GPS Phone

MEW Model No.: ECG221101

AC Adapter

MEW Model No.: ECG844

Charging Cradle

MEW Model No.: ECG845

Battery Pack

MEW Model No.: ECG846

Operating Instructions

Draft Version 1.0

March 3, 2006

SAFETY INFORMATION

General

- This product doesn't prevent an accident resulting in injury or death, a disaster, or a material damage. Use it as a machine, which plays the supplementary part to know the position of the person who has it.

Operation

- Do not keep this product under the place where is highly humid, high temperature, or exposed to the direct sunlight. Never leave it inside a car. Otherwise the normal operation may be prevented.
- Do not drop, give strong shock, or weight this product. Otherwise a failure may be caused.
- Do not wipe this product with benzine, thinner, or alcohol. Otherwise discoloration or deformation may be caused.
- This product is not waterproof structure. Do not use it in the rain or the bathroom. Do not soak it in the liquid such as water or seawater. Do not touch this product with wet hand. Otherwise a failure may be caused.
- Do not put a foreign substance in DC jack, the charging terminals or the connector. Otherwise a failure may be caused.
- Do not hold this product to the ear. Otherwise the user risks serious permanent damage to own hearing.

Accessory

- Use of accessories not approved, including but not limited to the battery pack, the AC adapter and the charging cradle, may cause a failure and violate the regulations.

Public emergency call

- This product operates using radio signals and cellular networks. Because of this connection cannot be guaranteed at all times under all conditions. Therefore, you should never rely solely upon any wireless device for essential communications, for example public emergency calls.
- Remember, in order to make or receive calls, this product must be switched on and in a service area with adequate cellular signal strength.
- Some networks do not allow for public emergency calls if certain network services or phone features are in use (e.g. fixed dialing etc.). You may need to deactivate those features before you can make public emergency call.

- Some networks require that a valid SIM card be properly inserted in this product to make public emergency call.

Medical equipments

- When in a hospital or other health care facility, observe the restrictions on the use of mobiles. Switch this product off, if instructed to do so by the guidelines posted in sensitive areas. Medical equipment may be sensitive to RF energy.
- The operation of cardiac pacemakers, other implanted medical equipment and hearing aids can be affected by interference from this product placed close to the device. If in doubt about potential danger, contact the physician or the manufacturer of the device to verify that the equipment is properly shielded. Pacemaker patients are advised to keep their hand-held mobile away from the pacemaker, while it is on.
- Pacemaker manufactures recommend that a minimum separation of 22 cm be maintained between a wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by Wireless Technology Research Committee in Japan.

Aircraft

- Switch off this product before boarding an aircraft. Make sure it cannot be switched on inadvertently. The operation of wireless appliances in an aircraft is forbidden to prevent interference with communications systems. Failure to observe these instructions may lead to the suspension or denial of cellular services to the offender, legal action, or both.

Potentially Explosive Atmospheres

- Do not operate this product in the presence of flammable gases or fumes. Switch off this product prior to entering any area with potentially explosive atmospheres such as near petrol stations, fuel depots, chemical plants or where blasting operations are in progress. Do not remove, install, or charge the battery in such area. Operation of any electrical equipment in potentially explosive atmospheres can constitute a safety hazard.

RF interference

- This product receives and transmits radio frequency energy while switched on. Remember that interference can occur if it is used close to TV sets, radios, computers or inadequately shielded equipment. Follow any special regulations and always switch off this product wherever forbidden, or when you suspect that it may cause interference or danger.

Use while driving

- Road safety comes first! Do not use this product when driving a vehicle. Before making a call with this product, park the vehicle.

GPS

- This product may not be able to use or calculate the position by GPS receiver when a TV station, a radio station or the wireless devices are near, and they send out the strong electric wave.
- This product calculates positions by acquiring signals from GPS satellites. When this product is used in a building, near a building, underground, in a tunnel, on a narrow road between the buildings, or under trees, position may be unavailable or a position error may become big.
- The GPS antenna is in the part beside the speaker, which is in front side of this product. Keep the GPS antenna to face a clear view of the sky. Don't cover the GPS antenna with the hand and the metal. Otherwise position may be unavailable.
- Even if the place is opened, position may be unavailable in the relations between the arrangement of GPS satellites and the installation of this product.
- Note that some car glass materials containing metal blocks signals from GPS satellites.
- GPS satellites are under the control of the U.S. Department of Defense. A position error may become big in case the accuracy is intentionally changed.

Information according to EU WEEE directive (2002/96/EC)Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)

- This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be

applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

- If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

- This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Safety information according to FCC RF exposure guidelines

- EXPOSURE TO RADIO FREQUENCY SIGNALS

  In August 1996, the Federal Communication Commission (FCC) adopted RF exposure guidelines with safety levels for handheld wireless phone. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards bodies;

  ANSI C95.1 (1992)*

  NCRP Report 86 (1996)*

  ICNIRP (1996)*

  *American National Standards Institute; National Council on Radiation Protection and Measurements; International Commission on Non-Ionizing Radiation Protection

  Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. Over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1). The design of your phone complies with the FCC guidelines in addition to those standards.

- ANTENNA CARE

  Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

- BODY-WORN OPERATION

  This device is designed to use as a speakerphone which uses a loudspeaker and a high-sensitivity microphone. Accordingly, voice call is designed to be made while holding the device by hand or worn on the body.

  For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used an accessory that contains no metal.

  The exposure standard for wireless mobile phones employs a unit of measurement known as the Specification Absorption Rate, or SAR. The SAR limit set by FCC is 1.6W/kg.

Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4W/kg.

TABLE OF CONTENTS

1. Overview

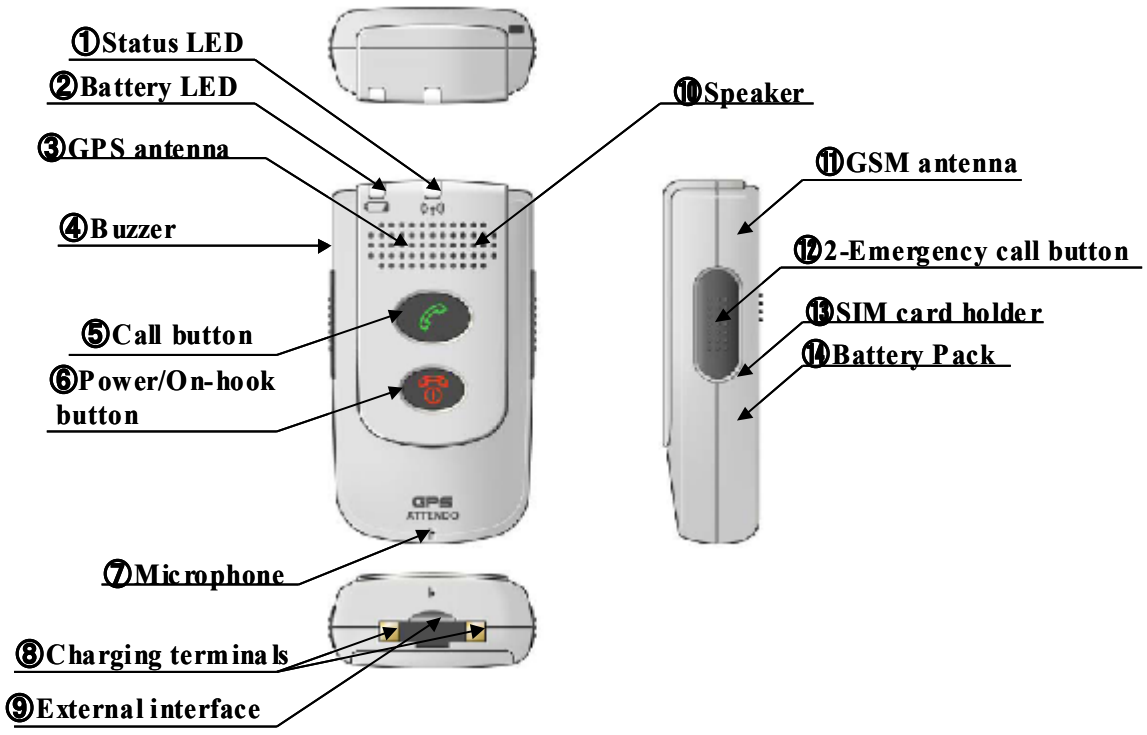
GPS Phone is a GSM hand-held phone containing the GPS location technology for position determination, DTMF and SMS for data communication, and associated control electronics. This product is carried and activated by a user in case that the person needs assistance and would like to communicate with the Call Center through GSM cellular network.

1.1. Features

The handset has the following features.

- Small size GSM handset with embedded GPS receiver
- Large double EMERGENCY buttons to allow quick and easy access
- High sensitivity GPS receiver is embedded and enables to locate the handset
- Speakerphone function
- DTMF data communication over voice channel
- Handset tracking functions over SMS channel
- Handset control functions over SMS channel
- 2 LEDs (GSM Availability, Low Battery)
- Build in Siren
- Rechargeable Lithium Ion Battery

1.2. Controls



(1) Status LED

This LED indicates the GSM and the handset status.

Flashing Red:

Indicates the GSM is out of service.

Flashing Green:

Indicates the GSM is in service.

Flashing Red in parallel with Battery LED:

Indicates the Handset has problem to operate.

(2) Battery LED

This LED indicates the battery and the handset status.

Solid Red:

Indicates the handset charges the battery.

Flashing Red:

Indicates the battery is low.

Flashing Red in parallel with Status LED:

Indicates the Handset has problem to operate.

(3) GPS antenna

The built-in antenna for GPS receiver

(4) Buzzer

The buzzer sounds several audible tones such as key-touch tone, ring-back tone, and error tone.

(5) Call button

Normal call to predefined destination will be initiated when pushed for more than 1 second in alert mode. When the in-coming call comes, the user can take a call by pushing this button for more than 1 second as well.

(6) Power/On-hook button

The handset will be powered on in power off mode when pushed for more than 3 seconds. The handset will be powered off in alert mode when pushed for more than 3 seconds. In normal call mode, the user can disconnect the call by pushing this button for more than 1 second.

(7) Microphone

High sensitivity microphone for the normal call and the emergency call

(8) Charging terminals

The charging terminal connected to the charger via the charging cradle

(9) External interface

The external interface for service provider use

(10)Speaker

Loud speaker for the normal call, the emergency call, and some audible tones such as ringer tone

(11)GSM antenna

The built-in GSM antenna for the GSM radio

(12)2-Emergency call button

Emergency call to the Monitoring center will be initiated when pushed 2 buttons at the same time for more than 1 second. After connecting with the Monitoring center, the handset acts according to the command received from the Monitoring center.

When the user pushes the 2-Emerrgency call button and the Call button together for more than 1 second, the handset initiates the call to the public emergency call number well known as 112, 911 and the others.

(13)SIM card holder

The SIM card holder for the GSM radio

(14)Battery Pack

The rechargeable Li-Ion battery pack for the handset power

2. Operation

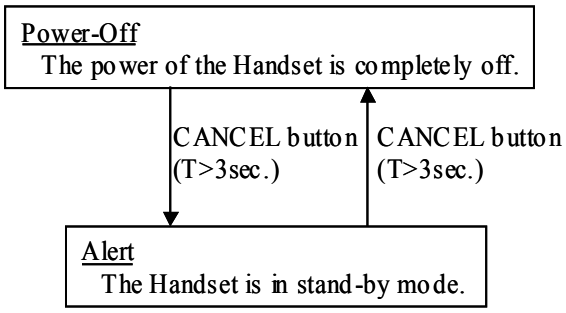
The handset has the following modes.

1) Power-Off
2) Alert
3) Emergency Call
4) Normal Call
5) Public Emergency Call

The following describes each mode.

2.1. Power-Off/Alert

- The handset is toggled between the Power-Off and the Alert (Power-On) by depressing the “Power/On-hook button” button for more than 3 seconds. At this time, the handset lights red colored status LED and sounds wake-up tone.
- In the alert mode, the user can make a call to predefined number (Normal call), the Monitoring center (Emergency call), the public emergency number (Public emergency call) as well as take an incoming call, if the GSM radio is in service.



2.2. Emergency call

- When the user depresses the "Emergency" buttons more than 1second or location-tracking command is received from the Monitoring center or low battery is detected, the Handset attempts to establish the connection with the Monitoring Center one by one from the top of registered number list. While the Call Retry Sequence, the handset sounds audible tone as similar as ring back tone.
- In the number list, a maximum of 4 telephone numbers for the Monitoring Center and/or the public emergency call number such as 112 are registered by the service provider.
- When the handset connects to the Monitoring Center except for the public emergency number, the handset starts to communicate with the Monitoring center. Normally the Monitoring center checks the handset ID and call cause, then enables the speakerphone of the handset to connect the operator in the monitoring center to the handset user.
- When the Handset connects to the public emergency number, the Handset moves to the Public Emergency Call mode. The call to the public emergency call number can be made even in limited service, such as no valid SIM card inserted.
- When the Handset could not connect to anywhere, the handset repeats the Call Retry Sequence maximum 5 times. If all 5 iterations end in failure, the handset will revert back to alert mode with beeping error tone to notify the user of the connection failure.

Step	Destination	Phone number
1	Monitoring Center 1 (MC1)	+4687123456
2	Monitoring Center 2 (MC2)	+4687123457
3	Monitoring Center 3 (MC3)	112
4	Monitoring Center 4 (MC4)	<not registered>

- In this mode, the handset calculates own position and sends out to the Monitoring center if requested.

2.3. Normal Call

- When the user depresses the "CALL" button for more than 1 second in the Alert mode, the handset make a call to the predefined number. At this time, the handset sounds wake-up tone.

- The user can abort call by depressing “Power/On-hook” button for more than 1 second.
- The Handset sounds Ring Back Tone during call attempt.
- If the number is not registered, the handset sounds error-tone and reverts back to the Alert mode.
- If a public emergency call number is registered and the handset connects to that number, the Handset moves to Public Emergency Call mode. The call to the public emergency call number can be made even in limited service, such as no valid SIM card inserted
- When the Handset receives an incoming call in the Alert mode, the Handset sounds ringer tone.
- The user can accept the incoming call by depressing the “CALL” button for more than 1second. The handset sounds wake-up tone and connect the call.
- The user can reject the incoming call by depressing the “CANCEL” button for more than 1second. The handset sounds wake-up tone and moves to the alert mode.
- If the user depresses Emergency buttons for more than 1second, the handset sounds wake-up tone, and quits call attempts or current call then moves to the Emergency Call mode.
- When the handset connects to the predefined number, the handset activates its speaker and microphone in this mode, and works as speakerphone.
- The user can terminate the call by depressing “Power/On-hook” button for more than 1 second at anytime. The Handset sounds wake-up tone, hangs up the line, and then backs to the Alert mode.

2.4. Public Emergency Call

- When the user depresses both “CALL” and ”EMERGENCY” buttons for more than 1 second in the Alert mode, the handset makes a call to the public emergency call number. At this time, the handset sounds wake-up tone.
- The call to the public emergency call number can be made even in limited service, such as no valid SIM card inserted.
- The user can abort call by depressing “Power/On-hook” button for more than 1 second.
- The handset sounds Ring Back Tone during call attempt.
- When the handset connects to the public emergency call number, the handset activates its speaker and microphone in this mode, and works as speakerphone.
- The user can terminate the call by depressing “Power/On-hook” button for more than 1 second at anytime. The Handset sounds wake-up tone, hangs up the line, and then backs to the Alert mode.

3. General Specification

GSM Radio:

- Frequency band: EGSM900, GSM1800, GSM1900
- GSM class: Small MS
- Transmit power: Class 4 (2W) at EGSM900
  Class 1 (1W) at GSM1800
  Class 1 (1W) at GSM1900
- SIM card interface: 3V GSM phase2+ SIM card interface

Handset and accessories

- Operating Temperature (Handset, operation without charging): -5 to 50 degree C
- Operating Temperature (Handset, charging): 0 to 40 degree C
- Operating Temperature (AC adapter, Charging cradle): 0 to 40 degree C
- Operational voltage: 3.7-4.2VDC (Battery terminal)
  5.5-8.0VDC (Charging terminal, with AC adapter)
- Size (handset): 90mm(H)×49mm(W)×23.5mm(T)
- Weight: less than 100g

* Subject to change without notice.

4. NOTICE FOR USING THE HANDSET

The handset has a hands-free function.