SPP-ID970/ID971

SERVICE MANUAL

Ver 1.0 1999. 11

US Model
SPP-ID970
Canadian Model
SPP-ID971

Photo: SPP-ID970

SPECIFICATIONS

General

Frequency band (SPP-ID970)
902 – 928 MHz
Frequency band (SPP-ID971)
923.1 – 927.75 MHz
Base unit : 18 µW
Handset : 73 µW
Operating channel
30 channels
Dial signal
Tone, 10 PPS (pulse) selectable
Supplied accessories
AC power adaptor AC-T127 (1)
Telephone line cords (2)
Wall bracket for base unit (1)
Rechargeable battery pack BP-T23 (1)

Handset

Power source
Rechargeable battery pack BP-T23
Battery life
Standby : Approx. 7 days
Talk : Approx. 6 hours
Dimensions
Approx. 58 × 177 × 46 mm (w/h/d), antenna excluded
(approx. 2 3/8 × 7 × 1 13/16 inches)
Antenna: Approx. 72 mm
(approx. 2 7/8 inches)
Mass
Approx. 270 g
(approx. 9.5 oz), battery included

Base unit

Power source
DC 9V from AC power adaptor
AC-T127
Battery charging time
Approx. 12 hours
Dimensions
Approx. 123 × 63 × 225 mm (w/h/d), antenna excluded
(approx. 4 7/8 × 2 1/2 × 8 7/8 inches)
Antenna: Approx. 120 mm
(approx. 4 3/4 inches)
Mass
Approx. 360 g
(approx. 13 oz), wall bracket excluded

Design and specifications are subject to change without notice.

Notes on Chip Component Replacement

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

CORDLESS TELEPHONE

MICROFILM

SONY®

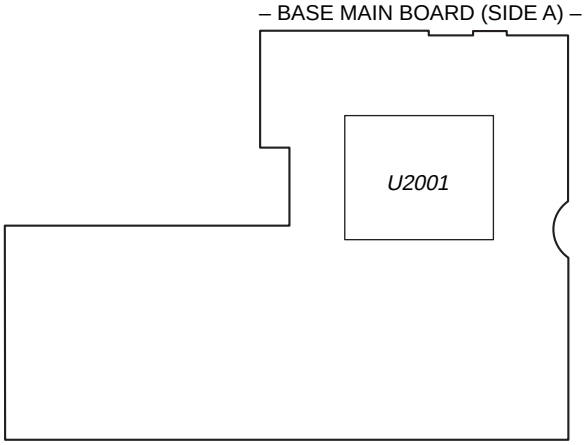
Note for Replacement of the ASIC Board

The ID is written in the ASIC board.

When replacing the ASIC board, the U2001 on BASE MAIN board and U1001 on HAND MAIN board should be replaced together as a pair.

Part No. : X-3378-158-1 ASIC ASSY (one assy of two parts)

– BASE MAIN BOARD (SIDE A) –



– HAND MAIN BOARD (SIDE B) –

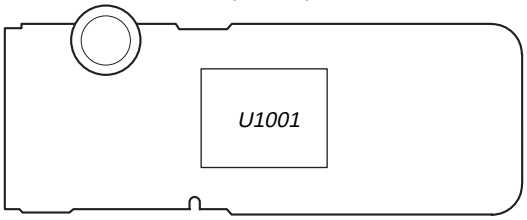


TABLE OF CONTENTS

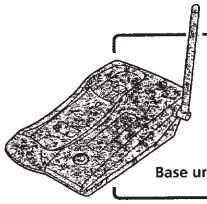
SECTION 1
GENERAL

This section is extracted from SPP-ID970's instruction manual.

Read this first

Before you use your phone, you must first set it up. Here's a quick way to set up your phone: Steps 1, 2, 3 and 4.

Step 1 (page 7)
First, unpack the phone and the supplied accessories.



Step 2 (pages 8 to 10)
Next, you need to do three things to set up the base unit, including finding the best location for the base unit.

Base unit

Step 3 (pages 11 to 12)
Then, insert the battery pack into the handset and charge it for more than 12 hours.

Step 4 (pages 13 to 15)
Finally, enter the area code to use the Caller ID service.

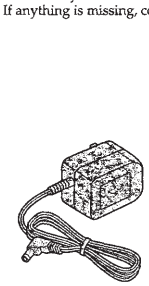
Handset

That's it!

Step 1

Checking the package contents

Make sure you have received the following items in the package. If anything is missing, contact your local Sony dealer.



AC power adaptor (AC-T127)

Base unit

Handset

Telephone line cords (2)

Wall bracket for base unit

Rechargeable battery pack (BP-T23)

Step 2

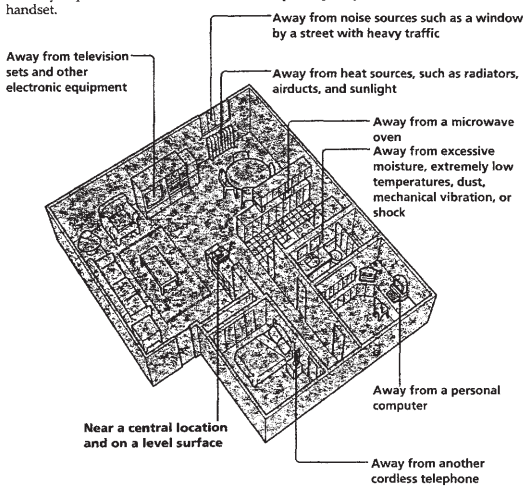
Setting up the base unit

Do the following steps:

- Choose the best location
- Connect the base unit
- Choose the dialing mode

Choose the best location

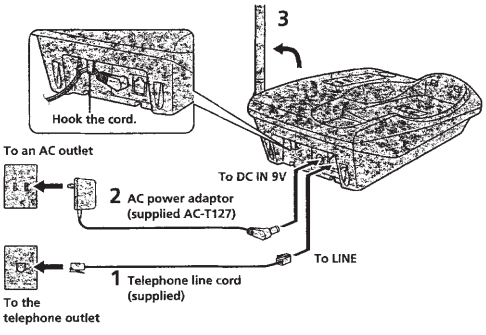
Where you place the base unit affects the reception quality of the handset.



CAUTION:
- **Should you experience intermittent loss of audio during a conversation, try moving closer to the base or move base unit away from other noise sources.**
- **The cordless telephone operates at a frequency that may cause interference to nearby TVs and VCRs; the base unit should not be placed near or on the top of a TV or VCR; and, if interference is experienced, moving the cordless telephone farther away from the TV or VCR will often reduce or eliminate the interference.**

Connect the base unit

If you want to hang the base unit on the wall, see page 42.



1 Connect the telephone line cord to the LINE jack and to a telephone outlet.

2 Connect the AC power adaptor to the DC IN 9V jack and to an AC outlet.

3 Raise the antenna. Make sure it points towards the ceiling.

continued

Step 2: Setting up the base unit (continued)

Notes

- Use only the supplied AC-T127 AC power adaptor. Do not use any other AC power adaptor.
- Connect the AC power adaptor to a continuous power supply.
- Place the base unit close to the AC outlet so that you can unplug the AC power adaptor easily.

Polarity of the plug

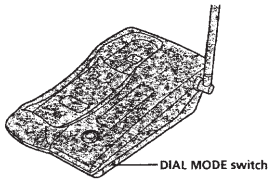
Tip

If your telephone outlet is not modular, contact your telephone service company for assistance.

Modular

Choose the dialing mode

For the telephone to work properly, select an appropriate dialing mode (tone or pulse).



Depending on your dialing system, set the DIAL MODE switch as follows:

If your dialing system is	Set the switch to
Tone	TONE
Pulse	PULSE

If you aren't sure of your dialing system

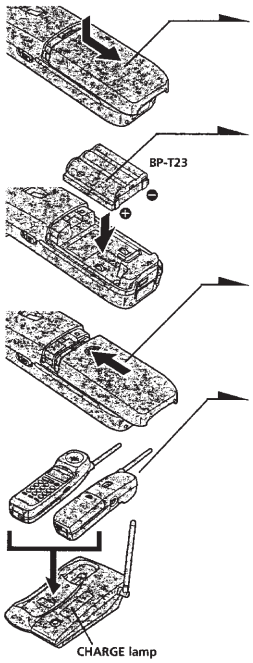
Make a trial call with the DIAL MODE switch set to TONE.

If the call connects, leave the switch as is; otherwise, set to PULSE.

Step 3

Preparing the battery pack

Charge the battery pack for more than **12 hours** before you start using your phone.



1 Slide open the battery compartment lid of the handset.

2 Insert the battery pack (with contacts facing down) into the battery compartment.

3 Close the battery compartment lid.

4 Place the handset on the base unit.

You can place it with either side facing up.

The CHARGE lamp lights up when the handset is properly seated on the charge terminals of the base unit. Charge the battery pack for more than **12 hours** so that the battery is fully charged. The CHARGE lamp remains lit even after charging is completed.

continued

Step 3: Preparing the battery pack (continued)

Battery duration

A fully charged battery pack lasts for about:

- Approx. 6 hours when you use the handset continuously
- Approx. 7 days when the handset is in standby mode.

Notes

- The battery pack will gradually discharge over a long period of time, even when not in use.
- If you leave the battery pack in the handset without charging it, the battery pack will be completely discharged. It may require several times of charging to recover to its full capacity.

To obtain the best performance from the battery

Do not place the handset on the base unit after each call. The battery works best if the handset is returned to the base unit after two or three calls. However, do not leave the handset off the base unit for a long period of time as this will completely discharge the battery pack.

When to purchase a new battery pack

If the battery lasts only a few minutes even after **12 hours** of charging, the usable life of the battery has expired and needs replacement. Contact your local Sony authorized dealer or service center, and ask for a Sony **BP-T23** rechargeable battery pack.

Note

Battery life may vary depending on usage condition and ambient temperature.

Step 4

Entering the area code

When you use this phone for the first time, or move to an area that has a different area code, you must enter your home area code. Otherwise, you cannot use some functions of this phone and the Caller ID functions.

This is also necessary because the phone must be able to select an area code to properly dial call from the Caller ID list.

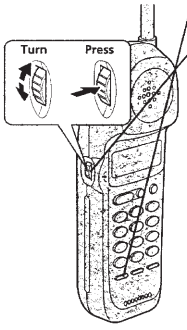
Depending on your region, enter 3-digit area code as follows:

Case 1.
If 7-digit dialing (no area code) is accepted for local calls in your area, see "To enter your home area code" below.

If you live in an area where calls from or to other local areas can also be made by 10-digit dialing (area code + number), you can register up to 5 local area codes with this telephone to take advantage of this system. See "To enter the local area code (For 10 digits phone number users)" on page 14.

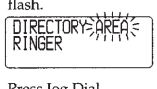
Case 2.
If 10-digit dialing (area code + number) is required for **all** local calls in your area, at first, enter "000" in your home area code. See "To enter your home area code" below. Then see "To enter the local area code (For 10 digits phone number users)" on page 14.

To enter your home area code

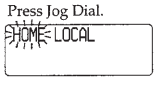


1 Press (PGM).

2 Turn Jog Dial up to make "AREA" flash.



3 Press Jog Dial.



4 Press Jog Dial again.
"ENTER AREA CODE" appears on the display.

5 Enter three digits of your home area code using the dialing keys.

6 Press (PGM).
You will hear a long confirmation beep.

continued

Step 4: Entering the area code (continued)

Notes
- If the home area code is already entered, it appears on the display in step 4. To enter a different home area code, see "To change the home area code" below.
- Do not allow more than 20 seconds to elapse between each step of the procedure.

Tips
- You may press Jog Dial instead of (PGM) in step 6.
- To check the current home area code, perform steps 1 to 4. The home area code appears on the display for about 20 seconds.

To change the home area code

1 Perform steps 1 to 4 on page 13.
The current home area code appears on the display.
2 Turn Jog Dial down to erase the current home area code.
3 Enter a new home area code using the dialing keys.
4 Press (PGM).
You will hear a long confirmation beep.

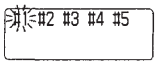
To enter the local area code (For 10 digits phone numbers users)

If a call matches one of the local area codes you entered, the phone number will be registered with 10 digits in the Caller ID list (area code + number). If a call does not match one of the local area codes you entered, the phone number will be registered with 11 digits in the Caller ID list (1.+ area code + number). Some regions of the country allow you to have more than one local area code. (Up to five local area codes can be entered in this phone.)

1 Perform steps 1 to 3 on page 13.

2 Turn Jog Dial up to make "LOCAL" flash.

3 Press Jog Dial.



4 Select the number ("#1" to "#5") to enter the local area code by turning Jog Dial.

5 Press Jog Dial.
"ENTER AREA CODE" appears on the display.

6 Enter three digits of the local area code using the dialing keys.

7 Press (PGM).
You will hear a long confirmation beep.

Notes
- If the local area code is already entered, it appears on the display in step 5. To enter a different local area code, see "To change the local area code" below.
- Do not allow more than 20 seconds to elapse between each step of the procedure.

Tips
- You may press Jog Dial instead of (PGM) in step 7.
- To check the current local area code, perform steps 1 to 5. The local area code appears on the display for about 20 seconds.

To change the local area code

1 Perform steps 1 to 5 on page 14.
The current local area code appears on the display.
2 Turn Jog Dial down to erase the current local area code.
3 Enter a new local area code using the dialing keys.
4 Press (PGM).
You will hear a long confirmation beep.

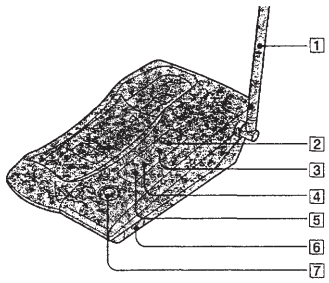
To erase the local area code

You can erase the local area code. Perform steps 1 and 2 above, then press (PGM).
The local area code will be erased, and you hear a long confirmation beep.

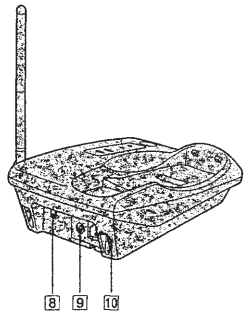
Identifying the parts

Refer to the pages indicated in parentheses for details.

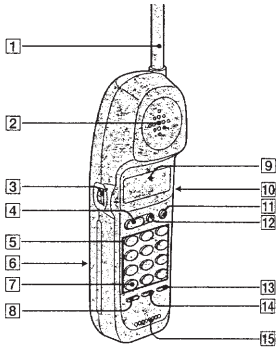
Base Unit



1 **Antenna** (p. 9, 42)
2 **NEW CALL lamp** (p. 32)
Flashes when there is a "NEW" data in the Caller ID list.
3 **MESSAGES lamp** (p. 40)
Flashes when you have messages.
4 **CHARGE lamp** (p. 11)
Lights while the battery is being charged.
5 **LINE lamp** (p. 18, 21)
Lights when the cordless handset is in use.
6 **DIAL MODE switch** (p. 10)
Selects pulse or tone dialing.
7 **HANDSET LOCATOR button** (p. 30)
Allows you to page the cordless handset.
8 **Hook for AC power adaptor cord** (p. 9)
9 **DC IN 9V jack** (p. 9, 42)
10 **LINE (telephone line) jack** (p. 9, 42)

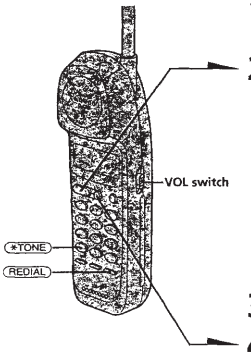


Handset



1 **Antenna**
2 **Speaker**
3 **Jog dial** (p. 13, 23, 32)
4 **TALK button** (p. 18, 21)
Lets you make or receive a call.
5 **Dialing keys** (p. 18)
6 **Battery compartment** (p. 11)
7 **✳ TONE button** (p. 18)
Allows you to switch temporarily to tone dialing.
8 **PGM (Program) button** (p. 13, 23)
Used to store numbers in Phone Directory.
9 **Display window** (p. 31)
10 **VOL (volume) switch** (p. 18)
Adjusts the handset volume.
11 **CALL WAITING/FLASH button** (p. 21, 39)
Switches to a second call if you have "call waiting" service, or lets you make a new call.
12 **OFF button** (p. 18)
Allows you to disconnect the call.
13 **REDIAL button** (p. 20)
Redials the last number called.
14 **PAUSE button** (p. 24)
Inserts a pause in the dialing sequence.
15 **Microphone**

Making calls



1 Pick up the handset from the base unit.

2 Press TALK and wait until "TALK" appears on the display. The display also shows the operation duration in hours, minutes and seconds.

You will then hear a dial tone.

The LINE lamp on the base unit lights up.

If "CHANNEL SEARCHING" appears on the display, move closer to the base unit.

3 Dial the phone number.

4 When you're done talking, press OFF or replace the handset on the base unit.

The display and the LINE lamp on the base unit go off.

Additional tasks

To	Do this
Adjust the handset volume	Set the VOL switch to H (high), M (middle) or L (low).
Switch to tone dialing temporarily	Press *TONE after you're connected. The line will remain in tone dialing until disconnected.

Notes

- When you increase the sound volume, in some cases the back ground noise may be increased as well. You should adjust the volume accordingly.
- If your conversation is muted and "CHANNEL SEARCHING" appears on the display, move closer to the base unit; otherwise, the call will be disconnected after one minute.

If the battery becomes weak during a call

The handset will beep every three seconds five times and ⌧ and "BATTERY LOW" appears on the display. Finish your call and charge the battery pack.

For optimum performance, charge the battery for a full 12 hours.

Note that during the first 10 - 15 minutes of charging, the phone will be inactive, i.e., unable to make or receive a call.

After this initial 10 - 15 minutes, you **may** be able to use the phone, but the battery duration will be **very short**; thus it is recommended that you **fully charge** the battery before the next usage.

continued

Redialing

1 Press TALK and wait until "TALK" appears on the display.

The LINE lamp on the base unit lights up.

2 Press REDIAL to redial the last number dialed.

Note

If the number exceeds 32 digits or if it is erased, five short error beeps will alert you that the number cannot be redialed.

To check the phone number before redialing

While the handset is not in use, press REDIAL.

The last number dialed is displayed for five seconds.

To dial the number, press TALK while the number is displayed.

Note

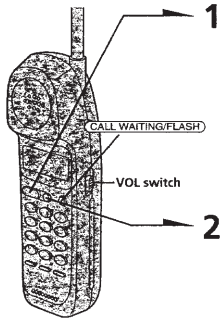
The number will not be displayed if the last number dialed exceeds 32 digits or if it is erased.

To erase the last phone number dialed

While the handset is not in use, press REDIAL twice within five seconds.

The number will be erased from the memory, and you will hear a long confirmation beep.

Receiving calls



1 When you hear the phone ring, pick up the handset from the base unit, and press TALK.

"TALK" appears on the display and the display also shows the operation duration in hours, minutes and seconds.

The LINE lamp on the base unit lights up.

2 When you're done talking, press OFF or replace the handset on the base unit.

The display and the LINE lamp on the base unit go off.

Additional tasks

To	Do this
Adjust the handset volume	Set the VOL switch to H (high), M (middle) or L (low).
Switch to another call ("call waiting" service*)	Press CALL WAITING/FLASH. Press CALL WAITING/FLASH again to return to the first caller.
Turn on/off the ringer of the handset	See "Turning off the ringer of the handset" on page 29.

* You need to subscribe to the service from your telephone company.

continued

Receiving calls (continued)

Note
If another call comes in by "call waiting" service while conversing with an outside caller, you will hear two short beeps.

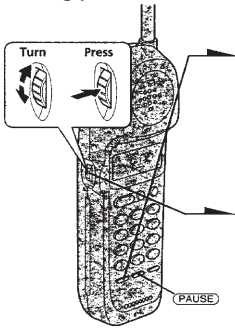
Tip
To inform you of an incoming call, the display shows "✻✻ RINGING ✻✻" when ringing.

If you have subscribed to the Caller ID service;
- the caller's number and/or name appears on the display when you receive a call (see page 31) or when another call comes in by "call waiting" service.
- the ringer sound changes to a higher tone if the call matches the number stored in the Phone Directory (memory match function; see page 31).

Phone Directory

You can dial a number by scrolling through the Phone Directory, in which up to 50 phone numbers can be stored.

Storing phone numbers and names



Example: to store "SONY" "123-4567".

1 Press (PGM).
(Be sure not to press (TALK).)

If "DIRECTORY" is not flashing, turn Jog Dial down to make it flash.

2 Press Jog Dial.
"ENTER NAME" appears.

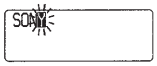
3 Enter the name using the dialing keys. You can enter up to 16 characters.

Press a dialing key until the desired character appears. (See the character table for details.)

Enter successive characters in the same way.

To enter two characters assigned to the same key, or to enter a "space", turn Jog Dial up to move the cursor to the right.

Example: to enter "SONY", press (7) four times (S), press (6) three times (O), turn Jog Dial up to move the cursor, press (6) twice (N), and press (9) three times (Y).



Character table

Key	Character
(1)	1
(2)	A → B → C → 2
(3)	D → E → F → 3
(4)	G → H → I → 4
(5)	J → K → L → 5
(6)	M → N → O → 6
(7)	P → Q → R → S → 7
(8)	T → U → V → 8
(9)	W → X → Y → Z → 9
(0)	0
(*)	✻
(#)	& → ' → , → - → . → #

continued

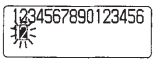
Phone Directory (continued)

4 Press (PGM).
"ENTER NUMBER" appears.

5 Enter the phone number.

You can enter up to 32 digits, including a tone and a pause, each of which is counted as one digit.

When the phone number of 17 digits or more has been entered, the phone number appears in two lines.



6 Press (PGM).
You will hear a long confirmation beep, and the name and the number are stored. The display goes off.

Notes
- If you intend to save a 51st phone number, you will hear five short error beeps and "MEMORY FULL" will be displayed. You cannot store the phone number. To store another phone number, erase one of the stored phone numbers (see page 26).
- Do not allow more than 20 seconds to elapse between each step of the procedure.
- The total number of phone numbers which can be stored into the Phone Directory varies according to the number of digits of each phone number. If all the phone numbers consist of up to 16 digits, you can store up to 50 phone numbers. However, as the Phone Directory uses two-phone number memory to store one phone number of 17 digits or more, the total number of phone numbers which can be stored in the Phone Directory decreases two by two every time you store a phone number of 17 digits or more.

Tips
- If you have entered a wrong name or number in step 3 or 5, turn Jog Dial down to erase it. Then enter the correct name or number.
- You may press Jog Dial instead of (PGM) in steps 4 and 6.

To store a number to be dialed via Private Branch Exchange (PBX)

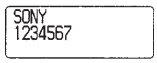
Before entering a phone number in step 5 above, do as follows:

1 Enter the outside line access digit (e.g., 9).

2 Press (PAUSE).

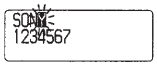
Changing a stored name and/or phone number

1 Display the name and phone number you want to change by doing steps 1 and 2 in "Making calls from the Phone Directory" on page 26.



2 Press Jog Dial.

3 Turn Jog Dial up to make "EDIT" flash and press Jog Dial.
The cursor flashes at the last character of the name.



4 Turn Jog Dial down to erase the characters and enter the new name.
If you want to change only the number, skip this step.

5 Press Jog dial.
The cursor flashes at the last digit of the phone number.

6 Turn Jog Dial down to erase the number and enter the new number.
If you don't want to change the number, skip this step.

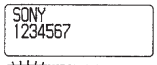
7 Press Jog Dial.
You will hear a long confirmation beep and the name and/or the number is changed.

Tip
When the phone number of 17 digits or more has been entered, "-" is displayed next to 15th digit and then the all digits are displayed in two lines after about two seconds.

continued

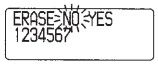
Erasing a memory location

1 Display the name and phone number you want to erase by doing steps 1 and 2 in "Making calls from the Phone Directory".



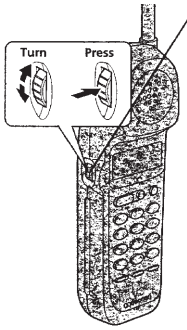
2 Press Jog Dial.

3 Turn Jog Dial up to make "ERASE" flash and press Jog Dial.



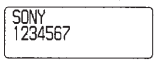
4 Turn Jog Dial up to make "YES" flash, then press Jog Dial.
You hear a long confirmation beep and the memory location is erased.

Making calls from the Phone Directory

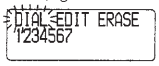


1 Press Jog Dial.
"DIRECTORY" appears on the display.

2 Display the name and phone number you want to call.
To search in alphabetical order: Turn Jog Dial up or down.
To search by entering the initial character: Press the dialing key of the desired character, then turn Jog Dial.



3 Press Jog Dial.



4 Press Jog Dial again.
The phone number will be dialed.

Tip
You may press (TALK) to make a call instead of doing steps 3 and 4.

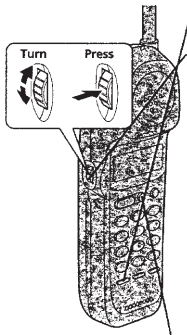
About the search order

The names appear in the following order when you turn Jog Dial up or down.

- Alphabetical order: ABC...XYZ ↔ symbols ↔ * ↔ # ↔ 0 - 9
- Initial character: To search for "SONY" for example, press (7) and then turn Jog Dial to search through the names starting with P, Q, R, S or 7.

Setting the ringer type

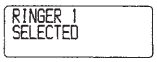
You can select a ringer type of the handset from four type.



1 Press (PGM).

2 Turn Jog Dial up to make "RINGER" flash.

3 Press Jog Dial.
The current ringer type appears.



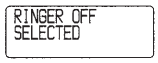
4 Press one of the dialing keys ((1) to (4)) to select a ringer type.
You will hear the corresponding ringer tone.

5 Press (OFF).

Turning off the ringer of the handset

1 Perform steps 1 to 3 on page 28.

2 Press (0).
You will hear a confirmation beep.



3 Press (OFF).

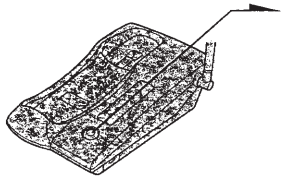
When "RINGER" is set to "RINGER OFF"
The handset won't ring. You can still make calls, and also receive calls if another telephone connected to the same line rings to inform you on incoming calls.

To turn the ringer on again
Follow the instructions described in "Setting the ringer type" on page 28.

Paging

You can page the handset from the base unit.

Note that you cannot page if the handset is in use.



To Page

Press (HANDSET LOCATOR).

The handset rings for about one minute.

To stop ringing, press (OFF) on the handset.

Tip

You can page the handset even when "RINGER" is set to "RINGER OFF".

Understanding the Caller ID service

Caller ID allows the caller's phone number to be shown on the display before the call is answered. In order to use this feature, you must first subscribe to the Caller ID service. The name of this service may vary depending on your telephone company.

To use this feature, be sure to enter your home area code (see page 13).

When you receive a call

The phone number appears on the display with the date and time as shown in the following example.

If your Caller ID service includes the caller name service, the caller's name also appears on the display (up to 15 letters).

When you answer the call, the Caller ID display changes to the "TALK" display.

Notes

- The caller's phone number and/or name will not appear in the following cases:
  - "OUT OF AREA": when the call is made through a telephone company which does not offer Caller ID service (including international calls).
  - "PRIVATE": when the call is "blocked." For privacy reasons, many states allow callers the option to prevent his or her telephone data from being displayed on the other party's Caller ID display.
- If the call is from an office which uses multiple lines, the displayed phone number may not match the number you use to call the extension.

Tip

Even if the ringer of the handset is set to "RINGER OFF", you can receive Caller ID data.

About the memory match function

If you receive a call from a phone number which is stored in the Phone Directory (see page 23), the ringer sound will change to a higher tone from the second ring.

Note

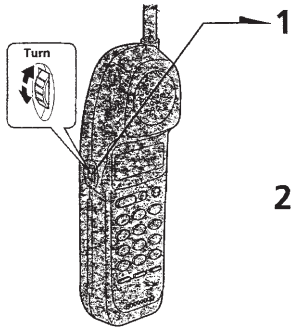
The memory match function does not work with "OUT OF AREA" or "PRIVATE" calls; and it may not work with calls made from an office which uses multiple lines because the number does not always match the one you stored in this phone.

Looking at the Caller ID list

The phone stores the data of the last 20 calls received including "OUT OF AREA" and "PRIVATE" calls. It keeps track of all calls received; even if they were not answered.

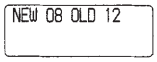
Viewing the Caller ID list

You can look through the Caller ID list to check the phone number and/or name of the calls received.



1 Turn Jog Dial.

The display shows the number of "NEW" (calls which you have not viewed) and "OLD" (calls which you have viewed) calls.



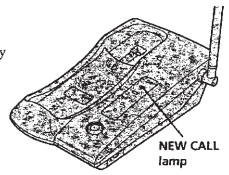
2 Turn Jog dial down to display older data or up to display newer data.

Note

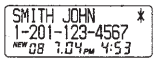
If a 21st call is received, the oldest data is automatically erased.

Tip

If there is a "NEW" data, the NEW CALL lamp of the base unit flashes.



About the "*" mark



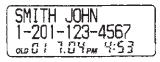
"*" appears if there are more than two calls from the same phone number. The older data will be replaced by the new data, so the calls are counted as only one call.

Erasing data from the Caller ID list

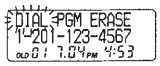
Old data will be erased automatically when a 21st call comes in, but you can also manually erase unnecessary data one by one or erase the entire list.

To erase the phone number one by one

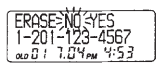
1 Display the phone number you want to erase from the Caller ID list (see page 32).



2 Press Jog Dial.



3 Turn Jog Dial up to make "ERASE" flash and press Jog Dial.



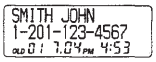
4 Turn Jog Dial up to make "YES" flash, then press Jog Dial.

You will hear a long confirmation beep and the data is erased.

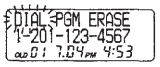
continued

To erase the entire list at once

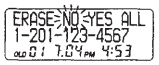
1 Display any Caller ID data.



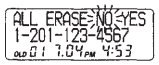
2 Press Jog Dial.



3 Turn Jog Dial up to make "ERASE" flash and press Jog Dial.

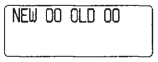


4 Turn Jog Dial up to make "ALL" flash, then press Jog Dial.



5 Turn Jog Dial up to make "YES" flash, then press Jog Dial.

You will hear a long confirmation beep and the entire list is erased.



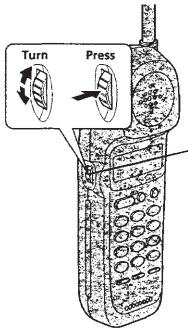
Note

"ALL" appears only when all the data has become "OLD" data. If there is any "NEW" data, you cannot erase the entire list.

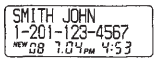
Using the Caller ID list

By using the Caller ID list, you can call back a phone number from the Caller ID list easily, or store numbers from the Caller ID list into the Phone Directory.

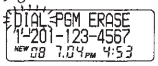
Calling back a number from the Caller ID list



1 Display the phone number you want to call from the Caller ID list (see page 32).



2 Confirm the number and press Jog dial.



3 Press Jog dial again.

The phone automatically dials the displayed number.

Notes

- If the number displayed in step 1 is not the one you should call back, you can change the number of digits of the phone number as described on page 37.
- If the phone is connected to a Private Branch Exchange (PBX), you may not be able to call back from the Caller ID list because an outside line access digit is necessary.

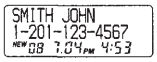
Tip

You may press (TALK) to make a call instead of doing steps 2 and 3.

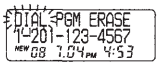
continued

Storing a number of the Caller ID list into the Phone Directory

1 Display the name and phone number you want to store from the Caller ID list (see page 32).



2 Confirm the number and press Jog Dial.



3 Turn Jog Dial up to make "PGM" flash and press Jog Dial.

The cursor flashes at the end of the name.

Enter or change the name, if necessary (see page 25).

4 Press Jog Dial.

The cursor flashes at the end of the phone number.

Enter or change the phone number, if necessary (see page 25).

5 Press Jog Dial again.

You will hear a long confirmation beep and the name and number are stored.

Notes

- Do not allow more than 20 seconds to elapse between each step of the procedure.
- If the number displayed in step 1 is not the one you should call back, you can change the number of digits of the phone number as described on page 37.
- If the phone is connected to a Private Branch Exchange (PBX), you may need to add an outside line access digit.

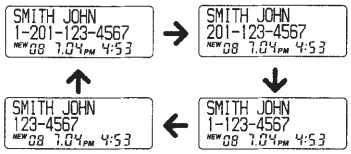
To change the number of digits of the phone number

If the number of digits of the phone number in the Caller ID list is different from the actual phone number, you need to adjust the number of digits of the phone number to call back or store into the Phone Directory.

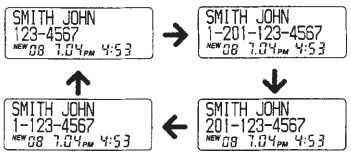
1 While the phone number from the Caller ID list is displayed, press (#) repeatedly until the phone number with the correct number of digits appears on the display.

Each time you press (#), the number of digits changes as follows.

When the home area code and the local area code do not match



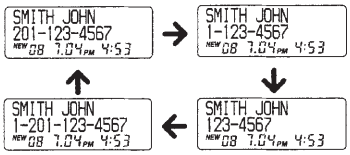
When the home area code matches



continued

Using the Caller ID list (continued)

When the local area code matches



2 Continue the operation to call or store the phone number with the correct number of digits (pages 35 and 36).

Notes

- You need to adjust the number of digits each time you call back from the Caller ID list as the changes to the Caller ID data is not stored in memory.
- You may not be able to change the number of digits depending on the Caller ID data.

Using "Caller ID with call waiting" service

This telephone is compatible with the "Caller ID with call waiting" service. Make sure that your telephone company offers this service.

Like the basic Caller ID service, you need to subscribe to "Caller ID with call waiting" in order to use this service.

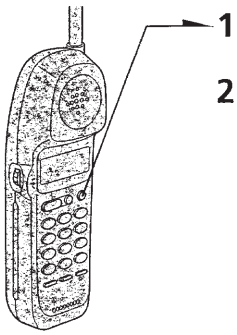
Even though you may have already subscribed to "Caller ID" and "call waiting" as two separate services, you need to request a subscription to "Caller ID with call waiting" as a single service.

This is a new service that combines the two services.

Even though you now have a "Caller ID with call waiting" compatible phone, unless you subscribe to the combined "Caller ID with call waiting" service, you will not be able to see the name and number of the second caller.

When a new call comes in while you are talking, you hear two short beeps. The caller's name and/or phone number of the new call appears on the display for about 20 seconds.

To switch to another caller

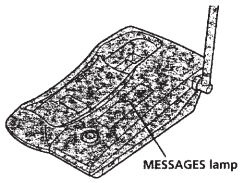


1 To switch to the new caller, press (CALL WAITING/ FLASH).

2 To switch back to the first caller, press (CALL WAITING/ FLASH) again.

Using visual message waiting service

If you subscribe to your telephone company's message service which includes this feature, the display will show that you have messages waiting to be retrieved.



If you have messages

"MESSAGES WAITING" will appear on the display, and the MESSAGES lamp on the base unit flashes.

The display and the MESSAGES lamp will go off when you retrieve your messages.

Note

You cannot use this feature, if you have not subscribed to your telephone company's message service.
For details on the availability of this service, please ask your telephone company.

If the MESSAGES lamp remains flashing

If this lamp does not go off (e.g. When you retrieve your messages with other phones), you can go off the lamp manually.

To go off the MESSAGES lamp

1 Press (PGM).

2 Press (#).

3 Press Jog Dial.

The MESSAGES lamp on the base unit goes off, and you will hear a long confirmation beep.

If you move or change your telephone company

Message waiting signals are sent in one of two ways: FSK signaling or "stutter" signaling (Your telephone company can provide you with more information about your service).

The first time this phone receives a voice mail message, it will set itself to the FSK service and will lock out the stutter service if your telephone company is in FSK service.

When you move or change your telephone company, you need to reset this phone. To reset, perform the following procedure. The phone will returns to ready state for either FSK or stutter dial tone voice mail recognition.

To reset this phone

1 Press (PGM).

2 Press (#).

3 Turn Jog Dial up to make "RESET" flash and press Jog Dial.

You will hear a long confirmation beep and the phone is reset.

SECTION 2
DISASSEMBLY

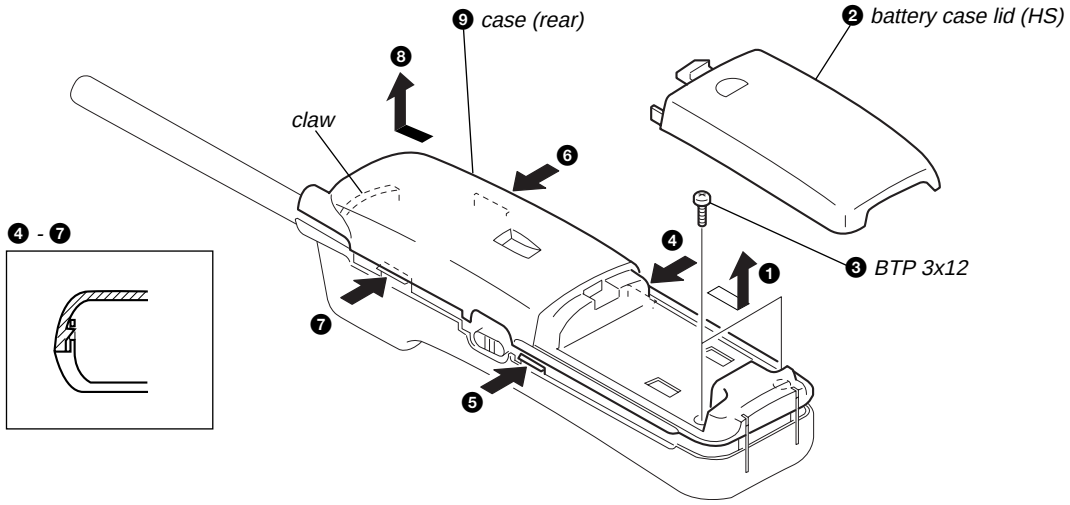
Note : This set can be disassemble according to the following sequence.

HANDSET → CASE (REAR) → RF UNIT (HS), HAND MAIN BOARD

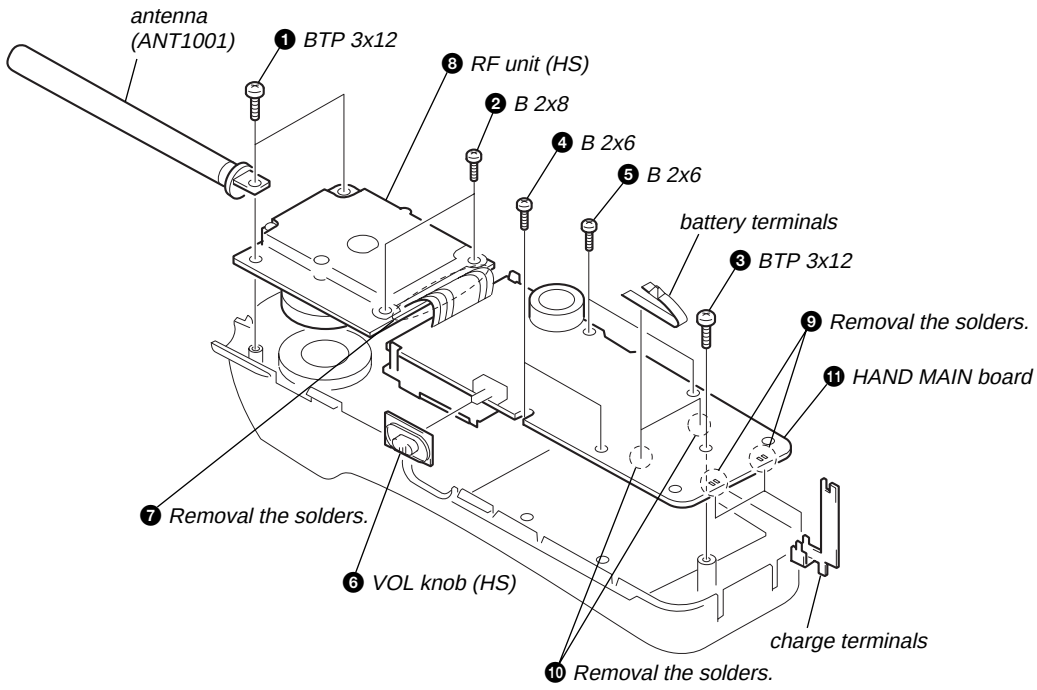
BASE UNIT → BASE (BOTTOM) → BASE MAIN BOARD → RF UNIT (BU) → LED BOARD

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

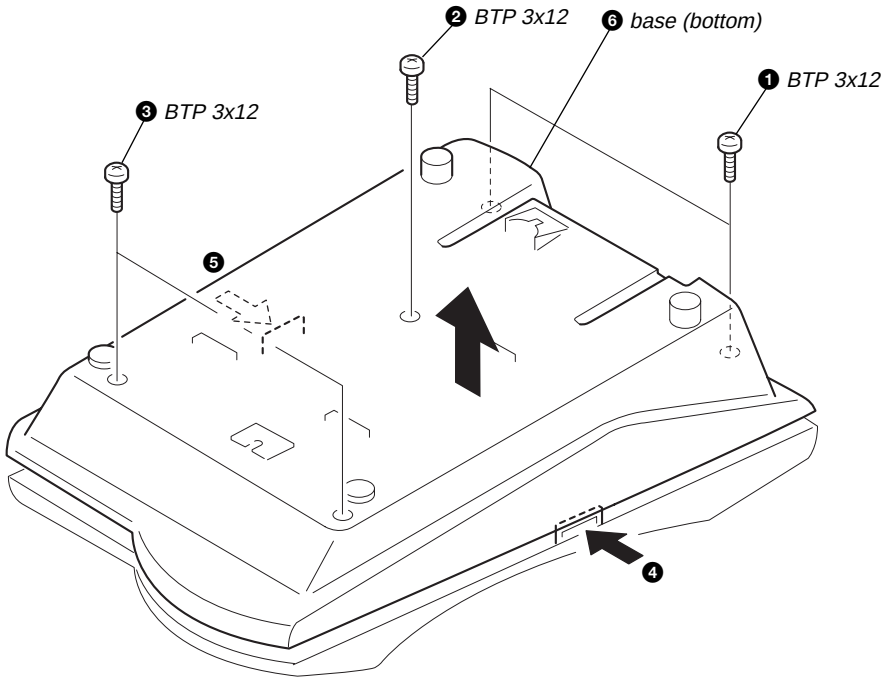
2-1. CASE (REAR)



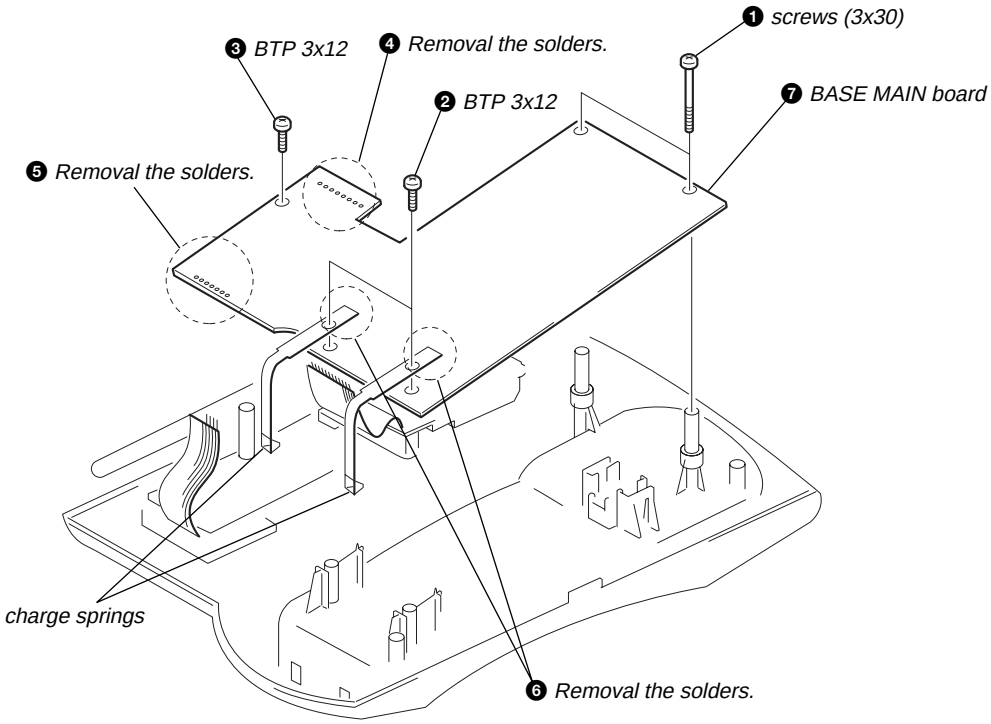
2-2. RF UNIT (HS), HAND MAIN BOARD



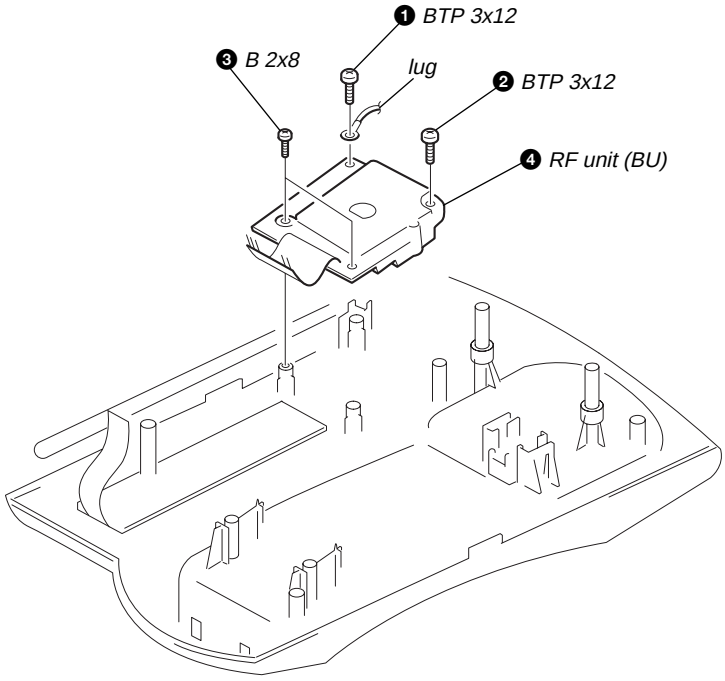
2-3. BASE (BOTTOM)



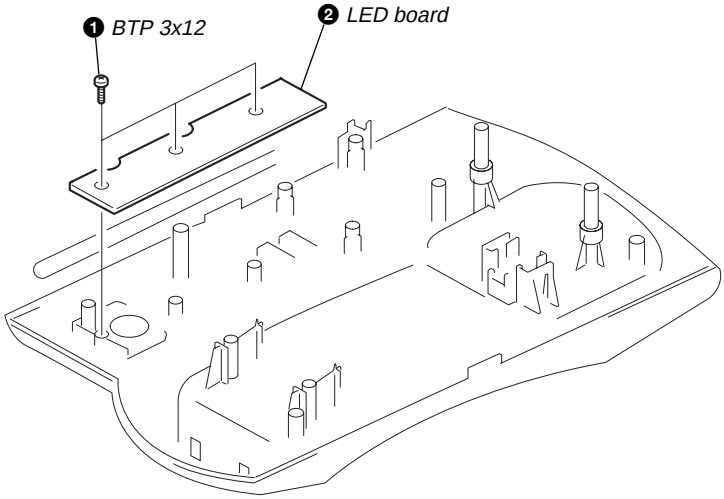
2-4. BASE MAIN BOARD



2-5. RF UNIT (BU)



2-6. LED BOARD



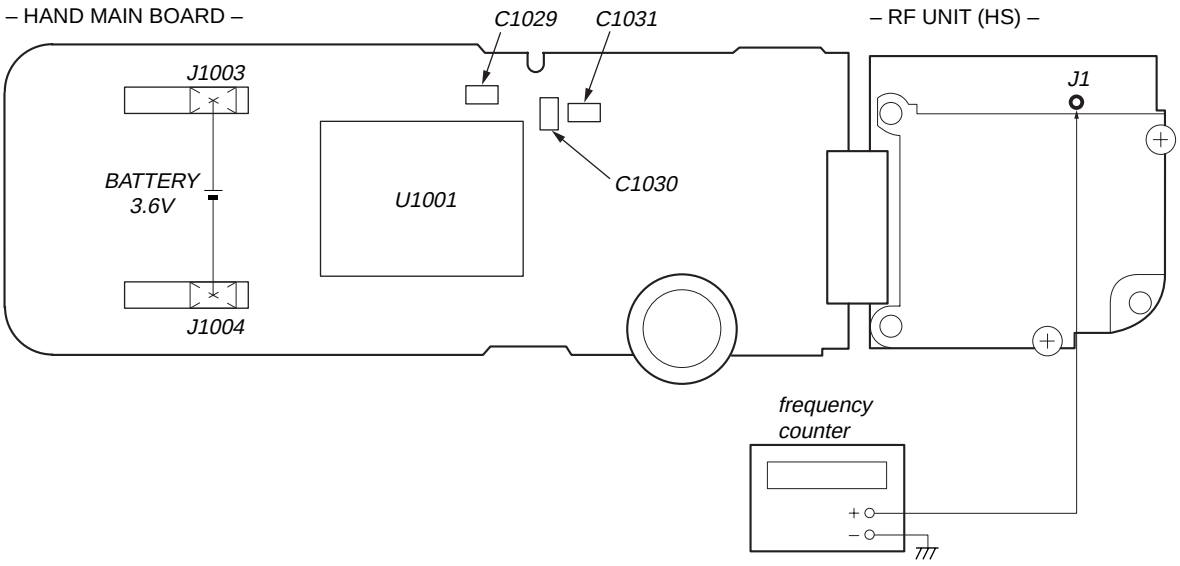
SECTION 3
ELECTRICAL ADJUSTMENTS

3-1. HANDSET

1. Test Mode

Entry— Press “PGM” key and enter “∗∗ TEST” on keypad.
Alternative entry— Write 99h into LSB of location 9 in EEPROM.
Exit— Press on “OFF” key.
LCD test— Press the “7” key.
Toggle TX power— Press the “0” key.
Increment RF channel— Press the “#” key.

2. Test Equipment Required and Connection



3. Verify Procedure

Item	Remark
18.4MHz Frequency Error	Connect the frequency counter to the test point J1, press “0” key to turn on the TX power. Then, check the frequency ± 1 kHz. If the result is within ± 1 kHz, then no adjustment required. Otherwise, refer to item 4. for Adjustment Procedure.

4. Adjustment Procedure

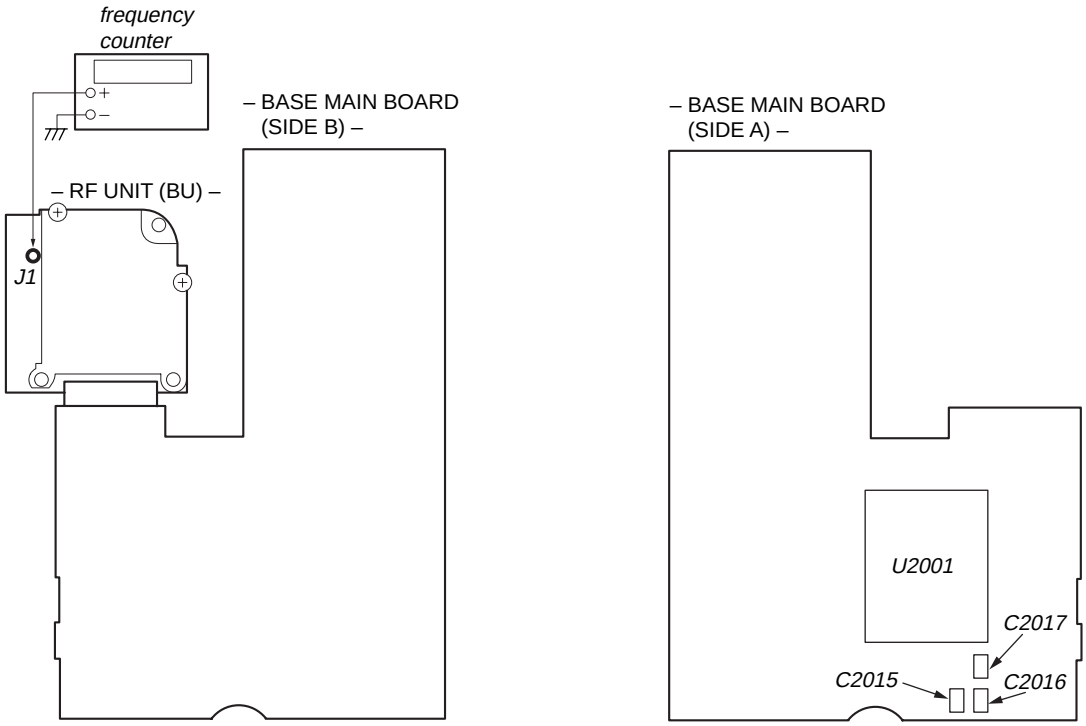
Item	Adjustment Element	Remark
18.4MHz Frequency Error	C1030	1. Remove C1031 from the HAND MAIN board. 2. Solder an 20PF chip capacitor C1030 (1-164-160-11) on the HAND MAIN board (in parallel of C1029). 3. Connect the frequency counter to the test point J1. Adjust for 0 Hz ± 1 kHz.

3-2. BASE UNIT

1. Test Mode

Entry— Simultaneously press the “HANDSET LOCATOR” key and toggle the “DIAL MODE” switch. When in test mode, the “LINE” and “CHARGE” LEDs will be light on.
Alternative entry— Write 99h into LSB of location 9 in EEPROM.
Exit— Remove the AC power adaptor.
Toggle TX power— DIAL MODE switch (S2001)
T (TONE) position : TX ON
P (PULSE) position : TX OFF
Increment RF channel— Press the “HANDSET LOCATOR” key.

2. Test Equipment Required and Connection



3. Verify Procedure

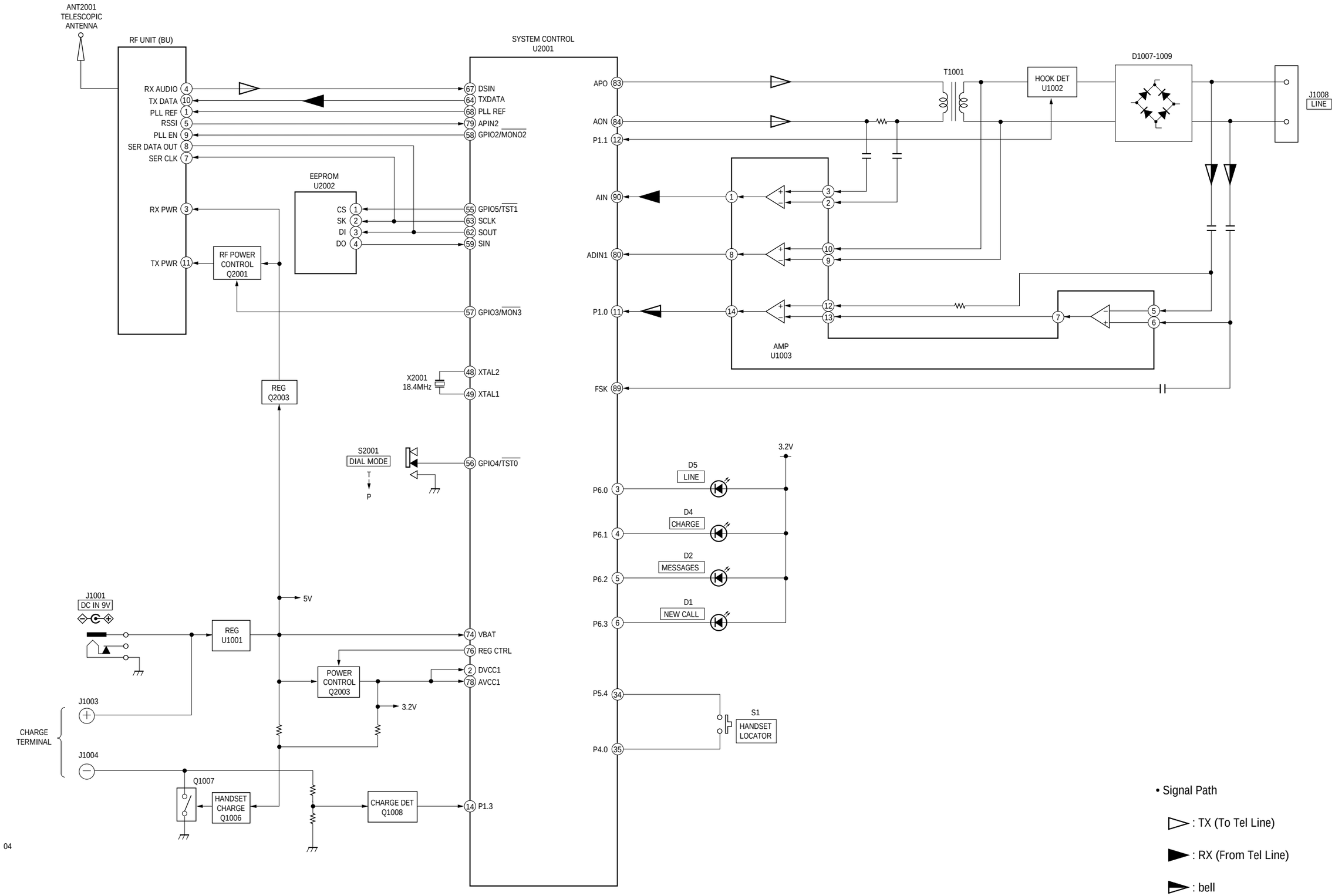
Item	Remark
18.4MHz Frequency Error	Connect the frequency counter to the test point J1, press “0” key to turn on the TX power. Then, check the frequency ± 1 kHz. If the result is within ± 1 kHz, then no adjustment required. Otherwise, refer to item 4. for Adjustment Procedure.

4. Adjustment Procedure

Item	Adjustment Element	Remark
18.4MHz Frequency Error	C2016	1. Remove C2017 from the BASE MAIN board. 2. Solder an 20PF chip capacitor C2016 (1-164-160-11) on the BASE MAIN board (in parallel of C2015). 3. Connect the frequency counter to the test point J1. Adjust for 0 Hz ± 1 kHz.

SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM — BASE UNIT SECTION —



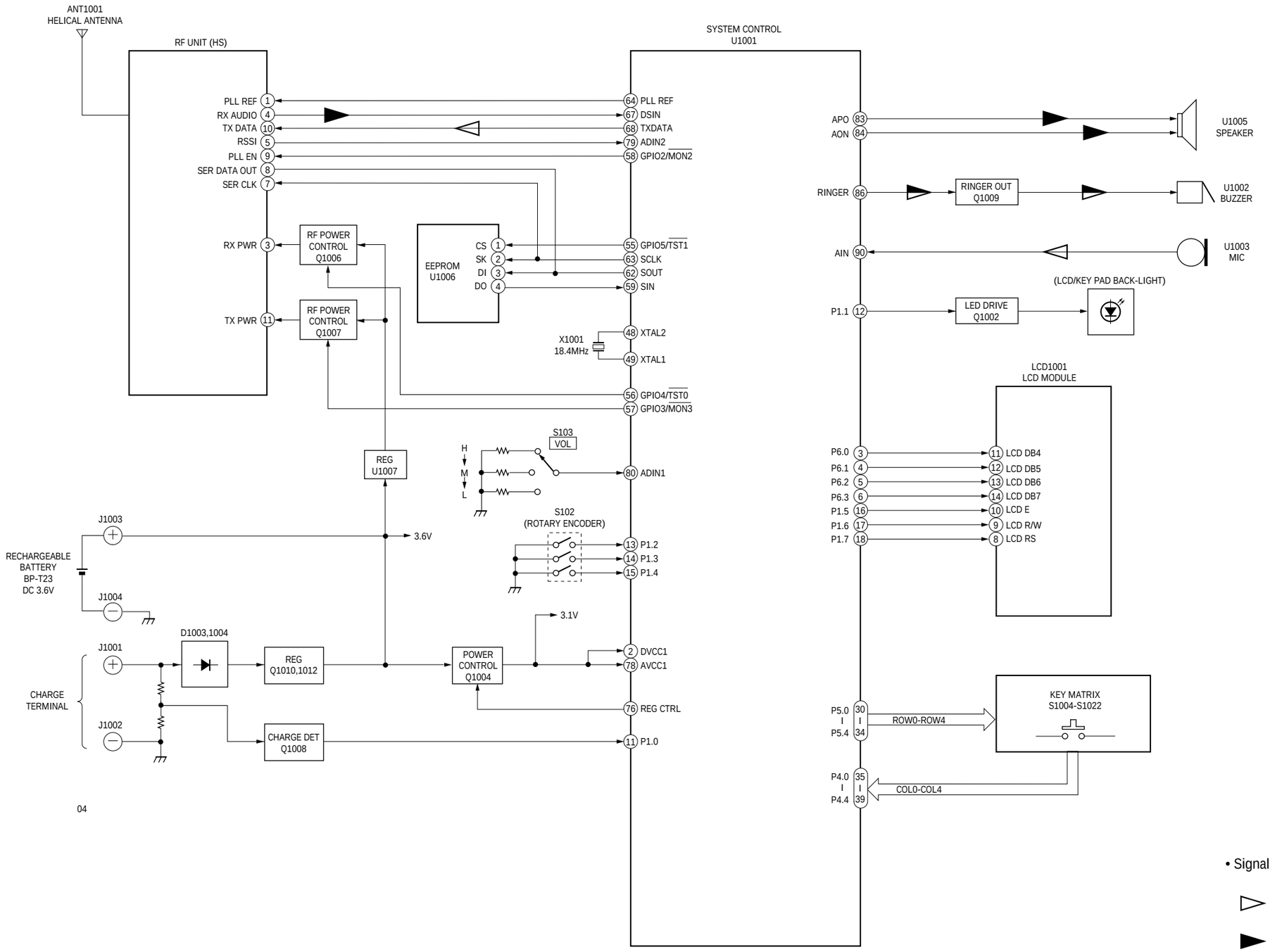
• Signal Path

: TX (To Tel Line)

: RX (From Tel Line)

: bell

4-2. BLOCK DIAGRAM — HANDSET SECTION —



• Signal Path

: TX (To Tel Line)

: RX (From Tel Line)

: bell

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams

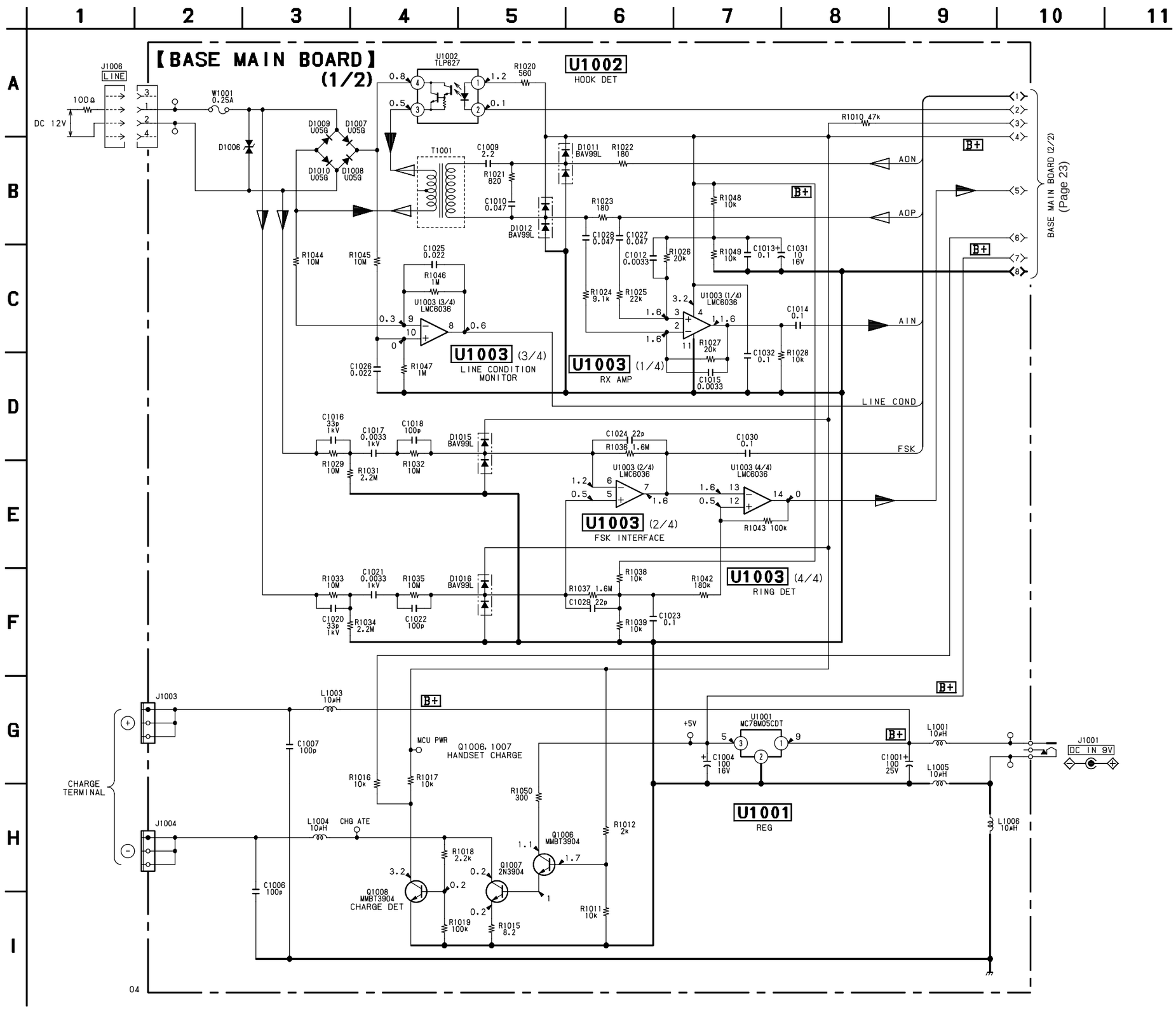
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack. (BASE UNIT)
- Power voltage is dc 12 V and fed with regulated dc power supply from J1006 with 100 Ω in series. (BASE UNIT)
- Power voltage is dc 3 V and fed with regulated dc power supply from battery terminal. (HANDSET)
- Voltage is dc with respect to ground under no-signal condition.
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : TX (To Tel Line)
  ▶ : RX (From Tel Line)
  ▶ : bell

For printed wiring boards

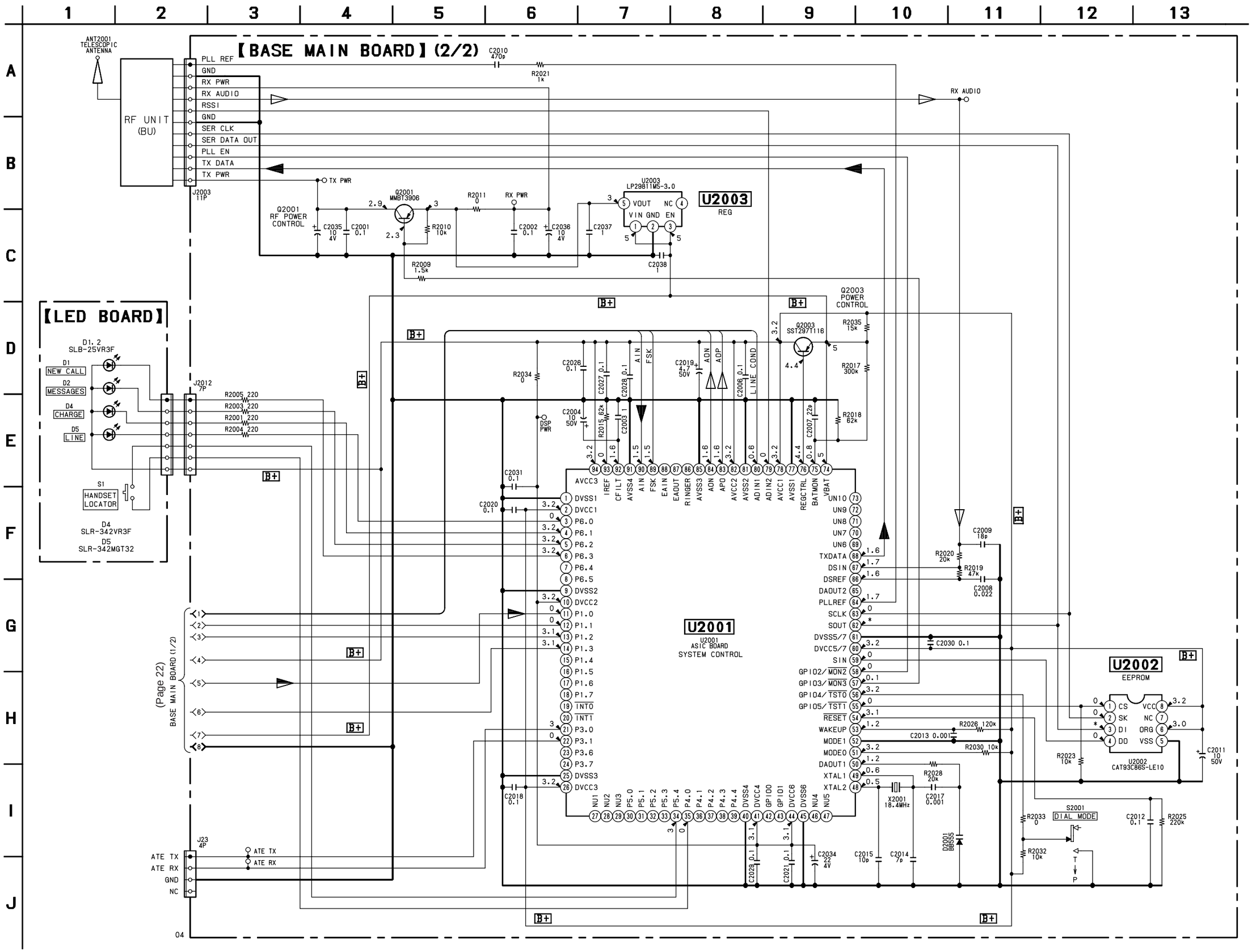
- o——o : parts extracted from the component side.
- o- - -o : Carbon pattern.
- ● : Through hole.
- ▒▒ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

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.

4-3. SCHEMATIC DIAGRAM — BASE UNIT SECTION (1/2) —

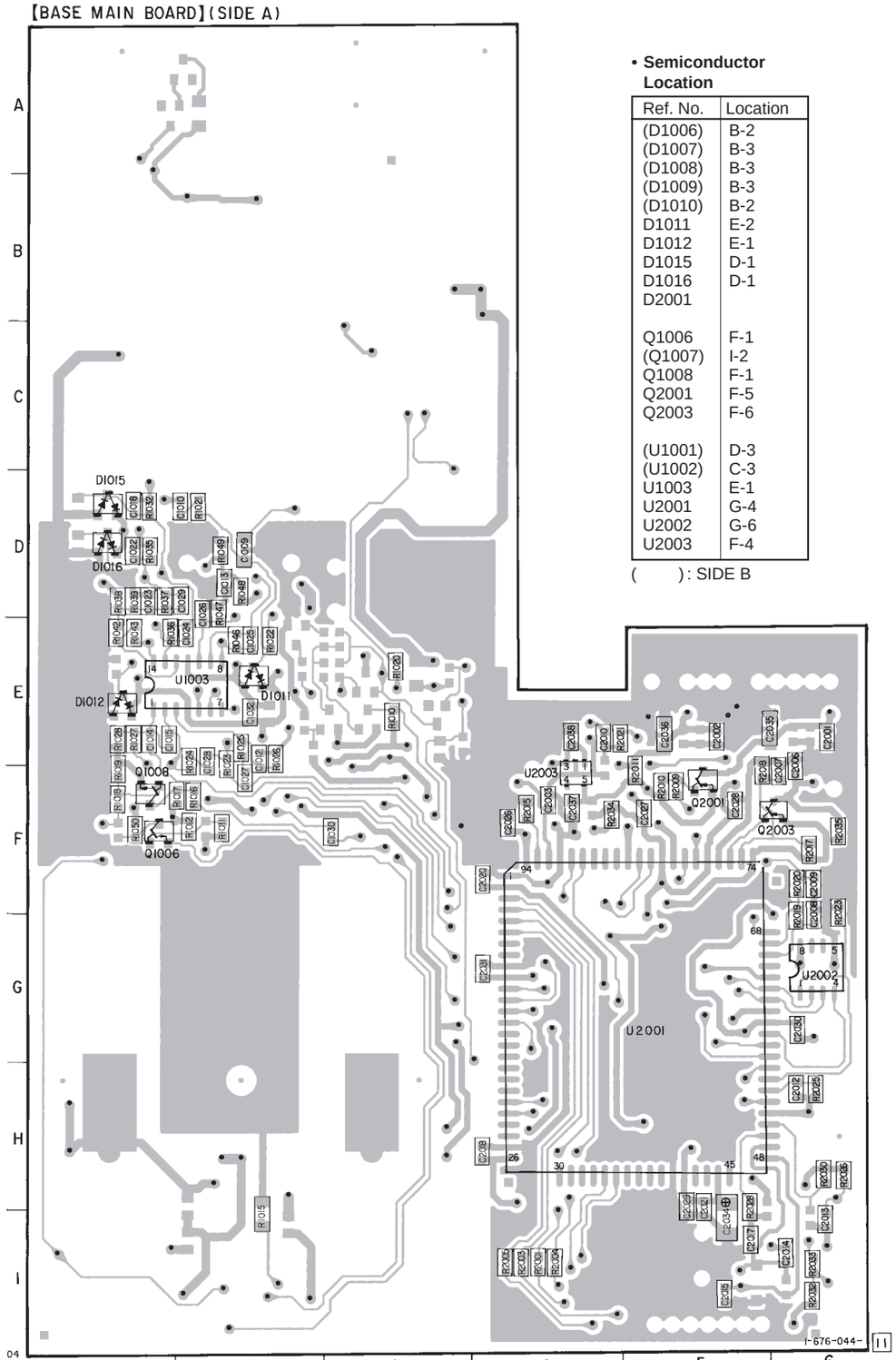


4-4. SCHEMATIC DIAGRAM — BASE UNIT SECTION (2/2) — • Refer to page 31 for IC Block Diagram.



4-5. PRINTED WIRING BOARDS — BASE UNIT SECTION —

【BASE MAIN BOARD】(SIDE A)

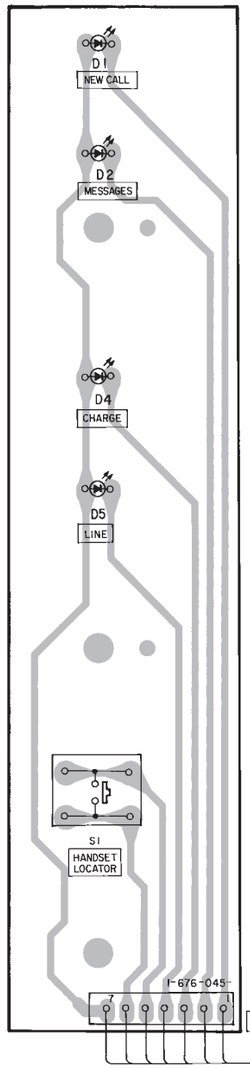


- **Semiconductor Location**

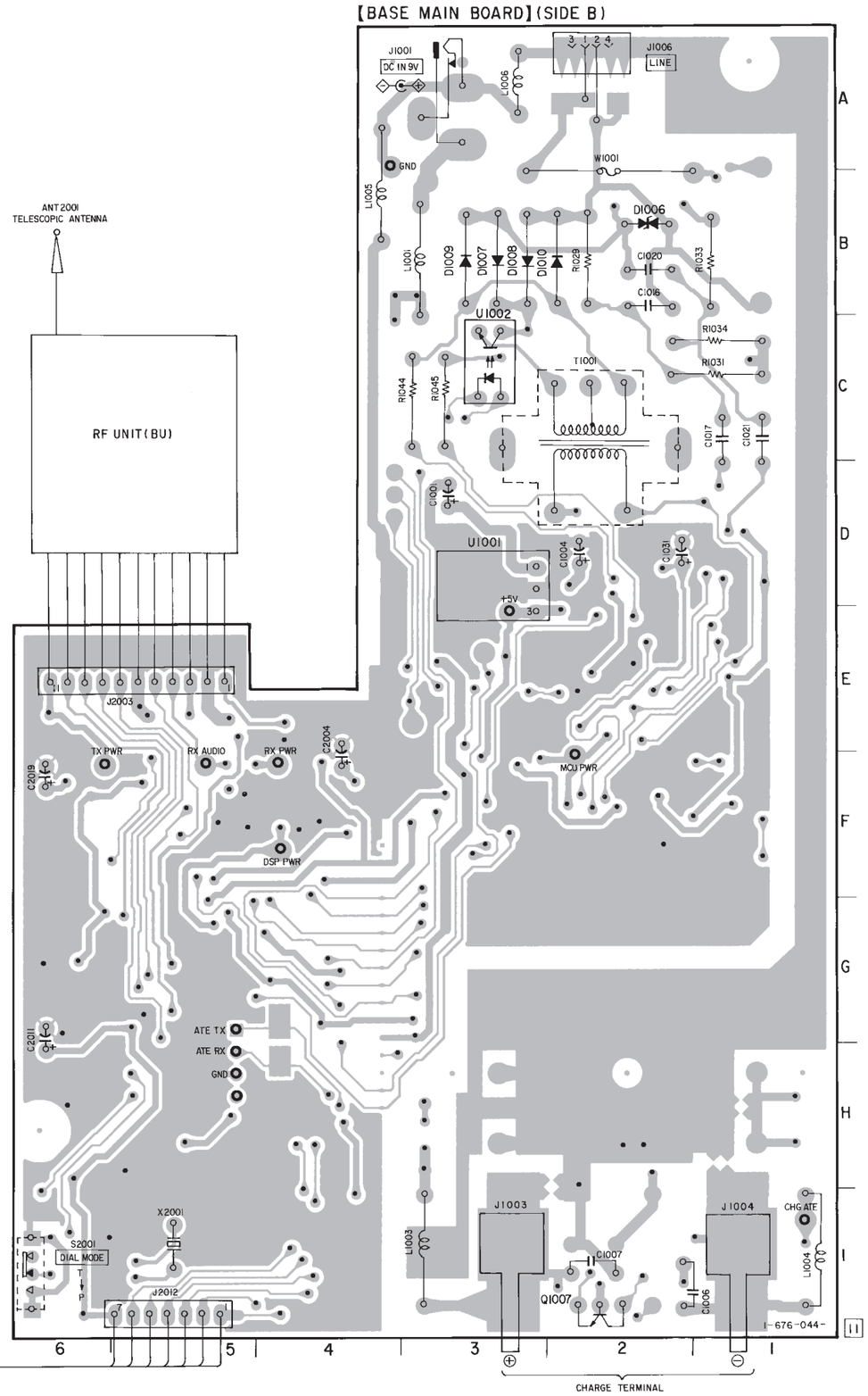
Ref. No.	Location
(D1006)	B-2
(D1007)	B-3
(D1008)	B-3
(D1009)	B-3
(D1010)	B-2
D1011	E-2
D1012	E-1
D1015	D-1
D1016	D-1
D2001	
Q1006	F-1
(Q1007)	I-2
Q1008	F-1
Q2001	F-5
Q2003	F-6
(U1001)	D-3
(U1002)	C-3
U1003	E-1
U2001	G-4
U2002	G-6
U2003	F-4

( ) : SIDE B

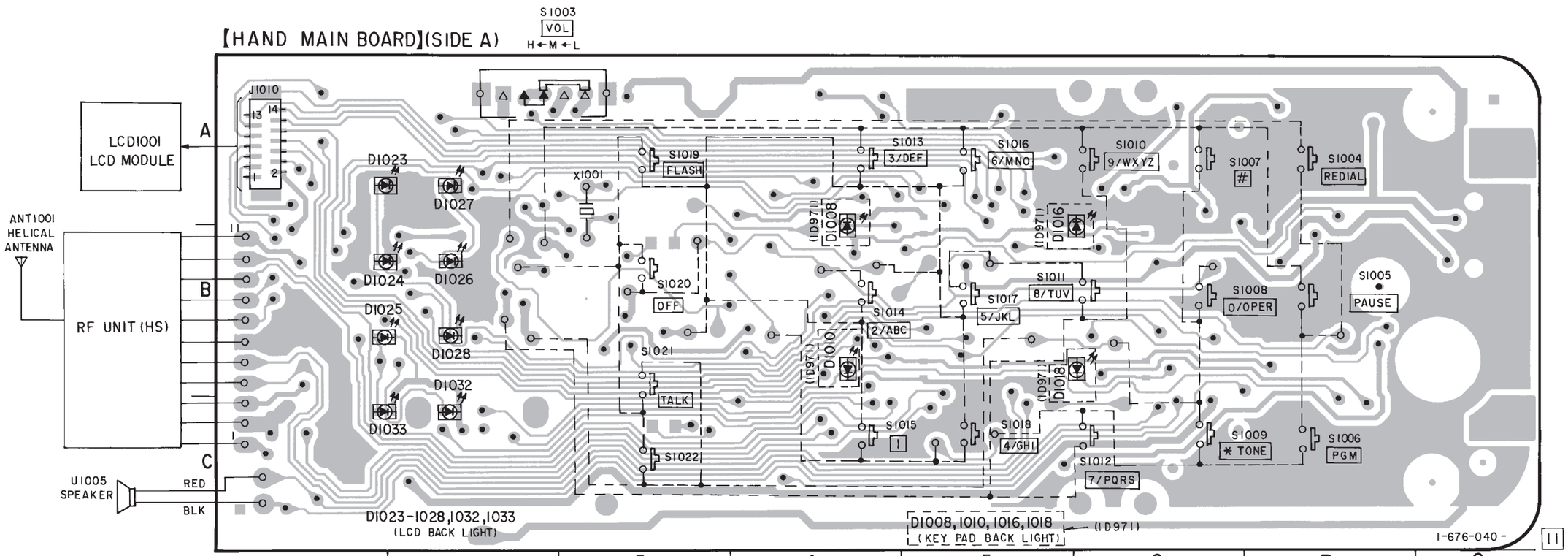
【LED BOARD】

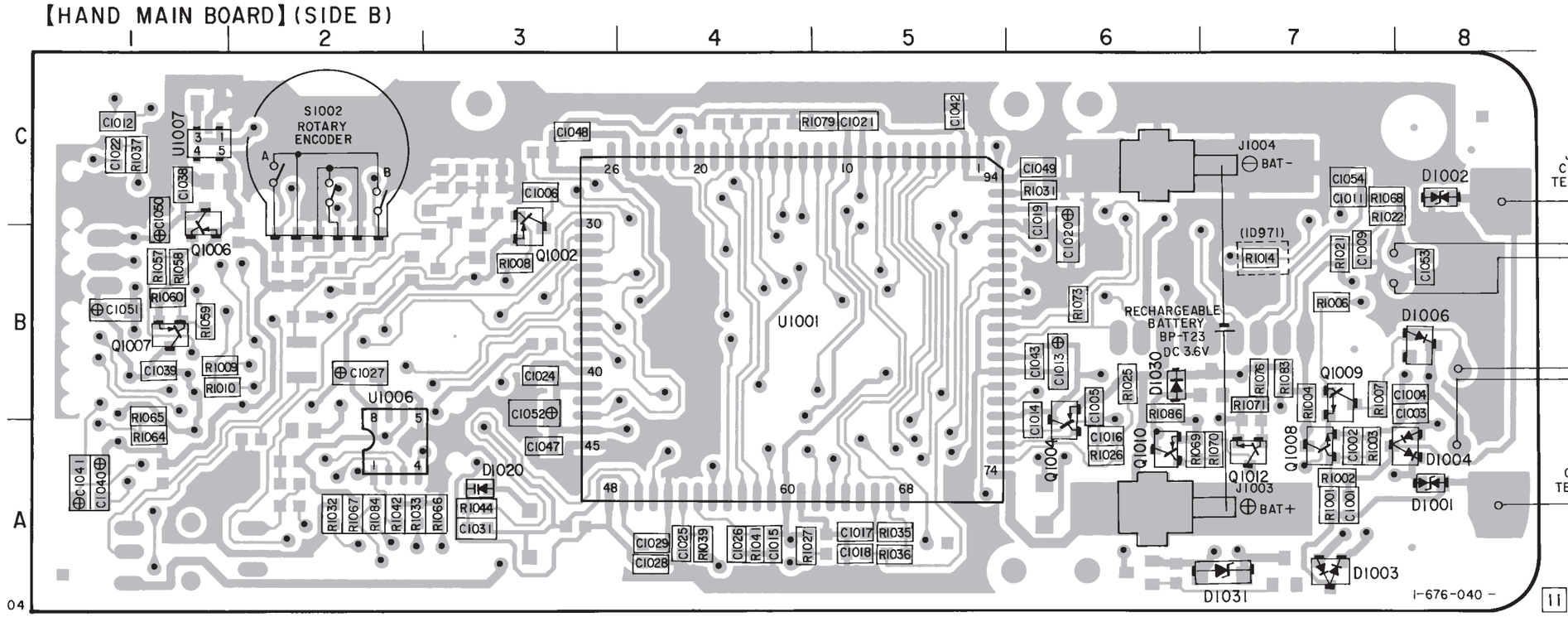


【BASE MAIN BOARD】(SIDE B)



4-6. PRINTED WIRING BOARD — HANDSET SECTION —



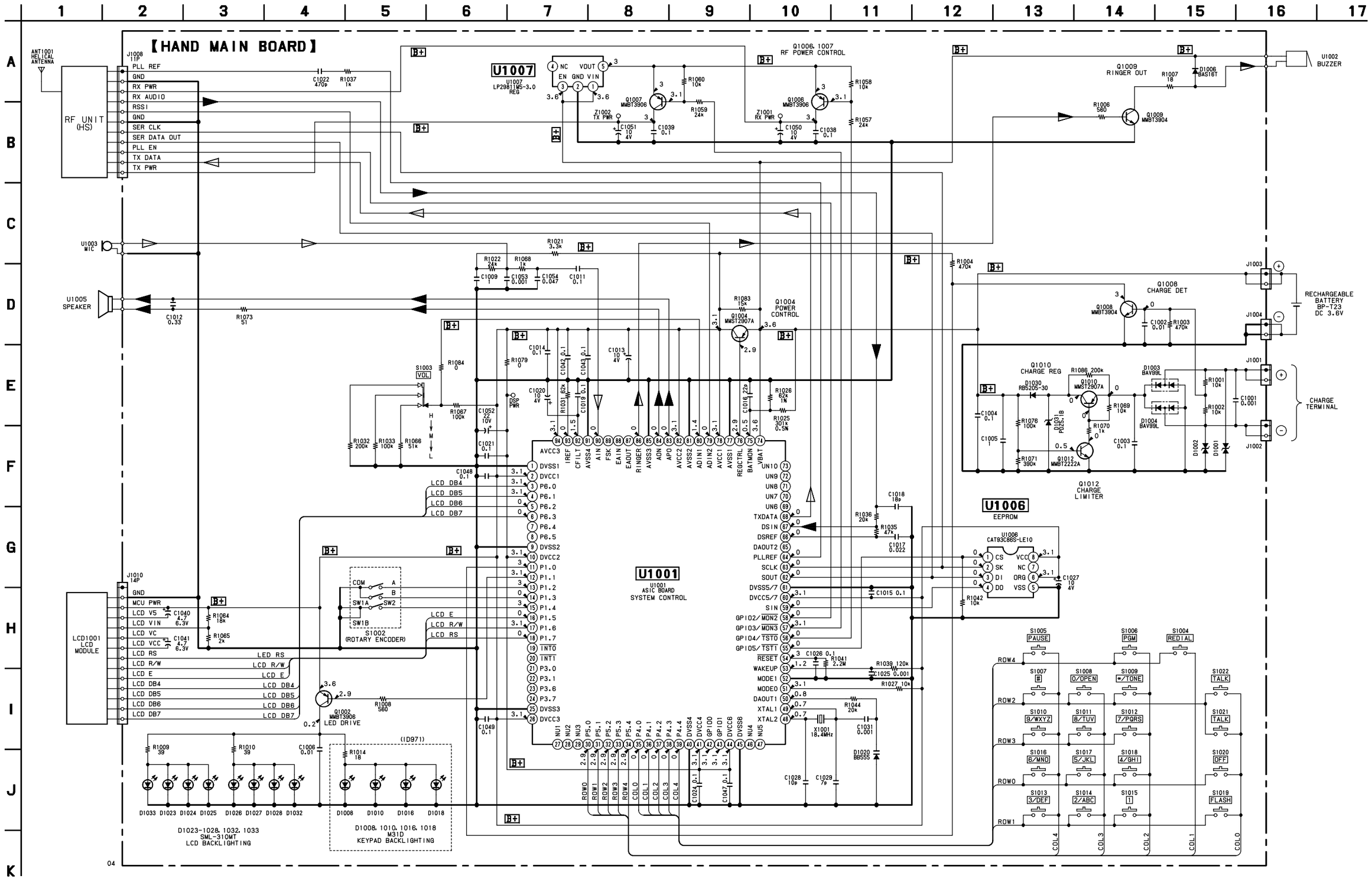


• **Semiconductor Location**

Ref. No.	Location
(D1001)	A-8
(D1002)	C-8
(D1003)	A-7
(D1004)	A-8
(D1006)	B-8
D1008	A-4
D1010	B-4
D1016	A-6
D1018	B-6
(D1020)	A-3
D1023	A-2
D1024	B-2
D1025	B-2
D1026	B-2
D1027	A-2
D1028	B-2
(D1030)	B-6
(D1031)	A-7
D1032	C-2
D1033	C-2
(Q1002)	B-3
(Q1004)	A-6
(Q1006)	B-1
(Q1007)	B-1
(Q1008)	A-7
(Q1009)	B-7
(Q1010)	A-6
(Q1012)	A-7
(U1001)	B-4
(U1006)	A-2
(U1007)	C-1

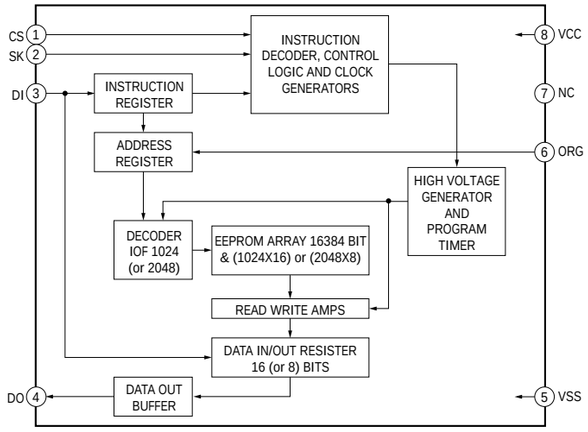
( ) : SIDE B

4-7. SCHEMATIC DIAGRAM — HANDSET SECTION — • Refer to page 31 for IC Block Diagram.



• IC Block Diagram

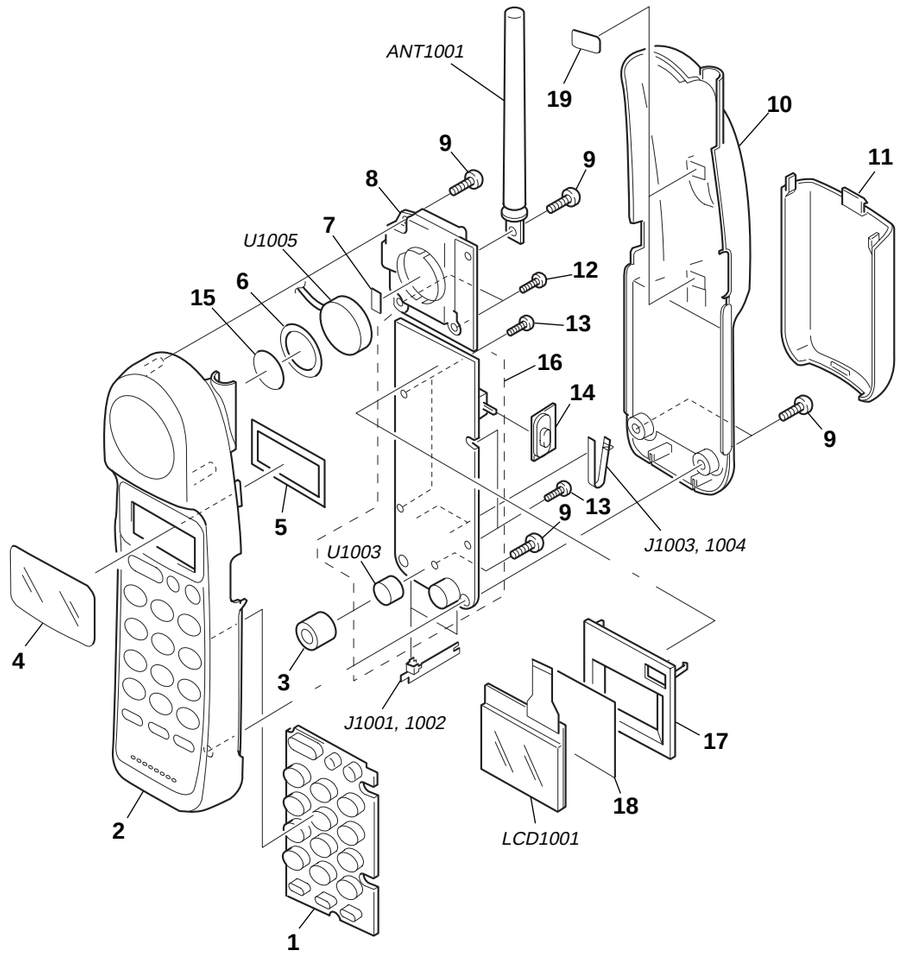
U1006, 2002 CAT93C86S-LE10



SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories and packing materials are given in the last of this parts list.

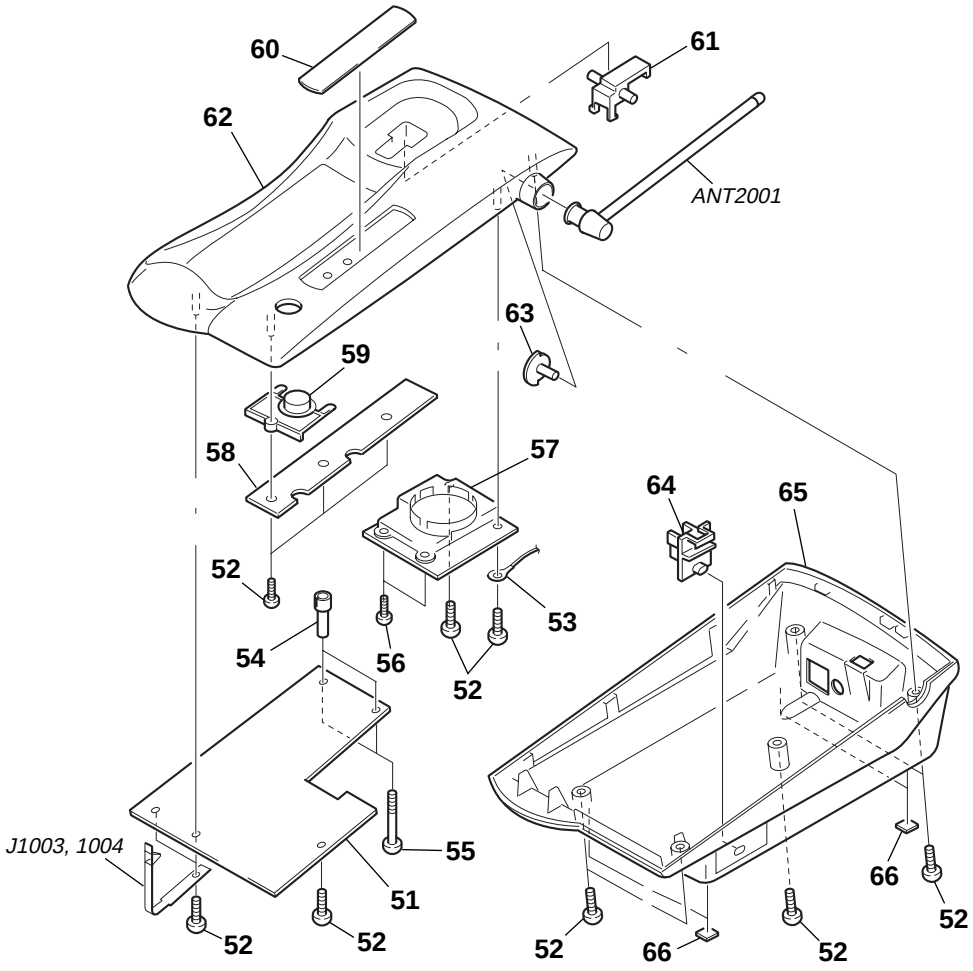
5-1. HANDSET SECTION



Ref. No.	Part No.	Description	Remark
1	3-038-147-01	KEY (HS), RUBBER (ID970)	
1	3-038-147-11	KEY (HS), RUBBER (ID971)	
2	3-038-079-01	CASE (FRONT) (HAND)	
3	3-041-211-01	RUBBER, MICROPHONE	
4	3-038-081-01	LENS (HS)	
5	3-041-520-01	HOLDER (HS), LCD	
6	3-041-537-01	RING, CUSHION RECEIVER	
7	3-041-212-01	CUSHION, SPEAKER	
8	A-3672-864-A	RF UNIT (HS)	
9	7-685-548-19	SCREW +BTP 3X12 TYPE2 N-S	
10	3-038-080-01	CASE (REAR) (HAND)	
11	3-038-083-01	LID (HS), BATTERY CASE	
12	4-356-741-21	SCREW, TAPPING (BIND 2X8)	
13	4-356-741-11	SCREW, TAPPING (BIND 2X6)	
14	3-038-085-01	KNOB (HS), VOL	

Ref. No.	Part No.	Description	Remark
15	3-041-535-01	FELT, RX	
* 16	A-3672-865-A	HAND MAIN BOARD, COMPLETE (ID970)	
* 16	A-3672-898-A	HAND MAIN BOARD, COMPLETE (ID971)	
17	3-038-084-01	DIFFUSER (HS)	
18	3-041-536-01	SHEET	
19	3-041-547-01	COVER (HS), HOOK	
ANT1001	1-754-103-11	ANTENNA	
J1001	3-041-208-01	TERMINAL, CHARGE	
J1002	3-041-208-01	TERMINAL, CHARGE	
J1003	3-041-210-01	TERMINAL, BATTERY	
J1004	3-041-210-01	TERMINAL, BATTERY	
LCD1001	1-803-832-11	LCD MODULE	
U1003	1-542-260-31	MICROPHONE, ELECTRET CONDENSER	
U1005	1-505-593-11	SPEAKER (2.8cm)	

5-2. BASE UNIT SECTION



Ref. No.	Part No.	Description	Remark
* 51	A-3672-868-A	BASE MAIN BOARD, COMPLETE	
52	7-685-548-19	SCREW +BTP 3X12 TYPE2 N-S	
53	3-044-144-01	TERMINAL BOARD, ANTENNA	
54	3-041-551-01	BASE, STUD	
55	3-044-146-01	SCREW (3X30)	
56	4-356-741-21	SCREW, TAPPING (BIND 2X8)	
57	A-3672-867-A	RF UNIT (BU)	
* 58	1-676-045-11	LED BOARD	
59	3-038-088-01	KEY, PAGE	
60	3-038-092-01	BASE, LENS	

Ref. No.	Part No.	Description	Remark
61	3-038-090-01	HOOK	
62	3-038-086-01	BASE (TOP) (ID970)	
62	3-038-086-11	BASE (TOP) (ID971)	
63	3-044-143-01	PLATE, ANTENNA RETAINER	
64	3-038-091-01	KNOB, TP SW	
65	3-038-087-01	BASE (BOTTOM)	
66	3-041-534-01	FOOT, RUBBER	
ANT2001	1-501-999-31	ANTENNA	
J1003	3-041-209-01	SPRING, CHARGE	
J1004	3-041-209-01	SPRING, CHARGE	

BASE MAIN

SECTION 6
ELECTRICAL PARTS 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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

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 piéce portant le numéro spécifié.

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

Ref. No.	Part No.	Description			Remark
*	A-3672-868-A	BASE MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1001	1-104-665-11	ELECT	100uF	20%	25V
C1004	1-126-933-11	ELECT	100uF	20%	16V
C1006	1-102-973-00	CERAMIC	100PF	5%	50V
C1007	1-102-973-00	CERAMIC	100PF	5%	50V
C1009	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V
C1010	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C1012	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1013	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1014	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1015	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1016	1-164-862-11	CERAMIC CHIP	33PF	5%	16V
C1017	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1018	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1020	1-164-862-11	CERAMIC CHIP	33PF	5%	16V
C1021	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1022	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1023	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1024	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1025	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C1026	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C1027	1-162-114-00	CERAMIC CHIP	0.047uF	10%	2KV
C1028	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C1029	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1030	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1031	1-128-582-11	ELECT	10uF	20%	6.3V
C1032	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2001	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2002	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2003	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2004	1-126-964-11	ELECT	10uF	20%	50V
C2006	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2007	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C2008	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C2009	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C2010	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C2011	1-126-964-11	ELECT	10uF	20%	50V
C2012	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2013	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C2014	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C2015	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V

Ref. No.	Part No.	Description			Remark
C2017	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C2018	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2019	1-126-963-11	ELECT	4.7uF	20%	50V
C2020	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2026	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2027	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2028	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2029	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2030	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2031	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2034	1-127-675-11	ELECT	22uF	10%	10V
C2035	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C2036	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C2037	1-115-156-11	CERAMIC CHIP	1uF		10V
C2038	1-115-156-11	CERAMIC CHIP	1uF		10V
C3047	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3048	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C3060	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< DIODE >			
D1006	1-801-730-11	VARISTOR			
D1007	8-719-911-55	DIODE U05G			
D1008	8-719-911-55	DIODE U05G			
D1009	8-719-911-55	DIODE U05G			
D1010	8-719-911-55	DIODE U05G			
D1011	8-719-909-90	DIODE BAV99			
D1012	8-719-909-90	DIODE BAV99			
D1015	8-719-909-90	DIODE BAV99			
D1016	8-719-909-90	DIODE BAV99			
D2001	8-719-077-35	DIODE BB555			
		< JACK >			
J1001	1-779-215-11	JACK, DC (DC IN 9V)			
J1006	1-565-999-11	JACK, MODULAR 2P (LINE)			
		< COIL >			
L1001	1-408-117-00	MICRO INDUCTOR 10uH			
L1003	1-408-117-00	MICRO INDUCTOR 10uH			
L1004	1-408-117-00	MICRO INDUCTOR 10uH			
L1005	1-408-117-00	MICRO INDUCTOR 10uH			
L1006	1-408-117-00	MICRO INDUCTOR 10uH			
		< TRANSISTOR >			
Q1006	8-729-026-06	TRANSISTOR MMBT3904LT1			

Ref. No.	Part No.	Description			Remark
Q1007	8-729-113-08	TRANSISTOR 2N3906			
Q1008	8-729-026-06	TRANSISTOR MMBT3904LT1			
Q2001	8-729-026-07	TRANSISTOR MMBT3906LT1			
Q2003	8-729-050-67	TRANSISTOR SST297AT116			
		< RESISTOR >			
R1010	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1011	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1012	1-218-271-11	RES,CHIP	2K	5%	1/16W
R1015	1-219-632-11	METAL CHIP	8.2	5%	1/10W
R1016	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1017	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1018	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R1019	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1020	1-216-818-11	METAL CHIP	560	5%	1/16W
R1021	1-216-820-11	METAL CHIP	820	5%	1/16W
R1022	1-216-812-11	METAL CHIP	180	5%	1/16W
R1023	1-216-812-11	METAL CHIP	180	5%	1/16W
R1024	1-218-345-11	RES,CHIP	9.1K	5%	1/16W
R1025	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1026	1-218-292-11	RES,CHIP	20K	5%	1/16W
R1027	1-218-292-11	RES,CHIP	20K	5%	1/16W
R1028	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1029	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1031	1-259-880-11	CARBON	2.2M	5%	1/4W
R1032	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1033	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1034	1-259-880-11	CARBON	2.2M	5%	1/4W
R1035	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1036	1-220-869-11	RES,CHIP	1.6M	5%	1/16W
R1037	1-220-869-11	RES,CHIP	1.6M	5%	1/16W
R1038	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1039	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1042	1-216-848-11	METAL CHIP	180K	5%	1/16W
R1043	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1044	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1045	1-219-570-11	METAL CHIP	10M	5%	1/16W
R1046	1-216-857-11	METAL CHIP	1M	5%	1/16W
R1047	1-216-857-11	METAL CHIP	1M	5%	1/16W
R1048	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1049	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1050	1-218-288-11	RES,CHIP	300	5%	1/16W
R2001	1-216-813-11	METAL CHIP	220	5%	1/16W
R2003	1-216-813-11	METAL CHIP	220	5%	1/16W
R2004	1-216-813-11	METAL CHIP	220	5%	1/16W
R2005	1-216-813-11	METAL CHIP	220	5%	1/16W
R2009	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R2010	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2011	1-216-864-11	METAL CHIP	0	5%	1/16W
R2015	1-218-161-11	RES,CHIP	62K	1%	1/10W
R2017	1-218-166-11	RES,CHIP	300K	1%	1/10W
R2018	1-218-161-11	RES,CHIP	62K	1%	1/10W
R2019	1-216-841-11	METAL CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R2020	1-218-292-11	RES,CHIP	20K	5%	1/16W
R2021	1-216-821-11	METAL CHIP	1K	5%	1/16W
R2023	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2025	1-216-849-11	METAL CHIP	220K	5%	1/16W
R2026	1-216-846-11	METAL CHIP	120K	5%	1/16W
R2028	1-218-292-11	RES,CHIP	20K	5%	1/16W
R2030	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2032	1-216-833-11	METAL CHIP	10K	5%	1/16W
R2033	1-216-864-11	METAL CHIP	0	5%	1/16W
R2034	1-216-864-11	METAL CHIP	0	5%	1/16W
R2035	1-216-835-11	METAL CHIP	15K	5%	1/16W
R3011	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
		< SWITCH >			
S2001	1-571-377-11	SWITCH, SLIDE (DIAL MODE)			
		< LINE TRANSFORMER >			
T1001	1-431-208-11	TRANSFORMER, LINE			
		< IC >			
U1001	8-759-391-69	IC MC78M05CDT			
U1002	8-719-821-66	PHOTO COUPLER TLP627			
U1003	8-759-700-44	IC NJM2902M			
U2001	X-3378-158-1	ASIC ASSY (ASIC BOARD, COMPLETE)			
U2002	8-759-466-52	IC CAT93C86S-LE10			
U2003	8-759-651-11	IC LP29811M5-3.0			
		< FUSE >			
W1001	1-533-842-11	FUSE (250mA/250V)			
		< VIBRATOR >			
X2001	1-577-269-11	VIBRATOR, CRYSTAL (18.4MHz)			
**********					
*	A-3672-865-A	HAND MAIN BOARD, COMPLETE (ID970)			
*	A-3672-898-A	HAND MAIN BOARD, COMPLETE (ID971)			
		**********			
		< CAPACITOR >			
C1001	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1002	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1003	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1004	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1005	1-164-346-11	CERAMIC CHIP	1uF		16V
C1006	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1009	1-164-346-11	CERAMIC CHIP	1uF		16V
C1011	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1012	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C1013	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1014	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1015	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1016	1-162-919-11	CERAMIC CHIP	22PF	5%	50V

HAND MAIN

Ref. No.	Part No.	Description			Remark
C1017	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C1018	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C1019	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1020	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1022	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C1024	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1025	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1026	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1027	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1028	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1029	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C1031	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1038	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1039	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1040	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C1041	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C1042	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1043	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1047	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1048	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1049	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1050	1-127-692-11	ELECT	10uF	10%	16V
C1051	1-127-692-11	ELECT	10uF	10%	16V
C1052	1-127-675-11	ELECT	22uF	10%	10V
C1053	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1054	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
		< DIODE >			
D1001	1-801-730-11	VARISTOR			
D1002	1-801-730-11	VARISTOR			
D1003	8-719-909-90	DIODE BAV99			
D1004	8-719-909-90	DIODE BAV99			
D1006	8-719-047-37	DIODE BAS16			
D1008	8-719-062-55	LED MS31D (ID971)			
D1010	8-719-062-55	LED MS31D (ID971)			
D1016	8-719-062-55	LED MS31D (ID971)			
D1018	8-719-062-55	LED MS31D (ID971)			
D1020	8-719-077-35	DIODE BB555			
D1023	8-719-063-83	LED SML-310MTT86			
D1024	8-719-063-83	LED SML-310MTT86			
D1025	8-719-063-83	LED SML-310MTT86			
D1026	8-719-063-83	LED SML-310MTT86			
D1027	8-719-063-83	LED SML-310MTT86			
D1028	8-719-063-83	LED SML-310MTT86			
D1030	8-719-047-37	DIODE BAS16			
D1031	8-719-070-56	DIODE PDZ5.1B-115			
D1032	8-719-063-83	LED SML-310MTT86			
D1033	8-719-063-83	LED SML-310MTT86			
		< TRANSISTOR >			
Q1002	8-729-026-07	TRANSISTOR MMBT3906LT1			
Q1004	8-729-922-00	TRANSISTOR MMST2907A			

Ref. No.	Part No.	Description			Remark
Q1006	8-729-026-07	TRANSISTOR MMBT3906LT1			
Q1007	8-729-026-07	TRANSISTOR MMBT3906LT1			
Q1008	T-941-615-31	TRANSISTOR MMBT3904LT1			
Q1009	T-941-615-31	TRANSISTOR MMBT3904LT1			
Q1010	8-729-922-00	TRANSISTOR MMST2907A			
Q1012	8-729-033-61	TRANSISTOR MMBT2222ALT1			
		< RESISTOR >			
R1001	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1002	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1003	1-216-853-11	METAL CHIP	470K	5%	1/16W
R1004	1-216-853-11	METAL CHIP	470K	5%	1/16W
R1006	1-216-818-11	METAL CHIP	560	5%	1/16W
R1007	1-216-156-00	RES,CHIP	18	5%	1/8W
R1008	1-216-818-11	METAL CHIP	560	5%	1/16W
R1009	1-216-804-11	METAL CHIP	39	5%	1/16W
R1010	1-216-804-11	METAL CHIP	39	5%	1/16W
R1014	1-216-800-11	RES,CHIP	18	5%	1/16W (ID971)
R1021	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R1022	1-216-231-00	RES,CHIP	24K	5%	1/8W
R1025	1-219-614-11	METAL CHIP	301K	0.50%	1/16W
R1026	1-218-161-11	RES,CHIP	62K	1%	1/10W
R1027	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1031	1-218-161-11	RES,CHIP	62K	1%	1/10W
R1032	1-220-372-11	RES,CHIP	200K	5%	1/16W
R1033	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1035	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1036	1-218-292-11	RES,CHIP	20K	5%	1/16W
R1037	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1039	1-216-846-11	METAL CHIP	120K	5%	1/16W
R1041	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R1042	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1044	1-218-292-11	RES,CHIP	20K	5%	1/16W
R1057	1-216-231-00	RES,CHIP	24K	5%	1/8W
R1058	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1059	1-216-231-00	RES,CHIP	24K	5%	1/8W
R1060	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1064	1-216-836-11	METAL CHIP	18K	5%	1/16W
R1065	1-218-271-11	RES,CHIP	2K	5%	1/16W
R1066	1-218-331-11	RES,CHIP	51K	5%	1/16W
R1067	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1068	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1069	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1070	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1071	1-216-852-11	METAL CHIP	390K	5%	1/16W
R1073	1-220-151-11	RES,CHIP	51	5%	1/16W
R1076	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1079	1-216-864-11	METAL CHIP	0	5%	1/16W
R1083	1-216-835-11	METAL CHIP	15K	5%	1/16W
R1084	1-216-864-11	METAL CHIP	0	5%	1/16W
R1086	1-216-849-11	METAL CHIP	220K	5%	1/16W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S1002	1-475-568-12	ENCODER, ROTARY	
S1003	1-771-833-11	SWITCH, SLIDE (VOL)	
		< IC >	
U1001	X-3378-158-1	ASIC ASSY (ASIC BOARD, COMPLETE)	
U1002	1-505-594-11	BUZZER	
U1003	1-542-260-31	MICROPHONE, ELECTRET CONDENSER	
U1005	1-505-593-11	SPEAKER (2.8cm)	
U1006	8-759-466-52	IC CAT93C86S-LE10	
U1007	8-759-651-11	IC LP29811M5-3.0	
		< VIBRATOR >	
X1001	1-577-269-11	VIBRATOR, CRYSTAL (18.4MHz)	
**********			
*	1-676-045-11	LED BOARD	
		**********	
		< DIODE >	
D1	8-719-031-09	LED SLB-25VR3F (NEW CALL)	
D2	8-719-031-09	LED SLB-25VR3F (MESSAGES)	
D4	8-719-059-40	LED SLR-342VR3F (CHARGE)	
D5	8-719-052-06	LED SLR-342MGT32 (LINE)	
		< SWITCH >	
S1	1-554-937-11	SWITCH, KEY BOARD (HANDSET LOCATOR)	
**********			
		MISCELLANEOUS	
		**********	
8	A-3672-864-A	RF UNIT (HS) (HANDSET)	
57	A-3672-867-A	RF UNIT (BU) (BASE UNIT)	
ANT1001	1-754-103-11	ANTENNA (HANDSET)	
ANT2001	1-501-999-31	ANTENNA (BASE UNIT)	
LCD1001	1-803-832-11	LCD MODULE (HANDSET)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
⚠	1-418-436-11	ADAPTOR, AC (AC-T127)	
	1-528-769-11	BATTERY PACK (BP-T23)	
	1-696-453-21	CORD (WITH MODULAR PLUG) (LINE) (215cm)	
	1-696-454-11	CORD (WITH MODULAR PLUG) (LINE) (15cm)	
	3-012-379-11	CASE (WALL HOOK)	
	3-867-313-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH)	(ID970)
	3-867-313-21	MANUAL, INSTRUCTION (ENGLISH,FRENCH)	(ID971)
	3-867-349-11	GUIDE, QUICK START (ENGLISH,SPANISH)	(ID970)
	3-867-349-21	GUIDE, QUICK START (ENGLISH,FRENCH)	(ID971)

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 piéce portant le numéro spécifié.

9-927-617-11

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