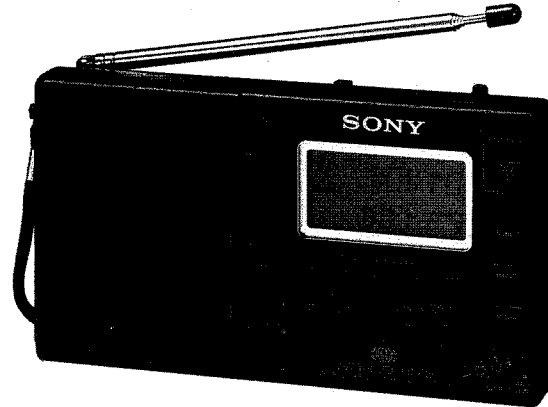


ICF-SW33

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model*



NOTE: ALL CORRECTIONS AND SUPPLEMENTS ARE ATTACHED TO THE BACK OF THE MANUAL.

SPECIFICATIONS

Circuit system SW: Dual conversion superheterodyne
MW/FM: Single conversion superheterodyne

Frequency range

Band	Meter band	Frequency	Channel step
MW		531-1710 kHz *1	9 kHz
		530-1710 kHz *1	10 kHz
		531-1602 kHz *2	9 kHz
		530-1610 kHz *2	10 kHz
SW	75 m	3700-4200 kHz *1	1 kHz
		3850-4200 kHz *2	
	60 m	4650-5150 kHz	
	49 m	5800-6300 kHz	
	41 m	6950-7450 kHz	
	31 m	9375-10000 kHz	
	25 m	11525-12150 kHz	
	21 m	13375-14000 kHz	
	19 m	14975-15600 kHz	
	16 m	17475-18100 kHz	
	13 m	21320-21950 kHz	
FM		87.50-108.00 MHz *3	0.05 MHz
		76.00-108.00 MHz *4	

*1 Countries except for Italy and Saudi Arabia

*2 Italy and Saudi Arabia

*3 Germany, Austria, Scandinavian countries, Italy and Saudi Arabia

*4 Countries except for *3

Intermediate frequency

MW: 450 kHz
SW: 21.44 MHz (1st)
450 kHz (2nd)

FM: 10.7 MHz

Antennas

SW/FM: Telescopic antenna
MW: Built-in ferrite bar antenna

Speaker

Approx. ø6.6 cm (2 1/8 inches)

Power output
Output

200 mW (at 10 % harmonic distortion)
PHONES jack (stereo minijack)
REC OUT jack (minijack)
Output level 0.775 mV (-60 dB)

Power requirements

Output impedance 1 kilohm
4.5 V DC, three R6 (size AA) batteries
DC IN 4.5 V jack accepts:
Sony AC-E45M AC power adaptor (not supplied)

Battery life

Sony DCC-E145L car battery cord (not supplied) for use with 12 V car battery
Approx. 11 hours of listening for 4 hours a day at a normal volume using Sony batteries SUM-3 (NS)

Dimensions

Approx. 165.7 x 93 x 30.5 mm (w/h/d)
(Approx. 6 5/8 x 3 3/4 x 1 1/4 inches)

Mass

Approx. 401 g (14.15 oz) incl. batteries.

Accessories supplied

Carrying case (1)
SW compact antenna (1)
Short wave guide (1) only English version

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Accessories not supplied

AC power adaptor AC-E45M
Car battery cord DCC-E145L
MW/SW wide range antenna AN-1/AN-102
Connecting cord RK-G69 (miniplug to miniplug, no resistor type)

Your dealer may not handle some of the above listed accessories.

Please ask the dealer for detailed information about them available in your country.



**MW/SW/FM STEREO
PLL SYNTHESIZED RECEIVER
SONY®**

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FEATURES

- An MW/SW/FM stereo portable receiver with worldwide band coverage.
- Quartz controlled PLL (Phase Locked Loop) synthesizer system using a microcomputer makes pinpoint tuning easy.
- Worldtime clock for international use.
Up to 5 local times in the world can be preset.
- Current time in some place in the world can be checked.
- 17 stations in total can be preset.
- The tuned frequency is digitally displayed to make searching of the desired station easier.
- You can preset a desired station to be received at a desired time. 2 buttons are equipped for 2 different time settings.
- The radio can be turned off automatically after about 60 minutes (Sleep timer).
- FM stereo reception through stereo earphones.

SERVICING NOTE

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY - RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

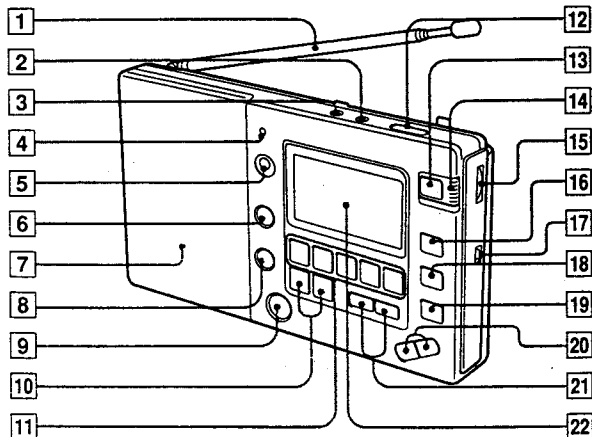
SECTION 1 GENERAL

This section is extracted from instruction manual.

1-1. LOCATION OF CONTROLS

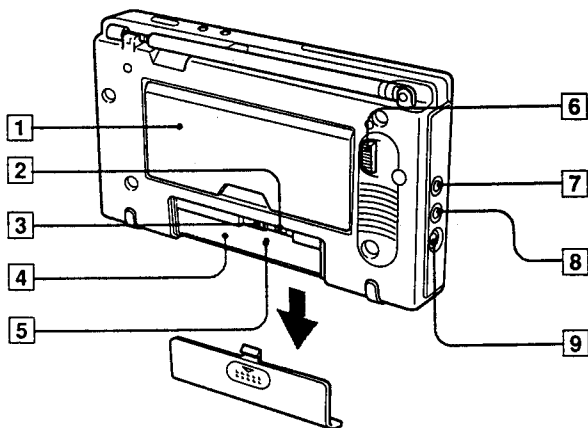
See the pages indicated in ● for details.

Front, Right Side and Upper Panel



- 1 Telescopic antenna ①
- 2 HOME TIME SET button ②
- 3 BATT(battery)/DST(Daylight Saving Time) button ⑬ ⑭
- 4 TUNE (tuning) indicator
Lights up when a station is tuned in.
- 5 KEY PROTECT \rightarrow button ⑮
- 6 ENTER button ⑯ ⑰
- 7 Speaker
- 8 HOME/WORLD button ⑱
- 9 METER BAND/TIME ZONE button ⑲
- 10 STANDBY MEMORY S **a**, S **b** buttons ⑳
- 11 FREQ(frequency)/CITY MEMORY PRESET buttons ㉓ ㉔
- 12 LIGHT button ㉕
- 13 ON/OFF button ㉖
Press this button to turn on and turn off the radio.
- 14 POWER/LOCK switch ㉗
When using the unit, set this switch to POWER. Set the switch to LOCK when carrying the unit. When this switch is set to LOCK, all the functions of the buttons are locked.
- 15 VOL (volume) control ㉘
- 16 SLEEP button ㉙
- 17 TONE selector ㉚
- 18 BAND button ㉛
- 19 SCAN button ㉜
- 20 TUNE(tuning)/WORLD TIME +,- buttons ㉝ ㉞
- 21 STANDBY/STANDBY TIME SET **a**, **b** buttons ㉟
- 22 Display window

Rear, Left Side

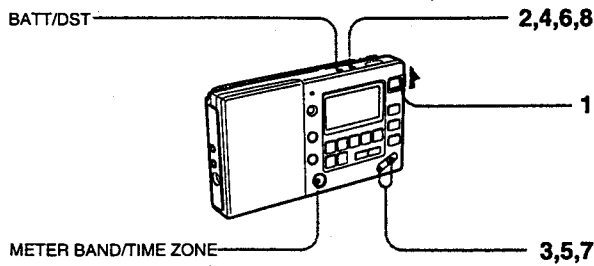


- 1 Stand
- 2 9/10 MW CH STEP (9 kHz/10 kHz MW channel step) selector ㉟
- 3 12H/24H (12-hour/24-hour clock system) button ㊱
- 4 Battery compartment ㊲
- 5 RESET button (inside the battery compartment)
When this button is pressed, all the stored memories are cleared and the clock is reset. The unit will return to the same condition as when you inserted the batteries for the first time.
- 6 SENS (sensitivity) DX/LOCAL selector ㊳
Normally set this selector to DX. When the scan stops so often, or received station is too strong to become distorted, set it to LOCAL.
- 7 REC OUT (recording out) jack ㊴
- 8 PHONES (earphones) jack (stereo mini) ㊵
- 9 DC IN 4.5 V \rightarrow \leftarrow (external power input) jack ㊶

1-2. SETTING THE CLOCK

Note

Set the clock when the radio is turned off.



When you insert the batteries for the first time, digits flash.



This illustration shows 24-hour clock system

Note

If you take longer than 64 seconds to proceed a step, the unit returns to the condition before the step 2. In this case, proceed again from the step 2.

Example: When you set the home time at 15:30 in Tokyo

- 1 Set the **POWER/LOCK** switch to **POWER**.
- 2 Press the **HOME TIME SET** button for more than 1 second.

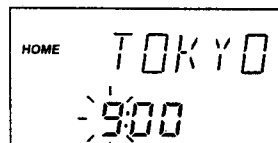


- 3 Press the **+** or **-** button to select the time difference or city name in your area.

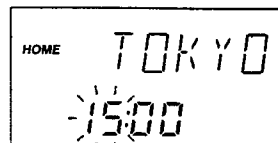


- When you keep the **+** or **-** button pressed, indications change constantly in the order shown in the table on page 25. Each time you press the **+** or **-** button while keeping the **METER BAND/TIME ZONE** button pressed, only the time differences appear in the order, thus skipping city names.
- When a city name has more than 5 letters, the letters move on the display. All the letters appear twice and then the first 5 letters flash.

- 4 Press the **HOME TIME SET** button.

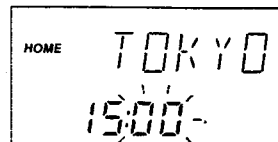


- 5 Adjust the hour with the **+** or **-** button.

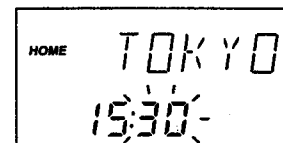


When you keep the button pressed, hour indication changes constantly.

- 6 Press the **HOME TIME SET** button.



- 7 Adjust the minute with the **+** or **-** button.



When you keep the button pressed, minute indication changes constantly.

- 8 Press the **HOME TIME SET** button. Just when you press the button, the clock starts operating from 0 second of that time. ":" flashes.



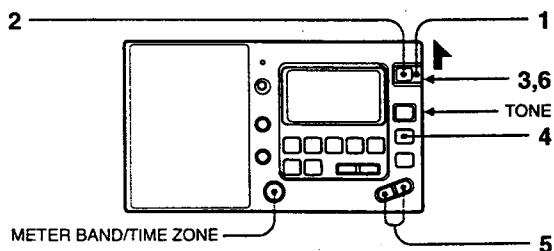
For areas where "Daylight Saving Time" is used

When you set the clock during this period, press the BATT/DST button between the steps 1 and 2. "⌚" appears. At the end of the daylight saving time, press the BATT/DST button. Current time indication changes automatically.

Note

Press the BATT/DST button only when the radio is turned off. You can set the Daylight Saving Time for HOME time and WORLD time respectively.

1-3. MANUAL TUNING



- 1 Set the POWER/LOCK switch to POWER.
- 2 Press the ON/OFF button to turn the radio on.
- 3 Turn the VOL control a little to get sound.
- 4 Press the BAND button to select the band.
Each press of the button changes the band in the following order.

→ MW → SW → FM →

 (The display window shows the last frequency chosen in each band.)
 For SW, while pressing the METER BAND/TIME ZONE button, press the TUNE + or - button to select the meter band.
- 5 Tune in the desired station by pressing the TUNE + or - button.
If you keep the button pressed, frequencies change continuously.
For the channel step, see the table on page 35.
- 6 Adjust the volume.

To turn the radio off
Press the ON/OFF button.

On TONE selector

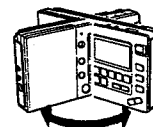
When you listen to the news, set the TONE selector to NEWS. Human voice will be heard more clearly. When you listen to music, set it to MUSIC.

To enjoy FM stereo

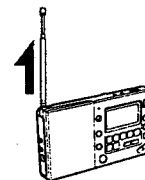
Connect the stereo earphones to the PHONES jack.

To Improve Reception

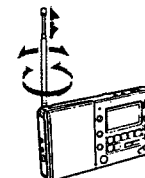
MW: Since the reception is affected by the position of the radio, rotate the unit horizontally for optimum reception.



SW: Pull out the telescopic antenna to its full length and set it vertically. Usually the telescopic antenna is sufficient for SW reception. However, in a metal or concrete building, use the wire antenna supplied.

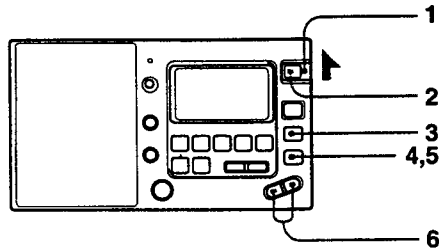


FM: Extend the telescopic antenna and adjust the length, direction and angle for the best reception.



1-4. SCAN TUNING

Use scan tuning to automatically scan the stations in the frequency range of a broadcast band.



- 1 Set the POWER/LOCK switch to POWER.
- 2 Press the ON/OFF button to turn the radio on.
- 3 Press the BAND button to select the band.
For SW, select the meter band, too.
- 4 Press the SCAN button.
Within the frequency range of the table on page 35, scan tuning will begin and stop automatically for about 2.5 seconds when a station is received.
- 5 When your desired station is tuned in, press the SCAN button.
When you do not press the SCAN button, scan tuning will continue.
- 6 Tune the station more precisely with the TUNE + or - button, if necessary.

On SENS selector

Normally set this selector to DX. When the scan stops so often, set it to LOCAL.

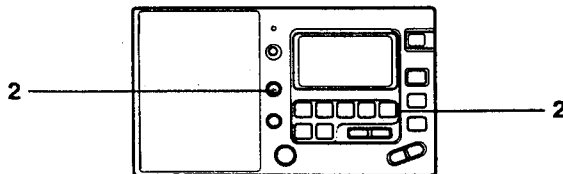
1-5. PRESET TUNING

You can preset up to five stations for each band in the MEMORY PRESET buttons M1 to M5 (a total of 15 stations) and 2 stations in the STANDBY MEMORY buttons S **A** and S **B**.

Note on the preset stations stored in the STANDBY MEMORY buttons

These stations can be used as the memories for standby operation. See page 38. Stations of any band can be stored in these two buttons.

Presetting the Stations



- 1 Tune in the desired station according to the procedures explained in "Manual Tuning" or "Scan Tuning".
- 2 While keeping the ENTER button pressed, press one of the MEMORY PRESET buttons M1 to M5, or STANDBY MEMORY buttons S **A** or S **B** in which you want to preset. "PRESET ▼" and preset number (or, a or b) appear in the display window.

Frequency range and channel step of each broadcast band

Band	Meter band	Frequency	Channel step		
MW		531-1710 kHz *1	9 kHz		
		530-1710 kHz *1	10 kHz		
		531-1602 kHz *2	9 kHz		
		530-1610 kHz *2	10 kHz		
SW	75 m	3700-4200 kHz *1	1 kHz (Manual tuning) 5 kHz (Scan tuning)		
		3850-4200 kHz *2			
	60 m	4650-5150 kHz			
	49 m	5800-6300 kHz			
	41 m	6950-7450 kHz			
	31 m	9375-10000 kHz			
	25 m	11525-12150 kHz			
	21 m	13375-14000 kHz			
	19 m	14975-15600 kHz			
	16 m	17475-18100 kHz			
SW		13 m	21320-21950 kHz		
		11 m	25475-26100 kHz		
		FM		87.50-108.00 MHz *3	0.05 MHz
				76.00-108.00 MHz *4	

*1 Countries except for Italy and Saudi Arabia
 *2 Italy and Saudi Arabia
 *3 Germany, Austria, Scandinavian countries, Italy and Saudi Arabia
 *4 Countries except for *3

To change the preset station

Preset a new station in the number of which you want to change the station. The previous station will be canceled.

Listening to the Preset Stations

- 1 Press the POWER/LOCK switch to POWER.
- 2 Press the ON/OFF button to turn the radio on.
- 3 Press the BAND button to select the band.
For STANDBY MEMORY button S **A** or S **B**, skip this step.
- 4 Press the desired MEMORY PRESET button M1 to M5 or STANDBY MEMORY button S **A** or S **B**.
- 5 Adjust the volume.

SECTION 2

IC PIN DESCRIPTION

2-1. IC350 μ PD17201AGF-655-3B9

Pin No.	Pin name	Description															
1	LCD32	LCD segment terminal.															
2	3	Driving voltage : 3.1V Duty : 1/3															
32	LCD1	Frame frequency : 85.3Hz Bias : 1/3															
33	GND	GND															
34	LCD0	LCD segment terminal.															
35	VADC	A/D converter positive power supply.															
36	ADC0	A/D converter input.	: BATT remainder reference input.														
37	ADC1		: OFF LOCK input (Hi : LOCK, Lo : ON)														
38	ADC2		: BATT remainder input.														
39	ADC3		: SCAN STOP SD input.														
40	GND ADC	A/D converter GND.															
41	INT	ACK : Data communication of 17201 to 1724.															
42	POA0	Key matrix. : Key source.	INITIAL-STATE SETTING														
43	POA1		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">MODEL Short land</th> <th style="text-align: center;">UK E AEP Australian</th> <th style="text-align: center;">US Canadian</th> <th style="text-align: center;">Germany Austrian Belgium Scandinavian</th> <th style="text-align: center;">Italian Saudi Arabia</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A0</td> <td style="text-align: center;">Short</td> <td style="text-align: center;">Open</td> <td style="text-align: center;">Short</td> <td style="text-align: center;">Open</td> </tr> <tr> <td style="text-align: center;">A1</td> <td style="text-align: center;">Short</td> <td style="text-align: center;">Short</td> <td style="text-align: center;">Open</td> <td style="text-align: center;">Open</td> </tr> </tbody> </table>	MODEL Short land	UK E AEP Australian	US Canadian	Germany Austrian Belgium Scandinavian	Italian Saudi Arabia	A0	Short	Open	Short	Open	A1	Short	Short	Open
MODEL Short land	UK E AEP Australian	US Canadian	Germany Austrian Belgium Scandinavian	Italian Saudi Arabia													
A0	Short	Open	Short	Open													
A1	Short	Short	Open	Open													
44	POA2	Key matrix. : Key source.															
45	POA3																
46	POB0	Key matrix. : Key return.															
49	POB3																
50	POC0	Key matrix. : Diode.															
51	POC1	CLK ACK	Data communication of 17201 to 1724.														
52	POC2	DATA															
53	POC3	REQ															
54	POD0	CLK UP															
55	POD1	MUTE : MUTE output active "L".															
56	POD2	POWER CHECK : BATT remainder DET output "H".															
57	POD3	FAIL : BACK UP voltage DET input. (Hi : RADIO ON practicable, Lo : BACK UP)															
58	PIA0	DATA + B : Data communication of 17201 to 1724. PULL UP terminal.															
59	PIA1	POWER (1724) : 1724 Power ON/OFF terminal "L".															
60	PIA2	LIGHT : BACK LIGHT ON/OFF terminal "H".															
61	REM	Not use.															
62	VDD	Power supply.															

Pin No.	Pin name	Description	
63	X IN	Main clock. 2.62MHz Ceramic vibrator.	
64	X OUT		
65	RESET	Set to reset when less 2.0V. "L".	
66	VREG	Sub clock. Vibrator regulator terminal.	
67	WDOUT	Not use.	
68	XT IN	Sub clock. 32.768kHz Crystal vibrator.	
69	XT OUT		
70	VLCD0	LCD drive referencce voltage output.	: Reference voltage output.
71	VLCD C		: Reference voltage adjust.
72	VLCD1		: Doubler output.
73	VLCD2		: Tripler output.
74	CAPH	LCD drive step-up condenser.	
75	CAPL		
76	COM0	LCD common terminal.	Driving voltage : 3.1V Duty : 1/3
77	COM1		Frame frequency : 85.3Hz Bias : 1/3
78	COM2		
79	LCD34	LCD segment terminal.	Driving voltage : 3.1V Duty : 1/3
80	LCD33		Frame frequency : 85.3Hz Bias : 1/3

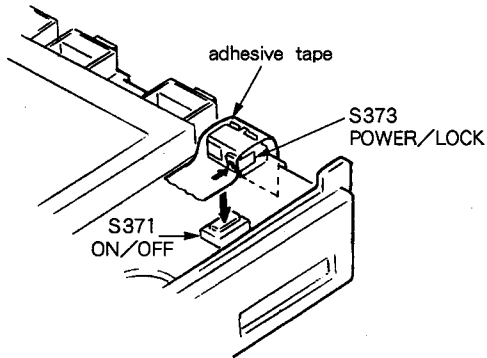
2-2. IC301 μ PD1724GB-612-1A7

Pin No.	Pin name	Description	
1	LCD10	LCD segment terminal.	
2	COM0	Driving voltage : 3.1V	Duty : 1/3
10	LCD1	Frame frequency : 100Hz	Bias : 1/2
11	NC	Not use.	
12	COM3	LCD common terminal.	
13	COM2	Driving voltage : 3.1V	Duty : 1/3
14	COM1	Frame frequency : 100Hz	Bias : 1/2
15	VSS3	LCD driving step-up circuit.	
16	CAP2		
17	CAP1		
18	VSS2		
19	VDP	Not use.	
20	VGP	BEEP : BUZZER sound output when STANDBY ON.	
21	NC	Not use.	
22	VDD	Power supply.	
23	VCOH	FM VCO input.	
24	VCOM	SW VCO input.	
25	VCOL	MW VCO input.	

Pin No.	Pin name	Description	
26	VSS1	GND	
27	EO1	Not use.	
28	EO2	PLL phase comparator output. →to LPF.	
29	CE	Pull up.	
30	X0	75kHz Crystal vibrator.	
31	X1		
32	VSS4	Crystal vibrator driving regulator.	
33	PA3	Power : Radio ON/OFF output. "H"	
34	PA2	DATA	Data communication input. 17201→1724
35	PA1	REQ	
36	PA0	CLK UP	
37	PB3	Not use.	
38	PB2		
39	PB1	BAND SW : BAND switching. FM : "L", MW : "L", SW : "H"	
40	PB0	BAND AM : BAND switching. FM : "L", MW : "H", SW : "H"	
41	PC3	Not use.	
42	PC2	SW 13mb : FM "L", MW "L", SW expect 13mb "H".	
43	PC1	CLK ACK	
44	PC0	ACK	
45	K3	Not use.	
48	K0		
49	NC	Not use.	
50			
51	LCD16	LCD segment terminal.	
56	LCD11	Driving voltage : 3.1V	Duty : 1/3
		Frame frequency : 100Hz	Bias : 1/2

SECTION 3 ELECTRICAL ADJUSTMENTS

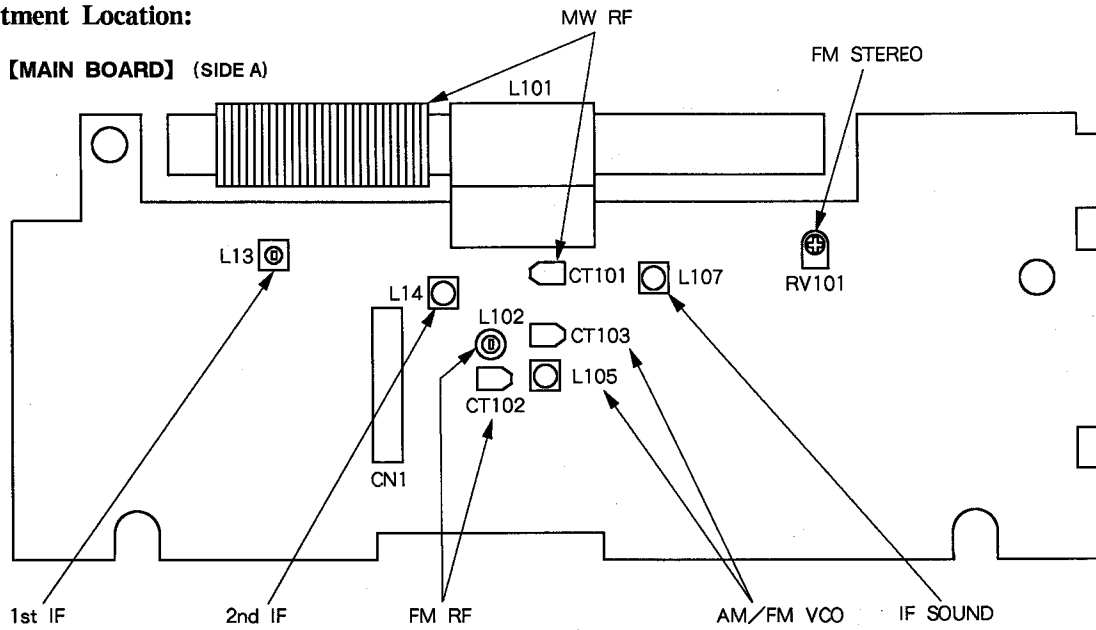
Preparation:



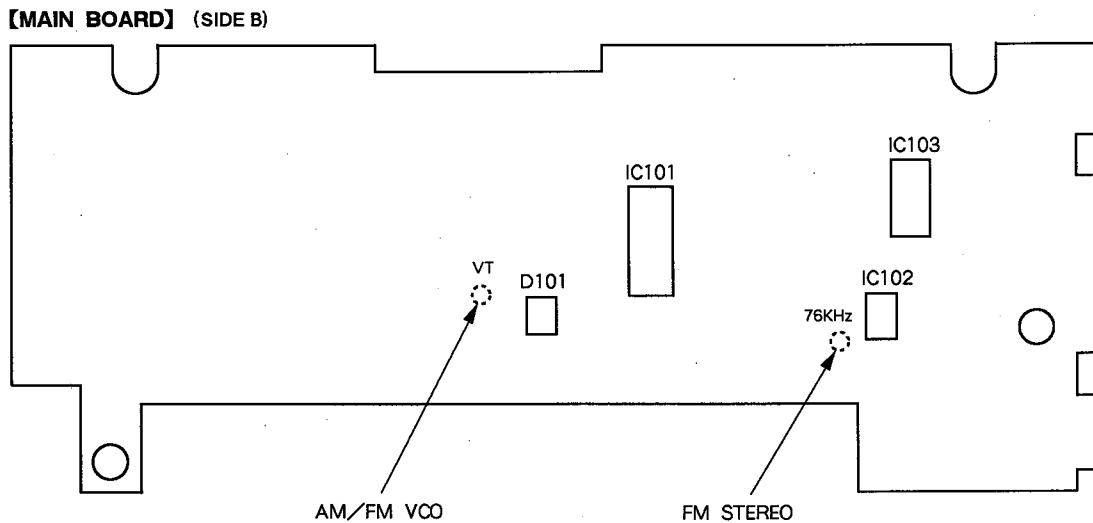
How to turn the power ON/OFF.

1. Press down portion A of S373 (Power/Lock) switch by adhesive tape.
2. Push the S371 (ON/OFF) switch.

Adjustment Location:



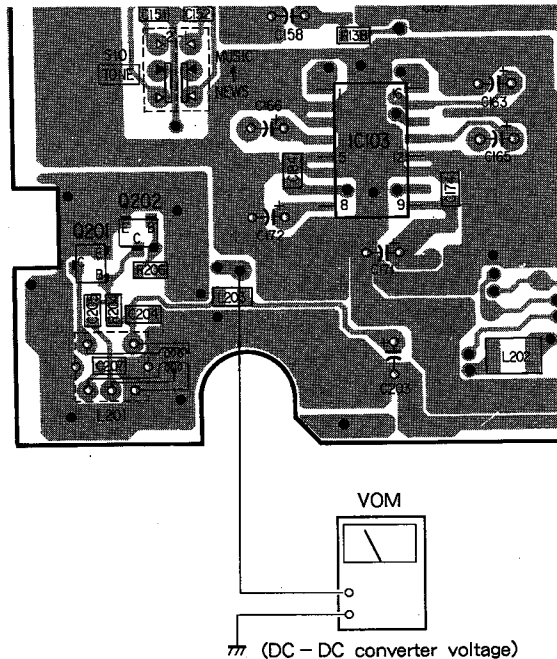
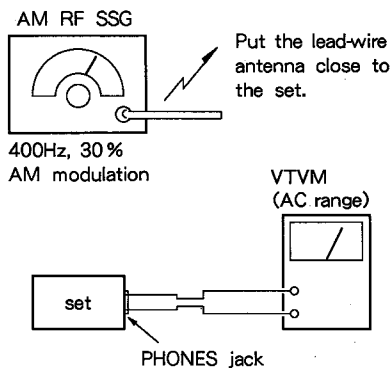
Test Point Location:



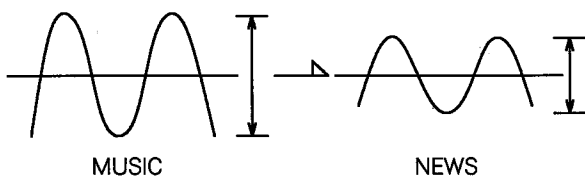
IF SOUND CHECK

Setup:

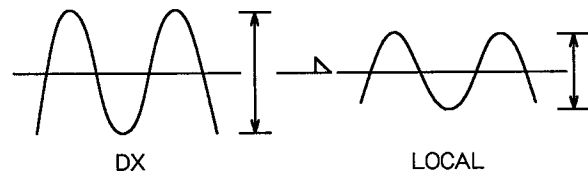
VOLUME : as required
BAND : MW



1. Confirm that the voltage reading on the VOM is 14.5V from DC - DC converter voltage.
2. Adjust L107 to obtain a maximum waveform on the oscilloscope.
3. Set the frequencies of the AM RF SG and the frequency display of the set to 999kHz.
4. Confirm that the waveforms on the oscilloscope is transformation like a bellow illustration when S101 (TONE) switching to MUSIC side and NEWS side.



5. Confirm that the waveforms on the oscilloscope is transformation like a bellow illustration when S1 (SENS) switching to DX side and LOCAL side.

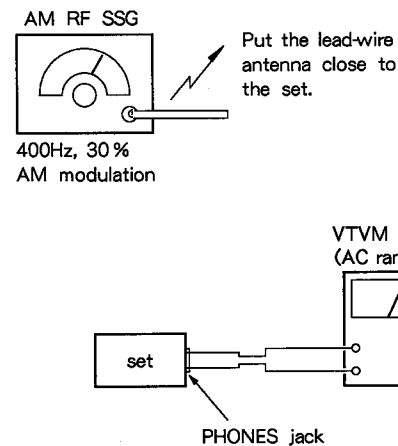


6. Confirm that hear the sound after insert the HEADPHONES into PHONES jack.

1st/2nd IF ADJUSTMENT

Setup:

VOLUME : as required
BAND : SW
SENS : DX



Procedure:

• 1st IF ADJUSTMENT

1. Set the frequencies of the AM RF SG and the frequency display of the set to 3700kHz.
2. Adjust L13 to obtain a maximum reading on the VTVM.

• 2nd IF ADJUSTMENT

1. Set the frequencies of the AM RF SG and the frequency display of the set to 3700kHz.
2. Adjust L14 to obtain a maximum reading on the VTVM.

FM SECTION

VCO VOLTAGE CHECK

- Note:**
- 1) This adjustment should be performed after the AM VCO VOLTAGE ADJUSTMENT.
 - 2) Test point is identical the AM VCO VOLTAGE ADJUSTMENT.

Setup:

VOLUME : as required
BAND : FM

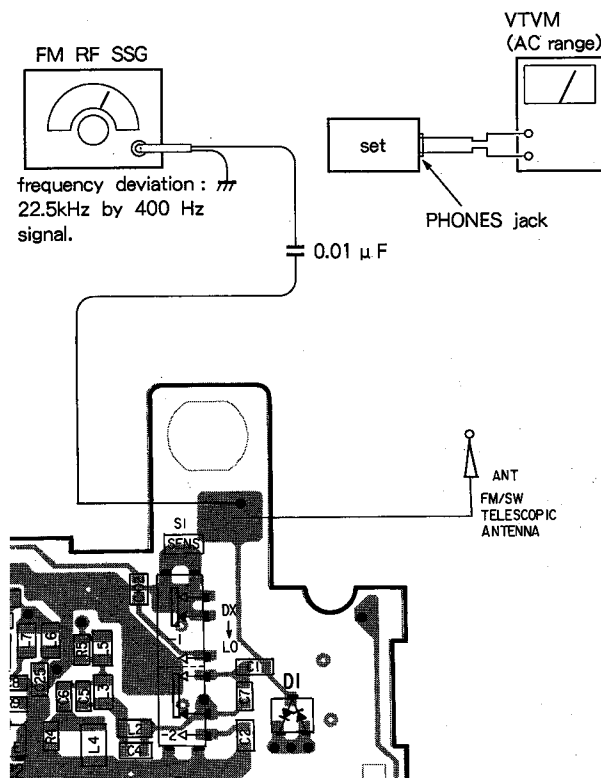
Procedure:

1. Tune the set to FM 76.0MHz.
2. Confirm that the voltage reading on the VOM is 0.8 - 1.8V.
3. Tune the set to FM 108.0MHz.
4. Confirm that the voltage reading on the VOM is 11.2 - 12.2V.

FM RF ADJUSTMENT

Setup:

VOLUME : as required
BAND : FM



Procedure:

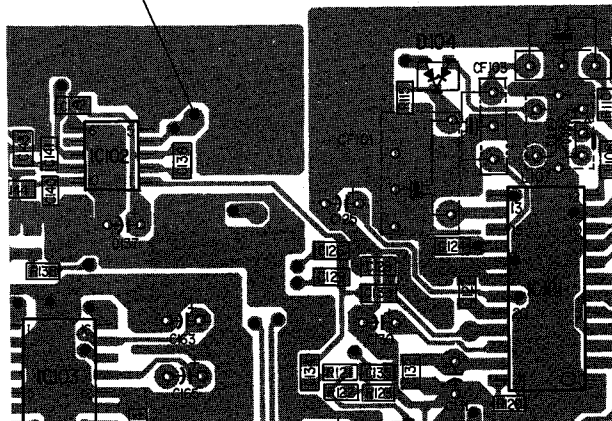
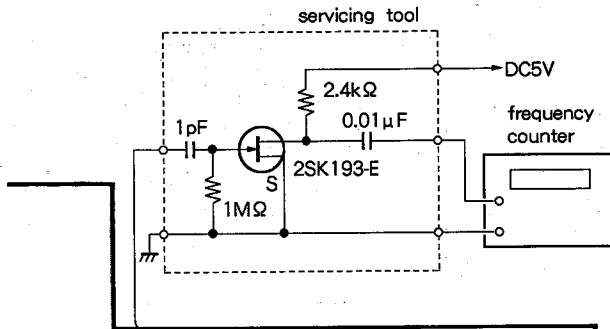
1. Set the frequencies of the FM RF SSG and the frequency display of the set to 108.0kHz.
2. Adjust CT102 to obtain a maximum reading on the VTVM.

3. Set the frequencies of the FM RF SSG and the frequency display of the set to 76.0kHz.
4. Adjust L102 to obtain a maximum reading on the VTVM.
5. Repeat the above steps several times.

FM STEREO ADJUSTMENT

Setup:

VOLUME : as required
BAND : FM

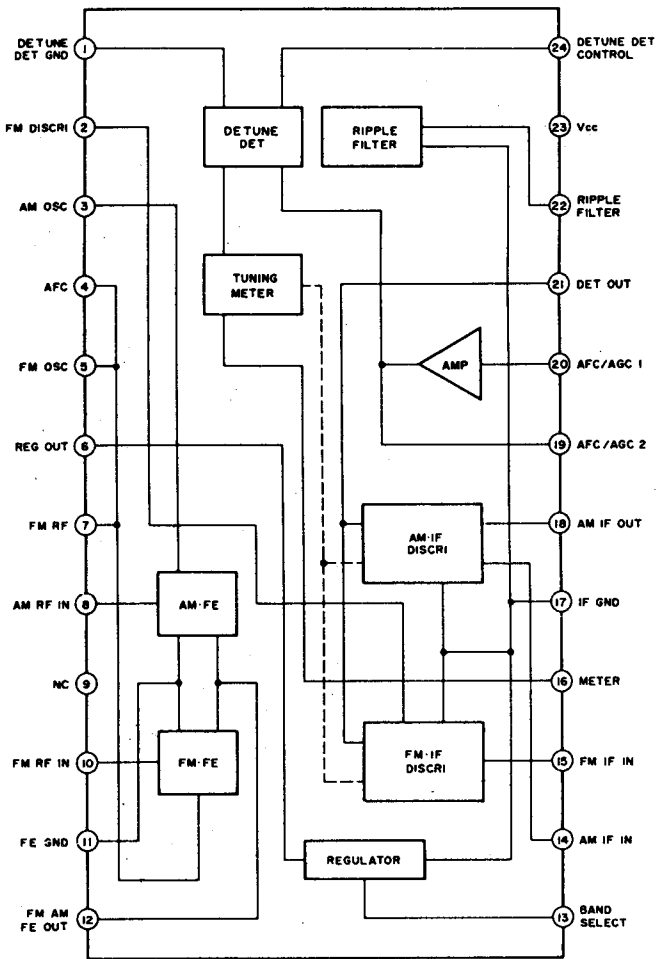


Procedure:

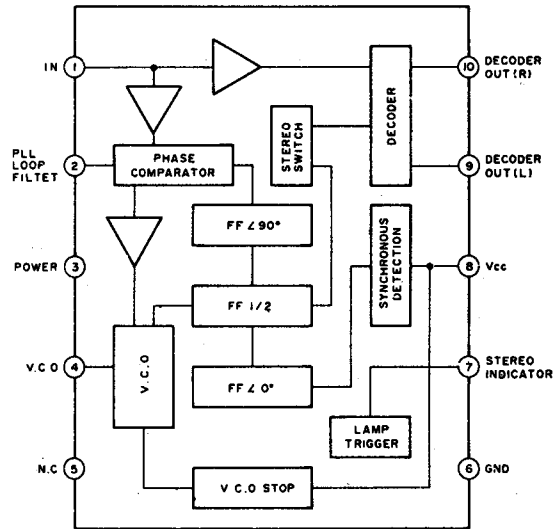
1. Insert the HEADPHONES into PHONES jack.
2. Connect a capacitor (10 μ F) between pin 21 of IC1 and GRAND.
3. Tune the set to FM 108.0MHz.
4. Adjust RV101 to obtain 75.9 - 76.1kHz on the frequency counter.

4-2. IC BLOCK DIAGRAMS

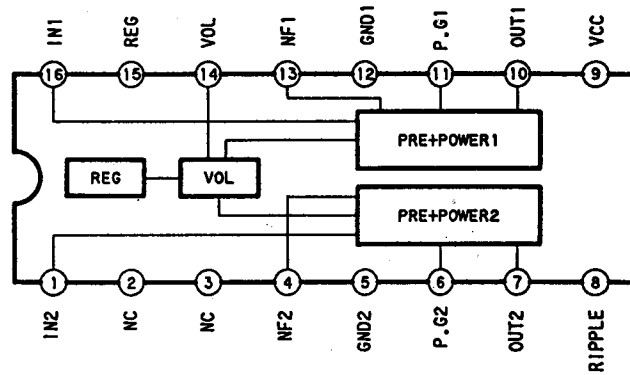
IC101 CX20111



IC102 LA3335M



IC103 CXA1522M



KEY

**SECTION 6
ELECTRICAL PARTS LIST**

NOTE:

- Due to standardization, replacements in the parts list may be different from the part specified in the diagrams or the components used on the set.
- -XX,-X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : μ , for example :
uA... : μ A..., uPA... : μ PA...,
uPB... : μ PB..., uPC... : μ PC...,
uPD... : μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H

When indicating parts by reference number, please include the board name.

- Abbreviations
EA...Soudi Arabia model
22AE7...Austrian, Belgium models
21AE7...Scandinavian Countries model

Ref. No.	Part No.	Description	Remark
*	A-3679-463-A	KEY BOARD, COMPLETE *****	
	1-537-465-11	CONDUCTIVE BOARD, CONNECTION	
	1-645-844-11	FLEXIBLE BOARD	
	3-383-863-01	PLATE, LIGHT GUIDE	
		< CAPACITOR >	
C304	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C305	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C306	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C307	1-130-834-00	FILM 1uF	10% 63V
C309	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C310	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C311	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C312	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C313	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C314	1-135-151-21	TANTAL. CHIP 4.7uF	20% 4V
C315	1-163-059-00	CERAMIC CHIP 0.01uF	10% 50V
C318	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C319	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C320	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C321	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C322	1-162-947-11	CERAMIC CHIP 33PF	5% 50V
C323	1-164-455-11	CERAMIC CHIP 16PF	5% 50V
C324	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C350	1-164-506-11	CERAMIC CHIP 4.7uF	16V
C351	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C352	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C353	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C355	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C358	1-163-205-00	CERAMIC CHIP 0.001uF	5% 50V
C359	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C360	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V

Ref. No.	Part No.	Description	Remark
C361	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C362	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C363	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C364	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C365	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C366	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
C367	1-163-189-00	CERAMIC CHIP 220PF	10% 50V
C368	1-163-189-00	CERAMIC CHIP 220PF	10% 50V
C369	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C370	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C371	1-162-961-11	CERAMIC CHIP 330PF	10% 50V
C374	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C375	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C377	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C378	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C379	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C380	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C381	1-164-113-11	CERAMIC CHIP 20PF	5% 50V
C382	1-164-113-11	CERAMIC CHIP 20PF	5% 50V
C383	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C384	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C387	1-164-457-11	CERAMIC CHIP 30PF	5% 50V
C388	1-164-457-11	CERAMIC CHIP 30PF	5% 50V
C389	1-135-151-21	TANTAL. CHIP 4.7uF	20% 4V
C390	1-135-181-21	TANTAL. CHIP 4.7uF	20% 6.3V
C391	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C392	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C393	1-162-953-11	CERAMIC CHIP 100PF	5% 50V
C394	1-163-181-00	CERAMIC CHIP 100PF	5% 50V
C395	1-163-181-00	CERAMIC CHIP 100PF	5% 50V

KEY

Ref. No.	Part No.	Description	Remark
< DIODE >			
D301	8-719-812-41	LED TLR124 (TUNE)	
D302	8-719-941-86	DIODE DAN202U	
D351	8-719-941-09	DIODE DAP202U	
D352	8-719-941-09	DIODE DAP202U	
D353	8-719-941-09	DIODE DAP202U	
D354	8-719-941-86	DIODE DAN202U	
D355	8-719-941-86	DIODE DAN202U	
D356	8-719-941-86	DIODE DAN202U	
D357	8-719-980-90	LED SLP381F-51-AB (BACKLIGHT)	
< IC >			
IC301	8-759-158-57	IC μ PD1724GB-612-1A7	
IC350	8-759-158-56	IC μ PD17201AGF-655-3B9	
IC351	8-759-070-05	IC S-80720AN-DH-S	
IC352	8-759-096-23	IC S-80728AN-DR-T1	
< LIQUID CRYSTAL DISPLAY >			
LCD	1-809-910-11	DISPLAY PANEL, LIQUID CRYSTAL	
< TRANSISTOR >			
Q302	8-729-220-93	TRANSISTOR 2SK209-G	
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q304	8-729-220-93	TRANSISTOR 2SK209-G	
Q305	8-729-018-90	TRANSISTOR 2SA1411-T1BM16	
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q351	8-729-901-06	TRANSISTOR DTA144EK	
Q352	8-729-901-01	TRANSISTOR DTC144EK	
Q353	8-729-920-08	TRANSISTOR DTC124TK	
< RESISTOR >			
R304	1-216-813-11	METAL GLAZE 220 5%	1/16W
R305	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R306	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R307	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R308	1-216-864-11	METAL GLAZE 0 5%	1/16W
R309	1-216-809-11	METAL GLAZE 100 5%	1/16W
R310	1-216-831-11	METAL GLAZE 6.8K 5%	1/16W
R311	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R312	1-216-831-11	METAL GLAZE 6.8K 5%	1/16W
R313	1-216-853-11	METAL GLAZE 470K 5%	1/16W
R314	1-216-849-11	METAL GLAZE 220K 5%	1/16W
R315	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R316	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R317	1-216-001-00	METAL GLAZE 10 5%	1/10W
R318	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R319	1-216-813-11	METAL GLAZE 220 5%	1/16W
R320	1-216-813-11	METAL GLAZE 220 5%	1/16W
R321	1-216-821-11	METAL GLAZE 1K 5%	1/16W

Ref. No.	Part No.	Description	Remark
R324	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R325	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R326	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R327	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R328	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R329	1-216-198-00	METAL GLAZE 1K 5%	1/8W
R330	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R331	1-236-499-11	RES, NETWORK 1K X 3	
R332	1-236-502-11	RES, NETWORK 100K X 3	
R333	1-236-502-11	RES, NETWORK 100K X 3	
R334	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R335	1-236-502-11	RES, NETWORK 100K X 3	
R336	1-236-502-11	RES, NETWORK 100K X 3	
R337	1-236-502-11	RES, NETWORK 100K X 3	
R338	1-236-502-11	RES, NETWORK 100K X 3	
R339	1-216-818-11	METAL GLAZE 560 5%	1/16W
R340	1-216-829-11	METAL GLAZE 4.7K 5%	1/16W
R350	1-216-864-11	METAL GLAZE 0 5%	1/16W
R351	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R352	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R353	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R354	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R355	1-236-499-11	RES, NETWORK 1K X 3	
R356	1-236-499-11	RES, NETWORK 1K X 3	
R357	1-236-500-11	RES, NETWORK 10K X 3	
R358	1-236-500-11	RES, NETWORK 10K X 3	
R359	1-236-500-11	RES, NETWORK 10K X 3	
R360	1-216-841-11	METAL GLAZE 47K 5%	1/16W
R361	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R362	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R363	1-216-848-11	METAL GLAZE 180K 5%	1/16W
R364	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R365	1-216-834-11	METAL GLAZE 12K 5%	1/16W
R366	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R367	1-216-797-11	METAL GLAZE 10 5%	1/16W
R368	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R369	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R370	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R371	1-236-502-11	RES, NETWORK 100K X 3	
R372	1-236-502-11	RES, NETWORK 100K X 3	
R373	1-236-502-11	RES, NETWORK 100K X 3	
R374	1-236-502-11	RES, NETWORK 100K X 3	
R375	1-236-502-11	RES, NETWORK 100K X 3	
R376	1-236-502-11	RES, NETWORK 100K X 3	
R377	1-236-502-11	RES, NETWORK 100K X 3	
R378	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R379	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R380	1-236-502-11	RES, NETWORK 100K X 3	
R381	1-236-502-11	RES, NETWORK 100K X 3	
R382	1-216-857-11	METAL GLAZE 1M 5%	1/16W

KEY

MAIN

Ref. No.	Part No.	Description	Remark
R383	1-216-857-11	METAL GLAZE	1M 5% 1/16W
R384	1-216-821-11	METAL GLAZE	1K 5% 1/16W
R385	1-216-857-11	METAL GLAZE	1M 5% 1/16W
R386	1-216-857-11	METAL GLAZE	1M 5% 1/16W
R387	1-216-821-11	METAL GLAZE	1K 5% 1/16W
R388	1-216-849-11	METAL GLAZE	220K 5% 1/16W
R389	1-216-849-11	METAL GLAZE	220K 5% 1/16W
R390	1-216-849-11	METAL GLAZE	220K 5% 1/16W
R391	1-216-849-11	METAL GLAZE	220K 5% 1/16W
R392	1-216-837-11	METAL GLAZE	22K 5% 1/16W
R393	1-216-837-11	METAL GLAZE	22K 5% 1/16W
R394	1-216-809-11	METAL GLAZE	100 5% 1/16W
R395	1-216-863-11	METAL GLAZE	3.3M 5% 1/16W
R396	1-216-295-11	METAL GLAZE	0 5% 1/10W
R397	1-216-837-11	METAL GLAZE	22K 5% 1/16W
R398	1-216-833-11	METAL GLAZE	10K 5% 1/16W
R399	1-216-864-11	METAL GLAZE	0 5% 1/16W
< SWITCH >			
S350	1-572-473-11	SWITCH, TACTIL	(METER/TIME)
S351	1-572-473-11	SWITCH, TACTIL	(TUNE +)
S352	1-572-473-11	SWITCH, TACTIL	(TUNE -)
S353	1-572-473-11	SWITCH, TACTIL	(SCAN)
S354	1-572-595-11	SWITCH, TACTIL	(REFLOW TYPE) (12H/24H)
S355	1-572-473-11	SWITCH, TACTIL	(Sa)
S356	1-572-473-11	SWITCH, TACTIL	(Sb)
S357	1-572-473-11	SWITCH, TACTIL	(BAND)
S358	1-572-499-11	SWITCH, TACTIL	(LIGHT)
S359	1-572-499-11	SWITCH, TACTIL	(BATT/DST)
S360	1-572-473-11	SWITCH, TACTIL	(HOME/WORLD)
S361	1-572-473-11	SWITCH, TACTIL	(M3)
S362	1-572-473-11	SWITCH, TACTIL	(M4)
S363	1-572-473-11	SWITCH, TACTIL	(M5)
S364	1-572-473-11	SWITCH, TACTIL	(STANDBY a)
S365	1-572-473-11	SWITCH, TACTIL	(STANDBY b)
S366	1-572-499-11	SWITCH, TACTIL	(HOME TIME SET)
S367	1-572-473-11	SWITCH, TACTIL	(ENTER)
S368	1-572-473-11	SWITCH, TACTIL	(M1)
S369	1-572-473-11	SWITCH, TACTIL	(M2)
S370	1-572-473-11	SWITCH, TACTIL	(KEY PROTECT)
S371	1-572-473-11	SWITCH, TACTIL	(ON/OFF)
S372	1-572-473-11	SWITCH, TACTIL	(SLEEP)
S373	1-571-754-11	SWITCH, PUSH (1 KEY)	(POWER/LOCK)
S374	1-570-863-11	SWITCH, SLIDE	(MW CH STEP)
S375	1-572-921-11	SWITCH, KEY BOARD	(RESET)

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
XC301	1-567-769-11	VIBRATOR, CRYSTAL	(75kHz)
XC351	1-579-825-11	VIBRATOR, CERAMIC	(2.62MHz)
XC352	1-567-098-41	VIBRATOR, CRYSTAL	(32.768kHz)

*	A-3679-462-A	MAIN BOARD, COMPLETE (21AE7, 22AE7, Germany, Italian, EA)	
*	A-3679-464-A	MAIN BOARD, COMPLETE (US, Canadian, UK, AEP, E, Australian)	

< CAPACITOR >			
C1	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C2	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C3	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C4	1-162-934-11	CERAMIC CHIP	3PF 0.25PF 50V
C5	1-162-934-11	CERAMIC CHIP	3PF 0.25PF 50V
C6	1-162-952-11	CERAMIC CHIP	82PF 5% 50V
C7	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C8	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C9	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C10	1-162-952-11	CERAMIC CHIP	82PF 5% 50V
C12	1-162-943-11	CERAMIC CHIP	15PF 5% 50V
C13	1-162-930-11	CERAMIC CHIP	1PF 0.25PF 50V
C14	1-164-462-11	CERAMIC CHIP	110PF 5% 50V
C15	1-162-943-11	CERAMIC CHIP	15PF 5% 50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C17	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C18	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C19	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C20	1-126-154-11	ELECT	47uF 20% 6.3V
C21	1-162-946-11	CERAMIC CHIP	27PF 5% 50V
C22	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C23	1-126-154-11	ELECT	47uF 20% 6.3V
C24	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C25	1-162-943-11	CERAMIC CHIP	15PF 5% 50V
C26	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C27	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C28	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C29	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C30	1-164-357-11	CERAMIC CHIP	1000PF 5% 50V
C31	1-164-357-11	CERAMIC CHIP	1000PF 5% 50V
C32	1-162-929-11	CERAMIC CHIP	0.5PF 0.25PF 50V
C33	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C34	1-136-850-11	FILM	0.1uF 10% 63V
C35	1-162-930-11	CERAMIC CHIP	1PF 0.25PF 50V
C36	1-164-232-11	CERAMIC CHIP	0.01uF 50V
C37	1-162-943-11	CERAMIC CHIP	15PF 5% 50V
C38	1-162-946-11	CERAMIC CHIP	27PF 5% 50V

Ref. No.	Part No.	Description	Remark		
C39	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C40	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C41	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C42	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C43	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C45	1-126-154-11	ELECT	47uF	20%	6. 3V
C46	1-126-157-11	ELECT	10uF	20%	16V
C48	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C51	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C52	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C53	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C102	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C103	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C104	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C105	1-162-936-11	CERAMIC CHIP	5PF	0. 25PF	50V
C106	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C107	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C108	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C109	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C110	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C111	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C112	1-164-456-11	CERAMIC CHIP	24PF	5%	50V
C113	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C114	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C115	1-164-474-11	CERAMIC CHIP	910PF	5%	50V
C116	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C117	1-162-932-11	CERAMIC CHIP	2PF	0. 25PF	50V
C118	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C119	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C120	1-124-430-00	ELECT	22uF	20%	4V
C121	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C122	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C123	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C124	1-164-346-11	CERAMIC CHIP	1uF		16V
C125	1-126-163-11	ELECT	4. 7uF	20%	50V
C126	1-163-809-11	CERAMIC CHIP	0. 047uF	10%	25V
C127	1-164-346-11	CERAMIC CHIP	1uF		16V
C128	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C129	1-163-986-00	CERAMIC CHIP	0. 027uF	10%	25V
C130	1-124-430-00	ELECT	22uF	20%	4V
C131	1-124-434-00	ELECT	220uF	20%	4V
C132	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C133	1-164-346-11	CERAMIC CHIP	1uF		16V
C134	1-164-005-11	CERAMIC CHIP	0. 47uF		25V
C135	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C136	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C137	1-126-154-11	ELECT	47uF	20%	6. 3V
C138	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C139	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C140	1-162-969-11	CERAMIC CHIP	0. 0068uF	10%	25V

Ref. No.	Part No.	Description	Remark		
C141	1-162-969-11	CERAMIC CHIP	0. 0068uF	10%	25V
C142	1-164-346-11	CERAMIC CHIP	1uF		16V
C143	1-164-346-11	CERAMIC CHIP	1uF		16V
C144	1-164-346-11	CERAMIC CHIP	1uF		16V
C145	1-162-969-11	CERAMIC CHIP	0. 0068uF	10%	25V
C146	1-162-969-11	CERAMIC CHIP	0. 0068uF	10%	25V
C147	1-163-023-00	CERAMIC CHIP	0. 015uF	10%	50V
C148	1-163-023-00	CERAMIC CHIP	0. 015uF	10%	50V
C149	1-163-022-00	CERAMIC CHIP	0. 012uF	10%	50V
C150	1-163-022-00	CERAMIC CHIP	0. 012uF	10%	50V
C151	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C152	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C153	1-163-016-00	CERAMIC CHIP	0. 0039uF	10%	50V
C154	1-163-016-00	CERAMIC CHIP	0. 0039uF	10%	50V
C155	1-164-346-11	CERAMIC CHIP	1uF		16V
C156	1-164-346-11	CERAMIC CHIP	1uF		16V
C157	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C158	1-126-157-11	ELECT	10uF	20%	16V
C159	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C160	1-164-346-11	CERAMIC CHIP	1uF		16V
C161	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C162	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C163	1-126-157-11	ELECT	10uF	20%	16V
C164	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C165	1-126-163-11	ELECT	4. 7uF	20%	50V
C166	1-126-163-11	ELECT	4. 7uF	20%	50V
C167	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C168	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C169	1-124-584-00	ELECT	100uF	20%	10V
C170	1-124-584-00	ELECT	100uF	20%	10V
C171	1-128-057-11	ELECT	330uF	20%	6. 3V
C172	1-126-153-11	ELECT	22uF	20%	6. 3V
C173	1-128-057-11	ELECT	330uF	20%	6. 3V
C174	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C175	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C176	1-124-434-00	ELECT	220uF	20%	4V
C177	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C178	1-135-161-21	TANTAL. CHIP	22uF	20%	10V
C179	1-163-189-00	CERAMIC CHIP	220PF	5%	50V
C180	1-125-733-31	CAP, DOUBLE LAYER	0. 047F		
C181	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C182	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C183	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C184	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C185	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C201	1-164-346-11	CERAMIC CHIP	1uF		16V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-124-434-00	ELECT	220uF	20%	4V
C204	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C205	1-162-932-11	CERAMIC CHIP	2PF		50V

MAIN

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
C206	1-163-038-00	CERAMIC CHIP	0. 1uF			< JACK >	
C207	1-162-934-11	CERAMIC CHIP	3PF				
		< CONNECTOR >		J1	1-563-330-11	JACK (REC OUT)	
				J2	1-695-153-11	JACK, DC (DC IN 4.5V)	
				J3	1-695-828-11	JACK (PHONES)	
CN1	1-691-397-11	CONNECTOR, FPC 21P				< COIL >	
		< FILTER >		L1	1-410-658-31	INDUCTOR CHIP	220uH
BPF	1-236-921-21	FILTER, BAND PASS		L2	1-410-992-11	INDUCTOR CHIP	0. 82uH
		(US, Canadian, UK, AEP, E, Australian)		L3	1-410-991-11	INDUCTOR CHIP	0. 68uH
BPF	1-239-061-11	FILTER, BAND PASS		L4	1-410-656-11	INDUCTOR CHIP	150uH
		(21AE7, 22AE7, Germany, Italian, EA)		L5	1-410-999-11	INDUCTOR CHIP	3. 3uH
CF1	1-579-827-11	FILTER, CERAMIC (21. 44MHz)		L6	1-410-991-11	INDUCTOR CHIP	0. 68uH
CF101	1-579-826-11	FILTER, CERAMIC (450kHz)		L7	1-412-004-31	INDUCTOR CHIP	6. 8uH
CF102	1-577-599-11	FILTER, CERAMIC (10. 7MHz)		L8	1-410-991-11	INDUCTOR CHIP	0. 68uH
CF103	1-577-599-11	FILTER, CERAMIC (10. 7MHz)		L9	1-410-990-31	INDUCTOR CHIP	0. 56uH
CF104	1-577-599-11	FILTER, CERAMIC (10. 7MHz)		L10	1-410-994-11	INDUCTOR CHIP	1. 2uH
		< TRIMMER >		L11	1-410-992-11	INDUCTOR CHIP	0. 82uH
CT101	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE) 10P		L12	1-426-357-11	TRANSFORMER, RF	
CT102	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE) 10P		L13	1-402-813-11	TRANSFORMER, IF	
CT103	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE) 10P		L14	1-404-444-31	TRANSFORMER, IF	
		< DIODE >		L15	1-410-989-11	INDUCTOR CHIP	0. 47uH
D1	8-719-800-76	DIODE	1SS226	L16	1-402-814-11	COIL (SW OSC)	
D2	8-719-123-79	DIODE	1SS279	L17	1-410-996-31	INDUCTOR CHIP	1. 8uH
D4	8-713-300-57	DIODE	1T33	L18	1-410-993-11	INDUCTOR CHIP	1uH
D5	8-713-300-57	DIODE	1T33	L19	1-410-986-31	INDUCTOR CHIP	0. 27uH
D6	8-713-300-57	DIODE	1T33	L21	1-410-658-31	INDUCTOR CHIP	220uH
D7	8-719-400-18	DIODE	MA152WK	L101	1-501-566-11	ANTENNA, FERRITE-ROD (LW/MW/SW)	
D8	8-719-400-18	DIODE	MA152WK	L102	1-402-815-11	COIL (WITH CORE) (FM RF)	
D101	8-719-023-XX	DIODE	KV1563MTL-2, 3	L103	1-414-001-11	INDUCTOR CHIP	0. 07uH
D102	8-713-300-57	DIODE	1T33	L104	1-402-812-11	COIL (FM OSC)	
D103	8-713-300-57	DIODE	1T33	L105	1-406-487-11	COIL (OSC)	
D104	8-719-400-18	DIODE	MA152WK	L106	1-412-002-31	INDUCTOR CHIP	4. 7uH
D105	8-719-031-56	DIODE	SB01W05C-TB	L107	1-404-444-31	TRANSFORMER, IF	
D106	8-719-400-18	DIODE	MA152WK	L108	1-410-989-11	INDUCTOR CHIP	0. 47uH
D107	8-719-031-56	DIODE	SB01W05C-TB	L201	1-423-377-11	TRANSFORMER, DC-DC CONVERTER	
D108	8-719-400-18	DIODE	MA152WK	L202	1-410-658-31	INDUCTOR CHIP	220uH
D109	8-719-941-23	DIODE	DA204U	L203	1-412-010-41	INDUCTOR CHIP	22uH
D110	8-719-106-80	DIODE	RD13M-B2	L204	1-412-010-41	INDUCTOR CHIP	22uH
D201	8-719-400-18	DIODE	MA152WK			< TRANSISTOR >	
D202	8-719-106-80	DIODE	RD13M-B2	Q1	8-729-116-64	TRANSISTOR	2SK508-K51
		< IC >		Q2	8-729-116-64	TRANSISTOR	2SK508-K51
IC101	8-752-050-00	IC	CX20111	Q3	8-729-116-64	TRANSISTOR	2SK508-K51
IC102	8-759-804-98	IC	LA3335M	Q4	8-729-220-93	TRANSISTOR	2SK209-G
IC103	8-752-057-63	IC	CXA1522M	Q5	8-729-220-93	TRANSISTOR	2SK209-G
IC104	8-759-804-77	IC	LA5002MTP1	Q6	8-729-102-07	TRANSISTOR	2SC2223-F13
IC105	8-759-939-41	IC	S-81230AG-RB-S	Q7	8-729-208-47	TRANSISTOR	2SK210GR
				Q8	8-729-102-07	TRANSISTOR	2SC2223-F13
				Q9	8-729-102-07	TRANSISTOR	2SC2223-F13

Ref. No.	Part No.	Description	Remark
Q10	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q12	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q13	8-729-141-75	TRANSISTOR 2SD596DV345	
Q15	8-729-901-01	TRANSISTOR DTC144EK	
Q16	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q17	8-729-923-62	TRANSISTOR DTA123JK	
Q18	8-729-923-62	TRANSISTOR DTA123JK	
Q19	8-729-903-30	TRANSISTOR DTC144TK	
Q20	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q21	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q22	8-729-141-75	TRANSISTOR 2SD596DV345	
Q101	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q102	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q103	8-729-901-01	TRANSISTOR DTC144EK	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q106	8-729-120-66	TRANSISTOR 2SC1623-L5L6	
Q107	8-729-901-01	TRANSISTOR DTC144EK	
Q108	8-729-903-29	TRANSISTOR DTA144TK	
Q109	8-729-903-29	TRANSISTOR DTA144TK	
Q110	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q112	8-729-903-29	TRANSISTOR DTA144TK	
Q113	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q114	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q115	8-729-903-30	TRANSISTOR DTC144TK	
Q116	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q117	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q118	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q119	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R2	1-216-837-11	METAL GLAZE 22K 5%	1/16W
R3	1-216-837-11	METAL GLAZE 22K 5%	1/16W
R4	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R5	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R6	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R7	1-216-797-11	METAL GLAZE 10 5%	1/16W
R9	1-216-809-11	METAL GLAZE 100 5%	1/16W
R11	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R12	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R13	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R14	1-216-809-11	METAL GLAZE 100 5%	1/16W
R15	1-216-809-11	METAL GLAZE 100 5%	1/16W
R16	1-216-809-11	METAL GLAZE 100 5%	1/16W
R17	1-216-819-11	METAL GLAZE 680 5%	1/16W
R18	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W

Ref. No.	Part No.	Description	Remark
R19	1-216-809-11	METAL GLAZE 100 5%	1/16W
R20	1-216-827-11	METAL GLAZE 3.3K 5%	1/16W
R21	1-216-829-11	METAL GLAZE 4.7K 5%	1/16W
R22	1-216-809-11	METAL GLAZE 100 5%	1/16W
R23	1-216-809-11	METAL GLAZE 100 5%	1/16W
R24	1-216-817-11	METAL GLAZE 470 5%	1/16W
R25	1-216-817-11	METAL GLAZE 470 5%	1/16W
R26	1-216-841-11	METAL GLAZE 47K 5%	1/16W
R27	1-216-805-11	METAL GLAZE 47 5%	1/16W
R28	1-216-805-11	METAL GLAZE 47 5%	1/16W
R29	1-216-807-11	METAL GLAZE 68 5%	1/16W
R30	1-216-817-11	METAL GLAZE 470 5%	1/16W
R31	1-216-839-11	METAL GLAZE 33K 5%	1/16W
R32	1-216-809-11	METAL GLAZE 100 5%	1/16W
R33	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R34	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R35	1-216-813-11	METAL GLAZE 220 5%	1/16W
R36	1-216-842-11	METAL GLAZE 56K 5%	1/16W
R37	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R38	1-216-295-00	METAL GLAZE 0 5%	1/10W
R39	1-216-841-11	METAL GLAZE 47K 5%	1/16W
R40	1-216-835-11	METAL GLAZE 15K 5%	1/16W
R41	1-216-817-11	METAL GLAZE 470 5%	1/16W
R42	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R43	1-216-809-11	METAL GLAZE 100 5%	1/16W
R44	1-216-839-11	METAL GLAZE 33K 5%	1/16W
R45	1-216-839-11	METAL GLAZE 33K 5%	1/16W
R46	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R47	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R50	1-216-829-11	METAL GLAZE 4.7K 5%	1/16W
R51	1-216-864-11	METAL GLAZE 0 5%	1/16W
R52	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R53	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R54	1-216-839-11	METAL GLAZE 33K 5%	1/16W
R101	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R102	1-216-857-11	METAL GLAZE 1M 5%	1/16W
R103	1-216-821-11	METAL GLAZE 1K 5%	1/16W
R104	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R105	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R107	1-216-833-11	METAL GLAZE 10K 5%	1/16W
R108	1-216-857-11	METAL GLAZE 1M 5%	1/16W
R109	1-216-857-11	METAL GLAZE 1M 5%	1/16W
R110	1-216-815-11	METAL GLAZE 330 5%	1/16W
R111	1-216-839-11	METAL GLAZE 33K 5%	1/16W
R112	1-216-803-11	METAL GLAZE 33 5%	1/16W
R113	1-216-811-11	METAL GLAZE 150 5%	1/16W
R114	1-216-825-11	METAL GLAZE 2.2K 5%	1/16W
R115	1-216-841-11	METAL GLAZE 47K 5%	1/16W
R116	1-216-845-11	METAL GLAZE 100K 5%	1/16W
R117	1-216-841-11	METAL GLAZE 47K 5%	1/16W

