

# Service Manual

Radio

FM-LW-MW-SW ALL BAND RECEIVER

## RF-B45

Color

(K) ..... Black Type



### Areas

Country Code	Area	Color
(PP)	U.S.A.	(K)

### ■ SPECIFICATIONS

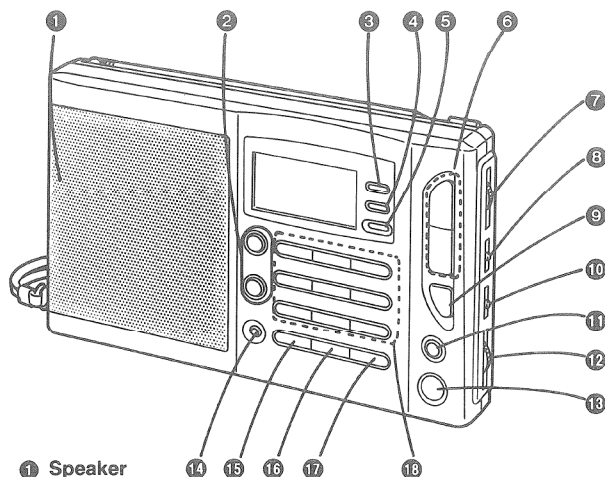
Frequency Range:	FM; 87.5~108 MHz LW; 144~288 kHz MW; 520~1610 kHz (at 10 kHz step) 522~1611 kHz (at 9 kHz step) SW; 1,620~29,995 kHz
Intermediate Frequency:	FM; 10.7 MHz AM 1st; 55,845 kHz AM 2nd; 459 kHz
Sensitivity:	FM; 4 $\mu$ V/50 mW output (−3 dB Limit Sens.) LW; 600 $\mu$ V/m/50 mW output MW; 180 $\mu$ V/m/50 mW output SW; 10 $\mu$ V/50 mW output
Power Source:	Battery; 6 V (four "AA" size batteries) (Panasonic UM3/R6P, AM3/LR6 or equivalent) AC; 120 V, 60 Hz with optional Panasonic AC adaptor RP-65
Speaker:	8 cm (3") PM dynamic speaker, 8 $\Omega$
Power Output:	600 mW (RMS Max.)
Jacks:	Earphone; 8 $\Omega$ , $\varnothing$ 3.5 EXT. ANT. (LW/MW/SW); $\varnothing$ 3.5 DC IN; 6 V
Dimensions:	204 (W)×119 (H)×37 (D) mm (8 $\frac{1}{16}$ "×4 $\frac{11}{16}$ "×1 $\frac{7}{16}$ " )
Weight:	620 g (1 lb. 6 oz.) without batteries

### Notes:

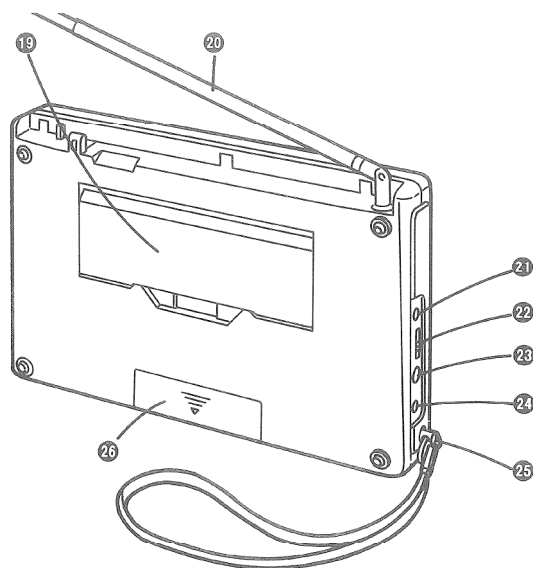
1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

# Panasonic®

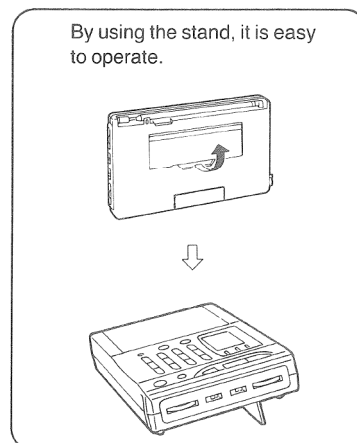
## ■ LOCATION OF CONTROLS



- ① **Speaker**  
(8 cm, 8Ω)
- ② **Band select keys (FM, AM/LW • MW • SW)**
- ③ **Standby key (STANDBY)**
- ④ **Standby set key (STANDBY SET)**  
Press the key to set the time you want to turn on the radio automatically.
- ⑤ **Memory/time set key (MEMORY/TIME SET)**  
Press the key when setting the clock time. In memory tuning, press to preset the stations.
- ⑥ **Tuning keys (TUNING +, -)**  
Press the + key or - key to make the frequency change up or down.
- ⑦ **Fine tuning control (FINE TUNING)**  
When receiving the MW, LW, SW and SSB, use this control for more precise tuning.
- ⑧ **AM mode selector (MODE)**
- ⑨ **Auto tuning key (AUTO TUNING)**
- ⑩ **Tone selector (TONE)**
- ⑪ **Sleep key (SLEEP)**  
Press the key to turn off the radio automatically in 90, 60 or 30 minutes.
- ⑫ **Volume control (VOLUME)**
- ⑬ **Power key (POWER)**  
Press to turn on or off the radio.
- ⑭ **Hold key (HOLD)**  
Press to hold the present condition.
- ⑮ **Frequency direct access key (FREQ)**  
When you know the frequency of your desired station, press the key before entering the frequency number.
- ⑯ **Number "0"/13 meter band/memory search key (MEMORY SEARCH)**
- ⑰ **Meter band direct access/enter key (METER/ENTER)**  
Press the key before calling the lowest frequency of the SW meter band that you desire to listen to.  
After entering the frequency number of your desired station or a clock time, press the key to begin receiving the broadcast of the station or to complete the time setting.
- ⑱ **Number/memory channel/meter band keys**



⑲ **Stand**



⑳ **Telescopic antenna**

㉑ **SW external antenna jack (EXT ANT) (Ø3.5)**

㉒ **Sensitivity selector (SENS)**  
Normally set to "DX". When the signal is too strong and the sound is distorted, set to "LOCAL".

㉓ **DC input jack (DC IN 6 V ⊖ ⊕ ⊕)**

㉔ **Earphone jack (㉔) (8Ω, Ø3.5)**  
Connect the included earphone to the jack. When using the earphone, avoid listening to sound at excessive volume levels to prevent hearing disorder.  
Speakers are automatically cut off when the earphone are connected.

㉕ **Carrying strap**

㉖ **Battery compartment**

- ② **Standby indicator**  
Appears while the standby function is operating. Or flashes while the standby time is being set.
- ③ **Hold indicator**  
Appears while the sleep timer is operating.
- ④ **Sleep indicator**  
Appears when a signal is received. The bar display indicates the receiving signal strength.
- ⑤ **Memory indicator**  
Appears when memory tuning is done, or flashes when you memorize a frequency.
- ⑥ **Memory channel/empty indicator**  
Indicates the memory channel when the frequency is received by memory tuning.

## How to change the step of MW (10 kHz ↔ 9 kHz)

This unit can be used on MW 10 kHz step area, but in case of MW 9 kHz step area, operate as follows.

**Before operation, turn off the radio.**

- 1 Press the AM key of the band select keys. "MW" indication flashes for 10 seconds.



- 2 During flashing, press the number "9" key. "9" appears and flashes for 10 seconds and returns clock time display.

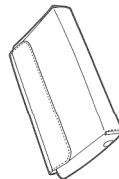


## ACCESSORIES

SW external antenna ... 1 pc. Earphone ..... 1 pc.



Soft case ..... 1 pc.



XEH1A1-AB

RSA0002

RFC0013

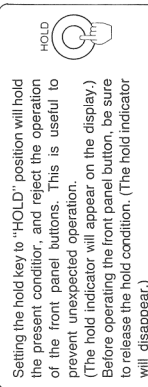
## DISASSEMBLY INSTRUCTIONS

Ref. No. 1	Ref. No. 2	Ref. No. 3	Ref. No. 4
Procedure 1	Procedure 1→2	Procedure 1→2→3	Procedure 1→2→3→4
<p>Telescopic antenna</p> <p>1. Remove the 1 screw (1).</p> <p>2. Remove the telescopic antenna in the direction of arrow.</p>	<p>Rear cabinet</p> <p>1. Unsolder the 2 terminals of the lead wire.</p> <p>2. Remove the front cabinet ass'y in the direction of arrow (2).</p>	<p>Side cabinet</p> <p>1. Unsolder the 2 terminals of the lead wire.</p> <p>2. Remove the front cabinet ass'y in the direction of arrow (2).</p>	<p>Operation P.C.B.</p> <p>1. Remove the 2 screws (1, 2).</p> <p>2. Release the 4 ribs.</p>
<p>■ <b>Side Cabinet</b></p> <p>● Remove the side cabinet in the direction of arrow.</p>	<p>■ <b>Front Cabinet</b></p> <p>1. Unsolder the 2 terminals of the lead wire.</p> <p>2. Remove the front cabinet ass'y in the direction of arrow (2).</p>	<p>■ <b>Side Cabinet</b></p> <p>● Remove the side cabinet in the direction of arrow.</p>	<p>■ <b>Operation P.C.B.</b></p> <p>1. Remove the 2 screws (1, 2).</p> <p>2. Release the 4 ribs.</p>

## NOTE FOR SERVICE

### ●About hold switch

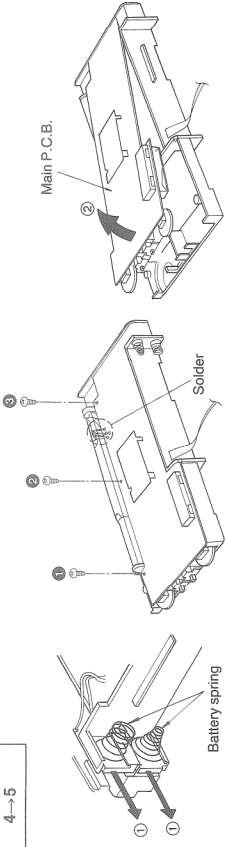
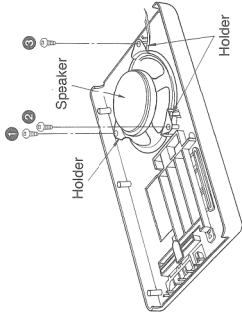
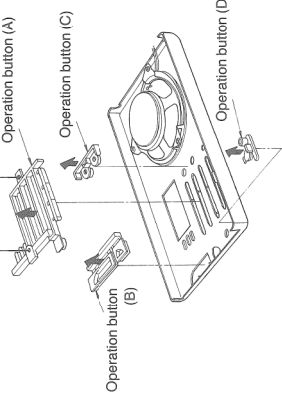
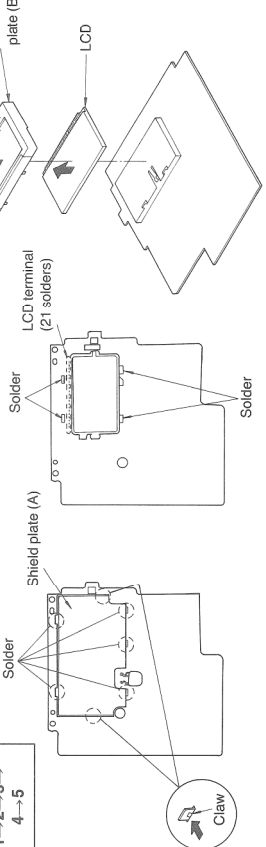
Before checking the operation problems and adjustments, be sure to release the hold state.

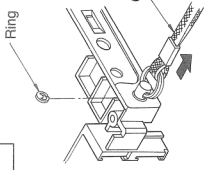
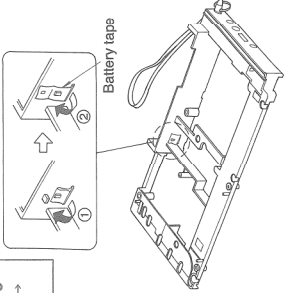
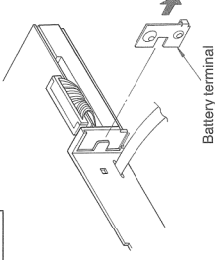
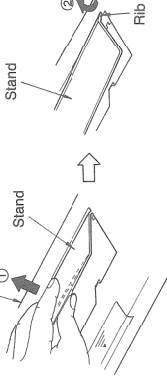


### BATTERY SERVICE LIFE

RG "AA" size batteries  
Approx. 14.5 hours of FM position (EIAJ)  
Approx. 13 hours of LW and MW position (EIAJ)  
Approx. 14 hours of SW position (EIAJ)

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

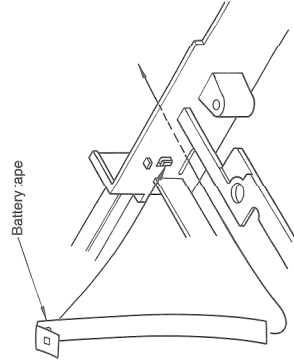
Ref. No. 5	Removal of the Main P.C.B.	
	Procedure 1→2→3→4→5	
Ref. No. 6	Removal of the speaker	
	Procedure 1→2→3→6	
Ref. No. 7	Removal of the operation buttons	
	Procedure 1→2→3→7	
Ref. No. 8	Removal of the LCD	
	Procedure 1→2→3→4→5	

Ref. No. 9	Removal of the carrying strap	
	Procedure 1→2→3→4→5→9	
Ref. No. 10	Removal of the battery tape	
	Procedure 1→2→3→4→10	
Ref. No. 11	Removal of the battery terminal	
	Procedure 1→2→3→11	
Ref. No. 12	Removal of the stand	
	Procedure 12	

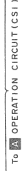
■ SPEAKER ASSEMBLY

1. Fit the line mark on the speaker with the rib's center.
2. Fix the speaker's lead wired by using Holder as shown above.
3. Install the speaker with the three screws (1-3).

■ BATTERY ASSEMBLY

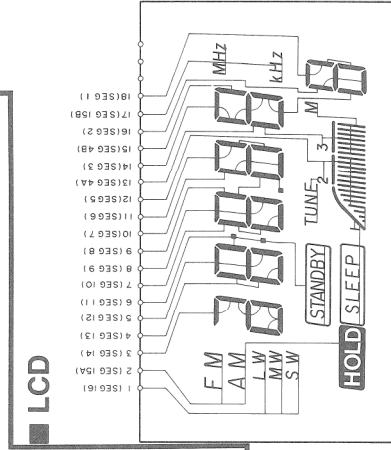
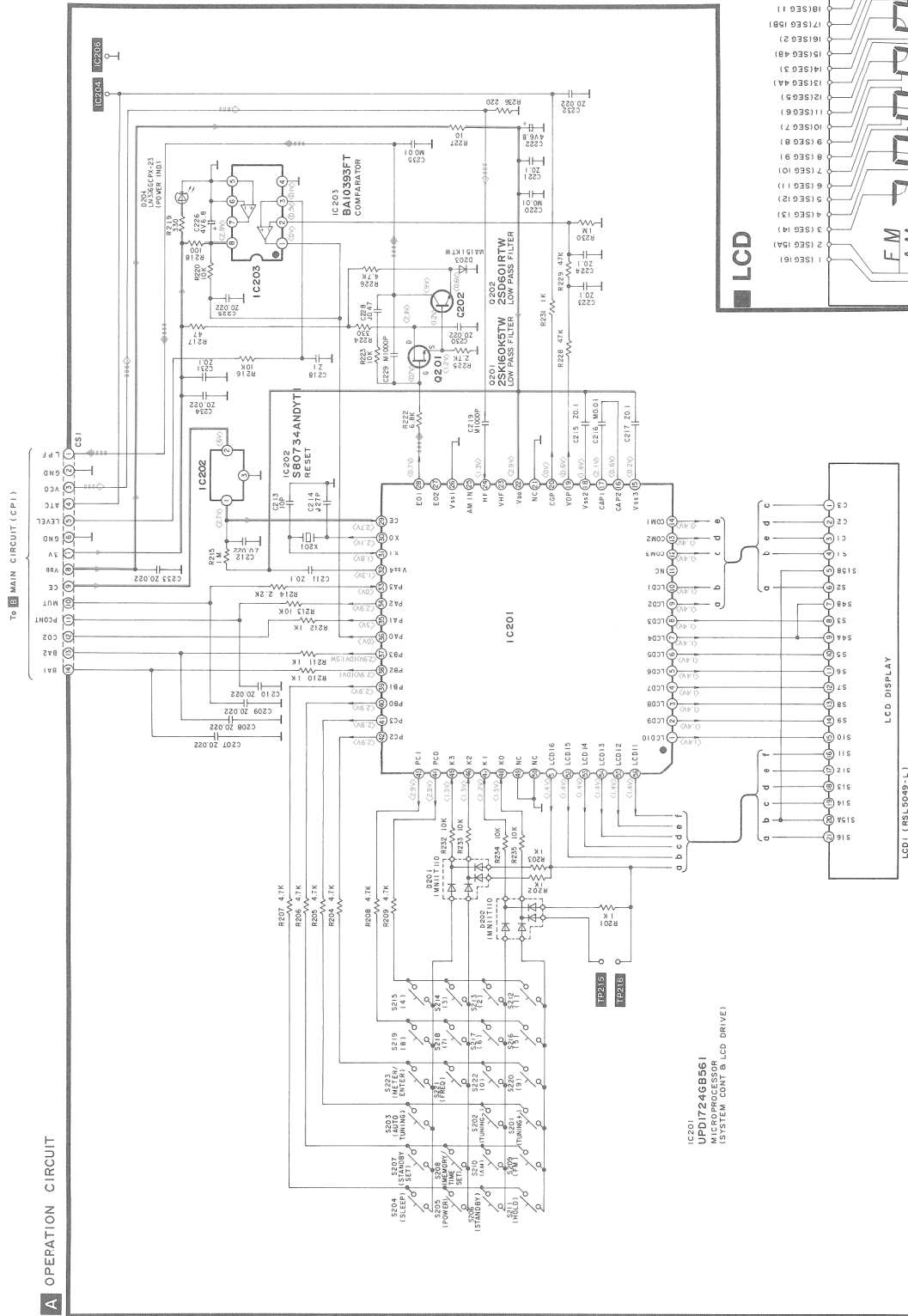
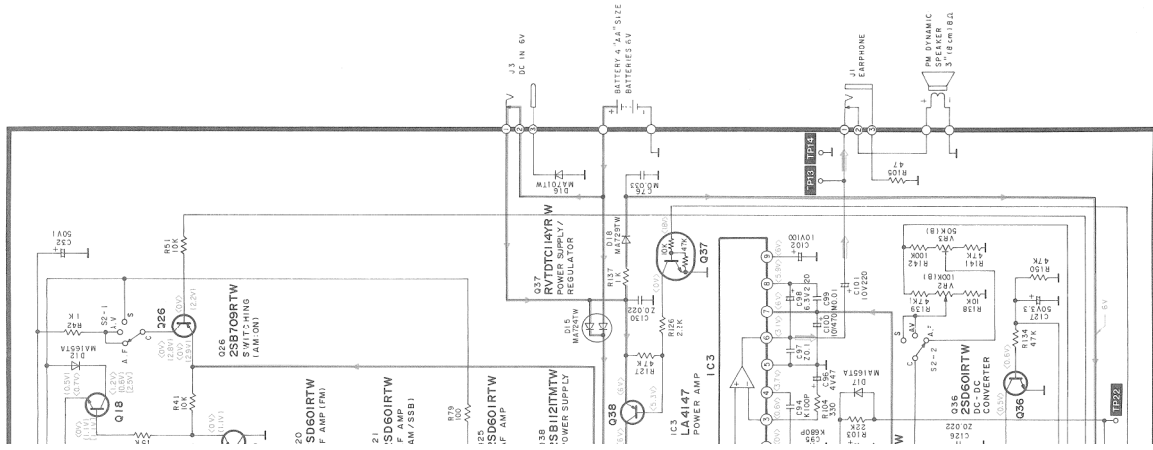


## RF-B45



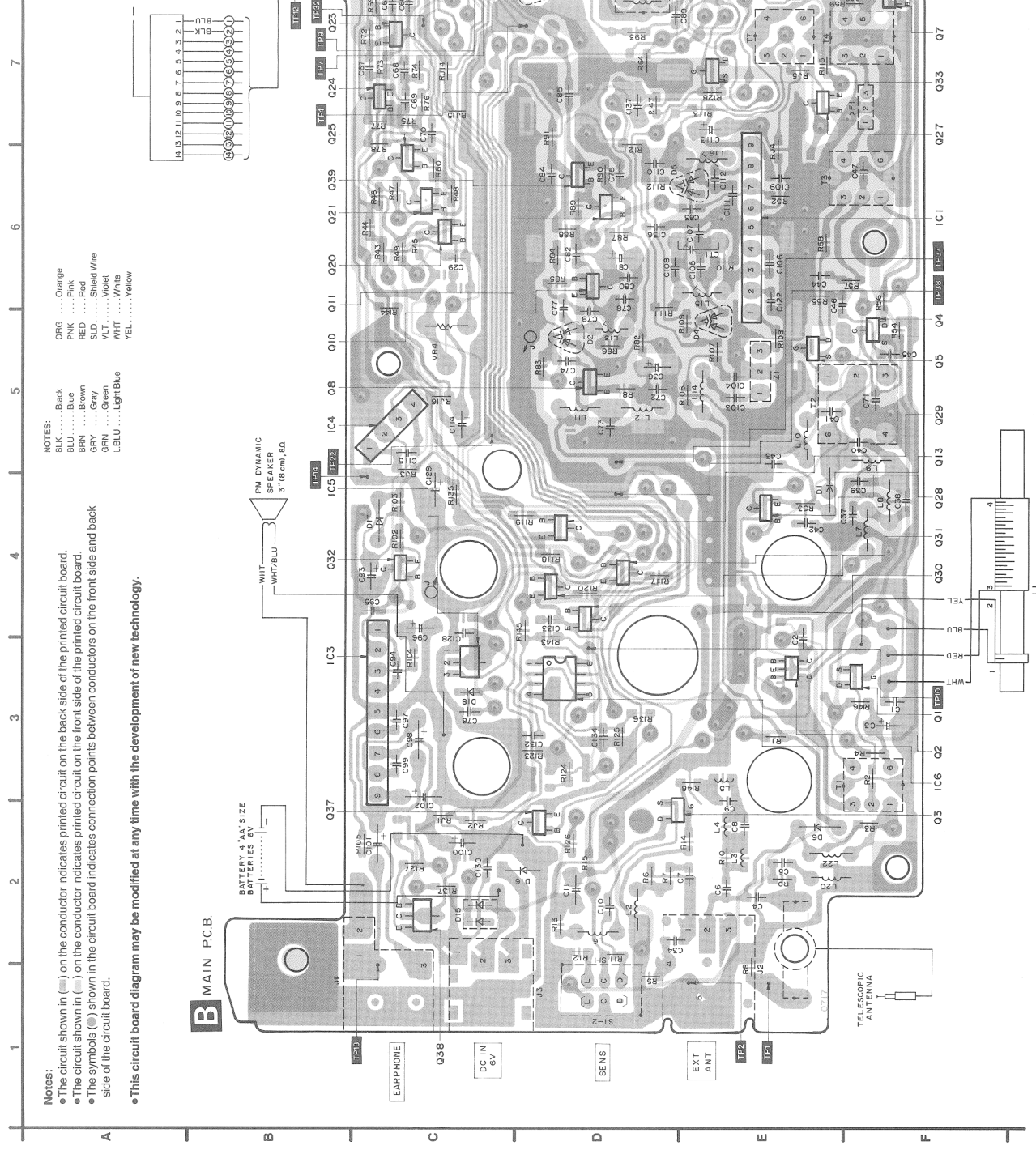
10 11 12 13 14 15 16 17 18 19

A OPERATION CIRCUIT

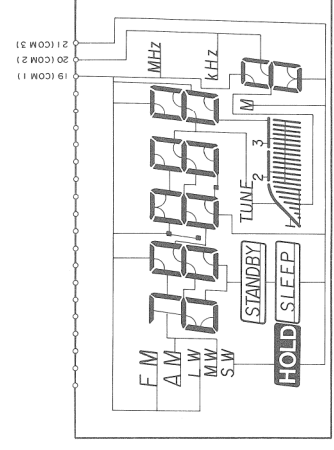


□ : +B Line  
 ▨ : LW/MW/SW Signal Line  
 ▩ : Main Signal Line  
 ▧ : FM/LW/MW/SW VCO Out Line  
 ▨ : LW/MW/SW 2nd OSC Signal Line  
 ▩ : FM/LW/MW/SW Vcap Line

## CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

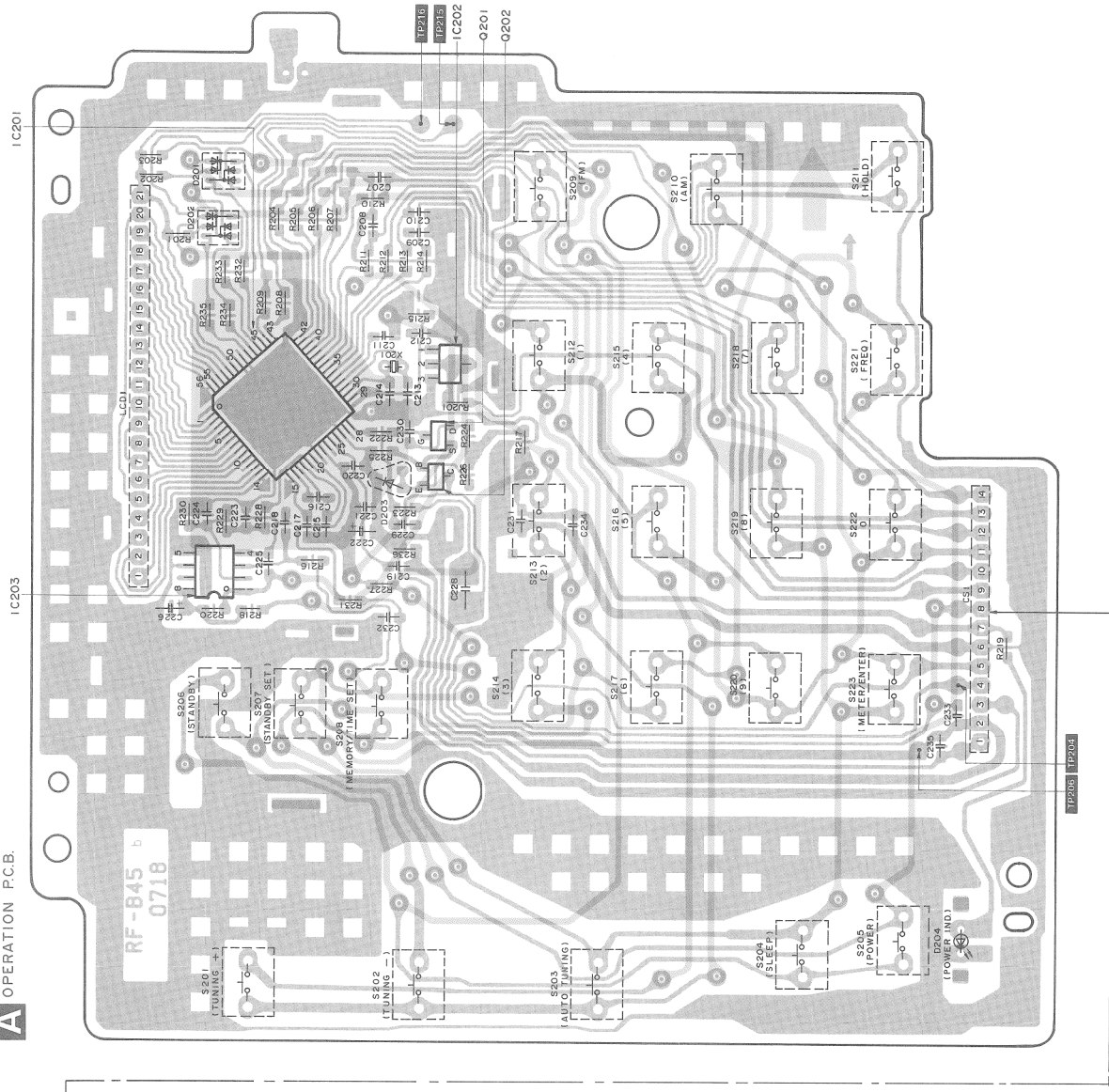


- Notes:**
- S1-1, S1-2 : Sensitivity select switch in "DX" position.  
(D...DX, L...LOCAL)
  - S2-1, S2-2 : AM mode select switch in "NOR/FIX" position.  
(A F...NOR/FIX, A V...NOR/VARIABLE, S...SSB/VARIABLE)
  - S3-1, S3-2 : Tone select switch in "HIGH" position.  
(H...HIGH, L...LOW)
  - S201 : Tuning (+) switch.
  - S202 : Tuning (-) switch.
  - S203 : Auto tuning switch.
  - S204 : Sleep switch.
  - S205 : Power switch.
  - S206 : Standby switch.
  - S207 : Standby set switch.
  - S208 : Memory/time set switch.
  - S209 : Band select (FM) switch.
  - S210 : Band select (AM) switch.
  - S211 : Hold switch.
  - S212 : Number/memory channel/meter band (1/75 m) switch.
  - S213 : Number/memory channel/meter band (2/60 m) switch.
  - S214 : Number/memory channel/meter band (3/49 m) switch.
  - S215 : Number/memory channel/meter band (4/41 m) switch.
  - S216 : Number/memory channel/meter band (5/31 m) switch.
  - S217 : Number/memory channel/meter band (6/25 m) switch.
  - S218 : Number/memory channel/meter band (7/21 m) switch.
  - S219 : Number/memory channel/meter band (8/19 m) switch.
  - S220 : Number/memory channel/meter band (9/16 m) switch.
  - S221 : Frequency direct access switch.
  - S222 : Number/meter band (0/13 m) memory search switch.
  - S223 : Meter band direct access/enter switch.
  - VR1 : Volume control VR.
  - VR2 : Fine tuning control VR.
  - VR3 : AM 2nd OSC adjustment VR.
  - VR4 : FM stop frequency adjustment VR.
- DC voltage measurements are taken with electronics voltmeter.
- The negative terminal of the battery provides negative meter connection point.
- < > ...FM ( ) ...AM ☐ ...MUTING [ ] ...SSB
- Battery current
    - Power OFF (back-up) ..... 36  $\mu$ A
    - No signal ..... 51 mA (FM)
    - ..... 57 mA (LW/MW)
    - ..... 54 mA (SW)
    - ..... 156 mA (FM)
    - ..... 156 mA (LW/MW)
    - ..... 160 mA (SW)
- Maximum output
- This schematic diagram may be modified at any time with the development of new technology.





## A OPERATION P.C.B.





## ■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

BA10393FT	S80734ANDYT1 S81230AGRBTT1	UPD1724GB561	LA1207	LA4147	AN7205
RVILA5003	2SB709RTW 2SC240CTW 2SD601RTW RVDTDC114YRW		RVTFMG5TW	2SB1121TMTW	2SK160K4TW 2SK160K5TW 2SK436A21TW
2SK238K16TW	MA165TA MA700TA RVD1SS135TA	0A90A-M	MA4120MTA	MA553	MA151K1TW
MA724TW	MA701TW	RVDSVC203ATW	MA728TW MA729TW	IMN11T110	LN376GC PX-23

## ■ FUNCTION OF IC TERMINALS

Pin No.	Mark	I/O Division	Function
1	LCD10	O	Output terminals for LCD segment signals.
10	LCD1		
11	NC	—	—
12	COM3	O	Output terminals for LCD common signals.
14	COM1		
15	VSS3	—	Reference voltage setting capacitor connected terminals for LCD.
16•17	CAP1•2		
18	VSS2	—	—
19	VDP	O	Variable duty port.
20	CGP	O	Clock generator port.
21	NC	—	—
22	VDD	I	A voltage of 1.8~3.6 V supply to this terminal.
23	VHF	—	—
24	HF	I	Input terminal for the FM local oscillator (VCO) signal.
25	AM IN	—	—
26	VSS1	—	Ground terminal.
27	EO1	—	—
28	EO2	O	PLL error output terminal.

## ■ MEASUREMENTS AND ADJUSTMENTS

### ●ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
●Set power source voltage to 6 V DC.	●Set bne select switch to HIGH.
●Set sensitivity select switch to DX.	●Set volume control to center.
●Set AM mode select switch to NOR/FIX.	
EQUIPMENT REQUIRED	
●Frequency counter	●DC digital voltmeter
●Ampere meter	●Oscilloscope
●Signal generator (FM/AM)	●FM/AM IF sweep generator

### ●BATTERY CURRENT CHECK

BAND	FREQUENCY DISPLAY SETTING	REMARKS
Power OFF	—	1. Power switch to OFF. 2. Check for less than 50 $\mu$ A. (for back-up current check)
FM	87.50 MHz	1. Power switch to ON. 2. Volume control to minimum. 3. Check for less than 70 mA.
AM (SW)	1620 kHz	1. Power switch to ON. 2. Volume control to minimum. 3. Check for less than 80 mA.

### ●FM AND AM (SW) VCO ALIGNMENT

BAND	FREQUENCY DISPLAY SETTING	DC DIGITAL VOLTMETER	ADJUSTMENT	REMARKS
FM	108.00 MHz	TP24...(+) TP23...(–)	L16	●Adjust L16 for 9 $\pm$ 0.1 V reading on digital voltmeter.
AM (SW)	29995 kHz	TP24...(+) TP24...(–)	L13	●Adjust L13 for 9 $\pm$ 0.1 reading on digital voltmeter.

### ●AM 2nd LOCAL OSC ALIGNMENT

BAND	FREQUENCY DISPLAY SETTING	FREQUENCY COUNTER	ADJUSTMENT	REMARKS
AM	Point of noninterference.	Connect to TP5 through 10 pF. TP5...(+) TP3...(–)	VR3	●Adjust VR3 for 55386 $\pm$ 0.1 kHz reading on frequency counter.
AM	Point of noninterference.	Connect to TP5 through 10 pF. TP5...(+) TP3...(–)	—	●Assure that the frequency control's reading is variable by rotating the frequency control (VR2).

### ●SSB RESTORATION FREQUENCY (B.F.O.) CHECK

BAND	FREQUENCY DISPLAY SETTING	FREQUENCY COUNTER	REMARKS
AM	Point of noninterference.	TP31...(+) TP2...(–)	1. Set AM mode select switch to SSB position. 2. Assure that the frequency counter's reading is 459 $\pm$ 1 kHz.

### ●FM IF CHECK

BAND	IF SWEEP GENERATOR		IF MONITOR SCOPE or OSCILLOSCOPE	REMARKS
	CONNECTIONS	FREQUENCY		
FM	Connect to TP35 through 1 pF. TP35...(+) TP3...(–)	10.7 MHz (400 Hz 30% Mod.)	Point of noninterference. (on/about 90 MHz)	●Assure that the waveform shown in Fig. 3 appears in the IF monitor scope or oscilloscope.

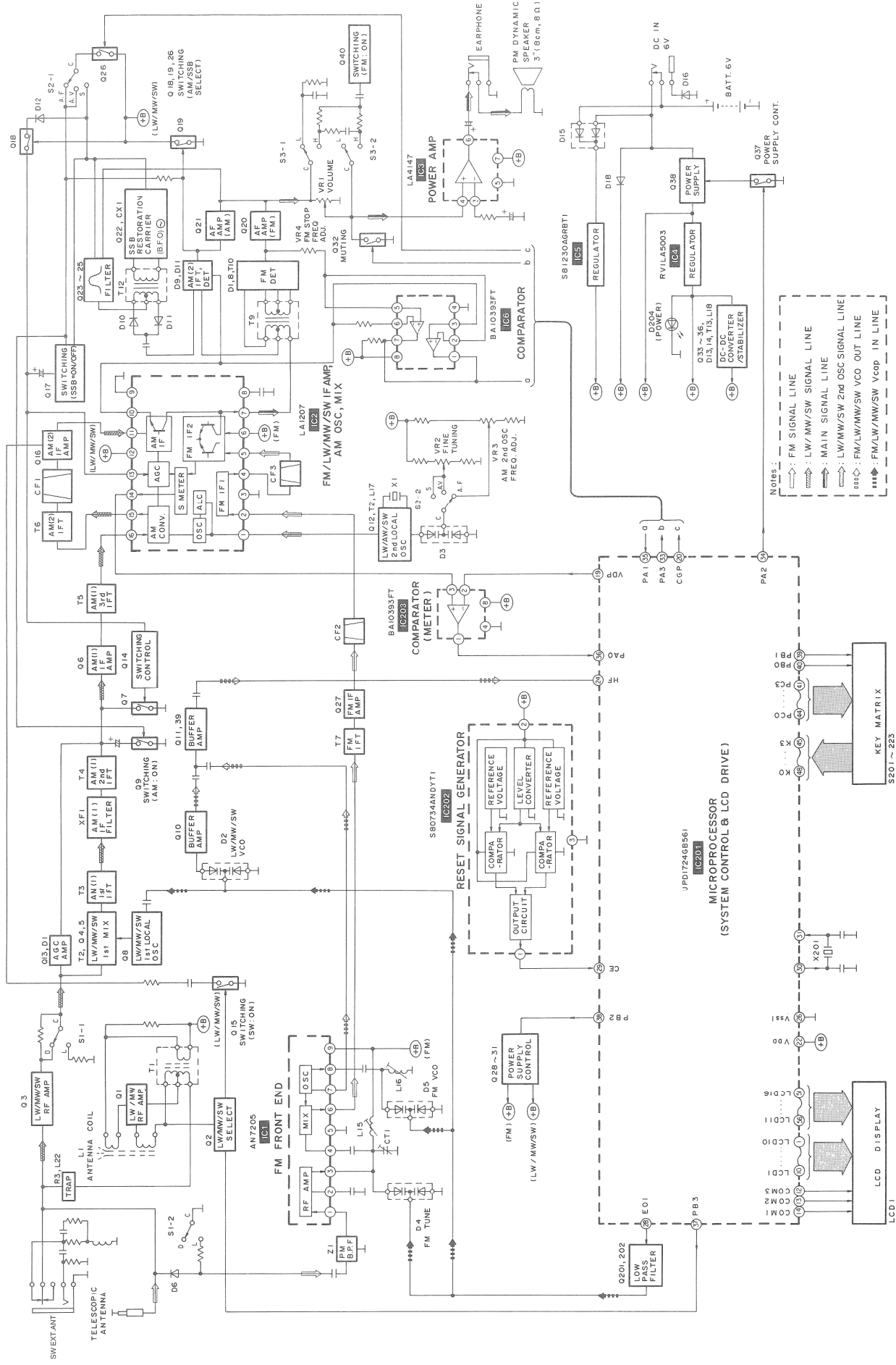
●FM AUTO STOP ALIGNMENT

BAND	SIGNAL GENERATOR		FREQUENCY DISPLAY SETTING	DIGITAL VOLTMETER	ADJUSTMENT	REMARKS
	CONNECTIONS	FREQUENCY				
FM	TP1...(+) TP2...(-)	106 MHz 400 Hz, 30% Mod. 60 dB	106 MHz	TP20...(+) TP20...(-)	T10	●Adjust T10 for $Q \pm 10$ mV reading on digital voltmeter.

# ■ BLOCK DIAGRAM

RF-B45

RF-B45



REPLACEMENT PARTS LIST

Notes : \* Important safety notice:  
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.  
\* The parenthesized indications in the Remarks column specify the areas. (Refer to the cover page for area.)  
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)	
IC1	AN7205	I. C. FRONT END	
IC2	LA1207	I. C. IF. AMP/DET. etc	
IC3	LA4147	I. C. POWER AMP	
IC4	RV1LA5003	I. C. REGULATOR	
IC5	S81230AGB8T1	I. C. REGULATOR	
IC6	BA10393FT	I. C. COMPARATOR	
IC201	UPD174GB561	I. C. MICROPROCESSOR	
IC202	S80734ANDVT1	I. C. RESET	
IC203	BA10393FT	I. C. COMPARATOR	
		TRANSISTOR (S)	
Q1	2SK436421W	TRANSISTOR	
Q2	RVTFW5TW	TRANSISTOR	
Q3	2SK436421W	TRANSISTOR	
Q4	2SK436421W	TRANSISTOR	
Q5	2SK436421W	TRANSISTOR	
Q6	2SK28K16TW	TRANSISTOR	
Q7	2S9601RTW	TRANSISTOR	
Q8	2SC2404CTW	TRANSISTOR	
Q9	RV7DTC114YRW	TRANSISTOR	
Q10	2SC2404CTW	TRANSISTOR	
Q11	2SC2404CTW	TRANSISTOR	
Q12	2SC2404CTW	TRANSISTOR	
Q13	2S9601RTW	TRANSISTOR	
Q14	2S9601RTW	TRANSISTOR	
Q15	RV7DTC114YRW	TRANSISTOR	
Q16	2S9601RTW	TRANSISTOR	
Q17	RVTFW5TW	TRANSISTOR	
Q18	2S9601RTW	TRANSISTOR	
Q19	2S9708RTW	TRANSISTOR	
Q20	2S9601RTW	TRANSISTOR	
Q21	2S9601RTW	TRANSISTOR	
Q22	2S9708RTW	TRANSISTOR	
Q23	2S9708RTW	TRANSISTOR	
Q24	2S9601RTW	TRANSISTOR	
Q25	2S9601RTW	TRANSISTOR	
Q26	2S9708RTW	TRANSISTOR	
Q27	2SC2404CTW	TRANSISTOR	
Q28	2S9708RTW	TRANSISTOR	
Q29	2S9708RTW	TRANSISTOR	
Q30	RV7DTC114YRW	TRANSISTOR	
Q31	2S9601RTW	TRANSISTOR	
Q32	2S9601RTW	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q33	2SK160K4TW	TRANSISTOR	
Q34	2S9601RTW	TRANSISTOR	
Q35	2S9601RTW	TRANSISTOR	
Q36	2S9601RTW	TRANSISTOR	
Q37	RV7DTC114YRW	TRANSISTOR	
Q38	2S81121TW	TRANSISTOR	
Q39	2SC2404CTW	TRANSISTOR	
Q40	RV7DTC114YRW	TRANSISTOR	
Q201	2SK160K5TW	TRANSISTOR	
Q202	2S9601RTW	TRANSISTOR	
		DIODE (S)	
D1	MA553	DIODE	
D2	RVDSVC203ATW	DIODE	
D3	RVDSVC203ATW	DIODE	
D4	RVDSVC203ATW	DIODE	
D5	RVDSVC203ATW	DIODE	
D6	RVDSI35TA	DIODE	
D7	MA728TW	DIODE	
D8	MA728TW	DIODE	
D9	0A90A-M	DIODE	
D10	MA700TA	DIODE	
D11	MA700TA	DIODE	
D12	MA165TA	DIODE	
D13	MA165TA	DIODE	
D14	MA120MTA	DIODE	
D15	MA724TW	DIODE	
D16	MA701TW	DIODE	
D17	MA165TA	DIODE	
D18	MA723TW	DIODE	
D201	IMN11T110	DIODE	
D202	IMN11T110	DIODE	
D203	MA151KTW	DIODE	
D204	LN376CPK-23	LED	
		VARIABLE RESISTOR (S)	
VR1	EVU105I02D54	VOLUME	
VR2	EVU105I02B15	FINE TUNING	
VR3	ENV4A00B54	FM ADJUSTMENT	
VR4	ENV4A00B54	FM ADJUSTMENT	
		TRIMMER	
CT1	RCV10AF15	TRIMMER CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
		COIL (S)	
L1	RLV62001-1	COIL	
L2	RLQ2P220MT-Y	COIL	
L3	RELJIC68KTD	COIL	
L4	RELJIC10KTD	COIL	
L5	RELJIC47KTD	COIL	
L6	RLQ2P221KT-Y	COIL	
L7	RLQ2P474MT-Y	COIL	
L8	RLQ2P18MT-Y	COIL	
L9	RLQ2P18MT-Y	COIL	
L10	RLQ2P18MT-Y	COIL	
L11	RLQ2P472MT-Y	COIL	
L12	RLQ2P456MT-Y	COIL	
L13	RLQ4N253-0	COIL	
L14	RLQ2P472MT-Y	COIL	
L15	RLQ4N253-0	COIL	
L16	RLQ4N125-0	COIL	
L17	RLQ38003-T	COIL	
L18	RLQ2P101KT-Y	COIL	
L20	RLQ2P18KT-Y	COIL	
L22	RLQ2P480KT-Y	COIL	
		TRANSFORMER (S)	
T1	RLA6C1-T	TRANSFORMER	
T2	RLA3211-0	TRANSFORMER	
T3	RL138001-T	TRANSFORMER	
T4	RL138002-T	TRANSFORMER	
T5	RL138003-T	TRANSFORMER	
T6	RL128006-T	TRANSFORMER	
T7	RL148011-M	TRANSFORMER	
T8	RLQ38004-T	TRANSFORMER	
T9	RLK48002-M	TRANSFORMER	
T10	RLK48003-M	TRANSFORMER	
T11	RL128005-M	TRANSFORMER	
T12	RL12A003-M	TRANSFORMER	
T13	RLQ9A002-M	TRANSFORMER	
T17	RLQ38003-T	TRANSFORMER	
		FILTER(S)	
CF1	RLFA5R45911	CERAMIC FILTER	
CF2	RLFFETW001L	CERAMIC FILTER	
CF3	RLFFETW001L	CERAMIC FILTER	
		COMPONENT COMBINATION	
Z1	RCRBWT001-H	COMPONENT COMBINATION	

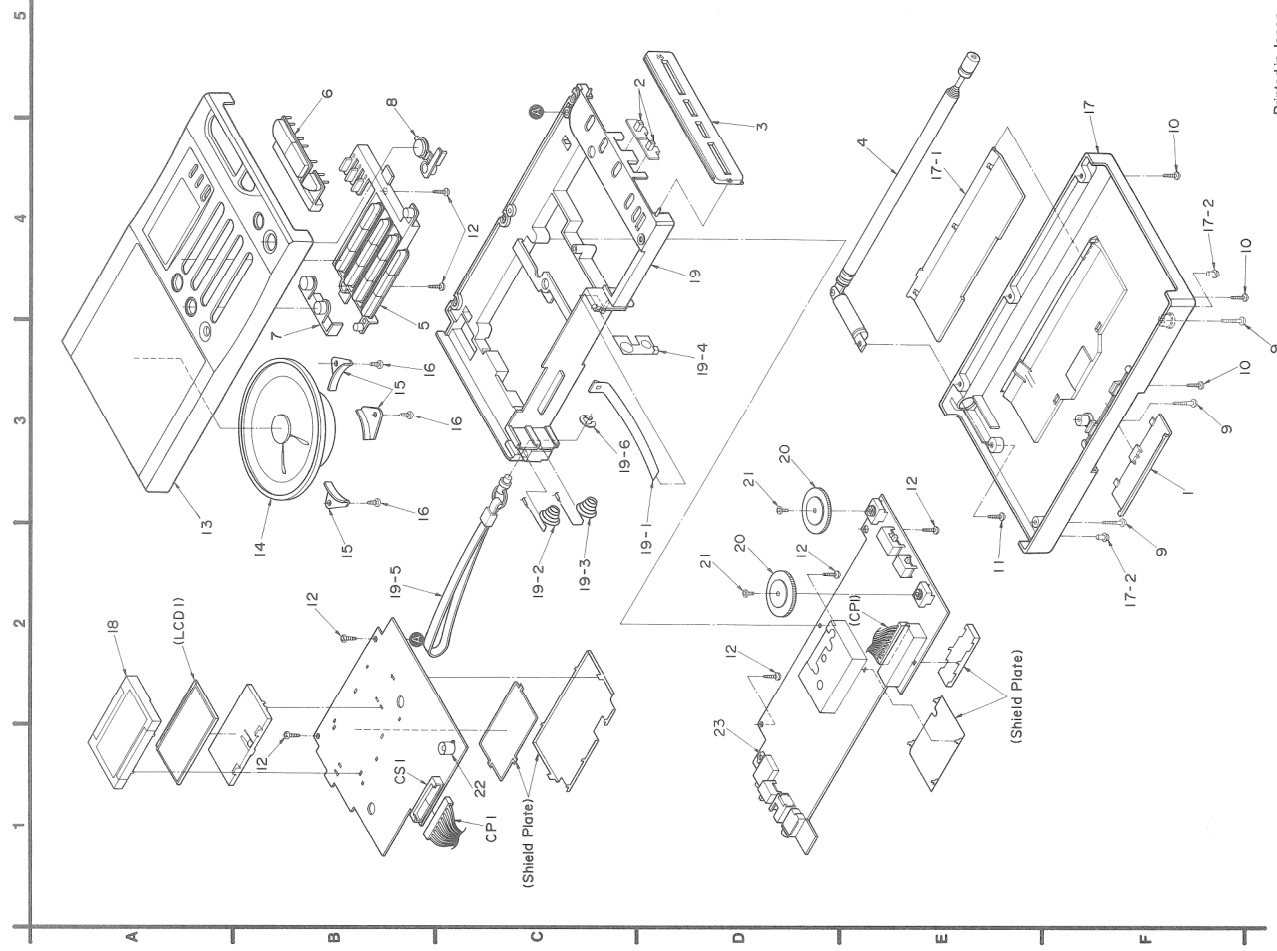
Ref. No.	Part No.	Part Name & Description	Remarks
		OSCILLATOR (S)	
OX1	RSX2459M001	OSCILLATOR	
X1	RSV4653M4S01	OSCILLATOR	
X201	RSX0750M305	OSCILLATOR	
XF1	RSX0653M6S01	OSCILLATOR	
		DISPLAY	
LD1	RLS15049-L	LCD	
		SWITCH (ES)	
S1	RSS28006-M	SW. SENS	
S2	RS28572A-M	SW. MODE	
S3	RSS38382A-M	SW. TONE	
S201	EVQ21405R	SW. TUNING (+)	
S202	EVQ21405R	SW. TUNING (-)	
S203	EVQ21405R	SW. AUTO TUNING	
S204	EVQ21405R	SW. SLEEP	
S205	EVQ21405R	SW. POWER	
S206	EVQ21405R	SW. STANDBY	
S207	EVQ21405R	SW. STANDBY SET	
S208	EVQ21405R	SW. MEMORY/TIME SET	
S209	EVQ21405R	SW. FM	
S210	EVQ21405R	SW. AM (LW/MW/SW)	
S211	EVQ21405R	SW. DOLD	
S212	EVQ21405R	SW. 1/75m	
S213	EVQ21405R	SW. 2/70m	
S214	EVQ21405R	SW. 3/40m	
S215	EVQ21405R	SW. 4/41m	
S216	EVQ21405R	SW. 5/21m	
S217	EVQ21405R	SW. 6/25m	
S218	EVQ21405R	SW. 7/22m	
S219	EVQ21405R	SW. 8/19m	
S220	EVQ21405R	SW. 9/16m	
S221	EVQ21405R	SW. FREQ.	
S222	EVQ21405R	SW. 0/13m/MEMORY SEARCH	
S223	EVQ21405R	SW. METER CENTER	
		JACK (S)	
J1	RLJD3W62A-C	EARPHONE	
J2	RLJD5022A-H	EXT. ANT.	
J3	RLJ1812C-C	DC IN	
		CONNECTOR (S)	
CP1	REX0365	CONNECTOR	
CS1	RJP14G172A	CONNECTOR	

Notes : \* Capacity values are in microfarads (uF) unless specified otherwise, P=Pi-co-farads (pF) F=Farads (F)  
 \* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000K (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R17	ERJ6GEYJ104V	1/10W 100K	R97	ERJ6GEYJ101V	1/10W 100
R18	ERJ6GEYJ322V	1/10W 3.3K	R98	ERJ6GEYJ470V	1/10W 47
R19	ERJ6GEYJ222V	1/10W 2.2K	R99	ERJ6GEYJ331V	1/10W 330
R20	ERJ6GEYJ220V	1/10W 2.2K	R100	ERJ6GEYJ222V	1/10W 2.2K
R21	ERJ6GEYJ103V	1/10W 10K	R101	ERJ6GEYJ153V	1/10W 15K
R22	ERJ6GEYJ322V	1/10W 3.3K	R102	ERJ6GEYJ102V	1/10W 1K
R23	ERJ6GEYJ221V	1/10W 220	R103	ERJ6GEYJ223V	1/10W 22K
R24	ERJ6GEYJ102V	1/10W 1K	R104	ERJ6GEYJ331V	1/10W 330
R25	ERJ6GEYJ102V	1/10W 1K	R105	ERJ6GEYJ470V	1/10W 47
R26	ERJ6GEYJ101V	1/10W 100	R106	ERJ6GEYJ152V	1/10W 1.5K
R27	ERJ6GEYJ101V	1/10W 100	R107	ERJ6GEYJ101V	1/10W 100
R28	ERJ6GEYJ101V	1/10W 100	R108	ERJ6GEYJ220V	1/10W 22
R29	ERJ6GEYJ152V	1/10W 1.5K	R109	ERJ6GEYJ104V	1/10W 100K
R30	ERJ6GEYJ322V	1/10W 3.3K	R110	ERJ6GEYJ104V	1/10W 100K
R31	ERJ6GEYJ101V	1/10W 100	R111	ERJ6GEYJ220V	1/10W 22
R32	ERJ6GEYJ104V	1/10W 100K	R112	ERJ6GEYJ103V	1/10W 10K
R33	ERJ6GEYJ470V	1/10W 47K	R113	ERJ6GEYJ220V	1/10W 22
R34	ERJ6GEYJ102V	1/10W 47K	R114	ERJ6GEYJ103V	1/10W 10K
R35	ERJ6GEYJ101V	1/10W 100	R115	ERJ6GEYJ472V	1/10W 47K
R36	ERJ6GEYJ101V	1/10W 100	R116	ERJ6GEYJ101V	1/10W 100
R37	ERJ6GEYJ102V	1/10W 1K	R117	ERJ6GEYJ332V	1/10W 3.3K
R38	ERJ6GEYJ101V	1/10W 100	R118	ERJ6GEYJ153V	1/10W 15K
R39	ERJ6GEYJ151V	1/10W 150	R119	ERJ6GEYJ322V	1/10W 3.3K
R40	ERJ6GEYJ102V	1/10W 10K	R120	ERJ6GEYJ101V	1/10W 100
R41	ERJ6GEYJ221V	1/10W 220	R121	ERJ6GEYJ101V	1/10W 100
R42	ERJ6GEYJ102V	1/10W 1K	R122	ERJ6GEYJ103V	1/10W 10K
R43	ERJ6GEYJ104V	1/10W 100K	R123	ERJ6GEYJ104V	1/10W 100K
R44	ERJ6GEYJ102V	1/10W 10K	R124	ERJ6GEYJ473V	1/10W 47K
R45	ERJ6GEYJ152V	1/10W 1.5K	R125	ERJ6GEYJ224V	1/10W 220K
R46	ERJ6GEYJ104V	1/10W 100K	R126	ERJ6GEYJ472V	1/10W 47K
R47	ERJ6GEYJ104V	1/10W 100K	R127	ERJ6GEYJ104V	1/10W 100K
R48	ERJ6GEYJ102V	1/10W 47K	R128	ERJ6GEYJ472V	1/10W 47K
R49	ERJ6GEYJ101V	1/10W 100	R129	ERJ6GEYJ103V	1/10W 10K
R50	ERJ6GEYJ102V	1/10W 1K	R130	ERJ6GEYJ101V	1/10W 100
R51	ERJ6GEYJ102V	1/10W 3.3K	R131	ERJ6GEYJ102V	1/10W 1K
R52	ERJ6GEYJ103V	1/10W 10K	R132	ERJ6GEYJ102V	1/10W 1K
R53	ERJ6GEYJ103V	1/10W 10K	R133	ERJ6GEYJ223V	1/10W 22K
R54	ERJ6GEYJ104V	1/10W 10K	R134	ERJ6GEYJ473V	1/10W 47K
R55	ERJ6GEYJ101V	1/10W 100	R135	ERJ6GEYJ101V	1/10W 100
R56	ERJ6GEYJ102V	1/10W 1K	R136	ERJ6GEYJ333V	1/10W 33K
R57	ERJ6GEYJ151V	1/10W 150	R137	ERJ6GEYJ102V	1/10W 1K
R58	ERJ6GEYJ104V	1/10W 100K	R138	ERJ6GEYJ104V	1/10W 100K
R59	ERJ6GEYJ151V	1/10W 150	R139	ERJ6GEYJ473V	1/10W 47K
R60	ERJ6GEYJ102V	1/10W 10K	R140	ERJ6GEYJ222V	1/10W 2.2K
R61	ERJ6GEYJ102V	1/10W 1K	R141	ERJ6GEYJ473V	1/10W 47K
R62	ERJ6GEYJ104V	1/10W 100K	R142	ERJ6GEYJ104V	1/10W 100K
R63	ERJ6GEYJ103V	1/10W 10K	R143	ERJ6GEYJ473V	1/10W 47K
R64	ERJ6GEYJ104V	1/10W 10K	R144	ERJ6GEYJ220V	1/10W 22
R65	ERJ6GEYJ333V	1/10W 33K	R145	ERJ6GEYJ101V	1/10W 100

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R146	ERJ6GEYJ621V	1/10W 680	R148	ERJ6GEYJ080V	1/10W 0
R147	ERJ6GEYJ472V	1/10W 4.7K	R149	ERJ6GEYJ080V	1/10W 0
R148	ERJ6GEYJ111V	1/10W 100	R150	ERJ6GEYJ080V	1/10W 0
R149	ERJ6GEYJ131V	1/10W 10K	R151	ERJ6GEYJ473V	1/10W 47K
R150	ERJ6GEYJ473V	1/10W 47K	R152	ERJ6GEYJ080V	1/10W 0
R151	ERJ6GEYJ153V	1/10W 15K	R153	ERJ6GEYJ332V	1/10W 3.3K
R152	ERJ6GEYJ153V	1/10W 15K	R154	ERJ6GEYJ080V	1/10W 0
R153	ERJ6GEYJ332V	1/10W 3.3K	R155	ERJ6GEYJ080V	1/10W 0
R201	ERJ6GEYJ12V	1/10W 1K	R156	ERJ6GEYJ080V	1/10W 0
R202	ERJ6GEYJ12V	1/10W 1K	R157	ERJ6GEYJ080V	1/10W 0
R204	ERJ6GEYJ472V	1/10W 4.7K	R158	ERJ6GEYJ080V	1/10W 0
R205	ERJ6GEYJ472V	1/10W 4.7K	R201	ERJ6GEYJ080V	1/10W 0
R206	ERJ6GEYJ472V	1/10W 4.7K			
R207	ERJ6GEYJ472V	1/10W 4.7K			CAPACITORS
R208	ERJ6GEYJ472V	1/10W 4.7K			
R209	ERJ6GEYJ472V	1/10W 4.7K	C1	ECOVIEJ042FN	25V 0.1U
R210	ERJ6GEYJ12V	1/10W 1K	C2	ECOVIEJ223MKN	25V 0.022U
R211	ERJ6GEYJ12V	1/10W 1K	C3	EC6ALCK1001	16V 100
R212	ERJ6GEYJ12V	1/10W 1K	C4	ECOVIEH80CKN	50V 82P
R213	ERJ6GEYJ13V	1/10W 10K	C5	ECOVIEH80CKN	50V 68P
R214	ERJ6GEYJ222V	1/10W 2.2K	C6	ECOVIEH221KN	50V 220P
R215	ERJ6GEYJ15V	1/10W 1M	C7	ECOVIEH81KN	50V 820P
R216	ERJ6GEYJ13V	1/10W 10K	C8	ECOVIEH30CKN	50V 3P
R217	ERJ6GEYJ473V	1/10W 47	C9	ECOVIEH50CKN	50V 5P
R218	ERJ6GEYJ11V	1/10W 100	C10	ECOVIEJ223MKN	25V 0.022U
R219	ERJ6GEYJ331V	1/10W 330	C11	EC6ALCK1001	16V 100
R220	ERJ6GEYJ13V	1/10W 10K	C12	ECOVIEJ103MKN	25V 0.01U
R222	ERJ6GEYJ622V	1/10W 6.8K	C13	ECOVIEJ232FN	25V 0.022U
R223	ERJ6GEYJ13V	1/10W 10K	C14	EC6ALN3301	10V 33U
R224	ERJ6GEYJ331V	1/10W 330	C15	EC6AGK2211	4V 220U
R225	ERJ6GEYJ27V	1/10W 2.7K	C16	EC6ALH101	50V 1U
R226	ERJ6GEYJ472V	1/10W 4.7K	C17	EC6ALCK1001	16V 100
R227	ERJ6GEYJ10V	1/10W 10	C18	ECOVIEJ104FN	25V 0.1U
R228	ERJ6GEYJ472V	1/10W 47K	C19	EC6ALCK4701	4V 47U
R229	ERJ6GEYJ473V	1/10W 47K	C20	ECOVIEJ221KN	50V 220P
R231	ERJ6GEYJ102V	1/10W 1K	C21	ECOVIEJ221KN	50V 220P
R232	ERJ6GEYJ103V	1/10W 10K	C22	ECOVIEJ105FN	16V 1U
R233	ERJ6GEYJ103V	1/10W 10K	C23	ECOVIEJ103MKN	25V 0.01U
R234	ERJ6GEYJ103V	1/10W 10K	C24	EC6ALCK4701	4V 47U
R235	ERJ6GEYJ103V	1/10W 10K	C25	ECOVIEJ223MKN	25V 0.022U
R236	ERJ6GEYJ221V	1/10W 220	C26	ECOVIEJ223MKN	25V 0.022U
			C27	ECOVIEJ223MKN	25V 0.022U
			C28	ECOVIEJ103MKN	25V 0.01U
			C29	ECOVIEJ104FN	25V 0.1U
			C30	ECOVIEJ104FN	25V 0.1U
			C31	EC6ALCK1001	16V 100
			C32	EC6ALH101	50V 1U
R11	ERJ6GEYJ080V	1/10W 0	C33	ECOVIEJ103MKN	25V 0.01U
R12	ERJ6GEYJ080V	1/10W 0	C34	ECOVIEJ221KN	50V 220P
R13	ERJ6GEYJ080V	1/10W 0	C35	ECOVIEJ104FN	25V 0.1U
R14	ERJ6GEYJ080V	1/10W 0	C36	EC6ALCK1001	16V 100
R15	ERJ6GEYJ080V	1/10W 0	C37	ECOVIEH80CKN	50V 82P
R16	ERJ6GEYJ080V	1/10W 0	C38	ECOVIEJ333MKN	25V 0.033U
R17	ERJ6GEYJ080V	1/10W 0	C39	ECOVIEH80CKN	50V 820P

## CABINET PARTS LOCATION



Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
G3	EC6A1H2R21	50V 2.2U	C119	EC6A1C6001	16V 10U	C210	EC0V1E2232FN	25V 0.022U
G4	EC0V1H0101N	50V 100P	C120	EC0V1E1042FN	25V 0.1U	C211	EC0V1E1042FN	25V 0.1U
G5	EC0V1H0610N	50V 680P	C121	EC0V1E2232FN	25V 0.022U	C212	EC0V1E2232FN	25V 0.022U
G6	EC6A1G4701	4V 47U	C122	EC0V1H0200N	50V 1000P	C213	EC0V1H0100CN	50V 10P
G7	EC0V1E1042FN	25V 0.1U	C123	EC0V1H2000CN	50V 22P	C214	EC0V1H2000CN	50V 27P
G8	EC6A1U221B	6.3V 220U	C124	EC0V1H0500CN	50V 15P	C215	EC0V1E1042FN	25V 0.1U
G9	EC0V1E1036N	25V 0.01U	C125	EC6A1G4701	4V 47U	C216	EC0V1E1036N	25V 0.01U
G10	EC6A1A471C	10V 470U	C126	EC0V1E2232FN	25V 0.022U	C217	EC0V1E1042FN	25V 0.1U
G11	EC6A1U221B	10V 220U	C127	EC6A1H003	50V 3.3U	C218	EC0V1C1052FN	16V 1U
G12	EC6A1U101B	10V 100U	C128	EC0V1E2232FN	25V 0.022U	C219	EC0V1H0200N	50V 1000P
G13	EC0V1H0101N	50V 100P	C129	EC6A1J102B	6.3V 1000U	C220	EC0V1E1036N	25V 0.01U
G14	EC0V1E1036N	25V 0.01U	C130	EC0V1E2232FN	25V 0.022U	C221	EC0V1E1042FN	25V 0.1U
G15	EC0V1H0200N	50V 0.001U	C131	EC0V1C1043	16V 0.1U	C222	EC30G1665LG	4V 6.8U
G16	EC0V1H0500CN	50V 5P	C132	EC0V1E1042FN	25V 0.1U	C223	EC0V1E1042FN	25V 0.1U
G17	EC0V1H000CN	50V 10P	C133	EC0V1E1042FN	25V 0.1U	C224	EC0V1E1042FN	25V 0.1U
G18	EC0V1E1036N	25V 0.01U	C134	EC0V1C1052FN	16V 1U	C225	EC0V1E2232FN	25V 0.022U
G19	EC0V1E1036N	25V 0.01U	C135	EC0V1E1036N	25V 0.01U	C226	EC30G1665LG	4V 6.8U
G20	EC0V1H0200N	50V 1000P	C136	EC0V1E1036N	25V 0.01U	C227	EC0V1H474JZ	50V 0.47U
G21	EC0V1H0500CN	50V 15P	C137	EC6A1H001	50V 0.1U	C228	EC0V1H474JZ	50V 0.47U
G22	EC0V1H2000CN	50V 22P	C138	EC0V1E2232FN	25V 0.022U	C229	EC0V1H0200N	50V 1000P
G23	EC6A1G4701	4V 47U	C139	EC0V1E1036N	25V 0.01U	C230	EC0V1E2232FN	25V 0.022U
G24	EC6A1G4701	4V 47U	C140	EC0V1E1036N	25V 0.01U	C231	EC0V1E1042FN	25V 0.1U
G25	EC0V1E1036N	25V 0.01U	C141	EC0V1C1043	16V 0.1U	C232	EC0V1E2232FN	25V 0.022U
G26	EC0V1E1042FN	25V 0.1U	C142	EC0V1E1036N	25V 0.01U	C233	EC0V1E2232FN	25V 0.022U
G27	EC6A1U221B	10V 220U	C143	EC0V1H000CN	50V 3P	C234	EC0V1E2232FN	25V 0.022U
G28	EC6A1U221B	10V 220U	C207	EC0V1E2232FN	25V 0.022U	C235	EC0V1E1036N	25V 0.01U
G29	EC6A1U221B	10V 220U	C208	EC0V1E2232FN	25V 0.022U			
G30	EC6A1U221B	10V 220U	C209	EC0V1E2232FN	25V 0.022U			

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
1	R00039-H	CABINET PARTS		19-1	R00010	BATTERY TAPE	
2	R00079-K	BATTERY COVER		19-2	R00010	BATTERY TERMINAL (-)	
3	R00040A-H	KNOB, TONE, MODE		19-3	R00011	BATTERY TERMINAL (-)	
4	Y0001470B-Y	ORNAMENT		19-4	R00010	BATTERY TERMINAL (-)	
5	R00015-H	TELESCOPIIC ANTENNA		19-5	R00014-K	CARRING STAMP	
6	R00016-H	TELESCOPIIC ANTENNA		19-6	R00014-K	E. RING	
7	R00017-H	TELESCOPIIC ANTENNA		20	R00012-K	KNOB, VOLUME	
8	R00018-H	TELESCOPIIC ANTENNA		21	XS0017-3FZ	SCREW	
9	XT026-121FZ	SCREW		22	R00014-K	LED HOLDER	
10	XT026-281FZ	SCREW		23	R00014-K	TERMINAL	
11	XT026-281FZ	SCREW				PACKING MATERIALS	
12	XT026-281FZ	SCREW		P1	R000271	GIFT BOX	
13	XT026-281FZ	SCREW		P2	R00014-K	PAD	
14	XT026-281FZ	SCREW		P3	R00014-K	SHEET	
15	XT026-281FZ	SCREW				ACCESSORIES	
16	XT026-281FZ	SCREW		A1	R00013	CARRING CASE	
17	XT026-281FZ	SCREW		A2	XT001-AB	FAIRPHONE	
18	XT026-281FZ	SCREW		A3	RS00002	EXT. ANTENNA	
19	XT026-281FZ	SCREW		A4	R001135-Y	INSTRUCTION MANUAL	
20	XT026-281FZ	SCREW		A5	R000122	GUIDE	