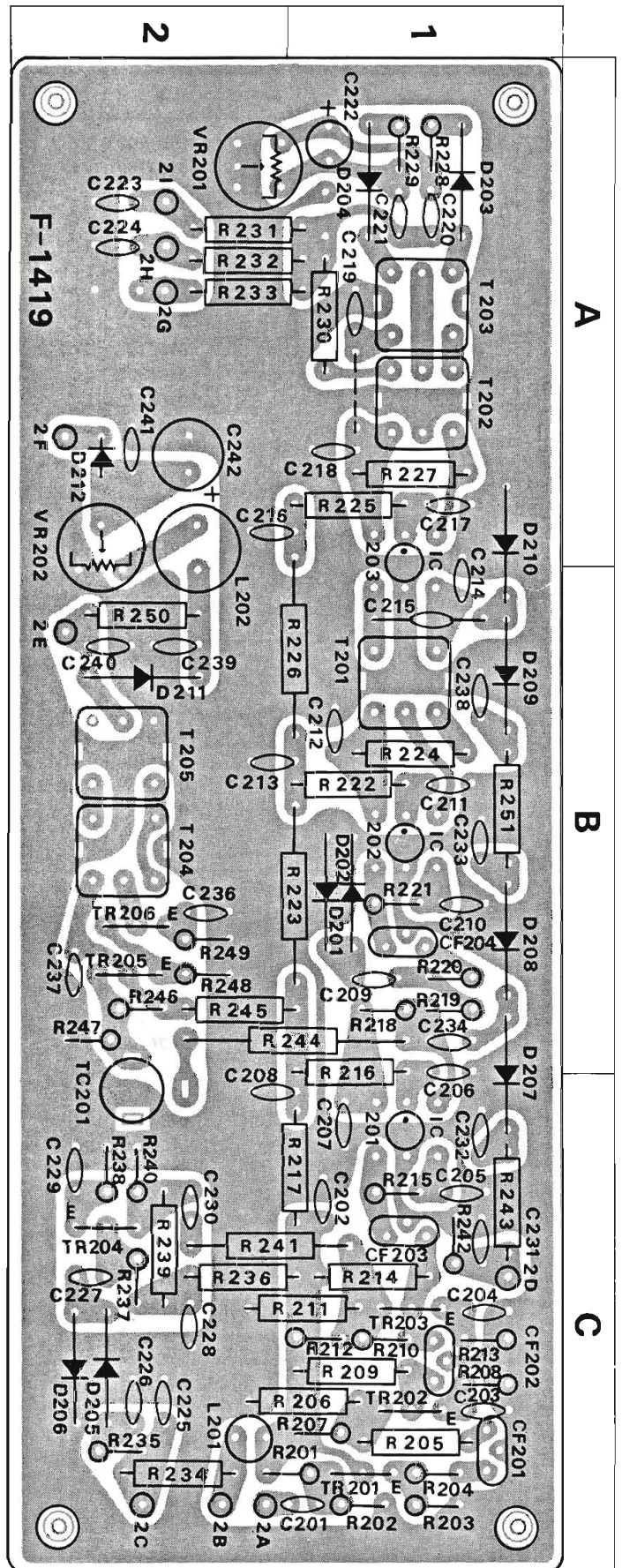
Stock No. 7520580

W	X	Y	Z
R201	6.8kΩ	0106682	1, 2 C
R202	3.3kΩ	0106332	1 C
R203	1kΩ	0106102	1 C
R204	220Ω	0106221	1 C
R205	100Ω	0107101	1 C
R206	1.5kΩ	0107152	1, 2 C
R207	3.3kΩ	0106332	1 C
R208	1kΩ	0106102	1 C
R209	680Ω	0107681	1 C
R210	100Ω	0106101	1 C
R211	1.5kΩ	0107152	1, 2 C
R212	3.3kΩ	0106332	1, 2 C
R213	1kΩ	0106102	1 C
R214	680Ω	0107681	1 C
R215	680Ω	0106681	1 C
R216	10Ω	0107100	1 B
R217	4.7Ω	0107479	1, 2 C
R218	1kΩ	0106102	1 B
R219	220Ω	0106221	1 B
R220	220Ω	0106221	1 B
R221	680Ω	0106681	1 B
R222	10Ω	0107100	1 B
R223	4.7Ω	0107479	1, 2 B
R224	10kΩ	0107103	1 B
R225	10Ω	0107100	1 A
R226	4.7Ω	0107479	1, 2 B
R227	6.8kΩ	0107682	1 A
R228	1kΩ	0106102	1 A
R229	1kΩ	0106102	1 A
R230	10Ω	0107100	1 A
R231	1kΩ	0107102	2 A
R232	18kΩ	0107183	2 A
R233	100kΩ	0107104	2 A
R234	1MΩ	0107105	2 C
R235	330kΩ	0106334	2 C
R236	100Ω	0107101	2 C
R237	2.2kΩ	0106222	2 C
R238	1kΩ	0106102	2 C
R239	47kΩ	0107473	2 C
R240	15kΩ	0106153	2 C
R241	1kΩ	0107102	1, 2 C
R242	47kΩ	0106473	1 C
R243	47kΩ	0107473	1 C
R244	1kΩ	0107102	1, 2 B
R245	100Ω	0107101	2 B
R246	47kΩ	0106473	2 B
R247	15kΩ	0106153	2 B
R248	3.3kΩ	0106332	2 B
R249	680Ω	0106681	2 B
R250	4.7kΩ	0107472	2 B
R251	1kΩ	0107102	1 B
VR201	10kΩ (B) FM Tuning Meter Adj.	1035130	2 A
VR202	47kΩ (B) FM Signal Meter Adj.	1035170	2 A
C201	0.001μF } +80% 50V CC.	0657102	1, 2 C
C202	0.001μF } -50%	0657223	1 C

W	X	Y	Z
C203	0.022μF	0657223	1 C
C204	0.022μF	0657223	1 C
C205	0.022μF	0657223	1 C
C206	0.022μF	0657223	1 B
C207	0.022μF	0657223	1 C
C208	0.022μF	0657223	2 B
C209	0.022μF	0657223	1 B
C210	0.022μF	0657223	1 B
C211	0.022μF	0657223	1 B
C212	0.022μF	0657223	1 B
C213	0.022μF	0657223	2 B
C214	0.022μF	0657223	1 A
C215	2.2 pF	0669003	1 B
C216	0.022μF	0657223	2 A
C217	0.022μF	0657223	1 A
C218	0.022μF	0657223	1 A
C219	0.022μF	0657223	1 A
C220	100 pF	0660101	1 A
C221	100 pF	0660101	1 A
C222	10 μF	0512100	1 A
C223	47 pF	0660470	2 A
C224	0.022μF	0657223	2 A
C225	0.022μF	0657223	2 C
C226	0.022μF	0657223	2 C
C227	0.001μF	0657102	2 C
C228	0.022μF	0657223	2 C
C229	0.022μF	0657223	2 C
C230	10 pF	0661100	2 C
C231	100 pF	0660101	1 C
C232	470 pF	0660471	1 C
C233	470 pF	0660471	1 B
C234	3.9 pF	0669002	1 B
C236	0.022μF	0657223	2 B
C237	0.022μF	0657223	1 B
C238	470 pF	0660471	1 B
C239	0.022μF	0657223	1 B
C240	0.022μF	0657223	2 A
C241	0.022μF	0657223	2 B, C
TR201	2SC380A (O)	0305571	1 C
TR202		0305571	1 C
TR203		0305571	1 C
TR204	2SC930 (D)	0305791	2 C
TR205		0305791	2 B
TR206		0305791	2 B
IC201	μPC555A	0360070	1 C
IC202		0360070	1 B
IC203		0360070	1 A
D201	1N60	0310330	1 B
D202		0310330	1 B
D203	1N60P	0311016	1 A
D204		0311016	1 A

W	X	Y	Z
D205	1N60	0310330	2C
D206		0310330	2C
D207		0310330	1B, C
D208		0310330	1B
D209		0310330	1B
D210		0310330	1A
D211		0310330	2B
D212	DS430	0340090	2A
T201	FM IF Coil	4235860	1B
T202		4235750	1A
T203		4235760	1A
T204		4235840	2B
T205		4235920	2B
L201	3.3 $\mu$ F Micro Inductor	4900100	2C
L201	33mH Micro Inductor	4900180	2A
CF201	SFE10.7MD	0910182	1C
CF202		0910182	1C
CF203		0910182	1C
CF204		0910182	1B
TC201	10pF Ceramic Trimmer Capacitor	1230050	2C
F-1419 Printed Circuit Board		2520350	

Abbreviations	
<b>CR</b>	: Carbon Resistor
<b>CeR</b>	: Cement Resistor
<b>CC</b>	: Ceramic Capacitor
<b>EC</b>	: Electrolytic Capacitor
<b>MC</b>	: Mylar Capacitor
<b>SC</b>	: Styrol Capacitor





# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## FM MPX BLOCK <F-1420E>

Stock No. 7540750

W	X	Y	Z
R401	1k $\Omega$	0106102	2C
R402	1k $\Omega$	0106102	1B
R403	68k $\Omega$	0106683	2C
R404	220k $\Omega$	0106224	1C
R405	68k $\Omega$	0106683	1C
R406	22k $\Omega$	0106223	1C
R407	1.2k $\Omega$	0106122	1C
R408	150k $\Omega$	0106154	1C
R409	10k $\Omega$	0106103	2C
R410	33k $\Omega$	0106333	2C
R411	47k $\Omega$	0106473	2C
R412	33k $\Omega$	0106333	2B, C
R413	470 $\Omega$	0106471	2B
R414	3.3k $\Omega$	0106332	2C
R415	100k $\Omega$	0106104	2B
R416	10k $\Omega$	0106103	2B
R417	10k $\Omega$	0106103	2B
R418	100k $\Omega$	0106104	2B
R419	100k $\Omega$	0106104	2B
R420	10k $\Omega$	0106103	1, 2B
R421	10k $\Omega$	0106103	1B
R422	100k $\Omega$	0106104	1B
R423	68k $\Omega$	0106683	2B
R424	100k $\Omega$	0106104	2A
R425	100k $\Omega$	0106104	1, 2A
R426	15k $\Omega$	0106153	1A, B
R427	15k $\Omega$	0106153	1B
R428	100 $\Omega$	0106101	2A
R429	10k $\Omega$	0106103	2A
R430	10k $\Omega$	0106103	1A
R431	470 $\Omega$	0106471	2A
R432	470 $\Omega$	0106471	1A
R433	1.5k $\Omega$	0106152	1A
R434	10k $\Omega$	0106103	1A
R435	10k $\Omega$	0106103	2A
R436	1M $\Omega$	0106105	3A
R437	1M $\Omega$	0106105	3A
R438	2.2k $\Omega$	0106222	1C
R439	33k $\Omega$	0106333	2C
R440	6.8k $\Omega$	0106682	2C
R441	3.3k $\Omega$	0106332	3C
R442	33 $\Omega$	0106330	3C
R443	1k $\Omega$	0106102	2, 3C
R444	47k $\Omega$	0106473	3C
R445	22k $\Omega$	0106223	3C
R446	47k $\Omega$	0106473	3C
R447	47k $\Omega$	0106473	2B
R448	22k $\Omega$	0106223	2C
R449	22k $\Omega$	0106223	3B, C
R450	8.2k $\Omega$	0106822	3B
R451	47 $\Omega$	0106470	3B
R452	1.5k $\Omega$	0106152	2, 3B
R453	100 $\Omega$	0106101	2B
R454	100k $\Omega$	0106104	3B
R455	120k $\Omega$	0106124	3B

W	X	Y	Z
R456	47 $\Omega$	0106470	3A, B
R457	3.3k $\Omega$	0106332	3A
R458	10k $\Omega$	0106103	2, 3A
R459	4.7k $\Omega$	0106472	3A
R460	47 $\Omega$	0106470	2, 3A
VR401	1k $\Omega$ (B) Stereo Separation Adj.	1035070	1B
VR402	220k $\Omega$ (B) Muting Adj.	1035210	3B, C
C401	10 $\mu$ F 25V EC.	0513100	2C
C402	47 pF $\pm 10\%$ 50V CC.	0660470	2C
C403	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	1C
C404	6800 pF $\pm 5\%$ 50V SC.	0629001	1B, C
C405	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	2, 3C
C406	47 $\mu$ F 6.3V EC.	0510470	2B
C407	10 $\mu$ F 25V EC.	0513100	1B
C408	10 $\mu$ F 25V EC.	0513100	2A, B
C409	47 $\mu$ F 16V EC.	0512470	1A, B
C410	10 $\mu$ F 25V EC.	0513100	1B
C411	47 $\mu$ F 16V EC.	0512470	1B
C412	0.0068 $\mu$ F $\pm 5\%$ 50V MC.	0600686	2A
C413	0.0068 $\mu$ F $\pm 5\%$ 50V MC.	0600686	2A
C414	100 $\mu$ F 25V EC.	0513101	2A
C415	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	3A
C416	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	3A
C417	220 pF $\pm 5\%$ 50V SC.	0620221	2C
C418	1000 pF $\pm 5\%$ 50V SC.	0620102	2C
C419	100 pF $\pm 5\%$ 50V SC.	0620101	2C
C420	680 pF $\pm 5\%$ 50V SC.	0620681	3C
C421	1 $\mu$ F 50V EC.	0515109	3C
C422	0.15 $\mu$ F $\pm 10\%$ 50V MC.	0601158	3C
C423	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	3C
C424	0.047 $\mu$ F $\pm 10\%$ 50V MC.	0601477	3C
C425	0.022 $\mu$ F $\pm 80\%$ $-20\%$ 50V CC.	0657223	3B
C426	100 $\mu$ F 25V EC.	0513101	2B
C427	10 $\mu$ F 16V EC.	0512100	3B
C428	0.022 $\mu$ F $\pm 80\%$ $-20\%$ 50V CC.	0657223	3B
C429	3.3 $\mu$ F 25V EC.	0513339	3B
C430	100 $\mu$ F 25V EC.	0513101	2, 3B
C435	3.3 $\mu$ F 25V EC.	0513339	
C436	0.0012 $\mu$ F $\pm 5\%$ 50V MC.	0600126	
C437	0.0012 $\mu$ F $\pm 5\%$ 50V MC.	0600126	
TR401	2SC871R (F)	0305475	1C
TR402	2SC711 (E, F)	0305731, 2	1C
TR403	2SC678 (6)	0300291	2B
TR404		0305475	2A
TR405	2SC871R (F)	0305475	1A
TR406		0305475	1A
TR407		0305891	3A
TR408	2SC634A (6)	0305891	3A
TR409	2SC711 (E, F)	0305731, 2	2, 3C
TR410	2SC634A (6)	0305891	3B, C
TR411		0305733	3C
TR412	2SC711 (G)	0305733	3B
TR413		0305733	2B, C
TR414	2SC735 (Y)	0305641	3B, C

# LAMP HOLDER BLOCK <F-1374>

Stock No. 7590810

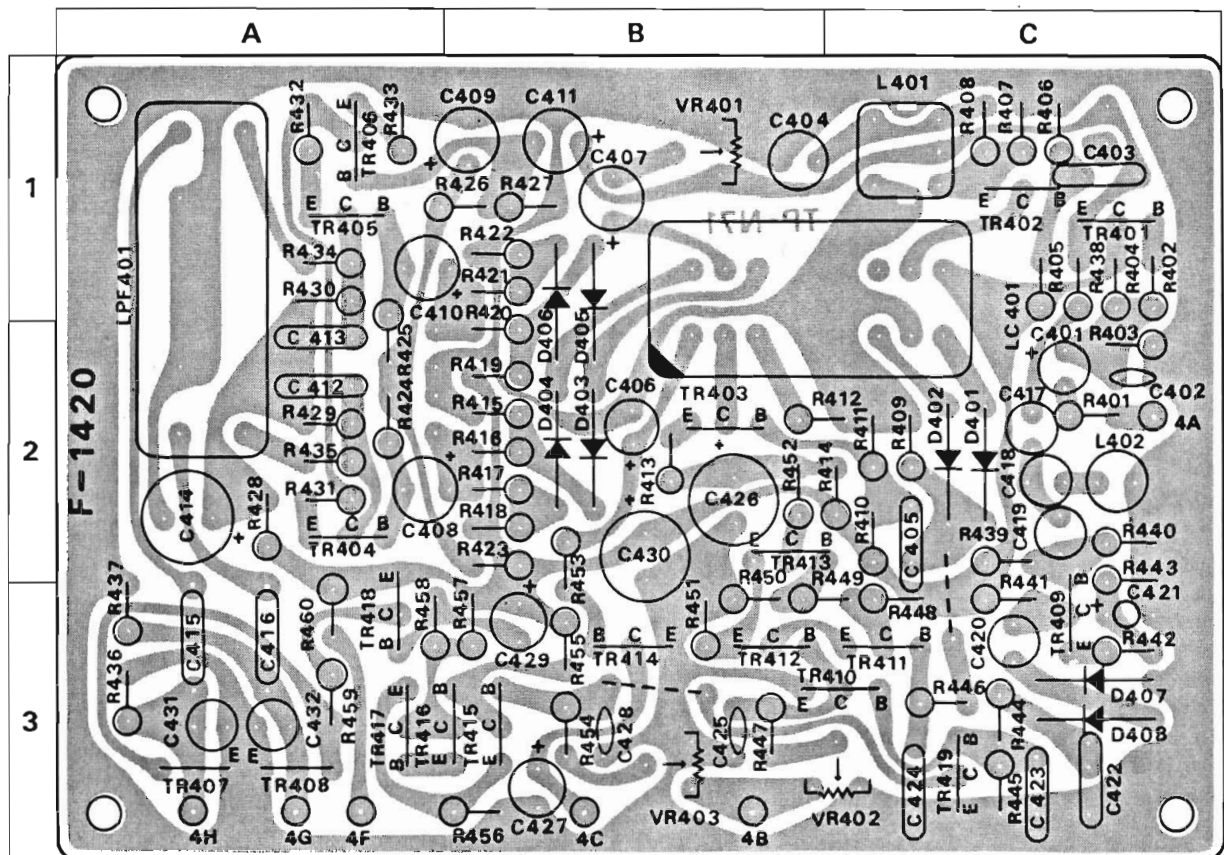
W	X	Y
R028	18Ω ± 5 % ¼W CR.	0107180
	Fuse Holder pin(× 10)	2310050
	F-1374 Printed Circuit Board	2590750

W	X	Y	Z	
TR415	2SC711 (E, F)	0305731, 2	3 B	
TR416		0305731, 2	3 B	
TR417		0305731, 2	3 A	
TR418		2SA678 (6)	0300291	2, 3 A
TR419		2SC634A (6)	0305891	3 C
D401	1N34A	0310400	2 C	
D402		0310400	2 C	
D403	1S1588 or 1S2473	0311180 or 0311160	2 B	
D404		0311180 or 0311160	2 B	
D405		0311180 or 0311160	1, 2 B	
D406		0311180 or 0311160	1, 2 B	
D407	1N34A	0310400	3 C	
D408		0310400	3 C	
L401	SLV-40S MPX Coil	4240510	1 C	
L402	4.7mH ± 5 % Micro Inductor	4900170	2 C	
LC401	SMU-203S LC Unit	4240490	1, 2 B C	
	F-1420 Printed Circuit Board	2540280		

# TERMINAL BLOCK <F-1451>

Stock No. 7591202

W	X	Y
R025	3.3kΩ } ± 5 % ¼W CR.	0107332
R026		3.3kΩ }
	F-1451 Printed Circuit Board	2591220





# PRINTED CIRCUIT BOARDS AND PARTS LIST

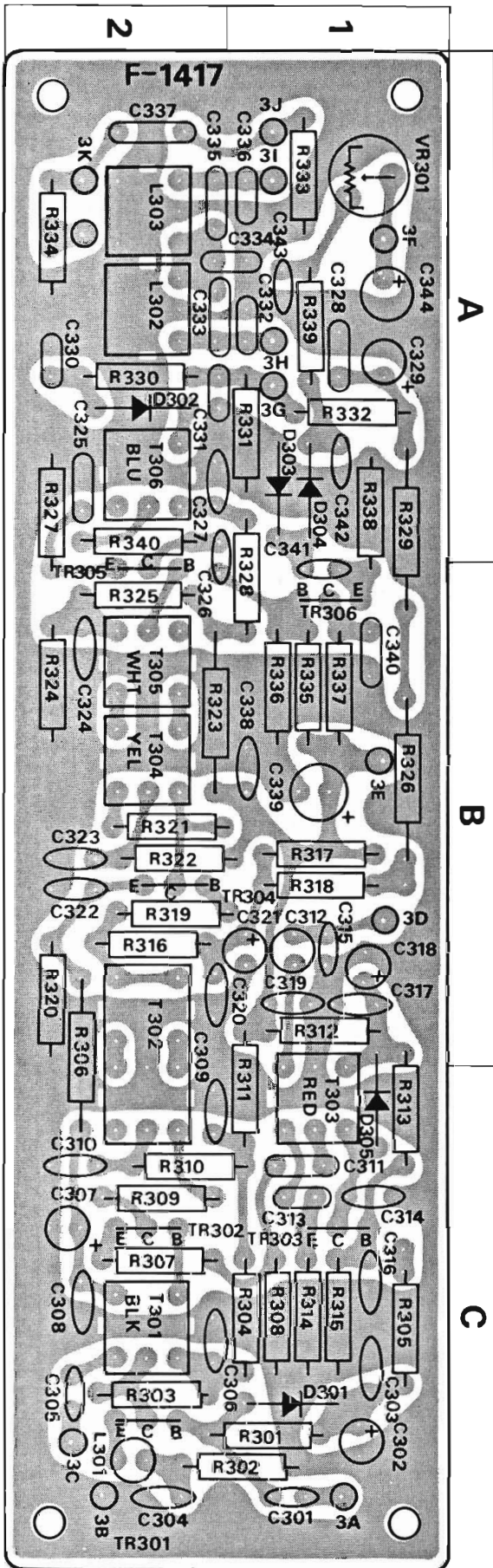
W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## AM BLOCK <F-1417A>

Stock No. 7530260

W	X	Y	Z
R301	10kΩ	0107103	1, 2C
R302	1kΩ	0107102	1, 2C
R303	3.3kΩ	0107332	2C
R304	100Ω	0107101	1C
R305	10kΩ	0107103	1C
R306	10kΩ	0107103	2B, C
R307	22Ω	0107220	2C
R308	1kΩ	0107102	1C
R309	470Ω	0107471	2C
R310	100Ω	0107101	1, 2C
R311	47Ω	0107470	1B, C
R312	1kΩ	0107102	1B
R313	22kΩ	0107223	1B, C
R314	1kΩ	0107102	1C
R315	3.3kΩ	0107332	1C
R316	1kΩ	0107102	2B
R317	150kΩ	0107154	1B
R318	5.6kΩ	0107562	1B
R319	10kΩ	0107103	2B
R320	1.5kΩ	0107152	2B
R321	100kΩ	0107104	2B
R322	100Ω	0107101	2B
R323	47Ω	0107470	2B
R324	4.7kΩ	0107472	2B
R325	10kΩ	0107103	2B
R326	1.8kΩ	0107182	1B
R327	1kΩ	0107102	2A
R328	100Ω	0107101	1A, B
R329	1.8kΩ	0107182	1A, B
R330	1kΩ	0107102	2A
R331	10kΩ	0107103	1A
R332	18kΩ	0107183	1A
R333	10kΩ	0107103	1A
R334	47kΩ	0107473	2A
R335	15kΩ	0107153	1B
R336	22kΩ	0107223	1B
R337	100Ω	0107101	1B
R338	2.2kΩ	0107222	1A, B
R339	1kΩ	0107102	1A
R340	100Ω	0107101	2A
VR301	10kΩ (B) AM Meter Adj.	1035130	1A
C301	0.022μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656223	1C
C302	1μF 50V EC.	0515109	1C
C303	0.047μF	0656473	1C
C304	0.047μF	0656473	2C
C305	0.022μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656223	2C
C306	0.047μF	0656473	2C
C307	1μF 50V EC.	0515109	2C
C308	0.047μF	0656473	2C
C309	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	2C
C310	0.047μF	0656473	2C
C311	0.01μF $\pm 10\%$ 50V MC.	0601107	1C
C312	430pF $\pm 5\%$ 50V SC.	0620431	1B

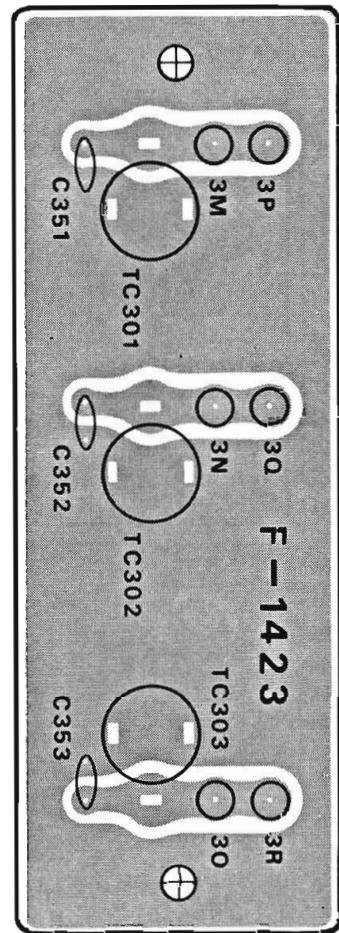
W	X	Y	Z
C313	0.01μF $\pm 10\%$ 50V MC.	0601107	1C
C314	10pF	0660100	1C
C315	22pF $\pm 10\%$ 50V CC.	0660220	1B
C316	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	1C
C317	0.047μF	0656473	1B
C318	10μF 16V EC.	0512100	1B
C319	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	1B
C320	0.047μF	0656473	2B
C321	1μF 50V EC.	0515109	1B
C322	0.047μF	0656473	2B
C323	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	2B
C324	0.047μF	0656473	2B
C325	0.047μF	0656473	2A
C326	47pF $\pm 10\%$ 50V CC.	0660470	2A, B
C327	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	2A
C328	0.047μF	0656473	1A
C329	4.7μF 25V EC.	0513479	1A
C330	0.0047μF	0601476	2A
C331	0.0033μF	0601336	2A
C332	0.0068μF	0601686	1A
C333	0.0047μF $\pm 10\%$ 50V MC.	0601476	2A
C334	0.01μF	0601107	1, 2A
C335	0.01μF	0601107	2A
C336	0.01μF	0601107	1A
C337	0.047μF	0601477	2A
C338	0.047μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656473	1B
C339	47μF 16V EC.	0512470	1B
C340	0.047μF	0656473	1B
C341	0.022μF $\begin{matrix} +80\% \\ -20\% \end{matrix}$ 25V CC.	0656223	1B
C342	0.022μF	0656223	1A
C343	0.022μF	0656223	1A
TR301	25C403C (4)	0305992	2C
TR302	25C403C (4)	0305992	2C
TR303	25C403C (3)	0305991	1C
TR304	25C403C (4)	0305992	1B
TR305	25C403C (4)	0305992	2B
TR306	25C403C (3)	0305991	1B
D301	1N60	0310332	1C
D302	1S1007	0311090	2A
D303	1N60	0310332	1A
D304	1N60	0310332	1A
D305	1S1555	0311040	1C
T301	2G-054 AM RF Coil	4210180	2C
T302	YEL-455E <sub>2</sub> Ceramic Filter	0910180	2B, C
T303	2G-017 AM OSC Coil	4220480	1A, B
T304	IG-058	4230590	2B
T305	IG-059	4230600	2B
T306	IG-057	4230580	2A
L301	3.3μH Micro Inductor	4900100	2C
L302	95mH Filter Coil	4290200	2A
L303	95mH Filter Coil	4290200	2A
	F-1417 Printed Circuit Board	2530160	



### AM TRIMMER BLOCK <F-1423>

Stock No. 7591280

W	X	Y	
C351	10 pF } ±10% 50V CC.	0660100	
C353		10 pF }	0660100
TC301	20 pF } Ceramic Trimer	1230060	
TC302		20 pF }	1230060
TC303		20 pF }	1230060
F-1423 Printed Circuit Board		2591280	



### METER POINTER ILLUMINATION BLOCK <F-2068>

Stock No. 7591450

W	X	Y
R031 (032)	10Ω ± 5% ¼W Fuse Resistor	0191100
PL011 (013)	5V 60mA Lamp	0400100, 1
PL012 (014)	6V 60mA Lamp	0400100, 1
F-2068 Printed Circuit Board		2591420



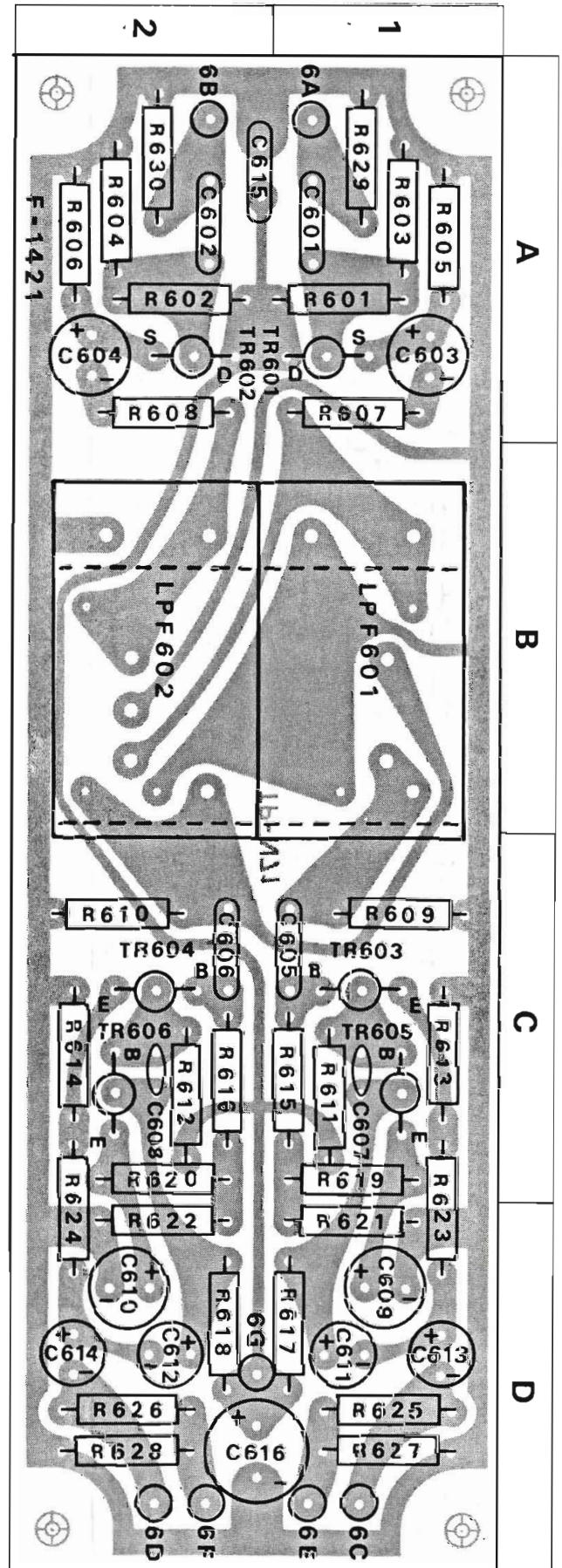
# PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. X: Parts Name Y: Stock No. Z: Position of Parts

## FILTER BLOCK <F-1421>

Stock No. 7591290

W	X	Y	Z
R601	1M $\Omega$	0107105	1A
R602	1M $\Omega$	0107105	2A
R603	1M $\Omega$	0107105	1A
R604	1M $\Omega$	0107105	2A
R605	4.7k $\Omega$	0107472	1A
R606	4.7k $\Omega$	0107472	2A
R607	2.2k $\Omega$	0107222	1A
R608	2.2k $\Omega$	0107222	2A
R609	3.3k $\Omega$	0107332	1C
R610	3.3k $\Omega$	0107332	2C
R611	100k $\Omega$	0107104	1C
R612	100k $\Omega$	0107104	2C
R613	2.2k $\Omega$	0107222	1C
R614	2.2k $\Omega$	0107222	2C
R615	100k $\Omega$	0107104	1C
R616	100k $\Omega$	0107104	2C
R617	6.8k $\Omega$	0107682	1D
R618	6.8k $\Omega$	0107682	2D
R619	1.2k $\Omega$	0107122	1C
R620	1.2k $\Omega$	0107122	2C
R621	560 $\Omega$	0107561	1D
R622	560 $\Omega$	0107561	2D
R623	8.2k $\Omega$	0107822	1C, D
R624	8.2k $\Omega$	0107822	2C, D
R625	47k $\Omega$	0107473	1D
R626	47k $\Omega$	0107473	2D
R627	22k $\Omega$	0107223	1D
R628	22k $\Omega$	0107223	2D
R629	1M $\Omega$	0107105	2D
R630	1M $\Omega$	0107105	2A
C601	0.15 $\mu$ F	0601158	1A
C602	0.15 $\mu$ F	0601158	2A
C603	33 $\mu$ F	0513330	1A
C604	33 $\mu$ F	0513330	2A
C605	0.15 $\mu$ F	0601158	1C
C606	0.15 $\mu$ F	0601158	2C
C607	47 pF	0660470	1C
C608	47 pF	0660470	2C
C609	100 $\mu$ F	0510101	1D
C610	100 $\mu$ F	0510101	2D
C611	10 $\mu$ F	0513100	1D
C612	10 $\mu$ F	0513100	2D
C613	10 $\mu$ F	0513100	1C
C614	10 $\mu$ F	0513100	2D
C615	0.047 $\mu$ F	0601477	2A
C616	100 $\mu$ F	0513101	1, 2D
TR601	} 2SK30 (GR)	0370103	1A
TR602		0370103	2A
TR603		0305475	1C
TR604		0305475	2C
TR605		0305475	1C
TR606		0305475	2C
LPF601	} BL-13 Low Pass Filter	0910190	1B
LPF602		0910190	2B
	F-1421 Printed Circuit Board	2591190	



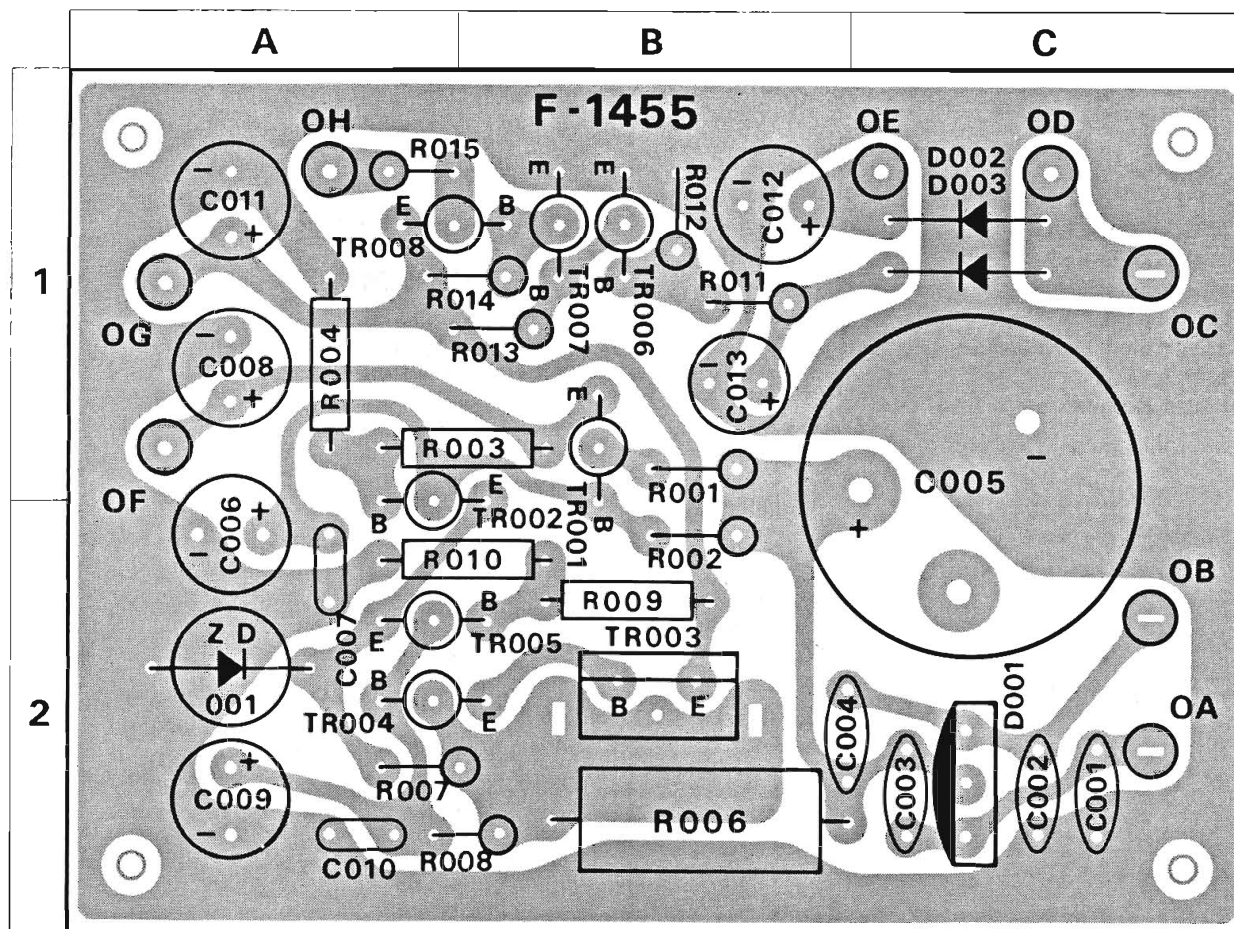


# POWER SUPPLY BLOCK <F-1455>

Stock No. 7500710

W	X	Y	Z
R001	22Ω	0106220	1 B
R002	4.7kΩ	0106472	2 B
R003	39kΩ	0107393	1 A
R004	18kΩ	0107183	1 A
R006	150Ω	0182151	2 A, B
R007	3.3kΩ	0106332	2 A
R008	10kΩ	0106103	2 A
R009	10kΩ	0107103	2 A, B
R010	12kΩ	0107123	2 A
R011	5.6kΩ	0106562	1 B
R012	5.6kΩ	0106562	1 B
R013	100kΩ	0106104	1 A
R014	10kΩ	0106103	1 A
R015	4.7kΩ	0106472	1 A
C001	0.0047μF	0659010	2 B
C002	0.0047μF	0659010	2 B
C003	0.0047μF	0659010	2 B
C004	0.0047μF	0659010	2 B
C005	1000μF	0549104	1, 2 B
C006	100μF	0513101	1, 2
C007	0.01μF	0601107	2 A

W	X	Y	Z
C008	100μF	0513101	1 A
C009	100μF	0512101	2 A
C010	0.022μF	0601227	2 A
C011	100μF	0512101	1 A
C012	220μF	0511221	1 B
C013	3.3μF	0515339	1 B
TR001	2SD330 (E, F)	0308362, 3	1, 2 A
TR002	2SC711 (E, F)	0305731, 2	1, 2 A
TR003	2SD313 (E, F)	0308392, 3	2 A, B
TR004	2SC711 (E, F)	0305731, 2	2 A
TR005		0305731, 2	2 A
TR006		0305731, 2	1 A
TR007		0305731, 2	1 A
TR008	2SA678 (6)	0300291	1 A
D001	10DC-1	0310680	2 B
D002	10D-1	0310340	1 B
D003		0310340	1 B
ZD001	ZB1-6	0315570	2 A
F-1455 Printed Circuit Board			2500600



# OTHER PARTS AND THEIR LOCATION ON CHASSIS

W: Parts No. X: Parts Name Y: Stock No.

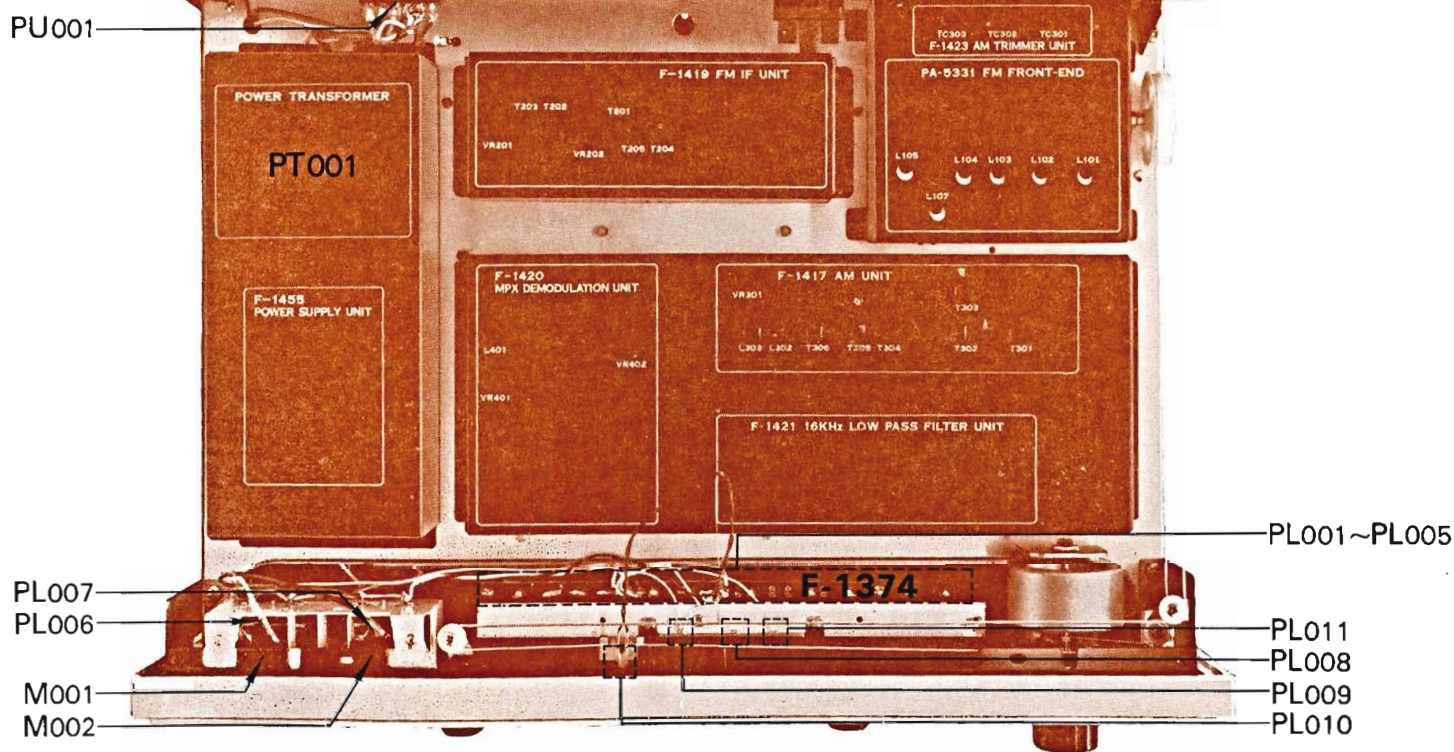
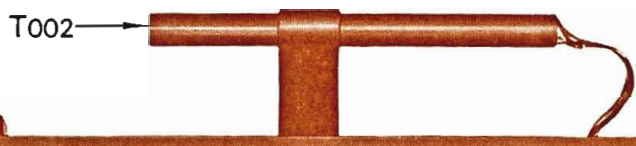
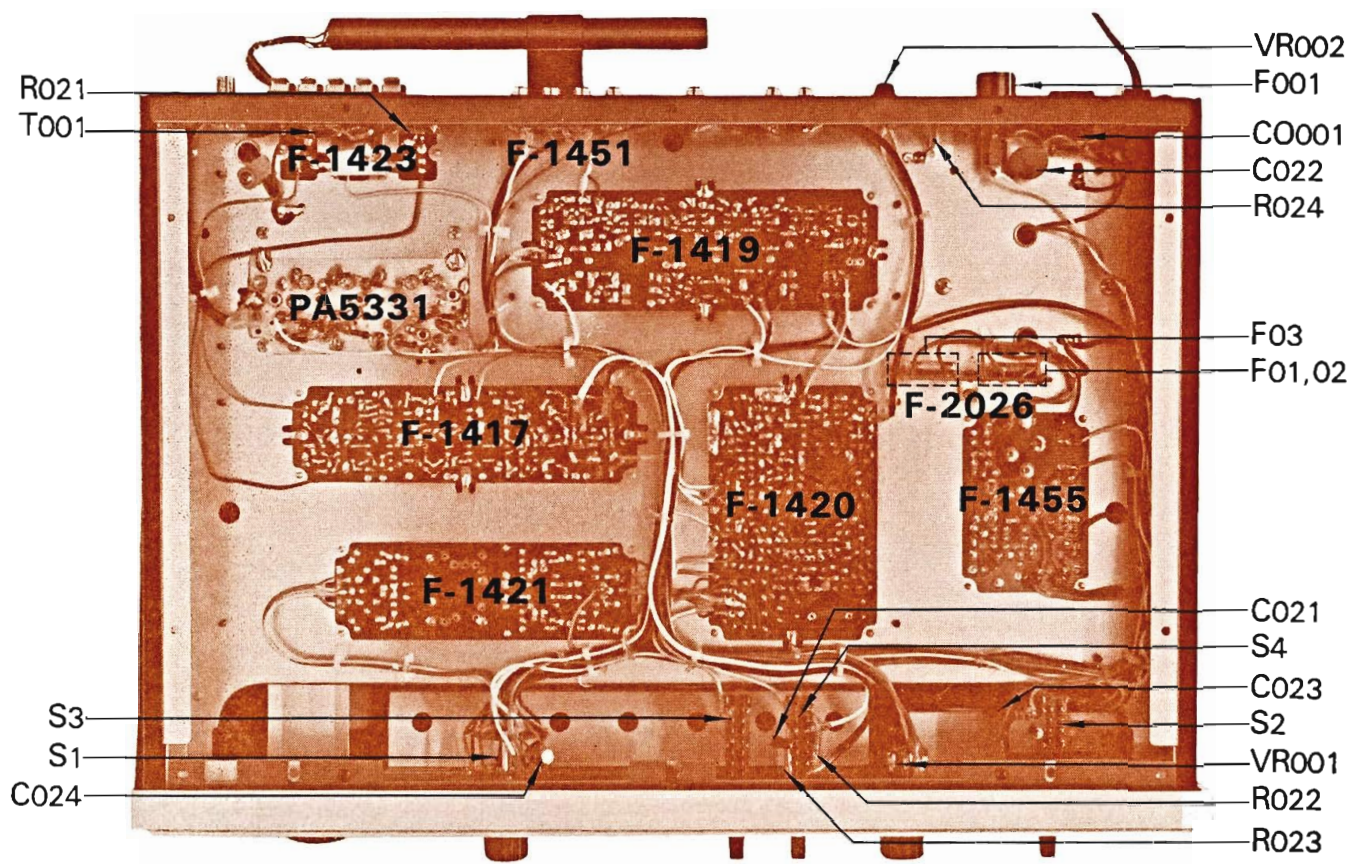
## OTHER PARTS

W	X	Y
R021	1.2k $\Omega$	0107122
R022	1.2k $\Omega$	0107122
R023	4.7k $\Omega$	0107472
R024	100k $\Omega$	0107104
R027	1.8k $\Omega$	0107182
VR001	20k $\Omega$ (B) X2 Output Level Adj.	1010810
VR002	100k $\Omega$ (B) Muting Level Adj.	1005041
C021	0.0022 $\mu$ F $\pm 10\%$ 50V MC.	0601226
C022	0.0047 $\mu$ F $+80\%$ 250V MC.	0659802
C023	0.01 $\mu$ F $-20\%$	0659801
C024	100 $\mu$ F 6.3V E.C.	0510101
PT001	Power Transformer	4001191
T001	300 $\Omega$ : 75 $\Omega$ Baloon	4290021
T002	AM Bar Antenna	4200540
L001	} 1 $\mu$ H Micro Inductor	4900140
L002		4900140
L003		4900140
M001	S-3 Signal Meter	4300580
M002	T-3 Tuning Meter	4300590
S1	Selector Switch Y-2-7-3	1102200
S2	Power Switch	1170310
S3	Muting Switch	1170270
S4	Noise Suppressor Switch	1170270
CO001	AC Outlet	2450040
F001	250V 1A Power Fuse (100/117V)	0431222
	250V 0.5A Power Fuse (220/240V)	0431212
	Fuse Holder	2300020
F01	250V 4A	0432890
F02	250V 0.5A	0432810
F03	250V 0.5A	0432810
	F-2026 Printed Circuit Board	2591370
PL001	} 7V 330mA Dial Scale Lamp	0420040
PL002		0420040
PL003		0420040
PL004		0420040
PL005		0420040
PL006	} 7V 330mA Signal Meter Lamp	0420040
PL007		Tuning Merer Lamp
PL008	} 7V 160mA FM Indicator	0400170
PL009		AM Indicator
PL010	6V 75mA Dial Pointer Lamp	0400200
PL011	6V 100mA Stereo Indicator	0400161
	Lamp Socket ( $\times 2$ )	2310080
	Power Cord	3800020
	Lup Board	2110060

W	X	Y
PU001	Voltage Selector Socket	2410080
	Voltage Selector Plug	2410090
	PA 5331 U07 FM Frontend	7510570
	F-1449 FM IF Unit	7520580
	F-1420E FM MPX Unit	7540750
	F-1417A AM Unit	7530260
	F-1423 AM Trimer Unit	7591280
	F-1421 Filter Unit	7591290
	F-1455 Power Supply Unit	7500710
	F-1451 Terminal Unit	7591220
	F-1374 Lamp Holder Unit	7590810
	F-2068 Meter Pointer Illumination Unit(x2)	7591450



\* Design and specifications subject to change without notice for improvements.





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