NEC

PA*P*-20*
Information Display Pager

Operating instructions

Be sure to observe the following:

- To prevent accidents from short-circuits, ensure that no metal objects come into contact with the battery terminals.
- Keep the pager away from fire.
- Do not expose the battery to direct sunlight.
- Keep the pager dry.
- Do not subject the pager to mechanical shock.
- Do not attempt to open the pager, or alter its software or hardware in any way.

1. General

Display
Speaker
Logo label
Function buttons

The PA*P*-20* information display pager is a digitized radio receiver that displays and stores alphanumeric messages.

When a call comes in, the pager makes an alert and shows an alphanumeric message on the display.

Function buttons

- **M** • To turn on and off the power of the pager
  • To confirm certain function settings

- **▲** • To scroll backward through stored messages
  • To select displayed functions.

- **▼** • To scroll forward through stored messages
  • To select displayed functions.

You can press any button to stop a call alert.

Message capacity

The pager can hold up to 16 alphanumeric messages or 640 characters in its memory. One message can be up to 120 characters long.
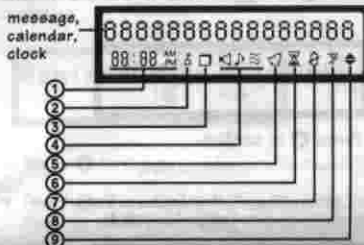
Addresses capacity

The pager has up to 3 main receiving addresses numbered 1 to 3.

In addition, addresses 1 and 2 can have up to 4 sub-addresses each, A to D.

A total of up to 9 receiving addresses are available.

2. Standard features

Display

message, calendar, clock

① message and address number   (Example:) 2 1R

    time stamp   9:42 PM

    alarm clock   1:00 AM

② **message protection indicator**: δ

The sub-symbol δ appears when you display a protected message.

③ **message duplication indicator**: □

If a receive message already exists in the contents of the address, the old message will be overwritten and the sub-symbol □ will appear. The time stamp is also updated.

④ **alert indicators**:

Sound On:	◁	Beep 1, 2
	◁♪	Melody
Sound Off:	♪≈	Chirp On
	≈	Chirp Off(vibrator)

⑤ **alarm indicator**: ◁

You may set the pager to sound an alarm tone at a specified time. The sub-symbol ◁ appears when the mode is set to on.

⑥ **countdown timer**: ⊠

You can set the pager to make an alarm after a certain number of minutes or seconds have elapsed. The sub-symbol ⊠ appears when the mode is set to on.

⑦ **low battery indicator**: ϑ

The sub-symbol ϑ appears when the battery goes low.

⑧ **out of area indicator (option)**: ⊤

The sub-symbol ⊤ is displayed constantly to show that your pager is inside the radio coverage area of the paging system. If the pager is outside the coverage area, ⊤ appears on the display.

⑨ **message indicator**: ◆

If a message is longer than one screen, this symbol appears on the right to let you know that the message length is more than one screen.

The ▲ indicates message(s) on the previous screen. And the ▼ indicates message(s) on the next screen.

3. Operation

Power on

☞ Hold down **M** for more than 1 second.

The pager will make a brief power on alert. The power on alert consists of the currently selected call alert.

The pager then goes to standby.

Power off

☞ Hold down **ⓜ** in standby mode.

Release **ⓜ** when the pager emits a single beep; then quickly press **ⓜ** again (within 2 seconds).

"Power OFF" appears on the display for 2 seconds. (Or quickly press **ⓜ** again to cancel power off.)

```
    Power OFF
       ◁
```

The pager then turns itself off.

Setting the time

When the pager is switched on and in standby, the time and date are displayed. The default date and time are as follows:

```
01/01/95 12:00AM
       ◁
```

To set the clock and calendar

☞ Briefly press **ⓜ**, then press **Ⓞ** until "Set clock" appears on the display.
☞ Press **Ⓞ** to start setting the time.
☞ Briefly press **Ⓞ** to adjust the hour by one digit. Or hold down **Ⓞ** to scroll rapidly.

```
01/01/95  2:00PM
```

☞ Press **Ⓞ** to confirm and to move to the next setting.

Follow the same procedure above for setting the minutes, hour format, year, month and day.

☞ Press **ⓜ** to confirm and return to standby.

To adjust the calendar format

The pager can display the date in the "month/day/year" or "day/month/year" format.

☞ Briefly press **ⓜ**, then press **Ⓞ** until "Set Options" appears on the display.
☞ Press **Ⓞ**, and then press **Ⓞ** until "Calendar" appears on the display.

The current setting appears on the display.

☞ Press **Ⓞ**. The prompt calendar format flashes.

```
Calendar :M/D/Y
```

☞ Press **Ⓞ** to toggle between "month/day/year" or "day/month/year".
☞ Press **Ⓞ** to confirm and stop the flashing. Then press **ⓜ** to return to standby.

Selecting the call alert

The pager has two alert modes: Sound ON and Sound OFF.

To change the alert mode

The pager should be turned on and in standby.

☞ Hold down **ⓜ** for more than 1 second.

Either "Sound ON" or "Sound OFF" appears on the display.

Release **ⓜ** when you hear a single beep.

After a few seconds the pager returns to standby with the last-displayed alert mode now active.

In this way, use **ⓜ** to repeat the process and to change the alert mode.

To select an alert mode for Sound ON

The pager should be turned on and in standby.

☞ Briefly press **ⓜ**, then press **Ⓞ**.

```
Sound ON / OFF
     ◁
```

☞ Press **Ⓞ** toggle between "ON" or "OFF".

When you select "Sound ON".

☞ Press **Ⓞ**.

The "Beep1,2 / Melody" appears on the display.

```
Beep1,2 / Melody
      ◁
```

☞ Use **Ⓞ** to toggle between "Beep1","Beep2" or "Melody"
☞ Press **ⓜ** to confirm and return to standby.

To select chirp on or off for Sound OFF

With the setting screen for Sound ON / OFF on the display—

☞ Press **Ⓞ** to select "Sound OFF", then **Ⓞ**.

The "Chirp ON / OFF" appears on the display.

```
Chirp ON / OFF
     ♪≡
```

☞ Press **Ⓞ** to toggle between "Chirp ON" or "Chirp OFF"
☞ Press **ⓜ** to confirm and return to standby.

4. Receiving a call

Call alert and display of new messages

When a call comes in, the pager generates the call alert you have selected and shows the message on the display.

```
Please call me
  1 1R        ◁      >
```

In the case of beep and melody alerts, the volume of the alert tone increases in four steps.

Manual reset

If you press any function button during the call alert, the call alert stops.

The new message remains on the display for a further 40 seconds, after which the display returns to standby.

Automatic reset

If you do nothing, the call alert and message display stop automatically after a certain number of seconds. The words "Call Received" remain on the display.

```
    Call Received
         ◁
```

Displaying unread message(s)

☞ Briefly press any function button while the words "Call Received" are displayed.

The new message(s) will reappear with the selected alert on the display.

5. Reviewing stored messages

To review the latest message (message #1)

☞ Briefly press **Ⓞ**.

Message #1 appears on the display.

```
address
number
message ─── Please call me
number        1 1R        ◁
time stamp ── 2:31 ᴘᴍ
```

After a few seconds, the message number and address number are then replaced by the time stamp (the time at which message #1 was received). *If you do nothing, the pager returns to standby after 40 seconds.*

To scroll through the stored messages

☞ Briefly press **Ⓞ** to review message #2.

All the messages will appear if you continuously press **Ⓞ**. But only the first screen of each message will appear if you continuously press **Ⓞ** (backward scrolling). With the oldest message on the display, quickly press **Ⓞ** to return to standby.

Automatic scrolling

During review of stored messages, hold down **Ⓞ** or **Ⓞ** to scroll through the messages at a rate of 1, 2 or 3 seconds per message screen.
See item "Automating scrolling speed".

Automatic scrolling speed

You can specify the display time for each message: Fast (1 second), Medium (2 seconds), Slow (3 seconds).

☞ Press **ⓜ** then press **Ⓞ** until "Set Options" appears.
☞ Press **Ⓞ**, then press **Ⓞ** until "Scroll" appears.

The current setting appears on the display.

☞ Press **Ⓞ**.

The current scroll speed flashes on the display.

```
Scroll  :Fast
```

☞ Press **Ⓞ** to toggle between the "Fast", "Medium" or "Slow".
☞ Press **Ⓞ** to confirm the setting and stop the flashing. Then press **ⓜ** to return to standby.

6. Protecting a message

If the memory of the pager is full, the oldest unprotected message is automatically deleted on the reception of a new message.

To protect a message

☞ Press **Ⓞ** or **Ⓞ** to enter message review mode and display the required message.

```
Please call me
  2:31 ᴘᴍ    ◁
```

☞ Press Ⓜ.

The "Protect" flashes in place of the last 8 characters of the message.

```
Please c Protect
2:31₅    ◁
```

☞ Press Ⓞ to stop flashing and enter protect mode.

☞ Press Ⓞ again to execute protection of the message.

After Ⓞ is pressed, the protect symbol δ is displayed with the message.

```
Please c Protect
2:31₅ δ  ◁
```

☞ Press Ⓜ again to return to standby.

☞ Press Ⓞ or Ⓥ to display the protect message.

☞ Briefly press Ⓜ, then press Ⓞ twice to unprotect the message. The sub-symbol δ disappears on the display.

☞ Press Ⓜ to return to standby

Message protection capacity

Up to 8 messages, or 256 characters, may be protected. If you attempt to protect a ninth message, or to protect a total of more than 256 characters, the pager displays the warning *FULL* and sounds a brief tone.

```
Please c *FULL*
10:25 ᴬᴹ  ◁
```

This screen appears for 1 second, after which the display returns to the protect mode display automatically.

☞ Press Ⓜ to return to standby.

7. Deleting a message

☞ Press Ⓞ or Ⓥ to enter message review mode and display the required message.

```
Please call me
2:31₅    ◁
```

With the required message on the display—

☞ Press Ⓜ.
☞ Press Ⓥ to toggle between "Protect" and "Delete".

```
Please c Delete
2:31₅    ◁
```

☞ Press Ⓞ to stop flashing and enter delete mode.

☞ Press Ⓞ.

The display shows "Delete?"

```
Please c Delete?
2:31₅    ◁
```

☞ Press Ⓞ to execute deletion of the message.

After the Ⓞ is pressed, the "Deleted" appears on the display.

This screen appears for 1 second, after which the pager goes to the delete mode display for the next message automatically.

☞ Press Ⓜ to return to standby.

To delete all stored messages

The pager has memory back-up for messages. All stored messages will be retained during power off while a valid battery is installed in the pager.

In this case, you can delete all messages, protected or unprotected, stored in the pager.

The power of the pager should be turned off.

☞ Hold down Ⓥ.

While holding down Ⓥ:

☞ Hold down Ⓜ for more than 1 second.

The pager displays the "Delete All ?". Release Ⓜ and Ⓥ.

☞ Press Ⓞ to confirm deletion of all stored messages. (Or press Ⓜ to cancel the deletion.)

```
Deleted All
```

"Deleted All" will appear on the display. The pager will make a brief power on alert.

8. No messages stored

During standby, with no messages stored—

☞ Press Ⓞ or Ⓥ. Then the message below will appear

```
No Messages
◁
```

Press any button to return to standby.

9. Selecting the duration of the call alert for Sound On

☞ Briefly press Ⓜ and then press Ⓥ until "Set Options" appears on the display.

☞ Press Ⓞ.

The current setting of the alert duration appears.

☞ Press Ⓞ to change the setting.

The current setting starts flashing.

```
AR Time  :Long
```

☞ Press Ⓥ to toggle between "Short", "Middle" or "Long".

    Short : 20 seconds
    Middle: 32 seconds
    Long : 44 seconds

☞ Press Ⓞ to confirm.

The setting stops flashing.

☞ Press Ⓜ to return to standby.

A Sound Off alert always lasts for only 8 seconds.

10. Reminder alert on~off

If any message is "unread", the pager repeats the call alert 1 minute, 2 minutes, 5 minutes, 10 minutes and 30 minutes after the message was received. Press any button to stop the reminder alert and display the unread message.

To set the reminder alert on or off

☞ Press Ⓜ, then press Ⓥ until "Set Options" appears.

☞ Briefly press Ⓞ, then press Ⓥ until "Reminder" appears.

The current setting of the reminder alert appears on the display.

☞ Press Ⓞ.

The current setting of the reminder alert flashes on the display.

```
Reminder :OFF
```

☞ Press Ⓥ to toggle between "OFF" and "ON".

☞ Press Ⓞ to confirm the setting and stop the flashing. Then press Ⓜ to return to standby.

11. Alarm clock

You can preset a daily alarm in the pager.

☞ Press Ⓜ and then press Ⓥ until "Set Alarm" appears.

☞ Press Ⓞ.

The current setting appears on the display.

```
Alarm ON / OFF
12:00 ᴬᴹ
        🔔
```

☞ Press Ⓥ to toggle between "ON" and "OFF".

☞ Press Ⓞ to confirm the setting.

If the confirmed setting is "OFF", the pager returns to standby automatically.

If the confirmed setting is "ON", the following is displayed.

```
Alarm ON
12:00 ᴬᴹ
        🔔
```

☞ Press Ⓥ to adjust the hour and minute. See item "Setting the time."

☞ Press Ⓜ to confirm the alarm time.

The pager returns to standby. The 🔔 remains on the standby display while the alarm clock function is active.

When the alarm time reaches the setting time, the pager sounds the specified tone alert and "*Alarm*" appears on the display—

```
*Alarm*
11:45 ᴬᴹ  ◁  🔔
```

☞ Press any button to stop the alert. Then press any button to return to standby.

12. Countdown timer

☞ Briefly press Ⓜ then press Ⓥ until "Set Timer" appears on the display.

☞ Press Ⓞ to enter the function.

The "Stop" and a default countdown setting of one minute appears on the display. The minute flashes together with ⏳.
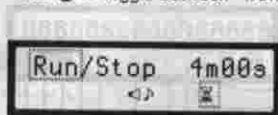
```
Stop   1m00s
        ⏳
```

☞ Press Ⓥ to adjust the minute setting.

☞ Press Ⓞ to confirm the minute setting.

Select "Run" to start the countdown process.

Select "Stop" to cease and retain the countdown time. Then select again to reset to the original countdown setting.
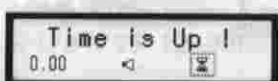
☞ Use ⊙ to toggle between "Run" and "Stop".

```
Run/Stop    4m00s
        ◁♪        ⌛
```

☞ Press ⊙ to confirm.

If you select "Run", the display will start the countdown in minutes and seconds.

```
Run/Stop    3m59s
        ◁♪        ⌛
```

And so on. Press ⊙ to select "Stop", then ⊙ to stop the countdown.

Otherwise, when the minutes and seconds reach zero, the pager makes the currently selected call alert for the specified call alert period and "Time is Up !" appears on the display—
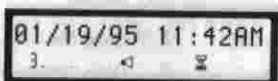
```
    Time is Up !
0.00        ◁        ⌛
```

☞ Press any button to stop the alert. Then press any button to return to standby.

Countdown alert in standby

With the countdown in progress—

☞ Press ⊛ to return to standby.

The countdown time appears on the lower left of the display.

```
01/19/95 11:42AM
3.          ◁        ⌛
```

If the countdown time is more than 1 minute, only the minutes are displayed, else only the seconds are displayed. When the time is up,

☞ Press any button to stop the alert. Then press any button to return to standby.

13. Installing and replacing the battery

The pager operates on a standard 1.5 V "AAA" battery. No battery is installed when the user first receives the pager.
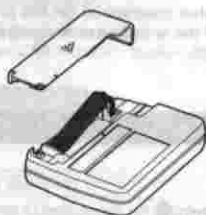
The cover for the battery compartment is located on the rear side of the pager.
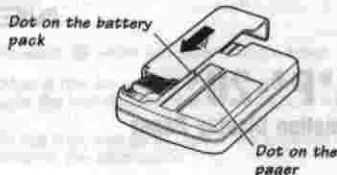
To install the battery

Slide the cover away from the battery compartment.

Dot on the battery pack

Dot on the pager

Insert the battery into the battery compartment, ensuring that the polarity of the battery is correct.

Slide the battery cover back into place.

Dot on the battery pack
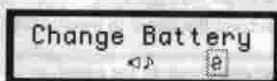
Dot on the pager

To remove the battery

Remove the battery cover. Remove the battery from the compartment by the + end.

Install a new battery as soon as possible to maintain the contents of the memory of the pager.

Low battery alarm

If the battery drops below a workable level, the pager will sound a low battery alarm.

The message "Change Battery" appears on the display along with the symbol 🔋.

```
   Change Battery
          ◁♪        🔋
```

Press any key to stop the alert tone.

Turn off the power of the pager and replace the battery as soon as possible.

Remember:
To protect the data you have stored in the pager, do not leave the pager without a valid battery for more than a few minutes.

Alpha entry from touch tone telephone

It is possible to send alphanumeric messages to the pager using the digit keys on the keypad of a landline or mobile phone.

The caller should dial the number of the paging service, then follow the directions given in the recorded announcement. To enter a particular message character, the caller has to press a combination of two digit keys.

In the table below, the double digits stand for digit entries on the keypad of the phone. The bold characters stand for the resulting message characters.

00	**0**	21	**A**	61	**M**	91	**W**
10	**1**	22	**B**	62	**N**	92	**X**
20	**2**	23	**C**	63	**O**	93	**Y**
30	**3**	31	**D**	71	**P**	13	**Z**
40	**4**	32	**E**	11	**Q**	12	**(SPACE)**
50	**5**	33	**F**	72	**R**	24	**-**
60	**6**	41	**G**	73	**S**	25	**(**
70	**7**	42	**H**	81	**T**	26	**)**
80	**8**	43	**I**	82	**U**		
90	**9**	51	**J**	83	**U**		
		52	**K**				
		53	**L**				