# SPP-A973/A974

# SERVICE MANUAL

**Ver 1.0 1999. 11**

*US Model*
*SPP-A973*
*Canadian Model*
*SPP-A974*

Photo: SPP-A973

## SPECIFICATIONS

### General

Frequency band (SPP-A973)
902 – 928 MHz
Frequency band (SPP-A974)
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-T128 (1)
Telephone line cords (2)
Wall bracket for base phone (1)
Rechargeable battery pack BP-T23 (1)

### Handset

Power source
Rechargeable battery pack BP-T23
Battery charging time
Approx. 12 hours
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 9 V from AC power adaptor AC-T128
Battery charging time
Approx. 24 hours
Dimensions
Approx. 160 × 63 × 225 mm (w/h/d), antenna excluded
(approx. 6 3/8 × 2 1/2 × 8 7/8 inches)
Antenna: Approx. 120 mm
(approx. 4 3/4 inches)
Mass
Approx. 585 g
(approx. 1 lb 5 oz), wall bracket excluded

### Answering machine

Maximum recording time
About 15 minutes, using incorporated IC
Greeting message
Up to 90 seconds per each
Incoming and Memo message
Up to 4 minutes per message

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®

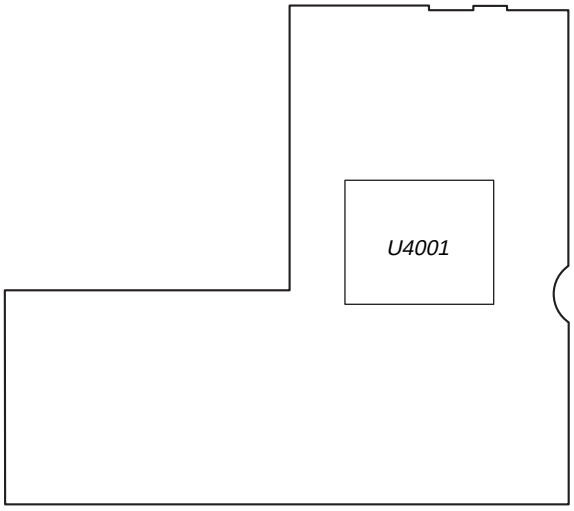
**Note for Replacement of the ASIC Board**

The ID is written in the ASIC board.

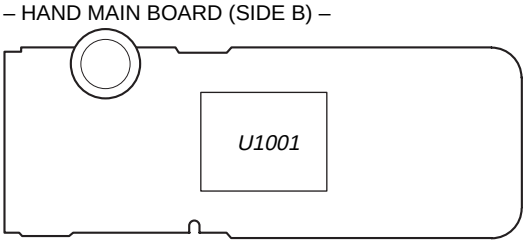
When replacing the ASIC board, the U4001 on BASE MAIN board and U1001 on HAND MAIN board should be replaced together as a pair.

Part No. : X-3378-160-1 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-A974's instruction manual.

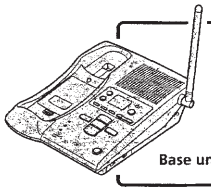


## Read this first

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 5)

First, unpack the phone and the supplied accessories.



**Step 2** (pages 6 to 8)

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 9 to 10)

Then, insert the battery pack into the handset and charge it for more than 12 hours.

**Step 4** (pages 12 to 14)

Finally, enter the area code to use the Caller ID service.

Handset

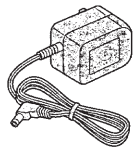
***That's it!***



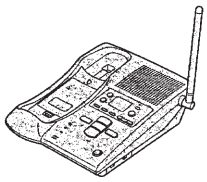
## Step 1

### Checking the package contents

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

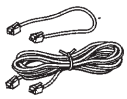


AC power adaptor (AC-T128)



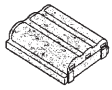
Base unit

Handset



Telephone line cords (2)

Wall bracket for base unit



Rechargeable battery pack (BP-T23)





## Step 2

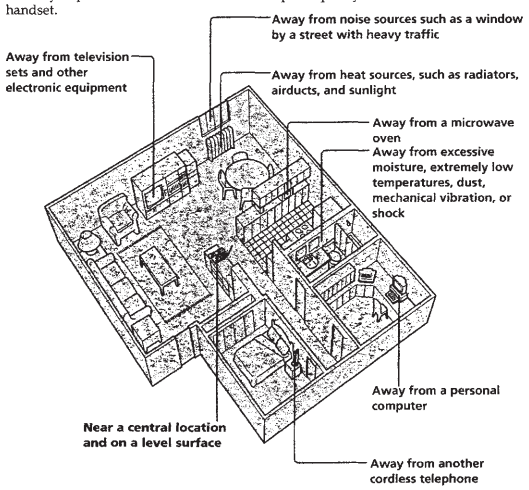
### Setting up the base unit

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.

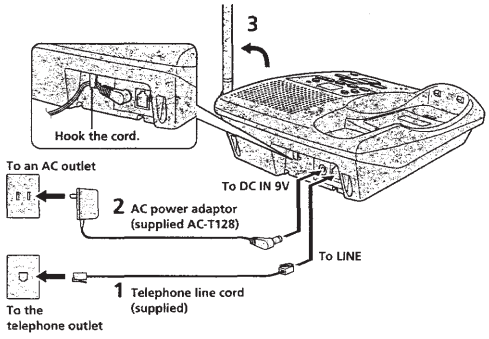



**CAUTION:**
- **Should you experience intermittent loss of audio during a conversation, try moving closer to the base or move base unit away from other noise sources.**
- **The cordless telephone operates at a frequency that may cause interference to nearby TVs and VCRs; the base unit should not be 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 50.




**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-T128 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

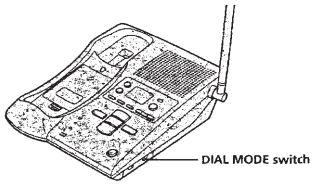
**Tip**

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.

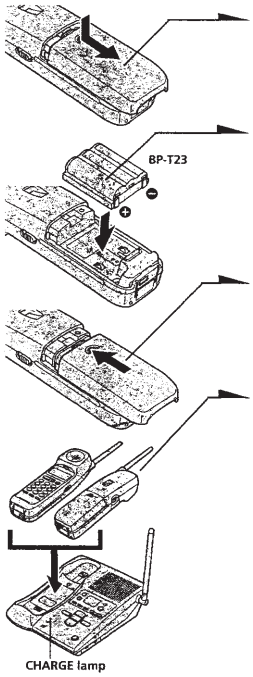
If the call connects, leave the switch as is; otherwise, set to PULSE.



# 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.

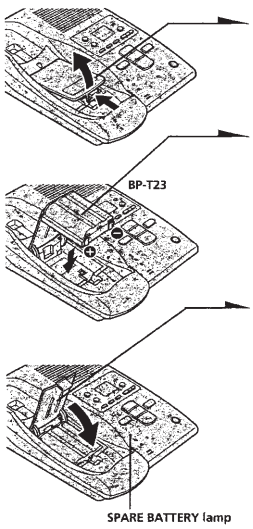
**Note**

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



### Handset spare battery usage

As only one battery pack is supplied with this unit, it is necessary to purchase an additional battery pack (optional) for use as a handset spare battery pack.




**1** Open the battery compartment lid of the base unit.

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

**3** Close the battery compartment lid.

The SPARE BATTERY lamp lights up. Charge the battery pack for more than 24 hours so that the battery is fully charged. The SPARE BATTERY lamp remains lit even after charging is completed.

## 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.**

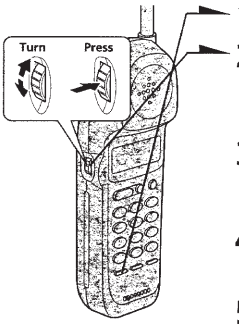
Depending on your region, enter 3-digit area code as follows:

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 13.

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 13.

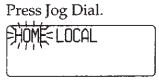
### To enter your home area code




**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.



**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 12.
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.

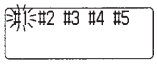
### To enter the local area code (For 10 digits phone numbers users)

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 12.

**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.

continued





**Step 4: Entering the area code (continued)**

**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 13.
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).

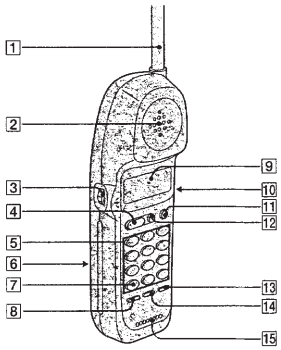
The local area code will be erased, and you hear a long confirmation beep.



# Identifying the parts

Refer to the pages indicated in parentheses for details.

### Handset

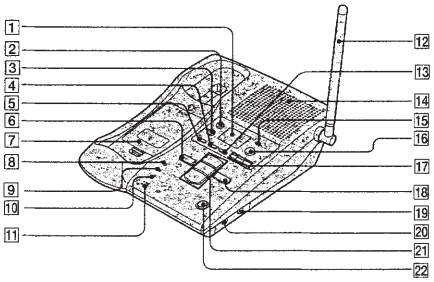



1. **Antenna**
2. **Speaker**
3. **Jog dial** (p. 12, 22, 42)
4. **TALK button** (p. 18, 20)
   Lets you make or receive a call.
5. **Dialing keys** (p. 18)
6. **Battery compartment** (p. 9)
7. **✳ TONE button** (p. 18)
   Allows you to switch temporarily to tone dialing.
8. **PGM (Program) button** (p. 12, 22)
   Used to store numbers in Phone Directory.
9. **Display window** (p. 41)
10. **VOL (volume) switch** (p. 18)
    Adjusts the handset volume.
11. **CALL WAITING/FLASH button** (p. 20, 49)
    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. 19)
    Redials the last number called.
14. **PAUSE button** (p. 23)
    Inserts a pause in the dialing sequence.
15. **Microphone**

continued

## Identifying the parts (continued)

### Base Unit




1 **Message counter** (p. 33)
Indicates the number of new messages recorded. "A" appears in the announcement only mode. "F" appears when there is no space to record messages.

2 **REC/MEMO button** (p. 29, 38)
Records a greeting or memo message.

3 **ERASE button** (p. 30, 35)
Erases the recorded greeting or messages.

4 **SELECT button** (p. 28)

5 **TIME/SET button** (p. 28, 39)
Press when setting the day and time, or to check the current time. Also used when setting the remote ID code (security code).

6 **REPEAT/SLOW button** (p. 34)
Press to repeat the current message or go back to the previous message. Keep the button pressed for slow playback of messages.

7 **Battery compartment** (p. 11)

8 **SPARE BATTERY lamp** (p. 11)
Lights while the spare battery is being charged.

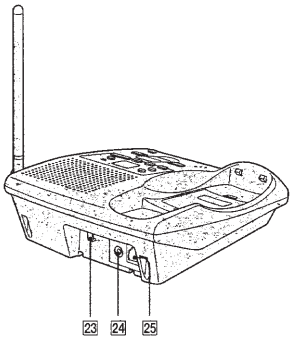
9 **CHARGE lamp** (p. 9)
Lights while the battery is being charged.

10 **IN USE lamp** (p. 18, 20)
Lights when the cordless handset is in use.

11 **MIC (microphone)** (p. 29, 38)

12 **Antenna** (p. 7, 50)






13 **MENU button** (p. 28)

14 **Speaker**

15 **NEW CALL lamp** (p. 42)
Flashes when there is a "NEW" data in the Caller ID list.

16 **ANSWER ON/OFF button** (p. 33)
Turns the answering function on or off.

17 **VOLUME +/– buttons** (p. 35)
Adjusts the speaker volume.

18 **SKIP/QUICK button** (p. 34)
Press to skip to the next message. Keep the button pressed for quick playback of messages.

19 **DIAL MODE switch** (p. 8)
Selects pulse or tone dialing.

20 **RINGER LEVEL switch** (p. 20)
Adjusts the ringer volume.

21 **PLAY/STOP (MAILBOX 1, 2, 3) buttons** (p. 34)
Plays back the messages in each mailbox.

22 **HANDSET LOCATOR button** (p. 27)
Allows you to page the cordless handset.

23 **Hook for AC power adaptor cord** (p. 7)

24 **DC IN 9V jack** (p. 7, 50)

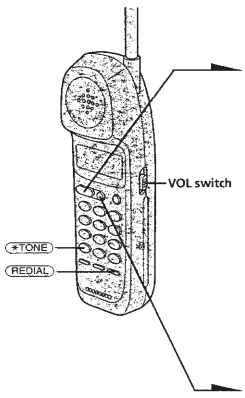
25 **LINE (telephone line) jack** (p. 7, 50)







# 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.
The dialing keys light up for five seconds.
You will then hear a dial tone.
The IN USE 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 IN USE 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.

## Redialing

**1** Press (TALK) and wait until "TALK" appears on the display.
The dialing keys light up for five seconds.
The IN USE 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

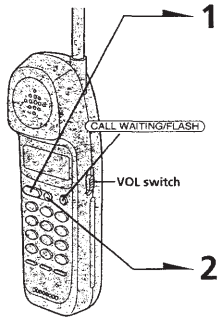
While the handset is not in use, press (REDIAL).
The last number dialed is displayed for five seconds.
To dial the number, press (TALK) while the number is displayed.

**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 dialing keys light up for five seconds.

The IN USE lamp on the base unit lights up.

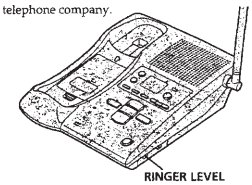
**2** When you're done talking, press (OFF) or replace the handset on the base unit.

The display and the IN USE 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 26. |
| Adjust the ringer volume of the base unit | Set the RINGER LEVEL switch on the base unit to HIGH, LOW or OFF. |

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






**Notes**

- If another call comes in by "call waiting" service while conversing with an outside caller, you will hear two short beeps.
- Even when you set the RINGER LEVEL switch on the base unit to OFF, the handset will ring when the ringer of the handset is turned on (see page 26).

**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 41) 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 41).



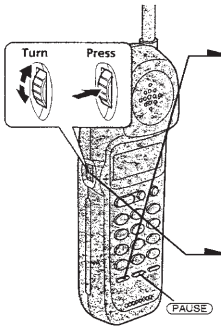




# Phone Directory

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).)

The dialing keys light up for five seconds.


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

**2** Press Jog Dial.

"ENTER NAME" appears.

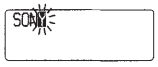
**3** Enter the name using the dialing keys. You can enter up to 16 characters.

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 |
| (*) | * |
| (#) | & → ' → , → - → . → # |



**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 25).
- 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).

continued

### 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 25.

SONY
1234567

2 Press Jog Dial.

DIAL=EDIT ERASE
1234567

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

The cursor flashes at the last character of the name.

SONY
1234567

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.

SMITH
1234567

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.



### 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".

SONY
1234567

2 Press Jog Dial.

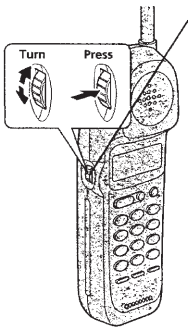
DIAL=EDIT ERASE
1234567

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

ERASE=NO=YES
1234567

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.

SONY
1234567

3 Press Jog Dial.

DIAL=EDIT ERASE
1234567

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**

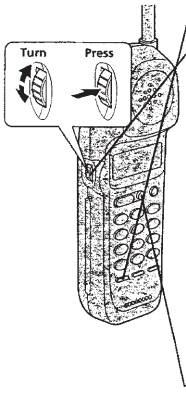
The names appear in the following order when you turn Jog Dial up or down.
• Alphabetical order: ABC...XYZ ↔ symbols ↔ * ↔ # ↔ 0 - 9
• Initial character: To search for "SONY" for example, press (7) and then turn Jog Dial to search through the names starting with P, Q, R, S or 7.





## 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.

DIRECTORY AREA
=RINGER=

3 Press Jog Dial.
The current ringer type appears.

RINGER 1
SELECTED

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 above.

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

RINGER OFF
SELECTED

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.

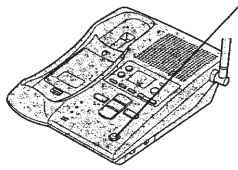
**To turn the ringer on again**

Follow the instructions described in "Setting the ringer type".



## Paging

You can page the handset from the base unit.
Note that you cannot page if the handset is in use.



### To Page

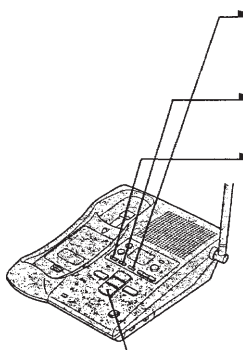
Press (HANDSET LOCATOR).
The handset rings for about one minute.
To stop ringing, press (OFF) on the handset.

**Tip**

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

# Setting up the answering machine

## Setting the time and day of the week



1 Press (MENU) repeatedly until you hear "Set day and time". "- -" blinks on the display.

2 Press (SELECT) repeatedly to select the day of the week.

3 Press (TIME/SET). The day is set and the hour is announced.

4 Press (SELECT) repeatedly to select the hour.

5 Press (TIME/SET). The hour is set and the minute is announced.

6 Press (SELECT) repeatedly to select the minute.

7 Press (TIME/SET). The day and time you just entered is announced and the clock restarts.

8 Press (PLAY/STOP) to exit the menu setup mode. You will hear a long confirmation beep.

**Notes**
- Press and hold (SELECT) to increase the minute setting by 10.
- The time and day are preset to Monday, 12:00 AM.
- "CL" flashes when the day and time is cleared or delayed due to a power interruption, or when you connect the base unit to the AC outlet for the first time.



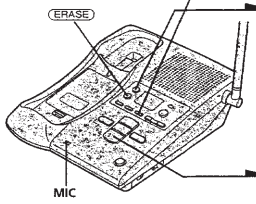
**Tip**
All the mailbox buttons ((MAILBOX 1), (MAILBOX 2) and (MAILBOX 3)) work as the (PLAY/STOP) button; press any of the three in this case.

### To hear the current time

Press (TIME/SET). The current time setting is announced.

## Recording the greeting

You can record your own greeting for the "normal" and "announcement only" modes (see page 36).




1 Press (MENU) repeatedly until "Set out-going message" is announced. "- -" blinks on the display.

2 Press (REC/MEMO). "Now recording" is announced and a long beep sounds.

3 Speak into the base unit microphone (MIC). The display starts counting. You can record up to 90 seconds.

4 To stop recording, press (PLAY/STOP). Your greeting replays automatically.

**Notes**
- If you do not record your own greeting, the prerecorded greeting will be assigned automatically (see page 30).
- If your greeting is less than two seconds, the greeting is not recorded. The prerecorded greeting will be assigned automatically.
- If a call comes in during recording, recording stops automatically.
- If 90 seconds have passed or memory becomes full in step 3, recording stops automatically.
- "Memory full" is announced if no recording space is available when you press (REC/MEMO). Erase unnecessary messages (see page 35).

**Tip**
To record a greeting for the "announcement only" mode, select the announcement only mode first (see page 36), then follow the instructions above. Otherwise, the normal greeting will be recorded.

continued







### To check the greeting

Press (MENU) repeatedly until "Set out-going message" is announced. Then press (PLAY/STOP) to play back the greeting.

### To change the greeting

Record a new greeting by following the instructions on the previous page. The new greeting replaces the old one.

### To erase the greeting

1 Press (MENU) repeatedly until "Set out-going message" is announced.

2 Press (ERASE).

**Notes**
- You can also erase the greeting during playback.
- If you have erased your own greeting, the prerecorded greeting will be assigned automatically.

### Prerecorded greetings

Normal mode: "Hello, I'm unable to answer your call right now. Please leave your name, number and message after the tone."

Announcement only mode: "Hello, I'm unable to answer your call right now. Please call again. Thank you."



## Setting the number of rings

You can select the number of times the phone rings before it answers to take a message.
There are four modes: 2, 4, 6, and Toll Saver.

1 Press (MENU) repeatedly until you hear "Set number of rings". "- -" blinks on the display.

2 Press (SELECT) repeatedly to select a ring duration (2, 4, 6, or Toll Saver).
To answer after 2 rings, select "2".
To answer after 4 rings, select "4".
To answer after 6 rings, select "6".
Select "Toll Saver" to answer after 2 rings when there are new messages, and 4 rings where there are no new messages.

3 Press (TIME/SET). The ring duration setting is announced.

4 Press (PLAY/STOP) to exit the menu setup mode.

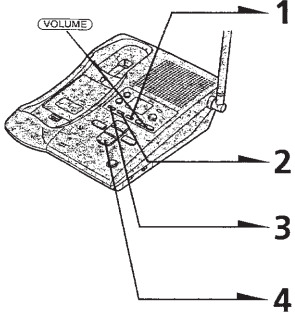
**Notes**
- When the number of rings is set to "Toll Saver", the phone answers after 2 rings if new messages are recorded. If no new message are recorded, it answers after 4 rings. When you hear 3 rings, you will know that there are no new messages. You can save the toll for the call when you pick up messages from an outside phone.
- The number of rings is preset to 4 rings.



continued

## Setting the audible message alert

You have the option of having a beep tell you if you have received any new incoming messages.




1 Press MENU repeatedly until you hear "Set audible message alert".
"- -" blinks on the display.

2 Press SELECT to set the audible message alert on or off.

3 Press TIME/SET.
The setting is announced.

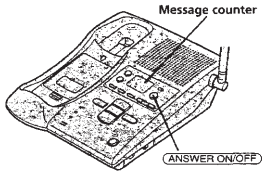
4 Press PLAY/STOP to exit the menu setup mode.

**Notes**

- When the audible message alert is turned on, you will hear a beep every 10 seconds if there are any new messages.
- To stop the beep, press any button related to the answering machine function or VOLUME + / −.
- The audible message alert is preset to off.



## Turning on the answering function




Press ANSWER ON/OFF on the base unit.
The ANSWER ON/OFF button lights up.

### Mailbox usage

This phone offers you three voice mailboxes, providing a convenient way to share the mailbox feature with other members of your household or business.

#### When a caller calls

The caller can choose one of the two ways to leave a message:

- If calling from a touch-tone phone, the caller select a mailbox by pressing ✱ 1 (MAILBOX 1), ✱ 2 (MAILBOX 2) or ✱ 3 (MAILBOX 3) while the caller hears the greeting. The greeting stops and a beep will sound, then the caller can start recording a message.
- Wait until the greeting finishes, then start recording a message. When the caller does not select a mailbox, the message is automatically recorded to MAILBOX 1.

**Notes**

- If four minutes have passed while recording the incoming message, the line will be disconnected automatically.
- If the message is shorter than two seconds, it will not be recorded.

#### To turn off the answering function

Press ANSWER ON/OFF on the base unit.
The ANSWER ON/OFF button goes off.

**Note**

The answering function is preset to on.

**Tip**

The answering machine will automatically answer a call after 10 rings, even if the answering function is off and announces "Please enter your security code" to prompt the caller to turn on the answering function.

#### When the memory is full

The total recording time of this answering machine is approximately 15 minutes (including the greeting, messages, and memo).
When the remaining recording time becomes less than 30 seconds, "F" flashes on the display and the answering machine goes into the memory full status.
In this status, the answering machine will not answer a call until after 10 rings even if the answering function is on.
To avoid this erase unnecessary messages (see page 35). You can also erase the messages from an outside phone (see page 40).

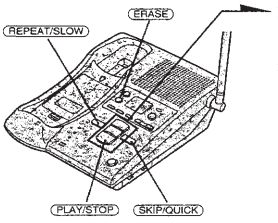




# Playing back messages

If there are new messages, the display flashes the number of new messages.

You will hear beeps if the audible message alert setting is on (see page 32).




Press a mailbox button (MAILBOX 1, MAILBOX 2 or MAILBOX 3) to play back new messages in the selected mailbox.

### Additional tasks when playing back messages

| To | Do this |
|---|---|
| Stop playback | Press a mailbox button (MAILBOX 1, MAILBOX 2 or MAILBOX 3). |
| Repeat the current message | Press REPEAT/SLOW during play back. |
| Skip the current message | Press SKIP/QUICK. |
| Go back to the previous message | Press REPEAT/SLOW within the first two seconds of the current message playback. |
| Play back slowly | Press and hold REPEAT/SLOW during play back.<br>Release REPEAT/SLOW to return to normal. |
| Play back quickly | Press and hold SKIP/QUICK during play back.<br>Release SKIP/QUICK to return to normal. |

**Notes**

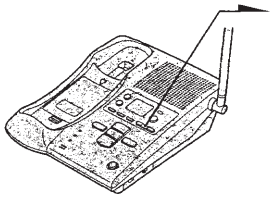
- If a call comes in, the play back will stop.
- A time and day stamp is announced after each message.

**Tips**

- If there are no new messages, all the previously reviewed messages are played back.
- The messages are saved even after a power failure.



## Adjusting the speaker volume



To adjust the speaker volume, press VOLUME + or −.

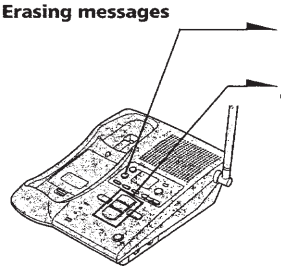
**Notes**

- When you have reached the minimum or maximum volume level, you will hear three short beeps.
- You cannot adjust the speaker volume while the phone is ringing.

**Tip**

There are 8 steps for the volume level (1 to 8). The volume level is preset to 5.

## Erasing messages



1 Press and hold ERASE for more than two seconds.

2 Press a button for the mailbox you want to erase (MAILBOX 1, MAILBOX 2 or MAILBOX 3).
You will hear a long confirmation beep and all "old" messages in the selected mailbox are erased.

### To erase individual messages

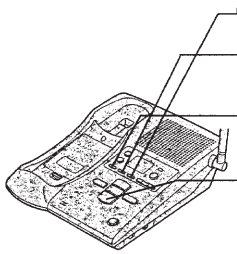
Press ERASE while playing back the message that you want to erase.

**Note**

The display shows the total number of "new" (i.e. unreviewed) messages. Therefore, the display is reset to "0" when you have played back all new messages, whether they have been erased or not. Be sure to erase unnecessary messages before the memory becomes full.

## Selecting the Announcement Only Mode

You can set the answering machine to play the greeting without recording incoming messages (announcement only mode). You might want to select this mode when, for example, you expect to be away for a while and you cannot pick up messages.



1 Press (MENU) repeatedly until you hear "Set announce only".

2 Press (SELECT) to set the announcement only mode on or off.

3 Press (TIME/SET). The setting is announced.

4 Press (PLAY/STOP) to exit the menu setup mode. The display shows "A" when the answering machine is set to the announcement only mode.

**Notes**

- To activate announcement only mode, you have to turn on the answering machine.
- The announcement only mode is preset to off.



## Screening calls

You can screen calls by leaving the answering machine on while you are at home. When a call is answered, you can hear the message being recorded through the base unit. You can decide either to continue recording or to answer the call.
Alternatively, you may select to mute the message (see "Turning on/off the screening calls function" below).
The message will be recorded, but to hear it you will need to play back the message (see page 34).

### To answer the call

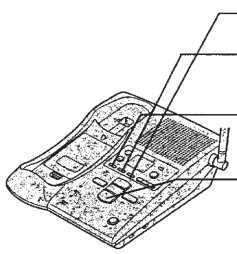
Press (TALK) on the handset.

**Notes**

- Press (VOLUME) (+) or (−) to adjust the speaker volume. If the speaker volume is set at its minimum level, you will not be able to hear incoming calls.
- The answering machine will stop automatically when the handset or a parallel phone is picked up. If the answering machine does not stop, press either (PLAY/STOP) on the base unit, or (*)(0) on the handset or parallel phone. The recording will remain as a new message.

### Turning on/off the screening calls function

The screening calls function is preset to on at the factory.



1 Press (MENU) repeatedly until you hear "Set call screening".

2 Press (SELECT) to set the screening calls function on or off.

3 Press (TIME/SET). The setting is announced.

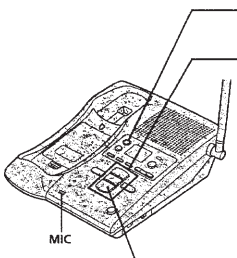
4 Press (PLAY/STOP) to exit the menu setup mode.





## Recording a memo message

You can leave messages for other users of the unit.




1 Press (REC/MEMO).

2 Press a mailbox button ((MAILBOX 1), (MAILBOX 2) or (MAILBOX 3)) to which you want to leave the message. "Now recording" is announced and counting starts.

3 Speak into the base unit microphone (MIC) to record your message.
A memo can be up to four minutes in length.

4 Press (PLAY/STOP) to stop recording.
The message number on the display increases by one.

**Notes**

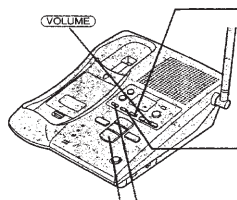
- If the memory becomes full, the answering machine will stop recording.
- "Memory full" is announced if no recording space is available when you press (REC/MEMO).
- If your message is shorter than two seconds, the recording will be canceled.
- The display flashes "99" if you record a memo for more than 99 seconds.
- If a call comes in during recording, the recording will be stopped.



## Operating from an outside phone

### Setting the remote ID code (security code)

To operate the answering machine from a touch-tone phone while you are away from home, you need to set the remote ID code (security code).




1 Press (MENU) repeatedly until you hear "Set security code".

2 Press (SELECT) to change the remote ID code (security code) setting.

3 Press (TIME/SET) to confirm your choice.
The new remote ID code (security code) is announced.

4 Press (PLAY/STOP) to exit the menu setup mode.

**Note**

Press and hold (SELECT) to increase the remote ID code (security code) by 10.



continued

### Picking up new messages

1 Call your telephone number from a touch-tone phone.

2 When you hear the greeting, press (#) and enter your remote ID code (security code).
You will hear a confirmation beep.
The number of new messages will be announced.

3 Press the keys in the "Table of control codes" below for the desired operation command.

4 When you are finished, disconnect the line.

**Notes**

- Do not let two seconds elapse between each digit of the remote ID code (security code) and the control code.
- If you did not turn on the answering machine, your phone answers automatically after 10 rings.
- If the message recording memory runs out, the answering machine turns off automatically. "Memory full. Please enter your security code" is announced.
- If you enter wrong remote ID code (security code) three times, the line will disconnect.
- If no keys are pressed within 20 seconds, the line will disconnect.

**Tips**

- Press (*) (0) on the touch-tone keypad or (PLAY/STOP) on the base unit to disconnect the line.
- Cut off the Remote Control Card and carry it with you to see how to operate from an outside phone.

### Table of control codes

| To | Key | Notes |
|---|---|---|
| Play back messages in MAILBOX 1 | (#) (1) | Plays back from the first new message. |
| Play back messages in MAILBOX 2 | (#) (2) | Plays back from the first new message. |
| Play back messages in MAILBOX 3 | (#) (3) | Plays back from the first new message. |
| Repeat/skip backward | (#) (4) | Press during play back to repeat a message. To skip backward, press within two seconds after the current message starts. |
| Get help | (*) (5) | Press to access simple voice menu. Press again to access advanced voice menu. |
| Stop operation | (#) (5) | Stops every function |
| Skip forward | (#) (6) | Press during play back to skip forward. |
| Record greeting | (*) (7) | "Now recording" is announced. |
| Check greeting | (#) (7) | Review your greeting |
| Record a memo | (*) (8) | Select the mailbox by entering "1", "2" or "3". |
| Erase individual messages | (#) (9) | Press during play back |
| Turn answering machine on/off | (#) (0) | Turns the system on/off. "Answer machine on" or "Answer machine off" is announced. |





## Understanding the Caller ID service

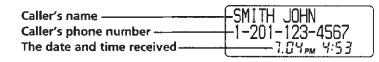
Caller ID allows the caller's phone number to be shown on the display before the call is answered. In order to use this feature, you must first subscribe to the Caller ID service. The name of this service may vary depending on your telephone company.

To use this feature, be sure to enter your home area code (see page 12).

### 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 22), 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.



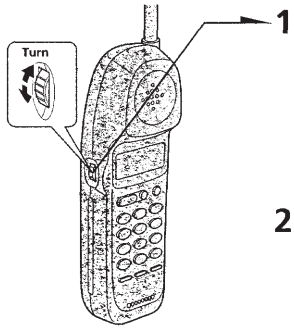


## Looking at the Caller ID list

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.

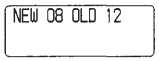
### Viewing the Caller ID list

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.



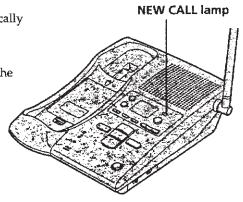

2 Turn Jog dial down to display older data or up to display newer data.

**Note**

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

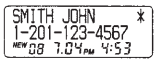
**Tip**

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.

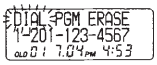
### Erasing data from the Caller ID list

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.

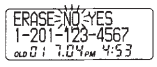
**To erase the phone number one by one**

1 Display the phone number you want to erase from the Caller ID list (see page 42).


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.

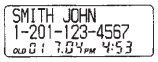
You will hear a long confirmation beep and the data is erased.

continued

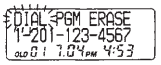
**Looking at the Caller ID list (continued)**

**To erase the entire list at once**

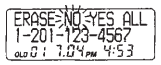
1 Display any Caller ID data.



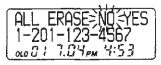

2 Press Jog Dial.




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

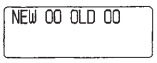



4 Turn Jog Dial up to make "ALL" flash, then press Jog Dial.




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**

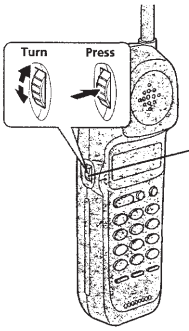
"ALL" appears only when all the data has become "OLD" data. If there is any "NEW" data, you cannot erase the entire list.



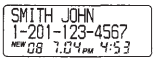
# Using the Caller ID list

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.

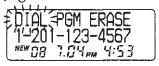
## Calling back a number from the Caller ID list




1 Display the phone number you want to call from the Caller ID list (see page 42).




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 47.
- 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.



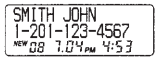
continued



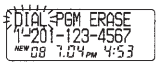
**Using the Caller ID list (continued)**

## 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 42).




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 24).


4 Press Jog Dial.

The cursor flashes at the end of the phone number.

Enter or change the phone number, if necessary (see page 24).


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 47.
- If the phone is connected to a Private Branch Exchange (PBX), you may need to add an outside line access digit.



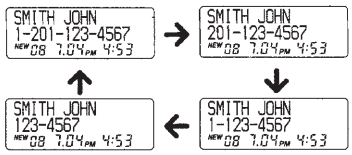
## To change the number of digits of the phone number

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.

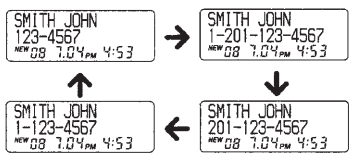
1 While the phone number from the Caller ID list is displayed, press (#) repeatedly until the phone number with the correct number of digits appears on the display.

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**

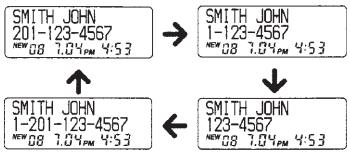





continued

**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 45 and 46).

**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 Visual Call Waiting" service

This telephone is compatible with the "Caller ID with Visual 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 Visual Call Waiting" in order to use this service.

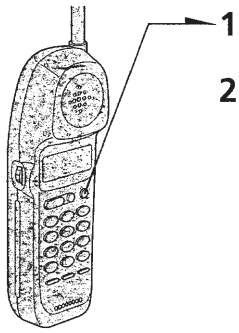
**Even though you may have already subscribed to "Caller ID" and "call waiting" as two separate services, you need to request a subscription to "Caller ID with Visual Call Waiting" as a single service.**

This is a new service that combines the two services.

**Even though you now have a "Caller ID with Visual Call Waiting" compatible phone, unless you subscribe to the combined "Caller ID with Visual 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.

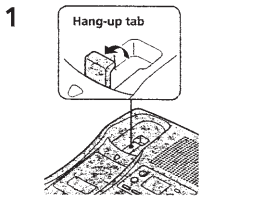
**2** To switch back to the first caller, press CALL WAITING/ FLASH again.

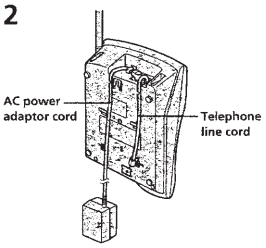


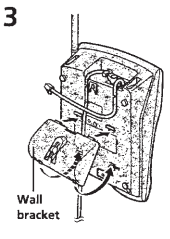


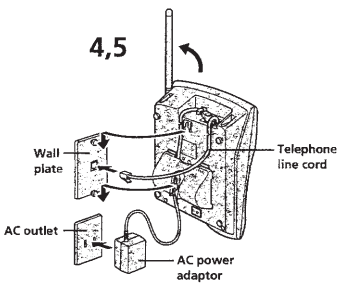
**Additional Information**

## Mounting the base unit on a wall




**1** Raise the hang-up tab.

**2** Plug the telephone line cord to the LINE jack and the AC power adaptor to the DC IN 9V jack, and hook the cords. Use the shorter cord for mounting.

**3** Attach the wall bracket to the center of the base unit.

Align the Δ marks of the wall bracket with those of the base unit.

**4** Plug the telephone line cord to the telephone outlet, and hook the base unit to the wall plate.

**5** Plug the AC power adaptor to an AC outlet. Then raise the antenna so that it points towards the ceiling.

**Tip**

To remove the wall bracket, press the lower tabs.

# SECTION 2
# DISASSEMBLY

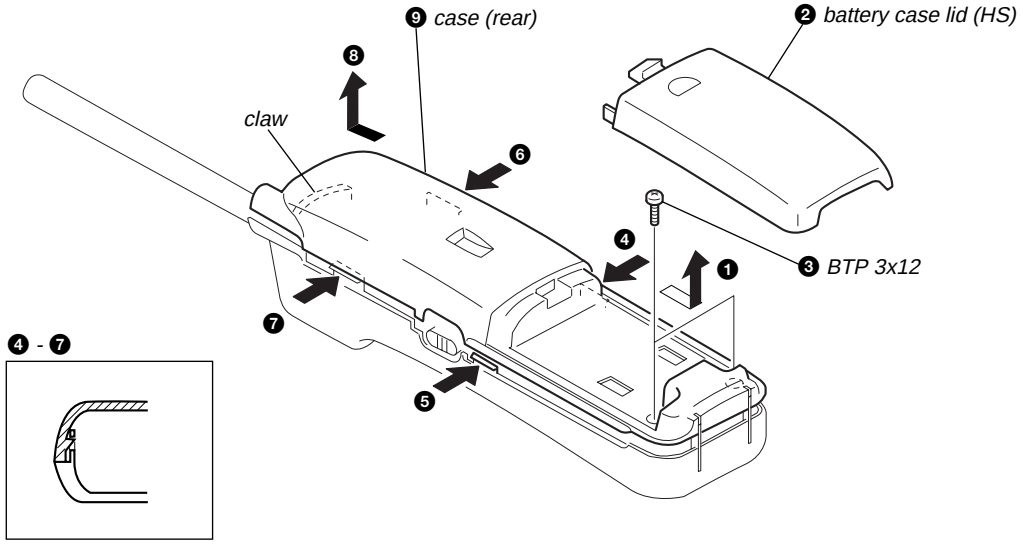
• The equipment can be removed using the following procedure.

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

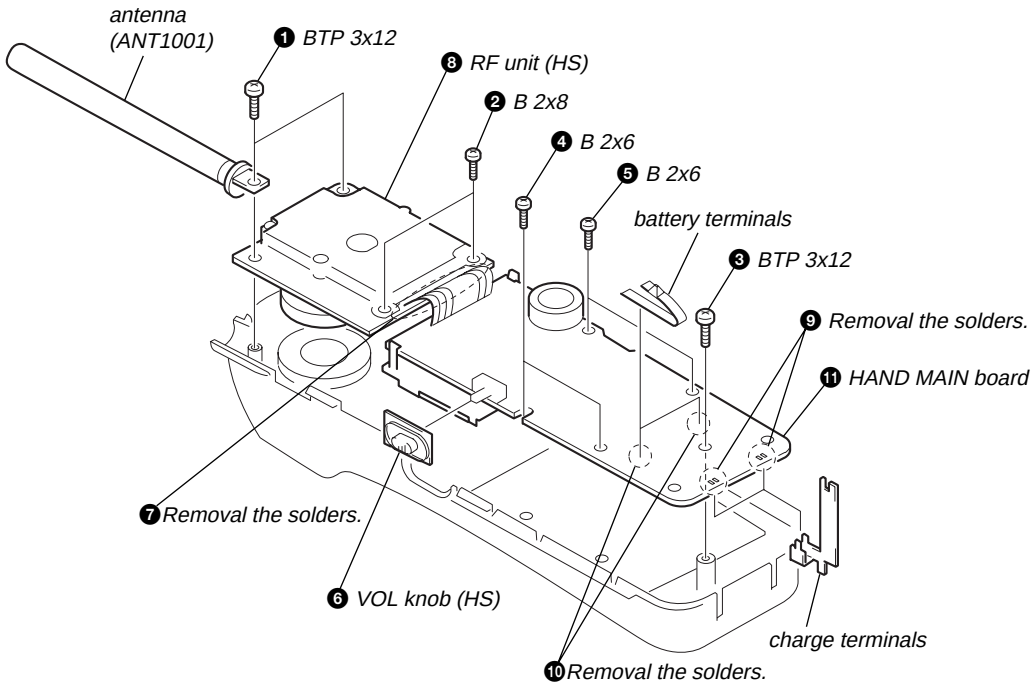
BASE UNIT ➡ BASE (BOTTOM) ➡ BASE MAIN BOARD ➡ RF UNIT (BU) ➡ BASE KEY BOARD ➡ I-TAD BOARD

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

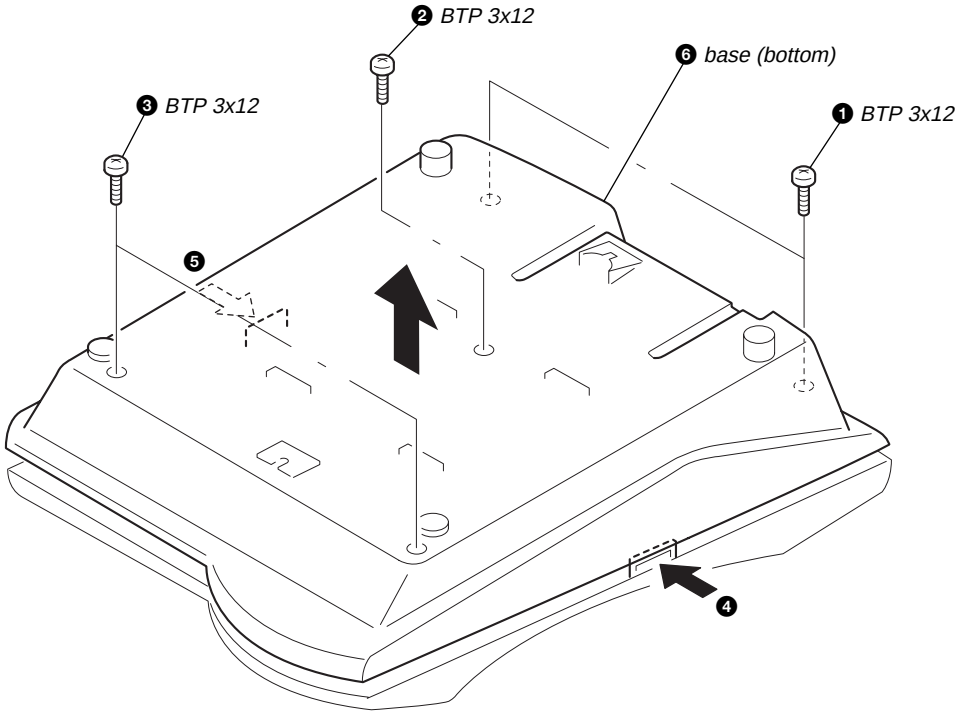
## 2-1. CASE (REAR)



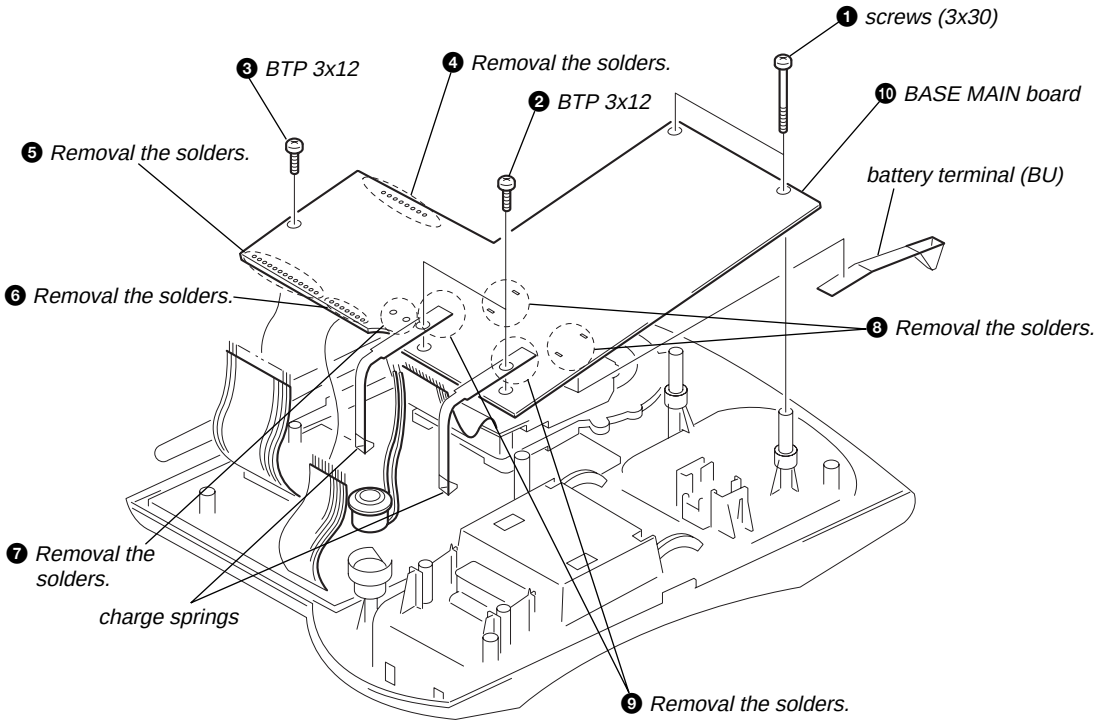

## 2-2. RF UNIT (HS), HAND MAIN BOARD



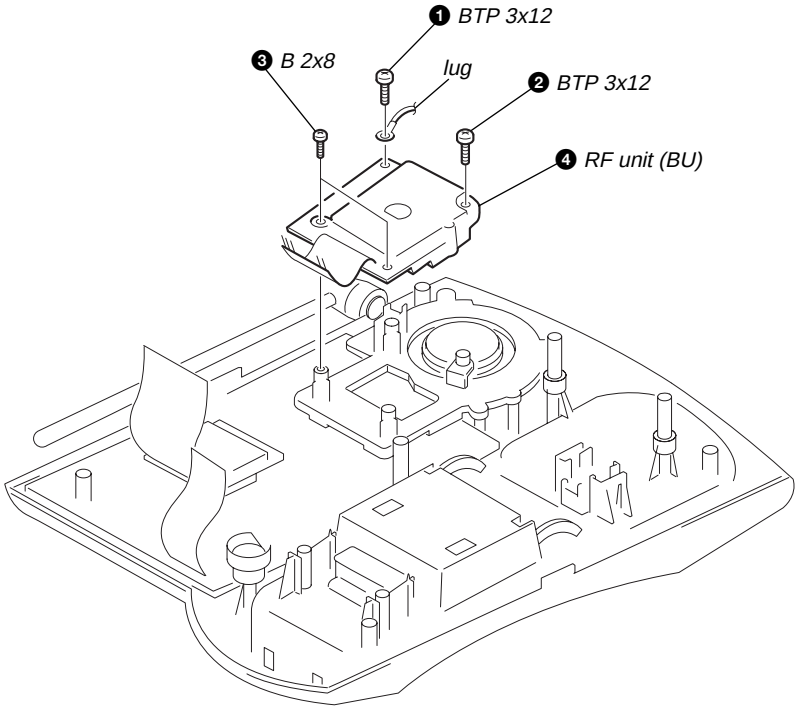
## 2-3. BASE (BOTTOM)



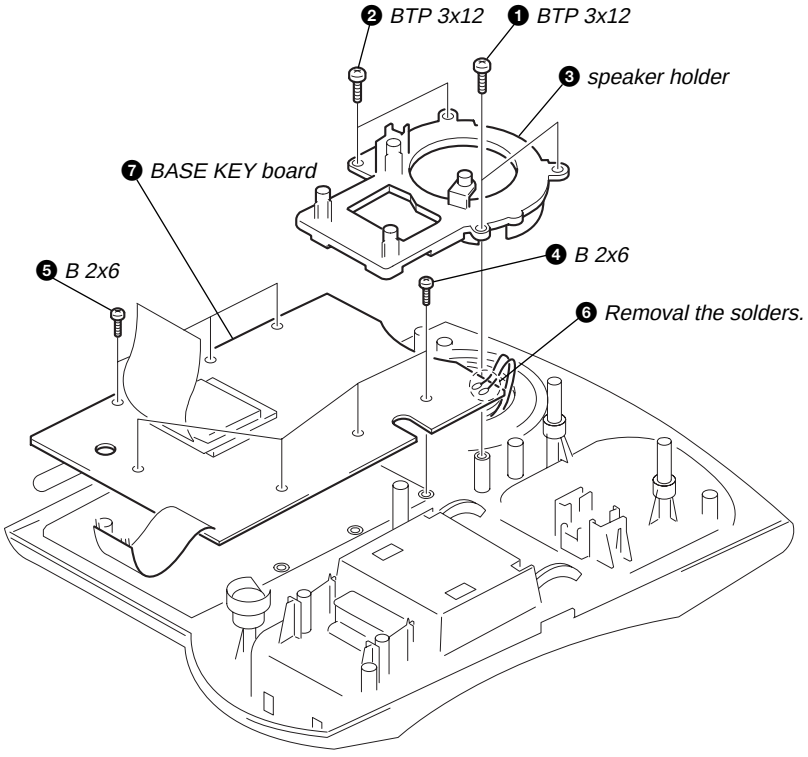

## 2-4. BASE MAIN BOARD



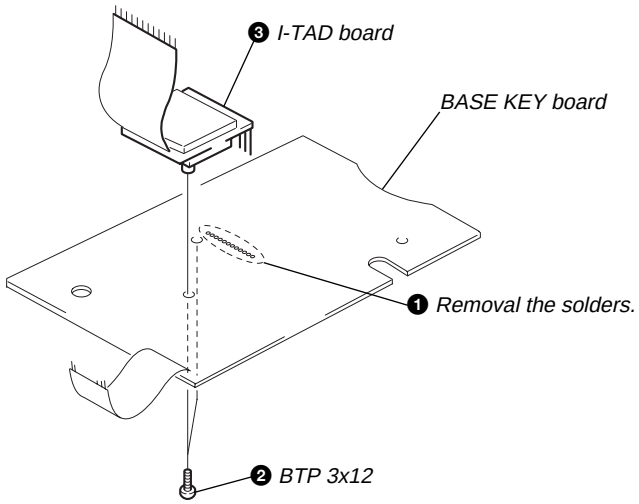
## 2-5. RF UNIT (BU)




## 2-6. BASE KEY BOARD



## 2-7. I-TAD BOARD



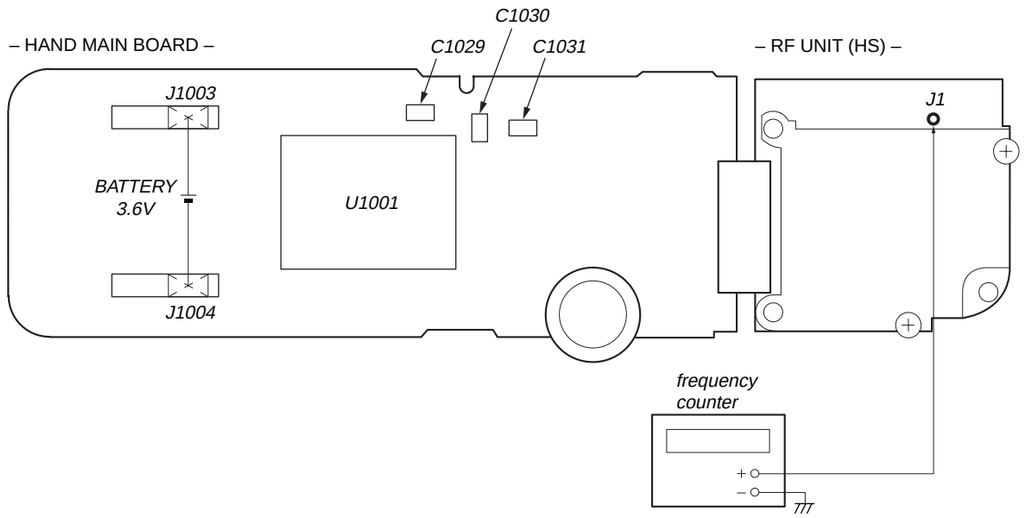
# SECTION 3
# ELECTRICAL ADJUSTMENTS

## 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.<br>2. Solder an 20PF chip capacitor C1030 (1-164-160-11) on the HAND MAIN board (in parallel of C1029).<br>3. Connect the frequency counter to the test point J1. Adjust for 0 Hz ± 1 kHz. |

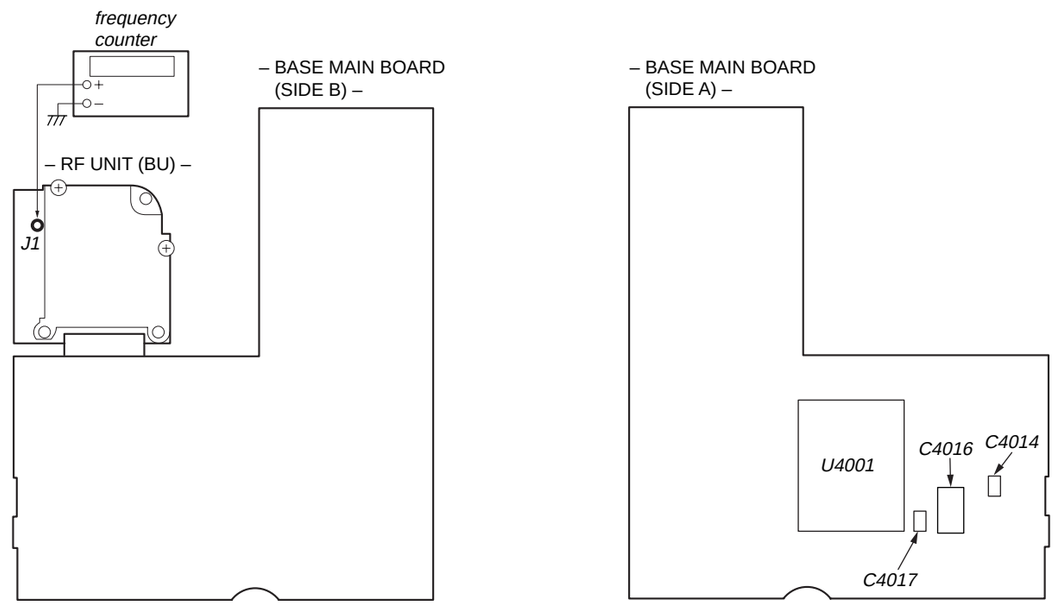


## 3-2. BASE UNIT

**1. Test Mode**

Entry— Simultaneously press the “HANDSET LOCATOR” key and toggle the “DIAL MODE” switch. When in test mode, the “IN USE” 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 (S4001)
T (TONE) position : TX ON
P (PULSE) position : TX OFF
Increment RF channel— Press the “INTERCOM” key.

**2. Test Equipment Required and Connection**




**3. Verify Procedure**

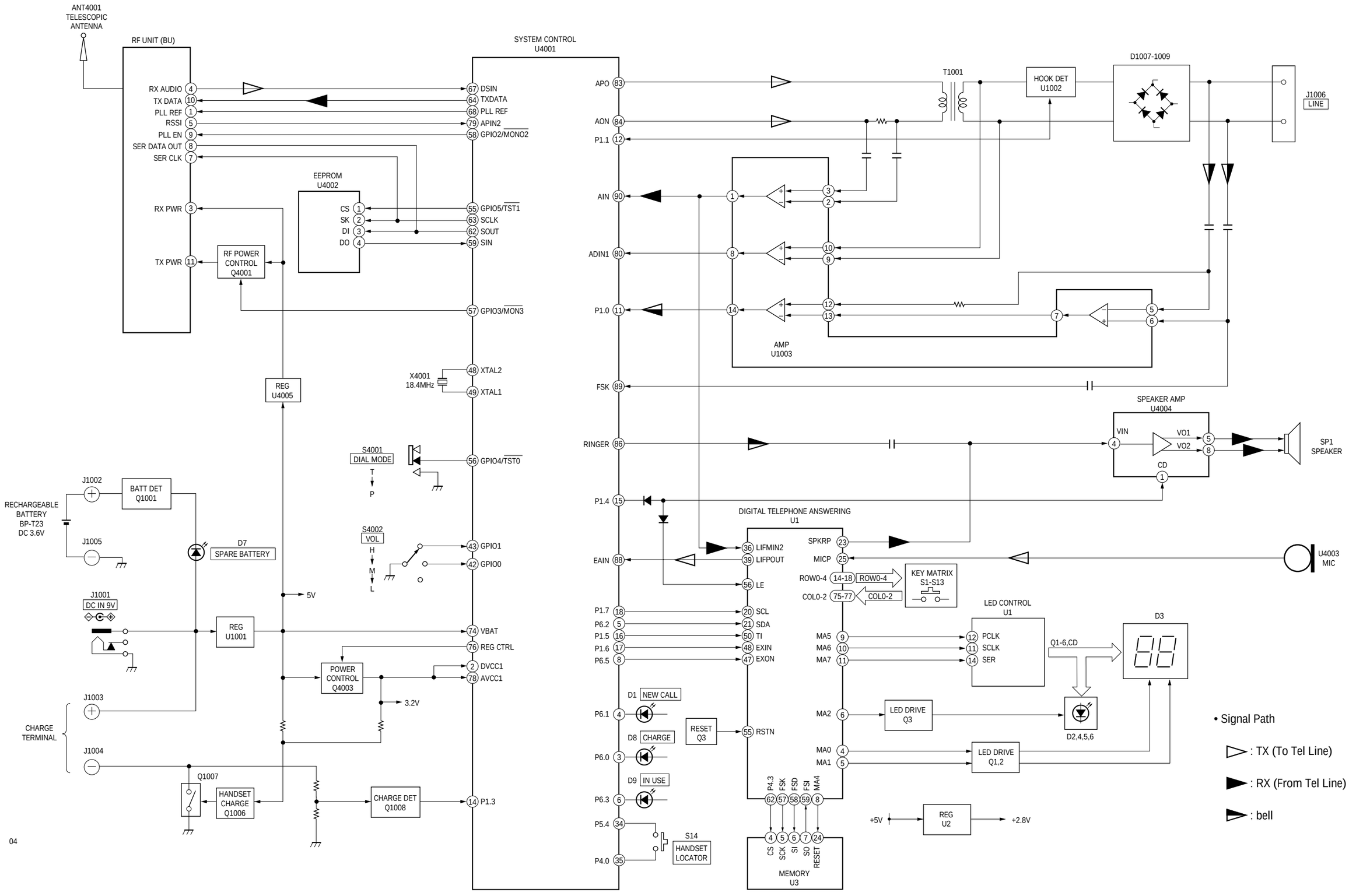
| Item | Remark |
|---|---|
| 18.4MHz Frequency Error | Connect the frequency counter to the test point J1, press “0” key to turn on the TX power. Then, check the frequency ± 1 kHz. If the result is within ± 1 kHz, then no adjustment required. Otherwise, refer to item 4. for Adjustment Procedure. |

**4. Adjustment Procedure**

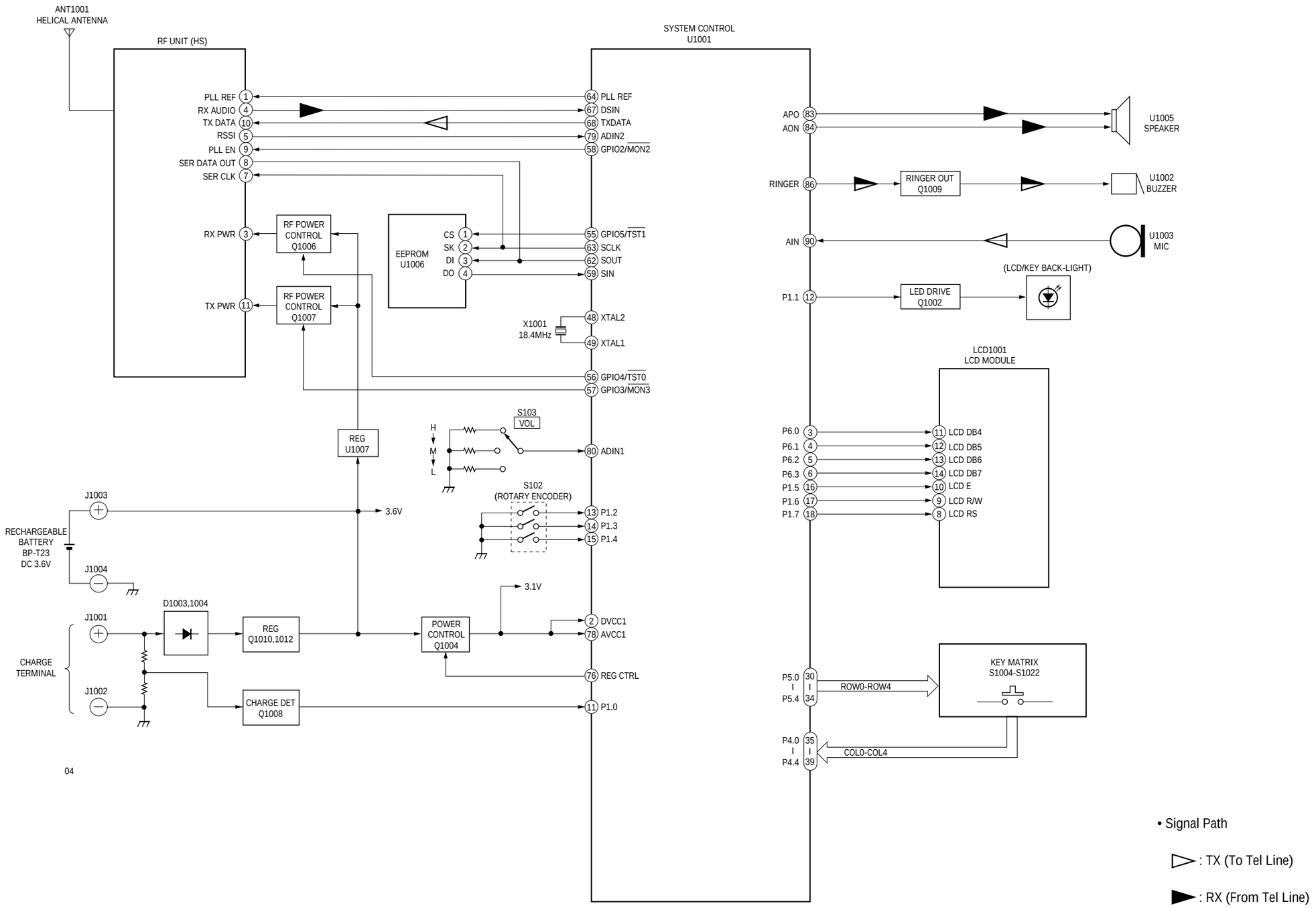
| Item | Adjustment Element | Remark |
|---|---|---|
| 18.4MHz Frequency Error | C4016 | 1. Remove C4017 from the BASE MAIN board.<br>2. Solder an 20PF chip capacitor C4016 (1-164-160-11) on the BASE MAIN board (in parallel of C4014).<br>3. Connect the frequency counter to the test point J1. Adjust for 0 Hz ± 1 kHz. |

# SECTION 4
# DIAGRAMS

## 4-1. BLOCK DIAGRAM — BASE UNIT SECTION —



## 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**

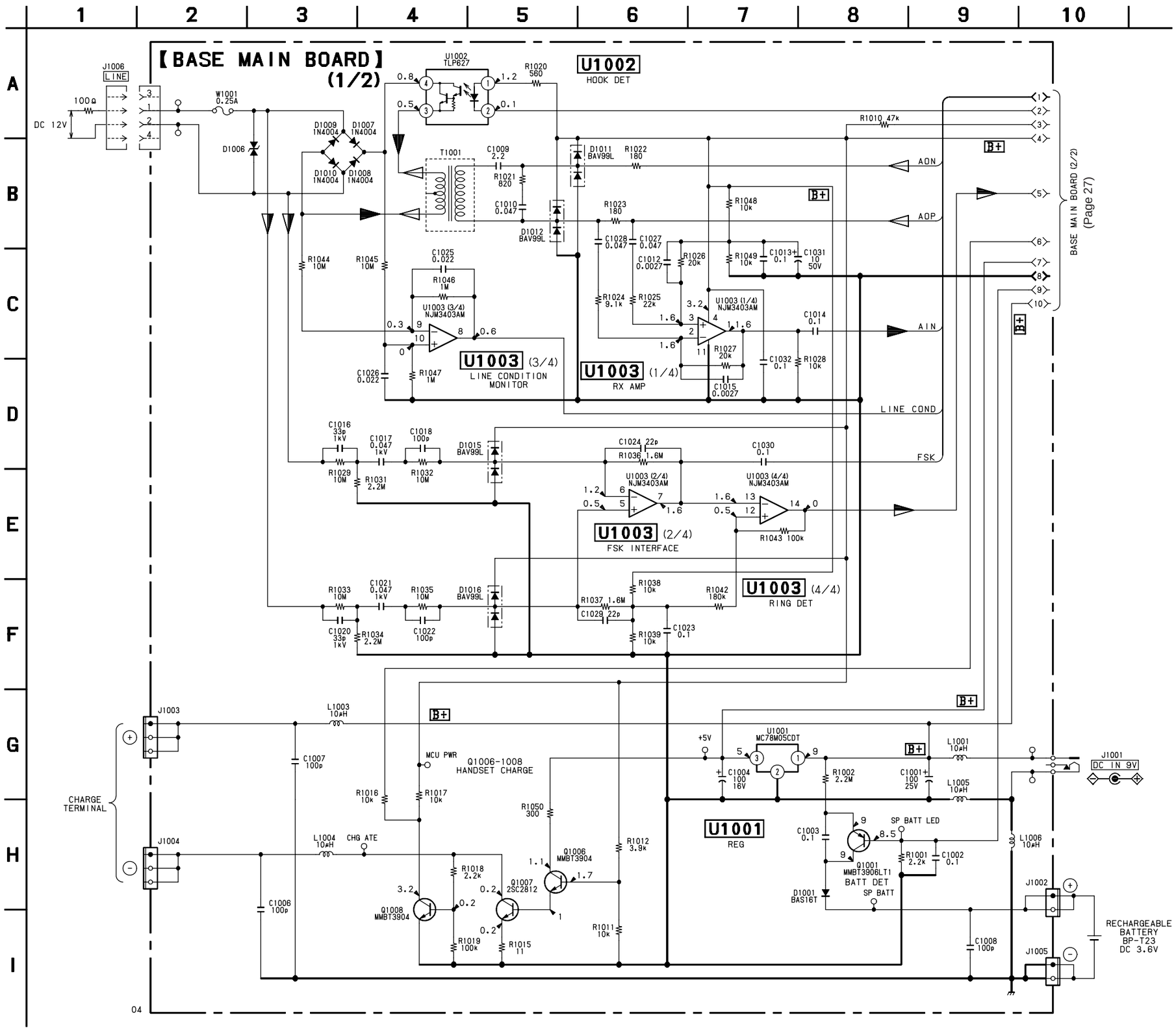
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 9 V and fed with regulated dc power supply from external power voltage jack. (BASE PHONE)
- Power voltage is dc 12 V and fed with regulated dc power supply from J1008 with 100 Ω in series. (BASE PHONE)
- 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.
- 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**

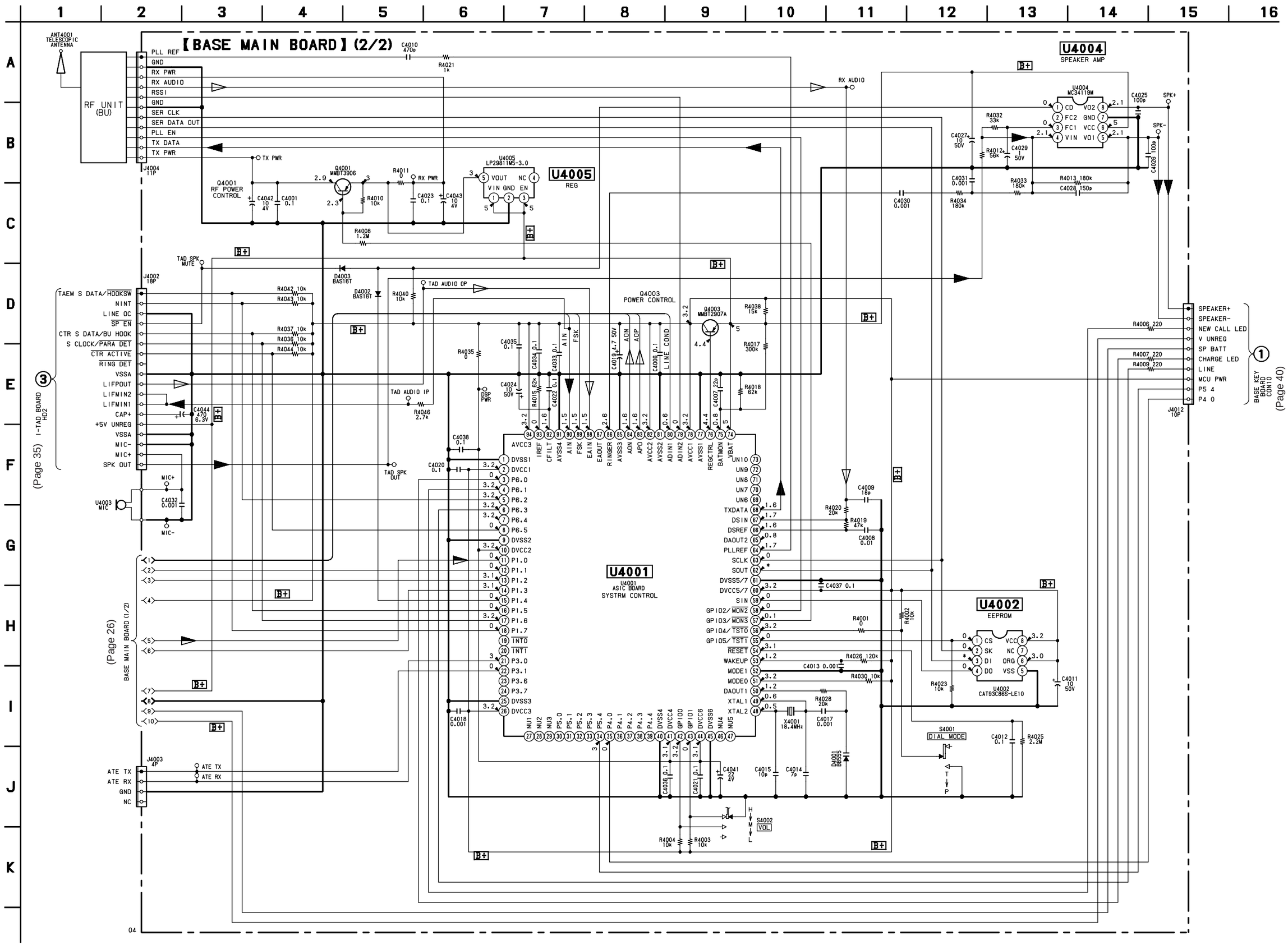
- ○——— : parts extracted from the component side.
- ○- - -○ : Carbon pattern.
- ● : Through hole.
- ▒▒ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

| 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 MAIN SECTION (1/2) —



## 4-4. SCHEMATIC DIAGRAM — BASE MAIN SECTION (2/2) — • Refer to page 45 for IC Block Diagrams.

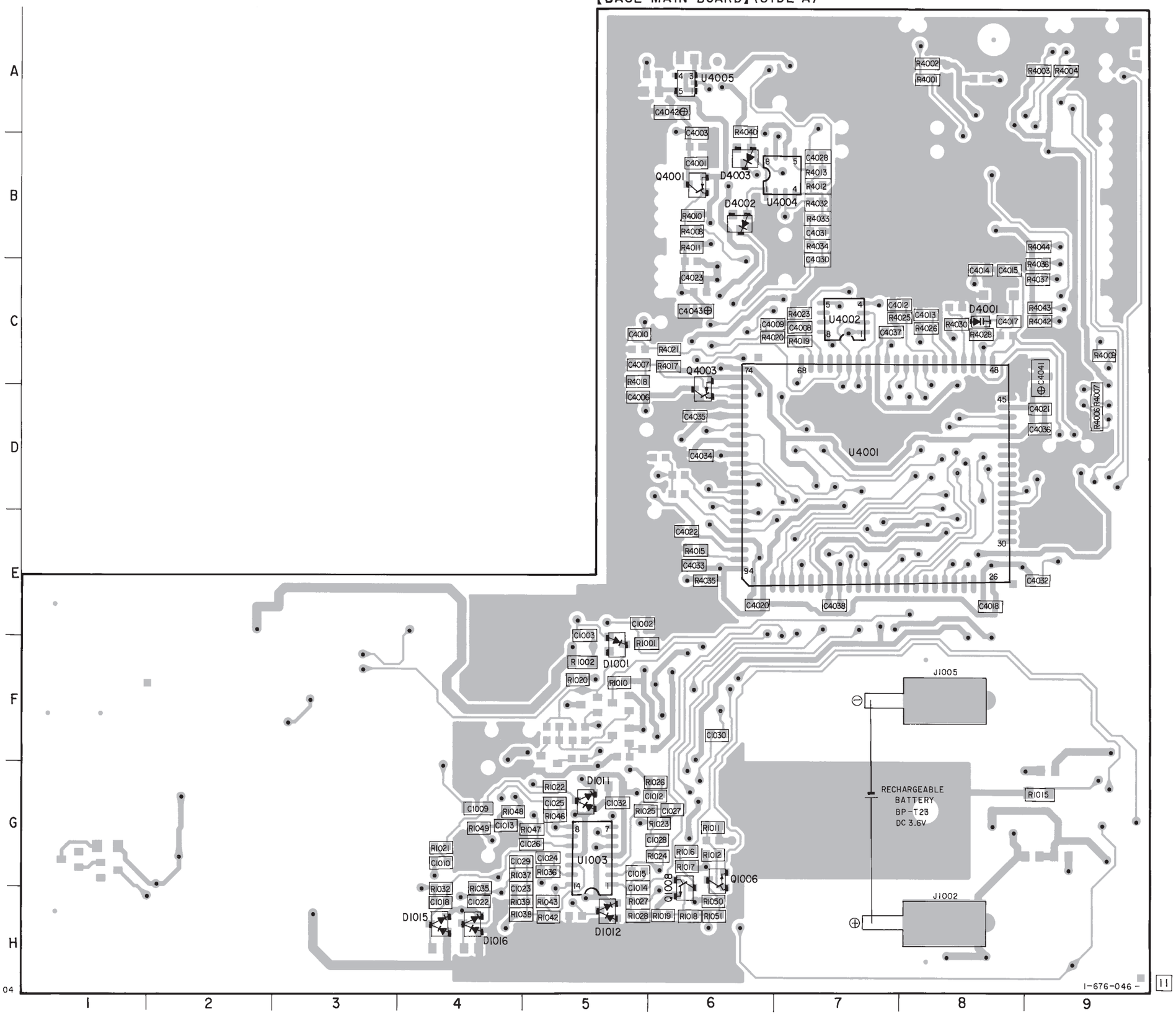


## 4-5. PRINTED WIRING BOARD — BASE MAIN SECTION —

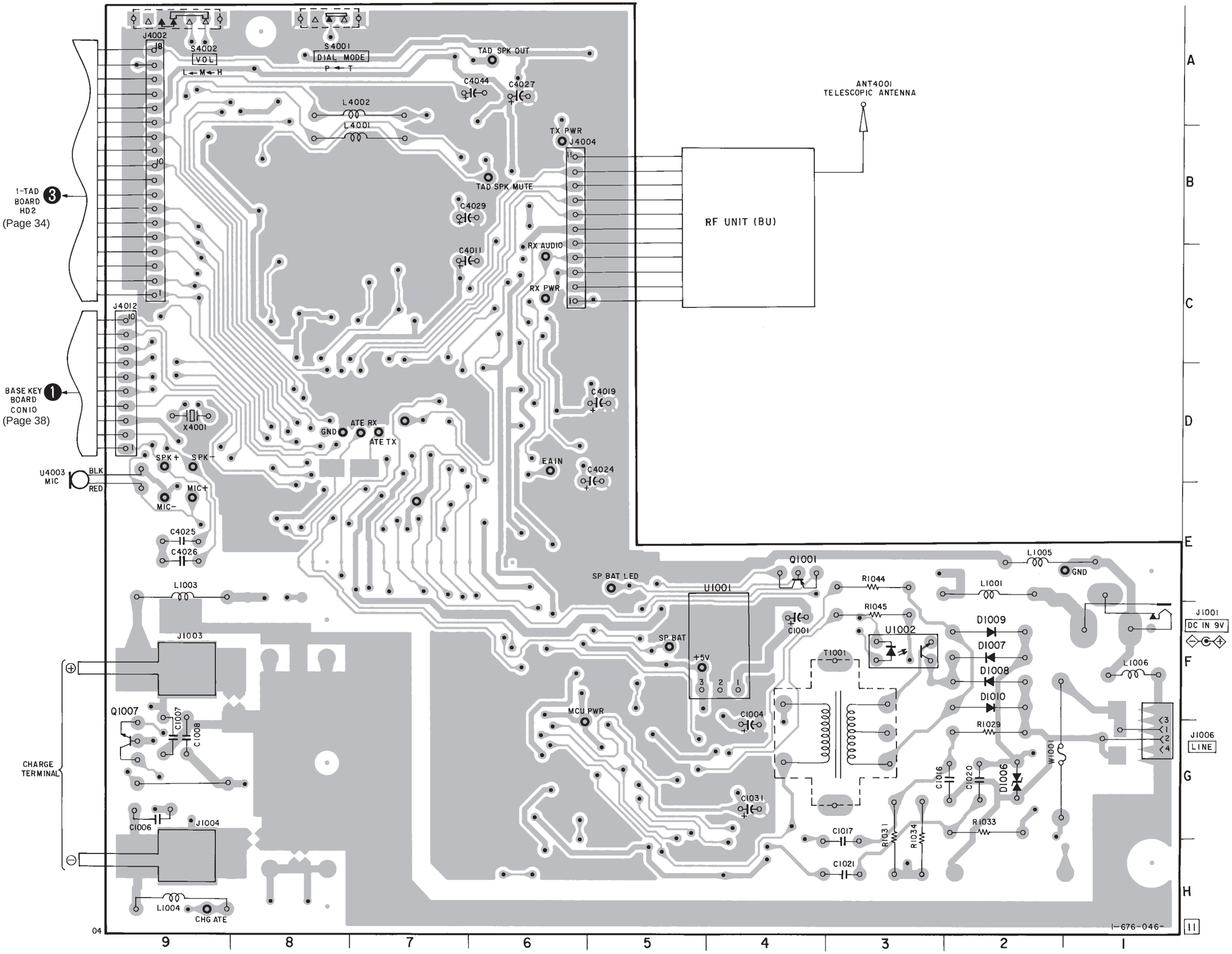
• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D1001 | F-5 |
| D1011 | G-5 |
| D1012 | H-5 |
| D1015 | H-4 |
| D1016 | H-4 |
| D4001 | C-8 |
| D4002 | B-6 |
| D4003 | B-6 |
| | |
| Q1006 | G-6 |
| Q1008 | G-6 |
| Q4001 | B-6 |
| Q4003 | B-6 |
| | |
| U1003 | G-5 |
| U4001 | D-7 |
| U4002 | C-7 |
| U4004 | B-6 |
| U4005 | A-6 |

【BASE MAIN BOARD】(SIDE A)



【BASE MAIN BOARD】(SIDE B)




• **Semiconductor Location**

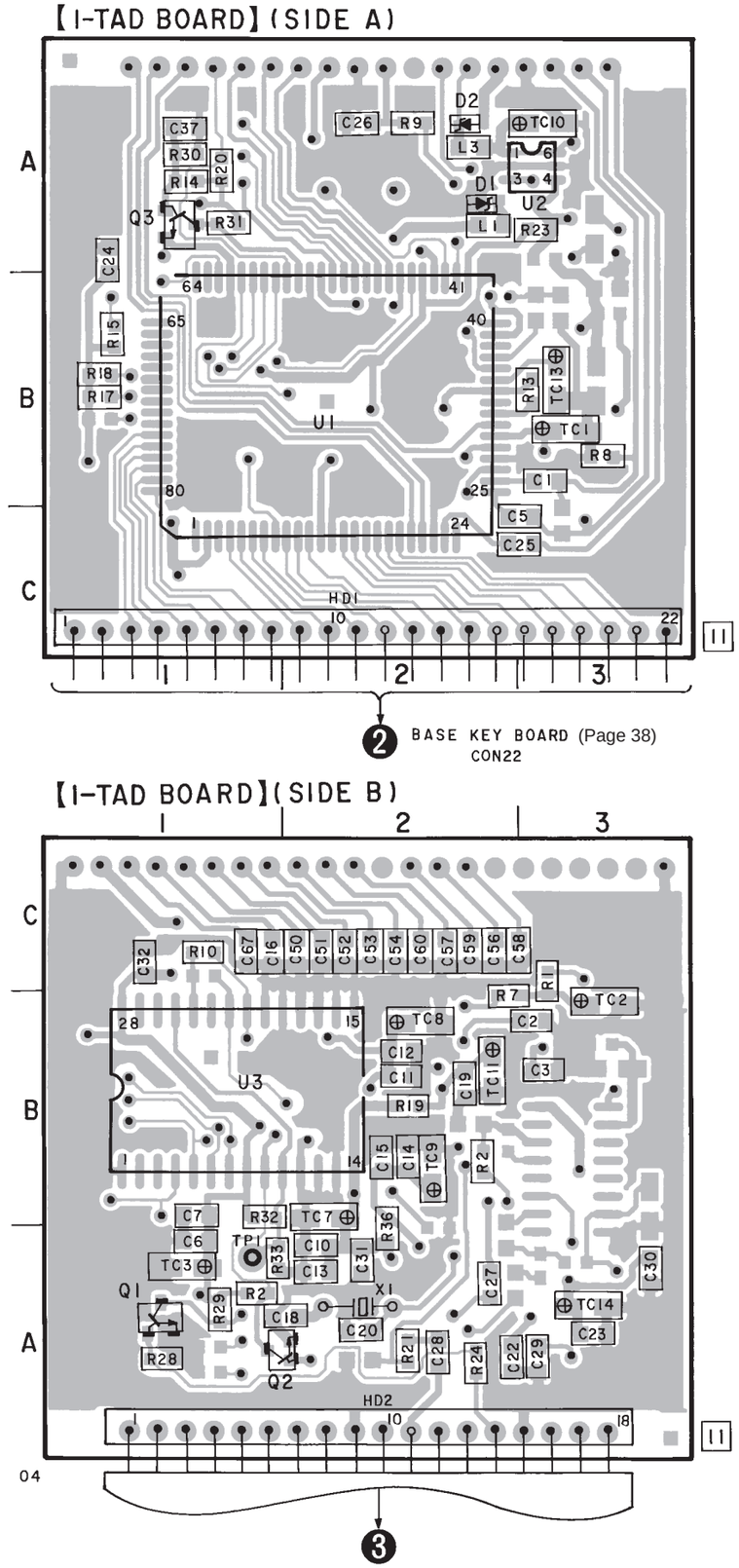
| Ref. No. | Location |
|---|---|
| D1006 | G-2 |
| D1007 | F-2 |
| D1008 | F-2 |
| D1009 | F-2 |
| D1010 | F-2 |
| Q1001 | E-4 |
| Q1007 | G-9 |
| U1001 | F-4 |
| U1002 | F-3 |

## 4-6. PRINTED WIRING BOARD — I-TAD SECTION —

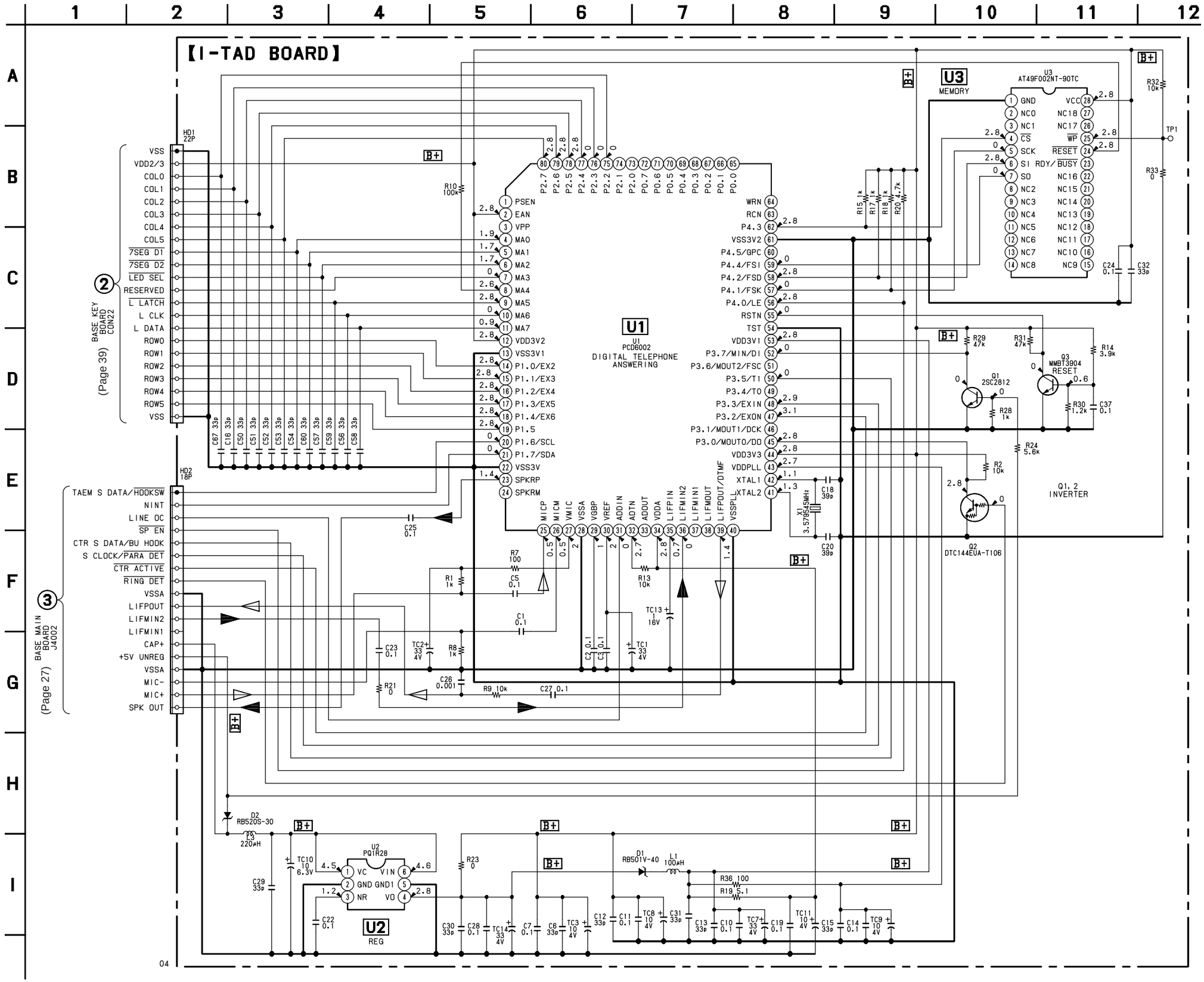
• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D1 | A-2 |
| D2 | A-2 |
| (Q1) | A-1 |
| (Q2) | A-1 |
| Q3 | A-1 |
| U1 | B-2 |
| U2 | A-3 |
| (U3) | B-1 |

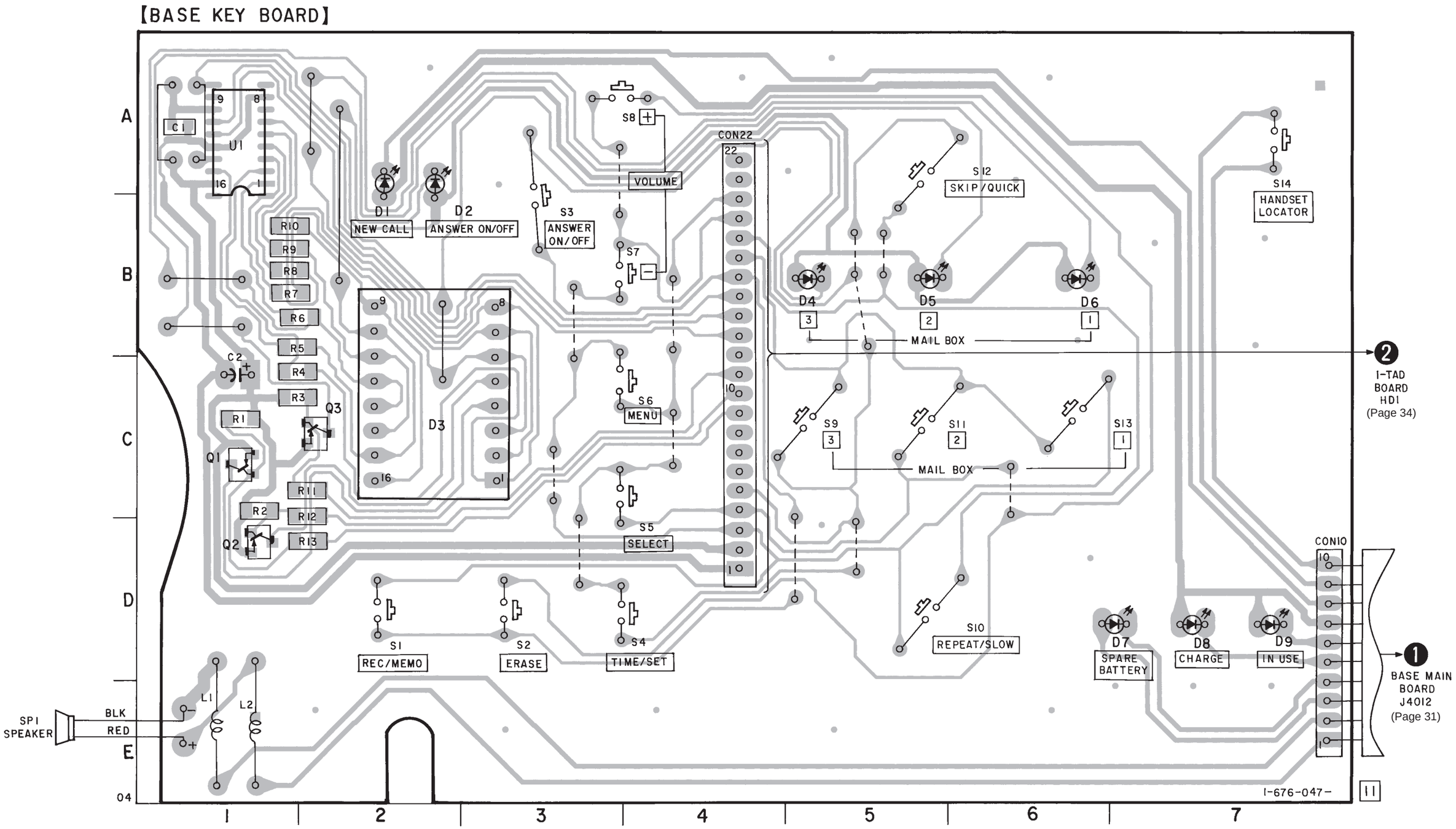
( ) : SIDE B



4-7. SCHEMATIC DIAGRAM — I-TAD SECTION — • Refer to page 45 for IC Block Diagrams.



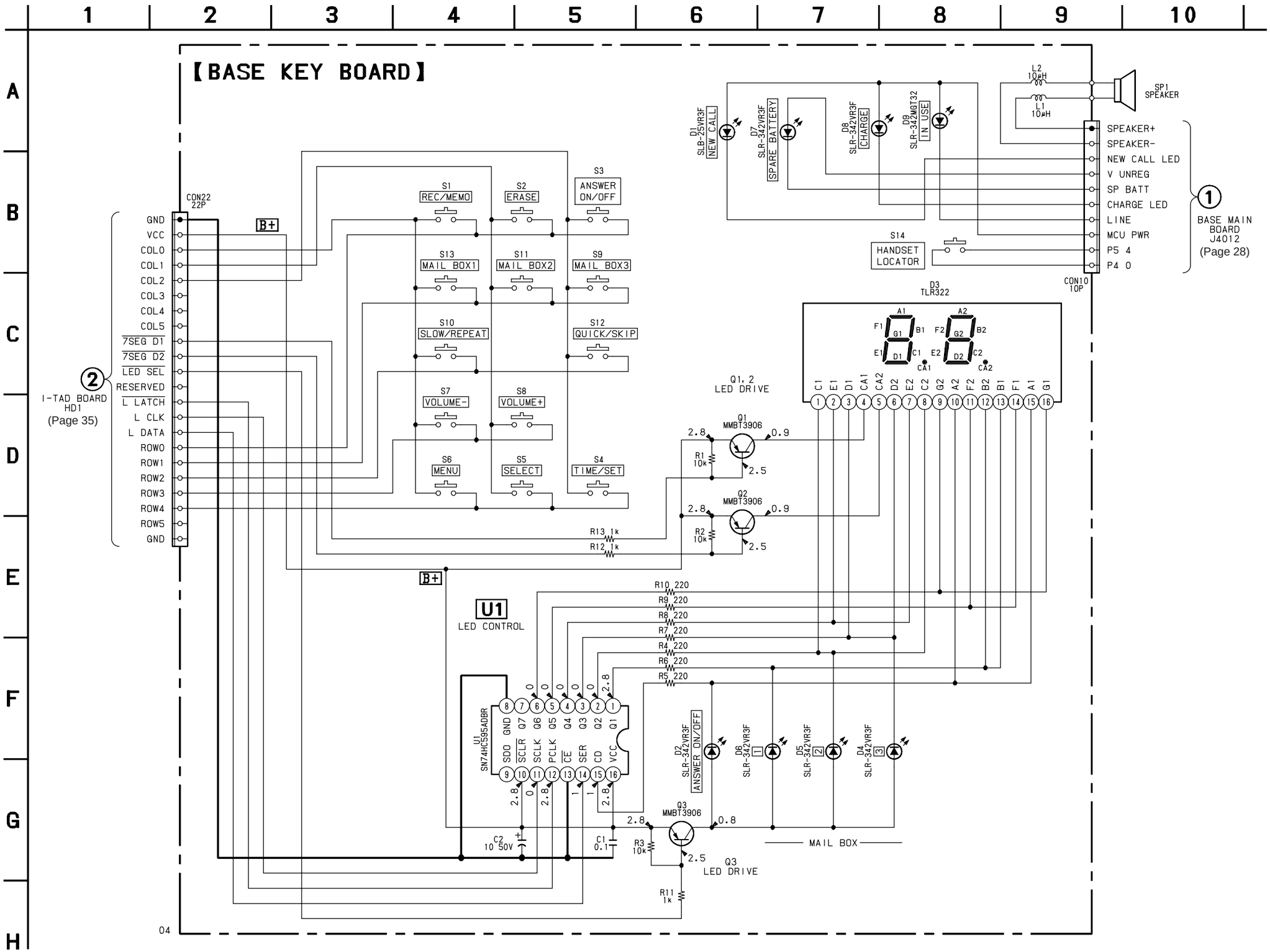
## 4-8. PRINTED WIRING BOARD — BASE KEY SECTION —



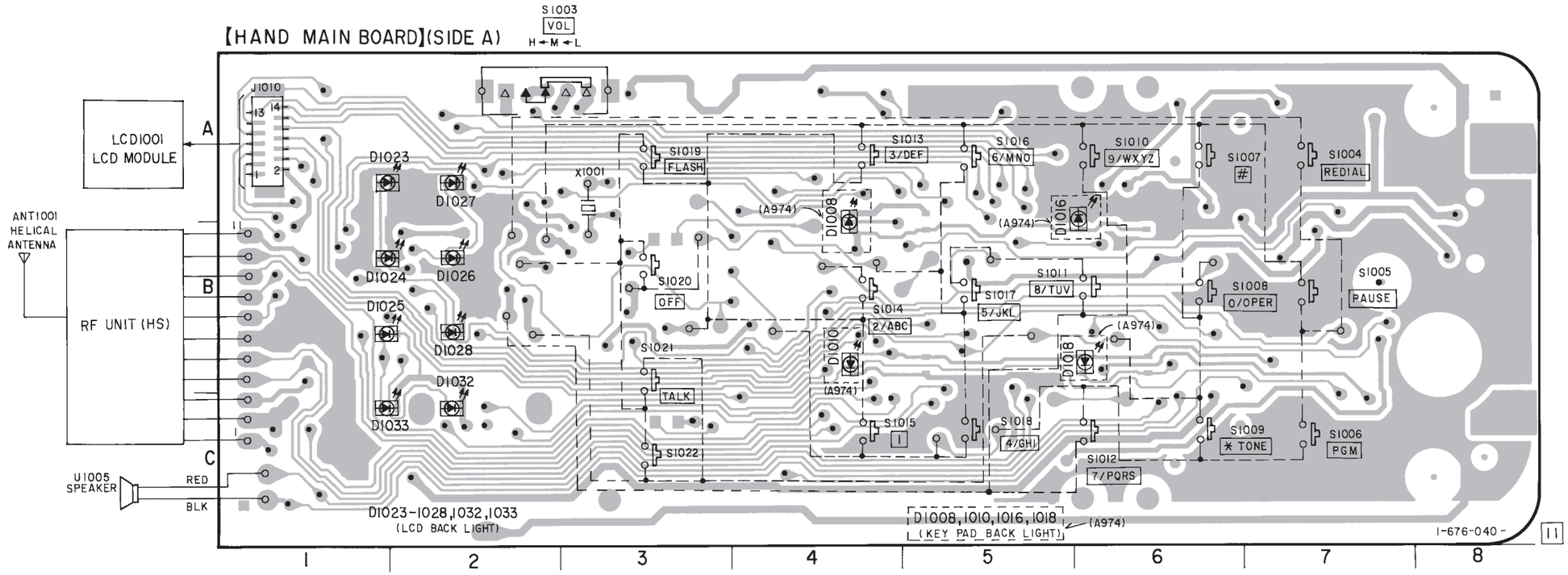

• **Semiconductor Location**

| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D1 | A-2 | D9 | D-7 |
| D2 | A-2 | | |
| D3 | C-2 | Q1 | C-1 |
| D4 | B-5 | Q2 | D-1 |
| D5 | B-5 | Q3 | C-2 |
| D6 | B-6 | | |
| D7 | D-7 | U1 | A-1 |
| D8 | D-7 | | |

4-9. SCHEMATIC DIAGRAM — BASE KEY SECTION — • Refer to page 45 for IC Block Diagrams.



## 4-10. PRINTED WIRING BOARD — HAND MAIN SECTION —

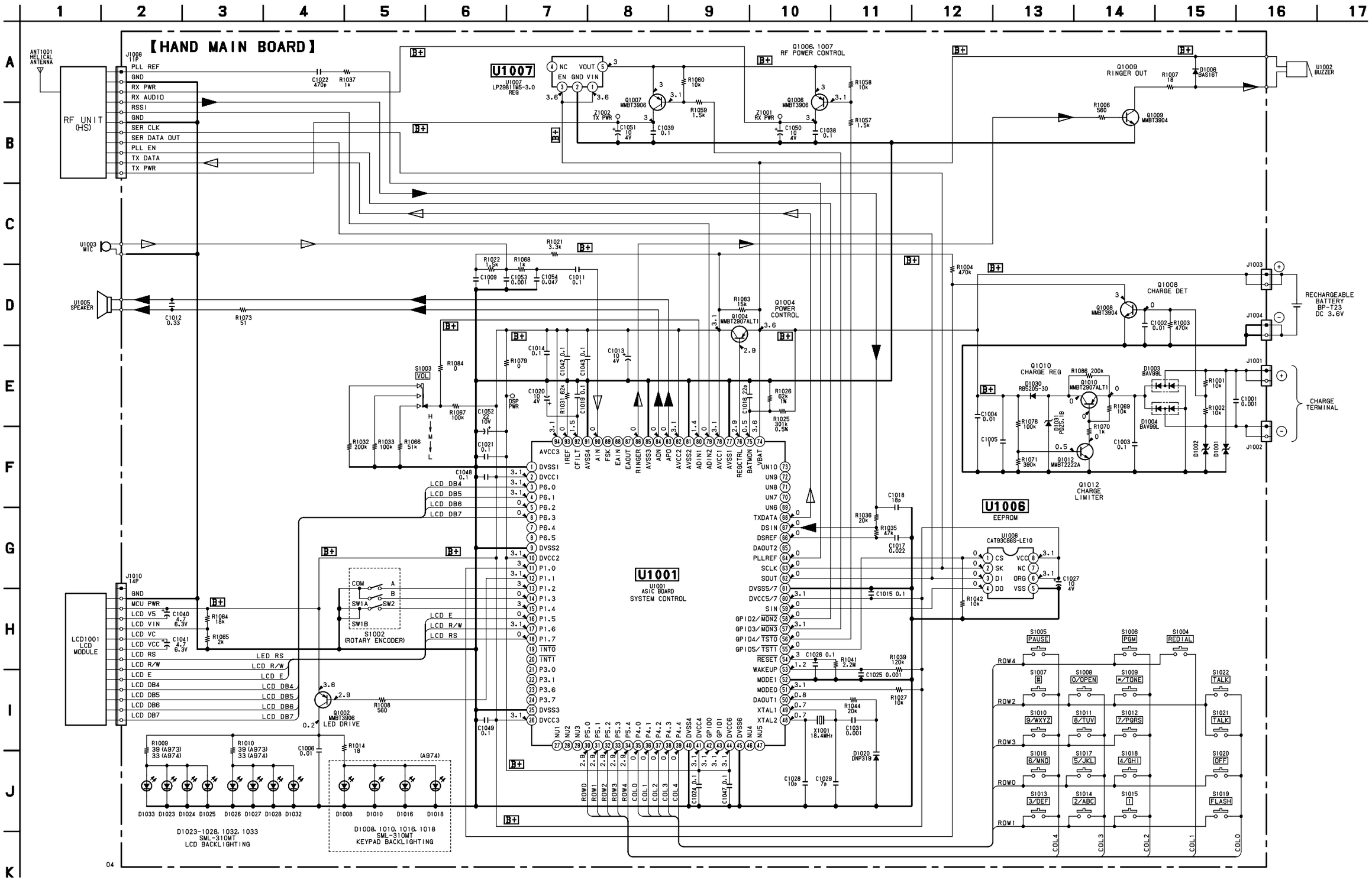



- **Semiconductor Location**

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

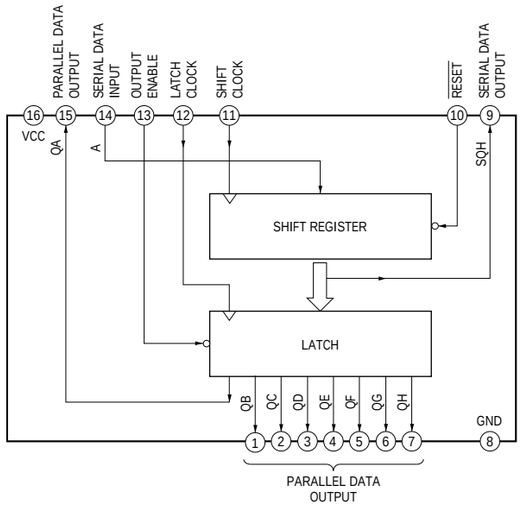
( ) : SIDE B

## 4-11. SCHEMATIC DIAGRAM — HAND MAIN SECTION — • Refer to page 45 for IC Block Diagrams.

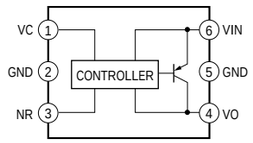


## • IC Block Diagrams

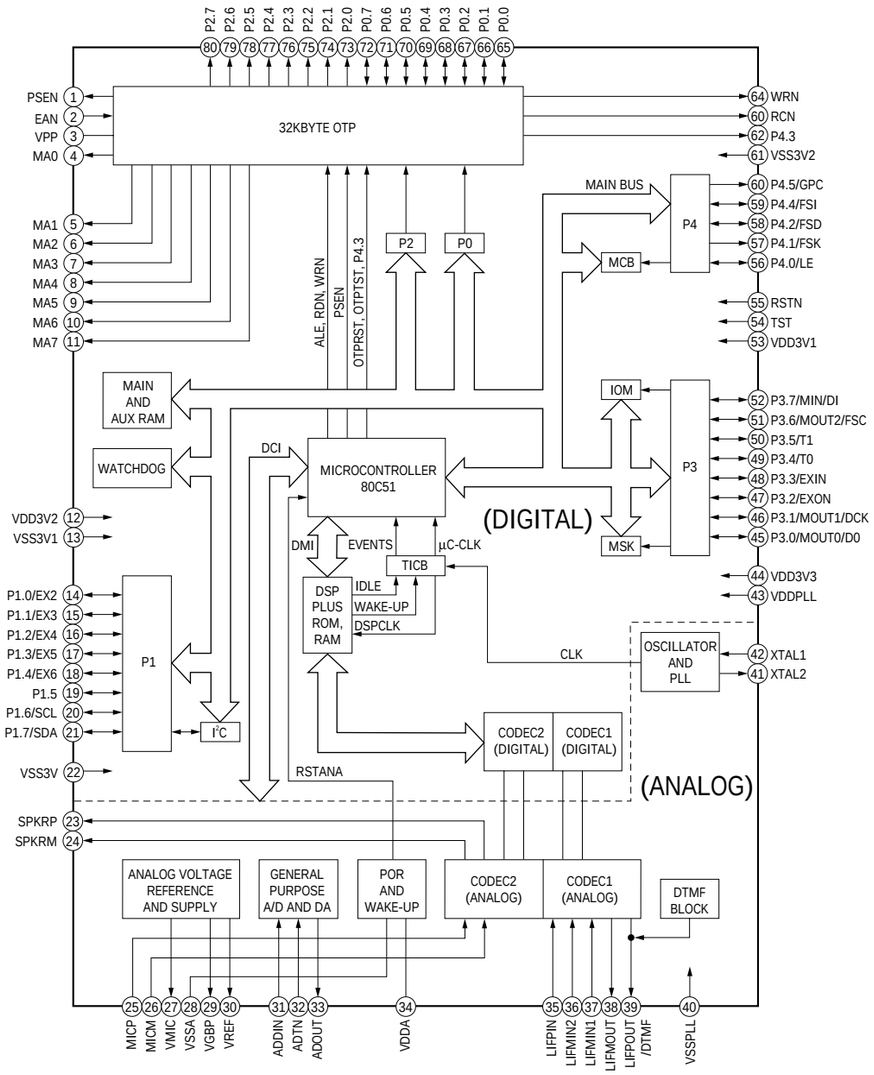
### U1 SN74HC595ADBR (BASE KEY board)



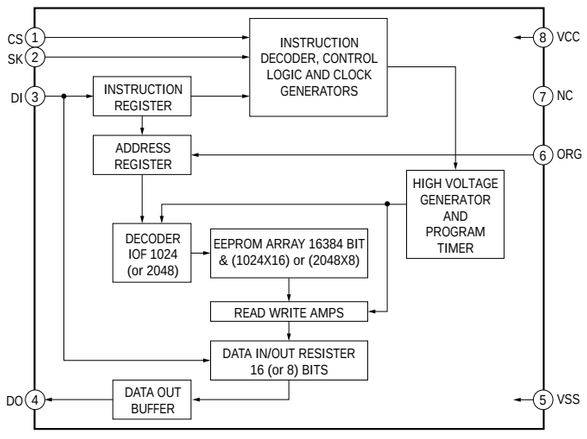

### U2 PQ1R28



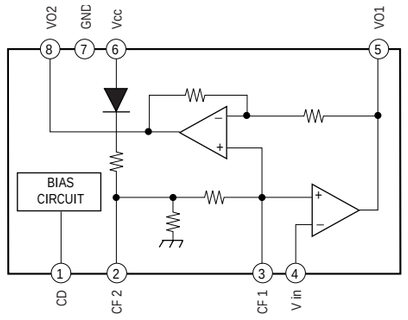

### U1 PCD6002 (I-TAD board)




### U1006, 4002 CAT93C86S-LE10



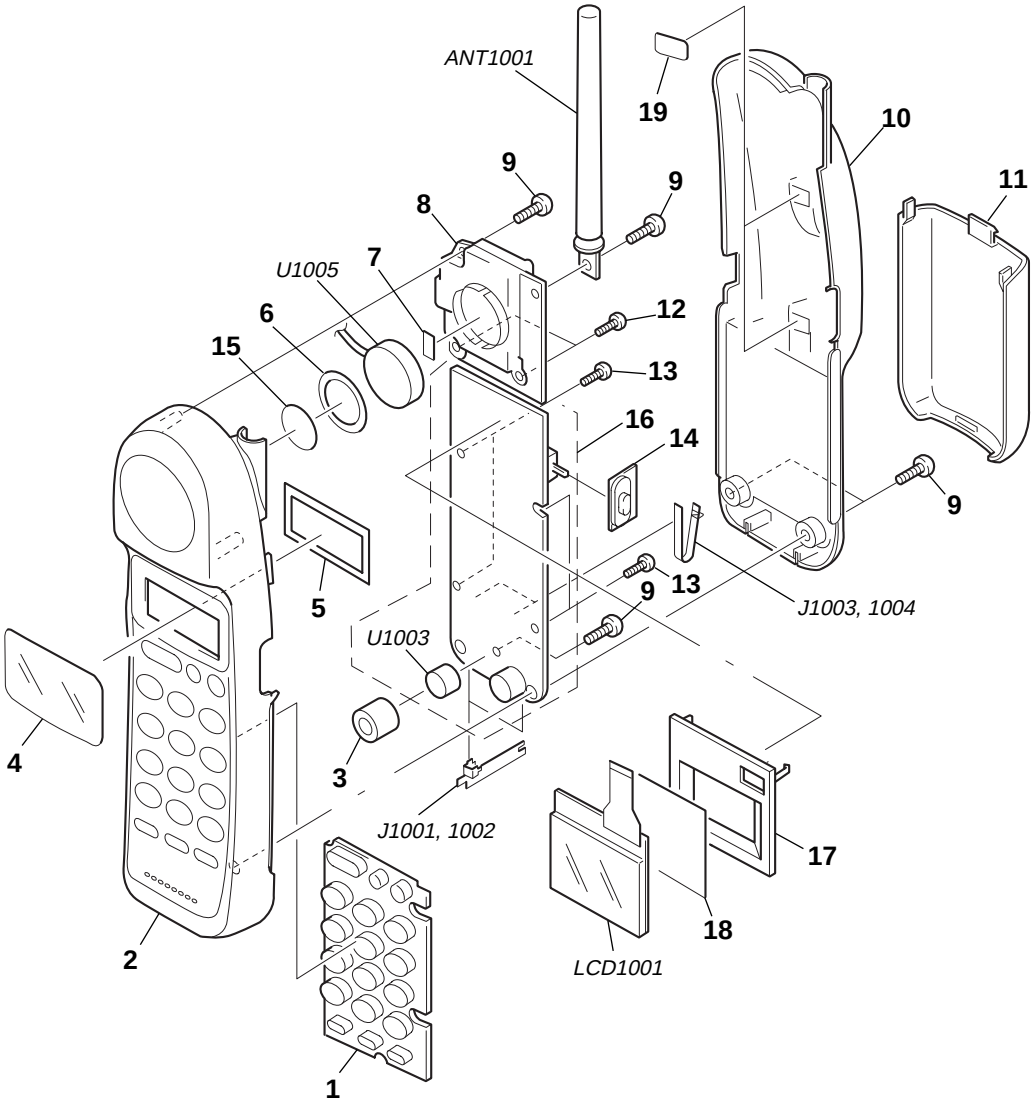

### U4004 MC34119M



# SECTION 5
# EXPLODED VIEWS

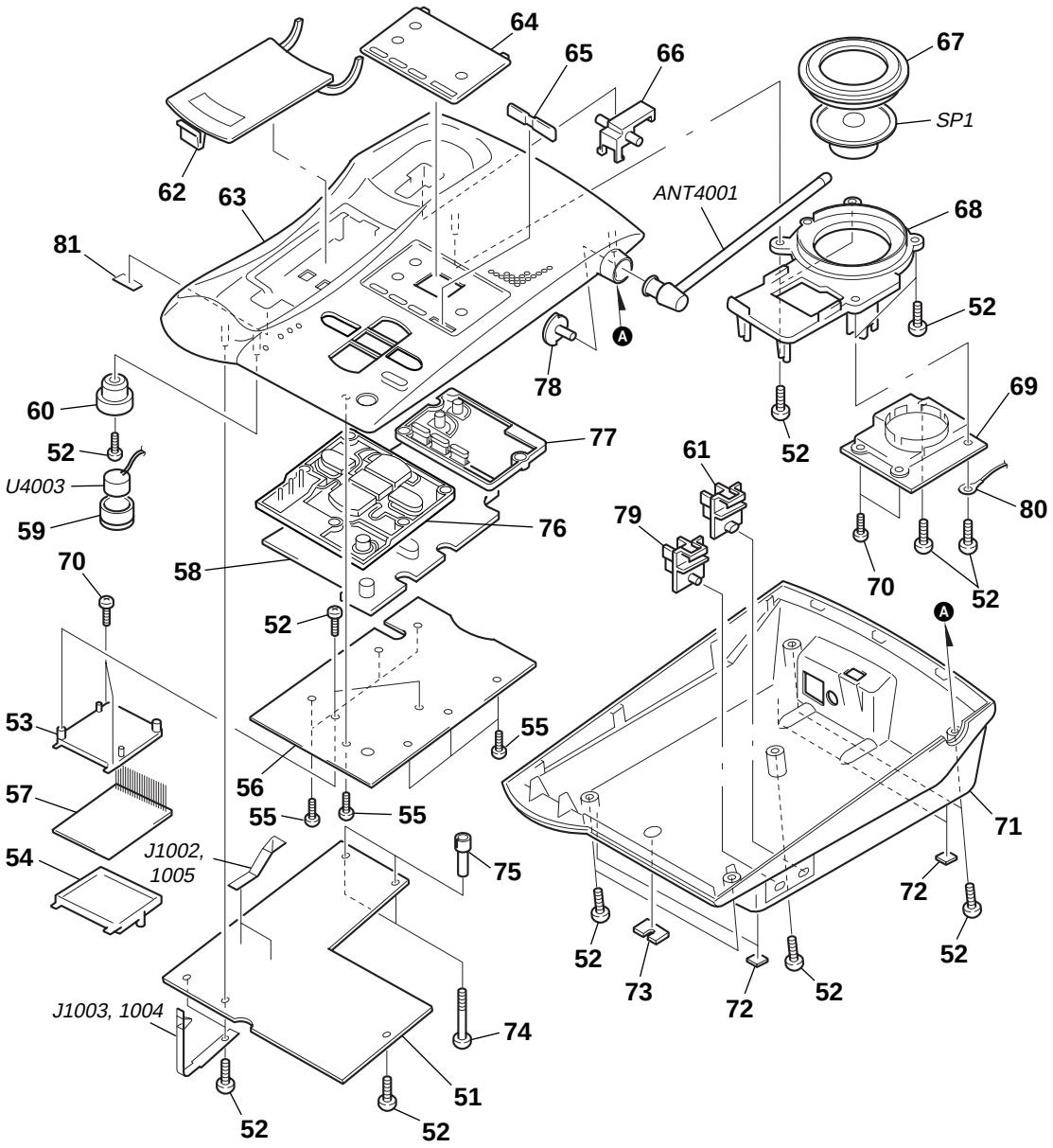
NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories and packing materials and hardware (# mark) list 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 (A973) | |
| 1 | 3-038-147-11 | KEY (HS), RUBBER (A974) | |
| 2 | 3-038-079-01 | CASE (FR) (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-3672-869-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 | |
| 15 | 3-041-535-01 | FELT, RX | |
| * 16 | A-3672-870-A | HAND MAIN BOARD, COMPLETE (A973) | |
| * 16 | A-3672-899-A | HAND MAIN BOARD, COMPLETE (A974) | |
| 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-3672-872-A | BASE MAIN BOARD, COMPLETE | |
| 52 | 7-685-548-19 | SCREW +BTP 3X12 TYPE2 N-S | |
| 53 | 3-041-524-01 | SHIELD (F), I-TAD | |
| 54 | 3-041-525-01 | SHIELD (R), I-TAD | |
| 55 | 7-685-534-19 | SCREW +BTP 2.6X8 TYPE2 N-S | |
| * 56 | 1-676-047-11 | BASE KEY BOARD | |
| * 57 | A-3672-874-A | I-TAD BOARD, COMPLETE | |
| 58 | 3-041-533-01 | PAD, FUNCTION KEY | |
| 59 | 3-041-532-01 | CUSHION (BU), MICROPHONE | |
| 60 | 3-041-531-01 | HOLDER (BU), MICROPHONE | |
| 61 | 3-038-091-01 | KNOB, TP SW | |
| 62 | 3-038-660-01 | LID (BU), BATTERY CASE | |
| 63 | 3-038-086-01 | BASE (TOP) (A973) | |
| 63 | 3-038-086-11 | BASE (TOP) (A974) | |
| 64 | 3-038-092-01 | BASE, LENS | |
| 65 | 3-041-528-01 | KNOB, BU VOLUME | |
| 66 | 3-038-090-01 | HOOK | |
| 67 | 3-041-275-01 | PACKING, SPEAKER | |
| 68 | 3-041-274-01 | HOLDER, SPEAKER | |
| 69 | A-3672-871-A | RF UNIT (BU) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 70 | 4-356-741-21 | SCREW, TAPPING (BIND 2X8) | |
| 71 | 3-038-087-01 | BASE (BOTTOM) | |
| 72 | 3-041-534-01 | FOOT, RUBBER | |
| 73 | 3-044-147-01 | SPONGE, MICROPHONE | |
| 74 | 3-044-146-01 | SCREW (3X30) | |
| 75 | 3-041-551-01 | BASE, STUD | |
| 76 | 3-041-526-01 | BUTTON (1), BASE | |
| 77 | 3-041-527-01 | BUTTON (2), BASE | |
| 78 | 3-044-143-01 | PLATE, ANTENNA RETAINER | |
| 79 | 3-041-523-01 | RINGER (SW), KNOB | |
| 80 | 3-044-144-01 | TERMINAL BOARD, ANTENNA | |
| 81 | 3-041-547-01 | COVER (HS), HOOK | |
| ANT4001 | 1-501-951-31 | ANTENNA | |
| J1002 | 3-041-530-01 | TERMINAL (BU), BATTERY | |
| J1003 | 3-041-209-01 | SPRING, CHARGE | |
| J1004 | 3-041-209-01 | SPRING, CHARGE | |
| J1005 | 3-041-530-01 | TERMINAL (BU), BATTERY | |
| SP1 | 1-505-231-11 | SPEAKER (5cm) | |
| U4003 | 1-542-118-11 | MICROPHONE, ELECTRET CONDENSER | |

# SECTION 6
# ELECTRICAL PARTS LIST

**BASE KEY**

**BASE MAIN**

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 |
|---|---|---|---|---|---|
| * | 1-676-047-11 | BASE KEY BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C1 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C2 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| | | < DIODE > | | | |
| D1 | 8-719-031-09 | LED SLB-25VR3F (NEW CALL) | | | |
| D2 | 8-719-059-40 | LED SLR-342VR3F (ANSWER ON/OFF) | | | |
| D3 | 8-719-803-22 | LED TLR322 (MESSAGES) | | | |
| D4 | 8-719-059-40 | LED SLR-342VR3F (MAIL BOX 3) | | | |
| D5 | 8-719-059-40 | LED SLR-342VR3F (MAIL BOX 2) | | | |
| D6 | 8-719-059-40 | LED SLR-342VR3F (MAIL BOX 1) | | | |
| D7 | 8-719-059-40 | LED SLR-342VR3F (SPARE BATTERY) | | | |
| D8 | 8-719-059-40 | LED SLR-342VR3F (CHARGE) | | | |
| D9 | 8-719-052-06 | LED SLR-342MGT32 (IN USE) | | | |
| | | < COIL > | | | |
| L1 | 1-408-117-00 | INDUCTOR | 10uH | | |
| L2 | 1-408-117-00 | INDUCTOR | 10uH | | |
| | | < TRANSISTOR > | | | |
| Q1 | 8-729-026-07 | TRANSISTOR MMBT3906LT1 | | | |
| Q2 | 8-729-026-07 | TRANSISTOR MMBT3906LT1 | | | |
| Q3 | 8-729-026-07 | TRANSISTOR MMBT3906LT1 | | | |
| | | < RESISTOR > | | | |
| R1 | 1-220-285-11 | RES,CHIP | 10K | 5% | 1/4W |
| R2 | 1-220-285-11 | RES,CHIP | 10K | 5% | 1/4W |
| R3 | 1-220-285-11 | RES,CHIP | 10K | 5% | 1/4W |
| R4 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R5 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R6 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R7 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R8 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R9 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R10 | 1-218-477-11 | RES,CHIP | 220 | 5% | 1/4W |
| R11 | 1-220-264-11 | RES,CHIP | 1K | 5% | 1/4W |
| R12 | 1-220-264-11 | RES,CHIP | 1K | 5% | 1/4W |
| R13 | 1-220-264-11 | RES,CHIP | 1K | 5% | 1/4W |
| | | < IC > | | | |
| U1 | 8-759-268-33 | IC SN74HC595ADBR | | | |

**********

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | A-3672-872-A | BASE MAIN BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C1001 | 1-104-665-11 | ELECT | 100uF | 20% | 25V |
| C1002 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C1003 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| 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 |
| C1008 | 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 | 1-162-979-11 | CERAMIC CHIP | 0.0027uF | 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 | 1-162-979-11 | CERAMIC CHIP | 0.0027uF | 10% | 50V |
| C1016 | 1-107-975-11 | CERAMIC CHIP | 33PF | 5% | 3KV |
| C1017 | 1-162-114-00 | CERAMIC CHIP | 0.047uF | 10% | 2KV |
| C1018 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C1019 | 1-136-193-11 | MYLAR | 0.47uF | 5% | 250V |
| C1020 | 1-107-975-11 | CERAMIC CHIP | 33PF | 5% | 3KV |
| C1021 | 1-162-114-00 | CERAMIC CHIP | 0.047uF | 10% | 2KV |
| 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 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| 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 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C1032 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4001 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4003 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4006 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4007 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C4008 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C4009 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C4010 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C4011 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C4012 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4013 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |

# BASE MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C4014 | 1-162-912-11 | CERAMIC CHIP | 7PF | 0.5PF | 50V |
| C4015 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C4017 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4018 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4019 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C4020 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4021 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4022 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4023 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4024 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C4025 | 1-102-973-00 | CERAMIC | 100PF | 5% | 50V |
| C4026 | 1-102-973-00 | CERAMIC | 100PF | 5% | 50V |
| C4027 | 1-126-964-11 | ELECT | 10uF | 20% | 50V |
| C4028 | 1-164-217-11 | CERAMIC CHIP | 150PF | 5% | 50V |
| C4029 | 1-126-960-11 | ELECT | 1uF | 20% | 50V |
| C4030 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4031 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4032 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C4033 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4034 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4035 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4036 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4037 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4038 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C4041 | 1-127-675-11 | ELECT | 22uF | 10% | 10V |
| C4042 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| C4043 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| C4044 | 1-126-935-11 | ELECT | 470uF | 20% | 6.3V |
| | | < DIODE > | | | |
| D1001 | 8-719-047-37 | DIODE BAS16 | | | |
| D1006 | 1-801-730-11 | VARISTOR | | | |
| D1007 | 8-719-911-55 | DIODE 1N4004 | | | |
| D1008 | 8-719-911-55 | DIODE 1N4004 | | | |
| D1009 | 8-719-911-55 | DIODE 1N4004 | | | |
| D1010 | 8-719-911-55 | DIODE 1N4004 | | | |
| 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 | | | |
| D4001 | 8-719-077-35 | DIODE BB555 | | | |
| D4002 | 8-719-047-37 | DIODE BAS16 | | | |
| D4003 | 8-719-047-37 | DIODE BAS16 | | | |
| | | < JACK > | | | |
| J1001 | 1-580-727-11 | JACK (DC IN 9V) | | | |
| J1006 | 1-565-999-11 | JACK, MODULAR 2P (LINE) | | | |
| | | < COIL > | | | |
| L1001 | 1-408-117-00 | INDUCTOR | 10uH | | |
| L1003 | 1-408-117-00 | INDUCTOR | 10uH | | |
| L1004 | 1-408-117-00 | INDUCTOR | 10uH | | |
| L1005 | 1-408-117-00 | INDUCTOR | 10uH | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| L1006 | 1-408-117-00 | INDUCTOR | 10uH | | |
| | | < TRANSISTOR > | | | |
| Q1001 | 8-729-026-07 | TRANSISTOR | MMBT3906LT1 | | |
| Q1006 | 8-729-026-06 | TRANSISTOR | MMBT3904LT1 | | |
| Q1007 | 8-729-820-84 | TRANSISTOR | 2SC2812-L5L6-TB | | |
| Q1008 | 8-729-026-06 | TRANSISTOR | MMBT3904LT1 | | |
| Q4001 | 8-729-026-07 | TRANSISTOR | MMBT3906LT1 | | |
| Q4003 | 8-729-033-62 | TRANSISTOR | MMBT2907ALT1 | | |
| | | < RESISTOR > | | | |
| R1001 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R1002 | 1-259-880-11 | CARBON | 2.2M | 5% | 1/4W |
| R1010 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R1011 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R1012 | 1-216-828-11 | METAL CHIP | 3.9K | 5% | 1/16W |
| R1015 | 1-216-151-00 | RES,CHIP | 11 | 5% | 1/8W |
| 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 |
| R4001 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R4002 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4003 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R4004 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4006 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/16W |
| R4007 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/16W |
| R4008 | 1-216-858-11 | METAL CHIP | 1.2M | 5% | 1/16W |
| R4009 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/16W |
| R4010 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4011 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R4012 | 1-216-842-11 | METAL CHIP | 56K | 5% | 1/16W |
| R4013 | 1-216-848-11 | METAL CHIP | 180K | 5% | 1/16W |
| R4015 | 1-218-161-11 | RES,CHIP | 62K | 1% | 1/10W |
| R4017 | 1-218-166-11 | RES,CHIP | 300K | 1% | 1/10W |
| R4018 | 1-218-161-11 | RES,CHIP | 62K | 1% | 1/10W |
| R4019 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R4020 | 1-218-292-11 | RES,CHIP | 20K | 5% | 1/16W |
| R4021 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R4023 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4025 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/16W |
| R4026 | 1-216-846-11 | METAL CHIP | 120K | 5% | 1/16W |
| R4028 | 1-218-292-11 | RES,CHIP | 20K | 5% | 1/16W |
| R4030 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4032 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/16W |
| R4033 | 1-216-848-11 | METAL CHIP | 180K | 5% | 1/16W |
| R4034 | 1-216-848-11 | METAL CHIP | 180K | 5% | 1/16W |
| R4035 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R4036 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4037 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4038 | 1-216-835-11 | METAL CHIP | 15K | 5% | 1/16W |
| R4040 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4042 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4043 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R4044 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| | | < SWITCH > | | | |
| S4001 | 1-571-377-11 | SWITCH, SLIDE (DIAL MODE) | | | |
| S4002 | 1-771-833-11 | SWITCH, SLIDE (VOL) | | | |
| | | < TRANSFORMER > | | | |
| T1001 | 1-431-965-11 | TRANSFORMER, LINE | | | |
| | | < IC > | | | |
| U1001 | 8-759-391-69 | IC MC78M05CDT | | | |
| U1002 | 8-719-821-66 | PHOTO COUPLER TLP627 | | | |
| U1003 | 8-759-701-36 | IC NJM3403AM | | | |
| U4001 | X-3378-160-1 | ASIC ASSY (ASIC BOARD, COMPLETE) | | | |
| U4002 | 8-759-466-52 | IC CAT93C86S-LE10 | | | |
| U4004 | 8-759-030-77 | IC MC34119-M | | | |
| U4005 | 8-759-651-11 | IC LP29811M5-3.0 | | | |
| | | < FUSE > | | | |
| W1001 | 1-533-842-11 | FUSE (250mA/250V) | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < VIBRATOR > | | | |
| X4001 | 1-577-269-11 | VIBRATOR, CRYSTAL (18.4MHz) | | | |
| ********** | | | | | |
| * | A-3672-870-A | HAND MAIN BOARD, COMPLETE (A973) | | | |
| * | A-3672-899-A | HAND MAIN BOARD, COMPLETE (A974) | | | |
| | | ********** | | | |
| | | < 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 | 1-128-934-11 | CERAMIC CHIP | 0.33uF | 20% | 10V |
| C1013 | 1-135-181-21 | TANTALUM CHIP | 4.7uF | 20% | 6.3V |
| 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 |
| 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 | 1-119-667-11 | CERAMIC CHIP | 22uF | | 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 | | | |

# HAND MAIN | I-TAD

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| D1003 | 8-719-909-90 | DIODE BAV99 | | | |
| D1004 | 8-719-909-90 | DIODE BAV99 | | | |
| D1006 | 8-719-047-37 | DIODE BAS16 | | | |
| D1008 | 8-719-063-83 | LED SML-310MTT86 (A974) | | | |
| D1010 | 8-719-063-83 | LED SML-310MTT86 (A974) | | | |
| D1016 | 8-719-063-83 | LED SML-310MTT86 (A974) | | | |
| D1018 | 8-719-063-83 | LED SML-310MTT86 (A974) | | | |
| D1020 | 8-719-077-33 | DIODE DNP319 | | | |
| 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 | | | |
| Q1006 | 8-729-026-07 | TRANSISTOR MMBT3906LT1 | | | |
| Q1007 | 8-729-026-07 | TRANSISTOR MMBT3906LT1 | | | |
| Q1008 | 8-729-026-06 | TRANSISTOR MMBT3904LT1 | | | |
| Q1009 | 8-729-026-06 | 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 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/16W (A974) |
| R1009 | 1-216-804-11 | METAL CHIP | 39 | 5% | 1/16W (A973) |
| R1010 | 1-216-803-11 | METAL CHIP | 33 | 5% | 1/16W (A974) |
| R1010 | 1-216-804-11 | METAL CHIP | 39 | 5% | 1/16W (A973) |
| R1014 | 1-216-800-11 | RES,CHIP | 18 | 5% | 1/16W |
| R1021 | 1-216-827-11 | METAL CHIP | 3.3K | 5% | 1/16W |
| R1022 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/16W |
| R1025 | 1-219-614-11 | METAL CHIP | 301K | 0.50% | 1/16W |
| R1026 | 1-218-735-11 | METAL CHIP | 62K | 0.50% | 1/16W |
| R1027 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R1031 | 1-218-735-11 | METAL CHIP | 62K | 0.50% | 1/16W |
| R1032 | 1-220-372-11 | RES,CHIP | 200K | 5% | 1/16W |
| R1033 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| 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 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/16W |
| R1058 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R1059 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/16W |
| 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 |
| | | < SWITCH > | | | |
| S1002 | 1-475-568-12 | ENCODER, ROTARY | | | |
| S1003 | 1-771-833-11 | SWITCH, SLIDE (VOL) | | | |
| | | < IC > | | | |
| U1001 | X-3378-160-1 | 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) | | | |
| ********** | | | | | |
| * | A-3672-874-A | I-TAD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C1 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C2 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C3 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C6 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C7 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C10 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C11 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C12 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C13 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C14 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C15 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C16 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C18 | 1-162-922-11 | CERAMIC CHIP | 39PF | 5% | 50V |
| C19 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C20 | 1-162-922-11 | CERAMIC CHIP | 39PF | 5% | 50V |
| C22 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C23 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C24 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C25 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C26 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C27 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C28 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C29 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C30 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C31 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C32 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C37 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C50 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C51 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C52 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C53 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C54 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C56 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C57 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C58 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C59 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C60 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C67 | 1-162-921-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| | | < DIODE > | | | |
| D1 | 8-719-047-37 | DIODE BAS16 | | | |
| D2 | 8-719-069-29 | DIODE RB520S-30TE61 | | | |
| | | < COIL > | | | |
| L1 | 1-412-064-11 | INDUCTOR CHIP | 100uH | | |
| L3 | 1-412-066-11 | INDUCTOR CHIP | 220uH | | |
| | | < TRANSISTOR > | | | |
| Q1 | 8-729-230-49 | TRANSISTOR 2SC2812-L5L6-TB | | | |
| Q2 | 8-729-029-14 | TRANSISTOR DTC144EUA-T106 | | | |
| Q3 | 8-729-026-06 | TRANSISTOR MMBT3904LT1 | | | |
| | | < RESISTOR > | | | |
| R1 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R2 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R7 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W |
| R8 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R9 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R10 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |
| R13 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R14 | 1-216-828-11 | METAL CHIP | 3.9K | 5% | 1/16W |
| R15 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R17 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R18 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R19 | 1-211-736-11 | RES,CHIP | 5.1 | 5% | 1/16W |
| R20 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/16W |
| R21 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R23 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R24 | 1-216-830-11 | METAL CHIP | 5.6K | 5% | 1/16W |
| R28 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R29 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R30 | 1-216-822-11 | METAL CHIP | 1.2K | 5% | 1/16W |
| R31 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R32 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/16W |
| R33 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R36 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W |
| | | < CAPACITOR > | | | |
| TC1 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 4V |
| TC2 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 4V |
| TC3 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| TC7 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 4V |
| TC8 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| TC9 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| TC10 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| TC11 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| TC13 | 1-135-177-21 | TANTALUM CHIP | 1uF | 20% | 20V |
| TC14 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 4V |
| | | < IC > | | | |
| U1 | 8-759-652-79 | IC PCD6002-C | | | |
| U2 | 8-759-664-08 | IC PQ1R28 | | | |
| U3 | 8-759-573-44 | IC AT49F002NT-90TC | | | |
| | | < VIBRATOR > | | | |
| X1 | 1-527-396-31 | VIBRATOR, CRYSTAL (3.579545MHz) | | | |

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MISCELLANEOUS

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| | | |
|---|---|---|
| 8 | A-3672-869-A | RF UNIT (HS) (HANDSET) |
| 69 | A-3672-871-A | RF UNIT (BU) (BASE UNIT) |
| ANT1001 | 1-754-103-11 | ANTENNA (HANDSET) |
| ANT4001 | 1-501-951-31 | ANTENNA (BASE UNIT) |
| LCD1001 | 1-803-832-11 | LCD MODULE (HANDSET) |
| SP1 | 1-505-231-11 | SPEAKER (5cm) (BASE UNIT) |
| U4003 | 1-542-118-11 | MICROPHONE, ELECTRET CONDENSER (BASE UNIT) |

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| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ********** | |
| ⚠ | 1-418-739-11 | ADAPTOR, AC (AC-T128) | |
| | 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) | |
| | 3-867-315-11 | MANUAL, INSTRUCTION (ENGLISH,SPANISH) | (A973) |
| | 3-867-315-21 | MANUAL, INSTRUCTION (ENGLISH,FRENCH) | (A974) |
| | 3-867-351-11 | GUIDE, QUICK START (ENGLISH,SPANISH) | (A973) |
| | 3-867-351-21 | GUIDE, QUICK START (ENGLISH,FRENCH) | (A974) |
| | 3-867-352-11 | CARD, REMOTE CONTROL (ENGLISH,SPANISH) | (A973) |
| | 3-867-352-21 | CARD, REMOTE CONTROL (ENGLISH,FRENCH) | (A974) |

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

9-927-618-11

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**Personal Audio Division Company**

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