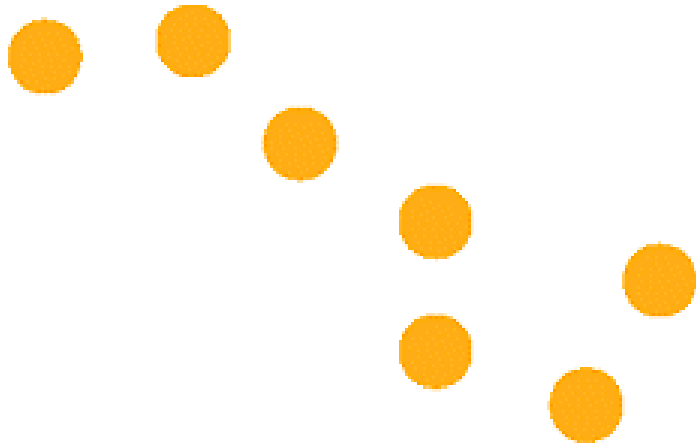


# **Iridium Maritime Unit**



**IRIDIUM**

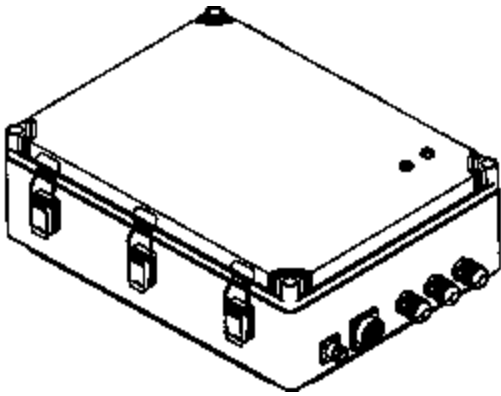
## Package Contents

This product is composed of the Iridium maritime phone kit and the Iridium single-mode telephone. The package contents of this product are as follows:

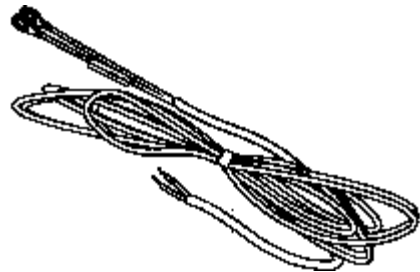
### Iridium Phone Kit

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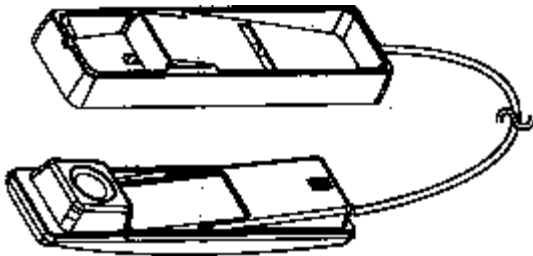
(1) Radio Unit



(3) DC Power Cable (w/fuse)



(2) Telephone Unit



(4) Telephone Unit cable (20m)

(5) Waterproof 2-hole bush for additional telephone unit



(6) Radio unit locking screws (x 4)



### Iridium single-mode telephone

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(7) Iridium telephone

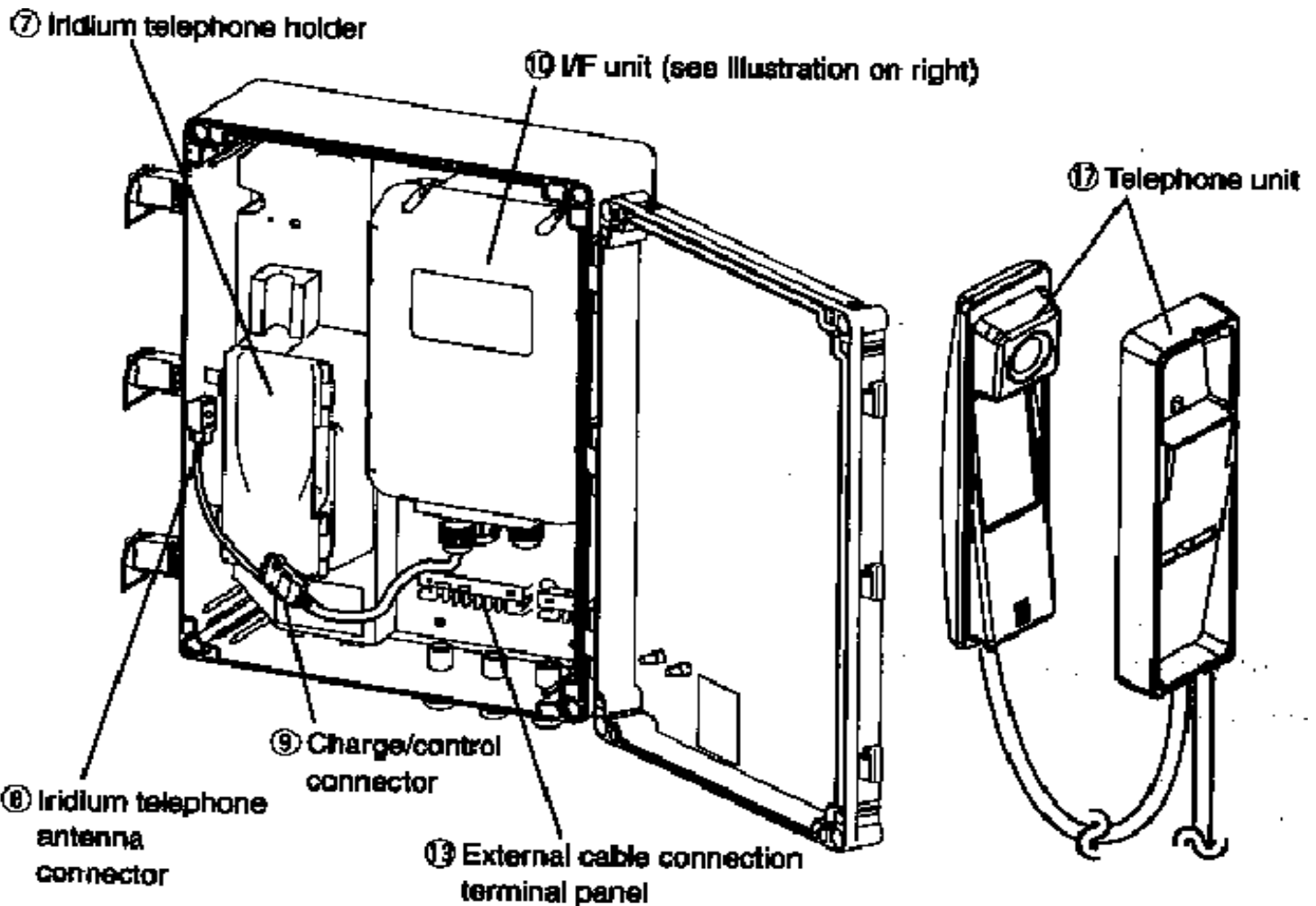
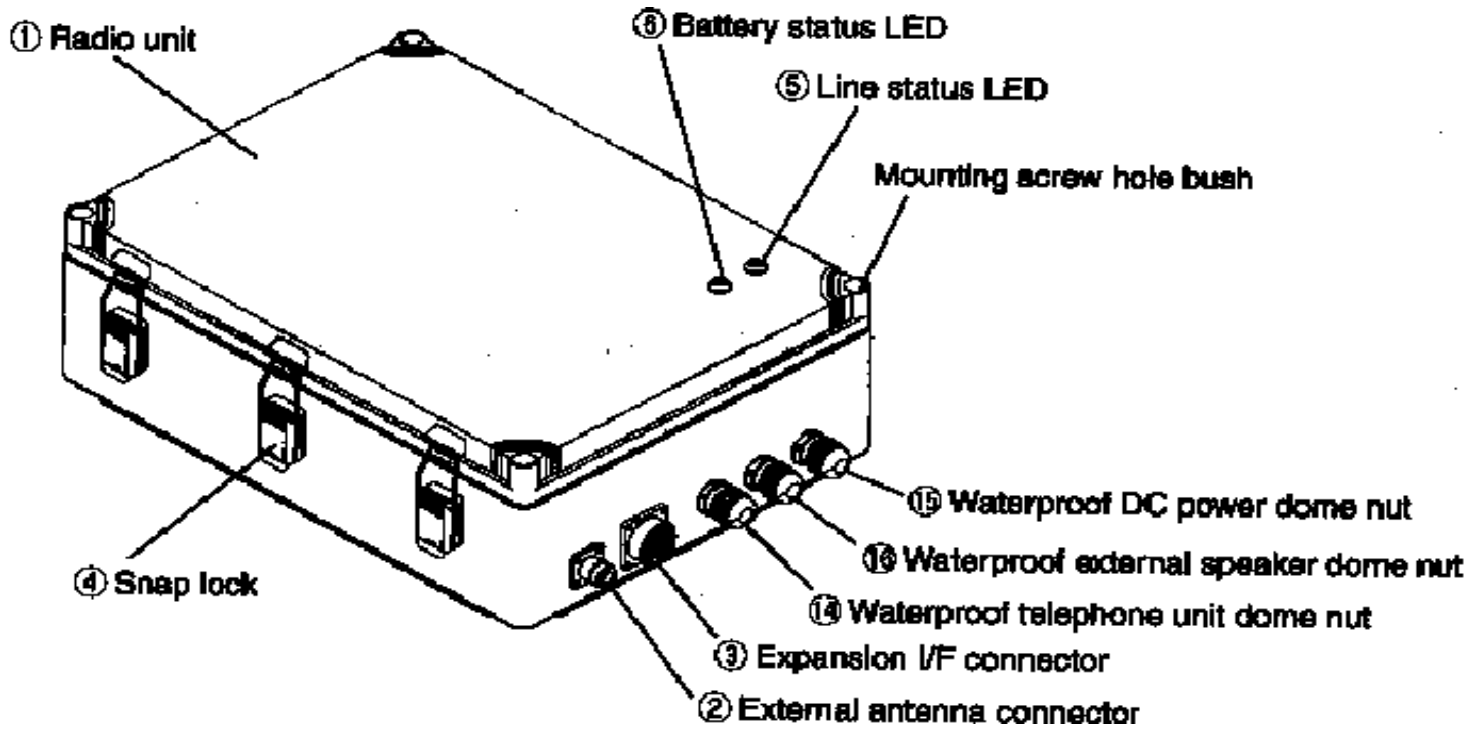


(8) Battery



## Part Names

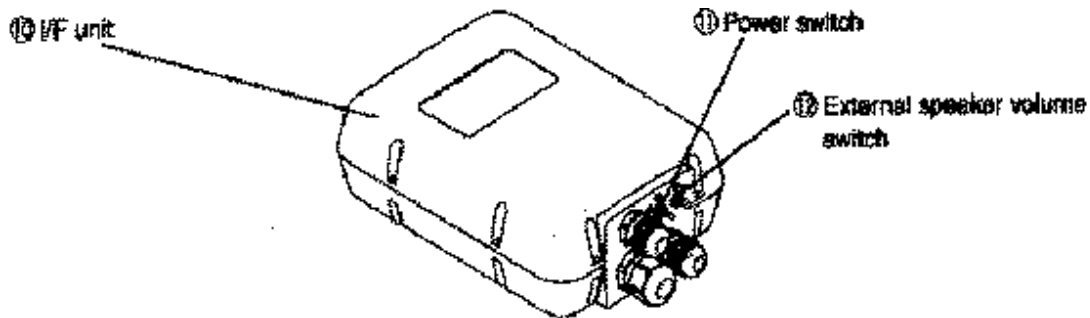
Part names of the Iridium Maritime Kit are described here.



## Options that can be used with this product

Options that can be used with this product are as follows:

- Maritime External Antenna (MA-S100)
- Maritime External Antenna Cables
  - 5m (MA-S100CA5)
  - 10m (MA-S100CA10)
  - 15m (MA-S100CA15)
- Maritime Arrester Kit (AR-S100)
- Maritime Extra Phone Unit (IM-S100HS)



### (1) Radio Unit

Stores and supplies power to the Iridium telephone as well as controls the Iridium telephone from the telephone unit.

**Note:** Do not leave the radio unit cover open.

### (2) External antenna connector

Connector to connect the Maritime External Antenna Cable.

### (3) Expansion VF connector

Connector specifically for feature expansion.

### (4) Snap Lock

Hooks to lock the radio unit cover. Out of the three hooks, one holds a lock mechanism to prevent accidental opening of the cover.

**Note:** The key for the lock is not provided. Please purchase a commercially available product.

### (5) Line status LED

LED that displays the line status of the Iridium Maritime Kit. Each displayed condition indicates the following status.

Light displayed	Meaning....
Green, flashing	System activation
Green	Line Operational
Orange	Line engaged
Red	System malfunction

**Note:** In case of system malfunction, turn off the power then turn it back on again.

**(6) Battery Status LED**

LED that displays the battery status of the Iridium telephone built in the Iridium Maritime Kit. Each displayed condition indicates the following status.

Light displayed	Meaning....
Green	Normal
Red	Malfunction

**Note:** The battery installed in the Iridium telephone is an expendable product. Replace annually regardless of the LED display.

**(7) Iridium telephone holder**

Holder to store the Iridium telephone within the radio unit. Securely fasten the snap lock of the holder after storing the Iridium telephone.

**(8) Iridium telephone antenna connector**

Connector for connecting with the antenna connector of the Iridium telephone.

**(9) Charge/control connector**

Connector for connecting with the Iridium telephone interface connector.

**(10) VF unit**

Composed of the power supply circuit for the Iridium telephone and control circuit for controlling the Iridium telephone from the telephone unit.

**(11) Power switch**

Switch to turn the power of the Iridium Maritime Kit on or and off. Turn off the power when the power of the ship is turned off or during system malfunction.

**(12) External speaker volume switch**

External speaker volume switch for the ringing tone. Select between low and high.

**(13) External cable connection terminal panel**

Panel for the connection of the DG power cable, telephone unit cable, extra phone unit cable, external speaker cable and GND.

**Note:**

- Installation must be performed by qualified personnel.
- Take caution so that unreasonable force is not applied to each cable.

(14) **Waterproof telephone unit cable dome nut**

For protecting the bush when the telephone unit cable is not connected into the radio unit. (The bush and lag terminal are used for preventing water from leaking in when the telephone unit cable is pulled from the radio unit.) Use the attached 2-hole bush when installing an additional telephone unit.

(15) **Waterproof power cable dome nut**

For protecting the bush when the DC power cable is not connected into the radio unit. (The bush and lag terminal are used for preventing water from leaking in when the DC power cable is pulled out from the radio unit.)

(16) **Waterproof external speaker cable dome nut**

For protecting the bush when the external speaker cable is not connected into the radio unit. (The bush and lag terminal are used for preventing water from leaking in when the external speaker cable is pulled out from the radio unit.) The external speaker is used to expand the ringing tone. Please purchase a commercially available product since this is not a standard accessory.

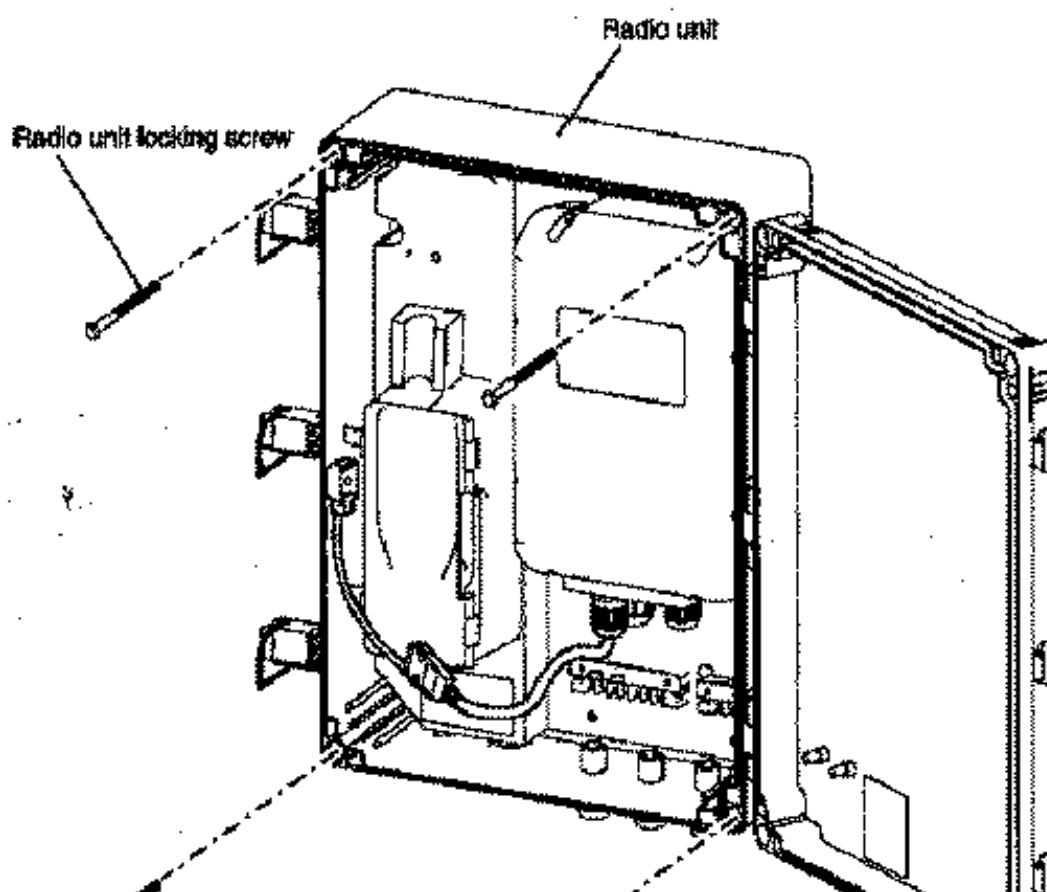
## Installation

**Note:** Installation work must only be performed by qualified personnel.

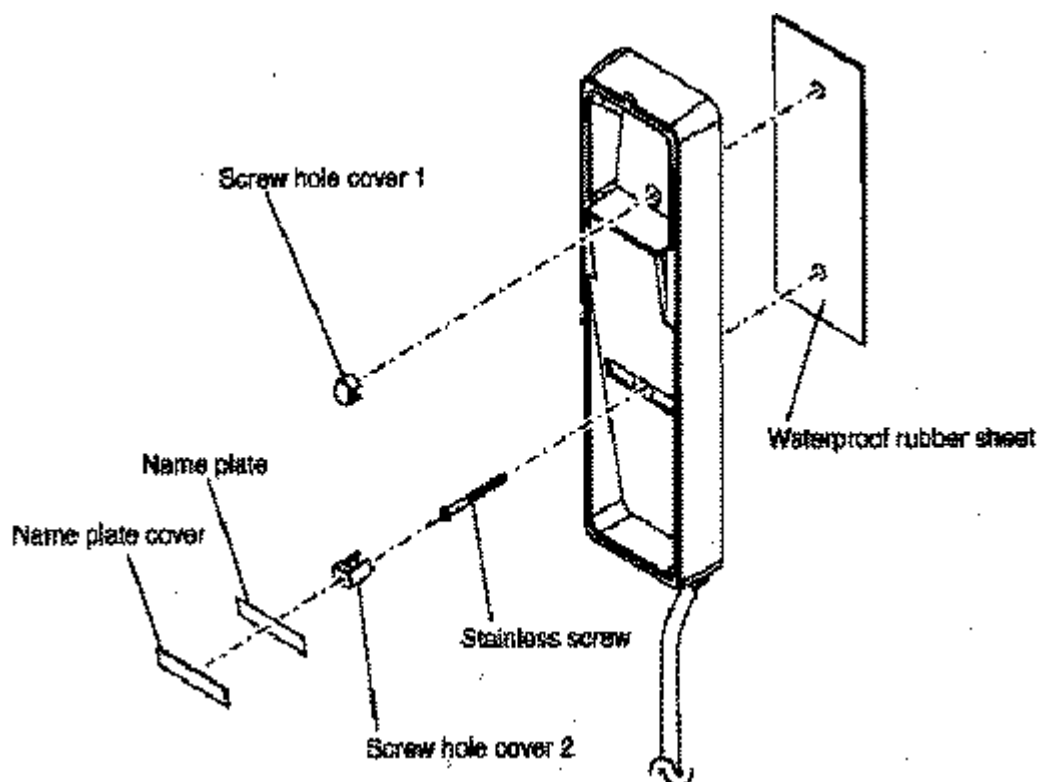
### Cautions concerning installation

1. Avoid installing in the following areas:
  - Areas under direct sunlight
  - Areas with frequent or extreme vibration or shock.
  - Areas where the unit may come into contact with water or oil.
  - Areas where condensation might easily occur.
  - Areas close to air-conditioners and heaters.
  - Areas that are sealed.
  - Rooms with sulfuric gas emission that may cause damage to the unit and connecting parts
2. Install in a well ventilated area.
3. To prevent noise from occurring, do not place computers, televisions, radios, audio equipment, microwave ovens, etc. near the unit.
4. Check to make sure that the unit does not affect the ship's facilities and instruments before installation.
5. The working temperature range is between  $-10^{\circ}\text{C}$  and  $+50^{\circ}\text{C}$ .
6. Take special caution when securing wiring with staples as this may damage the cables.
7. Wrap the connecting parts of the cables with waterproof tapes.
8. Use protectors, etc. when installing cables between floors.
9. Do not apply excessive force to connectors and bushes.
10. When using long cables, use mounting brackets so that the cables do not cause unnecessary force to be applied to the connectors and bushes.

## Installing the radio unit

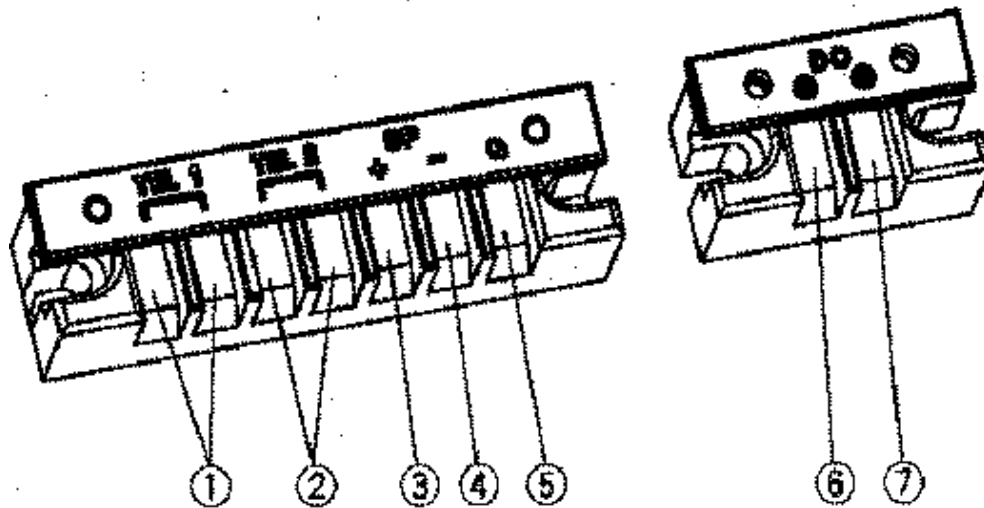


## Installing the telephone unit





## External cable connection terminal panel



Item number	What it is....
(1)	Telephone unit (standard)
(2)	Telephone unit (additional)
(3)	External speaker (+)
(4)	External speaker (-)
(5)	Ground
(6)	DC power cable (+)
(7)	DC power cable (-)

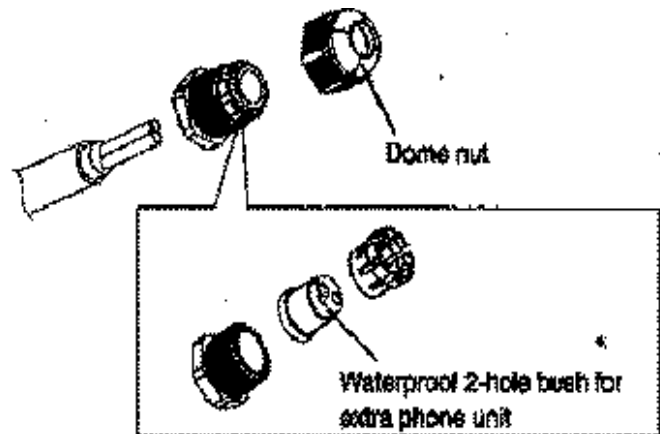
- \* It is possible to hear the ringing tone outside the ship by connecting the external speaker connector (+, -) at the radio unit connector terminal panel to a waterproof external speaker. Purchase the external speaker separately.

## Connecting the telephone cable

Remove the telephone unit dome nut section, then pass the cable from inside the radio unit through the cable bush.

### NOTE:

- When adding another telephone unit, use the attached waterproof 2-hole bush.
- After passing the cable from the radio unit through the bush, attach a lag terminal on the tip of the cable, then mount to the connector of the telephone unit.

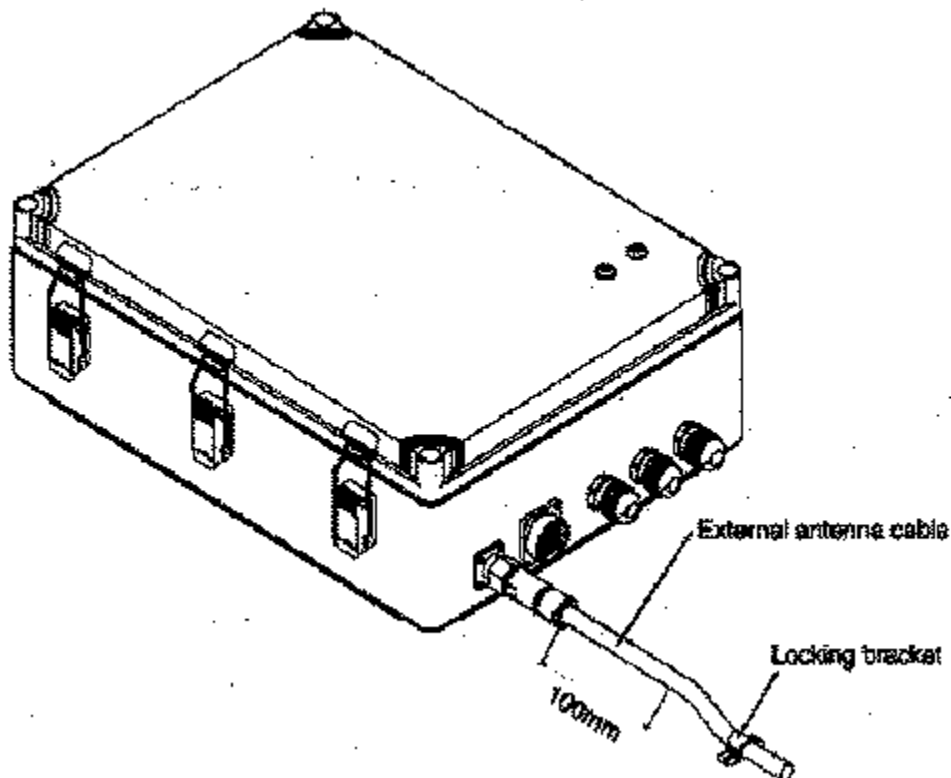


## Connecting the DC power cable

\* In the same manner as the telephone unit cable, remove the dome nut for the waterproof power cable, then pass the cable from inside the radio unit through the bush and connect to the DC power supply. Also note that the fuse box is located within the radio unit.

### NOTE:

- Use a locking bracket, etc. to securely fasten cables to walls, etc.
- Fasten the radio unit and cables so that the weight does not cause unnecessary force.
- Lock the straight section of the cable with the locking bracket as shown below so that unnecessary force is not applied to the connector section.



## Starting up the system

The Maritime Kit can be started up by simply turning the I/F unit power switch on if the power (DC 12V/24V) is supplied from the ship power supply. (The Iridium telephone power is also turned on automatically when the I/F unit power switch is turned on.)

## FG installation of the main unit

Connect the FG terminal of the main unit to the ground terminal. Always perform ground work (Type III ground work) to prevent electric shock and malfunction from static electricity.

## About the LED indication of the radio unit

There are two types of LEDs on the radio unit: LED that indicates the status of the line and LED that indicates the status of the battery. The battery and line status indicated by the LEDs are as follows (the same information can be found on the back side of the radio unit cover.)

During over-charge check (max. 20 min.), the line status LED will flash green and the battery status LED will be off even if there is current flow.

### ■ Line status LED indication: LINE

Light	Line Status
Off	Power off
Green	Line operational
Orange	Line engaged
Red	System malfunction
Green, flashing (every second)	System activation

### ■ Battery status LED indication: Battery

Light	Battery Status
Off	Power Off
Green	Normal
Red	Malfunction

## About battery/charging

### ■ Charging the battery

The power (DC 12V/24V) of the Iridium Maritime Kit is supplied from the ship and the battery is continuously charged when the system power is on.

### ■ Battery life

The battery is an expendable product. Although the replacement period depends on the frequency of use, it is recommended that the battery be replaced once a year. Always replace the battery with the same type of KYOCERA lithium ion battery.

## About the SIM card

- Always insert the SIM card when using this product. The SIM card is supplied by the Iridium service provider.
- The SIM card is stored with information such as the Iridium network subscriber information, subscriber confirmation number and used telephone number.
- When using the SIM card with the Maritime Kit, refer to the SS-66K Iridium telephone manual to disable the PIN1 setting.
- For details concerning the SIM card, refer to the SS-66K Iridium telephone manual.

## Using the telephone unit

### Turning the power on and off

The power can be turned on and off by using the power switch of the I/F unit.

## Basic operations of the maritime telephone

### Making a call (outside call)

**1. Unhook the handset.**

Check to make sure that a dial tone can be heard.

**2. Press (0), (0).**

**3. Press the country code of the calling party.**

- Do not need to follow this step in making a call to an Iridium telephone

**4. Press the telephone number of the calling party.**

- When calling another Iridium telephone, enter only the 12 digit subscriber number.
- If the number of the calling party begins with a 0 (city codes or mobile phone numbers that begin with 0), enter starting from the second digit.

When the call cannot be made, a message may be informed of when a call cannot be made. Check the contents of the message and try again.

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## ■ Making a call (extension)

### 1. Unhook the handset

Check to make sure that a dial tone can be heard.

### 2. Press (#), (0), (0).

**Note:** When you make a call to an extension number, only the telephone unit will ring. The ringing tone will not sound from any other source, regardless of whether the unit is connected to an external speaker.

## ■ Receiving a call

### 1. Unhook the handset when the ringing tone is heard

**Note:**

- If an additional telephone unit has been installed, the ringing tone will sound from both units for outside calls. The handset which is unhooked first will be connected to the outside call. At this time, only a busy tone will be heard from the other unit.
- Only the ringing tone of the telephone will sound when an extension number is dialed. The ringing tone will not sound from any other source, regardless of whether the unit is connected to an external speaker.

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## ■ Disconnecting

### 1. Replace the handset.

**Note:**

- If an additional telephone unit has been installed, the ringing tone will sound from both units for outside calls. The handset which is unhooked first will be connected to the outside call. At this time, only a busy tone will be heard from the other unit.
- Only the ringing tone of the telephone unit will sound when an extension number is dialed. The ringing tone will not sound from any other source, regardless of whether the unit is connected to an external speaker.

## ■ Redialing the same calling party

The number of the last calling party can be redialed at a touch of a button.

### 1. Unhook the handset.

- Check to make sure that a dial tone can be heard.

### 2. Press ®

- When the call cannot be made – A message may be informed of when a call cannot be made. Check the contents of the message and try again.

## ■ Transferring a call

- This is a feature that can be used when there are two telephone units.
  - It is possible to transfer an incoming outside call to another telephone unit.
1. During an outside call, press (HK).
  2. Press (#), (0), (0).
  3. Unhook the handset of the called telephone unit.
    - The unit will be in the internal call mode so that the user may notify the receiver of the outside call.
    - The outside caller will be placed on hold at this time (there is no hold tone).
  4. Replace the handset.
    - The telephone unit which is unhooked will be connected with the outside caller.

## ■ Muting

A call can be placed on mute by pressing the MUTE button on the telephone unit.

1. During a call, press (M).
  - The call will be placed on mute while the MUTE button is pressed.

## Incoming calls during middle of communication

- ### ■ Receiving another outside call during outside call communication.
- An outside call tone will sound from the handset when another outside call is received during communication.

#### Note:

- This feature is scheduled to be in operation soon. Please contact Iridium service provider for more information.
- To use this feature, it is necessary to turn the Call-waiting feature of the Iridium telephone on (for details, see the Iridium telephone instruction manual).

1. During an outside call, press (HK).
2. Speak into the unit to communicate with the waiting caller.
  - The first communication will be disconnected.

- ### ■ Receiving an outside call during an internal call (extension).
- It is possible to receive an outside call during an internal call
  - An outside call tone will sound from the handset when an outside call is received during communication.

1. During an internal call, press (HK).
2. Speak into the unit to communicate with the waiting outside caller.
  - The internal call will be disconnected.
  - A busy tone will sound from the handset which is not making the call.

## Internal communication

- It is possible to make internal calls by adding another telephone unit.

### Note:

- This feature is not available with only one telephone unit.
- During outside calls, only the telephone unit which is in use can call another telephone unit.
- A ringing tone will not sound from an external speaker when an extension number is dialed.

## Caring of the Unit

- Caring of Unit
  - Wipe lightly with a soft cloth, etc.
  - For stubborn dirt, dip a cloth into neutral detergent diluted with water, wring completely, then wipe lightly.

**Note:** Do not use a stiff cloth, benzine or paint thinner as this may cause the paint and printing to come off.

## Specifications

Power Supply Requirements		Dimensions
DC12V-DC24V	Max. 20W	Approx. 15.7 x 11.8 x 5.2 inch (Approx. 400 x 300 x 132 mm)