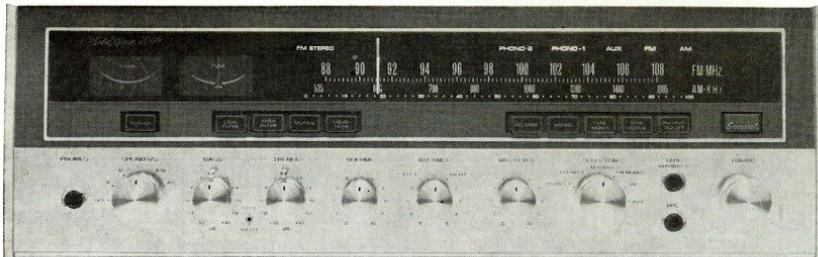


SERVICE MANUAL

SOLID-STATE AM/FM STEREO TUNER AMPLIFIER

SANSUI 7000



Sansui

SANSUI ELECTRIC COMPANY LIMITED

Your Sansui 7000 receiver is designed for trouble-free performance with a minimum of care. Should the receiver work unsatisfactorily, please refer to the section of this manual entitled 'General Troubleshooting Chart' on pages 3 and 4. If you will be confronted with a trouble not covered in the chart, please contact your nearest Sansui dealer or Authorized Service Station.

For the man who can repair or replace the defective part himself

This manual includes a schematic wiring diagram and pictures identifying all of the electric and electronic parts. The parts list (pp. 13~24) gives the reference numbers and letters which are used in the illustrations of printed-circuit boards to identify each part. To remove the front panel, bottom board and wood case from the unit, refer to 'Disassembly Procedure (p. 5)'.

For the man who can align the tuner himself

The necessary steps for FM and AM alignments are given in the charts under the heading 'Alignment (pp. 9~12)'. Note that the alignment should be used only when really necessary and that the proper alignment requires use of precision instruments listed on the top of the chart. Never attempt to align unless such instruments are available.

For the man who wants to make a custom cabinet himself

Before mounting the 7000 in a custom cabinet or making such a cabinet, be sure to refer to the section entitled 'Custom Mounting (pp. 7~8)'.

If you have any questions regarding operation and service, please consult your nearest Sansui dealer or Authorized Service Station.

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GENERAL TROUBLESHOOTING CHART

If the amplifier is otherwise operating satisfactorily, the more common causes of trouble may generally be attributed to the following:

1. Incorrect connection or loose terminal contacts. Check the speakers, record player, tape deck, antenna and line cord.
2. Improper operation. Before operating any audio com-

ponent, be sure to read the manufacturer's instructions.

3. Improper location of audio components. The proper positioning of components, such as speakers and turntable, is vital to stereo.

4. Defective audio components.

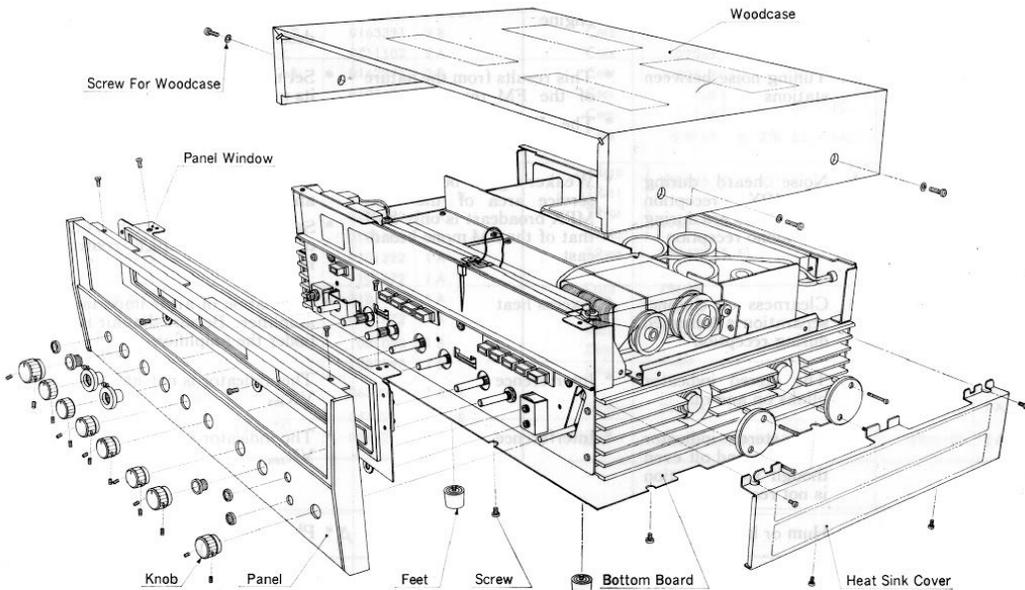
The following are some other common causes of malfunction and what to do about them.

PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
AM, FM or MPX reception	A. Constant or intermittent noise heard at times or in a certain area	<ul style="list-style-type: none"> * Discharge or oscillation caused by electrical appliances, such as fluorescent lamp, TV set, D.C. motor, rectifier or oscillator * Natural phenomena, such as atmospheric, static or thunderbolts * Insufficient antenna input due to ferroconcrete wall or long distance from the station * Wave interference from other electrical appliances 	<ul style="list-style-type: none"> * Attach a noise limiter to the electrical appliance causing the noise, or attach it to the amplifiers power source * Install an outdoor antenna and ground the amplifier 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 a proper distance from other electrical appliances
	B. The needle of the signal and tune meter does not move sharply	<ul style="list-style-type: none"> * Receiver is located in a weak signal area 	<ul style="list-style-type: none"> * Install the antenna for maximum signal pickup
	C. The zero point of the meter diverges much	<ul style="list-style-type: none"> * Regional difference in field intensity 	<ul style="list-style-type: none"> * The unit is not at fault
AM reception	A. Noise heard at a particular time of a day, in a certain area or over part of dial	<ul style="list-style-type: none"> * Due to the nature of AM broadcasts 	<ul style="list-style-type: none"> * Install the antenna for maximum antenna efficiency. See "ANTENNA" in the operating instructions * In some cases, the noise can be eliminated by grounding the amplifier or reversing the power cord plug-receptacle connections
	B. High-frequency noise	<ul style="list-style-type: none"> * Adjacent-channel interference or beat interference * TV set too close to audio system 	<ul style="list-style-type: none"> * Although such noise cannot be eliminated by the amplifier, it is advisable to adjust the TREBLE control from midpoint to left and switch on the HIGH FILTER * Keep the TV set at a proper distance from the audio system
FM reception	A. Noisy	<ul style="list-style-type: none"> * Poor noise limiter effect or too low SN ratio due to insufficient antenna input 	<ul style="list-style-type: none"> * Install the 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 a splitter, make sure TV reception is not affected * An excessively long antenna may cause noise
		<p>Note: FM reception is affected considerably by transmission conditions of stations: power and antenna efficiency. As a result, you may receive one station quite well while receiving another station poorly</p>	

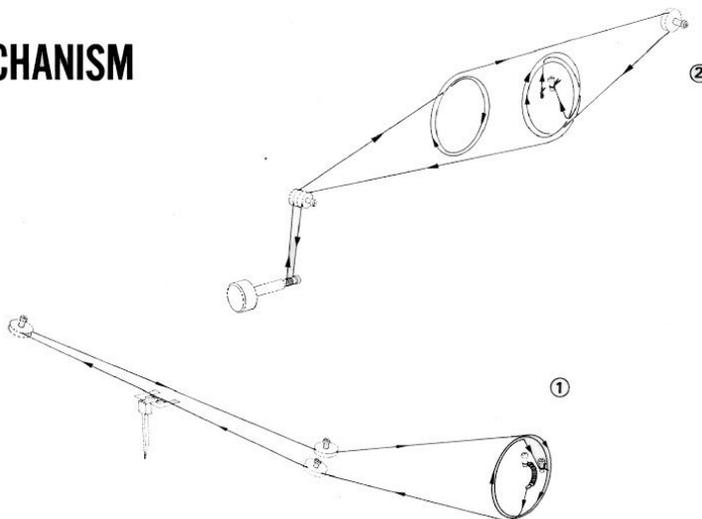
PROGRAM	SYMPTOM	PROBABLE CAUSE	WHAT TO DO
FM reception (cont'd)	B. A series of pops	* Ignition noise caused by starting of an automobile engine	* Install the antenna and its lead-in wire in proper distance from the road or raise the antenna input as described above
	C. Tuning noise between stations	* This results from the nature of the FM reception. * The FM MUTING OFF switch depressed	* Set the FM MUTING OFF switch to its up or on position
FM-MPX reception	A. Noise heard during FM-MPX reception while not heard during FM mono reception	* Weaker signal because the service area of the FM-MPX broadcast is only half that of the FM mono broadcast	* Install the antenna for maximum antenna input * Switch on the HIGH FILTER and/or turn the TREBLE control from midpoint, left
	B. Clearness of channel separation is decreased during reception	* Excess heat	* Circulation of air is important to the amplifier. Be sure that air is flowing under the amplifier
	C. The stereo indicator blinks on and off	* Interference	* The indicator is not at fault, adjust VR ₄₀₃
	D. The stereo indicator blinks on and off even though stereo station is not received	* Interference	* The indicator is not at fault, adjust VR ₄₀₃
Record playing or tape playback	A. Hum or howling	* Record player placed directly on speaker * Wire other than shielded wire used * Loose terminal contact * Shielded wire too close to line cord, fluorescent lamp or other electrical appliances * Nearby amateur radio station or TV transmission antenna	* Place a cushion between the player and the speaker box or place them away from each other * The connecting shielded wire should be as short as possible * Switch on the LOW FILTER and adjust the BASS control from midpoint, left * Consult the nearest Radio Regulatory Bureau
	B. Surface noise	* Worn or old record * Worn needle * Needle dusty * Improper needle pressure	* Recondition the playback head of the tape deck or the needle of the record player * Adjust the TREBLE control from midpoint, left * Switch the HIGH FILTER on
All stereo programs	BALANCE control is not at midpoint when equal sound comes from left and right channels	* It is important to adjust for equal sound from both channels. It should not always be set to the midpoint	* Depress the MONO switch and then set the BALANCE control to a position where equal sound comes from both channels * Check if the efficiency of one speaker is balanced with that of the other

DISASSEMBLY PROCEDURE

REMOVING THE FRONT PANEL, WOOD CASE AND BOTTOM BOARD



DIAL MECHANISM

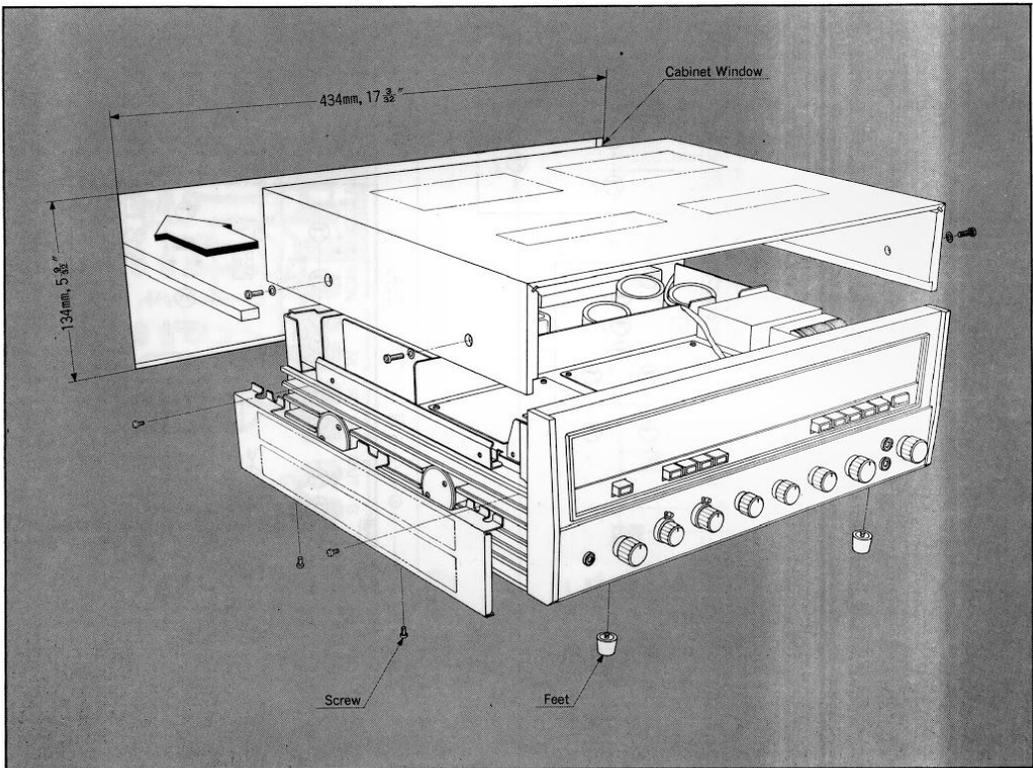


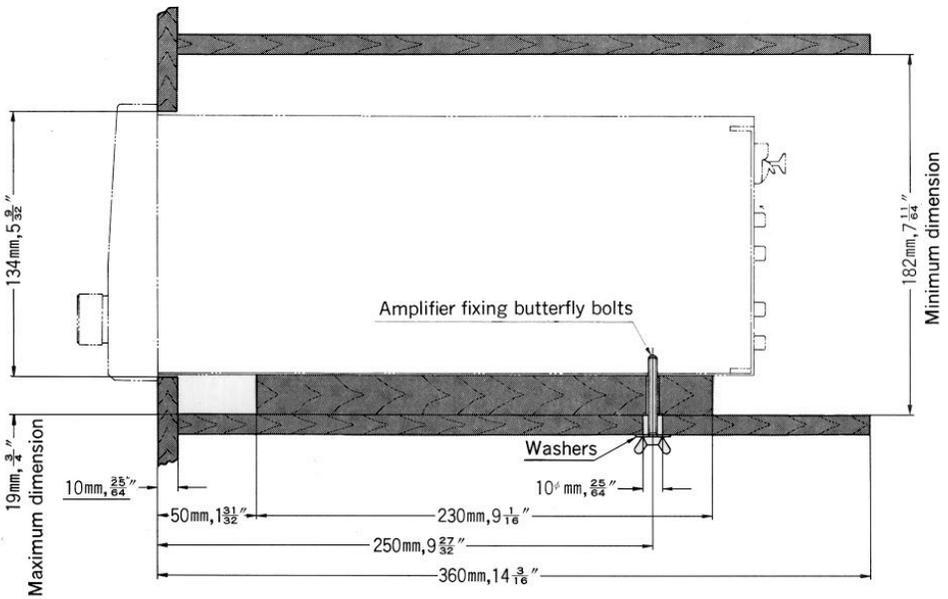
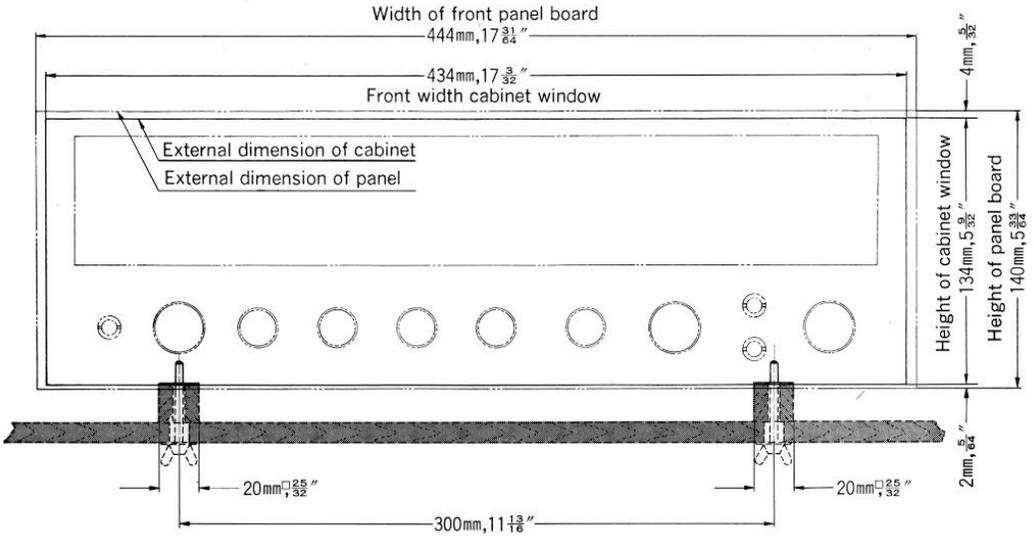
CUSTOM MOUNTING

Custom Mounting

1. Make a panel cutout 434mm ($17\frac{3}{32}$ ") wide and 134mm ($5\frac{9}{32}$ ") high.
2. Obtain two pieces of wood 20mm ($\frac{25}{32}$ ") square and 230mm ($9\frac{1}{16}$ ") long, and place them on the bottom board of the custom cabinet.
3. Drill two holes through the two pieces of wood and the bottom board of the cabinet as illustrated.
4. Remove the wood case, feet and two screws (on the control panel side of the bottom board of the amplifier).
5. Remove the heat sink covers from both sides of the unit.
6. Slide the amplifier into the cabinet through the panel cutout until the back of the control panel is tight against the panel of the cabinet.
7. Insert the two butterfly bolts (supplied) with washers through the holes in the bottom board of the cabinet and fasten the chassis into place.

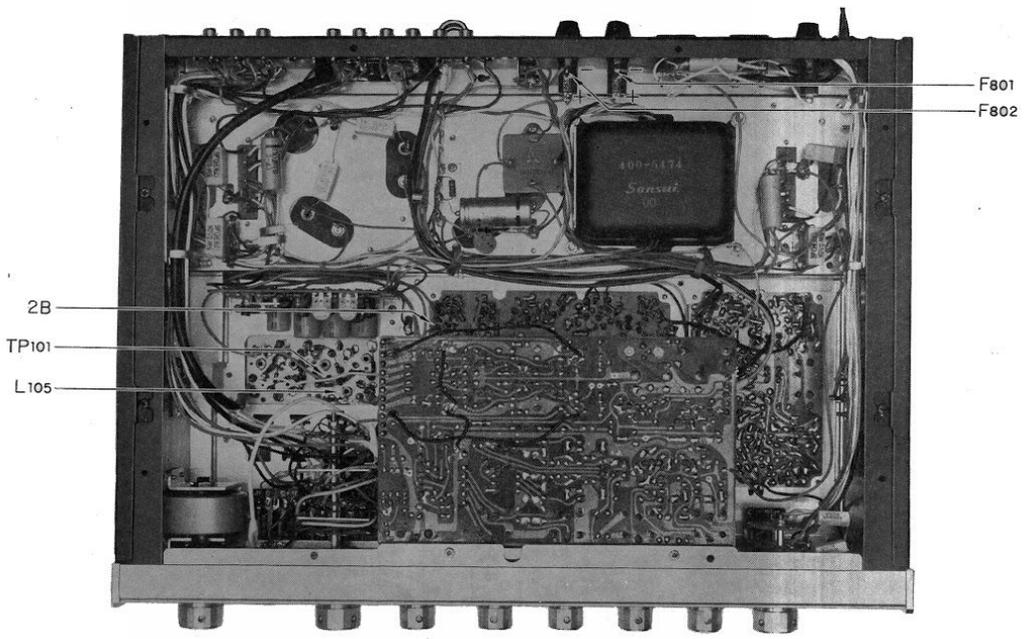
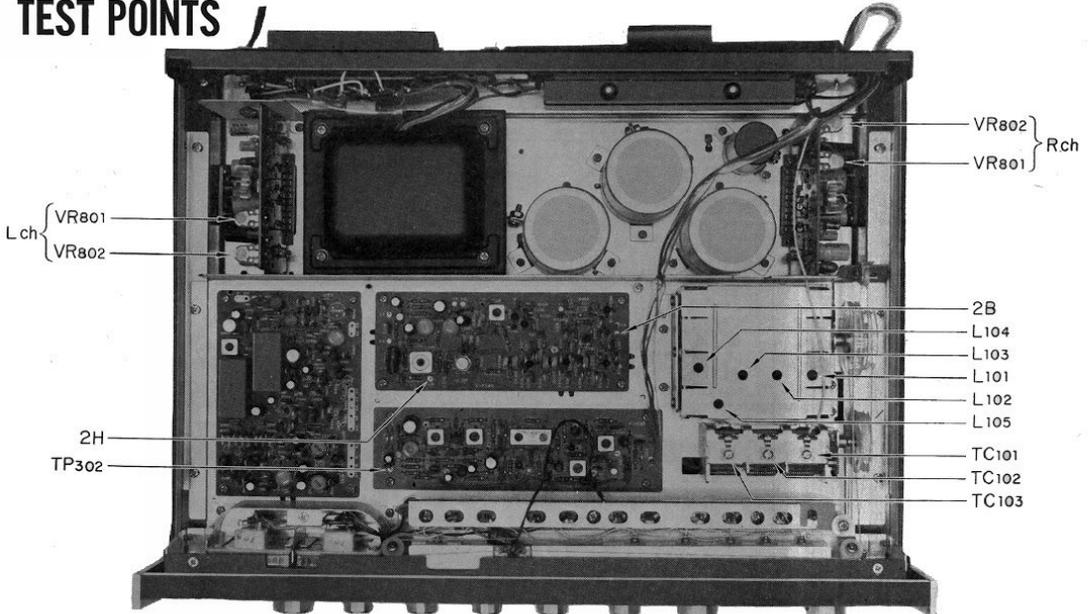
Note: When the receiver is mounted in the cabinet, the wood case, feet and two screws are not used. Retain them for future use.





ALIGNMENT

TEST POINTS



FM ALIGNMENT PROCEDURE

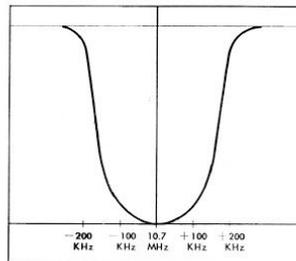
NOTE: To align, set the FM signal generator level to minimum.

Any internal parts replacement or changes you make in the 7000 requires proper adjustment again. Appropriate test points and adjustments are given on pages 9~12.

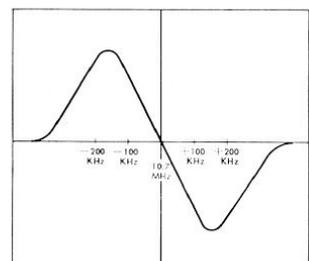
Equipment required: 1. Sweep Generator 2. Oscilloscope 3. FM Signal Generator 4. Multiplex Stereo Generator 5. AC V.T.V.M.
6. Audio Oscillator 7. AM Signal Generator 8. Distortion Meter

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF Transformer	10.7MHz ±200 kHz Sweep generator	To TP ₁₀₁ via the 10pF ceramic capacitor	Oscilloscope is connected to 2B via the 10pF ceramic by using a detector probe		L ₁₀₅	Best I.F. wave form
2.	Discriminator	10.7MHz ±200 kHz Sweep generator	To TP ₁₀₁ via the 10pF ceramic capacitor	Oscilloscope is connected to 2H (TP ₂₀₁).		FM Discriminating transformer T ₂₀₁ 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	88 MHz	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	108 MHz	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	90 MHz	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	106 MHz	Trimmer TC ₁₀₁ , TC ₁₀₂ and TC ₁₀₃	Maximum
8.	Repeat 6 and 7						

FM IF WAVE FORM



FM DISCRIMINATOR WAVE FORM



ALIGNMENT

FM MULTIPLEX CIRCUIT

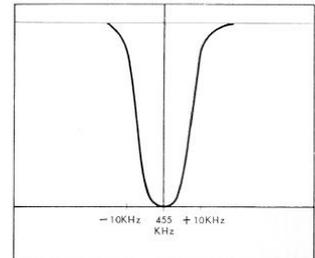
STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	19kHz phase	FM signal generator— 98MHz Stereo signal generator —composite signal with pilot signal, left chan, 30% modulation.	To antenna terminal	Connect distortion meter to right chan. load terminal	98MHz	L ₄₀₁	Min. distortion in right chan.
2.	Stereo separation	Same as above	Same as above	Connect oscilloscope and V.T.V.M. to load terminal	Same as above	VR ₁₀₁	Max. separation

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. Transformer	455 kHz \pm 30 kHz Sweep-generator	Antenna terminals	Oscilloscope and V.T.V.M. at TP ₃₀₂		I.F.T. T ₃₀₃ ~T ₃₀₅	Best IF wave form
2.	O.S.C.	AM-generator 535 kHz 400 Hz 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 ₃₀₆	Maximum
7.	RF amp.	AM-generator 1400 kHz 400 Hz 30% Modulation	Antenna terminals	Oscilloscope 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% Modulation	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						

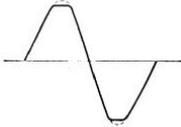
AM IF CHARACTERISTIC



1. CURRENT ADJUSTMENT

STEP	SETTING OF AMMETER (TESTER)	WHAT TO DO	NOTE
1.		Remove F_{801} and F_{802} .	Use an ammeter having 100mA range.
2.		Set VR_{802} (left and right channel) to minimum.	
3.		Set VR_{703} and VR_{704} (VOLUME) to minimum.	Be sure to switch on 1st and then connect the ammeter.
4.		Push the POWER switch ON.	
5.	100 mA range.	Connect the ammeter to F_{801} (See TEST POINTS).	
6.		Turn VR_{802} (left channel) clockwise and adjust current to 27 to 33mA.	
7.	100 mA range.	Push the POWER switch OFF and attach F_{801} in place.	
8.		Push the POWER switch ON and connect the ammeter to F_{802} (See TEST POINTS).	
9.		Turn VR_{802} (right channel) clockwise and adjust current to 27 to 33mA.	
10.		Attach F_{802} in place.	

2. OUTPUT ADJUSTMENT

STEP	WHAT TO DO	NOTE
1.	Adjust the volume control to minimum.	The oscillator used should have the oscillation frequency of, 20 to 20,000Hz and the output voltage of more than 200mV.
2.	Set an oscillator to 1,000Hz and connect it to the LEFT AUX input.	
3.	Set the SELECTOR switch to AUX	
		Set other controls and switches as follows: BALANCE to CENTER TAPE MON to OFF MODE to STEREO TONE to CENTER Others to OFF
4.	Connect an 8- or 16-ohm load resistor having capacity of more than 80 watts to the LEFT SPEAKER output.	
5.	Connect an oscilloscope to the SPEAKER terminal.	
6.	Push the POWER switch on and advance the volume little by little. Check the output at the terminal by means of the oscilloscope.	
7.	Adjust VR_{801} (left channel) so that the fronts of sine wave are clipped simultaneously,	
8.	Adjust the right channel as above.	

PRINTED CIRCUIT BOARDS AND PARTS LIST

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

FM IF BLOCK <F-1243>

W	X	Y	Z
R201	220Ω	0100221	2 C
R202	15kΩ	0100153	2 C
R203	4.7kΩ	0100472	2 C
R204	1kΩ	0100102	2 C
R205	390Ω	0101391	2 C
R206	680Ω	0101681	2 C
R207	3.3kΩ	0100332	2 C
R208	1.5kΩ	0100152	2 C
R209	220Ω	0100221	2 C
R210	1kΩ	0100102	2 C
R211	390Ω	0100391	2 C
R212	680Ω	0101681	2 C
R213	3.3kΩ	0100332	2 B
R214	1.5kΩ	0100152	2 B
R215	220Ω	0100221	2 B
R216	1kΩ	0100102	2 B
R217	390Ω	0100391	2 B
R218	680Ω	0101681	2 B
R219	270Ω	0101271	2 B
R220	56Ω	0100560	2 B
R221	390Ω	0101391	2 A
R222	1kΩ	0101102	2 A
R223	1kΩ	0101102	2 A
R224	270kΩ	0100274	1 C
R225	100Ω	0101101	1, 2 C
R226	1.8kΩ	0101182	1 C
R227	330Ω	0100331	1 C
R228	10kΩ	0101103	1 C
R229	1.5kΩ	0100152	1 C
R230	680Ω	0101681	1, 2 C
R231	680Ω	0101681	1, 2 B
R232	22kΩ	0100223	1 B
R233	68Ω	0100680	1 B
R234	2.2kΩ	0100222	1 B
R235	1.2kΩ	0100122	1 B
R236	560Ω	0100561	1 B
R237	100Ω	0101101	1, 2 B
R238	4.7kΩ	0101472	1 B
R239	1kΩ	0101102	1, 2 A
R240	100Ω	0101101	2 A
R241	1kΩ	0101102	1, 2 A
R242	1MΩ	0101105	1 A
R243	1MΩ	0101105	1 A
R244	4.7kΩ	0101472	1 A
R245	10kΩ	0101103	2 A
R246	18kΩ	0101183	2 A
VR201	22kΩ (B)	1035150	1 A
VR202	47kΩ (B)	1035170	1 A
C201	0.022μF	0656223	2 C
C202	0.022μF	0656223	2 C
C203	0.022μF	0656223	1 C
C204	0.022μF	0656223	2 C
C205	0.022μF	0656223	2 C
C206	0.022μF	0656223	2 B
C207	0.022μF	0656223	2 B

W	X	Y	Z
C209	0.022μF	0656223	2 B
C210	0.022μF	0656223	2 B
C211	0.022μF	0656223	2 B
C212	0.039μF	0656393	2 A
C213	220pF	0660221	2 A
C214	220pF	0660221	2 A
C215	10μF	0513100	1 A
C216	0.022μF	0656223	1 C
C217	47pF	0660470	1 C
C218	0.022μF	0656223	1 C
C219	47pF	0660470	1 C
C220	22pF	0660220	2 C
C221	22pF	0660220	1 B
C222	0.022μF	0656223	1 B
C223	0.022μF	0656223	1 B
C224	22pF	0660220	1 B
C225	22pF	0660220	1 B
C226	0.022μF	0656223	1 B
C227	3.3μF	0515339	1 B
C228	0.022μF	0656223	1 A
C229	0.022μF	0656223	1 A
C230	47μF	0512470	1 A
C231	220pF	0660221	2 A
C232	0.33μF	0601338	2 A
C233	10μF	0513100	1 A
C234	0.022μF	0656233	1 A
TR201		0305791	2 C
TR202		0305791	2 C
TR203		0305791	2 B
TR204		0305791	1 C
TR205		0305791	1 B
TR206		0305791	1 B
TR207		0370060	1 A
D201		0310331	1 C
D202		0310331	1 C
D203		0310331	1 B
D204		0310331	1 B
IC201		0360050	2 A, B
T201		4235660	2 A
T202		4235660	1 B
L201		4900100	1 C
L202		4900100	2 C
L203		4900100	2 C
CF201		0910100	1 C
CF202		0910100	1 C
CF203		0910100	1 C
CF204		0910100	1 B
CF205		0910100	1 B
CF206		0910100	1 B

PRINTED CIRCUIT BOARDS AND PARTS LIST

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

FM MPX BLOCK (F-1322B)

W	X	Y	Z
R401	1kΩ	0100102	1 C
R402	1kΩ	0100102	1 C
R403	100kΩ	0100104	1 C
R404	22kΩ	0100223	1 C
R405	100kΩ	0101104	2 A
R406	82kΩ	0100823	1 C
R407	6.8kΩ	0100682	2 C
R408	1.2kΩ	0100122	1 C
R409	47kΩ	0101473	2 C
R410	22kΩ	0100223	2 C
R411	100Ω	0100101	2, 3 B
R412	1.5kΩ	0100152	2, 3 B
R413	33kΩ	0100333	2 B
R414	220kΩ	0100224	1 A
R415	10kΩ	0100103	1 A
R416	10kΩ	0100103	1 A
R417	220kΩ	0100224	2 A
R418	220kΩ	0100224	1 A
R419	10kΩ	0100103	1 A
R420	10kΩ	0100103	1 A
R421	220kΩ	0100224	1 A
R422	56kΩ	0100563	2 A
R423	56kΩ	0100563	1 A
R426	10kΩ	0100103	2 A
R427	10kΩ	0100103	1 A
R428	100kΩ	0100104	2 A
R429	100kΩ	0100104	1 A
R430	33kΩ	0100333	2 A
R431	33kΩ	0100333	2 A
R432	68kΩ	0100683	2 A
R433	68kΩ	0100683	1, 2 A
R434	4.7kΩ	0100472	2 A
R435	4.7kΩ	0100472	1 A
R436	100Ω	0101101	1, 2 A
R437	100kΩ	0100104	2 B
R438	100kΩ	0100104	2 A
R439	3.3kΩ	0100332	2 A, B
R440	3.3kΩ	0100332	2 A
R441	4.7kΩ	0101472	2 A
R442	4.7kΩ	0100472	2 A
R443	22kΩ	0100223	3 A
R444	22kΩ	0100223	3 A
R445	1MΩ	0100105	3 C
R446	3.3kΩ	0100332	2 C
R447	68Ω	0100680	2 C
R448	3.3kΩ	0100332	3 C
R449	22kΩ	0100223	3 C
R450	220kΩ	0100224	3 C
R451	100kΩ	0100104	3 C
R452	47kΩ	0100473	3 C
R453	47Ω	0100470	3 C
R454	47kΩ	0100473	3 C
R455	1kΩ	0100102	3 B
R456	10kΩ	0100103	2 B
R457	1kΩ	0100102	3 B
R458	3.9kΩ	0100392	3 B
R461	47kΩ	0100473	3 B
R462	47kΩ	0100473	2 B
R463	10kΩ	0100103	2, 3 B
R464	4.7kΩ	0100472	3 A
R465	47Ω	0100470	3 B
R466	220kΩ	0100224	2 B
R467	4.7kΩ	0100472	2 B
R468	47kΩ	0101473	2, 3 B

±10% 1/4 W CR.

W	X	Y	Z
R469	150kΩ ±10% 1/4 W CR.	0101154	1 C
VR401	47kΩ(B) MPX Separation Adj.	1035170	2 A
VR403	220kΩ(B) FM Stereo Indicator Adj.	1035210	3 C
C401	68pF ±10% 50 V CC.	0660680	1, 2 C
C402	10μF 25 V EC.	0513100	1 C
C403	100pF	0620101	2 C
C404	4700pF ±5% 50 V SC.	0620472	2 C
C405	6800pF	0620682	1 C
C406	1μF 50 V EC.	0515109	2, 3 B
C407	10μF 25 V EC.	0513100	1 B
C408	560pF ±5% 50 V SC.	0620561	1 A
C409	560pF	0620561	1 A
C410	0.15μF ±10% 50 V MC.	0601158	1 A
C411	0.15μF	0601158	1 A
C412	1500pF ±5% 50 V SC.	0620152	2 A
C413	1500pF	0620152	1 A
C416	10μF 25 V EC.	0513100	2 A
C417	10μF 25 V EC.	0513100	1 A
C418	560pF ±5% 50 V SC.	0620561	2 A
C419	10μF 25 V EC.	0513100	2 A
C420	10μF 25 V EC.	0513100	2 A
C421	0.0022μF	0601226	2 A
C422	0.0022μF	0601226	2 A
C423	0.0022μF	0601226	3 A
C424	0.0022μF ±5% 50 V MC.	0601226	3 A
C425	0.0022μF	0601226	3 A
C426	0.0022μF	0601226	3 A
C427	0.022μF +80% -20% 50 V CC.	0650223	3 C
C428	0.68μF 25 V AEC.	0563688	3 C
C429	10μF 25 V EC.	0513100	2 B
C433	47μF 25 V EC.	0513470	2 B, C
C434	1μF 50 V EC.	0515100	2 B
C435	1μF 25 V AEC.	0563109	2 B
TR401	25C871(F)	0305472	1 C
TR402	25A562(Y)	0300221	2 B
TR403		0305472	2 A
TR404		0305472	1 A
TR405	25C871(F)	0305472	1 A, B
TR406		0305472	1 A
TR407	25C733(O, Y)	0305370, 1	3 A
TR408		0305370, 1	3 A
TR409	25C711(E, F)	0305731, 2	2 C
TR410	25C733(O, Y)	0305370, 1	3 C
TR411		0305370, 1	3 B, C
TR412	25C711(G)	0305733	3 B
TR413	25C711(E, F)	0305731, 2	3 B
TR414	25C735(O, Y)	0305640, 1	3 B
TR415	25A562(O, Y)	0300220, 1	3 B
TR416	25C711(E, F)	0305731, 2	3 B
TR417	25C711(E, F)	0305731, 2	2 B
D401		0310400	2 C
D402	IN34A	0310400	2 C
D403		0310401	1, 2 B
D404	IN34A(Y)	0310401	1, 2 B
D405		0310401	1 B
D406		0310401	1 B
D407	IN34A	0310400	3 C
L401	MPX Coil	4240510	1 C
L402	2.2mH Micro Inductor	4900090	2 C
L403	1mH Micro Inductor	4900120	2 C
L404		4240400	3 A
L405	MPX Coil	4240400	3 A
LC401		4240490	1, 2 B, C
LC402	MPX Coil	4240050	1 B

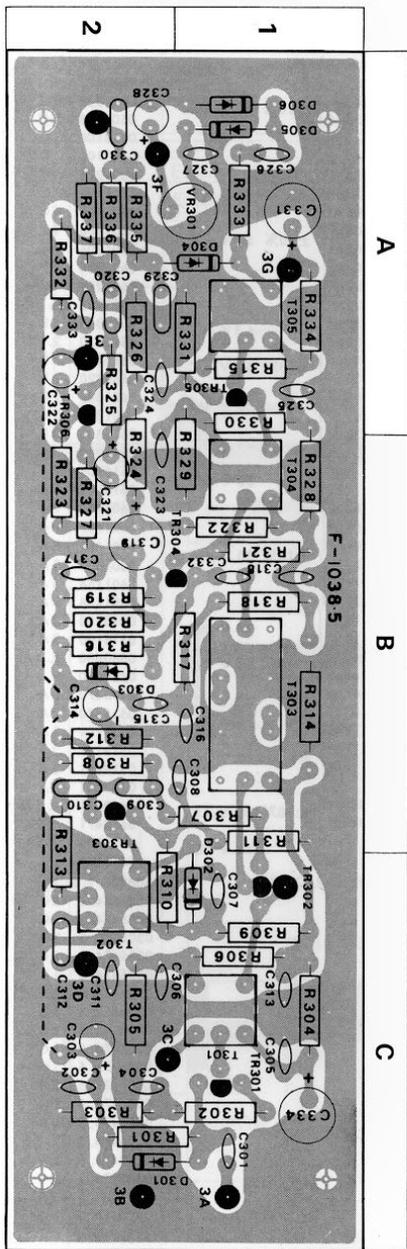
PRINTED CIRCUIT BOARDS AND PARTS LIST

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

AM BLOCK (F-1038-5A)

W	X	Y	Z
R301	10kΩ	0101103	1, 2 C
R302	39Ω	0101390	1 C
R303	1kΩ	0101102	2 C
R304	100Ω	0101101	1 C
R305	3.9kΩ	0101392	2 C
R306	33kΩ	0101333	1 C
R307	22Ω	0101220	1, 2 B
R308	1kΩ	0101102	2 B
R309	100Ω	0101101	1 C
R310	22kΩ	0101223	2 B, C
R311	3.9kΩ	0101392	1 B
R312	1kΩ	0101102	2 B
R313	10Ω	0101100	2 B, C
R314	22Ω	0101220	1 B
R315	47kΩ	0101473	1 A
R316	10kΩ	0101103	2 B
R317	47kΩ	0101473	1 B
R318	100Ω	0101101	1 B
R319	22Ω	0101220	2 B
R320	1kΩ	0101102	2 B
R323	3.3kΩ	0101332	1 B
R324	100kΩ	0101104	2 A, B
R325	100kΩ	0101104	2 A, B
R326	22kΩ	0101563	1 B
R327	1.5kΩ	0101152	1 A, B
R328	22Ω	0101220	1 A, B
R329	4.7kΩ	0101472	1 A, B
R330	22kΩ	0101223	1 A
R331	470Ω	0101471	1 A
R332	4.7kΩ	0101472	2 A
R333	470Ω	0101471	1 A
R334	22Ω	0101220	1 A
R335	1kΩ	0101102	2 A
R336	100Ω	0101101	2 A
R337	4.7kΩ	0101472	2 A
R338	3.9kΩ	0101392	2 B
VR301	10kΩ(B)	1035130	1, 2 A
C301	0.022μF } +80% -20%	25 V CC.	0656223 1 C
C302	0.039μF } +80% -20%	25 V CC.	0656393 2 C
C308	3.3μF	25 V EC.	0513339 2 C
C304	0.022μF		0656223 2 C
C305	0.039μF		0656393 1 C
C306	0.039μF } +80% -20%	25 V CC.	0656393 2 C
C307	0.039μF		0656393
C308	0.022μF		0656223 1 B
C309	0.01μF	±10% 50 V MC.	0601107 2 B
C310	0.01μF		0601107 2 B
C311	22 pF	±10% 50 V CC.	0660220 2 C
C312	430 pF	±5% 50 V MIC.	0640431 2 C
C313	0.022μF } +80% -20%	25 V CC.	0656223 1 C
C314	4.7μF	16 V EC.	0512479 2 B
C315	0.022μF		0656223 2 B
C316	0.022μF } +80% -20%	25 V CC.	0656223 1 B
C317	0.039μF		0656393 2 B

W	X	Y	Z
C318	0.022μF } +80% -20%	25 V CC.	0656223 1 B
C320	0.02μF	±10% 50 V MC.	0601207 2 A
C321	3.3μF	25 V EC.	0513339 2 B
C322	0.02μF	±10% 50 V MC.	0601207 2 A
C323	0.039μF		0656393 2 B
C324	0.039μF		0656393 2 A
C325	0.022μF } +80% -20%	25 V CC.	0656223 1 A
C326	0.022μF		0656223 1 A
C327	0.022μF		0656223 1 A
C328	10μF	16 V EC.	0512100 2 A
C329	0.012μF		0601127 2 A
C330	0.015μF } ±10%	50 V MC.	0601157 2 A
C331	100μF	16 V EC.	0512101 1 A
C332	0.022μF		0656223 1 B
C333	0.039μF } +80% -20%	25 V CC.	0656393 2 A
C334	33μF	16 V EC.	0512330 1 C
TR301			0305530 1 C
TR302			0305530 1 C
TR303			0305530 2 B
TR304			0305530 1, 2 B
TR305			0305530 1 A
TR306			0305474,5 1 A
D301	IN60		0310330 1, 2 C
D302			0340030 1 C
D303	DS-410		0340030 2 B
D304			0310330 1, 2 A
D305	IN60		0310330 1 A
D306			0310330 1 A
T301	RF Coil		4210100 1 C
T302	OSC Coil		4220300 2 C
T303	Ceramic Filter 455kHz		4230440 1 B
T304	AM IFT		4230480 1 B
T305	Detector Coil		4230470 1 A



PRE-AMPLIFIER BLOCK <F-1316>

W	X	Y	Z	
R020	470Ω	±10% 2 W CeR.	0162471	1A
R021	820Ω		0111821	1A
R022	680Ω	±10W 1/4 W SR.	0111681	1B
R501	2.2kΩ		0101222	2,3 C
R502	10kΩ	0101103	3 C	
R503	330kΩ	0101334	2,3 C	
R504	1kΩ	0101102	2,3 C	
R505	68kΩ	0101683	2,3 C	
R506	2.2kΩ	0101222	3 C	
R507	220kΩ	0101224	3 C	
R508	1kΩ	0101102	2 C	
R509	470Ω	0101471	2,3 C	
R510	68kΩ	0101683	2,3 C	
R511	560kΩ	0101564	2,3 C	
R512	2.2kΩ	0101222	2,3 C	
R513	8.2kΩ	0101822	2 C	
R514	33kΩ	0101333	2 C	
R515	470kΩ	0101474	2 C	
R516	820kΩ	0101824	2 B, C	
R517	3.9kΩ	0101392	2 B	
R601	100kΩ	0101104	1 B	
R602	100kΩ	0101104	1,2 B	
R603	100kΩ	0101104	1 B	
R604	100kΩ	0101104	1 B	
R605	560kΩ	0101564	1 B	
R606	560kΩ	0101564	1 B	
R607	470Ω	0101471	1 C	
R608	470Ω	0101471	1,2 C	
R609	3.3kΩ	0101332	1 B	
R610	3.3kΩ	0101332	1,2 B	
R611	39kΩ	0101393	1 B	
R612	39kΩ	0101393	1 B	
R613	22kΩ	0101223	1 B	
R614	22kΩ	±10% 1/4 W CR.	0101223	1 B
R615	470kΩ		0101474	1 B, C
R616	470kΩ	0101474	1 B, C	
R617	82kΩ	0101823	1 B	
R618	82kΩ	0101823	1,2 B	
R619	3.3kΩ	0101332	1 B, C	
R620	3.3kΩ	0101332	1 B, C	
R621	180Ω	0101181	1 B	
R622	180Ω	0101181	1,2 B	
R623	10kΩ	0101103	1 B, C	
R624	10kΩ	0101103	1 B, C	
R625	33kΩ	0101333	1 C	
R626	33kΩ	0101333	1 C	
R627	33kΩ	0101333	1 C	
R628	33kΩ	0101333	1 C	
R629	1kΩ	0101102	1 C	
R630	1kΩ	0101102	1 C	
R701	1kΩ	0101102	3 B, C	
R702	1kΩ	0101102	3 B, C	
R703	68kΩ	0101683	2 B	
R704	68kΩ	0101683	3 B	
R705	47kΩ	0101473	2 B, C	
R706	47kΩ	0101473	2 B, C	
R707	1kΩ	0101102	2 B	
R708	1kΩ	0101102	3 B	
R709	100kΩ	0101104	2 C	
R710	100kΩ	0101104	2 C	
R711	150kΩ	0101154	3 A	
R712	150kΩ	0101154	3 A	
R713	8.2kΩ	0101822	2 B	
R714	8.2kΩ	0101822	3 B	

PRINTED CIRCUIT BOARDS AND PARTS LIST

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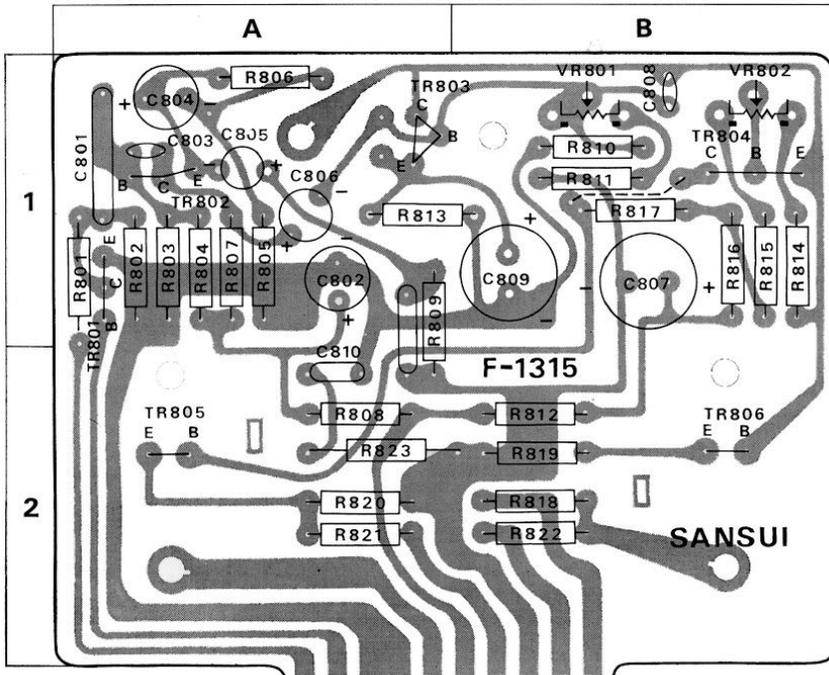
W	X	Y	Z
R715	270kΩ	0101274	2 B
R716	270kΩ	0101274	3 B
R717	2.7kΩ	0101272	2 B
R718	2.7kΩ	0101272	3 B
R719	8.2kΩ	0101822	2 A
R720	8.2kΩ	0101822	2 A
R721	10kΩ	0101103	3 A
R722	10kΩ	0101103	3 A
R723	6.8kΩ	0101682	3 B
R724	6.8kΩ	0101682	3 B
R725	22kΩ	0101223	3 A
R726	22kΩ	0101223	3 A
R727	10kΩ	0101103	3 A
R728	10kΩ	0101103	3 A
R729	6.8kΩ	0101682	3 A
R730	6.8kΩ	0101682	3 A
R731	150kΩ	0101154	2 A
R732	150kΩ	0101154	3 A
R733	390kΩ	0101394	2 A
R734	390kΩ	0101394	2 A
R735	560Ω	0101561	2 A
R736	560Ω	0101561	2 A
R737	5.6kΩ	0101562	2 A
R738	5.6kΩ	0101562	2 A
R739	3.3kΩ	0101332	2 A
R740	3.3kΩ	0101332	1 A
R741	47kΩ	0101473	2 A
R742	47kΩ	0101473	2 A
R743	120kΩ	0101124	2 A, B
R744	120kΩ	0101124	2 A, B
R745	820kΩ	0101824	2 A
R746	820kΩ	0101824	1 A
R747	470kΩ	0101474	2 A
R748	470kΩ	0101474	1 A, B
R749	3.9kΩ	0101392	1, 2 A
R750	3.9kΩ	0101392	1 A
VR501	30kΩ(B) Mic Level Control	1000270	3 C
VR701,702	250kΩ(MN) Balance Control	1010720, 1	3 B, C
VR703,704	250kΩ(B) × 2 Volume Control	1010730, 1	3 B
VR705,706	100kΩ × 2 Treble Control	1020110	3 A
VR707,708	88kΩ × 2 Bass Control	1020100	3 A
C020	220μF	0515221	1 A
C021	220μF	0515221	1 A
C022	0.022μF	0657223	2 A
C023	220μF	0515221	1 A
C501	1μF	0515109	3 C
C502	100μF	0513101	2 C
C503	100pF	0601607	3 C
C504	0.06μF	0706016	3 C
C505	0.03μF	0601307	3 C
C506	100pF	0660101	3 C
C507	100pF	0660101	2 C
C508	47μF	0511470	2 C
C509	68pF	0660680	2 C
C510	10μF	0515100	2 C
C511	0.022μF	0601227	2 C
C512	1μF	0519101	2 B
C601	0.33μF	0601338	1 B
C602	0.33μF	0601338	2 B
C603	47μF	0511470	1 C
C604	47μF	0511470	1 C
C605	33pF	0660330	1 B
C606	33pF	0660330	1 B
C607	33μF	0510330	1 B

W	X	Y	Z
C608	33μF	6.3 V EC.	0510330 1 B
C609	470pF		0660471 1 B
C610	470pF	±10% 50 V CC.	0660471 1, 2 B
C611	0.33μF		0601338 1 C
C612	0.33μF	±10% 50 V MC.	0601338 1 C
C613	10μF		0513100 1 C
C614	10μF	25 V EC.	0513100 1 C
C615	0.0022μF		0601226 1 C
C616	0.0022μF		0601226 1 C
C617	0.006μF		0601606 1 C
C618	0.006μF		0601606 1 C
C701	0.008μF	±10% 50 V MC.	0601806 3 B
C702	0.008μF		0601806 3 B
C703	0.22μF		0601228 2 C
C704	0.22μF		0601228 2, 3 C
C705	33μF		0510330 2 B
C706	33μF	6.3 V EC.	0510330 2, 3 B
C707	22pF		0660220 2 B
C708	22pF	±10% 50 V CC.	0660220 2 B
C709	0.008μF		0601806 2 B
C710	0.008μF	50 V MC.	0601806 2 B
C711	33μF		0513330 2 B
C712	33μF	25 V EC.	0513330 2, 3 B
C713	1μF		0515109 2 A, B
C714	1μF	50 V EC.	0515109 2 A
C715	0.04μF		0601407 3 A
C716	0.04μF		0601407 3 A
C717	0.04μF		0601407 3 A
C718	0.04μF	±10% 50 V MC.	0601407 3 A
C719	0.0015μF		0601156 3 A
C720	0.0015μF		0601156 3 A
C721	10μF		0513100 2 A
C722	10μF	25 V EC.	0513100 2 A
C723	68pF		0660680 2, 3 A
C724	68pF	±10% 50 V CC.	0660680 2, 3 A
C725	47μF		0515470 2 A
C726	47μF	6.3 V EC.	0515470 2 A
C727	1μF		0519101 2 A
C728	1μF		0519101 2 A
C729	1μF	RN 50 V EC.	0519101 2 A
C730	1μF		0519101 2 A
C731	470pF		0660471 1, 2 A
C732	470pF	±10% 50 V CC.	0660471 1, 2 A
C733	1μF		0515109 1, 2 A
C734	1μF	50 V EC.	0515109 1 A
TR020	2SD223 (R, O, Y)		0308230, 1, 2 1 A
TR501			0305474, 5 3 C
TR502			0305474, 5 3 C
TR503	2SC871R (E, F)		0305474, 5 2 C
TR504			0305474, 5 2 B
TR601			0305474, 5 1 B
TR602			0305474, 5 1 B
TR603	XA495BL(C,D)		0300162, 3 1 B
TR604			0300162, 3 1 B
TR605			0305474, 5 1 C
TR606			0305474, 5 1 C
TR701			0305474, 5 2 B
TR702			0305474, 5 2 B
TR703	2SC871R (E, F)		0305474, 5 2 B
TR704			0305474, 5 2, 3 B
TR705			0305474, 5 2 A
TR706			0305474, 5 2 A
TR707			0305474, 5 2 A
TR708			0305474, 5 1 A
D020	ZBI-25		0310710 1 A

DRIVER BLOCK <F-1315>

W	X	Y	Z
R801	10kΩ	0101103	1 A
R802	470kΩ	0101474	1 A
R803	270kΩ	0101274	1 A
R804	560kΩ	0101564	1 A
R805	100Ω	0101101	1 A
R806	2.2kΩ	0101222	1 A
R807	3.9kΩ	0101392	1 A
R808	33kΩ	0101333	2 A
R809	3.3kΩ	0101332	1, 2 A
R810	10kΩ	0101103	1 B
R811	100kΩ	0101104	1 B
R812	680Ω	0111681	2 B
R813	220Ω	0101221	1 A, B
R814	1.5kΩ	0101152	1 B
R815	3.3kΩ	0101332	1 B
R816	6.8kΩ	0111682	1 B
R817	39Ω	0101390	1 B
R818	220Ω	0111221	2 B
R819	10Ω	0111100	2 B
R820	220Ω	0111221	2 A
R821	6.8Ω	0111689	2 A
R822	6.8Ω	0111689	2 B

W	X	Y	Z
R823	4.7Ω ±10W 2W CeR.	0152479	2 A, B
VR801	100kΩ(B) AC Balance Adj.	1033141	1 B
VR802	1kΩ(B) DC Balance Adj.	1033051	1 B
C801	0.33μF ±10% 50 V MC.	0601338	1 A
C802	100μF 25 V EC.	0513101	1 A
C803	100pF ±10% 50 V CC.	0660101	1 A
C804	220μF 6.3 V EC.	0510221	1 A
C805	4.7μF 50 V EC.	0515479	1 A
C806	3.3μF ±20% 25 V AEC.	0563339	1 A
C807	100μF 50 V EC.	0515101	1 B
C808	100pF ±10% 50 V CC.	0660101	1 B
C809	470μF 6.3 V EC.	0510471	1 B
C810	0.1μF ±10% 50 V MC.	0601108	2 A
TR801	2SC711 (E, F)	0305731, 2	1 A
TR802	2SC871R (F)	0305475	1 A
TR803	2SC627 (3)	0305582	1 A
TR804	2SC984 (C)	0305872	1 B
TR805	2SC680 Blue (B, C)	0305621, 2	2 A
TR806	2SA566 (B, C)	0300151, 2	2 B



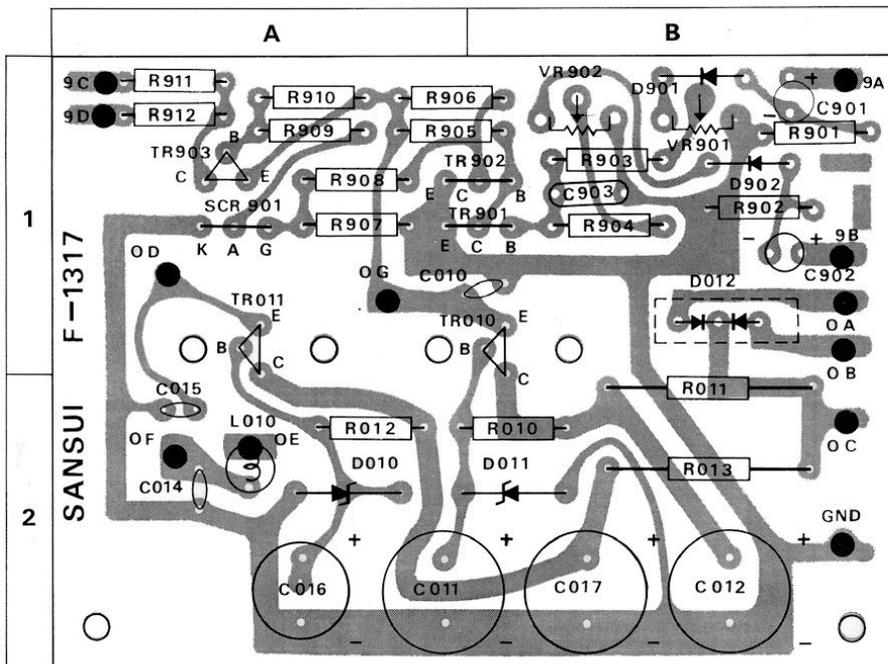
PRINTED CIRCUIT BOARDS AND PARTS LIST

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

POWER AND PROTECTOR BLOCK <F-1317>

W	X	Y	Z
R010	820Ω ±10% 1/2 W SR.	0111821	2 A, B
R011	390Ω ±10% 3 W CeR.	0163391	2 B
R012	1kΩ ±10% 1/2 W SR.	0111102	2 A
R013	270Ω ±10% 2 W CeR.	0162271	2 B
R901	4.7kΩ	0101471	1 B
R902	4.7kΩ	0101471	1 B
R903	4.7kΩ	0101471	1 B
R904	4.7kΩ	0101471	1 B
R905	47kΩ	0101473	1 A, B
R906	10kΩ	0101103	1 A, B
R907	1kΩ	0101102	1 A
R908	12kΩ	0101123	1 A
R909	3.9kΩ	0101392	1 A
R910	4.7kΩ	0101472	1 A
R911	4.7kΩ	0101472	1 A
R912	4.7kΩ	0101472	1 A
VR901	5kΩ (B)	1031090	1 B
VR902		1031090	1 B
C010	0.022μF ±80% -20% 50 V CC.	0650223	1 A, B
C011	220μF 50 V EC.	0515221	2 A, B
C012	220μF	0515221	2 B

W	X	Y	Z
C014	0.022μF ±80% -20% 50 V CC.	0650223	2 A
C015	0.022μF	0650223	2 A
C016	220μF 25 V EC.	0513221	2 A
C017	220μF 50 V EC.	0515221	2 B
C901	1μF 50 V EC.	0515109	1 B
C902	1μF 50 V EC.	0515109	1 B
C903	0.01μF ±10% 50 V MC.	0601107	1 B
TR010	2SD223 (O, Y, G)	0308230, 1, 2	1 B
TR011		0308230, 1, 2	1 A
TR901	2SC711 (E, F)	0305731, 2	1 A, B
TR902		0305731, 2	1 A, B
TR903		0300282, 3	1 A
D010	ZBI-12	0310641	2 A
D011	ZBI-25	0310710	2 A, B
D012	10DC1	0310680	1 B
D901	IN60	0310331	1 B
D902		0310331	1 B
SCR901	2SF656	0350020	1 A
L010	Micro Inductor 3.3μH	4900100	2 A



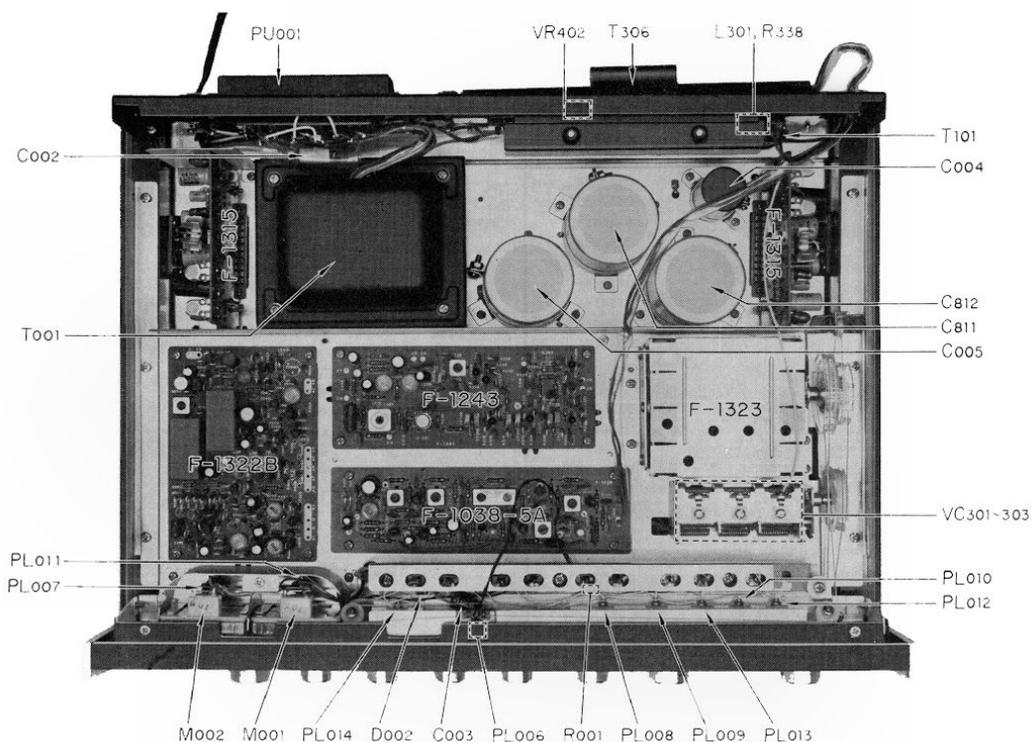
OTHER PARTS AND THEIR POSITION ON CHASSIS

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

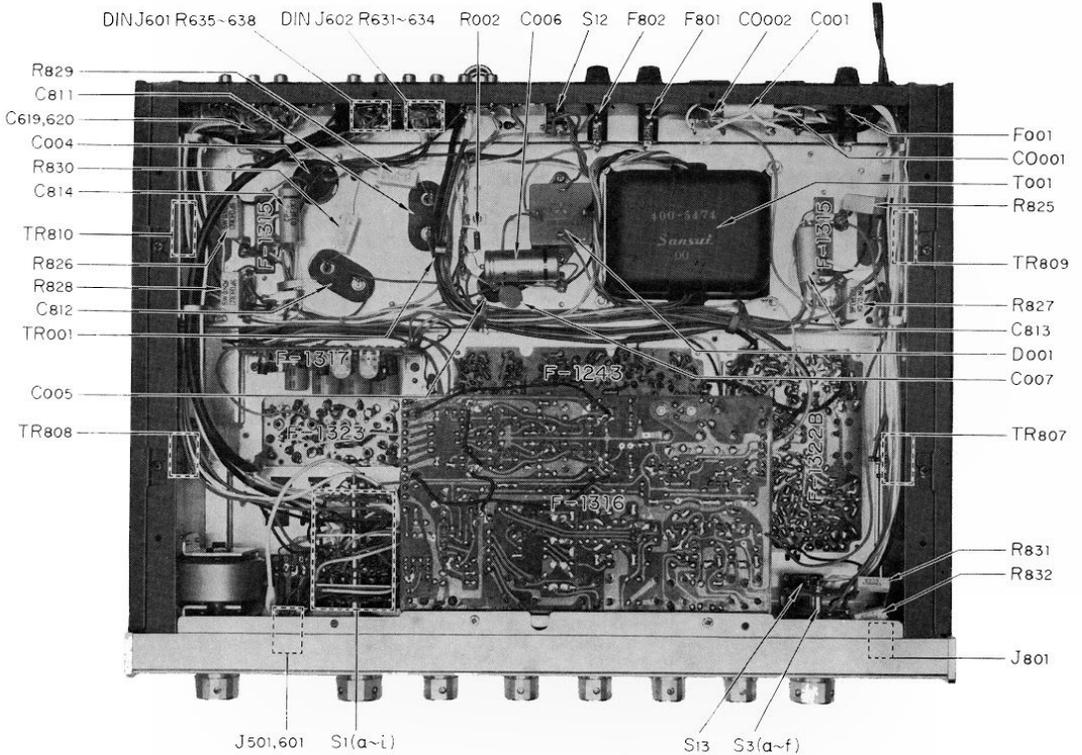
W	X	Y
R001	18Ω	±10% 1/2W SR.
R002	12kΩ	
R032	47Ω	±10% 1/4W CR.
R033	2.2kΩ	
R034	4.7Ω	±10% 2W CR.
R247	680kΩ	
R338	100Ω	
R527	10Ω	
R631	470kΩ	
R632	470kΩ	
R633	100kΩ	
R634	100kΩ	
R635	470kΩ	±10% 1/4W CR.
R636	470kΩ	
R637	100kΩ	
R638	100kΩ	
R640	100Ω	
R641	100Ω	
R761	39kΩ	
R762	39kΩ	
R825	0.7Ω	
R826	0.7Ω	±10% 7W CR.
R827	0.7Ω	
R828	0.7Ω	
R829	150Ω	±10% 5W CR.
R830	150Ω	
R831	470Ω	±10% 2W CR.
R832	470Ω	
VR402	100kΩ(B) Muting Adjustor	1005042
C001	0.033μF	600V OC.
C002	0.0047μF	
C003	220μF	10V EC.
C004	1000μF	50V EC.
C005	3300μF	100V EC.
C006	100μF	
C007	0.01μF	+80% -20% 500V CC.
C032	220μF	50V EC.
C235	0.022μF	+80% -20% 50V CC.
C619,620	0.047μF × 4	50V CC.
C739	3.3μF RN	50V EC.
C740	3.3μF RN	50V EC.
C811	2200μF	80V EC.
C812	2200μF	
C813	0.1μF	250V MPC.
C814	0.1μF	
VC301~303	3 Gang AM Variable Condenser	1200020
TR001	2SC627(3)	0305582
TR807	2SC1116(R,O,Y)	0305840, 1, 2
TR808		0305840, 1, 2
TR809		0305840, 1, 2
TR810		0305840, 1, 2
D001		DS10BN-M
D002	SRIFM2	0310870
S1(a~f)	Selector Switch Y-5-14-6	1105070, 1
S3(a~f)	Speakers Switch Y-2-2-6	1102260, 1

W	X	Y
S12	Power Limiter Switch	1160100
S13	Power Switch	1130350
J501	Microphone Jack	2430110
DIN J601	DIN Jack	2430040
DIN J602		2430040
J601	Tape Recording Jack	2430110
J801	Headphones Jack	2430010
PU001	Voltage Selector Plug	2410170
	Main Voltage Selector Plug	2410180
	Sub Voltage Selector Plug	2410190
CO001	AC Outlet	2450040
CO002		2450040
T001	Power Transformer 400-5474	4000910
T101	Balun 75Ω - 300Ω	4290021
T306	AM Bar Antenna	4300380
L301	Micro Inductor 100μH	4900110
M001	Tune Meter ±100μA	4300320
M002	Signal Meter 200μA	4300310
PL006	5V 0.06A Needle Indicator	0400100
PL007	7V 0.2A Signal Meter Lamp	0400150
PL008	6V 0.1A Phono 2 Indicator	0400160
PL009	6V 0.1A Phono 1 Indicator	0400160
PL010	7V 0.2A Tune Meter Lamp	0400150
PL011	6V 0.1A FM Indicator	0400160
PL012	6V 0.1A AM Indicator	0400160
PL013	6V 0.1A AUX Indicator	0400160
F001	3A Fuse (220~250V)	0431260
	5A Fuse (100~127V)	0431280
F801	5A Quick Acting Fuse	0433280
F802		0433280
F-1323	FM Front End	7510400

OTHER PARTS AND THEIR POSITION ON CHASSIS



* Manufacturer reserves right to change design and/or specifications without notice for purpose of improvement.





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