SERVICE MANUAL

Model RX-200 AM / FM Stereo Receiver

Roland Electronics Co., Ltd.

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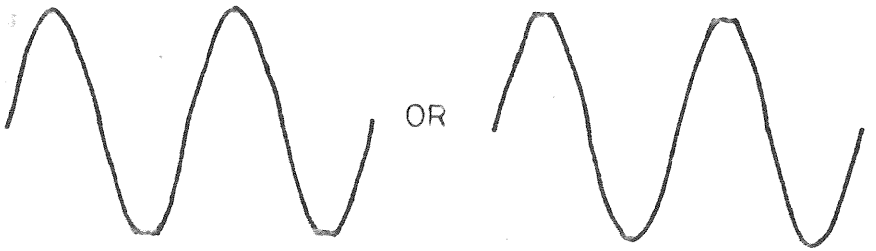
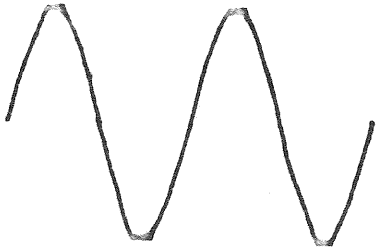
PREDRIVER / DRIVER ADJUSTMENT

1. Set BALANCE, BASS and TREBLE controls to mid-position.
2. Set MODE switch to "STEREO", LOUDNESS switch to "OFF" and SELECTOR switch to "AUX" position.
3. Connect 8 ohm, 20watts resistor across Left speaker terminals. Then in parallel with load resistor, connect a VTVM and the vertical input leads of an oscilloscope.
4. Connect an audio signal generator to Left channel, AUX input and apply 1,000Hz (sine wave) signals.
5. Connect AC power cord and rotate Volume Control clockwise --- full volume. Increase generator output until sine wave on scope just starts clipping. Adjust DC Balance Control VR505 (on Driver Circuit Board) for equal clipping on the positive and negative half cycles of the signal (see Figure 1).
6. Rotate Volume Control counterclockwise to get 0.9 volts RMS across 8 ohm (0.1 watt output) on VTVM. Adjust crossover distortion by turning Idling Adjust Control VR506 (on Driver Circuit Board) until ideal response appears on scope (see Figure 2 -1). Or adjust idling current using a DC milli-volt meter across R530 resistor (on Driver Circuit Board), rotate Idling Adjust Control VR506 to obtain a 7.5 mV reading on DC milli-volt meter (no signal input). See Figure 2 -2.
7. Repeat the steps 3 thru 6 for Right channel.

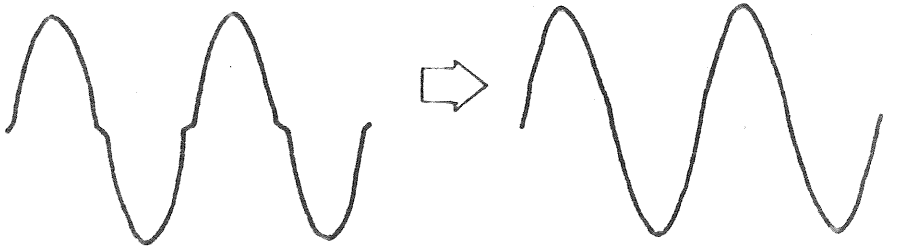
Fig. 1 DC BALANCE ADJUSTMENT





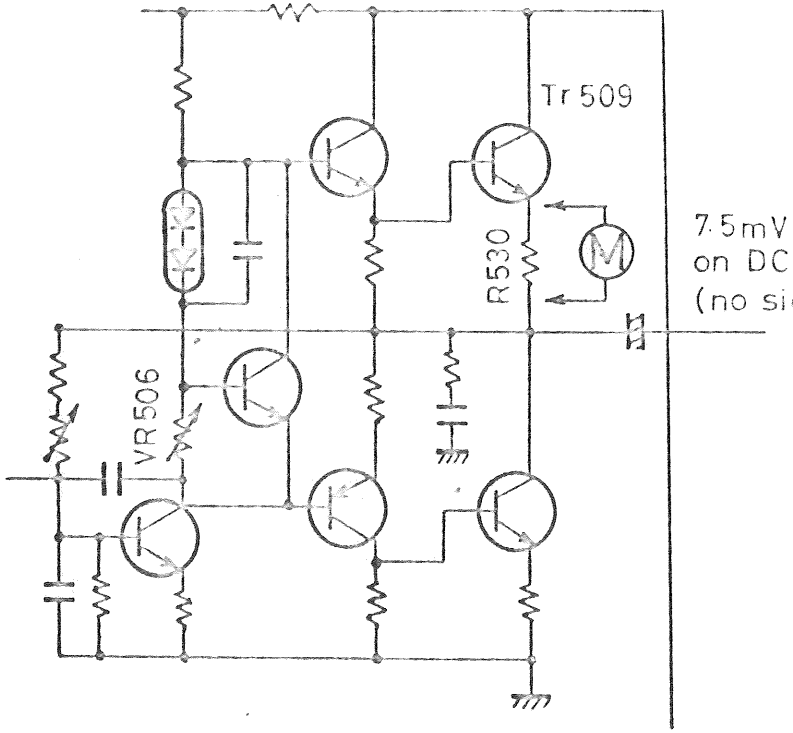
EQUAL CLIPPING AT
TOP AND BOTTOM

Fig. 2-1 CROSSOVER DISTORTION ADJUSTMENT



DISTORTED RESPONSE IDEAL RESPONSE

Fig 2-2 IDLING CURRENT ADJUSTMENT



AM ALIGNMENT PROCEDURE

Instruments: AM Signal Generator and AC VTVM.

NOTES: Set Selector switch to AM.

Input signal must be kept as low as possible to avoid AVC action.

Step	Generator		Tuning Dial Setting	Output Indicator Connected to	Adjust	Adjust for
	Coupling	Frequency				
1	Tr201 Base (on AM IF board) through a C.01 mfd capacitor.	455 KHz (400 Hz 30% mod.)	Non interfering at low end of scale.	AC VTVM to TAPE OUT jack.	T203,202 and 201 (on AM IF board)	Maximum reading on VTVM.
2	Connect to short loop of wire. Radiate signal into ferrite loopstick antenna.	600 KHz (400 Hz 30% mod.)	600 KHz		L201(OSC) (on AM IF board) & L901(ANT coil).	
3		1400 KHz (400 Hz 30% mod.)	1400 KHz		CT5 (OSC trim.) & CT4 (ANT trim.) (on Front-end)	
4	Repeat steps 2 and 3 until no further improvement is noticed.					

FM ALIGNMENT PROCEDURE

Instruments: FM Sweep Generator, FM Signal Generator, AC VTVM and Oscilloscope.

NOTE: Set Selector switch to FM.

Step	Generator		Tuning Dial	Output Indicator	Adjust	Adjust for
	Connected to	Freq.	Setting	Connected to		
1	FM Sweep Generator to Test Point (on Front end #5. terminal)	10.7MHz	Quiet point on band	Oscilloscope to junction of R119 and C116 (on IF board)	T103, 102, 101 (on IF board), & T2 (Front end).	Maximum and Balanced S curve on scope.
2	Disconnect FM Sweep Generator and connect FM Signal Generator to FM antenna terminals.					
3	FM Signal Generator to FM antenna terminals.	98MHz (400Hz 100% mod.)	Tune for maximum output point.	Oscilloscope and AC VTVM. to TAPE OUT jack.	Touch up T2, 101, 102 and 103 if necessary.	Maximum and undistorted amplitude on scope.
4	Same as in step 3. Signal strength must be kept -3db of limitter satulation.	90MHz (400Hz 100% mod.)	90MHz		L2 (OSC), L1 (RF) & T1 (ANT) (on Front end).	Maximum reading on VTVM.
5		106MHz (400Hz 100% mod.)	106MHz		CT3 (OSC), CT2 (RF) & CT1 (ANT) (on Front end).	
6	Repeat steps 4 and 5 until no further improvement is noticed.					

FM-STEREO ALIGNMENT PROCEDURE

Instruments: FM Stereo Generator, AC VTVM and Oscilloscope.

NOTE: The FM IF Amplifier Alignment must be completed before attempting this MPX Alignment. Poor IF alignment will result in poor Multiplex Adjustment. Set MPX Separation Control VR301 (on MPX board) to mid-position before starting this procedure.

Set Selector switch to FM STEREO.

Connect Stereo Generator to FM antenna terminals.

Step	Stereo Generator		Output Indicator Connected to	Adjust	Adjust for
	Modulation	RF Deviation			
1	19KHz Pilot signal only	1 - 2%	VTVM & Oscilloscope to Test Point TP-2 (on MPX board)	T301, 302 and 303	Maximum reading on VTVM.
2	Compsite 1 KHz signal to Left channel only	Pilot 10% Signal 70%	VTVM & Oscilloscope to Left channel TAPE OUT jack.	T302	Maximum and undistorted sine wave on scope.
3	Composite 1 KHz signal to Right channel only			VR301	Minimum reading on VTVM.
4	Same as in step 2.		VTVM & Oscilloscope to Right channel TAPE OUT jack.		
5	Repeat steps 3 and 4 until no further improvement is noticed.				

ENTIRE UNIT INOPERATIVE

I. If the pilot lamp does not light,
   A. Check to see if the AC Power Supply Cord is properly connected to the power source, or
   B. Check to see if there is adequate voltage from the power source.
   C. If A & B are OK,
      1. AC Power Supply Cord is cut, or
      2. Primary Winding in the Power Transformer is cut, or
      3. Power Switch connection is faulty.

II. If the Pilot Lamp does light,
   A. Check to see if the DC fuse is not blown.
      1. If the DC fuse is blown,
         a. Output Circuits (including the speakers) are shorted out, or
         b. +B Circuits are shorted out, due to faulty C904 or faulty Transistors Tr509,510,609,610,506,508,606 or 608, or
         c. Faulty C516 or 616, or
         d. Rectifier (D901) is shorted out.
      2. If the DC fuse is OK,
         a. And if the B voltage is not OK,
            (1). Rectifier (D901) is open, or
            (2). Secondary Winding in the Power Transformer (center tap, black lead) is cut, or
            (3). Faulty grounding of Black Lead, or
            (4). Faulty DC fuse connection.
         b. And if the B voltage is OK,
            (1). And if there is signal output at TAPE OUT jacks,
               (a). Tape Monitor Switch connection is faulty, or
               (b). Transistors Tr503,504,505,603,604 or 605 are faulty, or
               (c). C510,511,518,610,611 or 618 are faulty.
            (2). And if there is no signal output at TAPE OUT jacks,
               (a). Transistors Tr501,502,601 or 602 are shorted out or open, or
               (b). C501,502,521,601,602 or 621 are open, or
               (c). Wires from the Function Switch are cut, or
               (d). Wires to the Tape Monitor Switch are cut.

RADIO SECTION INOPERATIVE

III. If only FM is inoperative, check to see if MPX is working properly.

A. If MPX is faulty, measure voltage at B2.

1. If there is no voltage at B2.

a. C905 is faulty, or

b. R910 is faulty.

2. If there is proper voltage,

a. And if there is no signal with Function Switch set at FM,

(1). C301, 302 or 303 are faulty.

b. If there is no signal with Function Switch set at FM STEREO,

(2). Tr301, 302 or 303 are faulty.

c. If there is proper voltage at B4 but Stereo Lamp does not light.

(1). Check for audibility of stereo signal.

(a). If no stereo signal is heard from speakers, then check the above mentioned transistors.

(b). If stereo signal is heard, then stereo lamp or transistor Tr304 is faulty.

d. If stereo lamp stays on when signal changes from stereo to mono,

(1). Transistor Tr304 is faulty.

B. If MPX is OK, check FM IF circuit.

1. If FM IF is not OK,

a. Measure voltage of IF PCB FM(B).

(1). If there is no voltage,

(a). Function Switch connection is faulty, or

(b). Wire from Function Switch is cut, or

(c). C102 or 109 is faulty.

(2). If there is proper voltage,

(a). Tr101, 102 or 103 are faulty, or

(b). C104, 107 or 111 are faulty.

2. If FM IF is OK,

a. And if FM Front end is faulty,

(1). Tr1, 2 or 3 are faulty, or

(2). C4, 11 or 17 are faulty.

b. If FM Front end is OK,

(1). Input circuit is grounded. or

(2). FM antenna inproperly connected.

ONLY PHONO SECTION INOPERATIVE

I. If there is no fault in the wires to the Pre amplifier PCB,
   A. Transistors Tr401,402,403 or 404 are shorted out or open, or
   B. C401,405,408,409,414 or 417 are faulty or
   C. Function Switch connection is faulty.

TONE CONTROLS INEFECTIVE

I. C504,505,506,507,604,605,606 or 607 are faulty.

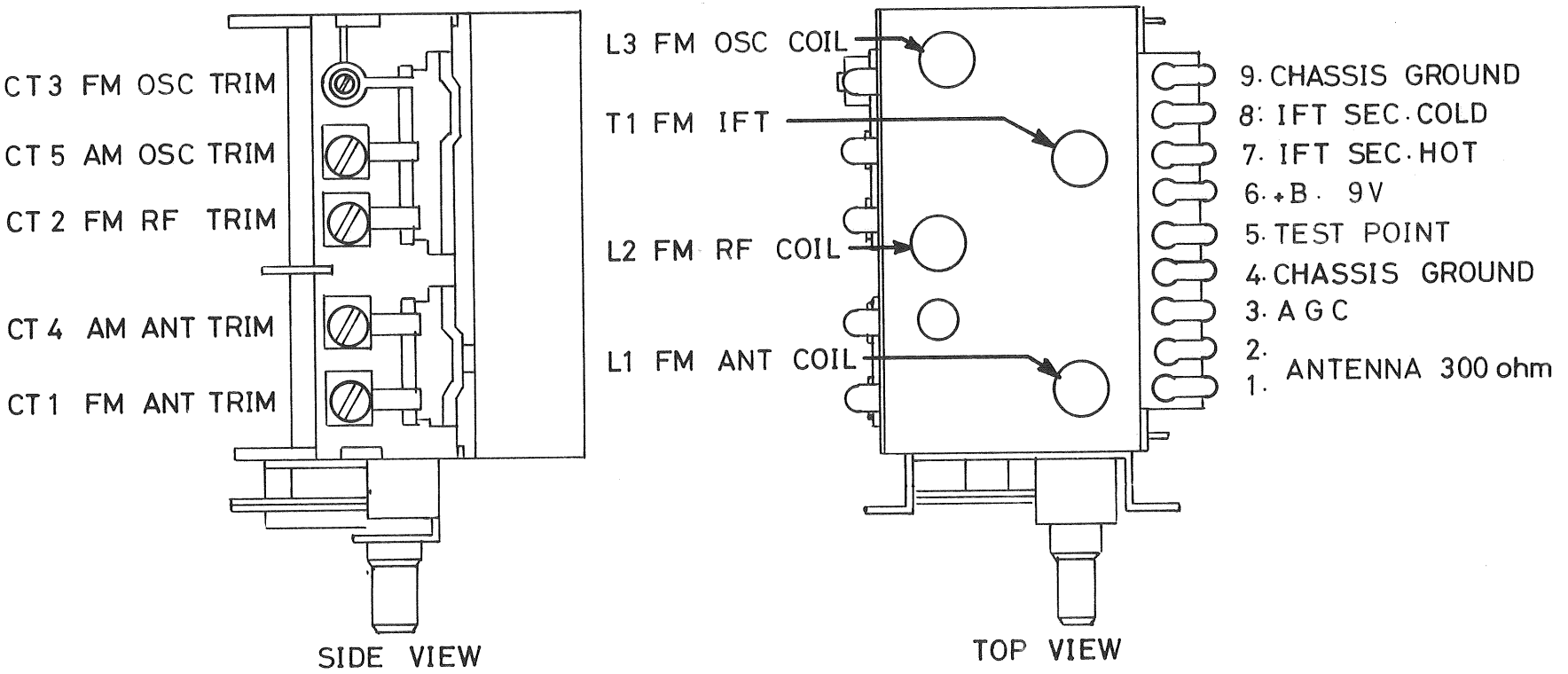
LOUDNESS CONTROL INEFECTIVE

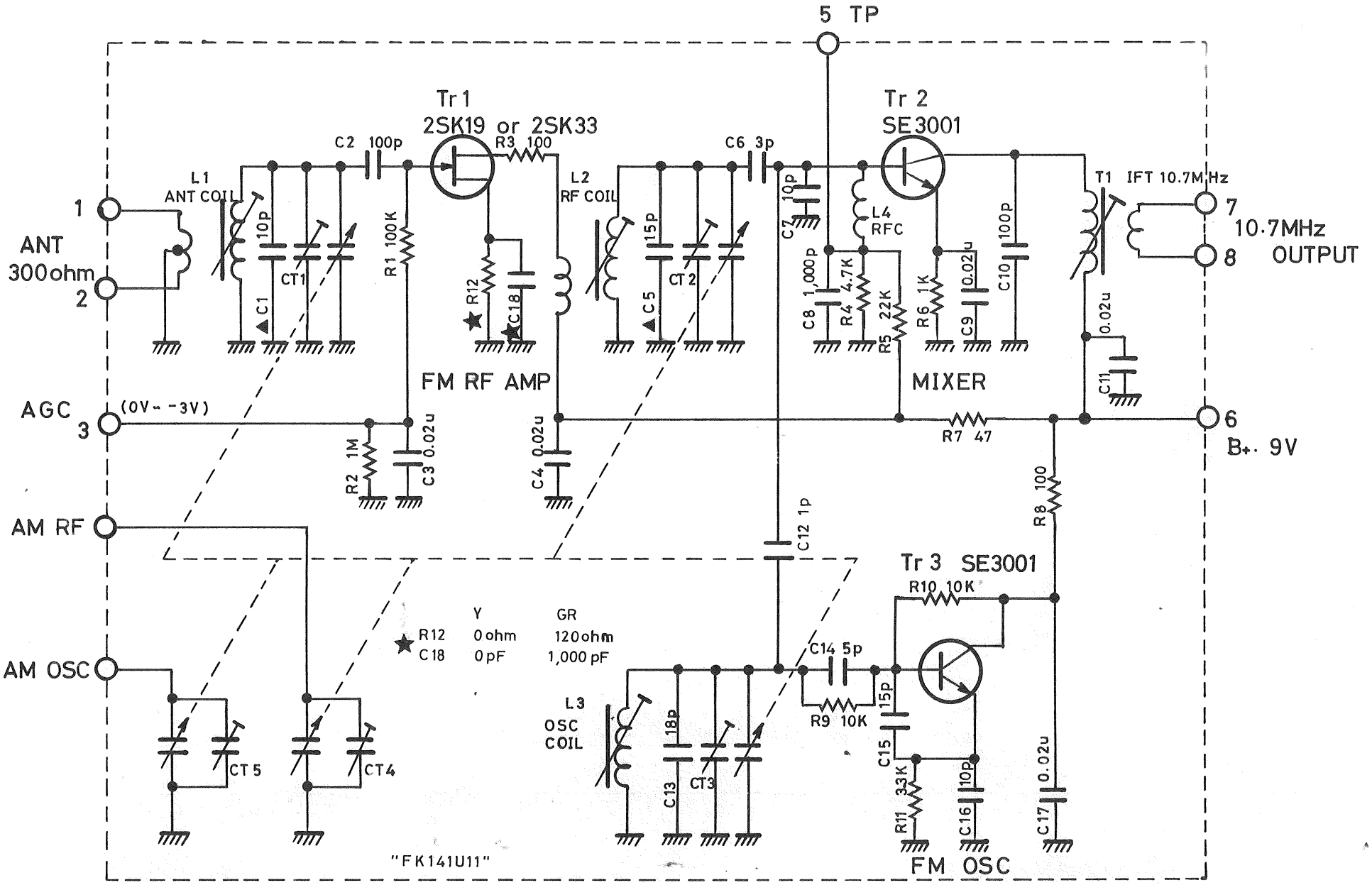
I. C508 or 608 is faulty, or
II. Loudness Switch connection is faulty.

RADIO SECTION INOPERATIVE

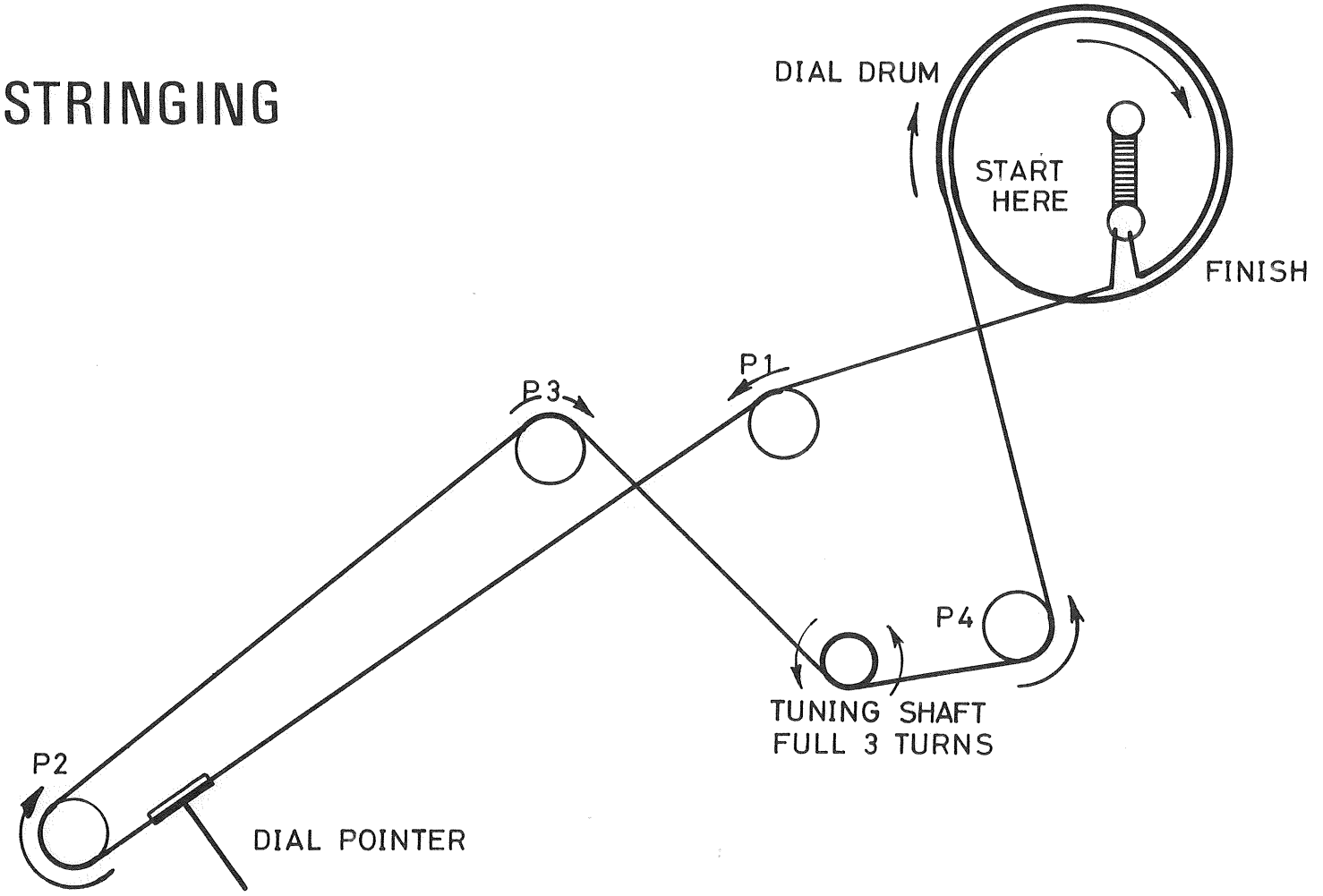
I. If both AM and FM are inoperative,
   A. Measure voltage at B5 (refer to circuit diagram),
      1. If there is no voltage at B5,
         (a). R916 is faulty, or
         (b). C907 is faulty.
      2. If there is proper voltage at B5,
         (a). Function Switch connction is faulty, or
         (b). Wire to the Function Switch is cut.
II. If only AM is inoperative,
   A. Measure voltage of IF PCB AM(B),
      1. If there is no voltage,
         (a). Function Switch connection is faulty, or
         (b). Wire from Function Switch is cut, or
         (c). C202 or 214 is faulty.
      2. If there is proper voltage,
         (a). C207 or 211 is faulty, or
         (b). Tr201,202 or 203 are faulty, or
         (c). Coils L201 or 901 is faulty, or
         (d). AM IFT T201,202 or 203 are faulty.

AM / FM FRONT END LAYOUT




5 TP
Tr 1
2SK19 or 2SK33
Tr 2
SE3001
C2 100p
R3 100
C6 3p
L1
ANT COIL
L2
RF COIL
T1 IFT 10.7MHz
1
ANT
300ohm
2
7
10.7MHz
OUTPUT
8
C1
CT1
R1 100K
R12
C18
C5
CT2
C7 10p
L4
RFC
C8 1,000p
R4 4.7K
R5 22K
R6 1K
C9 0.02u
C10 100p
C11 0.02u
FM RF AMP
MIXER
AGC
3
(0V ~ -3V)
R2 1M
C3 0.02u
C4 0.02u
R7 47
6
B+ 9V
R8 100
AM RF
C12 1p
Tr 3 SE3001
R10 10K
AM OSC
R12 Y GR
C18 0ohm 120ohm
0pF 1,000pF
C14 5p
L3
OSC
COIL
C13 18p
CT3
R9 10K
15p
C15
R11 33K
10p
C16
0.02u
C17
CT5
CT4
"FK141U11"
FM OSC

DIAL STRINGING



REPLACEMENT PARTS LIST FOR MODEL RX-200

Roland's Part No.	Symbol No.	Descriptions
TRANSISTORS		
301201125	Tr509,510,609,610.	2SC1061 (A), Power Amp.
301901118	Tr508,608.	CS2002, Driver
301901116	Tr506,606.	CS2003, Driver
301201115	Tr304,502,504,507,602,604, 607.	2SC828, Audio Amp.,etc.
301201113	Tr505,605.	2SC538A, Predriver
301201114	Tr401,402,403,404,501,503, 601,603.	2SC644, Equalizer and Tone Amp.
301001111	Tr202,203,301,302,303.	2SA49, AM IF and MPX Amp.
301001114	Tr101,102,103.	2SA234 or 2SA341, FM IF Amp.
301001112	Tr201.	2SA52, AM Conv.
DIODES		
300212002	D501,601.	KB265, Temprature Compensator
300919005	D902.	1S1850, Rectifier
300111008	D101,201,202,203,301,302, 303,304,305,306,502,602, 901.	1S188, FM AGC, AM Det., MPX Dec., etc.
COILS & TRANSFORMERS		
205001309	T901.	Trans., Power Supply
225501116	T101,102.	IFT, FM 1st and 2nd
225501117	T103.	IFT, FM Ratio
225301121	T201.	IFT, AM 1st
225301122	T202.	IFT, AM 2nd
225301124	T203.	IFT, AM 3rd
228211125	T302,303.	Trans., MPX 19KHz and 38KHz Tune
223301124	L201.	Coil, AM Local Oscillator
222391114	L901.	Coil, AM Antenna
228111125	L301.	Coil, MPX 19KHz Tune
228641111	L103.	Coil, SCA Filter
220001121	L101,102,202.	Coil, RF Choke, 47uH

Roland's Part No.	Symbol No.	Descriptions
RESISTORS		
5510220 33	R528,628.	Composition, 22 ohm (K) $\frac{1}{2}$w
5510 7133	R916.	" , 270 ohm (K) $\frac{1}{2}$w
5510 33133	R527,529,627,629,907,908, 917.	" , 330 ohm (K) $\frac{1}{2}$w
5510 68133	R910.	" , 680 ohm (K) $\frac{1}{2}$w
5510 10233	R915,918.	" , 1 Kohm (K) $\frac{1}{2}$w
5510 22233	R912,913.	" , 2.2 Kohm (K) $\frac{1}{2}$w
5510 22433	R919.	" , 2.2 Mohm (K) $\frac{1}{2}$w
552010123	R204,213,526,536,626.636.	Carbon Film, 100 ohm (K) $\frac{1}{4}$w
552022123	R325,519,619.	" , 220 ohm (K) $\frac{1}{4}$w
552027123	R104,108,116.	" , 270 ohm (K) $\frac{1}{4}$w
552033123	R304,313.	" , 330 ohm (K) $\frac{1}{4}$w
552056123	R112,114,115,326,314,405, 416.	" , 560 ohm (K) $\frac{1}{4}$w
552010223	R103,107,111,208,209,212, 215,310,502,507,513,602, 607,613.	" , 1 Kohm (K) $\frac{1}{4}$w
552015223	R202,509,609,532,632.	" , 1.5 Kohm (K) $\frac{1}{4}$w
552022223	R203,205,305,306,312,504, 508,523,537,604,608,623, 637.	" , 2.2 Kohm (K) $\frac{1}{4}$w
552033223	R315,316,319,320,409,419.	" , 3.3 Kohm (K) $\frac{1}{4}$w
552039223	R510,516,533,616,633.	" , 3.9 Kohm (K) $\frac{1}{4}$w
552056223	R321,322,506,514,518,524, 538,606,614.618,624,638.	" , 5.6 Kohm (K) $\frac{1}{4}$w
552047223	R102,106,110,207,211,214.	" , 4.7 Kohm (K) $\frac{1}{4}$w
552082223	R511,522,611,622.	" , 8.2 Kohm (K) $\frac{1}{4}$w
552010323	R117,118,311,407,418,512, 515,539,612,615,639.	" , 10 Kohm (K) $\frac{1}{4}$w
552022323	R101,105,109,113,201,404. 406,410,415,420,534,634, 903,905.	" , 22 Kohm (K) $\frac{1}{4}$w
552033323	R210,309,520,620.	" , 33 Kohm (K) $\frac{1}{4}$w
552047323	R303,302,401,412,521,621.	" , 47 Kohm (K) $\frac{1}{4}$w
552068323	R206,503,603.	" , 68 Kohm (K) $\frac{1}{4}$w
552010423	R308,535,635,904,906,909.	" , 100 Kohm (K) $\frac{1}{4}$w

Roland's Part No.	Symbol No.	Descriptions
RESISTORS——Continued		
552022423	R301,317,318.	Carbon Film, 220 Kohm (K) ¼w
552015423	R501,601.	" , 150 Kohm (K) ¼w
552033423	R411,421.	" , 330 Kohm (K) ¼w
552010523	R403,408,414,417.505,517, 605,617.	" , 1 Mohm (K) ½w
552033533	R901,902.	" , 3.3 Mohm (K) ½w
553030163	R911.	Metal Oxide Film, 300 ohm (K) 3w
553050163	R914.	" , 500 ohm (K) 3w
554050953	R530,531,630,631.	Bath-tub, 0.5 ohm (K) 2w
554010053	R525,625.	" , 10 ohm (K) 2w
VARIABLE RESISTORS		
525101111	VR501,502.	Bass and Treble Control, 50 Kohm
525121112	VR504.	Volume Control, 50 Kohm
515121112	VR503.	Balance Control, 100 Kohm
510502102	VR301.	Separation Adj., 10 Kohm
510502115	VR505,605.	DC Balance Adj., 250 Kohm
510502117	VR506,606.	Idling Current Adj., 5 Kohm
CAPACITORS		
400220439	C904.	Electrolytic, 2,200mfd, 35V (L)
401100439	C905,906.	" , 1,000mfd, 35V (ST)
401470539	C516,616.	" , 470mfd, 35V (ST)
401470519	C907.	" , 470mfd, 16V (ST)
402470629	C513,613.	" , 47mfd, 25V (SU)
402500719	C114.	" , 5mfd, 16V (SU)
402100749	C301,501,510,511,518,519,521,	" , 1mfd, 50V (SU)
402100619	601,610,611,618,619,621.	
402100619	C303,311,401,405,409,414, 502,602.	" , 10mfd, 16V (SU)
402100519	C410,509.	" , 100mfd, 16V (SU)
402330609	C206,302,404,413.503.603.	" , 33mfd, 6.3V (SU)
402100509	C517.617.	" , 100mfd, 6.3V (SU)
440100835	C408,417.	Ceramic, 0.1mfd, 50V
440500935	C201,202,205,207,209,210, 211,214,215,216.315,316.	" , 0.05mfd, 50V

Roland's Part No.	Symbol No.	Descriptions
CAPACITORS --- Continued		
440100985	C101,102,104,105,107,108, 109,111,203,213,514,614.	Ceramic, 0.01mfd, 250V
442501083	C305.	" , 0.005mfd, 250V, (YE)
442401083	C406,415.	" , 0.004mfd, 250V, (YE)
442301083	C313,314.	" , 0.003mfd, 250V, (YE)
440501183	C512,612.	" , 500pF (K), 250V
440331183	C204.	" , 330pF (K), 250V
440201183	C112,113,520,620.	" , 200pF (K), 250V
440101183	C115,116,403,412,901,902.	" , 100pF (K), 250V
440501283	C402,417.	" , 50pF (K), 250V
440501338	C110,208,212,903.	" , 5pF ± 0.5pF, 250V
441301336	C217.	" , 3pF (N5.6), 50V
440201388	C103,117,106.	" , 2pF ± 0.5pF, 250V
450200833	C507,607,515,615.	Mylar Film, 0.2mfd (K), 50V
450100833	C508,608.	" , 0.1mfd (K), 50V
450500933	C319.	" , 0.05mfd (K), 50V
450300933	C505,605.	" , 0.03mfd (K), 50V
450200933	C506,606.	" , 0.02mfd (K), 50V
450150933	C407,416.	" , 0.015mfd (K), 50V
450100933	C306,317,318.	" , 0.01mfd (K), 50V
MISCELLANEOUS		
321304364		AM / FM Front end
231310017		Meter, Tuning
614051002		Push Switch, 5 keys
610111245		Switch, Function Selector
120012201		AM ANT. Ring
116310019		Knob, Tuning
116310017		Knob, Func., Vol., Bal., Treb. and Bass
353063025	PL1,2,3,4,5.	Lamp, Dial Illumination, 6.3V 0.25A
351140008		Lamp, Stereo Beacon, 14V 80mA
341220020	F901.	Fuse, 2A 3AG
624100210		Pin Jack, 10P, RCA type
641200104		Terminal, 4P
620101114	J902.	AC Outlet
626107814	J901.	Headphone Jack

ALIGNMENT PROCEDURE

PRECAUTIONS

1. Always disconnect the chassis from power line when soldering. Turning the power switch OFF is not enough. Power line leakage passing through the heating element may destroy the transistors.
2. Never attempt to do any work on the transistor amplifiers without first disconnecting the AC line cord and waiting until the power supply filter capacitors have discharged.
3. Replacement for output and driver transistors, if necessary, must be made from the same beta group as the orignal type.
4. If one output transistor burns out (open or short) always remove all the output transistors in that channel and check the bias adjustment, the control and other parts in the network with an ohm-meter before inserting a new transistor. All transistors in one channel will be destroyed if the base biasing circuit is open on the emitter end.
5. When mounting a replacement power transistor, be sure that the bottom of the flange, the mica insulators and the surface of the heat sink are free of foreign matter, for they may cause transistors failure.
6. Silicon grease must be applied between the transistor and the mica insulator, and between the mica insulator and the heat sink for better heat conduction.

FUNCTION

(1) A M
(2) F M
(3) F M STEREO
(4) PHONO
(5) AUX

CONTROLS

VR301	SEPARATION ADJ.	
VR501	TREBLE CONTROL	50KA
VR502	BASS CONTROL	50KA
VR503	BALANCE CONTROL	100KW
VR504	VOLUME CONTROL	50KB
VR505, VR605	DC BALANCE ADJ.	
VR506, VR606	IDLING CURRENT ADJ.	

RESISTORS

K ··· KILO OHM M ··· MEGA OHM
▲ ·· COMPOSITION RESISTORS 10% TOLERANCE ½ WATT
NON MARK ·· CARBON RESISTORS 10% TOLERANCE ¼ WATT

CAPACITORS

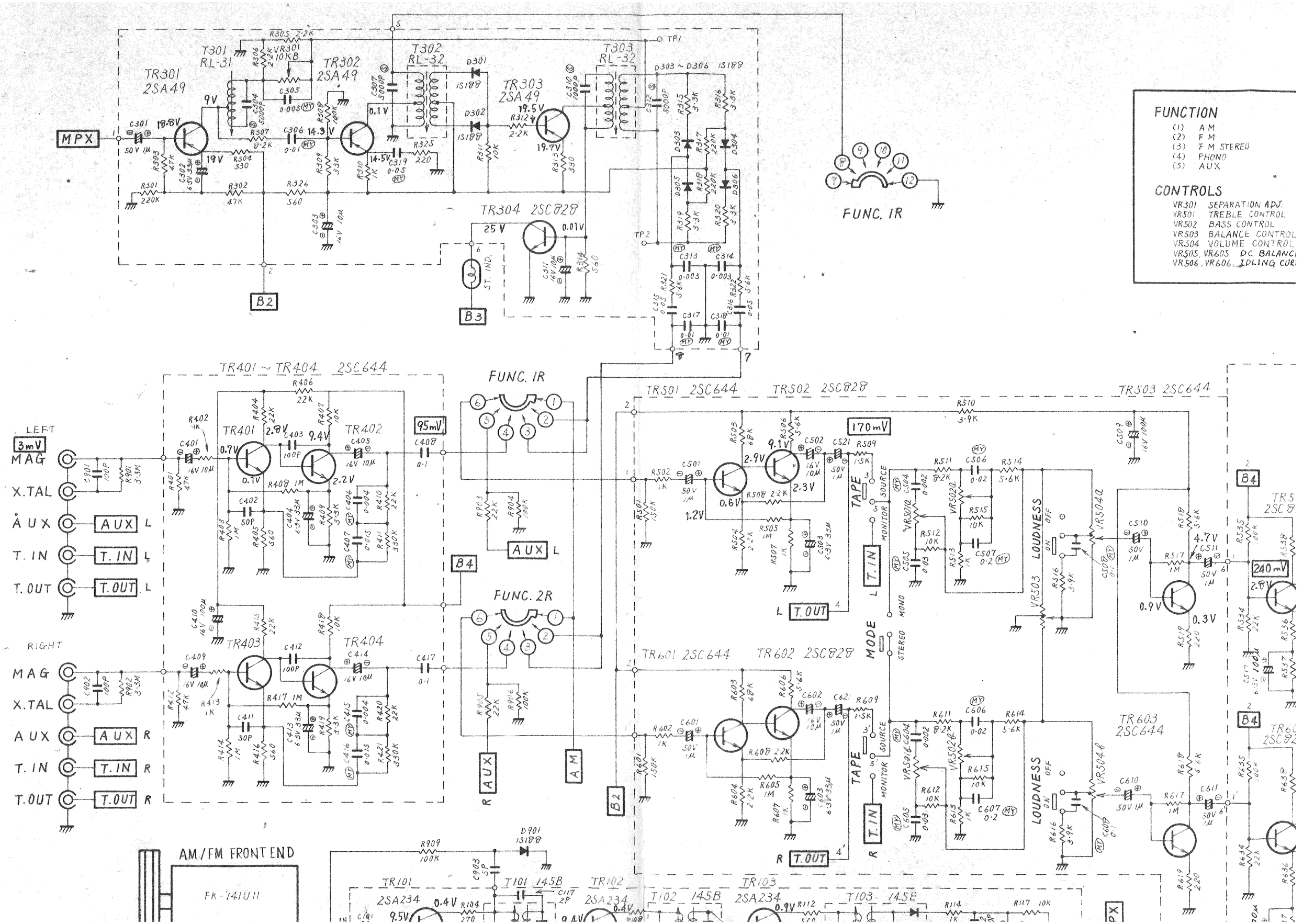
10% TOLERANCE UNLESS OTHERWISE NOTED
Ⓢ ·· POLY STYROL CAPACITORS
(MY) ·· MYLAR FILM CAPACITORS
⊣⊢ ELECTROLYTIC CAPACITORS
NON MARK ·· CERAMIC CAPACITORS

TR507, TR607 2SC828
TR508, TR608 CS2002

8V/80h

FUNC. IR

SPEAKER
MAIN REMOTE
G REMOTE G MAIN
G REMOTE G MAIN
J901 PHONES


MPX
TR301 2SA49
T301 RL-31
TR302 2SA49
T302 RL-32
TR303 2SA49
T303 RL-32
TR304 2SC828
D301 1S188
D302 1S188
D303 ~ D306 1S188
TP1
TP2
ST. IND.
B2
B3
FUNC. IR
TR401 ~ TR404 2SC644
TR401
TR402
TR403
TR404
FUNC. 2R
AM
B4
LEFT
RIGHT
MAG
X.TAL
AUX
T. IN
T. OUT
TR501 2SC644
TR502 2SC828
TR503 2SC644
TR601 2SC644
TR602 2SC828
TR603 2SC644
TAPE MONITOR
MODE
STEREO
MONO
LOUDNESS
AM/FM FRONT END
FK-141U11
TR101 2SA234
TR102 2SA234
TR103 2SA234
T101 145B
T102 145B
T103 145E
FUNCTION
(1) AM
(2) FM
(3) FM STEREO
(4) PHONO
(5) AUX
CONTROLS
VR301 SEPARATION ADJ.
VR501 TREBLE CONTROL
VR502 BASS CONTROL
VR503 BALANCE CONTROL
VR504 VOLUME CONTROL
VR505, VR605 DC BALANCE
VR506, VR606 IDLING CURR

TR507, TR607 2SC828
TR508, TR608 CS2002

8V/80

SPEAKER
MAIN REMOTE

R907 330
R908 330

J901 PHONES

TR601 2SC644 TR602 2SC828

TR603 2SC644

TR604 2SC828

TR605 2SC538A

TR606 CS2003

TR607

TR608

TR609 2SC1061

TR610 2SC1061

TR504 2SC828

TR505 2SC538A

TR506 CS2003

TR507

TR508

TR509 2SC1061

TR510 2SC1061

170mV

240mV

TAPE MONITOR SOURCE

MODE MONO STEREO

LOUDNESS ON OFF

T.IN

T.OUT

L

R

AM

FUNC. 2R

TUNING IND.

SCA Filter

L102 47μH

L202 47μH

D101 IS188

D202 IS188

D203 IS188

D501 KB265

D502 IS1880

D602 IS1880

D902 IS1850

DC FUSE F901 2A

PL1~PL3 6.3V 250mA

T901 POWER TRANSFORMER

AC OUTLET J902 MAX. 200W

POWER ON OFF

240V 117V 220V 100V

BROWN BLUE ORANGE WHITE RED YELLOW

SUBJECT TO MINOR CHANGES OF PARTS WITHOUT PRIOR NOTICE

LEFT
3mV
MAG
X.TAL
AUX L
T.IN L
T.OUT L
RIGHT
MAG
X.TAL
AUX R
T.IN R
T.OUT R
TR401 2SC644
TR402 2SC828
TR403 2SC644
TR404 2SC828
95mV
170mV
FUNC. 2R
AUX L
AUX R
AM
TAPE MONITOR SOURCE
MODE STEREO MONO
LOUDNESS ON OFF
TR601 2SC644
TR602 2SC828
TR603 2SC644
TR604 2SC828
240mV
AM/FM FRONT END
FK-141U11
TR101 2SA234
TR102 2SA234
TR103 2SA234
T101 145B
T102 145B
T103 145E
L101 47μH
L102 47μH
L103 RL-33
SCA Filter
MPX
FM 300Ω
75Ω
GND
AM
L901 RL-18
TR201 2SA52
TR202 2SA49
TR203 2SA49
T201 10A
T202 10B
T203 10D
L201 10E
L202 47μH
TUNING IND.
FUNC. 2R
10V B6
25V B3
12V B5
16V B4