



Wireless Email !
Wireless access to your
Email and Message
Get the latest News and
Information at your fingertips

 **ReFLEX™** Two-way Personal Communicator

H-200

H200 User's Manual

August 27, 2003

HuneTec Co.,Ltd

Contents

<u>General Information</u>	4
Introduction	4
RF Specification	4
Physical specification	4
H200 PC Link	6
Manufacturer	6
 <u>Technical Theory</u>	 7
Controller Circuit Descriptions	7
Transceiver Circuit Descriptions	11
 <u>User's Manual</u>	 16
Before You Start	19
Getting Started	29
Read Message	31
Write Message	41
Contact	45
Scheduler	50
Task	54
Memo	56
Preference	58
Alarm	66
Calculator	68
Lock	69
World Clock	70
Game	71
Tx Set	73
Alert	74
My Mail	75
H-200 PC Link Program	76
Device and Battery Care	82
Troubleshooting	83
Safety Information	85

Part List86

 Logic & RF Board Part List86

 Keypad Board Part List90

Block Diagram91

 Controller Functional Block Diagram92

 Transceiver Functional Block Diagram93

Schematic Diagram94

 Controller Schematic Diagram....95

 Transceiver Schematic Diagram96

 Keypad Schematic Diagram97

General Information

Introduction

- # Small Size and Light Weight for Portability
- # ReFLEX Two-way Messaging & E-Mailing
- # Graphic User Interface for Easy Use
- # Personal Information Management Support
- # PC Connectivity for Data Back-up and Restoring with Desktop PC

RF Specification

- Receiver

Frequency Bands: 929 MHz - 932 MHz , 935 MHz - 942 MHz
Channel Spacing: 6.25 kHz , 10 kHz and 12.5 kHz
Bit Rate: 1600/2 level FSK , 3200/2 level FSK , 3200/4 level FSK , 6400/4 level FSK
Frequency Deviation: +/- 800 Hz and +/- 2400 Hz
Signaling: 2/4 level FSK

- Transmitter

Frequency Range: 896-902 MHz
Bit Rate: 800, 1600, 6400 and 9600 bps
Channel Spacing: 12.5 KHz in 6.25 KHz steps
Frequency Deviation: +/- 800 Hz and +/- 2400 Hz
Signaling: 4 level FSK

Physical Specification

Operating temperature range: -10°C ~ +50°C (32F~122F)

Dimensions

- Size: 105×70×18mm

- Weight: 120g

Power Consumption

- Batteries: Li-Ion 700mA rechargeable battery

- Stand-by Time: 7 days

- Recharging Time: 2 hours

- Rx Consummation: 45mA

- Tx Consummation: 800mA

- Idle Current: 1.2mA

Display

- Full-graphics high-contrast screen

- Resolution 160×128 dots

- Lines by 24 characters

- Electro-Luminescent back lighting

- 4 gray LCD

- Multi Font (Large / Small) Display

Keypad

- 32 QWERTY Keyboard
- slide keys
- 4 navigation keys

Accessories

- Mains charger
- Belt clip
- H200 PC Link software & editor cable

H200 PC Link

Edit and back up address book memory

Send and receive messages by using a PC keyboard

Compose and change Bell melodies with H200 PC Link Maestro Manage settings

Manufacturers

Hunetec Co.,LTD

10th Hung-Kook Bldg., Soonae-dong, Bundang-ku,

Sungnam-si, Kyungki-do, Korea 463-020

Telephone : +82-31-712-6868

Facsimile : +82-31-712-6889

Technical Theory

Controller Circuit Descriptions

The controller section consists of the following main functional blocks(see Figure 2-1)

- # **Functional Controller (U25)**
- # **Message Storage (U24)**
- # **Primary Code Storage (U23)**
- # **Power Management (U304)**
- # **Display Module**
- # **Backlighting (U3)**
- # **Serial Interface (U28)**
- # **Audio (U31)**

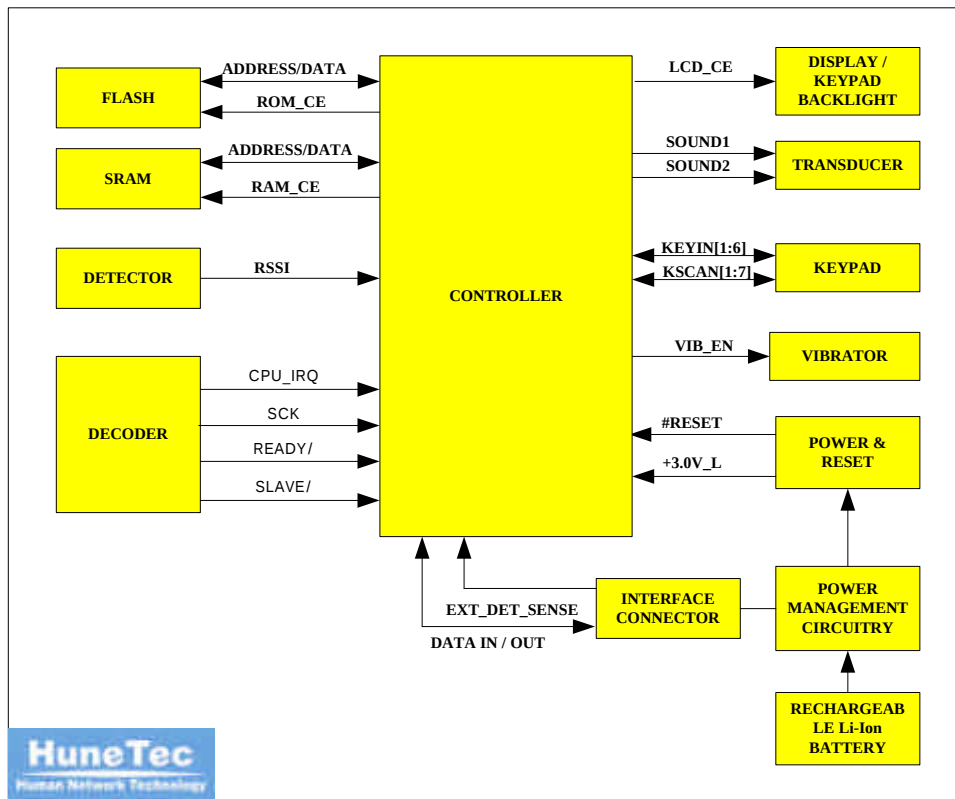


Figure 2-1. Controller Functional Block Diagram

1. Functional Controller

The functional controller (U25) provides user interface of the unit. The functional controller affects the following components:

- # Display Module
- # Message storage (U24)
- # Primary Code Storage (U23)
- # Decoder (U26)
- # Alert generators (vibrator at U17; transducer at U30)
- # Display (U7) and Keypad Backlight
- # Serial communication (U28)
- # Primary code storage (U23)

2. Digital Signal Processor

The digital signal processor (U14) is responsible for the decoding received information.

3. Message Storage

The message storage IC (U24) is a 4M bit SRAM (Static Random Access Memory) contained in a 44-pin package

4. Primary Code Storage

The primary code storage IC (U23) is a 16-megabit flash memory IC contained in a 48-pin package.

5. Power Management

After Battery voltage is authorized, voltage is authorized to internal LDO Regulator (U13, U18, U410, U411, U412) and Reset generator through V_{IN} of Power & reset IC (U304). CPU is initialized through Reset signal which is input to CPU as Reset IN.

Output power $V_{out}(+3V)$ for Power & reset IC is used for Logic such as Digital Part of Audio IC and CPU. Output power $V_{out}(+3V)$ for External Regulator is used for Analog part of Audio IC and VCTCXO, PLL of Transceiver. Regulator is used for authorization for regular voltage of EL through Battery voltage.

6. Display Module

The display driver is a flex circuit that drives Lines by 24 characters display. This circuit attaches to the controller at contacts display module. The functional controller (U25) provides sole control over the driver.

The display driver has an internal voltage triple that generates the appropriate voltage levels needed to drive the display glass.

7. Backlight

The backlight consists of the following elements:

- # Electro-Luminescent (EL) panels
- # An EL driver (U3)
- # EL contacts

When active, the EL panel draws approximately 90 volts peak-to-peak (200Hz) from the driver.

8. Serial Port Interface

The serial port interface provides a connection between the HRD-100 communicator and programming fixture.

9. AUDIO

Audio IC (U31) is a mono bridged audio power amplifier with DC voltage volume control.

Circuit Descriptions

Specifications

1. Receiver

Item	Specification
Frequency	929~932MHz, 935~942MHz
Channel Spacing	6.25 kHz , 10 kHz and 12.5 kHz
Bit Rate	1600/2 level FSK , 3200/2 level FSK , 3200/4 level FSK , 6400/4 level FSK
Signaling Modulation	2 / 4 Level FSK
Frequency Deviation	+/- 800 Hz and +/- 2400 Hz
Receiver Sensitivity	20uV/M with 80 char(TBD)
Frequency Accuracy	1ppm
Adjacent Channel Rejection	> 50dB from Sensitivity to -80dBm > 40dB at -70dB Signal Level > 30dB at -60dB Signal Level
Co-Channel Rejection	< 15dB at -105dBm < 10dB at -102dBm < 6dB at -95dBm
Spurious Response Rejection	> 55dB at -105dBm
Image Rejection	> 55dB at -105dBm
Inter-Modulation Distortion Rejection	> 50dB from Sensitivity to -80dBm > 40dB at -70dB Signal Level > 30dB at -60dB Signal Level
Simulcast Delay Spread Tolerance	> 1/4 symbol width at -105dBm and 15dB C/I > 1/4 Symbol width at -102dBm and 10dB C/I > 1/4 Symbol width at -55dBm and 6dB C/I

2. Transmitter

Item	Specification
Frequency Range	896~902MHz
Channel Spacing	12.5 KHz in 6.25 KHz steps
Bit Rate	800, 1600, 6400 and 9600 bps
Signaling Modulation	4Level FSK
Frequency Deviation	+/- 800 Hz and +/- 2400 Hz
Frequency Accuracy	-2.5ppm < X < 2.5ppm
Frequency Stability	-1.0ppm < X < 1.0ppm
Output Power	0.4W
Spurious Emission In-Band/Out-Band	< -50dB

Circuit Descriptions

The following information describes the circuitry specific to HRD-100 pagers with 900MHz transceivers. See Figure 3-1.

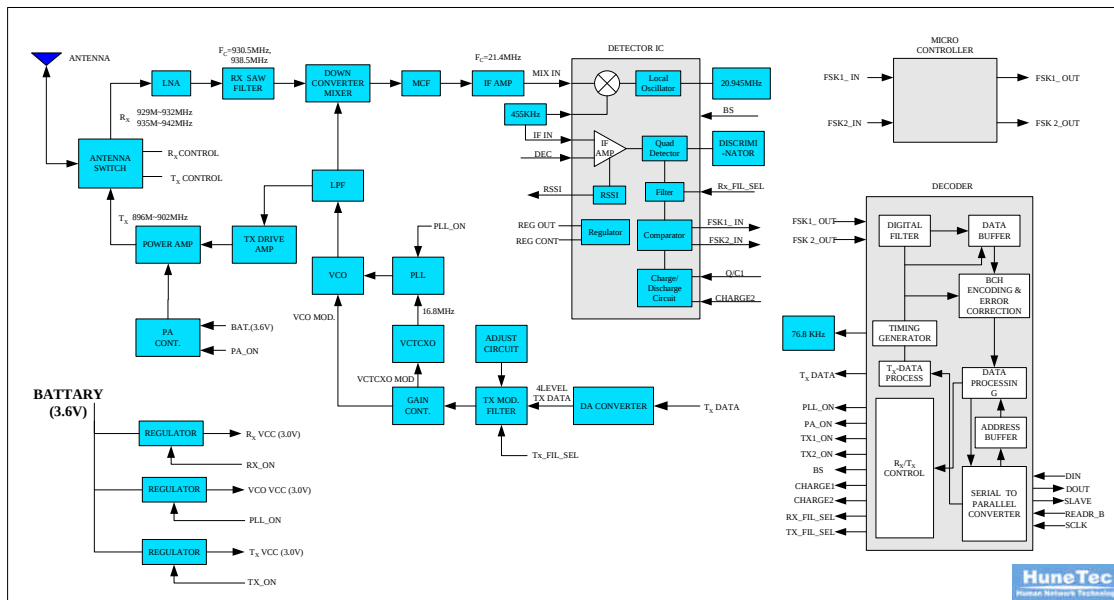


Figure 3-1 Transceiver Functional Block Diagram

The transceiver board consists of the following major component sections:

- # Antenna (ANT1)
- # Antenna Switch (U102)
- # Receiver Automatic Gain Control Circuit
- # Low Noise Amplifier (U8)
- # Receiver Surface Acoustic Wave Filter (U2)
- # Receiver First Mixer (U104)
- # Crystal Filter for First IF (MCF1)
- # IF Detector IC (U12)

- # Decoder (U26)
- # Operational Amplifier (U9, U19)
- # Transmit VCO/ Receiver First LO VCO (VCO1)
- # Phase locked Loop
- # Power Amplifier (U4)
- # Driver Amplifier (U6)

1. Antenna

Antenna is for optimal receiving of transmission signal from base station.

Reduce damage of weak signal under general external environment and voltage from device to a minimum.

2. Antenna Switch

The RF switch is it can be controlled with positive, negative or a combination of both voltages. Some standard implementations include antenna changeover, Transmit/Receive and diversity switching over 3W.

3. AGC (Automatic Gain Controller) Circuit

Level of signal which device receiving should maintain regular signal and AGC is for Power control of device.

4. LNA (Low Noise Amplifier)

LNA is used for reducing noise to a maximum for optimal signal and amplify signal that need to receive separately.

5. RF SAW (Surface Acoustic Wave) Filter

RF Saw Filter is used for band pass for the signal of receiving frequency and reduce other signal except receiving frequency in order to receive selected receiving frequency of Pager.

6. Down Converter (MIXER)

Down Converter is used for one output against two input signal and making IF signal by combining amplified RF signal from LNA with Local signal.

Adjust RF signal of $930.5\text{MHz} \pm 1.5\text{MHz}$ & $938.5\text{MHz} \pm 3.5\text{MHz}$ and local signal of 909.1MHz & 917.1MHz to downward as the next IF signal of 45MHz .

7. Crystal Filter for First IF (MCF1)

The filter is centered 45MHz . The output of the first mixer has four frequency components. The filter allows the passage of the desired IF frequency.

8. IF Detector IC (U12)

The IF Detector IC is a 4-level frequency-shift keying (FSK) comparator and a bit rate filter switch.

9. Decoder (U26)

The decoder supports 1600, 3200, and 6400 bps decoding. Intermediate frequency signals are demodulated, synchronized, de-interleaved and error corrected prior to entry into a holding buffer. The holding buffer is then fed into a synchronous serial peripheral interface (SPI) which then converts the data into a parallel format. A resident real-time clock operates off a 76.8kHz crystal.

10. Operational Amplifier (U9, U19)

The Operational Amplifier is quad C-MOS operated on a single-power-supply, low voltage and low operating current.

11. VCO(Voltage Controlled Oscillator)

VCO is used for creation of Local signal of $\pm 1.5\text{MHz}$.

12. VCTCXO(Voltage Controlled Temperature Compensated Crystal Oscillator)

VCTCXO is used for voltage supply for reference frequency of main set input.

It creates 16.8MHz frequency and input to PLL IC.

It controlled by voltage for exact frequency tuning.

12. PLL(Phase locked Loop)

PLL(PLL2) is frequency combiner of Dual mode. It output IF signal and Local signal if demultiplied signal and Phase of phase comparator is same.

13. Regulator

Regulator is used for authorization for regular voltage of VCO and RX circuit through Battery voltage.

14. Driver Amplifier

Drive amplifier (U6) is circuit for promote efficiency through supply amplified signal to power amp.

15. Power Amplifier

Power amplifier (U4) is amplifier circuit for the amplification of output signal in Drive amplifier (U6) in order to transmit the signal to base station through Antenna.

User' s Manual

(Draft Version)

Contents

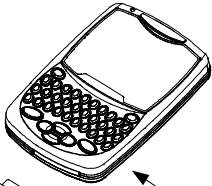
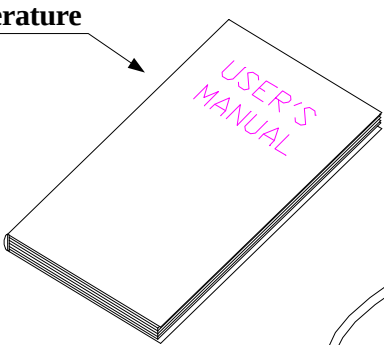
1. BEFORE YOU START	19
1 . 1 D E V I C E L A Y O U T A N D I C O N S	20
1.2 KEYS DESCRIPTION.....	24
1 . 3 D I S P L A Y I N T H E I N I T I A L S C R E E N	26
1 . 4 D I S P L A Y I N T H E M A I N M E N U S C R E E N	27
1.5 LED INDICATOR	28
2.GETTING STARTED	29
2 . 1 H O W T O S W I T C H D E V I C E O N A N D O F F	29
2.2 HOW TO CHARGE BATTERY	29
2 . 3 H O W T O R E S E T D E V I C E	30
2.4 HOW TO TURN ON BACKLIGHT	30
2.5 HOW TO LOCK KEYBOARD	30
3. READ MESSAGE	31
3 . 1 I N B O X	32
3.2 INFO	35
3.3 DRAFT	36
3 . 4 P E R S O N A L / B U S I N E S S / M I S C	37
3.5 OUTBOX	38
3.6 SENT	39
3 . 7 D E L E T E	39
4. WRITE MESSAGE	41
5. CONTACT	45

6. SCHEDULER	50
7. TASK	54
8. MEMO	56
9. PREFERENCE	58
9.1 ALERT SETTINGS	58
9.2 QUICK TEXT	60
9.3 PRIVATE TIME	60
9.4 SETUP	61
9.4.1 SET DATE & TIME	61
9.4.2 DISPLAY SETTINGS	62
9.4.3 OWNER INFORMATION.....	62
9.4.4 SIGNATURE	63
9.4.5 TITLE SCREEN	63
9.4.6 KEY LOCK PASSWORD.....	63
9.10 ABOUT	64
9.10 MYMAIL .SETUP	65
10. ALARM	66
11. CALCULATOR	68
12. LOCK	69
13. WORLD CLOCK	70
14. GAME	71
15. TX SET	73
16. ALERT	74
17. MYMAIL	75
18. H200 PC LINK PROGRAM	76
19. DEVICE AND BATTERY CARE	82
20. TROUBLE SHOOTING.....	83
121. SAFETY INFORMATION	85

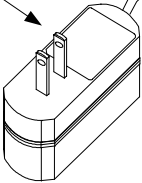
1. Before You Start

*** What's in the Box?**

Product Literature

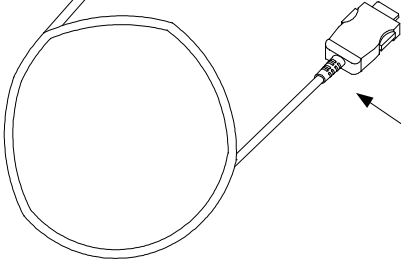


Travel Charger



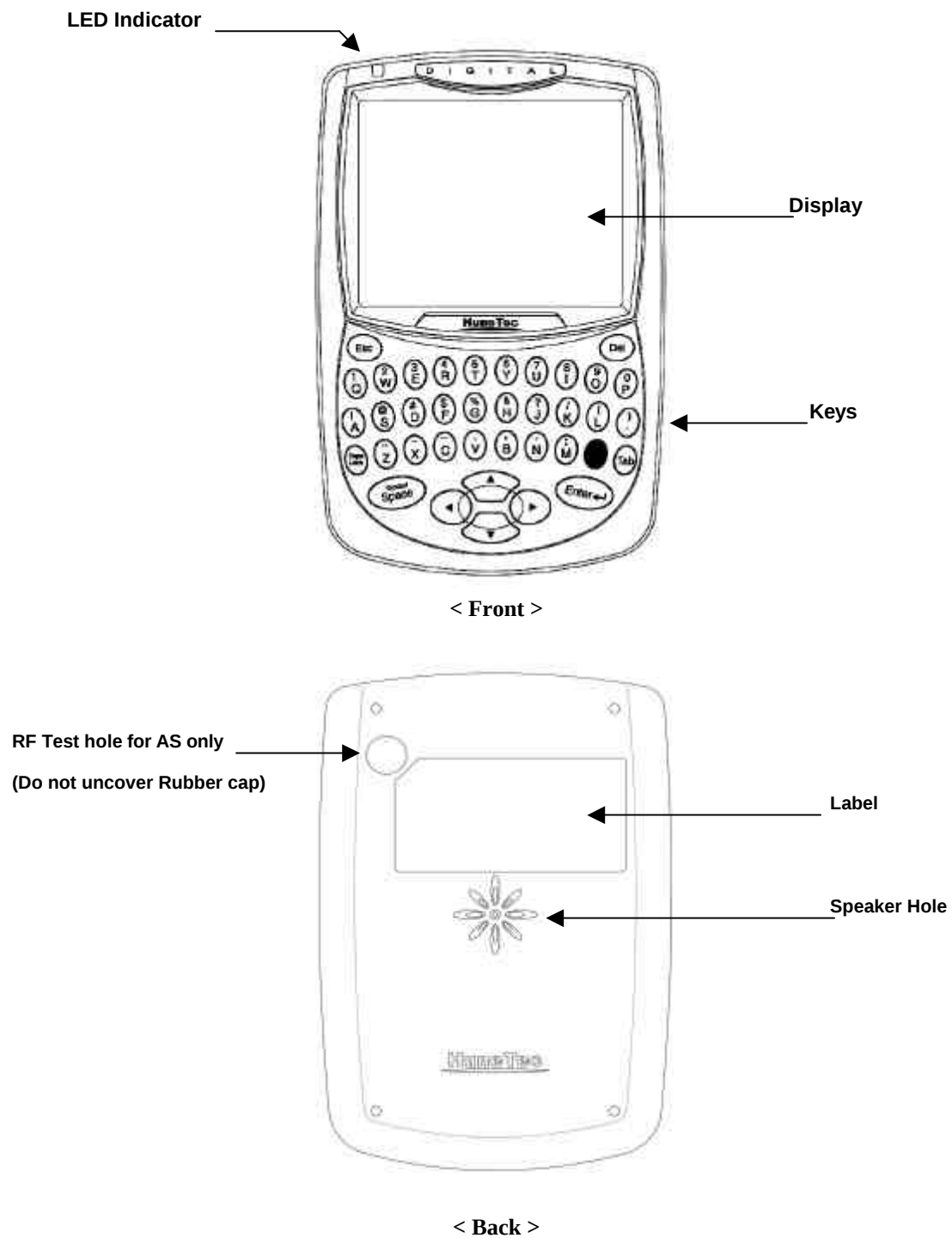
Holster

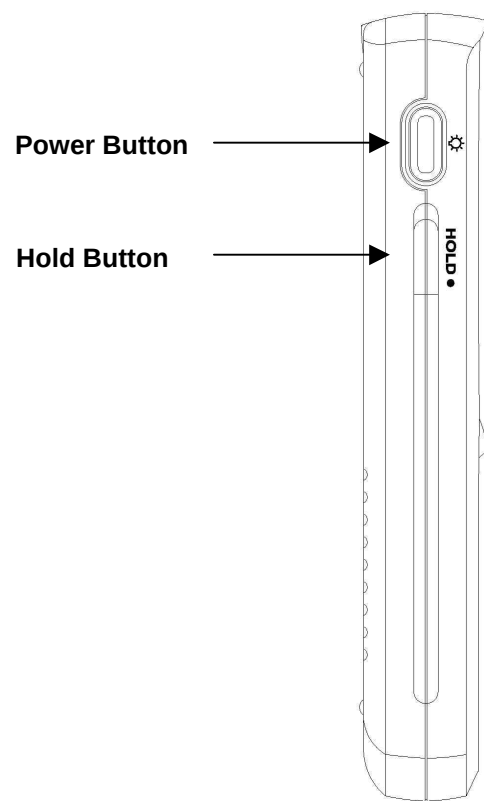
**Data Cable
(Optional Items)**



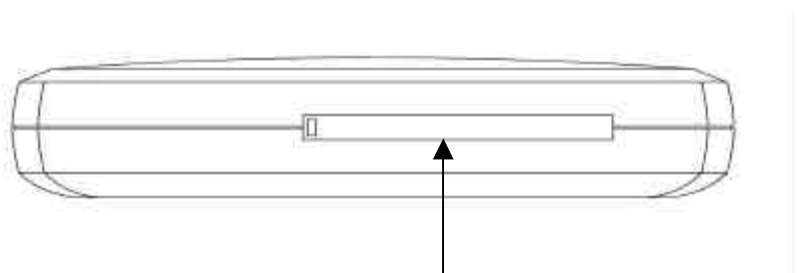
1.1 Device Layout and Icons

The following illustration shows the main elements of your H200.





< Left Side >



Rubber cap for serial port and Reset switch

< Bottom >

< Status Icons in the Main menu display>

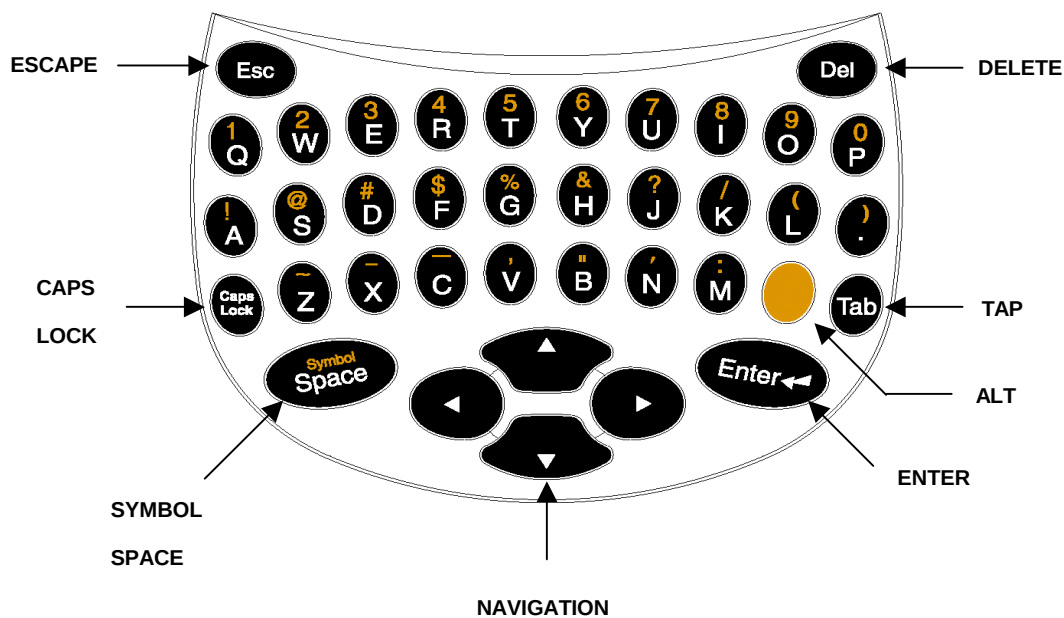
Icon	Description
	Appears device is 1 WAY mode. You can receive message only
	Appears device is 2 WAY mode. You can send and receive message
	Appears device is No Service mode. You are out of service range
	Shows the level of battery status. The more bars you see, the more power battery has left.
	Appears when keyboard is locked.
	Appears when device is locked by password You must input password to use device
	Appears when melody is selected as ring tone type
	Appears when vibrator is selected as ring tone type
	Appears when mute is selected as ring tone type
	Appears when Caps / Lock mode is turned on
	Appears when Caps mode is turned on
	Appears when message sending is in process
	Appears when new message has been received or unread message Is in Read box
	Appears when Alt lock mode is turned on
	Appears when Alt mode is turned on
	Appears when message sending is failed

	Appears when message sending is succeeded
	Appears when device is roaming status
	Appears when new news / Info message has been arrived

< Icons for message list >

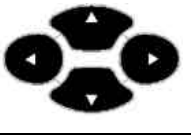
	Shows unread message
	Shows read message
	Shows duplicated read message
	Shows duplicated read message
	Shows sent failed message
	Shows sending message

1.2 Keys Description



Control Buttons

Control Button		Description
	Escape	Press to return to preceding screen without accepting any changes. Also, press to access the initial screen from the main menu screen
	Caps Lock	Press to capitalize for next typed letters. Caps Lock- Pressing button two times activates the Caps lock mode(uppercase letter). To exit, press again.
	Symbol /Space	Space: Press to insert a space in text. Symbol: Pressing ALT key and then pressing Space key Activates Symbols. Fourteen (14) symbols are available at the bottom of the screen.

	Enter	Press to select the highlighted option or to save settings.
	Navigation	Press left, right, up, down buttons to move within a field (Text field, list field, button field)
	Alt	Activates the alt-mode control keys (color-coded amber). The next key pressed activates an Alt-mode function. Pressing Alt key two times activates Alt lock mode. To exit, press again.
	Tab	Moves the bottom menu field. From the text field, press Tab to access the button field menu. To exit, press ESC or up keys
	Delete	Delete the character to the left of the cursor

Space / Symbol Display

Symbols can be used in all edit screens.

For example, symbol box appears when you press space in ALT mode as shown in below sample image.

Here, select the character you want with Left/Right to enter the corresponding characters.

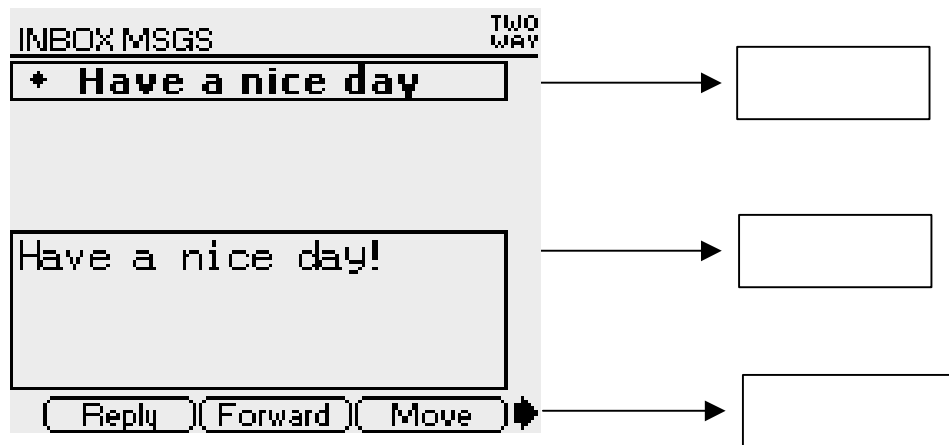


How to use Keys

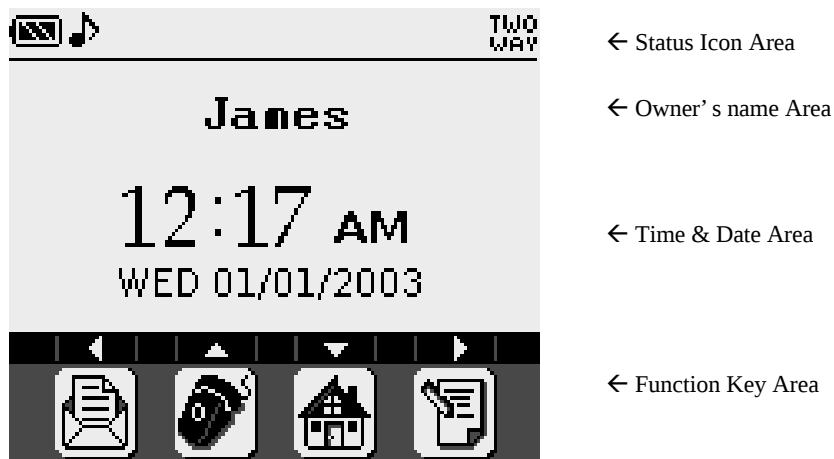
- Press TAB key to move to bottom menu and press ESC or Up key to exit.
- Use Navigation key to move a cursor. (Up, Down, Left, Right)
- Use Up or Down key to move in the upper box of list screen.

And use left or right key to view long text in the lower box.

- Always use Enter key to select.



1.3 Display in the initial screen



Function Key

Key : Go to Read menu directly

Key : Go to Write menu directly

Key : Go to Contact menu directly

Key : Go to Scheduler menu directly

* You can go to main menu by pressing any key with the exception of left, right, up and down keys.

1.4 Display in the Main menu screen



< Main menu icons >

Icon	Description
	Read Message
	Write Message
	Contact
	Scheduler
	Task
	Memo
	Preference
	Calculator

	Game
	Preference
	World Clock
	Alert
	Alarm
	Lock
	Tx Set
	Mymail icon

1.4 LED INDICATOR

Your device LED radiates 3 Color light

- When new message arrived – Yellow Green Color
- During device charging with charger – Red Color
- When device complete charging – Green Color

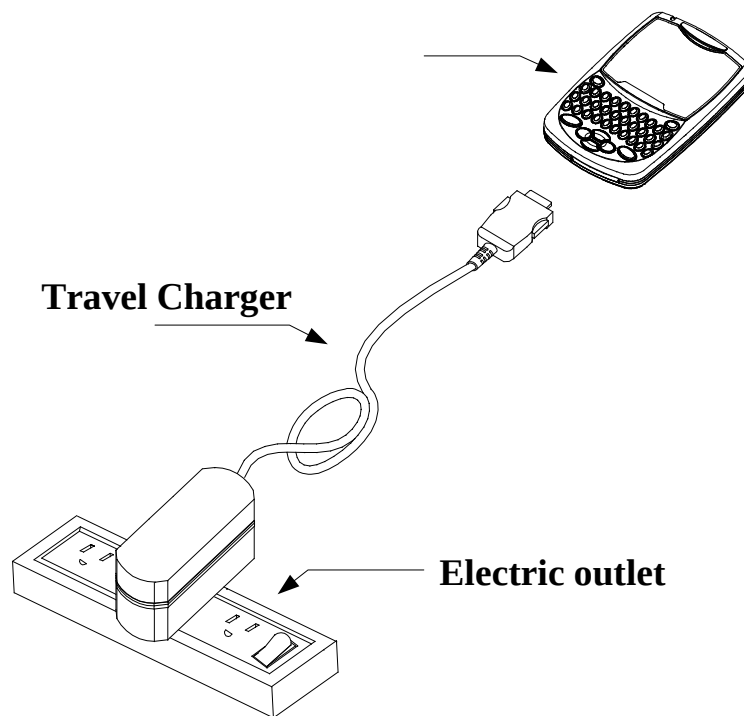
2. Getting Started

2.1 How to switch device on and off

Press Power Button over 3 sec to switch device on

Press Power Button over 4 sec to switch device off

2.2 How to charge battery



- Plug your charger into a main socket first
- Connect the lead from the charger to the bottom of device

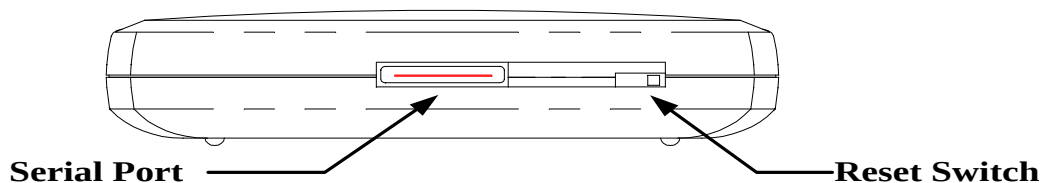
- Battery Charging Indicator

	Charging	Complete Charging
Device LED	Red light	Green light
Charger Indicator	Red light	Green light

- The first charging must be for at least 2 hours in order to achieve optimum performance.
- Normally the device completes to charge the battery in one hour
- After complete charging, the device automatically checks the battery status during the charger connector is installed on the device. Once it detect that the battery level is below full status, it automatically recharge the battery.
- When you unplug your device from its charger, grasp and pull the plug, not the power cord.
- Your device turns off by itself if the battery is able to power no longer sufficiently
- You can send and receive message while charging your device.
- Standby time of battery may be reduced if device is in the No Network Service area

2.3 How to reset device

First, uncover rubber cap on the bottom of device and find reset switch which is colored blue. And then, push reset switch to the right and return to the left again by using pointed tool.



2.4 How to turn on backlight

Press Power Button for 2 sec to turn on backlight (Device must be turned on first)

2.5 How to lock keyboard

If you want to lock all keyboard, pull hold switch to down.

To exit, pull hold switch up.

3. Read Message

This application enables you to read and respond to incoming messages & Info, forward and delete messages. It also allows you to manage inbox, Info, Draft, Personal / Business / Misc group, Outbox, Sent and delete menu.

Figure Read-1 appears when you select Read in the menu screen.

Read menu has below 9 sub menus



< Figure Read-1 >

Move to the message folder you want using Direction key and press Enter key to move to the relevant folder.

When a message arrives

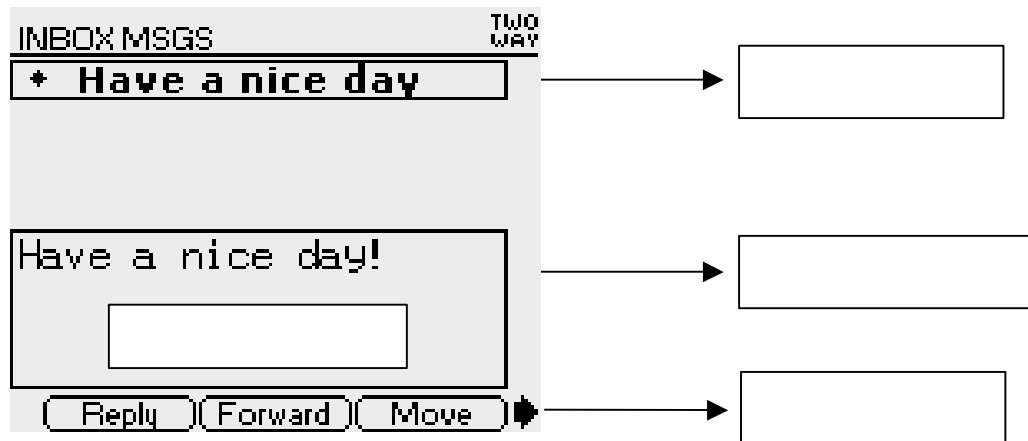
Popup box appears as shown in Figure Recv-1 screen when you receive a message.

If the user wants to read a message at this time, select Yes to directly go to initial screen of Inbox as shown in Figure Inbox-1 screen. If not, select No to go back to previous screen.



<Figure Recv-1>

3.1 Inbox



<Figure Inbox-1: Inbox MSGS>

Inbox folder saves all the messages received so far.

Upper box shows the message list and lower box shows the contents of message.

Up/Down direction key is used to move the message you want to read in the list.

And Left/Right Direction key is used to read the contents if the message is long.

Press Enter key while list is selected to display the screen in Figure Inbox-2.

And press TAB key to move the cursor to the bottom menu. Press Enter key to execute the function.

* Tip: For back tap, press ALT key and then press tap key.



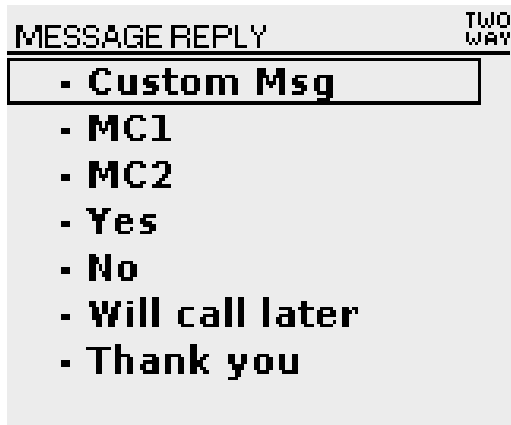
<Figure Inbox-2: Message View>

You can read the message and select the function of bottom menu in Figure Inbox-2 screen.

This bottom menu is same as that of Figure Inbox-1.

Feature of Bottom Menu

(1) Reply



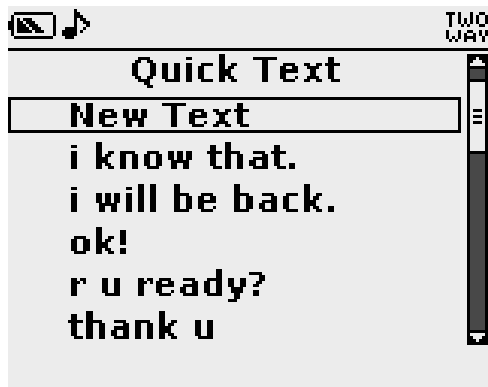
<Figure Reply-1>

If you want to write a new message in Figure Reply-1, select the custom message menu in the upper most menu to display the screen in Figure Reply-2. If you sends multi-choice or canned message, select the message you want and press Enter. Then, popup box "Reply Send" appears shortly and disappears.



<Figure Reply-2>

If you select custom message, write the relevant message in Figure Reply-2 and select Send function in the bottom menu to send the message. If you select Q-text in the bottom menu, the list of text you entered in advance will appear as shown in the screen of Figure Qtext-1.



<Figure Qtext-1>

At this time, select the content you want to type, in order to enter into the main part of editor.
Refer to Qtext menu function of Preference.

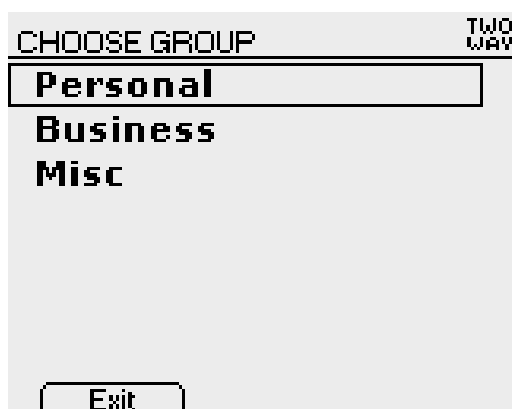
(2) Forward

If you select Forward in the bottom menu, Figure Write-1 appears. From here, it is same as the explanation of Write, and only difference with Forward is whether the contents of previous message exist or not.

(3) Move

If you select this function, the screen of Figure Move-1 appears, where you can move the message you select to the other group.

After selecting the group you want in three groups, press Enter key to move the message. Then, list screen of previous groups appears again.



<Figure Move-1>

(4) Delete

Select this function to display popup box "delete now?" as shown in the Figure Delete-1.

At this time, select "Yes" if you want to delete, and "No" if you don't want to delete. Press Esc key to go back to previous screen.



<Figure Delete-1>

3.2 Info

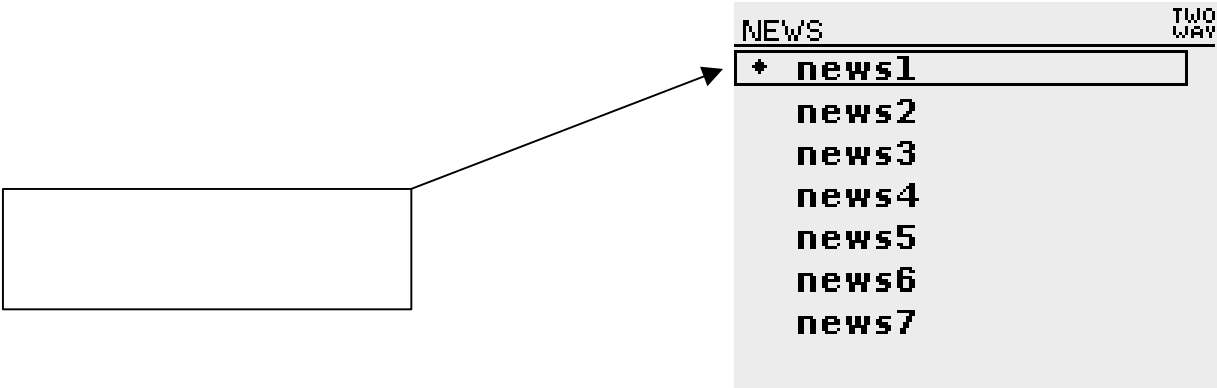
Info folder saves all Info messages from your service provider and display information data.

Select Info icon to display Figure Info-1. Regular information comes in this folder.

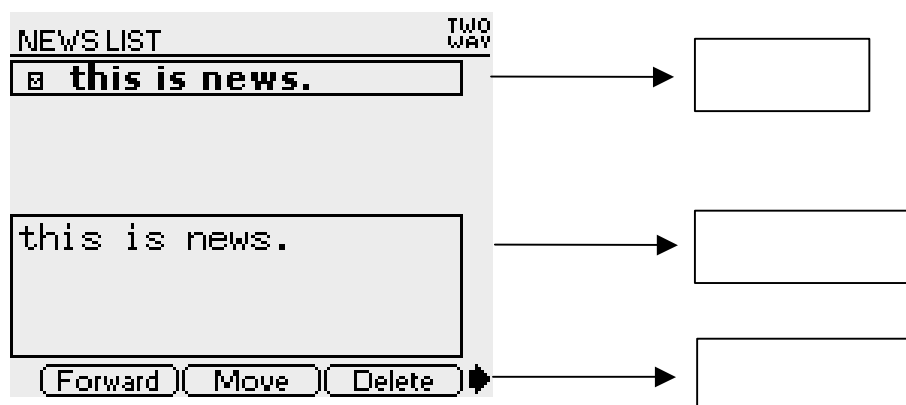
You can save up to 16 kinds of information. If you select Info you want to view, Figure Info-2 screen appears.

Select the message you want in Figure Info-2 screen and press Enter key to display Figure Info-3 screen.

The bottom menu of Figure Info-2 and Figure Info-3 are the same. You can perform the function in the bottom menu or any screen after selecting the message.



<Figure Info-1>



<Figure Info-2>



<Figure Info-3>

3.3 Draft

This folder is for the user to record and temporarily save the message.

If you select save function when you write a message, the message is saved in this folder. Initial screen is as shown in the screen of Figure Draft-1.

If you want to delete the relevant item in Figure Draft-1 screen, select Delete in the bottom menu. At this time, select "YES" when "delete now?" pops up.

If you want to move the relevant item to the message, select Send in the bottom menu.

Then, screen moves to the screen of Figure Write-1 and performs write function.



<Figure Draft-1>

If there is any item you want to modify, press Enter key in the relevant list to display the screen of Figure Draft-2 where you can modify.

If you want to save after modifying in Figure Draft-2 screen, select the Save function in the bottom menu.

If you want to delete, select Delete.

If you want to send it to message, select Send of lower menu of Figure Draft-2 screen.

Then, the screen moves to the screen of Figure Write-1 and performs write function.



<Figure Draft-2>

3.4 Personal / Business / Misc

This folder is for the user to classify received message according to message kind.

Since above 3 groups have same function, the description will focus on one of them, personal group here.

First, select Personal icon to pop up various message list you moved to Personal from various folder. It is as shown in Figure Personal-1.

Since the function of bottom menu in Figure Personal-1 is same as Inbox, refer to how to use Inbox folder described above.



<Figure Personal-1>

3.5 Outbox

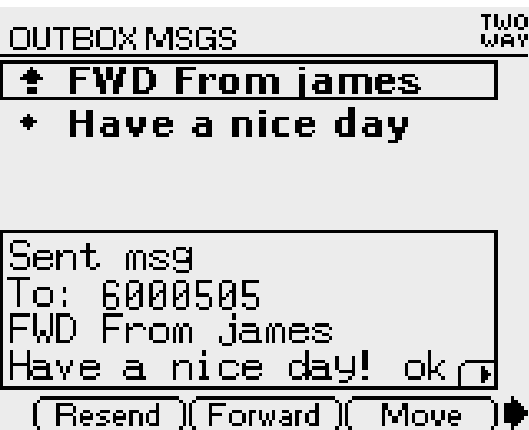
This folder is to show the message currently being sent or the message that was not successfully sent.

When you select, screen of Figure Outbox-1 will appear.

Function of lower menu is similar to that of bottom menu of inbox. Difference is that Reply function is left out, while Resend function is added.

Since Outbox has same function as Inbox, only Resend function will be explained here.

Select Resend in bottom menu to send the selected message again. However, it is not possible to resend the message which is on sending process.



<Figure Outbox-1>

3.6 Sent

This folder is to show the message successfully sent.

Screen of Figure Sent-1 will appear when you select one message among the message list.

Function of bottom menu is same as the bottom menu function of outbox.



<Figure Sent-1>

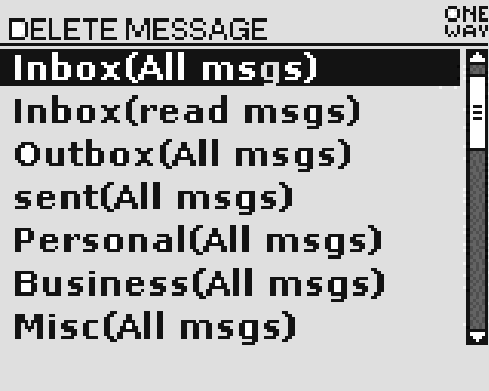
3.7 Delete

This folder is to delete message data and display the screen of Figure Delete-1, Figure Delete -2.

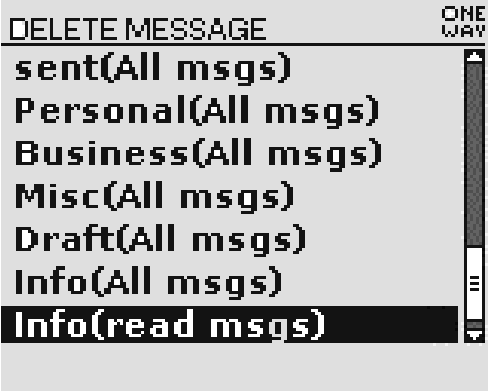
This screen is to delete the storage box in a device all at once.

Select each storage box, and you will see a popup box "Storage box is deleted".

At this time, select Info group to pop up the kinds of Info as shown in Figure Delete-3. Select and delete the kinds of Info you want here, and you will see a popup box "Info Deleted".



<Figure Delete-1>



<Figure Delete-2>



<Figure Delete-3>

4. Write Message

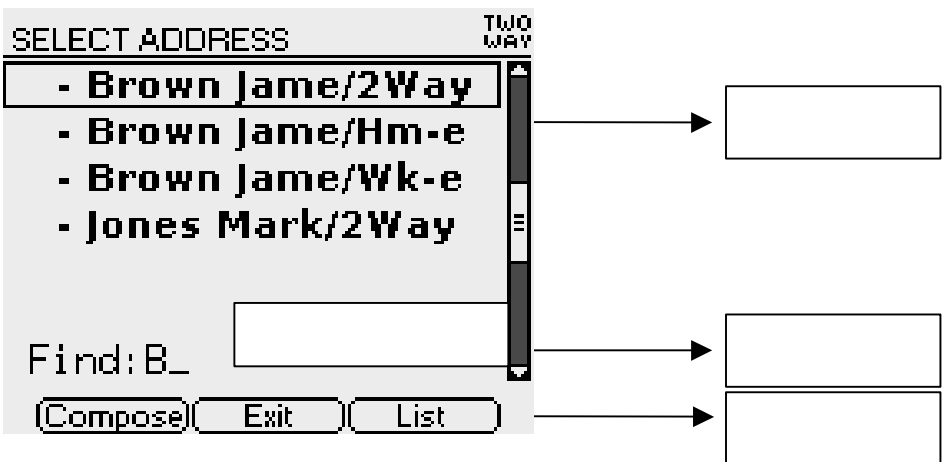
This application enables you to compose messages using the QWERTY keyboard, insert Quick text and other features.

Select Write in menu screen to pop up the screen of Figure Write-1. If there exists in the address book, the recipient you want to send the message to, move to the relevant item and press Enter key to pop up and select the check mark. When you select address item, the screen of Figure Write-2 appears so that you can directly enter the address.

When you press Enter key after entering the address, the cursor moves to Compose in the lower menu. If you want to select address continuously to send it to several recipients, press Up key to select address continuously.

If you want to find the address of recipient whose name you know, type in the alphabet of the name. Then, cursor will move to the relevant recipient.

For example, if you want to find recipient "Park jay" as shown in Figure find-1, type in park jay regardless of lowercase or capital letter. Then, the cursor will move to the relevant user.



<Figure find-1>



<Figure Write-1>



<Figure Write-2>

If you select new address, it will move to the screen of Figure Contact-2.1. Check how to use Contact for reference.

After entering address, select the Save function. Then, it will return to the screen of Figure Write-1 and checkmark appears in the new user data.

Bottom menu description

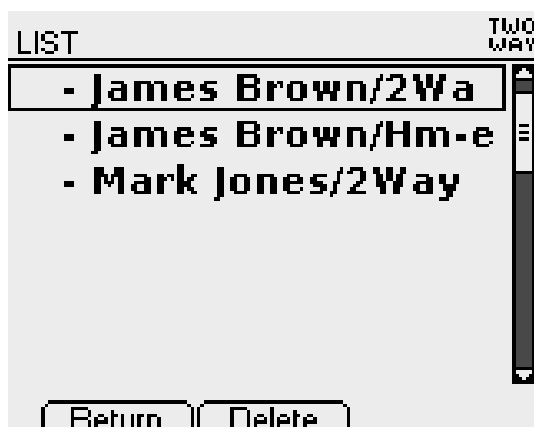
- List

When you select the list command in the bottom menu, the screen of Figure Write-3 appears.

This screen shows the list of the recipient.

- Delete

If you select several recipients and want to view the list, select the list in the lower menu to display the screen in Figure Write-3. You can delete the user you don't want in the screen using the Delete function in the lower menu.



<Figure Write-3>

- Return

Select Return function in the lower menu to display the Figure Write-1 screen again.

- Exit

Return to the previous screen.

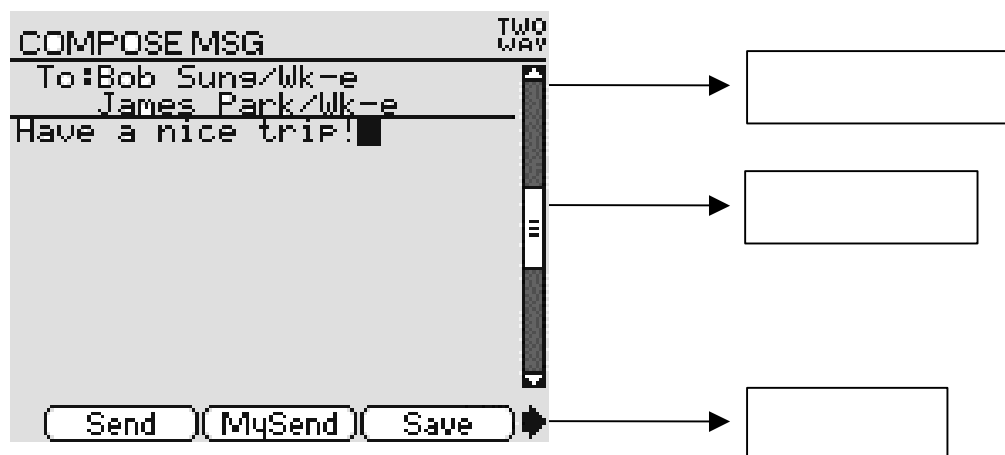
- Compose

If all selections are done, select Compose function in the lower menu to compose a message.

If you select Compose function, the screen of Figure Write-4 appears.

Following is the description about the bottom menu of Figure Write-4.

Functions of bottom menu in Figure Write-4



<Figure Write-4>

- Send

Modify the message as you want in Figure Write-4 screen and select Send in the bottom menu to send a message to the recipient you selected.

- Save

Select the Save function in the lower menu in Figure Write-4 screen to move the message you currently compose to the draft folder and then to the screen of Figure Write-1 again.

- Edit to

Edit to function enables to go back to the screen of Figure Write-1 screen and to add the user.

- Popup box "Discard changes?" appears if there is a message you currently compose. If you select Yes, it goes back to the menu screen (Figure menu-1).

If you select No, it goes back to the screen you are working on.

- Qtext

Q-text function in the lower menu of Figure Write-4 screen was already explained in Figure Qtext-1.

- replies

If you select Replies function in the lower menu of Figure Write-4 screen, screen of Figure Write-5 appears.

In this screen, you can add multi-choice function. You can select one of several items when you send reply to recipient.

You can enter up to 16 items. If you want to use this function, enter the data and select Save in the lower menu to use this function. Then, the screen moves to the screen where you can compose a message.

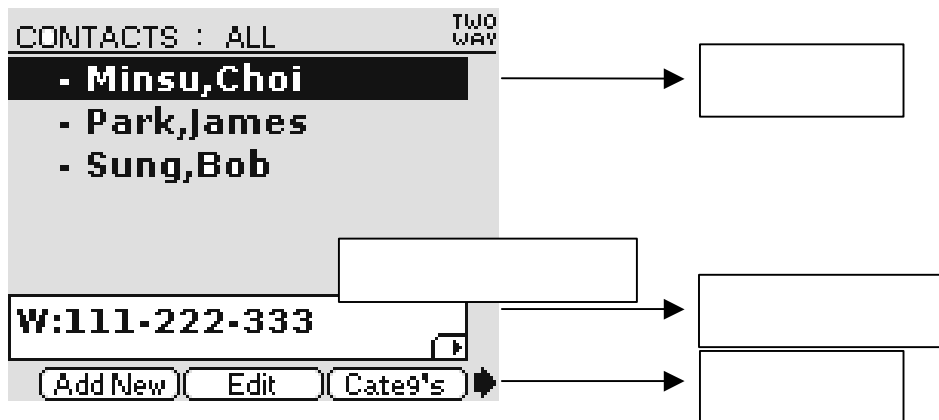
REPLIES	TWO WAY
1.Reply	
ok	
2.Reply	
no	
3.Reply	
thank u	
4.Reply	
Save Cancel	

<Figure Write-5>

5. Contact

This application enables you to store the address information of each person or group you might want to contact. You can include Name, email address, work & home phone number and even address for each contact entry.

5.1 Contact List (Screen showing the list of entered address)



<Figure Contact-1>

Contact List shows saved contact list and Contact preview shows the contents of selected contact list.

If there is any cursor in the List, use UP/DOWN arrow to move it to the location you want. In this case, details are displayed in the bottom Preview Box.

If there are lots of contents in Preview Box, small triangle() will be displayed in the lower part of Box.

You can check the remaining contents in Preview Box using Left/Right arrow.

If you press Enter, you can move to Contact View screen (Figure Contact-3) and check the overall contents. Enter Tab or Left/Right arrow Key while cursor is in the List, to move to the bottom menu.



<Figure Contact-1.2>

Bottom menu description

Selected menu is marked black when it is moved to the lower menu.

Use Tab Key to move to the bottom menu you want.

You can execute the selected menu using Enter Key. Use ESC Key to exit the lower menu.

Add New: Move to Contact New screen (Figure Contact-2.1) where you can enter new address.

Edit: Move to Contact Edit screen (Figure Contact-4.1) where you can edit the existing address.

Categ's : Move to screen where you can selectively view specific category only (Figure Contact-5.1, Contact-5.2, Contact-5.3).

Delete: Delete the address selected in the List.

Show as : It moves to 5.6 Name Type Screen.

5.2 New Contact (Screen for Entering New Address)

Max available character for each line is as below :

FIRST : 12	M Tel : 17	W adr : 98
LAST : 14	Fax : 17	W City : 20
WK mail : 38	Cmpny: 18	wSt/Zip : 12
Wireless:67	Title : 24	H adr : 98
Wk Tel : 17	Notes: 90	H City: 20
Hm Tel : 17		H St/Zip: 12

NEW CONTACT TWO WAY

First:

Last:

Wk mail:

Hm mail:

Wireless:

Wk Tel:

Hm Tel:

Next Save Cancel

<Figure Contact-2.1>

NEW CONTACT TWO WAY

M Tel:

Fax:

Cmpny:

Title:

Notes:

Next Prev Save →

<Figure Contact-2.2>

NEW CONTACT TWO WAY

W adr:

W City:

W St/Zip:

H adr:

H City:

H St/Zip:

Save Prev Cancel

<Figure Contact-2.3>

New Contact is to input new contact contents and if you press Add new menu in the bottom menu, this screen will displayed.

Use Up/Down arrow or Enter Key to move to the item you want and enter using the character and number Key. In case of telephone number, you can enter number, #, (,), x, - only.

If the cursor is placed on the last item, press Next in the bottom menu to move to the screen where you can enter the address book (Figure Contact-2.2, Figure Contact-2.3).

Use Left/Right arrow or Tab Key to move to the menu you want and use Enter key to execute the selected menu.

Use ESC Key to exit the lower menu.

Bottom menu description

Next: Move to the next screen where you can enter address book

Prev: Move to the previous screen where you can enter address book

Save: Save the currently entered contents in the address book

Cancel: Ignore the currently entered contents and go back to the Previous screen. (Address book list)

5.3 Contact View (Screen for Viewing Entered Address)

CONTACT VIEW TWO WAY

Jones Mark

M: 11-222-3333

Wireless: 11223344

Edit (Snd MSG)

<Figure Contact-3>

Contact view shows full contents of each contact person. If there are lots of contents in View Box, use Up/Down arrow to scroll the remaining contents in the box. If following list exists in the address, small

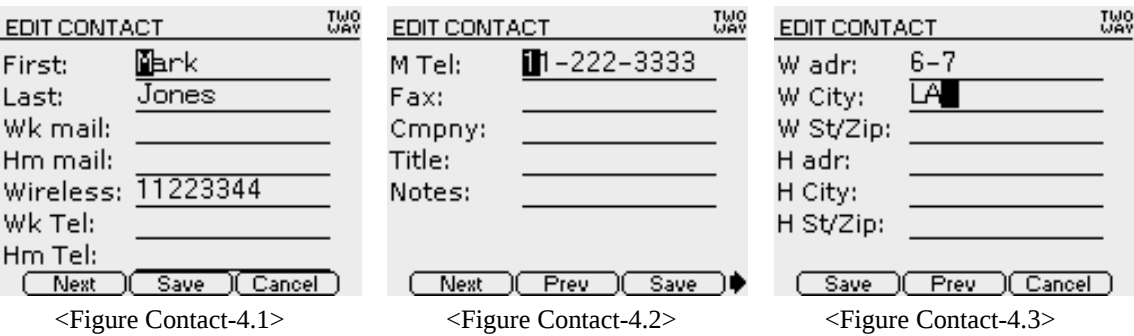
triangle () will be displayed in the lower part of Box. Use Left/Right arrow to move to the following list. Press Tab Key to move to the lower menu.

Bottom menu description

Edit: Move to the Contact Edit screen (Figure Contact-4.1) where you can edit the existing address.

Snd Msg: Move to Write screen (Figure Write-1)

5.4 Edit Contact (Screen for Editing Entered Address)



Edit Contact is for editing entered address.

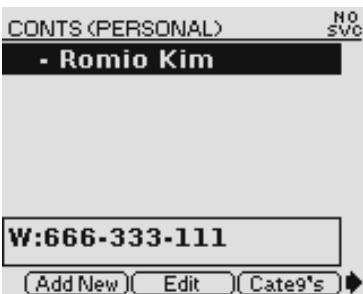
Use Up/Down arrow or Enter Key to move to the item you want and enter using character and number keys.

In case of phone number, you can enter number, #, (,), x, - only.

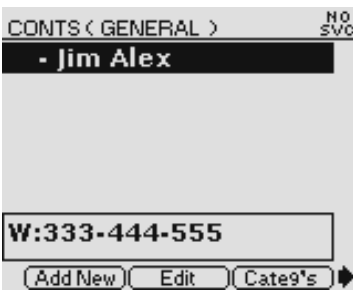
If the cursor is placed on the last item, press Next in the bottom menu to move to the screen where you can enter the address book (Figure Contact-4.2, Figure Contact-4.3).

Bottom menu description is same as bottom menu description of New Contact.

5.5 Contact Group (Screen for Listing Addresses by Group)



<Figure Contact – 5.1>



<Figure Contact – 5.2>



<Figure Contact – 5.3>

Contact group is to show classified contact list by group name – Personal / Business / General
Key operation and bottom menu description is same as Contact list.

5.6 Name Type

If Contact or Write icon is selected in the menu screen, the address you entered appears. It is used to sort the name in the order.



<Figure Contact -6>

Move the cursor to the item you want as shown in Figure Contact -6, and press Enter key to select and press Enter key again to save. You may press Esc key to cancel.

6. Scheduler

This application enables you to manage & record your schedule, view calendar and alarm function for each saved schedule event.

6.1 Calendar (Screen for showing whether there exist Schedule and Task)



<Figure Scheduler – 1>

Use Up/Down, Left/Right arrow to move the box in the screen and to select the specific date.

If there exist schedule or task previously entered, the date is underlined.

If you press Enter key after moving the box to the underlined date, it moves to View Day screen (Figure Scheduler - 3). Press Tab Key to move to the bottom menu.

Bottom menu description

SchEvt: Move to the screen (Figure Scheduler – 2) where you can enter new schedule.

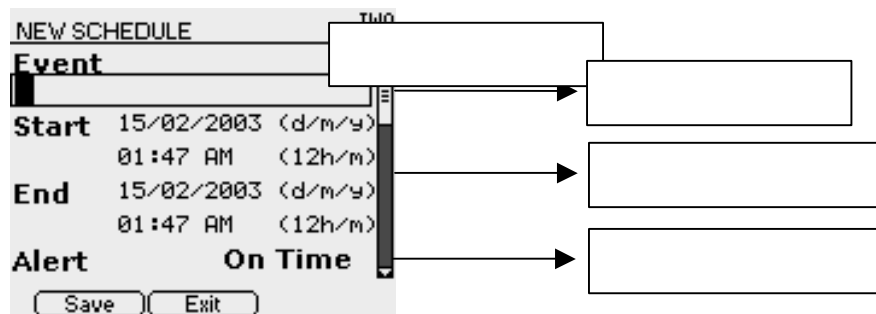
PrevMo: Move to the previous month.

NextMo: Move to the next month.

Exit: Move to the previous screen.

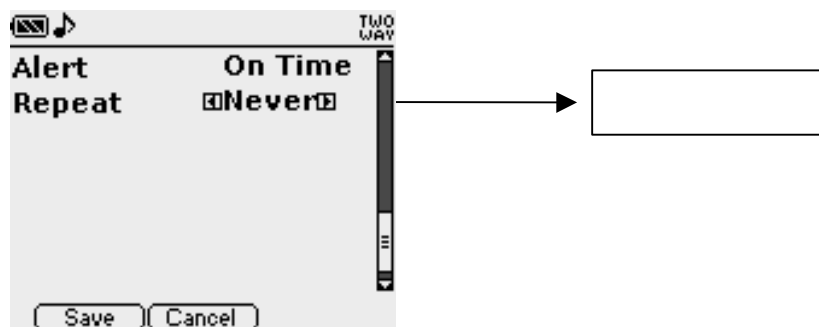
6.2 New Schedule (Screen for Entering New Schedule)

If you press SchEvt in the bottom menu to input new schedule event, Figure Scheduler 2 screen will be displayed.



The 'NEW SCHEDULE' screen features a title bar with a music icon and 'TWO WAY' text. The main area contains labels for 'Event', 'Start', 'End', and 'Alert'. The 'Event' field is a text input box. The 'Start' and 'End' fields each consist of a date input (format: dd/mm/yyyy) and a time input (format: hh:mm AM/PM). The 'Alert' field has a dropdown menu currently set to 'On Time'. At the bottom are 'Save' and 'Exit' buttons. Arrows point from each of the four input fields to separate empty rectangular boxes on the right.

<Figure Scheduler – 2>



The 'Alert Repeat' screen has a title bar with a music icon and 'TWO WAY' text. It contains two sections: 'Alert' with a dropdown menu set to 'On Time', and 'Repeat' with a checkbox labeled 'Never' that is currently checked. At the bottom are 'Save' and 'Cancel' buttons. An arrow points from the 'Repeat' checkbox area to an empty rectangular box on the right.

<Figure Scheduler – 3>

Input Schedule title on event entry area and then set the start date & time and end date & time.

You can enter characters, numbers and symbols in Text field and number in date field.

If it is 12hour mode, AM/PM appears. Enter a or A to change to AM, and enter p or P to change to PM.

Alert feature enables you to set the time when alarm go off to inform you the event.

You can set the alert using left and right button   and alert time is as below

1. None
2. On time
3. Before 5 min
4. Before 10 min
5. Before 20 min
6. Before 30 min

7. Before 1 hr
8. Before 2 hr
9. Before 4 hr
10. Before 12 hr
11. Before 1 day
12. Before 7 day

Repeat is to set the alarm repeatedly and you can set repeat mode using left and right key



Repeat mode has 5 options – Never / Daily / Weekly / Monthly / Yearly.

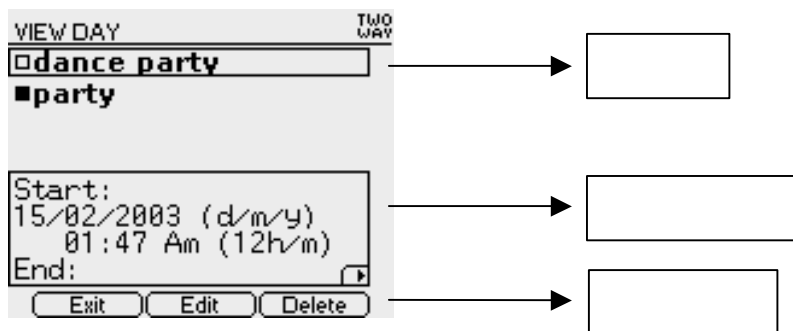
Use Esc Key to cancel the contents modified. Enter Tab Key to move to the bottom menu.

Bottom menu description

Save: Save the contents you entered.

Exit: Move to the previous screen.

6.3 View Day (Screen for Listing and Previewing Schedule and Task set up at the Selected Date)



<Figure Scheduler – 4>

If cursor is located in the list, use Up/Down arrow to move to the location you want. In this case, details will be displayed in the lower Preview Box.

If there are lots of contents in Preview Box, small triangle() is displayed in the lower part of Box. Use Left/Right arrow to check the remaining contents in Preview Box .

If you press Enter, it moves to Schedule Modification Screen (Figure Scheduler - 4) in case of Screen, and Task Modification Screen (Figure Task-2) in case of Task.

While a cursor is located in the List, enter Tab Key to move to the lower menu.

Bottom menu description

Exit: Move to the previous screen.

Edit: Move to the screen for modifying the selected item.

Delete: Delete the selected item.

6.4 Edit Schedule (Screen for Modifying selected Schedule)

EDIT SCHEDULE

TWO WAY

Event

date

Start

15/02/2003 (d/m/y)

12:02 AM (12h/m)

End

15/02/2003 (d/m/y)

12:02 AM (12h/m)

Alert

On Time

Save

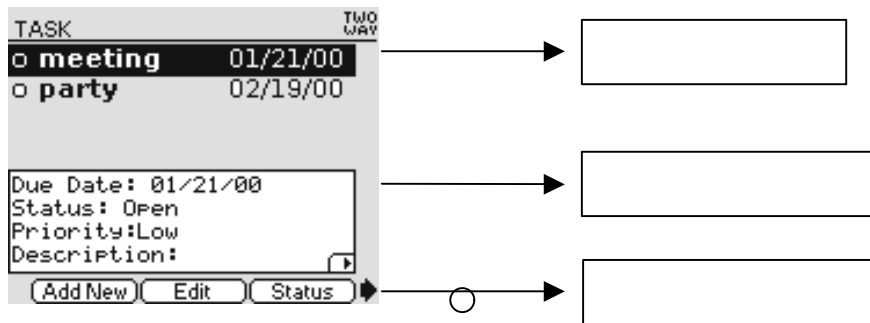
Cancel

<Figure Scheduler – 5>

- Bottom menu description
- Save: Save the contents you modified
- Cancel: Move to the previous screen.

7. Task

This application enables you to manage & record your to do list. It shows due date, status and priority of each to do list



<Figure Task – 1>

If cursor is located in the list, use Up/Down arrow to move to the location you want. In this case, details will be displayed in the lower Preview Box.

If status is open, it will be marked as ☐ and if close, as ☐ as shown in Figure Task-1.

If there are lots of contents in Preview Box, small triangle() is displayed in the lower part of Box. Use Left/Right arrow to check the remaining contents in Preview Box.

Press Enter to move to Task View screen (Figure Task - 3) and to check the overall contents.

While cursor is located in the List, Enter Tab Key to move to the bottom menu.

Bottom menu description

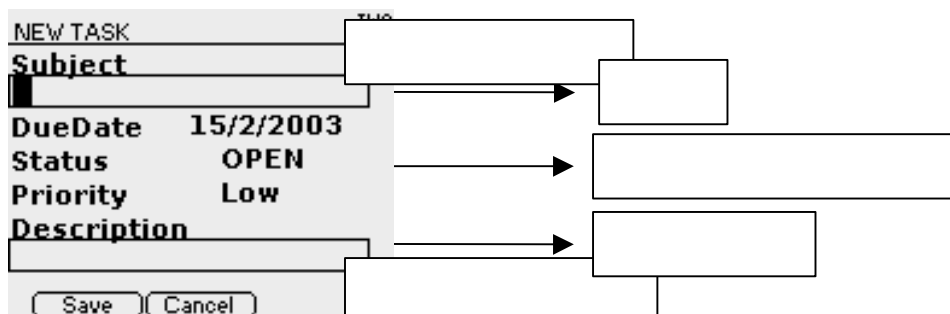
Add New: Move to the screen (Figure Task – 2) where you can enter new Task.

Edit: Move to the screen (Figure Task – 3) where you can modify the selected task.

Status: Change status of task selected.

Delete: Delete the selected task.

7.1 New Task (Screen for Entering New Task)



<Figure Task – 2>

Input Task title on event subject area and then set the due date, Status, Priority of task and description of task.

You can enter characters, numbers and symbols in Text field and number in date field.

Use Up/Down Key to move to the specific item.

You can use Left/Right Key   to set status and priority.

Status has 2 options – Open / Close and Priority has 3 options – Low / Medium / High

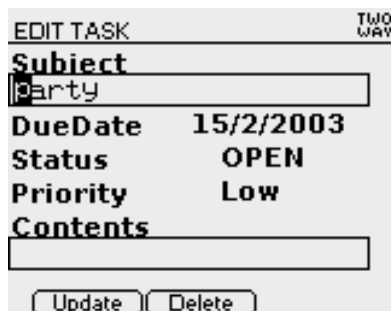
Enter Tab Key to move to the bottom menu.

Bottom menu description

Save: Save the contents you entered

Cancel: Move to the previous screen.

7.2 Edit Task (Screen for Modifying Contents of Selected Task)



<Figure Task – 3>

Use Up/Down Key to move to the specific item.

You can enter characters, numbers and symbols in the Text field.

You can use Left/Right Key to select in case of Select Menu.

Enter Tab Key to move to the lower menu.

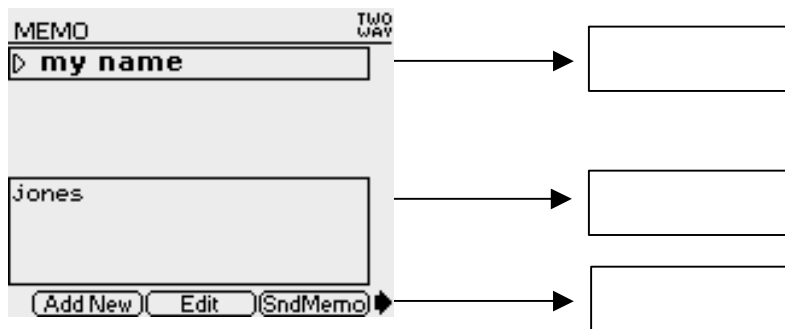
Bottom menu description

Update: Save the modified contents.

Delete: Delete the current Task.

8. Memo

This application enables you to record your memo and you can also send your saved memo as message to others.



<Figure Memo – 1>

If cursor is located in the list, use Up/Down arrow to move to the location you want. In this case, details will be displayed in the lower Preview Box.

If there are lots of contents in Preview Box, small triangle() is displayed in the lower part of Box. Use Left/Right arrow to check the remaining contents in Preview Box.

Press Enter to move to Memo View screen (Figure Memo - 3) where you can check the overall contents.

While a cursor is located in the list, enter Tab Key to move to the lower menu.

Bottom menu description

Add New: Move to the screen (Figure Memo – 2) where you can enter new memo.

Edit: Move to the screen (Figure Memo – 3) where you can modify the selected Memo.

SndMemo: Move to the screen (Figure Write-1) where you can transmit the contents of selected memo as a message and select the address you want.

Delete: Delete the selected memo

8.1 New Memo (Screen for Entering New Memo)

The diagram shows a screen titled 'NEW MEMO' with a 'TWO WAY' indicator. It contains two text input fields: 'Subject' and 'Notes'. Arrows point from these fields to external boxes. At the bottom, there are 'Save' and 'Cancel' buttons, with an arrow pointing from the 'Cancel' button to an external box.

<Figure Memo – 2>

Use Up/Down Key to move to the specific item.

You can enter characters, numbers and symbols in the Text field.

Enter Tab Key to move to the lower menu.

Bottom menu description

Save: Save the contents you entered

Cancel: Move to the previous screen.

8.1 Edit Memo (Screen for Modifying Contents of Selected Memo)

The diagram shows a screen titled 'EDIT MEMO' with a 'TWO WAY' indicator. It contains two text input fields: 'Subject' (with the text 'my name') and 'Notes' (with the text 'jones'). Arrows point from these fields to external boxes. At the bottom, there are 'Update' and 'Delete' buttons.

<Figure Memo – 3>

Use Up/Down Key to move to the specific item.

You can enter characters, numbers and symbols in the Text field.

Enter Tab Key to move to the lower menu.

Bottom menu description

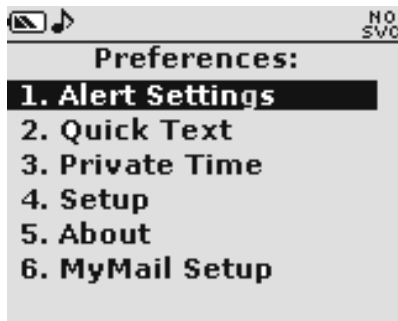
Update: Save the modified contents.

Delete: Delete the current Memo.

9. Preference

This application provides various features that allow you to select various options and to execute several functions.

Select Prefs in new screen to display Figure Prefs-1.



<Figure Prefs – 1>

9.1 Alert Settings

Change Sound and Alert in 1. Alert Settings.



<Figure Prefs – 2>

Use Up/Down Key to move to the specific item.

You can use Left/Right Key to select Alert field value you want.

Enter Up/Down Key to move the other menu.

After determining the strength with Left/Right key in Figure Prefs-5, press Enter to save or press Esc to cancel.

1. Volume

Select 1. Volume when you adjust the volume in Figure Prefs-2.

You can select Low/Middle/High volume with Left/Right key   in volume field,

2. Inbox, Info, Sch & Alm

You can select the preferable alert type using Left/Right key for Inbox, Info, Sch & Alm. These Alert notice you when there is new message in inbox or new information in Info. or when it is time to be alerted. You can listen the sound if you enter the Space key after selecting the Alert type you want in Figure Prefs-2 with Left/rRight Key.

You can listen to the sound when you enter the Space key after selecting Alert you want in Figure Prefs-2 with Left/Right key

3. Reminder

If you want to remind the user to check the message in case when the user doesn't read the mail after it arrives, use 3. Reminder Alert in Figure Prefs-2.

In Figure Prefs-2, select OFF/One Beep /Two Beep with Left/Right key in Reminder field,

4. R Interval

You can set the alert interval using Left/Right key   and alert interval is as below

1. 1 min
2. 2 min
3. 5 min
4. 10 min

5. R Repeat

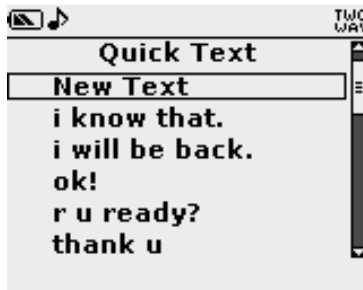
R Repeat is to set the alert repeatedly and you can set repeat mode using Left/Right key

 .

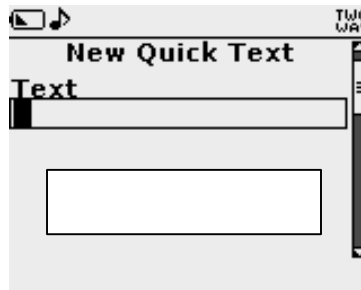
Repeat mode has 4 options – 1 / 2 / 5 / 10 times.

9.2 Quick Text

Using Quick Text, you can easily put the words or shot message which are frequently used as shown in 2. Quick Text of Figure Prefs-3..



<Figure Prefs-3>



<Figure Prefs-4>



<Figure Prefs-5>

* New Quick Text

If you want to register new Quick text, select New Text field by pressing Enter key and it display as Figure Prefs-4. Enter the text you want and press Enter key to register new text.

* Modify Quick Text

On the other hand, as shown in Figure Prefs-3, you can modify the registered text in the screen. Select the Quick Text you want to modify and press Enter key as shown in in Figure Prefs-5. After modifying the text you can move to the lower menu with Tab key to execute Update/Delete.

9.3 Private Time

If you want to stop the function that alerts whether the mail or Info are received for specific period of time, select 3. Private Time in Figure Prefs-1 to display the screen as shown in Figure Prefs-6.



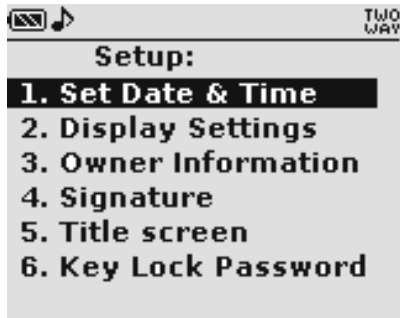
<Figure Prefs-6>

If you enter the number you want in Start/End field, it will display AM/PM if Time is 12 hour mode. When a cursor is located in AM/PM, press A key to become AM, and press P key to become PM. Select

ON/OFF in Set field with Left/Right key. Press Enter key when it is ON to activate private time function.
Mute icon will appear when it becomes the private time you set.

9.4 Setup

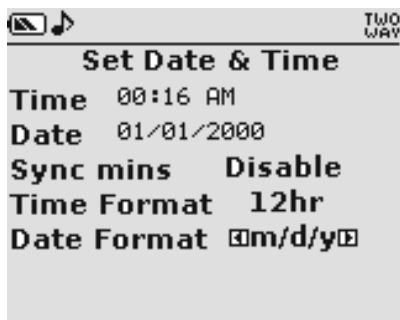
You can set up H200 in this menu.



<Figure Prefs-7>

9.4.1 Set Date & Time

If you want to set the current time of Device, select 1. Set Date & Time in Figure Prefs-7 to display Figure Prefs-8.



<Figure Prefs-8>

If you want to set the time information transferred from the station as the time of your device, select Sync mins field in Figure prefs-8 and select Enable. Move the cursor to the place you want with Up/Down and press Left/Right key to select and press Enter key to save.

* Set Time

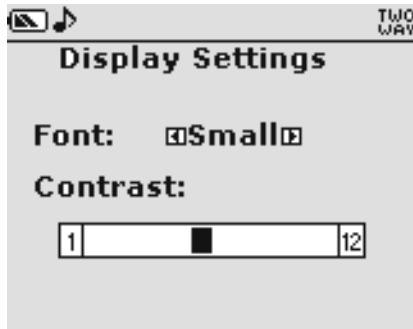
Select Time field if you want to directly enter the current time by yourself. As shown in Figure Prefs-8, enter the value you want in Date and Time field. If Time is 12 hour mode, AM/PM appears. When a

cursor is placed on AM/PM, press A key to become AM, and press P key to become PM. Decide the value in Sync mins/Date Format/Time Format field with Left/Right key.

Then, press Enter key to save the changed value and check the changed current time in the standby screen.

9.4.2 Display Settings

Select 2. Display Settings of Figure Prefs-7 to change the size of Font or LCD Contrast.



<Figure Prefs-9>

*Font

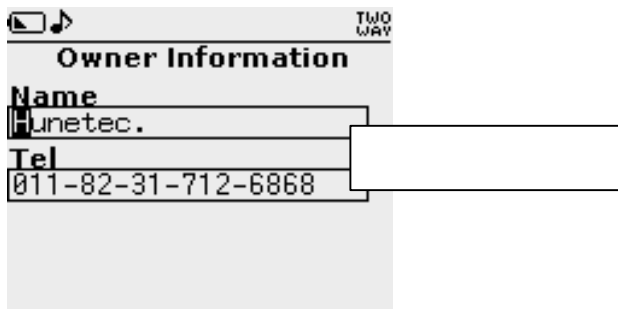
Select the size of font you want with Left/Right Key and press Enter to save. You may press Esc to cancel.

*Contrast

It is used to adjust LCD Contrast. Adjust contrast with Left/Right key as shown in Figure Prefs-9 and press Enter key to set the value. You may press Esc to cancel.

9.4.3 Owner Information

It is to save simple information of Device user such as name and phone number. As shown in Figure Prefs-10, enter the text you want and press Enter key to save.

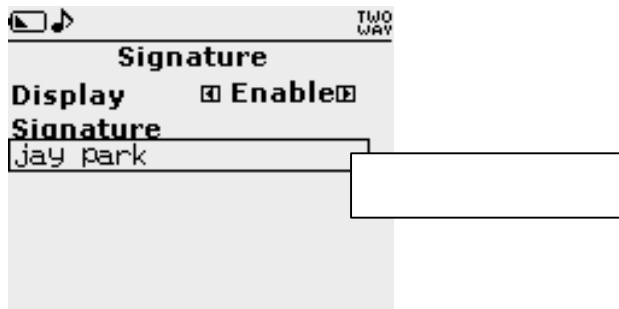


<Figure Prefs-10>

9.4.4 Signature

This function is used to attach the signature at the end of mail you transmit. Press 4.Signature in Figure Prefs-7 to display Figure Prefs-11.

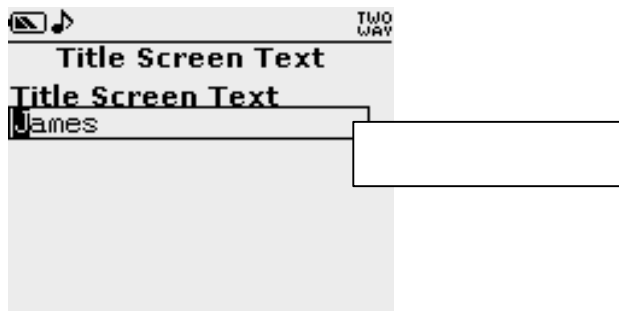
Select whether to Enable/Disable Display field with Left/Right key and enter the text you want in Signature field. Press Enter key to save.



<Figure Prefs-22>

9.4.5 Title screen

You can put the Title screen you want for standby screen. Select 5.Title Screen Text in Figure Prefs-7 and press Enter.

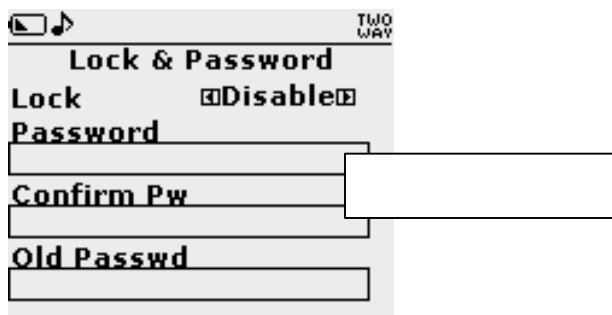


<Figure Prefs-12>

As shown in Figure Prefs-12, type in the text you want and press Enter key to save. You may press Esc to cancel.

9.4.6 Key Lock Password

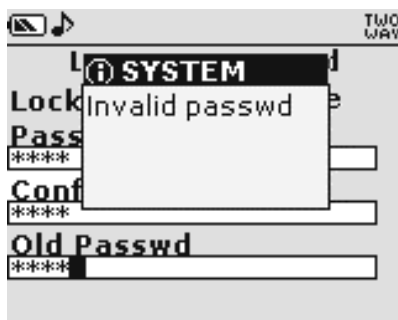
It is used when you want to lock the device. Figure Prefs-13 appears when you select 6. Key Lock Password in Figure Prefs-7.



<Figure Prefs-13>

In Figure Prefs-13, select Enable/Disable in lock field with Left/Right key and enter the 4 digit same letters both in Password and Confirm Password field. If you don't enter previous password exactly in Old Password field, you'll see the screen of Figure Prefs-14.

The Password to be set from the factory is "0000".

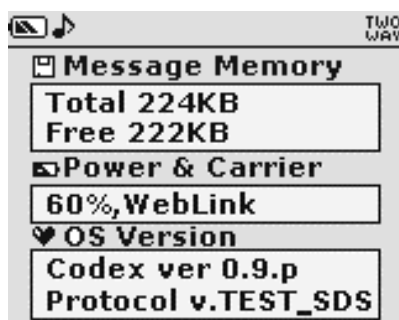


<Figure Prefs-14>

9.5 About

This application enables you to check the status of device such as current memory consumption, battery level, carrier name and OS version

Select About in the preferences screen to display Figure Prefs -15.



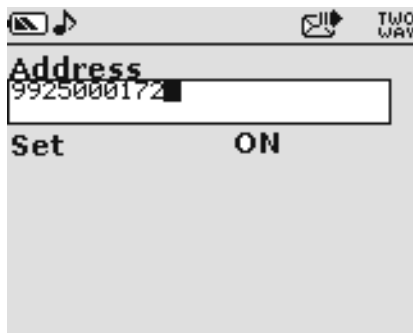
<Figure Prefs -15>

Current memory consumption, Battery level, carrier and S/W Version appear.

Press Esc key to exit.

9.6 Mymail Setup

It is used when you want to setup the Mymail communication. Select Mymail Setup to display Figure Prefs -16.



<Figure Prefs -16>

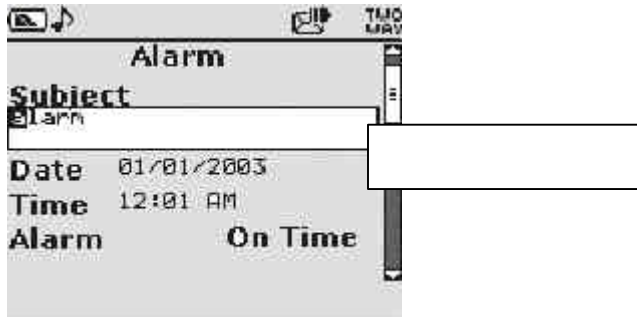
Input your Mymail address on address area and then set ON/OFF with Left/Right Key.

You can enter characters, numbers and symbols in address field.

Select ON in set field if you want to use the Mymail communication.

10. Alarm

You can set the alarm date & time with this application.



<Figure Alarm-1>

Input alarm title on subject area and then set date & time.

You can enter characters, numbers and symbols in Text field and number in date field.

If it is 12hour mode, AM/PM appears. Enter a or A to change to AM, and enter p or P to change to PM.

Alarm enables you to set the time when alarm goes off.

You can set the alarm using Left/Right key   and alarm can be set as below

None

On time

Before 30 min

Before 1 hr

Before 2 hr

Before 4 hr

Before 12 hr

Before 1 day

Before 7 day

Repeat is to set the alarm repeatedly and you can set repeat mode using left and right key



Repeat mode has 5 options – Never / Daily / Weekly / Monthly / Yearly.

Pop-up box as figure Alarm -2 will be displayed with Alarm. You can stop Alarm pressing Power button or ESC key.

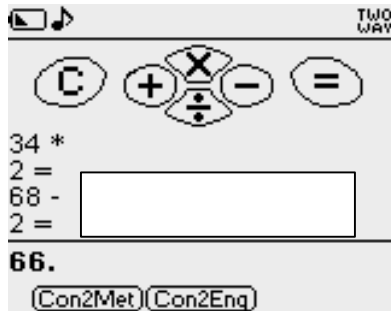


<Figure Alarm -2>

11. Calculator

This application enables you to calculate using navigation keys

Select Calc in the menu screen to display Figure Calc-1.



<Figure Calc-1>

1. Direction (Up/Down, Left/Right) key, Space, Enter, Esc, Del and number key from 1~0 are used.
2. Press the number key you want and direction keys displaying addition, subtraction, multiplication and division and repeat the process as shown above to press the number key. Press Enter key to view the result.
3. If you want to calculate new formula again, press Space key and follow the process in number 3 above.
4. You can change the value by changing the unit of length. When you use it, enter the number you want first and then Tab key. Select Con2ENG if you want English weights and measures, and Con2Met if you want meter system (international unit) to display the converted value. Then, press Esc to go back to Figure Calc-1.

12. Lock

After Lock field is selected to Enable setting in Figure Prefs-13, If select Lock Menu, you'll see the screen of Figure Lock-1.



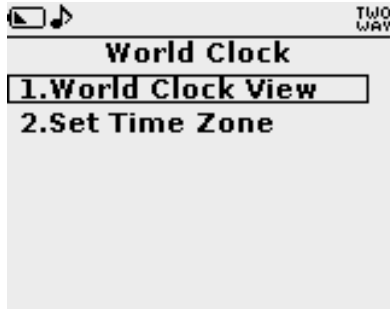
<Figure Lock-1>

To release lock in Figure Lock-1, enter 4 digit password you entered in Password field in Figure Prefs-13. Then, the lock will be released.

13. World Clock

This application enables you to check world clock with world map

Select W/Clock in the menu screen to display Figure W/Clock-1



<Figure W/Clock-1>.

1. World Clock View

Local time is displayed. Press left & right keys to move area and press Esc key to exit.



<Figure W/Clock-2>.

2. Set Time Zone

Move the cursor to 2 at Figure W/Clock-1 and press Enter to display Figure W/Clock-3.

Then, the user can select his own Time Zone with Direction key, and press Enter key to display the screen where Time zone is selected. Press Enter again to save. When you press Esc key, it will ask whether to cancel.

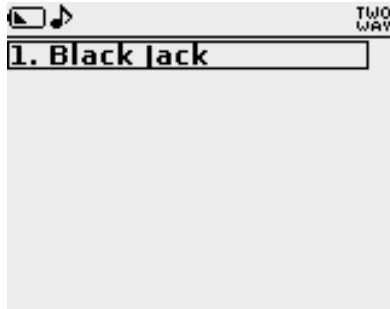


<Figure W/Clock-3>.

14. Game

This application enables you to play BLACK JACK game

Select Game in the menu screen to display Figure Game-1.



<Figure Game-1>

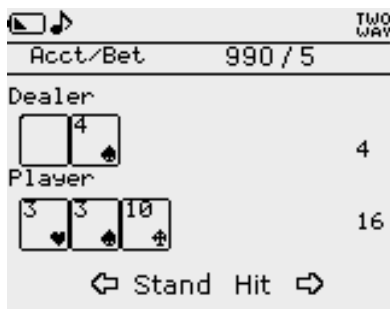
Press Enter here to display Figure Game-2.



<Figure Game-2>

* Betting

Change the Betting Money to the number you want using Up/Down key and press Enter Key to display Figure game-3.

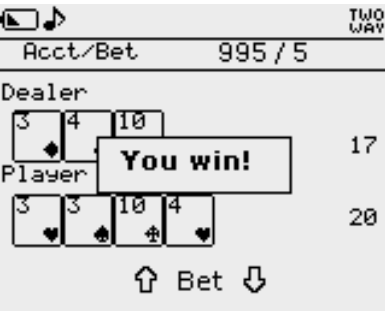


<Figure Game-3>

* Game Main

When Black Jack game starts, select whether to receive the card or not. If the game is over, the result is displayed as shown in Figure Game-4. At this time, you can change the Betting Money with Up/Down direction key and press Enter key to start new game.

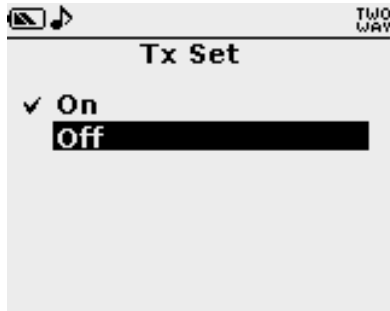
If you press Esc key while you are playing, it will exit to Figure Game-1.



<Figure Game-4>

15. Tx Set

If the user wants to restrict the transmission at his discretion, select Tx Set and press Enter.



<Figure TxSet-1>

Here, move the cursor to the place you want, and press Enter to select. Press Enter again to save. You may cancel it by pressing Esc. After you select Off and save it, tx/off will appear in the icon screen.

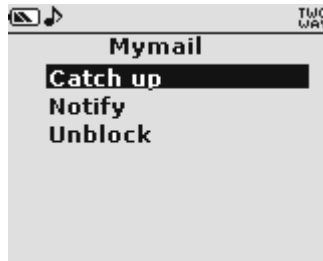
16. Alert

You can change the type of Alert pressing Enter Key,. Alert type status selected is displayed by Alert Type Satus Icon (Silent, Sound and Vibrator) at Status Icon Area.

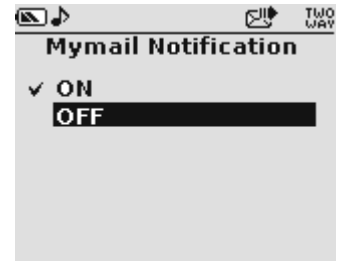
17. Mymail



<Figure Mymail-1>



<Figure Mymail-2>



<Figure Mymail-3>

18. H200 PC Link Program

1. Introducing H200 PC Link

- You can transfer and save device data to your PC via data cable.
- You can transfer and save following device data: Message (Inbox, Outbox, Sent, Personal, Business, Miscellaneous) Data, Contact Data, Scheduler Data and Task Data to your PC
- You can delete saved Data (Message and Contact Data) on your PC
- You can edit and input new Contact Data on your PC and transfer edited contact data from PC to device
- You can restore saved Data

2. Install and Uninstall

2.1 System Requirements

In order to connect properly with your device, your PC must meet the following minimum requirements

- Windows 98, Windows NT 4.0, Windows 2000 or Windows XP must already be installed on your PC
- 2MB of available storage on computer's hard drive
- 16MB RAM

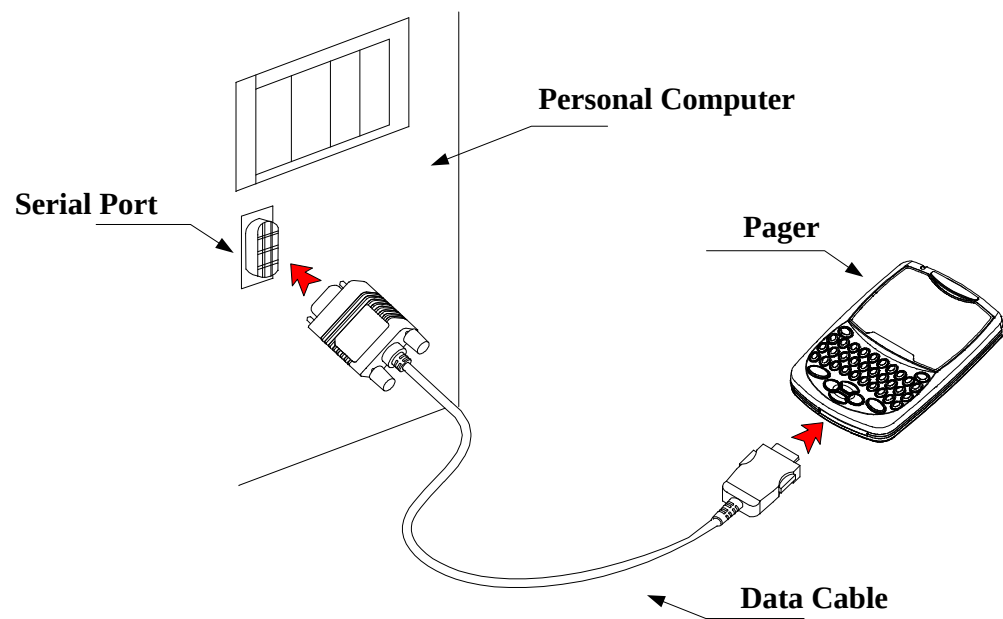
2.2 Install

1. Double Click "H200 link setup. exe" file and then follow instruction.
2. When setup is completed, click OK at each information window
3. Double Click H200 Link Program to start

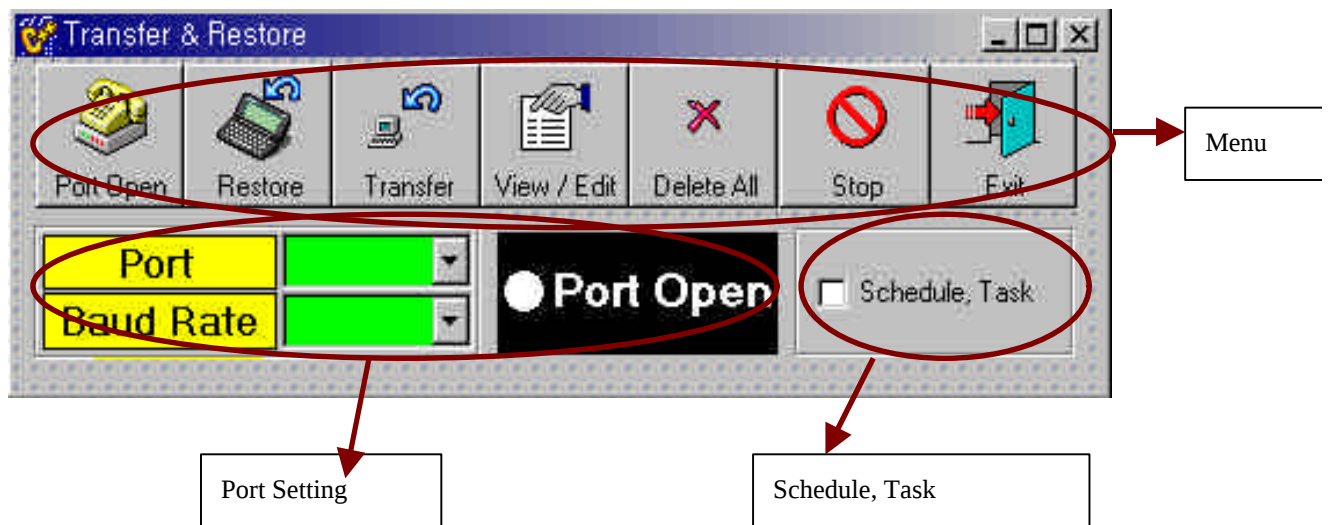
2.3 Uninstall

- From the window start menu, select “Uninstall H200 Link”

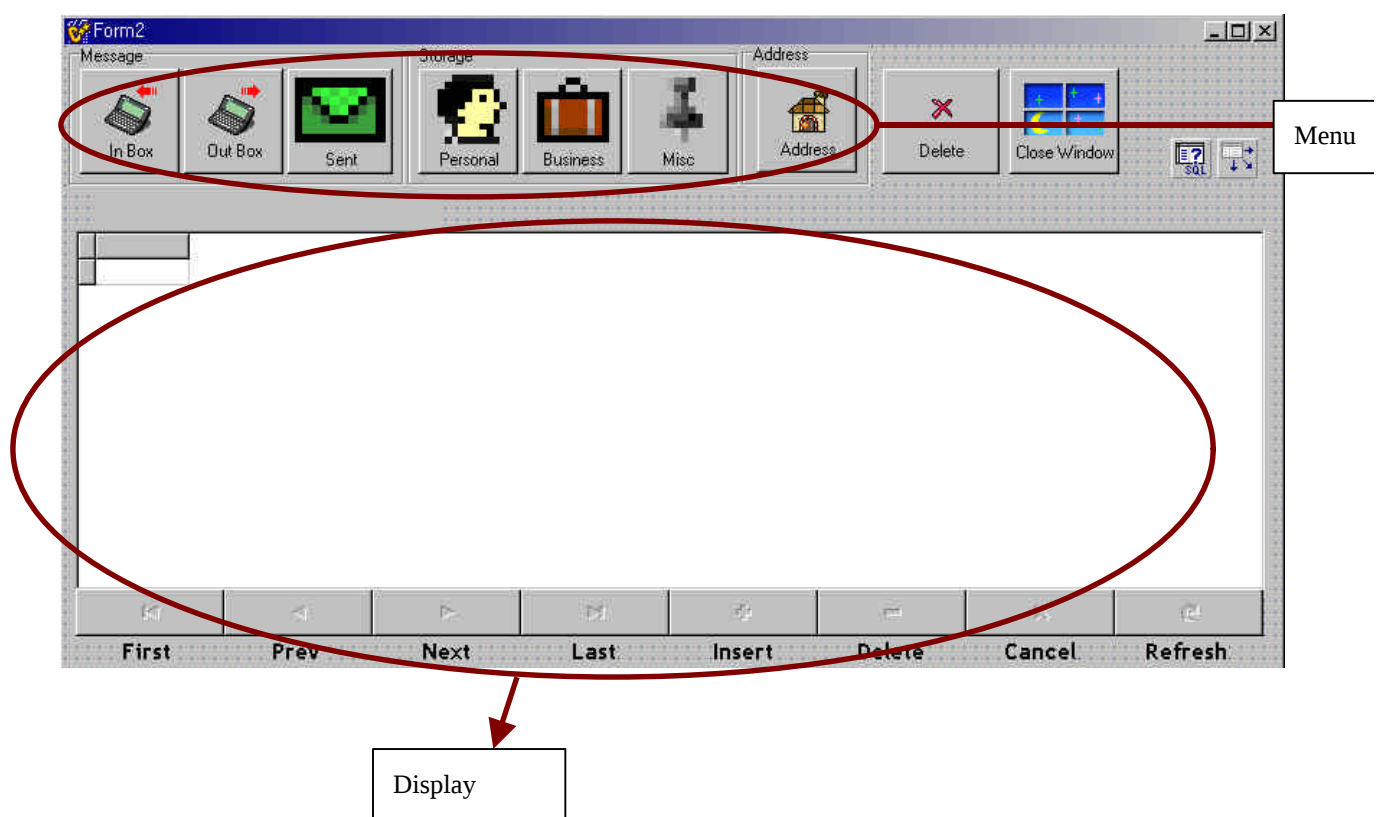
3. How to connect data cable to your computer



4. Using H200 PC Link



<Picture 1>



<Picture 2>



<Picture 3>

*** Note: Device must be connected with PC via Data cable and PC port must be opened.**

4.1 Port Open

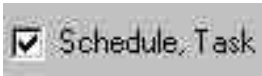
- After connect data cable with PC, set the port and baud rate.

- Press Port Open button  and then the circle of port open

 will be changed  this means your PC port is opened successfully. If you select port which can not open, "Unable open" message is displayed. In this case, select other port.

- After Port is opened, Backup  button and Restore  button will be activated as follow  

4.2 Save

- After press Backup button  , Picture 3 will be displayed and Backup starts.
- You can check Backup progress via Progress bar and current mode display (Picture 3)
- If you want to stop backup, press  button or  button.
- If you want to backup the Scheduler and Task, check  and press  button

4.3 Restore

- After press  button, picture 3 will be displayed and restore starts
- You can check Restore progress via Progress Bar and current mode display (Picture 3)
- If you want to stop restore, press  button or  button.
- If you want to restore Scheduler and Task, Check  and press  button

4.4 Check Data

- After press  button, picture 2 will be displayed and you can check saved data.
- You can check data by pressing each menu button on menu area (Picture 2)
- You can edit contact data and also you can input new contact data by pressing insert button

4.5 Delete Data

(1) Delete all data

Press  button

(2) Delete special message folder or contact data

After Press  button, picture 2 will be displayed.

Select message folder or contact button which you want to delete and then press

 button.

(3) Delete each Data

Select data and press  button

19. Device and Battery Care

- 1) Use only approved battery and power charger. Charging battery by any other method or unauthorized product may cause damage to the battery
- 2) Keep in mind that a new battery's full performance is achieved only after two or three times of completed charging
- 3) The battery can be charged and discharged hundreds of times but it will eventually wear out. When the operating time is noticeably shorter than normal, it is time to change to new battery.
- 4) Do not use device in the high temperature and humidity
- 5) Battery must be recycled or disposed of properly and never dispose of batteries in a fire.
- 6) Do not drop, knock and shake device
- 7) Do not use harsh chemicals, cleaning solvents, or strong detergents to clean device. Wipe it with a soft cloth slightly dampened in a mild soap-and-water solution.
- 8) Do not attempt to open the casing on your device.
- 9) Do not expose device or charger to rain or snow. If device is flooded, never turn on power and ask service center.

20. Trouble Shooting

1. Screen cannot be turned on at all.
It is because the batter is completely exhausted. Use it after charging.
2. Key is not pressed.
It is because Key is put on a hold. Release Hold Key.
3. When I turn on the power, it is turned off immediately.
Battery is completely discharged. Use it after charging.
4. I cannot hear the sound when I receive a message.
4.1 Your phone is set in Mute mode or the message receiving sound of Inbox is silent.
Select Melody in Pref-> 3. Sound Setting-> 3. Alert Types.
Select other sounds except Silent in Pref-> 3. Sound Setting-> 2. Alert-> 1. Inbox Alert.
4.2 If Private Time is set on and it is in that period, the sound will not occur. If you want to release Private Time, select Off in Set Item in Pref-> 6. Private Time.
5. I cannot send a message.
Check whether it is in Two Way state at present.
If it is not Two Way status, it is stored in Outbox temporarily and will be automatically sent if it is Two Way.
Contact your service provider if you still cannot send a message when it is in Two Way status.
6. I cannot see the screen clearly.
It is because Contrast is set too high or low.
Adjust it properly in Pref-> 10. Miscellaneous-> 3. Contrast.
7. I can see the screen but it does not operate at all.
Turn off the power by pressing Power Key in the upper left of the terminal for about 4 seconds and then press that key again to turn it on.
If it still does not operate ...
(Caution) It will result in deleting all the messages you saved.
Push off the Reset key to the right located at the right bottom of the terminal and push it off to the left to turn it on.

8. Backlight is not turned on.

Press Power Key located at the upper left of the terminal for about 2 seconds.

9. I locked it but forgot the password.

(Caution) It will result in deleting all the messages you saved.

Push off the Reset key to the right located at the right bottom of the terminal and push it off to the left to turn it on.

Initial Lock Password is '0000'.

10. The letter is too small.

It is because it is set as Small Font.

Select Small in Pref-> 4. Font.

11. I cannot write the letter I want, instead, symbol is written.

It is in Alt Lock mode. Press Alt key to release Alt mode.

12. Periodically, the date and time are incorrect.

Please go to preference menu of main screen and then select "8. Time and Date"

Select "1. Auto time setting" and set auto time setting off.

And set Date and Time on "2. Set time"

13. No SVC icon appears or Fail to send message

You probably are in the area out of the coverage of a ReFLEX network.

21. Safety Information

For the efficient and safe operation of your phone, observe these guidelines.

Pager Transmitter Safety

The FAA has regulations concerning the use of electric devices aboard aircraft.

When boarding an aircraft, turn your device off to avoid potential interference with aircraft radio communication or navigation equipment.

In blasting zones or wherever it is forbidden to use it, set the TX mode to OFF. This prevents potential transmission interference with sensitive equipment or explosives devices.

Using your device in a vehicle

Safety comes first, and is the ultimate responsibility of the driver. Please:

- i) Give full attention to driving – driving safely is your first responsibility.
- ii) If you receive message or want to write message during you drive vehicle, pull off the road and park your vehicle before reading or writing a message in driving conditions so require.

For Vehicle Equipped with an Air Bag

An air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment, in the area over the air bag or in the air bag development area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

Explosive Atmospheres and materials

Turn your device off when in any area with potential explosive atmospheres and obey all signs and instructions. You must observe restrictions on the use of radio equipment in fuel depots; below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; areas with signs about explosive atmospheres or where blasting operations are in progress; any other areas where you would normally be advised to turn off your vehicle engines.

22. FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception. Which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

SAR INFORMATION

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 1.27 W/kg and when worn on the body, as described in this user guide, is 0.685W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on PP4TX-50C.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association(CTIA) web-site at <http://www.wow-com.com>.

* In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a sub-stantial margin of safety to give additional protection for the public and to account for any variations in measurements.