

# ICF-SW30/SW30L

## SERVICE MANUAL



PHOTO : ICF-SW30

*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*  
*E Model*  
*Australian Model*  
*Tourist Model*  
 ICF-SW30  
  
*French Model*  
 ICF-SW30L

### SPECIFICATIONS

**Circuit system:**

SW: Dual conversion superheterodyne

MW/FM: Single conversion superheterodyne

**Frequency range:**

| Band | Meter band   | Frequency  | Channel step   |
|------|--|--|--|
| LW   |  | 153-279 kHz*1  | 9 kHz  |
| MW   |  | 531-1710 kHz*2<br>530-1710 kHz*2<br>531-1602 kHz*3<br>530-1610 kHz*3   | 9 kHz<br>10 kHz<br>9 kHz<br>10 kHz   |
| SW   | 75 m<br>60 m<br>49 m<br>41 m<br>31 m<br>25 m<br>21 m<br>19 m<br>16 m<br>13 m | 3700-4200 kHz*2<br>3850-4200 kHz*3<br>4650-5150 kHz<br>5800-6300 kHz<br>6950-7450 kHz<br>9375-10000 kHz<br>11525-12150 kHz<br>13375-14000 kHz<br>14975-15600 kHz<br>17475-18100 kHz<br>21320-21950 kHz | 1 kHz<br>(Manual tuning)<br><br><br><br><br><br><br><br><br><br>5 kHz<br>(Scan tuning) |
| FM   |  | 87,50-108,00 MHz*4<br>76,00-108,00 MHz*5   | 0,05 MHz   |

- \* 1 French Model (ICF-SW30L)
- \* 2 Countries except for Italian, French and Saudi Arabia Model
- \* 3 Italian and Saudi Arabia Model.
- \* 4 German, Austrian, Scandinavian countries, Italian and Saudi Arabia, French Model.
- \* 5 Countries except for \* 4

**Intermediate frequency:**

FM : 10.7 MHz, MW/LW : 450 kHz (LW : ICF-SW30L Only)

**Speaker:** Approx. 6.6 cm (2 1/8 inches)

**Power output:** 240 mW (at 10 % harmonic distortion)

**Output:** Earphones jack (stereo minijack)

**Power requirements:** 4.5 V DC, three R6 (size

AA) batteries

DC IN 4.5 V jack accepts:

Sony AC-E45M AC power adaptor (not supplied)

Sony DCC-E145L car battery cord (not supplied) for use with 12 V car battery

**Battery life:** Approx. 13 hours of listening for 4 hours a day at a normal volume using Sony batteries SUM-3(NS)

**Dimensions:** Approx. 169 × 111 × 35 mm (w/h/d) (Approx. 6 3/4 × 4 3/8 × 1 7/16 inches) not incl. projecting parts and controls

**Mass:** Approx. 448 g (15.8 oz) incl. batteries.

**Accessories supplied:** Short wave guide (1)

Design and specifications are subject to change without notice.

**Note**

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

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information about the optional accessories available in your country.

**ICF-SW30 : FM STEREO/SW/MW**  
**PLL SYNTHESIZED RECEIVER**  
**ICF-SW30L : FM STEREO/SW/LW**  
**PLL SYNTHESIZED RECEIVER**

**SONY®**



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## Features

- FM stereo/SW/MW portable receiver with worldwide band coverage
- Quartz controlled PLL (Phase Locked Loop) synthesizer system using a microcomputer for easy pinpoint tuning
- Worldtime clock for international use
- Memory preset for up to 5 stations on each band
- Scan tuning
- Alarm function to turn the radio on at the preset time
- 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.

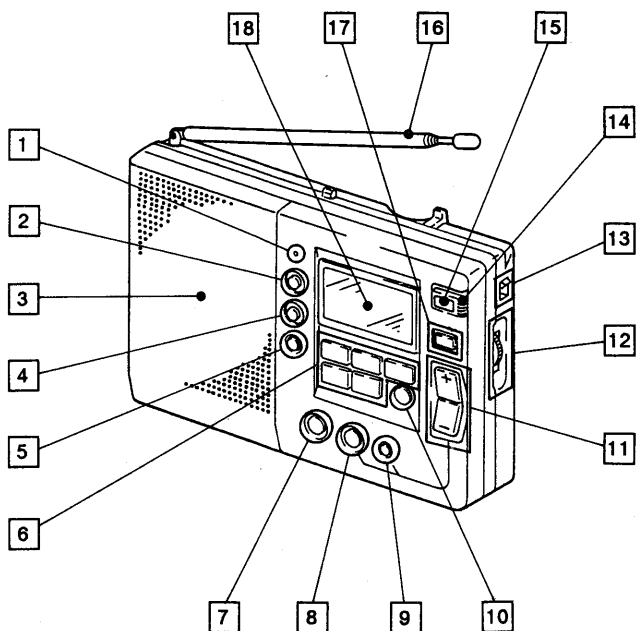
### Notes on chip component replacement


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

## SECTION 1 GENERAL

### LOCATION OF CONTROLS

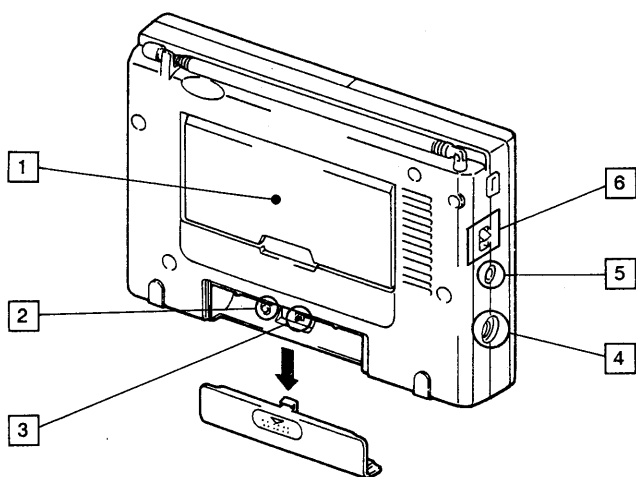
#### Front, Right Side




- 1** TUNE (tuning) indicator
- 2** LOCAL/WORLD button
- 3** Speaker
- 4** BATT/DST button
- 5** KEY PROTECT  button
- 6** MEMORY PRESET button
  - 1 button
  - 2 button
  - 3 button
  - 4 button
  - 5 button
- 7** SCAN/STANDBY button
- 8** SW BAND SELECT/ALARM button
- 9** ENTER /TIME button
- 10** BAND Select button
- 11** TUNE/TIME SET +/- button
- 12** VOL (Volume) control knob
- 13** TONE selector knob
- 14** POWER/LOCK switch
 

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** POWER ON/OFF button
- 16** Telescopic antenna
- 17** SLEEP button
- 18** Display window

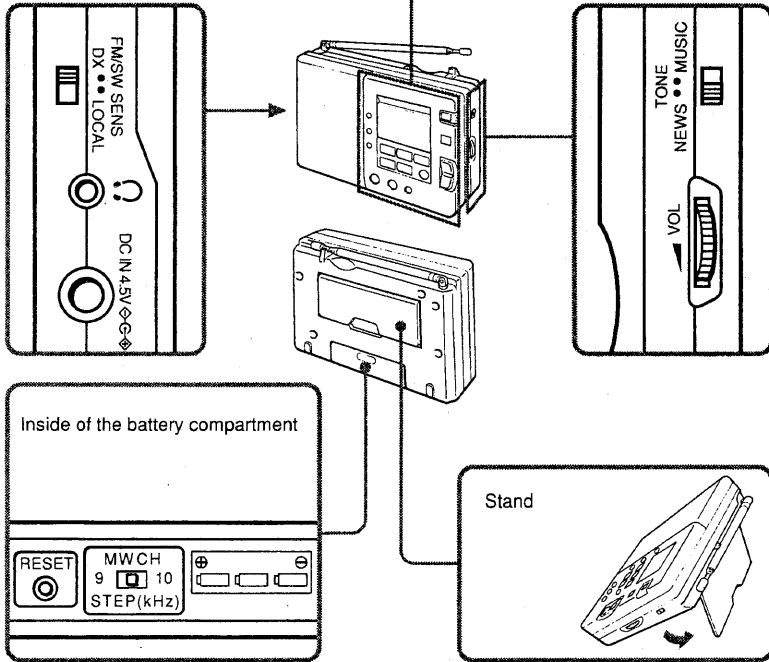
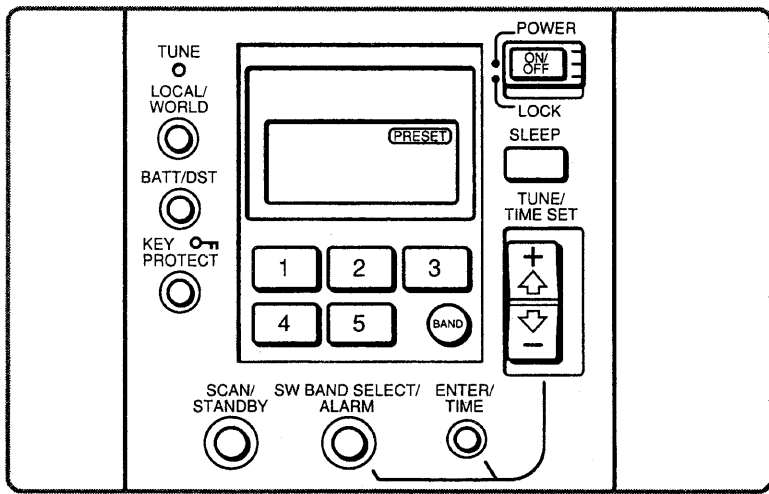
#### Rear, Left Side



- 1** Stand
- 2** 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.
- 3** MW CH STEP (9/10kHz step) selector (ICF-SW30 Only)
- 4** DC IN 4.5V  (external power input) jack
- 5** PHONES (earphones) jack (stereo mini)
- 6** FM/SW SENS selector

This section is extracted from instruction manual.



## Setting the Clock

Set the time when the radio is turned off.

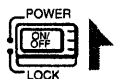
LOCAL time means the time in your area and WORLD time means the time in a certain place in the world. Refer to the map located at the rear of the unit. They can be switched between each other by pressing LOCAL/WORLD.

The clock operates in 24-hour system.  
 "0:00" = midnight  
 "12:00" = noon

### Setting LOCAL Time

When installing batteries for the first time, the display will flash "0:00" and indicate "LOCAL".

1. Set **POWER/LOCK** to **POWER**.  
 Make sure that **ON/OFF** is set to **OFF**.



2. Press **LOCAL/WORLD** to make the display show "LOCAL".
3. While holding down **ENTER/TIME**, press either **+** or **-** under **TUNE/TIME SET** till the correct time appears in the display. When you release **ENTER/TIME**, the clock begins to operate and ":" flashes.

- The current time displays even when **POWER/LOCK** is set to **LOCK**.
- To set the current time rapidly, keep pressing the **+** or **-** button while holding down **ENTER/TIME**.

### Setting WORLD Time

1. Set **POWER/LOCK** to **POWER**.  
 Make sure that **ON/OFF** is set to **OFF**.
2. Press **LOCAL/WORLD** to make the display show "WORLD".
3. While holding down **ENTER/TIME**, press either **+** or **-** under **TUNE/TIME SET** till the correct time appears in the display.  
 WORLD time changes only in hours.

### For Areas Where Daylight Saving Time is Used

When setting the clock during this period, press **BATT/DST** after the step 1. "☀" appears in the display. When daylight saving time finishes, press **BATT/DST**. Current time indication changes automatically.

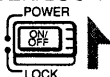
If you have previously set the clock when it is not in the period of daylight saving time, press **BATT/DST** at the beginning of this period.

- Press **BATT/DST** only when the radio is turned off.
- You can set daylight saving time for **LOCAL** time and **WORLD** time respectively.

## Operating the Radio

### Manual Tuning

1. Set **POWER/LOCK** to **POWER**.



2. Press **ON/OFF** to turn on the radio.
3. Turn **VOL** (volume) a little to get sound.
4. Press **BAND** to select the band.  
Each push changes the display as follows. (The last frequency selected in each band appears.) (LW : ICF-SW30L Only)

→ MW/LW → SW → FM

5. For SW, while holding down **SW BAND SELECT/ALARM**, press either + or – under **TUNE/TIME SET** to select the meter band.
6. Tune in a station by pressing either + or – under **TUNE/TIME SET**.
7. Adjust **VOL**.

- To turn off the radio, press **ON/OFF**.
- When you listen to the news, set **TONE** to **NEWS**. The human voice will be heard more clearly. When you listen to music, set it to **MUSIC**.
- To enjoy FM stereo, connect stereo earphones (not supplied) to  $\phi$  (earphones jack).
- To prevent accidental change of the receiving station, press **KEY**  $\odot$  **PROTECT**. " $\odot$ " is displayed, indicating that all the functions of the buttons are locked. You can adjust **TONE**, **VOL** and **FM/SW SENS** even if " $\odot$ " is displayed. To release the key protection, press **KEY**  $\odot$  **PROTECT** again.

### Changing the MW Channel Step

Change the channel step when you use the radio where the frequency allocation system is based on the other MW channel step.

| Area                               | MW channel step |
|------------------------------------|-----------------|
| North and South American countries | 10 kHz          |
| Other countries                    | 9 kHz           |

1. Set **POWER/LOCK** to **LOCK**.
2. Remove the batteries from the unit.
3. Change the position of the MW CH STEP selector in the battery compartment with a ball-point pen or other pointed object.
4. Install the batteries and set **POWER/LOCK** to **POWER**.

- The MW channel step cannot be changed with step 3 only. Follow steps from 1 to 4 completely.

### Note on RESET

There is the **RESET** button in the battery compartment. When this button is pressed, all the stored memories are cleared and the clock is reset.

### Scan Tuning

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

1. Set **POWER/LOCK** to **POWER**.
2. Press **ON/OFF** to turn on the radio.
3. Press **BAND** to select the band.  
For SW, while holding down **SW BAND SELECT/ALARM**, press either + or – under **TUNE/TIME SET** to select the meter band.
4. Press **SCAN/STANDBY**.  
Scan tuning will begin within the frequency range of the table on "Specifications", and stop automatically for about two seconds when a station is received.
5. When your desired station is tuned in, press **SCAN/STANDBY** again.  
Until you press **SCAN/STANDBY**, scan tuning will continue.
6. Tune the station more precisely with either + or – under **TUNE/TIME SET**, if necessary.
7. Adjust **VOL**.

- Set **FM/SW SENS** to **DX** normally. When the scan stops so often, set it to **LOCAL**.

### Preset Tuning

You can preset up to 5 stations in each band with the preset buttons 1 to 5.

#### Presetting the Stations

1. Tune in the desired station by manual or scan tuning.
2. While holding down **ENTER/TIME**, press the desired preset button.  
The preset number appears in the display and the station is preset.

- To change the preset station, install a new station's frequency in the number for which you wish to change stations. The previous frequency is canceled.

#### Tuning in a Preset Station

1. Set **POWER/LOCK** to **POWER**.
2. Press **ON/OFF** to turn on the radio.
3. Press **BAND** to select the desired band.  
For SW, while holding down **SW BAND SELECT/ALARM**, press either + or – under **TUNE/TIME SET** to select the meter band.
4. Press the preset number button of the station.
5. Adjust **VOL**.

- To improve reception

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

**SW**: Pull out the telescopic antenna to its full length and set it vertically.

**MW/LW**: Rotate the unit horizontally for optimum reception. A ferrite bar antenna is built into the unit. (LW : ICF-SW30L Only)

### Note

Reception of 4900 and 9800 kHz may be difficult because of internal spurious signals generated by the built-in oscillators.

## Setting the Alarm

You can turn on the radio at the preset time. The buzzer beeps 10 seconds earlier than the preset time, and at the preset time, the radio turns on with the frequency tuned before you turn off the radio last time.

When the power stays on, the radio is turned off automatically after about 60 minutes.

Before you set the alarm, make sure that tune in a station, adjust the volume, and turn it off.

1. Set **POWER/LOCK** to **POWER**.
2. While holding down **SW BAND SELECT/ALARM**, press either **+** or **-** under **TUNE/TIME SET** till the desired time appears in the display. While **SW BAND SELECT/ALARM** is held down, the display flashes "STANDBY".
3. Release **SW BAND SELECT/ALARM**. The alarm is set and the current time appears in the display.
4. Press **SCAN/STANDBY** to set the alarm. "STANDBY" appears in the display.

- The alarm turns itself off automatically after 60 minutes. When shutting off the alarm before that, press **ON/OFF**.
- To cancel the alarm, press **SCAN/STANDBY**. "STANDBY" in the display disappears.
- To check the preset time, set **POWER/LOCK** to **POWER** and press **SW BAND SELECT/ALARM**.
- When **POWER/LOCK** is set to **LOCK**, the alarm does not work even it is set.
- Radio sound will not be heard if **VOL** is turned down completely. Check **VOL** setting.
- When "0:00" is flashing, the alarm function does not work.

### Note

The alarm function will activate when the current time indication becomes identical with the alarm time which has been preset. Make sure that either "LOCAL" or "WORLD" appears in the display. If you want to activate the alarm function at your home (local) time, "LOCAL" should be displayed. If you want to activate it at a time in some place in the world, "WORLD" should be displayed. To change the indication, press **LOCAL/WORLD**.

## Setting the Sleep Timer

Enjoy falling asleep to the radio using the sleep timer.

1. Set **POWER/LOCK** to **POWER**.
2. Press **SLEEP**. "SLEEP" appears in the display and the radio turns on. It will go off after 60 minutes.
3. Tune in the desired station, and adjust **VOL**.

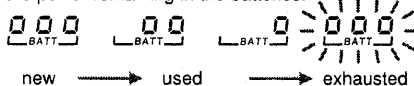
- To turn off the radio before the preset time, press **ON/OFF**.
- To prolong the listening time, press **SLEEP** again. The radio will be turned off 60 minutes later.

## Installing Batteries

To keep good time and preset stations, your receiver needs three R6 (size AA) batteries (not supplied). Before setting the time and preset stations on your receiver, open the lid at the rear of the unit, install the batteries with correct polarity and then close the lid. After installing the batteries, "0:00" flashes. To stop flashing, press **ENTER/TIME**.

### Knowing When To Replace the Batteries

While you are listening to the radio, check the battery condition by pressing **BATT/DST**. The unit displays one of four indications depending on the power remaining in the batteries.



- When the batteries become weak, the sound becomes weak or distorted. When the batteries are completely exhausted, the power is turned off and "0:00" in the display flashes. When the power is turned on with the indication flashing, the power will be turned off right away. When "0:00" starts flashing, replace all the batteries with new ones. After the batteries are replaced, press **ON/OFF** to erase the flashing indication.
- Replace the batteries within about one minute after removing the batteries. If you do not replace them within one minute, the preset stations may be erased, the clock setting may be cleared and "0:00" flashes in the display.
- For battery life, see "Specifications".
- When the batteries are removed for a long time, preset stations will be erased and the clock setting will be cleared. In this case, store stations and set the clock again.

## Using on Other Power Sources

The internal batteries are automatically disconnected when the AC power adaptor or the car battery cord is connected to the **DC IN 4.5 V** jack.

### House Current

Connect the Sony AC-E45M AC power adaptor (not supplied) to the **DC IN 4.5 V** jack, and plug it into a wall outlet.

### Car Battery

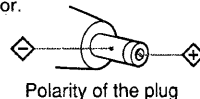
For use on a 12 V car battery, connect the Sony DCC-E145L car battery cord (not supplied) to the **DC IN 4.5 V** jack.

- When the AC power adaptor is not used, be sure to unplug it from both the **DC IN 4.5 V** jack and the wall outlet.
- The batteries should be inserted for backup even when the unit is operated on AC power adaptor or car battery cord.

### Note on the AC Power Adaptor

Use only the recommended car battery cord or AC power adaptor (not supplied).

Do not use any other car battery cord or AC power adaptor.



## SECTION 2

### EXPLANATION OF IC TERMINALS

#### μ PD1724GB-555-1A7 (IC101)

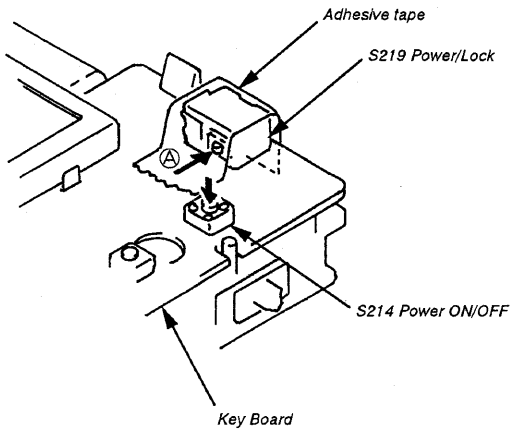
| Pin number           | Mark                         | Pin name                     | I/O    | Pin description   |
|----------------------|------------------------------|------------------------------|--------|---|
| 1<br> <br>10         | LCD10<br> <br>LCD1           | LCD10<br> <br>LCD1           | O      | LCD drive segment signal output.<br>Driving voltage : 3.1V      Duty : 1/3<br>Frame frequency : 100Hz      Bias :1/2  |
| 11                   | NC                           | NC                           | —      | Not used.   |
| 12<br> <br>14        | COM3<br> <br>COM1            | COM3<br> <br>COM1            | O      | LCD drive common signal output.<br>Driving voltage : 3.1V      Duty : 1/3<br>Frame frequency : 100Hz      Bias :1/2   |
| 15<br>16<br>17<br>18 | VSS3<br>CAP2<br>CAP1<br>VSS2 | VSS3<br>CAP2<br>CAP1<br>VSS2 | —      | Terminals used for connecting a capacitor of a doubler circuit which supplies LCD drive voltage.  |
| 19                   | VDP                          | MUTE                         | O      | Audio mute output signal. Active when Low. Audio noises are reduced before and after the mute signal when PLL, radio power supply or key srtobe change is controlled.   |
| 20                   | CGP                          | BEEP                         | O      | Buzzer output using CGP. Sound to check keys, to check settings, to indicate that a setting time of timer is reached or to alarm is produced by using two kinds of musical intervals and the sound modulation.                          |
| 21                   | NC                           | NC                           | —      | Not used.   |
| 22                   | VDD                          | VDD                          | —      | 5V power supply input terminal.   |
| 23                   | VCOH                         | FM VCOH                      | I      | FM VCO input.   |
| 24                   | VCOM                         | SW VCOM                      | I      | SW VCO input.   |
| 25                   | VCOL                         | MW/LW VCOL                   | I      | MW VCO input.   |
| 26                   | VSS1                         | VSS1                         | —      | GND   |
| 27<br>28             | EO1<br>EO2                   | EO1<br>EO2                   | O      | Not use with this machine.<br>PLL error output terminal.  |
| 29                   | CE                           | CE                           | I      | Detects the voltage reduction of the AC battery. When the battery energy is reduced, the microcomputer is in the reducedvoltage mode. The battery mark blinks and the microcomputer waits for a clock's reset/display and Power ON Key. |
| 30<br>31             | XO<br>XI                     | XO<br>XI                     | O<br>I | A quartz oscillating element connecting terminal. (75kHz)   |
| 32                   | VSS4                         | VSS4                         | —      | Connected to a capacitor for a regulator circuit which supplies the oscillator' stable drive voltage.   |
| 33                   | PA3                          | LOCK SW IN                   | I      | OFF Lock input. (Hi : Lock, Low : Unlock)   |
| 34                   | PA2                          | SD IN                        | I      | Scan stop SD input.   |
| 35                   | PAI                          | BATT CHECK IN                | I      | Power check : BATT remainder DET input.   |
| 36                   | PA0                          | POWER OUT                    | O      | Power : Radio ON/OFF output. "H"  |
| 37                   | PB3                          | BAND SW                      | O      | BAND switching.<br>FM : "L", MW(LW) : "L", SW : "H"   |
| 38                   | PB2                          | BAND AM                      | O      | BAND switching.<br>FM : "L", MW(LW) : "L", SW : "H"   |
| 39                   | PB1                          | BATT CHECK OUT               | O      | BATT remainder DET output.  |
| 40                   | PB0                          | INITIALIZE                   | O      | INTIAL state setting terminal.  |

| Pin number    | Mark                | Pin name            | I/O | Pin description   |
|---------------|---------------------|---------------------|-----|---|
| 41<br> <br>44 | PC2<br> <br>PC0     | Key SOURCE          | O   | Strobe and return signals in 4 × 4 key matrix. A strobe signal change makes an audio noise. A strobe signal must be set to the fixed value when a key input is not changed. When the key input is decoded, the mute signal must be added. |
| 45<br> <br>48 | K3<br> <br>K0       | Key RETURN          | I   |   |
| 49<br>50      | NC                  | NC                  | —   | Not used.   |
| 51<br> <br>56 | LCD16<br> <br>LCD11 | LCD16<br> <br>LCD11 | O   | LCD drive segment signal output.<br>Driving voltage : 3.1V      Duty : 1/3<br>Frame frequency : 100Hz      Bais :1/2  |



### SECTION 3 ELECTRICAL ADJUSTMENTS

Preparation :

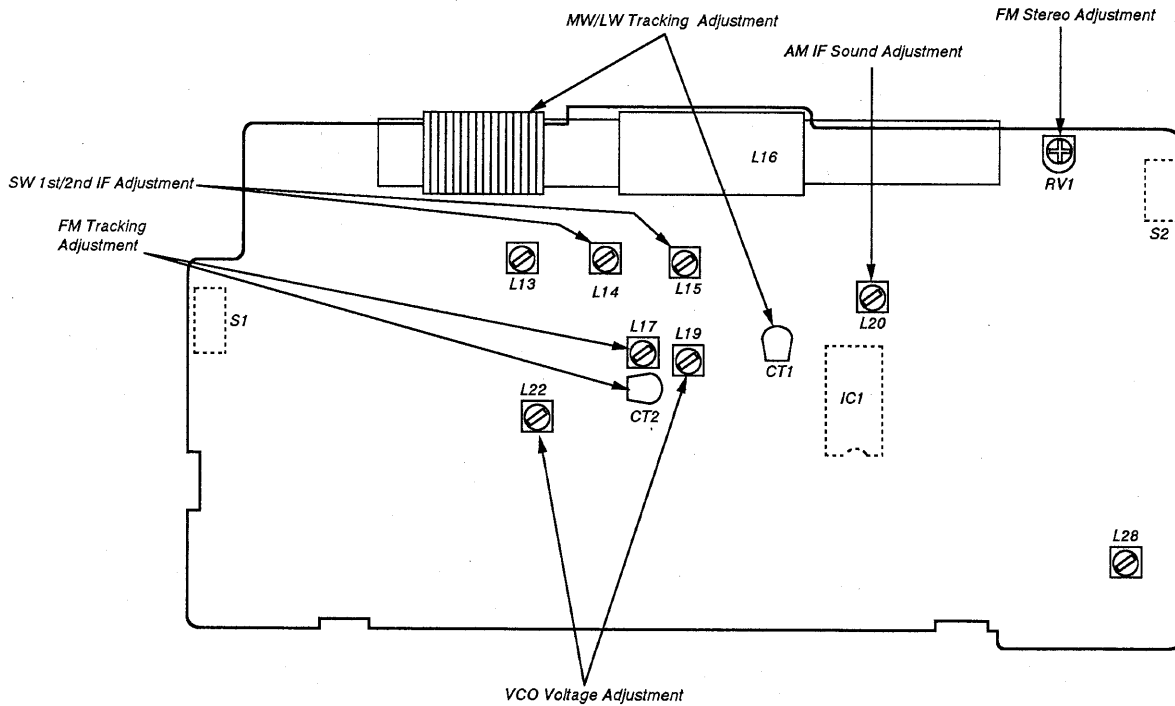


#### How to turn the power ON/OFF

1. Press down portion ① of S219 (Power/Lock) switch by adhesive tape.
2. Push the S214 (Power ON/OFF) switch.

Adjustment Location :

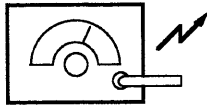
**[MAIN BOARD]** (Component Side)



## AM SECTION

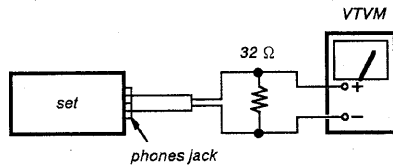
- MW: ICF-SW30  
LW: ICF-SW30L

AM RF signal generator



Put the lead-wire antenna close to the set.

30% amplitude modulation by 400Hz signal.  
Output level : as low as possible



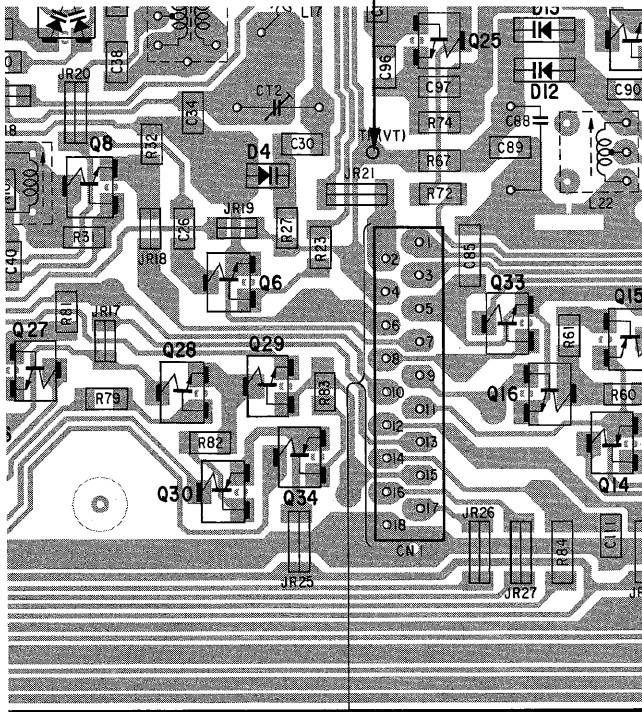
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

## VCO Voltage Adjustment

Setting :

VOLUME : as required  
BAND : AM (MW → SW)  
SENS : DX

[MAIN BOARD] (Conductor Side)



Procedure :

1. Tune the set to MW 531kHz.
2. Adjust L19 to obtain a 1.4 – 1.6V on the VOM.
3. Tune the set to MW 1710kHz.
4. Confirm that the voltage reading on the VOM is 7.0 – 9.0V.
5. Repeat the above steps several times.
6. Tune the set to SW 3700kHz.
7. Adjust L22 to obtain a 1.0 – 1.2V on the VOM.
8. Tune the set to SW 26100kHz.
9. Confirm that the voltage reading on the VOM is 11.5 – 12.0V.

## MW/LW Tracking Adjustment

SEE ADDITIONAL INFORMATION

Setting :

VOLUME : as required  
BAND : MW (LW)  
SENS : DX

Procedure:

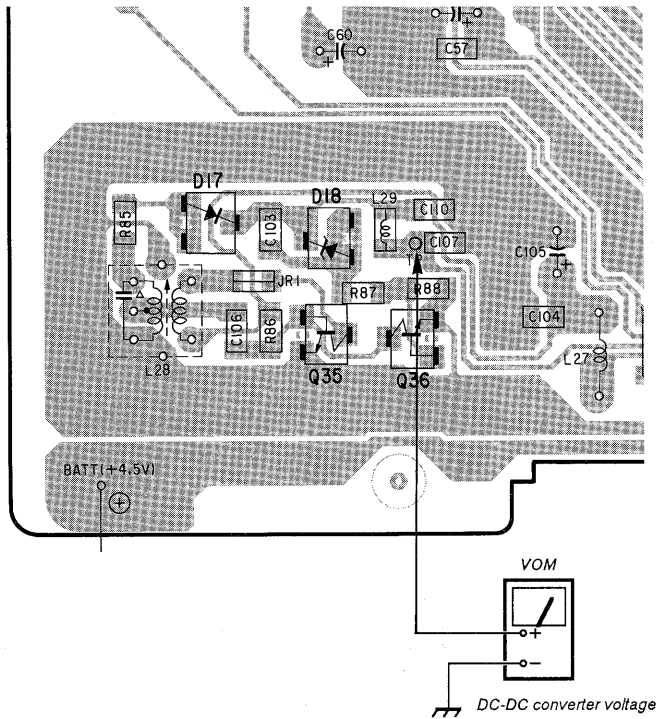
1. Set the frequencies of the AM RF SG and the frequency display of the set to 585kHz (171kHz).
2. Adjust L16 (Ferrite-rod Antenna) to obtain a maximum reading on the VTVM.
3. Set the frequencies of the AM RF SG and the frequency display of the set to 1485kHz (252kHz).
4. Adjust CT1 to obtain a maximum reading on the VTVM.
5. Repeat the above steps several times.

## AM IF Sound Adjustment

### Setting :

VOLUME : as required  
BAND : MW (LW)

### 【MAIN BOARD】 (Conductor Side)



### Procedure :

1. Set the frequencies of the AM RF SG and the frequency display of the set to MW 531kHz (LW 153kHz).
2. Confirm that the voltage reading on the VOM is 16.5-18.5V from DC-DC converter voltage.
3. Adjust L20 to obtain a maximum waveform on the oscilloscope.

## SW 1st/2nd IF Adjustment

### Setting :

VOLUME : as required  
BAND : SW  
SENS : DX

### Procedure :

#### ● 1st IF Adjustment

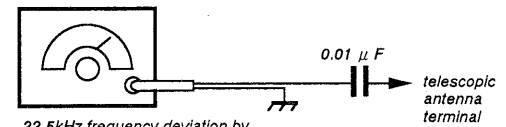
1. Set the frequencies of the AM RF SG and the frequency display of the set to 3700KHz.
2. Adjust L14 to obtain a maximum reading on the VTVM.

#### ● 2st IF Adjustment

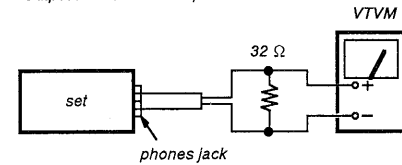
1. Set the frequencies of the AM RF SG and the frequency display of the set to 3700KHz.
2. Adjust L15 to obtain a maximum reading on the VTVM.

## FM SECTION

FM RF signal generator



22.5kHz frequency deviation by 400Hz signal.  
Output level : as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

## 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.

### Setting :

VOLUME : as required  
BAND : FM

### Procedure :

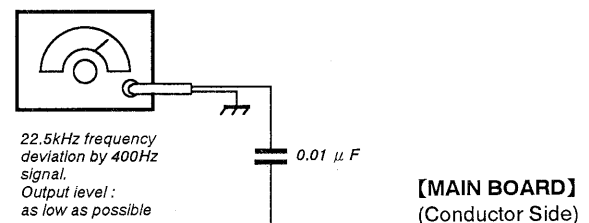
1. Tune the set to 76.0MHz.
2. Confirm that the voltage reading on the VOM is 1.0 – 3.0V.
3. Tune the set to FM 108.0MHz.
4. Confirm that the voltage reading on the VOM is 10.5 – 12.5V.

## FM Tracking adjustment

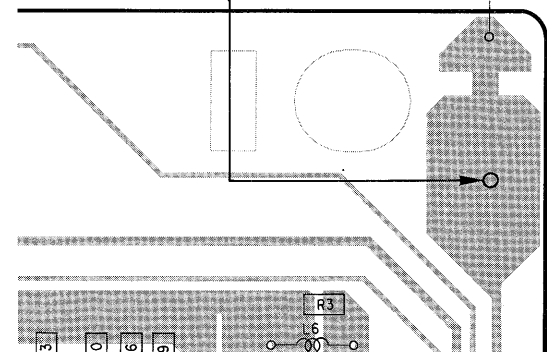
### Setting :

VOLUME : as required  
BAND : FM

FM RF signal generator



22.5kHz frequency deviation by 400Hz signal.  
Output level : as low as possible

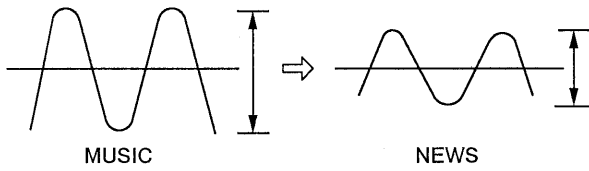


**Procedure :**

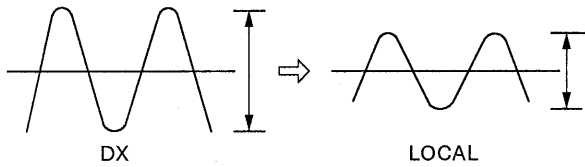
1. Set the frequencies of the FM RF SG and the frequency display of the set to 76.0MHz.
2. Adjust L17 to obtain a maximum reading on the VTVM.
3. Set the frequencies of the FM RF SG and the frequency display of the set to 108.0MHz.
4. Adjust CT2 to obtain a maximum reading on the VTVM.
5. Repeat the above steps several times.

**FM IF Sound Check**

1. Set the frequencies of the FM RF SG and the frequency display of the set to 90.0MHz.
2. Confirm that the waveforms on the oscilloscope is transformation like a bellow illustration when S2 (TONE) switching to MUSIC side and NEWS side.



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

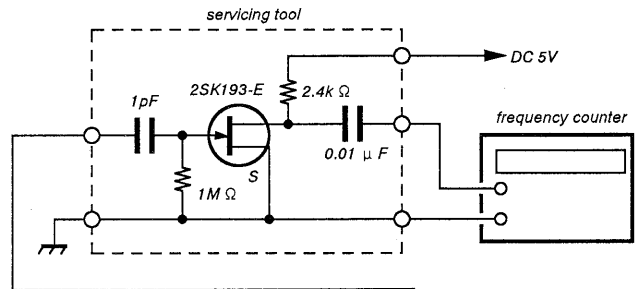


4. Confirm that hear the sound after insert the HEADPHONES into PHONES jack.

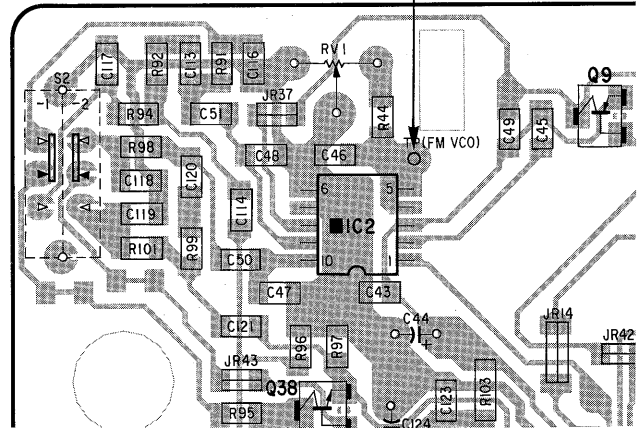
**FM Stereo Adjustment**

**Setting :**

VOLUME : as required  
BAND : FM



**[MAIN BOARD] (Conductor Side)**

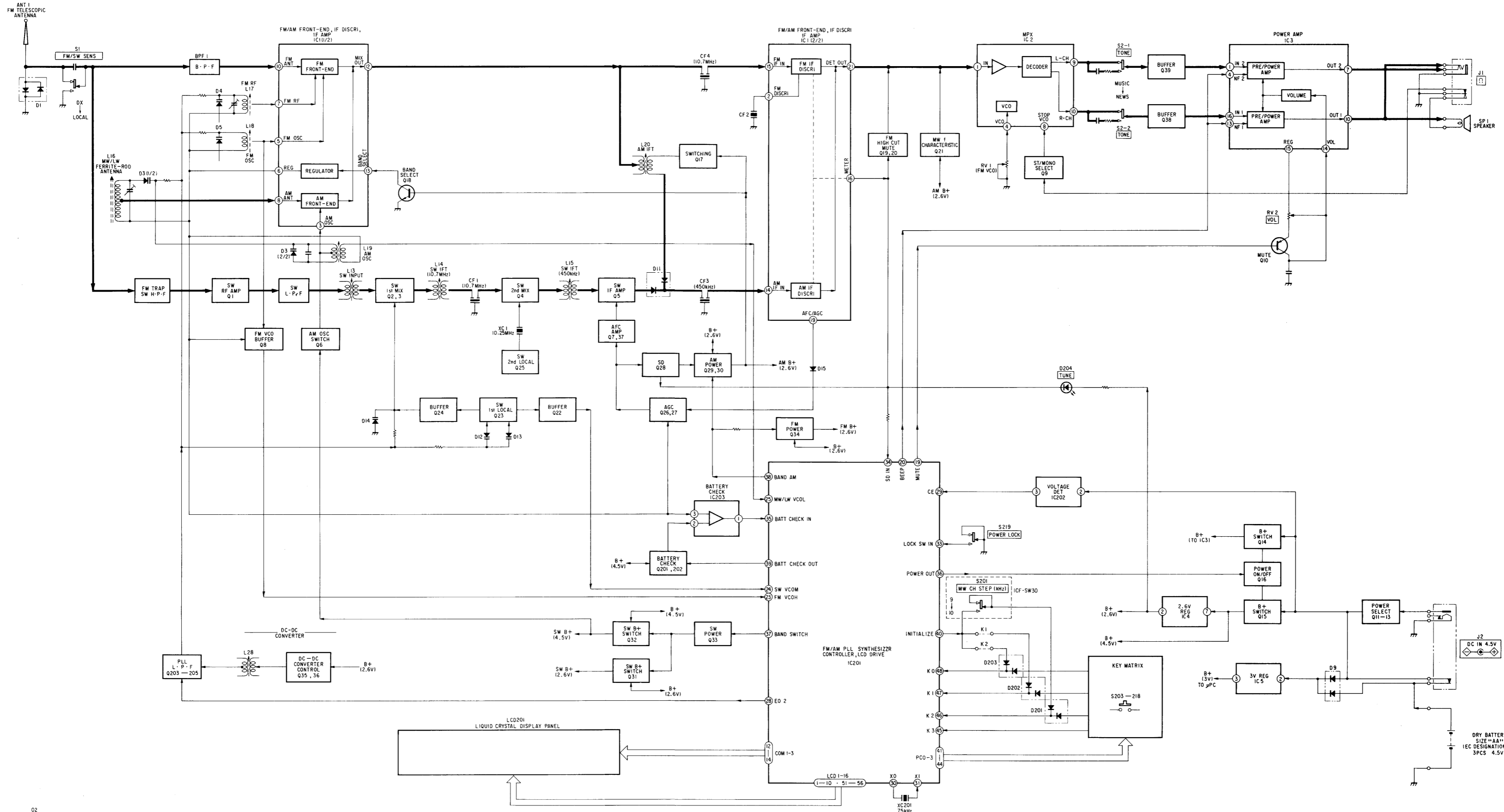


**Procedure :**

1. Insert the HEADPHONES into PHONES jack.
2. Connect a capacitor (10uF) between pin 21 of IC1 and GRAND.
3. Tune the set to FM 108.0MHz.
4. Adjust RV1 to obtain 75.8 – 76.2kHz on the frequency counter.

SECTION 4  
DIAGRAMS

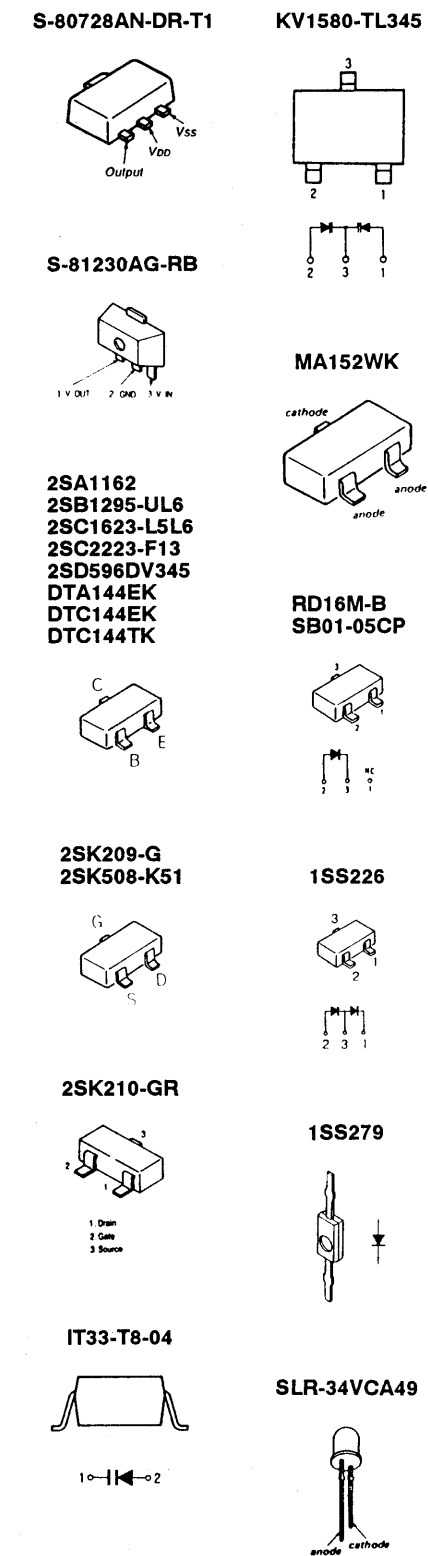
4-1. BLOCK DIAGRAMS



DRY BATTERY  
SIZE "AA"  
IEC DESIGNATION R6  
3PCS 4.5V

4-2. PRINTED WIRING BOARDS

• SEMICONDUCTOR LEAD LAYOUTS

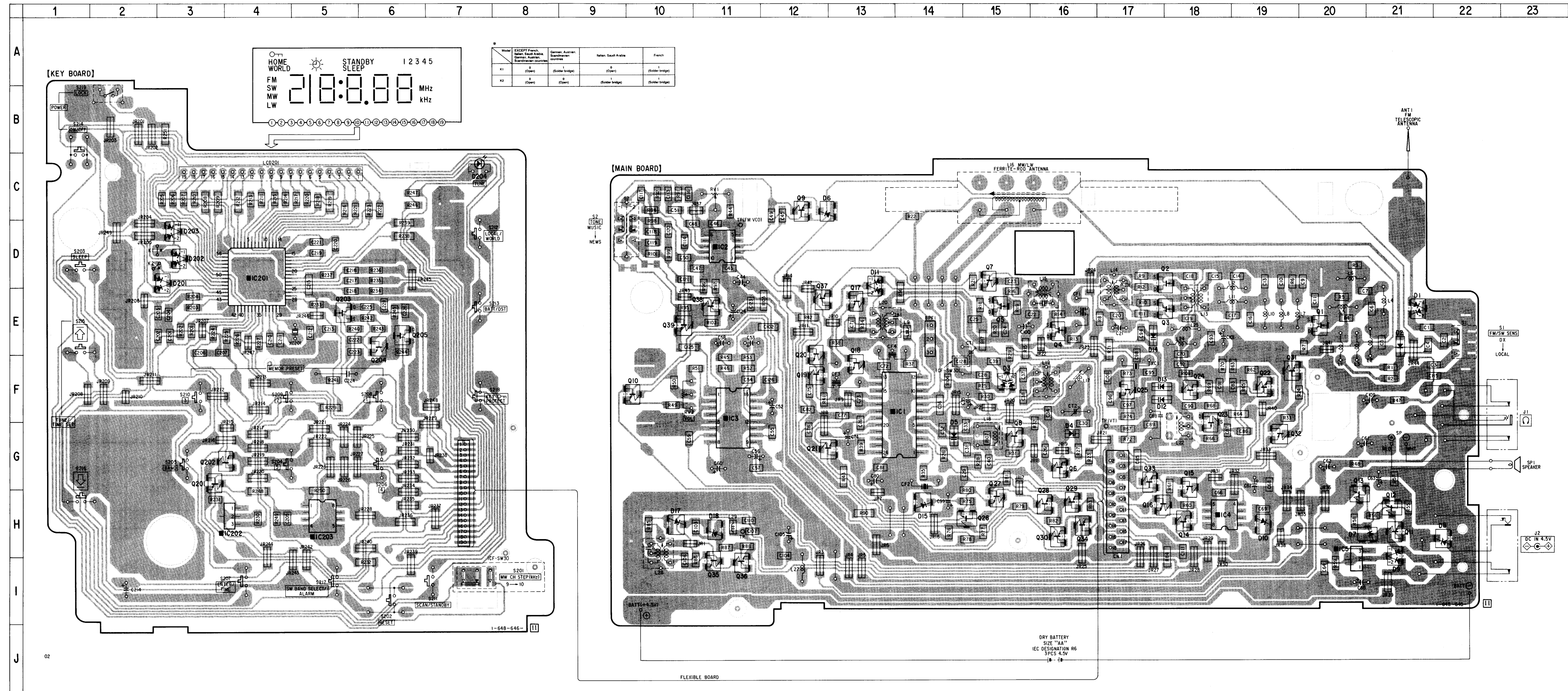


• SEMICONDUCTOR LOCATION

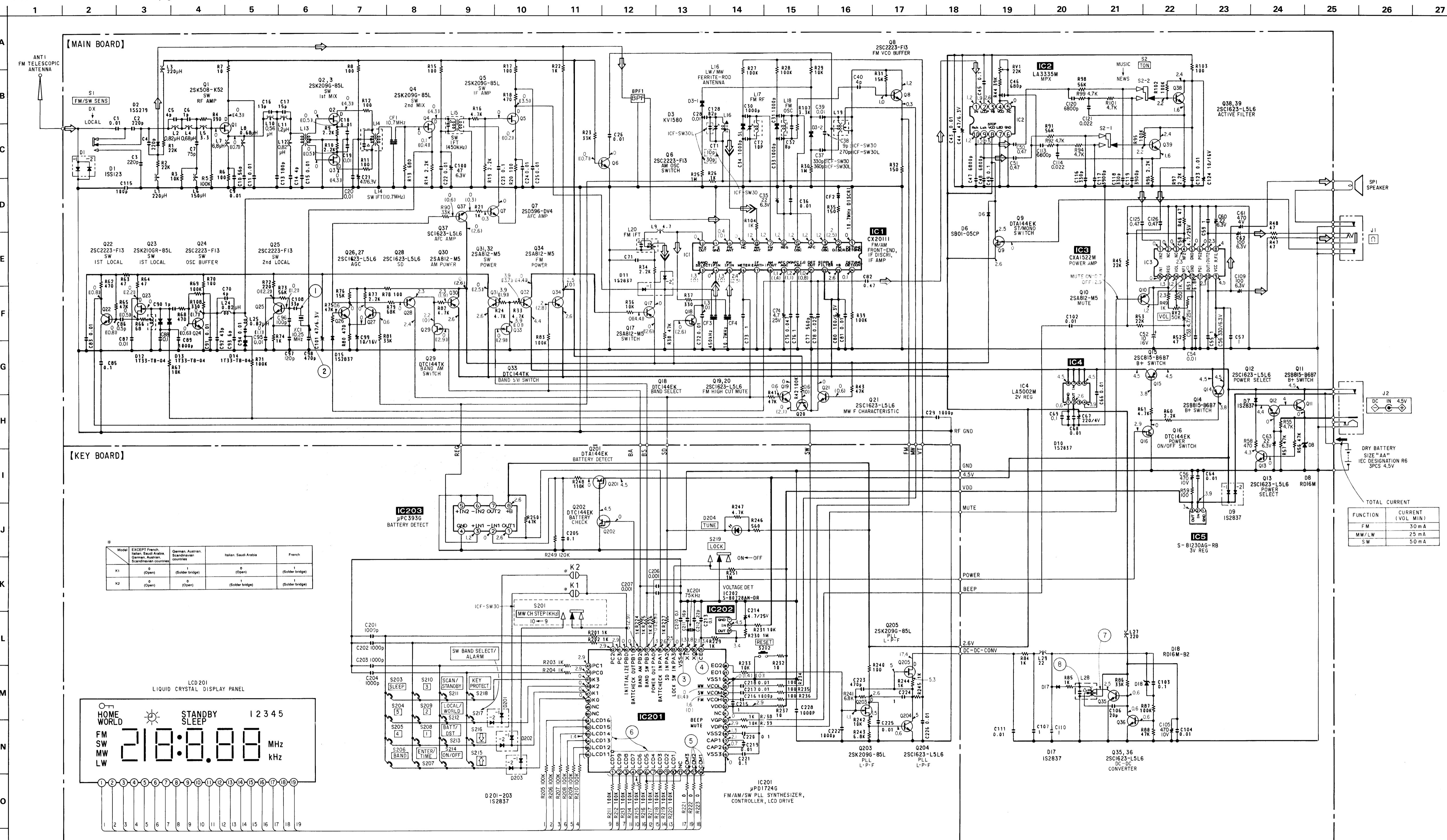
| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D1       | E-21     | Q7       | D-15     |
| D2       | E-21     | Q8       | G-15     |
| D3       | F-15     | Q9       | C-12     |
| D4       | G-16     | Q10      | F-10     |
| D5       | G-14     | Q11      | H-21     |
| D6       | C-12     | Q12      | H-21     |
| D7       | H-20     | Q13      | H-20     |
| D8       | H-22     | Q14      | H-18     |
| D9       | H-21     | Q15      | G-18     |
| D10      | H-19     | Q16      | H-17     |
| D11      | D-13     | Q17      | E-13     |
| D12      | F-17     | Q18      | F-13     |
| D13      | F-17     | Q19      | F-12     |
| D14      | E-17     | Q20      | F-12     |
| D15      | H-14     | Q21      | G-12     |
| D17      | H-10     | Q22      | F-19     |
| D18      | H-11     | Q23      | F-18     |
| D201     | D-3      | Q24      | F-18     |
| D202     | D-3      | Q25      | F-17     |
| D203     | D-3      | Q26      | H-15     |
| D204     | C-7      | Q27      | H-15     |
| IC1      | F-14     | Q28      | H-16     |
| IC2      | D-11     | Q29      | H-16     |
| IC3      | F-11     | Q30      | F-19     |
| IC4      | H-18     | Q32      | G-19     |
| IC5      | I-20     | Q33      | G-17     |
| IC201    | D-4      | Q34      | H-16     |
| IC202    | H-4      | Q35      | I-11     |
| IC203    | H-5      | Q36      | I-11     |
| Q1       | E-20     | Q37      | E-12     |
| Q2       | D-18     | Q38      | E-11     |
| Q3       | E-18     | Q39      | E-10     |
| Q4       | E-16     | Q201     | G-3      |
| Q5       | E-15     | Q202     | G-3      |
| Q6       | G-16     | Q203     | E-5      |
|          |          | Q204     | E-6      |
|          |          | Q205     | E-6      |

Note:

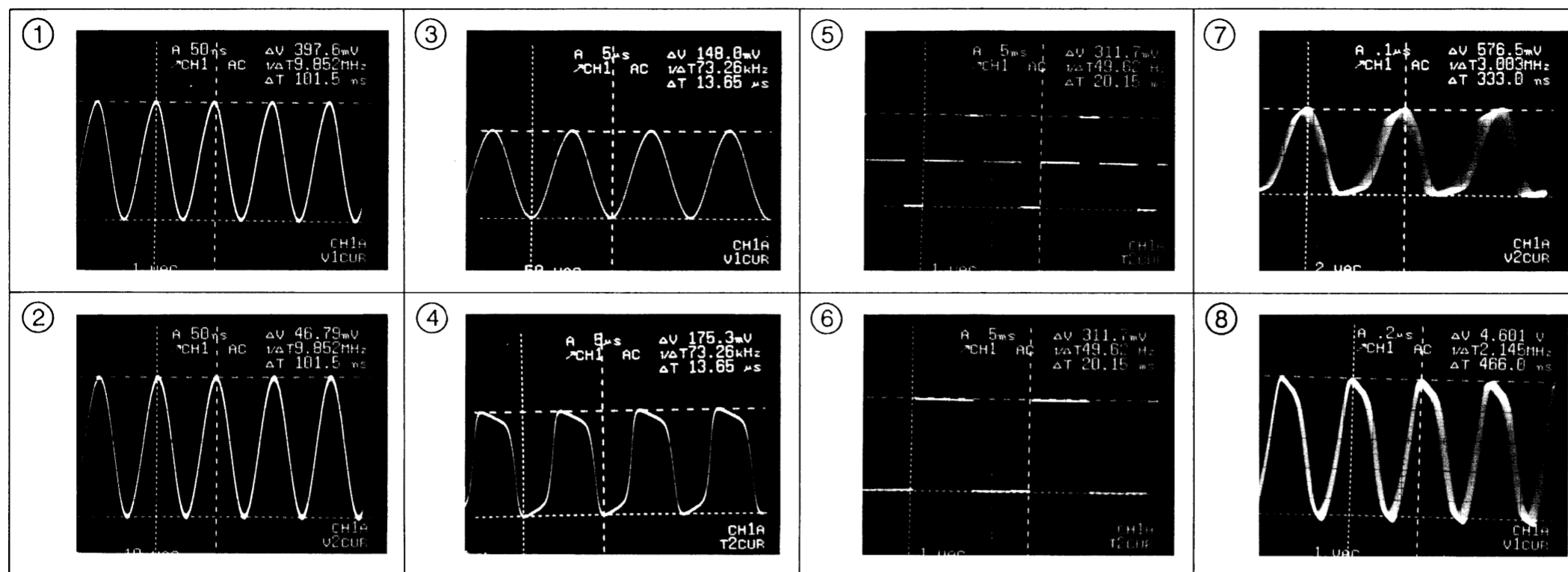
- — : parts extracted from the component side.
- : parts mounted on the conductor side.
- (dotted) : Pattern on the side which is seen.
- (white) : Chip components extracted from the rear side.



| Model | EXCEPT French, Spain, South Africa, Canada, Australia, Switzerland countries | Japan, Austria, Scandinavian countries | Netherlands, Saudi Arabia | France            |
|-------|--|--|---------------------------|-------------------|
| K1    | (Open)   | (Resistor bridge)                      | (Open)                    | (Resistor bridge) |
| K2    | (Open)   | (Open)                                 | (Resistor bridge)         | (Resistor bridge) |

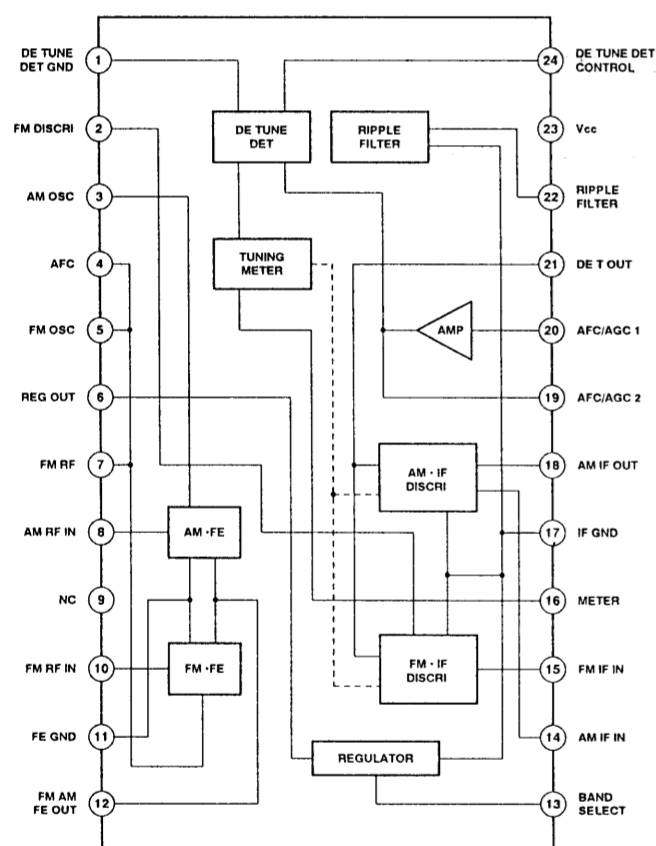


● WAVEFORMS

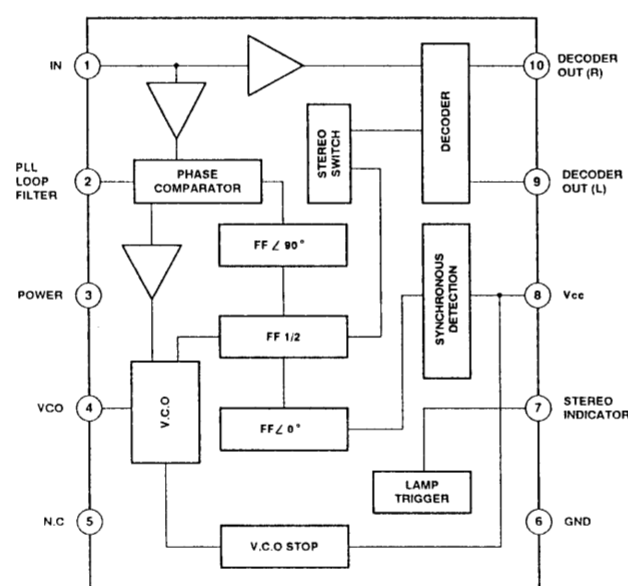


● IC BLOCK DIAGRAMS

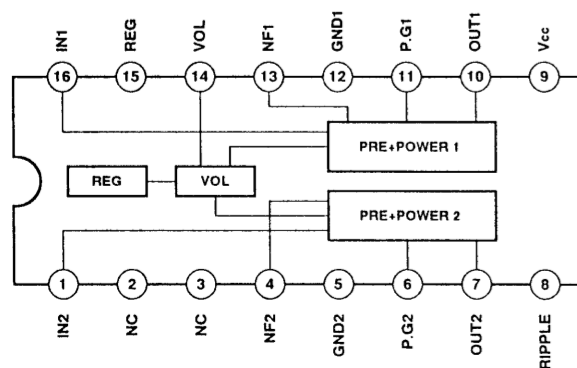
IC1 CX20111



IC2 LA3335M



IC3 CXA1522M



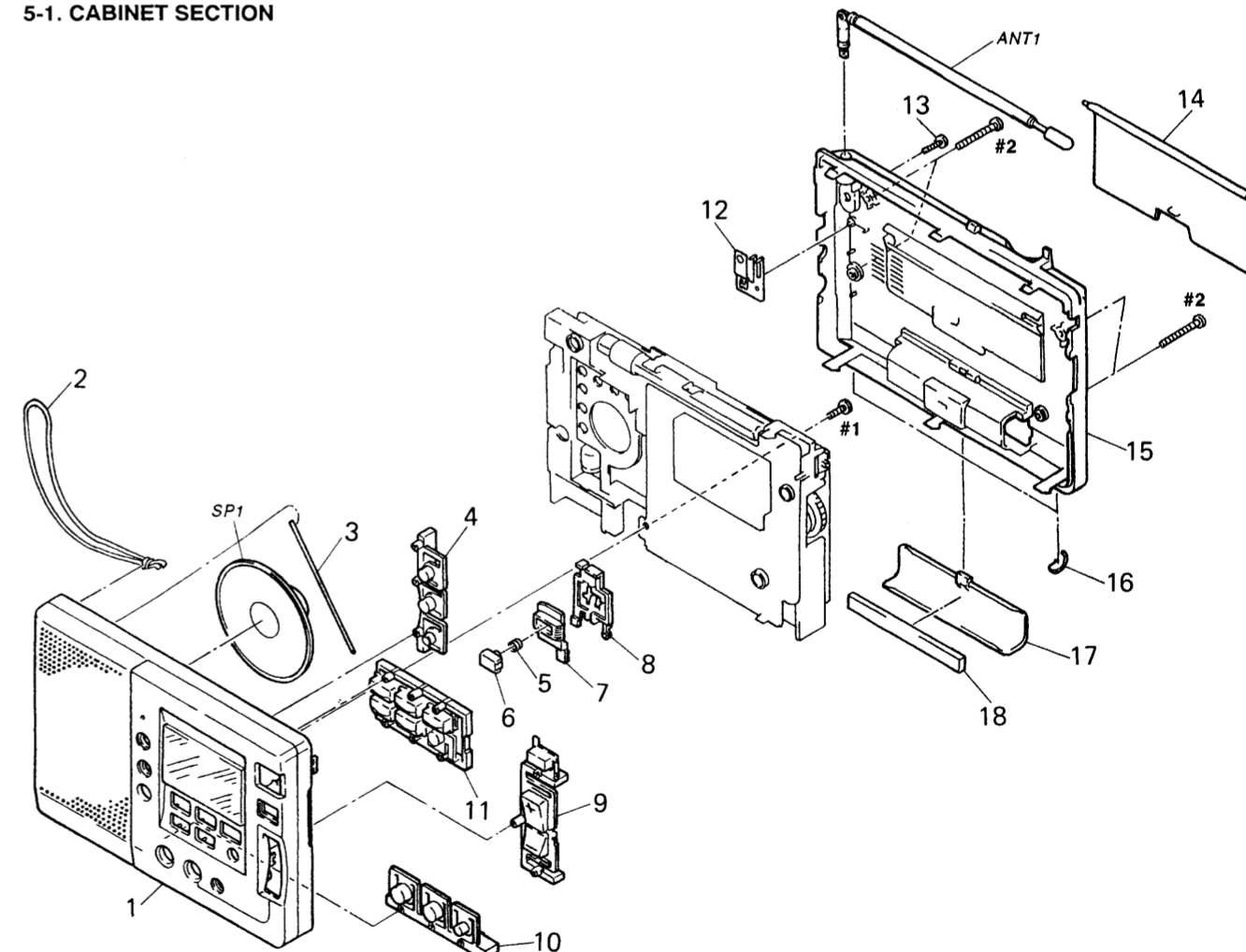
SECTION 5  
EXPLODED VIEWS

SEE ADDITIONAL INFORMATION

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example :  
KNOB, BALANCE (WHITE)...(RED)  
Parts color                      Cabinet's color
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

5-1. CABINET SECTION

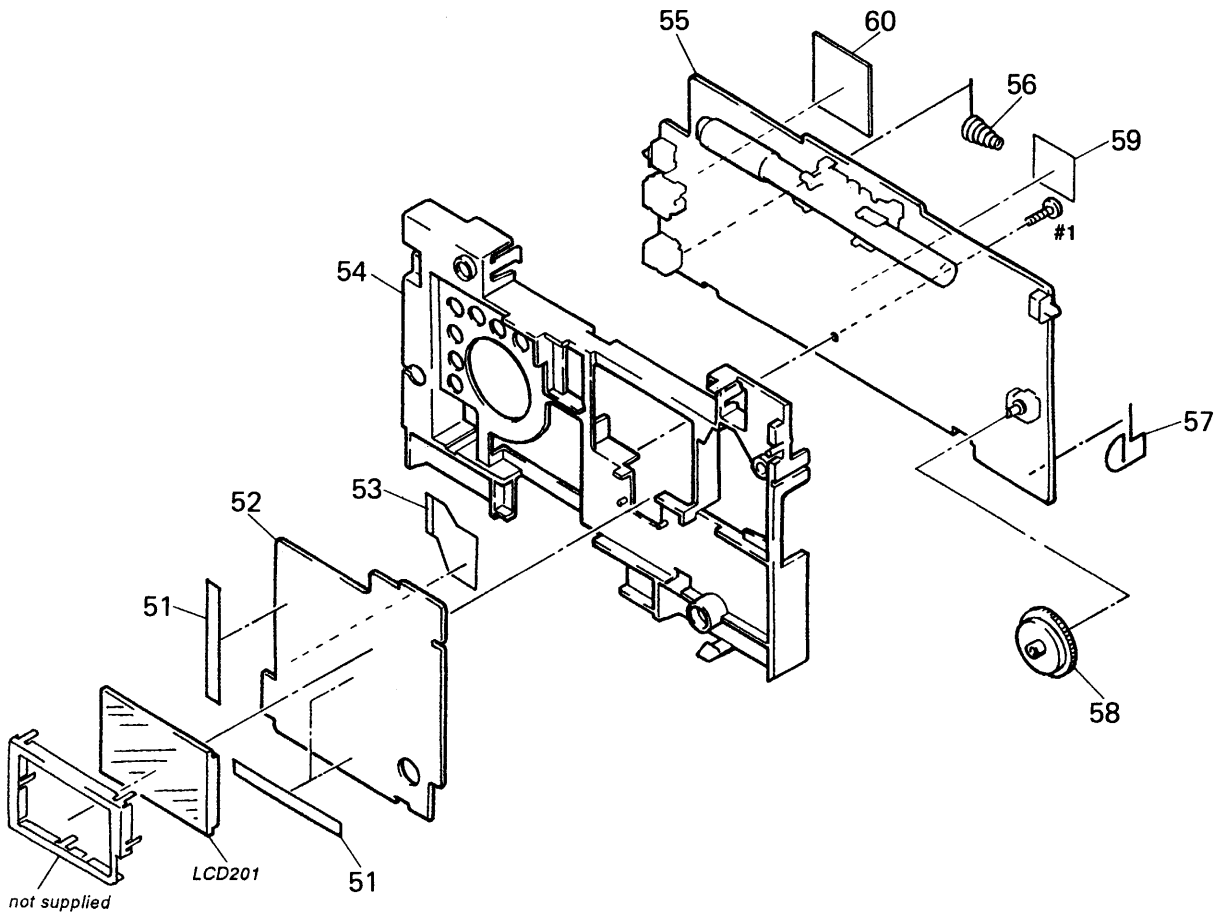


| Ref. No. | Part No.     | Description                        | Remark | Ref. No. | Part No.     | Description                | Remark |
|----------|--------------|------------------------------------|--------|----------|--------------|----------------------------|--------|
| 1        | X-3366-880-1 | CABINET (FRONT) ASSY (ICF-SW30)    |        | 11       | 3-388-676-01 | BUTTON (MEMORY PRESET)     |        |
| 1        | X-3366-912-1 | CABINET (FRONT) ASSY (ICF-SW30L)   |        | 12       | 3-383-877-01 | PLATE (ANT), CONTACT       |        |
| 2        | 3-385-660-01 | STRAP, HAND                        |        | 13       | 3-385-945-01 | SCREW (M3X6)               |        |
| 3        | 3-389-575-01 | WITE (SP)                          |        | 14       | 3-893-839-11 | STAND                      |        |
| 4        | 3-389-569-01 | BUTTON (KEY PRO/BATT/LOCAL)        |        | 15       | 3-388-749-01 | CABINET (REAR) (ICF-SW30)  |        |
| 5        | 3-904-229-02 | SPRING, COMPRESSION                |        | 15       | 3-388-749-21 | CABINET (REAR) (ICF-SW30L) |        |
| 6        | 3-383-858-01 | BUTTON (POWER ON/OFF)              |        | 16       | 3-383-881-01 | FOOT, RUBBER               |        |
| 7        | 3-383-857-02 | KNOB (POWER LOCK)                  |        | 17       | 3-383-852-01 | LID, BATTERY CASE          |        |
| 8        | 3-383-864-02 | RETAINER                           |        | 18       | 3-383-882-01 | CUSHION (BATTERY CASE LID) |        |
| 9        | 3-389-568-01 | BUTTON (TUNE/TIME SET + -)         |        | ANT1     | 1-501-222-71 | ANTENNA, TELESCOPIC (FM)   |        |
| 10       | 3-389-567-01 | BUTTON (ENTER/SW BAND SELECT/SCAN) |        | SP1      | 1-544-758-11 | SPEAKER (6.6CM)            |        |



5-2. CHASSIS SECTION

SEE ADDITIONAL INFORMATION



| Ref.No. | Part No.     | Description                      | Remark |
|---------|--------------|----------------------------------|--------|
| 51      | 3-831-441-11 | CUSHION, SIDE PLATE              |        |
| * 52    | A-3679-517-A | KEY BOARD, COMPLETE (ICF-SW30)   |        |
| * 52    | A-3679-519-A | KEY BOARD, COMPLETE (ICF-SW30L)  |        |
| 53      | 1-648-768-11 | FLEXIBLE BOARD                   |        |
| * 54    | 3-388-677-01 | CHASSIS                          |        |
| * 55    | A-3661-844-A | MAIN BOARD, COMPLETE (ICF-SW30)  |        |
| * 55    | A-3661-848-A | MAIN BOARD, COMPLETE (ICF-SW30L) |        |

| Ref.No. | Part No.     | Description           | Remark                        |
|---------|--------------|-----------------------|-------------------------------|
| 56      | 3-389-572-01 | TERMINAL (-), BATTERY |                               |
| 57      | 3-389-571-01 | TERMINAL (+), BATTERY |                               |
| 58      | 3-380-913-01 | KNOB (VOL)            |                               |
| 59      | 9-911-845-XX | RETAINER, PC BOARD    |                               |
| 60      | 3-906-144-01 | CUSHION               |                               |
|         |              | LCD201 1-810-134-11   | DISPLAY PANEL, LIQUID CRYSTAL |

## SECTION 6 ELECTRICAL PARTS LIST

### KEY

**NOTE :**

- Due to standardization, replacements in the parts list may be different from the parts 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 :  $\mu$ , for example :  
uA..... :  $\mu$  A....., uPA..... :  $\mu$  PA.....  
uPB..... :  $\mu$  PB....., uPC..... :  $\mu$  PC.....  
uPD..... :  $\mu$  PD.....
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H

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

- AEP TYPE 1 : Countries except for German, Austrian, Scandinavian countries.
- AEP TYPE 2 : German, Austrian, Scandinavian countries.

| Ref. No. | Part No.     | Description                              | Remark  |
|----------|--------------|--|---------|
| *        | A-3679-517-A | KEY BOARD, COMPLETE (ICF-SW30)<br>*****  |         |
| *        | A-3679-519-A | KEY BOARD, COMPLETE (ICF-SW30L)<br>***** |         |
|          | 1-648-768-11 | FLEXIBLE BOARD                           |         |
|          | 3-831-441-11 | CUSHION, SIDE PLATE                      |         |
|          |              | < CAPACITOR >                            |         |
| C201     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C202     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C203     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C204     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C205     | 1-164-004-11 | CERAMIC CHIP 0.1uF                       | 10% 25V |
| C206     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C207     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C210     | 1-163-038-00 | CERAMIC CHIP 0.1uF                       | 25V     |
| C211     | 1-163-098-00 | CERAMIC CHIP 16PF                        | 5% 50V  |
| C212     | 1-163-101-00 | CERAMIC CHIP 22PF                        | 5% 50V  |
| C213     | 1-163-038-00 | CERAMIC CHIP 0.1uF                       | 50V     |
| C214     | 1-126-163-11 | ELECT 4.7uF                              | 20% 50V |
| C215     | 1-162-638-11 | CERAMIC CHIP 1uF                         | 16V     |
| C216     | 1-163-141-00 | CERAMIC CHIP 0.001uF                     | 5% 50V  |
| C217     | 1-164-232-11 | CERAMIC CHIP 0.01uF                      | 50V     |
| C218     | 1-164-232-11 | CERAMIC CHIP 0.01uF                      | 50V     |
| C219     | 1-164-232-11 | CERAMIC CHIP 0.01uF                      | 50V     |
| C220     | 1-163-038-00 | CERAMIC CHIP 0.1uF                       | 25V     |
| C221     | 1-163-038-00 | CERAMIC CHIP 0.1uF                       | 25V     |
| C222     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
| C223     | 1-163-005-11 | CERAMIC CHIP 470PF                       | 10% 50V |
| C224     | 1-130-834-00 | FILM 1uF                                 | 10% 63V |
| C225     | 1-164-232-11 | CERAMIC CHIP 0.01uF                      | 50V     |
| C226     | 1-164-232-11 | CERAMIC CHIP 0.01uF                      | 50V     |
| C228     | 1-163-009-11 | CERAMIC CHIP 0.001uF                     | 10% 50V |
|          |              | < DIODE >                                |         |
| D201     | 8-719-400-18 | DIODE MA152WK                            |         |
| D202     | 8-719-400-18 | DIODE MA152WK                            |         |
| D203     | 8-719-400-18 | DIODE MA152WK                            |         |
| D204     | 8-719-940-99 | LED SLR-34VC3 (TUNE)                     |         |

| Ref. No. | Part No.     | Description          | Remark     |
|----------|--------------|----------------------|------------|
|          |              | < IC >               |            |
| IC201    | 8-759-189-63 | IC UPD1724GB-650-1P7 |            |
| IC202    | 8-759-096-23 | IC S-80728AN-DR-T1   |            |
| IC203    | 8-759-510-73 | IC BA10393F-E2       |            |
|          |              | < JUMPER RESISTOR >  |            |
| JR201    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR202    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR203    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR204    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR205    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR206    | 1-216-295-00 | METAL CHIP           | 0 5% 1/10W |
| JR207    | 1-216-295-00 | METAL CHIP           | 0 5% 1/10W |
| JR208    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR209    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR210    | 1-216-295-00 | METAL CHIP           | 0 5% 1/10W |
| JR211    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR212    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR213    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR214    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR215    | 1-216-295-00 | METAL CHIP           | 0 5% 1/10W |
| JR216    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR217    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR218    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR219    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR220    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR221    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR222    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR223    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR224    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR225    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR226    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR227    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR228    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR229    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR230    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR231    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR232    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |
| JR233    | 1-216-296-91 | METAL GLAZE          | 0 5% 1/8W  |

|            |
|------------|
| <b>KEY</b> |
|------------|

| Ref. No.                   | Part No.     | Description                   | Remark |    |       |
|----------------------------|--------------|-------------------------------|--------|----|-------|
| JR234                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR235                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR236                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR237                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR238                      | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |
|                            |              |                               |        |    |       |
| JR239                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR240                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR242                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR243                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR244                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
|                            |              |                               |        |    |       |
| JR245                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
| JR246                      | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |
| JR247                      | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |
| JR248                      | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |
| JR249                      | 1-216-296-91 | METAL GLAZE                   | 0      | 5% | 1/8W  |
|                            |              |                               |        |    |       |
| < LIQUID CRYSTAL DISPLAY > |              |                               |        |    |       |
| LCD201                     | 1-810-134-11 | DISPLAY PANEL, LIQUID CRYSTAL |        |    |       |
|                            |              |                               |        |    |       |
| < TRANSISTOR >             |              |                               |        |    |       |
| Q201                       | 8-729-901-06 | TRANSISTOR DTA144EK           |        |    |       |
| Q202                       | 8-729-901-01 | TRANSISTOR DTC144EK           |        |    |       |
| Q203                       | 8-729-220-93 | TRANSISTOR 2SK209-G           |        |    |       |
| Q204                       | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6       |        |    |       |
| Q205                       | 8-729-220-93 | TRANSISTOR 2SK209-G           |        |    |       |
|                            |              |                               |        |    |       |
| < RESISTOR >               |              |                               |        |    |       |
| R201                       | 1-216-049-00 | METAL CHIP                    | 1K     | 5% | 1/10W |
| R202                       | 1-216-049-00 | METAL CHIP                    | 1K     | 5% | 1/10W |
| R203                       | 1-216-049-00 | METAL CHIP                    | 1K     | 5% | 1/10W |
| R204                       | 1-216-049-00 | METAL CHIP                    | 1K     | 5% | 1/10W |
| R205                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
|                            |              |                               |        |    |       |
| R206                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R207                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R208                       | 1-216-246-91 | METAL GLAZE                   | 100K   | 5% | 1/8W  |
| R209                       | 1-216-246-91 | METAL GLAZE                   | 100K   | 5% | 1/8W  |
| R210                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
|                            |              |                               |        |    |       |
| R211                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R212                       | 1-216-246-91 | METAL GLAZE                   | 100K   | 5% | 1/8W  |
| R213                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R214                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R215                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
|                            |              |                               |        |    |       |
| R216                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R217                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R218                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
| R219                       | 1-216-246-91 | METAL GLAZE                   | 100K   | 5% | 1/8W  |
| R220                       | 1-216-097-00 | METAL CHIP                    | 100K   | 5% | 1/10W |
|                            |              |                               |        |    |       |
| R221                       | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |
| R222                       | 1-216-295-00 | METAL CHIP                    | 0      | 5% | 1/10W |

| Ref. No.   | Part No.     | Description                              | Remark |    |       |
|------------|--------------|--|--------|----|-------|
| R223       | 1-216-295-00 | METAL CHIP                               | 0      | 5% | 1/10W |
| R224       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
| R225       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
| R226       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
| R227       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
|            |              |  |        |    |       |
| R229       | 1-216-198-00 | METAL CHIP                               | 1K     | 5% | 1/8W  |
| R230       | 1-216-121-00 | METAL CHIP                               | 1M     | 5% | 1/10W |
| R231       | 1-216-073-00 | METAL CHIP                               | 10K    | 5% | 1/10W |
| R232       | 1-216-150-00 | METAL GLAZE                              | 10     | 5% | 1/8W  |
| R233       | 1-216-073-00 | METAL CHIP                               | 10K    | 5% | 1/10W |
|            |              |  |        |    |       |
| R234       | 1-216-025-00 | METAL CHIP                               | 100    | 5% | 1/10W |
| R235       | 1-216-025-00 | METAL CHIP                               | 100    | 5% | 1/10W |
| R236       | 1-216-025-00 | METAL CHIP                               | 100    | 5% | 1/10W |
| R237       | 1-216-001-00 | METAL CHIP                               | 10     | 5% | 1/10W |
| R238       | 1-216-198-00 | METAL CHIP                               | 1K     | 5% | 1/8W  |
|            |              |  |        |    |       |
| R239       | 1-216-222-00 | METAL GLAZE                              | 10K    | 5% | 1/8W  |
| R240       | 1-216-025-00 | METAL CHIP                               | 100    | 5% | 1/10W |
| R241       | 1-216-069-00 | METAL CHIP                               | 6.8K   | 5% | 1/10W |
| R242       | 1-216-073-00 | METAL CHIP                               | 10K    | 5% | 1/10W |
| R243       | 1-216-069-00 | METAL CHIP                               | 6.8K   | 5% | 1/10W |
|            |              |  |        |    |       |
| R244       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
| R245       | 1-216-049-00 | METAL CHIP                               | 1K     | 5% | 1/10W |
| R246       | 1-216-043-00 | METAL CHIP                               | 560    | 5% | 1/10W |
| R247       | 1-216-065-00 | METAL CHIP                               | 4.7K   | 5% | 1/10W |
| R248       | 1-216-247-00 | METAL GLAZE                              | 110K   | 5% | 1/8W  |
|            |              |  |        |    |       |
| R249       | 1-216-099-00 | METAL CHIP                               | 120K   | 5% | 1/10W |
| R250       | 1-216-238-00 | METAL GLAZE                              | 47K    | 5% | 1/8W  |
| R251       | 1-216-270-00 | METAL GLAZE                              | 1M     | 5% | 1/8W  |
|            |              |  |        |    |       |
| < SWITCH > |              |  |        |    |       |
| S201       | 1-553-510-00 | SWITCH, SLIDE (MW CH STEP) (ICF-SW30)    |        |    |       |
| S202       | 1-553-856-00 | SWITCH, KEY BOARD (RESET)                |        |    |       |
| S203       | 1-572-198-11 | SWITCH, KEY BOARD (SLEEP)                |        |    |       |
| S204       | 1-572-198-11 | SWITCH, KEY BOARD (5)                    |        |    |       |
| S205       | 1-572-198-11 | SWITCH, KEY BOARD (BAND)                 |        |    |       |
|            |              |  |        |    |       |
| S206       | 1-572-198-11 | SWITCH, KEY BOARD (4)                    |        |    |       |
| S207       | 1-572-198-11 | SWITCH, KEY BOARD (ENTER/TIME)           |        |    |       |
| S208       | 1-572-198-11 | SWITCH, KEY BOARD (1)                    |        |    |       |
| S209       | 1-572-198-11 | SWITCH, KEY BOARD (2)                    |        |    |       |
| S210       | 1-572-198-11 | SWITCH, KEY BOARD (3)                    |        |    |       |
|            |              |  |        |    |       |
| S211       | 1-572-198-11 | SWITCH, KEY BOARD (SCAN/STANDBY)         |        |    |       |
| S212       | 1-572-198-11 | SWITCH, KEY BOARD (LOCAL/WORLD)          |        |    |       |
| S213       | 1-572-198-11 | SWITCH, KEY BOARD (BATT/DST)             |        |    |       |
| S214       | 1-570-876-11 | SWITCH, KEY BOARD (POWER ON/OFF)         |        |    |       |
| S215       | 1-572-198-11 | SWITCH, KEY BOARD (TUNE/TIME SET UP)     |        |    |       |
|            |              |  |        |    |       |
| S216       | 1-572-198-11 | SWITCH, KEY BOARD (TUNE/TIME SET DOWN)   |        |    |       |
| S217       | 1-572-198-11 | SWITCH, KEY BOARD (SW BAND SELECT/ARARM) |        |    |       |
| S218       | 1-572-198-11 | SWITCH, KEY BOARD (KEY PROTECT)          |        |    |       |
| S219       | 1-571-958-11 | SWITCH, PUSH (1 KEY) (POWER LOCK)        |        |    |       |

|            |             |
|------------|-------------|
| <b>KEY</b> | <b>MAIN</b> |
|------------|-------------|

| Ref. No.      | Part No.     | Description                      | Remark            |
|---------------|--------------|----------------------------------|-------------------|
| < VIBRATOR >  |              |                                  |                   |
| XC201         | 1-567-769-11 | VIBRATOR, CRYSTAL                |                   |
| *****         |              |                                  |                   |
| *             | A-3661-844-A | MAIN BOARD, COMPLETE (ICF-SW30)  |                   |
| *****         |              |                                  |                   |
| *             | A-3661-848-A | MAIN BOARD, COMPLETE (ICF-SW30L) |                   |
| *****         |              |                                  |                   |
| < FILTER >    |              |                                  |                   |
| BPF1          | 1-236-921-21 | FILTER, BAND PASS                |                   |
| < CAPACITOR > |              |                                  |                   |
| C1            | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C2            | 1-163-125-00 | CERAMIC CHIP 220PF               | 5% 50V            |
| C3            | 1-163-125-00 | CERAMIC CHIP 220PF               | 5% 50V            |
| C4            | 1-163-125-00 | CERAMIC CHIP 220PF               | 5% 50V            |
| C5            | 1-163-087-00 | CERAMIC CHIP 4PF                 | 50V               |
| C6            | 1-163-083-00 | CERAMIC CHIP 1PF                 | 50V               |
| C7            | 1-163-114-00 | CERAMIC CHIP 75PF                | 5% 50V            |
| C9            | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C10           | 1-163-111-00 | CERAMIC CHIP 56PF                | 5% 50V            |
| C11           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C13           | 1-163-123-00 | CERAMIC CHIP 180PF               | 5% 50V            |
| C14           | 1-163-087-00 | CERAMIC CHIP 4PF                 | 50V               |
| C15           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C16           | 1-163-096-00 | CERAMIC CHIP 13PF                | 5% 50V            |
| C17           | 1-163-097-00 | CERAMIC CHIP 15PF                | 5% 50V            |
| C18           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C19           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C20           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C21           | 1-126-154-11 | ELECT 47uF                       | 20% 6.3V          |
| C22           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C23           | 1-164-004-11 | CERAMIC CHIP 0.1uF               | 10% 25V           |
| C24           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C25           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C26           | 1-164-232-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C28           | 1-163-031-11 | CERAMIC CHIP 0.01uF              | 50V               |
| C29           | 1-163-009-11 | CERAMIC CHIP 0.001uF             | 10% 50V           |
| C30           | 1-163-141-00 | CERAMIC CHIP 0.001uF             | 5% 50V            |
| C31           | 1-163-141-00 | CERAMIC CHIP 0.001uF             | 5% 50V            |
| C32           | 1-163-091-00 | CERAMIC CHIP 8PF                 | 50V               |
| C33           | 1-163-141-00 | CERAMIC CHIP 0.001uF             | 5% 50V            |
| C34           | 1-163-141-00 | CERAMIC CHIP 0.001uF             | 5% 50V            |
| C35           | 1-124-638-11 | ELECT 22uF                       | 20% 10V           |
| C36           | 1-163-059-00 | CERAMIC CHIP 0.01uF              | 10% 50V           |
| C37           | 1-163-129-00 | CERAMIC CHIP 330PF               | 5% 50V (ICF-SW30) |

| Ref. No. | Part No.     | Description           | Remark                |
|----------|--------------|-----------------------|-----------------------|
| C37      | 1-163-130-00 | CERAMIC CHIP 360PF    | 5% 50V (ICF-SW30L)    |
| C38      | 1-163-092-00 | CERAMIC CHIP 9PF      | 0.25PF 50V (ICF-SW30) |
| C38      | 1-163-127-00 | CERAMIC CHIP 270PF    | 5% 50V (ICF-SW30L)    |
| C39      | 1-163-031-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C40      | 1-163-087-00 | CERAMIC CHIP 4PF      | 50V                   |
| C43      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C44      | 1-126-154-11 | ELECT 47uF            | 20% 6.3V              |
| C45      | 1-163-038-00 | CERAMIC CHIP 0.1uF    | 25V                   |
| C46      | 1-163-137-00 | CERAMIC CHIP 680PF    | 5% 50V                |
| C47      | 1-163-019-00 | CERAMIC CHIP 0.0068uF | 10% 50V               |
| C48      | 1-163-019-00 | CERAMIC CHIP 0.0068uF | 10% 50V               |
| C49      | 1-163-038-00 | CERAMIC CHIP 0.1uF    | 25V                   |
| C50      | 1-164-005-11 | CERAMIC CHIP 0.47uF   | 25V                   |
| C51      | 1-164-005-11 | CERAMIC CHIP 0.47uF   | 25V                   |
| C52      | 1-126-157-11 | ELECT 10uF            | 20% 16V               |
| C53      | 1-126-163-11 | ELECT 4.7uF           | 20% 50V               |
| C54      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C55      | 1-164-346-11 | CERAMIC CHIP 1uF      | 16V                   |
| C56      | 1-128-057-11 | ELECT 330uF           | 20% 6.3V              |
| C57      | 1-164-346-11 | CERAMIC CHIP 1uF      | 16V                   |
| C58      | 1-126-163-11 | ELECT 4.7uF           | 20% 50V               |
| C59      | 1-164-346-11 | CERAMIC CHIP 1uF      | 16V                   |
| C60      | 1-124-638-11 | ELECT 22uF            | 20% 10V               |
| C61      | 1-104-483-11 | ELECT 470uF           | 20% 4V                |
| C62      | 1-126-177-11 | ELECT 100uF           | 20% 10V               |
| C63      | 1-124-638-11 | ELECT 22uF            | 20% 10V               |
| C64      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C65      | 1-126-925-11 | ELECT 470uF           | 20% 10V               |
| C66      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C67      | 1-124-635-00 | ELECT 220uF           | 20% 4V                |
| C68      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C69      | 1-164-004-11 | CERAMIC CHIP 0.1uF    | 10% 25V               |
| C70      | 1-163-087-00 | CERAMIC CHIP 4PF      | 50V                   |
| C71      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C72      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C73      | 1-164-346-11 | CERAMIC CHIP 1uF      | 16V                   |
| C74      | 1-126-163-11 | ELECT 4.7uF           | 20% 50V               |
| C75      | 1-163-035-00 | CERAMIC CHIP 0.047uF  | 50V                   |
| C76      | 1-164-346-11 | CERAMIC CHIP 1uF      | 16V                   |
| C77      | 1-163-135-00 | CERAMIC CHIP 560PF    | 5% 50V                |
| C78      | 1-163-033-00 | CERAMIC CHIP 0.022uF  | 50V                   |
| C80      | 1-126-177-11 | ELECT 100uF           | 20% 10V               |
| C81      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C82      | 1-164-005-11 | CERAMIC CHIP 0.47uF   | 25V                   |
| C83      | 1-164-232-11 | CERAMIC CHIP 0.01uF   | 50V                   |
| C85      | 1-163-077-00 | CERAMIC CHIP 0.1uF    | 10% 25V               |

| Ref. No.   | Part No.     | Description     | Remark                     |
|------------|--------------|-----------------|----------------------------|
| C86        | 1-163-082-00 | CERAMIC CHIP    | 0.5PF 50V                  |
| C87        | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C88        | 1-136-850-11 | FILM            | 0.1uF 10% 63V              |
| C89        | 1-163-141-00 | CERAMIC CHIP    | 0.001uF 5% 50V             |
| C90        | 1-163-083-00 | CERAMIC CHIP    | 1PF 50V                    |
| C91        | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C92        | 1-163-108-00 | CERAMIC CHIP    | 43PF 5% 50V                |
| C93        | 1-163-089-00 | CERAMIC CHIP    | 6PF 50V                    |
| C94        | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C95        | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C96        | 1-163-117-00 | CERAMIC CHIP    | 100PF 5% 50V               |
| C97        | 1-163-119-00 | CERAMIC CHIP    | 120PF 5% 50V               |
| C98        | 1-163-133-00 | CERAMIC CHIP    | 470PF 5% 50V               |
| C99        | 1-126-157-11 | ELECT           | 10uF 20% 16V               |
| C100       | 1-126-154-11 | ELECT           | 47uF 20% 6.3V              |
| C101       | 1-126-154-11 | ELECT           | 47uF 20% 6.3V              |
| C102       | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C103       | 1-163-038-00 | CERAMIC CHIP    | 0.1uF 25V                  |
| C104       | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C105       | 1-126-925-11 | ELECT           | 470uF 20% 10V              |
| C106       | 1-163-100-00 | CERAMIC CHIP    | 20PF 5% 50V                |
| C107       | 1-164-346-11 | CERAMIC CHIP    | 1uF 16V                    |
| C108       | 1-163-105-00 | CERAMIC CHIP    | 33PF 5% 50V                |
| C109       | 1-126-177-11 | ELECT           | 100uF 20% 10V              |
| C110       | 1-164-346-11 | CERAMIC CHIP    | 1uF 16V                    |
| C111       | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C113       | 1-163-019-00 | CERAMIC CHIP    | 0.0068uF 10% 50V           |
| C114       | 1-163-037-11 | CERAMIC CHIP    | 0.022uF 10% 25V            |
| C115       | 1-163-117-00 | CERAMIC CHIP    | 100PF 5% 50V               |
| C116       | 1-163-003-11 | CERAMIC CHIP    | 330PF 10% 50V              |
| C117       | 1-163-016-00 | CERAMIC CHIP    | 0.0039uF 10% 50V           |
| C118       | 1-163-003-11 | CERAMIC CHIP    | 330PF 10% 50V              |
| C119       | 1-163-016-00 | CERAMIC CHIP    | 0.0039uF 10% 50V           |
| C120       | 1-163-019-00 | CERAMIC CHIP    | 0.0068uF 10% 50V           |
| C121       | 1-163-037-11 | CERAMIC CHIP    | 0.022uF 10% 25V            |
| C123       | 1-164-232-11 | CERAMIC CHIP    | 0.01uF 50V                 |
| C124       | 1-126-157-11 | ELECT           | 10uF 20% 16V               |
| C125       | 1-162-637-11 | CERAMIC CHIP    | 0.47uF 16V                 |
| C126       | 1-164-005-11 | CERAMIC CHIP    | 0.47uF 25V                 |
| C128       | 1-163-115-00 | CERAMIC CHIP    | 82PF 5% 50V<br>(ICF-SW30L) |
| < FILTER > |              |                 |                            |
| CF1        | 1-577-687-11 | FILTER, CERAMIC |                            |
| CF2        | 1-577-324-11 | FILTER, CERAMIC |                            |
| CF2        | 1-579-881-11 | FILTER, CERAMIC |                            |
| CF3        | 1-577-601-11 | FILTER, CERAMIC |                            |
| CF4        | 1-577-324-11 | FILTER, CERAMIC |                            |

| Ref. No.            | Part No.     | Description                  | Remark |
|---------------------|--------------|------------------------------|--------|
| < CONNECTOR >       |              |                              |        |
| CN1                 | 1-750-505-11 | CONNECTOR, FPC 18P           |        |
| < TRIMMER >         |              |                              |        |
| CT1                 | 1-141-304-21 | CAP, TRIMMER 10PF (ICF-SW30) |        |
| CT1                 | 1-141-443-11 | TRIMMER, CERAMIC (ICF-SW30L) |        |
| CT2                 | 1-141-304-21 | CAP, TRIMMER 10PF            |        |
| < DIODE >           |              |                              |        |
| D1                  | 8-719-800-76 | DIODE 1SS226                 |        |
| D2                  | 8-719-123-79 | DIODE 1SS279                 |        |
| D3                  | 8-719-032-60 | DIODE KV1580-TL345           |        |
| D4                  | 8-719-950-19 | DIODE 1T33-T8-04             |        |
| D5                  | 8-719-950-19 | DIODE 1T33-T8-04             |        |
| D6                  | 8-719-938-72 | DIODE SB01-05CP              |        |
| D7                  | 8-719-400-18 | DIODE MA152WK                |        |
| D8                  | 8-719-106-98 | DIODE RD16M-B                |        |
| D9                  | 8-719-400-18 | DIODE MA152WK                |        |
| D10                 | 8-719-400-18 | DIODE MA152WK                |        |
| D11                 | 8-719-400-18 | DIODE MA152WK                |        |
| D12                 | 8-719-950-19 | DIODE 1T33-T8-04             |        |
| D13                 | 8-719-950-19 | DIODE 1T33-T8-04             |        |
| D14                 | 8-719-950-19 | DIODE 1T33-T8-04             |        |
| D15                 | 8-719-400-18 | DIODE MA152WK                |        |
| D17                 | 8-719-400-18 | DIODE MA152WK                |        |
| D18                 | 8-719-106-98 | DIODE RD16M-B                |        |
| < IC >              |              |                              |        |
| IC1                 | 8-752-061-79 | IC CX20111-T6                |        |
| IC2                 | 8-759-804-98 | IC LA3335M                   |        |
| IC3                 | 8-752-057-63 | IC CXA1522M                  |        |
| IC4                 | 8-759-804-76 | IC LA5002M                   |        |
| IC5                 | 8-759-939-41 | IC S-81230AG-RB              |        |
| < JACK >            |              |                              |        |
| J1                  | 1-566-891-11 | JACK (HEADPHONE)             |        |
| J2                  | 1-695-153-11 | JACK, DC (DC IN 4.5V)        |        |
| < JUMPER RESISTOR > |              |                              |        |
| JR1                 | 1-216-295-00 | METAL CHIP 0 5% 1/10W        |        |
| JR2                 | 1-216-295-00 | METAL CHIP 0 5% 1/10W        |        |
| JR3                 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W        |        |
| JR4                 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W        |        |
| JR5                 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W        |        |
| JR6                 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W        |        |
| JR7                 | 1-216-295-00 | METAL CHIP 0 5% 1/10W        |        |

# MAIN

| Ref. No. | Part No.     | Description   | Remark     | Ref. No.       | Part No.     | Description                           | Remark       |
|----------|--------------|---------------|------------|----------------|--------------|---------------------------------------|--------------|
| JR8      | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L13            | 1-426-357-11 | TRANSFORMER, RF                       |              |
| JR9      | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L14            | 1-426-464-11 | COIL (RF)                             |              |
| JR10     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L15            | 1-404-444-31 | TRANSFORMER, IF                       |              |
| JR11     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L16            | 1-501-613-11 | ANTENNA, FERRITE-ROD (MW) (ICF-SW30)  |              |
| JR14     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L16            | 1-501-614-11 | ANTENNA, FERRITE-ROD (LW) (ICF-SW30L) |              |
| JR15     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L17            | 1-406-922-11 | COIL, (RF)                            |              |
| JR16     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L18            | 1-406-786-11 | COIL, FM (OSC)                        |              |
| JR17     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L19            | 1-406-269-11 | COIL (OSC)                            |              |
| JR18     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L20            | 1-404-444-31 | TRANSFORMER, IF                       |              |
| JR19     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L22            | 1-406-787-11 | COIL, SW (OSC)                        |              |
| JR20     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L24            | 1-412-290-11 | INDUCTOR                              | 0.82uH       |
| JR21     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L25            | 1-412-290-11 | INDUCTOR                              | 0.82uH       |
| JR22     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | L27            | 1-412-319-41 | INDUCTOR                              | 220uH        |
| JR23     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L28            | 1-423-730-11 | TRANSFORMER, D/D CONVERTER            |              |
| JR24     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | L29            | 1-412-010-41 | INDUCTOR CHIP                         | 22uH         |
| JR25     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | < TRANSISTOR > |              |                                       |              |
| JR26     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q1             | 8-729-116-64 | TRANSISTOR                            | 2SK508-K51   |
| JR27     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q2             | 8-729-220-93 | TRANSISTOR                            | 2SK209-G     |
| JR28     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q3             | 8-729-220-93 | TRANSISTOR                            | 2SK209-G     |
| JR29     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q4             | 8-729-220-93 | TRANSISTOR                            | 2SK209-G     |
| JR30     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q5             | 8-729-220-93 | TRANSISTOR                            | 2SK209-G     |
| JR31     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q6             | 8-729-102-07 | TRANSISTOR                            | 2SC2223-F13  |
| JR32     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q7             | 8-729-141-75 | TRANSISTOR                            | 2SD596DV345  |
| JR33     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q8             | 8-729-102-07 | TRANSISTOR                            | 2SC2223-F13  |
| JR34     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q9             | 8-729-901-06 | TRANSISTOR                            | DTA144EK     |
| JR35     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q10            | 8-729-216-22 | TRANSISTOR                            | 2SA1162      |
| JR36     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q11            | 8-729-807-87 | TRANSISTOR                            | 2SB1295-UL6  |
| JR37     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q12            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| JR38     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q13            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| JR39     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q14            | 8-729-807-87 | TRANSISTOR                            | 2SB1295-UL6  |
| JR40     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q15            | 8-729-807-87 | TRANSISTOR                            | 2SB1295-UL6  |
| JR41     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q16            | 8-729-901-01 | TRANSISTOR                            | DTC144EK     |
| JR42     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q17            | 8-729-216-22 | TRANSISTOR                            | 2SA1162      |
| JR43     | 1-216-295-00 | METAL CHIP    | 0 5% 1/10W | Q18            | 8-729-901-01 | TRANSISTOR                            | DTC144EK     |
| JR44     | 1-216-296-91 | METAL GLAZE   | 0 5% 1/8W  | Q19            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| < COIL > |              |               |            | Q20            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| L1       | 1-412-319-41 | INDUCTOR      | 220uH      | Q21            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| L2       | 1-412-290-11 | INDUCTOR      | 0.82uH     | Q22            | 8-729-102-07 | TRANSISTOR                            | 2SC2223-F13  |
| L3       | 1-412-319-41 | INDUCTOR      | 220uH      | Q23            | 8-729-208-47 | TRANSISTOR                            | 2SK210-GR    |
| L4       | 1-412-289-11 | INDUCTOR      | 0.68uH     | Q24            | 8-729-102-07 | TRANSISTOR                            | 2SC2223-F13  |
| L5       | 1-412-297-11 | INDUCTOR      | 3.3uH      | Q25            | 8-729-102-07 | TRANSISTOR                            | 2SC2223-F13  |
| L6       | 1-412-317-11 | INDUCTOR      | 150uH      | Q26            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| L7       | 1-412-301-11 | INDUCTOR      | 6.8uH      | Q27            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| L8       | 1-412-289-11 | INDUCTOR      | 0.68uH     | Q28            | 8-729-120-28 | TRANSISTOR                            | 2SC1623-L5L6 |
| L9       | 1-412-002-31 | INDUCTOR CHIP | 4.7uH      | Q29            | 8-729-903-30 | TRANSISTOR                            | DTC144TK     |
| L10      | 1-412-288-11 | INDUCTOR      | 0.56uH     | Q30            | 8-729-216-22 | TRANSISTOR                            | 2SA1162      |
| L11      | 1-412-292-11 | INDUCTOR      | 1.2uH      | Q31            | 8-729-216-22 | TRANSISTOR                            | 2SA1162      |
| L12      | 1-412-290-11 | INDUCTOR      | 0.82uH     | Q32            | 8-729-216-22 | TRANSISTOR                            | 2SA1162      |

| Ref. No.     | Part No.     | Description | Remark       |    |       |
|--------------|--------------|-------------|--------------|----|-------|
| Q33          | 8-729-903-30 | TRANSISTOR  | DTC144TK     |    |       |
| Q34          | 8-729-216-22 | TRANSISTOR  | 2SA1162      |    |       |
| Q35          | 8-729-120-28 | TRANSISTOR  | 2SC1623-L5L6 |    |       |
| Q36          | 8-729-120-28 | TRANSISTOR  | 2SC1623-L5L6 |    |       |
| Q37          | 8-729-120-28 | TRANSISTOR  | 2SC1623-L5L6 |    |       |
|              |              |             |              |    |       |
| Q38          | 8-729-120-28 | TRANSISTOR  | 2SC1623-L5L6 |    |       |
| Q39          | 8-729-120-28 | TRANSISTOR  | 2SC1623-L5L6 |    |       |
| < RESISTOR > |              |             |              |    |       |
| R1           | 1-216-081-00 | METAL CHIP  | 22K          | 5% | 1/10W |
| R2           | 1-216-081-00 | METAL CHIP  | 22K          | 5% | 1/10W |
| R3           | 1-216-073-00 | METAL CHIP  | 10K          | 5% | 1/10W |
| R4           | 1-216-039-00 | METAL CHIP  | 390          | 5% | 1/10W |
| R5           | 1-216-097-00 | METAL CHIP  | 100K         | 5% | 1/10W |
|              |              |             |              |    |       |
| R6           | 1-216-025-00 | METAL CHIP  | 100          | 5% | 1/10W |
| R7           | 1-216-001-00 | METAL CHIP  | 10           | 5% | 1/10W |
| R8           | 1-216-025-00 | METAL CHIP  | 100          | 5% | 1/10W |
| R9           | 1-216-057-00 | METAL CHIP  | 2.2K         | 5% | 1/10W |
| R10          | 1-216-057-00 | METAL CHIP  | 2.2K         | 5% | 1/10W |
|              |              |             |              |    |       |
| R11          | 1-216-025-00 | METAL CHIP  | 100          | 5% | 1/10W |
| R12          | 1-216-025-00 | METAL CHIP  | 100          | 5% | 1/10W |
| R13          | 1-216-045-00 | METAL CHIP  | 680          | 5% | 1/10W |
| R14          | 1-216-057-00 | METAL CHIP  | 2.2K         | 5% | 1/10W |
| R15          | 1-216-174-00 | METAL GLAZE | 100          | 5% | 1/8W  |
|              |              |             |              |    |       |
| R16          | 1-216-065-00 | METAL CHIP  | 4.7K         | 5% | 1/10W |
| R17          | 1-216-174-00 | METAL GLAZE | 100          | 5% | 1/8W  |
| R18          | 1-216-041-00 | METAL CHIP  | 470          | 5% | 1/10W |
| R19          | 1-216-057-00 | METAL CHIP  | 2.2K         | 5% | 1/10W |
| R20          | 1-216-025-00 | METAL CHIP  | 100          | 5% | 1/10W |
|              |              |             |              |    |       |
| R21          | 1-216-049-00 | METAL CHIP  | 1K           | 5% | 1/10W |
| R22          | 1-216-049-00 | METAL CHIP  | 1K           | 5% | 1/10W |
| R23          | 1-216-085-00 | METAL CHIP  | 33K          | 5% | 1/10W |
| R24          | 1-216-065-00 | METAL CHIP  | 4.7K         | 5% | 1/10W |
| R25          | 1-216-121-00 | METAL CHIP  | 1M           | 5% | 1/10W |
|              |              |             |              |    |       |
| R26          | 1-216-049-00 | METAL CHIP  | 1K           | 5% | 1/10W |
| R27          | 1-216-097-00 | METAL CHIP  | 100K         | 5% | 1/10W |
| R28          | 1-216-097-00 | METAL CHIP  | 100K         | 5% | 1/10W |
| R29          | 1-216-073-00 | METAL CHIP  | 10K          | 5% | 1/10W |
| R30          | 1-216-121-00 | METAL CHIP  | 1M           | 5% | 1/10W |
|              |              |             |              |    |       |
| R31          | 1-216-077-00 | METAL CHIP  | 15K          | 5% | 1/10W |
| R32          | 1-216-029-00 | METAL CHIP  | 150          | 5% | 1/10W |
| R33          | 1-216-065-00 | METAL CHIP  | 4.7K         | 5% | 1/10W |
| R34          | 1-216-057-00 | METAL CHIP  | 2.2K         | 5% | 1/10W |
| R35          | 1-216-029-00 | METAL CHIP  | 150          | 5% | 1/10W |
|              |              |             |              |    |       |
| R36          | 1-216-222-00 | METAL GLAZE | 10K          | 5% | 1/8W  |
| R37          | 1-216-037-00 | METAL CHIP  | 330          | 5% | 1/10W |
| R38          | 1-216-089-91 | METAL GLAZE | 47K          | 5% | 1/10W |
| R39          | 1-216-097-00 | METAL CHIP  | 100K         | 5% | 1/10W |
| R41          | 1-216-089-91 | METAL GLAZE | 47K          | 5% | 1/10W |

| Ref. No. | Part No.     | Description | Remark |      |       |
|----------|--------------|-------------|--------|------|-------|
| R42      | 1-216-246-91 | METAL GLAZE | 100K   | 5%   | 1/8W  |
| R43      | 1-216-238-00 | METAL GLAZE | 47K    | 5%   | 1/8W  |
| R44      | 1-216-689-11 | METAL CHIP  | 39K    | 0.5% | 1/10W |
| R45      | 1-216-081-00 | METAL CHIP  | 22K    | 5%   | 1/10W |
| R46      | 1-216-017-00 | METAL CHIP  | 47     | 5%   | 1/10W |
|          |              |             |        |      |       |
| R47      | 1-216-017-00 | METAL CHIP  | 47     | 5%   | 1/10W |
| R48      | 1-216-017-00 | METAL CHIP  | 47     | 5%   | 1/10W |
| R49      | 1-216-049-00 | METAL CHIP  | 1K     | 5%   | 1/10W |
| R50      | 1-216-049-00 | METAL CHIP  | 1K     | 5%   | 1/10W |
| R51      | 1-216-069-00 | METAL CHIP  | 6.8K   | 5%   | 1/10W |
|          |              |             |        |      |       |
| R52      | 1-216-017-00 | METAL CHIP  | 47     | 5%   | 1/10W |
| R53      | 1-216-081-00 | METAL CHIP  | 22K    | 5%   | 1/10W |
| R55      | 1-216-065-00 | METAL CHIP  | 4.7K   | 5%   | 1/10W |
| R56      | 1-216-089-91 | METAL GLAZE | 47K    | 5%   | 1/10W |
| R57      | 1-216-089-91 | METAL GLAZE | 47K    | 5%   | 1/10W |
|          |              |             |        |      |       |
| R58      | 1-216-041-00 | METAL CHIP  | 470    | 5%   | 1/10W |
| R59      | 1-216-025-00 | METAL CHIP  | 100    | 5%   | 1/10W |
| R60      | 1-216-057-00 | METAL CHIP  | 2.2K   | 5%   | 1/10W |
| R61      | 1-216-065-00 | METAL CHIP  | 4.7K   | 5%   | 1/10W |
| R62      | 1-216-041-00 | METAL CHIP  | 470    | 5%   | 1/10W |
|          |              |             |        |      |       |
| R63      | 1-216-017-00 | METAL CHIP  | 47     | 5%   | 1/10W |
| R64      | 1-216-166-00 | METAL GLAZE | 47     | 5%   | 1/8W  |
| R65      | 1-216-089-91 | METAL GLAZE | 47K    | 5%   | 1/10W |
| R66      | 1-216-021-00 | METAL CHIP  | 68     | 5%   | 1/10W |
| R67      | 1-216-073-00 | METAL CHIP  | 10K    | 5%   | 1/10W |
|          |              |             |        |      |       |
| R68      | 1-216-041-00 | METAL CHIP  | 470    | 5%   | 1/10W |
| R69      | 1-216-097-00 | METAL CHIP  | 100K   | 5%   | 1/10W |
| R70      | 1-216-025-00 | METAL CHIP  | 100    | 5%   | 1/10W |
| R71      | 1-216-246-91 | METAL GLAZE | 100K   | 5%   | 1/8W  |
| R72      | 1-216-033-00 | METAL CHIP  | 220    | 5%   | 1/10W |
|          |              |             |        |      |       |
| R73      | 1-216-091-00 | METAL CHIP  | 56K    | 5%   | 1/10W |
| R74      | 1-216-049-00 | METAL CHIP  | 1K     | 5%   | 1/10W |
| R75      | 1-216-089-91 | METAL GLAZE | 47K    | 5%   | 1/10W |
| R76      | 1-216-077-00 | METAL CHIP  | 15K    | 5%   | 1/10W |
| R77      | 1-216-057-00 | METAL CHIP  | 2.2K   | 5%   | 1/10W |
|          |              |             |        |      |       |
| R78      | 1-216-025-00 | METAL CHIP  | 100    | 5%   | 1/10W |
| R79      | 1-216-093-00 | METAL CHIP  | 68K    | 5%   | 1/10W |
| R80      | 1-216-041-00 | METAL CHIP  | 470    | 5%   | 1/10W |
| R81      | 1-216-085-00 | METAL CHIP  | 33K    | 5%   | 1/10W |
| R82      | 1-216-065-00 | METAL CHIP  | 4.7K   | 5%   | 1/10W |
|          |              |             |        |      |       |
| R83      | 1-216-097-00 | METAL CHIP  | 100K   | 5%   | 1/10W |
| R84      | 1-216-198-00 | METAL CHIP  | 1K     | 5%   | 1/8W  |
| R85      | 1-216-049-00 | METAL CHIP  | 1K     | 5%   | 1/10W |
| R86      | 1-216-085-00 | METAL CHIP  | 33K    | 5%   | 1/10W |
| R87      | 1-216-097-00 | METAL CHIP  | 100K   | 5%   | 1/10W |
|          |              |             |        |      |       |
| R88      | 1-216-089-91 | METAL GLAZE | 47K    | 5%   | 1/10W |
| R90      | 1-216-234-00 | METAL GLAZE | 33K    | 5%   | 1/8W  |
| R91      | 1-216-091-00 | METAL CHIP  | 56K    | 5%   | 1/10W |
| R92      | 1-216-065-00 | METAL CHIP  | 4.7K   | 5%   | 1/10W |

**MAIN**

**SEE ADDITIONAL INFORMATION**

| Ref. No. | Part No.     | Description | Remark        |
|----------|--------------|-------------|---------------|
| R94      | 1-216-065-00 | METAL CHIP  | 4.7K 5% 1/10W |
| R95      | 1-216-097-00 | METAL CHIP  | 100K 5% 1/10W |
| R96      | 1-216-057-00 | METAL CHIP  | 2.2K 5% 1/10W |
| R97      | 1-216-057-00 | METAL CHIP  | 2.2K 5% 1/10W |
| R98      | 1-216-091-00 | METAL CHIP  | 56K 5% 1/10W  |
| R99      | 1-216-065-00 | METAL CHIP  | 4.7K 5% 1/10W |
| R101     | 1-216-065-00 | METAL CHIP  | 4.7K 5% 1/10W |
| R102     | 1-216-097-00 | METAL CHIP  | 100K 5% 1/10W |
| R103     | 1-216-174-00 | METAL GLAZE | 100 5% 1/8W   |
| R104     | 1-216-049-00 | METAL CHIP  | 1K 5% 1/10W   |
| R107     | 1-216-061-00 | METAL CHIP  | 3.3K 5% 1/10W |
| R108     | 1-216-037-00 | METAL CHIP  | 330 5% 1/10W  |

< VARIABLE RESISTOR >

|     |              |                               |
|-----|--------------|-------------------------------|
| RV1 | 1-241-631-11 | RES, ADJ, CARBON 22K (FM VCO) |
| RV2 | 1-223-450-11 | RES, VAR, CARBON 50K (VOL)    |

< SWITCH >

|    |              |                            |
|----|--------------|----------------------------|
| S1 | 1-571-850-81 | SWITCH, SLIDE (FM/SW SENS) |
| S2 | 1-571-850-81 | SWITCH, SLIDE (TONE)       |

< VIBRATOR >

|     |              |                   |
|-----|--------------|-------------------|
| XC1 | 1-760-018-21 | VIBRATOR, CRYSTAL |
|-----|--------------|-------------------|

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MISCELLANEOUS  
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|     |              |                          |
|-----|--------------|--------------------------|
| ANT | 1-501-222-71 | ANTENNA, TELESCOPIC (FM) |
| SP1 | 1-544-758-11 | SPEAKER (6.6CM)          |

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ACCESSORIES & PACKING MATERIALS  
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|              |   |
|--------------|---|
| 3-757-182-01 | MANUAL, INSTRUCTION<br>(JAPANESE/ENGLISH/KOREAN) (Tourist)  |
| 3-757-182-11 | MANUAL, INSTRUCTION<br>(ENGLISH/SPANISH/PORTUGUESE)<br>(US, Canadian, AEP TYPE1, UK, E, Australian) |
| 3-757-182-41 | MANUAL, INSTRUCTION<br>(FRENCH/ITALIAN/DUTCH)<br>(Canadian, French, AEP TYPE1/TYPE2,<br>Italian)    |
| 3-757-182-51 | MANUAL, INSTRUCTION<br>(ENGLISH/GERMAN/SWEDISH)<br>(AEP TYPE1/TYPE2)                                |
| 3-757-182-61 | MANUAL, INSTRUCTION (DANISH/FINNISH)  |
| 3-757-182-71 | MANUAL, INSTRUCTION (ENGLISH/ARABIC)<br>(Saudi Arabia)  |

| Ref. No. | Part No.     | Description                                    | Remark |
|----------|--------------|--|--------|
|          | 3-893-802-09 | HAND BOOK (Tourist)                            |        |
|          | 3-893-940-19 | GUIDE, SHORT WAVE (EXCEPT Tourist)             |        |
| *        | 3-905-473-01 | INDIVIDUAL CARTON (ICF-SW30:Tourist)           |        |
| *        | 3-905-666-01 | INDIVIDUAL CARTON<br>(ICF-SW30:EXCEPT Tourist) |        |
| *        | 3-906-028-01 | INDIVIDUAL CARTON (ICF-SW30L)                  |        |
|          | 3-906-140-01 | CASE, CARRYING (Tourist)                       |        |

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**HARDWARE LIST**  
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|    |              |          |                     |
|----|--------------|----------|---------------------|
| #1 | 7-685-647-79 | SCREW +P | 3X10 TYPE2 NON-SLIT |
| #2 | 7-685-153-19 | SCREW +P | 3X30 TYPE2 NON-SLIT |



# ICF-SW30/SW30L

## SONY<sup>®</sup> SERVICE MANUAL

US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model  
Tourist Model  
ICF-SW30  
French Model  
ICF-SW30L

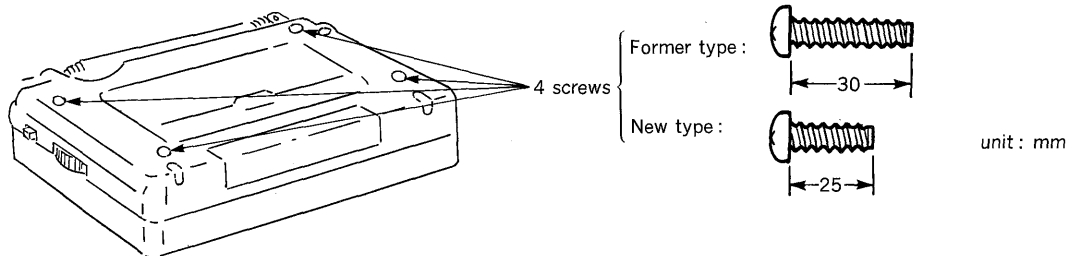
### SUPPLEMENT-1

File this supplement with the Service Manual.

The cabinet (front) assy has the former and new types.  
The following describes how to discriminate between former and new types and the part No.

(ECN-TR500429)

#### 1. How to discriminate between former and new types



#### 2. Part No. of former and new types

• Former type

X-3366-880-1 CABINET (FRONT) ASSY (ICF-SW30)  
X-3366-912-1 CABINET (FRONT) ASSY (ICF-SW30L)



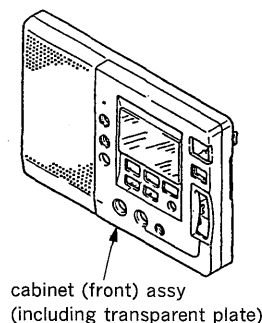
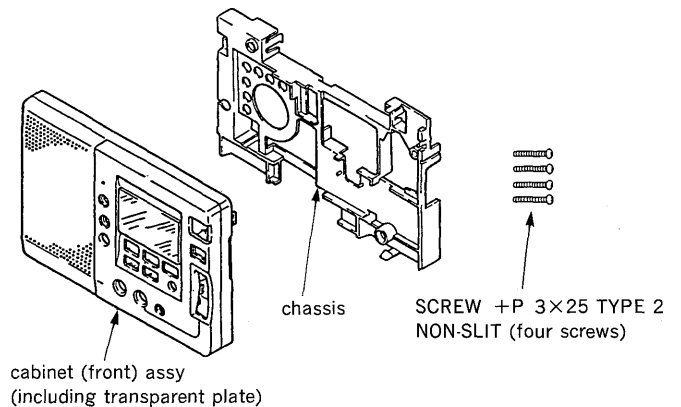
X-3371-134-1 CABINET (FRONT) ASSY (ICF-SW30)  
X-3371-149-1 CABINET (FRONT) ASSY (ICF-SW30L)

• New type

X-3366-880-1 CABINET (FRONT) ASSY (ICF-SW30)  
X-3366-912-1 CABINET (FRONT) ASSY (ICF-SW30L)



X-3366-880-2 CABINET (FRONT) ASSY (ICF-SW30)  
X-3366-912-2 CABINET (FRONT) ASSY (ICF-SW30L)

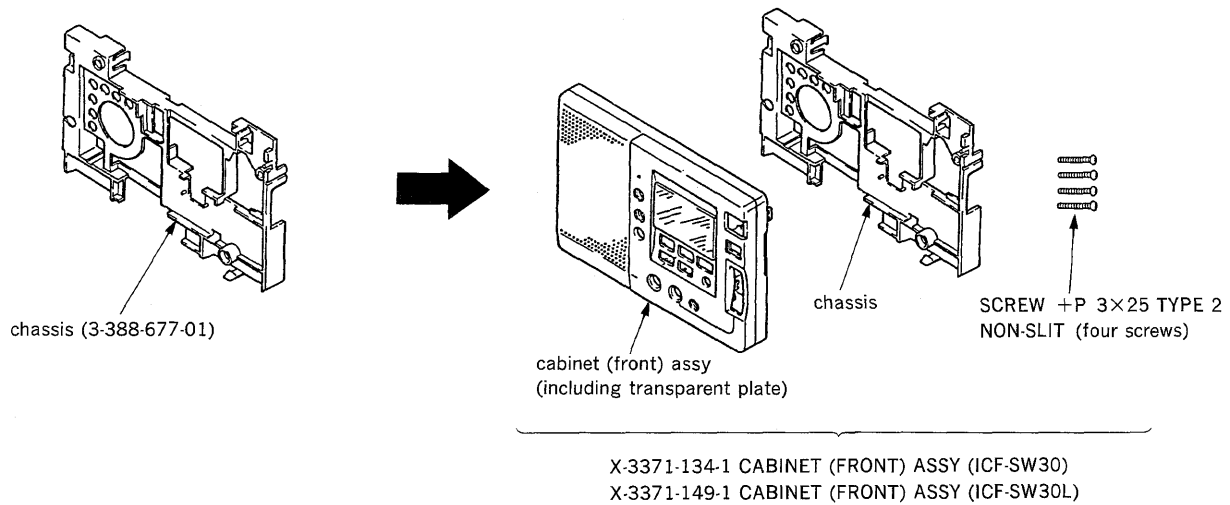


### 3. Parts changed

|      |          | Before change |                                  |        | After change  |                                  |        |
|------|----------|---------------|----------------------------------|--------|---------------|----------------------------------|--------|
| Page | Ref. No. | Part No.      | Description                      | Remark | Part No.      | Description                      | Remark |
| 26   | 1        | X-3366-880-1  | CABINET (FRONT) ASSY (ICF-SW30)  |        | X-3366-880-2  | CABINET (FRONT) ASSY (ICF-SW30)  |        |
|      | 1        | X-3366-912-1  | CABINET (FRONT) ASSY (ICF-SW30L) |        | X-3366-912-2  | CABINET (FRONT) ASSY (ICF-SW30L) |        |
| 27   | 54       | *3-388-677-01 | CHASSIS                          |        | *3-388-677-02 | CHASSIS                          |        |
| 34   | #2       | 7-685-153-19  | SCREW +P 3×30 TYPE2 NON-SLIT     |        | 7-685-152-19  | SCREW +P 3×25 TYPE2 NON-SLIT     |        |

### 4. Others

When replacing the chassis (3-388-677-01) in the former type of the set, the cabinet (front) assy should be replaced similarly as given in item 2.



# ICF-SW30/SW30L

## SONY SERVICE MANUAL

US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model  
Tourist Model  
ICF-SW30  
French Model  
ICF-SW30L

### SUPPLEMENT-2

File this Supplement with the Service Manual.

We inform you that the former and new types of cabinet (front) assy described in the Supplement-1 have been integrated into the new type only.

(RPC-96015)

#### 1. Changed Parts of the Former Type of the Cabinet (Front) Assy

|      |          | Before change |                                  |        | After change   |                                  |        |
|------|----------|---------------|----------------------------------|--------|----------------|----------------------------------|--------|
| Page | Ref. No. | Part No.      | Description                      | Remark | Part No.       | Description                      | Remark |
| 26   | 1        | X-3371-134-1  | CABINET (FRONT) ASSY (ICF-SW30)  |        | X-3366-880-2   | CABINET (FRONT) ASSY (ICF-SW30)  |        |
|      |          | X-3371-149-1  | CABINET (FRONT) ASSY (ICF-SW30L) |        | X-3366-912-2   | CABINET (FRONT) ASSY (ICF-SW30L) |        |
| 27   | 54       |               |                                  |        | * 3-388-677-02 | CHASSIS                          |        |
| 34   | #2       |               |                                  |        | 7-685-152-19   | SCREW +P 3X25 TYPE2 NON-SLIT     |        |

- When replacing the chassis (3-388-677-01) in the former type of the set, the three parts after changes described in Item 1 should be replaced at the same time.
- The new type of the set is as described in the previous Supplement-1.

# ICF-SW30/SW30L

## SONY® SERVICE MANUAL

### CORRECTION-1

File this Correction with the Service Manual.

*US Model*  
*Canadian Model*  
*AEP Model*  
*UK Model*  
*E Model*  
*Australian Model*  
*Tourist Model*  
*ICF-SW30*  
*French Model*  
*ICF-SW30L*


 : Corrected portion

#### SECTION 3 ELECTRICAL ADJUSTMENTS (Page 10.)

##### AM SECTION

##### VCO Voltage Adjustment

###### Procedure :

1. Tune the set to MW 531kHz.
2. Adjust L19 to obtain a 1.4 – 1.6V on the VOM.
3. Tune the set to MW 1710kHz.
4. Confirm that the voltage reading on the VOM is 7.0 – 9.0V.
5. Repeat the above steps several times.
6. Tune the set to SW 3700kHz.
7. Adjust L22 to obtain a 1.0 – 1.2V on the VOM.
8. Tune the set to SW 21,950kHz. 
9. Confirm that the voltage reading on the VOM is 13.5 – 15.5V. 