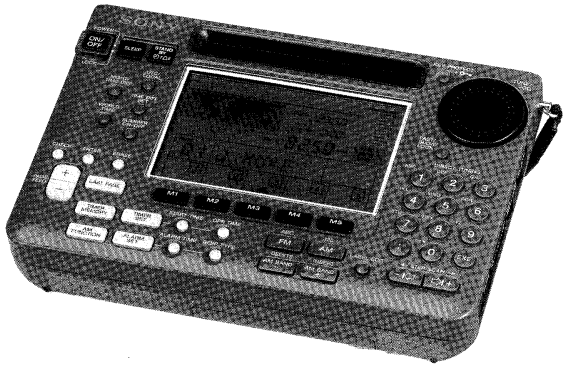
ICF-SW55

SERVICE MANUAL

Ver 1.1 2002.12



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

Specifications

Circuit system LW/MW/SW: Dual conversion super-heterodyne
FM: Single conversion, superheterodyne

Frequency range

Type	Frequency coverage			
	FM*	LW	MW	SW
1	76.0-108MHz	150 ———	———	——— 29,999.9kHz
2	87.5-108MHz	150 ———	———	——— 29,999.9kHz
3	87.5-108MHz	150-285kHz	531———	——— 26,100kHz
4	87.5-108MHz	150-285kHz	531-1,602kHz	3,850-26,100kHz

*Stereo reception when using stereo earphones
Type 1: Countries that are not listed below
Type 2: Germany, Austria, and Scandinavian countries
Type 3: Saudi Arabia
Type 4: Italy

Intermediate frequency LW/MW/SW: 55.845MHz (first)
455kHz (second)
FM:10.7MHz

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

Speaker Approx. 7.7 cm (3 1/8 inches) dia.

Power output 400mW (at 10% harmonic distortion)

Outputs Recording output jack (minijack)
Output level 245 mV (− 10dB)
Output impedance 10 kilohms or less
Earphones jack (stereo minijack)

Power requirements 6VDC
For R6 (size AA) batteries
DC IN 6V jack accepts:
•supplied AC power adaptor

Where purchased	AC power adaptor	Operating voltage
Canadian model	AC-E602	110 - 120V/ 220 - 240V AC, adjustable, 50/60Hz
US model	AC-E604	120V AC, 60Hz
UK model	AC-E603	240V AC, 50Hz
AEP, Germany, French, E, Saudi Arabia, Italian model	AC-E600	110 - 120V/ 220 - 240V AC, adjustable 50/60Hz

•DCC-E160L car battery cord(not supplied)for use with 12V car battery

Battery life Approx. 10 hours (FM reception)
Approx. 7 hours (AM reception)
listening for four hours a day at normal volume. using Sony SUM-3 (NS) batteries.

Dimensions 194 × 127 × 39 mm(w/h/d)
(7¾ × 5 × 1 5/16 inches) including projecting parts and controls with antenna retracted

Weight Approx. 900g(approx. 2lb) including batteries

— Continued on page 2 —

LW/MW/SW/FM STEREO PLL SYNTHESIZED RECEIVER

9-956-854-12
2002L0200-1

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

Accessories supplied

AC power adaptor* (1)
AC plug adaptor* (1)
Stereo earphones (1)
Earpad (2)
System carrying case (1)
Carrying case (1)
SW compact antenna (1)
External antenna connector (1)
"Wave Handbook" only English version(1)
"How to Catch the Wave" only English version (1)
Quick reference (1)
Preset frequency list (1)
* Not provided with certain models

Design and specifications subject to change without notice.

TABLE OF CONTENTS

SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

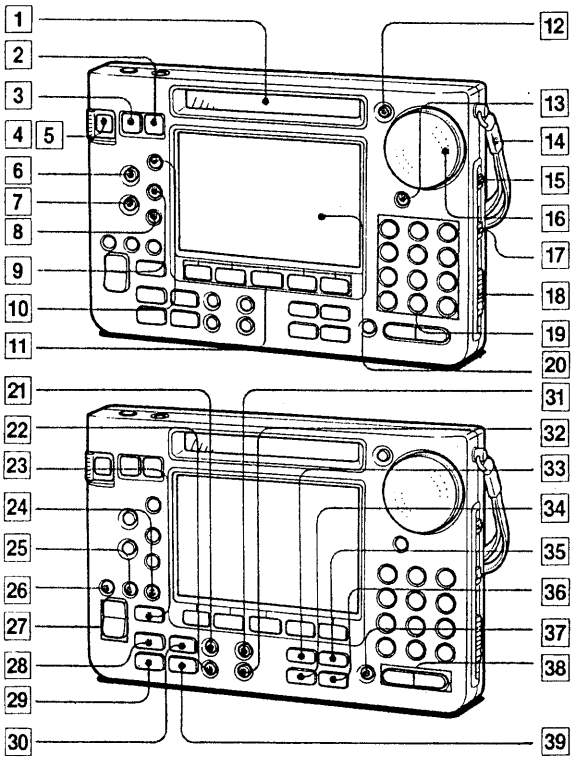
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location and Function of Controls

See the pages indicated in ● for details.

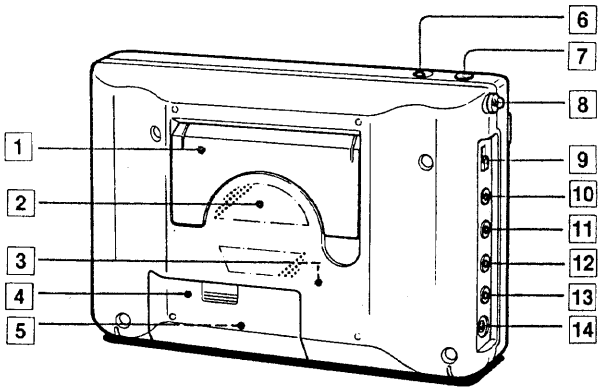
Front and Right Side Panel



1 Speaker duct
2 STANDBY button ㊴
3 SLEEP (sleep timer) button ㊻
4 ON/OFF (power) button
5 POWER/LOCK switch
Set this switch to POWER, then press the ON/OFF button to turn on the radio. Set the switch to LOCK when carrying the radio. When this switch is set to LOCK, the power will not turn on nor the timer activate even if you accidentally press the ON/OFF button.
6 NIGHT/TIME DIFF (night/time difference) button ⑳
7 WORLD TIME button ⑲
8 SUMMER (summer time or "daylight saving time") ON/OFF button ⑮
9 TIME DIFF SET (time difference set) button ⑮
10 UTC/LOCAL (Universal Time Coordinated/local) button ⑮
11 M1, M2, M3, M4, M5 (memory 1–5) buttons ㉑
12 KEY PROTECT ⊶ button ㉔
While this button is pressed, all the functions of the buttons and dial are locked.
13 FAST/SLOW/LOCK (dial tuning mode and lock) button ㉕ ㉖
14 Hand strap
15 MONO STEREO (monoaural/stereo) selector ㉔
16 TUNE/JOG dial
17 TONE selector ㉔
MUSIC: for listening to music
NORM: for normal listening
NEWS: for listening to news
18 VOLUME control ㉑
19 DIRECT TUNING numeric buttons/letter, ⊙ (hours) and EXE (execute) buttons ㉓ ㊱ ㊷
20 Display window
21 START TIME button ㊳
22 ALARM TIME button ㊷
23 LAST PAGE button ㉞
24 ERASE button ㉝
25 ENTER button ㉜
26 CHECK button ㉝
27 PAGE FEED +/– buttons ㉑
28 TIMER MEMORY button ㉜
29 AM FUNCTION button ㉗ ㉘
30 TIMER SET button ㊲
31 OPR TIME (operation time) button ㊳
32 BEEP TYPE button ㊸
33 FM (ABC...) button ㉓ ㊱
34 AM BAND–(DELETE) button ㉖ ㊱
35 AM (123...) button ㉓ ㊱
36 AM BAND+(INSERT) button ㉖ ㊱
37 LABEL EDIT button ㉟
38 STEP/SCAN buttons ㉖
39 ALARM SET button ㊷

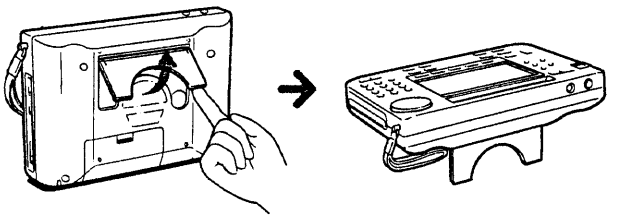
Location and Function of Controls

Rear, Left Side and Upper Panel



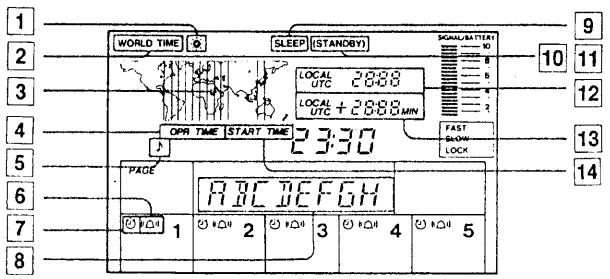
1 Stand ⑨
2 Speaker
3 Buzzer
4 Battery compartment ⑫
5 Reset button (inside the battery compartment)
Press this button with something like a toothpick, when the unit functions incorrectly because of an electric discharge caused by static electricity, etc.
When this button is pressed, all the memorized data except for the page memory (pages from 1 to 25) will be erased.
6 TIME SET button ⑮
7 LIGHT/BATT CHECK (light/battery check) button ⑫
Press to illuminate the display window for about 15 seconds or to check the battery condition. The duration of the illumination is prolonged while you operate the unit. To put off, press this button again.
8 Telescopic antenna ㉒
9 AM SENS (AM sensitivity) selector ㉔
10 AM EXT ANT (AM external antenna) jack ㊽
11 TAPE REMOTE jack ㊶
12 TAPE LINE OUT jack (stereo mini jack) ㊵ ㊶
13 ∩ (stereo earphones) jack
Connect the stereo earphones for private listening.
14 DC IN 6V ⊖⊂⊕ (external power input) jack ⑭

How to use the stand



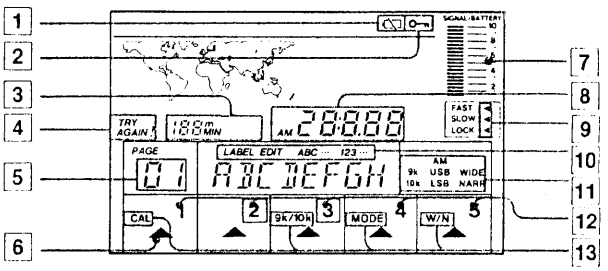
Location and Function of Controls

Clock/Timer Display



1 ☼ Summer time indication ⑮
2 WORLD TIME indication ⑲
3 Night indication and area (time difference) indication ⑳
4 OPR TIME (operation time) indication ㊳
Appears when the time length of the timer operation is set.
5 ♪ Beep indication ㊷
6 Alarm indication ㊸
7 Timer indication ㊳ ㊴
8 LABEL display – TIMER (M) (timer memory), ∗TIMER∗ (timer setting), memorized title labels, city names, time difference from UTC, appear.
9 SLEEP indication ㊵
Appears when the timer or sleep timer is activated.
10 STANDBY (timer or alarm standby) indication ㊴
Appears when the timer or alarm is reserved.
11 (STANDBY) indication ㊴
( ) appears when you set the timer or alarm (or adjust the current time or the time difference) after the unit has been set in the standby condition by pressing the STANDBY button. When (STANDBY) appears, timer or alarm will not activate.
12 LOCAL/UTC current time indication
Indication changes between LOCAL current time and the UTC current time by pressing the UTC/LOCAL button.
13 Time difference indication and remaining time indication of the timer
The meaning of the time difference differs according to LOCAL or UTC indication. (LOCAL indication appears while WORLD TIME is pressed.)
LOCAL: Indicates the time difference between your local time and the time in some other area in the world.
UTC: Indicates the time difference between UTC (Universal Time Coordinated) and your local time.
14 START TIME indication ㊳
Appears when the starting time of the timer or alarm is set.

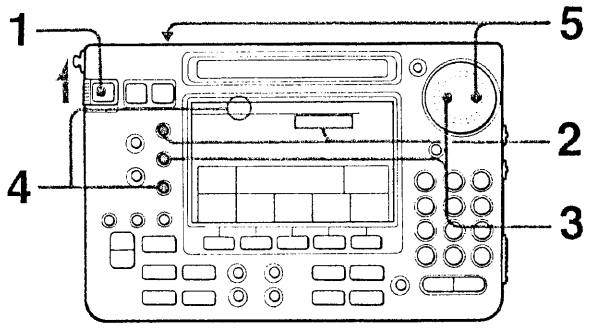
Radio Reception Display and Others



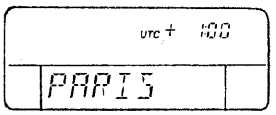
1 Battery empty indication ⑫
2 Key protect indication ㉔
While this indication appears, all the functions of the buttons and dial are locked.
3 AM band and SW meter band
4 TRY AGAIN! indication ㉔
Appears when the frequency outside the frequency range is input.
5 PAGE number, AL (alarm) FU (AM function) indication
6 ▲ indication
Indicates the memory which is being selected.
7 SIGNAL/BATTERY (signal strength/battery) meter ⑫
8 Band, frequency and CAL indication
CAL appears when power is supplied or when calibration adjustment is made.
9 FAST SLOW LOCK (dial tuning mode) indication ㉖
10 LABEL EDIT indication ㉟
11 AM mode indication
9kHz or 10kHz MW channel step indication
AM USB LSB indication
WIDE NARR (wide or narrow selectivity) indication
12 Memories (1 to 5)
The numbers (from 1 to 5) correspond to memory buttons (M1 to M5). A frame appears around a memory number when the station is preset in that memory.
13 AM function indication
CAL (calibration), 9k/10k, MODE (AM, USB or LSB mode), W/N (wide or narrow selectivity).

Setting the Clock

Before setting the clock, check the time difference between the local time in your area and the UTC time by referring to the table in page ⑯. Some city names and their time difference from UTC are already memorized at the factory.



1 Set POWER/LOCK to POWER.
2 Check the current time indication.
When the LOCAL current time appears, skip this step.
When the UTC current time appears, press UTC/LOCAL button.
3 While pressing TIME DIFF SET, turn the TUNE/JOG dial until your city name or the time difference* between your local time and the UTC time appears.



While pressing TIME DIFF SET, the ☼ indication (if already displayed) disappears temporarily.

4 When "summer time" is not used in your area or ☼ is already displayed, skip this step.
Press SUMMER ON/OFF if your area is now in the "summer time" period (under daylight saving time).
☼ appears.
5 While pressing TIME SET, turn the TUNE/JOG dial to adjust the current local time.

The clock starts operating.

Notes

- When pressing TIME SET, city name or time difference appears.
- Current UTC time is displayed when you press the UTC/LOCAL button. (UTC indication appears).

*Here, this means time difference during the standard time as shown in the table in page ⑯ (not under daylight saving time).

Zero second adjustment

If you want to adjust the time exactly to the second with a telephone time signal, proceed as in the following example.
Example: To set to 15:15

1 Adjust the time indication to 15:15 in step 5 in page ⑮, release TUNE/JOG but keep TIME SET pressed.
2 Release TIME SET simultaneously with the telephone time signal. The clock begins to show the precise time.

Note

Zero second adjustment is not made by pressing TIME SET only. Once turn the TUNE/JOG dial while pressing TIME SET.

Difference between local time and UTC (Universal Time Coordinated)

The table shows the difference between the local time and the UTC time in each area. The differences marked with a plus sign (+) indicate the number of hours ahead of the UTC. The differences marked with a minus sign (−) indicate the number of hours behind the UTC.
To see the time difference during the period for daylight saving time or "Summer Time" (if necessary), add one hour to the difference indicated in the table.

Area or city	Label preset	Time difference
Argentina		−3:00
Buenos Aires	BUENOS A	−3:00
Australia		
Sydney	SYDNEY	+10:00
Darwin		+9:30
Perth	PERTH	+8:00
Austria		+1:00
Vienna	VIENNA	+1:00
Bangladesh		+6:00
Dacca	DACCA	+6:00
Belgium		+1:00
Brussels	BRUSSELS	+1:00
Brazil		
Sao Paulo	SAO PAUL	−3:00
Rio de Janeiro		−3:00
Manaus		−4:00
Canada		
Vancouver	VANCOUVE	−8:00
Calgary	CALGARY	−7:00
Toronto	TORONTO	−5:00
Montreal	MONTREAL	−5:00
Canary Islands	CANARY	+0:00
Chile		−4:00
Santiago	SANTIAGO	−4:00

Setting the Clock

Area or city	Label preset	Time difference
China (P.R.)		+8:00
Beijing	BEIJING	+8:00
Denmark		+1:00
Ecuador		−5:00
Egypt		+2:00
Cairo	CAIRO	+2:00
Fiji Island	FIJI	+12:00
Finland		+2:00
Helsinki	HELSINKI	+2:00
France		+1:00
Paris	PARIS	+1:00
Germany		+1:00
Berlin	BERLIN	+1:00
Greece		+2:00
Athens	ATHENS	+2:00
Hawaii		−10:00
Honolulu	HONOLULU	−10:00
Hong Kong	HONGKONG	+8:00
India		+5:30
Calcutta	CALCUTTA	+5:30
Indonesia		
Jakarta	JAKARTA	+7:00
Iran		+3:30
Tehran	TEHRAN	+3:30
Italy		+1:00
Rome	ROME	+1:00
Japan		+9:00
Tokyo	TOKYO	+9:00
Kenya		+3:00
Nairobi	NAIROBI	+3:00
Korea (D.P.R.)		+9:00
Seoul	SEOUL	+9:00
Malaysia		+8:00
Mexico		
Tijuana		−8:00
Acapulco	ACAPULCO	−6:00
Mexico	MEXICO	−6:00
Maldives	MALDIVES	+5:00
Netherlands		+1:00
Amsterdam	AMSTERDA	+1:00
New Caledonia		+11:00
Noumea	NOUMEA	+11:00
New Zealand		+12:00
Auckland	AUCKLAND	+12:00
Norway		+1:00
Pakistan		+5:00
Karachi	KARACHI	+5:00

Area or city	Label preset	Time difference
Panama		−5:00
Panama	PANAMA	−5:00
Peru		−5:00
Lima	LIMA	−5:00
Philippines		+8:00
Poland		+1:00
Portugal		+0:00
Saudi Arabia		+3:00
Riyadh	RIYADH	+3:00
Senegal		+0:00
Dakar	DAKAR	+0:00
Singapore	SINGAPOR	+8:00
Spain		+1:00
Madrid	MADRID	+1:00
Sri Lanka		+5:30
Sweden		+1:00
Stockholm	STOCKHOL	+1:00
Switzerland		+1:00
Zurich	ZURICH	+1:00
Tahiti Island		−10:00
Taiwan		+8:00
Thailand		+7:00
Bangkok	BANGKOK	+7:00
United Arab Emirates		+4:00
Dubai	DUBAI	+4:00
United Kingdom		+0:00
London	LONDON	+0:00
USA		
Anchorage	ANCHORAG	−9:00
San Francisco	SAN FRAN	−8:00
Los Angeles	LOS ANGE	−8:00
Denver	DENVER	−7:00
Chicago	CHICAGO	−6:00
Dallas	DALLAS	−6:00
New York	NEW YORK	−5:00
USSR		
Moscow	MOSCOW	+2:00
Venezuela		−4:00
Caracas	CARACAS	−4:00

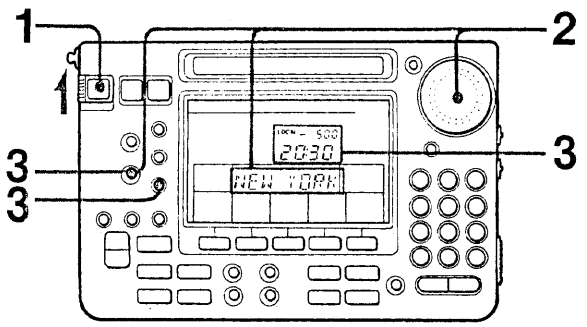
For areas where "summer time" (daylight saving time) is used

Press SUMMER ON/OFF during the summer time period to make ☼ appear, as stated in step 4 in page ⓯, and press again at the end of the summer time. The time indication will be changed automatically. When the clock has been set during the standard time period, press SUMMER ON/OFF at the beginning of the summer time. The time indication will change to the summer time indication.

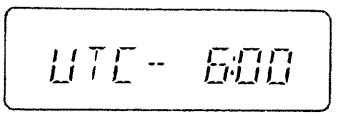
Setting the Clock

How to Know the Current Time in Some Place in the World

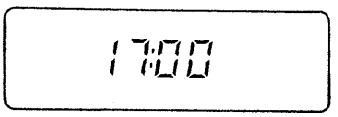
Even while you are listening to the radio, you can know the time in some other place in the world without affecting the radio reception.



1 Set POWER/LOCK to POWER.
2 While pressing WORLD TIME, turn the TUNE/JOG dial until the desired city name or the time difference* between desired place and the UTC appears.

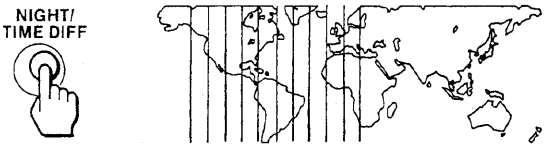


3 Keep pressing WORLD TIME. Keep pressing SUMMER ON/OFF if your desired place is in the summer time period. Read the time shown in the display.
Also you can read the time difference between your local time and the time in your desired place, which is displayed just above the current time.



*Here, this means time difference as shown in the table in page ⓰.

How to Know the Night Area in the World



Press NIGHT/TIME DIFF.
The area on the world map where it is night (from about 18:00 to 6:00) will be shaded. This is useful as a reference for better reception of SW, because SW is received better in the nighttime than in the daytime.

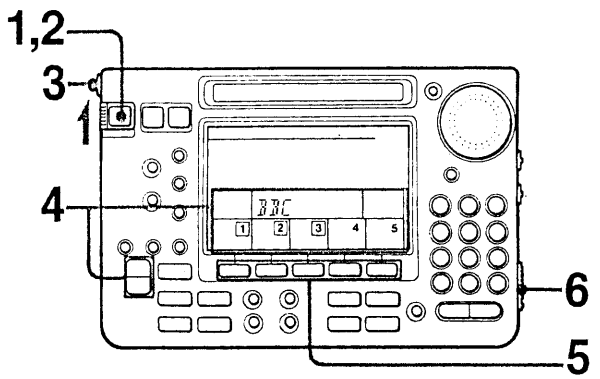
When You Move from One Place to Another

Adjust the time difference only. Local time can be changed by adjusting the time difference.

Note
The UTC time, local time and the time difference are related to each other as follows:
(Time difference) = (Local time) – (UTC time)

Preset Station Tuning

Once the frequencies of the stations are preset, you can tune in the station easily just by selecting the page and pressing the necessary memory button.
Some stations are already preset in this unit at the factory. Let's try to receive some of the preset stations.



The illustration does not necessarily show the preset memory or station.

1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Extend the antenna. See page ㉒.
4 Press PAGE FEED + or – to find a page where a title label is already written.
A frame appears around the memory number.
5 Press an M1 – M5 which corresponds to the memory number inside a frame.
6 Adjust VOLUME.

After listening, turn off the radio by pressing ON/OFF.

You can also preset the stations according to your own preference. See page ㉗.

Notes

- Tuning conditions differ very much according to the area, time, broadcasting condition, etc., so you may not be able to tune in the station with these procedures. If you cannot, try another memory or page for another station.
- When power is supplied, calibration adjustment is made automatically. (CAL indication appears.) But, when transporting the unit to a place where the temperature is very different than before, proceed as follows:
  1 Press AM.
  2 Press AM FUNCTION.
  3 Press M1.
  AM calibration adjustment will be made in a moment.
  4 Press AM FUNCTION again.

To Improve Receiving Condition

Adjust the antenna as illustrated.

For LW/MW reception

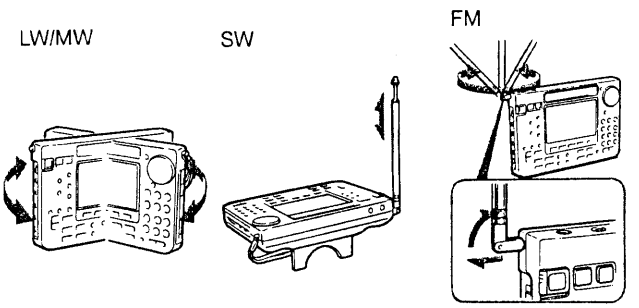
Retract the telescopic antenna. The built-in ferrite bar antenna activates. Since this antenna is directional, rotate the unit horizontally for optimum direction.

For SW reception

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

For FM reception

Pull out the telescopic antenna to expose its swivel base and adjust its length, angle and direction.

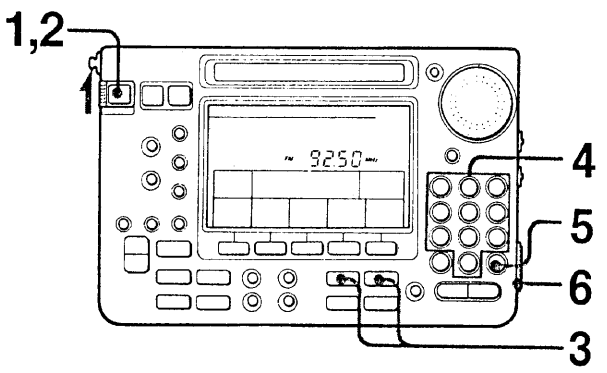


Notes

- Adjust the antenna within the range as illustrated. Be careful not to turn the antenna forcibly because it might be broken.
- If there is a fluorescent lamp just above the radio and the reception is noisy, keep the radio away from the lamp.
- If reception is unsatisfactory with the telescopic antenna or the built-in ferrite bar antenna, connect an external antenna for AM (LW/MW) and SW. See page ㉗ for details.
  External antenna connection for FM cannot be done.
- In vehicles or buildings, radio reception may be difficult or noisy. Try listening near the window.
- If the received sound is distorted or noisy, adjust the antenna carefully.

Direct Tuning

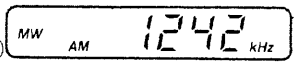
If you know the frequency of a station to be received, you can tune in the station easily by direct tuning.



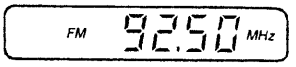
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Select the desired band by pressing FM or AM.
For LW, MW or SW, press AM.
4 Input the frequency of the desired station by pressing DIRECT TUNING numeric buttons.
5 Press EXE.
6 Adjust VOLUME.
After listening, turn off the radio by pressing ON/OFF.

To input a frequency

Example: AM 1,242kHz
(AM) → ① → ② → ④ → ② → (EXE)



Example: FM 92.5MHz
(FM) → ⑨ → ② → ⑤ → (EXE)



To input an AM frequency whose three digits are all 0

Example: AM 1,000kHz
(AM) → ① → (EXE)

Example: AM 21,000kHz
(AM) → ② → ① → (EXE)

Direct Tuning

Notes

- After pressing a numeric button, press next one within 5 seconds. If you do not, the indication will return to the previously received station.
- With direct tuning, the frequency is displayed in steps of the following intervals, depending on the band.
  AM: 1kHz
  FM: 0.05MHz
  If you input a frequency between the intervals, the frequency at the interval just below will be tuned in and displayed.
  For example, if you input FM 92.59MHz, FM 92.55MHz will be tuned in and displayed.

If "TRY AGAIN!" indication appears

You have input the frequency outside the frequency range. Try again to input the appropriate frequency.

If you notice a mistake while inputting

Press EXE once and input the frequency again.

On AM SENS selector

For AM reception, normally set AM SENS in the left side to NORM. If the received station is very weak, set it to DX and if received station is too strong to become distorted, set it to LOCAL.

On MONO STEREO selector (only for listening through stereo earphones)

For FM reception, normally set MONO STEREO in the right side to STEREO. When it is hard to hear the broadcast due to noise, set to MONO. The reception will be more stable and noise will be reduced. In this mode, there is no stereo effect.

When you are listening to the news

Set TONE in the right side to NEWS. Human voice will be heard more clearly. When you are listening to music, set it to MUSIC.

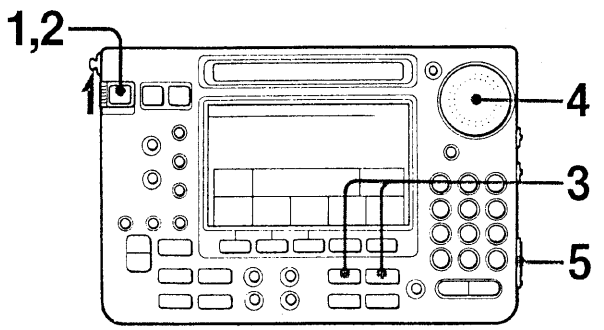
What is key protection?

When KEY PROTECT is pressed, 🔑 appears on the display. While it is displayed, all the functions of the buttons and dial are locked, even though you can press or turn them. This prevents accidental change of the received station.
To release the key protection, press KEY PROTECT again.

Manual Tuning

Use manual tuning when you do not know the frequency of the station you want to tune in, or when you want to tune in judging with your own ears. There are two ways of tuning in: Dial tuning and Step tuning.

Dial Tuning



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Select the desired band by pressing FM or AM.
For LW, MW or SW reception, press AM.
4 Turn the TUNE/JOG dial to search for the desired staion.
Turn the dial clockwise for higher frequencies and counterclockwise for lower frequencies.
5 Adjust VOLUME.

After listening, turn off the radio by pressing ON/OFF.

Notes

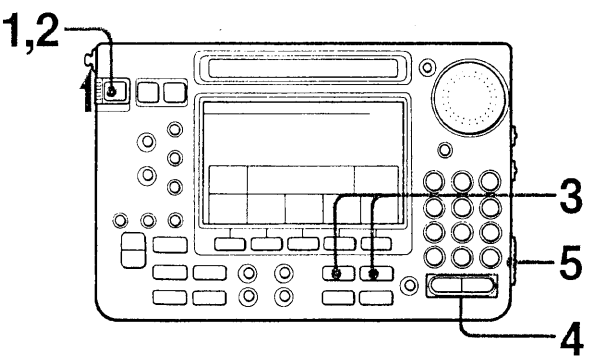
- The frequency changes in the following steps according to the dial tuning mode set to FAST or SLOW. Setting is adjusted by the FAST/SLOW/LOCK button.

	FAST	SLOW
FM	0.5MHz	0.05MHz
AM	1kHz	approx. 0.1kHz*

*Indication of each 0.1kHz does not appear.

- For AM reception in USB or LSB, set the tuning mode to SLOW and turn the TUNE/JOG dial slowly.

Step Tuning



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Select the desired band by pressing FM or AM.
For LW, MW or SW reception, press AM.
4 Press the STEP/SCAN -⇦ or ⇨+, to search for the desired station.
One push changes the AM frequency in the steps shown in the table in page ⓫.
Tune in the station more precisely with the TUNE/JOG dial.
For FM, the frequency changes every 0.05MHz.
5 Adjust VOLUME.

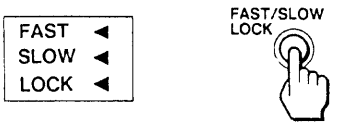
After listening, turn off the radio by pressing ON/OFF.

How to use the AM BAND + or AM BAND – button

In AM reception, when you press this button, frequency indication will jump to the lowest frequency in the neighboring frequency range.

To prevent the frequency from fluctuating when the TUNE/JOG dial is accidentally touched

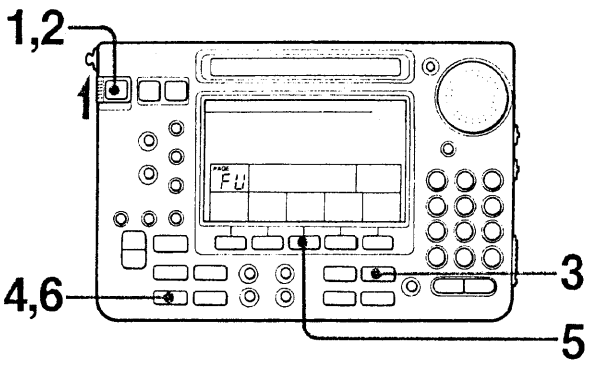
Set the dial tuning mode to LOCK by pressing FAST/SLOW/LOCK.



Manual Tuning

MW Channel Step

The MW channel step is factory-set to 9kHz or 10kHz to match the frequency allocation system of the country. If you use the radio where the frequency allocation system is based on the other interval, proceed as follows:



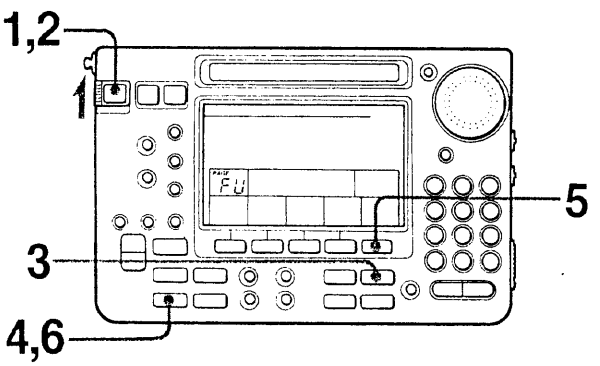
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press AM.
4 Press AM FUNCTION.
5 Press M3.
The channel step has been changed.
Display changes to 9k or 10k vice versa.
6 Press AM FUNCTION again.

The frequency allocation of the area

Area	Frequency allocation for MW
North America, South America	10kHz step
Other countries	9kHz step

Wide or Narrow Band Width in AM

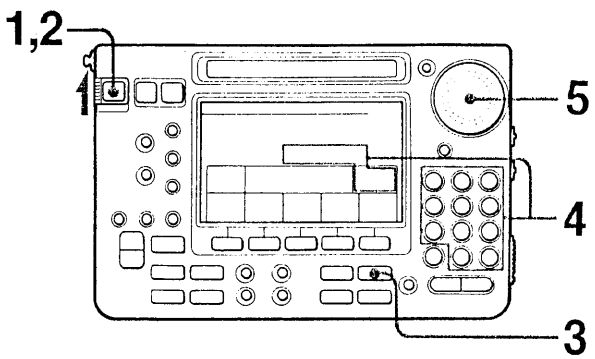
Selectivity for this unit is adjusted WIDE or NARR (narrow) automatically according to the frequency input. But if the reception is poor because of too much noise or interference, proceed as follows:



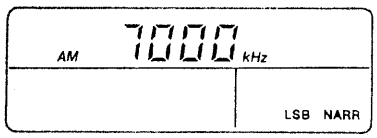
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press AM.
4 Press AM FUNCTION.
5 Press M5.
The indication changes to WIDE or NARR vice versa. The reception will be improved.
6 Press AM FUNCTION again.

To Receive the SSB (Single Side Band)

For SSB reception, proceed as follows:



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press AM.
4 Input the frequency with DIRECT TUNING numeric buttons and EXE.
Display changes automatically to LSB or USB according to the frequency input.
Example: ⑦ → (EXE)



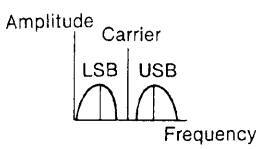
5 Turn the TUNE/JOG dial to find a station.
Finally tune in with the TUNE/JOG dial with the dial tuning mode set to SLOW.

If you want to manually change the display among LSB, USB or AM

Press AM FUNCTION, then press M4.

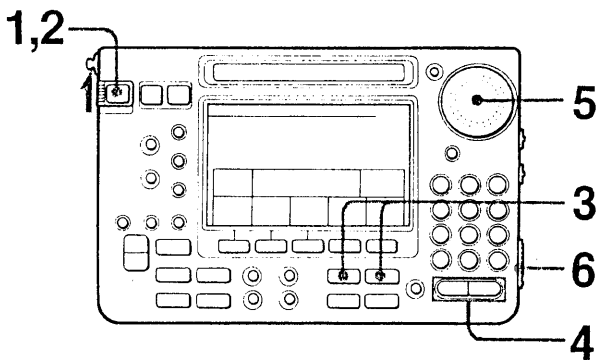
What is SSB?

SSB is very popular among ham and business radio and will be found on all of the amateur bands because of its signal intelligibility.
In general, SSB transmissions employ USB modulation, and for amateur bands lower than 10MHz, LSB is often used.



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.
3 Select the desired band by pressing FM or AM.
4 Press STEP/SCAN -⇦ or ⇨+ for about 1 second.
Within the frequency range of the table in page ㉛, scan tuning will begin and stop automatically when a station is received.
5 Tune in the station more precisely with the TUNE/JOG dial if necessary.
6 Adjust VOLUME.

After listening, turn off the radio by pressing ON/OFF.

The frequency range and tuning interval of each broadcast band

Frequency (kHz)	Display (Meter band)	Repeat scan	Scanning interval	AM Mode
150 – 282	LW	Yes	3kHz	AM WIDE
283 – 530	LW		3kHz	AM WIDE
* 283 – 529	LW		3kHz	AM WIDE
531 – 1602	MW	Yes	9kHz	AM WIDE
* 531 – 1710	MW	Yes	10kHz	AM WIDE
1603 – 2249	SW		5kHz	USB NARROW
*1711 – 2249	SW		5kHz	LSB NARROW
2250 – 2550	120m	Yes	5kHz	AM WIDE
2551 – 3149	SW		5kHz	USB NARROW
3150 – 3450	90m	Yes	5kHz	AM WIDE
3451 – 3499	SW		5kHz	USB NARROW
3500 – 3849	SW		5kHz	LSB NARROW
3850 – 4050	75m	Yes	5kHz	AM WIDE
4051 – 4699	SW		5kHz	USB NARROW
4700 – 5100	60m	Yes	5kHz	AM WIDE
5101 – 5899	SW		5kHz	USB NARROW
5900 – 6250	49m	Yes	5kHz	AM WIDE
6251 – 6999	SW		5kHz	USB NARROW
7000 – 7099	SW		5kHz	LSB NARROW
7100 – 7400	41m	Yes	5kHz	AM WIDE
*7100 – 7400	SW		5kHz	LSB NARROW
7401 – 9399	SW		5kHz	USB NARROW
9400 – 10000	31m	Yes	5kHz	AM WIDE
10001 – 11499	SW		5kHz	USB NARROW
11500 – 12150	25m	Yes	5kHz	AM WIDE
12151 – 13499	SW		5kHz	USB NARROW
13500 – 13900	21m	Yes	5kHz	AM WIDE
13901 – 14999	SW		5kHz	USB NARROW
15000 – 15700	19m	Yes	5kHz	AM WIDE
15701 – 17449	SW		5kHz	USB NARROW
17450 – 18000	16m	Yes	5kHz	AM WIDE
18001 – 21449	SW		5kHz	USB NARROW
21450 – 21950	13m	Yes	5kHz	AM WIDE
21951 – 25599	SW		5kHz	USB NARROW
25600 – 26100	11m	Yes	5kHz	AM WIDE
26101 – 29999	SW		5kHz	USB NARROW

*When MW channel step is 10kHz.

Note

In some countries, it is impossible to receive some frequencies. The frequency ranges which can be received are indicated on the bottom exterior of your unit.

Memorizing Stations

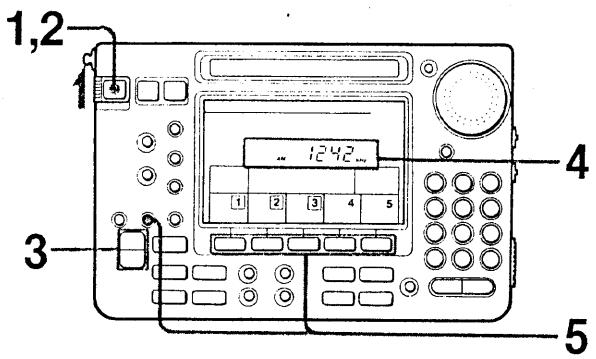
This section describes how to memorize stations for Preset Station Tuning.
Some stations are already preset at the factory.

Note on the page "00"

The preset stations memorized in page "00" can also be used as the memories for timer operation (see page ㊲.)
To memorize in page "00", press TIMER MEMORY in the step 3 of the next section and do the same procedures as described.

How to Memorize a Station in the Pages

Up to 125 stations can be memorized in the pages from 1 to 25 (Each page accommodates 5 stations).



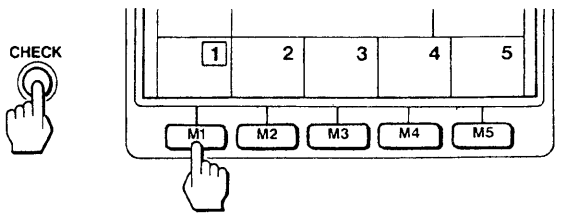
1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press PAGE FEED + or – to select the desired page for memorizing.
4 Tune in the desired station by direct, manual or scan tuning. (See pages ㉓, ㉕ and ㉚.)
5 While pressing ENTER, press an M1 – M5 which corresponds to the memory number where you want to memorize.
A frame appears around the memory number which tells you that the memorizing has been completed.

Note

Frequency, AM/USB/LSB and AM band width (WIDE or NARR) are memorized.

To check which station is memorized

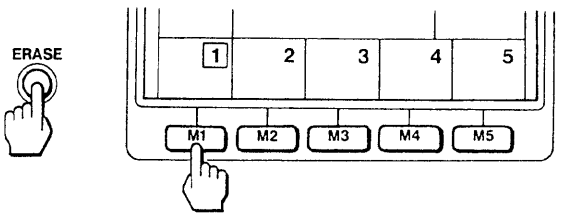
While pressing CHECK, press an M1 to M5 whose memory should be checked. The frequency already preset in that memory is shown in the display independently of the station now being received.



While the memory button is pressed, the SIGNAL meter indication disappears.

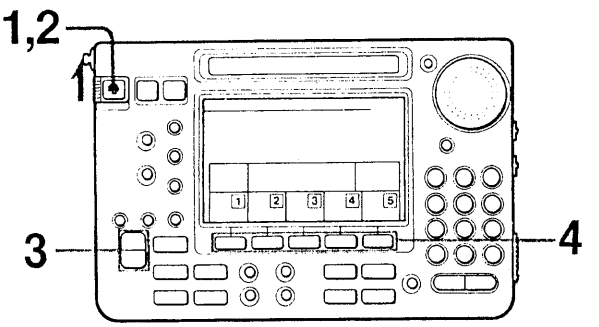
To erase the memorized station

If you memorize a station in the same memory (1 – 5), the previous station is erased automatically. If you want to erase the station without adding a new one: while pressing ERASE, press the corresponding memory button (M1 – M5).
The frame around the memory number disappears which shows that memory has become vacant.



Memorizing Stations

How to Tune in the Memorized Station



1 Set POWER/LOCK to POWER.
2 Press ON/OFF.
3 Press PAGE FEED + or – to select the page.
4 Press an M1 – M5 whose memory number is surrounded with in a frame.

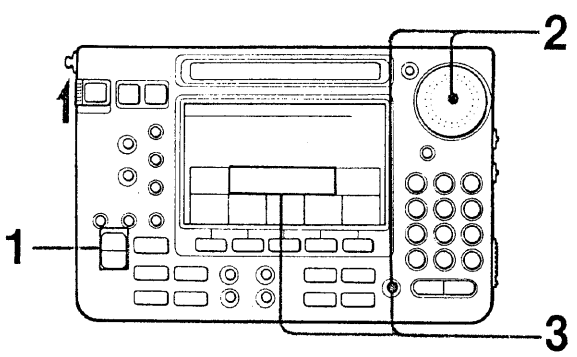
When you go back to the latest page

Each time you press LAST PAGE, the number of the page previously memorized or received is displayed. In total, 8 pages are shown in this descending order. This button is convenient to use to go back to a station you often listen to.

Adding a Title in the Pages (1 – 25)

Titles can be added in each page from 1 to 25. You can also use the titles preset at the factory.
In page "00", TIMER (M) label is already memorized and cannot be erased.

When using a title preset at the factory



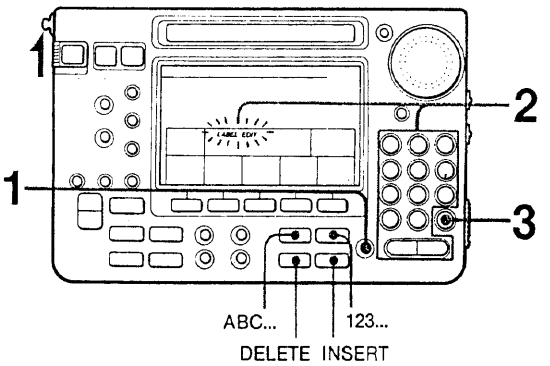
1 Press PAGE FEED + or – to select the page.
2 While pressing LABEL EDIT, turn the TUNE/JOG dial. Titles already preset appear in the display.
3 Release LABEL EDIT when you find the desired title. Now the title label is memorized.

The preset title labels are as follows:
BBC, D-WELLE, R-BEIJIN, R-FRANCE, R-JAPAN, R-MOSCOW, VOA, APPOINTM (appointment), MEETING, TELEPHON (telephone)

Memorizing Stations

When adding your own title

You can make a title which has up to 8 characters Letters, numerals or marks such as ( ) / + – * are used.
Freely think out your own titles such as JAZZ, POPS, NEWS, FM or AM according to the stations memorized in the same page.



1 Press LABEL EDIT.
2 While the LABEL EDIT indication flashes, select the first character with the numeric/letter/mark buttons. Each time you select one character, press STEP/SCAN⇨+, then move to the next character to be selected.
3 At the end of the title, press EXE.
Now your own title label has been memorized.

Note
LABEL EDIT indication flashes for about 20 seconds after pressing any button. When no character is input during this period, the indication returns to the previous condition. In this case, press LABEL EDIT to try again.

To select the character to input

Numeric buttons work as letter buttons when the ABC... (FM) button is pressed and they return to numerals when the 123... (AM) button is pressed. One button comprises three letters. For example, if you press the button "1" continuously, the character changes from A → B → C and A.

To delete or add the character

1 Press LABEL EDIT.
2 Press STEP/SCAN -⇦ or ⇨+ to make the flashing move to the desired position.
3 To delete the flashing character, press DELETE (AM BAND +).
To add a character, press INSERT (AM BAND –) to make a space and select the desired character.
4 Press EXE.

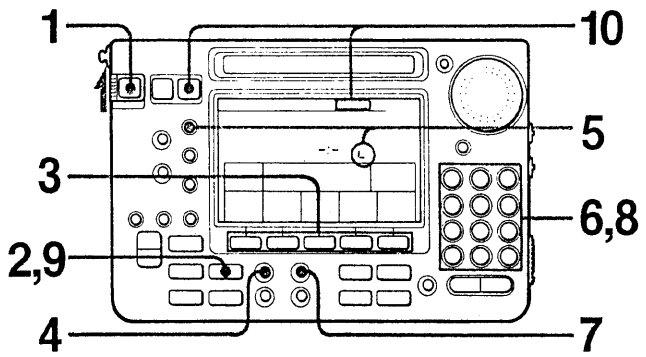
How to Set the Timer

You can set up to 5 different memories for timer operation. The memories are those preset in page "00". (See page ㉜.)

Before setting the timer, make sure that the desired station is memorized in the desired memory number. In page "00", if a frame does not appear around the desired memory number, see page ㉜ and memorize it.

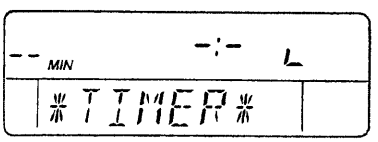
Note

When you take longer than 20 seconds to proceed a step, the unit returns to the condition just before step 2. In this case, proceed again from step 2.



1 Set POWER/LOCK to POWER.
The ON/OFF button can be at either ON or OFF.

2 Press TIMER SET.
A frame appears around the memory number where the station is memorized in page "00".
The ✳TIMER✳ appears. The time itself and operation time appear when they have been already input. These are the memorized contents in the memory which ▲ points.
When nothing is memorized, – (minus) appears.



(To be continued)

How to Set the Timer

(Continued)

3 Press the corresponding M1 to M5 button to place ▲ in the desired memory from 1 to 5. The memories 1–5 correspond to the broadcasting stations preset in page "00".

4 Press START TIME.
The START TIME indication flashes.

5 Check the L or U indication.

L: Timer will be set according to the local time.
U: Timer will be set according to UTC.
To change the indication, press the UTC/LOCAL button.

6 Input the timer-on time directly with the numeric buttons, ⊙ button, numeric buttons and finally EXE.

Example
② → ② → ⊙ → ③ → ⓪ → (EXE)

For a little further adjustment, while pressing the START TIME, turn the TUNE/JOG dial.

7 Press OPR TIME.
OPR TIME and MIN flash.

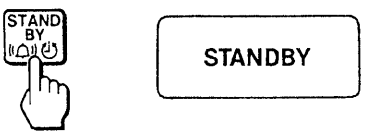
8 Input the time length of the timer operation in minutes (from 1 to 199 minutes) with the numeric buttons and finally press EXE.

Example ③ → ⓪ → (EXE)

⏻ indication appears, but the timer is not completely prepared at this stage. Follow the next steps.
Time length can be also adjusted as follows: While pressing OPR TIME, turn the TUNE/JOG dial.

9 Press TIMER SET to quit the ✳TIMER✳ page.

10 Press STANDBY so that STANDBY indication appears.
When the STANDBY is already indicated, this step is not necessary.



Now the timer is set to activate. At the preset time, selected memory will start even when the power is turned off (but at least POWER/LOCK should be set at POWER) or when you are listening to another station.

Example
In page 00: station A is preset in memory "1"
In memory "1" in ∗TIMER∗ page: the starting time is set at 23:30 and operation time is set for 90 minutes
—Station A will start at 23:30 and disconnect after 90 minutes. (Remaining time indication reduces from 90 MIN.)

Note on STANDBY button

The STANDBY button activates all the timer and alarm settings at once. After a setting has been completed by pressing the STANDBY button, all new settings in either the timer or alarm page are automatically activated when you quit the page. The (STANDBY) indication which appeared during the setting changes to STANDBY at that time and the unit enters the standby condition. If you press the STANDBY button again (in step 10), all the settings will be deactivated and the unit will not operate at the set time.
You should be accustomed to make sure the indication STANDBY when using timer or alarm!

What is ⏻ mark?

This shows that the following three conditions are satisfied:

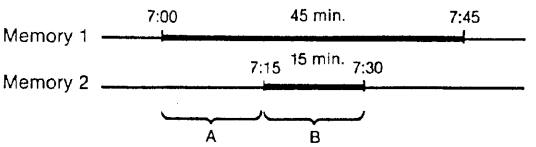
- A station is preset in that memory.
- Timer-on time is set.
- Timer operation time is set.

But this does not mean that the timer is set. Always make sure of the STANDBY indication after timer setting. When STANDBY indication does not appear, the timer will NOT activate.

How to Set the Timer

When two or more memories overlap, priority is transferred one and after to the memory whose timer-on time is the earliest.

Example
Memory 1 (station A is preset)
Memory 2 (station B is preset)



Station A starts at 7:00 and will be replaced with station B at 7:15 and station B will stop at 7:30. At that time, station A will not start again and the power will be disconnected.

Notes

- When you press TIMER SET while the STANDBY indication appears, the indication changes to (STANDBY). If the start time already set comes before you quit the ∗TIMER∗ page, the timer operation will be canceled.
  This also happens in alarm setting, in current time adjustment and in time difference adjustment. If start time comes during these operations, the timer operation will be canceled.
- When the timer activates, SLEEP indication and remaining time indication appear, and they disappear when the remaining time elapses.
- Sound volume of the radio activated by the timer, depends on the VOLUME control setting.

To Cancel the Timer Setting

Once you set the timer, the timer will activate at the same time everyday until you release it. To cancel the unnecessary timer operation on a particular day without completely erasing the setting, proceed as follows:

1 Set POWER/LOCK to POWER.
2 Press TIMER SET.
  ∗TIMER∗ appears.
3 Press the M1 – M5 corresponding to the timer memory you don't need that day and press STANDBY.
  The ⏻ mark will disappear from the corresponding memory.
  Pushing STANDBY again, resets the timer operation. The ⏻ mark will come on again.
4 Press TIMER SET.

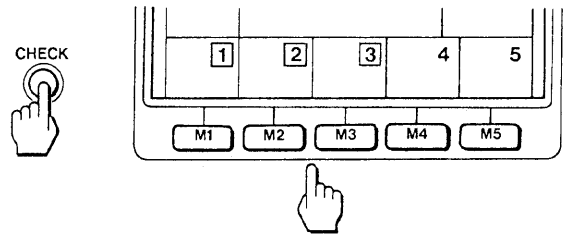
To Erase the Timer Setting Completely

Once you set the timer, the timer will activate everyday. To completely erase the timer setting, proceed as follows:

1 Set POWER/LOCK to POWER.
2 Press TIMER SET.
  ✳TIMER✳ appears.
3 While pressing ERASE, press the corresponding M1 – M5 (regardless of the ▲ position).
  The settings for start time and operation time in that memory will be cleared.
4 Press TIMER SET.

To Check the Station in Page "00" during Timer Setting

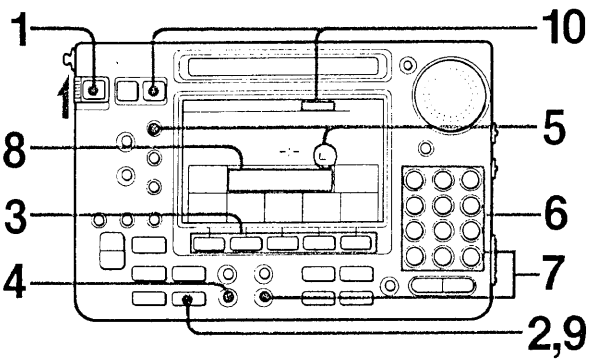
While pressing CHECK, press an M1 – M5 whose corresponding memory you want to know (a frame appears around the memory number). While CHECK is pressed, the frequency of the station preset in that memory is displayed.



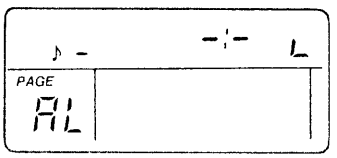
How to Set the Alarm

5 settings of the alarm will tell you the time by buzzer and/or indication.

Note
When you take longer time than 20 seconds to proceed a step, the unit returns to the condition just before step 2. In this case, proceed again from step 2.



1 Set POWER/LOCK to POWER.
  The ON/OFF button can be at either ON or OFF.
2 Press ALARM SET.
  "AL" indication appears. The time itself and beep type appear when they have been already input. These are the memorized contents in the memory which "▲" points. When nothing is memorized, – (minus) appears.



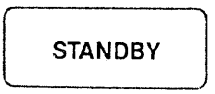
3 Select the memory with an M1 – M5.
  The ▲ mark will move to the corresponding memory 1 – 5.
4 Press ALARM TIME.
  START TIME indication flashes.
5 Check the L or U indication.
  L: Alarm will be set according to the local time.
  U: Alarm will be set according to the UTC.
  To change the indication, press UTC/LOCAL button.
6 Input the alarm-on time.
  Input the time directly with the numeric buttons, ⊙button, numeric buttons and finally EXE.
  For further adjustment, while pressing ALARM TIME, turn the TUNE/JOG dial.

7 Press BEEP TYPE and select the type of alarm sound with the numeric buttons and EXE. The trial beep will sound when pressing numeric buttons (except for the beep type 0).
Beep type 0 ... No sound but title will appear and 🔔 will flash to notify you without disturbing others.
Beep type 1–8 ... Beep sound will be heard once to 8 times.
Beep type 9 ... Wake-up beep will sound.
Now 🔔 appears in the selected memory.
Beep type can be also selected as follows: While pressing BEEP TYPE, turn the TUNE/JOG dial to select from 0 to 9. The trial beep will sound when BEEP TYPE is released (except for the beep type 0).

8 Enter the alarm title for each memory in the same way as for title editing on page 35, if necessary.
The alarm is not completely set at this stage. Follow the next steps.

9 Press ALARM SET to quit the alarm page.
"AL" indication disappears.

10 Press STANDBY so that STANDBY indication appears.
If STANDBY has been already indicated, this step is not necessary.



Now the alarm is set to activate.
At the time set, buzzer sound will be heard and the 🔔 mark in the selected memory will flash. The display will be illuminated for about 15 seconds.
The title will continue to be displayed for about 1 hour. To make the title disappear, press any button. (If 🔑 is displayed, press KEY PROTECT and then press any other button.)
Wake-up beep (beep type 9) will continue for about 1 hour. To stop the beep, press any button.

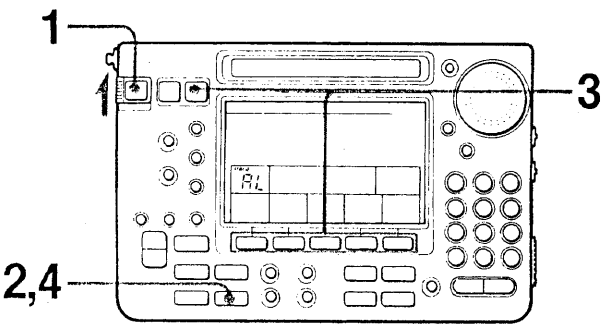
Note on STANDBY button

The STANDBY button activates all the timer and alarm settings at once. After a setting has been completed by pressing the STANDBY button, all new settings in either the timer or alarm page are automatically activated when you quit the page. See page 39 for details.

How to Set the Alarm

To Cancel the Alarm Setting

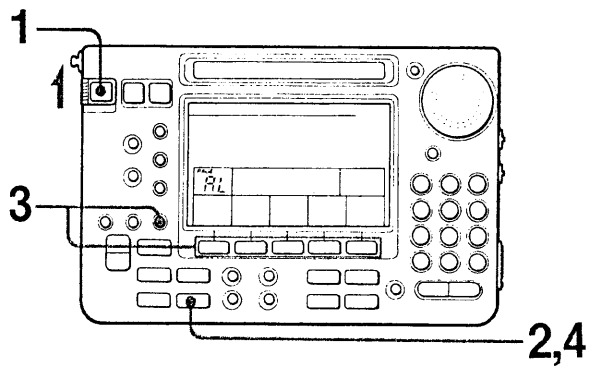
Once you set the alarm, the alarm will activate at the same time everyday until you release it. To cancel the unnecessary alarm operation on a particular day without completely erasing the setting, proceed as follows:



1 Set POWER/LOCK to POWER.
2 Press ALARM SET.
3 Press the M1–M5 button corresponding to the alarm memory you don't need that day and press STANDBY.
The 🔔 mark will disappear from the corresponding memory.
Pushing STANDBY again, resets the alarm operation. The 🔔 mark will come on again.
4 Press ALARM SET.

To Erase the Alarm Completely

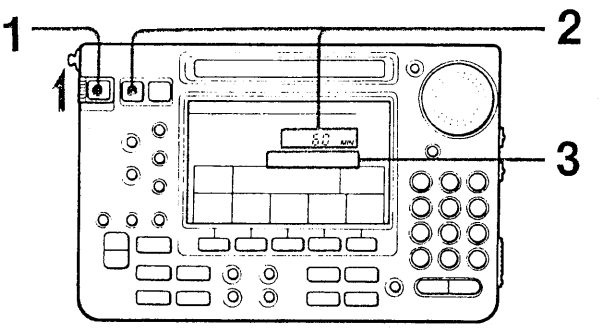
Once you set the alarm, the alarm will activate everyday.
To completely erase the alarm setting, proceed as follows:



1 Set POWER/LOCK to POWER.
2 Press ALARM SET.
"AL" appears.
3 While pressing ERASE, press M1 – M5 (regardless of the ▲ position) of the alarm memory you want to cancel.
The settings for alarm time and beep type in that memory will be cleared. (Title label will remain.)
4 Press ALARM SET.

Sleep Timer Operation

You can fall asleep while listening to the radio.



1 Set POWER/LOCK to POWER.
The ON/OFF can be at either ON or OFF.
2 Press SLEEP until desired time length of timer is displayed.
It changes from 60 → 45 → 30 → 15 minutes.
3 Tune in the desired station and adjust the volume.
The radio will be turned off automatically after the time set.

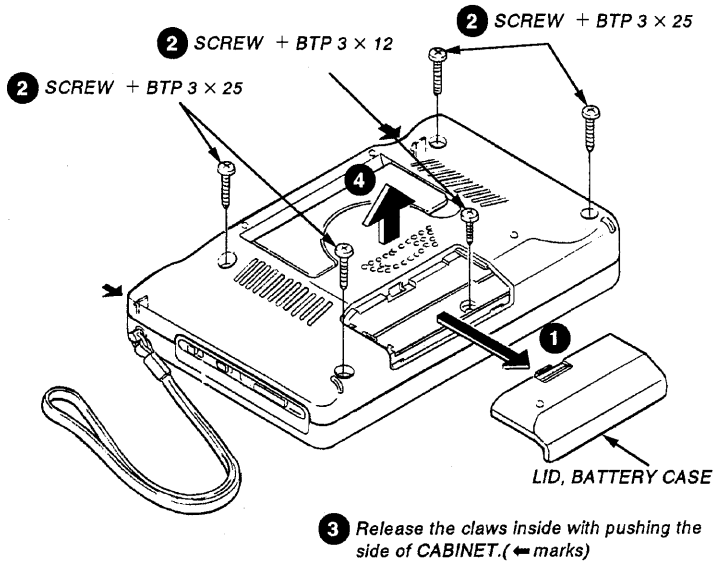
To turn off the radio before the time being set
Press ON/OFF, or press SLEEP until the UTC time difference is displayed.

When setting both sleep timer and alarm
You can fall asleep listening to the radio and wake up by the alarm.

SECTION 2
DISASSEMBLY

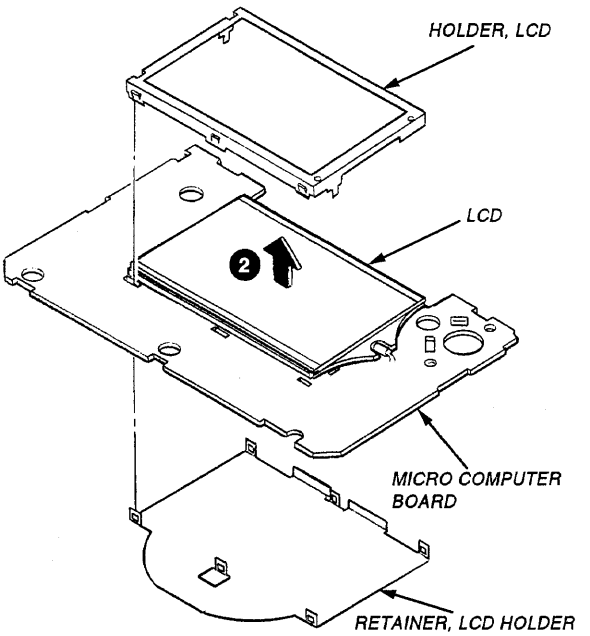
Note: Follow the disassembly procedure in the numerical order given.

2-1. Removal Rear Cabinet



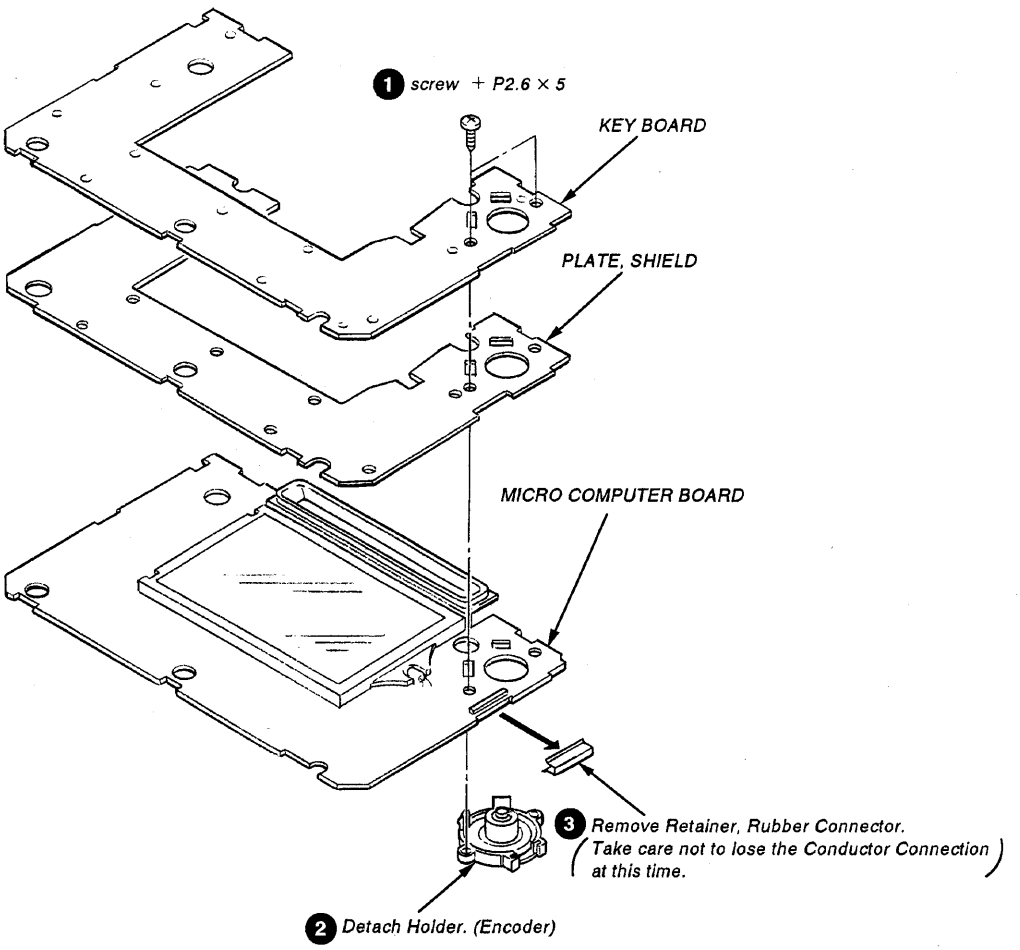
3 Release the claws inside with pushing the side of CABINET.(⬅ marks)

2-2. Removal LCD



1 Detach Holder, LCD with Retainer, LCD Holder.

2-3. Removal Key Board



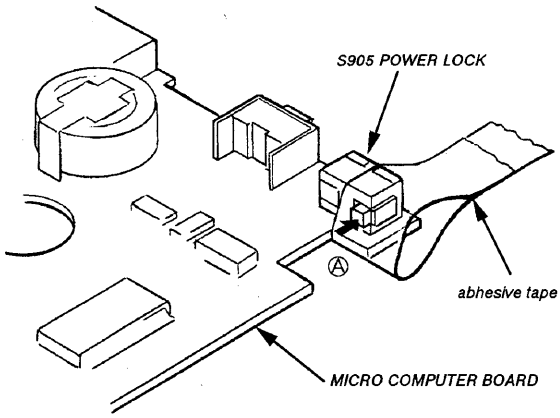
SECTION 3
PORT FUNCTIONS DISCRIPTION

IC904, 905 M6M80021FP

Pin No.	Symbol	Name	Description
1	$\overline{CS}$	CHIP SELECT IN	• Selects chip at "L". In case the terminal is at "H", resets built-in sequential controller. For this reason, set this terminal at "H" once before performing on action in a mode. • In performing of writing in (when busy output is at "L"), it continves to write in despite this terminal is performing input action. • After performed write in, after this terminal is turned to "H" . However in case of "status output" only, write in is feasible when sequence controller is reset and then this terminal remains at "L" after write in started.
2	$\overline{SCK}$	CLOCK IN	• Reads in input data at rising up edge of the clock. • Data outputs synchronously at falling down of the clock.
3, 8	NC	NO CONNECTION	This is a free terminal and is not connected to the internal circuits, and this terminal can be used as a junction land.
4	DI	DATA IN	Input data.
5	$D\overline{O}$	DATA OUT	Output data. DI can be connected with $D\overline{O}$.
6	Vss	GROUND	Ground-return terminal.
7	RESET	RESET IN	• Set to "H" at the time of power ON/OFF. • When set to "H" , sequential controller and write in circuit are reset and performing memory protection. During writing in, the write in is interrupted when this terminal becomes to "H". • Furthermore, RESET and $\overline{CS}$ are connectable. However, at such time, during writing in, $\overline{CS}$ (=RESET) is required to maintain at "L".
9	RDY/$\overline{BUSY}$	BUSY OUT	• Turns to "L" during performance of write in. • Turns to "L" at the time of power ON/OFF. At this time, writing in of all inputs are prohibited.
10	V_{DD}	INPUT OF POWER SUPPLY VOLTAGE	Power supply terminal (+5V).

SECTION 4
ELECTRICAL ADJUSTMENT

Preparation



How to turn the power ON/OFF

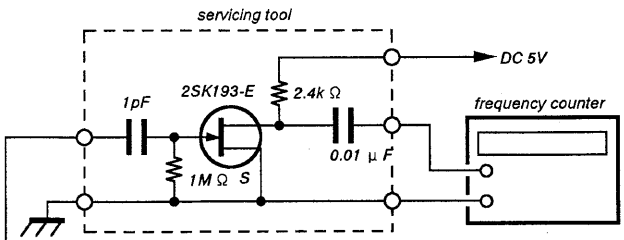
1. Press down portion Ⓐ of S905 (Power Lock) switch by adhesive tape.
2. Push the S148 (ON/OFF) switch on the KEY Board.

AM SECTION

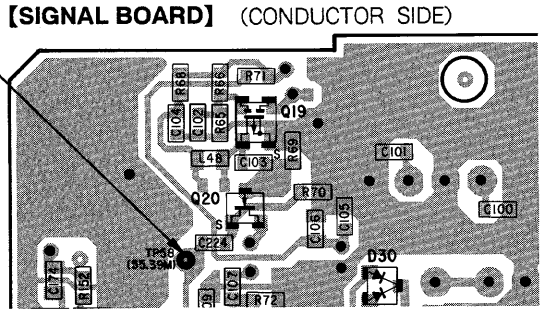
2nd LOCAL ADJUSTMENT

Setup:

VOLUME control: Arbitrary
STEREO/MONO: STEREO
AM SENS: NORM



[SIGNAL BOARD] (CONDUCTOR SIDE)



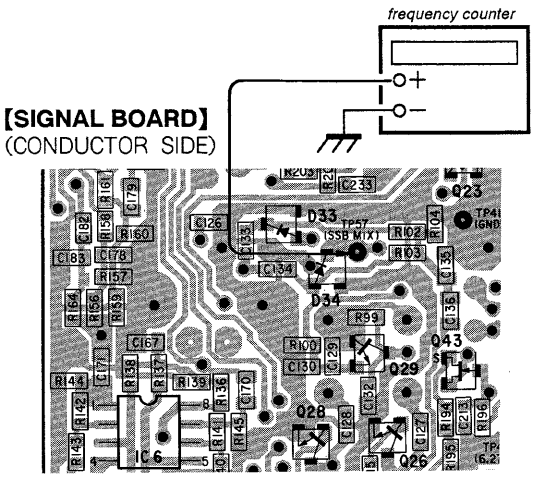
Procedure:

1. Tune the set to AM 150kHz.
2. Adjust T13 to obtain a 55.3912 ± 0.0003MHz on the frequency counter.

BFO ADJUSTMENT

Setup:

VOLUME control: Arbitrary
STEREO/MONO: STEREO
AM SENS: NORM



Procedure:

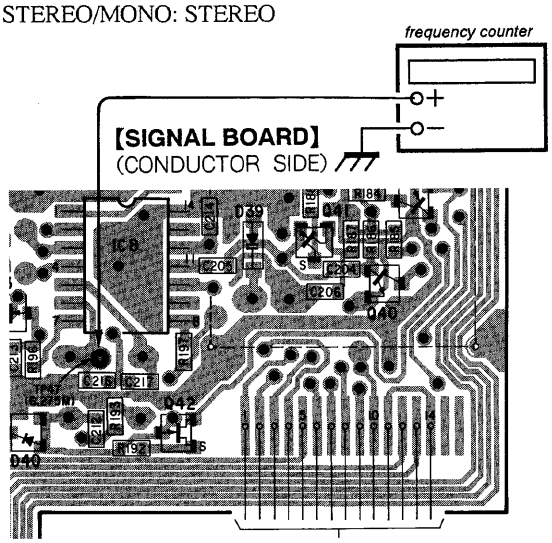
- BFO (USB) ADJUSTMENT
  1. Tune the set to AM 150kHz USB.
  2. Adjust CT1 to obtain a 457 ± 0.05kHz on the frequency counter.

- BFO (LSB) ADJUSTMENT
  1. Tune the set to AM 150kHz LSB.
  2. Adjust CT2 to obtain a 453 ± 0.05kHz on the frequency counter.

PLL ADJUSTMENT

Setup:

VOLUME control: Arbitrary
STEREO/MONO: STEREO



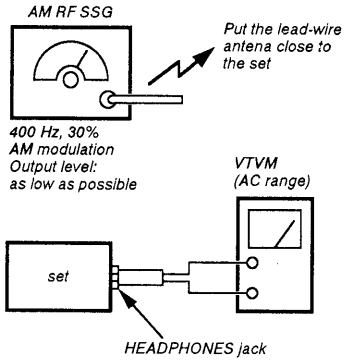
Procedure:

1. Tune the set to AM 4155kHz WI DE.
2. Adjust CT6 to obtain a 60 ± 0.0005MHz on the frequency counter.

AM IF ADJUSTMENT

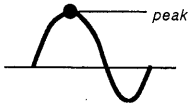
Setup:

VOLUME control: Arbitrary
STEREO/MONO: STEREO



Procedure:

1. Tune the set to the AM RF SSG frequency.
2. Adjust T4 and T5 for a maximum output level.
3. Final response should be as illustrated bellow.

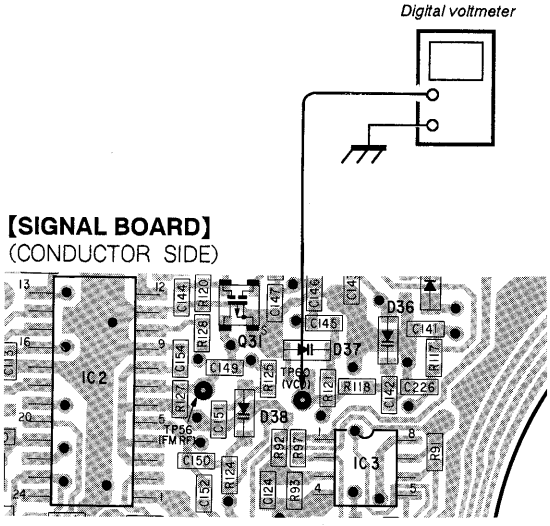


FM SECTION

FM VCO ADJUSTMENT

Setup:

VOLUME control: Arbitrary



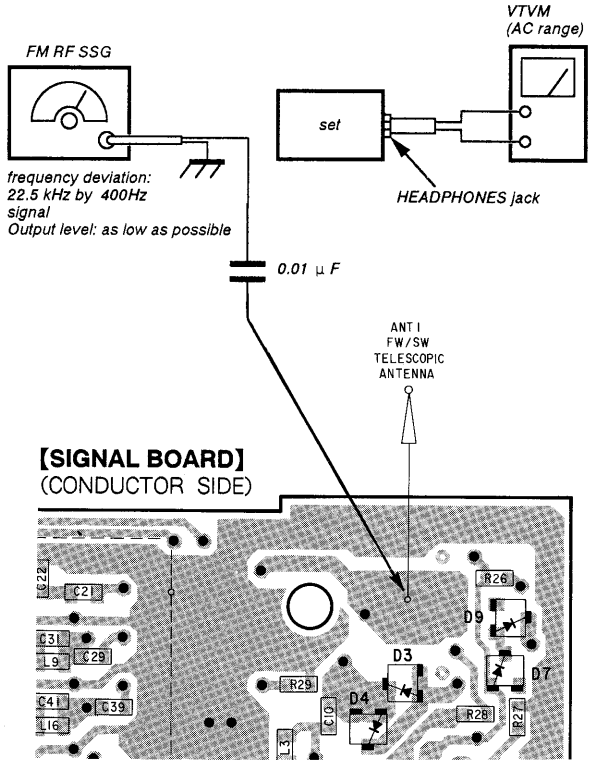
Procedure:

1. Tune the set to 76MHz.
2. Adjust T11 to obtain a 1.8 ± 0.1V on the Digital voltmeter.

FM RF ADJUSTMENT

Setup:

VOLUME control: Arbitrary
AM SENS: DX



Procedure:

1. Set the frequencies of the FM RF SSG and the frequency display of the set to 76MHz.
2. Adjust T9 and T10 to obtain a maximum reading on the VTVM.
3. Set the frequencies of the FM RF SSG and the frequency display of the set to 108MHz.
4. Adjust CT3 and CT4 to obtain a maximum reading on the VTVM.
5. Repeat the above steps several times.

FM STEREO ADJUSTMENT

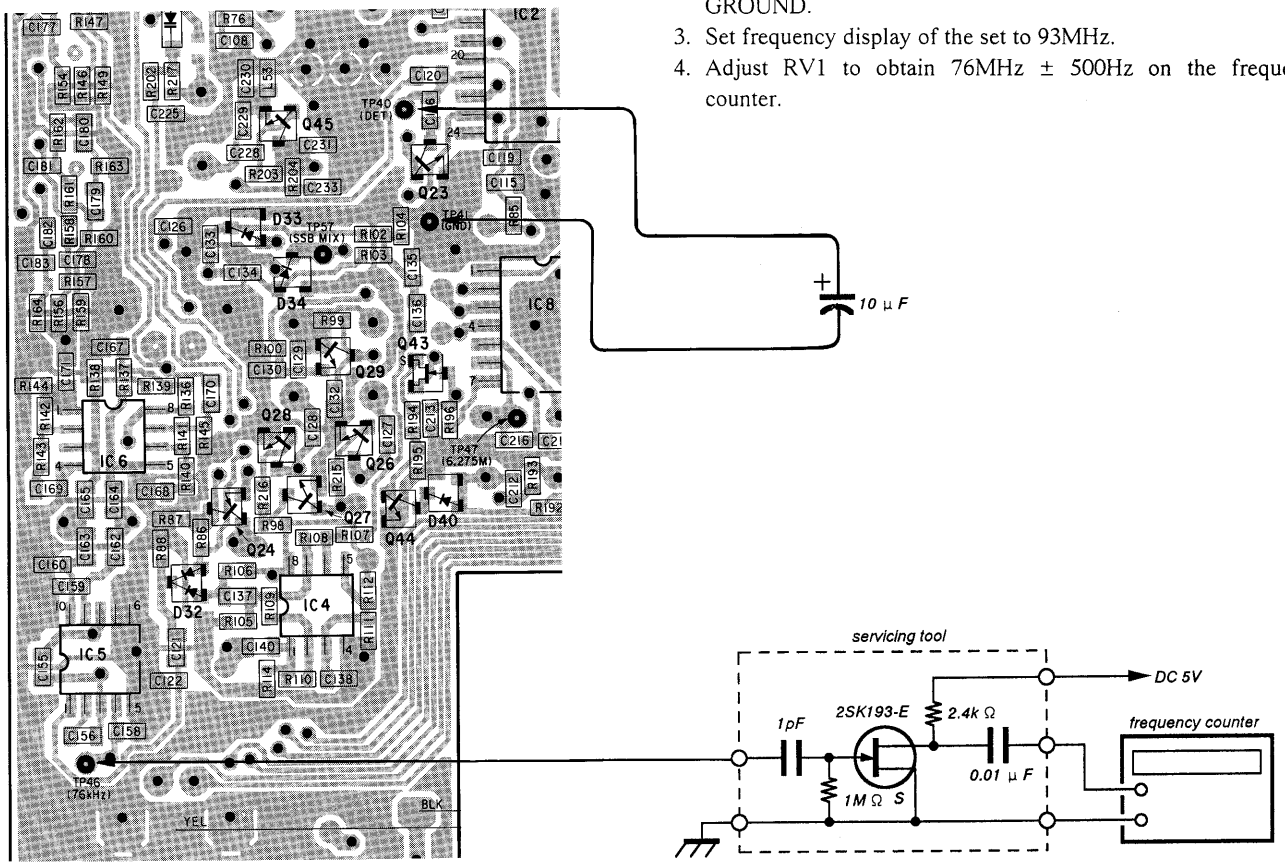
Setup:

VOLUME control: Arbitrary

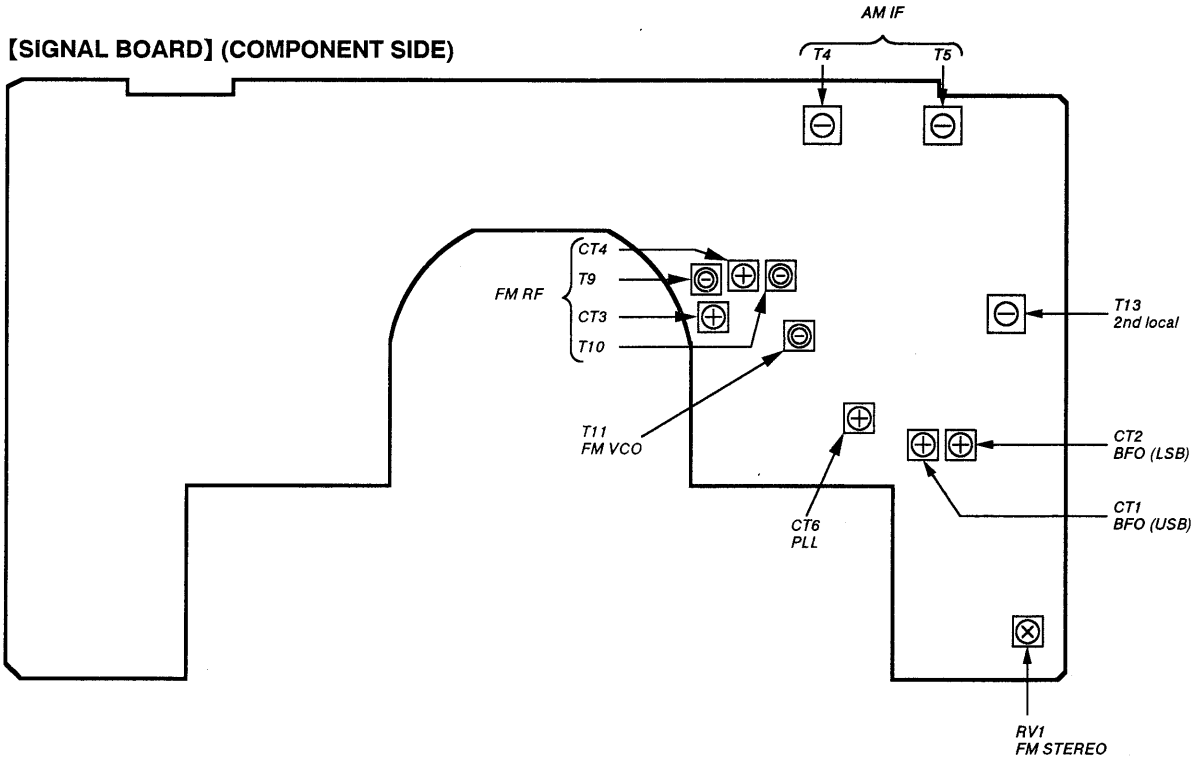
Procedure:

1. Insert HEADPHONES plug into HEADPHONES jack.
2. Connect a capacitor (10 μF) between pin ㉑ of IC2 and GROUND.
3. Set frequency display of the set to 93MHz.
4. Adjust RV1 to obtain 76MHz ± 500Hz on the frequency counter.

[SIGNAL BOARD] (CONDUCTOR SIDE)



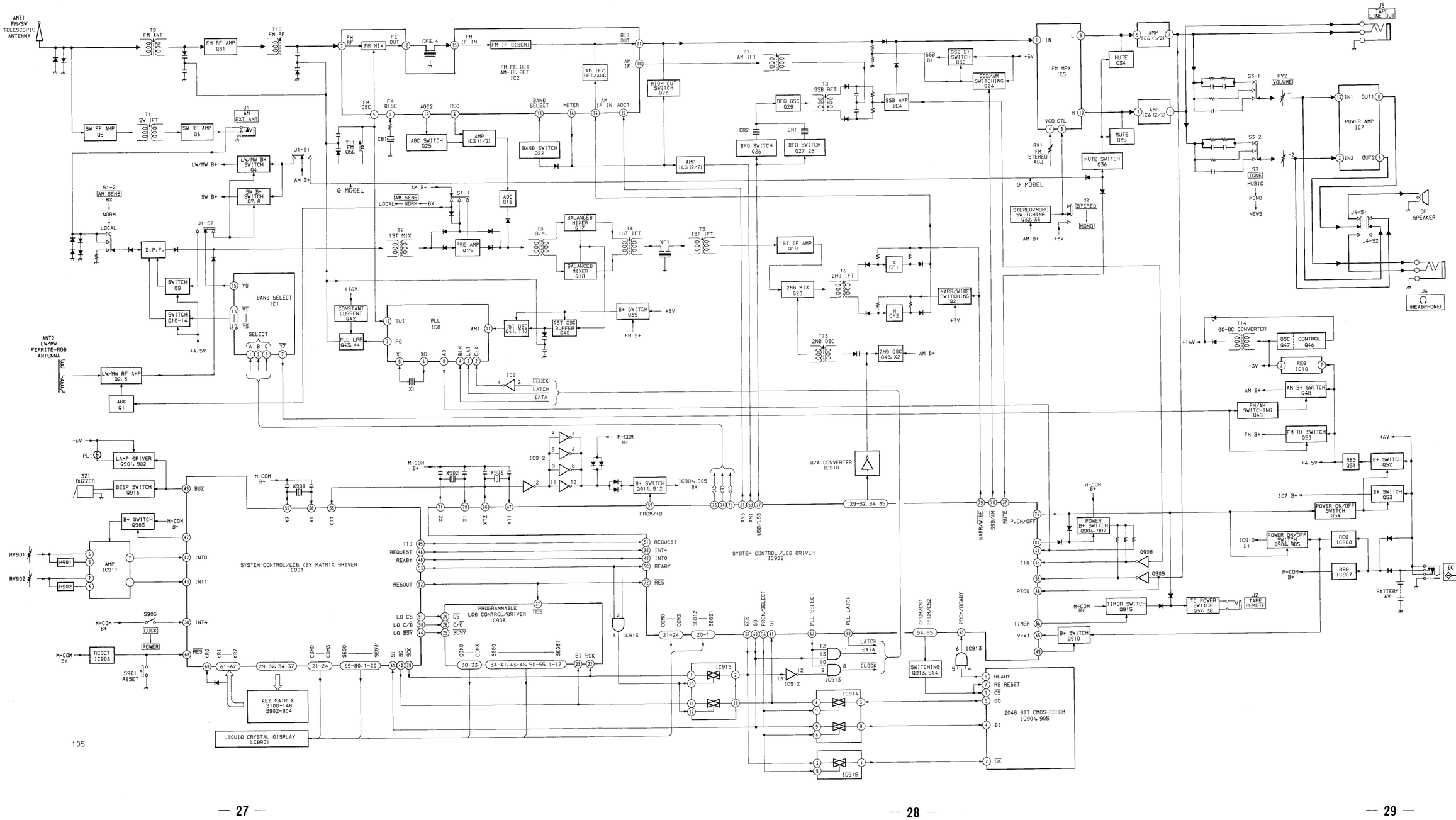
[SIGNAL BOARD] (COMPONENT SIDE)



SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM

G:Germany



• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D1	C – 25	IC9	G – 11
D2	C – 26	IC10	F – 28
D3	C – 29		
D4	C – 29		
D5	C – 22	Q1	B – 26
		Q2	C – 25
D6	D – 30	Q3	C – 23
D7	C – 30	Q4	C – 7
D8	C – 2	Q5	D – 29
D9	C – 30		
D10	C – 2	Q6	E – 28
		Q7	E – 3
D11	B – 4	Q8	E – 3
D12	B – 5	Q9	E – 5
D13	C – 4	Q10	C – 6
D14	B – 6		
D15	C – 4	Q11	C – 6
		Q12	C – 6
D16	C – 6	Q13	D – 6
D17	C – 4	Q14	D – 5
D18	C – 5	Q15	C – 11
D19	C – 4		
D20	C – 6	Q16	C – 21
		D17	B – 20
D21	D – 4	Q18	B – 20
D22	D – 6	Q19	B – 18
D23	B – 20	Q20	C – 17
D24	B – 21		
D25	B – 20	Q21	D – 17
		Q22	C – 13
D26	B – 20	Q23	E – 18
D27	C – 20	Q24	G – 18
D28	C – 20	Q25	E – 21
D29	D – 18		
D30	C – 18	Q26	G – 18
		Q27	G – 18
D31	D – 13	Q28	F – 18
D32	G – 17	Q29	F – 18
D33	E – 18	Q30	G – 14
D34	F – 18		
D35	C – 21	Q31	D – 20
		Q32	C – 15
D36	D – 21	Q33	C – 15
D37	D – 20	Q34	I – 16
D38	D – 20	Q35	I – 15
D39	F – 20		
D40	G – 19	Q36	H – 14
		Q37	E – 30
D41	D – 17	Q38	E – 30
D42	I – 29	Q39	E – 21
D43	I – 3	Q40	F – 21
D44	G – 6		
D45	H – 29	Q41	F – 20
		Q42	G – 19
D46	H – 29	Q43	F – 18
D47	B – 3	Q44	G – 18
D48	I – 14	Q45	E – 18
		Q46	I – 29
IC1	E – 6	Q47	I – 29
IC2	D – 19	Q48	C – 7
IC3	E – 21	Q49	C – 7
IC4	G – 18	Q50	D – 7
IC5	H – 17		
		Q51	F – 6
IC6	G – 17	Q52	G – 28
IC7	F – 4	Q53	H – 29
IC8	F – 19	Q54	G – 28

Note :

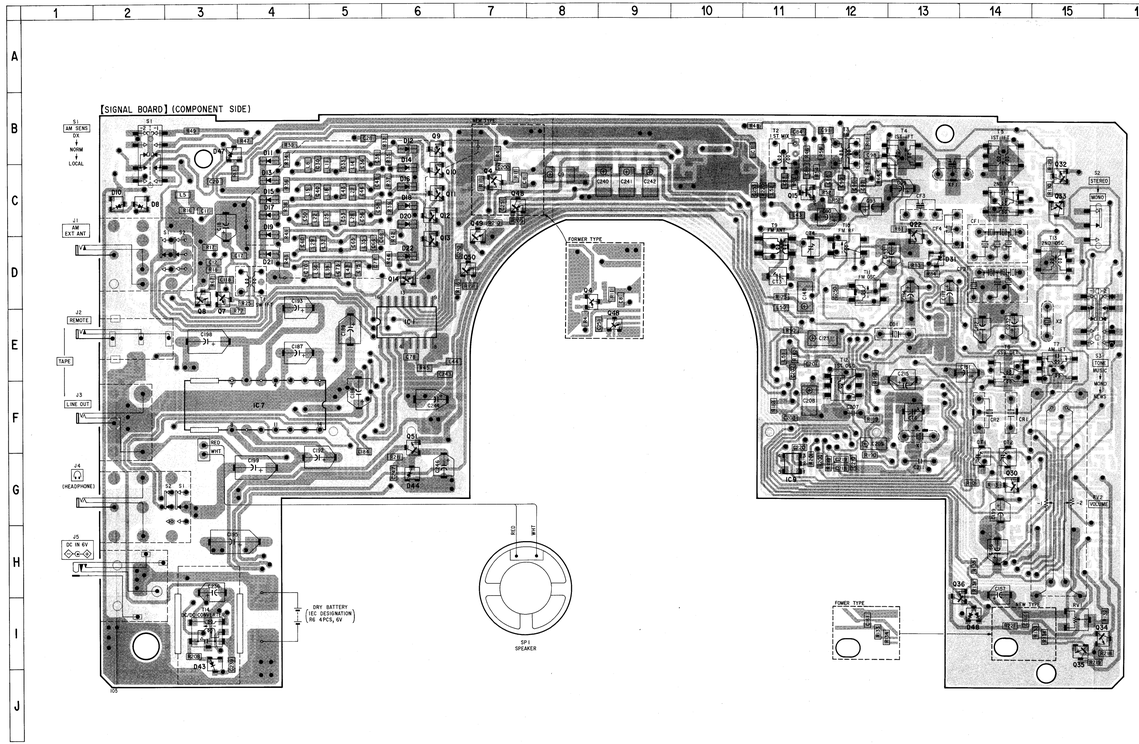
- ⎓ : parts extracted from the conductor side.
- ⊣⊢ indicates side identified with part number.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

G :Germany

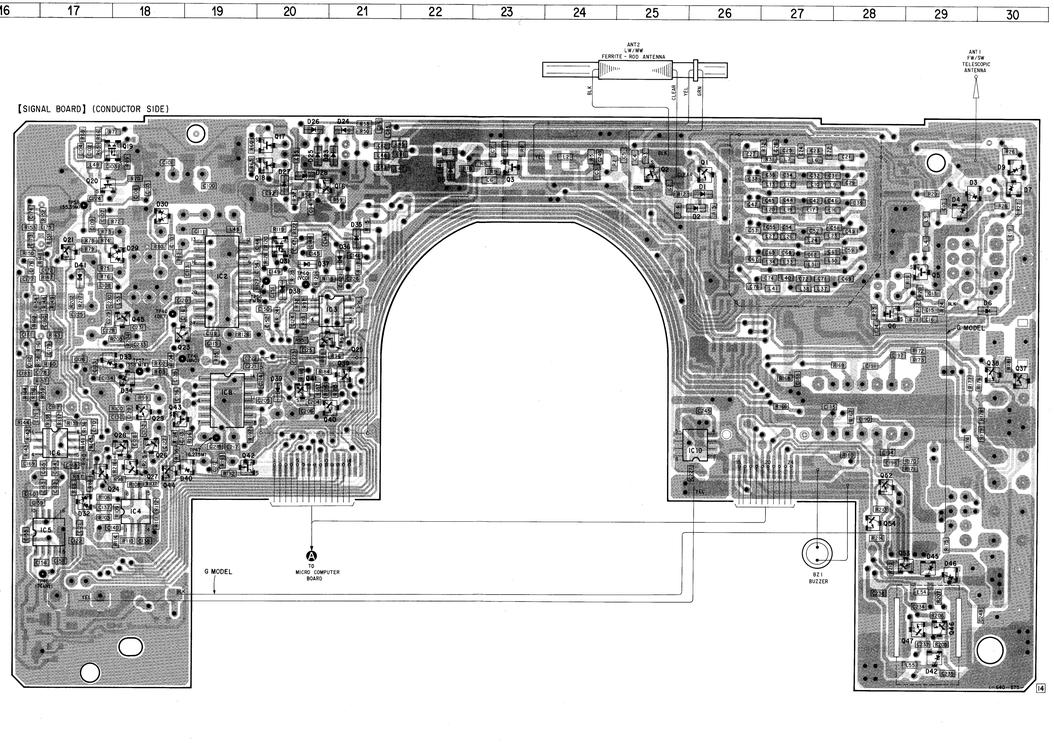
5-2. PRINTED WIRING BOARD – SIGNAL SECTION –

•Refer to Page 38 for Semiconductor Lead Layout

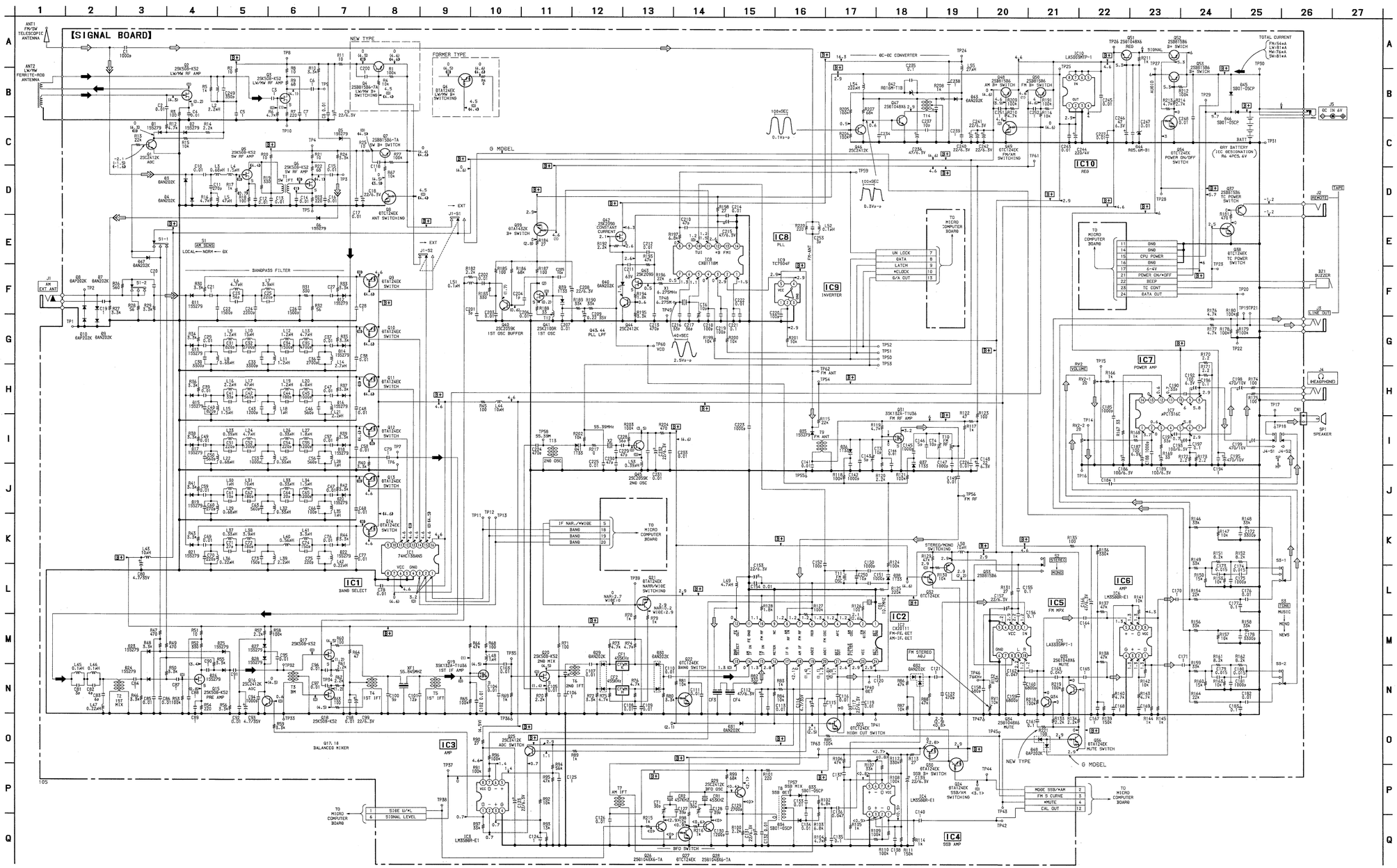
【SIGNAL BOARD】(COMPONENT SIDE)



【SIGNAL BOARD】(CONDUCTOR SIDE)

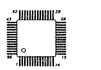


•Refer to Page 47 for IC Block Diagrams.



•Semiconductor lead Layout

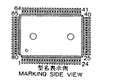
μ PD7225GB-3B7



3SK-132A-U35

1SS279
1T-33

μ PD75316GF-181
μ PD75316GF-3B9

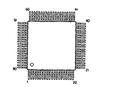


1MN10

LT120

1. GND
2. Input
3. Vcc
4. Output

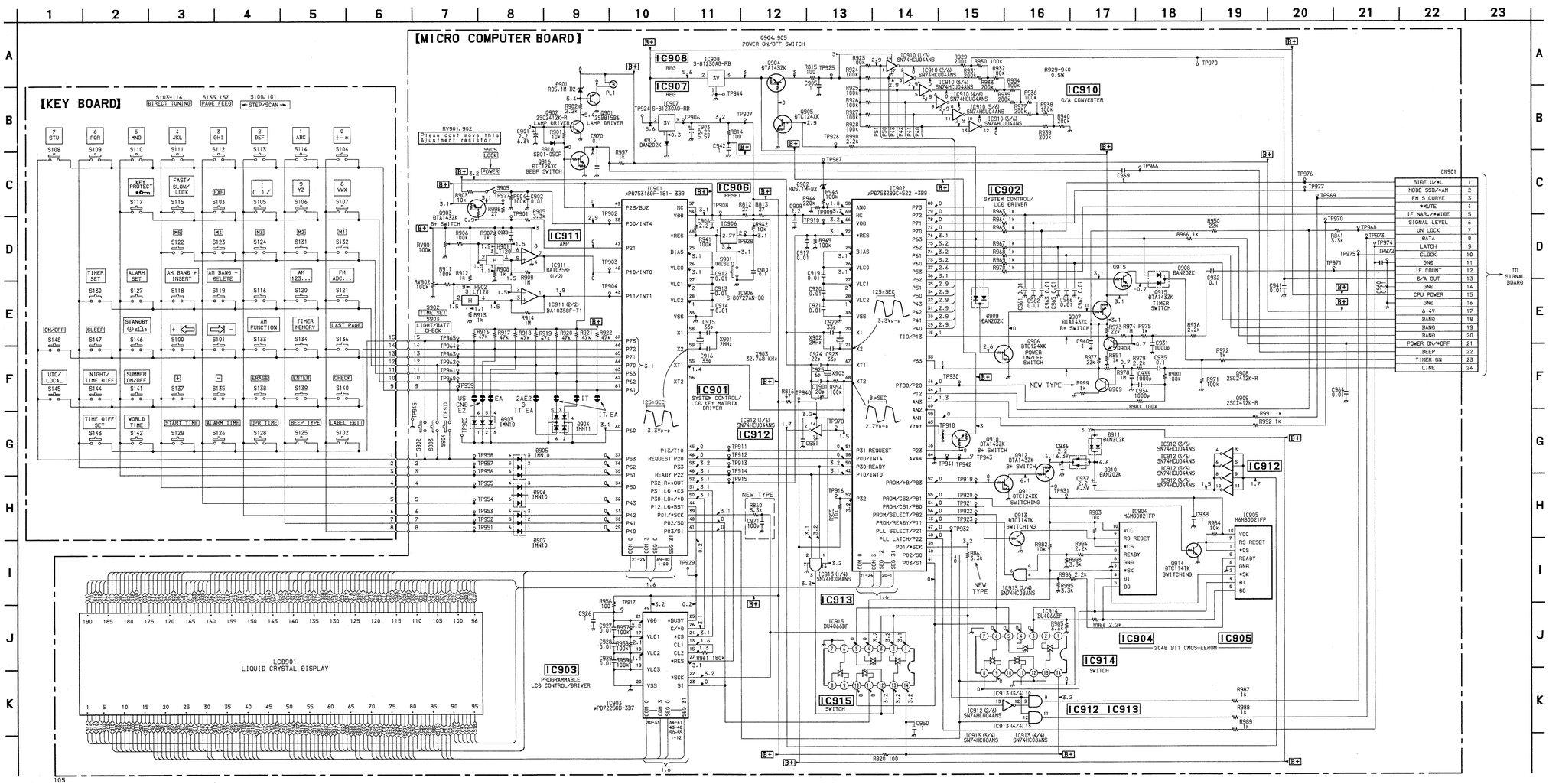
μ PD75328GC-522
μ PD75328GC-3B9



1MN11

Note :

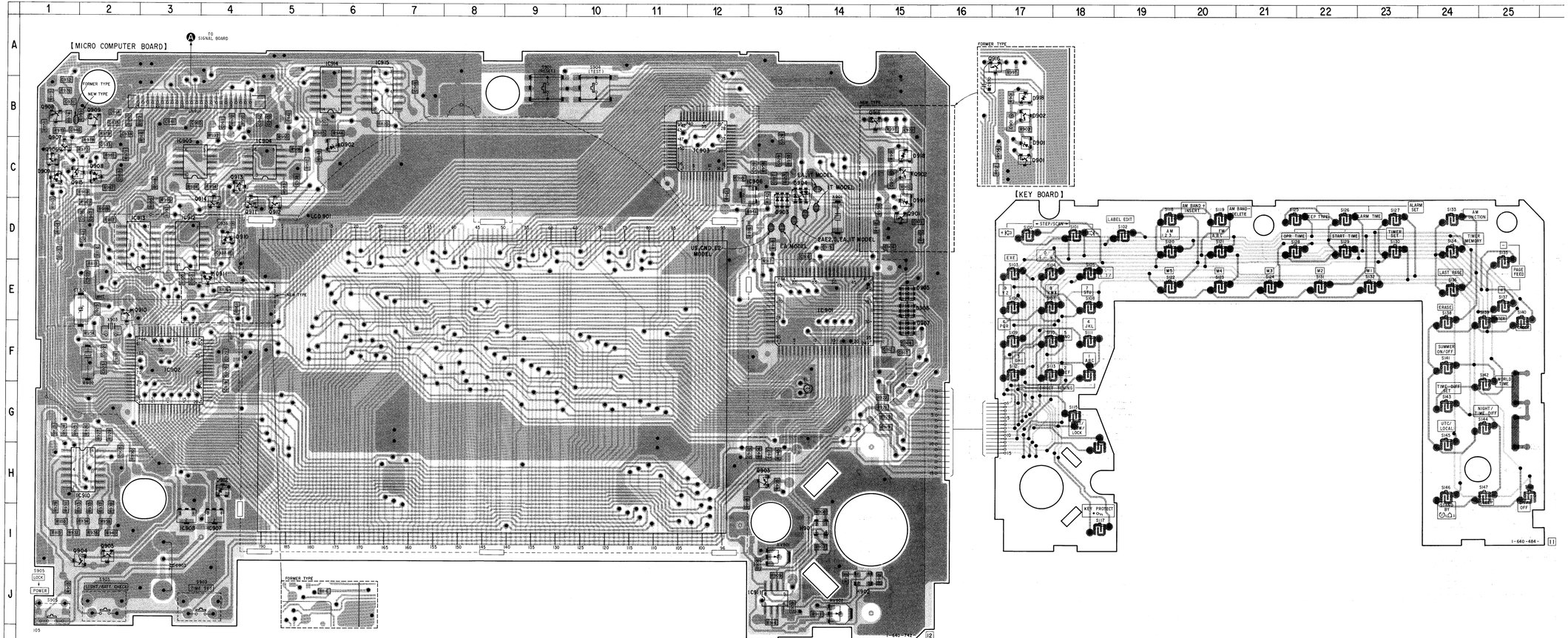
- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 6V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under detuned conditions.
- no mark : FM
  ( ) : LW/MW
  ( ) : SW
  ( ) : SSB
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : LW/MW
  ⇨ : SW
- G :Germany



- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- % : indicates tolerance.
- B+ : B+ Line
- Power voltage is dc 6V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under detuned conditions.
- no mark : FM
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

CND :Canadian
IT :Italian
G :Germany
EA :Saudi Arabia

- 1AE2, 2AE2 : This shows the differences of the FM/SW frequency bands.



• SEMICONDUCTOR LOCATION

Ref. No.	Location
D901	C – 15
D902	C – 6
D903	D – 13
D904	C – 13
D905	E – 15
D906	E – 15
D907	E – 15
D908	C – 2
D909	C – 1
D910	D – 4
D911	E – 4
D912	H – 4
D918	C – 15
H901	I – 13
H902	J – 14
IC901	E – 14
IC902	F – 3
IC903	C – 12
IC904	C – 5
IC905	C – 3
IC906	C – 13
IC907	I – 4
IC908	I – 3
IC910	H – 2
IC911	J – 13
IC912	D – 3
IC913	D – 2
IC914	A – 6
IC915	A – 6
Q901	D – 15
Q902	C – 15
Q903	H – 13
Q904	I – 2
Q905	I – 2
Q906	C – 1
Q907	C – 1
Q908	B – 1
Q909	B – 2
Q910	E – 3
Q911	D – 4
Q912	D – 5
Q913	C – 4
Q914	D – 4
Q915	C – 1
Q916	B – 15

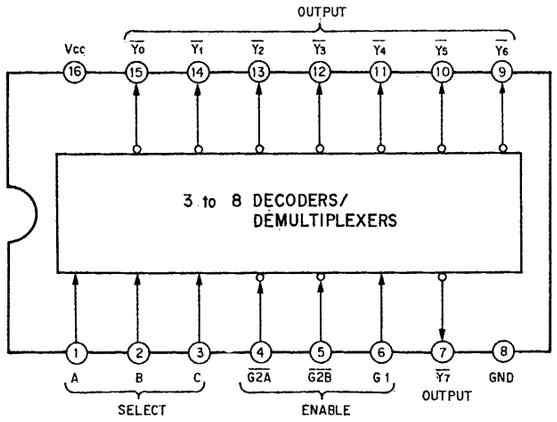
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

CND :Canadian
IT :Italian
G :Germany
EA :Saudi Arabia

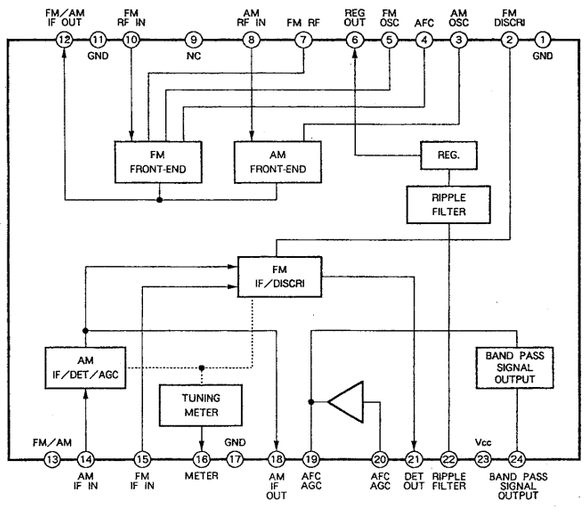
- 1AE2, 2AE2 : This shows the differences of the FM/SW frequency bands.

•IC Block Diagrams.

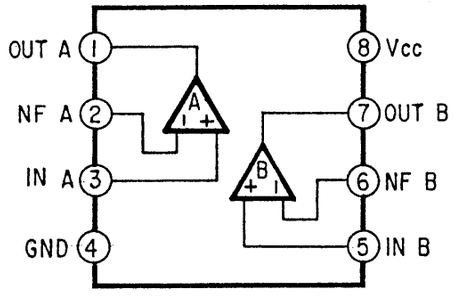
IC1 74HC138ANS



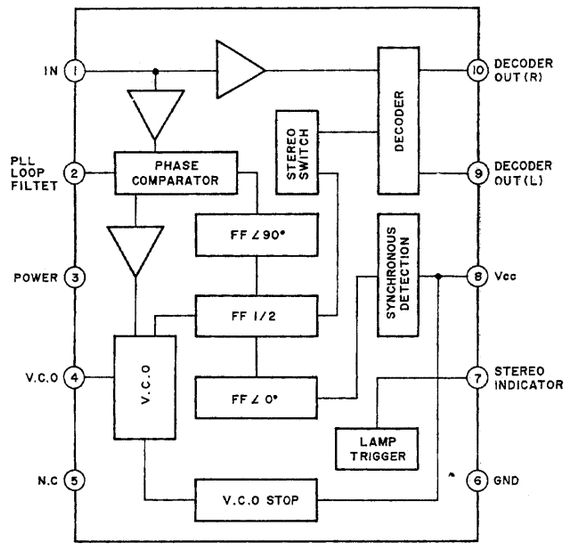
IC2 CXA20111



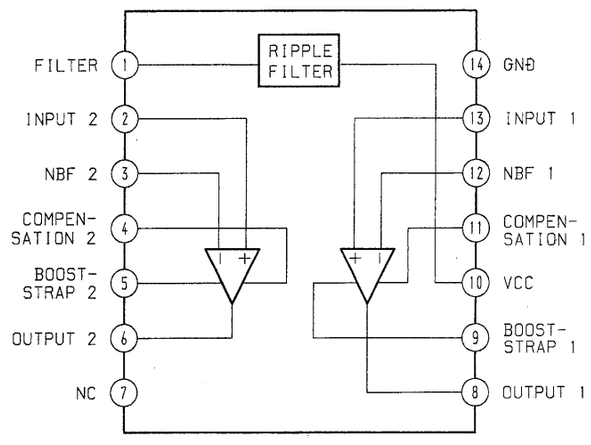
IC3, 4, 6 LM358DR



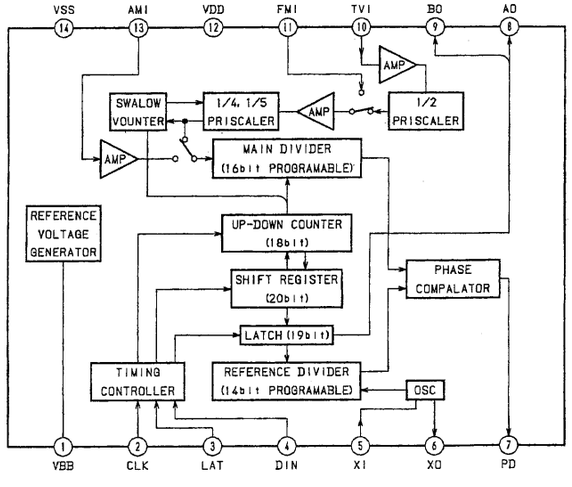
IC5 LA3335M



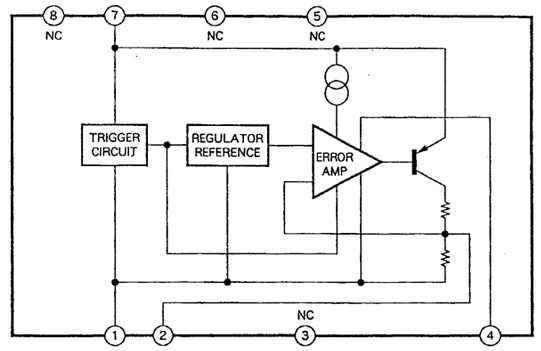
IC7 UPC1316C



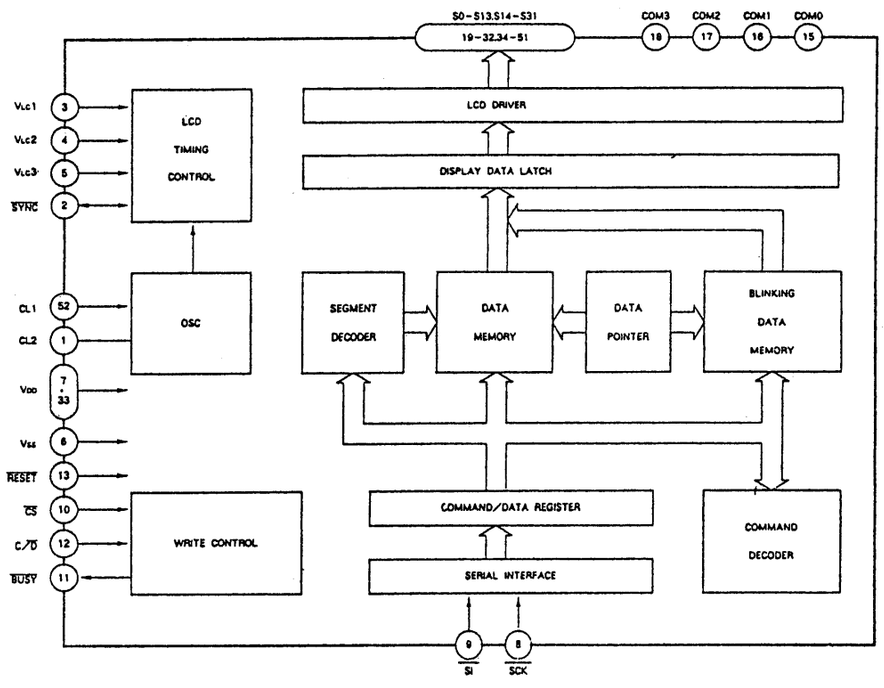
IC8 CXD1118M



IC10 LA5003M



IC903 μ PD7225GB-3B7



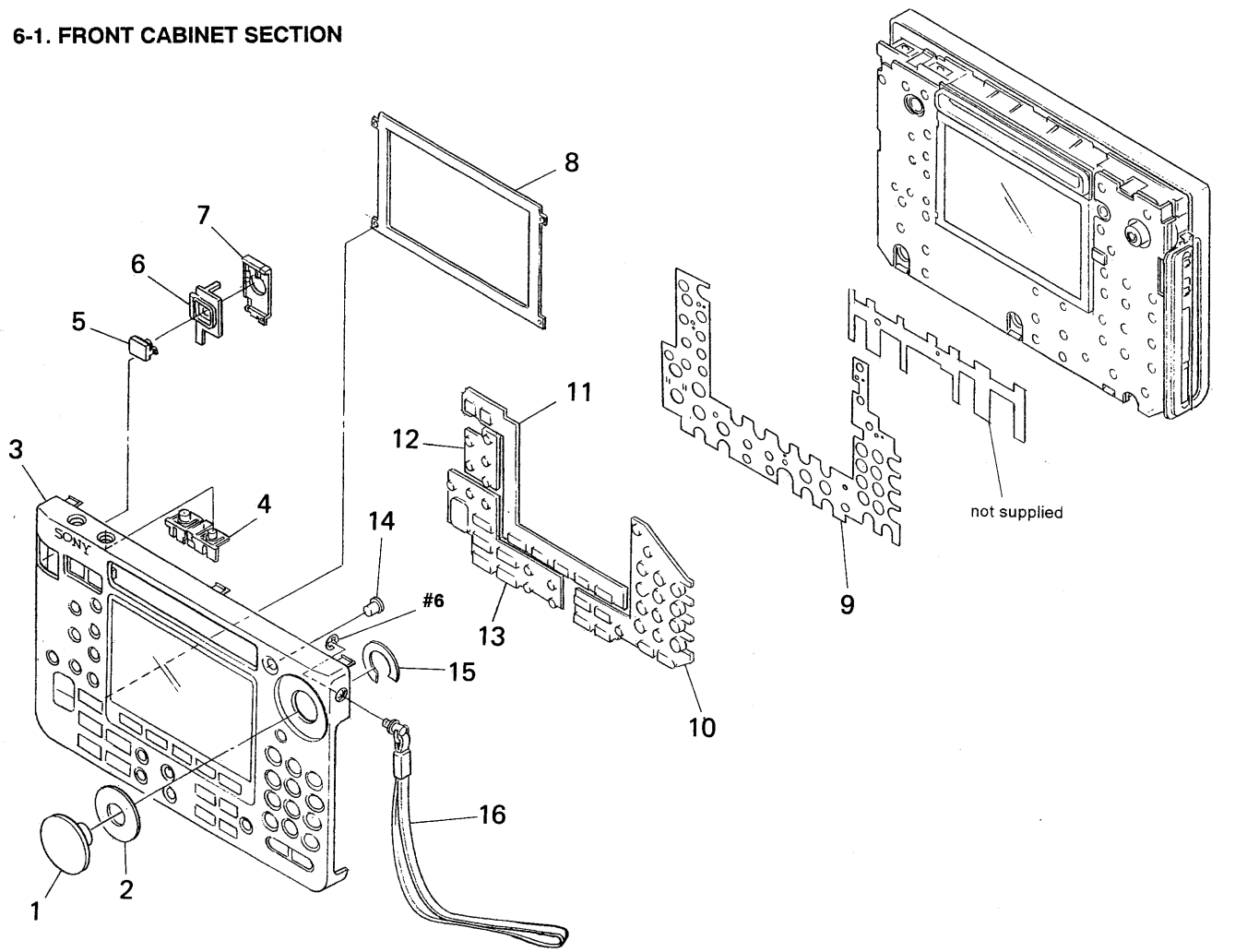
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences 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.

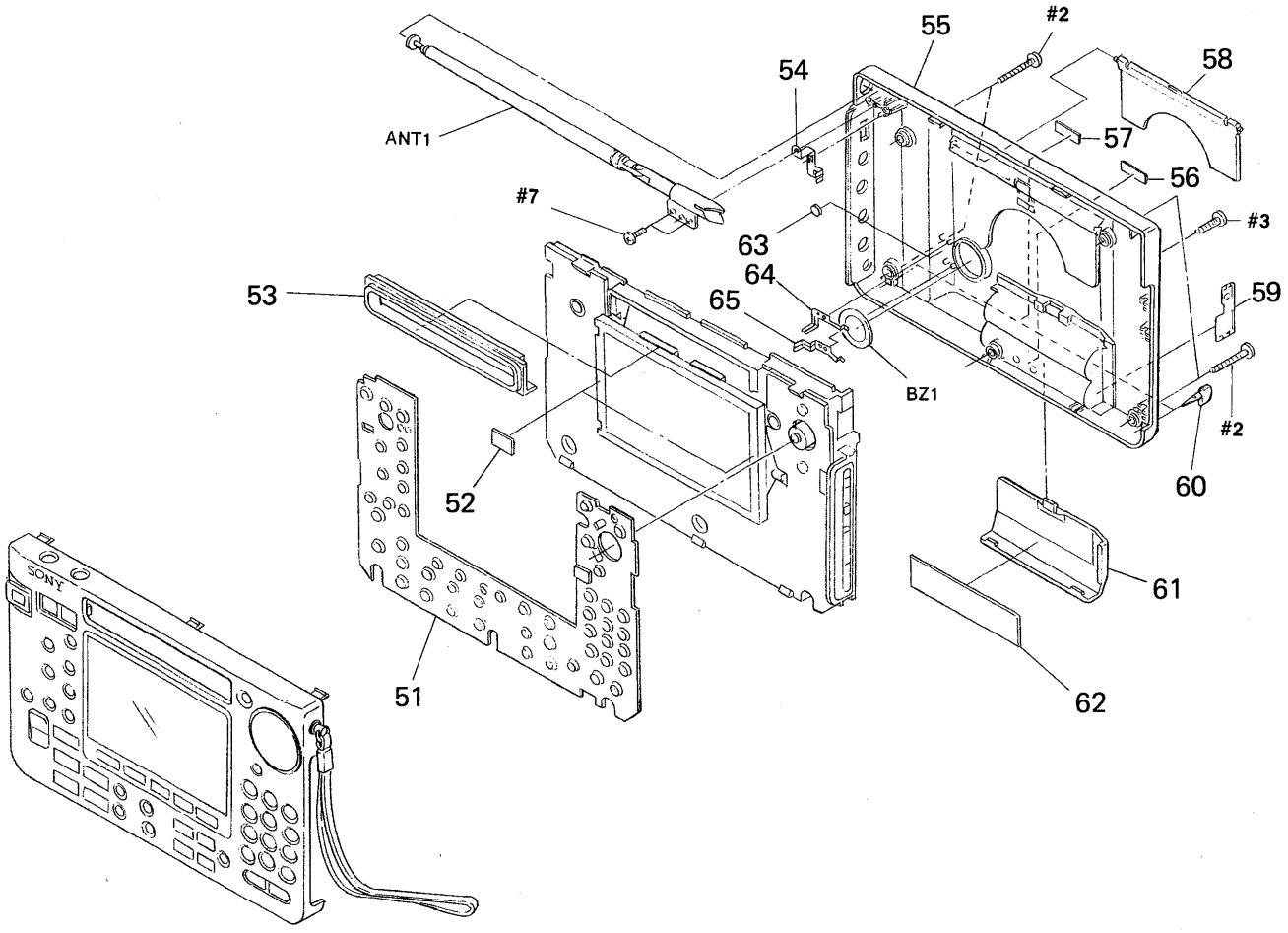
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	3-370-406-01	KNOB (ENCODER)	
* 2	3-375-344-01	SPACER (R. E)	
3	X-3363-388-1	CABINET (FRONT) ASSY	
4	3-370-417-01	BUTTON (LIGHT)	
5	3-370-418-01	BUTTON (POWER)	
6	3-370-431-01	KNOB, POWER	
7	3-370-432-01	RETAINER, KNOB	
8	3-370-405-01	PLATE, BACK	
9	3-370-434-01	SHEET, BUTTON RETAINER	
10	3-370-429-01	BUTTON (D)	
11	3-370-428-01	BUTTON (C)	
12	3-370-393-01	BUTTON (A)	
13	3-370-427-01	BUTTON (B)	
14	3-370-409-01	BUTTON (E)	
15	3-370-397-01	WASHER	
16	3-373-147-01	STRAY, HAND	

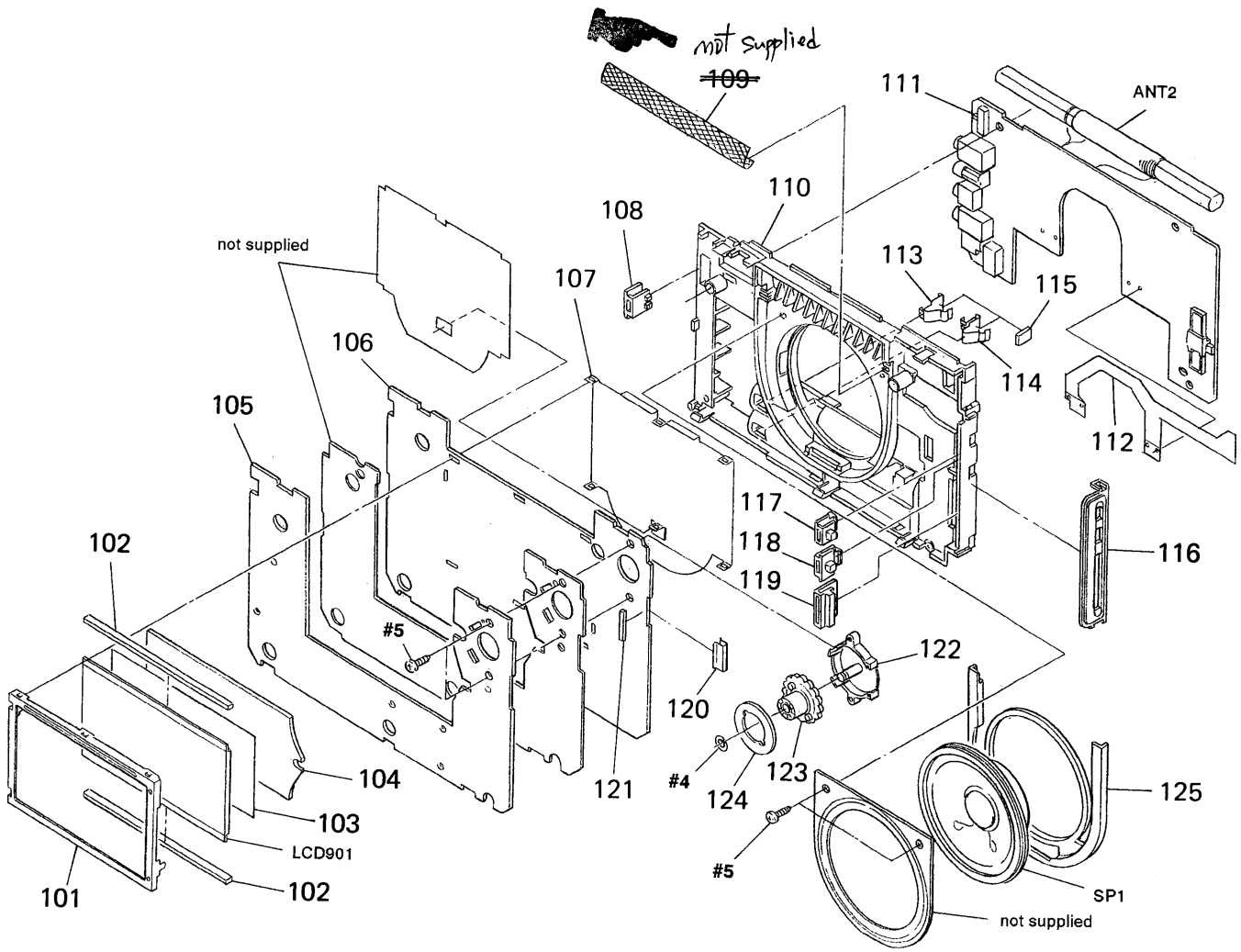
6-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
51	1-572-854-11	SWITCH, RUBBER KEY	
52	3-831-441-XX	SPACER	
53	3-370-433-01	DUCT, OPEN BLOCK	
54	3-370-425-01	PLATE, CONTACT, ANT	
55	3-370-438-01	CABINET (REAR)	
* 56	3-375-751-01	LABEL (B), BATTERY MARK	
* 57	3-372-110-01	LABEL, BATTERY MARK	
58	3-370-402-01	STAND	
59	3-370-423-01	TERMINAL (+, -), BATTERY	

Ref. No.	Part No.	Description	Remark
60	3-370-422-01	FOOT, RUBBER	
61	3-370-403-01	LID, BATTERY CASE	
62	9-911-844-XX	CUSHION (BATTERY CASE LID)	
63	3-368-590-01	CUSHION (A)	
64	3-370-396-01	PLATE (B), CONTACT, BUZZER	
65	3-370-395-01	PLATE (A), CONTACT, BUZZER	
ANT1	1-501-512-11	ANTENNA, TELESCOPIC	
BZ1	1-529-102-11	BUZZER	

6-3. LCD SECTION



Ref. No.	Part No.	Description	Remark
101	3-370-424-01	HOLDER, LCD	
102	1-535-946-11	CONDUCTOR, CONNECTION (LCD)	
103	3-374-110-01	SHEET, DISPERSE	
104	3-370-407-01	PLATE, LIGHT GUIDE	
105	1-640-484-11	PC BOARD, KEY	
* 106	A-3661-337-A	MICRO COMPUTER BOARD, COMPLETE (EXCEPT UK)	
* 106	A-3661-379-A	MICRO COMPUTER BOARD, COMPLETE (UK)	
107	3-370-426-01	RETAINER, LCD HOLDER	
108	3-370-413-01	KNOB (ATT)	
109	~~3-372-112-01~~	~~SHEET METAL, SP~~ not supplied	
* 110	3-370-439-01	CHASSIS	
* 111	A-3679-276-A	SIGNAL BOARD, COMPLETE (EXCEPT UK)	
* 111	A-3679-291-A	SIGNAL BOARD, COMPLETE (UK)	

Ref. No.	Part No.	Description	Remark
112	1-640-874-13	PC BOARD, FLEXIBLE	
113	3-370-415-01	TERMINAL (+), BATTERY	
114	3-370-416-01	TERMINAL (-), BATTERY	
115	3-376-821-01	CUSHION (TERMINAL)	
116	3-370-401-01	PANEL	
117	3-370-410-01	KNOB (MONO/ST SELECTION)	
118	3-370-412-01	KNOB (TONE)	
119	3-370-411-01	KNOB (VOLUME)	
120	3-370-400-01	RETAINER, RUBBER CONNECTOR	
121	1-535-947-11	CONDUCTOR, CONNECTION	
122	3-370-421-01	HOLDER (ENCODER)	
123	3-370-399-01	SHAFT, ENCODER	
124	1-452-629-11	MAGNET	
125	3-370-430-01	RUBBER, SP	
SP1	1-544-577-11	SPEAKER (7.7CM)	
ANT2	1-402-574-11	ANTENNA, FERRITE-ROD (LW/MW)	
LCD901	1-809-480-11	DISPLAY PANEL, LIQUID CRYSTAL	

MICRO COMPUTER

SECTION 7
ELECTRICAL PART LIST

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

CND :Canadian
FR :French
IT :Italian
G :Germany
AUS :Australian
EA :Saudi Arabia

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA....: μA...., uPA....: μPA....
  uPB....: μPB...., uPC....: μPC....
  uPD....: μPD....
- CAPACITORS
  uF: μF
- COILS
  uH: μH

• **1AE2, 2AE2**: This shows the differences of the FM/SW frequency bands.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

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

Ref. No.	Part No.	Description		Remark
*	A-3661-337-A	MICRO COMPUTER BOARD, COMPLETE (EXCEPT UK)		
*	A-3661-379-A	MICRO COMPUTER BOARD, COMPLETE (UK)		
		**********		
		< CAPACITOR >		
C901	1-135-149-21	TANTALUM CHIP 2.2uF	20%	10V
C902	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C903	1-125-486-11	DOUBLE LAYERS 0.22F		5.5V
C905	1-164-346-11	CERAMIC CHIP 1uF		16V
C906	1-164-505-11	CERAMIC CHIP 2.2uF		16V
C909	1-164-505-11	CERAMIC CHIP 2.2uF		16V
C910	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V
C912	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C913	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C914	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C915	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C916	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C917	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C919	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C920	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C921	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C922	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C923	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C924	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C925	1-163-089-00	CERAMIC CHIP 6PF		50V
C926	1-164-346-11	CERAMIC CHIP 1uF		16V
C927	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C928	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C929	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C931	1-163-141-00	CERAMIC CHIP 0.001uF	5%	50V
C932	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V
C933	1-163-141-00	CERAMIC CHIP 0.001uF	5%	50V
C934	1-163-141-00	CERAMIC CHIP 0.001uF	5%	50V
C935	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V
C936	1-135-149-21	TANTALUM CHIP 2.2uF	20%	10V
C937	1-135-149-21	TANTALUM CHIP 2.2uF	20%	10V
C938	1-164-346-11	CERAMIC CHIP 1uF		16V
C939	1-164-346-11	CERAMIC CHIP 1uF		16V
C940	1-164-346-11	CERAMIC CHIP 1uF		16V
C941	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C942	1-164-346-11	CERAMIC CHIP 1uF		16V
C950	1-164-346-11	CERAMIC CHIP 1uF		16V
C951	1-164-346-11	CERAMIC CHIP 1uF		16V
C960	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C961	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C962	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C963	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C964	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C965	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C966	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C967	1-164-232-11	CERAMIC CHIP 0.01uF		50V
C969	1-164-346-11	CERAMIC CHIP 1uF		16V
C970	1-164-004-11	CERAMIC CHIP 0.1uF	10%	25V (NEW)
C970	1-161-039-00	CERAMIC 0.1uF	10%	50V (FORMER)
C971	1-163-117-00	CERAMIC CHIP 100PF	5%	50V (NEW)
		< CONNECTOR >		
CN901	1-573-217-21	CONNECTOR, FPC (NON-ZIF) 24P		
		< TRIMMER >		
CT901	1-141-433-11	CAP, TRIMMER 20PF		
		< DIODE >		
D901	8-719-105-82	DIODE RD5.1M-B2		
D902	8-719-105-82	DIODE RD5.1M-B2		

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Ref. No.	Part No.	Description	Remark
D903	8-719-951-22	DIODE IMN10	
D904	8-719-984-29	DIODE IMN11	
D905	8-719-951-22	DIODE IMN10	
D906	8-719-951-22	DIODE IMN10	
D907	8-719-951-22	DIODE IMN10	
D908	8-719-400-18	DIODE MA152WK	
D909	8-719-400-18	DIODE MA152WK	
D910	8-719-400-18	DIODE MA152WK	
D911	8-719-400-18	DIODE MA152WK	
D912	8-719-400-18	DIODE MA152WK	
D918	8-719-938-72	DIODE SB01-05CP	
		< HOLE DEVICES >	
H901	8-719-938-56	HOLE DEVICES LT120	
H902	8-719-938-56	HOLE DEVICES LT120	
		< IC >	
IC901	8-759-040-85	IC uPD75316GF-181-3B9	
IC902	8-759-040-86	IC uPD75328GC-522-3B9	
IC903	8-759-153-90	IC uPD7225GB-3B7	
IC904	8-759-551-69	IC M6M80021FP	
IC905	8-759-551-69	IC M6M80021FP	
IC906	8-759-503-28	IC S-80727AN-DQ-S	
IC907	8-759-939-41	IC S-81230AG-RB-S	
IC908	8-759-939-41	IC S-81230AG-RB-S	
IC910	8-759-927-29	IC SN74HCU04ANS	
IC911	8-759-970-89	IC BA10358F	
IC912	8-759-927-29	IC SN74HCU04ANS	
IC913	8-759-925-76	IC SN74HC08ANS	
IC914	8-759-008-67	IC MC14066BF	
IC915	8-759-008-67	IC MC14066BF	
		< PILOT LAMP >	
PL1	1-518-658-11	LAMP, PILOT	
		< TRANSISTOR >	
Q901	8-729-807-87	TRANSISTOR 2SB1295-UL6	
Q902	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q903	8-729-923-65	TRANSISTOR DTA143ZK	
Q904	8-729-923-65	TRANSISTOR DTA143ZK	
Q905	8-729-901-02	TRANSISTOR DTC124XK	
Q906	8-729-901-02	TRANSISTOR DTC124XK	
Q907	8-729-923-65	TRANSISTOR DTA143ZK	
Q908	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q909	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q910	8-729-923-65	TRANSISTOR DTA143ZK	
Q911	8-729-901-02	TRANSISTOR DTC124XK	
Q912	8-729-923-65	TRANSISTOR DTA143ZK	
Q913	8-729-902-99	TRANSISTOR DTC114TK	
Q914	8-729-902-99	TRANSISTOR DTC114TK	
Q915	8-729-923-65	TRANSISTOR DTA143ZK	
Q916	8-729-901-02	TRANSISTOR DTC124XK	
		< RESISTOR >	
R812	1-216-011-00	METAL CHIP 27 5% 1/10W	
R813	1-216-011-00	METAL CHIP 27 5% 1/10W	
R814	1-216-025-00	METAL CHIP 100 5% 1/10W	
R815	1-216-025-00	METAL CHIP 100 5% 1/10W	
R816	1-216-017-00	METAL CHIP 47 5% 1/10W	
R820	1-216-025-00	METAL CHIP 100 5% 1/10W	
R841	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R851	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R860	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	(NEW)
R861	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	(NEW)
R901	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R902	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R903	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R904	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R905	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R906	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R907	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R908	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R909	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R911	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R912	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R913	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R914	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R916	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R917	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R918	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R919	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R920	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R921	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R922	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R923	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R924	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R925	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R926	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R927	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R928	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R929	1-216-104-00	METAL CHIP 200K 5% 1/10W	
R930	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R931	1-216-104-00	METAL CHIP 200K 5% 1/10W	
R932	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R933	1-216-104-00	METAL CHIP 200K 5% 1/10W	
R934	1-216-699-11	METAL CHIP 100K 0.5% 1/10W	
R935	1-216-104-00	METAL CHIP 200K 5% 1/10W	

MICRO COMPUTER SIGNAL

Ref. No.	Part No.	Description			Remark
R936	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R937	1-216-104-00	METAL CHIP	200K	5%	1/10W
R938	1-216-699-11	METAL CHIP	100K	0.5%	1/10W
R939	1-216-104-00	METAL CHIP	200K	5%	1/10W
R940	1-216-104-00	METAL CHIP	200K	5%	1/10W
R941	1-216-097-00	METAL CHIP	100K	5%	1/10W
R942	1-216-073-00	METAL CHIP	10K	5%	1/10W
R943	1-216-097-00	METAL CHIP	100K	5%	1/10W
R944	1-216-105-00	METAL CHIP	220K	5%	1/10W
R945	1-216-097-00	METAL CHIP	100K	5%	1/10W
R950	1-216-081-00	METAL CHIP	22K	5%	1/10W
R954	1-216-097-00	METAL CHIP	100K	5%	1/10W
R955	1-216-073-00	METAL CHIP	10K	5%	1/10W
R956	1-216-025-00	METAL CHIP	100	5%	1/10W
R957	1-216-097-00	METAL CHIP	100K	5%	1/10W
R958	1-216-097-00	METAL CHIP	100K	5%	1/10W
R959	1-216-097-00	METAL CHIP	100K	5%	1/10W
R961	1-216-103-00	METAL CHIP	180K	5%	1/10W
R963	1-216-049-00	METAL CHIP	1K	5%	1/10W
R964	1-216-049-00	METAL CHIP	1K	5%	1/10W
R965	1-216-049-00	METAL CHIP	1K	5%	1/10W
R966	1-216-049-00	METAL CHIP	1K	5%	1/10W
R967	1-216-049-00	METAL CHIP	1K	5%	1/10W
R968	1-216-049-00	METAL CHIP	1K	5%	1/10W
R969	1-216-049-00	METAL CHIP	1K	5%	1/10W
R970	1-216-049-00	METAL CHIP	1K	5%	1/10W
R971	1-216-097-00	METAL CHIP	100K	5%	1/10W
R972	1-216-049-00	METAL CHIP	1K	5%	1/10W
R973	1-216-081-00	METAL CHIP	22K	5%	1/10W
R974	1-216-121-00	METAL CHIP	1M	5%	1/10W
R975	1-216-049-00	METAL CHIP	1K	5%	1/10W
R976	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R977	1-216-081-00	METAL CHIP	22K	5%	1/10W
R978	1-216-121-00	METAL CHIP	1M	5%	1/10W
R979	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R980	1-216-097-00	METAL CHIP	100K	5%	1/10W
R981	1-216-097-00	METAL CHIP	100K	5%	1/10W
R982	1-216-073-00	METAL CHIP	10K	5%	1/10W
R983	1-216-073-00	METAL CHIP	10K	5%	1/10W
R984	1-216-073-00	METAL CHIP	10K	5%	1/10W
R985	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R986	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R987	1-216-049-00	METAL CHIP	1K	5%	1/10W
R988	1-216-049-00	METAL CHIP	1K	5%	1/10W
R989	1-216-049-00	METAL CHIP	1K	5%	1/10W
R990	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R991	1-216-049-00	METAL CHIP	1K	5%	1/10W
R992	1-216-049-00	METAL CHIP	1K	5%	1/10W
R993	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R994	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R995	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R996	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R997	1-216-049-00	METAL CHIP	1K	5%	1/10W
R998	1-216-011-00	METAL CHIP	27	5%	1/10W
R999	1-216-049-00	METAL CHIP	1K	5%	1/10W (NEW)

< VARIABLE RESISTOR >

RV901	1-241-581-11	RES, ADJ, CERMET 100K
RV902	1-241-581-11	RES, ADJ, CERMET 100K

< SWITCH >

S901	1-570-909-21	SWITCH, TACTIL (REFLOW TYPE) (RESET)
S902	1-572-499-11	SWITCH, TACTIL (TIME SET)
S903	1-572-499-11	SWITCH, TACTIL (LIGHT/BATT CHECK)
S904	1-570-909-21	SWITCH, TACTIL (REFLOW TYPE) (TEST)
S905	1-571-754-11	SWITCH, PUSH (1 KEY) (LOCK/POWER)

< CRYSTAL >

X901	1-577-703-21	VIBRATOR, CERAMIC (2MHz)
X902	1-577-703-21	VIBRATOR, CERAMIC (2MHz)
X903	1-567-098-00	OSCILLATOR, CRYSTAL (32.768KHz)

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*	A-3679-276-A	SIGNAL BOARD, COMPLETE (EXCEPT UK)
*	A-3679-291-A	SIGNAL BOARD, COMPLETE (UK)

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< CAPACITOR >

C1	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V
C2	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C3	1-164-346-11	CERAMIC CHIP	1uF	16V
C4	1-164-232-11	CERAMIC CHIP	0.01uF	10% 50V
C5	1-164-346-11	CERAMIC CHIP	1uF	16V
C6	1-164-346-11	CERAMIC CHIP	1uF	16V
C7	1-164-346-11	CERAMIC CHIP	1uF	16V
C8	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C9	1-135-161-21	TANTALUM CHIP	22uF	10% 10V
C10	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C11	1-162-958-11	CERAMIC CHIP	270PF	5% 50V
C12	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C13	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C14	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C17	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C18	1-124-778-00	ELECT CHIP	22uF	20% 6.3V
C19	1-162-638-11	CERAMIC CHIP	1uF	16V

SIGNAL

Ref. No.	Part No.	Description			Remark
C20	1-162-638-11	CERAMIC CHIP	1uF		16V
C21	1-162-638-11	CERAMIC CHIP	1uF		16V
C22	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C23	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C24	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C25	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C26	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C27	1-164-346-11	CERAMIC CHIP	1uF		16V
C28	1-164-346-11	CERAMIC CHIP	1uF		16V
C29	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C30	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C31	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C32	1-162-979-11	CERAMIC CHIP	0.0027uF	10%	50V
C33	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C34	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C35	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C36	1-162-979-11	CERAMIC CHIP	0.0027uF	10%	50V
C37	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C38	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C39	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C40	1-164-473-11	CERAMIC CHIP	820PF	10%	50V
C41	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C42	1-164-363-11	CERAMIC CHIP	560PF		50V
C43	1-164-730-11	CERAMIC CHIP	0.0012uF	5%	50V
C44	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C45	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C46	1-164-363-11	CERAMIC CHIP	560PF		50V
C47	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C48	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C49	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C50	1-164-363-11	CERAMIC CHIP	560PF		50V
C51	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C52	1-164-730-11	CERAMIC CHIP	0.0012uF	5%	50V
C53	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C54	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C55	1-164-730-11	CERAMIC CHIP	0.0012uF	5%	50V
C56	1-164-363-11	CERAMIC CHIP	560PF		50V
C57	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C58	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C59	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C60	1-162-958-11	CERAMIC CHIP	270PF	5%	50V
C61	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C62	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C63	1-164-363-11	CERAMIC CHIP	560PF		50V
C64	1-164-113-11	CERAMIC CHIP	20PF	5%	50V
C65	1-164-730-11	CERAMIC CHIP	0.0012uF	5%	50V
C66	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C67	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C68	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C69	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C70	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C71	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C72	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C73	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C74	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C75	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C76	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C77	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C78	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C79	1-164-346-11	CERAMIC CHIP	1uF		16V
C80	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C81	1-162-934-11	CERAMIC CHIP	3PF	0.25PF	50V
C82	1-162-935-11	CERAMIC CHIP	4PF	0.25PF	50V
C83	1-162-937-11	CERAMIC CHIP	6PF	0.5PF	50V
C84	1-164-346-11	CERAMIC CHIP	1uF		16V
C85	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C86	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C87	1-164-346-11	CERAMIC CHIP	1uF		16V
C88	1-164-346-11	CERAMIC CHIP	1uF		16V
C89	1-164-346-11	CERAMIC CHIP	1uF		16V
C90	1-164-346-11	CERAMIC CHIP	1uF		16V
C91	1-164-346-11	CERAMIC CHIP	1uF		16V
C92	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C93	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C94	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C95	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C96	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C97	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C98	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C99	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C100	1-162-940-11	CERAMIC CHIP	9PF	0.5PF	50V
C101	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C112	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C114	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C115	1-164-346-11	CERAMIC CHIP	1uF		16V
C116	1-164-232-11	CERAMIC CHIP	0.01uF	10%	50V
C117	1-124-778-00	ELECT CHIP	22uF	20%	6.3V

SIGNAL

Ref. No.	Part No.	Description			Remark
C118	1-164-346-11	CERAMIC CHIP	1uF		16V
C119	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-164-346-11	CERAMIC CHIP	1uF		16V
C121	1-164-346-11	CERAMIC CHIP	1uF		16V
C122	1-164-362-11	CERAMIC CHIP	470PF		50V
C123	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C124	1-164-346-11	CERAMIC CHIP	1uF		16V
C125	1-164-346-11	CERAMIC CHIP	1uF		16V
C126	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C127	1-162-948-11	CERAMIC CHIP	39PF	5%	50V
C128	1-162-948-11	CERAMIC CHIP	39PF	5%	50V
C129	1-162-979-11	CERAMIC CHIP	0.0027uF	10%	50V
C130	1-164-730-11	CERAMIC CHIP	0.0012uF	5%	50V
C131	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C132	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C134	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C135	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C136	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C137	1-164-346-11	CERAMIC CHIP	1uF		16V
C138	1-164-346-11	CERAMIC CHIP	1uF		16V
C139	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C140	1-164-346-11	CERAMIC CHIP	1uF		16V
C141	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C142	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C143	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C144	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C145	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C146	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C147	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C148	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C149	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C150	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C151	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C152	1-162-935-11	CERAMIC CHIP	100PF	5%	50V
C153	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C154	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C155	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C156	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C157	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C158	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C159	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C160	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C161	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C162	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C163	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C164	1-164-346-11	CERAMIC CHIP	1uF		16V
C165	1-164-346-11	CERAMIC CHIP	1uF		16V
C166	1-126-205-11	ELECT CHIP	47uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C167	1-164-346-11	CERAMIC CHIP	1uF		16V
C168	1-164-346-11	CERAMIC CHIP	1uF		16V
C169	1-164-346-11	CERAMIC CHIP	1uF		16V
C170	1-164-346-11	CERAMIC CHIP	1uF		16V
C171	1-164-346-11	CERAMIC CHIP	1uF		16V
C172	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C173	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C174	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C175	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C176	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C177	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C178	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C179	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C180	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C181	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C182	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C183	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C184	1-164-346-11	CERAMIC CHIP	1uF		16V
C185	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C186	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C187	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C188	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C189	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C190	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C191	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C192	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C193	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C194	1-164-346-11	CERAMIC CHIP	1uF		16V
C195	1-128-361-11	ELECT	470uF	20%	10V
C196	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C197	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C198	1-128-361-11	ELECT	470uF	20%	10V
C199	1-128-361-11	ELECT	470uF	20%	10V
C200	1-164-346-11	CERAMIC CHIP	1uF	16V	(NEW)
C201	1-162-934-11	CERAMIC CHIP	3PF	0.25PF	50V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-162-930-11	CERAMIC CHIP	1PF	0.25PF	50V
C205	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C207	1-161-051-00	CERAMIC	0.01uF	10%	50V
C208	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C209	1-135-072-21	TANTALUM CHIP	0.22uF	20%	35V
C210	1-164-949-11	CERAMIC CHIP	47PF	5%	50V
C211	1-130-834-00	FILM	1uF	10%	63V
C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C213	1-164-362-11	CERAMIC CHIP	470PF		50V
C214	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C215	1-126-205-11	ELECT CHIP	47uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C216	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C217	1-164-149-11	CERAMIC CHIP	36PF	5%	50V
C218	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C219	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C220	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C221	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C222	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C223	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C224	1-164-362-11	CERAMIC CHIP	470PF		50V
C225	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C226	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C227	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C228	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C229	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C230	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C231	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C232	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C233	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C234	1-164-346-11	CERAMIC CHIP	1uF		16V
C235	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C236	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C237	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C238	1-164-346-11	CERAMIC CHIP	1uF		16V
C239	1-164-346-11	CERAMIC CHIP	1uF		16V
C240	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C241	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C242	1-135-161-21	TANTALUM CHIP	22uF	10%	10V
C243	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C244	1-126-246-11	ELECT CHIP	220uF	20%	4V
C245	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C246	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C247	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C248	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C249	1-164-145-11	CERAMIC CHIP	390PF	5%	50V
C250	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C251	1-164-346-11	CERAMIC CHIP	1uF		16V
C252	1-164-346-11	CERAMIC CHIP	1uF		16V
C253	1-162-934-11	CERAMIC CHIP	3PF	0.25PF	50V

< FILTER >

CD1	1-577-658-11	FILTER, CERAMIC	(10.7MHz)
CF1	1-567-943-11	FILTER, CERAMIC	(455KHz)
CF2	1-579-425-11	FILTER, CERAMIC	(457KHz)
CF3	1-577-658-11	FILTER, CERAMIC	(10.7MHz)
CF4	1-577-658-11	FILTER, CERAMIC	(10.7MHz)

< CONNECTOR >

* CN1	1-566-430-11	PIN, CONNECTOR 2P	

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
CR1	1-579-420-11	VIBRATOR, CERAMIC (453KHz)	
CR2	1-579-421-11	VIBRATOR, CERAMIC (457KHz)	
		< TRIMMER >	
CT1	1-141-424-11	CAP, ADJ 30PF	
CT2	1-141-424-11	CAP, ADJ 30PF	
CT3	1-141-422-11	CAP, ADJ 10PF	
CT4	1-141-422-11	CAP, ADJ 10PF	
CT6	1-141-422-11	CAP, ADJ 10PF	
		< DIODE >	
D1	8-719-123-79	DIODE 1SS279	
D2	8-719-123-79	DIODE 1SS279	
D3	8-719-400-18	DIODE MA152WK	
D4	8-719-400-18	DIODE MA152WK	
D5	8-719-123-79	DIODE 1SS279	
D6	8-719-123-79	DIODE 1SS279	
D7	8-719-400-18	DIODE MA152WK	
D8	8-719-104-34	DIODE 1S2836	
D9	8-719-400-18	DIODE MA152WK	
D10	8-719-104-34	DIODE 1S2836	
D11	8-719-123-79	DIODE 1SS279	
D12	8-719-123-79	DIODE 1SS279	
D13	8-719-123-79	DIODE 1SS279	
D14	8-719-123-79	DIODE 1SS279	
D15	8-719-123-79	DIODE 1SS279	
D16	8-719-123-79	DIODE 1SS279	
D17	8-719-123-79	DIODE 1SS279	
D18	8-719-123-79	DIODE 1SS279	
D19	8-719-123-79	DIODE 1SS279	
D20	8-719-123-79	DIODE 1SS279	
D21	8-719-123-79	DIODE 1SS279	
D22	8-719-123-79	DIODE 1SS279	
D23	8-719-123-79	DIODE 1SS279	
D24	8-719-123-79	DIODE 1SS279	
D25	8-719-123-79	DIODE 1SS279	
D26	8-719-123-79	DIODE 1SS279	
D27	8-719-123-79	DIODE 1SS279	
D28	8-719-123-79	DIODE 1SS279	
D29	8-719-400-18	DIODE MA152WK	
D30	8-719-400-18	DIODE MA152WK	
D31	8-719-400-18	DIODE MA152WK	
D32	8-719-400-18	DIODE MA152WK	
D33	8-719-938-72	DIODE SB01-05CP	
D34	8-719-938-72	DIODE SB01-05CP	
D35	8-719-123-79	DIODE 1SS279	
D36	8-713-300-57	DIODE 1T-33	

SIGNAL

Ref. No.	Part No.	Description	Remark
D37	8-713-300-57	DIODE 1T-33	
D38	8-713-300-57	DIODE 1T-33	
D39	8-713-300-57	DIODE 1T-33	
D40	8-719-400-18	DIODE MA152WK	
D41	8-713-300-57	DIODE 1T-33	
D42	8-719-106-98	DIODE RD16M-B	
D43	8-719-400-18	DIODE MA152WK	
D44	8-719-105-91	DIODE RD5.6M-B2	
D45	8-719-938-72	DIODE SB01-05CP	
D46	8-719-938-72	DIODE SB01-05CP	
D47	8-719-400-18	DIODE MA152WK	
D48	8-719-104-34	DIODE 1S2836	
		< IC >	
IC1	8-759-926-11	IC SN74HC138ANS	
IC2	8-752-050-00	IC CX20111	
IC3	8-759-998-98	IC LM358D	
IC4	8-759-998-98	IC LM358D	
IC5	8-759-804-98	IC LA3335M	
IC6	8-759-998-98	IC LM358D	
IC7	8-759-144-31	IC uPC1316C	
IC8	8-752-323-84	IC CXD1118M	
IC9	8-759-031-84	IC SC7S04F	
IC10	8-759-801-15	IC LA5003M	
		< JACK >	
J1	1-569-187-11	JACK (AM EXE ANT)	
J2	1-563-330-11	JACK (TAPE REMOTE)	
J3	1-573-670-11	JACK 1P (TAPE LINE OUT)	
J4	1-507-806-00	JACK 1P (HEADPHONE)	
J5	1-573-180-11	JACK, DC (DC IN 6V)	
		< COIL >	
L2	1-410-793-11	INDUCTOR CHIP 2.2mH	
L3	1-410-991-11	INDUCTOR CHIP 0.68uH	
L4	1-410-995-41	INDUCTOR CHIP 1.5uH	
L5	1-410-212-51	INDUCTOR CHIP 47uH	
L6	1-412-002-31	INDUCTOR CHIP 4.7uH	
L7	1-412-001-31	INDUCTOR CHIP 3.9uH	
L8	1-410-991-11	INDUCTOR CHIP 0.68uH	
L9	1-410-994-11	INDUCTOR CHIP 1.2uH	
L10	1-412-008-11	INDUCTOR CHIP 15uH	
L11	1-410-994-11	INDUCTOR CHIP 1.2uH	
L12	1-410-994-11	INDUCTOR CHIP 1.2uH	
L13	1-412-002-31	INDUCTOR CHIP 4.7uH	
L14	1-410-998-31	INDUCTOR CHIP 2.7uH	
L15	1-410-995-41	INDUCTOR CHIP 1.5uH	
L16	1-410-997-31	INDUCTOR CHIP 2.2uH	
L17	1-410-212-51	INDUCTOR CHIP 47uH	

Ref. No.	Part No.	Description	Remark
L18	1-410-993-11	INDUCTOR CHIP 1uH	
L19	1-410-994-11	INDUCTOR CHIP 1.2uH	
L20	1-412-004-31	INDUCTOR CHIP 6.8uH	
L21	1-410-997-31	INDUCTOR CHIP 2.2uH	
L22	1-410-991-11	INDUCTOR CHIP 0.68uH	
L23	1-410-988-11	INDUCTOR CHIP 0.39uH	
L24	1-412-002-31	INDUCTOR CHIP 4.7uH	
L25	1-410-987-11	INDUCTOR CHIP 0.33uH	
L26	1-410-987-11	INDUCTOR CHIP 0.33uH	
L27	1-410-996-31	INDUCTOR CHIP 1.8uH	
L28	1-410-993-11	INDUCTOR CHIP 1uH	
L29	1-410-991-11	INDUCTOR CHIP 0.68uH	
L30	1-410-993-11	INDUCTOR CHIP 1uH	
L31	1-412-006-31	INDUCTOR CHIP 10uH	
L32	1-410-987-11	INDUCTOR CHIP 0.33uH	
L33	1-410-987-11	INDUCTOR CHIP 0.33uH	
L34	1-410-995-41	INDUCTOR CHIP 1.5uH	
L35	1-410-993-11	INDUCTOR CHIP 1uH	
L36	1-410-985-11	INDUCTOR CHIP 0.22uH	
L37	1-410-987-11	INDUCTOR CHIP 0.33uH	
L38	1-412-001-31	INDUCTOR CHIP 3.9uH	
L39	1-410-997-31	INDUCTOR CHIP 2.2uH	
L40	1-410-990-31	INDUCTOR CHIP 0.56uH	
L41	1-410-999-11	INDUCTOR CHIP 3.3uH	
L42	1-410-985-11	INDUCTOR CHIP 0.22uH	
L43	1-412-006-31	INDUCTOR CHIP 10uH	
L44	1-410-204-31	INDUCTOR CHIP 10uH	
L45	1-410-981-31	INDUCTOR CHIP 0.1uH	
L46	1-410-981-31	INDUCTOR CHIP 0.1uH	
L47	1-410-985-11	INDUCTOR CHIP 0.22uH	
L48	1-410-993-11	INDUCTOR CHIP 1uH	
L49	1-412-002-31	INDUCTOR CHIP 4.7uH	
L50	1-412-006-31	INDUCTOR CHIP 10uH	
L51	1-410-981-31	INDUCTOR CHIP 0.1uH	
L52	1-410-981-31	INDUCTOR CHIP 0.1uH	
L53	1-410-988-11	INDUCTOR CHIP 0.39uH	
L54	1-410-220-31	INDUCTOR CHIP 220uH	
L55	1-410-209-51	INDUCTOR CHIP 27uH	
		< TRANSISTOR >	
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2	8-729-116-64	TRANSISTOR 2SK508-K51	
Q3	8-729-116-64	TRANSISTOR 2SK508-K51	
Q4	8-729-901-05	TRANSISTOR DTA124EK (FORMER)	
Q4	8-729-807-87	TRANSISTOR 2SB1295-UL6 (NEW)	
Q5	8-729-116-64	TRANSISTOR 2SK508-K51	
Q6	8-729-116-64	TRANSISTOR 2SK508-K51	
Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6	

SIGNAL

Ref. No.	Part No.	Description		Remark
Q8	8-729-901-00	TRANSISTOR	DTC124EK	
Q9	8-729-901-05	TRANSISTOR	DTA124EK	
Q10	8-729-901-05	TRANSISTOR	DTA124EK	
Q11	8-729-901-05	TRANSISTOR	DTA124EK	
Q12	8-729-901-05	TRANSISTOR	DTA124EK	
Q13	8-729-901-05	TRANSISTOR	DTA124EK	
Q14	8-729-901-05	TRANSISTOR	DTA124EK	
Q15	8-729-116-64	TRANSISTOR	2SK508-K51	
Q16	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q17	8-729-116-64	TRANSISTOR	2SK508-K51	
Q18	8-729-116-64	TRANSISTOR	2SK508-K51	
Q19	8-729-114-62	TRANSISTOR	3SK-132A-U35	
Q20	8-729-116-64	TRANSISTOR	2SK508-K51	
Q21	8-729-901-05	TRANSISTOR	DTA124EK	
Q22	8-729-901-00	TRANSISTOR	DTC124EK	
Q23	8-729-901-00	TRANSISTOR	DTC124EK	
Q24	8-729-901-05	TRANSISTOR	DTA124EK	
Q25	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q26	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q27	8-729-901-00	TRANSISTOR	DTC124EK	
Q28	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q29	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q30	8-729-901-05	TRANSISTOR	DTA124EK	
Q31	8-729-114-62	TRANSISTOR	3SK-132A-U35	
Q32	8-729-901-00	TRANSISTOR	DTC124EK	
Q33	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q34	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q35	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q36	8-729-901-05	TRANSISTOR	DTA124EK	
Q37	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q38	8-729-901-00	TRANSISTOR	DTC124EK	
Q39	8-729-923-65	TRANSISTOR	DTA143ZK	
Q40	8-729-920-38	TRANSISTOR	2SC2059K-N	
Q41	8-729-208-47	TRANSISTOR	2SK210-GR	
Q42	8-729-220-93	TRANSISTOR	2SK209-G	
Q43	8-729-220-93	TRANSISTOR	2SK209-G	
Q44	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q45	8-729-920-38	TRANSISTOR	2SC2059K-N	
Q46	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q47	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q48	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q49	8-729-901-00	TRANSISTOR	DTC124EK	
Q50	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q51	8-729-800-36	TRANSISTOR	2SD1048-X6	
Q52	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q53	8-729-807-87	TRANSISTOR	2SB1295-UL6	
Q54	8-729-901-00	TRANSISTOR	DTC124EK	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R1	1-216-845-11	METAL CHIP	100K	5%	1/16W (NEW)
R2	1-216-979-11	METAL CHIP	10	5%	1/16W
R3	1-216-809-11	METAL CHIP	100	5%	1/16W
R4	1-216-833-11	METAL CHIP	10K	5%	1/16W (NEW)
R4	1-216-864-11	METAL CHIP	0	5%	1/16W (FORMER)
R5	1-216-821-11	METAL CHIP	1K	5%	1/16W
R6	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R7	1-216-813-11	METAL CHIP	220	5%	1/16W
R8	1-216-979-11	METAL CHIP	10	5%	1/16W
R9	1-216-807-11	METAL CHIP	68	5%	1/16W
R10	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R11	1-216-979-11	METAL CHIP	10	5%	1/16W
R12	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R13	1-216-081-00	METAL CHIP	22K	5%	1/10W
R14	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R15	1-216-833-11	METAL CHIP	10K	5%	1/16W
R16	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R17	1-216-821-11	METAL CHIP	1K	5%	1/16W
R18	1-216-809-11	METAL CHIP	100	5%	1/16W
R19	1-216-815-11	METAL CHIP	330	5%	1/16W
R20	1-216-979-11	METAL CHIP	10	5%	1/16W
R21	1-216-979-11	METAL CHIP	10	5%	1/16W
R22	1-216-807-11	METAL CHIP	68	5%	1/16W
R23	1-216-813-11	METAL CHIP	220	5%	1/16W
R24	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R25	1-216-979-11	METAL CHIP	10	5%	1/16W
R26	1-216-818-11	METAL CHIP	560	5%	1/16W
R27	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R28	1-216-806-11	METAL CHIP	56	5%	1/16W
R29	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R30	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R31	1-216-815-11	METAL CHIP	330	5%	1/16W
R32	1-216-806-11	METAL CHIP	56	5%	1/16W
R33	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R34	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R35	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R36	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R37	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R38	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R39	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R40	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R41	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R42	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R43	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R44	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R45	1-216-025-00	METAL CHIP	100	5%	1/10W

SIGNAL

Ref. No.	Part No.	Description			Remark
R46	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R47	1-216-817-11	METAL CHIP	470	5%	1/16W
R48	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R49	1-216-817-11	METAL CHIP	470	5%	1/16W
R50	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R51	1-216-979-11	METAL CHIP	10	5%	1/16W
R52	1-216-815-11	METAL CHIP	330	5%	1/16W
R53	1-216-845-11	METAL CHIP	100K	5%	1/16W
R54	1-216-813-11	METAL CHIP	220	5%	1/16W
R55	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R56	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R57	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R58	1-216-845-11	METAL CHIP	100K	5%	1/16W
R59	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R60	1-216-809-11	METAL CHIP	100	5%	1/16W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R62	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R63	1-216-809-11	METAL CHIP	100	5%	1/16W
R64	1-216-805-11	METAL CHIP	47	5%	1/16W
R65	1-216-845-11	METAL CHIP	100K	5%	1/16W
R66	1-216-841-11	METAL CHIP	47K	5%	1/16W
R67	1-216-833-11	METAL CHIP	10K	5%	1/16W
R68	1-216-809-11	METAL CHIP	100	5%	1/16W
R69	1-216-821-11	METAL CHIP	1K	5%	1/16W
R70	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R71	1-216-809-11	METAL CHIP	100	5%	1/16W
R72	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R73	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R74	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R75	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R76	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R77	1-216-845-11	METAL CHIP	100K	5%	1/16W
R78	1-216-821-11	METAL CHIP	1K	5%	1/16W
R79	1-216-821-11	METAL CHIP	1K	5%	1/16W
R80	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R81	1-216-833-11	METAL CHIP	10K	5%	1/16W
R82	1-216-815-11	METAL CHIP	330	5%	1/16W
R83	1-216-821-11	METAL CHIP	1K	5%	1/16W
R84	1-216-833-11	METAL CHIP	10K	5%	1/16W
R85	1-216-845-11	METAL CHIP	100K	5%	1/16W
R86	1-216-841-11	METAL CHIP	47K	5%	1/16W
R87	1-216-833-11	METAL CHIP	10K	5%	1/16W
R88	1-216-841-11	METAL CHIP	47K	5%	1/16W
R89	1-216-821-11	METAL CHIP	1K	5%	1/16W
R90	1-216-802-11	METAL CHIP	27	5%	1/16W
R91	1-216-845-11	METAL CHIP	100K	5%	1/16W
R92	1-216-833-11	METAL CHIP	10K	5%	1/16W
R93	1-216-076-00	METAL CHIP	13K	5%	1/10W
R94	1-216-842-11	METAL CHIP	56K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R95	1-216-841-11	METAL CHIP	47K	5%	1/16W
R96	1-216-845-11	METAL CHIP	100K	5%	1/16W
R97	1-216-839-11	METAL CHIP	33K	5%	1/16W
R98	1-216-833-11	METAL CHIP	10K	5%	1/16W
R99	1-216-843-11	METAL CHIP	68K	5%	1/16W
R100	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R101	1-216-813-11	METAL CHIP	220	5%	1/16W
R102	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R103	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R104	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R105	1-216-821-11	METAL CHIP	1K	5%	1/16W
R106	1-216-841-11	METAL CHIP	47K	5%	1/16W
R107	1-216-839-11	METAL CHIP	33K	5%	1/16W
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W
R109	1-216-845-11	METAL CHIP	100K	5%	1/16W
R110	1-216-845-11	METAL CHIP	100K	5%	1/16W
R111	1-216-847-11	METAL CHIP	150K	5%	1/16W
R112	1-216-851-11	METAL CHIP	330K	5%	1/16W
R113	1-216-802-11	METAL CHIP	27	5%	1/16W
R114	1-216-821-11	METAL CHIP	1K	5%	1/16W
R115	1-216-837-11	METAL CHIP	22K	5%	1/16W
R116	1-216-833-11	METAL CHIP	10K	5%	1/16W
R117	1-216-821-11	METAL CHIP	1K	5%	1/16W
R118	1-216-845-11	METAL CHIP	100K	5%	1/16W
R119	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R120	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R121	1-216-845-11	METAL CHIP	100K	5%	1/16W
R122	1-216-805-11	METAL CHIP	47	5%	1/16W
R123	1-216-809-11	METAL CHIP	100	5%	1/16W
R124	1-216-845-11	METAL CHIP	100K	5%	1/16W
R125	1-216-849-11	METAL CHIP	220K	5%	1/16W
R126	1-216-809-11	METAL CHIP	100	5%	1/16W
R127	1-216-845-11	METAL CHIP	100K	5%	1/16W
R128	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R129	1-216-841-11	METAL CHIP	47K	5%	1/16W
R130	1-216-833-11	METAL CHIP	10K	5%	1/16W
R131	1-216-802-11	METAL CHIP	27	5%	1/16W
R132	1-216-088-00	METAL CHIP	43K	5%	1/10W
R133	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R134	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R135	1-216-809-11	METAL CHIP	100	5%	1/16W
R136	1-216-851-11	METAL CHIP	330K	5%	1/16W
R137	1-216-841-11	METAL CHIP	47K	5%	1/16W
R138	1-216-841-11	METAL CHIP	47K	5%	1/16W
R139	1-216-847-11	METAL CHIP	150K	5%	1/16W
R140	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R141	1-216-833-11	METAL CHIP	10K	5%	1/16W
R142	1-216-833-11	METAL CHIP	10K	5%	1/16W
R143	1-216-829-11	METAL CHIP	4.7K	5%	1/16W

SIGNAL

Ref. No.	Part No.	Description			Remark
R144	1-216-821-11	METAL CHIP	1K	5%	1/16W
R145	1-216-821-11	METAL CHIP	1K	5%	1/16W
R146	1-216-839-11	METAL CHIP	33K	5%	1/16W
R147	1-216-833-11	METAL CHIP	10K	5%	1/16W
R148	1-216-839-11	METAL CHIP	33K	5%	1/16W
R149	1-216-839-11	METAL CHIP	33K	5%	1/16W
R150	1-216-835-11	METAL CHIP	15K	5%	1/16W
R151	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R152	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R153	1-216-833-11	METAL CHIP	10K	5%	1/16W
R154	1-216-837-11	METAL CHIP	22K	5%	1/16W
R156	1-216-839-11	METAL CHIP	33K	5%	1/16W
R157	1-216-833-11	METAL CHIP	10K	5%	1/16W
R158	1-216-839-11	METAL CHIP	33K	5%	1/16W
R159	1-216-839-11	METAL CHIP	33K	5%	1/16W
R160	1-216-835-11	METAL CHIP	15K	5%	1/16W
R161	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R162	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R163	1-216-833-11	METAL CHIP	10K	5%	1/16W
R164	1-216-837-11	METAL CHIP	22K	5%	1/16W
R166	1-216-821-11	METAL CHIP	1K	5%	1/16W
R167	1-216-803-11	METAL CHIP	33	5%	1/16W
R168	1-216-821-11	METAL CHIP	1K	5%	1/16W
R169	1-216-803-11	METAL CHIP	33	5%	1/16W
R170	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R171	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R172	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R173	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R174	1-216-809-11	METAL CHIP	100	5%	1/16W
R175	1-216-809-11	METAL CHIP	100	5%	1/16W
R176	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R177	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R178	1-216-845-11	METAL CHIP	100K	5%	1/16W
R179	1-216-845-11	METAL CHIP	100K	5%	1/16W
R180	1-216-845-11	METAL CHIP	100K	5%	1/16W
R181	1-216-817-11	METAL CHIP	470	5%	1/16W
R182	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R183	1-216-815-11	METAL CHIP	330	5%	1/16W
R184	1-216-802-11	METAL CHIP	27	5%	1/16W
R185	1-216-809-11	METAL CHIP	100	5%	1/16W
R186	1-216-843-11	METAL CHIP	68K	5%	1/16W
R187	1-216-809-11	METAL CHIP	100	5%	1/16W
R188	1-216-803-11	METAL CHIP	33	5%	1/16W
R189	1-216-839-11	METAL CHIP	33K	5%	1/16W
R190	1-216-839-11	METAL CHIP	33K	5%	1/16W
R191	1-216-833-11	METAL CHIP	10K	5%	1/16W
R192	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R193	1-216-841-11	METAL CHIP	47K	5%	1/16W
R194	1-216-824-11	METAL CHIP	1.8K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R195	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R196	1-216-837-11	METAL CHIP	22K	5%	1/16W
R197	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R198	1-216-802-11	METAL CHIP	27	5%	1/16W
R199	1-216-833-11	METAL CHIP	10K	5%	1/16W
R200	1-216-833-11	METAL CHIP	10K	5%	1/16W
R201	1-216-833-11	METAL CHIP	10K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-845-11	METAL CHIP	100K	5%	1/16W
R204	1-216-817-11	METAL CHIP	470	5%	1/16W
R205	1-216-845-11	METAL CHIP	100K	5%	1/16W
R206	1-216-845-11	METAL CHIP	100K	5%	1/16W
R207	1-216-843-11	METAL CHIP	68K	5%	1/16W
R208	1-216-821-11	METAL CHIP	1K	5%	1/16W
R209	1-216-097-00	METAL CHIP	100K	5%	1/10W
R210	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R211	1-216-821-11	METAL CHIP	1K	5%	1/16W
R212	1-216-845-11	METAL CHIP	100K	5%	1/16W
R213	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R214	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R215	1-216-821-11	METAL CHIP	1K	5%	1/16W
R216	1-216-821-11	METAL CHIP	1K	5%	1/16W
R217	1-216-864-11	METAL CHIP	0	5%	1/16W
R218	1-216-845-11	METAL CHIP	100K	5%	1/16W
R219	1-216-845-11	METAL CHIP	100K	5%	1/16W
R220	1-216-813-11	METAL CHIP	220	5%	1/16W
R221	1-216-809-11	METAL CHIP	100	5%	1/16W (NEW)

< VARIABLE RESISTOR >

RV1	9-910-999-34	RES, ADJ, METAL GLAZE 10K
RV2	1-238-869-11	RES, VAR, SLIDE 20/20 (VOLUME)

< SWITCH >

S1	1-572-855-11	SWITCH, SLIDE (AM SENS)
S2	1-572-272-11	SWITCH, SLIDE (STEREO/MONO)
S3	1-572-855-11	SWITCH, SLIDE (TONE)

< TRANSFORMER >

T1	1-426-357-11	TRANSFORMER, RF
T2	1-426-357-11	TRANSFORMER, RF
T3	1-426-357-11	TRANSFORMER, RF
T4	1-404-976-11	TRANSFORMER, IF
T5	1-404-975-11	TRANSFORMER, IF
T6	1-404-973-11	TRANSFORMER, IF
T7	1-404-974-11	TRANSFORMER, IF
T8	1-404-972-11	TRANSFORMER, IF
T9	1-460-178-11	COIL (WITH CORE)
T10	1-460-179-11	COIL (WITH CORE)

SIGNAL

Ref. No.	Part No.	Description	Remark
T11	1-460-180-11	COIL (WITH CORE)	
T12	1-424-549-11	COIL, OSCILLATION	
T13	1-460-177-11	COIL (WITH CORE)	
T14	1-450-627-11	TRANSFORMER, DC-DC CONVERTER	
		< CRYSTAL >	
X1	1-567-386-11	OSCILLATOR, CRYSTAL (6.275MHz)	
X2	1-578-062-11	VIBRATOR, CRYSTAL (55.39MHz)	
XF1	1-527-372-00	FILTER, CRYSTAL (55.845MHz)	
		MISCELLANEOUS	
51	1-572-854-11	SWITCH, RUBBER KEY	
102	1-535-946-11	CONDUCTOR, CONNECTION (LCD)	
105	1-640-484-11	PC BOARD, KEY	
112	1-640-874-11	PC BOARD, FLEXIBLE	
121	1-535-947-11	CONDUCTOR, CONNECTION	
124	1-452-629-11	MAGNET	
ANT1	1-501-512-11	ANTENNA, TELESCOPIC	
ANT2	1-402-574-11	ANTENNA, FERRITE-ROD (LW/MW)	
BZ1	1-529-102-11	BUZZER	
LCD901	1-809-480-11	DISPLAY PANEL, LIQUID CRYSTAL	
SP1	1-544-577-11	SPEAKER (7.7CM)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
⚠	1-465-775-11	ADAPTOR, AC (AC-E600) (AEP, G, FR, E, EA, IT)	
⚠	1-465-846-11	ADAPTOR, AC (AC-E602) (CND)	
⚠	1-465-847-11	ADAPTOR, AC (AC-E603) (UK)	
⚠	1-465-953-11	ADAPTOR, AC (AC-E604) (US)	
⚠	1-557-787-11	CONNECTOR, CONNECTION	
⚠	1-569-008-11	ADAPTER, CONVERSION 2P (AEP, G, FR, E, EA, IT)	
⚠	1-573-856-11	ADAPTOR, CHANGE (CND)	
	3-367-445-11	HAND BOOK (EXCEPT EA)	
	3-370-440-01	CASE, CARRYING	
*	3-371-758-01	INDIVIDUAL CARTON	
	3-753-912-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE, SWEDISH) (US, AE1, 2AE2, FR, UK, E)	
	3-753-912-21	MANUAL, INSTRUCTION (ENGLISH, GERMAN, FRENCH, ITALIAN, DUTCH) (CND, 1AE2, G, IT, AUS)	
	3-753-912-51	MANUAL, INSTRUCTION (ENGLISH, ARABIC) (EA)	
	3-893-802-08	BOOK, GUIDE, WAVE (EXCEPT EA)	
	8-953-314-95	HEADPHONE MDR-E757/BK SET	
	X-3321-270-1	ATTACHMENT	

HARDWARE LIST

#1	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT
#2	7-685-152-19	SCREW +BTP 3X25 TYPE2 N-S
#3	7-685-648-79	SCREW +BTP 3X12 TYPE2 N-S
#4	7-624-106-04	STOP RING 3.0, TYPE-E
#5	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT
#6	7-624-104-04	STOP RING 2.0, TYPE-E
#7	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ICF-SW55

SONY

SERVICE MANUAL

Ver 1.1 2002.12

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

SUPPLEMENT - 1

File this Supplement with the Service Manual.

Subject :
- **CHANGE OF ELECTRICAL PARTS**
- **CHANGE OF MICRO COMPUTER BOARD**

9-956-854-81

Electrical parts and microcomputer board became changes from the middle of the production.

HOW TO DISTINGUISH A NEW TYPE

It is a new type if the code No. printed on the microcomputer board is 1-640-742-15.

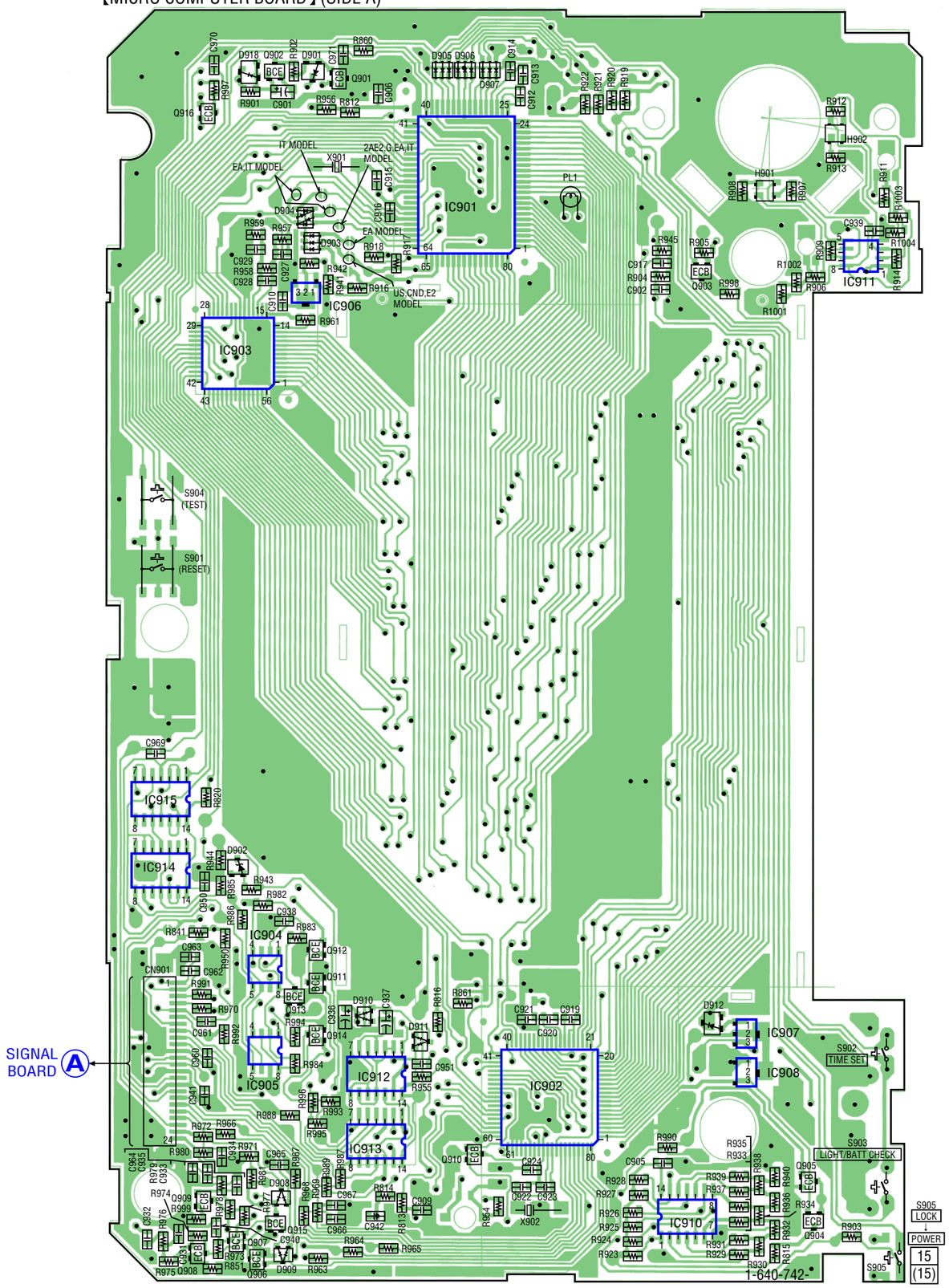
• CHANGED ELECTRICAL PART LIST

MICRO COMPUTER

Ref.No.	FORMER TYPE Part No.	Description			NEW TYPE Part No.	Description			
C925	1-163-089-00	CERAMIC CHIP	6PF	50V	————				
IC904	8-759-551-69	IC M6M80021FP (10pin)			8-759-464-95	IC AK6420AF-E2 (8pin)			
IC905	8-759-551-69	IC M6M80021FP (10pin)			8-759-464-95	IC AK6420AF-E2 (8pin)			
R1001	————				1-216-091-00	METAL CHIP	56K	5%	1/10W
R1002	————				1-216-086-00	METAL CHIP	36K	5%	1/10W
R1003	————				1-216-091-00	METAL CHIP	56K	5%	1/10W
R1004	————				1-216-086-00	METAL CHIP	36K	5%	1/10W
RV901	1-241-581-11	RES, ADJ, CERMET	100K		————				
RV902	1-241-581-11	RES, ADJ, CERMET	100K		————				

PRINTED WIRING BOARD – MICRO COMPUTER SECTION – Last digit : -15

【MICRO COMPUTER BOARD】(SIDE A)



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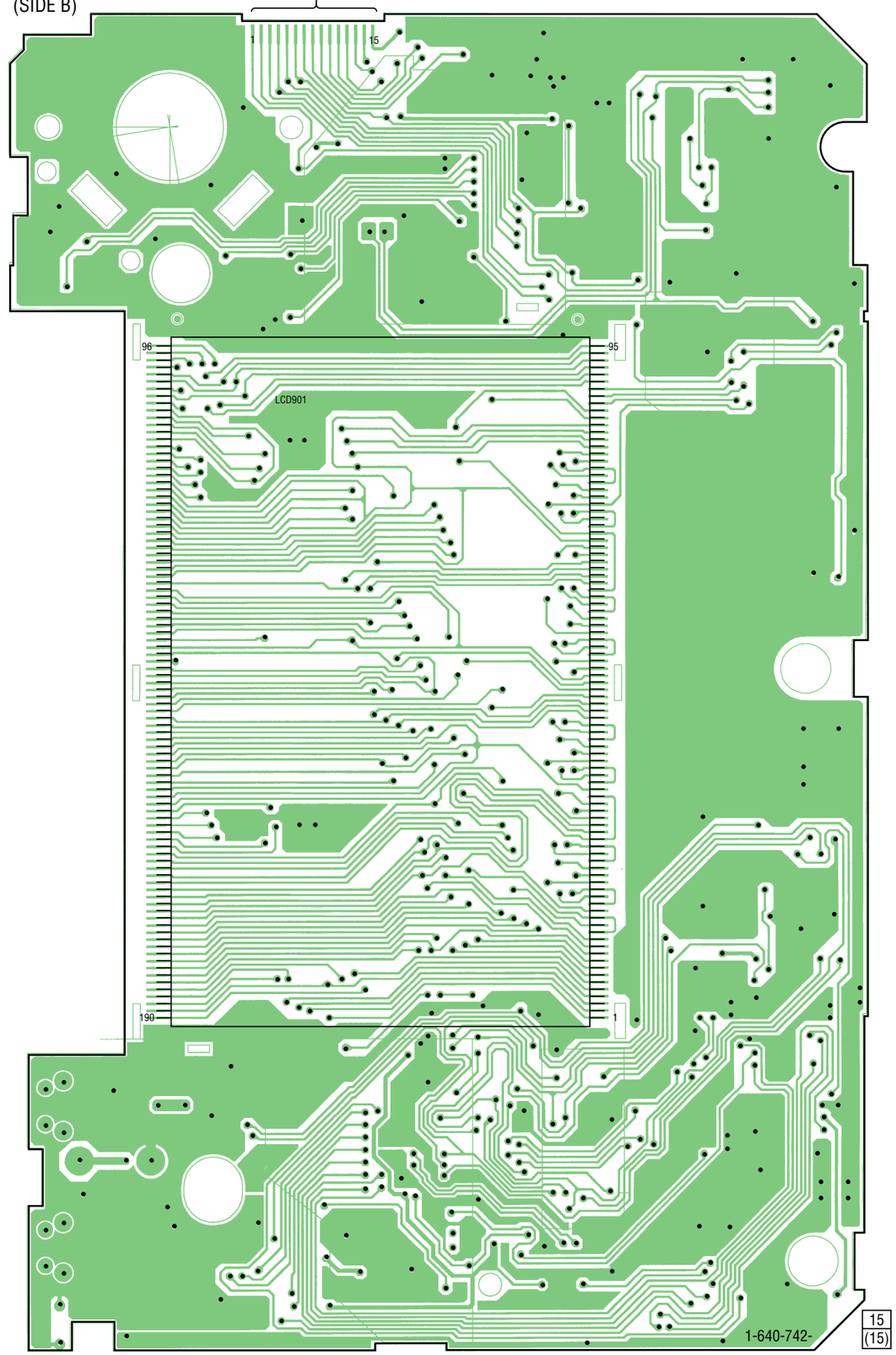
【MICRO COMPUTER BOARD】(SIDE B)

KEY BOARD

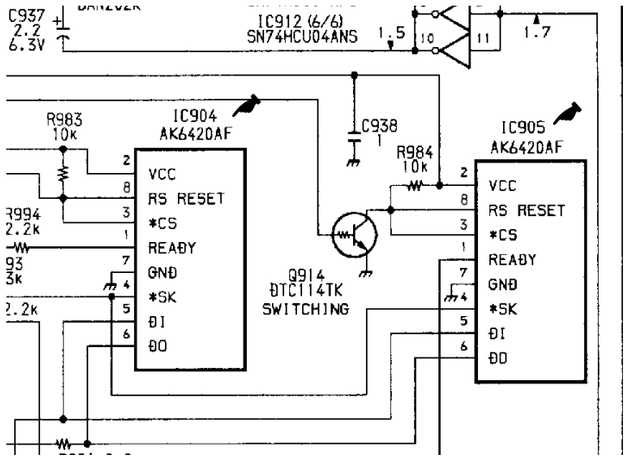


3

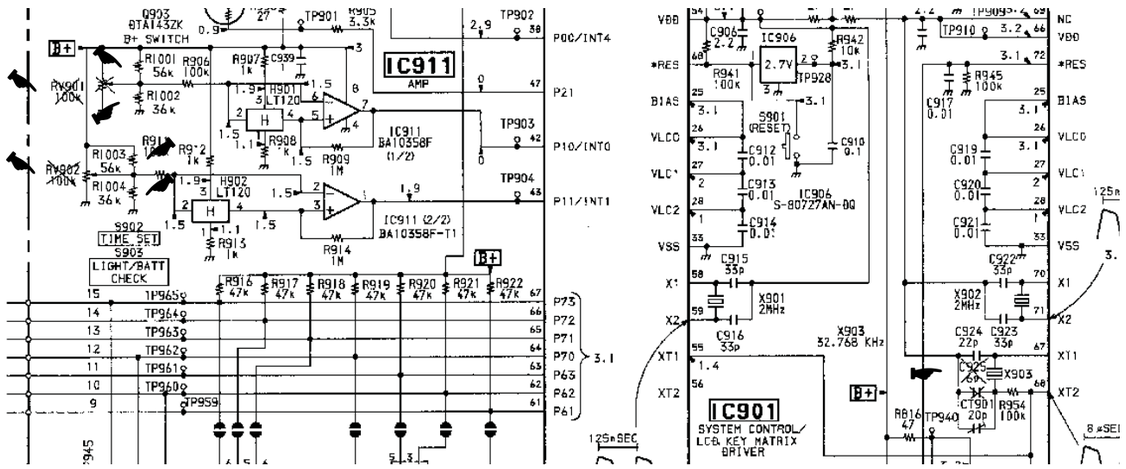
SCHEMATIC DIAGRAM – MICRO COMPUTER SECTION – Last digit : -15

page 23 (Location H-I, 17-20)

☛ : Changed portion



(Location D-F, 6-13)



For printed wiring board.

Note:

- ● : Through hole.
- ▭ :: Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

- Abbreviation
  - CND : Canadian model
  - IT : Italian model
  - G : Germany model
  - EA : Saudi Arabia model
- 1AE2, 2AE2 : This shows the differences of the FM/SW frequency bands.

- **Semiconductor Location**

Ref. No.	Location
D901	A-3
D902	F-2
D903	B-3
D904	B-2
D905	A-3
D906	A-3
D907	A-4
D908	H-2
D909	H-2
D910	G-3
D911	G-3
D912	G-5
D918	A-2
H901	B-5
H902	B-6
IC901	B-3
IC902	G-4
IC903	C-2
IC904	F-2
IC905	G-2
IC906	C-3
IC907	G-5
IC908	G-5
IC910	H-5
IC911	B-6
IC912	G-3
IC913	G-3
IC914	F-2
IC915	E-2
Q901	A-3
Q902	A-2
Q903	B-5
Q904	H-5
Q905	H-5
Q906	H-2
Q907	H-2
Q908	H-2
Q909	H-2
Q910	H-3
Q911	F-3
Q912	F-3
Q913	G-2
Q914	G-3
Q915	H-2
Q916	A-2

Printing Method for Large Sized Documents Such As Circuit Diagrams

Printing the page that exceeds A4-size two pages (or letter size) is possible by specifying the print range. (Acrobat Reader Version 4.0 or later)

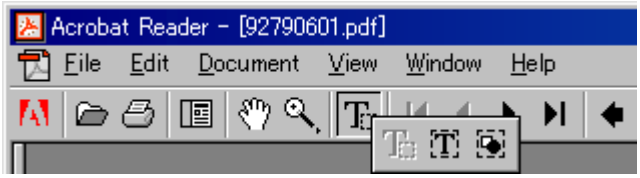
1. The enlarged print is made, if a smaller range than A4 size is specified and the A4 size is selected as a print paper.
2. Almost real sized print is made, if the range is specified, meeting the print paper size.
3. The reduced print is made, if a larger range than the print paper size is specified.

Printing by Specifying a Range

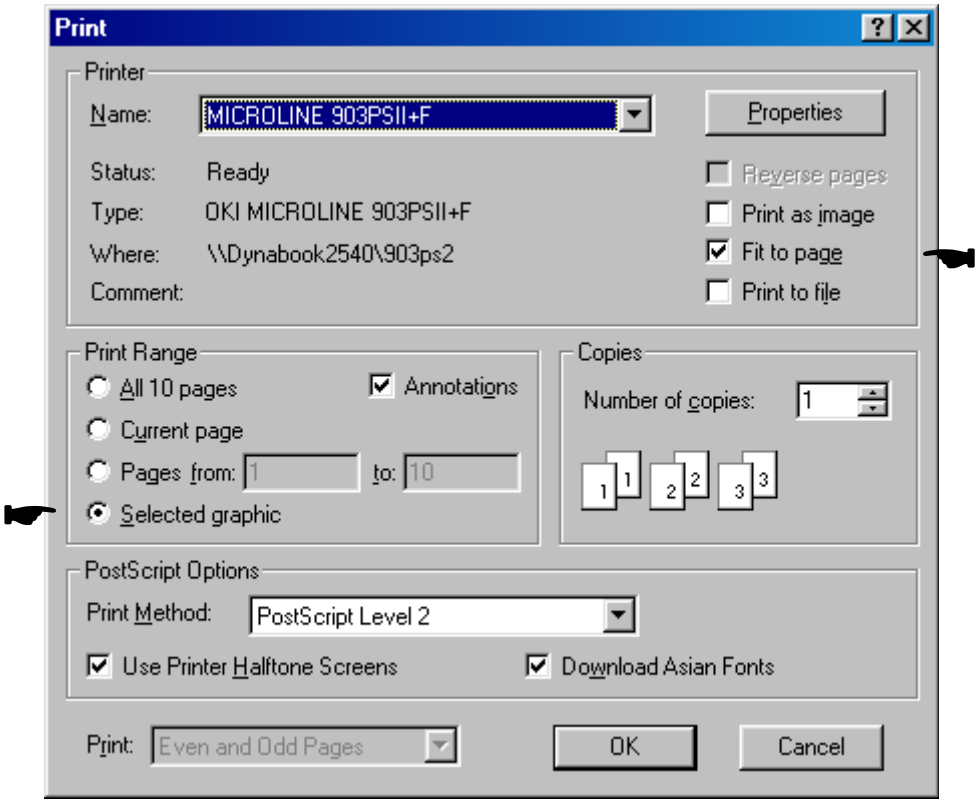
In printing out the drawings such as a schematic diagram and a printed wiring board larger than the printed paper size, they can be printed by specifying the range. (Acrobat Reader Version 4.0 or later)

1. Display the page to be printed.
2. From the File menu, select [Page Setup] and set the paper size.
3. From the Command bar, select [Graphic Select Tool].

   (Keep pressing  , select )



4. Dragging the cursor, enclose the range on the page to be printed.
5. From the File menu, select [Print] and make sure that the [Selected Graphic] is already checked. Also, if [Fit to page] is checked, the selected range is enlarged or reduced (and rotated as necessary) meeting the paper size.



6. To cancel the printed range, click an arbitrary position on the screen.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	1991. 12	New
	1992.05	Correction-1 (9-956-854-91)
1.1	2002. 12	Change of electrical parts and microcomputer board.
		Including correction-1. (ECN-TRA01918)