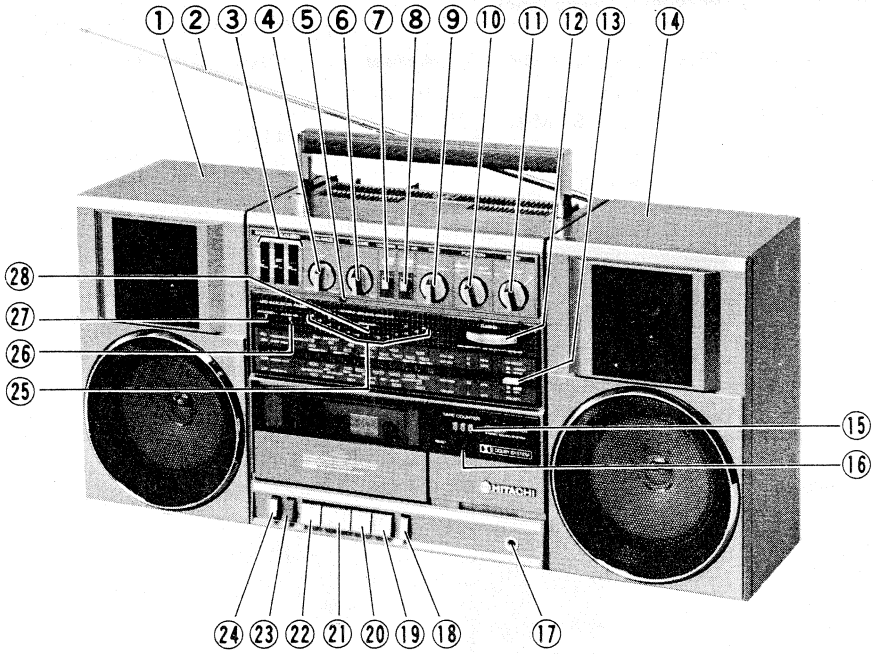
HITACHI
SERVICE MANUAL

TK | **No. 1888E**

TRK-9100E/EZ/ E(BS)/E(AU)



CONTENTS

KEY TO ILLUSTRATIONS

① SPEAKER BOX (LEFT)
② TELESCOPIC ANTENNA (AERIAL)
③ GRAPHIC EQUALIZER CONTROLS
④ BALANCE CONTROL
⑤ BUILT IN MICROPHONE (MONAURAL)
⑥ VOLUME CONTROL
⑦ LOUDNESS SWITCH
⑧ DOLBY NR SWITCH
⑨ TAPE SELECTOR
⑩ FUNCTION SELECTOR
⑪ BAND SELECTOR
⑫ TUNING CONTROL
⑬ FM MODE/FM AFC SWITCH
⑭ SPEAKER BOX (RIGHT)
⑮ TAPE COUNTER
⑯ COUNTER RESET BUTTON
⑰ HEADPHONES SOCKET
⑱ PAUSE BUTTON
⑲ STOP BUTTON
⑳ FAST FORWARD/CUE BUTTON
㉑ PLAYBACK BUTTON
㉒ REWIND/REVIEW BUTTON
㉓ RECORD BUTTON
㉔ EJECT BUTTON
㉕ LED LEVEL INDICATORS
㉖ DOLBY NR INDICATOR
㉗ FM STEREO INDICATOR
㉘ OPERATION INDICATORS

SAFETY PRECAUTION

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with ⚠ in the schematic diagram and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

FM/SW/MW/LW RADIO CASSETTE TAPE RECORDER

Feb. 1983 **TOKAI WORKS**

SPECIFICATIONS

GENERAL SECTION

Semi-conductors :	ICs : 8 Transistors : 10 [E/E(BS)/E(AU)] 11 [EZ] Diodes : 4 LEDs : 13 Varicap : 1
Power (Mains) Supply :	AC : 220V, 50Hz [E/EZ] 240V, 50Hz [E(BS)/E(AU)] DC : 12V (IEC R20 × 8 or equivalent)
Power (Mains) Consumption :	28W [E/EZ] 24W [E(BS)/E(AU)]
Power output :	15W M.P.O. (AC operation) 5W/CH (10% T.H.D.DC)
Speakers :	12cm, 2.8 ohms × 2 3cm, 3000 ohms × 2 2cm, 500 ohms × 2
Dimensions :	54.2 (W) × 25.3 (H) × 17.7 (D) cm
Weight	7.4 kg (with batteries)

TUNER SECTION

Circuit System	FM/SW/MW/LW 4-band superheterodyne
Tuning Range :	FM : 87.5 to 108MHz SW : 6 to 18MHz MW : 530 to 1605kHz LW : 150 to 350kHz
Sensitivity :	FM : 10dB (pra.), 0dB (max.) SW : 25dB (pra.), 20dB (max.) MW : 45dB (pra.), 35dB (max.) LW : 52dB (pra.), 40dB (max.)
Intermediate Frequency :	FM : 10.7MHz SW/MW/LW : 468kHz
Antennas (Aerials) :	FM/SW : Telescopic antenna (aerial) MW/LW : Ferrite-core antenna (aerial)

TAPE RECORDER SECTION

Tape :	Cassette tape (C-30, 60, 90)
Tape Speed :	4.75cm/s
Recording System :	AC bias, 57kHz
Erasing System :	AC erasing
Frequency Response :	METAL ; 40 to 14,000Hz CrO_2 ; 40 to 13,000Hz Normal ; 40 to 12,000Hz
S/N (Signal to Noise Ratio) :	60dB (Dolby NR ON)
Wow & Flutter :	0.08% (WRMS)
Crosstalk :	Between tracks : 50dB Between channels : 30dB
Erase Ratio :	65dB
Input sensitivity and Impedance :	Microphone : 4mV, 600 ohms DIN : 0.5mV/k ohms, 20k ohms Phono : 6mV, 50k ohms
Output Level and Impedance :	DIN : 450mV, 5k ohms Headphone : 8 ohms – 300 ohms Ext, speaker : 2,8 – 8 ohms
Fast Forward or Rewinding Time :	120sec (Using C-60)
Distortion :	2 %
Motor :	DC micromotor

DISASSEMBLY

1. Rear case
   1) Remove eight knobs (Band, Function, Tape, Volume, Balance, Graphic Equalizers) and remove Ⓐ (six) screws.
   2) Open the cassette lid and remove the rear case.

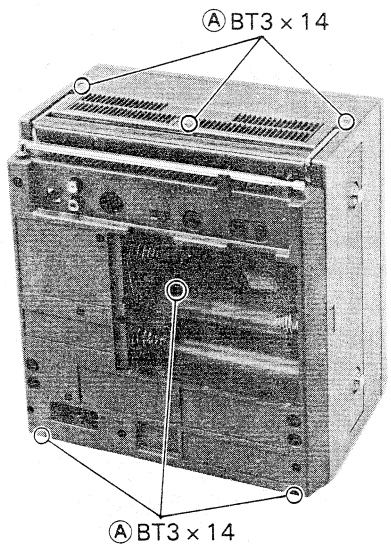


Fig. 1

2. Cassette lid
   Push the cassette lid arm in the direction of the arrow and pull out the cassette lid.
3. Function button assembly
   Insert a ⊖ screwdriver into the recess in the front case and push out the function button assembly.

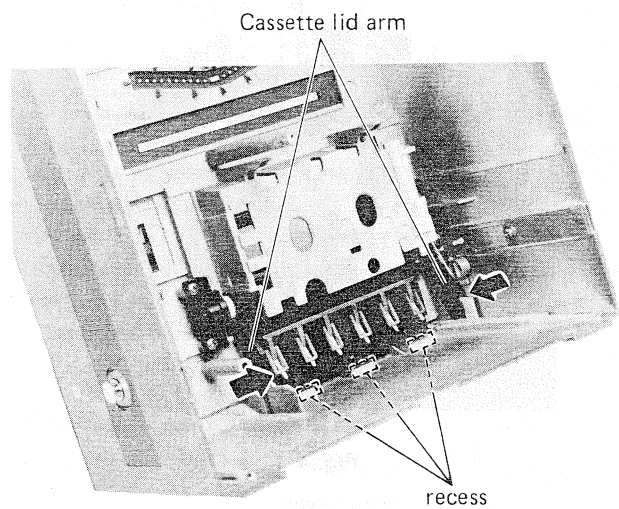


Fig. 2

4. **Cassette chassis**
   Remove Ⓑ spring and Ⓒ (four) screws.
5. **Control PC board**
   Remove Ⓓ (two) screws.
6. **PC board holder**
   Remove Ⓔ (two) screws.
7. **Headphone PC board**
   Remove Ⓕ (one) nut and Ⓖ (two) screws.

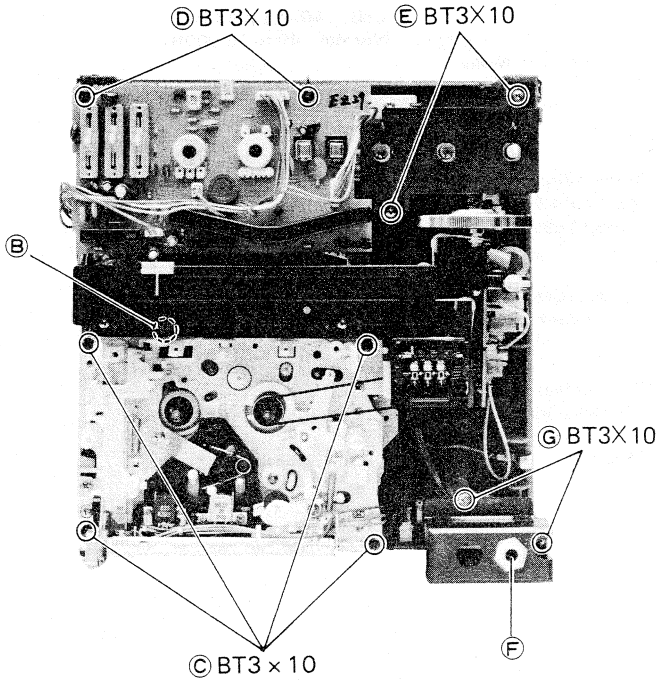


Fig. 3

8. **Tuner PC board**
   Remove Ⓗ (two) screws.

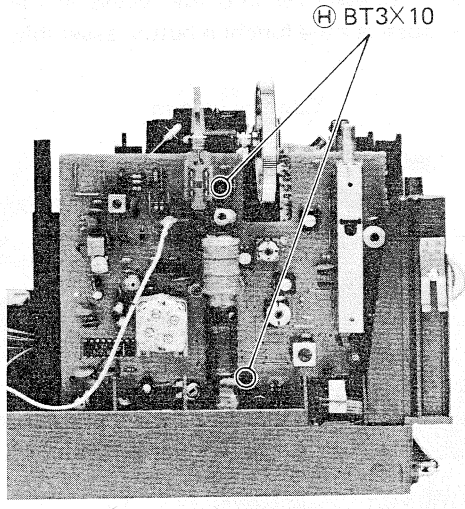


Fig. 4

9. **Dial cord stringing holder**
   Remove Ⓘ (three) screws.
10. **Power PC board**
    Remove Ⓙ (four) screws and Ⓚ (two) connectors.
11. **Main PC board and record arm**
    Remove Ⓛ (three) screws.

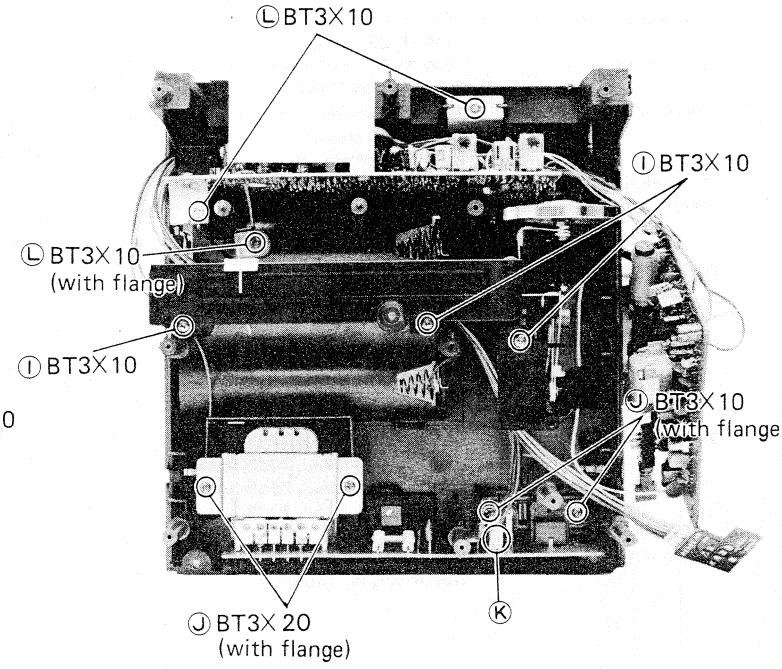


Fig. 5

ADJUSTMENT

1. Tuner Section

* For TRK-9100EZ

Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
1	(1)	FM IF	• Genescope (10.7 MHz)	TP103	TP201	10.7 MHz	Highest	T101	Note 1
2	(1)	FM OSC. (Covering)	• FM signal generator (400 Hz 30% mod.) • Oscilloscope • VTVM	TP101, 102 (thru FM dummy antenna) [Note 2]	TP201	87 MHz (87.5 MHz*)	Lowest	L102	Output Max.
	(2)					109 MHz (108 MHz*)	Highest	CT102	
	(3)					Repeat steps (1) and (2)			
3	(1)	FM ANT. (Tracking)				90 MHz	90 MHz	L101	Output Max.
	(2)					106 MHz	106 MHz	CT101	
	(3)					Repeat steps (1) and (2)			
4	(1)	FM MPX (Multiplex)	• Frequency counter	Connect a 10μF 25V electrolytic capacitor between the No. 2 pin of IC301 and ground.	TP301	——	——	RT301	19 kHz ±200Hz (Note 3)
5	(1)	AM IF	• Genescope (468 kHz)	Ferrite-core antenna (Note 4)	TP201	468 kHz	Highest	——	Note 5
	(2)								
6	(1)	LW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	Ferrite-core antenna (Note 4)	TP201	145 kHz	Lowest	L156	Output Max.
	(2)					360 kHz	Highest	CT156	
	(3)					Repeat steps (1) and (2)			
7	(1)	LW ANT. (Tracking)				160 kHz	160 MHz	L153	Output Max.
	(2)					330 kHz	330 kHz	CT153	
	(3)					Repeat steps (1) and (2)			
8	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	Ferrite-core antenna (Note 4)	TP201	515 kHz	Lowest	L155	Output Max.
	(2)					1650 kHz	Highest	CT155	
	(3)					Repeat steps (1) and (2)			
9	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L152	Output Max.
	(2)					1400 kHz	1400 kHz	CT152	
	(3)					Repeat steps (1) and (2)			
10	(1)	SW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM	TP101, 102 (thru SW dummy antenna) [Note 6]	TP201	5.8 MHz	Lowest	L154	Output Max.
	(2)					18.5 MHz	Highest	CT154	
	(3)					Repeat steps (1) and (2)			
11	(1)	SW ANT. (Tracking)				6.5 MHz	6.5 MHz	L151	Output Max.
	(2)					16 MHz	16 MHz	CT151	
	(3)					Repeat steps (1) and (2)			

Note :

1. Feed in a weak signal to TP103 from the genescope. Adjust the T101 core to form the S-curve shown in Figure 6. Adjust the symmetry of A and B about point C for linearity.

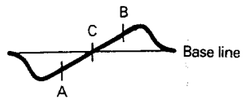


Fig. 6

2. FM dummy antenna shows Figure 7.

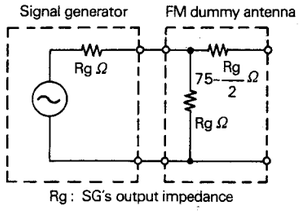


Fig. 7

3. Connect the frequency counter to TP301, via a resistor of 100 kΩ.
4. Connect AM signal generator to loop antenna, bring near to ferrite antenna.
5. Feed in a weak signal from the genescope and confirm that the waveform is obtained shown in Figure 8.

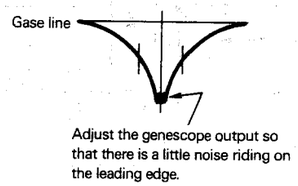


Fig. 8

6. SW dummy antenna shows Figure 9.

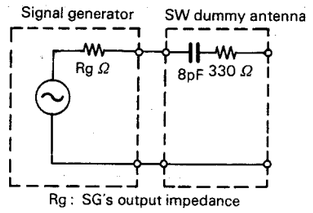


Fig. 9

2. Tape Recorder Section

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller, and capstan with a head cleaning stick moisted in alcohol.

Also, unless otherwise specified, set the switches to the positions indicated in the table.

Symbol No.	Switches	Position
S4	Tape select switch	NORMAL
S5	Function selector	TAPE
S6	Dolby NR switch	OFF

Step	Adjustment Item	Measuring Instrument and connection			Check Tape	Mode	Adjusted Position	Adjusted Value	Remarks
		Measuring Instrument	Input Terminal	Output Terminal					
1	Head azimuth	• VTVM	——	DIN socket (output)	Head azimuth test tape (10 kHz)	Playback	Azimuth adjusting screw	Output Max.	Note 1
2	Playback gain	• VTVM	——	TP401L, R	Dolby test tape (400 Hz, 200 nWb/m)	Playback	RT401L, R	450 mV (◻◻ +3 dB)	Note 2
3	Record/ playback frequency characteristics	Set the RIF switch to A position							
		• Audio oscilllator (1.25 kHz/ 12.5 kHz) • Attenuator • VTVM	DIN socket (input)	TP401L, R	NORMAL tape	Record/ playback	RT402, R	Output difference within ± 2 dB	Note 3

Note :

1. When the maximum values of both channels are different, adjust to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2dB.
2. 1) Playback a Dolby test tape (400Hz, 200 nWb/m) and adjust RT401L, R so that the level of TP1L, R becomes 450 mV.
   2) Confirm that the +3dB level indictors (◻◻) light.
3. 1) Freed a 1.25 kHz signal to the DIN socket (input) in the recording mode and adjust the audio oscillator so that the level of TP401L, R becomes 450 mV. Then, adjust the attenuator to lower the output level by 20 dB.
   2) Record the signal on NORMAL tape with the conditions of item 1), then continue to record with the audio oscillator frequency set to 12.5 kHz.
   3) Playback the recorded signal and adjust RT402L, R so that the output level difference between two frequencies is within ±2dB.

INSPECTION OF MECHANISM

Item No.	Inspection item	Reference value	Remarks
1	Pressure of pressure roller	375 ± 75 g	Note 1
2	Take-up torque	30 ~ 55 g·cm	
3	East forward torque	75 ~ 115 g·cm	
4	Rewind torque	75 ~ 115 g·cm	
5	Supply reel back-tension	2.0 ~ 4.5 g·cm	Without counter
6	Take-up reel back-tension	2.0 ~ 4.0 g·cm	Without counter
7	Brake force	10 g·cm or more	
8	PLAY, REC, FF, REW, STOP buttons	0.25 kg or less	
9	PAUSE button	0.3 kg or less	
10	Flywheel thrust gap	0.05 ~ 0.5 mm	

Note 1

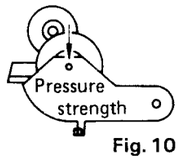


Fig. 10

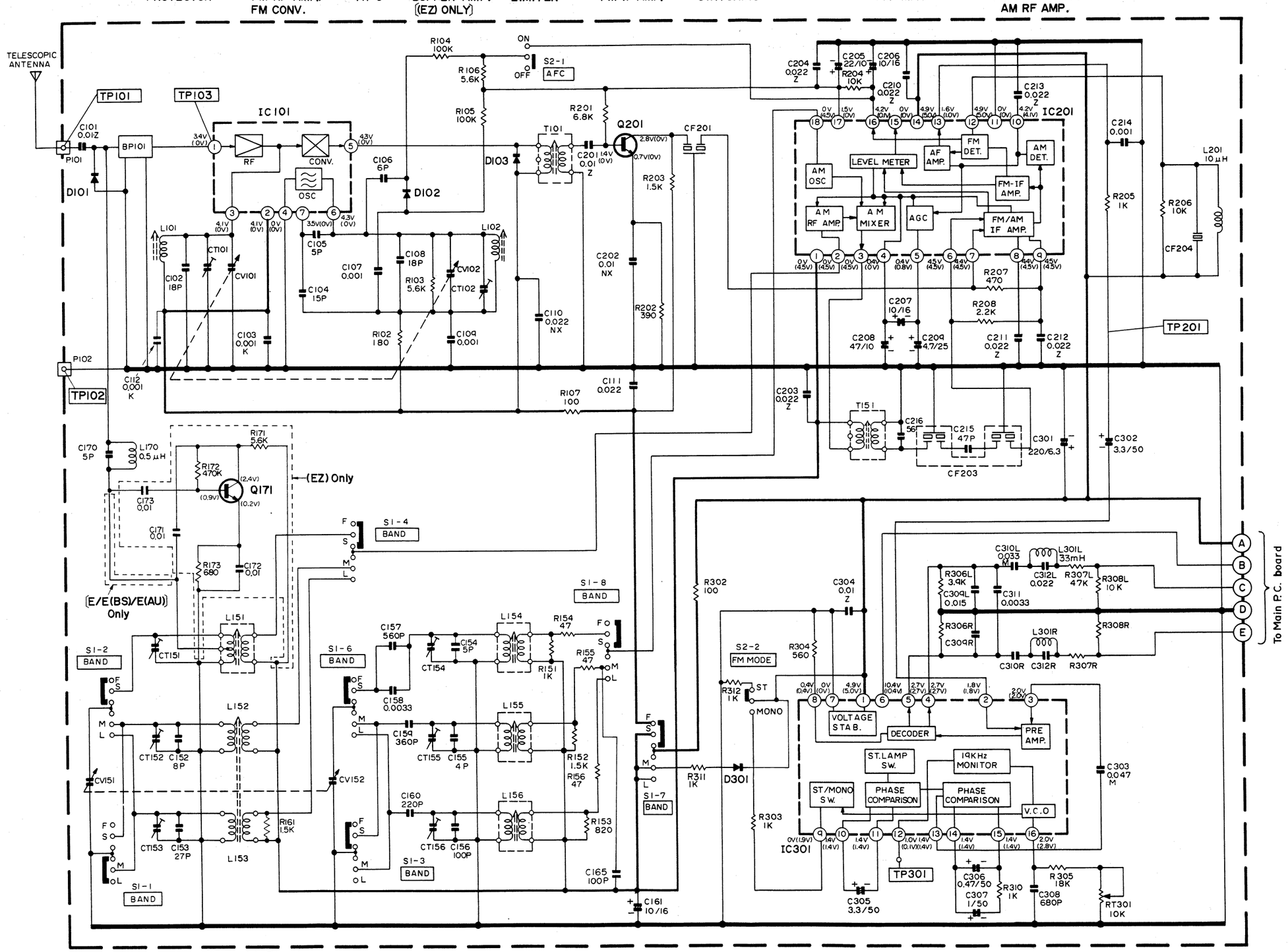
LUBRICATION

Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point.
Lubricate the respective parts listed once every 1000 hours or once a year under normal conditions of use.
Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Lubrication		Oil or Grease
Rotary Section	Metal and metal	Pan motor oil (10W -40)
	Mold and metal	Sonic slider oil (# 1600)
Sliding section	Metal and metal	Hitasol (MO-138)
	Mold and mold Mold and metal	White grease (FL-LUBE-A)
Spring resonance prevention		Floil (GB-TS-1)

SCHEMATIC DIAGRAM (Tuner Section)

D101 ISS133 PROTECTOR
IC101 AN7213A FM RF AMP./ FM CONV.
D102 IS2790 AFC
Q171 2SC380 BUFFER AMP. (EZ) ONLY
D103 ISS133 LIMITER
Q201 2SC380 FM IF AMP.
D301 ISS133 SWITCHING
IC301 BA1330 FM MPX
IC201 AN7224 FM/AM IF AMP. AM RF AMP.



Voltages are measured in FM mode.
Inside ( ) voltages are measured in AM mode.

CIRCUIT BOARD DIAGRAM (Tuner Section)

Note

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

R101 150-RS-1-K

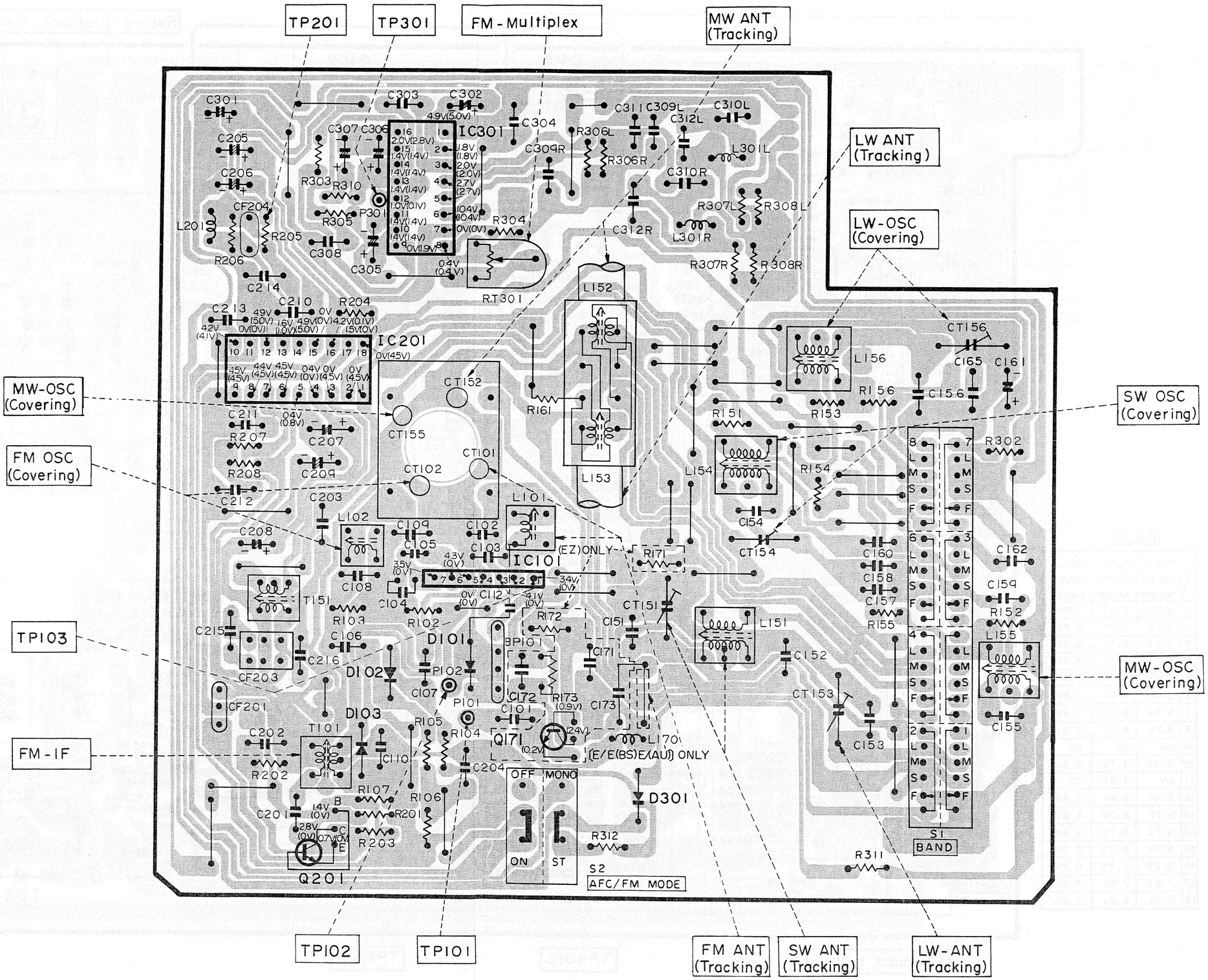
Circuit No.	
Value	No indicated Ω(Ohm) M : 1000kΩ
Tolerance	No indicated ±5% K : ±10% M : ±20%
Wattage	No indicated ¼W
Sort	No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film

C101 0.001-M

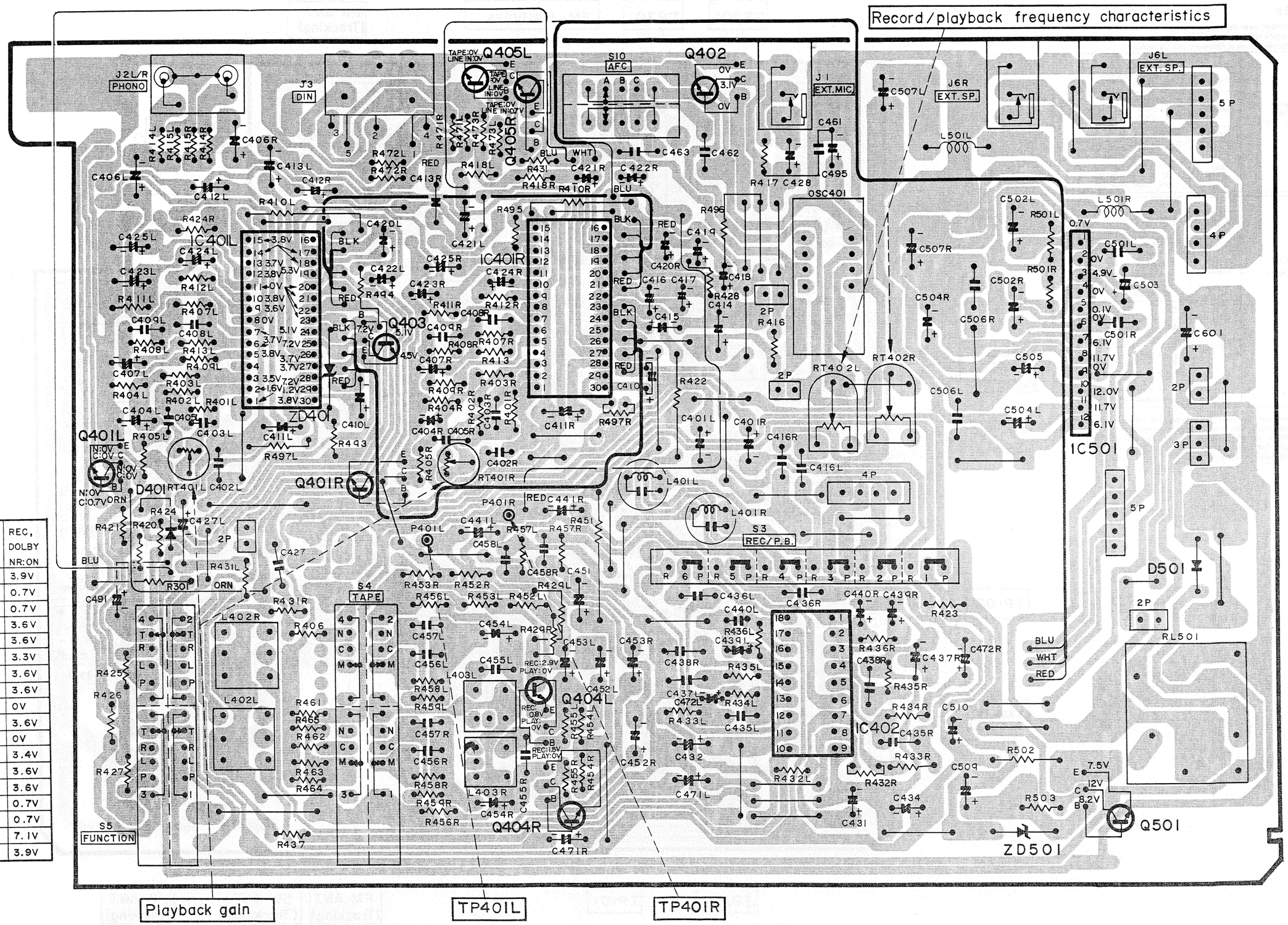
C102 0.1/16

Circuit No.		
Value	No indicated μF P : PF	
Tolerance	No indicated ±10% J : ± 5% M : ±20% Z : +80% −20% D : ±0.5pF C : ±0.25pF	
Sort		Ceramic
		Electrolitic
		Mylar
		Polyester
		Styrol
Voltage	No indicated 50WV	

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with ✻, use specified ones stated on parts list since required temperature characteristics.



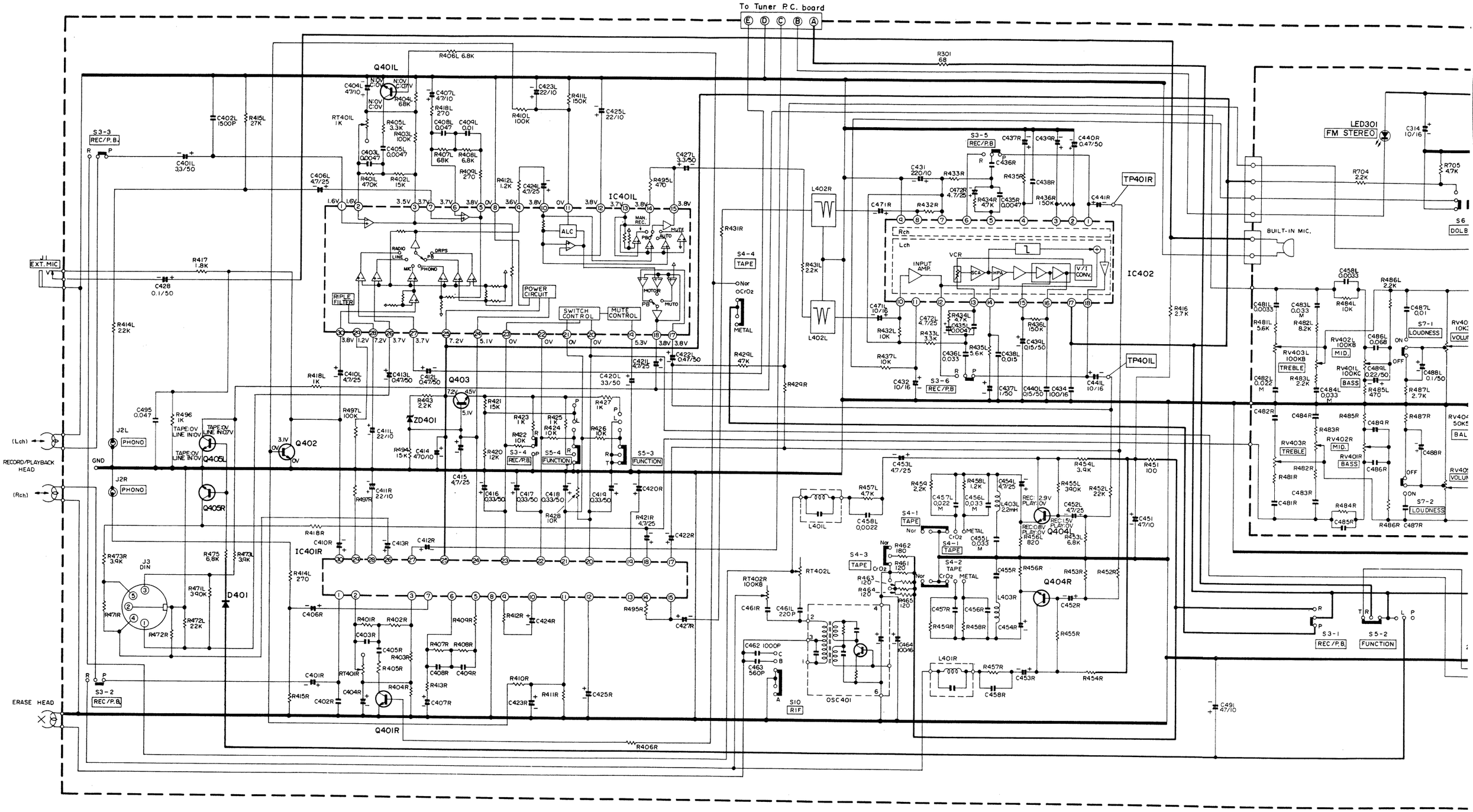
CIRCUIT BOARD DIAGRAM (Tape Recorder Section)



IC402

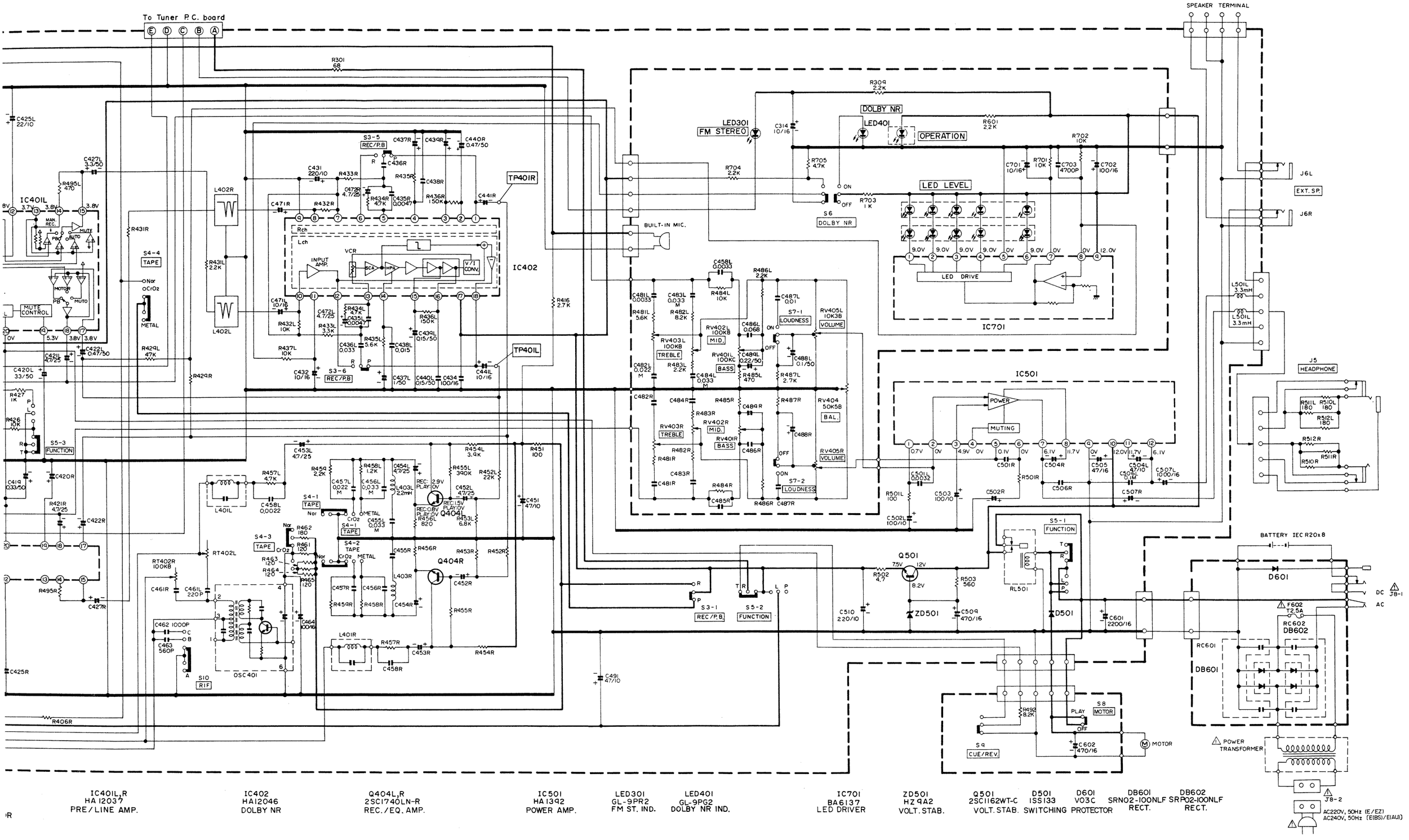
	PLAY, DOLBY NR:OFF	PLAY, DOLBY NR:ON	REC, DOLBY NR:ON
1	4.0V	4.0V	3.9V
2	0.7V	0.7V	0.7V
3	0.7V	0.7V	0.7V
4	3.7V	3.7V	3.6V
5	3.7V	3.7V	3.6V
6	3.4V	3.4V	3.3V
7	3.7V	3.7V	3.6V
8	3.7V	3.7V	3.6V
9	0V	0V	0V
10	3.7V	3.7V	3.6V
11	0V	4.9V	0V
12	3.4V	3.4V	3.4V
13	3.7V	3.7V	3.6V
14	3.7V	3.7V	3.6V
15	0.7V	0.7V	0.7V
16	0.7V	0.7V	0.7V
17	7.2V	7.2V	7.1V
18	4.0V	4.0V	3.9V

SCHEMATIC DIAGRAM (Tape Recorder Section)



Q405L,R 2SC458 DIN MUTE	Q402 2SC1740LN-R MIC. ALC	Q401L,R 2SC458 SWITCHING	ZD401 HZ-28 VOLT. STAB.	Q403 2SC458 REGULATOR	D401 IS2473 PROTECTOR	IC401L,R HA12037 PRE/LINE AMP.	IC402 HA12046 DOLBY NR	Q404L,R 2SC1740LN-R REC./EQ. AMP.	IC501 HA1392 POWER AMP.	LED301 GL-9PR2 FM ST. IND.	LED401 GL-9PG2 DOLBY NR IND.

TRK-9100



IC401L,R
HA12037
PRE/LINE AMP.

IC402
HA12046
DOLBY NR

Q404L,R
2SC1740LN-R
REC./EQ. AMP.

IC501
HA1392
POWER AMP.

LED301
GL-9PR2
FM ST. IND.

LED401
GL-9PG2
DOLBY NR IND.

IC701
BA6137
LED DRIVER

ZD501
HZ9A2
VOLT. STAB.

Q501
2SC1162WT-C
VOLT. STAB.

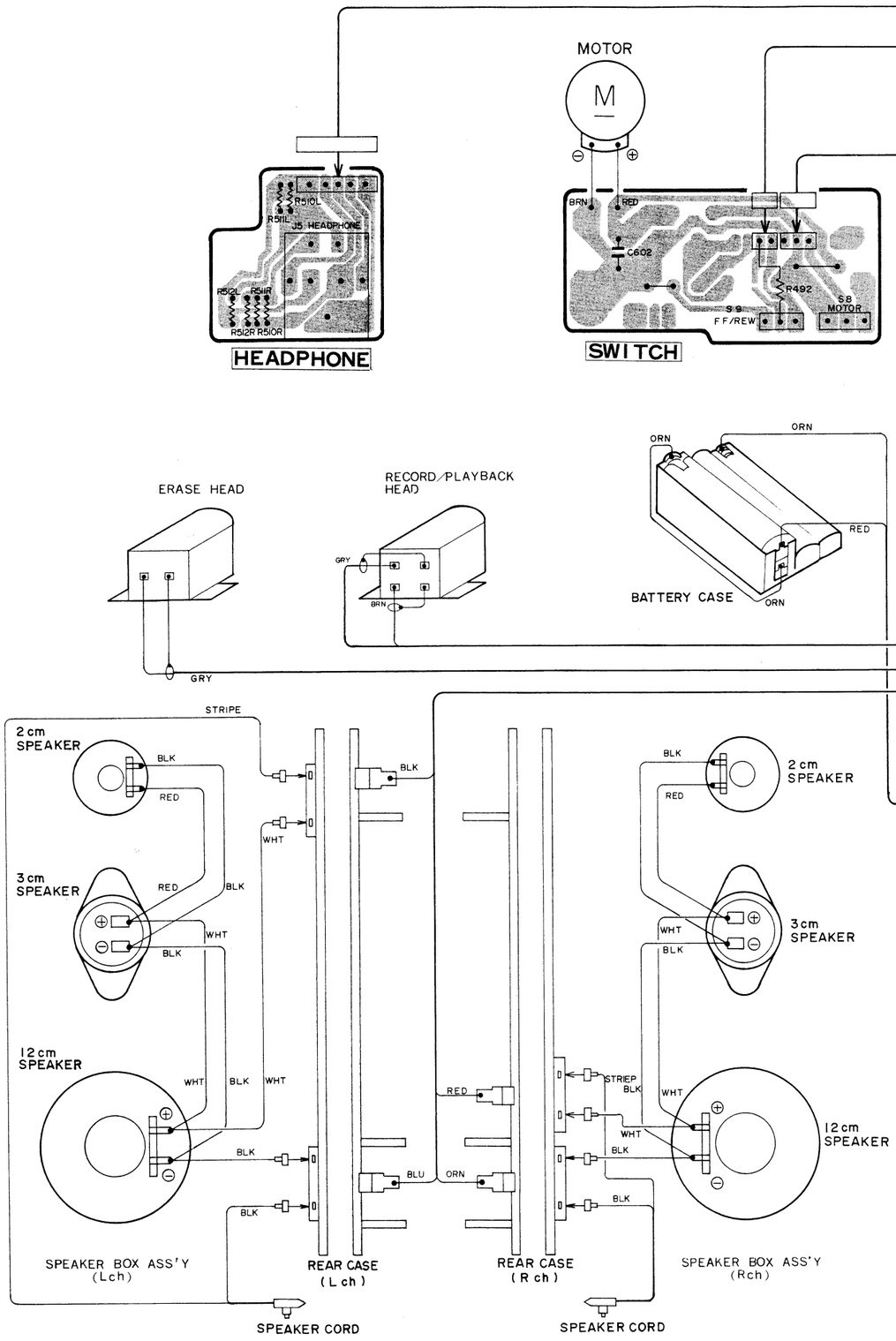
D501
1SS133
SWITCHING

D601
V03C
PROTECTOR

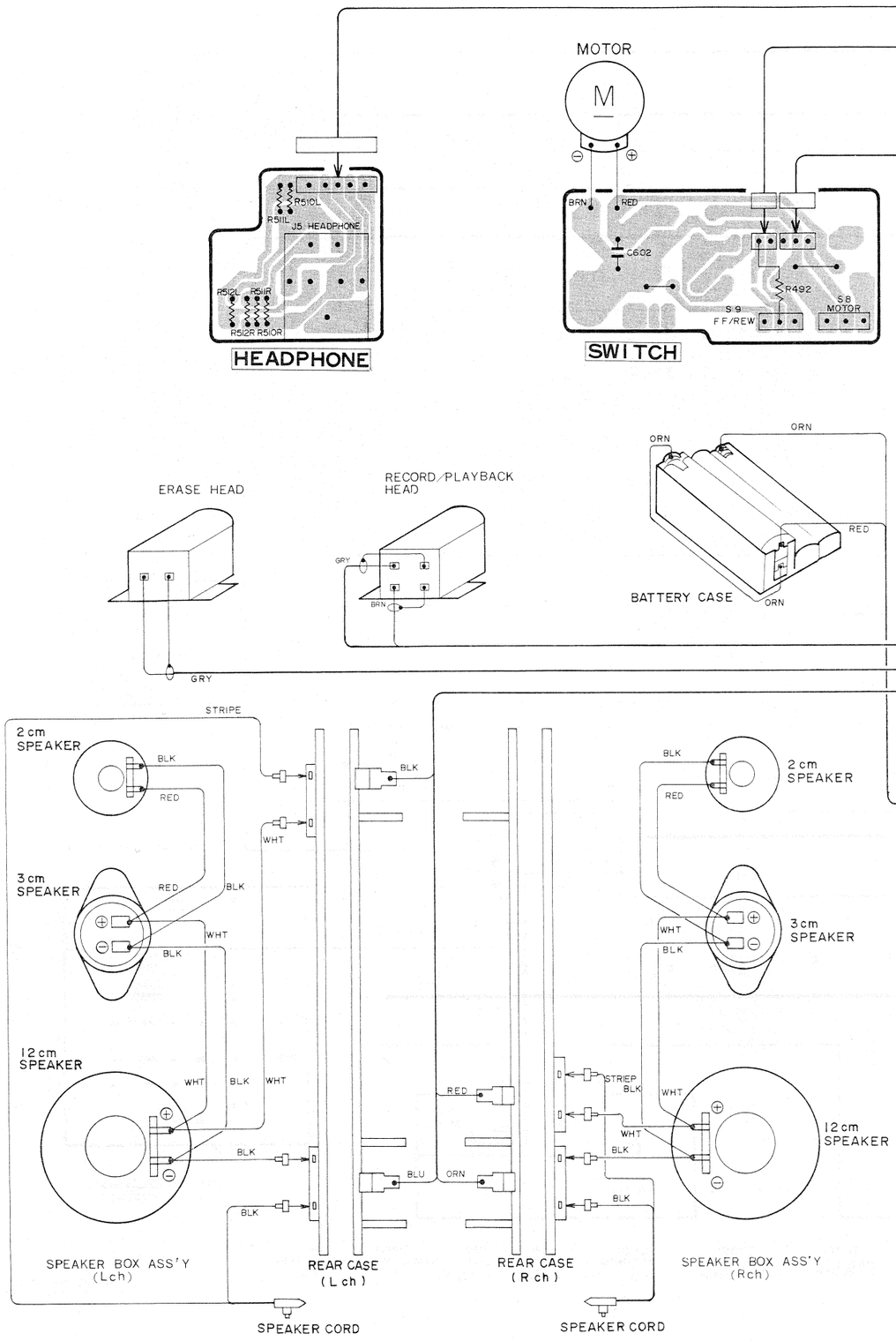
DB601
SRN02-100NLF
RECT.

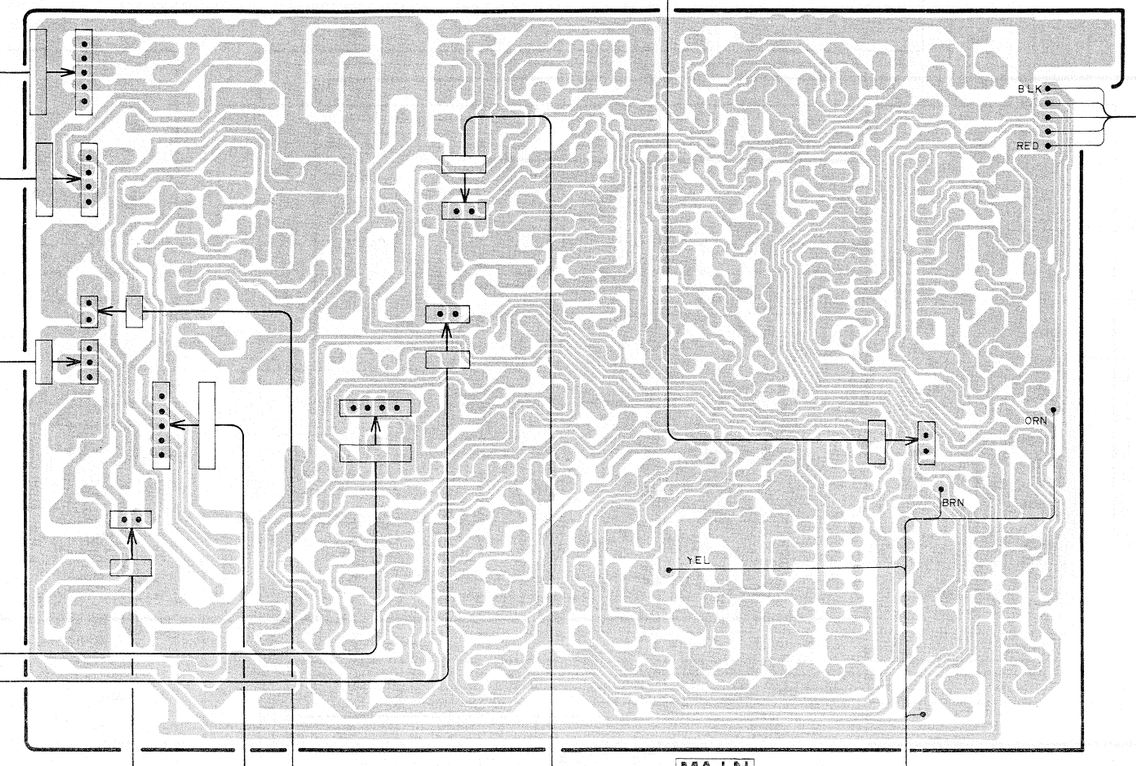
DB602
SRP02-100NLF
RECT.

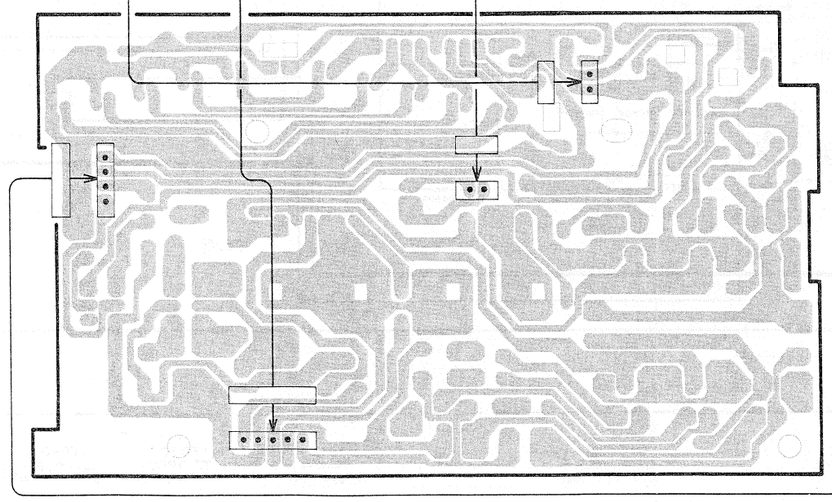
WIRING DIAGRAM

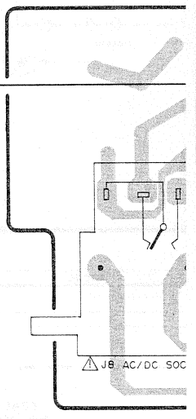


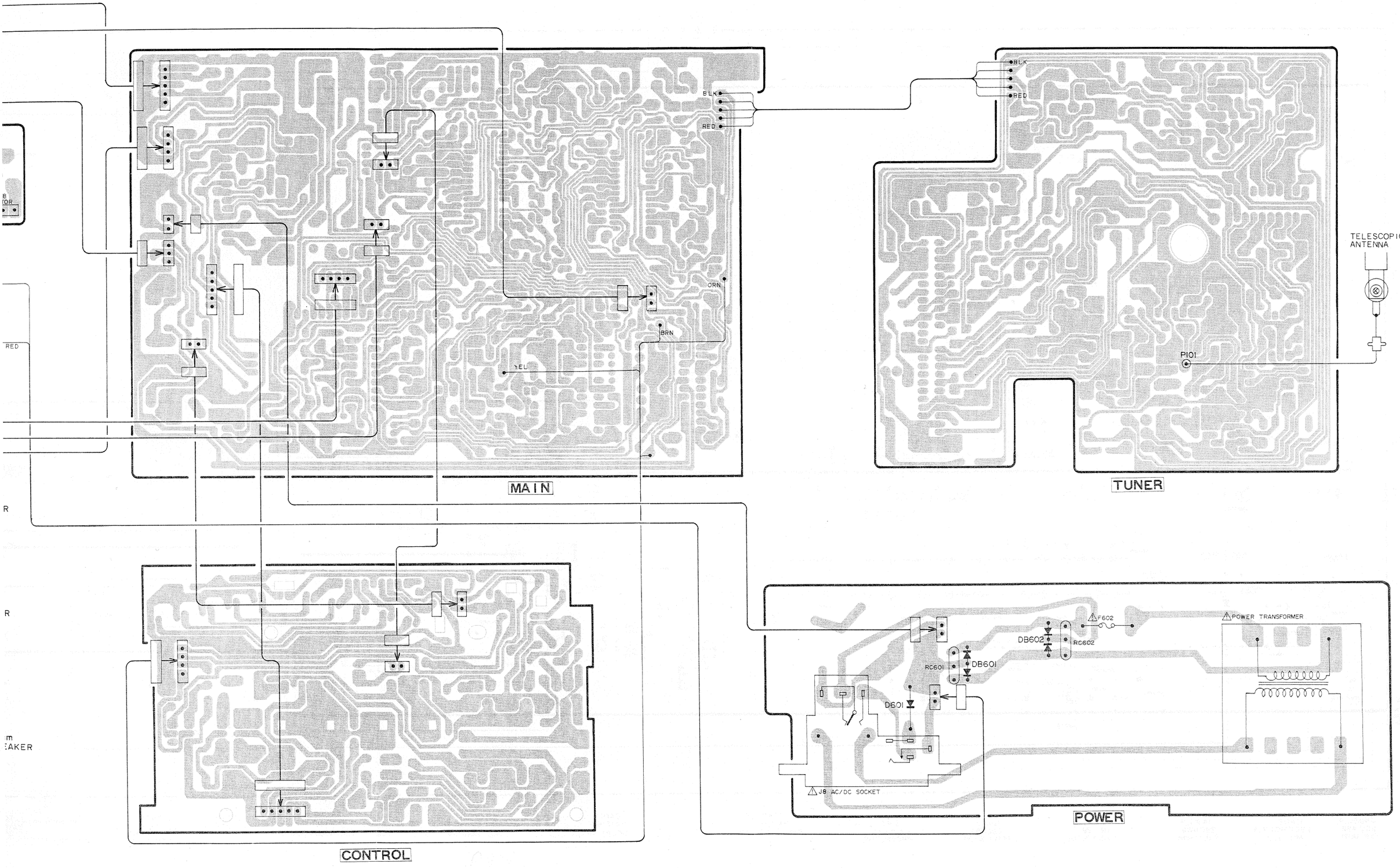
WIRING DIAGRAM



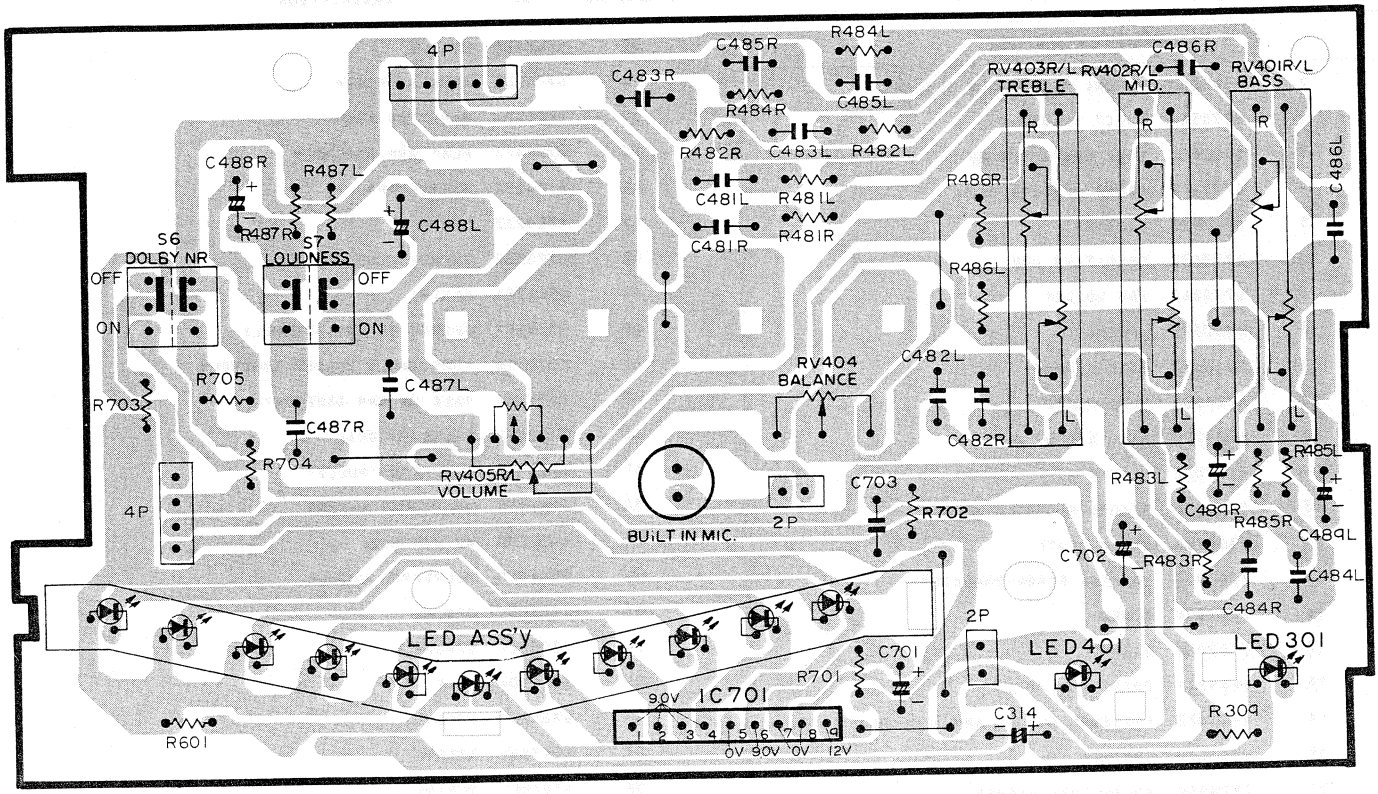




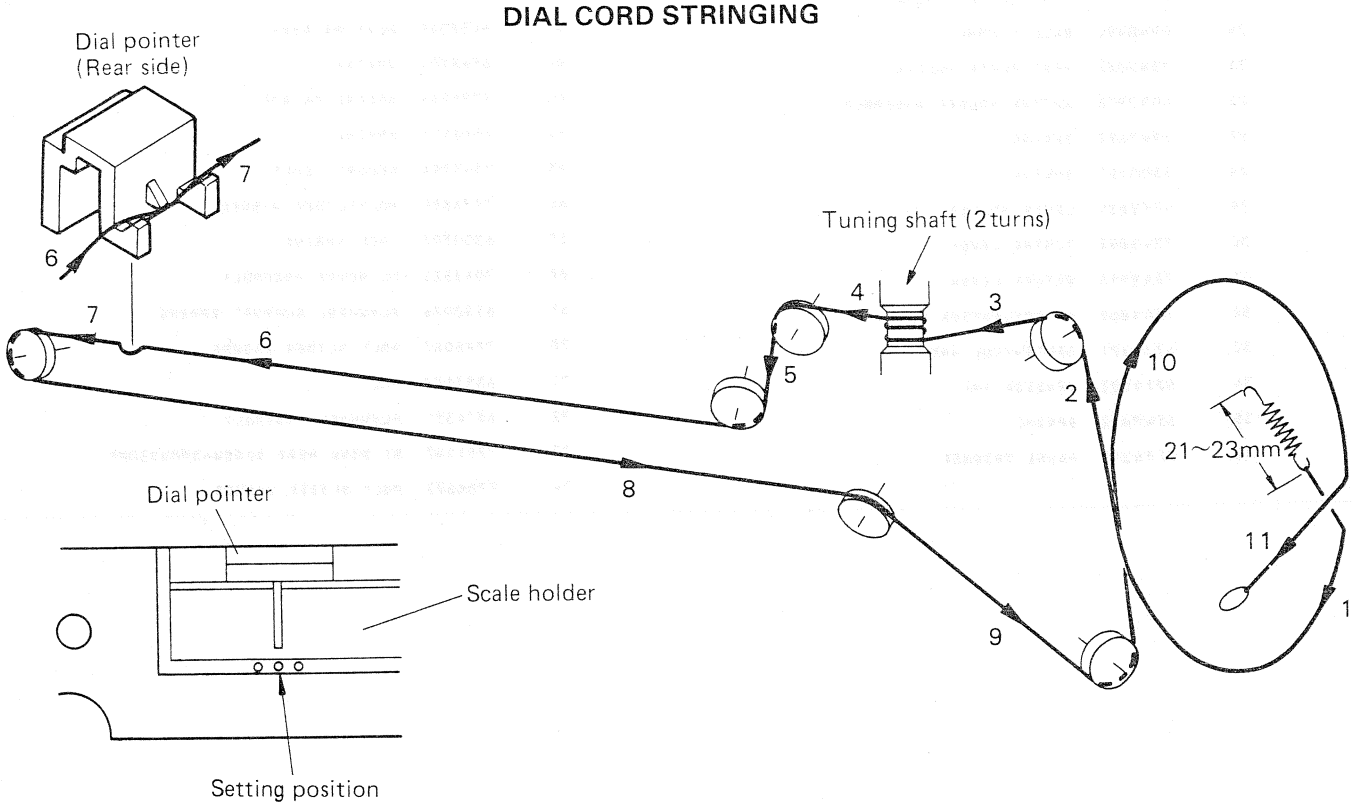



BLK
RED
ORN
BRN
YEL
MAIN
BLK
RED
TELESCOPIC ANTENNA
P101
TUNER
CONTROL
F602
POWER TRANSFORMER
DB602
RC602
RC601
DB601
D601
J8 AC/DC SOCKET
POWER

CIRCUIT BOARD DIAGRAM



DIAL CORD STRINGING



Stringing Method

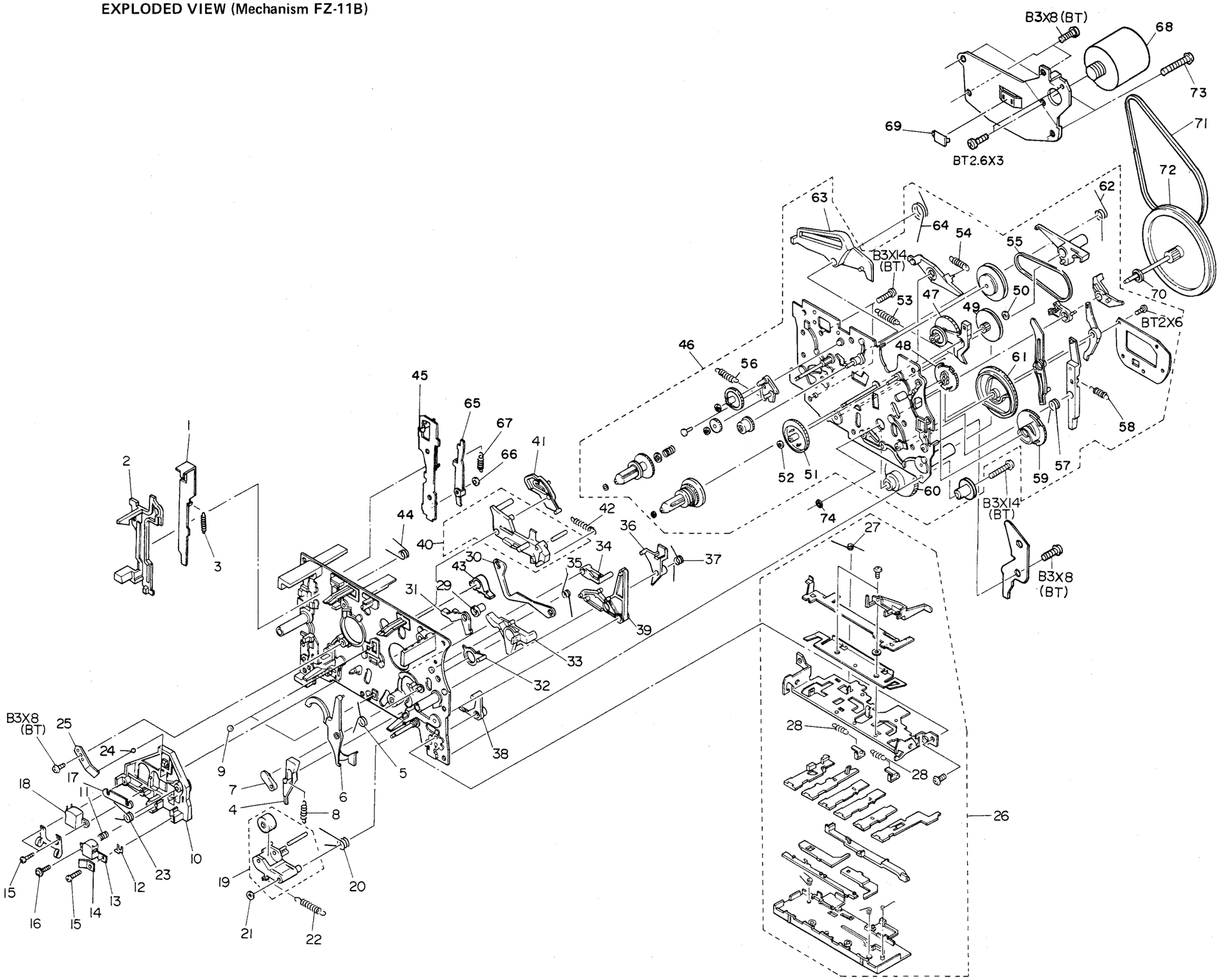
1. Turn the pulley fully clockwise.
2. String the dial cord in the direction of the arrow (Nos. 1 – 11).
3. Set the dial pointer to setting position.

REPLACEMENT PARTS LIST

MECHANISM (FZ-11B)

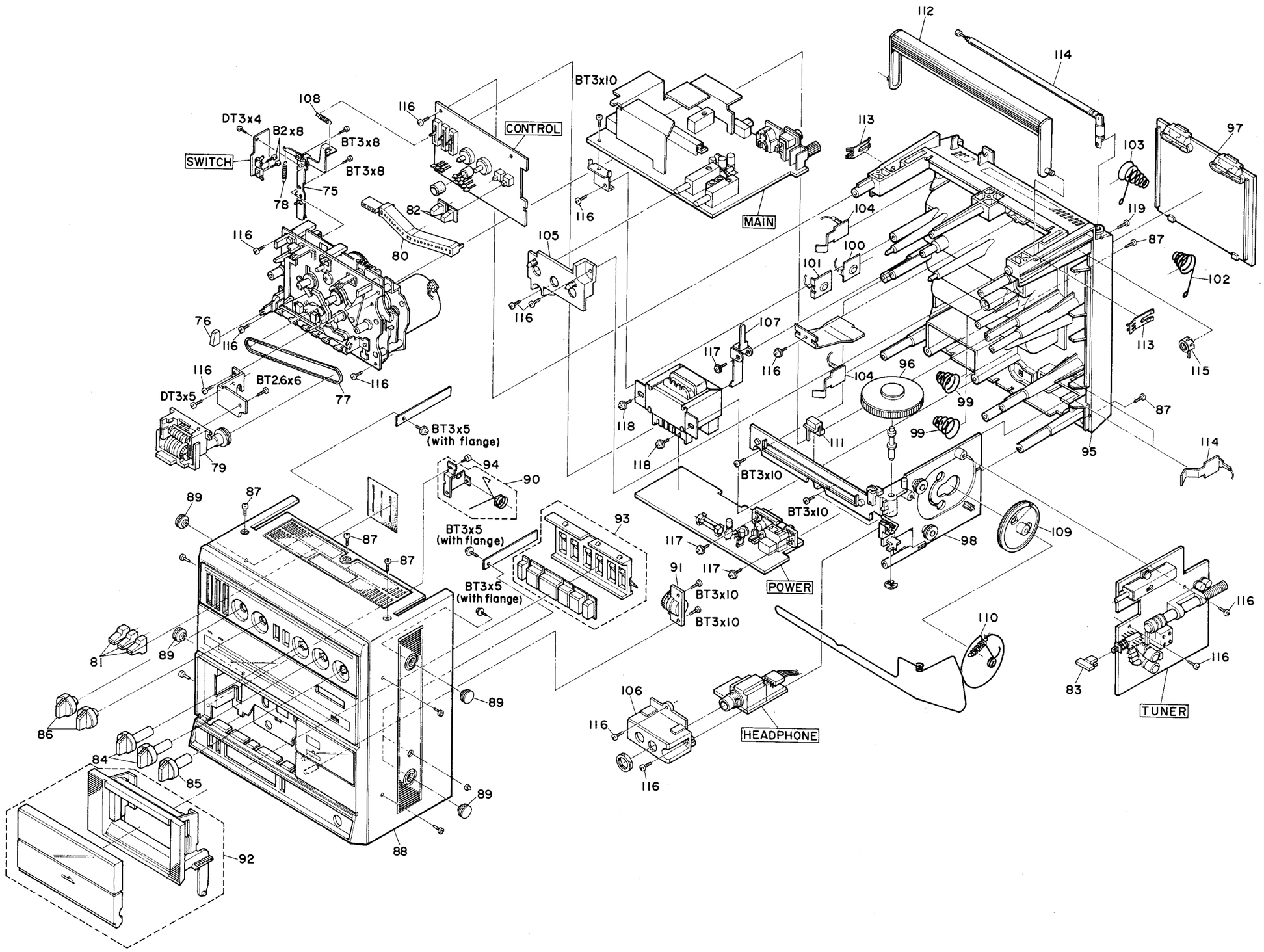
SYMBOL-NO	P-NO	DESCRIPTION
1	7345871	RECORD PREVENTION SLIDER
2	6771344	EJECT SLIDER
3	6301011	LOCK LEVER SPRING
4	6773822	PAUSE SENSING ARM
5	6547923	SPRING
6	6773832	OPERATING ARM
7	6772843	ARM HOLDER
8	6300595	SPRING
9	0948492	BALL - 2MMD
10	6771334	HEAD PLATE
11	6321733	HEAD SPRING C
12	7757042	SPACER
13	5449032	RECORD PLAYBACK HEAD
14	7339961	EARTH PLATE
15	7780913	TAPPING SCREW-2MMDX10MM
16	7781004	SCREW
17	7757052	SPACER
18	5445531	ERASE HEAD
19	6771072	PRESSURE ROLLER ARM ASSEMBLY
20	6547692	SPRING
21	7778859	POLYSLIDER WASHER
22	6301101	SPRING
23	6547571	HEAD PLATE SPRING
24	0948492	BALL - 2MMD
25	7345882	HEAD PLATE HOLDER
26	6057975	BUTTON HOLDER ASSEMBLY
27	6547642	SPRING
28	6300181	SPRING
29	6772831	LEVER HOLDER
30	7345892	TIMING LEVER
31	7345913	RETURN LEVER
32	7345862	AS PREVENTION LEVER
33	6774221	REVIEW/CUE ARM
34	6771082	TENSION ARM
35	6547622	SPRING
36	6774211	PAUSE TRIGGER
37	6548261	SPRING
38	6774201	AUTO STOP ARM
39	6771474	FUNCTION ARM
40	6771413	PLAY ARM ASSEMBLY
41	6774231	SWITCH ARM
42	6301233	SPRING
43	6773332	SEARCH STOPPER
44	6548281	SPRING
45	7345807	RECORD SLIDER ASSEMBLY
46	6771716	TURN TABLE HOLDER ASSEMBLY
47	6771364	TAKE UP ARM ASSEMBLY
48	6432212	PAUSE PA GEAR
49	6422772	AUTO STOP PULLEY
50	7786115	POLYESTER WASHER
51	6432073	AS CAM GEAR
52	7786115	POLYESTER WASHER
53	6301331	SPRING
54	6301101	SPRING
55	6355504	BELT
56	6301331	SPRING
57	6547561	SPRING
58	6301001	SPRING
59	6432053	FF PA GEAR
60	6432061	REWIND PA GEAR
61	6432042	PLAY PA GEAR
62	6548121	SPRING
63	6771244	RECORD PA ARM
64	6548112	SPRING
65	7345994	RECORD LEVER
66	7778859	POLYSLIDER WASHER
67	6300592	LOCK SPRING
68	7043325	DC MOTOR ASSEMBLY
69	6530926	FLYWHEEL SUPPORT SPRING
70	7788067	POLY SLIDER WASHER
71	6355509	BELT
72	6374551	FLYWHEEL ASSEMBLY
73	7781147	BT BIND HEAD SCREW-3MMDX30MM
74	7786623	POLY SLIDER WASHER

EXPLODED VIEW (Mechanism FZ-11B)



Note: Components marked without numbers in this drawing are not specified as replacement parts.

EXPLODED VIEW (Cabinet)

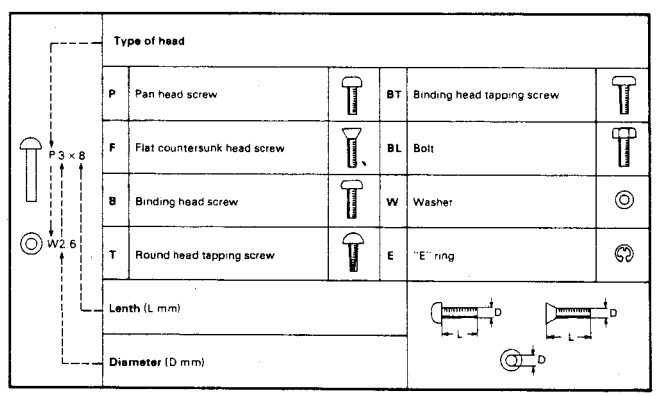


Note: Components marked without numbers in this drawing are not specified as replacement parts.

SYMBOL-NO	P-NO	DESCRIPTION
		FOR CASSETTE DECK ASSEMBLY
75	7347152	RECORD LEVER ASSEMBLY
76	6056423	EJECT BUTTON ASSEMBLY
77	6354472	COUNTER BELT
78	6542552	REC SPRING
79	5559592	COUNTER
80	6776151	LED HOLDER
		MISCELLANEOUS
81	6293901	SLIDE KNOB (BASS,TREBLE,MID)
82	6293881	PUSH BUTTON(LOUDNESS,DOLBY)
83	6293891	PUSH BUTTON (AFC/MODE)
84	6284331	KNOB (TAPE,FUNCTION)
85	6284332	KNOB (BAND)
86	6284333	KNOB (VOLUME,BALANCE)
87	8698410	BT BIND SCREW-3MMDX10MM
88	6037682	FRONT CASE ASSEMBLY
89	7544967	JOINT SHAFT
90	7347223	EJECT HOLDER ASSEMBLY
91	6768341	DAMPER
92	6094106	CASSETTE LID ASSEMBLY
93	6057031	FUNCTION BUTTON ASSEMBLY
94	8699408	BT BIND HEAD SCREW-3MMDX8MM (BLACK)
95	6037602	REAR CASE ASSEMBLY (E)
95	6037603	REAR CASE ASSEMBLY (E(BS))
95	6037604	REAR CASE ASSEMBLY (EZ)
95	6037609	REAR CASE ASSEMBLY (E(AU))
96	6284091	TUNING KNOB ASSEMBLY
97	6172431	BATTERY LID ASSEMBLY
98	6776131	DIAL CORD STRINGING HOLDER ASSEMBLY
99	6324112	BATTERY SPRING
100	7450344	BATTERY TERMINAL
101	7450343	BATTERY TERMINAL
102	6303973	SPRING
103	6303972	SPRING
104	7776471	SPEAKER TERMINAL
105	6776161	P.W.B HOLDER
106	6776141	HEADPHONE SOCKET HOLDER
107	7354572	RECORD ARM
108	6300593	LOCK SPRING
109	6346355	PULLEY
110	6316231	SPRING M
111	6398871	POINTER
112	6334921	HANDLE ASSEMBLY
113	6531142	SPRING
114	5752711	TELESCOPIC ANTENNA
115	5687142	CAP TERMINAL
116	8699410	BT BIND HEAD SCREW-3MMDX10MM (BLACK)
117	7781132	BT SCREW 3MMDx10MM
118	7781136	BT SCREW 3MMD x 20MM
119	8678414	DT BIND SCREW-3MMDX14MM
120	6037542	SPEAKER BOX ASSEMBLY(R)
121	6174501	CORD LID
122	7354601	JOINT HOLDER ASSEMBLY
123	6037612	BAFFLE PLATE ASSEMBLY
124	5746991	SPEAKER CORD
125	5406842	SPEAKER-12CM
126	5409112	SPEAKER-3CM
127	5419071	SPEAKER-2CM
128	6774412	SPEAKER HOLDER
129	7781147	BT BIND HEAD SCREW-3MMDX30MM
130	7781132	BT SCREW 3MMDx10MM
131	6037552	SPEAKER BOX ASSEMBLY(L)
		CAPACITORS
CT151	5058191	TRIMMER 10PF
CT153-154	5058191	TRIMMER 10PF
CT156	5058414	TRIMER 20P
C104	0246444	CERAMIC DISCAL 15PF+-5%
C108	0248336	CERAMIC DISCAL 18PF+-5%(N-470)
	5052781	VARIABLE CAPACITOR
		RESISTORS
RC601-602	0186451	CR PACK
RT301	5007477	SEMI VARIABLE 10KOHM
RT401LR	5007432	SEMI VARIABLE 1.0KOHM
RT402LR	5007701	SEMI VARIABLE 100KOHM
RV401LR	5027162	VARIABLE RESISTOR 100KOHM(C)
RV402LR	5027161	VARIABLE RESISTOR 100KOHM(B)
RV403LR	5027161	VARIABLE RESISTOR 100KOHM(B)
RV404	5000894	VARIABLE RESISTOR 50KOHM(B)
RV405LR	5000913	VARIABLE RESISTOR 10KOHM(B)
R502	0170473	FUSE RESISTOR 4.7OHM+-5%
		SEMI-CONDUCTORS
DB601	5331452	DIODE SRN02-100NLF
DB602	5331451	DIODE SRP02-100NLF
D101	5339021	DIODE 1SS133
D102	5330661	DIODE SILICON 1S2790
D103	5339021	DIODE 1SS133
D301	5339021	DIODE 1SS133
D401	5330571	DIODE IS2473VE
D501	5339021	DIODE 1SS133
D601	5330001	RECTIFIER SILICON V03C
IC101	5351902	IC AN7213A
IC201	5368171	IC AN7224
IC301	5350684	IC HA1330
IC401LR	5369901	IC HA12037
IC402	5369891	IC HA12046
IC501	5352141	IC HA1392
IC701	5352572	IC BA6137
LED	5381241	LED ASSEMBLY
LED301	5380271	LED GL-9PR2
LED401	5380281	LED GL-9PG2
Q171	5323061	TRANSISTOR 2SC380TM-O (EZ)

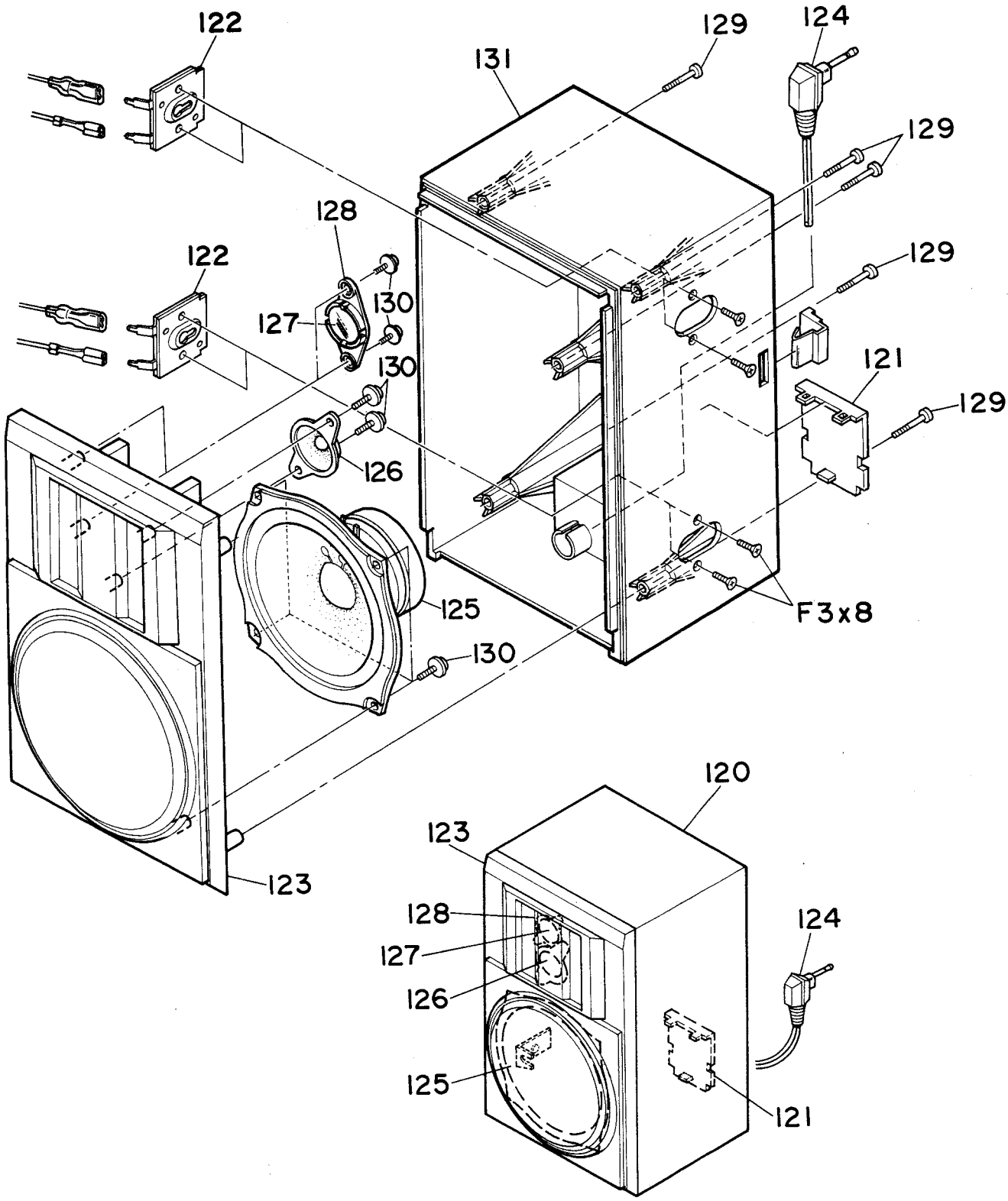
SYMBOL-NO	P-NO	DESCRIPTION
		SEMI-CONDUCTORS
Q201	5323061	TRANSISTOR 2SC380TM-O
Q401LR	5320069	TRANSISTOR 2SC458CD
Q402	5321293	TRANSISTOR 2SC1740LN-R
Q403	5320069	TRANSISTOR 2SC458CD
Q404LR	5321293	TRANSISTOR 2SC1740LN-R
Q405LR	5320069	TRANSISTOR 2SC458CD
Q501	5320643	TRANSISTOR 2SC1162WT-C
ZD401	5330715	ZENER DIODE HZ2B
ZD501	5330325	ZENER DIODE HZ9A2
		TRANSFORMERS
⚠ PT	5213143	POWER TRANSFORMER [E/EZ]
⚠ PT	5213144	POWER TRANSFORMER [E(BS)/E(AU)]
T101	5140071	FM IF TRANSFORMER
T151	5152372	AM IF TRANSFORMER
		COILS
L101	5126482	FM RF COIL
L102	5126278	FM OSILLATOR COIL
L151	5123493	SW ANTENNA [E,E(BS)]
L151	5123776	SW ANTENNA COIL [EZ/E(AU)]
L152-153	5113711	FERRITE ANTENNA
L154	5123678	SW OSCILLATOR COIL
L155	5120518	MW OSCILLATOR COIL
L156	5120663	MW OSCILLATOR COIL
L170	5123271	FM TRAP COILL0.5MH
L201	5152324	CHOKE COIL 10μH+-10%
L301LR	5150571	CHOKE COIL 33MH
L401LR	5120566	CHOKE COIL
L402LR	5162283	LOW PASS FILTER
L403LR	5120274	CHOKE COIL
L501LR	5150761	CHOKE COIL

SYMBOL-NO	P-NO	DESCRIPTION
		MISCELLANEOUS
	5421921	BUILT IN MICROPHONE
	5686201	TERMINAL PLATE
BP101	5161551	FILTER
CF201	5160303	CERAMIC FILTER 10.7MHZ
CF203	5160065	CERAMIC FILTER 468KHZ
CF204	5160381	CERAMIC FILTER 10.7MHZ
⚠ F602	5721064	FUSE 2.5A
J 1	5673381	JACK-3.5MMD
J 2LR	5676322	2P PIN JACK
J 3	5653181	DIN SOCKET
J 5	5674353	HEADPHONE JACK
J 6LR	5673381	JACK-3.5MMD
⚠ J 8	5652342	AC-DC SOCKET [E/E(BS)/EZ]
⚠ J8	5652341	AC – DC SOCKET [E/(AU)]
OSC401	5260981	OSCILLATOR BLOCK
RL501	5641491	RELAY
S 1	5613454	SLIDE ROTARY SWITCH (BAND)
S 2	5634418	PUSH SWITCH (FM MODE)
S 3	5622301	SLIDE SWITCH (REC/P.B.)
S 4	5613452	SLIDE ROTARY SWITCH (TAPE)
S 5	5613451	SLIDE ROTARY SWITCH (FUNCTION)
S 6	5633792	PUSH SWITCH (DOLBY NR)
S 7	5633792	PUSH SWITCH (LOUDNESS)
S 8	5633891	PUSH SWITCH (MOTOR)
S 9	5633691	PUSH SWITCH (CUE/REV.)
S 10	5624411	SLIDE SWITCH (RIF)
		FOR ACCESSARIES
⚠	5747324	POWER CORD [E, EZ]
⚠	5746344	POWER CORD [E(BS)]
⚠	5747172	POWER CORD [E(AU)]



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

EXPLODED VIEW (Speaker box)



Note: Components marked without numbers in this drawing are not specified as replacement parts.