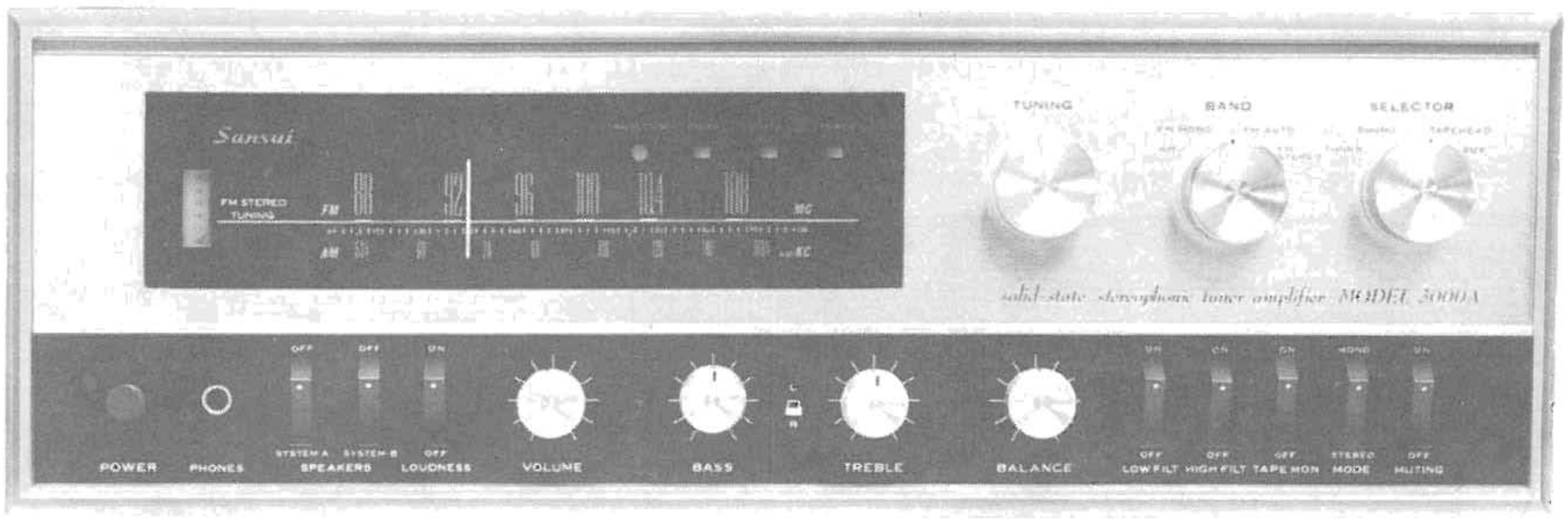
SERVICE MANUAL

SOLID-STATE AM/FM MULTIPLEX STEREO TUNER AMPLIFIER

SANSUI MODEL 3000 A

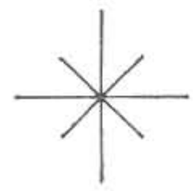


Sansui®

SANSUI ELECTRIC COMPANY LIMITED

SANSUI

SOLID-STATE
am/fm-multiplex
STEREO TUNER AMPLIFIER



MODEL-3000A

HOW TO USE THIS SERVICE MANUAL

1. Look up the type of trouble you are confronted with in either the General or Troubleshooting charts provided in this manual.
2. By referring to the charts, isolate the trouble to a particular unit or part. (See the column titled "What to Do" in the General chart and "Check Point" in the Troubleshooting chart).
3. Locate the section of the chassis in which the part is located by using the co-ordinates (Column D) in the Parts List pp. 32-39.
4. Using the co-ordinates given in the Parts List (Column C), pinpoint the position of the part in the Schematic Diagram of Circuits pp. 21-22.

NOTE: Much of the information contained in this manual has been prepared for use by qualified service repairmen. Please read your Warranty thoroughly before attempting any internal adjustments on your own.

CONTENTS

GENERAL INFOMATION 3, 4
TROUBLESHOOTING CHART
OVER ALL PROGRAM SOURCES 5, 6, 7
FM OR FM-MPX RECEPTION 8, 9, 10
AM RECEPTION 11, 12
USING WITH RECORD PLAYER OR TAPE DECK 12, 13
OTHER PROGRAM SOURCES 14
RECORDING ON TAPE 14
ALIGNMENT 15, 16, 17, 18, 19
DISASSEMBLY PROCEDURE 20
DIAL MECHANISM 20
SCHEMATIC DIAGRAM OF CIRCUITS 21, 22
BLOCK DIAGRAM 23
PARTS LAYOUT 24
PRINTED CIRCUIT SHEETS 25, 26, 27, 28, 29, 30
SELECTOR CHART 31
PARTS LIST 32, 33, 34, 35, 36, 37, 38, 39
COLOR CODE 40

GENERAL INFORMATION

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

1. Incorrect connections or loose terminal contacts. Check the speakers, record player, tape recorder, antenna and line cord.
2. Improper operation. Before operating any audio component, be sure to read the manufacturer's instructions.
3. Improper location of audio eomponents. 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	* 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 feceo concrete wall or long distance from the station * Wave interference from other electrical appliances	* 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 tuning meter does not move shacply	* Receiver is located in a weak signal area	* Place the set fo Receive maximum signal strength
	C. The zero point of the meter diverges much	* Regional difference in field intensity	* 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	* Due to the nature of AM broadcasts	* 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	* Adjacent-channel interference or beat interference * TV set too close to audio system	* Although such noice 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	* Poor noise limiter effect or too low S/N ratio due to insufficient antenna input	* Install the antenna (attached) 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 divider, make sure TV reception is not affected * An excessively long antenna may cause noise
	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 pooply		

Program	Symptom	Probable Cause	What to Do
FM reception (cont'd)	B. "Scratch noice" heard	* Starting of an automobile engine	* Install the antenna and its lead-in wire at a proper distance from the road or raise the antenna input as described preuiously
	C. Tuning noise between stations	* This results from the nature of the FM reception. As the station signal becomes weak, the noise limiter effect is decreased, and the amplification of the limiter, in turn, is enlarged, generating a noise	* Turn the MUTING switch on. It reduces the sensitivity, and therefore it should be used sparingly
FM-MPX reception	A. Noise heard during FM-MPX reception but not heard during FM mono reception	* Weaker signal becaus 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 noise filter and/or turn the TREBLE control from midpoint, left
	B. Clearness of channel separation decreases buring reception	* Excess heat	* Circulation of air is important to the amplifier. Be sure that air is flowing undee the amplifier
	C. The stereo indicator blinks on and off	* Interference	* The indicator is not at fault, adjust VR_{502}
	D. The stereo indicator blinks on and off even though stereo station is not received	* Interference	* The indicator is not at fault, adjust VR_{502}
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 shield 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 racorder or the needle the record player * Adjust the TREBLE control from midpoint, left * Turn 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	* Set the MODE switch to MONO and then set the BALANCE control to a position where equal sound comes from both channels

TROUBLESHOOTING CHART

OVER ALL PROGRAM SOURCES

Program	Probable Cause		Check Point
No sound over all program sources	A. Defective speaker system	1. Speaker cord or network broken or shorted	Check continuity of speaker and cord. Repair broken cord or replace speaker
		2. Broken or short-circuited voice coil	
	B. No power	1. No power comes to the power source	
		2. Defective on-off switch	S_{001}
		3. Defective line cord	
		4. Loose plug	PU_{001}
		5. Blown fuse	F_{005}
		If the fuse burns out as soon as it is replaced, the trouble may be attributed to:	
		a. Shorted power transformer	T_{001}
		b. Shorted capacitor	C_{001}, C_{009}, C_{010}, C_{011}, C_{012}, C_{013}, C_{014}, C_{015}
		c. Shorted power transistor	TR_{002}~TR_{005}
		Note: Check the continuity between the collector and emitter of the power transistor. If it is 0 ohm or close to 0 ohm, the transistor is defective. If it is more than 20 ohms, the transistor is operating correctly. Se Fig. 1, page 7.	
		d. B circuit open	Check continuity of B circuit
		6. Primary winding of power transformer broken	T_{001}
	C. Defective power circuit	Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the power circuit and replace defective element if necessary
	D. Defective low-frequency circuit	1. Protector lamp on	Push the power switch off; after 5 or 6 seconds, push it on
		2. Blown fuse	F_{001}, F_{002}, F_{003}, F_{004}
		If the fuse burns out as soon as it is replaced, the trouble may be attributed to:	
		a. Defective power transistor	TR_{805}~TR_{808}, TR_{002}~TR_{005}
		b. Sherted power transistor	TR_{805}~TR_{808}, TR_{002}~TR_{005}
		Note: The continuity between the output terminal (+), and collector, is less than 100 ohms. The continuity between 0.3-ohm R_{017} (or R_{019}) and collector is less than 100 ohms. See Fig. 2, page 8.	
		c. Contact at output terminal	Check the speaker system
		3. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the low-frequency circuit and replace defective element if necessary

Program	Probable Cause		Check Point
No sound over all program sources (cont'd)		4. Defective transistor	TR_{701}~TR_{708}, TR_{801}~TR_{804}, TR_{001}
		5. Capacitor shorted or open	C_{703}, C_{707}, C_{714}, C_{717}, C_{722}, C_{726}, C_{732}, C_{736}
	E. Non-electrical trouble	1. MONITOR switch is in ON position	Turn off
		2. SPEAKER switch is in OFF position	Turn on
Weak sound over all program sources	A. Defective speaker circuit	Shorted voice coil	Check voice coil for short circuit
	B. Defective power circuit	Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the power circuit and replace defective element if necessary
	C. Defective low-frequency circuit	1. Divergence of voltage	Measure the voltage in the low-frequency circuit and replace defective element if necessary
		2. Shorted driver transformer	T_{801}, T_{802}
		3. Insufficient capacity or short circuit of capacitor	C_{703}, C_{705}, C_{707}, C_{714}, C_{715}, C_{717}, C_{722}, C_{724}, C_{726}, C_{732}, C_{734}, C_{736}, C_{801}, C_{803}, C_{804}, C_{806}, C_{808}, C_{810}, C_{811}, C_{813}
		4. Weak transistor	TR_{701}~TR_{708}, TR_{801}~TR_{808}, TR_{002}~TR_{005}
		5. Incorrect speaker impedance	S_{13}
Distortion over all program sources	A. Defective speaker	1. Defective voice coil	Check and replace
		2. Defective cone or damper	
	B. Defective power circuit	Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the power circuit and replace defective element if necessary
	C. Defective low-frequency circuit	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the low-frequency circuit and replace defective element if necessary
		2. Weak transistor	TR_{701}~TR_{708}, TR_{801}~TR_{808} TR_{002}~TR_{005}
		3. Quick acting fuse blown	F_{001}~F_{004}
Hum over all program sources	A. Defective power circuit	1. Capacitor insufficient	C_{001}, C_{009}~C_{012}
		2. Ripple filter transistor befective	TR_{001}
	B. Defective low-frequency circuit	1. Capacitor insufficient	C_{704}, C_{711}, C_{723}, C_{733}, C_{802}, C_{809}
		2. Fixed resistor blown	R_{809}, R_{817}, R_{819}, R_{820}
Noise over all program sources	A. Defective speaker	1. Defective voice coil	Check speaker system
		2. Inner contact of speaker components loose	
		3. Defective cone or damper	
	B. Defective power circuit	Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the power circuit and replace defective element if necessary

TROUBLESHOOTING CHART

OVER ALL PROGRAM SOURCES (cont'd)

Symptom	Probable Cause		Check Point
Noise over all program sources (cont'd)	C. Defective low-frequency circuit	1. Driver transformer defective	T_{801}, T_{802}
		2. Poor transistor	TR_{701}~TR_{708}, TR_{801}~TR_{808}, TR_{002}~TR_{005}
		3. Master volume defective	VR_{701}, VR_{702}
SPEAKER switch not working	A. Defective headphone		Check headphone
	B. Defective headphone circuit		S_{11a}, S_{11b}, S_{12a}, S_{12b}, R_{025}, R_{026}
HIGH FILTER switch not working	Defective filter circuit		C_{718}, C_{737}, S_{10a}, S_{10b}
LOW FILTER switch not working	Defective filter circuit		C_{719}, C_{738}, R_{726}, R_{751}, S_{9a}, S_{9b}
LOUDNESS switch not working	Defective filter circuit		C_{701}, C_{702}, C_{720}, C_{721}, R_{701}, R_{727}, VR_{701}, VR_{702}, S_{8a}, S_{8b}
TONE CONTROL not working	Defective tone control circuit		C_{708}, C_{709}, C_{710}, C_{712}, C_{713}, C_{727}, C_{728}, C_{729}, C_{730}, C_{731}, R_{713}, R_{714}, R_{738}, R_{739}, VR_{703}, VR_{704}, VR_{705}, VR_{706}

Fig-1 HOW TO CHECK TR_{002}~TR_{005}

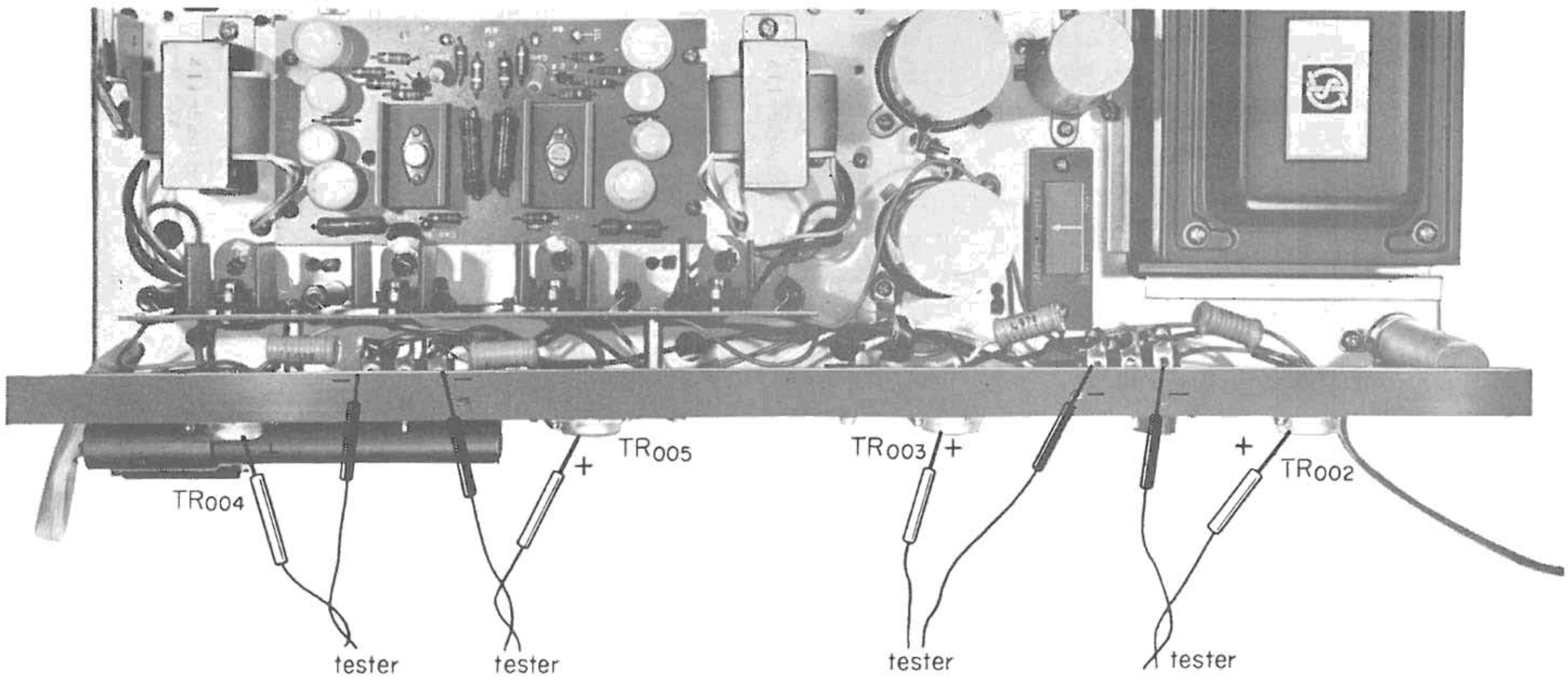
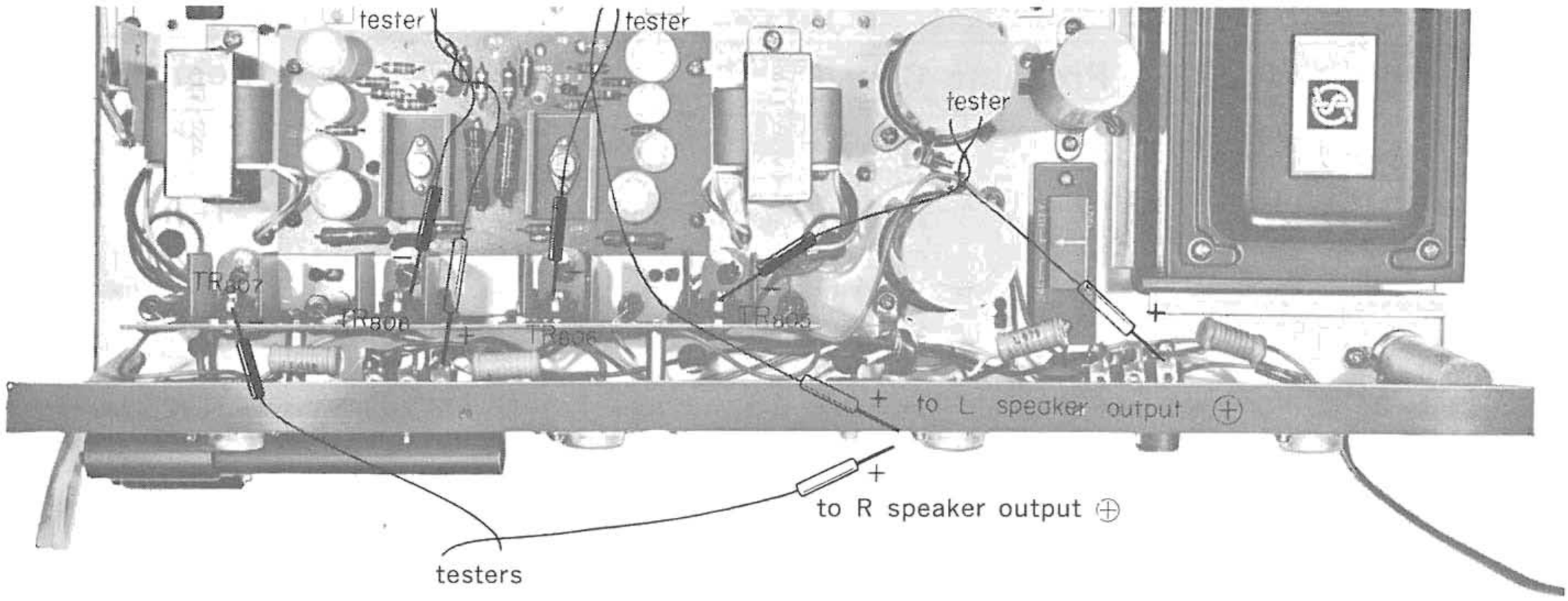


Fig-2 HOW TO CHECK $TR_{805} \sim TR_{808}$



FM OR FM-MPX RECEPTION

Symptom	Probable Cause		Check Point
No sound	A. Defective over all section		See "No sound over all program sources"
	B. Defective FM or FM-MPX section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the FM or FM-MPX section and replace defective element if necessary
		2. Weak transistor	$TR_{101} \sim TR_{103}$, $TR_{201} \sim TR_{205}$, $TR_{401} \sim TR_{407}$
		3. Defective resistor	R_{110}, R_{203}, R_{209}, R_{215}, R_{221}, R_{227}
		4. Weak capacitor	C_{101}, C_{111}, C_{122}, C_{123}, C_{124}, C_{401}, C_{402}, C_{406}, C_{409}, C_{413}, $C_{418} \sim C_{422}$, C_{424}, $C_{426} \sim C_{428}$, $C_{430} \sim C_{432}$ etc.
		5. Defective IFT	T_{101}, $T_{201} \sim T_{205}$
		6. Defective coil	$L_{101} \sim L_{106}$, L_{201}, L_{401}, T_{401}
		7. Defective CR	CR_{401}, CR_{402}
		8. Defective oscillator circuit	TR_{103}, C_{114}, C_{119}, C_{120}, C_{124}
		9. Divergence in adjustment of variable resistor	VR_{201}
Weak sound	A. Weak station signal		See "TROUBLESHOOTING AUDIO SYSTEM"
	B. Defective over all		See "Weak sound over all program sources".
	C. Defective FM or FM-MPX section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the FM or FM-MPX section and replace defective element if necessary
		2. Poor Q or divergence of adjustment of coil	$L_{101} \sim L_{106}$, T_{101}, $T_{201} \sim T_{205}$, $T_{401} \sim T_{405}$
		3. Capacitor insufficient	C_{201}, C_{203}, C_{204}, C_{206}, C_{209}, C_{210}, C_{214}, C_{215}, C_{219}, C_{220}, $C_{401} \sim C_{410}$, C_{412}, C_{418}, C_{419}, C_{421}, C_{422}, C_{426}, C_{428}, C_{431}, C_{432}

TROUBLESHOOTING CHART

FM OR FM-MPX RECEPTION (cont'd)

Symptom	Probable Cause		Check Point
Weak Sound (cont'd)		4. Improper contact of rotary switch	S_{1g}, S_{2b}, S_{2c}, S_{2d}, S_{2e}
		5. Weak transistor	TR_{101}~TR_{103}, TR_{201}~TR_{205}, TR_{401}~TR_{407}
		6. Weak diode	D_{203}, D_{204}, D_{401}~D_{406}, D_{501}~D_{503}
		7. Voltage loss in local oscillator	TR_{103}, C_{121}, L_{106}
		8. Defective AGC circuit	TR_{104}, D_{201}, D_{202}, C_{107}, C_{204}, C_{211}, C_{212}
		9. Divergence in adjustment of:	Use measuring instruments to adjust properly
		a. Tracking	TC_{101}~TC_{104}, L_{101}, L_{103}, L_{104}, L_{106}
		b. I.F.T.	T_{101}, T_{201}~T_{205}
		c. MPX coil	T_{401}~T_{403} for FM stereo
		d. Variable resistor	VR_{201}
Distortion	A. Defective overall section		See "Distortion over all program sources"
	B. Defective FM or FM-MPX section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the FM or FM-MPX section and replace defective element if necessary
		2. Weak diode	D_{203}, D_{204}, D_{401}~D_{406}
		3. Capacitor insufficient	C_{205}, C_{208}, C_{213}, C_{217}, C_{222}, C_{223}, C_{230}, C_{235}, C_{236}, C_{401}, C_{403}, C_{408b}, C_{409}, C_{421}, C_{422}, C_{426}, C_{428}, C_{431}, C_{423} etc.
		4. Divergence in adjustment of:	Use measuring instruments to adjust properly
		a. Tracking	TC_{101}~TC_{104}, L_{101}, L_{103}, L_{104}, L_{106}
		b. I.F.T.	T_{101}, T_{201}~T_{205}
		c. MPX coil	T_{401}~T_{403}
		5. Weak transistor	TR_{401}~TR_{407}
Hum	A. Defective overall section		See "Hum over all program sources"
	B. Defective FM or FM-MPX section	Capacitor insufficient	C_{007}, C_{008}, C_{420}
	C. Defective power circuit	Aging or weak transistor	TR_{001}
Noise	A. Amplifier operating propery		See "General infomation"
	B. Defective overall section		See "Noise over all program sources"
	C. Defective FM or FM-MPX section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the FM or FM-MPX section and replace defective element if necessary
		2. Weak transistor	TR_{101}~TR_{103}, TR_{201}~TR_{205}, TR_{401}~TR_{403}
		3. Defective MPX coil	T_{401}~T_{403}
		4. Resistor, rubbing or broken	R_{101}~R_{109}, R_{201}~R_{227}, R_{233}

Symptom	Probable Cause		Check Point
Noise (cont'd)		5. Capacitor insufficient	C_{101}~C_{125}, C_{201}~C_{224}, C_{401}, C_{403}, C_{406}, C_{409}, C_{421}, C_{422}, C_{431}, C_{432}
		6. Poor performance of FM AUTO (more noise when using FM MONO)	TR_{501}~TR_{504}, VR_{502}
		7. Improper contact of rotary switch	S_{2b}, S_{2c}, S_{2d}, S_{2e}
		8. Defective AGC circuit	TR_{104}, D_{201}, D_{202}, C_{107}, C_{204}, C_{211}, C_{212}
No MPX stereo sound (orange indicator lamp not lit)	A. Sub-carrier amplifying circuit defective	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the MPX indicator section and replace defective element if necessary
		2. Weak transistor	TR_{401}~TR_{403}, TR_{501}~TR_{505}
		3. Weak diode	D_{401}~D_{406}, D_{501}~D_{503}
		4. Defective MPX coil	T_{401}~T_{403}, T_{501}
	B. Defective separation circuit	1. Weak transistor	TR_{401}~TR_{407}
		2. Defective resistor	R_{407}~R_{438}, R_{501}~R_{511}
		3. Insufficient capacity or short circuit of capacitor	C_{406}~C_{432}, C_{501}~C_{505}
	C. Defective indicator circuit	1. Divergence in adjustment of variable resistor	VR_{401}, VR_{501}, VR_{502}
		2. Divergence in adjustment of:	Use measuring instruments to adjust properly
		a. MPX circuit	
		b. Indicator circuit	T_{401}~T_{403}, T_{501}
		c. Pilot lamp blown	PL_{501}
Poor separation	Defective MPX section	1. Same as above	Same as above
		2. Divergence of properties of circuit element (MPX coil and diode) due to temperature change	Adjust VR_{401}. Sansui has adjusted circuit elements for the optimum conditions
Stereo indicator changes repeatedly from orange to green or from green to orange even though a station is not received.	A. Amplifier is operating correctly		See "General Infomation"
	B. defective stereo indicator circuit		
		a. Weak transistor in indicator circuit	TR_{503}~TR_{505}
		b. Divergence in adjustment of input and wrong action preventing circuit	VR_{501}, VR_{502}
Tuning meter not working normally.	A. Defective FM tuner		Same as above
	B. Defective tuning indicator circuit		TR_{206}, D_{205}, D_{206}, T_{206}, VR_{202}, R_{220}, R_{235}~R_{239}, C_{239}, C_{216}, C_{227}~C_{232}, C_{017}
	C. Poor BAND switch connection		S_{2a}
MUTING switch not working	A. Defective MUTING circuit		TR_{206}~TR_{208}, D_{205}, D_{206}, VR_{203}, C_{216}, C_{227}~C_{234}, R_{220}, R_{235}~R_{245}
	B. Defective MUTING switch		S_5

TROUBLESHOOTING CHART

AM RECEPTION

Symptom	Probable Cause		Check Point
No sound	A. Defective overall section		See "No sound over all program sources"
	B, Defective AM section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the AM section and replace defective element if necessary
		2. Weak or defective transistor	TR_{301}~TR_{305}
		3. Weak or defective I,F.T.	T_{301}~T_{303}
		4. Detector diode defective	D_{302}, D_{303}
		5. Weak or defective capacitor	C_{304}, C_{317}, C_{318}' C_{319}, C_{320}~C_{322} etc.
		6. Defective resistor	R_{301}, R_{303}, R_{305}, R_{306}, R_{309}, R_{310}, R_{312}, R_{313}, R_{320}, R_{322}
Weak sound	A. Weak station signal		See "General Infomation"
	B. Defective overall section	1. Divergence of voltage specified in "CIRCUIT DIAGRAM"	Measure the voltage in the AM section and replace defective element if necessary
		2. Voltage loss in local oscillator	TR_{302}, C_{309}, L_{302}
		3. Detector diode, weak	D_{303}
		4. Coil Q too low	L_{301}~L_{302}, T_{301}~T_{304}
		5. Capacitor insufficient	C_{302}, C_{303}, C_{306}, C_{307}, C_{311}, C_{313}, C_{314}, C_{315}, C_{317}~C_{320} etc
		6. Defective resistor	R_{302}, R_{308}, R_{311}, R_{318}, R_{321} etc
		7. Divergence in adjustment of:	Use measuring instruments for optimum adjustment
		a. Traking	TC_{301}~TC_{303}, L_{301}, T_{301}
		b. I.F.T.	T_{302}~T_{304}
Distortion	A. Defective overall section		See "Distortion over all program sources"
	B. Defective AM section	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the AM section and replace defective element if necessary
		2. Detector diode weak	D_{303}
		3. Capacitor insufficient	C_{311}, C_{319}, C_{320}, C_{312} etc
		4. Divergence in adjustment	See "Weak sound"
		5. Defective resistor	
		6. Excessive antenna input	Check antenna switch
Hum	A. Defective overall section		See "Hum over all program sources"
	B. Defective AM section	Capacitor insufficient	C_{321}, C_{323}, C_{008}, C_{015}
Noise	A. Amplifier is operating correctly		See "General information"
	B. Defective overall section		See "Noise over all program sources"

Symptom	Probable Cause		Check Point
Noise (cont'd)	C. Defective AM section	1. Weak or defective transistor	TR_{301}~TR_{305}
		2. Rotary switch loose	S_{1g}, S_{2b}, S_{2c}, S_{2d}
		3. Broken lead in antenna circuit or shorted V.C.	L_{301} or VC_{301}
		4. Defective RF circuit	VC_{302}, T_{301}
Tuning meter not working normally	A. Defective AM tuner		Same as above
	B. Defective tuning indicator circuit		C_{316}, R_{323}, D_{302}
	C. Poor BAND switch contact		S_{2a}

USING RECORD PLAYER (MAGNETIC) OR TAPE DECK

Symptom	Probable Cause		Check Point
No sound	A. Program source defective		Check and repair or replace
	B. Defective overall section		See "No sound over all program sources"
	C. Divergence of voltage	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the head amplifier section and replace defective element if necessary
		2. Defective capacitor	C_{601}, C_{603}, C_{604}, C_{608}, C_{611}
		3. Defective resistor	R_{602}~R_{607}, R_{615}~R_{621}
		4. Rotary switch loose	S_{1a}, S_{1b}, S_{1c}, S_{1d}, S_{1e}, S_{1f},
		5. Input terminal or pin jack loose	
Weak sound	A. Program source defective		Check and repair or replace
	B. Defective overall section		See "Weak sound over all program sources"
	C. Defective head amplifier	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the head amplifier section and replace defective element if necessary
		2. Capacitor insufficient	C_{601}~C_{604}, C_{608}~C_{611}
		3. Rotary switch loose	S_{1a}, S_{1b}, S_{1c}, S_{1d}, S_{1e}, S_{1f}
		4. Input terminal or pin jack loose	
		5. Defective resistor	
Distortion	A. Program source defective		Check and repair or replace
	B. Defective overall section		See "Distortion over all program sources"

USING RECORD PLAYER (MAGNETIC) OR TAPE DECK (cont'd)

Symptom	Probable Cause		Check Point
Distortion (cont'd)	C. Defective head amplifier	1. Divergence of voltage specified in "SCHEMATIC DIAGRAM"	Measure the voltage in the head amplifier section and replace defective element if necessary
		2. Capacitor shorted or blown	C_{601}~C_{604}, C_{608}~C_{611}
		3. Defective resistor	R_{602}~R_{612}, R_{615}~R_{625}
		4. Weak transistor	TR_{601}~TR_{604}
Hum	A. Program source defective		Check and repair or replace
	B. Amplifier operating correctly	Improper connections	See "General information"
	C. Defective overall section		See "Hum over all program sources"
	D. Defective head amplifier	Capacitor insufficient	C_{006}
Noise	A. Program source defective		Check and repair or replace
	B. Amplifier operating correctly		See "General information"
	C. Defective overall section		See "Noise over all program sources"
	D. Defective head amplifier	1. Fixed resistor defective	R_{601}~R_{612}, R_{614}~R_{628}, R_{629}, R_{630}
		2. Defective capacitor	C_{601}~C_{610}, C_{611}~C_{620}
		3. Weak transistor	TR_{601}~TR_{604}

OTHER PROGRAM SOURCES

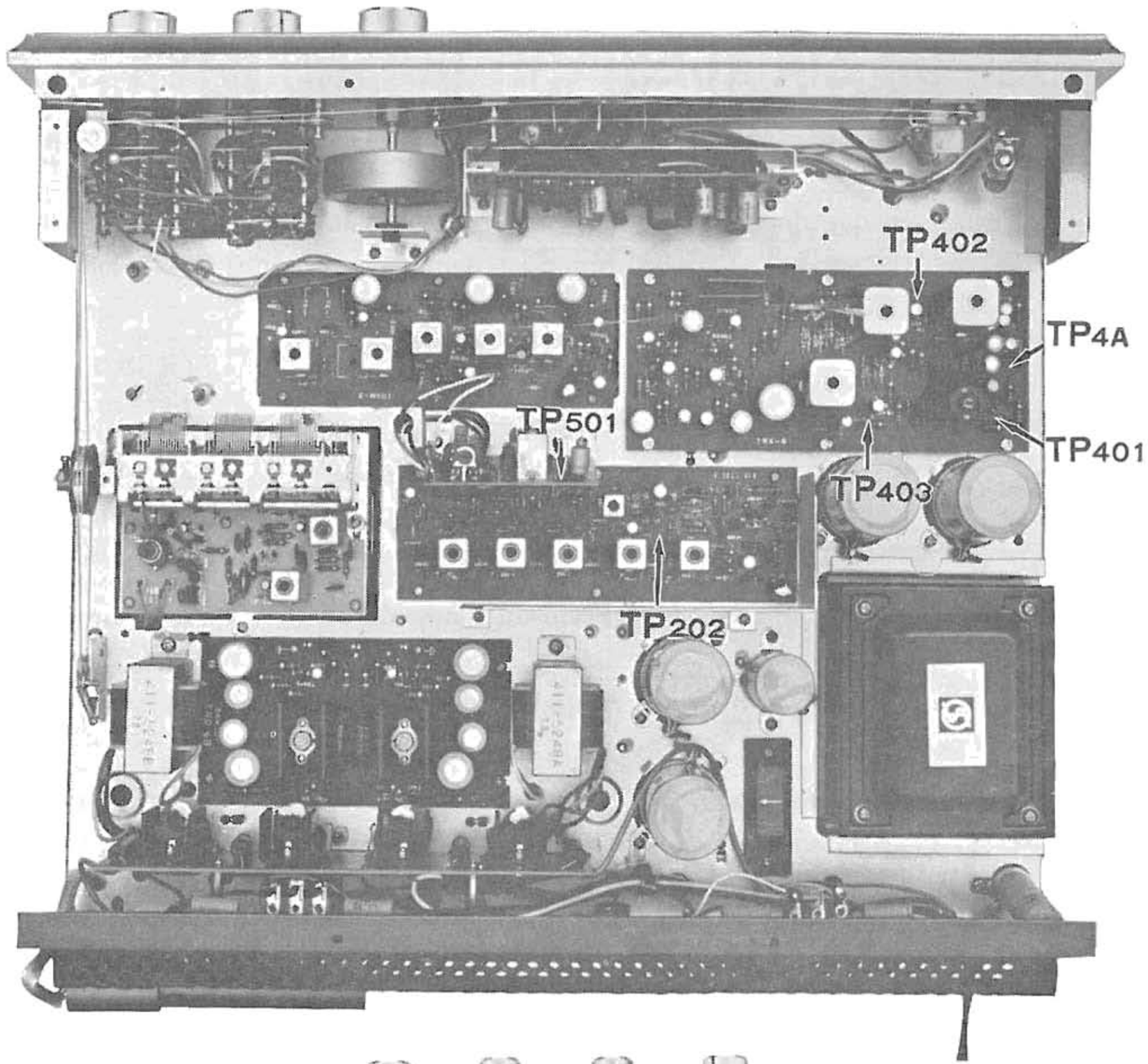
Symptom	Probable Cause	Check Point
Record player with crystal cartridge does not operate properly	1. Program source defective 2. Improper or incorrect connections 3. Defective overall section	Check and repair or replace See "General information" See "OVER ALL PROGRAM SOURCES"
Sound input from additional tuner etc. is not reproduced properly	1. Program source defective 2. Improper connections 3. Defective overall section	Check and repair or replace See "Genelal information" See "OVER ALL PROGRAM SOURCES"
Pin-jack tape recorder does not operate properly	1. Program source defective 2. Improper connections 3. Defective overall section	Check and repair or replace See "General information" See "OVER ALL PROGRAM SOURCES"
One-connection tape recorder (DIN standard) does not operate properly	1. Program source defective 2. Improper connections 3. Defective overall section 4. Defective input circuit	Check and repair or replace See "General information" See "OVER ALL PROGRAM SOURCES" DIN jack, $R_{631} \sim R_{634}$

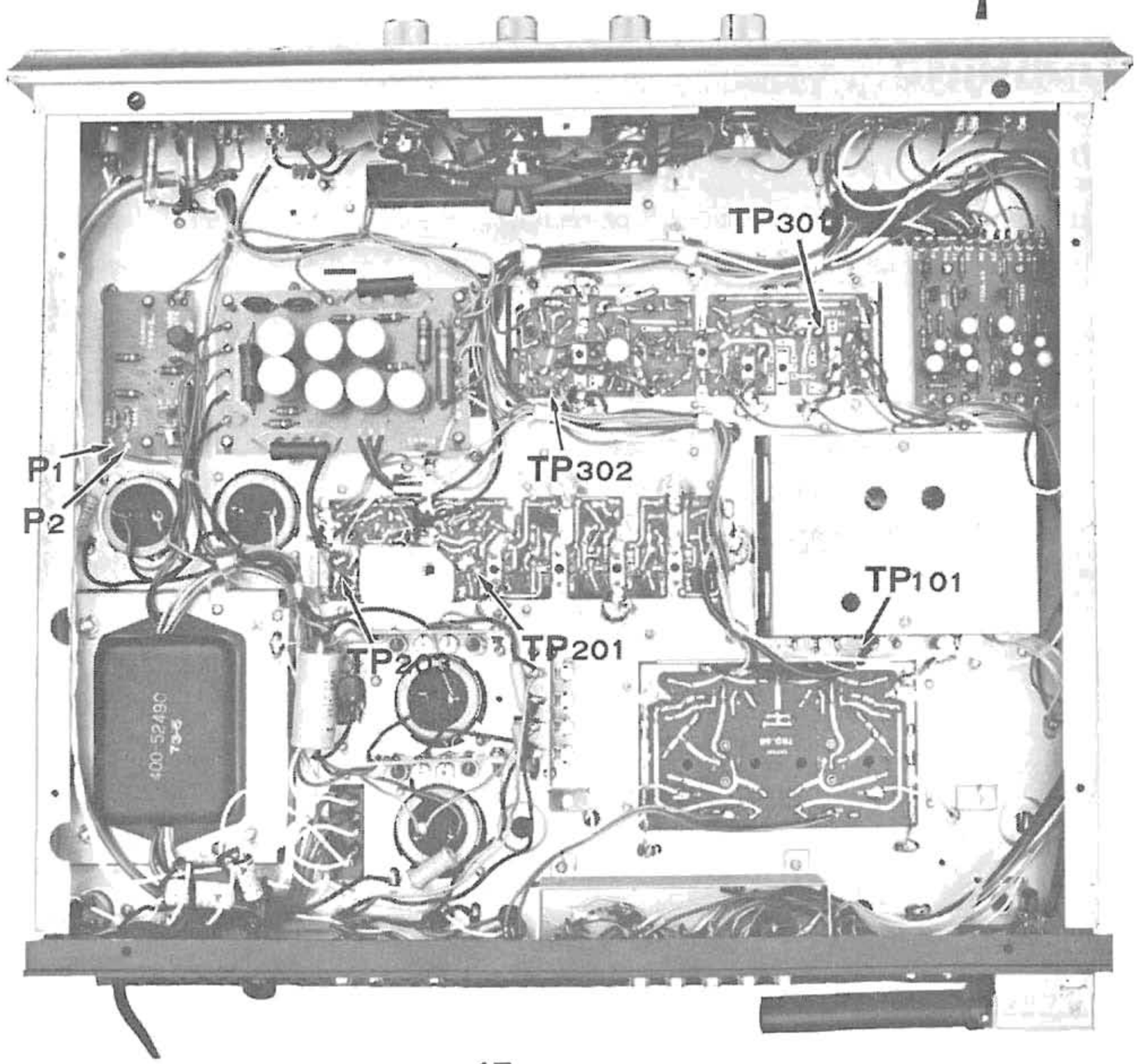
TAPE RECORDING

Symptom	Probable Cause	Check Point
Broadcast is not recorded well	1. Defective tape or tape recorder 2. Improper connections 3. FM, FM-MPX or AM section defective	Check and repair or reprace See "General information" See "AM" "FM" or "FM-MPX" RECEPTION"
Record is not recorded well	1. Defective tape or tape recorder 2. Improper connections 3. Recorde or record player defective 4. Defective head amplifier	Check and repair or replace See "General information" Check and repair or replace See "USING RECORD PLAYER: Defective head amplifier"

ALIGNMENT

TEST POINTS



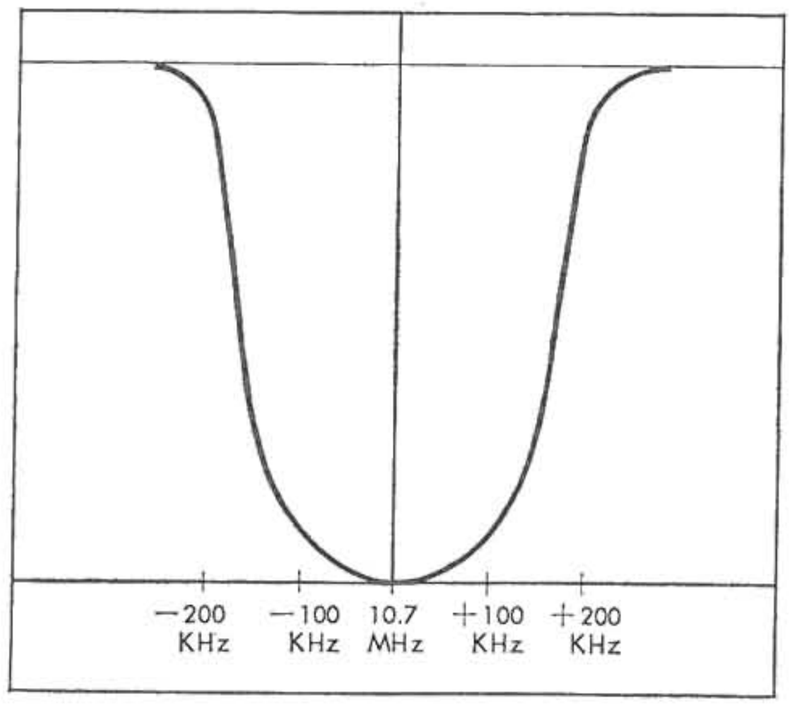


FM ALIGNMENT PROCEDURE

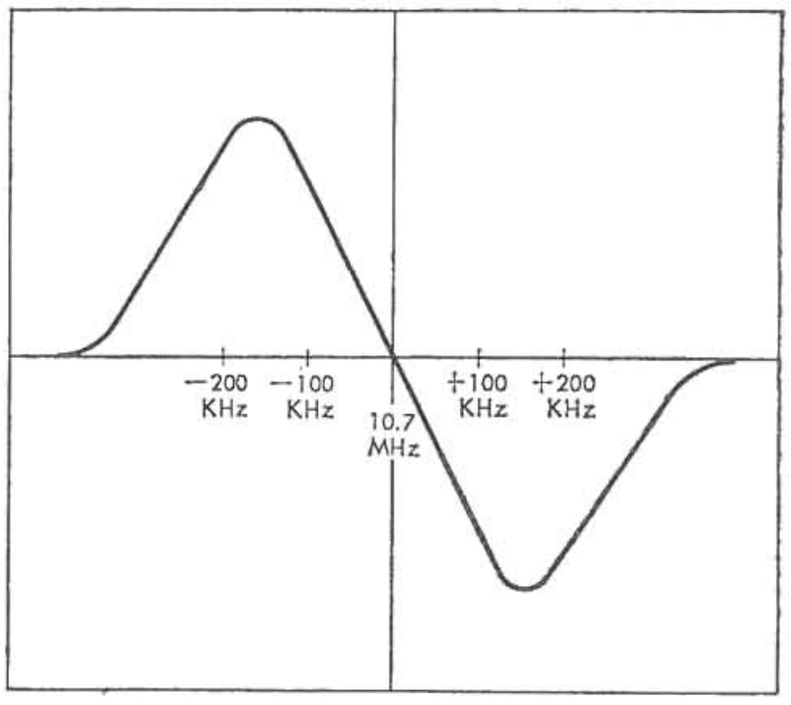
NOTE: To align, set the signal generator level to minimum.
Turn tuning gang fully.
Center carrier wave.
Set pointer at reference make.

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	IF Trans-former	10.7 MHz ±200 KHz	Sweep signal is sent to TP_{101} via the 10pF ceramic condenser	Oscilloscope is connected to TP_{202} via the 0.05μF ceramic condenser		Primary and secondary sides of T_{101}, T_{201}, T_{202} T_{203} and T_{204}	Best I.F.T. wave form
2.	Discrimin-ator	10.7 MHz ±200 KHz	Sweep signal is sent to TP_{201} via the 0.05μF ceramic condenser	Oscilloscope is connected to TP_{203} via the 0.05μF condenser		FM Discriminator transformer T_{205} primary and secondary	S curve
3.	O.S.C.	10.7 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	88 MHz	O.S.C. coil L_{106}	Maximum
4.	O.S.C.	108 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	108 MHz	O.S.C. trimmer TC_{104}	Maximum
5.	Reiterate 3 and 4.						
6.	High fre-buency Amp. Circuit	90 MHz 400 Hz 100% Modulation	To antenna terminals	Oscilloscope and V.T.V.M. at output load	90 MHz	Antenna coil L_{101}, L_{103} and L_{104}	Maximum
7.	High fre-puency Amp. Circuit	106 MHz 400 Hz 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.	Reiterate 6 and 7.						

FM IF WAVE FORM



FM DISCRIMINATOR WAVE FORM



FM M.P.X. ALIGNMENT PROCEDURE

1. Do not attempt to align the Multiplex Circuit unless the following equipment is available:
a. Multiplex Stereo Generator b. Oscilloscope c. AC. V.T.V.M. d. Audio Oscillator e. FM Signal Generator

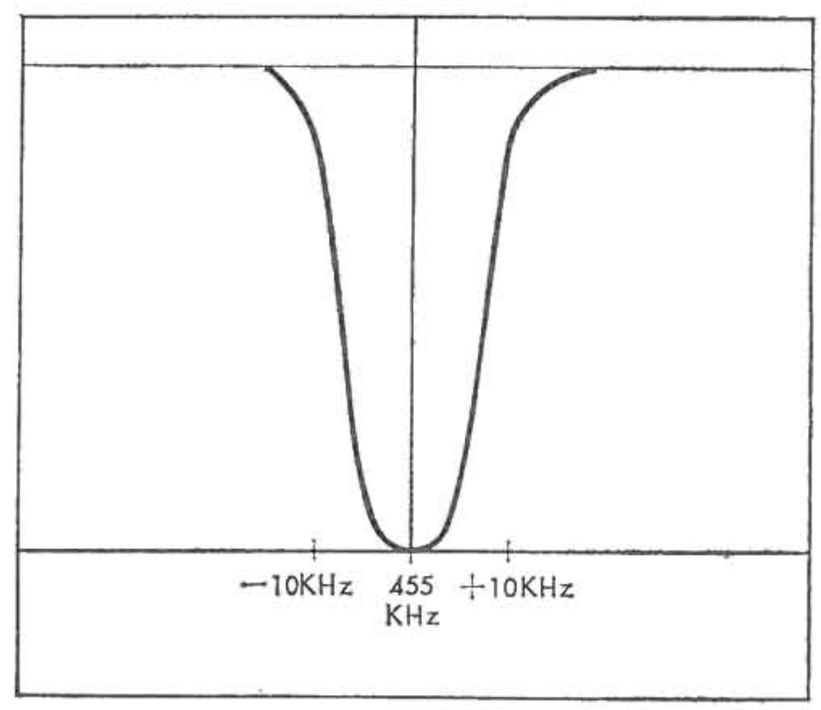
STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	ADJUST	ADJUST FOR
1.	67 KHz Trap	67 KHz Audio Signal	Connect to TP_{4A}	V.T.V.M. at TP_{401}	L_{401}(MFC-A)	Maximum
2.	71 KHz Trap	71 KHz Audio Signal	Connect to TP_{4A}	V.T.V.M. at TP_{401}	L_{402}(MFC-B)	Maximum
3.	19 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals tune to signal	V.T.V.M. and Oscilloscope at TP_{402}	T_{401}(MPT-20A)	Maximum
4.	19 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals tune to signal	V.T.V.M. and Oscilloscope at TP_{403}	T_{402}(MPT-20B)	Smaller peakvalue of two peakvalues
5.	38 KHz Transformer	FM Signal Gen. Modulated 30% by STEREO Gen. sub-channel	Antenna terminals tune to signal	V.T.V.M. and Oscilloscope at TP_{403}	T_{403}(MPT-20B)	Smaller peakvalue of two peakvalues
6.	38 KHz Transformer and Separation VR	FM Signal Gen. Modulated 30% by STEREO Signal Gen. channel-L	Antenna terminals tune to signal	V.T.V.M. and Oscilloscope at output load channel-R	T_{403}(MPT-20B) within ¼ turn and Separation VR(VR_{401})	Channel-R Minimum

AM ALIGNMENT PROCEDURE

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

STEP	ALIGN	GENERATOR	FEED SIGNAL	OUTPUT INDICATOR	DIAL SETTING	ADJUST	ADJUST FOR
1.	I.F. Transformer	455 KHz ±30 KHz Sweep-generator	Antenna terminals	Oscilloscope and V.T.V.M. at TP_{302}		Primary and secondary sides from the 1st I.F.T. (T_{302}) to the 3rd I.F.T. (T_{304})	Best I.F.T. wave form
2.	O.S.C.	AM-generator 535 KHz 30% 400 Hz 30% Modulation	Antenna terminals	Oscilloscope and V.T.V.M. at output load	535 KHz	O.S.C. Coil L_{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.	Reiterate 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	1400 KHz	Ferrite bar Antenna coil L_{301}	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.	Reiterate 5, 6, 7, 8						

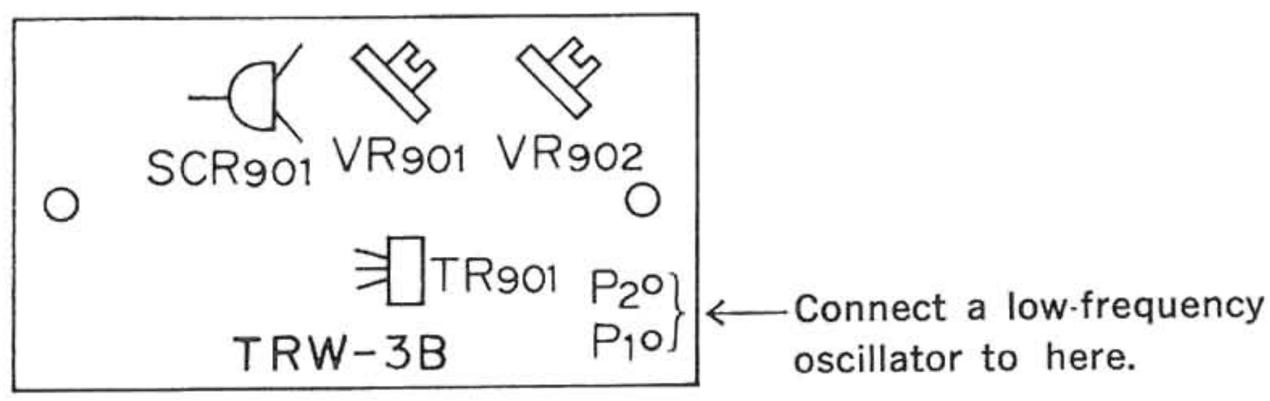
AM IF WAVE FORM



ALIGNMENT

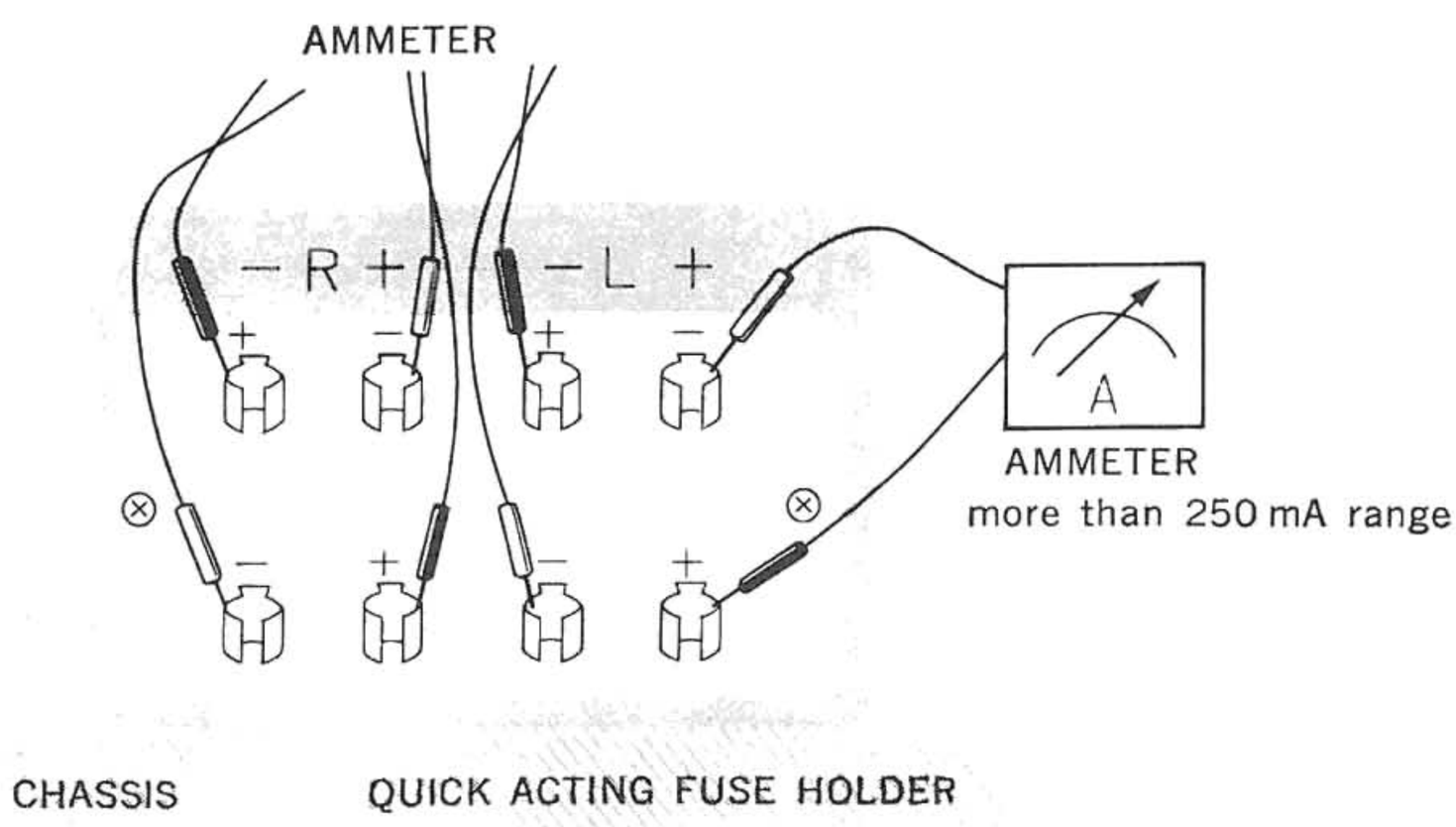
TO ADJUST THE PROTECTOR CIRCUIT (TRW-3B)

1. Remeve leads from P_1 and P_2.
2. Connect the output (output impedance: 600 ohms, 1 KHz) of the low-frequency oscillator to P_1 and raise its output gradually. Adjust the VR_{901} so that the protector lamp is lit and no power comes to the SPEAKER output terminals at 1.8V RMS.
3. Connect the output (output impedance: 600 ohms, 1 KHz) of the low-frequency oscillator to P_2 and raise its output gradually. Adjust the VR_{902} so that the protector lamp is lit and no power comes to the SPEAKER output terminals at 1.8V RMS.
4. Solder the leads to P_1 and P_2.



TO ADJUST THE BIAS CURRENT IN THE OUTPUT STAGE

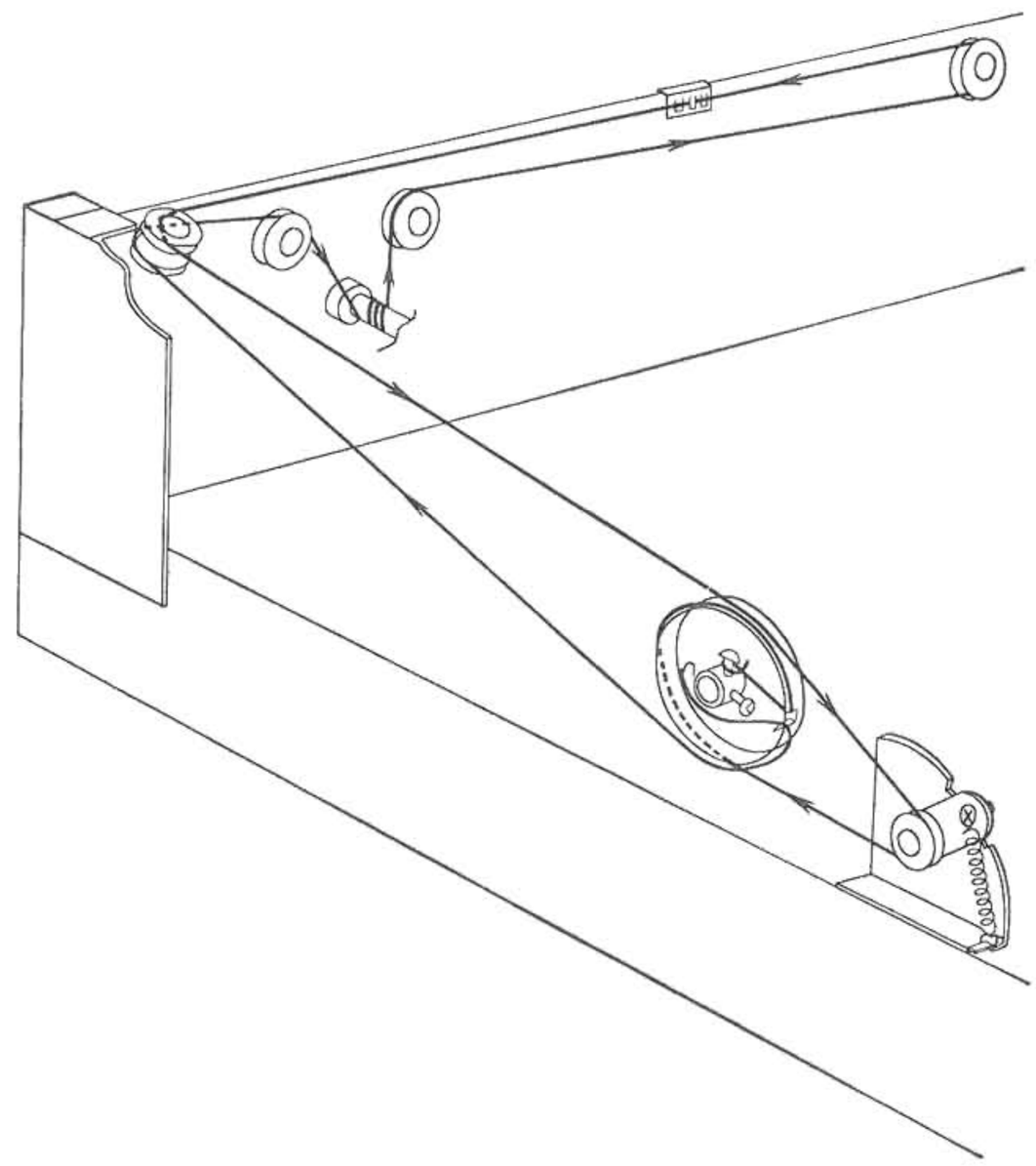
1. Set the MAIN VOL. control to MINIMUM.
2. Connect a resistor (approx. 10 ohms and 1 watt) to each of the SPEAKER output terminals.
3. Remove quick-acting fuse from its holder.
4. Connect an ammeter (about 250 milliamperes) to CHANNEL R as illustrated.
5. Adjust the VR_{803} and VR_{804} on the TRZ-2D sheet so that the ammeter indicates 80 milliamperes.
6. Remove the ammeter and secure the fuse in place.
7. Adjust CHANNEL L as above.



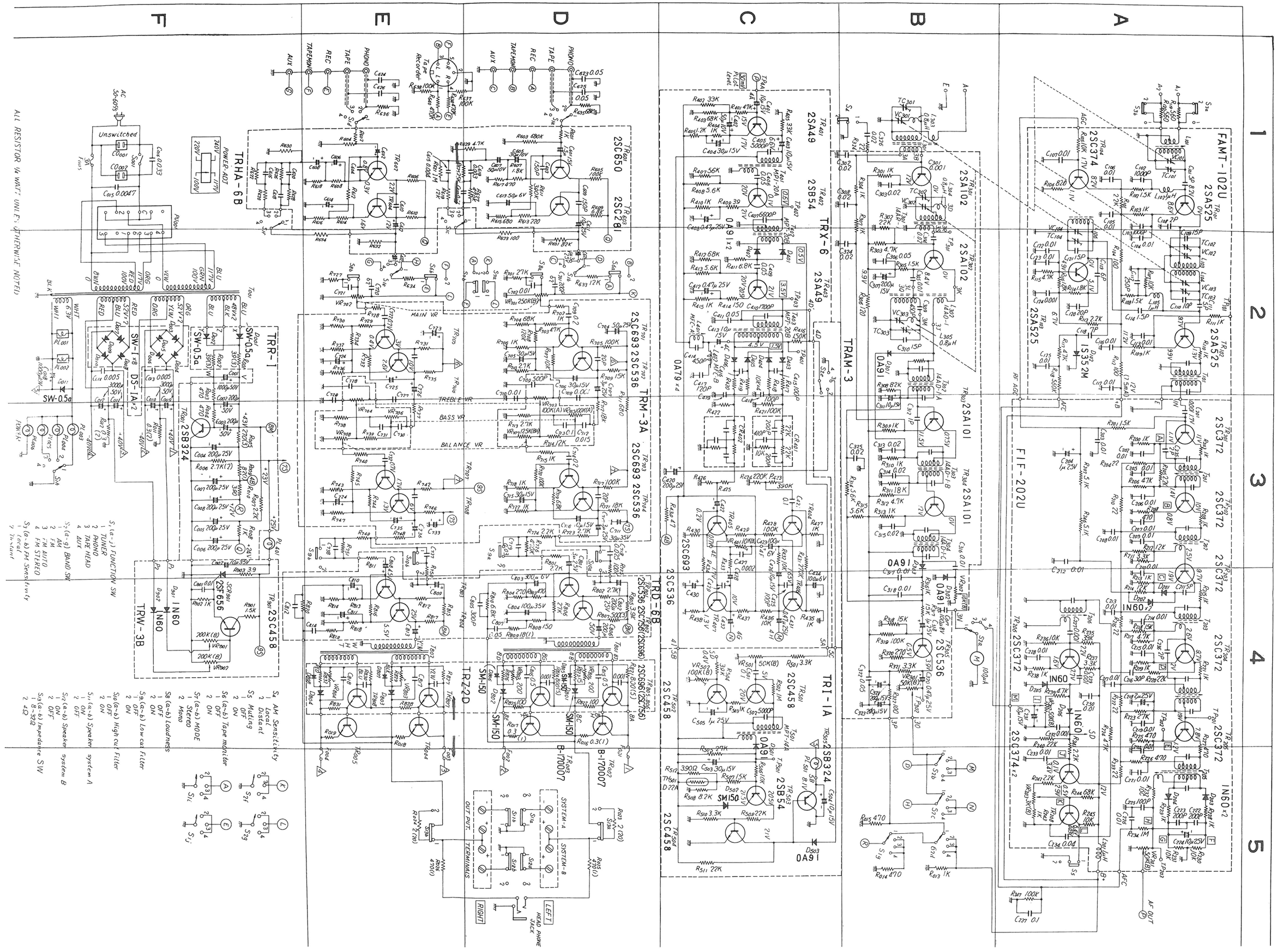
DISASSEMBLY PROCEDURE

REMOVING THE FRONT PANEL, BONNET AND BOTTOM PLATE

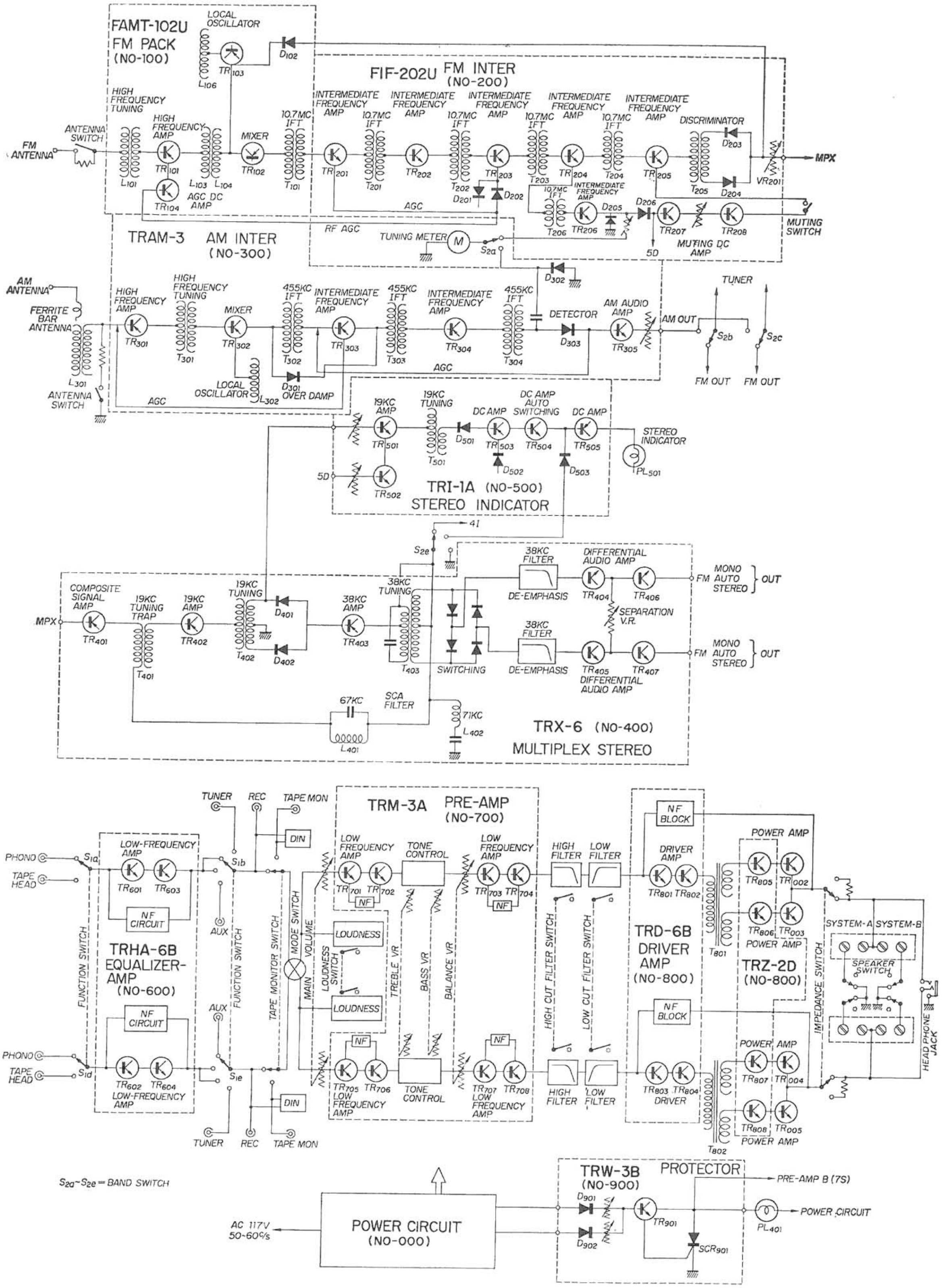
DIAL MECHANISM



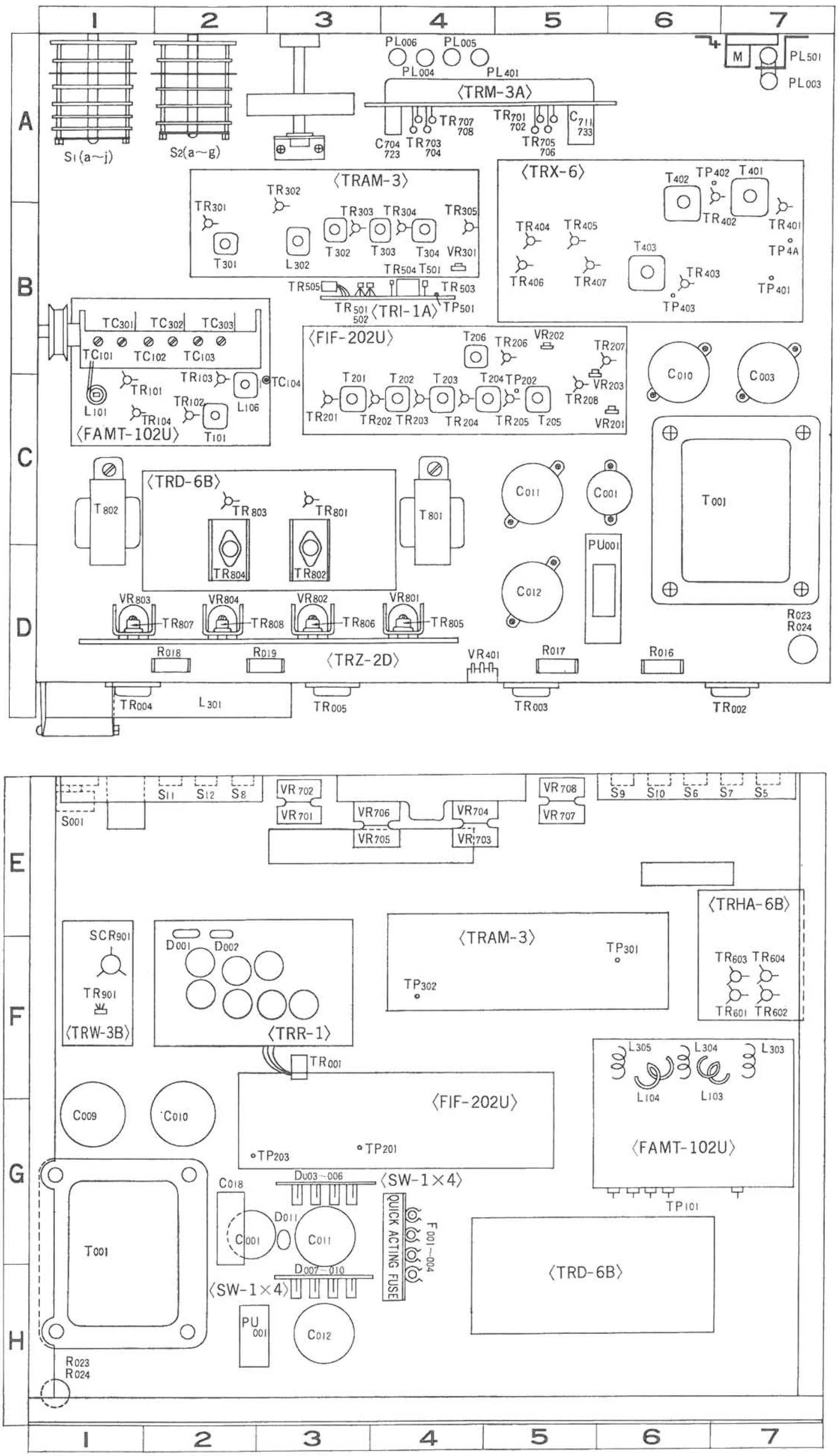
SCHEMATIC DIAGRAM OF CIRCUITS



BLOCK DIAGRAM



PARTS LAYOUT

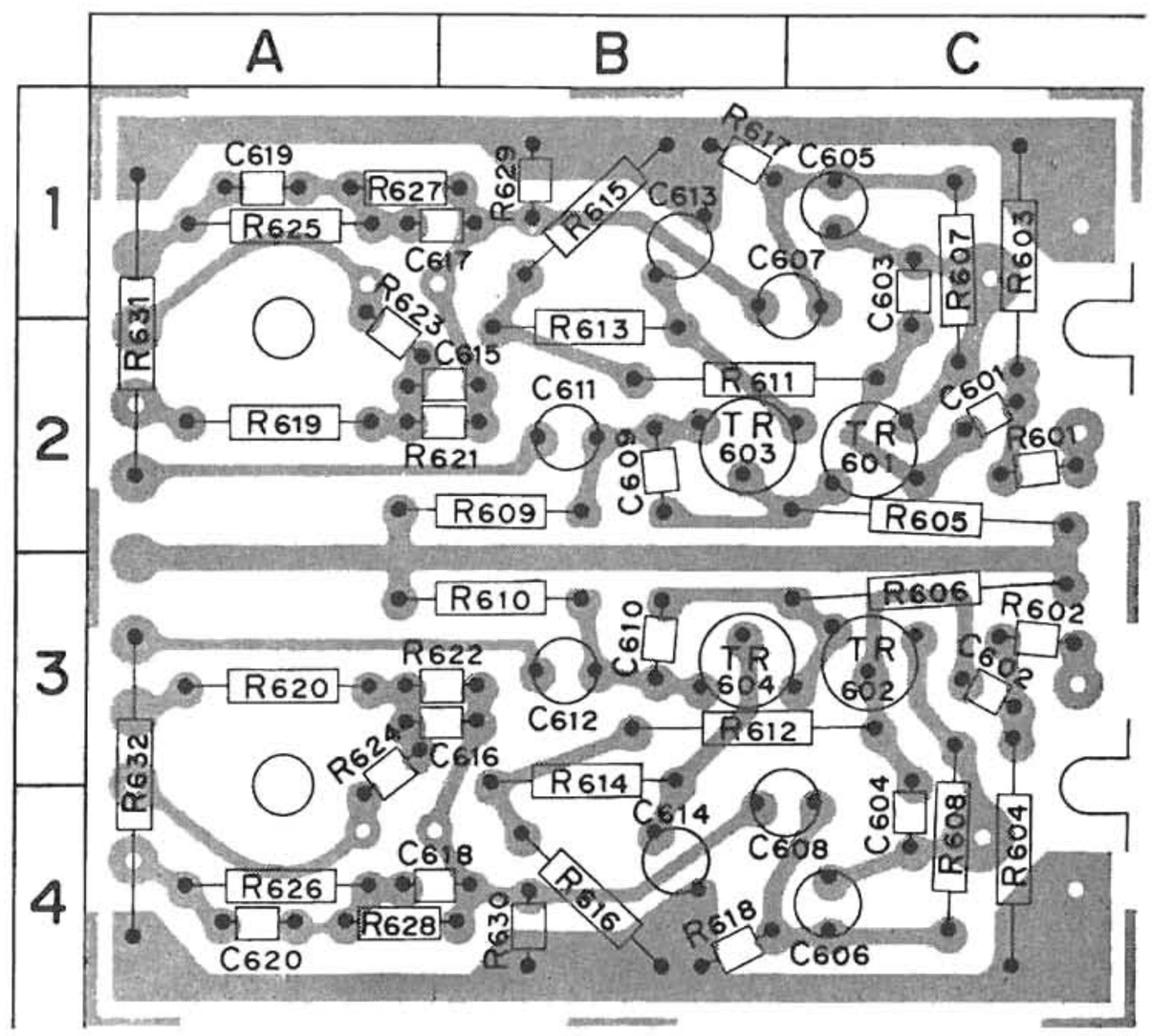


PRINTED-CIRCUIT SHEETS

EQUALIZER AMP. TRHA-6B

CO-ORDINATES OF PARTS USED

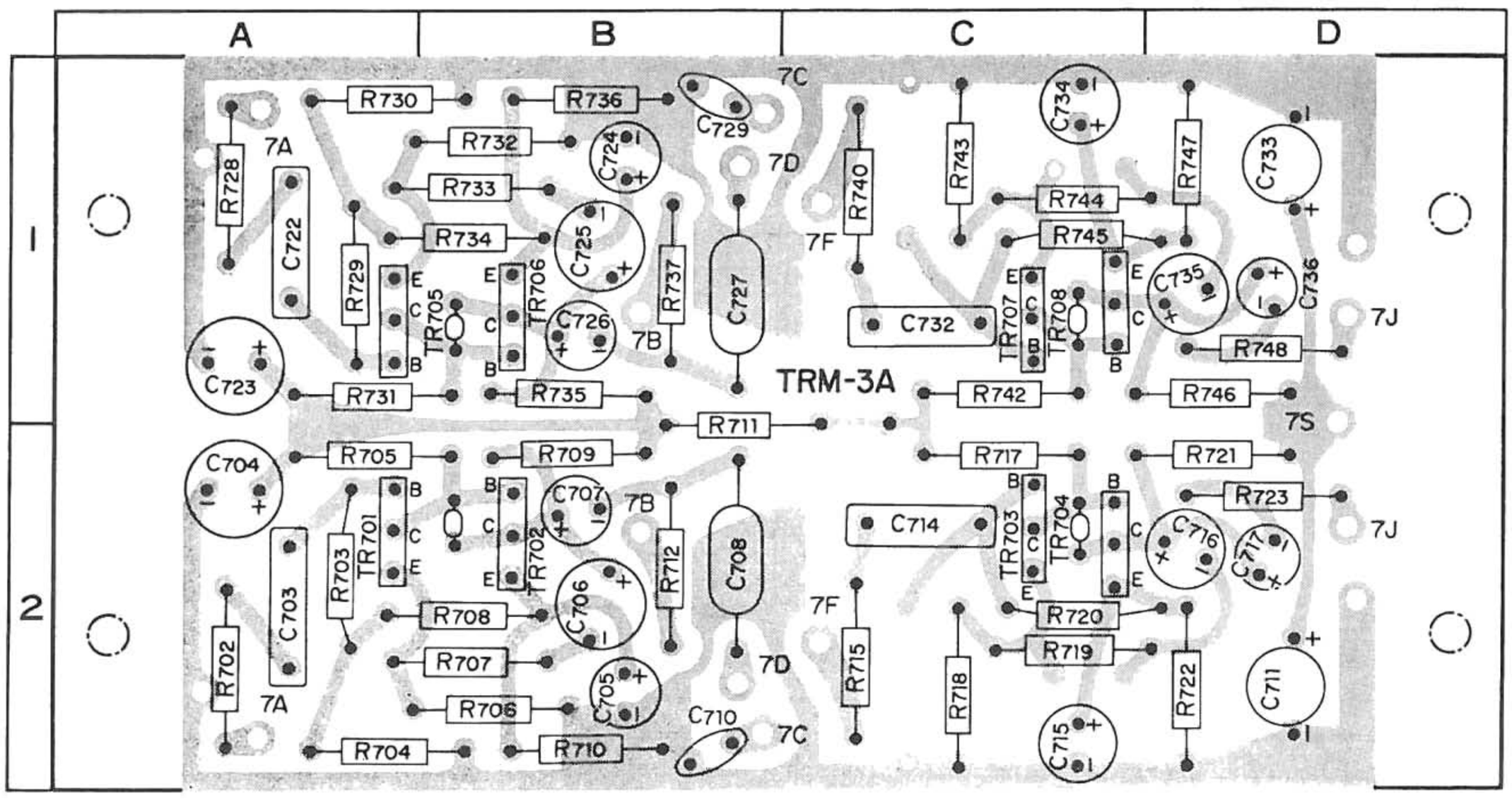
R601....2C	R615....1B	R631....2A	C612....3B
R602....3C	R616....4B	R632....3A	C613....1B
R603....1C	R617....1B		C614....4B
R604....4C	R618....4B	C601....2C	C615....2B
R605....2C	R619....2A	C602....3C	C616....3B
R606....3C	R620....3A	C603....1C	C617....1A
R607....1C	R621....2B	C604....4C	C618....4A
R608....4C	R622....3B	C605....1C	C619....1A
R609....2B	R623....2A	C606....4C	C620....4A
R610....3B	R624....3A	C607....1C	
R611....2B	R625....1B	C608....4C	TR601..2C
R612....3B	R626....4A	C609....2B	TR602..3C
R613....2B	R627....1A	C610....3B	TR603..2B
R614....3B	R628....4A	C611....2B	TR604..3B



CONTROL AMP. TRM-3A

CO-ORDINATES OF PARTS USED

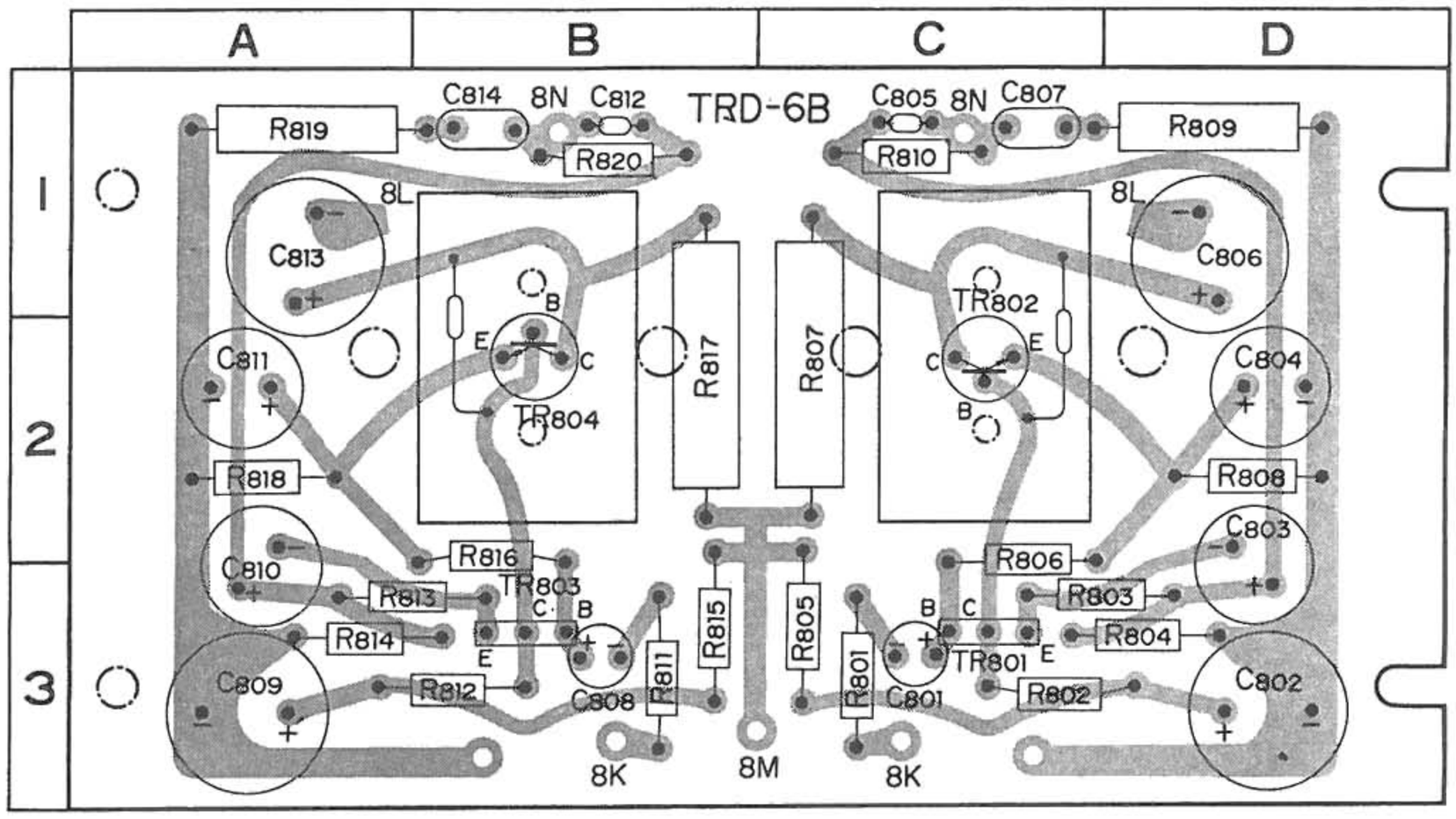
R702....2A	R710....2B	R721....2D	R733....1D	R744....1C	C705....2B	C716....2D	C729....1B	TR702..2B
R703....2A	R711....1B	R722....2D	R734....1B	R745....1C	C706....2B	C717....2D	C732....1C	TR703..2B
R704....2A	R712....2B	R723....2D	R735....1B	R746....1D	C707....2B	C722....1A	C733....1D	TR704..2C
R705....2A	R715....2C	R728....1A	R736....1B	R747....1D	C708....2B	C723....1A	C734....1C	TR705..1A
R705....2B	R717....2C	R729....1A	R737....1B	R748....1D	C710....2B	C724....1B	C735....1D	TR706..1B
R707....2B	R718....2C	R730....1A	R740....1C		C711....2D	C725....1B	C736....1D	TR707..1C
R708....2B	R719....2C	R731....1A	R742....1C	C703....2A	C714....2C	C726....1B		TR708..1C
R709....2B	R720....2C	R732....1B	R743....1C	C704....2A	C715....2C	C727....1B	TR701..2A	



DRIVER AMP. TRD-6B

CO-ORDINATES OF PARTS USED

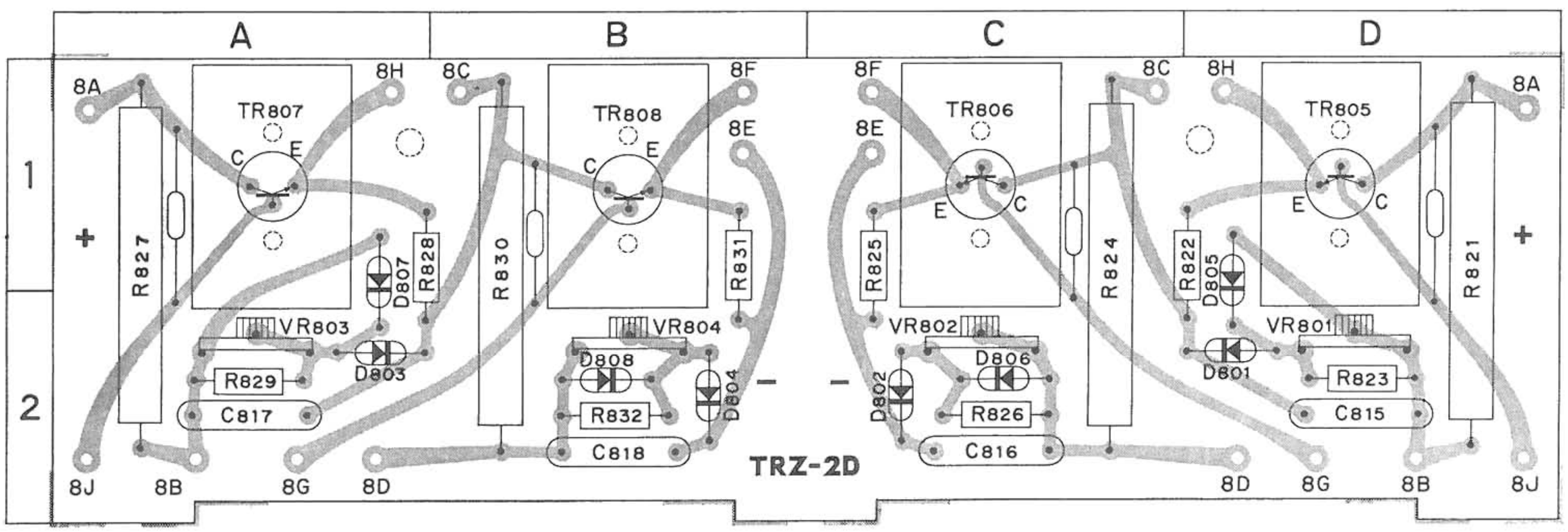
R801 . . . . 3 C	R815 . . . . 3 B	C808 . . . . 3 D
R802 . . . . 3 C	R816 . . . . 2 B	C809 . . . . 3 A
R803 . . . . 3 C	R817 . . . . 2 B	C810 . . . . 3 A
R804 . . . . 3 D	R818 . . . . 2 A	C811 . . . . 2 A
R805 . . . . 3 C	R819 . . . . 1 A	C812 . . . . 1 B
R806 . . . . 2 C	R820 . . . . 1 B	C813 . . . . 1 A
R807 . . . . 2 C		C814 . . . . 1 B
R808 . . . . 2 D	C801 . . . . 3 C	
R809 . . . . 1 D	C802 . . . . 3 D	TR801 . . 3 C
R810 . . . . 1 C	C803 . . . . 3 D	TR802 . . 2 C
R811 . . . . 3 D	C804 . . . . 2 D	TR803 . . 3 B
R812 . . . . 3 B	C805 . . . . 1 C	TR804 . . 2 B
R813 . . . . 3 A	C806 . . . . 1 D	
R814 . . . . 3 A	C807 . . . . 1 C	



PRE-POWER TRZ-2D

CO-ORDINATES OF PARTS USED

R821 . . . . 1 D	R831 . . . . 1 B	VR803 . . 2 A	D803 . . . . 2 A
R822 . . . . 1 D	R832 . . . . 2 B	VR804 . . 2 B	D804 . . . . 2 B
R823 . . . . 2 D			D805 . . . . 2 D
R824 . . . . 1 C	C815 . . . . 2 D	TR805 . . 1 D	D806 . . . . 2 C
R825 . . . . 1 C	C816 . . . . 2 C	TR806 . . 1 C	D807 . . . . 2 A
R826 . . . . 2 C	C817 . . . . 2 A	TR807 . . 1 A	D808 . . . . 2 B
R827 . . . . 1 A	C818 . . . . 2 B	TR808 . . 1 B	
R828 . . . . 1 A			
R829 . . . . 2 A	VR801 . . 2 D	D801 . . . . 2 D	
R830 . . . . 1 B	VR802 . . 2 C	D802 . . . . 2 C	

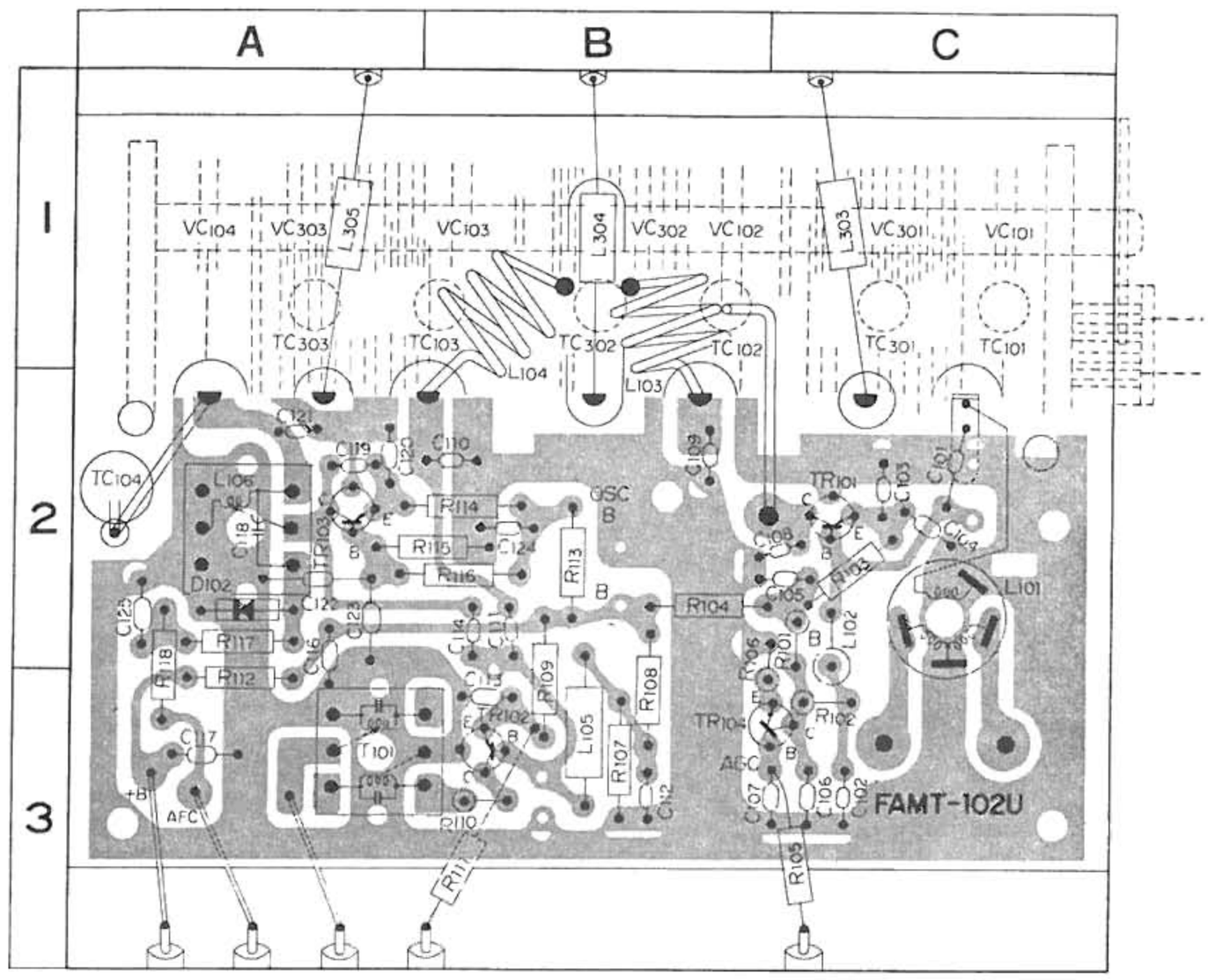


PRINTED-CIRCUIT SHEETS

FM TUNER FAMT-102U

CO-ORDINATES OF PARTS USED

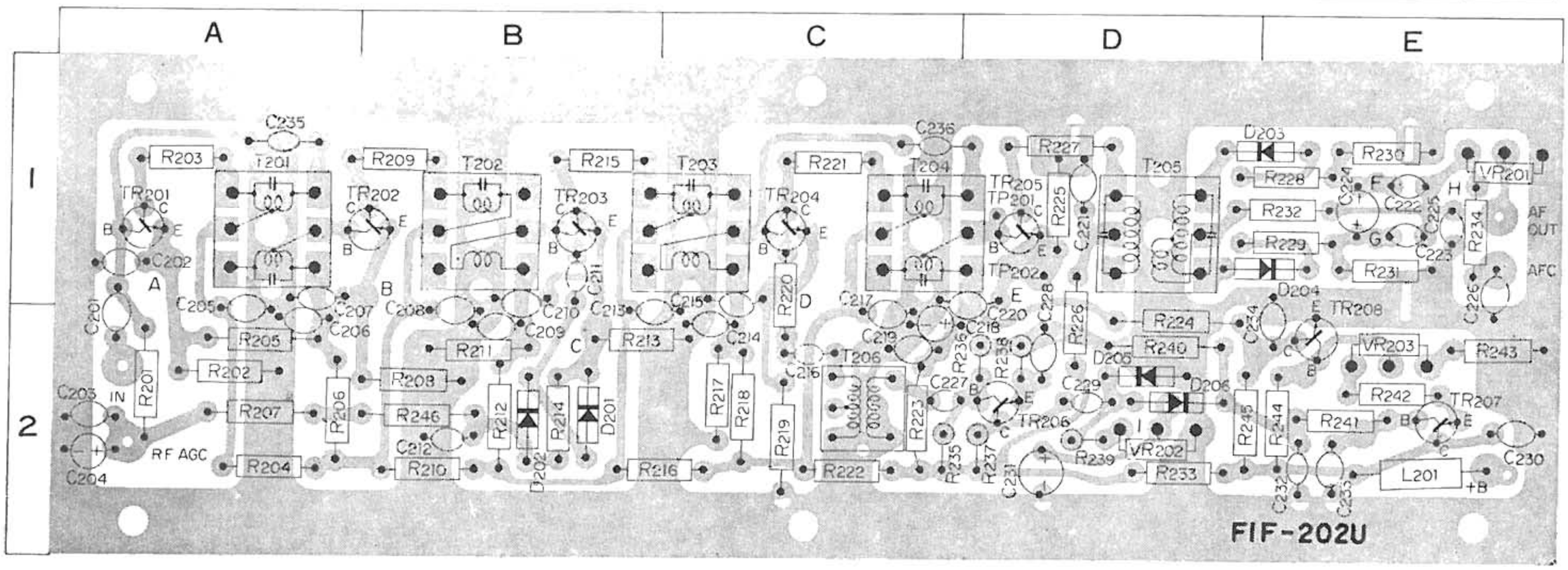
R101 . . . . 2 C	C102 . . . . 3 C	C123 . . . . 2 A	TC102 . . 1 B
R102 . . . . 1 C	C103 . . . . 2 C	C124 . . . . 2 B	TC103 . . 1 B
R103 . . . . 2 C	C104 . . . . 2 C	C125 . . . . 2 A	TC104 . . 2 A
R104 . . . . 2 B	C105 . . . . 2 C		
R105 . . . . 3 C	C106 . . . . 3 C	L101 . . . . 2 C	VC101 . . 1 C
R106 . . . . 3 C	C107 . . . . 3 C	L102 . . . . 2 C	VC102 . . 1 B
R107 . . . . 3 B	C108 . . . . 2 C	L103 . . . . 1 B	VC103 . . 1 B
R108 . . . . 3 B	C109 . . . . 2 B	L104 . . . . 1 B	VC104 . . 1 A
R109 . . . . 3 B	C110 . . . . 2 B	L105 . . . . 3 B	
R110 . . . . 3 B	C111 . . . . 2 B	L106 . . . . 2 A	L303 . . . . 1 C
R111 . . . . 3 B	C112 . . . . 3 B		L304 . . . . 1 B
R112 . . . . 3 A	C113 . . . . 3 B	TR101 . . 2 C	L305 . . . . 1 A
R113 . . . . 2 B	C114 . . . . 2 B	TR102 . . 3 B	
R114 . . . . 2 B	C116 . . . . 2 A	TR103 . . 2 A	TC301 . . 1 C
R115 . . . . 2 B	C117 . . . . 3 A	TR104 . . 3 C	TC302 . . 1 B
R116 . . . . 2 B	C118 . . . . 2 A		TC303 . . 1 A
R117 . . . . 2 A	C119 . . . . 2 A	D102 . . . . 2 A	
R118 . . . . 2 A	C120 . . . . 2 A		VC301 . . 1 C
	C121 . . . . 2 A	T101 . . . . 3 A	VC302 . . 1 B
C101 . . 2 C	C122 . . . . 3 A	TC101 . . 1 C	VC303 . . 1 A



FM-IFT FIF-202U

CO-ORDINATES OF PARTS USED

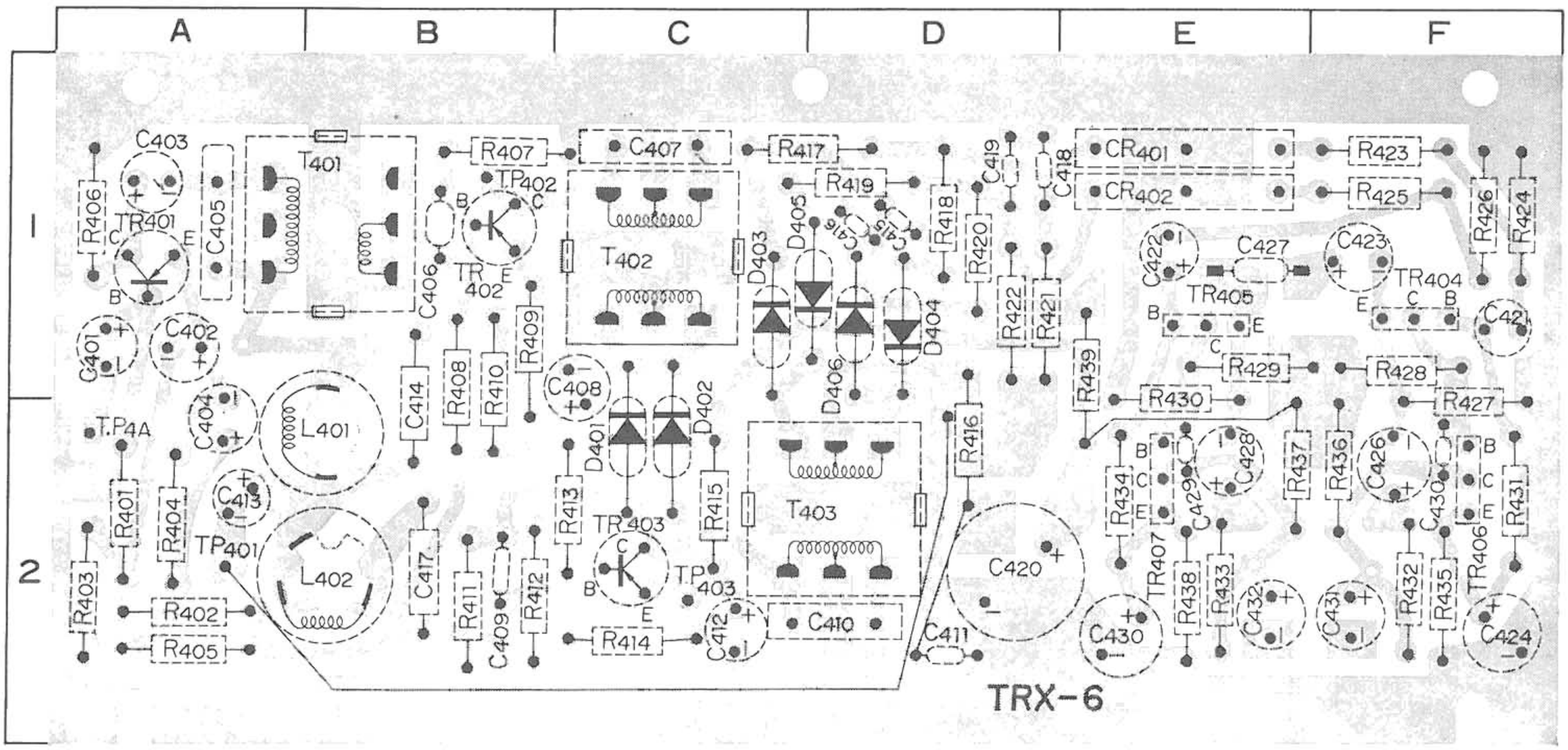
R201 . . . . 2 A	R212 . . . . 2 B	R223 . . . . 2 C	R234 . . . . 1 E	R245 . . . . 2 D	C209 . . . . 2 B	C220 . . . . 1 D	C231 . . . . 2 D	TR205 . . 1 D	VR201 . . 1 E
R202 . . . . 2 A	R213 . . . . 2 B	R224 . . . . 2 D	R235 . . . . 2 C	R246 . . . . 2 B	C210 . . . . 1 B	C221 . . . . 1 D	C232 . . . . 2 E	TR206 . . 2 D	VR202 . . 2 D
R203 . . . . 1 A	R214 . . . . 2 B	R225 . . . . 1 D	R236 . . . . 2 D		C211 . . . . 1 B	C222 . . . . 1 E	C233 . . . . 2 E	TR207 . . 2 E	VR203 . . 2 E
R204 . . . . 2 A	R215 . . . . 1 B	R226 . . . . 2 D	R237 . . . . 2 D	C201 . . . . 2 A	C212 . . . . 2 B	C223 . . . . 1 E	C234 . . . . 2 E	TR208 . . 2 E	
R205 . . . . 2 A	R216 . . . . 2 C	R227 . . . . 1 D	R238 . . . . 2 D	C202 . . . . 1 A	C213 . . . . 2 B	C224 . . . . 1 E	C235 . . . . 1 A		T201 . . . . 1 A
R206 . . . . 2 A	R217 . . . . 2 C	R228 . . . . 1 E	R239 . . . . 2 D	C203 . . . . 2 A	C214 . . . . 2 C	C225 . . . . 1 E	C236 . . . . 1 C	D201 . . . . 2 B	T202 . . . . 1 B
R207 . . . . 2 A	R218 . . . . 2 C	R229 . . . . 1 E	R240 . . . . 2 D	C204 . . . . 2 A	C215 . . . . 1 C	C226 . . . . 1 E		D202 . . . . 2 B	T203 . . . . 1 C
R208 . . . . 2 B	R219 . . . . 2 C	R230 . . . . 1 E	R241 . . . . 2 E	C205 . . . . 2 A	C216 . . . . 2 C	C227 . . . . 2 C	TR201 . . 1 A	D203 . . . . 1 E	T204 . . . . 1 C
R209 . . . . 1 B	R220 . . . . 1 C	R231 . . . . 1 E	R242 . . . . 2 E	C206 . . . . 2 A	C217 . . . . 2 C	C228 . . . . 2 D	TR202 . . 1 B	D204 . . . . 1 E	T205 . . . . 1 D
R210 . . . . 2 B	R221 . . . . 1 C	R232 . . . . 1 E	R243 . . . . 2 E	C207 . . . . 1 A	C218 . . . . 2 C	C229 . . . . 2 D	TR203 . . 1 B	D205 . . . . 2 D	T206 . . . . 2 C
R211 . . . . 2 B	R222 . . . . 2 C	R233 . . . . 2 B	R244 . . . . 2 E	C208 . . . . 2 B	C219 . . . . 2 C	C230 . . . . 2 E	TR204 . . 1 C	D206 . . . . 2 D	L201 . . . . 2 E



FM MULTIPLEX TRX-6

CO-ORDINATES OF PARTS USED

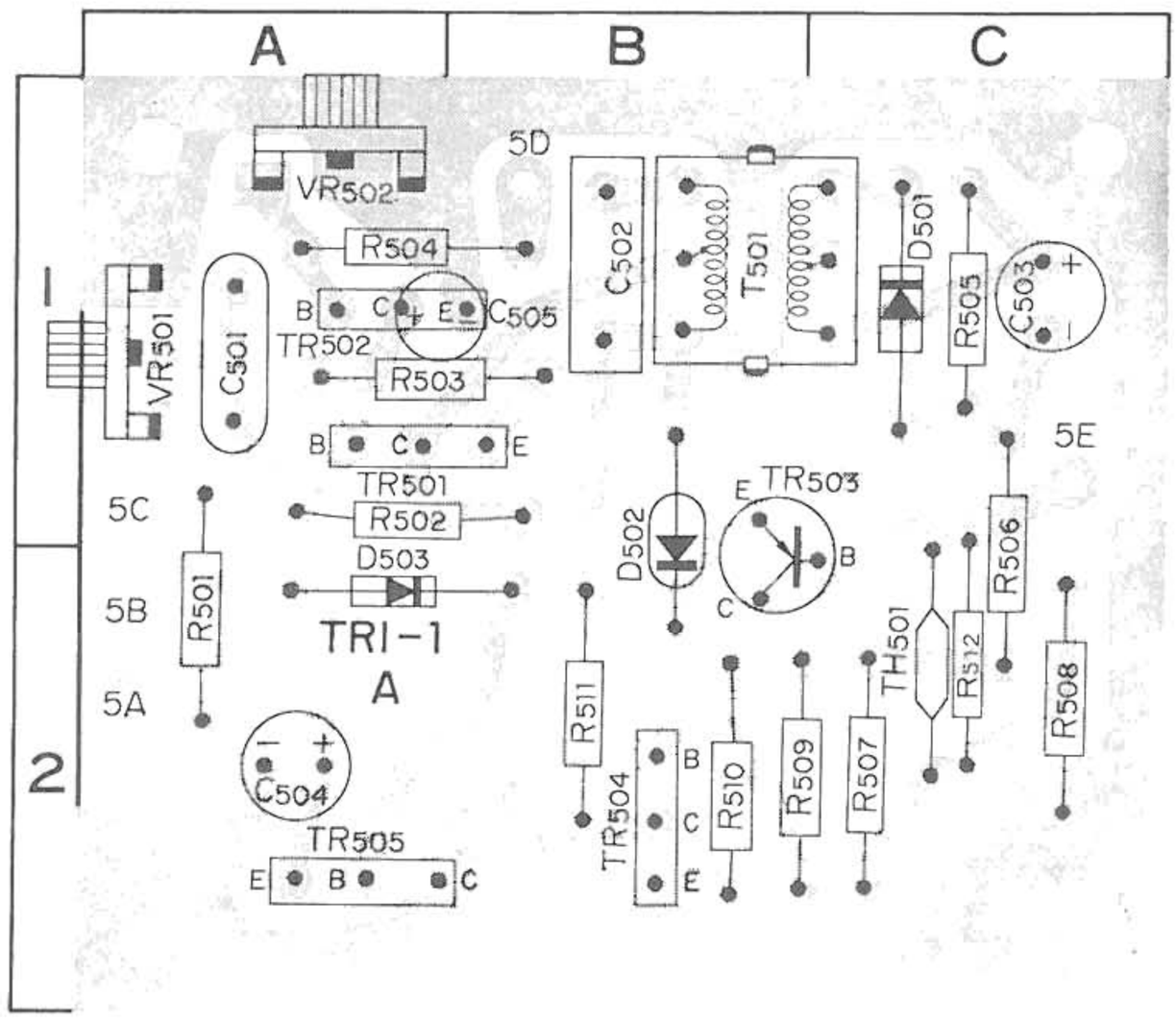
R401....2 A	R411....2 B	R421....1 D	R431....2 F	C401....1 A	C411....2 D	C421....1 F	C431....2 F	TR405 ..1 E	L401....2 B
R402....2 A	R412....2 B	R422....1 D	R432....2 F	C402....1 A	C412....2 C	C422....1 E	C432....2 E	TR406 ..2 F	L402....2 B
R403....2 A	R413....2 C	R423....1 E	R433....2 E	C403....1 A	C413....2 A	C423....1 F		TR407 ..2 E	
R404....2 A	R414....2 C	R424....1 F	R434....2 E	C404....2 A	C414....1 B	C424....2 F	CR401 ..1 E		T401....1 B
R405....2 A	R415....2 C	R425....1 F	R435....2 F	C405....1 A	C415....1 D	C425....2 F	CR402 ..1 E	D401....2 C	T402....1 C
R406....1 A	R416....2 D	R426....1 F	R436....2 F	C406....1 B	C416....1 D	C426....2 F		D402....2 C	T403....2 D
R407....1 B	R417....1 C	R427..1. 2 F	R437....2 E	C407....1 C	C417....2 B	C427....1 E	TR401 ..1 A	D403....1 C	
R408....1 B	R418....1 D	R428....1 F	R438....2 E	C408....1 C	C418....1 D	C428....2 E	TR402 ..2 C	D404....1 D	
R409....1 B	R419....1 D	R429....1 E	R439....1 E	C409....2 B	C419....1 D	C429....2 E	TR403 ..2 C	D405....1 D	
R410....1 B	R420....1 D	R430..1. 2 E		C410....2 D	C420....2 D	C430....2 E	TR404 ..1 F	D406....2 D	



FM STEREO INDICATOR TRI-1A

CO-ORDINATES OF PARTS USED

R501....2 A	R510....2 C	T501....1 B	TR503 ..2 B
R502....1 A	R511....2 B		TR504 ..2 B
R503....1 A	R512....2 C	VR501 ..1 A	TR505 ..2 A
R504....1 A		VR502 ..1 A	
R505....1 C	C501....1 A		D501....1 C
R506....1 C	C502....1 B	TH501 ..2 C	D502....1 B
R507....2 C	C503....1 C		D503....2 A
R508....2 C	C504....2 A	TR501 ..1 A	
R509....2 C	C505....1 A	TR502 ..1 A	

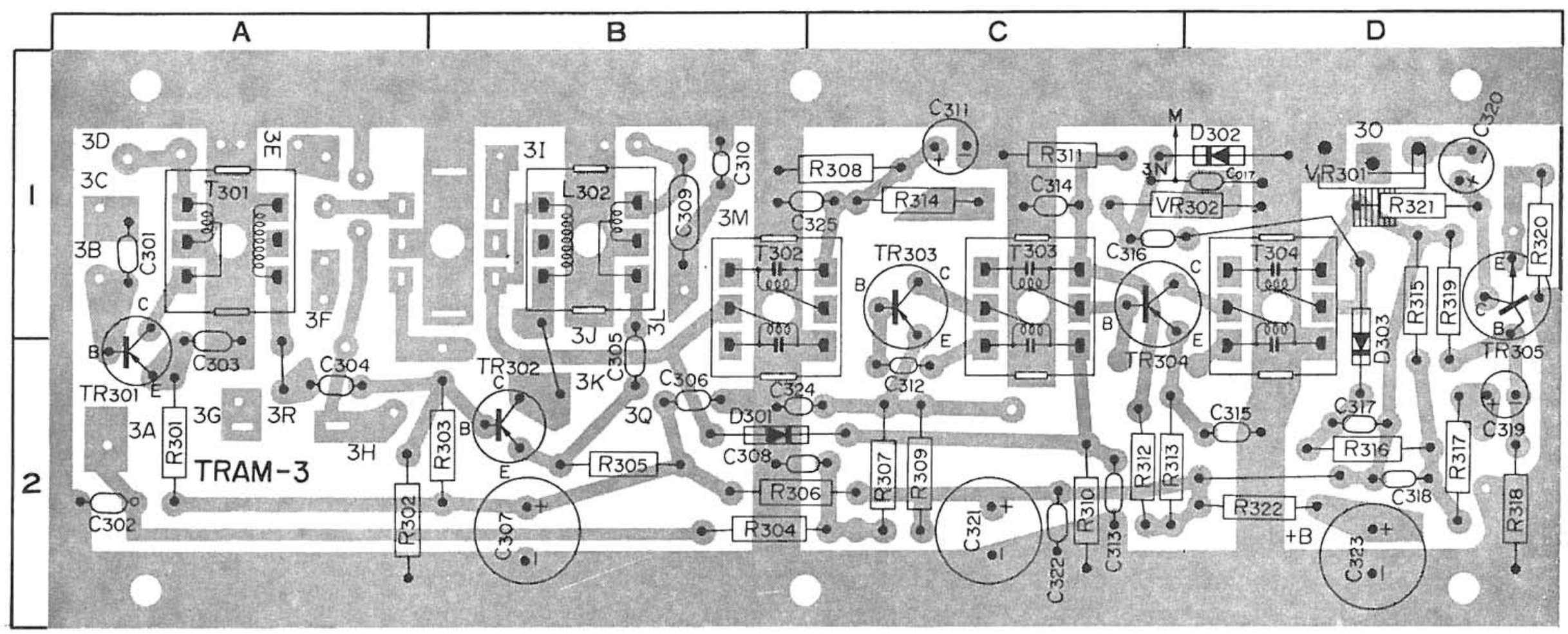


PRINTED-CIRCUIT SHEETS

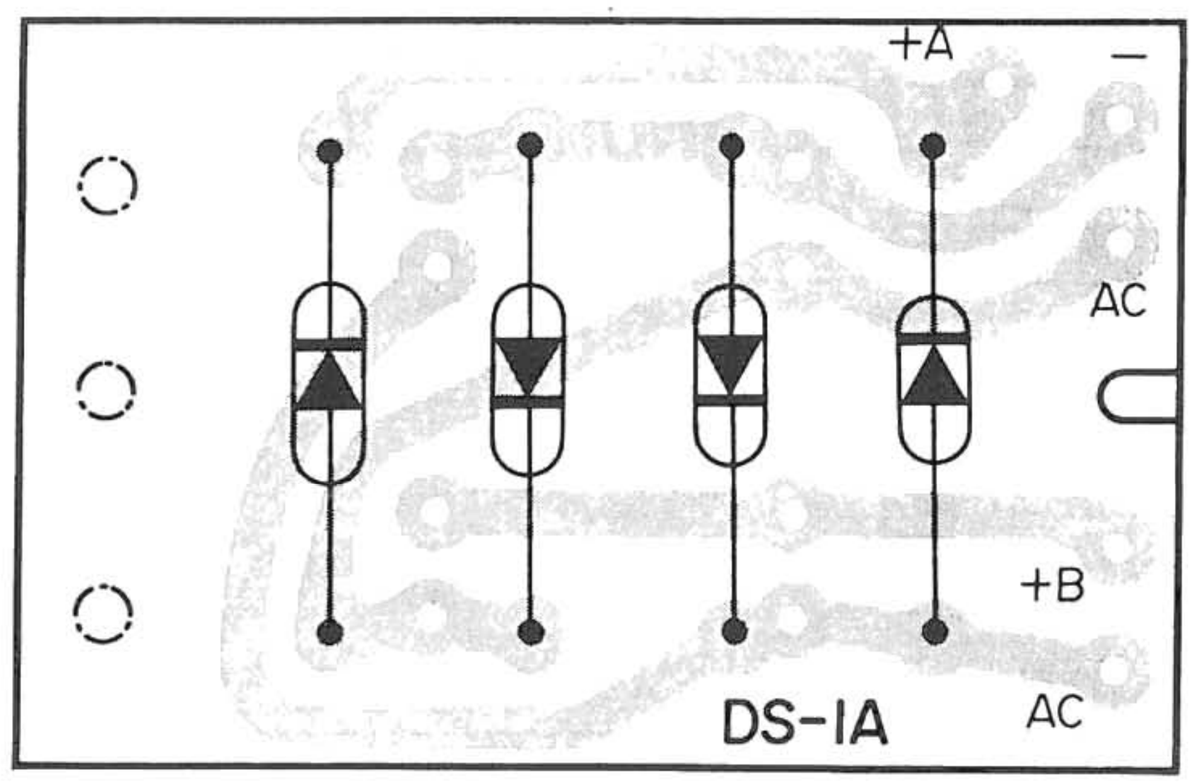
AM TUNER TRAM-3

CO-ORDINATES OF PARTS USED

R301 . . . . 2 A	R310 . . . . 2 C	R319 . . . . 1 D	C303 . . . . 2 A	C312 . . . . 2 C	C321 . . . . 2 C	TR302 . . 2 B	L302 . . . . 1 B
R302 . . . . 2 A	R311 . . . . 1 C	R320 . . . . 1 D	C304 . . . . 2 A	C313 . . . . 2 C	C322 . . . . 2 C	TR303 . . 1 C	T301 . . . . 1 A
R303 . . . . 2 B	R312 . . . . 2 C	R321 . . . . 1 D	C305 . . . . 2 B	C314 . . . . 1 C	C323 . . . . 2 D	TR304 . . 1 C	T302 . . . . 1 B
R304 . . . . 2 B	R313 . . . . 2 C	R322 . . . . 2 D	C305 . . . . 2 B	C315 . . . . 2 D	C324 . . . . 2 B	TR305 . . 1 D	T303 . . . . 1 C
R305 . . . . 2 B	R314 . . . . 1 C	R323 . . . . 1 C	C307 . . . . 2 B	C316 . . . . 1 C	C325 . . . . 1 B		T304 . . . . 1 D
R306 . . . . 2 B	R315 . . . . 1 D		C308 . . . . 2 B	C317 . . . . 2 D		D301 . . . . 2 B	
R307 . . . . 2 C	R316 . . . . 2 D	C017 . . . . 1 D	C309 . . 1 B	C318 . . . . 2 D	VR301 . . 1 D	D302 . . . . 1 D	
R308 . . . . 1 C	R317 . . . . 2 D	C301 . . . . 1 A	C310 . . . . 2 B	C319 . . . . 2 D		D303 . . . . 1 D	
R309 . . . . 2 C	R318 . . . . 2 D	C302 . . . . 2 A	C311 . . . . 2 B	C320 . . . . 1 D	TR301 . . 2 A		



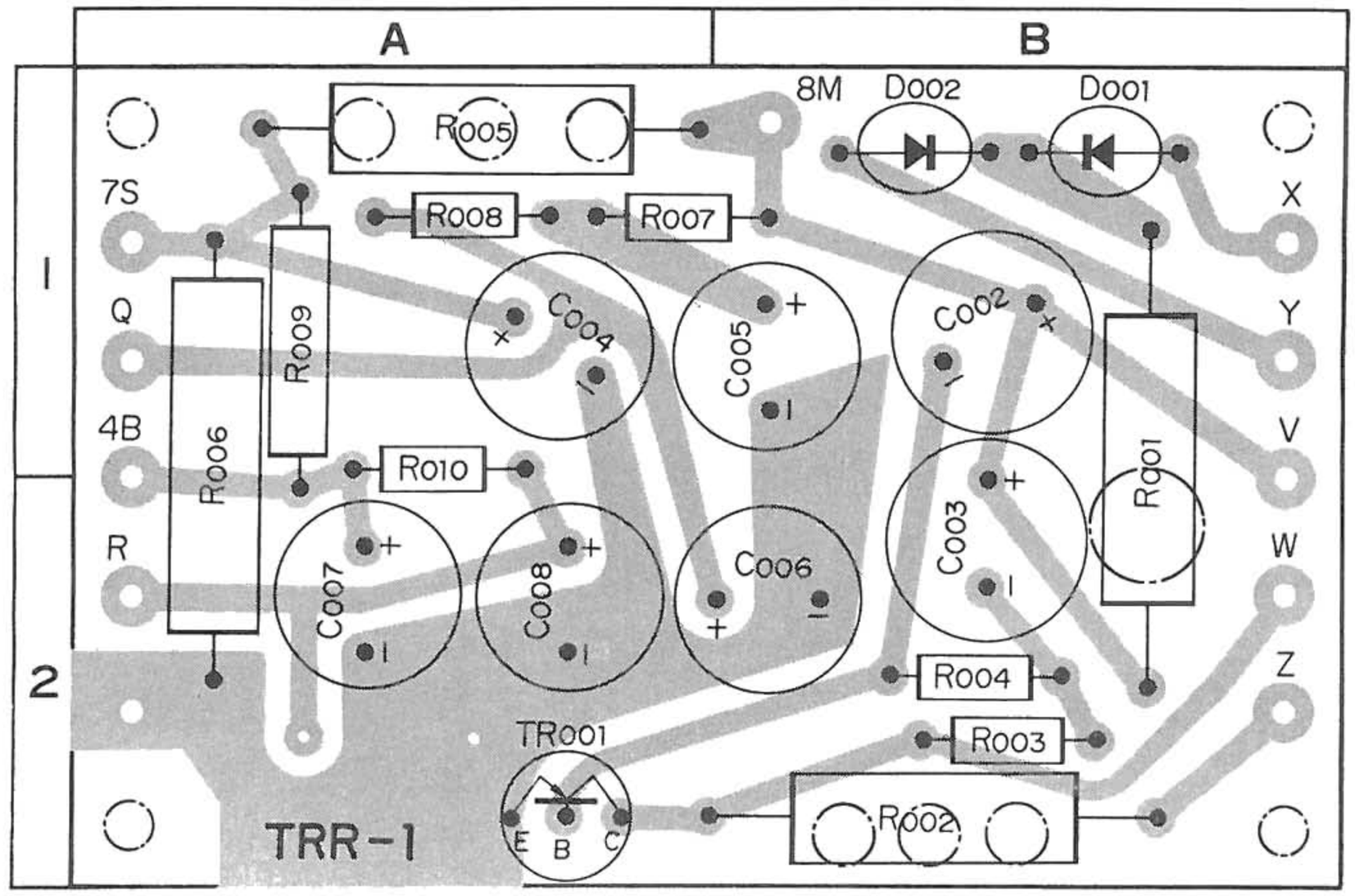
DIODES STACK DS-1A



RIPPLE FILTER TRR-1

CO-ORDINATES OF PARTS USED

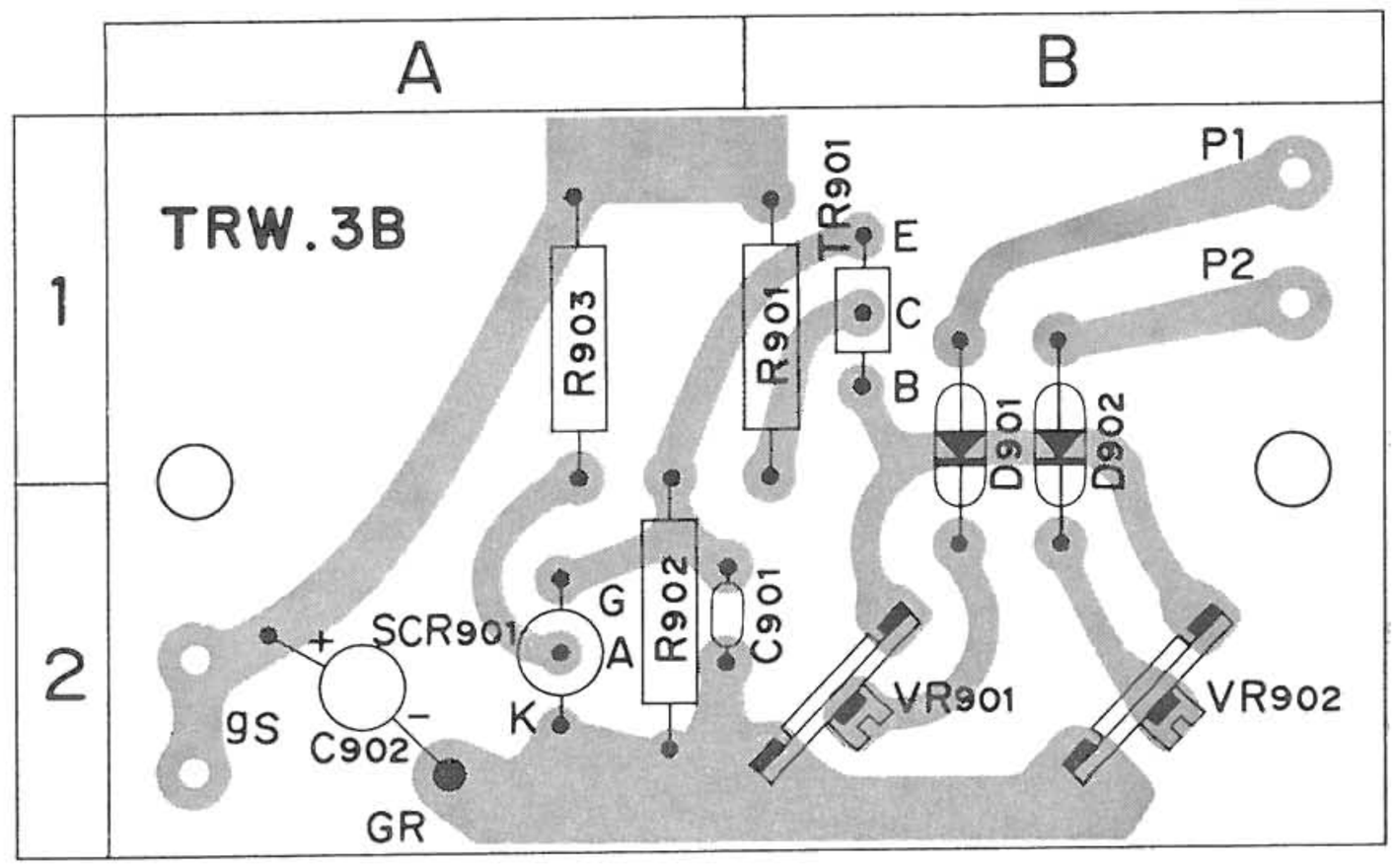
R001....1 B	C003....2 B
R002....2 B	C004....1 A
R003....2 B	C005....1 B
R004....2 B	C006....2 B
R005....1 A	C007....2 A
R006....1 A	
R007....1 A	TR001 ..2 A
R008....1 A	
R009....1 A	D001....1 B
R010....1 A	D002....1 B
C002....1 B	



PROTECTOR TRW-3B

CO-ORDINATES OF PARTS USED

R901....1 B	TR901 ..1 B
R902....2 A	
R903....1 A	D901....1 B
	D902....1 B
C901....2 A	
	SCR901..2 A
VR901 ..2 B	
VR902 ..2 B	



SELECTOR CHART

Remove the bonnet and look at the switehes from the back side of the amplifier. This chart tells you the location of their contact and supporting points. The smaller the circle, the nearer the points are located to the back of the amplifier.

● indicates a contact point of the selector switch.
◉ indicates a supporting point of the selector switch.
▲ indicates a terminal point of the selector switch.

Ex. 1 2 3 4 ....Contact Point

....Supporting Point

FUNCTION

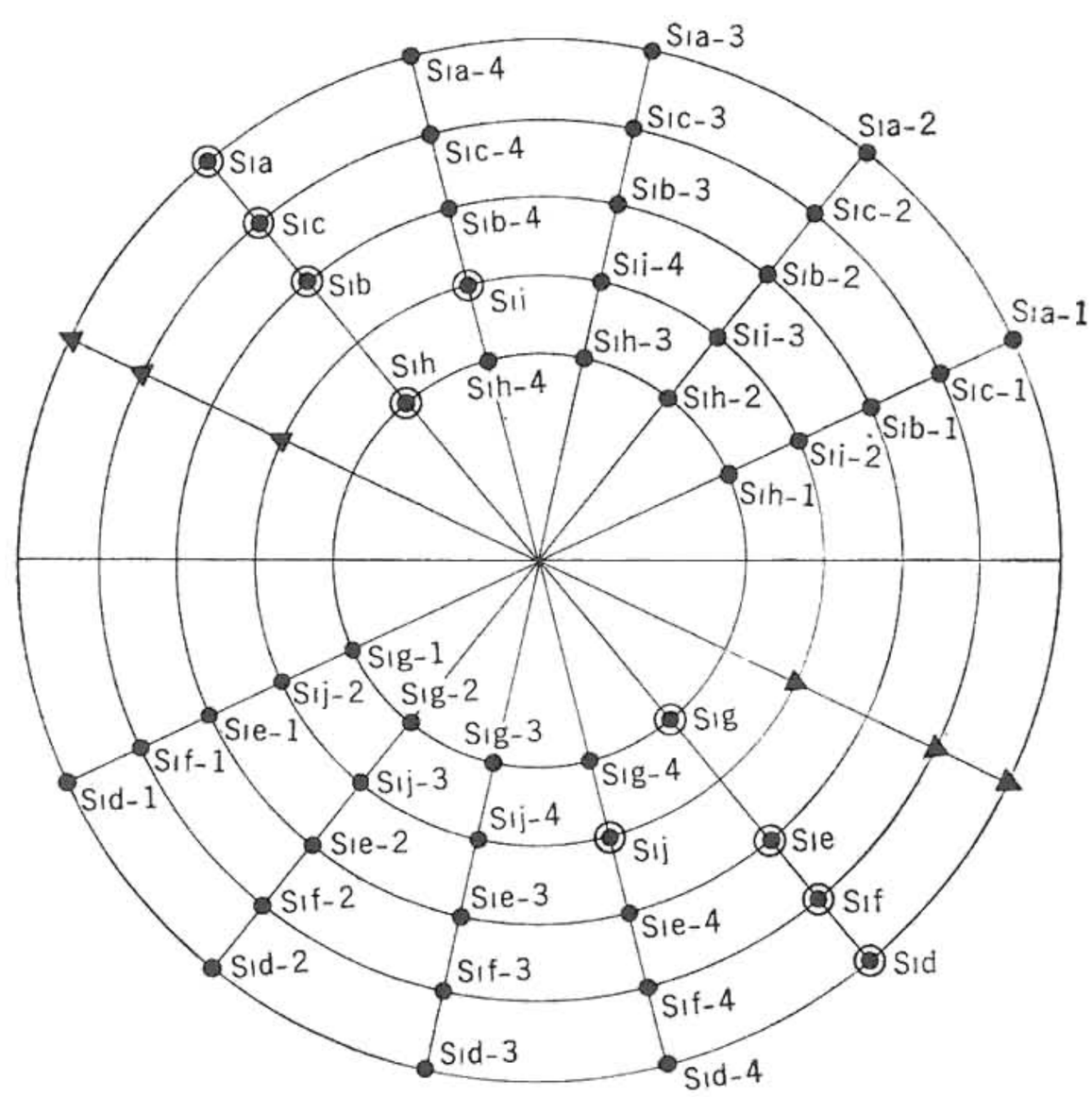
S_1 (a~j)

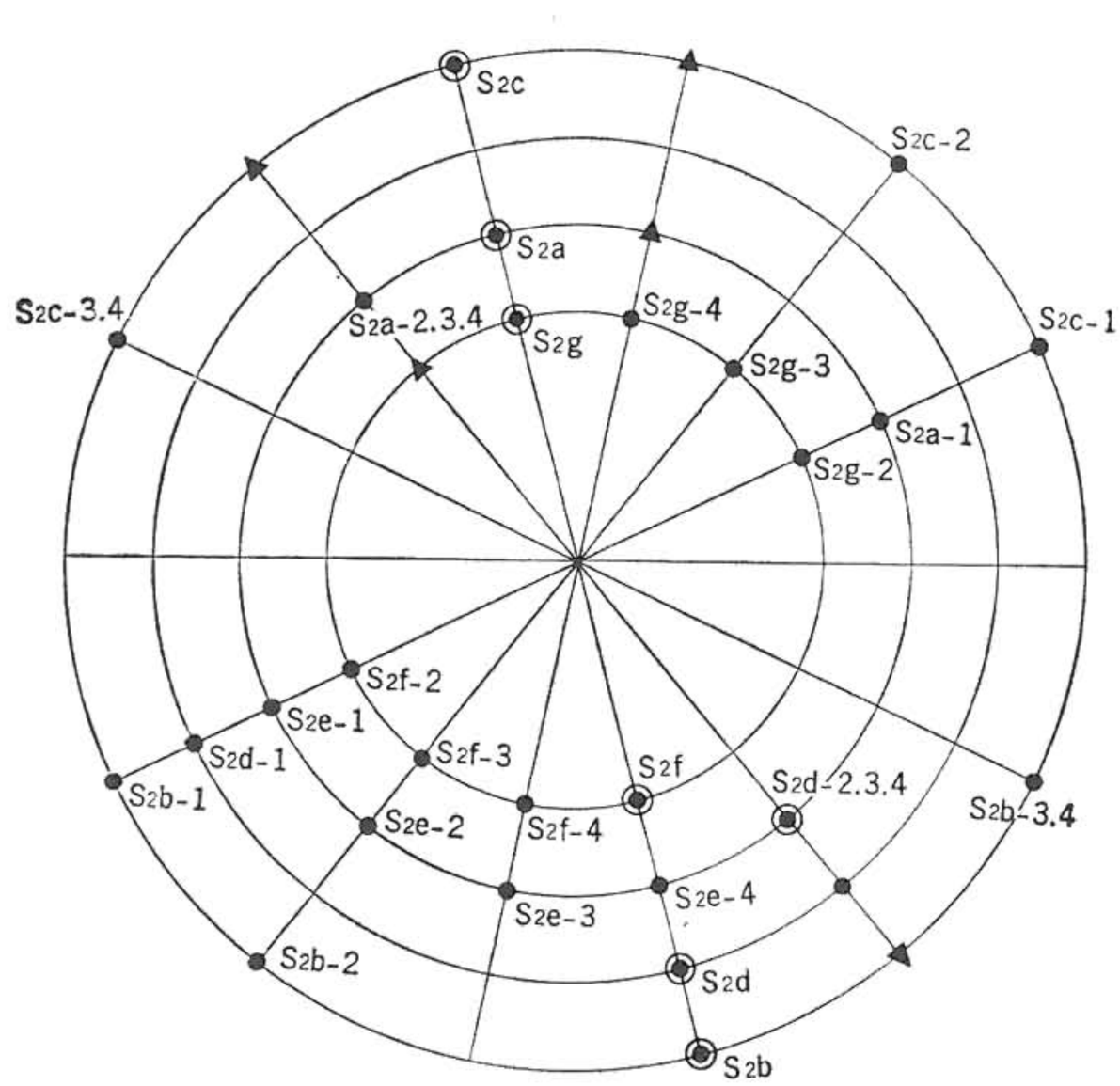
1. TUNER
2. PHONO
3. TAPE HEAD
4. AUX

BAND

S_2 (a~g)

1. AM
2. FM MONO
3. FM AUTO
4. FM STEREO





PARTS LIST

DESIGNATORS

C	Capacitor
CR	Capacitor-resistor modulated parts
D	Diode
F	Fuse
L	Inductor
M	Meter
NL	Neon lamp
PL	Pilot lamp
PU	Line voltage controller
R	Resistor
RLY	Relay
S	Switch
SCR	Silicon controlled rectifier
T	Transformer
TC	Trimmer capacitor
TH	Thermistor
T-P	Test point
TR	Transistor
V	Vacuum tube
VC	Variable capacitor
VR	Variable resistor

ABBREVIATIONS

(A)	A type taper
(B)	B type taper
(BH)	BH type taper
(C)	C type taper
CER.	Ceramic capacitor
COMP.	Composition
Hz	Cycles per second
ELECT.	Electrolytic
f	Farad
FET	Field effect transistor
Ge	Germanium
GND	Ground (ed)
H	Henry
Ins	Insulation (ed)
K	Kilo, 10^3
m	Milli, 10^{-3}
mA	Milli ampere(s), 10^{-3} ampere(s)
Mc.	Mica
M	Meg, 10^6
MET. FLM.	Metal film
μ	Micro, 10^{-6}
My.	Mylar ®
	® Dupont de Nemours
Ne	Neon
Ω	ohm(s)
PC	Printed circuit
P	Pico: $\mu\mu$: 10^{-12}
Pos	Position(s)
Poly	Polystyrene
Pot	Potentiometer
PREC.	Precision (temperature coefficient, long term stability, and/or tolerance)
ROT	Rotary
Si	Silicon
Sl	Slide
Ta.	Tantalum
Tog	Toggle
Tol	Tolerance
Trim	Trimmer
V	Volt(s)
VACW	Alternating current working volt(s)
VDCW.	Direct current working volt(s)
W	Watt
W/	With
W/O	Without
WW	Wire-wound

PARTS LIST

A : Parts No.
B : Parts Name
C : Co-ordinates in Schematic Diagram of Circuits
D : Co-ordinates in Chassis Diagram

A	B	C	D
R001	39Ω 3W ±10% MET. FLM.	2 F	TRR-1
R002	39Ω 3W ±10% MET. FLM.	2 F	TRR-1
R003	470Ω ½W ±10% COMP. Fixed	2 F	TRR-1
R004	470Ω ½W ±10% COMP. Fixed	3 F	TRR-1
R005	270Ω 3W ±10% MET. FLM.	3 F	TRR-1
R006	2.7KΩ 2W ±10% R type PREC. Fixed	3 F	TRR-1
R007	2.2KΩ ½W ±10% COMP. Fixed	3 F	TRR-1
R008	1KΩ ½W ±10% COMP. Fixed	3 F	TRR-1
R009	82Ω 1W ±10% R type PREC. Fixed	3 F	TRR-1
R010	390Ω ½W ±10% COMP. Fixed	3 F	TRR-1
R011	0.3Ω 2W ±10% WW	3 F	1G
R012	0.3Ω 2W ±10% WW	3 F	3H
R013	1KΩ ½W ±10% COMP. Fixed	5 B	2E
R014	470Ω ½W ±10% COMP. Fixed	5 B	1E
R015	470Ω ½W ±10% COMP. Fixed	5 B	2E
R016	0.3Ω 2W ±10% WW	4 D	6D
R017	0.3Ω 2W ±10% WW	4 D	5D
R018	0.3Ω 2W ±10% WW	4 E	2D
R019	0.3Ω 2W ±10% WW	4 E	3D
R023	2Ω 20W ±10% Cementing Fixed	5 D	7D
R024	2Ω 20W ±10% Cementing Fixed	5 E	7D
R025	470Ω 1W ±10% R type PREC. Fixed	5 D	1E
R026	470Ω 1W ±10% R type PREC. Fixed	5 E	1E
R027	470KΩ ½W ±10% COMP. Fixed	1 F	2H
R101	2.2KΩ ¼W ±10% PREC. Fixed	1 A	FAMT-102U
R102	1.5KΩ ¼W ±10% PREC. Fixed	1 A	FAMT-102U
R103	1KΩ ¼W ±10% PREC. Fixed	1 A	FAMT-102U
R104	100Ω ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R105	10KΩ ¼W ±10% PREC. Fixed	1 A	FAMT-102U
R106	820Ω ¼W ±10% PREC. Fixed	1 A	FAMT-102U
R107	10KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R108	1.5KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R109	1KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R110	1KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R112	100Ω ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R113	2.2KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R114	1.8KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R115	4.7KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R116	1.8KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R117	47KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R118	560KΩ ¼W ±10% PREC. Fixed	2 A	FAMT-102U
R119	560Ω ¼W ±10% PREC. Fixed	1 A	6H
R120	560Ω ¼W ±10% PREC. Fixed	1 A	6H
R201	1.5KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R202	1KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R203	1KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R204	22Ω ¼W ±10% PREC. Fixed	3 A	FIF-202U
R205	2.2KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R206	47Ω ¼W ±10% PREC. Fixed	3 A	FIF-202U
R207	5.1KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R208	470Ω ¼W ±10% PREC. Fixed	3 A	FIF-202U
R209	1KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R210	22Ω ¼W ±10% PREC. Fixed	3 A	FIF-202U
R211	3.3KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R212	12KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R213	1KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R214	12KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R215	1KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U

A	B	C	D
R216	22Ω ¼W ±10% PREC. Fixed	4 A	FIF-202U
R217	4.7KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R218	15KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R219	1KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R220	22Ω ¼W ±10% PREC. Fixed	4 A	FIF-202U
R221	1KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R222	22Ω ¼W ±10% PREC. Fixed	4 A	FIF-202U
R223	27KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R224	4.7KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R225	470Ω ¼W ±10% PREC. Fixed	5 A	FIF-202U
R226	470Ω ¼W ±10% PREC. Fixed	5 A	FIF-202U
R227	470Ω ¼W ±10% PREC. Fixed	5 A	FIF-202U
R228	1KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R229	1KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R230	10KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R231	10KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R232	100Ω ¼W ±10% PREC. Fixed	5 A	FIF-202U
R233	22Ω ¼W ±10% PREC. Fixed	5 A	FIF-202U
R234	1MΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R235	39KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R236	10KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R237	3.3KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R238	1KΩ ¼W ±10% PREC. Fixed	4 A	7E
R239	4.7KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R240	22KΩ ¼W ±10% PREC. Fixed	4 A	FIF-202U
R241	2.2KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R242	2.2KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R243	1KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R244	68KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R245	10KΩ ¼W ±10% PREC. Fixed	5 A	FIF-202U
R246	5.1KΩ ¼W ±10% PREC. Fixed	3 A	FIF-202U
R247	100KΩ ¼W ±10% PREC. Fixed	5 A	6G
R301	1KΩ ½W ±10% COMP. Fixed	1 B	TRAM-3
R302	22KΩ ½W ±10% COMP. Fixed	2 B	TRAM-3
R303	4.7KΩ ½W ±10% COMP. Fixed	2 B	TRAM-3
R304	1KΩ ½W ±10% COMP. Fixed	1 B	TRAM-3
R305	1.5KΩ ½W ±10% COMP. Fixed	2 B	TRAM-3
R306	120Ω ½W ±10% COMP. Fixed	2 B	TRAM-3
R307	1KΩ ½W ±10% COMP. Fixed	2 B	TRAM-3
R308	82KΩ ½W ±10% COMP. Fixed	2 B	TRAM-3
R309	1KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R310	1KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R311	22KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R312	4.7KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R313	1KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R314	5.6KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R315	5.6KΩ ½W ±10% COMP. Fixed	3 B	TRAM-3
R316	1KΩ ½W ±10% COMP. Fixed	4 B	TRAM-3
R317	15KΩ ½W ±10% COMP. Fixed	4 B	TRAM-3
R318	15KΩ ½W ±10% COMP. Fixed	4 B	TRAM-3
R319	100KΩ ½W ±10% COMP. Fixed	4 B	TRAM-3
R320	270Ω ½W ±10% COMP. Fixed	4 B	TRAM-3
R321	3.3KΩ ½W ±10% COMP. Fixed	4 B	TRAM-3
R322	100Ω ½W ±10% COMP. Fixed	4 B	TRAM-3
R324	22Ω ¼W ±10% COMP. Fixed	1 B	7H
R401	47KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R402	33KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R403	68KΩ ½W ±10% COMP. Fixed	1 C	TRX-6

A	B	C	D
R404	1KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R405	1.2KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R406	3.3KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R407	56KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R408	5.6KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R409	39Ω ½W ±10% COMP. Fixed	1 C	TRX-6
R410	1KΩ ½W ±10% COMP. Fixed	1 C	TRX-6
R411	6.8KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R412	68KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R413	5.6Ω ½W ±10% COMP. Fixed	2 C	TRX-6
R414	150Ω ½W ±10% COMP. Fixed	2 C	TRX-6
R415	1KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R416	150KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R417	10KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R418	10KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R419	10KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R420	10KΩ ½W ±10% COMP. Fixed	2 C	TRX-6
R421	100KΩ ½W ±10% COMP. Fixed	3 C	TRX-6
R422	100KΩ ½W ±10% COMP. Fixed	3 C	TRX-6
R423	390KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R424	220KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R425	390KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R426	220KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R427	1KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R428	100KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R429	100KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R430	1KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R431	270KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R432	10KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R433	10KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R434	270KΩ ¼W ±10% R type PREC. Fixed	3 C	TRX-6
R435	1KΩ ¼W ±10% R type PREC. Fixed	4 C	TRX-6
R436	10KΩ ¼W ±10% R type PREC. Fixed	4 C	TRX-6
R437	10KΩ ¼W ±10% R type PREC. Fixed	4 C	TRX-6
R438	1KΩ ¼W ±10% R type PREC. Fixed	4 C	TRX-6
R439	47Ω ½W ±10% COMP. Fixed	3 C	TRX-6
R501	3.3KΩ ½W ±10% COMP. Fixed	4 C	TRI-1A
R502	1MΩ ½W ±10% COMP. Fixed	4 C	TRI-1A
R503	1KΩ ½W ±10% COMP. Fixed	4 C	TRI-1A
R504	39KΩ ½W ±10% COMP. Fixed	4 C	TRI-1A
R505	27KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R506	10KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R507	15KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R508	8.2KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R509	22KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R510	3.3KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R511	22KΩ ½W ±10% COMP. Fixed	5 C	TRI-1A
R512	390Ω ½W ±10% COMP. Fixed	5 C	TRI-1A
R601	1KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R602	1KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R603	680KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R604	680KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R605	100KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R606	100KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R607	1.8KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R608	1.8KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R609	6.8KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R610	6.8KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B

A	B	C	D
R611	390KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R612	390KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R613	220Ω ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R614	220Ω ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R615	680Ω ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R616	680Ω ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R617	470Ω ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R618	470Ω ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R619	12KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R620	12KΩ ¼W ±10% R type PREC. Fixed	1 F	TRHA-6B
R621	1MΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R622	1MΩ ¼W ±10% R type PREC. Fixed	1 F	TRHA-6B
R623	100Ω ¼W ±10% R type PREC. Fixed	2 D	1A
R624	100Ω ¼W ±10% R type PREC. Fixed	2 E	1A
R625	25KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R626	25KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R627	470Ω ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R628	470Ω ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R629	4.7KΩ ¼W ±10% R type PREC. Fixed	1 D	TRHA-6B
R630	4.7KΩ ¼W ±10% R type PREC. Fixed	1 E	TRHA-6B
R631	82KΩ ¼W ±10% R type PREC. Fixed	2 D	TRHA-6B
R632	82KΩ ¼W ±10% R type PREC. Fixed	2 E	TRHA-6B
R633	12KΩ ½W ±10% COMP. Fixed	2 D	1A
R634	12KΩ ½W ±10% COMP. Fixed	2 E	1A
R635	68KΩ ¼W ±10% R type PREC. Fixed	1 D	3H
R636	68KΩ ¼W ±10% R type PREC. Fixed	1 E	5H
R637	100KΩ ½W ±10% COMP. Fixed	1 D	4H
R638	100KΩ ½W ±10% COMP. Fixed	1 E	4H
R639	470KΩ ½W ±10% COMP. Fixed	1 E	4H
R640	470KΩ ½W ±10% COMP. Fixed	1 E	4H
R701	27KΩ ¼W ±10% R type PREC. Fixed	2 D	6E
R702	1KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R703	47KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R704	68KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R705	100KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R706	1KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R707	10KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R708	120KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R709	15KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R710	2.7KΩ ¼W ±10% R type PREC. Fixed	2 D	TRM-3A
R711	680Ω ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R712	18KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R713	2.7KΩ ¼W ±10% R type PREC. Fixed	3 D	3E
R714	12KΩ ¼W ±10% R type PREC. Fixed	3 D	3E
R715	1KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R717	100KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R718	1KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R719	6.8KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R720	100KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R721	18KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R722	1KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R723	2.7KΩ ¼W ±10% R type PREC. Fixed	3 D	TRM-3A
R724	2 2KΩ ¼W ±10% R type PREC. Fixed	3 D	2E
R725	100KΩ ¼W ±10% R type PREC. Fixed	4 D	2E
R726	470KΩ ¼W ±10% R type PREC. Fixed	3 D	2E
R727	27KΩ ¼W ±10% R type PREC. Fixed	2 E	6E
R728	1KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R729	47KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A

PARTS LIST

A : Parts No.
B : Parts Name
C : Co-ordinates in Schematic Diagram of Circuits
D : Co-ordinates in Chassis Diagram

A	B	C	D
R730	68KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R731	100KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R732	1KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R733	10KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R734	120KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R735	15KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R736	2.7KΩ ¼W ±10% R type PREC. Fixed	2 E	TRM-3A
R737	18KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R738	2.7KΩ ¼W ±10% R type PREC. Fixed	3 E	3E
R739	12KΩ ¼W ±10% R type PREC. Fixed	3 E	3E
R740	1KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R742	100KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R743	1KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R744	6.8KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R745	100KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R746	18KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R747	1KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R748	2.7KΩ ¼W ±10% R type PREC. Fixed	3 E	TRM-3A
R749	2.7KΩ ¼W ±10% R type PREC. Fixed	3 E	2E
R750	100KΩ ¼W ±10% R type PREC. Fixed	4 E	2E
R751	470KΩ ¼W ±10% R type PREC. Fixed	3 E	2E
R801	2.2KΩ ½W ±10% COMP. Fixed	3 D	TRD-6B
R802	2.7KΩ ½W ±10% COMP. Fixed	4 D	TRD-6B
R803	470Ω ½W ±10% COMP. Fixed	4 D	TRD-6B
R804	270Ω ½W ±10% COMP. Fixed	4 D	TRD-6B
R805	3.9KΩ ½W ±10% COMP. Fixed	4 D	TRD-6B
R806	27KΩ ½W ±10% COMP. Fixed	4 D	TRD-6B
R807	500Ω 3W ±10% MET. FLM.	4 D	TRD-6B
R808	150Ω ½W ±10% COMP. Fixed	4 D	TRD-6B
R809	18Ω 1W ±10% R type PREC. Fixed	4 D	TRD-6B
R810	6.8KΩ ½W ±10% COMP. Fixed	4 D	TRD-6B
R811	2.2KΩ ½W ±10% COMP. Fixed	3 E	TRD-6B
R812	2.7KΩ ½W ±10% COMP. Fixed	4 E	TRD-6B
R813	470Ω ½W ±10% COMP. Fixed	4 E	TRD-6B
R814	270Ω ½W ±10% COMP. Fixed	4 E	TRD-6B
R815	3.9KΩ ½W ±10% COMP. Fixed	4 E	TRD-6B
R816	27KΩ ½W ±10% COMP. Fixed	4 E	TRD-6B
R817	500Ω 3W ±10% MET. FLM.	4 E	TRD-6B
R818	150Ω ½W ±10% COMP. Fixed	4 E	TRD-6B
R819	18Ω 1W ±10% R type PREC. Fixed	4 E	TRD-6B
R820	6.8KΩ ½W ±10% COMP. Fixed	4 F	TRD-6B
R821	800Ω ½W ±10% COMP. Fixed	4 D	TRZ-2D
R822	100Ω ½W ±10% COMP. Fixed	4 D	TRZ-2D
R823	15Ω ½W ±10% COMP. Fixed	4 D	TRZ-2D
R824	800Ω 5W ±10% MET. FLM.	4 D	TRZ-2D
R825	100Ω ½W ±10% COMP. Fixed	4 D	TRZ-2D
R826	15Ω ½W ±10% COMP. Fixed	4 D	TRZ-2D
R827	800Ω 5W ±10% MET. FLM.	4 E	TRZ-2D
R828	100Ω ½W ±10% COMP. Fixed	4 E	TRZ-2D
R829	15Ω ½W ±10% COMP. Fixed	4 E	TRZ-2D
R830	800Ω 5W ±10% MET. FLM.	4 E	TRZ-2D
R831	100Ω ½W ±10% COMP. Fixed	4 E	TRZ-2D
R832	15Ω ½W ±10% COMP. Fixed	4 E	TRZ-2D
R901	1.5KΩ ½W ±10% COMP. Fixed	4 F	TRW-3B
R902	1KΩ ½W ±10% COMP. Fixed	4 F	TRW-3B
R903	3.9Ω ½W ±10% COMP. Fixed	4 F	TRW-3B
C001	1000μF 50 VDCW. ELECT.	2 F	TRR-1

A	B	C	D
C002	200μF 50 VDCW. ELECT.	3 F	TRR-1
C003	200μF 50 VDCW. ELECT.	3 F	TRR-1
C004	200μF 25 VDCW. ELECT.	3 F	TRR-1
C005	200μF 25 VDCW. ELECT.	3 F	TRR-1
C006	200μF 25 VDCW. ELECT.	3 F	TRR-1
C007	200μF 25 VDCW. ELECT.	3 F	TRR-1
C008	200μF 25 VDCW. ELECT.	3 F	TRR-1
C009	3000μF 50 VDCW. ELECT.	3 F	1G
C010	3000μF 50 VDCW. ELECT.	3 F	2G
C011	3000μF 50 VDCW. ELECT.	3 F	3G
C012	3000μF 50 VDCW. ELECT.	3 F	3H
C013	0.005μF ±10% 250 VDCW. Oil	2 F	4G
C014	0.005μF ±10% 250 VDCW. Oil	2 F	4H
C015	0.0047μF ±10% 600 VDCW. Oil	1 F	4H
C016	0.033μF ±10% 600 VDCW. Oil	1 F	1E
C017	100μF 6 VDCW. ELECT.	4 B	2A
C018	1000μF 10 VDCW. ELECT.	2 F	2G
C019	0.022μF ±10% 600 VDCW. Oil	1 F	2H
C101	5 pF ±0.5 pF 50 VDCW. CER.	1 A	FAMT-102U
C102	1000 pF $^{+100}_{-0}$% 50 VDCW. CER.	1 A	FAMT-102U
C103	1000 pF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C104	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C105	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	1 A	FAMT-102U
C106	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	1 A	FAMT-102U
C107	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	1 A	FAMT-102U
C108	2 pF ±0.5pF 50 VDCW. CER.	2 A	FAMT-102U
C109	15 pF ±10% 50 VDCW. CER.	2 A	FAMT-102U
C110	10 pF ±10% 50 VDCW. CER.	2 A	FAMT-102U
C111	5 pF ±0.5pF 50 VDCW. CER.	2 A	FAMT-102U
C112	250 pF ±10% 50 VDCW. CER.	2 A	FAMT-101U
C113	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C114	1.5 pF ±0.25% 50 VDCW. CER.	2 A	FAMT-102U
C116	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C117	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C118	7 pF ±0.5pF 50 VDCW. CER.	2 A	FAMT-102U
C119	6 pF ±0.5pF 50 VDCW. CER.	2 A	FAMT-102U
C120	20 pF ±10% 50 VDCW. CER.	2 A	FAMT-102U
C121	15 pF ±10% 50 VDCW. CER.	2 A	FAMT-102U
C122	0 01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C123	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C124	0.001μF $^{+100}_{-0}$% 50 VDCW. CER.	2 A	FAMT-102U
C125	0.01μF $^{+100}_{-0}$% 50 VDCW· CER.	2 A	FAMT-102U
C201	0.001μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C202	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C203	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C204	1μF 25 VDCW. ELECT.	3 A	FIF-202U
C205	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U

A	B	C	D
C206	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C207	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C208	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C209	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C210	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C211	5 pF ±0.5pF 50 VDCW. CER.	4 A	FIF-202U
C212	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	3 A	FIF-202U
C213	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C214	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C215	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C216	30 pF ±10% 50 VDCW. CER.	4 A	FIF-202U
C217	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C218	2μF 25 VDCW. ELECT.	4 A	FIF-202U
C219	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C220	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	5 A	FIF-202U
C221	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	5 A	FIF-202U
C222	200 pF ±10% 50 VDCW. CER.	5 A	FIF-202U
C223	200 pF ±10% 50 VDCW. CER.	5 A	FIF-202U
C224	10μF 25 VDCW. ELECT.	5 A	FIF-202U
C225	100 pF ±10% 50 VDCW. CER.	5 A	FIF-202U
C226	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	5 A	FIF-202U
C227	0.001μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C228	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C229	0.001μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C230	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C231	10μF 15 VDCW. ELECT.	4 A	FIF-202U
C232	0.001μF $^{+100}_{-0}$% 50 VDCW. CER.	4 A	FIF-202U
C233	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	5 A	FIF-202U
C234	0.04μF $^{+100}_{-0}$% 50 VDCW. CER.	5 A	FIF-202U
C235	2 pF ±0.5pF 50 VDCW. CER.	3 A	FIF-202U
C236	2 pF ±0.5pF 50 VDCW. CER.	4 A	FIF-202U
C237	0.1μF ±10% 50 VDCW. My.	5 A	7E
C301	0.001μF ±20% 50 VDCW. CER.	1 B	TRAM-3
C302	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	1 B	TRAM-3
C303	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	1 B	TRAM-3
C304	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	2 B	TRAM-3
C305	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	2 B	TRAM-3
C306	0.05μF $^{+100}_{-0}$% 50 VDCW. CER.	2 B	TRAM-3
C307	200μF 15 VDCW. ELECT.	2 B	TRAM-3
C308	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	1 B	TRAM-3
C309	450 pF ± 5 % 50 VDCW. Poly	2 B	TRAM-3
C310	15 pF ± 5 % 50 VDCW. CER.	2 B	TRAM-3
C311	10μF 15 VDCW. ELECT.	3 B	TRAM-3
C312	1 pF ±0.25pF 50 VDCW. CER.	3 B	TRAM-3
C313	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	3 B	TRAM-3
C314	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	3 B	TRAM-3

A	B	C	D
C315	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	3 B	TRAM-3
C316	0.01μF $^{+100}_{-0}$% 50 VDCW. CER.	4 B	TRAM-3
C317	0.01μF ±10% 50 VDCW. My.	4 B	TRAM-3
C318	0.01μF ±10% 50 VDCW. My.	4 B	TRAM-3
C319	1μF 25 VDCW. ELECT.	4 B	TRAM-3
C320	10μF 15 VDCW. ELECT.	4 B	TRAM-3
C321	200μF 15 VDCW. ELECT.	4 B	TRAM-3
C322	0.05μF $^{+100}_{-0}$% 50 VDCW. CER.	4 B	TRAM-3
C323	200μF 15 VDCW. ELECT.	4 B	TRAM-3
C324	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	2 B	TRAM-3
C325	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	1 B	TRAM-3
C326	0.02μF $^{+100}_{-0}$% 50 VDCW. CER.	3 B	7 H
C401	10μF 15 VDCW. ELECT.	1 C	TRX-6
C402	50μF 10 VDCW. ELECT.	1 C	TRX-6
C403	10μF 15 VDCW. ELECT.	1 C	TRX-6
C404	30μF 15 VDCW. ELECT.	1 C	TRX-6
C405	5000 pF ± 5 % 50 VDCW. Mc.	1 C	TRX-6
C406	0.05 μF $^{+100}_{-0}$% 50 VDCW. CER.	1 C	TRX-6
C407	6600 pF ± 5 % 50 VDCW. Mc.	1 C	TRX-6
C408	0.47μF 25 VDCW. ELECT.	2 C	TRX-6
C409	0.05μF $^{+100}_{-0}$% 50 VDCW. CER.	2 C	TRX-6
C410	1700 pF ± 5 % 50 VDCW. Mc.	2 C	TRX-6
C411	0.05μF $^{+100}_{-0}$% 50 VDCW. CER.	2 C	TRX-6
C412	0.47μF 25 VDCW. ELECT.	2 C	TRX-6
C413	10μF 15 VDCW. ELECT.	2 C	TRX-6
C414	450 pF ±10% 50 VDCW. Mc.	2 C	TRX-6
C415	100 pF ±10% 50 VDCW. CER.	2 C	TRX-6
C416	100 pF ±10% 50 VDCW. CER.	2 C	TRX-6
C417	120 pF ±10% 50 VDCW. Mc.	2 C	TRX-6
C418	100 pF ±10% 50 VDCW. CER.	3 C	TRX-6
C419	100 pF ±10% 50 VDCW. CER.	3 C	TRX-6
C420	200μF 25 VDCW. ELECT.	3 C	TRX-6
C421	0.1μF 50 VDCW. My.	3 C	TRX-6
C422	0.1μF 50 VDCW. My.	3 C	TRX-6
C423	100μF 6 VDCW. ELECT.	3 C	TRX-6
C424	100μF 6 VDCW. ELECT.	4 C	TRX-6
C425	100 pF ±10% 50 VDCW. CER.	4 C	TRX-6
C426	10μF 15 VDCW. ELECT.	4 C	TRX-6
C427	0.002μF $^{+100}_{-0}$% 50 VDCW. CER.	3 C	TRX-6
C428	10μF 15 VDCW. ELECT.	4 C	TRX-6
C429	100 pF ±10% 50 VDCW. CER.	4 C	TRX-6
C430	100μF 6 VDCW. ELECT.	4 C	TRX-6
C431	0.47μF 25 VDCW. ELECT.	4 C	TRX-6
C432	0.47μF 25 VDCW. ELECT.	4 C	TRX-6
C501	0.1μF ±10% 50 VDCW. My.	4 C	TRI-1A
C502	5000 pF ± 5 % 50 VDCW. Mc.	4 C	TRI-1A
C503	30μF 15 VDCW. ELECT.	5 C	TRI-1A
C504	10μF 15 VDCW. ELECT.	5 C	TRI-1A

PARTS LIST

A : Parts No.
B : Parts Name
C : Co-ordinates in Schematic Diagram of Circuits
D : Co-ordinates in Chassis Diagram

A	B	C	D
C505	1μF 25 VDCW. ELECT.	4 C	TRI-1A
C601	1.5μF 15 VDCW. Ta.	1 D	TRHA-6B
C602	1.5μF 15 VDCW. Ta.	1 E	TRHA-6B
C603	150 pF ±10% 50 VDCW. CER.	1 D	TRHA-6B
C604	150 pF ±10% 50 VDCW. CER.	1 E	TRHA-6B
C605	30μF 10 VDCW. ELECT.	1 D	TRHA-6B
C606	30μF 10 VDCW. ELECT.	1 E	TRHA-6B
C607	50μF 10 VDCW. ELECT.	1 D	TRHA-6B
C608	50μF 10 VDCW. ELECT.	1 E	TRHA-6B
C609	150 pF ±10% 50 VDCW. CER.	1 D	TRHA-6B
C610	150 pF ±10% 50 VDCW. CER.	1 E	TRHA-6B
C611	10μF 25 VDCW. ELECT.	2 D	TRHA-6B
C612	10μF 25 VDCW. ELECT.	2 E	TRHA-6B
C613	50μF 6 VDCW. ELECT.	1 D	TRHA-6B
C614	50μF 6 VDCW. ELECT.	1 E	TRHA-6B
C615	0.004μF ±10% 50 VDCW. My.	1 D	TRHA-6B
C616	0.004μF ±10% 50 VDCW. My.	1 E	TRHA-6B
C617	0.01μF ±10% 50 VDCW. My.	1 D	TRHA-6B
C618	0.01μF ±10% 50 VDCW. My.	1 E	TRHA-6B
C619	0.003μF ±10% 50 VDCW. My.	1 D	TRHA-6B
C620	0.003μF ±10% 50 VDCW. My.	1 E	TRHA-6B
C621	1μF 25 VDCW. ELECT.	2 D	1 A
C622	1μF 25 VDCW. ELECT.	2 E	1 A
C623	0.05μF ±10% 50 VDCW. My.	1 D	5 H
C324	0.05μF ±10% 50 VDCW. My.	1 D	5 H
C625	0.05μF ±10% 50 VDCW. My.	1 E	5 H
C626	0.05μF ±10% 50 VDCW. My.	1 E	5 H
C705	30μF 15 VDCW. ELECT.	2 D	TRM-3A
C706	30μF 15 VDCW. ELECT.	2 D	TRM-3A
C707	3μF 25 VDCW. ELECT.	2 D	TRM-3A
C708	0.001μF ±10% 250 VDCW. Oil	3 D	TRM-3A
C709	500 pF ±10% 50 VDCW. Mc.	2 D	5 E
C710	0.01μF ±10% 50 VDCW. My.	3 D	TRM-3A
C711	30μF 35 VDCW. ELECT.	3 D	TRM-3A
C712	0.015μF ±10% 50 VDCW. My.	3 D	4 E
C713	0.1μF ±10% 50 VDCW. My.	3 D	4 E
C714	0.2μF ±10% 50 VDCW. My.	3 D	TRM-3A
C715	30μF 15 VDCW. ELECT.	3 D	TRM-3A
C716	30μF 15 VDCW. ELECT.	3 D	TRM-3A
C717	3μF 25 VDCW. ELECT.	3 D	TRM-3A
C718	0.025μF ±10% 50 VDCW. My.	3 D	2 E
C719	0.03μF ±10% 50 VDCW. My.	3 D	2 E
C720	200 pF ±10% 50 VDCW. Mc.	2 E	6 E
C721	0.01μF ±10% 50 VDCW. My.	2 E	6 E
C722	0.2μF ±10% 50 VDCW. My.	2 E	TRM-3A
C723	50μF 25 VDCW. ELECT.	2 E	TRM-3A
C724	30μF 15 VDCW. ELECT.	2 E	TRM-3A
C725	30μF 15 VDCW. ELECT.	2 E	TRM-3A
C726	3μF 25 VDCW. ELECT.	2 E	TRM-3A
C727	0.001μF ±10% 250 VDCW. Oil	3 E	TRM-3A
C728	5000 pF ±10% 50 VDCW. Mc.	2 E	5 E
C729	0.01μF ±10% 50 VDCW. My.	3 E	TRM-3A
C730	0.015μF ±10% 50 VDCW. My.	3 E	4 E
C731	0.1μF ±10% 50 VDCW. My.	3 E	4 E
C732	0.2μF ±10% 50 VDCW. My.	3 E	TRM-3A
C733	30μF 35 VDCW. ELECT.	3 E	TRM-3A
C734	30μF 15 VDCW. ELECT.	3 E	TRM-3A
C735	30μF 15 VDCW. ELECT.	3 E	TRM-3A

A	B	C	D
C736	3μF 25 VDCW. ELECT.	3 E	TRM-3A
C737	0.025μF ±10% 50 VDCW. My.	3 E	2 E
C738	0.03μF ±10% 50 VDCW. My.	3 E	2 E
C801	3μF 25 VDCW. ELECT.	3 D	TRD-6B
C802	200μF 25 VDCW. ELECT.	4 D	TRD-6B
C803	300μF 6 VDCW. ELECT.	4 D	TRD-6B
C804	100μF 35 VDCW. ELECT.	4 D	TRD-6B
C805	150 pF ±10% 50 VDCW. CER.	4 D	TRD-6B
C806	200μF 50 VDCW. ELECT.	4 D	TRD-6B
C807	0.05μF ±10% 50 VDCW. My.	4 D	TRD-6B
C808	3μF 25 VDCW. ELECT.	3 E	TRD-6B
C809	200μF 25 VDCW. ELECT.	4 E	TRD-6B
C810	300μF 6 VDCW. ELECT.	4 E	TRD-6B
C811	100μF 35 VDCW. ELECT.	4 E	TRD-6B
C812	150 pF ±10% 50 VDCW. CER.	4 E	TRD-6B
C813	200μF 50 VDCW. ELECT.	4 E	TRD-6B
C814	0.05μF ±10% 50 VDCW. My.	4 E	TRD-6B
C815	0.5μF ±10% 50 VDCW. My.	4 D	TRZ-2D
C816	0.5μF ±10% 50 VDCW. My.	4 D	TRZ-2D
C817	0.5μF ±10% 50 VDCW. My.	4 E	TRZ-2D
C818	0.5μF ±10% 50 VDCW. My.	4 E	TRZ-2D
C901	0.01μF ±10% 50 VDCW. My.	4 E	TRW-3B
C902	10μF 35 VDCW. ELECT.	3 F	TRW-3B
CR401	38KC Filter & de-emphasis EXA6FB02	3 C	TRX-6
CR402	38KC Filter & de-emphasis EXA6FB02	3 C	TRX-6
VR201	50KΩ (B) FM output adjust	5 A	FIF-202U
VR202	50KΩ (B) FM tuning meter adjust	4 A	FIF-202U
VR203	3KΩ (B) Muting adjust	5 A	FIF-202U
VR301	50KΩ (B) AM output adjust	4 B	TRAM-3
VR302	10KΩ (B) AM tuning meter adjust	4 A	TRAM-3
VR401	10KΩ (B) Separation adjust	3 C	4D
VR501	50KΩ (B) Stereo indicator adjust	4 C	TRI-1A
VR502	100KΩ (B) Stereo indicator adjust	4 C	TRI-1A
VR701	250KΩ (B)×2 Main control	2 D	5E
702		2 E	
VR703	100KΩ (A)×2 Treble control	3 D	4E
704		3 E	
VR705	100KΩ (A)×2 Bass control	3 D	4E
706		3 E	
VR707	125KΩ (BH)×2 Balance control	3 D	3E
708		3 E	
VR801	200Ω (B) Bias current adjust	4 D	TRD-6B
VR802	200Ω (B) Bias current adjust	4 D	TRD-6B
VR803	200Ω (B) Bias current adjust	4 F	TRD-6B
VR804	200Ω (B) Bias current adjust	4 F	TRD-6B
VR901	200KΩ (B) Protector adjust	4 F	TRW-3B
VR902	200KΩ (B) Protector adjust	4 F	TRW-3B
VC101	5～24pF FM RF tuning	1 A	FAMT-102U
VC102	5～24pF FM RF tuning	2 A	FAMT-102U
VC103	5～24pF FM RF tuning	2 A	FAMT-102U
○ VC104	5～18pF FM local oscillator	2 A	FAMT-102U
VC301	10～436pF AM RF tuning	1 B	FAMT-102U
VC302	10～436pF AM RF tuning	1 B	FAMT-102U
VC303	10～436pF AM local oscillator	2 B	FAMT-102U

○ 7-gang variable capacitor
◎ Trimmer attached to 7-gang variable capacitor

A	B	C	D
◎ TC101	2～10pF Trim.	1 A	FAMT-102U
◎ TC102	2～10pF Trim.	2 A	FAMT-102U
◎ TC103	2～10pF Trim.	2 A	FAMT-102U
TC104	3～20pF Trim.	2 A	FAMT-102U
◎ TC301	2～15pF Trim.	1 B	FAMT-102U
◎ TC302	2～15pF Trim.	1 B	FAMT-102U
◎ TC303	2～15pF Trim.	2 B	FAMT-102U
TR001	2SB324 Ge P-N-P Alloy	3 F	TRR-1
TR002	B-170007 (B-170008) Si N-P-N Planar (Mesa)	4 D	7D
TR003	B-170007 (B-170008) Si N-P-N Planar (Mesa)	4 D	5D
TR004	B-170007 (B-170008) Si N-P-N Planar (Mesa)	4 E	1D
TR005	B-170007 (B-170008) Si N-P-N Planar (Mesa)	4 E	3D
TR101	2SA525 Ge P-N-P Mesa	1 A	FAMT-102U
TR102	2SA525 Ge P-N-P Mesa	2 A	FAMT-102U
TR103	2SA525 Ge P-N-P Mesa	2 A	FAMT-102U
TR104	2SC374 Si N-P-N Epitaxial Planar	1 A	FAMT-102U
TR201	2SC372 Si N-P-N Epitaxial Planar	3 A	FIF-202U
TR202	2SC372 Si N-P-N Epitaxial Planar	3 A	FIF-202U
TR203	2SC372 Si N-P-N Epitaxial Planar	4 A	FIF-202U
TR204	2SC372 Si N-P-N Epitaxial Planar	4 A	FIF-202U
TR205	2SC372 Si N-P-N Epitaxial Planar	4 A	FIF-202U
TR206	2SC372 Si N-P-N Epitaxial Planar	4 A	FIF-202U
TR207	2SC374 Si N-P-N Epitaxial Planar	5 A	FIF-202U
TR208	2SC374 Si N-P-N Epitaxial Planar	5 A	FIF-202U
TR301	2SA102 Ge P-N-P Drift	1 B	TRAM-3
TR302	2SA102 Ge P-N-P Drift	2 B	TRAM-3
TR303	2SA101(X) Ge P-N-P Drift	3 B	TRAM-3
TR304	2SA101(Y) Ge P-N-P Drift	3 B	TRAM-3
TR305	2SC536 Si N-P-N Planar	4 B	TRAM-3
TR401	2SA49 Ge P-N-P Alloy	1 C	TRX-6
TR402	2SB54 Ge P-N-P Alloy	1 C	TRX-6
TR403	2SA49 Ge P-N-P Alloy	2 C	TRX-6
TR404	2SC693 Si N-P-N Planar	3 C	TRX-6
TR405	2SC693 Si N-P-N Planar	3 C	TRX-6
TR406	2SC536 Si N-P-N Planar	4 C	TRX-6
TR407	2SC536 Si N-P-N Planar	4 C	TRX-6
TR501	2SC458 Si N-P-N Planar	4 C	TRI-1A
TR502	2SC458 Si N-P-N Planar	4 C	TRI-1A
TR503	2SB54 Ge P-N-P Alloy	5 C	TRI-1A
TR504	2SC458 Si N-P-N Planar	5 C	TRI-1A
TR505	2SB324 Ge P-N-P Alloy	5 C	TRI-1A
TR601	2SC650 Si N-P-N Epitaxial	1 D	TRHA-6B
TR602	2SC650 Si N-P-N Epitaxial	1 E	TRHA-6B
TR603	2SC281 Si N-P-N Epitaxial	1 D	TRHA-6B
TR604	2SC281 Si N-P-N Epitaxial	1 E	TRHA-6B
TR701	2SC693 Si N-P-N Planar	2 D	TRM-3A
TR702	2SC536 Si N-P-N Planar	2 D	TRM-3A
TR703	2SC693 Si N-P-N Planar	3 D	TRM-3A
TR704	2SC536 Si N-P-N Planar	3 D	TRM-3A

A	B	C	D
TR705	2SC693 Si N-P-N Planar	2 E	TRM-3A
TR706	2SC536 Si N-P-N Planar	2 E	TRM-3A
TR707	2SC693 Si N-P-N Planar	3 E	TRM-3A
TR708	2SC536 Si N-P-N Planar	3 E	TRM-3A
TR801	2SC536 Si N-P-N Planar	4 D	TRD-6B
TR802	2SC756 (2SC696) Si N-P-N Epitaxial	4 D	TRD-6B
TR803	2SC536 Si N-P-N Epitaxial	4 E	TRD-6B
TR804	2SC756 (2SC696) Si N-P-N Epitaxial	4 E	TRD-6B
TR805	2SC696 (2SC756) Si N-P-N Epitaxial	4 D	TRZ-2D
TR806	2SC696 (2SC756) Si N-P-N Epitaxial	4 D	TRZ-2D
TR807	2SC696 (2SC756) Si N-P-N Epitaxial	4 E	TRZ-2D
TR808	2SC696 (2SC756) Si N-P-N Epitaxial	4 E	TRZ-2D
TR901	2SC458 Si N-P-N Planar	4 F	TRW-3B
D001	SW-0.5a Si Rectifier	2 F	TRR-1
D002	SW-0.5a Si Rectifier	2 F	TRR-1
D003	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D004	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D005	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D006	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D007	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D008	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D009	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D010	SW-1(DS-1) Si Bridge rectifier	2 F	DS-1A
D011	SW-0.5a Si Rectifier	2 F	3G
D102	IS352M Si FM AFC variable C	2 A	FAMT-102U
D201	IN60 Ge Rectifier	4 A	FIF-202U
D202	IN60 Ge Rectifier	4 A	FIF-202U
D203	IN60 Ge FM detector	5 A	FIF-202U
D204	IN60 Ge FM detector	5 A	FIF-202U
D205	IN60 Ge Rectifier	4 A	FIF-202U
D206	IN60 Ge Rectifier	4 A	FIF-202U
D301	OA91 Ge AM over damp	2 B	TRAM-3
D302	OA91 Ge Rectifier	4 B	TRAM-3
D303	OA91 Ge AM detector	3 B	TRAM-3
D401	OA91 Ge 19KC doubler	2 C	TRX-6
D402	OA91 Ge 19KC doubler	2 C	TRX-6
D403	OA79 Ge Switching	2 C	TRX-6
D404	OA79 Ge Switching	2 C	TRX-6
D405	OA79 Ge Switching	2 C	TRX-6
D406	OA79 Ge Switching	2 C	TRX-6
D501	OA91 Ge Rectifier	5 C	TRI-1A
D502	SM150 Si Rectifier	5 C	TRI-1A
D503	OA91 Ge Reverse current stop	5 C	TRI-1A
D801	SM150 Si Rectifier	4 D	TRZ-2D
D802	SM150 Si Rectifier	4 D	TRZ-2D
D803	SM150 Si Rectifier	4 E	TRZ-2D
D804	SM150 Si Rectifier	4 E	TRZ-2D
D805	SM150 Si Rectifier	4 D	TRZ-2D
D806	SM150 Si Rectifier	4 D	TRZ-2D
D807	SM150 Si Rectifier	4 E	TRZ-2D
D808	SM150 Si Rectifier	4 E	TRZ-2D
D901	IN60 Ge Reverse current stop	4 F	TRW-3B

PARTS LIST

A : Parts No.
B : Parts Name
C : Co-ordinates in Schematic Diagram of Circuits
D : Co-ordinates in Chassis Diagram

A	B		C	D
D902	IN60	Ge Reverse current stop	4 F	TRW-3B
SCR901	2SF656		4 F	TRW-3B
TH501	D-22A		5C	TRI-1A
L101		FM antenna coil	1 A	FAMT-102U
L102	1μH	FM peaking coil	1 A	FAMT-102U
L103		FM RF coil	2 A	FAMT-102U
L104		FM RF coil	2 A	FAMT-102U
L105	1μH	FM peaking coil	2 A	FAMT-102U
L106		FM local oscillator	2 A	FAMT-102U
L201	1μH	FM choke coil	5 A	FIF-202U
L301		AM loop stick antenna coil	1 B	1-2D
L302	14AO-1	AM local oscillator	2 B	TRAM-3
L303	0.8μH	AM peaking coil	1 B	FAMT-102U
L304	0.8μH	AM peaking coil	1 B	FAMT-102U
L305	0.8μH	AM peaking coil	2 B	FAMT-102U
L401	MFC-A	SCA 67KC filter	2C	TRX-6
L402	MFC-B	SCA 71KC filter	2C	TRX-6
T001	Power transformer 400-5293		2 F	7C
T101		FM IFT 10.7MC tuning	2 A	FAMT-102U
T201		FM IFT 10.7MC tuning	3 A	FIF-202U
T202		FM IFT 10.7MC tuning	3 A	FIF-202U
T203		FM IFT 10.7MC tuning	4 A	FIF-202U
T204		FM IFT 10.7MC tuning	4 A	FIF-202U
T205		FM discriminator	5 A	FIF-202U
T206		FM IFT 10.7MC tuning	4 A	FIF-202U
T301	14AR-1	AM RF tuning coil	2 B	TRAM-3
T302	14AD-1-A	AM IFT 455KC tuning	2 B	TRAM-3
T303	14AD-1-B	AM IFT 455KC tuning	3 B	TRAM-3
T304	14AD-1-C	AM IFT 455KC tuning	3 B	TRAM-3
T401	MPT-20A	19KC tuning trap	1C	TRX-6
T402	MPT-20B	19KC tuning	2C	TRX-6
T403	MPT-20B	38KC tuning	2C	TRX-6
T501	MPT-14A	19KC tuning	4C	TRI-1A
T801	(Primary: 500Ω Secondary: 30Ω) driver		4 D	4C
T802	(Primary: 500Ω Secondary: 30Ω) driver		4 E	1C
S1(a~i)	Function	110-1-5249		1 A
S2(a~g)	Band	110-2-5249		1 A
S3(a~b)	FM antenna switch		1 A	6H
S4	AM antenna switch		1 B	7H
S5	Muting switch		5 A	7 E
S6(a~b)	Tape monitor switch		2D, E	6 E
S7(a~b)	Mode switch		2 D	7 E
S8(a~b)	Loudness switch		3D, E	2 E
S9(a~b)	Low cut filter switch		3D, E	6 E
S10(a~b)	High cut filter switch		2D, E	6 E
S11(a~b)	Speaker system A switch		5 D	2 E
S12(a~b)	Speaker system B switch		5 D	2 E
S13(a~b)	Impedance selector		5D, E	3H

A	B		C	D
PL001	Pilot lamp F type	6.3V 0.25A	2 F	6 A
PL002	Pilot lamp F type	6.3V 0.25A	2 F	3 A
PL003	Meter indicator	8V 0.15A	3 F	4 A
PL004	Phone indicator	8V 0.15A	3 F	4 A
PL005	Tape indicator	8V 0.15A	3 F	4 A
PL006	Power indicator	8V 0.15A	3 F	4 A
PL401	Protector indicator	25V 90mA	3 F	4 A
PL501	MPX indicator	8V 0.15A	5C	7 A
F001	F tubular 3A		4G	4G
F002	Super-quick acting	F tubular 4A	4G	4G
F003	Super-quick acting	F tubular 4A	4G	4G
F004	Super-quick acting	F tubular 4A	4G	4G
F005	Super-quick acting	F tubular 4A	2H	2H
S001	Power S		1 E	1 E
M	Tuning meter 100μA		4 B	7 A

Sansui®

SANSUI ELECTRIC COMPANY LIMITED

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

Printed in Japan (D7050M3)