JUE-87

INMARSAT-C
MOBILE EARTH STATION

INSTRUCTION MANUAL

JRC Japan Radio Co., Ltd.

ABOUT YOUR SAFETY

CAUTIONS AGAINST HIGH VOLTAGE

Radio and radar devices are operated by high voltages of anywhere from a few hundred volts up to many hundreds of thousands of volts. Although there is no danger with normal use, it is very dangerous if contact is made with the internal parts of these devices. (Only specialists should attempt any maintenance, checking or adjusting.)

There is a very high risk of death by even a few thousand volts, in some cases you can be fatally electrocuted by just a few hundred volts. To circumvent accidents, you should avoid contact with the internal parts of these devices at all costs. If contact is inevitable as in the case of emergency, you must switch off the devices and ground a terminal in order to discharge the capacitors. After making certain that all the electricity is discharged, only then can you insert your hand into the device. Wearing cotton gloves and putting your free hand in your pocket, in order not to use both hands simultaneously, are also very good methods of shock prevention.

Quite often, an injury occurs by secondary factors, therefore it is necessary to choose a sturdy and level working surface. If someone is electrocuted it is necessary to thoroughly disinfect the affected area and seek medical attention as soon as possible.

CAUTIONS CONCERNING TREATMENT OF ELECTROCUTION VICTIMS

When you find an electrocution victim, you must first switch off the machinery and ground all circuits. If you are unable to cut off the machinery, move the victim away from it using a non-conductive material such as dry boards or clothing.

When someone is electrocuted, and the electrical current reaches the breathing synapses of the central nervous system inside the brain, breathing stops. If the victim’s condition is stable, he or she can be administered artificial respiration. An electrocution victim becomes very pale, and their pulse can be very weak or even stop, consequently losing consciousness and becoming stiff. Administration of first aid is critical in this situation.

☆Note points for first aid

Unless there is impending danger leave the victim where he or she is, then begin artificial respiration. Once you begin artificial respiration, you must continue without losing rhythm.

(1) Make contacts with the victim cautiously, there is a risk that you may get electrocuted.

(2) Switch off the machinery and then move the victim away slowly if you must.

(3) Inform someone immediately (a hospital or doctor, dial emergency numbers, etc.).

(4) Lay the victim on his or her back and loosen any constructive clothing (a tie, or belt).

(5) (a) Check the victim's pulse.
(b) Check for a heartbeat by pressing your ear against the victim's chest.
(c) Check if the victim is breathing by putting the back of your hand or face near the victim's face.
(d) Check the pupils of the eyes.

(6) Open the victim's mouth and remove any artificial dentifrice, food, or chewing gum. Leave the mouth opened and flatten the tongue with a towel or by putting something into the mouth to prevent the victim's tongue from obstructing the throat (If he or she is clenching their teeth and it is difficult to open the mouth, use a spoon or the like to pry open the mouth).

(7) Continually wipe the mouth to prevent the accumulation of saliva.

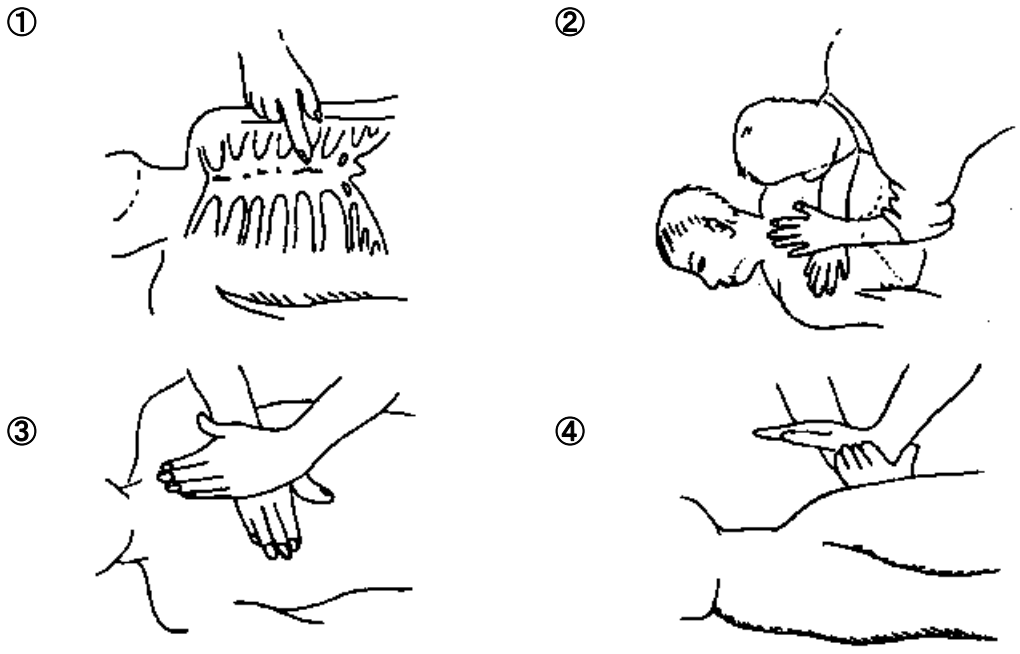
☆If the victim has no pulse and is not breathing
(Heart massage in combination with artificial respiration.)

If the victim has no pulse, his or her pupils are dilated, and if you cannot detect a heartbeat, the heart may have stopped, beginning artificial respiration is critical.

(1) Put both hands on the diaphragm, with hands on top of each other keeping both arms straight (If your elbows are bent, you cannot push with as much power). Press the diaphragm with your body weight until the chest sinks about 2 cm (about 50 times per minute).

(2) If administering first aid when alone:
Perform the heart massage about 15 times then blow in twice. Repeat this routine.
If administering first aid with two people:
One person performs the heart massage 15 times, and the other person blows air in twice. Repeat this routine (Heart massage and "mouth to mouth" resuscitation used together).

(3) Constantly check the pupils and the pulse, if the pupils become normal and the pulse steadies, keep them in a laying position and give them something warm to drink, be sure that they rest (do not give them any alcohol). In any case you have to entrust major decision making to a doctor. Having understanding people around is essential to the victim's recovery from the mental shock of electrocution.



Heart massage in combination with artificial respiration.

Flow of Cardiopulmonary Resuscitation (CPR)

A person is collapsing.
- Secure the safety of the surrounding area.
- Prevent secondary disasters.

↓

Check for response.
- Call while tapping the shoulder.

→ Responding → Listen to the appeal of the injured or ill person and give the necessary first-aid

↓ Not responding

Ask for help.
- Make an emergency call.
- Ask to bring an AED.

↓

Open the airway.
- Check for breathing.

→ Breathing → Recovery position
- Lay the injured or ill person on his/her side and wait for the arrival of the emergency services.

↓ Not breathing

Give 2 rescue breaths; omittable Note(1)

↓

Give CPR.
- 30 chest compressions
- Give 2 rescue breaths; omittable Note(1)

↓

Arrival of an AED
- Turn on the power.
- Use the AED by following its voice prompts. Fitting of the electrode pads, etc.

↓

Automatic electrocardiogram analysis
- Do not touch the injured or ill person.

→ Electric shock is not needed.

↓ Electric shock is needed.

Delivery of electric shock

↓

Resume CPR from chest compressions by following the voice prompts of the AED.

→ When to stop CPR → When the injured or ill person has been handed over to the emergency services or has started moaning or breathing normally, lay him/her on his/her side in a recovery position and wait for the arrival of emergency services.

The AED automatically analyzes the heart rhythm every 2 min.

Note(1) Omission of rescue breathing:
If there is a fear of infection because the injured or ill person has an intraoral injury, you are hesitant about giving mouth-to-mouth resuscitation, or preparing the mouthpiece for rescue breathing takes too long, omit rescue breathing and proceed to the next step.

Specific Procedures for Cardiopulmonary Resuscitation (CPR)

1. Check the scene for safety to prevent secondary disasters

a) Do not touch the injured or ill person in panic when an accident has occurred. (Doing so may cause electric shock to the first-aiders.)

b) Do not panic and be sure to turn off the power. Then, gently move the injured or ill person to a safe place away from the electrical circuit.

2. Check for responsiveness

a) Tap the shoulder of the injured or ill and shout in the ear saying, "Are you OK?"

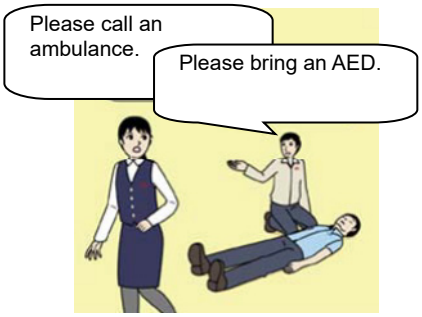
b) If the person opens his/her eyes or there is some response or gesture, determine it as "responding." But, if there is no response or gesture, determine it as "not responding."

3. If responding

a) Give first-aid treatment.

4. If not responding

a) Ask for help loudly. Ask somebody to make an emergency call and bring an AED.
- ・Somebody has collapsed. Please help.
- ・Please call an ambulance.
- ・Please bring an **AED**.
- ・If there is nobody to help, call an ambulance yourself.



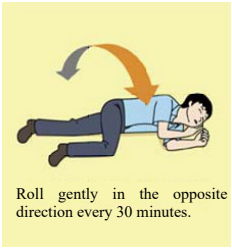
5. Open the airway

a) Touch the forehead with one hand. Lift the chin with the two fingers of the middle finger and forefinger of the other hand and push down on the forehead as you lift the jaw to bring the chin forward to open the airway.
If neck injury is suspected, open the airway by lifting the lower jaw.

6. Check for breathing

a) After opening the airway, check quickly for breathing for no more than 10 seconds. Put your cheek down by the mouth and nose area of the injured or ill person, look at his/her chest and abdomen, and check the following three points.
- ・Look to see if the chest and abdomen are rising and falling.
- ・Listen for breathing.
- ・Feel for breath against your cheek.

b) If the injured or ill person is breathing, place him/her in the recovery position and wait for the arrival of the emergency services.
Position the injured or ill person on his/her side, maintain a clear and open airway by pushing the head backward while positioning their mouth downward.
To maintain proper blood circulation, roll him/her gently to position them in the recovery position in the opposite direction every 30 minutes.



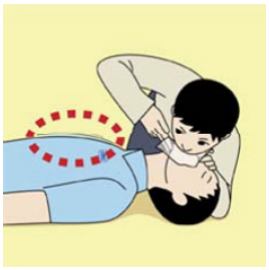
7. Give 2 rescue breaths (omittable)

a) If opening the airway does not cause the injured or ill person to begin to breathe normally, give rescue breaths.

b) If there is a fear of infection because the injured or ill person has an intraoral injury, you are hesitant about giving mouth-to-mouth resuscitation, or getting and preparing the mouthpiece for rescue breathing takes too long, omit rescue breathing and perform chest compressions.

c) When performing rescue breathing, it is recommended to use a mouthpiece for rescue breathing and other protective devices to prevent infections.

d) While maintaining an open airway, pinch the person's nose shut with your thumb and forefinger of the hand used to push down the forehead.



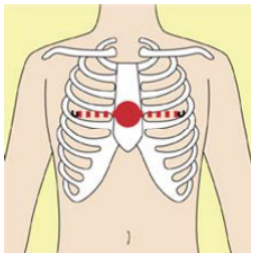
e) Open your mouth widely to completely cover the mouth of the injured or ill person so that no air will escape. Give rescue breathing twice in about 1 second and check if the chest rises.

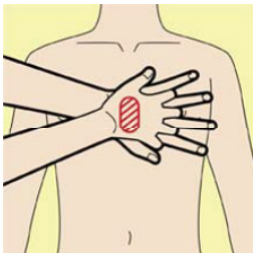
8. Cardiopulmonary resuscitation (CPR) (combination of chest compressions and rescue breaths)

a) Chest compressions

1) Position of chest compressions

Position the heel of one hand in the center of the chest, approximately between the nipples, and place your other hand on top of the one that is in position.

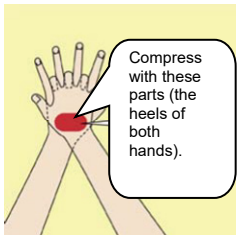




2) Perform chest compressions

・Perform uninterrupted chest compressions of 30 at the rate of about 100 times per minute.
While locking your elbows positioning yourself vertically above your hands.

・With each compression, depress the chest wall to a depth of approximately 4 to 5 cm.

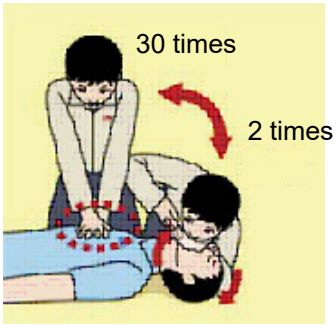


b) Combination of 30 chest compressions and 2 rescue breaths

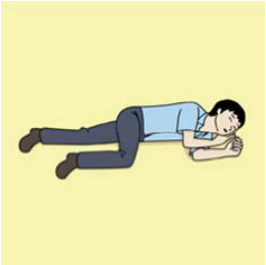
1) After performing 30 chest compressions, give 2 rescue breaths. If rescue breathing is omitted, perform only chest compressions.

2) Continuously perform the combination of 30 chest compressions and 2 rescue breaths without interruption.

3) If there are two or more first-aiders, alternate with each other approximately every two minutes (five cycles of compressions and ventilations at a ratio of 30:2) without interruption.



9. When to stop cardiopulmonary resuscitation (CPR)



a) When the injured or ill person has been handed over to the emergency services

b) When the injured or ill person has started moaning or breathing normally, lay him/her on his/her side in a recovery position and wait for the arrival of emergency services.

10. Arrival and preparation of an AED

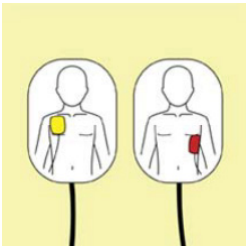
a) Place the AED at an easy-to-use position. If there are multiple first-aiders, continue CPR until the AED becomes ready.

b) Turn on the power to the AED unit. Depending on the model of the AED, you may have to push the power on button, or the AED automatically turns on when you open the cover.

c) Follow the voice prompts of the AED.

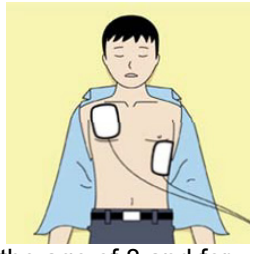
11. Attach the electrode pads to the injured or ill person's bare chest

a) Remove all clothing from the chest, abdomen, and arms.



b) Open the package of electrode pads, peel the pads off and securely place them on the chest of the injured or ill person, with the adhesive side facing the chest. If the pads are not securely attached to the chest, the AED may not function. Paste the pads exactly at the positions indicated on the pads, If the chest is wet with water, wipe dry with a dry towel and the like, and then paste the pads. If there is a pacemaker or implantable cardioverter defibrillator (ICD), paste the pads at least 3 cm away from them.

If a medical patch or plaster is present, peel it off and then paste the pads. If the injured or ill person's chest hair is thick, paste the pads on the chest hair once, peel them off to remove the chest hair, and then paste new pads.



c) Some AED models require to connect a connector by following voice prompts.

d) The electrode pads for small children should not be used for children over the age of 8 and for adults.

12. Electrocardiogram analysis

a) The AED automatically analyzes electrocardiograms. Follow the voice prompts of the AED and ensure that nobody is touching the injured or ill person while you are operating the AED.

b) On some AED models, you may need to push a button to analyze the heart rhythm.

13. Electric shock (defibrillation)

a) If the AED determines that electric shock is needed, the voice prompt saying, "Shock is needed" is issued and charging starts automatically.

b) When charging is completed, the voice prompt saying, "Press the shock button" is issued and the shock button flashes.

c) The first-aider must get away from the injured or ill person, make sure that no one is touching him/her, and then press the shock button.

Press the shock button.

d) When electric shock is delivered, the body of the injured or ill person may jerk.

14. Resume cardiopulmonary resuscitation (CPR).

Resume CPR consisting of 30 chest compressions and 2 rescue breaths by following the voice prompts of the AED.

15. Automatic electrocardiogram analysis

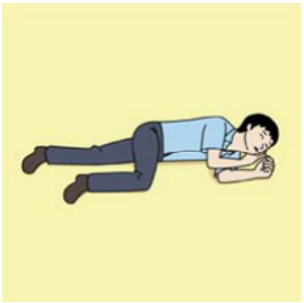
a) When 2 minutes have elapsed since you resumed cardiopulmonary resuscitation (CPR), the AED automatically analyzes the electrocardiogram.

b) If you suspended CPR by following voice prompts and AED voice prompt informs you that shock is needed, give electric shock again by following the voice prompts.
If AED voice prompt informs you that no shock is needed, immediately resume CPR.

16. When to stop CPR (Keep the electrode pads on.)

a) When the injured or ill person has been handed over to the emergency services

b) When the injured or ill person has started moaning or breathing normally, lay him/her on his/her side in a recovery position and wait for the arrival of emergency services.



PREFACE

Thank you for purchase of the JRC Inmarsat-C, Mobile Earth Station, JUE-87.

- Please read this manual carefully and carry out proper operation.
- Please keep this manual importantly to refer to when it is necessary.
  Please use it when questions and troubles are caused in operation, by any chance.

ATTENTIONS BEFORE INSTALLATION

- JRC cannot accept responsibility for any loss due to incorrect operation, malfunction, and other causes except product guarantee condition and liability by law.

- There is possibility that some functions of the terminal may not operate correctly depend on the hardware and software version of equipment connected to the terminal. Please confirm your equipment version before contact with the dealer or agent you purchased, or JRC branches.

- Your communication data are transmitted via Inmarsat system and other global communications system, so unusually some errors may occur in communication theory same as the landlines. You are recommended to backup for your important data.

- Usually, digital scrambling of Inmarsat system protects your communication data privacy. However you are recommended to understand that your communication data might be intercepted by special technology and unauthorized access in the communication theory.

- Specifications of JUE-87 and its accessories may change without notice for improvement.

BEFORE INSTALLATION

About safety symbols

This manual and the terminal are indicated the following safety symbols for your correct operation to prevent your and somebody's injury or damage to the product and assets. The symbols and descriptions are as follows.

You should understand well them before reading this manual and operating the terminal.

⚠ **DANGER**	This symbol denotes high risk of causing death or serious injury.
⚠ **WARNING**	This symbol denotes that improper handling poses a risk of causing death or serious injury.
⚠ **CAUTION**	This symbol denotes that improper handling poses a risk of causing injury or damage to the product and/or assets.

Examples of symbols

The △ symbol indicates denotes DANGER, WARNING or CAUTION.
The inside illustration of the △symbol denotes meaning of the DANGER, WARNING or CAUTION more concretely. (This example warns of possible electrical shock.)

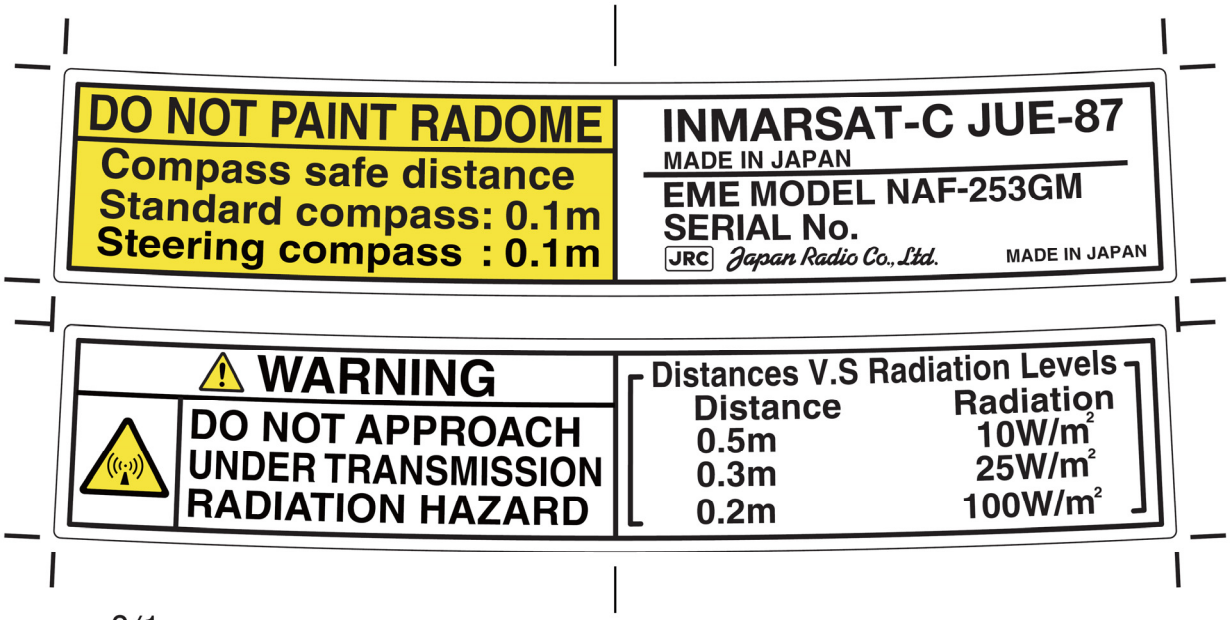
The ⃠ symbol denotes prohibited action.
The inside illustration of the ⃠ symbol denotes the specific prohibited action more concretely. (This example indicated disassembly is prohibited.)

The ● symbol obligatory operation or instruction.
The inside illustration of the ● symbol denotes obligatory operation or instruction more concretely. (This example indicates unplugging is the obligatory instruction.)

ABOUT WARNING LABELS

Below mentioned warning labels are put on JUE-87. Do not take off, destroy, or modify these labels.

Labels put on EME



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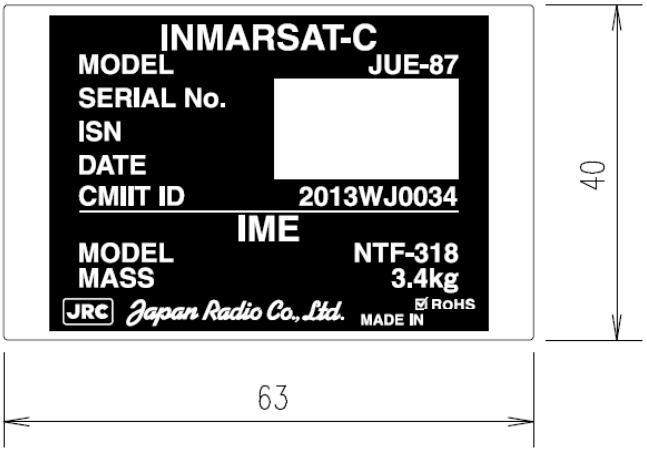
Labels put on IME

<Type1>



<Type2>


警告 WARNING
保守員以外は、装置を
分解しないで下さい
NO USER SERVICEABLE
PARTS INSIDE.
REFER SERVICING TO
QUALIFIED PERSONNEL.
IMPORTANT
Compass safe distance
Standard compass : 1.1m
Steering compass : 0.7m
50
44

CAUTIONS TO BE USED DURING OPERATION

⚠ DANGER

Do not touch any internal parts with your hands or tools to avoid danger of electronic shock.

Immediately after printing, the printing head is still very hot, don't touch it until it is cool down.

⚠ WARNING

Do not bring JUE-87 (EME) close to the fire, or put it in the fire. It causes the explosion, generation of heat.

Do not approach the JUE-87 (EME) while transmitting, It transmits microwave and strong microwave might be cause injury.

If a foreign substances, such as metal fragment, water, liquid and etc., are get into your JUE-87, turn off the power and contact with the agent you purchased or JRC branches. Continuous operation may cause fire, electrical shock or malfunction.

Ask maintenance and the adjustment of JUE-87 internal equipment to our sales department or nearest branch office.

Do not turn on the terminal under the primary power except the specific voltage (mentioned below).The primary power except the specific voltage may cause fire, electrical shock or malfunction.
DC+24V (+19.2 V to +31.2 V) (When standard PSU, NBD-904 is used)

Do not adjust the internal circuit or exchange the parts because the internal circuit is adjusted strictly. When an abnormal operation is found, please contact with our sales department or nearest branch office.

Do not check or repair the internal equipment of JUE-87 by yourself.
Any electrical work by any person other than our specialized maintenance persons may cause fire or abnormal operation of this equipment or electrical shock. This equipment meets the technical standard of the Ministry of Internal affairs and Communications (MIC).

Do not take apart, and do not remodel the equipment. It may cause a fire, the electric shock, and the breakdown.

Ask our agency or office to dispose JUE-87 (EME). Illegal disposal may heat-up, firing, which is affected by the impact or submerged of water.

CAUTIONS TO BE USED DURING OPERATION

⚠ CAUTION

Before operating JUE-87, read the operation manual carefully.
Inappropriate procedure may cause incorrect operation or malfunction.

When a failure has been detected, check it according to the Trouble shooting described in this book. If abnormalities are still accepted, restart the terminal. Nevertheless abnormalities are still accepted, stop operation and contact the dealer or agent from which you purchased the device or one of our branches, marketing offices, and representative offices.

＜EME＞

Do not give mechanical shock and force, because all units of EME are precision instrument. Unwanted shock and force may cause malfunction.

Do not paint radome. Painting of radome may cause decrease of the communication quality.

＜IME＞

Do not use the IME to other purpose.
It may cause a problem that unable to be transmitted in the emergency.

DISTRESS ALERT TRANSMISSION PROCEDURES

- DO NOT REQUEST THE DISTRESS ALERT EXCEPT IN AN EMERGENCY
- The distress alert is routed to RCC (Rescue Coordination Center).
- If the false distress request is transmitted, take the following instructions immediately.
  (1) Stop the transmission power immediately.
  (2) Report the following information to the Nearest Maritime Safety Office or Station or the Operations Center, Administration Division, Guard & Rescue Department, Maritime Safety Agency (TLX: +72-222-5193 JMSAHQ J, TEL: +81-3-3591-9000).
    (a) Ship's Name, Type and Flag
    (b) Main ID Number
    (c) Position and Time at the false transmission
    (d) Cause of the false transmission
    (e) MES type, Serial Number and Delivery Date

  Register the distress message in advance before transmitting the distress alert at the distress window in Main menu.
- Distress alert is retransmitted after the device is restarted, when momentary disconnection is occurred in the device during the distress alert transmitting. However, please note that distress alert is not retransmitted in the following cases.
  (1) When power switch of device is turned OFF/ON
  (2) When power switch of External power supply unit is turned OFF/ON
  (3) When the reset button of IME is turned ON
  (4) When the ship is recovered from blackout
  (5) When a random failure is occurred on device.

Step	DB* Operation	IME Response	Remarks
1	• Open hinged cover and press DISTRESS button till the buzzer sounds.	• IME displays **"SOS"**. • The buzzer starts sounding 0.5 sec ON 1.0 sec OFF.	• If you do not want to initiate a distress alert, immediately release the button within 4 sec.
2	• Distress alert is transmitted after continuously pressing DISTRESS button for 4 sec or more.	• The buzzer sounds continuously. • IME displays **"Distress Alert Transmission"**.	• When the JUE-87 is tuning to LES channel, the **SYNC** LED blinks. • The distress message registered in main unit is transmitted.

* DB: Distress button

Note 1) Please register the Distress message to the Distress window in main menu beforehand, prior to transmitting the Distress Alert.

Note 2) **To stop Distress alert transmission, press X key or Y key while holding down Ctrl key.**

ACRONYMS AND ABBREVIATIONS

A

AC ..... **Alternating Current**

ACK ..... **Acknowledgement**

AFC ..... **Automatic Frequency Control**

AGC ..... **Automatic Gain Control**

ALM ..... **Alarm**

AMER ..... **Americas**

AMVER ..... **Automated Mutual-assistance Vessel Rescue system**
A vessel position-reporting system operated by the United States Coast Guard for any merchant vessel of 1000grt or more on a voyage lasting longer than 24 hours, to and from anywhere on the world.

ANSI ..... **American National Standard Institute**

Answerback:
An identifier given to an Inmarsat MES and used in message transmissions. The format must be four letters (A-Z; no numbers) finishing with an x.

ANT ..... **Antenna**

AOR ..... **Atlantic Ocean Region**

AOR-E ..... **Atlantic Ocean Region (East).**

AOR-W ..... **Atlantic Ocean Region (West).**

APAC ..... **Asia-Pasific**

ARQ ..... **Automatic Request Repeat**
The error correction process used in store-and-forward messaging by which a receiver checks for errors in received data packets and requests the sending end to re-transmit any packets which were received containing an error.

ASCII ..... **American Standard Code for Information Interchange**
A standard alphanumeric character set based on 7-bit codes.

AUSREP:
A vessel position-reporting system similar to AMVER, but operated by the Australian Authorities.

B

Backup:
A copy of a program or document that you can use if the original is destroyed. To back up is to make a copy.

BAM ..... **Bridge Alert Management**

BB ..... **Bulletin Board**
Operational information of LES, which send from satellite to each ship.

BBER ..... **Bulletin Board Error Rate**
Used as a measure of the quality of reception by the MES of the Bulletin Board of a TDM Channel.

BCD ..... **Binary Coded Decimal**

BER ..... **Bit Error Rate**
Bit: The basic unit of digital communications; may be either 1 or 0.

BPS ..... **bit per second**
A unit of measurement for speed of data transfer or throughput.

BPSK ..... **Binary Phase Shift Keying**

BS ..... **Backspace**

Bulletin Board (in a TDM channel):
A data packet transmitted in each frame of a TDM channel, which contains information about the status of the Inmarsat B/M, mini-M and C network configurations, and the current frame number, used by the MES as a timing reference.

BUZ ..... **Buzzer**

Byte:
One byte comprises eight bits and may represent either one alphanumeric character or numeric information.

C

Channel number:
The number representing the frequency of an Inmarsat communications channel.

Character:
One element of an alphanumeric character set. One character is equivalent to one byte or eight bits.

Class 1 Inmarsat C MES:
A Class 1 MES is capable of ship-to-shore and shore-to-ship message transfer and distress alerting, but is not capable of receiving EGC messages.

Class 2 Inmarsat C MES:
A Class 2 MES is capable of two modes of operation (selected by the operator):

- As Class 1, and also capable of receiving EGC messages when not engaged in Inmarsat C traffic.
- Ready for EGC message reception exclusively (and not available in that mode for Inmarsat C message transfer).

Class 3 Inmarsat C MES:
A Class 3 MES has two independent receivers, one for receiving two-way Inmarsat C messages, the other for receiving EGC messages.

Closed network:
A private network, with access limited to registered users. The Inmarsat C system allows two types of closed networks: data reporting networks, identified by a Data Reporting Network Identification (DNID) code, and EGC Fleet NET networks, identified by an EGC Network Identification (ENID) code.

Closed user Group:
A private network available only to a group of registered users. Access from the public network being barred to non-registered users.

CNID ..... **Closed Network Identification**

COMM ..... **Communication**

Command:
The generic name for anything you tell a computer program to do.

Commissioning:
The process by which an MES is registered for use via the Inmarsat network.

CPU ..... **Central Processing Unit**

CR ..... **Carriage Return**
One of a code for line feeding.

CSDN ..... **Circuit Switched Data Network**

CUG ..... **Closed User Group**
Private network used by the registered user only. Unregistered user cannot be accessed from public network.

D

Data reporting:
A short data packet transmitted in burst mode on the MES signaling channel as a result of a polling telecommand or at the initiative of the MES (operator).

Data services:
This is how a terminal may send and receive electronic messages such as e-mail.

dB ..... **Decibels**

DB ..... **Distress Button**

DC ..... **Direct Current**

DCE ..... **Data Circuit Terminating Equipment**
A component part of an Inmarsat C MES. An MES contains a DCE receiver and a DCE transmitter, which are used for communication between the MES and an Inmarsat C LES.

DEC ..... **Decoder Circuit**

DEL ..... **Delete**

DEM ..... **Demodulator Circuit**

Distress alert:
In the Inmarsat-C system, a packet transmitted to an LES or an NCS on a signaling channel by maritime MES in distress. A distress alert provides information on a ship's identity, position, course, speed and the nature of distress. A distress alert has the highest priority in the Inmarsat-C system.

Distress priority message:
In the Inmarsat-C system, a store and forward message carried on a messaging channel having Distress Priority. Used for distress communications between maritime MESs and RCCs.

DMG ..... **Distress Message Generator**

DNID ..... **Data Network Identification code**
See data report (unreserved), data report (reserved) and data report (pre-assigned).

Downloading:
The process by which an Inmarsat C MES receives information from a service provider. For data reporting purposes, an operational center downloads a DNID code and Member Number to the MES. In the EGC Fleet NET^{TM} service, an information provider downloads an EGC Network Identification (ENID) code to an MES.

DR ..... **Data Reporting**

DS ..... **Data Source**

DTE ..... **Data Terminal Equipment**
A component part of an Inmarsat C MES, used primarily for storage and interfacing external devices (such as a keyboard or monitor). For other Inmarsat systems, this can be a computer connected to the MES for use for data communications.

E

EDR ..... **Enhanced Data Reporting**

EEPROM ..... **Electrically Erasable and Programmable ROM**
Read only Memory that is able to delete and rewrite electrically.

EGC ..... **Enhanced Group Call**
The system for broadcasting messages via Inmarsat C mobile satellite communications system that supports two services: SafetyNET and FleetNET.

EIA ..... **Electronic Industries Association**

EIRP ..... **Equivalent Isotropically Radiated Power**
Effective Isotropically Radiated Power, a measure of transmitted power.

E-mail ..... **Electronic mail**
A global message-handling system whereby subscribers to commercial e-mail services can exchange electronic messages and data files between computers. E-mail services are provided by some service providers and private organizations. Access to e-mail services may be via PSTN, PSDN networks or the Internet.

EME ..... **Externally Mounted Equipment**

EMEA ..... **Europe, Middle East and Africa**

ENID ..... **EGC network identification**

EOF ..... **End Of File**

EPADR ..... **Enhanced Pre-assigned Data Reporting**

EXT ..... **External**

E/W ..... **East/West**

F

FleetNET:
A commercial service for the broadcasting and automatic reception of fleet management and general public information by means of direct printing through Inmarsat's EGC system.

Footprint (of a satellite):
The area on the Earth's surface (sea or land) covered by the satellite and where an antenna can obtain line-of-sight communications. In the Inmarsat systems, this area is also known as the ocean region or coverage area.

FRLP ..... **Forward ID Return ID Link Pair**

FTU ..... **Frequency Translation Unit**

G

GMDSS ..... **Global Maritime Distress and Safety Service**
GMDSS: Global Maritime Distress and Safety System with the basic concept that SAR authorities ashore, in addition to shipping in the vicinity of a casualty, must be rapidly alerted of the distress event so that they can assist with coordinated SAR operation with minimum delay (or a similar definition).

GPS ..... **Global Positioning System**
System that provides the geographic location of a vessel. This service uses American military satellites, which have been made available for civilian use.

Ground segment:
The network of LESs which provide a link between the space segment and the terrestrial telecommunication networks.

H

HPA ..... **High Power Amplifier**

HYB ..... **Hybrid**

I

IA5 ..... **International Alphabet number 5**
A standard alpha- numeric character set, also known as ASCII, based on 7-bit codes. Supports both upper and lower case characters.

ID ..... **Identity**

IF ..... **Intermediate Frequency**

IFU ..... **Intermediate Frequency Unit**

IHO ..... **International Hydrographic Organization**

IME ..... **Internally Mounted Equipment**

IMN ..... **INMARSAT Mobile Number**
The number assigned by the national routing organization to an Inmarsat MES as its identity number. An Inmarsat C maritime IMN has the format 4xxxxxxxx.

IMO ..... **International Maritime Organization**

INFO ..... **Information**

INMARSAT ..... **International Maritime Satellite Organization**
The operator of global mobile satellite communications, part of the Inmarsat Ventures Ltd group of companies.

Inmarsat C:
A digital system based on a low-cost MES with low power consumption. This system provides global two-way store-and-forward messaging, distress alerting, EGC Safety NET™ and Fleet NET™, data reporting and polling.

I/O ..... **Input/Output**

IOR ..... **Indian Ocean Region**

ISDN ..... **Integrated Services Digital Network**

ISO ..... **International Organization for Standardization**

ITA ..... **International Telegraph Alphabet**

ITA2 ..... **International Telegraph Alphabet 2**
A standard alphanumeric character set, generally used for sending messages on the international telex networks. The character set is based on 5-bit codes, also known as telex format, or 5-bit packed.

ITU ..... **International Telecommunication Union**

J

JASREP:
A vessel position-reporting system similar to AMVER, but operated by the Japanese authorities.

K

Kbytes:
1024 bytes or 128 characters.

L

LCD ..... **Liquid Crystal Display**

LED ..... **Light Emitting Diode**

LES ..... **Land Earth Station**
Land Earth Station. A fixed land station in the Inmarsat satellite communications system acting as a gateway between the space segment and the terrestrial communication networks.

LES TDM channel:
A TDM channel used by an LES to transmit system information and data addressed to an MES.

LMSS ..... **Land Mobile Satellite Service**

Log in:
The action performed on an Inmarsat C MES to inform the NCS in an ocean region that the MES is available for communications.

Log out:
The action performed on an Inmarsat C MES to inform the NCS in an ocean region that the MES is not available for communication.

LNA ..... **Low Noise Amplifier**

LSB ..... **Least Significant Bit**

LT ..... **Local Time**

M

Member number:
The number downloaded with a DNID to an MES, when the MES is registered to a data-reporting network.

MES ..... **Mobile Earth Station**
Mobile Earth Station. A mobile user terminal in the maritime mobile-satellite service located aboard a ship.

Message channel:
A channel assigned by the NCS for an MES to send a message through an LES to its required destination.

METAREA:
A geographical sea area established for the purpose of coordinating the broadcast of marine meteorological information.

MHS ..... **Message Handling System**

MID ..... **Mobile Identification Digit**
3-digit number which identify the country of registration of the mobile terminal (or similar definition)

MMSI ..... **Maritime Mobile Service Identity**
A nine-digit format assigned by the maritime authority to identify a vessel. The first three digits are the code of the country where the vessel is registered as defined by the ITU.

MMSS ..... **Maritime Mobile Satellite Service**

MOD ..... **Modulator**

Modem ..... **MODulator/DEModulator**
A device used to transmit digital data, by converting (modulating) a digital signal into an analogue form and re-converting (demodulating) the analogue signal into digital form at the receiving end.

MSB ..... **Most Significant Bit**

MSI ..... **Maritime Safety Information**
Navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships (as defined in Regulation IV/2 of the 1974 SOLAS Convention, as amended).

N

NAVAREA ..... **Navigational Area**
A geographical sea area established for the purpose of coordinating the broadcast of navigational warnings.

NAVTEX ..... **MF Navigational Broadcast Service**
The system for the broadcast and automatic reception of Maritime Safety information by means of narrow-band direct-printing telegraphy.

NCS ..... **Network Coordination Station**
A fixed land station in the Inmarsat satellite communications system which controls channel assignments and provides network management functions in each satellite ocean region. NCSs also transmit EGC messages on the NCS common channel.

NCS Common Signaling Channel:
Also known as the NCS Common Channel. A TDM channel used by the NCS to transmit system information and message announcements to MESs.

NMEA ..... **National Marine Electronics Association**

N/S ..... **North/South**

O

OCC ..... **INMARSAT Operations Control Centre**

Ocean region:
The coverage area of an Inmarsat satellite within which an MES may send and receive messages.

OSC ..... **Oscillator**

P

Packet:
An envelope or block of data sent over a network; each packet contains addressing information as well as the data being sent.

PC ..... **Personal Computer**

PEP ..... **Packet Error Probability**

PER ..... **Packet Error Rate**

PIN ..... **Personal Identification Number**

Polling:
The facility whereby an operational center sends an instruction (a polling command) to selected MESs to perform a defined task, such as returning a pre-assigned data report or performing a SCADA operation.

POR ..... **Pacific Ocean Region**

Presentation code:
A code included in a transmission (ship-to-shore or shore-to-ship), indicating to the recipient the presentation or formatting of the data contained in the message.

Protocol:
A defined set of communications standards, which lay down the parameters to which all users must abide. Protocols in general use are X.25 and X.400.

PROM ..... **Programmable Read Only Memory**
PSA ..... **Point of service activation**
PSDN ..... **Packet Switched Data Network**
PSPDN ..... **Packet Switched Public Data Network**
PSTN ..... **Public Switched Telephone Network**
PSU ..... **Power Supply Unit**
PVT ..... **Performance Verification Test**

R

RAM ..... **Random Access Memory**
RCC ..... **Rescue Coordination Center**
RDB ..... **Remote Distress Button**
REC ..... **Receiving level**
ROM ..... **Read Only Memory**
RX ..... **Receive/Receiver**

S

SafetyNET
The international service for the broadcasting and automatic reception of MSI through Inmarsat EGC system. SafetyNET receiving capability is part of the mandatory equipment which is required to be carried by certain ships under the provisions of chapter IV of SOLAS Convention 1974, as amended.

SAR ..... **Search and Rescue**

Satellite coastal warning area
A unique and precisely defined sea area within a NAVAREA/METAREA or Sub-Area established by a coastal state for the purpose of coordinating the broadcast of coastal maritime safety information through the SafetyNET service.

SDM ..... **System Definition Manual**
SFU ..... **Store and Forward Unit**

Signaling channel (MES - LES):
A random access TDMA channel, used by an MES to transmit signaling information and data to an LES.

Signaling channels (MES - NCS):
A random access TDMA channel, used by an MES to transmit signaling information and data to an NCS.

SLCA ..... **Slot Logical Channel Assignment**

SOLAS ..... **International Convention for the Safety of Life at Sea**

Space segment:
Consists of the communications satellites operated by Inmarsat.

Special access code:
A destination address code used in a ship-to-shore or shore-to-ship message to access a special service provided by a service provider. The two-digit codes are examples of special access codes.

SYNC ..... **Synchronization**
SYNTH ..... **Synthesizer**

T

TDM ..... **Time Division Multiplex**
The process by which multiple signals can share the same communication channel, each using a different time slot.

TDMA..... **Time Division Multiple Access**
The process by which MESs communicate with an LES or NCS.

TDM channel:
The Inmarsat system uses different TDM channels, each transmitted on a unique frequency. The TDM channels are used for system control and message transfer to MESs. See LES TDM Channel and NCS Common Channel.

Time slot:
Basic unit into which one time frame of a TDM channel is divided.

TX ..... **Transmit/Transmitter**

U

UDP..... **User Datagram Protocol**

User defined area
A temporary geographic area, either circular or rectangular, to which maritime safety information is addressed.

UTC ..... **Coordinated Universal Time**
Universal Coordinated Time. A term, which for practical purpose has the same meaning as Greenwich Mean Time (GMT).

V

VCXO ..... **Voltage Control Crystal Oscillator**

W

WMO..... **World Meteorological Organization**

Others

5-bit packed (also known as telex format or ITA2):
A format based on 5-bit codes used for sending alphanumeric characters to and from telex terminals.

7-bit ASCII:
A format based on 7-bit codes used for sending the alphanumeric characters of the ASCII character set.

8-bit data:
A format based on 8-bit codes used for encoding information such as text, national character sets and numerical information.

TABLE OF CONTENTS

CHAPTER 1. GENERAL

This manual covers the installation, operation, and maintenance of the MES (Mobile Earth Station) JUE-87 for Inmarsat-C satellite communications.

The Inmarsat-C satellite communications provides text and data transmission to and from Inmarsat-C MES and terrestrial subscribers via a variety of public networks. It also carries the EGC (Enhanced Group Call) message.

JUE-87 provides the following functions;

(a) Store and Forward message transfer

(b) Distress Alert and Distress Priority Messaging

(c) EGC message reception when not engaged in Inmarsat-C traffic (Inmarsat-C Class 2)

(d) Position and/or file transfer by a polling command from shore using store and forward message transfer

(e) Scheduled position and/or file transfer using store and forward message transfer

(f) Position and/or Data Reporting, Enhanced Data Reporting (EDR) and Enhanced Pre-Assigned Data Reporting (EPADR) using data reporting protocol specified by Inmarsat (depends on LES facility)

(g) Long-Range Identification Tracking (LRIT) function (by improved version of data reporting)

(h) INM-C service support via LAN

(i) JRC Remote Maintenance Service support

(j) Bridge Alert Management (BAM) function in accordance with IEC62923-1 and IEC62923-2

(k) EGC Output function in accordance with IEC61097-4 ed3.1.

CHAPTER 2. COMPOSITION

2.1 JUE-87 Installation Wiring Diagram, Components and Supplied Parts List

2.1.1 Installation Wiring Diagram

The following diagram is for stand-alone mounting type.

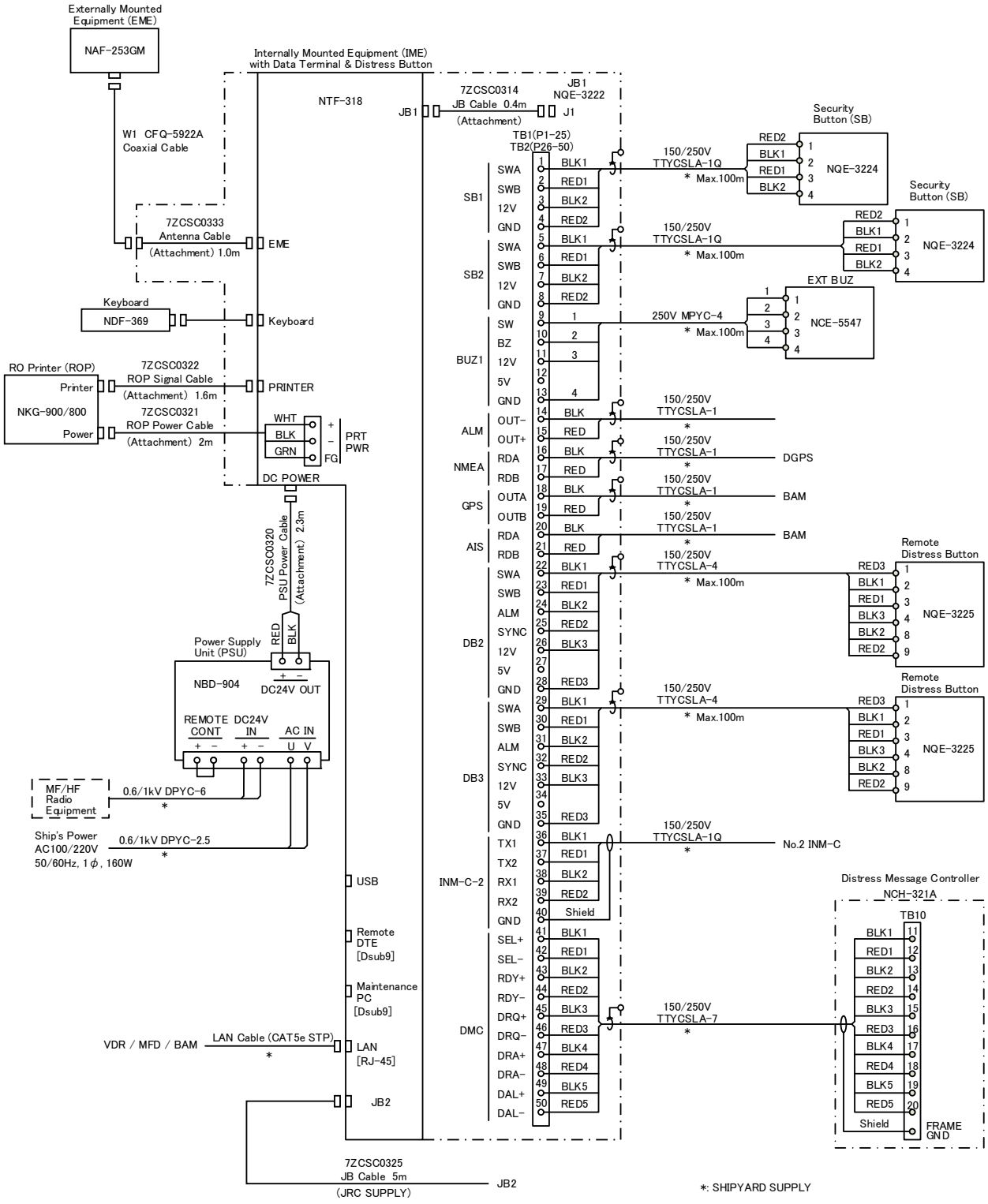
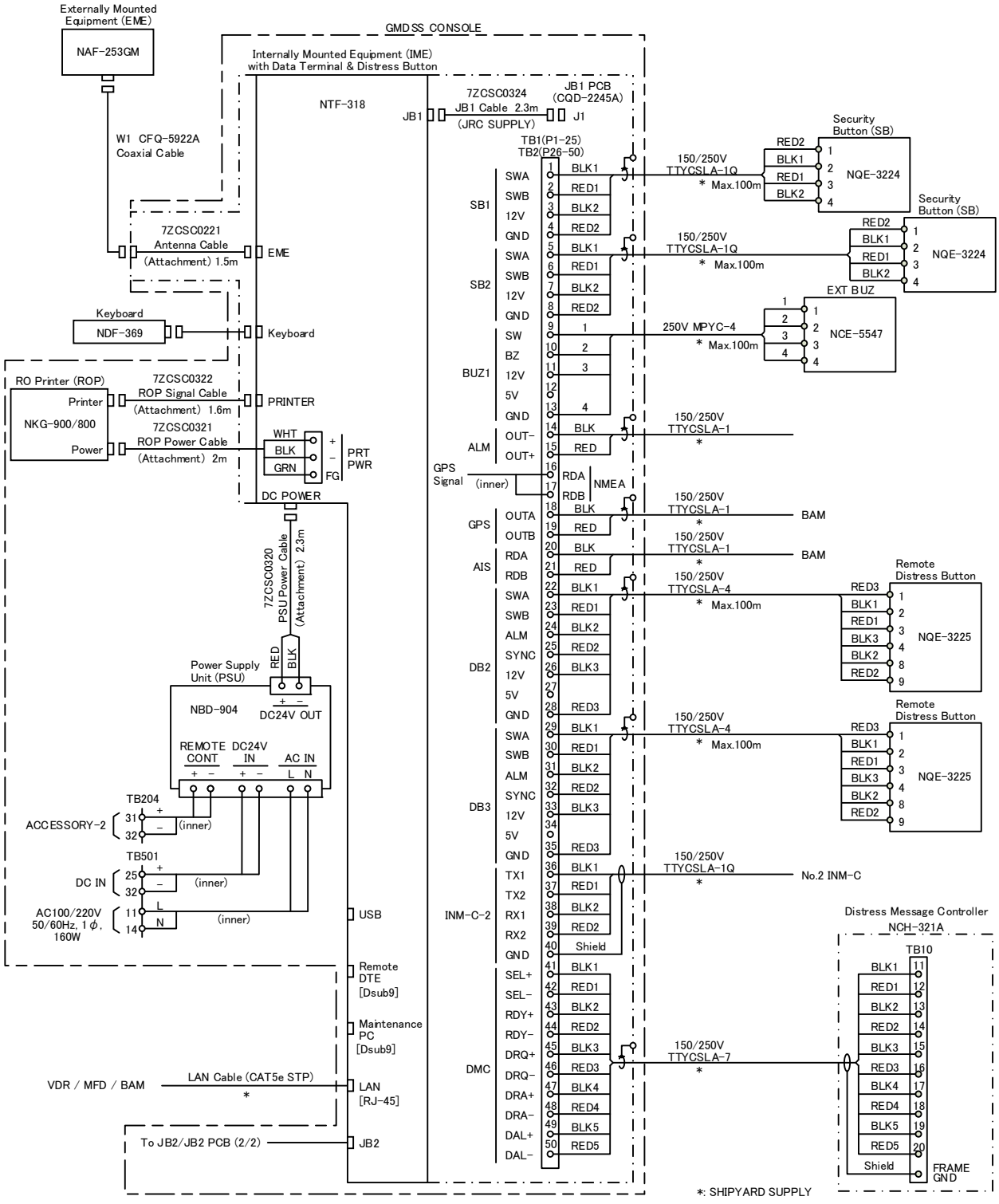


Fig.2.1.1a Wiring Diagram Inmarsat-C JUE-87 Mobile Earth Station (Stand-alone, JB1)



The following diagram is GMDSS console mounting type.

Fig.2.1.1b Wiring Diagram Inmarsat-C JUE-87 Mobile Earth Station (GM console, JB1)

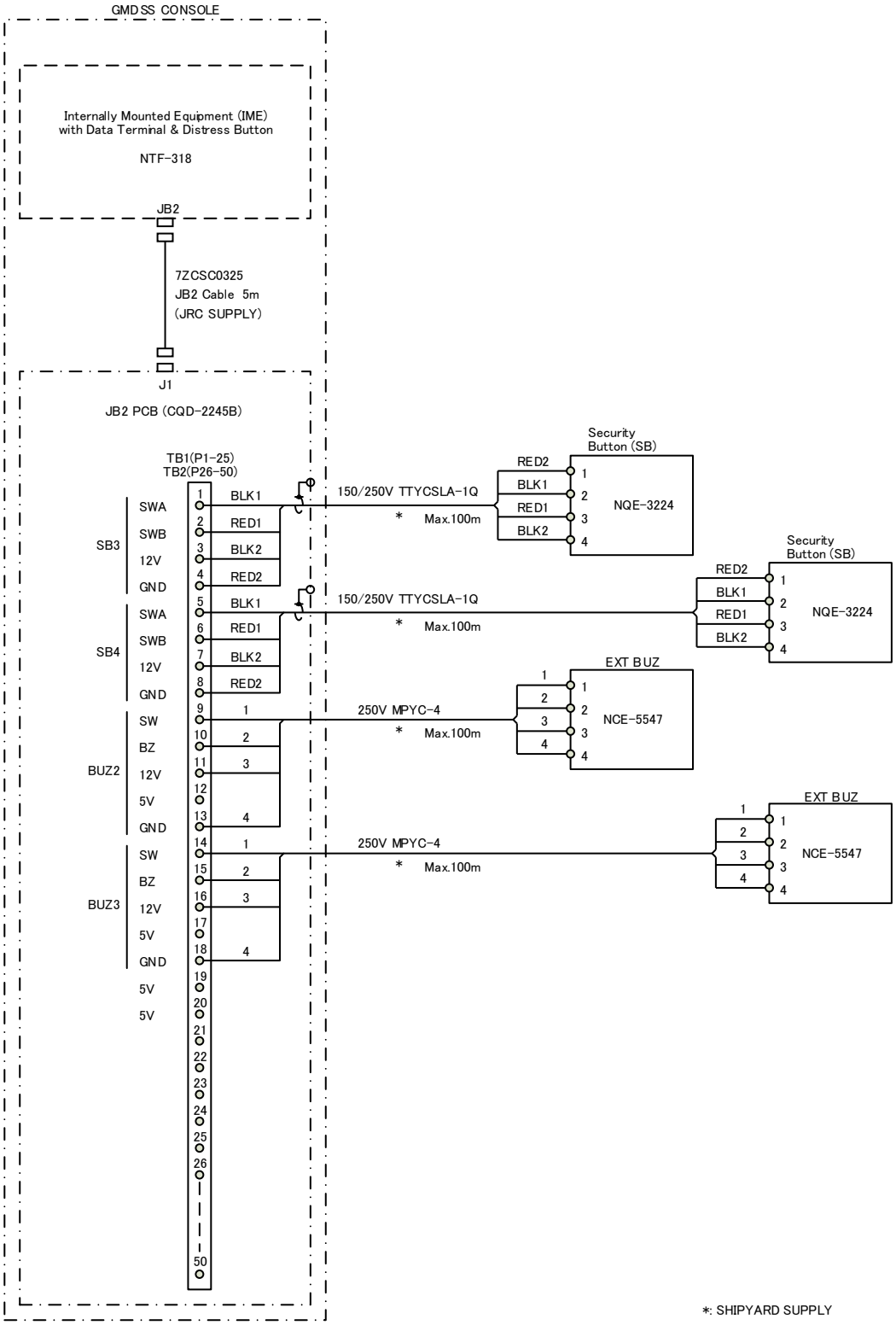


Fig.2.1.2 Wiring Diagram Inmarsat-C JUE-87 Mobile Earth Station (JB2)

2.1.2 Components List

Table 2.1.2 Components List

	No.	Name of component	Type	Q'ty
JUE-87 (Standard Components)	1	EME (Externally Mounted Equipment)	NAF-253GM	1
	2	IME (Internally Mounted Equipment)	NTF-318	1
	3	Keyboard	NDF-369	1
	4	Printer	NKG-900/NKG-800	1
	5	EXT PSU (Externally Power Supply Unit)	NBD-904	1
	6	Coaxial cable (Between IME coaxial cable and EME)	CFQ-5922A	1
	7	JB1 Board	CQD-2245A	1
	8	Spare parts	7ZXSC8702*/7ZXSC8701*	1
	9	JUE-87 Instruction Manual	7ZPSC0444A	1
	10	JUE-87 Installation Manual	7ZPSC0446A	1
	11	JUE-87 Operation Guide	7ZPSC0448	1
(Optional Components)	1	Remote Distress Button	NQE-3225	1 to 2
	2	DTE	NDZ-227	1
	3	Keyboard	NDF-369	1
	4	JB1	NQE-3222	1
	5	Security Button	NQE-3224	1 to 4
	6	EXT BUZ (External Buzzer)	NCE-5547	1 to 3
	7	JB2	NQE-3223	1
	8	JUE-87 SSAS Option Instruction Manual	7ZPSC0450	1
	9	JUE-87 SSAS Option Operation Guide	7ZPSC0452	1
		JUE-87 COMMON USE TYPE OPTION INSTALLATION GUIDE	7ZPSC0571	1
		JUE-87 Common Use type Option Operation Guide	7ZPSC0573	1

- "Standard components" means the needful units for Inmarsat-C Mobile Earth Station.
- Use the cable [150/250V TTYCSLA-4] to connect IME and remote Distress button.
- Use the cable [250V MPYC-7] to connect IME and EXT BUZ.
- When the common use type option's Remote Distress Button, Security Button and Distress Message Controller is installed with two JUE-87 terminals, refer to separate volume [JUE-87 Common Use type Option Operation Guide (code No. 7ZPSC0573)].

" *" means revision, such as A,B and so on

2.1.3 Supplied Parts by JRC

Table 2.1.3a Supplied parts by JRC for EME Installation

No.	Name	Type	Q'ty	Remarks	Application
1	Fixing Band	MPBP31867	1	Single unit by two	
2	Painting Protection Material	MPXP33556	1		
3	Self Bandaging Tape	BRXP05369	1		
4	Packing List	MTZ304557	1		

Table 2.1.3b Supplied parts by JRC for IME Installation

No.	Name	Type	Q'ty	Remarks	Application
1	JB1 Board	CQD-2245A	1	Junction PCB	On Console
2	JB1	NQE-3222	1	Including JB1 Board, IME Coaxial Cable and JB1 Cable	On Stand
3	Tapping Screw	BRTG10227	4		
4	Knob bolt	MPTG30053A	2		
5	Rubber Spacer	MTT315177	2		
6	Packing List	MANQE5191C	1		
7	Earth Cable	7ZCSC0240*	1		

" *" means revision, such as A,B and so on

Table 2.1.3c Others

No.	Name	Type	Q'ty	Remarks	Application
1	Cover	MTV305087	8	For IME corner	Including spare
2	Ferrite Core		3	For Power Supply Cable LAN Cable	
3	IME Label		1	For Spare label on console	
4	Note for IME Label		1		
5	Register Sheet		1		
6	Envelope for Airmail		1		

Table 2.1.3d Supplied Cables by JRC for IME Installation

No.	Name	Type	Q'ty	Remarks	Application
1	EXT PSU Cable (IME to EXT PSU)	7ZCSC0320*	1		
2	Printer Signal Cable (Printer to IME)	7ZCSC0322*	1		
3	Printer Power Cable (Printer to IME)	7ZCSC0321*	1		
4	JB1 Cable (JB1 to IME)	7ZCSC0314*	1	0.4m	On stand
5	JB1 Cable (JB1 to IME)	7ZCSC0324*	1	2.0m (Option)	On wall
6	JB2 Cable (JB2 to IME)	7ZCSC0325*	1	5m (Option)	
7	DTE Signal Cable (DTE to IME)	7ZCSC0203*	1	Option	
8	DTE Power Cable (DTE to Ext PUS)	7ZCJD0419*	1	Option	

" *" means revision, such as A,B and so on

2.1.4 Parts for Installation (Prepared by Shipyard)

Table 2.1.4 Required Cables

No.	Part	Description	Q'ty	Remarks	Application
1	PVC tape	Vinyl tape	1	L = 15m	For protecting cable
2	Copper plate	JIS H 3100	1	W = 30mm, t = 0.2mm	For grounding IME
3	Pole		1		For mounting EME

2.1.5 Required Tools

Table 2.1.5 Required Tools

No.	Tool	Description
1	Open-ended spanner	Nominal 13 (for M8)
2	Plus screwdriver	

2.1.6 Consumable Supplies and Spare Parts List

Table 2.1.6a Consumable Supplies List

No.	Name	Type	Remarks	Application
1	Roll paper Recording paper (1PLY)	5ZPAL00002	105m	
		5ZPCM00020	98m	
2	Print head unit	5ZYWZ00001	For Printer(NKG-800)	
3	Ink ribbon	7ZZJD0105*	For Printer(NKG-900) Color: Black	
		5ZZCM00003	For Printer(NKG-800) Color: Black	

” *” means revision, such as A,B and so on

Table 2.1.6b Spare Parts List (H-7ZXSC8702A)

No.	Name	Type	Q’ty	Remarks	Application
1	Fuse (DC32 10A)	5ZFCK00015	6	For IME	
2	Fuse (DC32 15A)	5ZFCK00021	6	For Ext PSU	

2.2 JUE-87 (Standard Components)

2.2.1 EME (Externally Mounted Equipment: NAF-253GM)

EME is connected to IME with a coaxial cable. The cable can be extended to maximum 100 m.

Fig.2.2.1 EME

2.2.2 IME (Internally Mounted Equipment: NTF-318)

IME is consists of Interface Unit, Power Supply Unit, Process Circuit, Color LCD Unit, I/F Circuit and USB I/F Circuit.

Fig.2.2.2a IME

Table 2.2.2a The LED Indicates the MES Status (Refer to Fig.2.2.2a)

NAME	ON	OFF
(2) POWER LED	MES power on	MES power off
(3) READY LED	MES receives NCS TDM carrier correctly and login is completed.	MES does not receive NCS TDM carrier correctly. Or, it does not log-in, although MES has been receiving NCS TDM career correctly.
(4) COMM LED	MES is communicating.	MES is idle.

Table 2.2.2b The Switch and the Button Function (Refer to Fig.2.2.2a)

Name	Function	Remarks
(1) Screen Angle Adjust Knob	Used to adjust the screen angle (up to 25digrees) to clearly.	
(5) Distress Button	Used to send Distress Alert	
(6) Dimmer Button	Used to adjust the screen and each LED (POWER/READY/COMM) dimmer.	
(7) POWER Switch	Used to turn on MES power	
(8) USB Port	Connect an USB flash memory.	

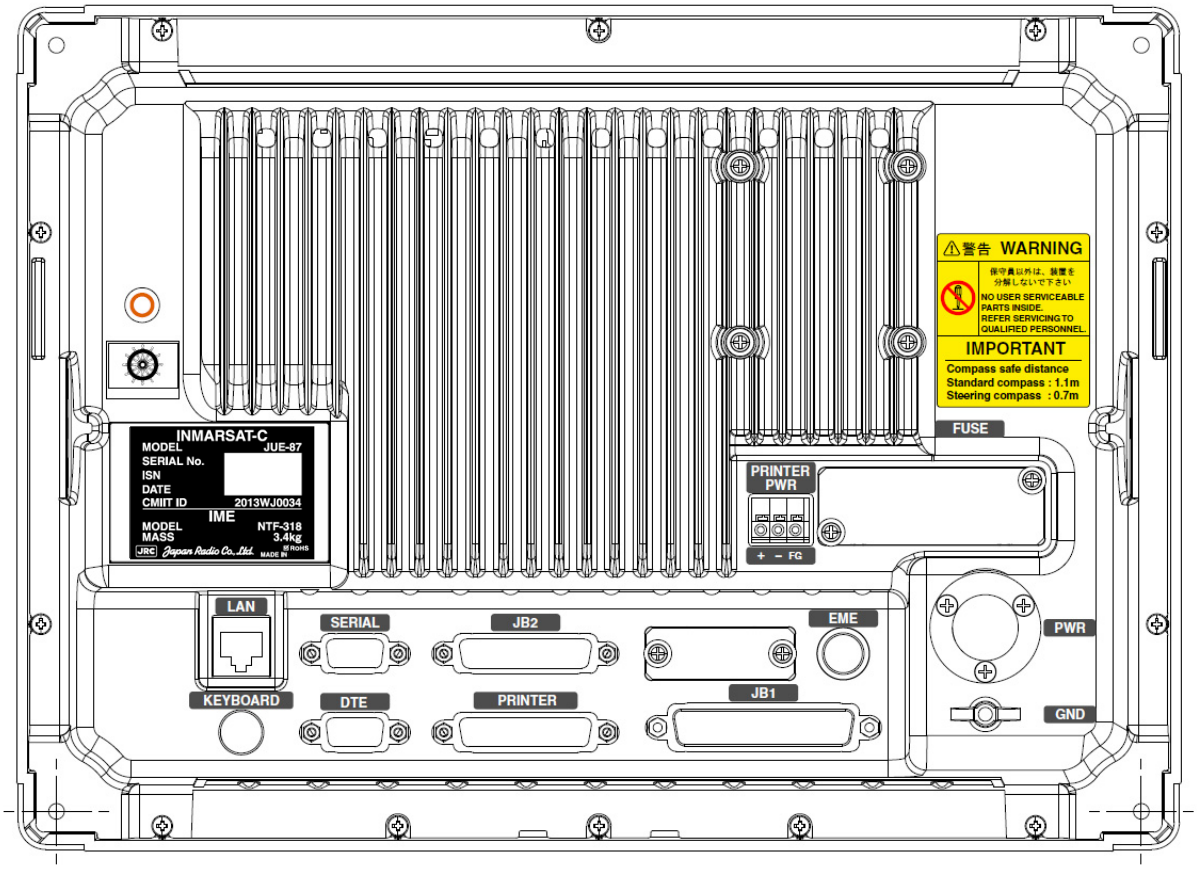


Fig.2.2.2b Back View of IME

Table 2.2.2c Connectors and the Cable (Refer to Fig.2.2.2b)

Name	Connected from/to
LAN Port	PC or HUB for RMS
KEYBOARD Port	KEYBOARD
SERIAL Port	(Not USED)
DTE Port	DTE
JB2 Port	JB2
PRINTER Port	PRINTER
JB1 Port	JB1
EME Port	EME
PWR Port	External Power Supply
GND Port	GND
PRINTER PWR Port	PRINTER

2.2.3 Printer (NKG-900/NKG-800)

The printer (NKG-900/NKG-800) is connected Internally Mounted Equipment (IME) to take a hard copy of transmitted, received and edited messages.

<NKG-900>

NOTE

- Keep [ON LINE] status at all time. Received message is not printed out in [OFF Line] status.
- When status is off line: received message is not printed.
- Use a roll-paper (JRC code: 5ZPAL00002/5ZPCM00020 for one-sheet copy) and ink ribbon (7ZZJD0105*)
- While a power supply is on, it isn't possible to turn paper feed knob manually.

Do not use except above mentioned products, for keep normal operation.

” *” means revision, such as A,B and so on

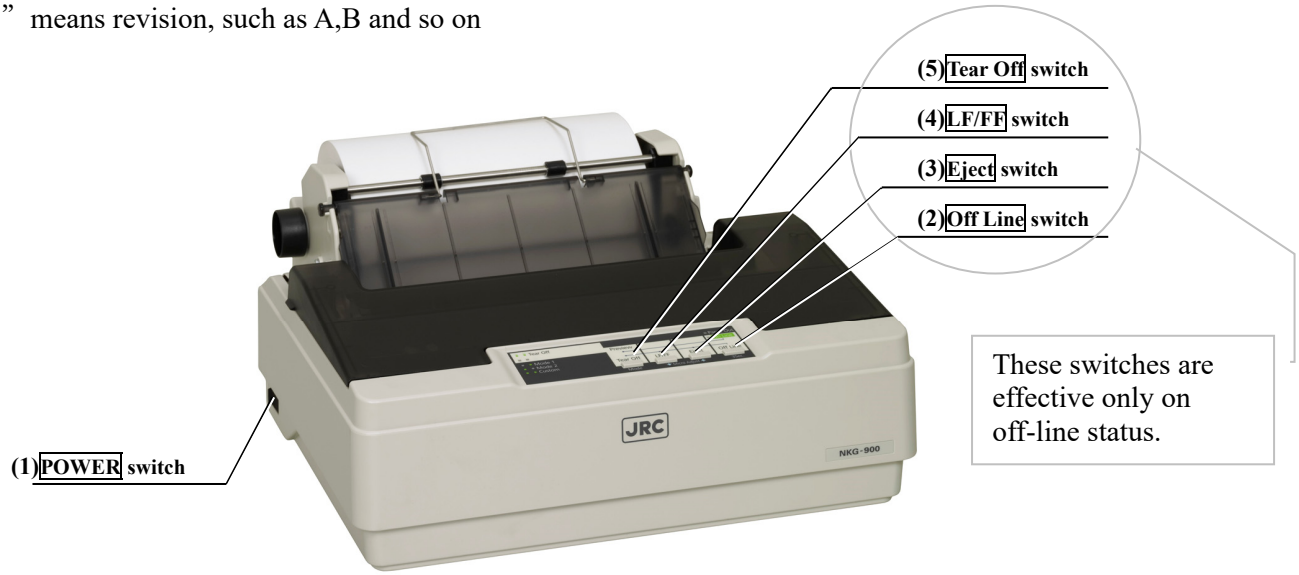


Fig.2.2.3a Printer (NKG-900)

(1) **POWER** switch
Used to turn on/off line voltage to ROP.

(2) **Off Line** switch
Used to alternate ROP status on line and off line.

(3) **Eject** switch
Reverses the paper back out to eject it.

(4) **LF/FF** switch
Feeds the paper one line if pressing a moment or feeds the paper one page if holding down a few seconds.

(5) **Tear Off** switch
Inserts line feeds to cut the paper at the end of the printed line.

<NKG-800>

NOTE

- Keep [ON LINE] status at all time. Received message is not printed out in [OFF Line] status.
- When status is off line: received message is not printed.
- Use a roll-paper (JRC code: 5ZPAL00002/5ZPCM00020 for one-sheet copy) and ink ribbon (5ZZCM00003)

Do not use except above mentioned products, for keep normal operation.

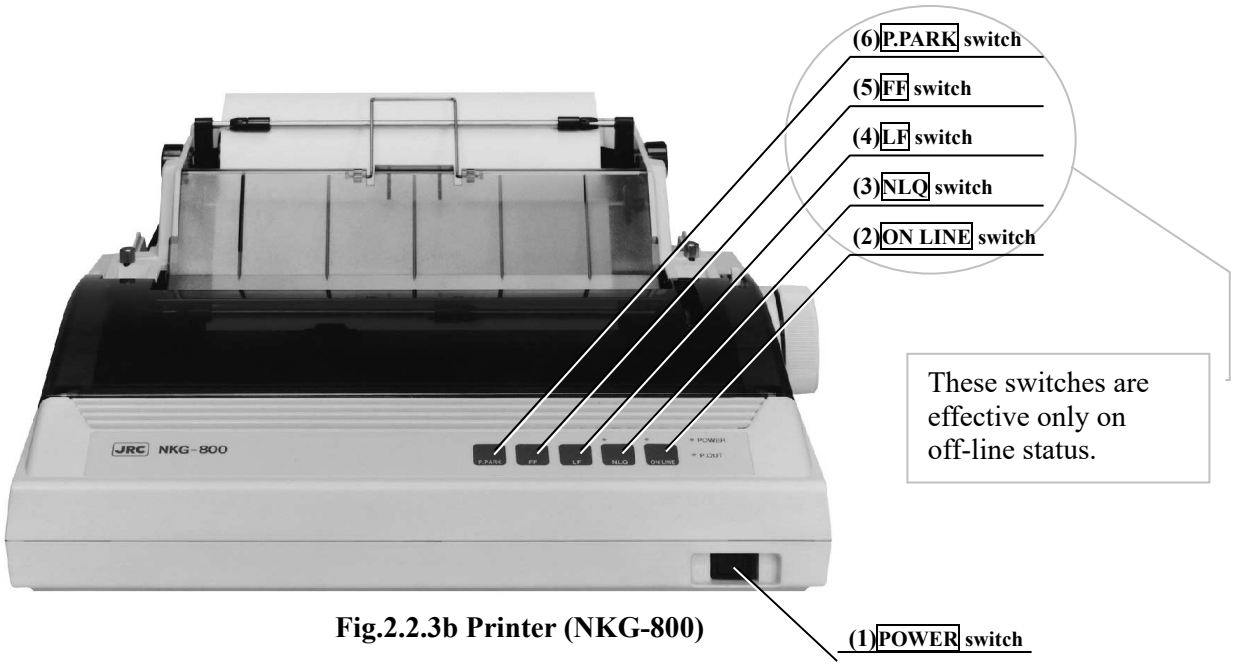


Fig.2.2.3b Printer (NKG-800)

(1) **POWER** switch
Used to turn on/off line voltage to ROP.

(2) **ON LINE** switch
Used to alternate ROP status on line and off line.

(3) **NLQ** switch
Used to alternate the character mode normal quality and high quality.

(4) **LF** switch (Line feeder)
Used to do a linefeed. If a button is pushed once, width of linefeed is 1/6 inches. When keep pressing, linefeed is repeated continuously.

(5) **FF** switch
Used to do a page feed.

(6) **P.PARK** switch
Used to eject roll paper or cut sheet.

2.2.4 EXT PSU (External Power supply Unit: NBD-904)

The EXT PSU (NBD-904) supplies DC+24V for IME-EME and Printer from Ship's power source (from 100 to 240V AC) and/or +24V DC.

When both AC and DC power source are connected to the EXT PSU and the power interruption of AC power source is occurred: EXT PSU switches over from AC power source to the DC power source automatically (Power failure detecting function).

The input of the AC power supply of EXT PSU is AC wide range 100- 240V.

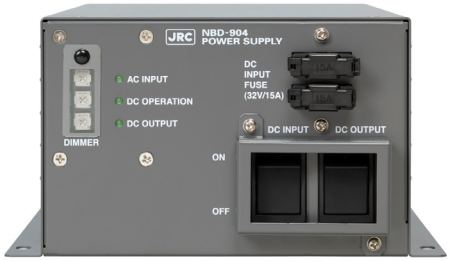


Fig.2.2.4 EXT PSU

2.2.5 JB1 (Junction Box 1: NQE-3222)

Fig.2.2.5 JB1

2.2.6 Coaxial Cable (CFQ-5922A)

Connecting EME and Antenna Cable.

Fig.2.2.6 Coaxial Cable

2.3 Appearance (Optional Components)

2.3.1 RDB (Remote Distress Button: NQE-3225)

The DB (Distress Button) is used to transmitting Distress Alert.

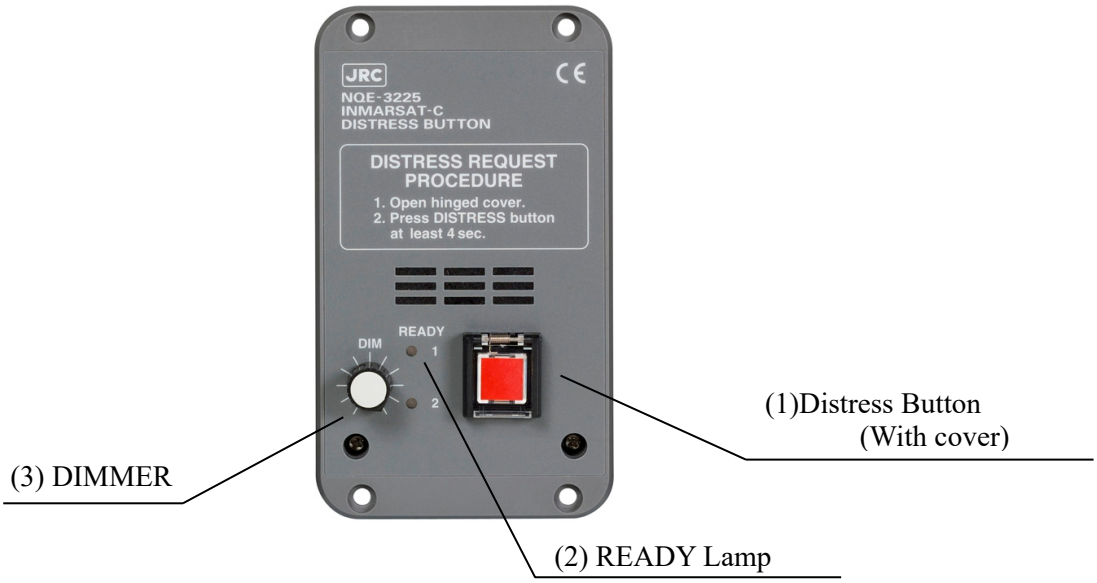


Fig.2.3.1 Remote Distress Button

(1) Distress Button
Used to Distress Alert transmission.
In case of transmitting Distress Alert, open hinged cover and press the button for 4 seconds.
The Lamp is lit during sending the Distress Alert transmission.

(2) READY LED
Illuminates RED: Not synchronizing
Illuminates GREEN: Synchronizing, and able to transmitting Distress Alert

(3) DIMMER
Used to adjust lamp brightness. When it is turn to the right completely, brightness becomes the maximum. When turning it to the left completely, brightness becomes minimum (shines slightly).

2.3.2 JB2 (Junction Box 2: NQE-3223)

It is used when two or more RDB or EXT BUZ is installed.

Fig.2.3.2 JB2

2.3.3 DTE (Data Terminal Equipment: Display NDZ-227 and Keyboard NDF-369)

DTE is composed of display and keyboard, and is connected to IME. DTE can be connected to USB drive.

⚠ CAUTION

Do not use the DTE to other purpose.

It may cause a problem that unable to be transmitted in the emergency.

NOTE

- Do not use except the NDZ-227 DTE: otherwise DTE is not operated normally.
- Do not use except specified DTE-IME cable: otherwise the IME is damaged.
- In case of no key-instruction for a given length of time (depends on the setting) under DTE operating mode except any communication, any display is disappeared automatically.

Fig.2.2.3 DTE

(1) Screen Angle Adjust Knob
Used to adjust the screen angle to clearly.

(2) **POWER** LED
Illuminates when power has been supplied.

(3) **READY** LED
Illuminates when communication is possible

(4) **COMM** LED
Illuminates in communication.

(5) **Dimmer** BUTTON
Used to adjust the screen and each LED (POWER/READY/COMM) dimmer.

(6) **USB** PORT
Connect an USB flash memory.

2.3.4 EXT BUZ (External Buzzer: NCE-5547)

The buzzer built in EXT BUZ sounds, when message is received.

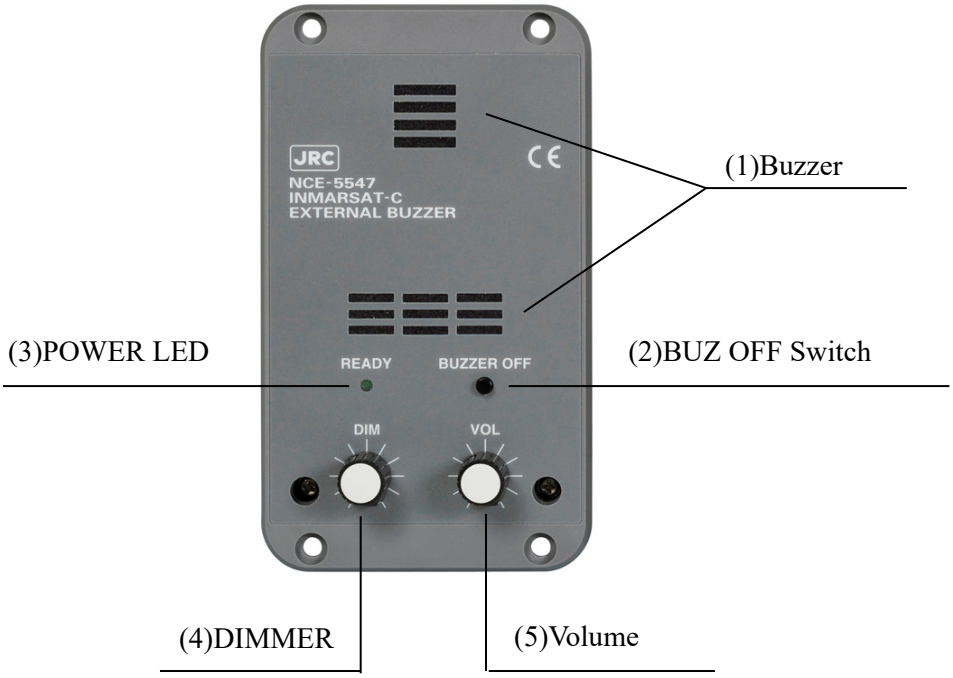


Fig.2.3.4 EXT BUZ

(1) Buzzer
Sounds when JUE-87 receives messages (INM-C and EGC)

(2) BUZ OFF Switch
Used to stop the buzzer sounding by pressing the switch.

(3) POWER LED
Illuminates when power is supplied.

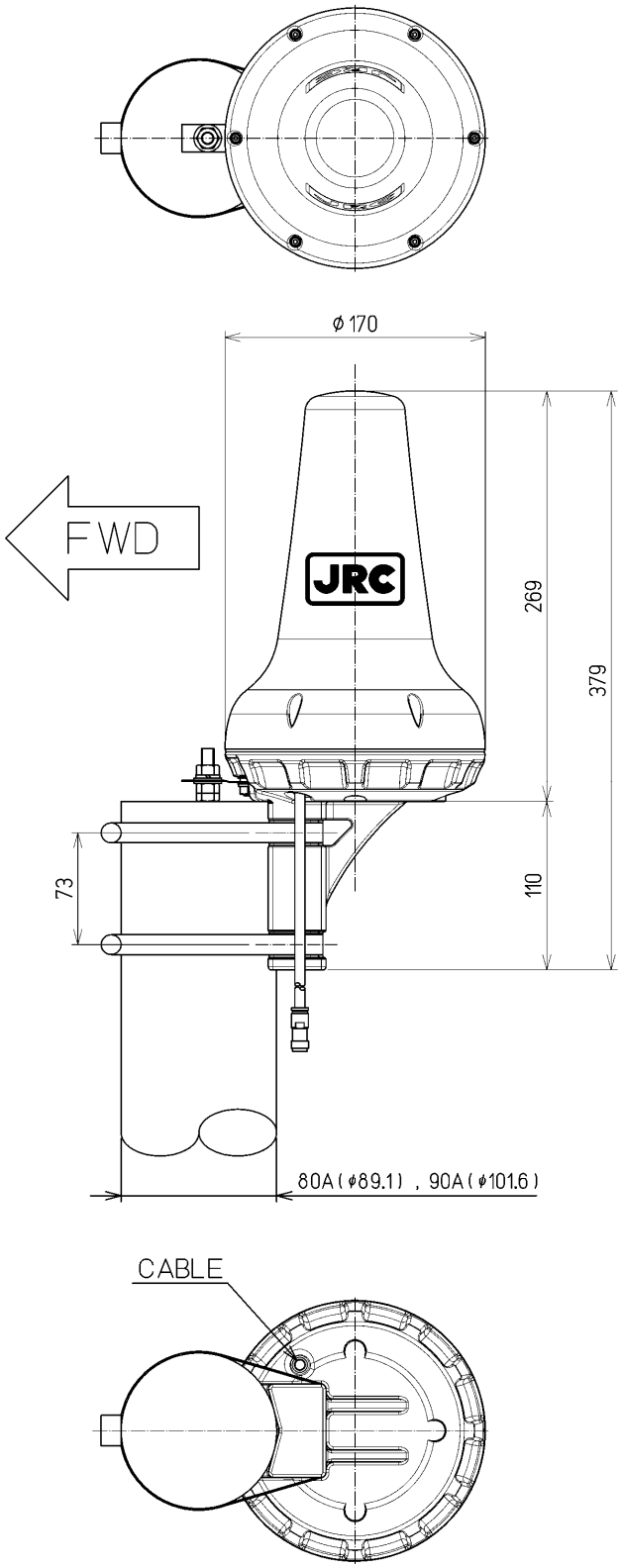
(4) DIMMER
Used to adjust brightness of the lamp.

(5) Volume
Used to adjust volume of buzzer.

- When you want to extend the buzzer sound longer, change the parameter of “Buzzer sound duration” DTE screen.

2.4 Dimensional Drawing (JUE-87 Standard Components)

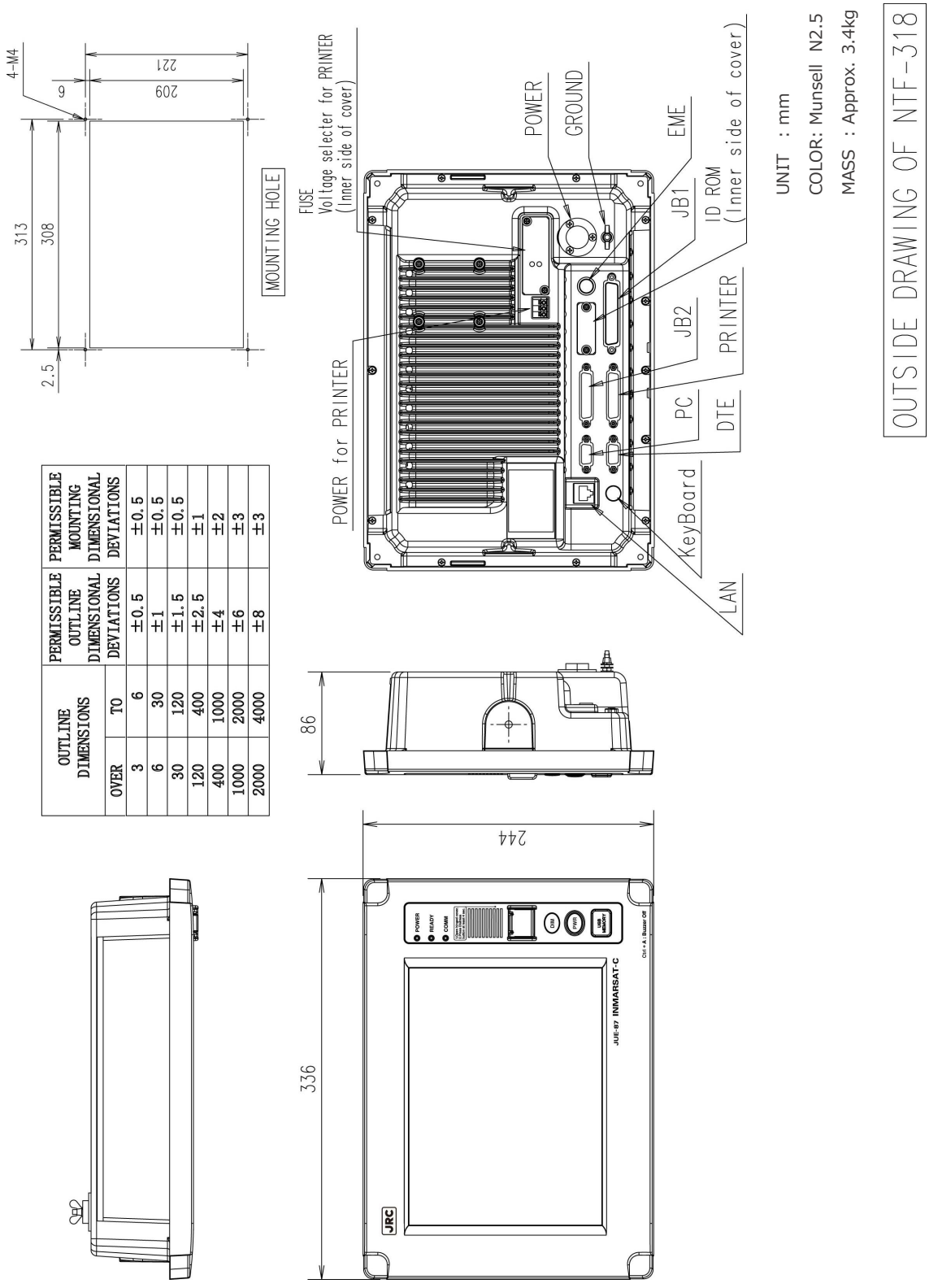
2.4.1 EME (NAF-253GM)



Unit: mm
Mass: Approx. 2.4kg
Color: N9

Fig.2.4.1 EME

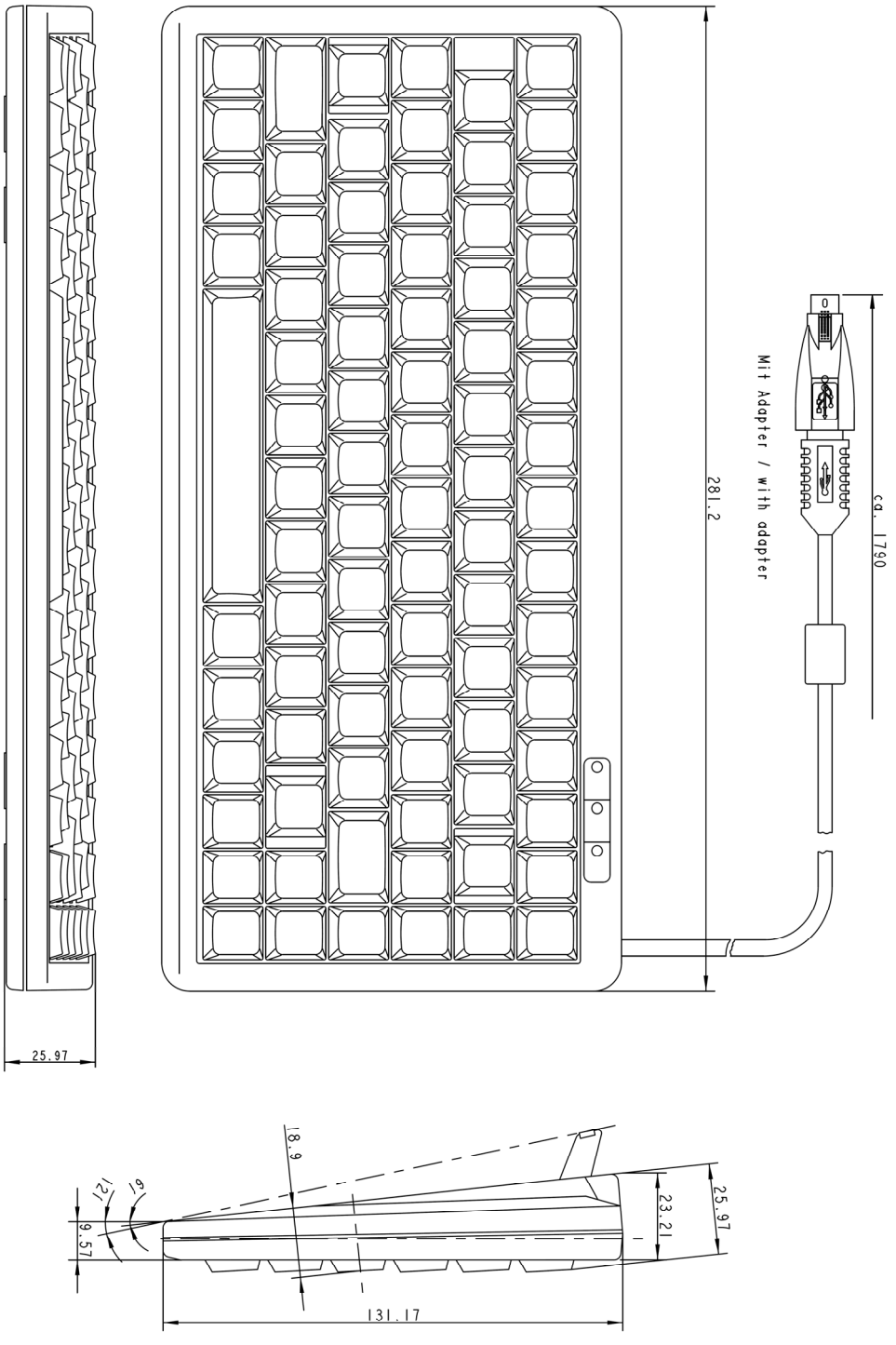
2.4.2 IME (NTF-318)



OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

Fig.2.4.2 IME

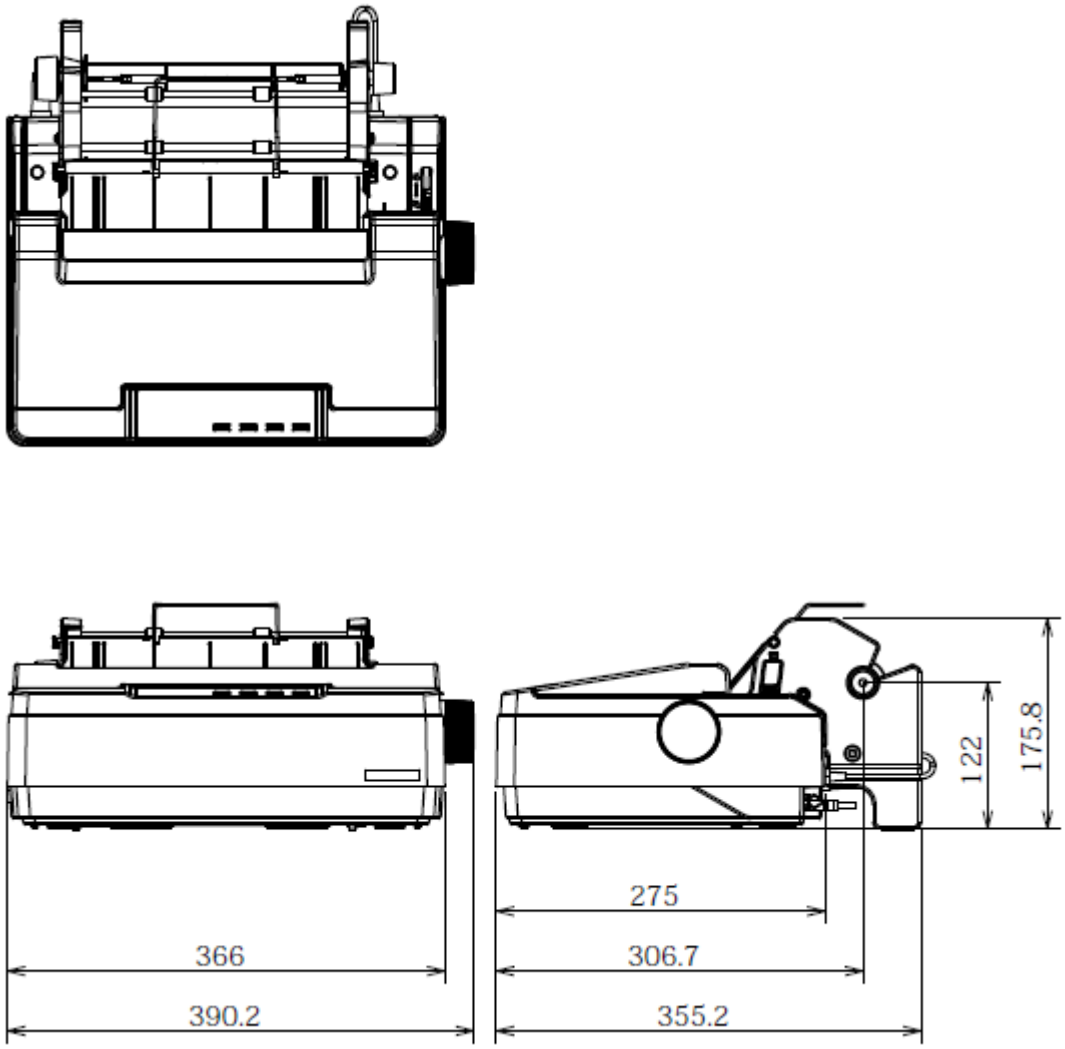
2.4.3 DTE Keyboard (NDF-369)



Unit : mm
Mass : Approx. 0.4kg

Fig.2.4.3 DTE Keyboard

2.4.4 Printer (NKG-900/NKG-800)

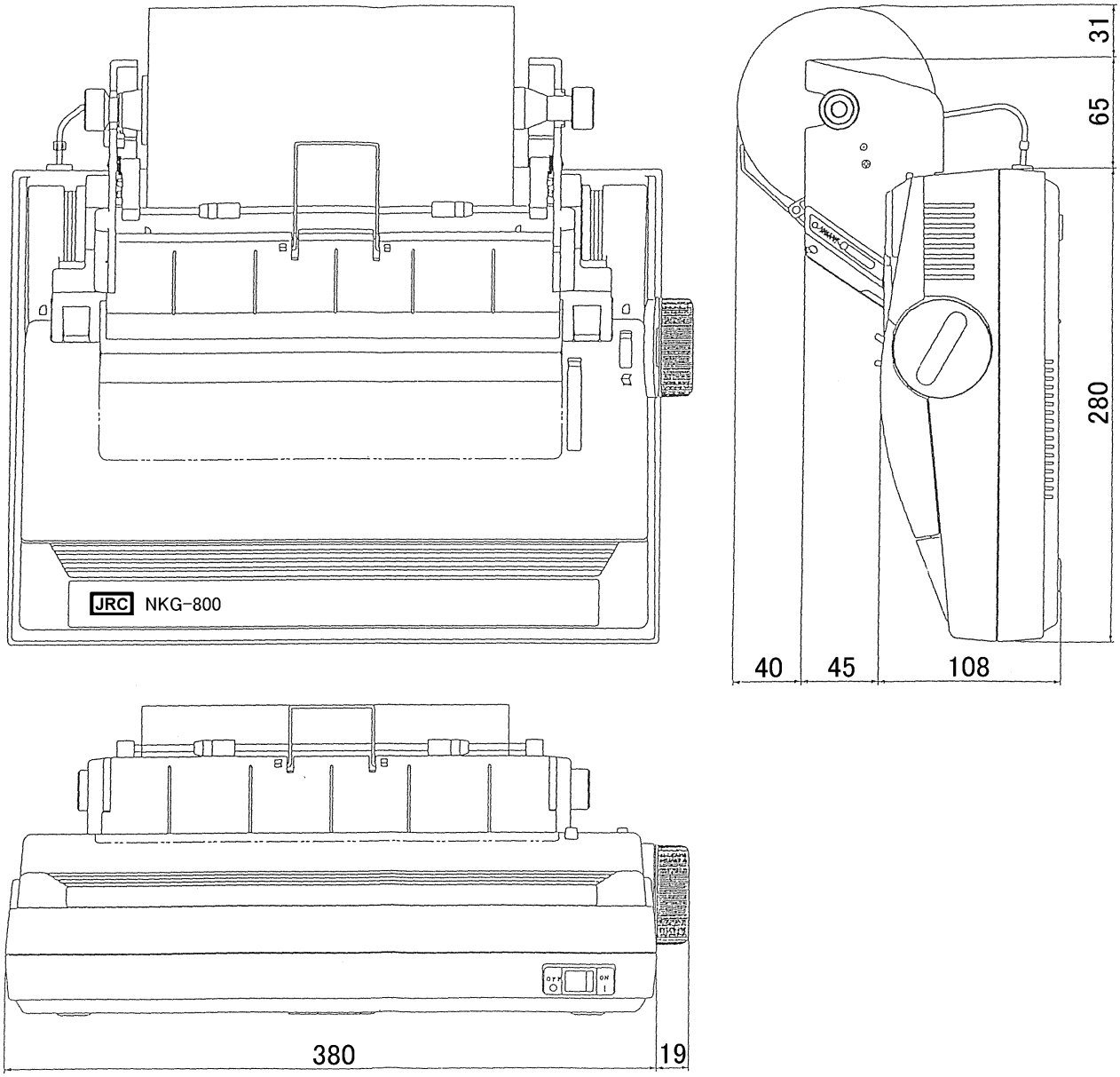


Unit: mm
Mass: Approx. 4.8kg

Fixing

Attach the hook and loop fastener to the bottom of the printer and the desk, and then fix them.

Fig.2.4.4a Printer (NKG-900)



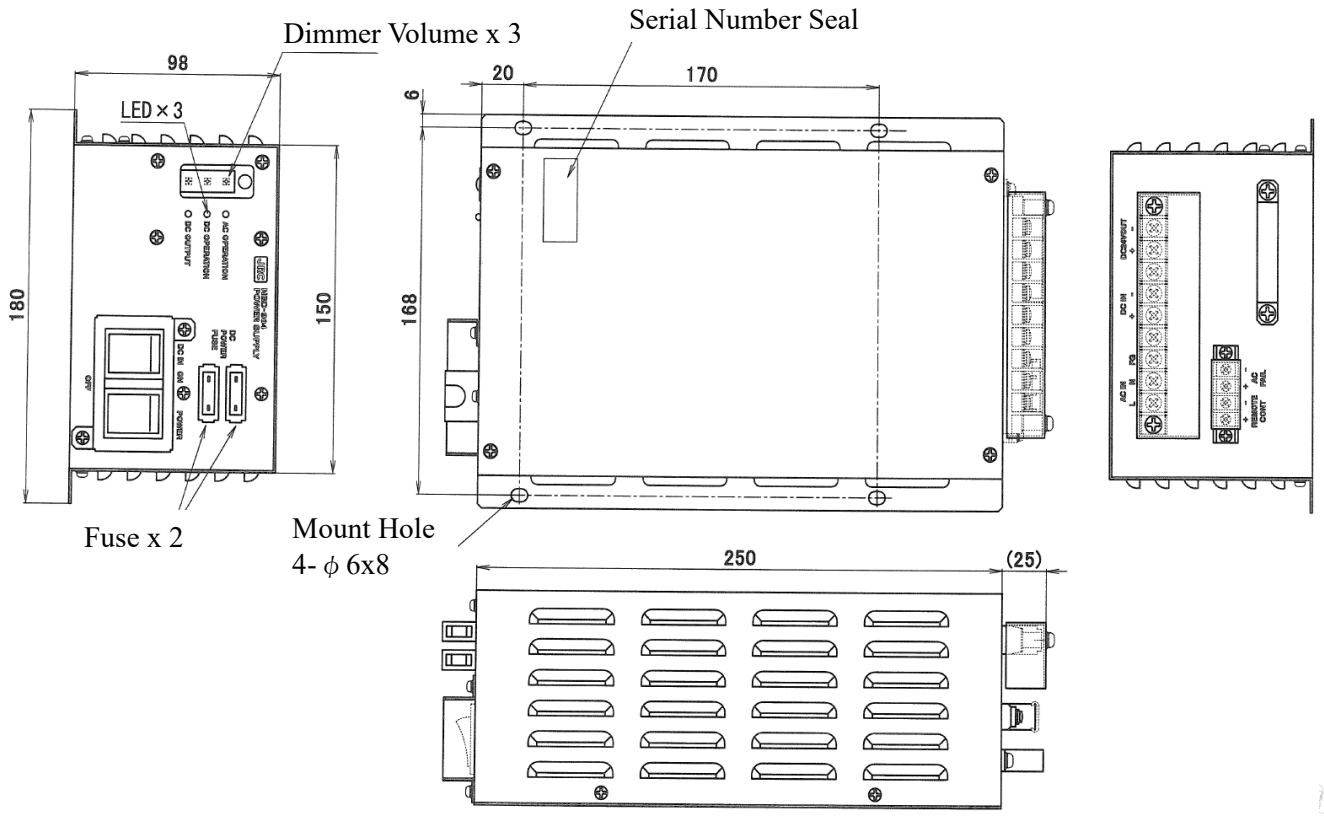
Unit: mm
Mass: Approx. 3.7kg

Fixing

Attach the hook and loop fastener to the bottom of the printer and the desk, and then fix them.

Fig.2.4.4b Printer (NKG-800)

2.4.5 EXT PSU (NBD-904)

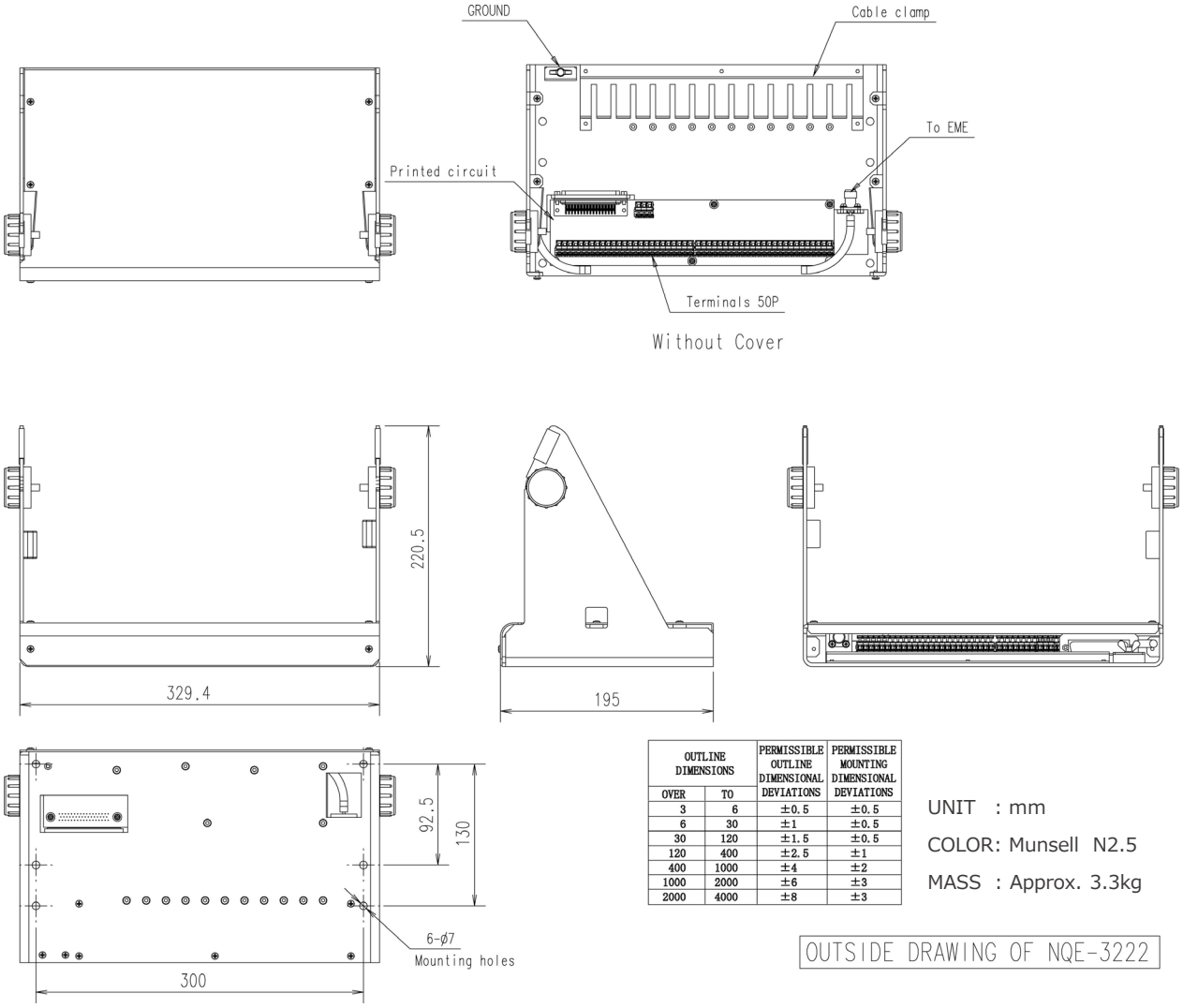


Refer to Table5.1.3 Principal Specification of EXT PSU for detailed specifications.

Unit: mm
Mass: Approx. 2.6kg

Fig.2.4.5 EXT PSU

2.4.6 JB1 (NQE-3222)

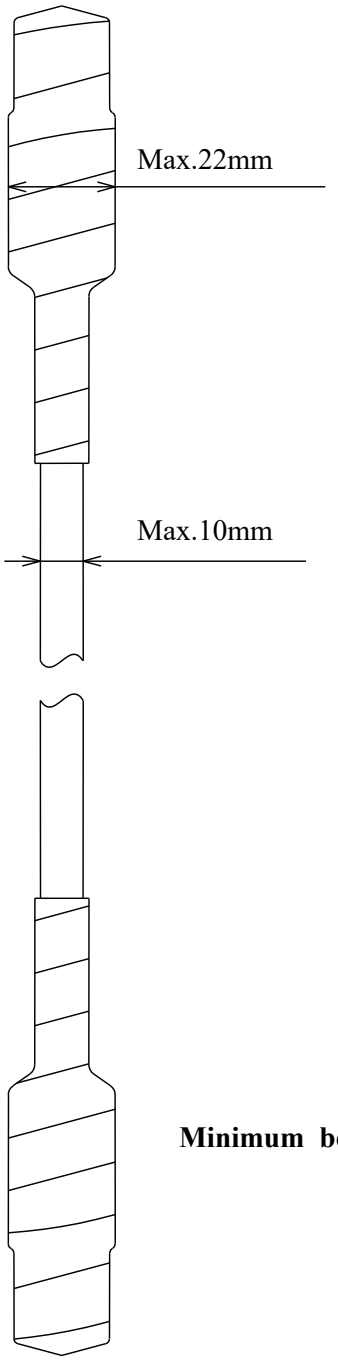


OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

Fig.2.4.6 JB1

2.4.7 Coaxial Cable (CFQ-5922A)

Connecting EME and Antenna Cable.



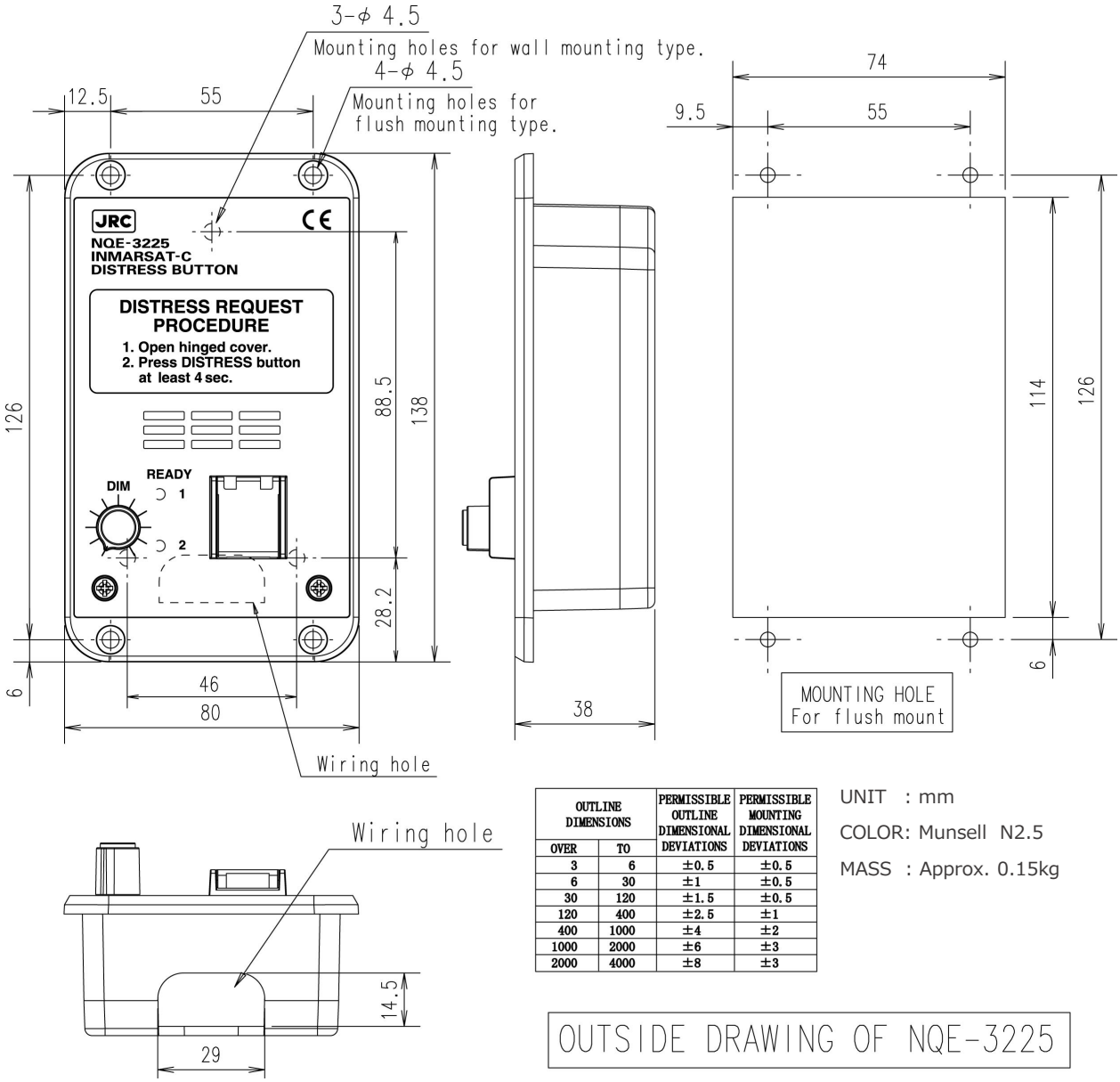
Minimum bending radius: 46mm

Type	Length
Standard: CFQ-5922A3	30m
Option: CFQ-5922A4	40m
Option: CFQ-5922A5	50m

Fig.2.4.7 Coaxial Cable

2.5 Dimensional Drawing (Optional Components)

2.5.1 RDB (NQE-3225)



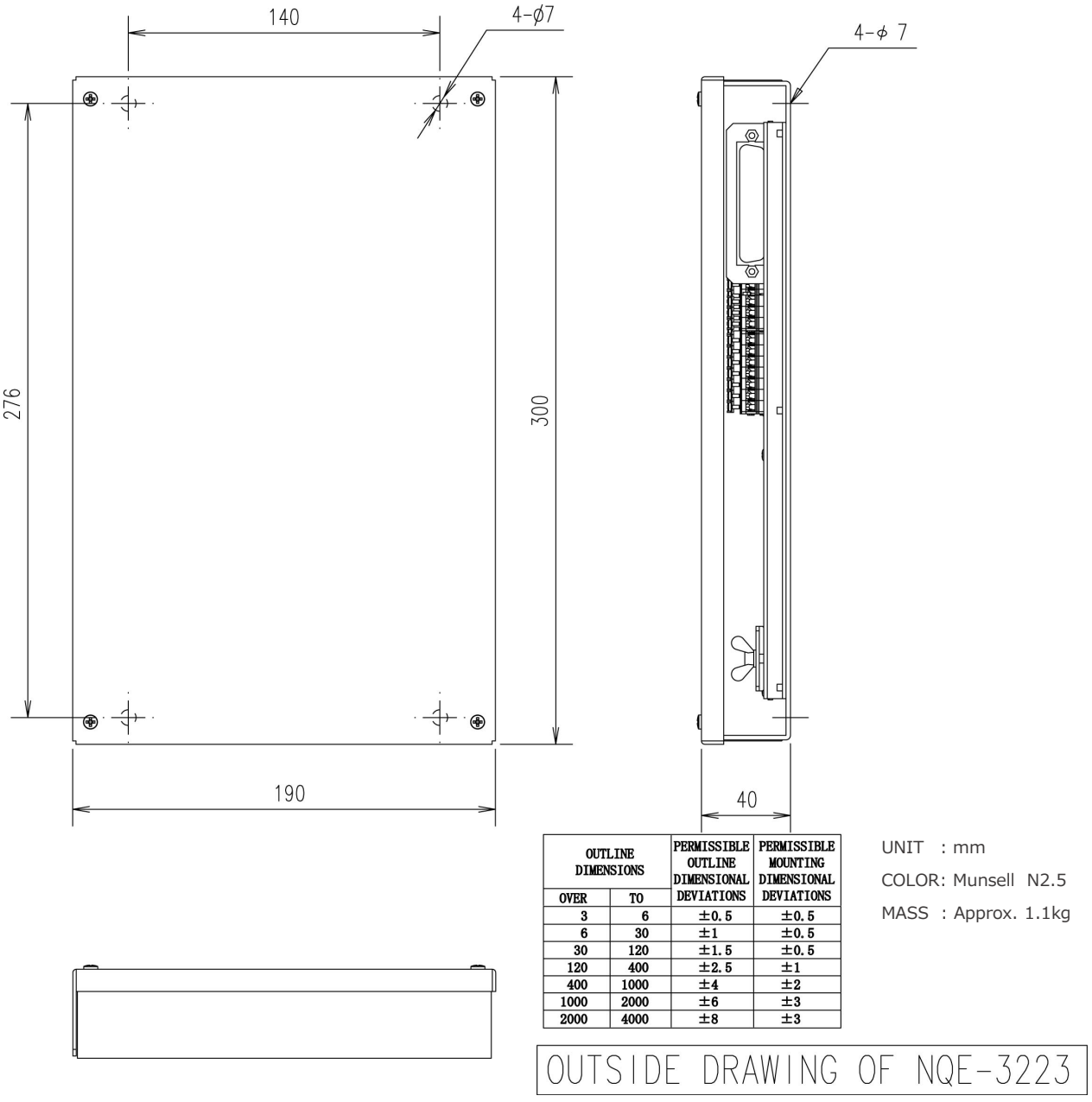
OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

UNIT : mm
COLOR: Munsell N2.5
MASS : Approx. 0.15kg

OUTSIDE DRAWING OF NQE-3225

Fig.2.5.1 Remote Distress Button

2.5.2 JB2 (NQE-3223)



OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

UNIT : mm
COLOR: Munsell N2.5
MASS : Approx. 1.1kg

OUTSIDE DRAWING OF NQE-3223

Fig.2.5.2 JB2

2.5.3 DTE (Display NDZ-227 Keyboard NDF-369)

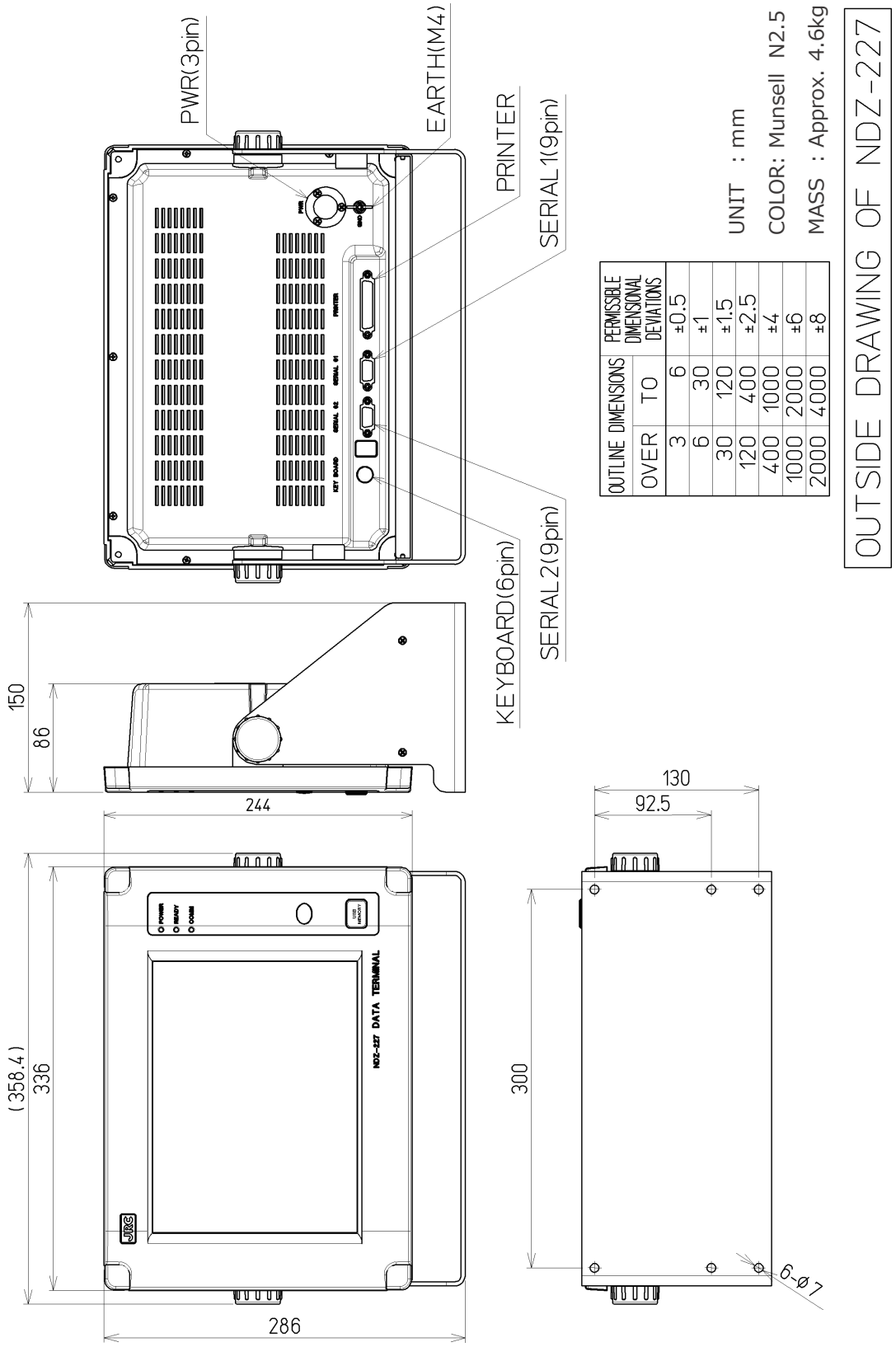
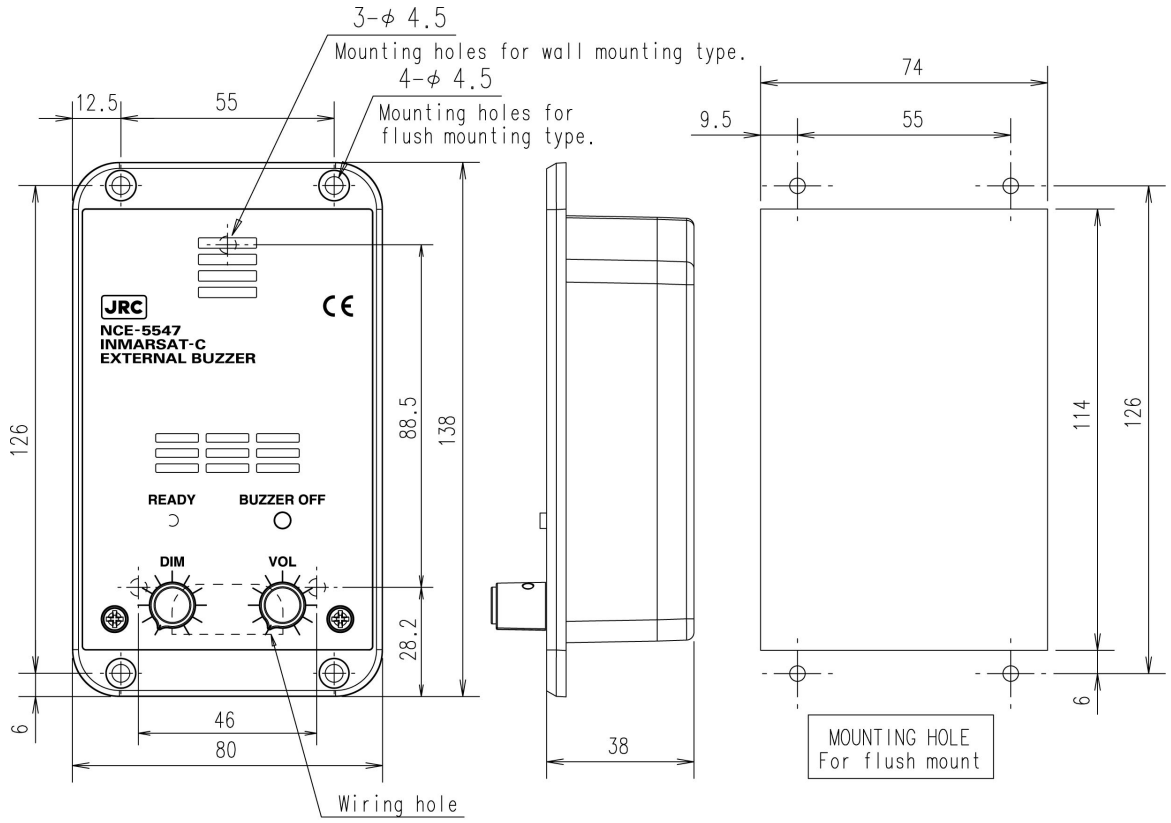


Fig.2.5.3 DTE

2.5.4 EXT BUZ (NCE-5547)



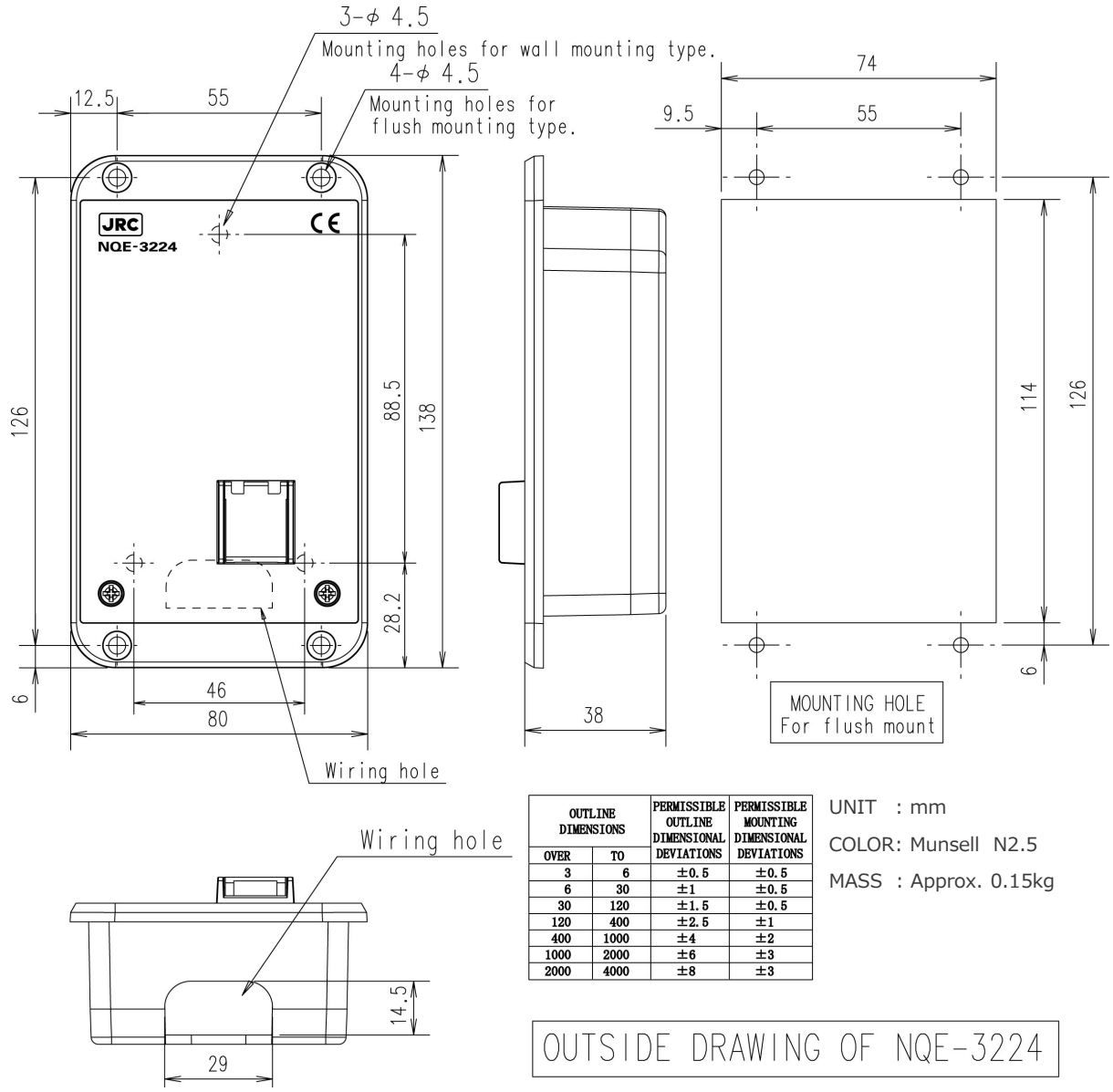
OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

UNIT : mm
COLOR: Munsell N2.5
MASS : Approx. 0.15kg

OUTSIDE DRAWING OF NCE-5547

Fig.2.5.4 EXT BUZ

2.5.5 SB (Security Button: NQE-3224)



OUTLINE DIMENSIONS		PERMISSIBLE OUTLINE DIMENSIONAL DEVIATIONS	PERMISSIBLE MOUNTING DIMENSIONAL DEVIATIONS
OVER	TO		
3	6	±0.5	±0.5
6	30	±1	±0.5
30	120	±1.5	±0.5
120	400	±2.5	±1
400	1000	±4	±2
1000	2000	±6	±3
2000	4000	±8	±3

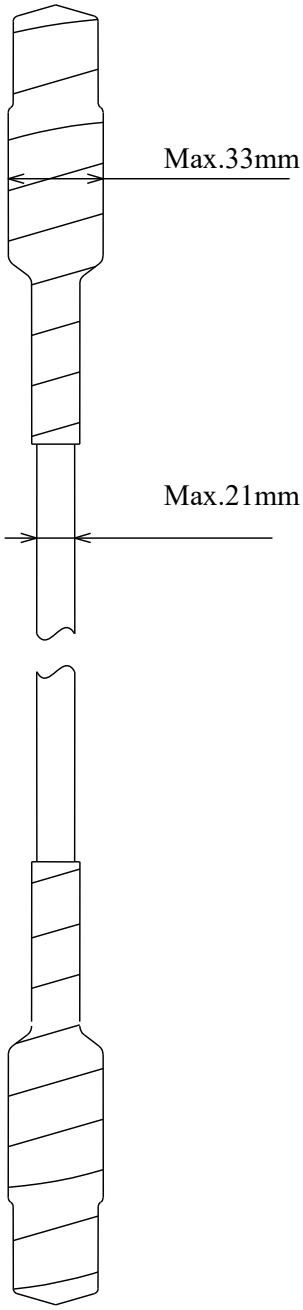
UNIT : mm
COLOR: Munsell N2.5
MASS : Approx. 0.15kg

OUTSIDE DRAWING OF NQE-3224

Fig.2.5.5 Security Button

2.5.6 Coaxial Cable (CFQ-9710/CFQ-3923A)

This option cable is used to connect between IME and EME, when the cable length is longer than 50m.



Minimum bending radius
Installation: 114mm
Repeated: 284mm

Type	Length
Option：CFQ-9710-7/CFQ-3923A7	70m
Option：CFQ-9710-A/CFQ-3923A1	100m

Note) Use joint cable (7ZCSC0212, N (J)-TNC (P)) and joint connector (5JAAE01753, N (J)-TNC (P)).
Lay down coaxial cable without cutting. (If cutting the cable, it will be out of warranty)
If reducing cable length is needed, cut the “IME” side only.

Fig.2.5.6 Coaxial Cable

CHAPTER 3. OPERATION

3.1 Starting Up

NOTE

POWER ON

When you turn on the power switch, your JUE-87 tries Log-in to the NCS automatically after synchronized with NCS TDM carrier.

POWER OFF

When you turn off the power switch, your JUE-87 still powered on and tries to Log-out automatically, and regardless of Log-out sequence results, it is disconnected.

This Log-out function does not operate when you turn off the power switch of external power supply or switchboard. Please be sure to turn off the power switch.

* Log-in: It is to notice initiating operation of JUE-87 to NCS (Network Coordination Station), which is operated automatically when power switch is turned on.
* Log-out: It is to notice ending operation of JUE-87 to NCS, which is operated automatically when power switch is turned off.
* NCS TDM Carrier: The signal outputted from NCS as COMMON channel.

3.1.1 Power ON

Before turning on all power switches of JUE-87, confirm that all the signal cables and power cables are connected correctly.

Step	Operation/Response (Example)	Screen (Example)
1	• Turn on the DC switch and AC switch on the EXT PSU. • Turn on the IME and the **POWER** LED of the IME is illuminated. • The software version is displayed and operation check.	NOW LOADING･･･ SELF DIAGNOSING･･･ Software version :3.00 ROM check :OK RAM check :OK Keyboard check :OK
2	• The IME system software starts up in about 30 seconds, then Main menu screen is displayed.	
3	• Confirming that EME and IME (DTE unit) are compatible with model. (To close this window, press F10 key.) If EME and IME (DTE unit) are not compatible with model, please inform JRC.	---Model & Country mode Compatibility--- EME and DTE are compatible with model & country mode. Country mode: Standard F10:Previous
4	• Turn on the printer. • The status is changed **"Log-out"** or **"Egc-only"** to **"Tune"** in the first line on the main menu, then JUE-87 is started selecting NCS common channel.	See "Fig. 3.4"
5	• After few minutes, the status is changed Tune to **"Comm (TX)"** or **"Egc-only"** in the first line on the main menu. • After few minutes, **READY** LED on the IME is lit. • The status is changed **"Comm (TX)"** to **"READY"** in the first line on the main menu.	Log-in (10-11-04 12:05) succeeded. F10: Previous
6	• Set up each parameter following **"3.5 Initial setting".**	

3.1.2 Power OFF

Turn OFF the power switch of JUE-87 with below outlined procedure.

Step	Operation/Response (Example)	Remarks
1	• Turn off the IME. (Press the POWER button until POWER LED starts blink.)	• Press "Power" on front of IME for 2 seconds at least.
2	• The status is changed **"READY"** to **"Comm (TX)"** in the first line on the main menu to initiate the Log-out. • After few minutes, **POWER** LED on the IME is light OFF. • When **"Log-out"**, **"Egc-only"** or **"Tune"** is displayed in the first line on the main menu, power supply of IME is turned off automatically.	• When you turned off the external power switch, IME is turned off without Log-out. Switch off after check whether it has Log-out.
3	• Turn off the printer. • Turn off the DC switch and AC switch on the EXT PSU.	• Switch off the external power source from DC switch to AC switch. If you made reverse this turn, the power failure detection circuit works after turn off the AC switch, and the battery is drained until turn off the DC switch.

3.2 Log In

When the status in the first line on the main menu is **"Log-out"** or **"Egc only"**, initiate the **"Log-in"** according to the following procedures;

When the **"Receive mode"** is changed from **"Egc receive only"** to **"Inmarsat-C"**. The **"Log-In"** is initiated automatically.

Step	Operation/Response (Example)	Screen (Example)
1	• Hold down **Alt** key and press **U** key on Main menu.	• **"Set up"** screen is displayed.
2	• Hold down **Alt** key and press **I** key.	Log-in Do you initiate log-in? Yes No
3	• Move the cursor to **"Yes"** and press **Enter** key. • The status is changed **"Comm (TX)"** in the first line on the main menu.	
4	• After few minutes, **READY** LED on the IME is lit. • The status is changed **"Comm (TX)"** to**" READY"**. • Press **ESC** key to clear the message window.	Log-in (10-11-04 12:05) succeeded. F10: Previous

3.3 Log Out

When the status in the first line on the main menu is **"READY"**, initiate the **"Log-out"** according to the following procedures;

When the received-mode is changed from **"Inmarsat-C"** to **"Egc receive only"**, the "**Log-out**" is initiated automatically.

Step	Operation/Response (Example)	Screen (Example)
1	• Hold down **Alt** key and press **U** key on Main menu.	• **"Set up"** screen is displayed.
2	• Hold down **Alt** key and press **O** key.	Log-out Do you initiate log-out? Yes No
3	• Move the cursor to **"Yes"** and press **Enter** key. • The status is changed from **"READY"** to **"Comm (TX)"** in the first line on the main menu.	
4	• After few minutes, **READY** LED on the IME becomes unlit. • The status is changed from **"Comm (TX)"** to **"Log-out"** on **"Egc only"**.	Log-out (10-11-04 13:10) succeeded. F10: Previous

3.4 Main Menu Screen

The JUE-87 operation adopts a multi-level menu structure with window-menus and hierarchical - submenus. Refer to clause 3.4.3 and 3.4.4 for confirming the composition of each menu. All the time, screen displays the newest information by pop-up window.

The menu can be chosen by moving the cursor with the right-, left-, up-, and down- arrow keys and the targeted item is chosen by pressing **Enter** key.

On the pop-up window, a new window opens whenever information occurs, and the windows are displayed with overlapped when two or more information occurs. Maximum of 10 sheets can be displayed in piles. Press **F10** key to close the pop-up window displays.

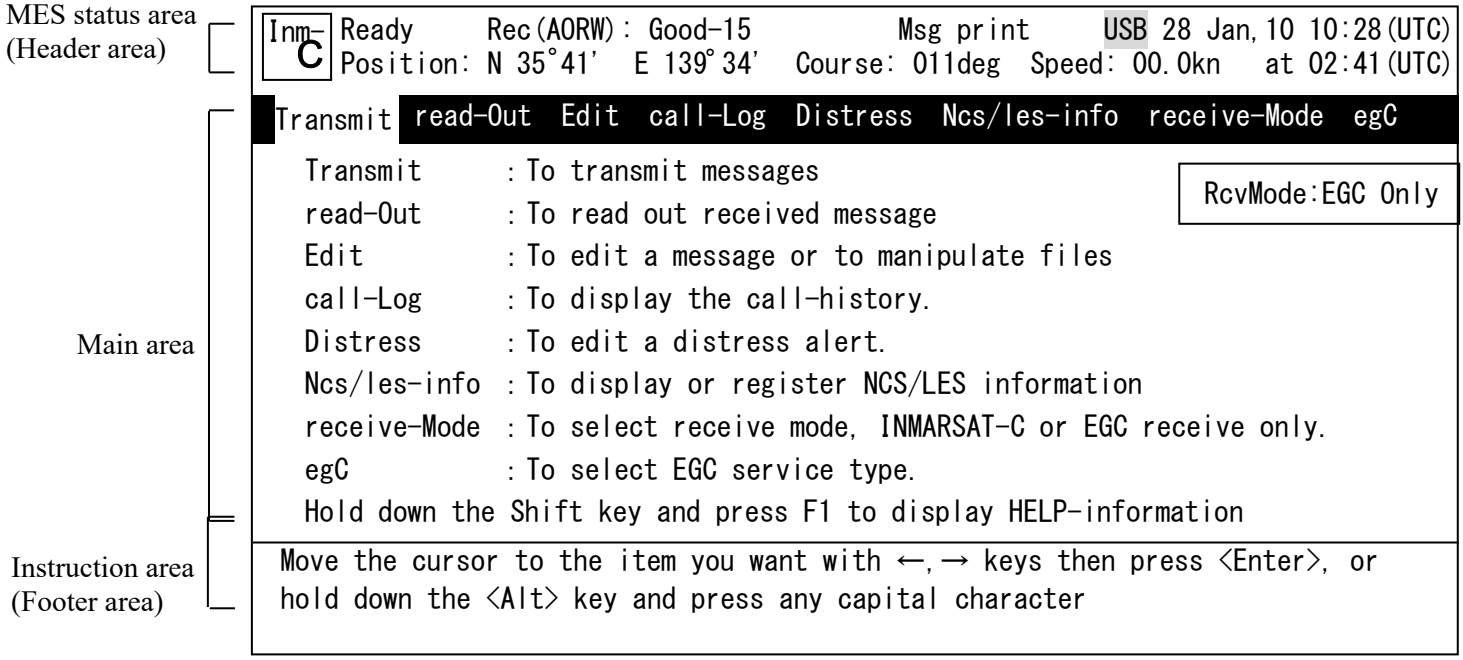


Fig.3.4 Main Manu Screen

The Main menu screen is the starting screen to select the main function and is divided into the following areas:

(1) MES status area (Upper two lines): Gives the MES status, current date, time, and MES position

(2) Main menu area: Gives a list of function you use routinely.

(3) Instruction area (Lower two lines): Gives instruction at the state where you were.

NOTE

Screen saver function is built into IME/DTE.
When you use this function, backlight of IME/DTE is automatically turned off if no key is pressed on keyboard over a given length of time (depends on the setting). Press any key to turn on backlight of IME/DTE.

3.4.1 Command

JUE-87 has two kinds of way to operate the IME/DTE, one is selecting command by cursor, and the other one is pressing the buttons directory. Direct commands make quicker and easy operation when you get used to the operation of IME/DTE.

NOTE

Selecting command by cursor, commands using **Alt key** is **not available when another window is displayed on main menu screen. Use them after closed window with F10** ("Previous") key.

(1) Commands selecting by cursor

You can select the function below in the Main menu by moving the cursor to the item you want and pressing **Enter** key.

Transmit..... To transmit messages.
read-Out..... To read out received messages.
Edit ..... To edit a message or to manipulate files.
call-Log ..... To display the history of both incoming and outgoing calls
Distress ..... To initiate a distress alert.
Ncs/les-info ..... To display the lists of LES or NCS, or to register newly operating LES or NCS in the list.
receive-Mode..... To select receive mode, i.e. Inmarsat-C mode or EGC reception mode.
egC ..... To select EGC service type.

(2) Direct commands

You can select each function in the Main menu screen directly by pressing one of the following keys while holding down **Alt** key:

Alt + **T** ..... **Transmit**
Alt + **O** ..... **read-Out**
Alt + **E** ..... **Edit**
Alt + **L** ..... **call-Log**
Alt + **D** ..... **Distress**
Alt + **N** ..... **Ncs/les-info**
Alt + **M** ..... **receive-Mode**
Alt + **C** ..... **egC**
Alt + **G** ..... **To go to "Status", "set Up" and "diAgnostics".**
Alt + **S** ..... **Status**

To display MES status or test results

- MES status (line status, bulletin board error rate, ID, MES serial number and delivery date)
- Tests results (ROM/RAM test, performance test)
- UDP error count

Alt + U ..... **set Up**

- To set the current date & time;
- To initiate a Log-out, Log-in or performance test;
- To register each parameter for scheduled transmission;
- To register land ID for polling;
- To select the closed network ID;
- To select the function of peripheral equipment connected with IME or DTE.

Alt + A ..... **diAgnostics**

To display contents of data source, alarm history, software version, BAM active alert or BAM alert history.

Further instruction and/or selection items are displayed in the pop-up window every time you select a function.

In each window, by pressing a capital character while holding down Alt key you can select function instead of moving the cursor.

The following commands are available by pressing a key with holding down Ctrl key:

Ctrl + A ..... **Alarm off**

To stop sounding the alarm buzzer of the IME/DTE.

Ctrl + L ..... **MES position display ON/OFF**

To alternate MES position display ON and OFF

Ctrl + O ..... **log-Out**

To initiate a log-out request.

Ctrl + F ..... **MES communication status display ON/OFF**

To alternate MES communication status display ON and OFF.

Ctrl + Z ..... **Printer status display ON/OFF**

To alternate MES printer status display ON and OFF.

Msg print on ..... Automatic printout function ON

Msg print off..... Automatic printout function OFF.

DTE ..... Printer is routed to IME/DTE.

All Messages ..... All messages are printed out.

Distress & EGC ..... Distress and EGC message are printed out.

EGC Only ..... EGC message only is printed-out.

(Note: All EGC SafetyNET message with "Urgency" and "Distress" priority message are printed out automatically regardless printer setup as required by IMO.)

(3) Screen control commands

You can control screen on the IME/DTE by pressing one of the following keys while holding down **Ctrl** key:

Ctrl + ↑ ..... **To light up the display backlight and LED to 15 stages**
Ctrl + ↓ ..... **To darken the display backlight and LED to 15 stages**

3.4.2 MES Status Area

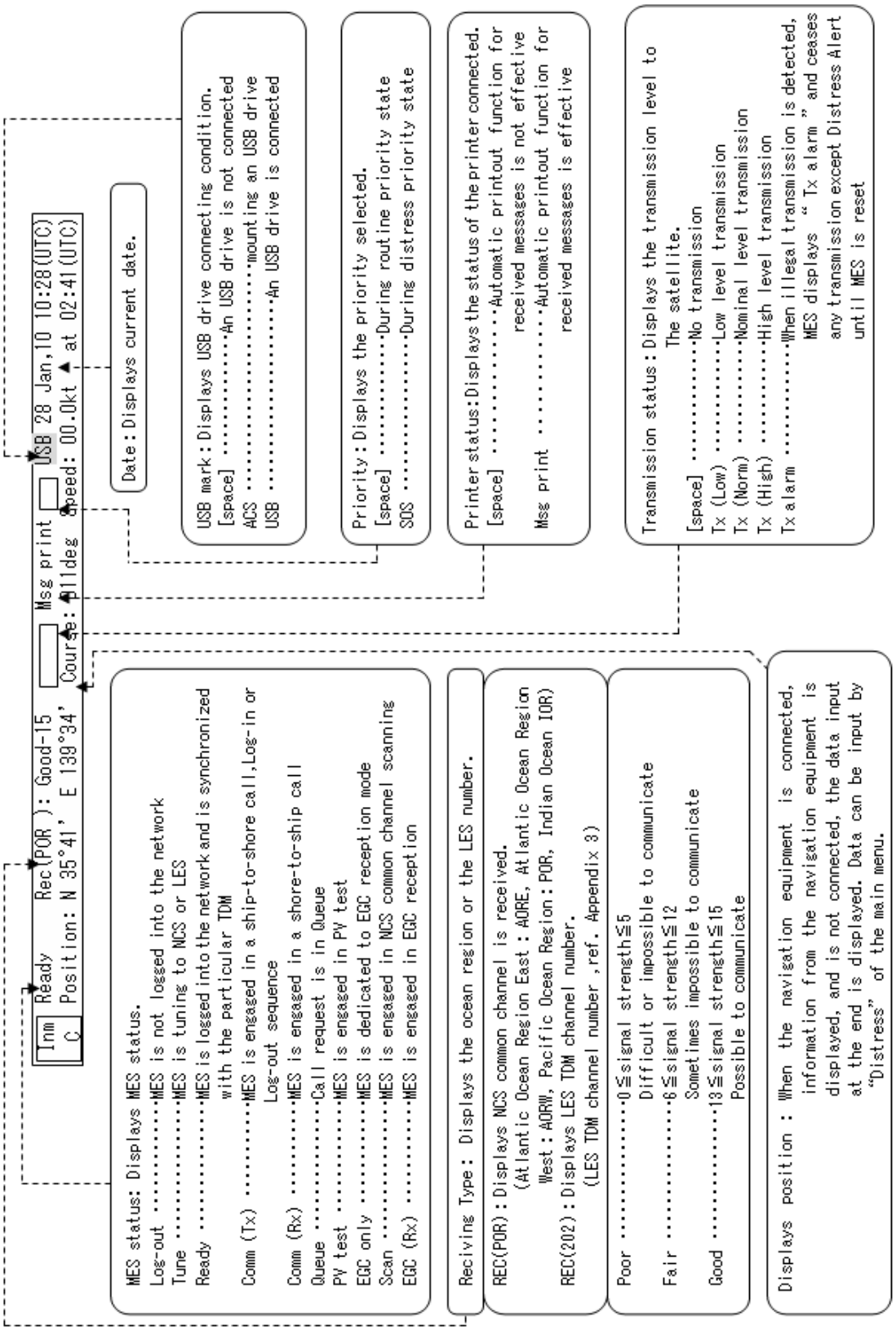


Fig.3.4.2 MES Status Area

3.4.3 Menu Structure Chart

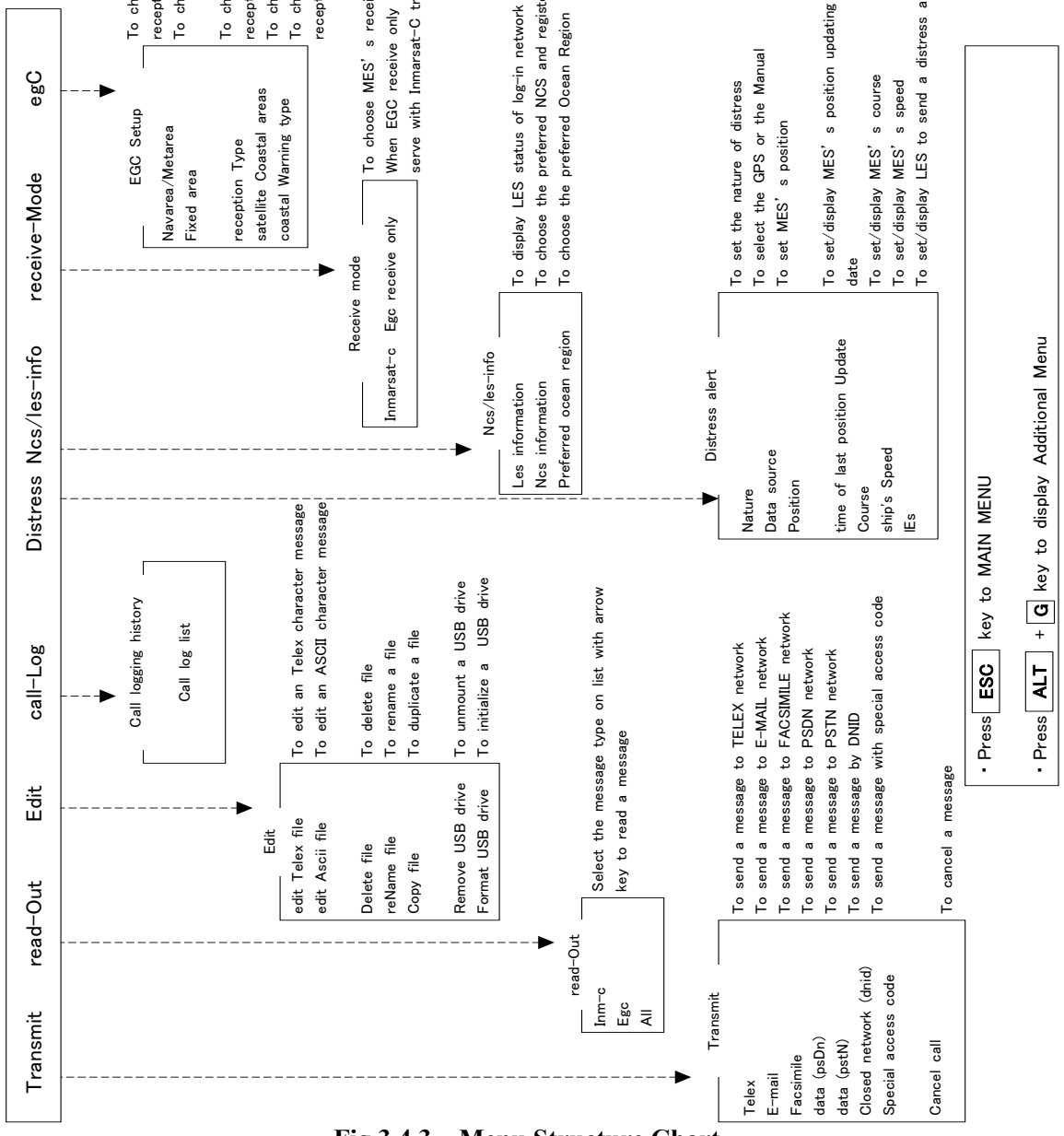


Fig.3.4.3 Menu Structure Chart

3.4.4 Additional Menu Structure Chart

To display additional menu, hold down the **Alt** key and press **G** key on main menu.

(Additional menu screen)

Additional Menu	
Status	Displays MES status
set Up	Sets MES parameter
diAgnostics	Diagnoses MES

To display the Status screen, press and hold **Alt** key and then press **S** key in the main menu or additional menu.

(Status screen)

Status	
Mes status	Displays MES current status
ram/rom Test	Displays the RAM/ROM test results of Main, DTE, and modem unit
Performance test result	Displays the results of performance test
Udp error count	Displays the number of UDP communication errors according to IEC 61162-450

To display the Set Up screen, press and hold **Alt** key, then press **U** key in the main menu or additional menu.

(Set up screen)

Set up	
Date & time	Sets date and time
confiG	Sets IME/DTE display
log-Out initiation	Initiates log-out request
log-In initiation	Initiates log-in request
Performance test initiation	Initiates performance test
Scheduled transmission	Sets parameter of scheduled transmission
Land id registration for polling	Registers land user ID of S&F polling
dnid seleCtion	Sets message reception to able/disable by dedicated network ID
peripheral Function	Sets parameter of peripheral function
passWord	Changes password
EPADR informAtion	Confirms EPADR information and requests EPADR assignment

To display Diagnostics screen, press and hold **Alt** key, then press **A** key in the main menu or additional menu.

(Diagnostics screen)

Diagnostics	
Data source contents	Displays data from data source equipment
Alarm history	Displays alarm history
software Version	Displays the software version of EME/IME/MODEM/DTE
distress button Test	Executes distress button test
BAM active alert	Displays BAM active alert that are occurring in this equipment.
BAM alert History	Displays BAM alert history that has occurred in this equipment.

Fig.3.4.4 Additional Menu Structure Chart

3.5 Initial Setting

After turn on the JUE-87 MES, set the following parameters;

(1) Selecting Preferred Ocean Region

(2) Setting Date & Time

(3) Setting Peripheral Function

3.5.1 Selecting Preferred Ocean Region (Ncs/Les info)

When a particular ocean region is selected, the MES will scan the NCS common channel only in the ocean region selected.

NOTE

1) The Selecting Preferred Ocean Region command is available, when the first line of the screen is displayed **"Ready"**, **"Log-out",** or **"EGC only"**.

2) In case of "All ocean region" setup, if MES does not receive NCS common channel more than 30minutes, MES automatically scans all ocean region and tunes new NCS common channel. However, MES automatically does not login. Please login manually. (The information is displayed on IME/DTE screen to user.)

Step	Operation/Response (Example)	Screen (Example)	Remarks
1	• Move the cursor to **"Ncs/les-info"** with using the arrow keys and press **Enter** key.	• The **"Ncs/les information"** window is displayed.	
2	• Move the cursor to **"Preferred ocean region"** and press **Enter** key.	• The **"Preferred ocean region"** window is displayed.	
3	• Confirm the cursor is at **"All ocean region"** and press **Enter** key.	• Status display is changed from "**Ready**" to "**Scan**".	• When you want to change a parameter, move the cursor to the item you want and press **Enter** key. • You cannot set up when the status in the first line on the main menu is **"Tune"**. • In this case, change the parameter during **"Log-out"** or **"EGC only"** displayed in the first line (about 3 seconds), by switching the IME power source OFF and ON.
4	• To return to Main menu screen, press **Esc** key.	• Windows are disappeared.	

3.5.2 Setting Date & Time

When the Date & time (displayed in the bottom line on the right side of the first screen) is wrong, correct the Date & time as follows.

When the JUE-87 is synchronized with the NCS common channel, the time is reset at 00:00 (UTC) everyday by Inmarsat frame channel.

Step	Operation/Response (Example)	Screen (Example)	Remarks
1	• Hold down **Alt** key and press **U** key.	• The **"Set up"** window is displayed.	
2	• Confirm that Data & Time window has been selected, then press **Enter** key.	• The **"Date & time"** window is displayed.	
3	• Move the cursor to the item you want to correct and press **Enter** key.		• You can select the display mode, Coordinated Universal Time (UTC), or local time (LT) with **"display timE".**
4	• To return to Main menu and correct Date & time in IME, press **F10** (**"Previous"**) key twice or **Esc** key.	• The correct Date & time is displayed at the first line.	

3.5.3 Setting Peripheral Function

Set the peripheral device (printer, data port, navigation equipment, and/or buzzer) function. Setting procedure is as follows;

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **Alt** key and press **U** key on Main menu.	• The "**Set up**" window is displayed.	
2	• Move the cursor to the item **"Peripheral function"** and press **Enter** key.	• The **"Peripheral function"** window (Fig.3.5.3) is displayed.	
3	• Set the each parameter.		
4	• After confirming each parameter, to return to Main menu, press **F10** key twice or **ESC** key.	• The Main menu is displayed	

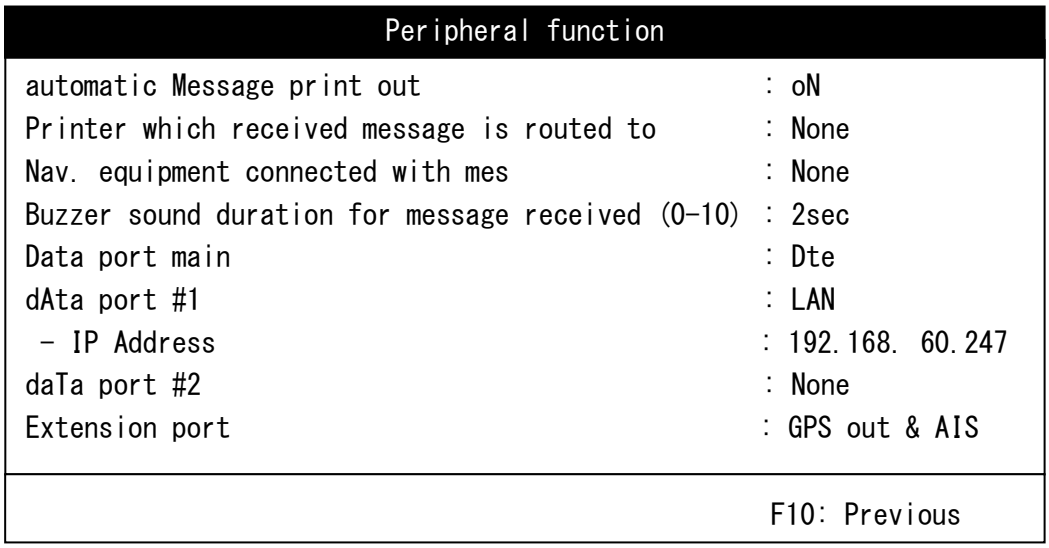


Fig.3.5.3 "Peripheral function" Window

Setting parameters are as follows;

- automatic Message print out:

  Set received message, transmitted message, and function of call logging information automatic print out to ON or OFF.

NOTE

Printing of EGC massage is carried out although automatic print out function is turned OFF. Please note it is not malfunction of the printer.

- Printer which received message is routed to:

  Set a port of printer connected. Choose the message type to print out:

  - None: No connection
  - Dte: Connecting with IME/DTE

  Then, choose the message reception type from follows:

  - All message: Print out all messages.
  - Inm-c message only: Print out Inm-C message only.
  - inm-c Distress and egc message only: Print out Inm-C Distress message and EGC message.
  - Egc message only: Print out EGC message only.

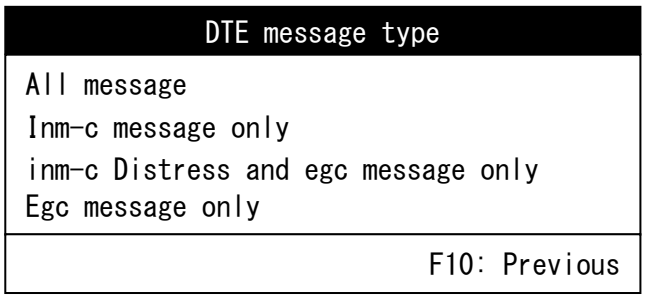


Fig.3.5.4 "DTE message type" Window

- Nav. equipment connected with MES:

  * Choose the port connected with MES and interface condition, i.e. Nmea0183, nMea0182 or JRC original, when you choose **"Internal"**.

  * Choose interface from **"Nmea0183"** or **"nMea0182"** when you choose **"External"**. (as usual, select **"Nmea0183"**)

  * Received sentence is **GGA, RMC, GLL, GNS, ZDA and DTM**. Baud rate is **4800 bps**.

NOTE

If JUE-87 is used as GMDSS equipment, please use the external GPS only.

Because the internal GPS does not have type approval, the internal GPS cannot be used for the navigational purpose. And the internal GPS is only used for date/time stamping of Inmarsat-C transmitted/received message.

- Buzzer sound duration for message received:

  Set the buzzer sound duration for receiving routine or safety message. No sound occurs when you set it as "**0 sec**".

  However, when distress or urgent message is received, buzzer sounds continuously until alarm off command (**Ctrl** + **A**) is executed, or BUZ OFF switch of EXT. BUZ is pressed.

- dAta port #1 (LAN port):

  Set parameters of Local Area Network.

  - IP Address (Default Primary IP: 192.168.60.247, Secondary IP: 192.168.60.248)
  - Subnet mask
  - Default gateway
  - JCmail port number

- daTa port #2 (IME optional DTE port (option)):

  Set the data port which is connected. When you choose **"Dte"**, you can set printer parameter. When you choose **"dS"**, you can select the following interface condition;

  - Baud rate : 4800, 2400 or 1200 bps
  - Data length : 8 or 7 bits
  - Parity : None, odd or even
  - Stop bit : 1 or 2 bits

- Extention port
  Set the extension port which is connected.

  - GPS out & AIS: output Internal GPS data and input AIS data
  - BAM/AME: Connecting with BAM/AME
  - Both: Connecting with BAM/AME and AIS, output Internal GPS data

NOTE

Do not operate the followings from DTEs connect to data port #2.

- Log in
- Log out
- Ocean region setting
- Data port setting
- Telex (Distress alert)
- Cancel call

3.6 IME/DTE Display Setting (Config)

This menu can set the IME display setting.

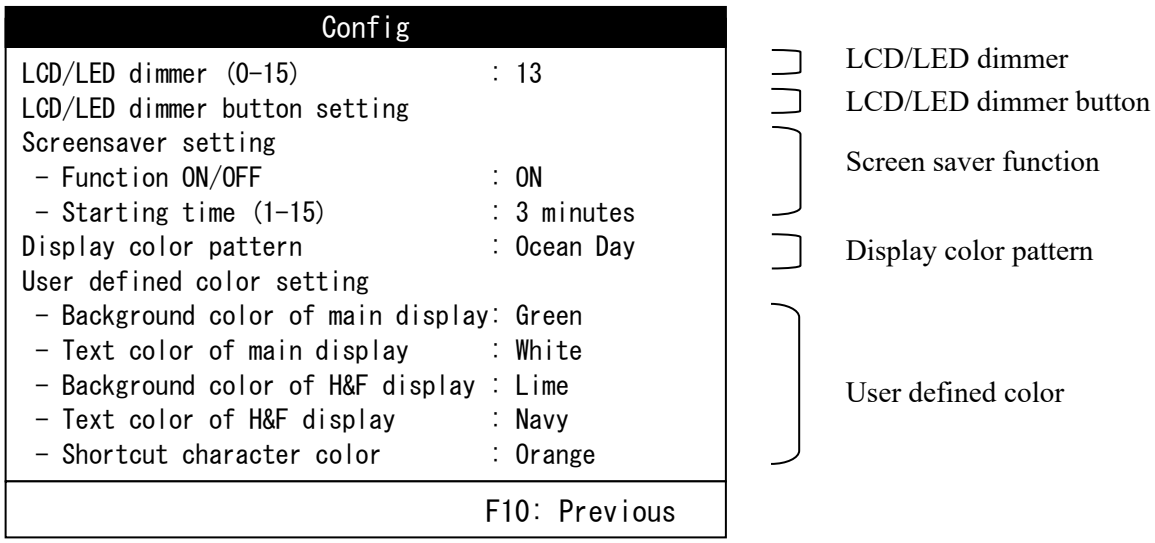


Fig.3.6 "Config" Window(Default Setting)

3.6.1 LCD/LED Dimmer

This menu can set the IME/DTE display and LED dimmer level. Setting range is from 0 to 15.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"LCD/LED dimmer"** with using the arrow keys and press **Enter** key.	・The cursor is move to next step.
2	・Enter the value you want , and press **Enter** key.	・Change the setting to new one.

3.6.2 LCD/LED Dimmer Button Setting

This menu can set dimmer level, which are switched by pressing dimmer button. There are settable three step values, "Maximum", "Typical", and "Minimum". When press the dimmer button, dimmer level switch four step values, "Maximum", "Typical", "Minimum", and "Turn off a light".

Setting range is from 1 to 15.

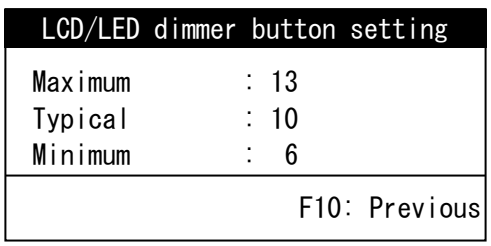


Fig.3.6.2 "LCD/LED dimmer button setting" Window

Step	Operation	IME/DTE Response
1	・ Move the cursor to setting **"LCD/LED dimmer button setting"** with using the arrow keys and press **Enter** key.	・The cursor is move to next step.
2	・Move the cursor to the following three step, you want to change (Maximum, Typical or Minimum) and press **Enter** key.	・The cursor is move to the setting area.
3	・Enter the value you want , and press **Enter** key. Setting range is from 1 to 15. As the value rise, the LCD/LED lights up.	・Change the setting to new one.

3.6.3 Screensaver Setting

Screensaver setting sets screensaver function and starting time.

3.6.3.1 Function ON/OFF

This menu can set the screensaver function ON/OFF state.

Step	Operation	IME/DTE Response
1	・Move the cursor to setting **"Function ON/OFF"** with using arrow keys and press **Enter** key.	・The cursor is move to the setting area.
2	・Choose **"ON"** or **"OFF"** from the pull down menu and press **Enter** key.	・Change the setting to new one.

3.6.3.2 Starting Time

This menu can set the time between the last key operations to starting up screensaver. Setting range is from 1 to 15 (min).

Step	Operation	IME/DTE Response
1	・Move the cursor to setting **"Starting time"** with using arrow keys and press **Enter** key.	・The cursor is move to the setting area.
2	・Enter the value you want , and press **Enter** key.	・Change the setting to new one.

3.6.4 Display Color Pattern

This menu can set the display color pattern and select from the following 9 colors. Ocean Day, Ocean Dusk, Ocean Night, Earth Day, Earth Dusk, Earth Night, Basic Black, Basic White, and User defined. When select the User defined, the color pattern is set "3.6.5 User defined color setting"

Step	Operation	IME/DTE Response
1	・Move to the cursor to setting **"Display color pattern"** with using the arrow keys and press **Enter** key.	・The cursor is move to the setting area.
2	・Select the color pattern you want from the pull down menu and press **Enter** key.	・Change the setting to new one.

3.6.5 User Defined Color Setting

This menu can set the color is used to when you select **"User defined"** in **"3.6.4 Display color pattern"**.

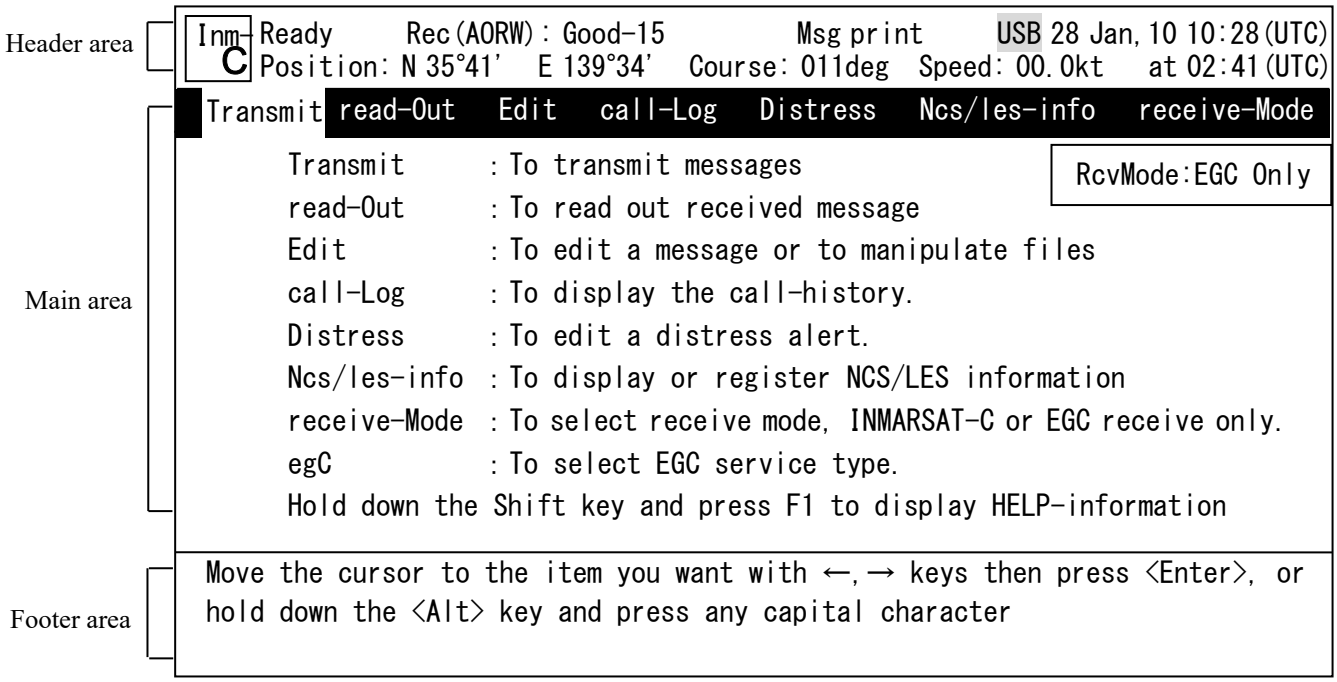


Fig.3.6.5 IME/DTE Display Structure

This menu can set the five colors, Main area background (3.6.5.1) and text (3.6.5.2) colors, H&F (Header & Footer) area background (3.6.5.3) and text (3.6.5.4) colors, and capital letter shows shortcut command(for example, **"T"** for **T**ransmit) font (3.6.5.5) color. Each item can set from the following 17 colors, Black, Gray, Silver, White, Maroon, Red, Olive, Yellow, Green, Lime, Teal, Cyan, Navy, Blue, Purple, Magenta, and Orange. In addition, you cannot set the same color between background and text in each area.

3.6.5.1 Background Color of Main Display

This menu can set Main area background color.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"Background color of main display"** with using the arrow keys and press **Enter** key.	・**"Background color of main display"** setting window is displayed.
2	・Select the color and press **Enter** key. When the color is not changed, Press **F10** key.	・Change the setting to new one.

3.6.5.2 Text Color of Main Display

This menu can set the Main area text color.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"Text color of main display"** with using the arrow keys and press **Enter** key.	・**"Text color of main display"** setting window is displayed.
2	・Select the color and press **Enter** key. When the color is not changed, Press **F10** key.	・Change the setting to new one.

3.6.5.3 Background Color of H&F Display

This menu can set H&F area background color.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"Background color of H&F display"** with using the arrow keys and press **Enter** key.	・**"Background color of H&F display"** setting window is displayed.
2	・Select the color and press **Enter** key. When the color is not changed, Press **F10** key.	・Change the setting to new one.

3.6.5.4 Text Color of H&F Display

This menu can set H&F area text color.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"Text color of H&F display"** with using the arrow keys and press **Enter** key.	・**"Text color of H&F display"** setting window is displayed.
2	・Select the color and press **Enter** key. When the color is not changed, Press **F10** key.	・Change the setting to new one.

3.6.5.5 Shortcut Character Color

This menu can set capital character shows shortcut command.

Step	Operation	IME/DTE Response
1	・Move the cursor to **"Shortcut character color"** with using the arrow keys and press **Enter** key.	・**"Shortcut character color"** setting window is displayed.
2	・Select the color and press **Enter** key. When the color is not changed, Press **F10** key.	・Change the setting to new one.

3.7 Editing a Message

Before a calling, edit a message file by the editing menu. The editing command can be edited a message file and managed a message file.

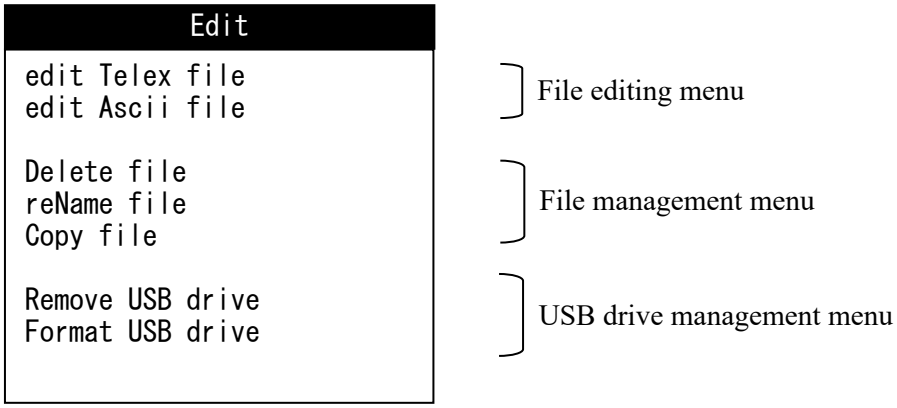


Fig.3.7 Example of "Edit" Window

3.7.1 File Editing Menu

(1) Edit a message file by the editing command.

(2) The editing command is composed of **"Edit Telex File"** menu and **"Edit Ascii File"** menu.

- Edit Telex File

  This command is used for the transmitting file by telex.
  In this command, the characters that can use on the land telex line can be input. (Note 1)

- Edit Ascii File

  This command is used for the transmitting file by data line.
  In this command, the characters that can use on the land data line can be input.

(3) The edited message file is stored in the IME/DTE memory. The capacity of the IME/DTE memory is approx. 128M byte or 100 files maximum.

(4) When the USB drive is connected to the IME/DTE, the edited message file is saved in the USB drive.

NOTE

When saves the file at the 101st, the following window is displayed. In this case, delete the unnecessary file until the file number is decreased less than 100, by **"delete file"** command.

This window is continuously displayed until the file number is decreased less than 100.

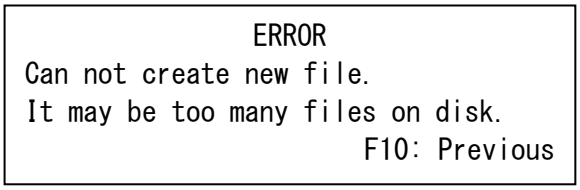


Fig.3.7.1 "ERROR" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Edit"** and press **Enter** key.	• The **"Edit"** window is displayed.	
2	• Move the cursor to **"edit Telex file"** or **"edit Ascii file"** and press **Enter** key. The cursor blinks at **"File"**.	• List of files stored in the IME/DTE memory is displayed.	
3	• Enter the file name to be edited and press **Enter** key, or move the cursor to the file to be edited and press **Enter** key.	• The message in the file is displayed.	• When you want to make a new file, enter a file name and press **Enter** key. • Note 2 • When you want to edit a file stored in USB drive, input **E** **:** into the column of **"File:"** (Note 3)
4	• Edit the message using Edit function keys (**F1-F10**).		• See "3.6.2 Editing Procedure" below.
5	• After confirmation of editing, press **F9** (**"Save & Quit"**) key.	• Edited message is saved in the IME/DTE memory and the list of file is displayed again.	• When **F7** (**"Quit"**) key is pressed, the message is abandoned without saving in the USB drive.
6	• To return to Main menu screen, press **Esc** key.	• Main menu screen is displayed.	

In **"edit telex file"** mode;

Note 1) The characters which can use on the land telex line can be input. So, the following characters and the small letters are rejected in the file:

!, @, #, $, %, ^, &, *, _, {, [,], }, :, ¥, ;, ", ~, ', and -

Note 2) Edit telex file uses the extension ".TLX" as file name.

Blank space and the characters specified in Note 1 cannot be used for file name. It may cause an error at the schedule transmission.

To erase file name, use **Delete** key, or **Backspace** key.

To erase all characters, use **Delete** key. To erase characters one by one, use **Backspace** key.

Note 3) After editing USB drive file, saving and read-out place of file is changed to USB drive (**E** **:**).

When you want to save and read-out files in the memory of the IME/DTE, enter **F** **:**

into the column of **"File:"**.

Note 4) Pull out USB drive after return the read-out place to inner IME/DTE memory (**F** **:**), when you completed editing of USB drive.

Error is occurred when you log-in to the editing mode again, if you pull out the USB drive without change the read-out place to **F** **:** from **E** **:** .

3.7.1.1 Editing Menu

"Edit" has two sets of the function-key commands, group A and group B. Each command set can be selected alternately by pressing **F10** (**"-Others-"**) key.

Group A

Function	Step	Operation	Example
F1 (**"Insert-on"**) Character Insertion	1	• Move the cursor to the character to be inserted by pressing ←, →, ↑ and ↓.	THE QUCK BROWN ↑ cursor
	2	• Press **F1** (**"Insert-on"**).	THE QUCK BROWN
	3	• Type character(s) to be inserted.	THE QUICK BROWN
F1 (**"Insert-off"**) Character Change	1	• Move the cursor to the character to be changed by pressing ←, →, ↑ and ↓.	THE QUECK BROWN
	2	• Type desired character(s).	THE QUICK BROWN
F2 (**"Ins-Line"**) Line Insertion	1	• Move the cursor to a character in the next line to be inserted by pressing ←, →, ↑ and ↓.	THE QUICK BROWN THE LAZY DOG
	2	• Press **F2** (**"Ins-Line"**).	THE QUICK BROWN _ THE LAZY DOG
	3	• Type character(s) to be inserted.	THE QUICK BROWN FOX_ THE LAZY DOG
F3 (**"Block"**) Block Function	1	• See paragraph 3.7.1.2	
F4 (**"Del-Word"**) Word Deletion	1	• Move the cursor to any character of the word to be deleted by pressing ←, →, ↑ and ↓.	THE QUICK QUICK BROWN
	2	• Press **F4** (**"Del-Word"**).	THE _QUICK BROWN
F5 (**"Del-Line"**) Line Deletion	1	• Move the cursor to any character of the next line to be deleted by pressing ←, →, ↑ and ↓.	THE QUICK BROWN ABC 123 FOX JUMPS
	2	• Press **F5** (**"Del-Line"**).	THE QUICK BROWN FOX JUMPS
F6 (**"Transmit"**) Call initiation	1	• Edited message can be transmitted directly from editing screen.	

Function	Step	Operation	Example
F7 (**"Quit"**) Exit Edit without Saving File	1	• Press **F7** (**"Quit"**).	
	2	• When **"Really quit without saving? Yes No"** is displayed, select **"Yes"** for finishing the editing without saving or **"No"** for returning the editing to save the file.	
F8 (**"Save As"**) Saving edited file as another file	1	• Press **F8** to save the edited file as another file.	Input save file name Name:__
	2	• Enter a new file name • Note 1	
F9 (**"Save & Quit"**) Storage of Editing File on the USB drive & Exit Edit	1	• Press **F9** (**"Save & Quit"**)	
F10 (**"-Others-"**) Switch of Command Sets	1	• Press **F10** (**"-Others-"**) to switch the command sets to the group B.	

Note 1) When **F8** key is pressed, then the new file is created in File list.

NOTE

"Edit" has two modes for character editing, **'overwrite'** mode and **'insertion'** mode.

These two modes can be alternately selected by pressing **F1** (**"Insert Off" / "Insert On"**).

When **"Edit"** is started, **'overwrite'** mode is selected automatically. Once **F1** is pressed, **"Edit"** enters **'overwrite'** mode then **"'overwrite'** appears at the right end of the third line.

In **'overwrite'** mode, a character on the cursor is overwritten with the character typed-in from the keyboard.

In **'insertion'** mode, a character typed-in is inserted before the cursor and **"Insert On"** appears at the right end of the third line.

Group B

Function	Step	Operation	Example
F1 (**"Max Column"**) Number of characters per Line (Note)	1	• Press **F1** (**"Max Column"**).	Input Max Column Numbers:_
	2	• Type the number of characters per line and press **Enter** key.	
F2 (**"Set Tab"**) Tab setting	1	• Press **F2** (**"Set Tab"**).	Input Column Numbers:_
	2	• Type the number of columns with delimiting by / key and press **Enter** key.	20/30/40/ (The column number tub position is being set)
F3 (**"Undo-Char"**) Restoration of Deleted Character	1	• Move the cursor to the character after the one to be restored (only one character is restored)	THE UICK
	2	• Press **F3** (**"Undo-Char"**).	THE QUICK
F4 (**"Undo-word"**) Restoration of Deleted Word	1	• Move the cursor to the word after the one to be restored.	THE BROWN FOX
	2	• Press **F4** (**"Undo-Word"**).	THE QUICKBROWN FOX
F5 (**"Undo-Line"**) Restoration of Deleted Line	1	• Move the cursor to the next line after the one to be restored.	THE QUICK OVER THE LAZY
	2	• Press **F5** (**"Undo-Line"**).	BROWN FOX JUMPS THE QUICK OVER THE LAZY
F6 (**"Merge File"**) Mergence of Files	1	• Move the cursor to the character where another file is to be inserted.	THE QUICK_FOR
	2	• Press **F6** (**"Merge-File"**).	Merge File:_
	3	• Type the file name to be merged.	THE QUICK BROWN
F7 (**"Find"**) Word Search	1	• Move the cursor to the beginning of the line.	THE QUICK BROWN
	2	• Press **F7** (**"Find"**).	Input Search Strings:__
	3	• Type the word to be searched. (EX: THE) The number of characters can be searched is 20 characters or less. • Command set is returned to Group B, when searching is completed.	THE QUICK BROWN
F8 (**"Print Out"**) Print-out File	1	• Press **F8** (**"Print Out"**).	**"Now printing. Please wait"** is displayed.

Function	Step	Operation	Example
F9 (**"Find/Replace"**) Word Search and Replace	1	• Move the cursor to the beginning of the line.	1. THE QUICK 2. THE BLOCK 3. THE QUICK
	2	• Press **F9** (**"Find/Replace"**).	Input Search String:
	3	• Input the search string and press **Enter**. EX. **"BLOCK"**	Input Replace String:
	4	• Input the replace string and press **Enter** EX. **"QUICK"**	2. THE BLOCK 3. THE QUICK Replace the string? **YES** NO
	5	• Select **YES** and press **Enter** to replace the search string. • Select **NO** and press **Enter** to stop the search. EX. Select **YES**	2. THE QUICK 3. THE QUICK Continue Search? **YES** NO
	6	• Select **YES** and press **Enter** to continue the search string. • Select **NO** and press **Enter** to stop the search string.	String xxxxx not found!
	7	• Press any Key to return the edit mode.	
F10 (**"-Others-"**) Switch of Command sets	1	• Press **F10** (**"-Others-"**) to switch the command sets to the group A.	

NOTE

- When the edit mode is **"edit Telex file"**, set the max columns to **"69"**.
- Characters, words, and lines can be copied easily with using "**Undo**" command. After once deleted, press **"Undo"** command the number of times you want to copy.
- Input a word with capital letter when searching and replacing the word in Telex file. To make capital letter, input character string with pressing **Caps Lock** key or **Shift** key.

3.7.1.2 Block Function

When the block is selected in Edit mode previously, the block can be copied, moved, deleted and etc. The block function menu is provided on Edit mode. Item of the menu is as follows:

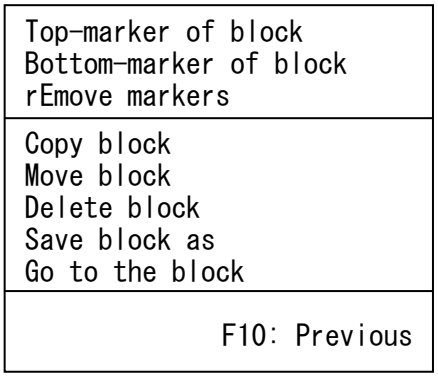


Fig.3.7.1.2a "Block function menu" Window

Top-marker of block.....To select a top-marker of block.
Bottom-marker of block.....To select a bottom-marker of block.
Remove marker.....To remove the block markers.
Copy block.....To duplicate a block on the edit mode.
Move block .....To move a block on the edit mode.
Delete block .....To delete a block on the edit mode.
Save block as.....To save a block to the USB drive.
Go to the block.....To go the cursor to a top of the selected

(1) Select block

Before the block function is used, select the block according to the following procedures.

Step	Operation	Example
1	• Move the cursor to the top of the block.	1. THE QUICK 2. THE QUICK 3. THE QUICK
2	• Press **F3** (**"Block"**). • Move the cursor to **"Top-marker of block"** and press **Enter** key.	**Top-marker of block**
3	• Move the cursor to the bottom of the block.	1. THE QUICK 2. THE QUICK 3. THE QUICK
4	• Press **F3** (**"Block"**). • Move the cursor to **"Bottom- marker of block"** and press **Enter** key.	**Bottom- marker of block**
5	• When the block is selected, it is highlighted.	**1. THE QUICK** **2. THE QUICK** 3. THE QUICK
6	• To remove the highlighted, press **F3** (**"Block"**). • Move the cursor to "rEmove markers" and press **Enter** key.	1. THE QUICK 2. THE QUICK 3. THE QUICK

(2) Copy block

Step	Operation	Example
1	• Select the Block according to the item (1) **"Select Block"**.	1. THE QUICK 2. THE QUICK 3. THE QUICK 4. THE QUICK
2	• Move the cursor to the character where the block is to be inserted.	1. THE QUICK 2. THE QUICK 3. THE QUICK 4. THE QUICK
3	• Press **F3** (**"Block"**). • Select **"Copy block"** and press **Enter** key.	1. THE QUICK 2. THE QUICK 3. THE QUICK 1. THE QUICK 2. THE QUICK 4. THE QUICK

The copied block

3

* Warning message window (Fig.3.8b) is displayed when the data capacity exceeds 8000 bytes.

(3) Delete block

Step	Operation	Example
1	• Select the Block according to the item (1) **"Select Block"**.	1. THE QUICK 2. THE QUICK 3. THE QUICK
2	• Press **F3** (**"Block"**). • Select **"Delete block"** and press **Enter** key.	3. THE QUICK

(4) Move block

Step	Operation	Example
1	• Select the Block according to the item (1**) "Select Block"**.	1. THE QUICK 2. THE QUICK 3. THE QUICK 4. THE QUICK
2	• Move the cursor to the character where the block is to be removed.	1. THE QUICK 2. THE QUICK 3. THE QUICK 4. THE QUICK
3	• Press **F3** (**"Block"**). • Select **"Move block"** and press **Enter** key. • The highlight is removed automatically.	3. THE QUICK 1. THE QUICK 2. THE QUICK 4. THE QUICK

The moved block

(5) Save block

Step	Operation	Example
1	• Select the Block according to the item (1) **"Select Block"**.	1. THE QUICK 2. THE QUICK 3. THE QUICK
2	• Press **F3** (**"Block"**). • Select **"Save block as"** and press **Enter** key.	File name:_
3	• Enter the file name to be saved and press **Enter** Ex. ABC. TLX • The block is saved to the memory.	File name: ABC. TLX

(6) Go to the block

Step	Operation	Example
1	• Select the Block according to the item (1) **"Select Block"**.	1. THE QUICK 2. THE QUICK 3. THE QUICK 4. THE QUICK
2	• Press **F3** (**"Block"**). • Select **"Go to the block"** and **Enter** key. • The cursor is jumped to a top of the block. (Note)	3. THE QUICK 4. THE QUICK

NOTE

When the block has not selected, the following messages are displayed. Press any key to erase this message.

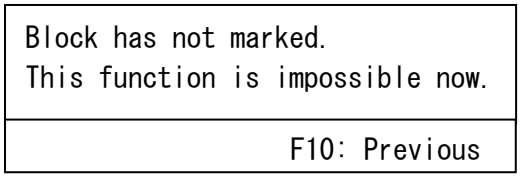


Fig.3.7.1.2b The Message Window Says "Block has not marked"

3.7.2 File Management

The edited message file in the IME/DTE memory can be deleted, renamed, or copied by the file management menu.

When the USB drive is connected to the IME/DTE optionally, the edited message file in the USB drive can be deleted, renamed, or copied by the file management menu.

Delete file : To delete a file
Rename file: To rename a file
Copy file : To copy a file

Press **F2** (**"Sort by Name/Time"**) to sort the file by Name or Time, when file list is displayed.

(1) Delete file

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"EdIt"** and press **Enter** key.	• **"Edit"** window is displayed.	
2	• Select **"Delete file"** and press **Enter** key.	• Delete file list menu is displayed. **"Delete file:_"**	
3	• Select the file name to delete and press **Enter** key. EX. **"TEST.BAK"**	• "CAUTION:Are you sure you want to delete the file "TEST.BAK"? **Yes No"** is displayed.	To delete the file of USB drive, input **E** **:** into the column of "File: "
4	• To delete the selected file, select **Yes** and press **Enter** key.	• The selected file is deleted.	
5	• Press **ESC** key to return the main menu.	• The main menu is displayed.	

(2) Rename file

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Edit"** and press **Enter** key.	• **"Edit"** window is displayed.	
2	• Select **"reName file"** and press **Enter** key.	• The file list memorized in IME/DTE and **"Current file name: "** is displayed.	
3	• Select or input the file name you want to rename, and press **Enter** key. Example: **"TEST. TLX"**	• **"Current file name: TEST. TLX"** **"New file name: "** is displayed.	
4	• Input the new file name and press **Enter** key. EX: **"ABC. TLX"**	• **"New file name: ABC. TLX** **CAUTION.** **Are you sure you want to rename the file "TEST. TLX" To "ABC. TLX"**? **Yes No"** is displayed.	Blank space cannot be used for file name.
5	• When the file name is renamed, select **Yes** and press **Enter** key.	• The selected file is renamed.	
6	• Press **ESC** key to return the main menu.	• Main menu is displayed.	

(3) Copy file

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Edit"** and press **Enter** key.	• **"Edit"** window is displayed.	
2	• Select **"Copy file"** and press **Enter** key.	• The file list memorized in IME/DTE and **"Current file name: "** is displayed.	
3	• Enter the file name, or move the cursor to the file name you want to copy, then press **Enter** key. • When you save the file to IME/DTE from USB drive, Enter as [E: (the file name you want to copy)] to the column of copy origin, then press **Enter** key.	• **"Current file name: XXX. TLX"** • **"New file name: "** is displayed.	
4	• When you save the file to USB drive from IME/DTE, Enter as [E: (new file name)] to the column of copy origin, then press **Enter** key.	• **"New file name: ABC. TLX" is displayed.**	Input file name within 8 characters and input the extension within 3 characters.
5	• The new file is duplicated.		
6	• Press **ESC** key to return the main menu.	• Main menu is displayed.	

3.7.3 USB Drive Management Menu

Remove USB drive : To remove a USB drive.
Format USB drive : To format a USB drive.

3.7.3.1 Connect the USB Drive

- When you connect USB drive, ACS mark is displayed at header area in the display during recognizing the device.
- When the USB drive installation succeeded, **"**The USB drive is installed and ready to use.**"** is displayed and the USB mark is displayed (ACS mark is disappeared).
- When the USB drive installation failed, **"**The attached USB drive has malfunctioned, and DTE does not recognize the attached USB drive.**"** is displayed.
- When the USB device is noncompliant, **"**The attached USB drive is not supported. DTE supports the USB drive only**"** is displayed.

NOTE

- You need your USB drive, when you use.
- Do not remove the USB drive, while the USB drive LED which lights up when IME/DTE is loading from or writing to the USB drive is lighting up. Otherwise, the data in the USB drive might be destroyed.
- When the USB Device is not connected, please close the rubber flap in order to maintain waterproofing and dust-proofing.
- JRC cannot accept responsibility for any loss due to use virus-infected USB Device except product guarantee condition and liability by law.

3.7.3.2 The USB Drive Management Menu

(1) Remove USB drive

When select **"**Remove USB drive**"** and press **Enter** key, you remove the USB drive.

Step	Operation	IME/DTE Response
1	･Move the cursor to **"Edit"** and press **Enter** key.	･**"Edit"** window is displayed.
2	･Select **"Remove USB drive"** and press **Enter** key.	･**"**To stop the USB drive, choose Yes. After the USB drive is stopped, the USB drive can be safety removed. YES NO **"** is displayed
3	･To remove the USB drive, select **Yes** and press **Enter** key.	･When the processing is succeeded, **"**The USB drive can now be safely removed from DTE. **"** is displayed and the USB mark is disappeared. ･When the processing is failed, **"** ERROR DTE failed to stop the USB drive.**"** is displayed. ･When USB Device is not connected, **"**DTE failed to detect the USB drive**"** is displayed.
4	･When the processing is succeeded, remove the USB drive from IME/DTE.	

NOTE

When the source file name is presented to the target USB drive, **"WARNING, File XXXX. XXX (file name) already present on the USB drive, Do you want to overwrite it? Yes No"** is displayed. When the file name is overwritten, select **Yes** and press **Enter** key. When the file name is not overwritten, select **No** and press **Enter** key.

When remove the USB drive without above operation, **"**The USB drive was removed before the USB drive is stopped.**"** is displayed. Then, there is a possibility the data in the USB drive is destroyed.

(2) Format USB drive

Carry out formatting of USB drive when the USB drive you use is unusable.

NOTE

Formatting destroys all data on the USB drive. Be very careful when using the command.

Step	Operation	IME/DTE Response	Remarks
1	・Move the cursor to **"Edit"** and press **Enter** key.	・**"Edit"** window is displayed.	
2	・Select **" Format USB drive "** and press **Enter** key.	・**"WARNING,** Formatting will erase ALL data on the USB drive. To format the USB drive, choose Yes. **Yes No"** is displayed.	
3	・Select **Yes** to format the USB drive and press **Enter** key, and then insert the new USB drive to USB drive. When select **No** key and press **Enter** key, back to the **"Edit"** window.	・When start the formatting, **"**Formatting the USB drive. **"** is displayed and blinked. ・When the formatting is success, **"**Format the USB drive complete**"** is displayed. ・When the formatting is failed, **"**ERROR DTE was unable to complete the format. Please remove the USB drive. **"** is displayed. ・When carry out the formatting USB drive is not connected, **"**DTE failed to detect the USB drive.**"** is displayed.	

3.7.3.3 USB Drive Feature Overview

(1) USB drive compatibility

※1: The USB device must be USB Flash memory.

※2: The USB Flash memory complies with USB 1.1 or USB 2.0 standards.

※3: The USB Flash memory has NOT any built-in USB hubs.

※4: The USB Flash memory has NOT any security functions. (e.g. to require passwords when connecting the USB Flash memory)

※5: The USB Flash memory is formatted in FAT16 or FAT32; the USB Flash memory is not formatted in Non-MS Windows operating system. FAT16 is recommended for fast accessing such as mounting and formatting rather than FAT32.

※6: The USB Flash memory contains only one drive.

※7: Do NOT use write protect function.

Above requirements do NOT provide any warranties as to the device performances. Some USB Flash memory devices do NOT operate normally as data is NOT recorded and NOT recognized.

Please inquire of our branch and office about the USB Flash memory of our recommendation.

Please inquire of our branch and office about the USB Flash memory max size of our confirmed operation.

(2) Accessible files

※: The IME/DTE only ensures to access the files which are created or edited by itself.

(3) Precautions

※1: The IME/DTE does NOT support other than USB Flash memories devices, such as Hard Disk Drives, any Optical Drives such as CD-ROM drives or DVD-ROM drives, any Optical-Magnetic Drives such as MO drives, and any Flash memory Card Reader such as SD Card Reader. In addition Mousses, Keyboards, Game Pads, and all other USB devices are disabled. These devices must NOT connect the IME/DTE.

※2: The IME/DTE does NOT support the devices as bus-powered.

※3: The size of the USB Flash memory is greater, the accessing speed, such as read/write speed, recognizing speed, and quick formatting speed will be slower.

※4: The IME/DTE does NOT support other than FAT16 and FAT32 file system, such as NTFS, HFS, HFS+, and exFAT.

※5: The USB Flash memory must connect the IME/DTE directly, NOT through any USB hubs.

※6: The USB Flash memory specially shaped may NOT be able to connect the IME/DTE physically.

※7: The maximum files and folders which are accessible by the IME/DTE are 100 and 50 respectively; the IME/DTE is only accessible 150 files and folders if the IME/DTE finds more files and folders than the limits. The files and the folders should be under the limits when the USB Flash memory is used.

※8: The maximum name length of folders and files which are accessible by the IME/DTE is 255 characters in full path.

※9: The USB Flash memory which contains multibyte character filenames and folders which can be created under other than the IME/DTE must not connect.

※10: The rubber cap on the USB connector of the IME/DTE must be closed when a USB Flash memory is not connected.

※11: The USB Flash memory has NOT to be removed when accessing LED of the memory is flickered. The file data might be destroyed.

※12: Our warranty does not apply to damages or malfunctions affected by the USB Flash memories which are infected by computer viruses.

※13:Save a file into the USB Flash memory after it is physically formatted on a PC. Without that, to mount the USB Flash memory on this IME/DTE will require long time.

※14: The USB connector must be series A connector.

※15: Do NOT use extension cable or translator to connect the IME/DTE.

3.8 Transmitting Message (Transmit)

The edited message is sent to the subscriber with some communication network. When the message is sent, the communication network is selected in the **"Transmit"** window.

The telex communication network is the mandatory facility for all LESs. Other facility depends on each LES.

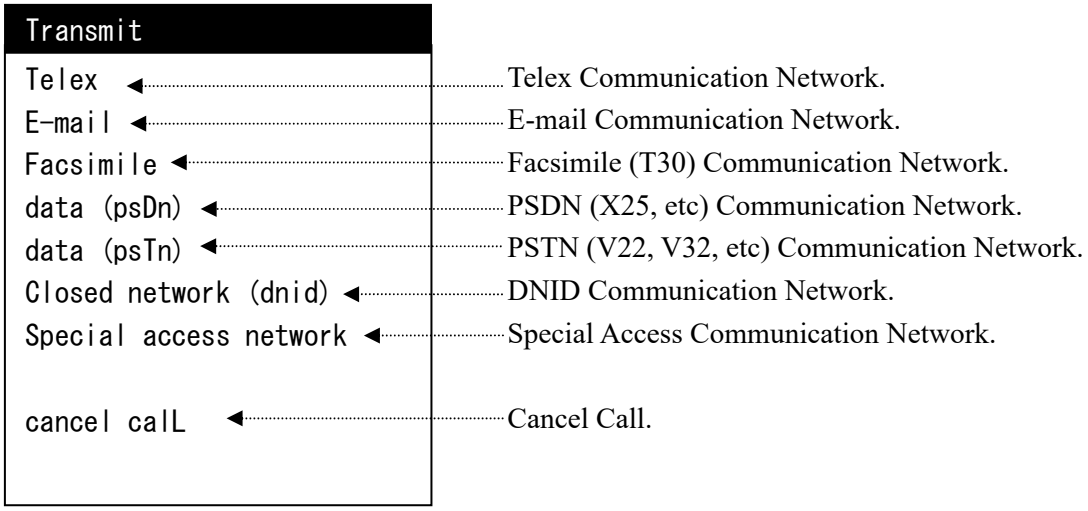


Fig.3.8a "Transmit" Window

NOTE

The size of the transmission message in JUE-87 is 8000 bytes maximum. If the size of the message is exceeded 8000 bytes, the following windows is displayed. In this case, reduce the size to 8000 bytes or less divide the message to a few file.

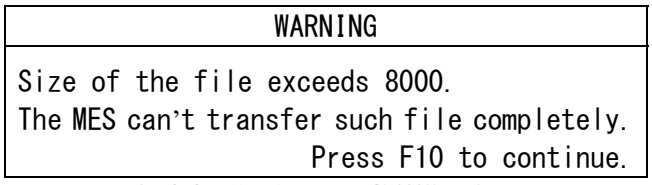


Fig.3.8b "WARNING !!!" Window

3.8.1 Sending Telex

NOTE

- DO NOT REQUEST ANY DISTRESS PRIORITY CALLS EXCEPT IN AN EMERGENCY.

  Accident alarm message is transmitted to Rescue Coordination Center regardless of destination code, subscriber's number, and answerback.

- Distress telex message is retransmitted after the device is restarted, when momentary disconnection is occurred in the device during the distress telex message transmitting. However, please note that distress telex message is not retransmitted in the following cases.

  (1) When power switch of the device is turned OFF and ON

  (2) When power switch of External power supply unit is turned OFF and ON

  (3) When the ship is recovered from blackout

  (4) When a random failure is occurred in the device

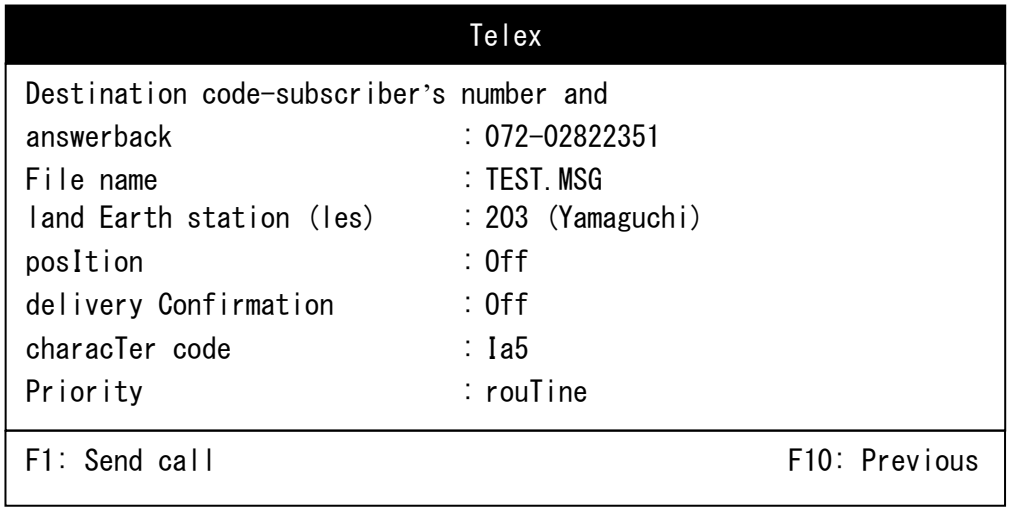


Fig.3.8.1a Example of "Telex" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to **"Telex"** and press **Enter** key.	• The **"Telex"** window is displayed.	• **"Telex"** is the mandatory facility for all LESs. Other facility depends on each LES.
3	• Move the cursor to **"Destination code-subscriber's number and answerback"** and press **Enter** key.	• The **"Destination"** window is displayed.	
4	• Move the cursor to the **"1:"** and press **Enter** key.	• The cursor is moved to **"subscriber's no"**.	• When the abbreviated number is used, press **F2** (**"Address book code"**) key.
5	• Type telex country code, subscriber's number and press →. Ex. Country code: 72 Subscriber's number: 12345678 **0 7 2 1 2 3 4 5 6 7 8 →**	• The cursor is moved to **"answerback"**.	• Type triple digits in the country code. When the country code is double digits such as Ex, "0" is preceded by the country code.
6	• Type answerback code and press **Enter**. Ex. 12345678 ABCD J **1 2 3 4 5 6 7 8 A B C D J Enter**	• The cursor is moved to **"2"**.	• When the answerback code is not provided, press **Enter** key only. • Note 1
7	• After confirmation of each parameter, press **F10** (**"Previous"**) key.	• The **"Telex"** window is displayed, and the cursor is moved to **"File name"**.	.
8	• When the file is selected, press **Enter** key.	• The cursor is moved to right side.	
9	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	
10	• Select the file by ↑, ↓ key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 2
11	• Confirm the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	

Step	Operation	IME/DTE Response	Remarks
12	• Press **F10** (**"Previous"**) key to return the **"Telex"** window.	• The **"Telex"** window is displayed and the cursor is moved to **"land Earth station (les)".**	
13	• When the LES is selected, press **Enter** key.	• The cursor is moved to right side.	• When the LES ID is knowledge, type the LES ID directly.
14	• Confirm the contents and press **F2** (**"LES list"**) key.	• The **"Les list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
15	• Select the Les ID by ↑, ↓ key, and press **Enter** key.	• The cursor is moved to **"posItion"**.	• Note 3
16	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right side.	
17	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"delivery Confirmation"**.	
18	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right side.	
19	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**.	
20	• When the setting of the **"characTer code"** is changed, press **Enter** key.	• The cursor is moved to right side.	
21	• Select the **"characTer code"** and **Enter** key. • Select the **"Ia5"** normally.	• The cursor is moved **"Priority"**.	
22	• When the **"Priority"** is changed, press **Enter** key.	• The cursor is moved to right side.	
23	• When the priority is set to the normal, select **"Routine"** and press **Enter** key. • When the priority is set to the distress, select **"Distress"** and press **Enter** key.	• The cursor is returned to "Destination code-subscriber's number and answerback".	

Step	Operation	IME/DTE Response	Remarks
24	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.	• The contents of the selected file are displayed, and then Main menu is displayed again.	• Normally, it takes about 3-5 minutes to complete the communication.
25		• **"S&F message (14-04-01 11:00) sent to LES (203)"** is displayed. • Example: Call date and time: 2014/4/1 11:00 LES ID: 203 • When the **"Message print on function"** is turned on, the call time, date destination number, LES ID, and the message are printed out.	• Press **F10** (**"Previous"**) key to delete the message.
26	• After the message is transmitted to subscribers, **"S&F message delivered to subscribers"** is displayed. Press **F10** (**"Previous"**) key to return to main menu.	• **"S&F message (14-04-01 11:00) delivered to subscribers (07202822351)"** is displayed. • Example: Delivery date and time: 2014/4/1 11:00 Destination number: 07202822351	• Press **F10** (**"Previous"**) key to delete the message.

Note 1) Message can be sent to up to 5 subscribers whom destination code is same, by moving the cursor to **"Destination code-subscriber's number, and answerback code"** with pressing **Enter** key (Multi address function).

When the subscriber's number set to two numbers or more, **"*"** is displayed at right side of the number.

Note 2) When the entered file is not in the IME/DTE memory or the USB drive, the following window is displayed, press **F10** (**"Previous"**) key and type the new file name.

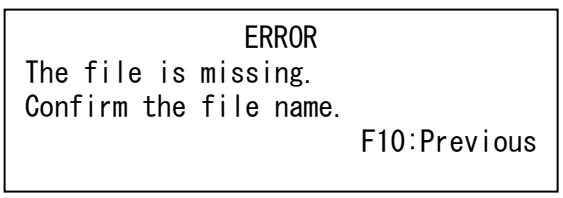


Fig.3.8.1b "ERROR" Window

Note 3) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.

Press **F10** (**"Previous"**) key and type the correct LES ID.

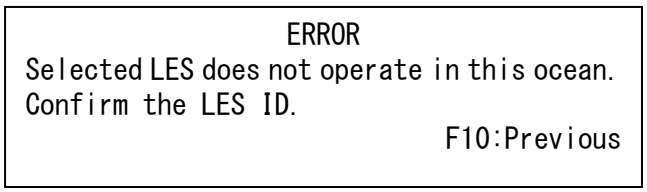


Fig.3.8.1c "ERROR" Window

3.8.2 Transmitting E-mail Message

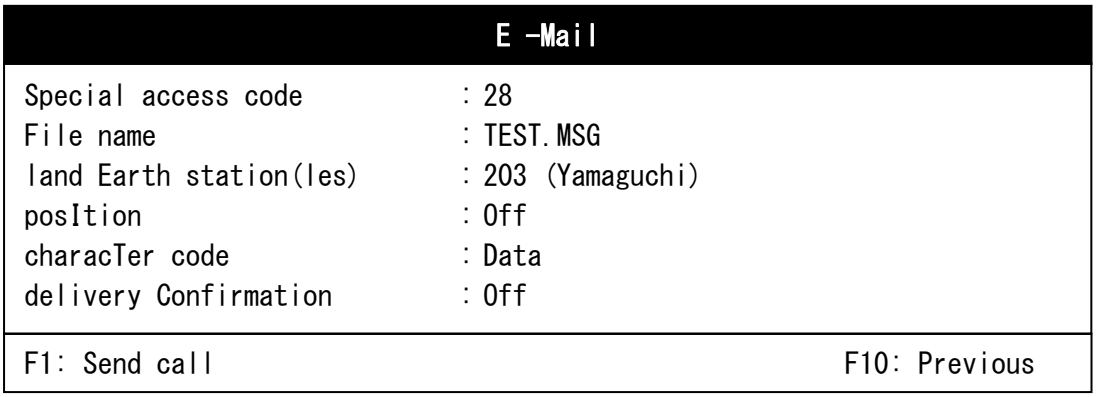


Fig.3.8.2a Example of "E-mail" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"E-mail"** and press **Enter** key.	• The **"E-mail"** window is displayed.	• **"E-mail"** is optional facility for each LES.
3	• Move the cursor to the **"Special access code"** and press **Enter** key.	• The cursor is moved to right column from **"Special access code".**	
4	• Type the Special access code (Numbers or Alphabets, 6 digits maximum) and press **Enter** key. Ex. 28 **2** **8** **Enter**	• The cursor is moved to **"File name".**	• Special access codes differ from LES to LES. • Ask LES of the LES's special access code.
5	• When the file is selected, press **Enter** key.	• The cursor is moved to right column from **"File name".**	
6	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	
7	• Select the file by ↑, ↓key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 1, 2
8	• After confirmation of the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	

Step	Operation	IME/DTE Response	Remarks
9	• Press **F10** (**"Previous"**) key to return to the "Special access network" window.	• The cursor is moved to **"land Earth station (les)"**.	
10	• When the LES is selected, press **Enter** key.	• The cursor is moved to right column from **"land Earth station (les)"**. .	• When the LES ID is knowledge, type the LES ID directly.
11	• Press **F2** (**"Les list"**) key.	• The **"Les list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
12	• Select the LES ID by ⇑ , ⇓ key, and press **Enter** key.	• The cursor is moved to **"posItion"**.	• Note 3
13	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right column from **"posItion"**.	
14	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. • When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**.	
15	• When the setting of the **"characTer code"** is changed, press **Enter** key.	• The cursor is moved to right column from **"characTer code"**.	
16	• Select the **"characTer code"** and **Enter** key.	• The cursor is moved to **"delivery Confirmation"**.	
17	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right column from **"delivery Confirmation".**	
18	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**. • The **"special access code"** window is displayed.	
19	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.		• Normally, it takes about 3-5 minutes to complete the communication.

Step	Operation	IME/DTE Response	Remarks
20	• Press **F10** (**"Previous"**) key to return to main menu.	• Main menu is displayed.	

Note 1) When the entered file name is not in the IME/DTE memory or the USB drive, "ERROR, The file is missing. Confirm the file name." is displayed, press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.2b "ERROR" Window

Note 2) Following window is displayed when you carry out the procedure of Step 7, if "characTer code" is set as "Data". Press **F10** (**"Previous"**) key when you carry out data transmission.

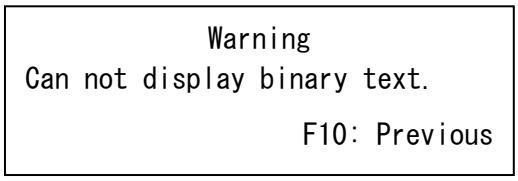


Fig.3.8.2c "WARNING" Window

Note 3) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

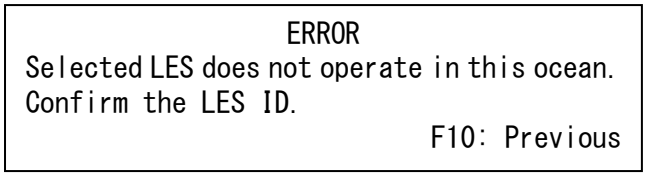


Fig.3.8.2d "ERROR" Window

3.8.3 Transmitting Facsimile Message

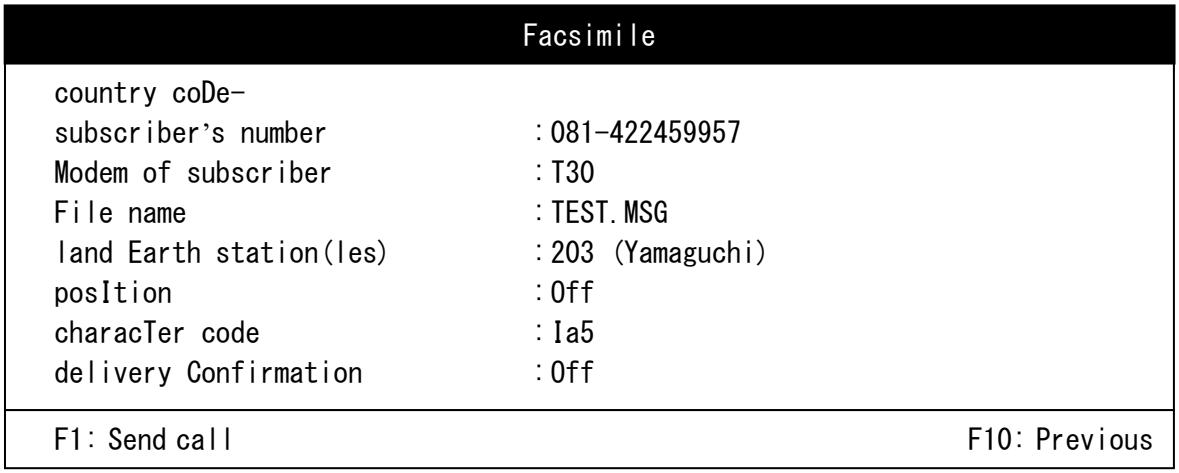


Fig.3.8.3a Example of "Facsimile" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"Facsimile"** and press **Enter** key.	• The **"Facsimile"** window is displayed.	• **"Facsimile"** is optional facility for each LES.
3	• Move the cursor to the **"Country code-subscriber's number"** and press **Enter**.	• The **"Destination"** window is displayed.	
4	• Move the cursor to the **"1:"** and press **Enter** key.	• The cursor is moved to **"subscriber's no"**.	• When the abbreviated number is used, press **F2** (**"Address book code"**) key.
5	• Type telephone country code, subscriber's number and press **Enter**. Ex. Country code: 81 Subscriber's number: 12345678 **0 8 1 1 2 3 4 5 6 7 8 Enter**	• The cursor is moved to **"2:"**.	• Type triple digits in the country code. When the country code is double digits such as Ex, "0" is preceded by the country code. • Note 1
6	• After confirmation of each parameter, press **F10** (**"Previous"**) key.	• The cursor is moved to **"File name"**.	
7	• When the file is selected, press **Enter** key.	• The cursor is moved to right side.	

Step	Operation	IME/DTE Response	Remarks
8	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	
9	• Select the file by ⇑ , ⇓.key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 2, 3
10	• After confirmation of the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	
11	• Press **F10** (**"Previous"**) key to return the **"Facsimile"** window.	• The cursor is moved to **"land Earth station (les)"**.	
12	• When the LES is selected, press **Enter** key.	• The cursor is moved to right side.	• When the LES ID is knowledge, type the LES ID directly.
13	• Press **F2** (**"LES list"**) contents and press (**"Previous"**) key.	• The **"LES list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
14	• Select the LES ID by ⇑, ⇓ key, and press **Enter** key.	• The "Facsimile" window is displayed and the cursor is moved to **"posItion"**.	• Note 4
15	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right side.	
16	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**.	
17	• When the setting of the "characTer code" is changed, press **Enter** key.	• The cursor is moved to right side.	
18	• Select the **"characTer code"** and **Enter** key. • Select the **"Ia5"** normally.	• The cursor is moved to **"delivery Confirmation"**.	
19	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right side.	

Step	Operation	IME/DTE Response	Remarks
20	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is return to "country coDe-subscriber's number".	
21	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.	• The contents of the selected file are displayed, then Main menu is displayed again.	• Normally, it takes about 3-5 minutes to complete the communication.
22		• **"S&F message (14-04-01 11:00) sent to LES (203)"** is displayed. Example: Call date and time: 2014/4/1 11:00 LES ID: 203 • When the message print on function is turned on, the call time, date destination number, LED ID, and the message are displayed.	• Press **F10** (**"Previous"**) key to clear the message.
23	• After the message is transmitted to subscribers, **"S&F message delivered to subscribers"** is displayed . Press **F10** ("previous") key to return previous screen.	• **"S&F message (14-04-01 11:00) delivered to subscribers (0811234567)"** is displayed. Example: Delivery date and time: 2014/4/1 11:00 Destination number: 0811234567 • When the message print on function is turned on, the call time destination number and LES ID are displayed.	• Press **F10** (**"Previous"**) key to clear the message.

Note 1) Message can be sent to up to 5 subscribers whom destination code is same, by moving the cursor to **"Destination code-subscriber's number and answerback code"** then pressing Enter key (Multi address function).

When the subscriber's number set to two numbers or more, **"*"** is displayed at right side of the number.

Note 2) When the file is not in the IME/DTE memory or the USB drive, the following window is displayed, press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.3b "ERROR" Window

Note 3) Following window is displayed when you carry out the procedure of Step 9, if "characTer code" is set as "Data". Press **F10** (**"Previous"**) key when you carry out data transmission.

Fig.3.8.3c "WARNING" Window

Note 4) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

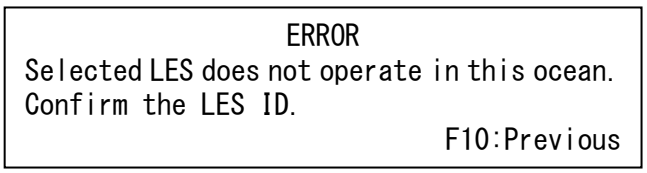


Fig.3.8.3d "ERROR" Window

3.8.4 Transmitting Data (PSDN) Message

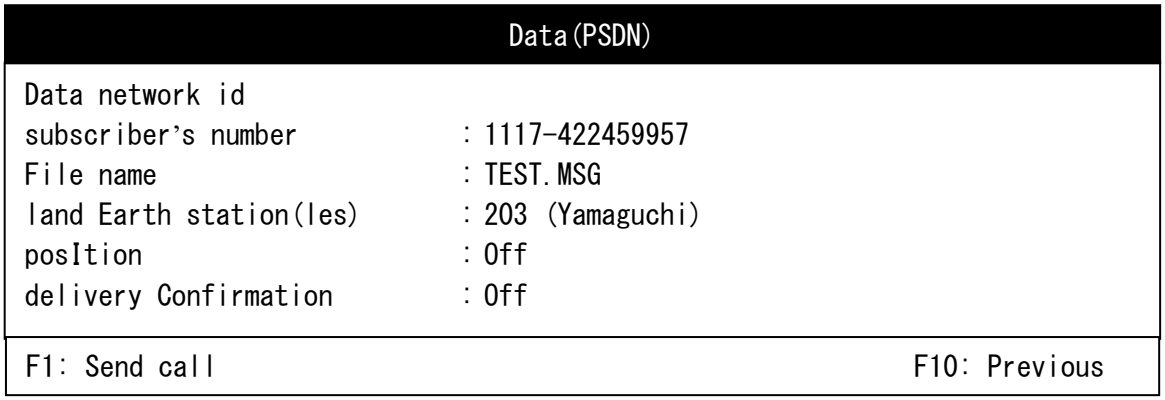


Fig.3.8.4a "Data (PSDN)" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter**.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"data (psDn)"** and press **Enter**.	• The **"Data (PSDN)"** window is displayed.	• **"Data (PSDN)"** is optional facility for each LES.
3	• Move the cursor to the **"Data network id, subscriber's number and answerback"** and press **Enter**.	• The **"Destination"** window is displayed.	
4	• Move the cursor to the **"1:"** and press **Enter** key.	• The cursor is moved to **"subscriber's no"**.	• When the abbreviated number is used, Press **F2** (**"Address book code"**) key.
5	• Type data network id, subscriber's number and press **Enter**. Ex. Data Network ID: 1112 Subscriber's number: 12345678 **1 1 1 2 1 2 3 4 5 6 7 8 Enter**	• The cursor is moved to **"2:"**.	• The data network id is provided by each LES. • Note 1
6	• Confirm each parameter, and press **F10** (**"Previous"**) key.	• Data (PSDN) window is displayed and the cursor is moved to **"File name"**.	
7	• When the file is selected, press **Enter** key.	• The cursor is moved to right side.	
8	• Press **F2** (**"File selection"**) key.	• The "File list" window is displayed.	

Step	Operation	IME/DTE Response	Remarks
9	• Select the file by ↑ ,↓ key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 2, 3
10	• Confirm the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	
11	• Press **F10** (**"Previous"**) key to return the **"Data (PSDN)"** window.	• Data (PSDN) window is displayed and the cursor is moved to **"land Earth station (les)"**.	
12	• When the LES is selected, press **Enter** key.	• The cursor is moved to right side.	• When the LES ID is knowledge, type the LES ID directly.
13	• Press **F2** (**"LES list"**) key.	• The **"Les list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed. • Note 4
14	• Select the LES ID by ↑ , ↓ key, and press **Enter** key.	• Data (PSDN) window is displayed and the cursor is moved to **"posItion"**.	
15	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right side.	
16	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. • When the ship's position is not included, select **"oFf"** and press **Enter** key.	• The cursor is moved to **"delivery Confirmation"**.	
17	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right side.	
18	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is returned to "**Data network id subscriber's number**".	

Step	Operation	IME/DTE Response	Remarks
19	• Confirm each parameter and press **F1** (**"Send Call"**) key.	• The Main menu is displayed.	• Normally, it takes about 3-5 minutes to complete the communication.
20		• **"S&F message (14-04-01 11:00) sent to LES (203)"** is displayed. Example: Call date and time: 2014/4/1 11:00 LES ID: 203 • When the message print on function is turned on, the call time, date destination number, LED ID is displayed.	• Press **F10** (**"previous"**) key to clear the message.
21		• **"S&F message (14-04-01 11:00) delivered to subscribers (11121234567)"** is displayed. Example: Delivery date and time: 2014/4/1 11:00 Destination number: 11121234567 • When the message print on function is turned on, the call time destination number and LES ID are displayed.	• Press **F10** (**"previous"**) key to clear the message.

Note 1) Message can be sent to up to five subscribers whom destination code is same, by moving the cursor to **"Destination code-subscriber's number and answerback code"** then pressing **Enter** key. When the subscriber's number set to 2 numbers or more, **"*"** is displayed at right side of the number.

Note 2) When the file is not in the IME/DTE memory or the USB drive, the following window is displayed, press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.4b "ERROR" Window

Note 3) Following window is displayed when you carry out the procedure of Step 9. Press **F10** (**"Previous"**) key when you carry out data transmission.

```
Warning
Can not display binary text.
                    F10:Previous
```

Fig.3.8.4c "WARNING" Window

Note 4) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

```
ERROR
Selected LES does not operate in this ocean.
Confirm the LES ID.
                    F10:Previous
```

Fig.3.8.4d "ERROR" Window

3.8.5 Transmitting Data (PSTN) Message

```
Data(PSTN)
country coDe-
subscriber's number          : 081-4123456789
Modem of subscriber          : Others (T30)
File name                    : TEST.MSG
land Earth station (les)     : 203 (Yamaguchi)
posItion                     : Off
characTer code               : Data
delivery Confirmation        : Off

F1: Send call                          F10: Previous
```

Fig.3.8.5a Example of "Data (PSTN)" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"data (psTn)"** and press **Enter** key.	• The **"Data (PSTN)"** window is displayed.	• **"Data (PSTN)"** is optional facility for each LES.
3	• Move the cursor to the **"Country code-subscriber's number"** and press **Enter**.	• The **"Destination"** window is displayed.	
4	• Move the cursor to the **"1:"** and press **Enter** key.	• The cursor is moved to **"Subscriber's no"**.	• When the abbreviated number is used, press **F2** (**"Address book code"**) key.
5	• Type telephone country code, subscriber's number and press **Enter**. • Ex. Country code: 081 Subscriber's number: 12345678 • **0 8 1 1 2 3 4 5 6 7 8 Enter**	• The cursor is moved to **"2:"**.	• Note 1
6	• After confirmation of each parameter, press **F10** (**"Previous"**) key.	• The **"Data (PSTN)"** window is displayed. • The cursor is moved to **"Modem of subscriber"**.	
7	• When the setting of the Modem of subscriber's is changed, press **Enter** key.	• The cursor is moved to right side.	
8	• Select the setting of the Modem of subscriber's and press **Enter** key. V22 : 1200bps V22bis : 2400bps V32bis : 9600bps Others : 3 digits protocol number described the ITU-T	• The **"Data (PSTN)"** window is displayed. • The cursor is moved to **"File name".**	
9	• When the file is selected, press **Enter** key.	• The cursor is moved to right side.	
10	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	

Step	Operation	IME/DTE Response	Remarks
11	• Select the file by ⇑ , ⇓.key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 2, 3
12	• After confirmation of the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	
13	• Press **F10** (**"Previous"**) key to return the **"Data (PSTN)"** window.	• The **"Data (PSTN)"** window is displayed. • The cursor is moved to **"land Earth station (les)"**.	
14	• When the LES is selected, press **Enter** key.	• The cursor is moved to right side.	• When the LES ID is knowledge, type the LES ID directly.
15	• Press **F10** (**"LES list"**) key.	• The **"LES list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
16	• Select the LES ID by ⇑ , ⇓ key, and press **Enter** key.	• The **"Data (PSTN)"** window is displayed. • The cursor is moved to **"posItion"**.	• Note 4
17	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right side.	
18	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code".**	
19	• When the setting of the **"characTer code"** is changed, press **Enter** key.	• The cursor is moved to right side.	
20	• Select the **"characTer code"** and **Enter** key. • Select the "Ia5" normally.	• The cursor is moved to **"delivery Confirmation"**.	
21	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right side.	

Step	Operation	IME/DTE Response	Remarks
22	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is returned to "country coDe-subscriber's number".	
23	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.	• The contents of the selected file are displayed, and then Main menu is displayed again.	• Normally, it takes about 3-5 minutes to complete the communication.
24		• **"S&F message (14-04-01 11:00) sent to LES (203)"** is displayed. Example: Call date and time: 2014/4/1 11:00 LES ID: 203 • When the message print on function is turned on, the call time, date destination number, LES IDs are displayed.	• Press **F10** (**"Previous"**) key to clear the message.
25		• **"S&F message (14-04-01 11:00) delivered to subscribers (0811234567)"** is displayed. • Example: Delivery date and time: 2014/4/1 11:00 Destination number: 0811234567 • When the message print on function is turned on, the call time destination number and LES IDs are displayed.	• Press **F10** (**"Previous"**) key to clear the message.

Note 1) Message can be sent to up to five subscribers whom destination code is same, by moving the cursor to **"Destination code-subscriber's number and answerback code"** then pressing **Enter** key. When the subscriber's number set to 2 numbers or more, **"*"** is displayed at right side of the number.

Note 2) When the file is not in the IME/DTE memory or the USB drive, the following window is displayed, press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.5b "ERROR" Window

Note 3) Following window is displayed when you carry out the procedure of Step 11, if "characTer code" is set as "Data". Press **F10** (**"Previous"**) key when you carry out data transmission.

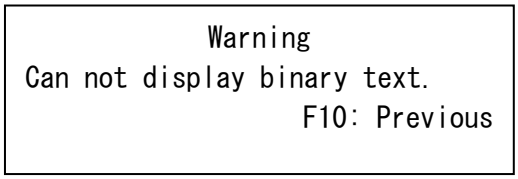


Fig.3.8.5c "WARNING" Window

Note 4) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

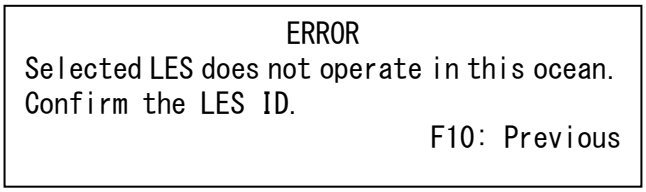


Fig.3.8.5d "ERROR" Window

3.8.6 Transmitting Closed Network Message

NOTE

It is necessary to download the closed network ID (DNID) from LES prior to the closed network message is transmitted.

```
                    Closed network (dnid)
cloSed network id (dnid)      : 12345
File name                     : TEST.MSG
land Earth station (les)      : 203 (Yamaguchi)
posItion                      : Off
traNsfer                      : Data report

F1: Send call                                  F10: Previous
```

Fig.3.8.6a Example of "Closed network" Window

```
                    Closed network (S&F)
cloSed network id (dnid)      : 12345
File name                     : TEST.MSG
land Earth station (les)      : 203 (Yamaguchi)
posItion                      : Off
traNsfer                      : S&F
character code                : Ia5
delivery Confirmation         : oN

F1: Send call                                  F10: Previous
```

Fig.3.8.6b Example of "Closed network (S&F)" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"Closed network"** and press **Enter** key.	• The **"Closed network"** window is displayed.	• **"Closed network"** is the optional facility for each LES.
3	• Move the cursor to the **"Closed network id"** and press **Enter** key.	• The cursor is moved to right entry field from **"Closed network id"**.	
4	• When the closed network ID is selected, press **F2** (**"DNID list"**) key.	• The **"Closed network list window"** is displayed. • When the closed network ID is not downloaded, the blank list is displayed.	• When the closed network ID is not downloaded, the blank list is displayed.
5	• Select the closed network ID by ↑ and ↓ key and press **Enter** key.	• The cursor is moved to **"File name"**.	
6	• When the file is selected, press **Enter** key.	• The cursor is moved to right column from **"File name".**	
7	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	
8	• Select the file by ↑ , ↓ key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 1, 2
9	• After confirmation of the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	
10	• Press **F10** (**"Previous"**) key to return the **"Closed network"** window.	• The cursor is moved to **"land Earth station (les)"**.	
11	• When the LES is selected, press **Enter** key.	• The cursor is moved to right column from **"land Earth station (les)"**.	• When the LES ID is knowledge, type the LES ID directly.
12	• Press **F2** (**"LES list"**) key.	• The **"LES list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
13	• Select the LES ID by ↑, ↓ key, and press **Enter** key.	• The cursor is moved to **"posItion"**.	• Note 3

Step	Operation	IME/DTE Response	Remarks
14	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right column from **"posItion"**.	
15	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. • When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"traNsfer"**.	
16	• When the setting of **"traNsfer"** is changed, press **Enter** key.	• The cursor is moved to right column from **"traNsfer"**.	
17	• When the data reporting service is used, select the **"Data report"** and press **Enter** key. • When the store and forward service is used, select the **"S&F"** and press **Enter** key.	• When the **"S&F"** is selected, the **"closed network"** window is displayed.	• When the **"Data report"** is selected, skip to step 23.
18	• Select the **"characTer code"** and **Enter** key.	• The cursor is moved to right column from **"characTer code".**	
19	• When the setting of the **"characTer code"** is changed, press **Enter** key.	• The cursor is moved to **"delivery Confirmation".**	
20	• When the setting of the "delivery Confirmation" is changed, press **Enter** key.	• The cursor is moved to right column from **"delivery Confirmation".**	
21	• When the delivery Confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is returned to **"closed network id"**.	
22	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.	• The contents of the selected file are displayed, and then Main menu is displayed again.	• Normally, it takes about 3-5 minutes to complete the communication.

Note 1) When the entered file name is not in the IME/DTE memory or the USB drive, **"ERROR, The file is missing. Confirm the file name."** is displayed. Then press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.6c "ERROR" Window

Note 2) Following window is displayed when you carry out the procedure of Step 8, if "characTer code" is set as "Data". Press **F10** (**"Previous"**) key when you carry out data transmission.

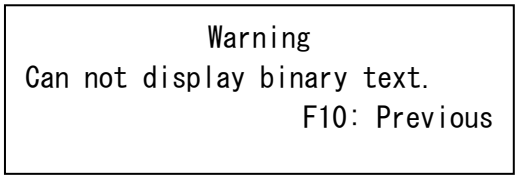


Fig.3.8.6d "WARNING" Window

Note 3) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

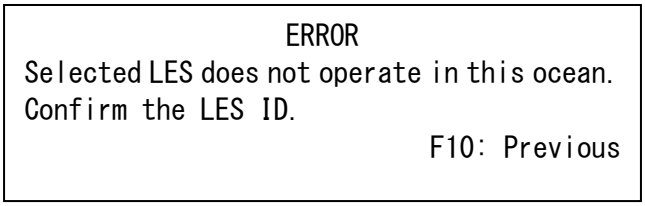


Fig.3.8.6e "ERROR" Window

3.8.7 Transmitting Special Access Network Message

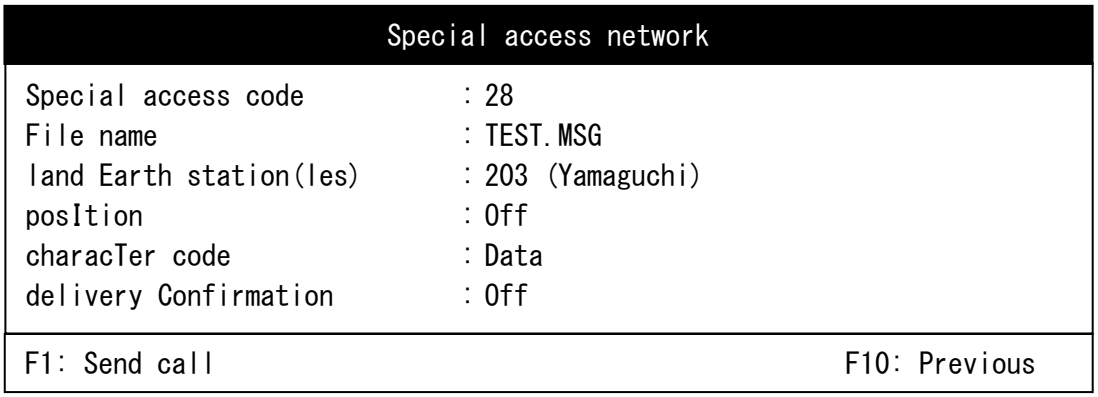


Fig.3.8.7a Example of "Special access network" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the **"Special access network"** and press **Enter** key.	• The **"Special access network"** window is displayed.	• **"Special access network"** is optional facility for each LES.
3	• Move the cursor to the **"Special access code"** and press **Enter** key.	• The cursor is moved to right column from **"Special access code".**	
4	• Type the Special access code (Numbers or Alphabets, 6 digits maximum) and press **Enter** key. Ex. 28 **2** **8** **Enter**	• The cursor is moved to **"File name".**	• Special access codes differ from LES to LES. • Ask LES of the LES's special access code.
5	• When the file is selected, press **Enter** key.	• The cursor is moved to right column from **"File name".**	
6	• Press **F2** (**"File selection"**) key.	• The **"File list"** window is displayed.	
7	• Select the file by ↑ , ↓.key and press **Enter** key.	• The contents of the file are displayed.	• When the file name is knowledge, type the file name directly. • Note 1, 2
8	• After confirmation of the contents and press **F10** (**"Previous"**) key.	• The **"File list"** window is displayed.	

Step	Operation	IME/DTE Response	Remarks
9	• Press **F10** (**"Previous"**) key to return to the "Special access network" window.	• The cursor is moved to **"land Earth station (les)"**.	
10	• When the LES is selected, press **Enter** key.	• The cursor is moved to right column from **"land Earth station (les)"**. .	• When the LES ID is knowledge, type the LES ID directly.
11	• Press **F2** (**"Les list"**) key.	• The **"Les list"** window is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
12	• Select the LES ID by ⇑ , ⇓ key, and press **Enter** key.	• The cursor is moved to **"posItion"**.	• Note 3
13	• When the setting of the **"posItion"** is changed, press **Enter** key.	• The cursor is moved to right column from **"posItion"**.	
14	• When the ship's position is included the transmitting message, select **"oN"** and press **Enter** key. • When the ship's position is not included, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**.	
15	• When the setting of the **"characTer code"** is changed, press **Enter** key.	• The cursor is moved to right column from **"characTer code"**.	
16	• Select the **"characTer code"** and **Enter** key.	• The cursor is moved to **"delivery Confirmation"**.	
17	• When the setting of the **"delivery Confirmation"** is changed, press **Enter** key.	• The cursor is moved to right column from **"delivery Confirmation".**	
18	• When the delivery confirmation is requested to LES, select **"oN"** and press **Enter** key. • When the delivery confirmation is not requested to LES, select **"Off"** and press **Enter** key.	• The cursor is moved to **"characTer code"**. • The **"special access code"** window is displayed.	
19	• After confirmation of each parameter, press **F1** (**"Send Call"**) key.		• Normally, it takes about 3-5 minutes to complete the communication.

Step	Operation	IME/DTE Response	Remarks
20	• Press **F10** (**"Previous"**) key to return to main menu.	• Main menu is displayed.	

Note 1) When the entered file name is not in the IME/DTE memory or the USB drive, "ERROR, The file is missing. Confirm the file name." is displayed, press **F10** (**"Previous"**) key and type the new file name.

Fig.3.8.7b "ERROR" Window

Note 2) Following window is displayed when you carry out the procedure of Step 7, if "characTer code" is set as "Data". Press **F10** (**"Previous"**) key when you carry out data transmission.

Fig.3.8.7c "WARNING" Window

Note 3) When the selected LED ID is closed, or the selected LES ID is other than 000～063, 100～163, 200～263, and 300～363, the following window is displayed.
Press **F10** (**"Previous"**) key and type the correct LES ID.

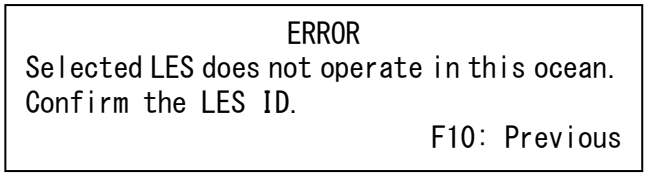


Fig.3.8.7d "ERROR" Window

3.8.8 Address Book

(1) Address number registration

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the service type to register the address number.	• The **"Transmit"** window is displayed.	• The address number can be used in **"Telex"**, **"FAX"**, **"Data (PSTN)"**and **"Data (PSDN)".**
3	• Move the cursor to the **"Destination code"** and press **Enter** key.	• The **"Destination"** window is displayed.	
4	• Press **F2** (**"Address book code"**) key.	• The **"Address book code"** window is displayed.	
5	• Move the cursor to register the abbreviated number and press **F6** (**"New code"**) key.	• The cursor is moved to **"Name"**.	• The abbreviated number is registered 40 numbers maximum.
6	• Type the country code, subscriber's number and press **Enter** key. • When the service type is **"Telex"**, type the answerback code. • Move the cursor to next number after press **Enter** key.	• The typed numbers are displayed.	• When the cursor is moved, press ← or → key. • When the number is deleted, press **Del** key.
7	• After confirmation of each parameter, press **F1** (**"Complete"**) key.	• The **"Address book code"** window is displayed.	• Registration completed.
8	• Press **Esc** Key.	• The **"Main Menu"** screen is displayed.	

(2) Address number selection

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Transmit"** and press **Enter** key, on main menu.	• The **"Transmit"** window is displayed.	
2	• Move the cursor to the service type to register the address number, and press **Enter** key.	• Selected service window is displayed.	
3	• Move the cursor to **"Destination code"** and press **Enter** key.	• The **"Destination"** window is displayed.	
4	• Press **F2** (**"Address book code"**) key.	• The **"Address book code"** window is displayed.	
5	• Select the address number by cursor key and press **Enter** key.	• The line of selected number is displayed in reverse.	
6	• Press **F10** (**"Previous"**) key.	• The specified destination number etc. is displayed on the **"Destination"** menu.	• When the multi address function is used, press **Enter** key instead of **F10** key, and select the number. After confirmation, press **F10** (**"Previous"**) key. • Note 1
7	• Press **F10** (**"Previous"**) key.	• **"Telex"** window is displayed.	
8	• Set the other request parameter and press **F1** (**"Send Call"**) key when you want to send a call.	• The **"Main Menu"** screen is displayed.	• Communication can be start.

Note 1) Using Multi address function, message can be sent up to 5subscribers whom destination codes are same.

Multi address function is optional facility of each LES. Depends on LES, this function is not offered.

3.8.9 Scheduled Transmission

JUE-87 can send position information, file, and/or data from data source to a designated party in regular interval.

Up to 5 schedules can be registered.

Step	Operation	IME/DTE Response	Remarks
1	Hold down **Alt** key and press **U** key on Main menu.	The **"Set up"** window is displayed.	
2	Move the cursor to the item **"Scheduled transmission"** then press **Enter** key.	The **"Scheduled transmission"** window is displayed.	
3	Move the cursor to the item you want to register then press **Enter** key.	The **"Scheduled transmission parameter"** window is displayed.	See the example below.
4	Move the cursor to each item to set and press **Enter** key then set each parameter.		
5	After confirming each parameter, to return to Main menu, press **F10** (**"Previous"**) key twice or **ESC** key.		

```
          Scheduled transmission #1

starting date and Time
(yy-mm-dd hh:mm UTC)  : 14-04-01 17:00
requesting Interval   : 00:10
IEs                   : 002-111-210-302
Network type          : Telex
Destination code &
subscriber's number   : 072-0223344
Character code        : Ia5
data type qtH         : oFf
          dS          : None
          File name   : 0: TEST.TLX
transMission          : oFf

                    F9:Next    F10:Previous
```

Fig.3.8.9 Example of "Scheduled transmission" Window

- Starting date and time

  Set the date and time you want to start for a scheduled transmission.

- Requesting interval

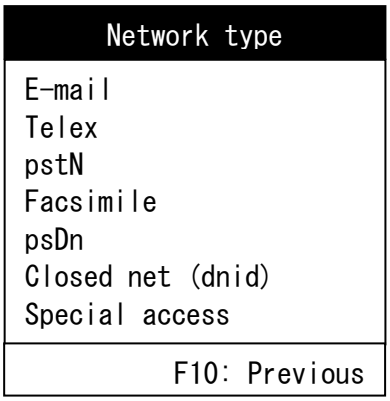
  Set the interval time of schedule. (Minimum 10 minutes)

- LES

  Set the LES IDs you want to use, in all ocean regions. The first field is West AOR (000-063), the second field is East AOR (100-163), the third field is POR (200-263) and the fourth field is IOR (300-363).

- Network type

  Set the network type you want to use. You can choose one of the following networks:
  - E-mail
  - Telex
  - PSTN
  - Facsimile
  - PSDN (Data transmission)
  - Closed network.
  - Special access.



- Destination code & subscriber's number

  Set the destination code and subscriber's number.

- Character code

  Set the character code you want to use over the satellite link.

- Data type

  Set the data type you want to send.
  You can choose the following messages:
  - Position data (QTH):
    Choose the on or off of the position data transmission, Position data is automatically updated when navigation equipment (GPS, etc.) is connected. Use the information you inputted at the section of **"Distress"** when no navigation equipment is connected.
  - Data source (dS)
    *** "1"** and **"2"** means data source number.

- File (File name)
  Set the file name you want to send. Confirmation of file name is required at **"Edit"**. Message with no file name is sent when unrecorded file name is inputted.

- Transmission

  Choose the schedule on or off.

3.9 Handling Received Messages (Read-out, Printing, Saving and Deleting)

The received messages of Inmarsat-C and EGC, are printed out immediately when the MES receives them, in the case of the automatic message print out function (see **3.5.3**.) is turned on. They are erased from older ones when stored calls exceed more than its maximum capacity, 100 calls, or 40K bytes. When your JUE-87 stored over 90 calls, warning window is displayed (**Fig.3.9g**). If the numbers of calls exceed 100, the call logs are deleted from older ones. When you need to **read out**, **print out**, **saving**, or **deleting** the messages, follow the below procedures.

REFERENCE

JUE-87 has function that EGC message is read out from JRC MFD via LAN.
Please refer to the MFD's documentation about the MFD corresponding to this function and the operation method.

(1) To read out, print out, and save the message

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"read Out"** and press **Enter** key.	• **"Read-out"** window is displayed. It shows 3 types of message list.	• "Inm-C": "Inm-C message list" "Egc" : "Egc message list" "All" : "reception message list" (Received all messages) • See **Fig. 3.9a to 3.9c**.
2	• Select the type of message list you want to see.	• The **message list** you have chosen is displayed**.** Each **message list** displays received messages in chronological order. (The newest message is displayed at the top of list.)	
3	• Move the cursor to the message you want to **read** and press **Enter** key.	• The message you want to see is displayed. (See **Fig. 3.9e**) • Press **F10** (**"Previous"**) key to return to main menu when you **do not need to print out.**	• Lower 2 lines show the description of the received message. • Under line shows the characters received in error. (See **Fig. 3.9e**)
4	• To **print** out the message, press **F5** ("Print out").	• The message is printed out.	• Press **F10** (**"Previous"**) key to return to main menu when you **do not need to save it.**
5	• To **save** the message, press **F6** ("save as") key.	• The **"File name"** is displayed.	• Blank space cannot be used for file name. • Using received day for file name, is convenient for you.
6	• Enter the file name and press **Enter** key. • Press **F10** (**"Previous"**) key to return main menu.	• **"Now saving data. Please wait"** is displayed	

When you select with the cursor and press the Enter key, the message text is displayed.

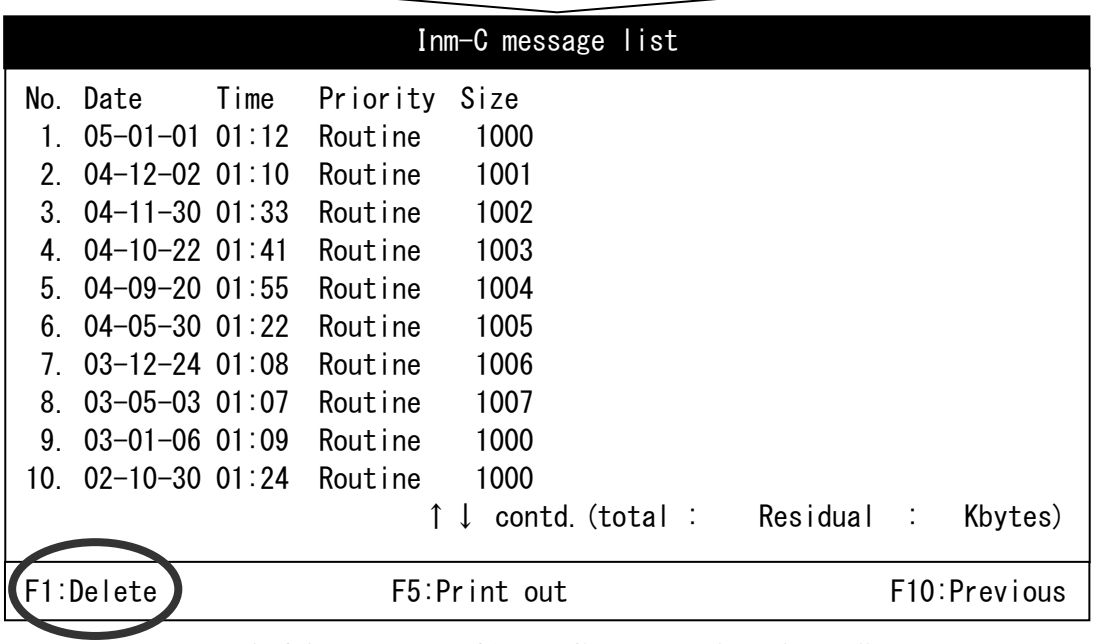


Fig.3.9a Example of "Inm-C Message list Window"

Press F1 to go to **Delete mode**

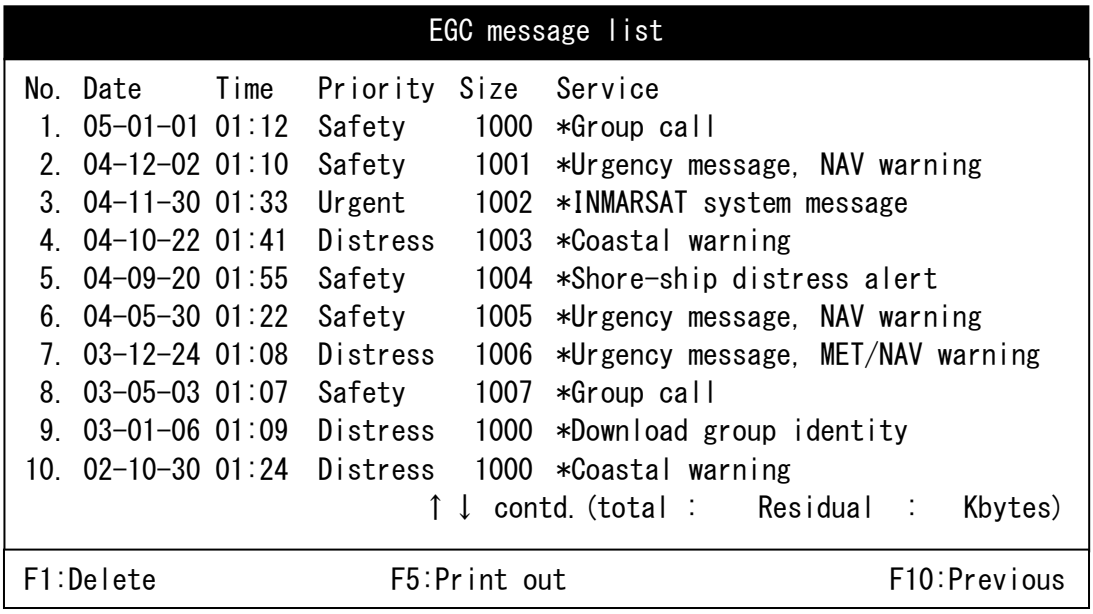


Fig.3.9b Example of "EGC Message list Window"

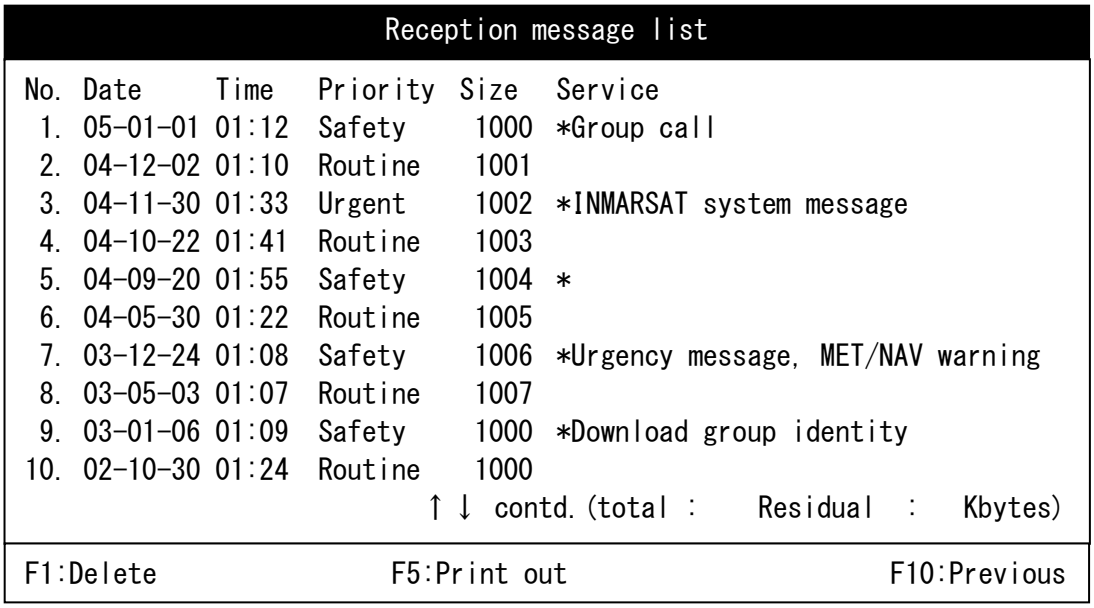


Fig.3.9c Example of "Reception Message list Window"

(2) To delete the message

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"read Out"** and press **Enter** key.	• "**Read-out**" window is displayed. It shows three types of message list.	• "**Inm-C**": "**Inm-C message list**" "**Egc**" : "**Egc message list**" "**All**" : "**Reception message list**" (Received all messages) • See **Fig. 3.8a** to **3.8c**.
2	• Select the type of message list you want to see.	• The **message list** you have chosen is displayed**.** Each **message list** displays received messages in chronological order. (The newest message is displayed at the top of list.)	
3	• Press **F1** key to go to Delete mode.	• "**Delete mode**" screen is displayed.	
4	• Move the cursor to the message you want to **delete,** and press Space bar (You can select a number of messages in same time).	• Asterisk marks (*) are displayed on the head of the lines you want to delete. • To delete the all message, press **F2** **(select all) key.**	• If you want to cancel the deleting, press Space bar once more to cancel it. Then, Asterisk marks (*) are cleared and deletion is cancelled.
5	• To delete the selected messages, press **F7** (**"Delete"**) key.	Warning Do you really want to delete selected messages? OK Cancel	Messages displayed on warning dialog boxes are: Do you really want to delete All messages? Do you really want to delete Inm-C messages? Do you really want to delete EGC messages?
6	• Select **OK** .	• The messages are deleted. • **"Message list " in read-out mode** is re-displayed when deletion is completed.	

3

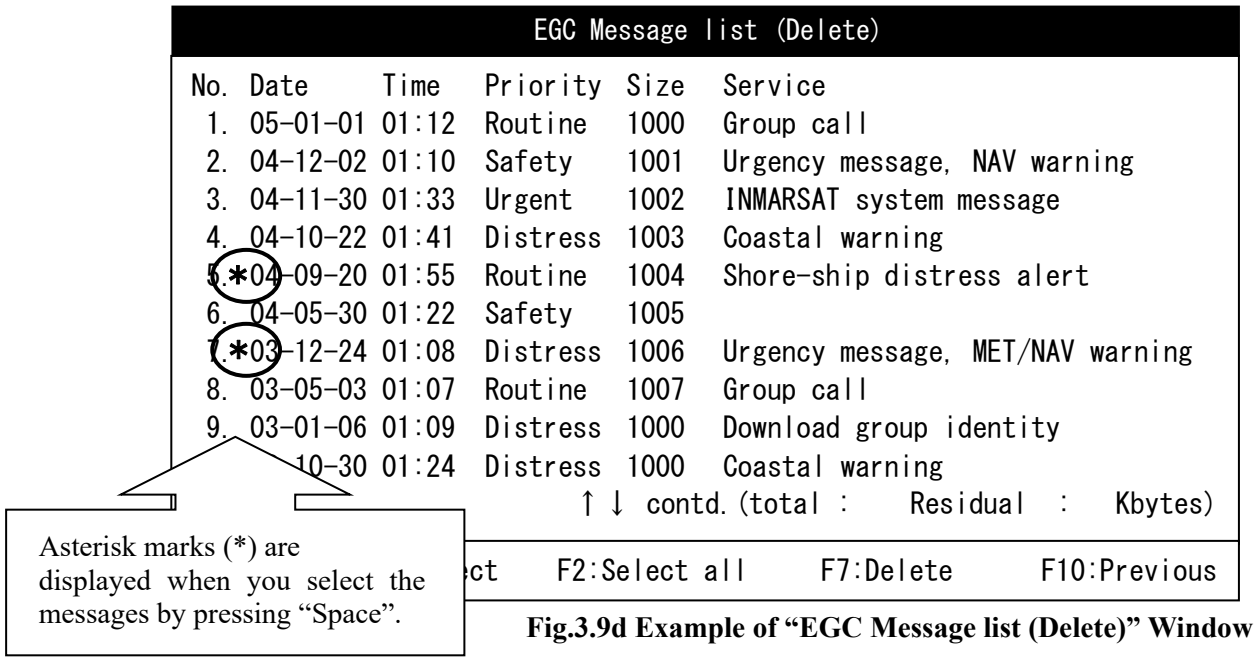


Fig.3.9d Example of “EGC Message list (Delete)” Window

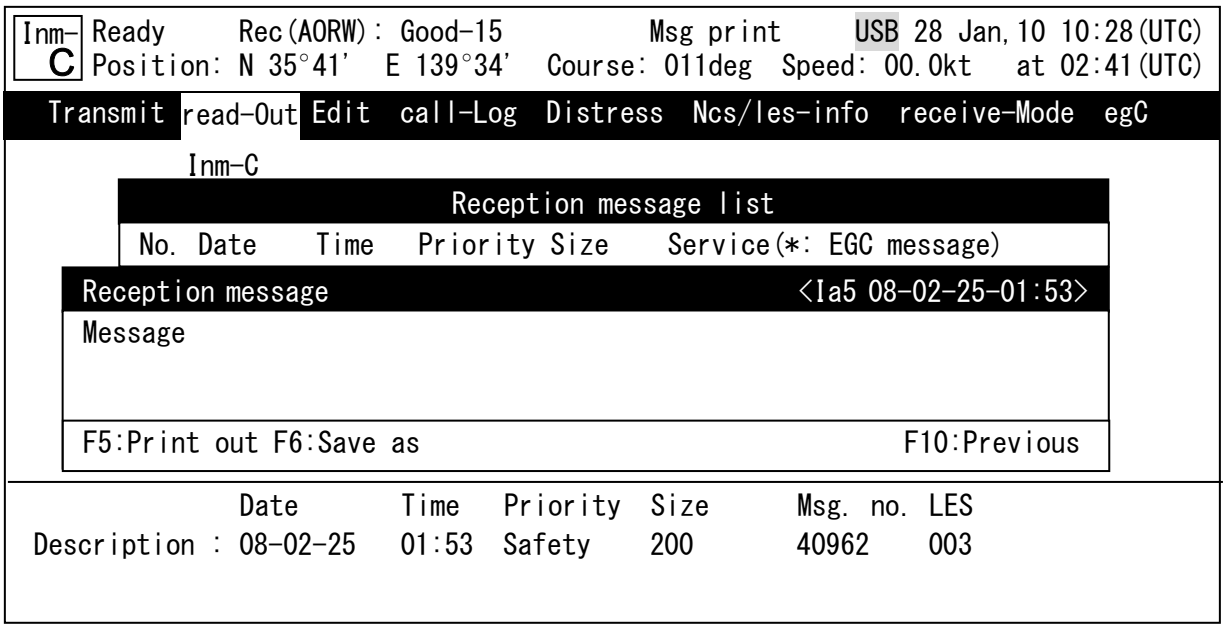


Fig.3.9e Example of “Message” Window

* When the received message in the data communication is read out, the following window is displayed. In this case, press **F10** (**“Previous”**) key, and press **F6** (**“save as”**) key to save the message in the IME/DTE memory. When the message is read out, use the **“edit Ascii file”** command in the **“Edit”** window.

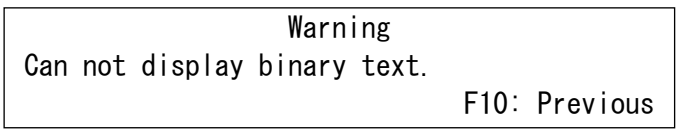


Fig.3.9f “Warning Window” is Displayed When A Message is Received in Data Communication

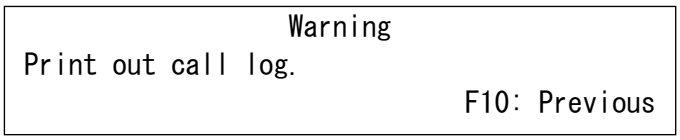


Fig.3.9g “Warning Window” is Displayed When Calls are Stored Over 90

3.10 Call Logging (Call-Log)

Call history of the latest calls (up to 100) are stored in the IME memory, and are displayed by moving the cursor to **"call-Log"** and pressing **Enter** key, in the main menu.

If the numbers of calls exceed 100, the call logs are deleted from older ones and waning window (Fig.3.9g) is displayed.

If you need to print out the call logs, press **F5** (**"Print out"**) key, and delete the call logs by press **F7** (**"clear history"**) key.

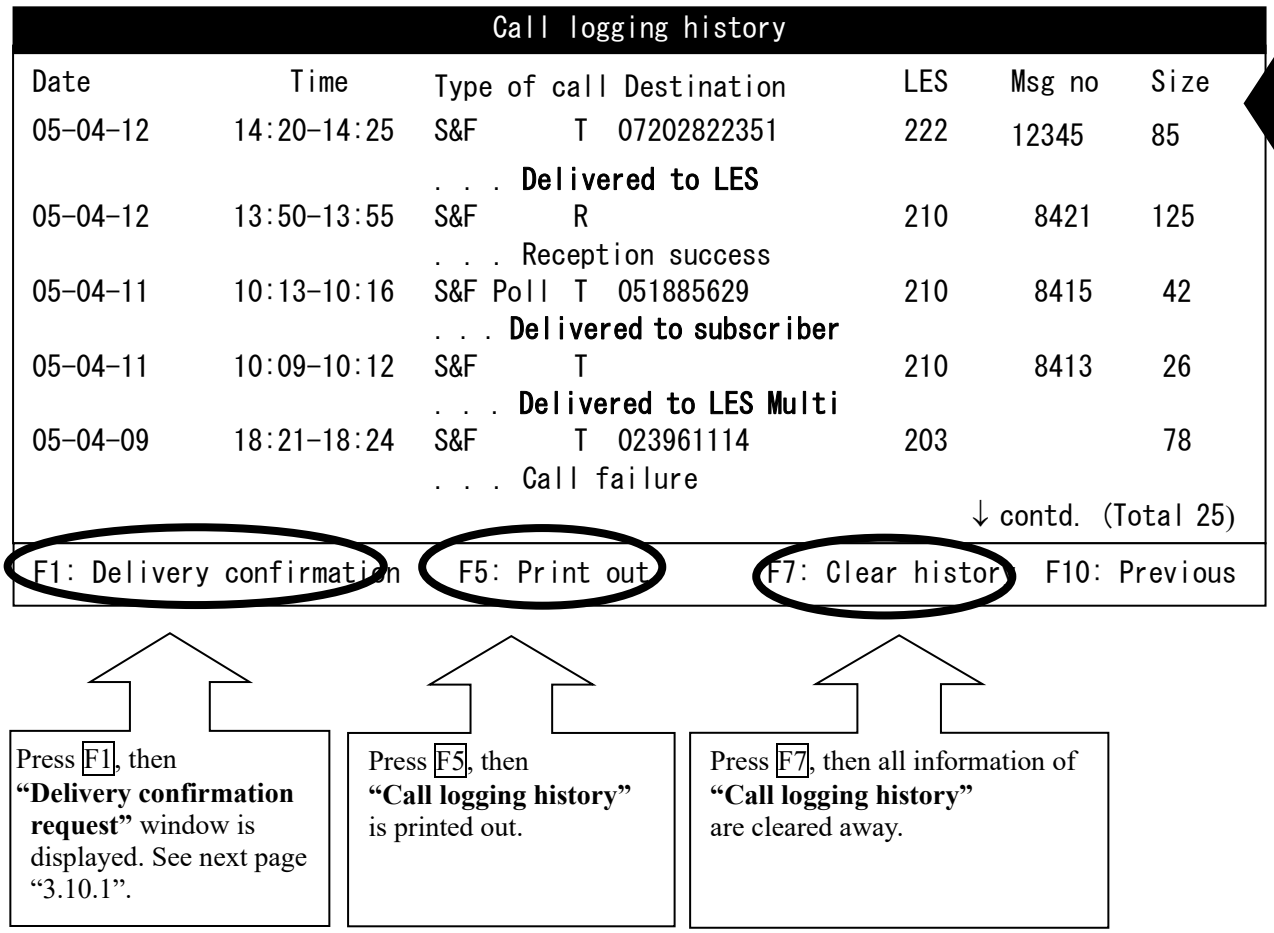


Fig.3.10 Example of "Call logging history" Window

NOTE

F7 **"clear history"** command clears all information of your call-log.

Note:

(1) **"Time"** area (example: 14:20-14:25) shows the starting time and stopping time of the call.

(2) **"Type of call"** shows the communication type and the direction as follows:

- Type of call

S&F:	Store & Forward communication (Telex communication)
S&F Poll:	Automatic response communication with S&F to the polling command
S&F sched:	Scheduled communication with S&F
S&F Dist:	Distress priority communication with S&F
Data RPT:	Data reporting
EDR:	Enhanced Data Reporting
EDR Sched:	Scheduled communication with EDR
EDR Prg:	Programmed Position Report with EDR
EDR Poll:	Immediate Position Report with EDR
EPADR:	Enhanced Pre-assigned Data Reporting
SLCA:	Slot Logical Channel Assignment (for EPADR)
SLCA Req:	SLCA Request
SLCA Ctrl:	SLCA Control (which is suspending SLCA or resuming SLCA)
EDR R-PADR:	Re-sending data reporting by EDR which EPADR communication is failed
Distress:	Distress alerting
Log-in:	Log-in request
Log-out:	Log-out request
PV test:	Performance verification test

- Direction of call

  R: Reception (Land subscriber to MES)
  T: Transmission (MES to land subscriber)

(3) **"Msg no"** shows the serial number of the calls via each LES.

(4) **"Size"** shows number of characters in the message.

(5) 2nd line shows the result of the call.

Example)

Delivered to LES:	Message is transmitted to LES.
Delivered to subscriber :	Message is transmitted to (land) subscriber.
Reception success:	Message from LES is received.
Call failure:	Message transmission to LES or subscriber is failed.

NOTE

"Delivered to LES" means the message you sent to land subscriber is received by LES as a relay point. When you want to confirm whether the message is received by land subscriber, execution of "Delivery confirmation request" is recommended.

When you turn 'ON' "delivery confirmation" function (see Fig. 3.8.1.) at the Telex window, you can receive delivery confirmation automatically.

When you use **"Multi-address function"(**sending a message to up to 5 subscribers whom destination code is same, via Telex), result of transmission is displayed individually. (checking **"Delivery confirmation request"** window is not necessary).

3.10.1 Delivery Confirmation

When you want to confirm the delivery result of the transmitted message, press **F1** (**"Delivery confirmation"**) key of the **"Call logging history"** window (see previous page), then select the message to be confirmed on **"Delivery confirmation request window"**, then press **Enter** key.

Then, the delivery information is shown in the window as **"Delivery confirmation request".**

This window shows information of all messages you sent, and received message from only LES as same as "Call logging history". But point of difference is, you can check the result of transmission to a number of subscribers via E-mail, an individual transmission succeeded or not, in this screen.

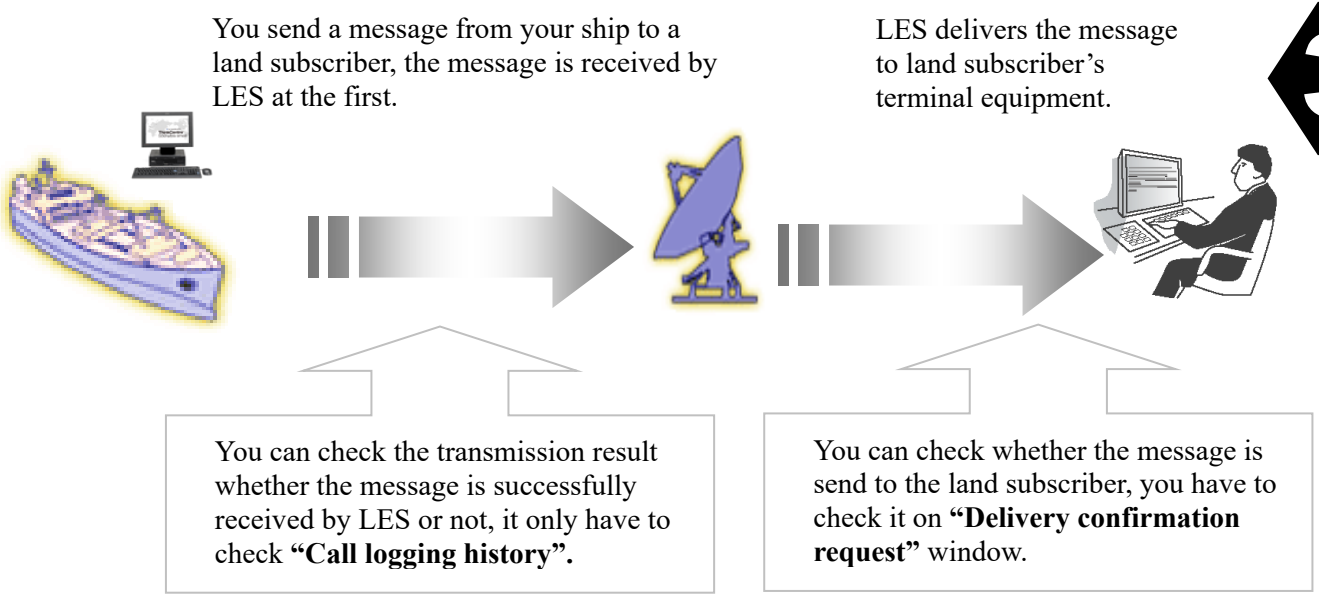


Fig.3.10.1a Confirmation of the Result of Telex Transmission

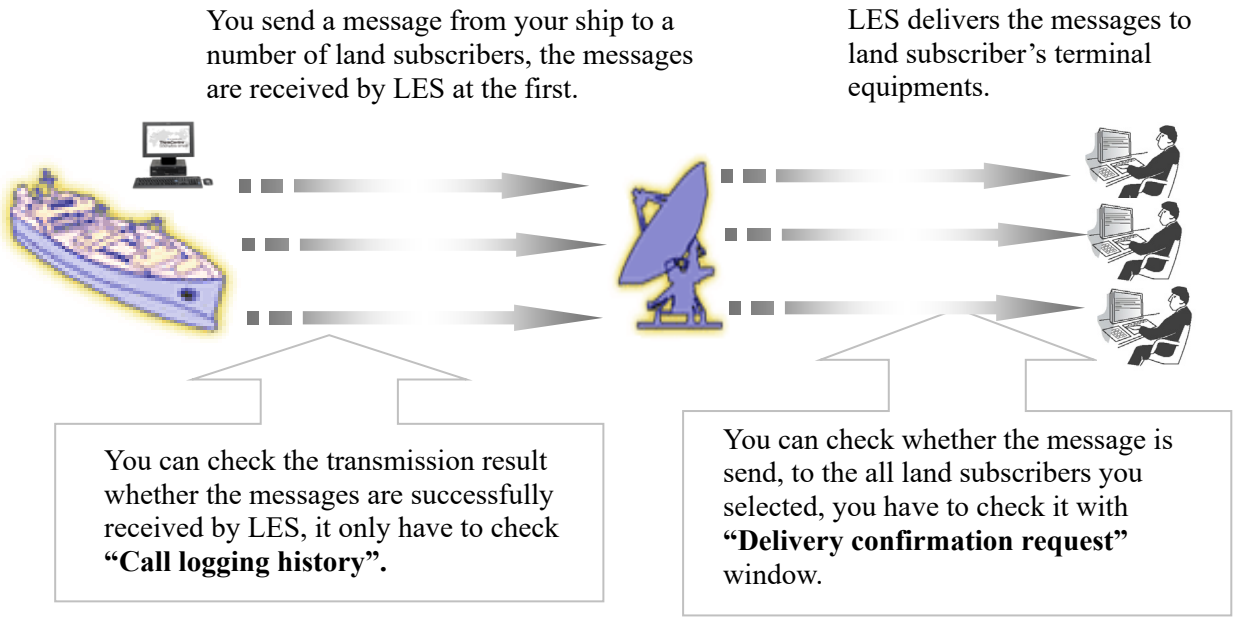


Fig.3.10.1b Confirmation of the Result of E-mail Transmission

Delivery confirmation can be done on the result of all transmissions. Cursor will skip the received calls from LES. On the example window below, cursor stops first item, but does not stop on second one (because the message is received from LES, no use to confirm the detail). And, it stops again on third call.

Select the received message**,** and pressing **ENTER** or **F3** key, then **"Delivery confirmation"** window is displayed , and you can check that your messages are send to the land subscribers you selected.

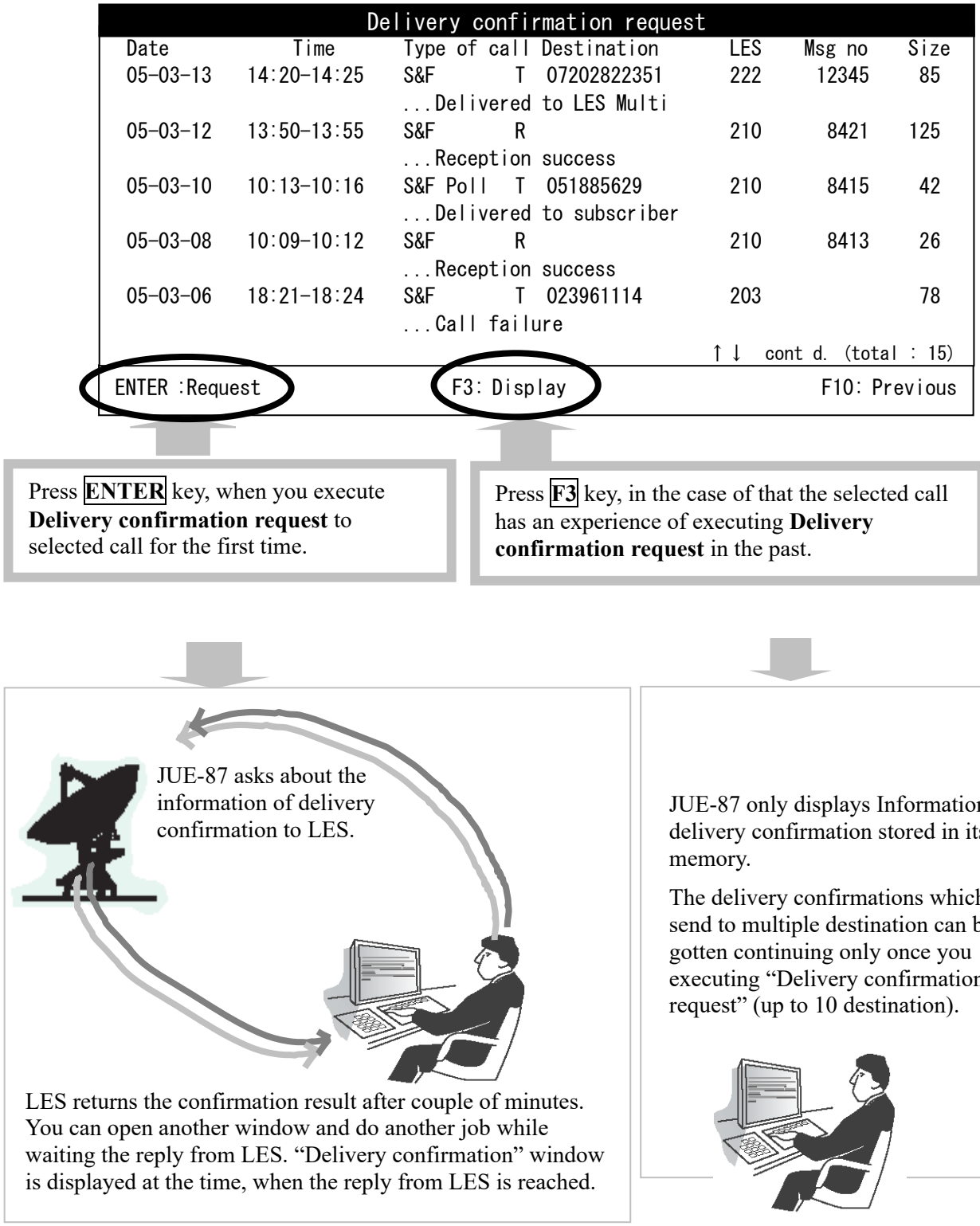


Fig.3.10.1c Example of "Delivery confirmation request" Window and About Key Operation

```
S&F message (96-04-14-08:10)
delivered to subscribers
(072123456, 0729876543).

                                F10: Previous
```

Fig.3.10.1d Example of "Delivery confirmation" Window for A Message Sent to A Subscriber.

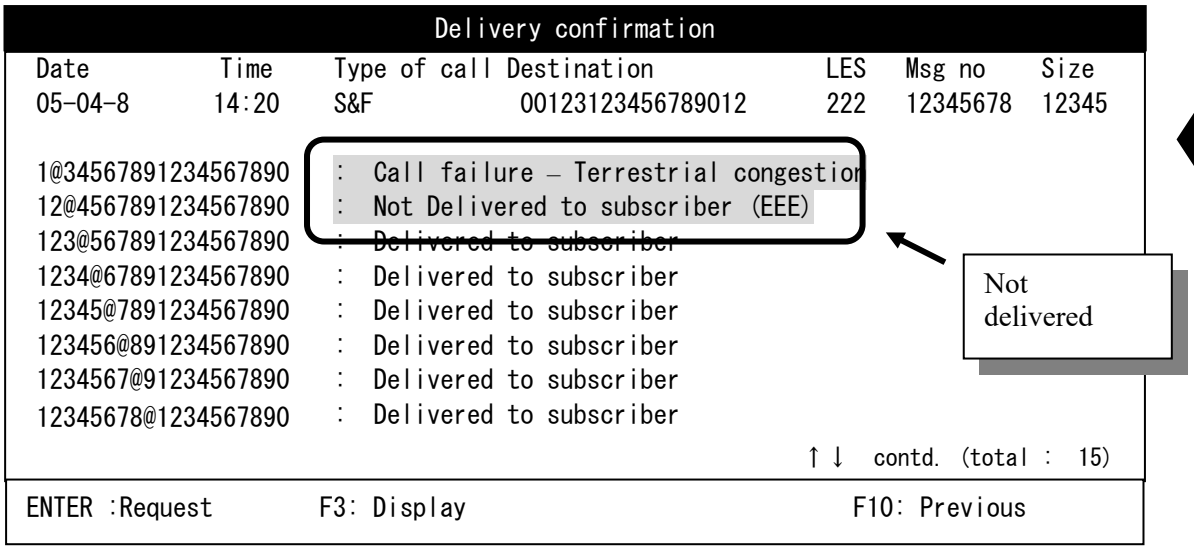


Fig.3.10.1e Example of "Delivery confirmation" Window for A Message Sent to A Number of Subscribers.

Above figure shows that first and second destination did not receive the mail by any reasons. Ask the LES of the detail of 3 degrees code is showed when the destination does not receive the mail such as second call. Transmissions to the rest of 5 persons are succeeded.

* Character line, 1234567@91234567890, means E-mail address.

3.10.2 Print Out

When you want to print out the history, press **F5** (**"Print out"**) key.

3.10.3 Clear History

Press **F7** ("Clear history") key to clear away all the communication histories.

NOTE

All histories are cleared away when **F7** **"Clear history"** key is pressed.

3.10.4 Ending

To quit this function, press **F10** (**"Previous"**) key or **Esc** Key.

3.10.5 Buzzer (Alarm) Processing

To stop the buzzer sound of **EXT BUZ**, press **BUZ OFF** switch. (See clause 2.3.4)
To stop the buzzer sound of **IME,** press **Ctrl** + **A** .

There are two types of buzzer sounds:

1	Continuation sound as receiving buzzer (Low priority)	When JUE-87 received routine or safety message. In accordance with the buzzer sound duration, it stops automatically. Conversely, buzzer sound does not stop at **Ctrl** + **A** key and **BUZ OFF** switch. (Note 1)
2	Continuation sound as receiving buzzer (High priority)	When JUE-87 received distress or routine message. Buzzer sounds continuously until press **Ctrl** + **A** key or **BUZ OFF** switch. (Note 2)
3	Intermittence sound as alarm	When the ship's position has not been updated for definite period of time. Time is decided by the input source of position information. Internal / External GPS : 3 minutes Manual Input : 4 hours
		Some sort of trouble occurs on JUE-87. Check the alarm window displayed on the screen, and follow the direction.
		JUE-87 received an abnormal message. All LED lamps are blinked with buzzer sound, you can no operation from the keyboard.

Note 1) The buzzer sound specifications change depending on whether the BAM function is enabled or disabled. See 5.2.3

Note 2) When the ship's position has not been updated more than 4 hours, the buzzer is sounded, and "Enter new ship's position" message is displayed. When the BAM function is enabled, the buzzer does not sound and only the message "Enter new ship 's position" is displayed.

Turn off the IME when you cannot stop the sound by pressing **Ctrl** + **A** .

Contact the JRC service agent and let them know about Alarm history of your JUE-87, when some sort of failure is occurred. (See 4.2 Troubleshooting.)

3.11 Distress Alert (Distress)

NOTE

- DO NOT SEND DISTRESS ALERT EXCEPT YOU ARE IN GRAVE AND IMMINENT DANGER
- Update content of the distress alert prior to its transmission.
- Distress alert can be transmitted from dedicated distress button only.

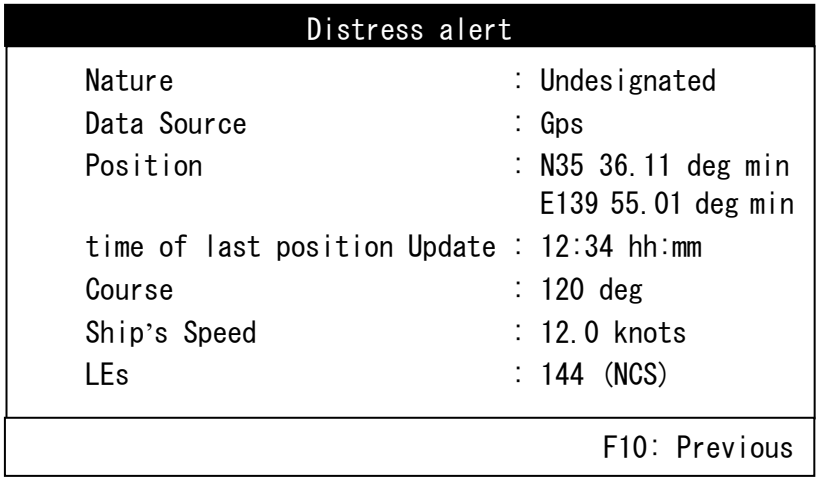


Fig.3.11 "Distress Alert" Window

Nature	:	Nature of distress (Default value: Undesignated)
Data Source	:	Input-method of position information
Position	:	MES position
Time of last position Update	:	MES Last updated time
Course	:	MES heading
ship's Speed	:	MES Navigation speed
lEs	:	LES ID/name where a distress alert is sent

NOTE

Set the "Data source" to "Manual" prior to enter a position information manually.
The position information from GPS is ignored within 60 minutes after manual entering.
Set the "Data source" to "GPS" to make the position information from GPS effective.

To stop Distress alert transmission, press X key or Y key while holding down Ctrl key.

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"Distress"** and press **Enter** key.	• **"Distress Alert"** window is displayed.	
2	• Move the cursor to **"Nature of distress"** and press **Enter** key.	• **"Nature of distress"** window is displayed. Nature of distress Undesignated fire／Explosion Flooding Collision Grounding Listing Sinking Disabled and adrift Abandoning ship furTher assistance required Piracy／armed attack F10: Previous	
3	• Move the cursor to the type of **"Nature of distress"**, press **Enter** key.	• **"Nature of distress"** window is closed and the cursor moved to **"Data source."**	
4	• Press **Enter** key, to change the setting of **"Data source"** (Input method of position information)	• The cursor is moved on right side.	
5	• Select **"Data source"** and then press **Enter** key. • "GPS": Automatically inserted with GPS data (Position /Update/Course/Speed). • "Manual": Input data (Position Update/Course/Speed).Update/Course/Speed).	• The cursor is moved to **"lEs"** when you select **"GPS"**. • The cursor is moved to **"Position"**, when you select **"Manual"**.	
6	• Enter the latitude of your ship and press **Enter** key. • Enter longitude of your ship and **Enter** key. Example: North latitude 35 50 20 East longitude 139 30 35 **N 3 5 5 0 2 0** **Enter** **N 1 3 9 3 0 3 5** **Enter**	• The cursor is moved to **"time of last position Update"**	

Step	Operation	IME/DTE Response	Remarks
7	• Press **Enter** key to change the MES Last updated time.	• The cursor moves on right side.	
8	• Enter the MES Last updated time and press **Enter** key.	• The cursor is moved to **"Course"**	
9	• Press **Enter** key to change the course.	• The cursor moves on right side.	
10	• Enter the course of your ship and press **Enter** key.	• The cursor moves to **"ship's Speed"**	
11	• Press **Enter** key to change the speed.	• The cursor moves to right side.	
12	• Enter the speed, and then press **Enter** key. • Ex) : 12.0 knots **1** **2** **0** **Enter**	• The cursor moves to **"lEs"**	
13	• Press **Enter** key to change the LES you want to send.	• The cursor moves to right side.	
14	• Press **F2** (**"LES list"**) key.	• **"LES list"** window screen is displayed.	• When the JUE-87 is not synchronized to satellite, the blank list is displayed.
15	• Choose LES ID using ⇑ , ⇓ key and press **Enter** key.	• **"Distress alert"** window is displayed.	
16	• Send Distress Alert using **Distress** button, • Refer to the article of the beginning of this manual, **"Distress Alert Transmission Procedure."**		
17	• To return to Main menu, press **F10** (**"Previous"**) key.		

3.12 Polling

Polling is the function, which is automatically sending position of JUE-87, file or data, demanded from land Telex users.

JUE-87 provides the following polling function from land telex user;

- Position polling by using S&F message transfer
- File polling by using S&F message transfer
- Data source polling by using S&F message transfer

NOTE

Polling command is effective only by registered TELEX user in section 3.12.1 Land ID registration for polling.

3.12.1 Land ID Registration for Polling

Register the subscriber's number of land user to use the polling function.

Up to 10 land users can be registered. Registration procedure is as follows;

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **ALT** key and press **U** key on Main menu.	• **"Set up"** window is displayed.	
2	• Move the cursor to the item **"Land id registration for polling"** then press **Enter** key.	• **"Land id registration for polling"** window is displayed.	• See the example in next page.
3	• Move the cursor to the item you want to register, then press **Enter** key.		
4	• Type Telex destination code and subscriber's number of polling user then press **Enter** key.		• 1st field: 3-digit destination code (country code) • 2nd field: Up to 11-digit subscriber's number
5	• Type LES IDs of each ocean region then press **Enter** key. • LES ID of all ocean regions is required for the registration.	• The cursor is moved to next column, when data is registered. • LES ID is not registered when incorrect data was entered. Enter correct data again.	• 1st field: West AOR (000-063) • 2nd field: East AOR (100-163) • 3rd field: POR (200-263) • 4th field: IOR (300-363)
6	• To return to Main menu, press **F10** (**"Previous"**) key twice or press **ESC** key.	• Main menu screen is displayed.	

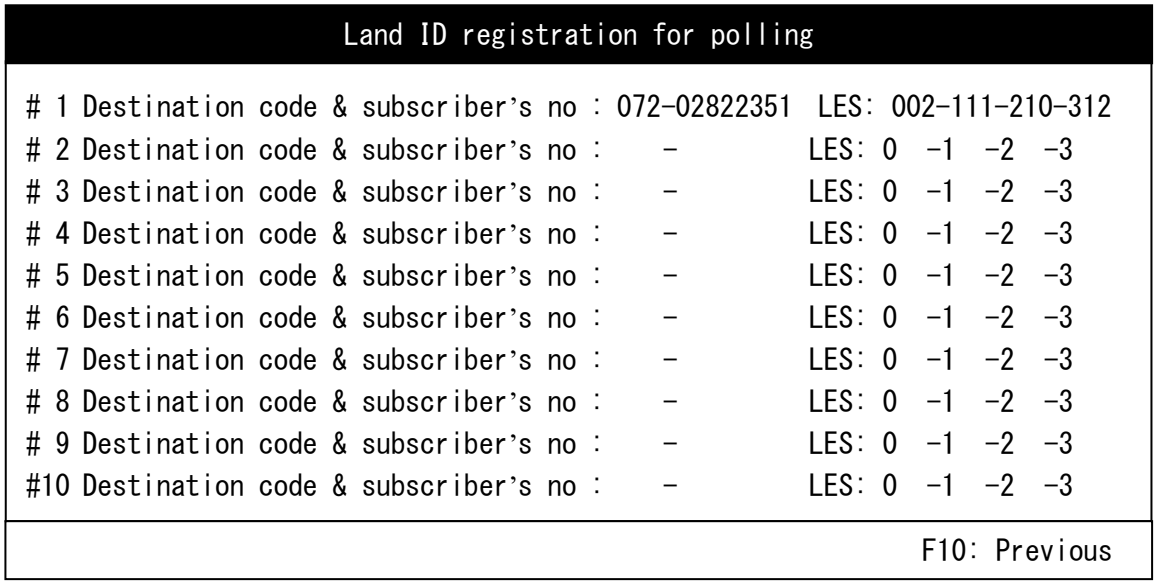


Fig.3.12.1 Example of "Land id registration for polling" Window

3.12.2 Position Polling using S&F Message Transfer

Land user can poll the MES's position information by S&F message transfer. When the following text is included in the received message, JUE-87 checks the land ID then transmit the MES's position information to the land user in the text if the number is registered.

Command for position polling

```
/Q/XXX:XXX.....XXX/X..X/
   |   |          |
   |   |          Network type [TELEX, PSDN or Vxx (for PSTN)]
   |   Subscriber's number (up to 11-digit)
   Destination code (3-digit)
```

Example of position polling

MES receives the following message:

```
/Q/072:02822351/TELEX/
NNNN
```

Then, MES transmits the following message to the land user, destination code: 072, subscriber's number: 02822351 via Telex:

```
MES NO,412345678
LAT,N12 34.56,LON,E123 45.67,UTC,10.05.2011 12:34,SOG, 12.3KT,COG,123DEG
```

3.12.3 File Polling by Using S&F Message Transfer

Land user can access to the MES's file on IME/DTE's memory by S&F message transfer. When the following text is included in the received message, JUE-87 checks the land ID, then transmit the contents of file or its list to the land user in the text if the user's number is registered.

Command for position polling

```
/FILEXXX...XXX/XXX:XXX.....XXX/X..X/
       |  |      |  |          |
       |  |      |  |          Network type [TELEX, PSDN or Vxx (for PSTN)]
       |  |      |  Subscriber's number (up to 11-digit)
       |  |      Destination code (3-digit)
       |  File name (8-digit, and extension 3-digit)
       Port number of DTE connected (1-digit)
          0: Data port main
          2: Data port #2 (Option)
```

Example of position polling

MES receives the following message:

```
/FILE0QBF.TLX/072:02822351/TELEX/
NNNN
```

Then, MES transmits the following message to the land user, destination code: 072, subscriber's number: 02822351 via Telex:

```
FILE  0:QBF.TLX
THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.
```

Command for file list polling

```
/FLISTX/XXX:XXX.....XXX/X..X/
        |   |   |          |
        |   |   |          Network type [TELEX, PSDN or Vxx (for PSTN)]
        |   |   Subscriber's number (up to 11-digit)
        |   Destination code (3-digit)
        Port number of DTE connected (1-digit)
            0: Data port main
            2: Data port #2 (Option)
```

Example of file list polling

MES receives the following message:

```
/FLIST0/072:02822351/TELEX/
NNNN
```

Then, MES transmits following message to the land user, destination code: 072, subscriber's number: 02822351 via Telex:

```
FLIST 0
  0PEDTE.EXE      280337        96-08-08        19:53
     QBF.TLX          58        96-07-14        02:47
```

3.12.4 Data Source Polling by Using S&F Message Transfer

Land user can access to the data from data source connected with MES by S&F message transfer. When the following text is included in the received message, JUE-87 checks the land ID then transmit the data from data source to the land user in the text if the number is registered. The maximum data size is up to 2K bytes per each port.

Command for file polling

```
/DSX/XXX:XXX.....XXX/X..X/
     |   |   |          |
     |   |   |          Network type [TELEX, PSDN or Vxx (for PSTN)]
     |   |   Subscriber's number (up to 11-digit)
     |   Destination code (3-digit)
     Port number of data source connected (1-digit)
         0: Data port main
         2: Data port #2 (Option)
```

Example of data source polling

MES receives the following message:

```
/DS0/072:02822351/TELEX/
NNNN
```

Then, MES transmits the following message to the land user, destination code: 072, subscriber's number: 02822351 via Telex:

```
DS   0:
ABCD12345
```

3.12.5 Parameter Setting Polling for Scheduled Transmission

Parameters of scheduled transmission are changeable from IME/DTE or the polling from land based user. Firstly, land based user should read out the parameters with parameter read out command. Land user will acquire the access code and parameters. The access code is changed by each command of reading out and is required to change the parameters. Secondly, land user should change the parameters. When the correct command is included in the receive message, the MES checks the access code then change the parameters.

Command for parameters read out polling

```
/SR/XXX:XXX.....XXX/X..X/
      |       |       |
      |       |       |
      |       |       Network type [TELEX, PSDN or Vxx (for PSTN)]
      |       Subscriber's number (up to 11-digit)
      Destination code (3-digit)
```

Example of parameter read out polling

MES receives the following message:

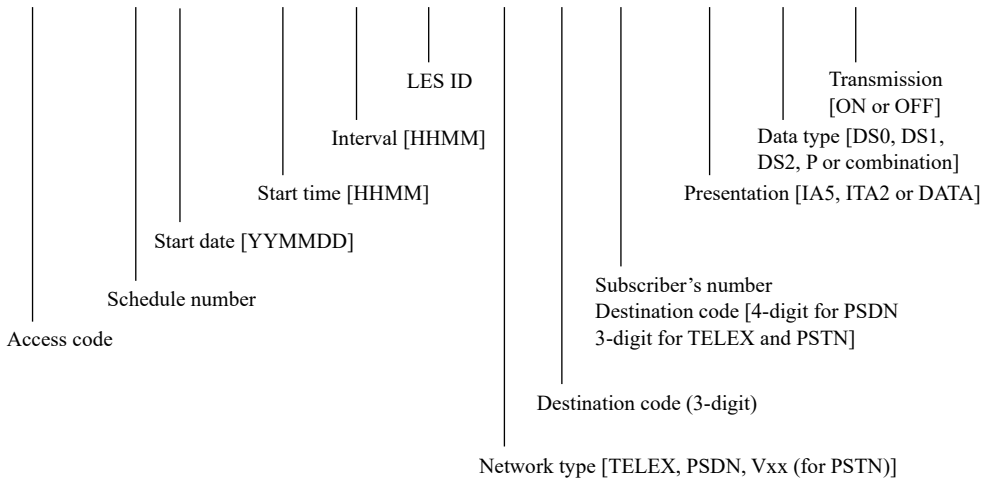
```
/SR/072:02822351/TELEX/
```

MES transmits the following message to the land based user, destination code: 072, subscriber's number: 02822351 via Telex:

```
MES NUMBER: 412345678
SCHEDULE
1 START          96-10-10  19:00
  INTERVAL       12:00
  LES            202
  DESTINATION    123-123456789
  NETWORK        TELEX
  CHARACTER      IA5
  DATA           DS1  DS2
  TRANSMIT       ON
DELAY LOGGING OUT 00:00
ACCESS CODE: 123456
96-01-25
```

Command for parameter setting

/SP/XXXXXX/X/XXXXXX/XXXX/XXXX/XXX/X..X/XXX:X...X/X..X/X..X/X.X/



3

Example of parameter setting

MES receives the following message:

/SP/123456/1/930515/1200/0600/101/V22B/001:1234567890/DATA/DS1/ON/

MES changes the parameters as follows:

```
1 START          96-05-15  12:00
  INTERVAL       06:00
  LES            101
  DESTINATION    001-1234567890
  NETWORK        PSTN (V22B)
  CHARACTER      DATA
  DATA           DS1
  TRANSMIT       ON
```

3.12.6 Call Log by Using S&F Message Transfer

Land user will read out the latest up 10 call log from MES by S&F message transfer. When the following command is included in the polled message, the MES checks the land ID then transmit MES's call log to the land based user in the number is registered in the land ID registration for polling.

Command for call log polling

```
/LOG/XXX:XXX.....XXX/X..X/
      |   |          |
      |   |          Network type [TELEX, PSDN or Vxx (for PSTN)]
      |   Subscriber's number (up to 11-digit)
      Destination code (3-digit)
```

Example of call log polling

MES receives the following message:

```
/LOG/072:02822351/TELEX/
```

MES transmits the following message to the land based user, country code: 072, subscriber's number: 02822351 via Telex:

```
CALL LOG 412345678
96-10-10 14:10-14:13 S+F        T        07201822351 202    12345    10
                     ... DELIVERED TO SUBSCRIBER
96-10-10 13:20-13:21 LOGIN      T                    244
                     ... CALL SUCCESS
96-10-09 07:10-07:11 LOGOUT     T                    244
                     ... CALL SUCCESS
96-10-09 06:55-06:58 S+F        T        07201822351 202      345    10
                     ... DELIVERED TO LES
96-10-08 14:34-14:37 S+F        T        07201822351 202    21345    10
                     ... DELIVERED TO SUBSCRIBER
96-10-08 14:10-14:13 S+F        T        07201822351 202    20845    10
                     ... DELIVERED TO SUBSCRIBER
96-10-08 06:10-06:11 LOGIN      T                    244
                     ... CALL SUCCESS
96-10-08 02:10-02:13 S+F        T        07201822351 202    12345    10
                     ... NOT DELIVERED TO SUBSCRIBER
```

3.13 EGC Message Reception

3.13.1 EGC Messages

EGC is a message broadcast service within the Inmarsat-C communication system. It allows terrestrial information providers to pass messages or data to JUE-87 Inmarsat-C MES.

EGC messages are sent to Land Earth Station by shore based Information Providers using terrestrial facilities such as Telex, and are processed at the LES, and forwarded to an NCS then are broadcasted to the INMARSA-C MES via NCS common channel transmitted by NCS.

There are three basic services offered by EGC; the Safety NET™ service, the Fleet NET™ service and System service. Safety NET™ is a service provided primarily for the dissemination of maritime safety information, such as shore to ship distress alerts, weather forecasts and coastal warning. Fleet NET™ is a commercial communication service allowing terrestrial information providers to send messages to pre-defined groups of subscribers. System service is a service provided for operational information.

Both the Safety NET™ and Fleet NET™ services make use of flexible addressing techniques to allow the reception of messages from a variety of service providers depending on the particular requirements of the user. The Safety NET™ service utilizes a geographic area addressing technique to direct messages to ships within defined boundary. The Fleet NET™ service employs closed user group and unique receiver addressing to provide secure transmission of messages from the terrestrial information provider to the desired service recipients(s).

Following message services are available:

(a) General Call
(b) Group Call
(c) Urgency message, NAV warning to rectangular area
(d) Inmarsat system message
(e) Coastal warning
(f) Shore-ship distress alert to circular area
(g) EGC system message
(h) Urgency message, MET/NAV warning to circular area
(i) MET NAVAREA warning or MET Forecast
(j) Download group identity
(k) SAR coordination to rectangular area
(l) SAR coordination to circular area
(m) Chart correction services
(n) Chart correction services for fixed area

3.13.2 Receive Mode for EGC Reception (Receive-Mode)

The JUE-87 has following two kinds of receive mode;

"Inmarsat-C" mode: EGC message can be received when Inmarsat-C mode is not communicated.

"EGC receive only" mode: EGC message can be received continuously and Inmarsat-C mode may be ignored. However, the distress alert can be transmitted in EGC receive only mode.

This command is effective only while the MES status displayed at the first line of the IME/DTE is **"Log-out"**, **"Ready"** or **"EGC only"**.

When you choose **"EGC receive only"** from **"Inmarsat-C"**, the JUE-87 initiates log-out automatically when logged in status. The other way, when you choose **"Inmarsat-C"** from **"EGC receive only"**, the JUE-87 initiates Log-in automatically.

NOTE

- When an Inmarsat-C mode is communicated, EGC message cannot be received. To receive EGC message only, select the **"EGC receive only"** mode in **"receive-Mode"** window.
- When EGC message with Urgency or Distress priority is received, the buzzer in DTE and IME sounding continuously. In this case, hold down **Ctrl** key and press **A** key on Main menu.
- When the ship's position has not been updated more than 4 hours, **"Enter new ship's position"** message is displayed. When the ship's position has not been updated more than 8 hours from the displayed above warning message, all geographical addresses and Safety NET message with priorities higher than routine are received.
  When any navigation equipment is connected with the JUE-87 ship's position data is updated automatically.

3.13.3 EGC Message Restriction (Egc)

The JUE-87 can restrict to EGC message reception with Navarea/Metarea, Fixed area, reception type, Satellite Coastal areas, and Coastal Warning type. Choose **"egC"** on main menu to setup this function.

Also JUE-87 has the function that printing EGC message automatically when received it. See "3.13.3.7", when you want to stop it.

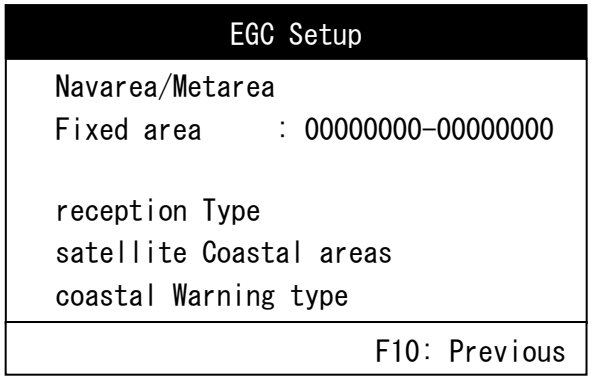


Fig.3.13.3 "EGC" Window

3.13.3.1 Setting of Navarea/Metarea

Only receives the messages to Navarea/Metarea, which have been set up.

NOTE
Basically, information of Navarea/Metarea in the ocean region being logged in now is sent.

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"egC"** and press **Enter** key.	• The **"EGC"** window is displayed.	
2	• When you want to change the **"Navarea/Metarea"**, press **Enter** key.	• The **"Navarea/Metarea"** window is displayed.	
3	• When you want to restrict the **"Navarea/Metarea"**, move the cursor to the restrict **"Navarea/Metarea"** number and **Enter** key.	• The cursor is moved To **"Enable"** or **"Disable"**.	
4	• Move the cursor to **"Enable"** or **"Disable"** and press **Enter** key.	• The cursor is moved to next item.	
5	• Press **F10** (**"Previous"**) key.	• The **"EGC"** window is displayed.	
6	• To return to Main menu, press **F10** (**"Previous"**) key twice.	• Main menu screen is displayed.	• When you want to change the another item, move the cursor and press **Enter** key.

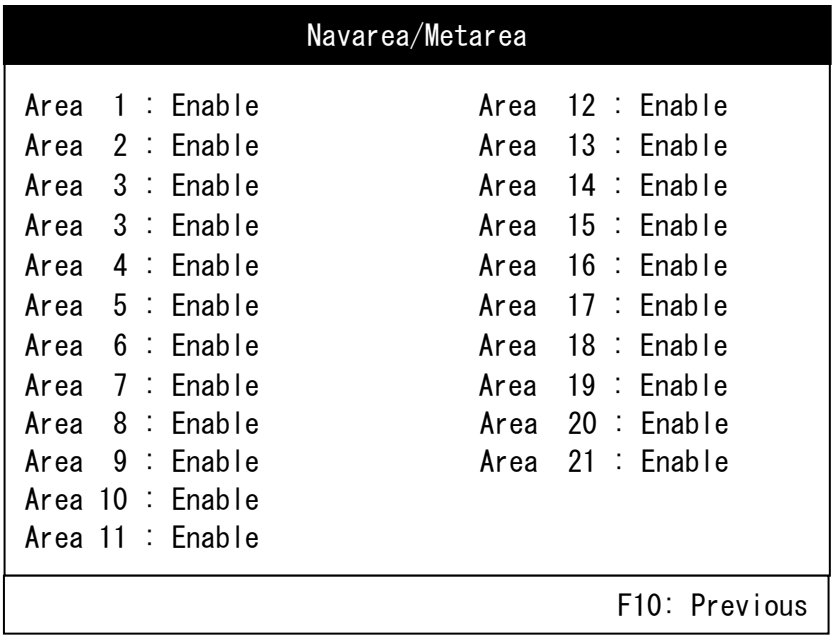


Fig.3.13.3.1a "Navarea/Metarea" Window

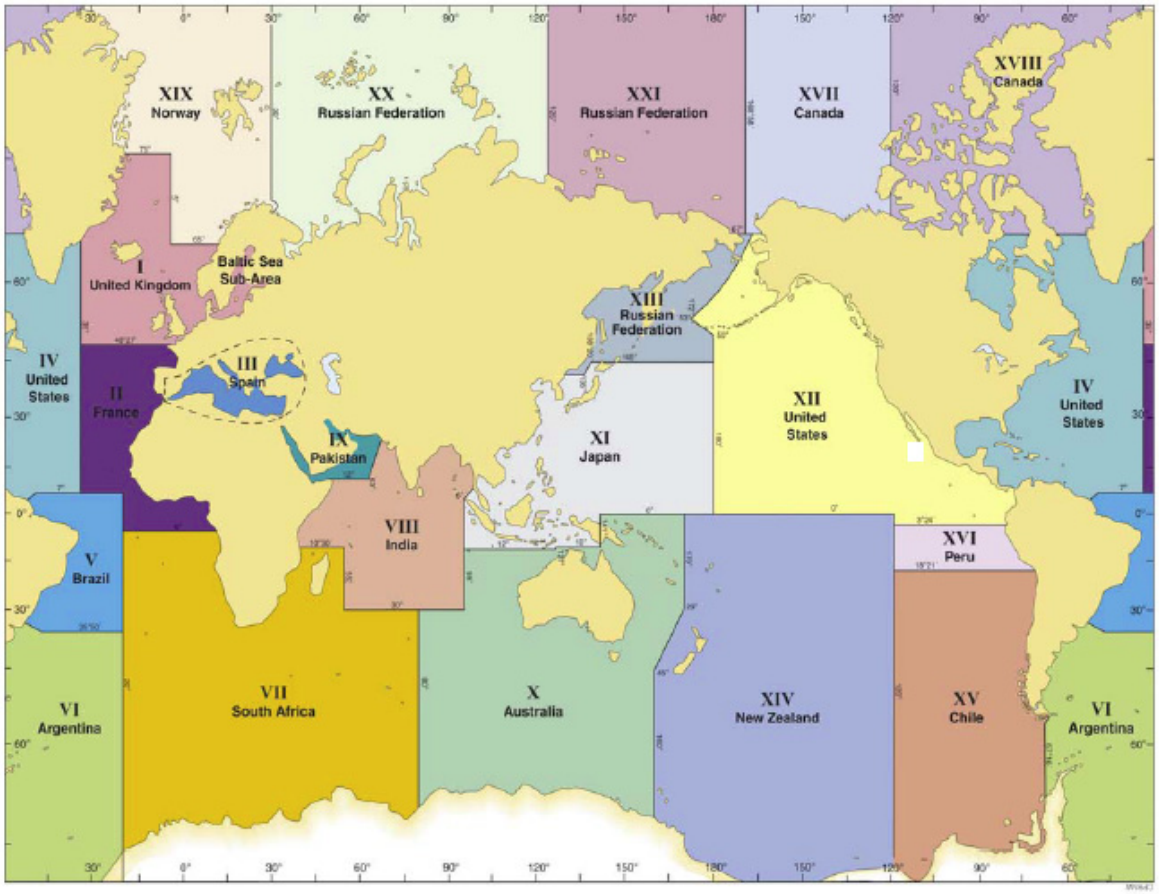


Fig.3.13.3.1b Navarea/Metarea

3.13.3.2 Setting of Fixed Area

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"egC"** and press **Enter** key.	• The **"EGC"** window is displayed.	
2	• When you want to change the fixed area, move the cursor to the **"Fixed area"** and press **Enter** key.	• The cursor is moved to the **"Fixed area"** area.	
3	• Press the new **"Fixed area"** and **Enter** key.	• The new fixed area is displayed and the cursor is moved next to fixed area.	
4	• To return to Main menu, press **F10** (**"Previous"**) key twice.	• Main menu screen is displayed.	• When you want to change the other item, move the cursor and press **Enter** key.

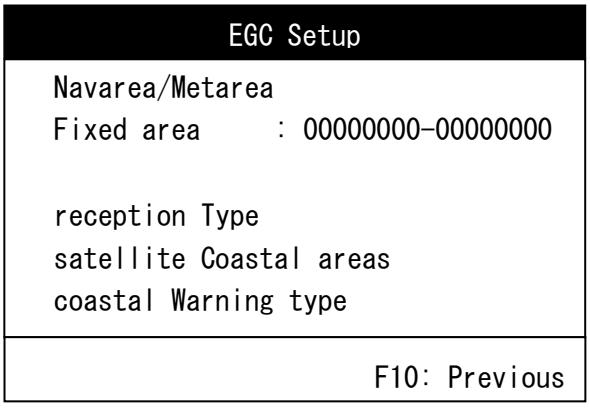


Fig.3.13.3.2 "EGC" Window

3.13.3.3 Setting of Reception Type

You can restrict below mentioned services at this menu.

- Chart correction service ("charT correction service")
- Chart correction service for fixed area ("Chart correction service for fixed areas")
- Download group ID ("Download group identity")
- General call ("General call")
- Group call ("group calL") (Note 1)

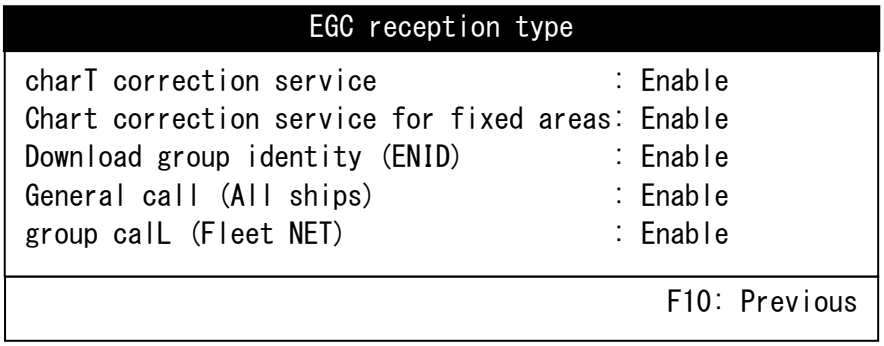


Fig.3.13.3.3 "EGC reception type" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"egC"** and press **Enter** key.	• The **"EGC"** window is displayed.	
2	• Move the cursor to **"reception type"** and press **Enter** key.	• The **"EGC reception type"** window is displayed.	
3	• When you want to restrict the service message, move the cursor to restrict item and press **Enter** key.	• The cursor is moved to **"Enable"** or **"Disable"**.	
4	• Move the cursor to **"Enable"** or **"Disable"** and press **Enter** r key.	• The cursor is moved to next item.	
5	• Press **F10** (**"Previous"**) key.	• The **"EGC"** window is displayed.	• When you want to restrict the other service message, return to step 3.
6	• To return to Main menu, press **F10** (**"Previous"**) or press **Esc** key.	• Main menu screen is displayed.	• When you want to change the other item, move the cursor and press **Enter** key.

Note 1) When the **"group calL (Fleet NET)"** is selected and the **"Enable"** is also selected, the list of ENIDs downloaded into MES's memory is displayed.

3.13.3.4 Setting of Satellite Coastal Areas

The JUE-87 can restrict the Satellite Coastal Area message of the A through Z areas. Choose the area you want to receive or restrict from these areas.

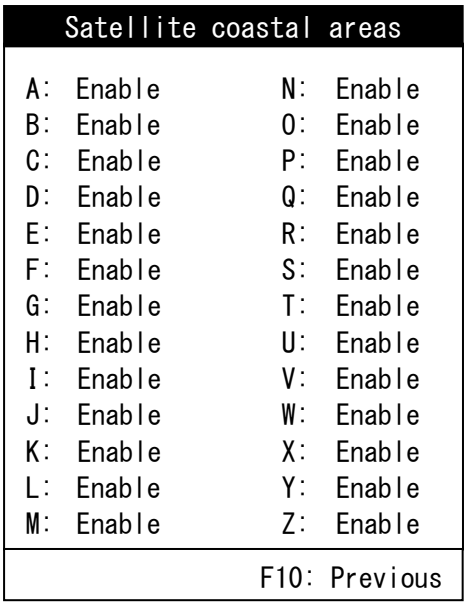


Fig.3.13.3.4 "Satellite coastal areas" Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"egC"** and press **Enter** key.	• The **"EGC"** window is displayed.	
2	• Move the cursor to **"satellite Coastal area"** and press **Enter** key.	• The **"Satellite coastal areas"** window is displayed.	• The JUE-87 can select the **"A"** through **"Z"** areas to the **"Enable"** or the **"Disable"**.
3	• When you want to change the setting, move the cursor.	• The cursor is moved to **"Enable"** or **"Disable"**.	
4	• Select the **"Enable"** or **"Disable"** and press **Enter** key.	• The cursor is moved to next area.	
5	• Press **F10** (**"Previous"**) key.	• The **"EGC"** window is displayed.	• When you want to change the other area setting, return to step 3.
6	• To return to Main menu, press **F10** (**"Previous"**) or press **Esc** key.	• Main menu screen is displayed.	• When you want to change the other item, move the cursor and press **Enter** key.

3.13.3.5 Setting of Coastal Warning Type

The JUE-87 can restrict the Coastal Warnings mentioned below.

- other Electronic navaid messages
- Ice reports
- Loran messages
- Meteorological forecasts
- Pilot and VTS service messages
- GNSS messages
- no message on Hand
- AIS service messages

NOTE

The following items are mandatory.
JUE-87 cannot restrict.

- Navigational warnings
- meteorological Warnings
- search and Rescue (SAR) information and piracy attack warnings
- Other navigational warnings

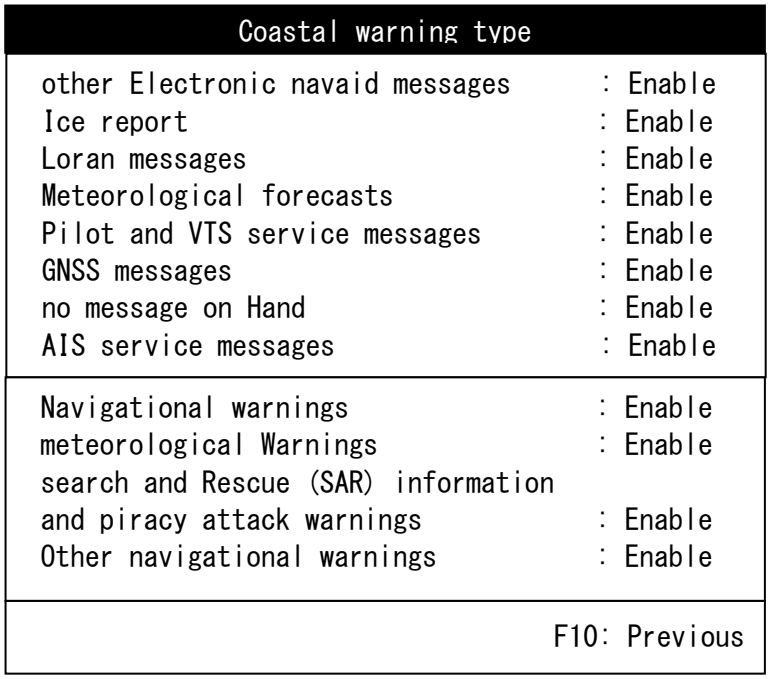


Fig.3.13.3.5 Coastal warning type Window

Step	Operation	IME/DTE Response	Remarks
1	• Move the cursor to **"egC"** and press **Enter** key.	• The **"EGC"** window is displayed.	
2	• Move the cursor to **"coastal Warning type"** and press **Enter** key.	• The **"Coastal warning type"** window is displayed.	
3	• When you want to restrict the Coastal warning, move the cursor to restrict item and press **Enter** key.	• The cursor is moved to **"Enable"** or **"Disable"**.	
4	• Move the cursor to **"Enable"** or **"Disable"** and press **Enter** key.	• The cursor is moved to next item.	
5	• Press **F10** (**"Previous"**) key.	• The **"EGC"** window is displayed.	• When you want to restrict the other Coastal warning, return to step 3.
6	• To return to Main menu, press **F10** (**"Previous"**) or press **Esc** key.	• Main menu screen is displayed.	• When you want to change the other item, move the cursor and press **Enter** key.

3.13.3.6 Position Updated

Renew the position information at fixed intervals with following below outlined procedures.

NOTE

Set the "Data source" to "Manual" prior to enter a position information manually.
The position information from GPS is ignored within 60 minutes after manual entering.
Set the "Data source" to "GPS" to make the position information from GPS effective.

Step	Operation	IME/DTE Response
1	• Move the cursor to the **"Distress"** and press **Enter** key.	**"Distress"** window is displayed.
2	• Move the cursor to the **"Data source"** and press **Enter** key.	The cursor is moved to right side.
3	• Select the "Data source" and press **Enter** key. **GPS**: Ship's position is set from GPS data **Manual**: Ship's position is set to manual.	When the **"Gps"** is selected, the cursor is moved to **"lEs"**. When the **"Manual"** is selected, the cursor is moved to **"Position"**.
4	• Type the ship's latitude and press **Enter** key. • Type the ship's Longitude and press **Enter** key. Ex. North: 35 50 20 East: 139 30 35 **N 3 5 5 0 2 0 Enter** **E 1 3 9 3 0 3 5 Enter**	The cursor is moved to **"Course"**.
5	• When the ship's course is changed, press **Enter** key.	The cursor is moved to right side.
6	• When the ship's course is changed, press **Enter** key.	The cursor is moved to **"ship's Speed"**.
7	• When the ship's Speed is changed, press **Enter** key.	The cursor is moved to right side.
8	• Type the ship's Speed and press **Enter** key.	The cursor is moved to **"lEs"**.
9	• To return to Main menu, press **F10** (**"Previous"**) or press **Esc** key.	Main menu is displayed right side.

Note 1) When the ship's position has not been updated more than 4 hours, the **"Enter new ship's position"** message is displayed.

When the ship's position has not been updated more than 8 hours from the displayed above warning message, all geographical addresses and Safety NET message with priorities higher than routine are received.

Note 2) When any GPS equipment is connected with the JUE-87, ship's position data is updated automatically.

If GPS equipment is disconnected more than 3 minutes, it displays warning. When the BAM function is disabled, the buzzer also is sounded.

Note 3) Valid time of Position information and Update information is for 24 hours, and velocity information is for a hour.

When it passes over the valid time, IME/DTE displays as follows

Position information Latitude 999.99 deg, Longitude 9999.99 deg
Velocity information 99.9 knot
Course information 999 deg
Update information 88:88

And IME displays warning message. When the BAM function is disabled, the buzzer also is sounded.

3.13.3.7 Message Print Out Function

When the JUE-87 is received the EGC or Inmarsat-C message, the received message is printed out automatically that is the message print out function.

When this function is turned off or on according to the following procedure.

Step	Operation	IME/DTE Response
1	• Hold down **Alt** key and press **u** key.	**"Set up"** window is displayed.
2	• Move the cursor to **"Peripheral Function"** and press **Enter** key.	**"Peripheral function"** window is displayed.
3	• Move the cursor to **"automatic Message print out"** and press **Enter** key.	The cursor is moved to **"oN"**, **"oFf"**.
4	• Select **"oN"** or **"oFf"** and press **Enter** key. ➢ oN: The function is turned on. ➢ oFf: The function is turned off.	The cursor is moved to next step.
5	• Press **F10** (**"Previous"**) key.	**"Setup"** window is displayed.
6	• To return to Main menu, press **Enter** key.	Main menu is displayed.

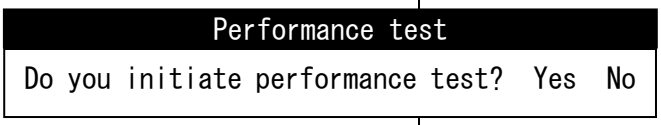
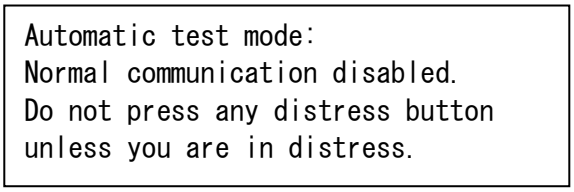
NOTE

EGC SafetyNET messages with Urgency and Distress priority are printed out automatically if the print function is set off.

3.14 PV Test

Performance Verification Test of JUE-87 can be carried out with following below outlined procedures.

Carry out PV test with confirming that JUE-87 is logged-in.

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **Alt** key and press **U** key on Main menu.	• The **"Set up"** window is displayed.	
2	• Move the cursor to the item **"Performance test initiation"** and press **Enter** key.	• Initiation confirming window is displayed. • **"Performance test"** window is displayed. 	
3	• Move the cursor to **"Yes"** and press **Enter** key.	• The **"Set up"** window is displayed. MES status changes to **"PV test"** from **"Ready"**. • The following window is displayed within PV testing. 	
4		• When PV test is completed, test results are displayed automatically.	• See the following example of test results.

```
        Performance test result   <10-04-10-00:11>

  Overall result            : Applicable tests pass
  Request attempts          : Third attempt failed
  RX attempts               : First attempt
  TX attempts               : First attempt
  Distress alert            : Test OK
  Signal strength           : Greater than X + 13dB
  Bulletin Board Error Rate : Pass
  Transmit power            : OK
  Frequency                 : OK

F5: Print out                                F10: Previous
```

Fig.3.14 Example of Performance Test Results

The Performance Verification test (PV test) is a fully automatic test to check individual MESs with respect to signal level and some access and control responses. In the PV test, the following tests are performed sequentially:

Shore-ship message transfer test, Ship-shore message transfer test, and Distress alert test.

In PV test, below tests are performed sequentially and then the signal level is automatically measured.

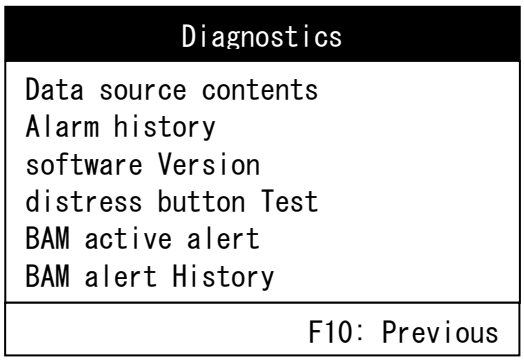
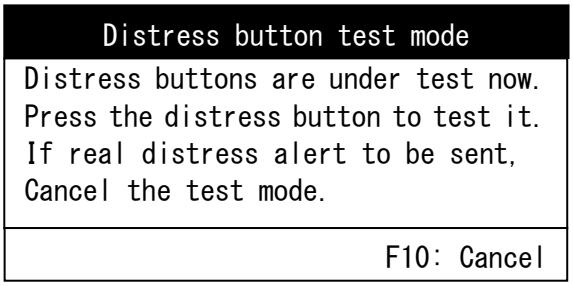
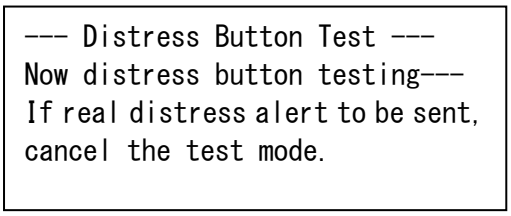
- LES originating message transfer test
- MES originating message transfer test
- Distress alert test

3.15 Distress Button Test

The Distress button test can be demonstrated the procedure of a distress alert transmission even if the JUE-87 is not synchronized to satellite.

NOTE

To avoid sending the false distress alert transmission, confirm certainly that JUE-87 is in the test mode, prior to carrying out Distress button test. When the common use type option's Remote Distress Button is installed with two JUE-87 terminals, refer to separate volume [JUE-87 Common Use type Option Operation Guide (code No. 7ZPSC0573)].

Step	Operation	IME/DTE Response
1	• Hold down **Alt** key and press **A** key on Main Menu.	• **"Diagnostics"** window is displayed. 
2	• Move the cursor to **"distress button Test"** and press **Enter** key.	• "**Distress Button test mode**" window is displayed. 
3	• When the distress button is tested, press the distress button till the buzzer sounds for about 5 seconds or more. • When the distress button test is terminated, press **F10** (**"Cancel"**) key.	• The buzzer in IME is sounding 0.5 sec on, 1.0 sec off. Then, **"SOS"** is displayed at the first line of IME.
4	• (It passes 5 sec after pressing the distress button.)	• The buzzer in IME is sounding 0.5 sec ON, 0.5 sec OFF. • The "Distress" lamp on IME is blinking 0.5 sec ON, 0.5 sec OFF. • "Distress Button Test" window is displayed. 

Step	Operation	IME/DTE Response
5	• (Start the distress test)	• The buzzers in DTE and IME are sounding 5 sec continuously. • The **"DISTRESS"** lamp on IME is illuminating 5 sec. • When the distress button is tested completely, the following window is displayed. --- Distress Button Test --- Distress button test succeeded. If real distress alert to be sent, cancel the test mode. F10: Previous
6	• To return to Main menu, press **F10** key.	• Main menu is displayed.

3.16 Data Reporting Function

3.16.1 Data Reporting Function Overview

The data reporting function mainly is used as MES's position reporting. The methods of reporting include two kinds, immediate reporting and periodic reporting.

Moreover, data reporting has three kinds of functions, DR (Data Reporting), EDR (Enhanced Data Reporting), and EPADR (Enhanced Pre-assigned Data Reporting). DR and EDR are available as immediate reporting or periodic reporting. EPADR is available as only periodic reporting.

In periodic reporting, there is the necessity of downloading reporting configuration information in advance. The data reporting is transmitted based on configuration information.

3.16.2 Comparison of Various Data Reporting Function

The comparison of DR, EDR and EPADR function is as follows.

	DR	EDR	EPADR
Previously reserved channel *			X
Re-transmit report after reporting failure		X	X
Request periodic reporting configuration information from MES			X
Maximum of data size	32 bytes	40 bytes	40 bytes

* If channel does previously reserve, the possibility of data reporting failure is reduced sharply.

(1) DR communication sequence

MES transmits a data report to LES using an unreserved channel in the timing of transmission. Regardless of transmit success or failure, DR communication sequence is completed.

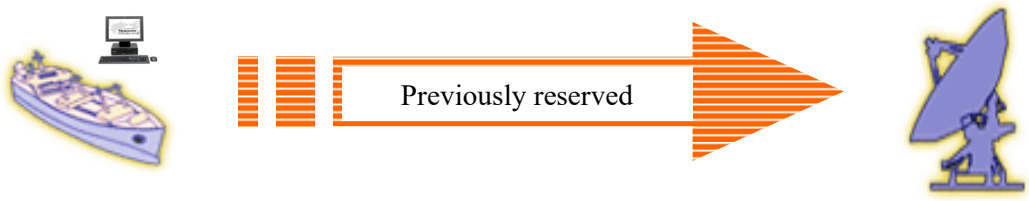
(2) EDR communication sequence

MES transmits a data report to LES using an unreserved channel in the timing of transmission.

When transmission is successful, LES transmits an acknowledgement to the MES.

(a) When MES receives the acknowledgement, EDR communication sequence is completed.
(b) When MES does not receive the acknowledgement, MES re-transmits data report to the LES. Re-transmitting is performed a maximum of 3 times.

(3) EPADR communication sequence
MES transmits a data report to the LES by the channel which are previously reserved.



(a) When transmission is successful, EPADR communication sequence is completed.
(b) When transmission is fail, MES re-transmits data report (EDR) to LES.
Re-transmitting is performed only once.

3.16.3 DR/EDR function

DR/EDR is function to transmit immediate reporting by the directions from land user and to transmit periodic reporting by the programmed reporting configuration information.

3.16.3.1 Download DNID for DR/EDR

When using a DR/EDR function, it is necessary to download DNID beforehand. Please request download of DNID from a service provider.
DNID can be confirmed by following procedures.

Step	Operation	IME/DTE response
1	• Hold down **Alt** key and press **U** key on Main menu.	• "Set up" window is displayed. **Set up** Date & time confiG log-Out initiation log-In initiation Performance test initiation Scheduled transmission Land id registration for polling dnid seleCtion peripheral Function passWord EPADR informAtion F10:Previous

2	• Move the cursor to "dnid seleCtion" and press **Enter** key.	• "DNID selection" window is displayed and downloaded DNID can be confirmed. • Confirm that "Enable" is selected to each column. • DNID which has '*' mark in the left of an ID number is for EPADR.

DNID selection

Name	DNID(*:for EPADR)	LES MEM
ABC	12345	003 123 : Enable
CDE	13503	203 002 : Disable
	*00001	003 100 : Enable

↑ ↓ contd.(total : 3)

F1:Program information F2:EPADR information F5:Print out F10:Previous

3.16.3.2 Periodic reporting configuration information for DR/EDR

The configuration information for transmitting periodic reporting by DR/EDR is called "Polling Program".

The following setup is included in Polling Program.

- LES ID
- Address information[DNID, Member Number]
- Start data and time of DR/EDR first transmission
- Number of packets[DR：1 packet to 3 packets, EDR：1 packet to 4 packets]
- Transmission interval[15 minutes to 24 hours]

Polling Program can be confirmed by following procedure.

Step	Operation	IME/DTE response
1	• Hold down **Alt** key and press **U** key on Main menu.	• "Set up" window is displayed.
2	• Move the cursor to "dnid seleCtion" and press **Enter** key.	• "DNID Selection" window is displayed.
3	• Press **F1** key at "DNID Selection window"	• "Polling program information" window is displayed and downloaded Polling Program can be confirmed. • Confirm that the status of the Polling Program (STS) is set to Active (Act).

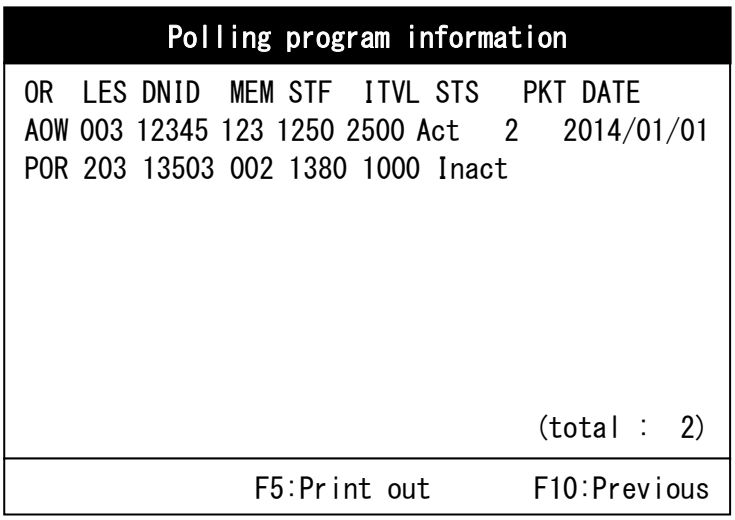


Fig 3.16.3.2 “Polling program information” window

<Explanation of displayed items>

OR: Ocean Region (AOW, AOE, POR, IOR)
LES: Land Earth Station
DNID: Data Network ID
MEM: Member Number
STF: Starting Transmission Frame*
ITVL: Transmission Interval Frame*
STS: Status (Act: Active, Inact: Inactive)
PKT: Number of transmitted Packet
DATE: Program activated date

* For changing a frame number into time (UTC)
1 frame is 8.64 seconds. Therefore, since a "second" is calculable by frame number x 8.64[second], please change from there at a "time" and a "minute".

e.g. Case of 1380 frame
1380 x 8.64 = 11923.2[second] ≒ 3.18 AM

<Explanation of displayed screen>
In the above case, the program 1 transmits 2 packets every 2500 frames (6 hours) from 1250 frames (UTC three o'clock) on January 1, 2014.

Program 2 does not transmit because its status is [Inact] (Inactive).

3.16.3.3 Employment of DR/EDR

Please carry out the following procedure, in order to employ DR/EDR.

■ Case of periodic reporting

(1) Download DNID

Please request download of DNID for DR/EDR from a service provider.

(2) Download Polling Program

Please request download of Polling Program for periodic reporting from a service provider.

(3) Start transmission

DR/EDR transmission is started from the starting transmission frame specified by Polling Program. After starting transmission, periodic reporting is performed according to an transmission interval.

(4) The term of validity of polling program

Downloaded Polling Program is valid until it is deleted by the service provider. Periodic reporting is continued while Polling Program is effective.

If it is during a normal performance, Polling Program will be held even if it makes a reboot and ocean region change of a terminal.

■ Case of immediate reporting

Please request download of DNID for DR/EDR from a service provider. After downloading DNID, immediate reporting can be used with the directions from a land user.

3.16.4 EPADR function

EPADR is the function to transmit periodic reporting by the programmed reporting configuration information like DR/EDR by Polling Program.

This chapter has indicated only the indispensable function. Refer to the Appendix for the details of a function.

3.16.4.1 About DNID for EPADR

EPADR function may use DNID. However, unlike a DR/EDR function, it is not necessary to download beforehand. It is downloaded together with configuration information from LES.

As cautions, DNID for EPADR cannot be used DR/EDR function.

3.16.4.2 Periodic reporting configuration information for EPADR

The configuration information for transmitting periodic reporting by EPADR is called "Assignment". The following setup is included in Assignment.

- Slot Logical Channel Number(SLCN)
- LES ID
- Destination address information[DNID, Member Number]
- Start data and time of EPADR first transmission
- Number of packets[1 packet to 4 packets]
- Transmission interval[15 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 6 hours or 8 hours]
- Number of reports

EPADR Assignment can be confirmed by following procedure.

Step	Operation	IME/DTE response
1	• Hold down **Alt** key and press **U** key on Main menu.	• "Set up" window is displayed. **Set up** Date & time configG log-Out initiation log-In initiation Performance test initiation Scheduled transmission Land id registration for polling dnid seleCtion peripheral Function passWord EPADR informAtion F10:Previous

2	• Move the cursor to "EPADR informAtion" and press **Enter** key.	• "EPADR Information" window is displayed. EPADR Information EPADR Assignment EPADR Tx Data F10:Previous
3	• Move the cursor to "EPADR Assignment" and press **Enter** key.	• "EPADR Assignment" window is displayed. EPADR Assignment EPADR Assignment #1 EPADR Assignment #2 EPADR Assignment #3 EPADR Assignment #4 F10:Previous
4	• Move the cursor to "EPADR Assignment #1" and press **Enter** key.	• "EPADR Assignment #1" window (Fig.3.16.4.2) is displayed.
5	• Press **F9** key.	• Each time **F9** key is pressed, other assignments ("EPADR Assignment #1, #2, #3 or #4" window) is displayed.

3

EPADR Assignment #1

destination Address type	: SLCN & DNID
IEs	: 003 (KDDI JPN)
Dnid/mem	: 12345/100
transmission Interval	: 2 hours
number of Packets	: 2 packets
number of Reports	: 7000
Number of Reports remaining	: 6999
Status of the assignment	: Active
Start Date&Time (YY-MM-DD hh:mm)	: 14-01-01 12:00
Slot Logical Channel Number (SLCN)	: 001
Request Origin	: LES
Multi-user detection (MUD)	: Disable
LES TDM/Sig CH/Slot	: 12000/13000/28

F1:Assignment Request F9:Next

Fig.3.16.4.2 "EPADR Assignment #1" Window

Parameters are as follows;

- destination Address type:
  The type of the information used as an address of transmission is displayed.
  The following two types are existed.
  - SLCN & DNID: Slot Logical Channel Number and Data Network ID
  - SLCN: Slot Logical Channel Number only

- lEs: Land Earth Station used for transmission

- Dnid/mem: Data Network ID, Member Number

- transmission Interval:
  The transmitting interval of EPADR transmission
  [15 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 6 hours or 8 hours]

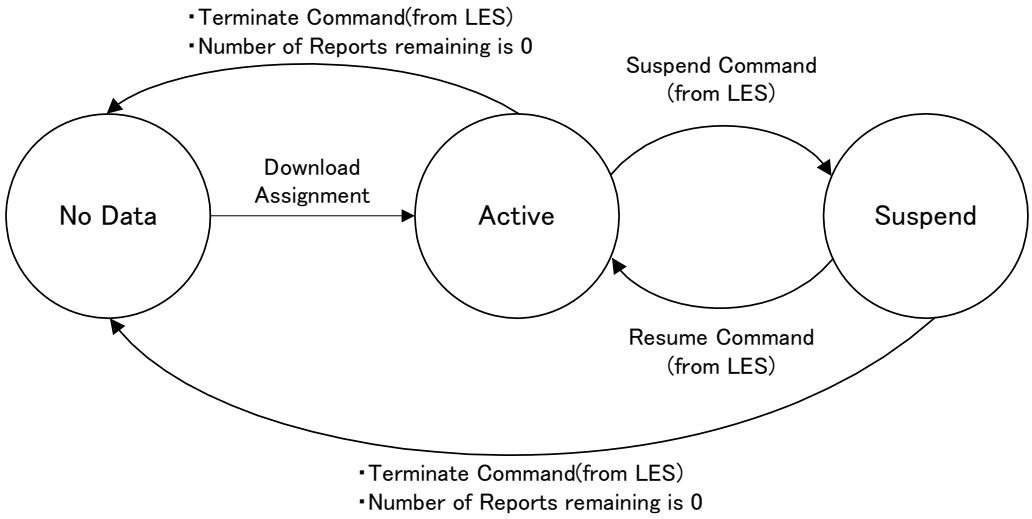
- number of Packets:
  The number of packets which transmits by one communication
  [1 packet, 2 packets, 3 packets or 4 packets]

- number of Reports:
  It is the number of times of transmitting periodic reporting by this Assignment.

- Number of Reports remaining:
  It is the remaining number of times of transmission. It is the number which subtracted the number of times of having transmitted from number of reports.
  If the number of reports remaining is set to 0, Assignment becomes invalid and stops periodic reporting. In this case, renewal of Assignment is performed automatically by MES.

- Status of the assignment:
  The following three statuses are existed.
  - No Data: Unregistered
  - Active: Ready for transmitting
  - Suspend: suspension of transmission

  As shown in the following figure, a state changes.



- Start Date&Time (YY-MM-DD hh:mm):
  Start date and time of EPADR first transmission.

- Slot Logical Channel Number (SLCN):
  The number, which was assigned by LES, is assignment identification for EPADR.
  It is used also as an address of transmission.

3.16.4.3 Setting of EPADR Transmission Data

EPADR transmission data can be set by following procedure. The following contents can be chosen as transmission data.

- Position data
- User data*
- Position data + User data*

* Please save user data as a file beforehand at IME. It corresponds to both a text / binary data.

Initial setting is "Position data". A setup can be changed if needed. However, please keep in mind that trouble may occur in employment of EPADR if a setup is changed easily.

Step	Operation	IME/DTE response
1	• Hold down **Alt** key and press **U** key on Main menu.	• "Set up" window is displayed.
2	• Move the cursor to "EPADR informAtion" and press **Enter** key.	• "EPADR Information" window is displayed.
3	• Move the cursor to "EPADR Tx Data" and press **Enter** key.	• "EPADR Tx Data" window is displayed.
4	• When you want to send position data, move the cursor to "posItion" and press **Enter** key, and move the cursor to "oN" and press **Enter** key.	<Caution> When Position is set as OFF, please be sure to set up user data. Position:OFF and User data:nothing cannot be set up.
5	• When you want to send other data, move the cursor to "File name" and press **Enter** key, and select file.	• Warning message window is displayed when the data capacity exceeds 39 bytes.

3.16.4.4 Employment of EPADR

Please carry out the following procedure, in order to employ EPADR. Fundamentally, it can employ like the DR/EDR periodic reporting by Polling Program.

(1) Download Assignment

Please request download of Assignment for periodic reporting from a service provider like Polling Program.

(2) Setting transmission data

Initial setting is "Position data"(Latitude, Longitude, SOG, and COG). When you transmit arbitrary user data, please set up transmission data from EPADR Tx Data window.

However, the data exceeding the number of transmitting packets specified by Assignment cannot be transmitted.

(3) Start transmission

EPADR transmission is started from the starting transmission frame specified by Assignment.

After starting transmission, periodic reporting is performed according to a transmission interval.

(4) Assignment Renewal

In DR/EDR function, downloaded Polling Program is valid until it is deleted by the service provider. Periodic reporting is continued while Polling Program is effective.

However, as for the EPADR function, the number of times of transmission was decided by Assignment. Periodic reporting is stopped after finishing transmission for this number of times. In this case, MES requires renewal of Assignment from LES automatically. Periodic reporting is continued by Assignment having been updated.

Updated Assignment is the same contents as former Assignment fundamentally. However, "Start Date&Time" is changed according to the updated date and time.

* Assignment automatic renewal of other cases

Also when the following situation occurs during employment of EPADR, MES updates Assignment automatically.

- Power supply OFF/ON of a terminal and Log-in
- Movement to other ocean region and Log-in
- Log-out in current ocean region and Log-in

30 minutes after login is completed, MES requires renewal of Assignment.

3.16.5 DNID selection

It's possible to set DNID by the following procedure.

NOTE

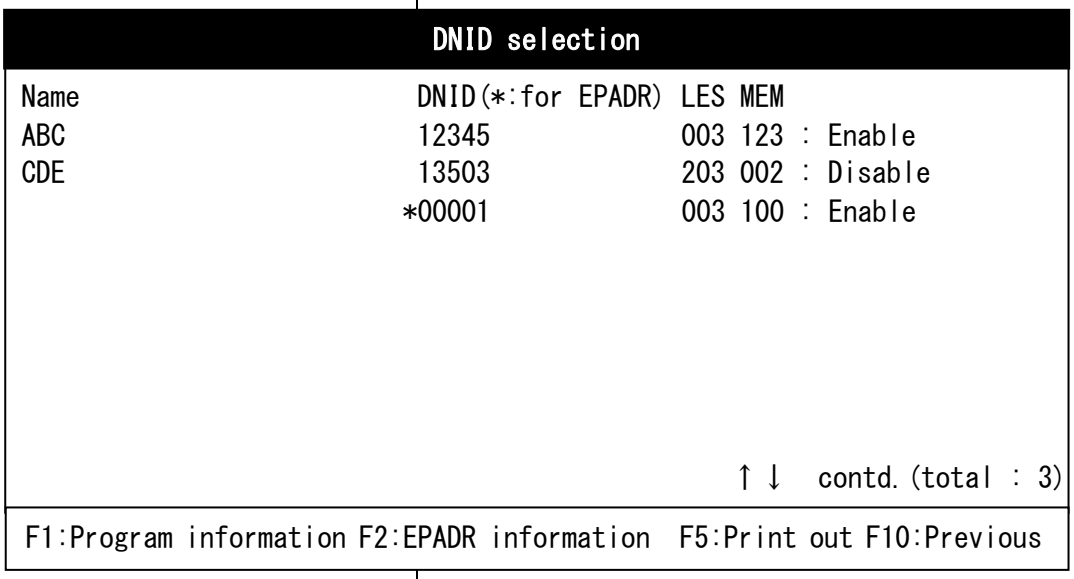
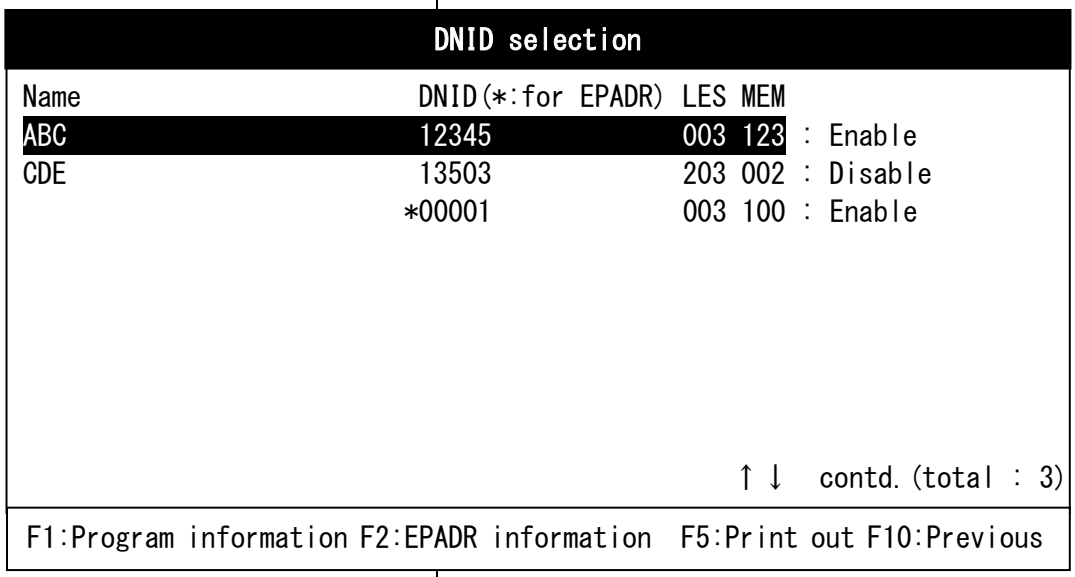
(1) DNID's enable/disable setting needs the password authentication.
The person who was authorized to the use of Inmarsat-C MES's password can change this setting.
(Password is the same as SSAS Setup.)

(2) In case of LRIT, the function to set LRIT information transmission interval at 24 hours is added, in order to reduce the transmission number of times during coming alongside the pier and a dockhand dock.
If "enable (24H)" is setup, DR/EDR/EPADR which uses this DNID is transmitted at 24hours interval regardless of transmission interval of Program/Assignment. Before departure, please reset this setting.
In addition, this setting is canceled when power supply is off.

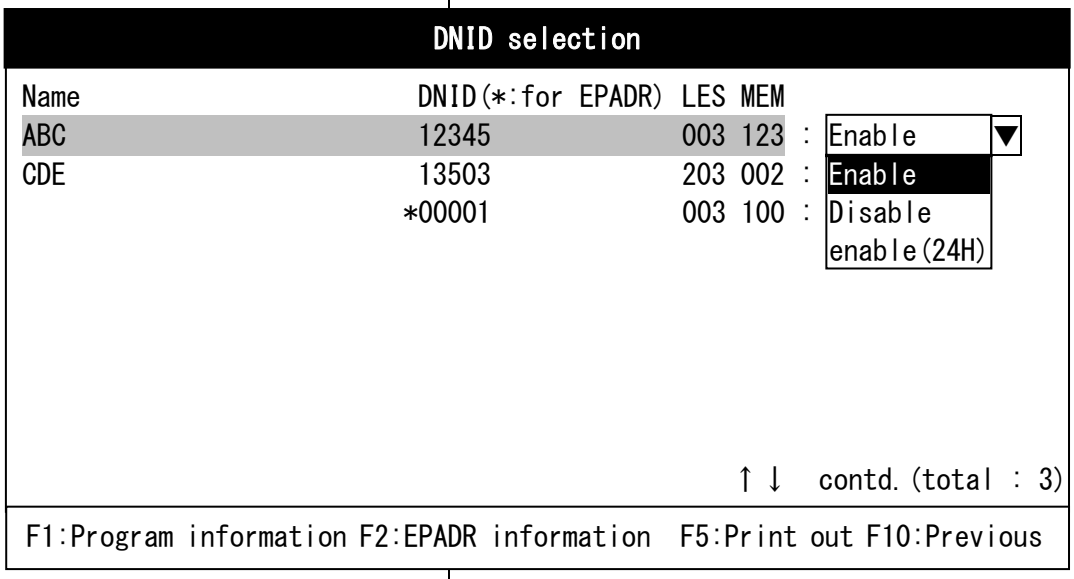
REFERENCE

JUE-87 has function that DNID enable/disable setting is carried out from JRC MFD via LAN.
Please refer to the MFD's documentation about the MFD corresponding to this function and the operation method.

Step	Operation	IME/DTE response
1	• Hold down **Alt** key and press **U** key on Main menu.	• "Set up" window is displayed. Set up Date & time confiG log-Out initiation log-In initiation Performance test initiation Scheduled transmission Land id registration for polling dnid seleCtion peripheral Function passWord EPADR informAtion F10:Previous

<table>
<tr><td>2</td><td>• Move the cursor to "dnid seleCtion" and press Enter key.</td><td>• "DNID selection" window is displayed and downloaded DNID can be confirmed.
 
</td></tr>
<tr><td>3</td><td>• Hold down Ctrl key and press F10 key.</td><td>• "Password" window is displayed
 
</td></tr>
<tr><td>4</td><td>• Input 4 digits of password and press Enter key. (displayed as ****)
 
</td><td>• If password is correct, "Password" window closes automatically. After that a cursor shows in "DNID selection" window.
• If password is not correct, characters (displayed as ****) are all cleared.
 
</td></tr>
</table>

5	• When canceling the password input, press **Esc** key.	• Main menu screen is displayed.
6	• Move the cursor to DNID which changes the setting and press **Enter** key.	• The cursor is moved to right side.
7	• Move the cursor to **"Enable"** or **"Disable" or "enable(24H)"** [*] and press **Enter** key.	• The cursor is moved to next DNID.
8	• Press **F10** (**"Previous"**) key.	• "DNID selection" window is closed.



NOTE

(1) DNID is only downloaded from LES. And there is no control external to the equipment to set up or remove DNIDs.

(2) JUE-87 can store up to 64 DNIDs. And 64 DNIDs with associated configuration information are in the nonvolatile memory of JUE-87.

CHAPTER 4. MAINTENANCE

4.1 Maintenance

Keep the equipment in a good state according to the following maintenance.

4.1.1 Daily Maintenance

4.1.1.1 Mechanical Maintenance

1) Cleaning

Keep the equipment as clean as possible. In particular, wipe the ventilation opening with a dry cloth.

2) Tightening of screws

Check screws in all parts of the equipment and tighten any loosen one.

4.1.1.2 Electrical Maintenance

Daily maintenance of electrical may be unnecessary. Refer to Next chapter, [Troubleshooting Flowchart], Fig.4.2.1.

4.2 Troubleshooting

CAUTION

When a failure has been detected, check it according to the Trouble shooting described in this book. If abnormalities are still accepted, restart the terminal. Nevertheless abnormalities are still accepted, stop operation and contact the dealer or agent from which you purchased the device or one of our branches, marketing offices, and representative offices.

4.2.1 Troubleshooting Flowchart

Check all items in the following section to secure normal communication at all times. When any unusual phenomenon occurs in the equipment, send appropriate information to JRC service network to get advice or to request for repair with the results of these items.

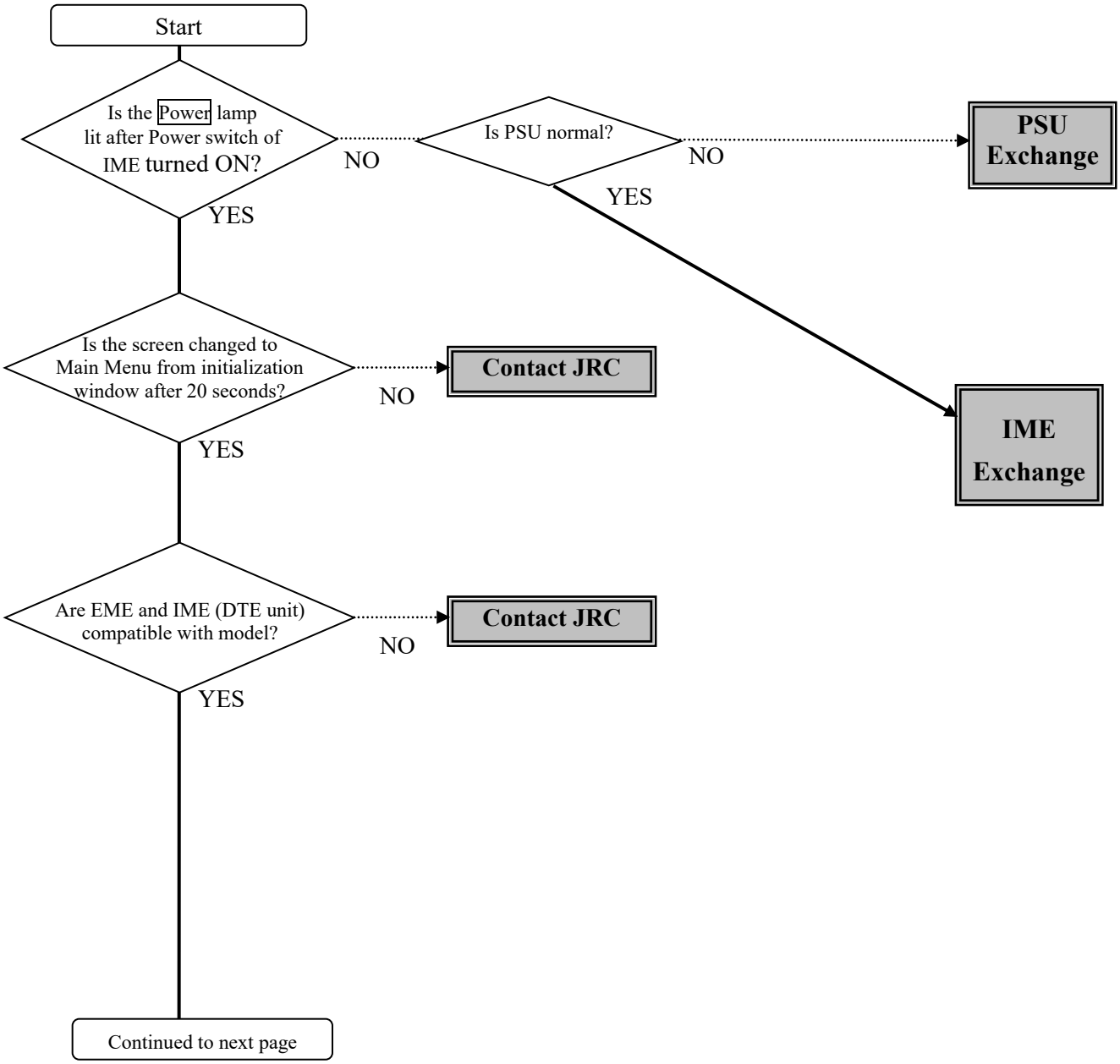


Fig4.2.1a Troubleshooting Flowchart (1/2)

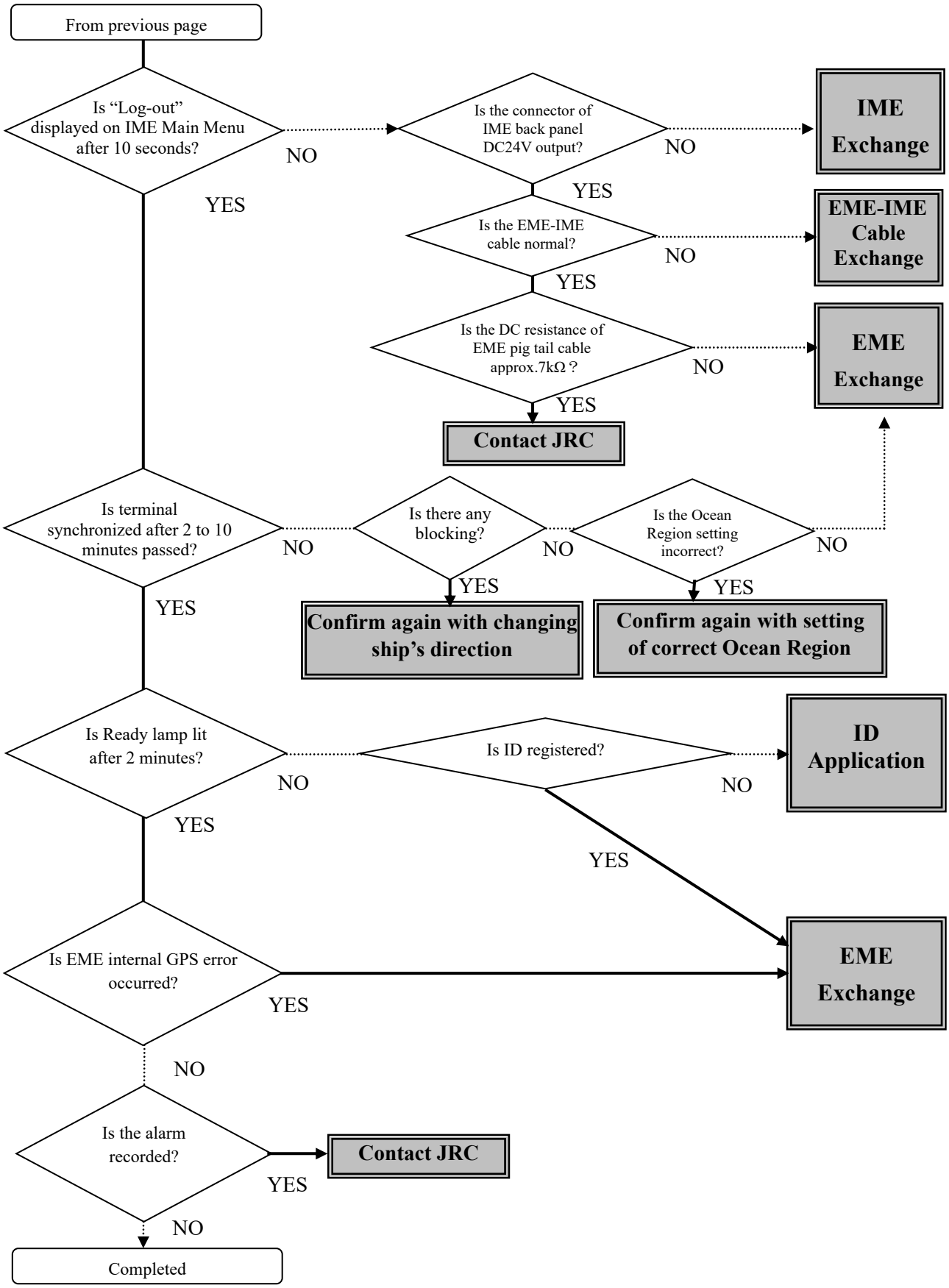


Fig4.2.1b Troubleshooting Flowchart (2/2)

4.2.2 Alarm Check

The JUE-87 provides the following function, which is useful for maintenance and for prompt detection of faults on the equipment.

Various operation states and alarm states are displayed on the first line of the screen of IME/DTE and alarm history is displayed as the following procedure.

4.2.3 Alarm History

The JUE-87 has a self-monitoring function named alarm history, which is displayed as the following procedure:

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **Alt** key and press **A** key on Main menu.	• **"Diagnostics"** window is displayed.	
2	• Move the cursor to the item "Alarm history" then press **Enter** key.	• **"Alarm history"** window is displayed.	
3	• To return to Main menu, press **F10** key twice or **ESC** key.	• Main menu is displayed	

Example of Alarm History

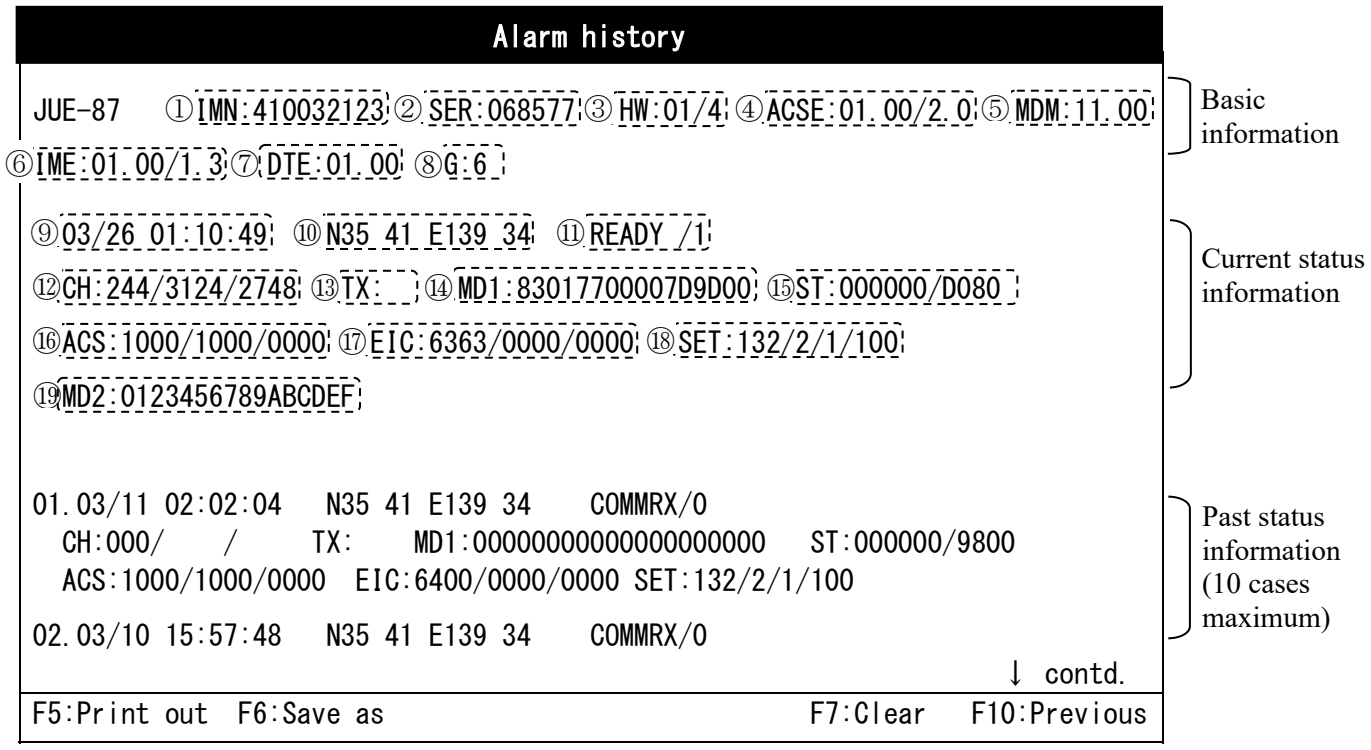


Fig.4.2.3 "Alarm history" window

Table 4.2.3 Contents of Alarm history

No.	Display format (In case of Fig.4.2.3)	Content	
①	IMN:4XXXXXXXX (IMN:410032123)	MES Number	
②	SER:XXXXXX (SER:068577)	Serial Number	
③	HW:XX/Y (HW:01/4)	EME Board Version (XX)	
		IME Board Version (Y)	
④	ACSE:XX.XX/Y.Y (ACSE:01.00/2.0)	ACSE Main Version (XX.XX)	
		ACSE SAFE Mode Version (Y.Y)	
⑤	MDM:XX.XX (MDM:11.00)	MODEM Version	
⑥	IME:XX.XX/Y.Y (IME:01.00/1.3)	IME Main Version (XX.XX)	
		IME SAFE Mode Version (Y.Y)	
⑦	DTE:XX.XX (DTE:01.00)	DTE Version	
⑧	G:X (G:6)	GPS Equipment	
⑨	MM/DD hh:mm:ss (03/26 01:10:49)	Date	Month (MM)
			Day (DD)
			Hour (hh)
			Minute (mm)
			Second (ss)
⑩	NXX XX EYYY YY (N35 41 E139 34)	Position	Latitude (N)
			Degree (XX XX)
			Longitude (E)
			Degree (YYY YY)
⑪	XXXXXX/Y (READY /1)	MES Status(XXXXXX)	
		TDM Channel type (Y)	
⑫	CH:XXX/YYYY/ZZZZ (CH:244/3124/2748)	TDM Channel ID (XXX)	
		Receiving channel (YYYY)	
		Transmitting channel (ZZZZ)	
⑬	TX:XX (TX:)	EIRP shows the strength of transmitting signal power.	

⑭	**MD1:UUVVVVWWWWXXXXYY** (MD1:83017700007D9D00)	Receiver AGC setting value (UU) shows the gain control value to adjust level of current receiving signal. Normal value : from 80(hex) to E0 (Hex) Lower value shows that receiving signal is stronger and receiver circuit performance is better.
		Receiving C/N0 (VVVV) shows 10 times C/No dBHz. This value depends on both received signal from satellite and receiver circuit performances. Bigger C/No is better. (ex. 0177 (Hex) means 37.5dBHz.) Normal value : from 15E(Hex) to 1AE(Hex) Normal C/No (dBHz) from 35.0dBHz (15E) to 43.0dBHz (1AE). VVVV / C/No (dBHz) / Condition 0190 / 40.0 / Good 017C / 38.0 / Good 0168 / 36.0 / Good 0154 / 34.0 / Fair Rec “Good” shows bigger C/No than 35.0dBHz. Rec “Fair” shows C/No from 34.5 to 33.0 dBHz. Rec “Poor” shows lower C/No than 33.0 dBHz. <NOTE> If receiving C/No shows lower than 34.5dBHz, check coverage of satellite and ocean region, and select best ocean region for present location. Refer to Appendix C.
		IQ balance (WWWW) is always 0000.
		Master OSC Setting value (XXXX: 7D9D (Hex)) shows control value of Master OSC. Normal value : from 3000(Hex) to D000(Hex) Center value is 8000 (Hex). Nearer value to 8000(Hex) is better.
		Modem ATC Wave Detect Power (YY) shows the strength of interferences to Inmarsat-C. (Ex. 00 (Hex)) Normal value: from 00 to 30 (Hex). <NOTE> If this value is bigger than 80 (Hex), Inmarsat-C cannot receive normally by too strong interferences.

⑮	ST:XXXXXX/YYYY (ST:000000/D080)	Alarm(XXXXXX)	0x000000	No alarm (If there are any alarm, Add the following each status value)
			+ 0x800000	EME ROM data alarm
			+ 0x400000	EME RAM data alarm <Note> If user stops power supply without "Log-out", this bit becomes "high".
			+ 0x200000	EEPROM data alarm
			+ 0x100000	EEPROM FATAL alarm
			+ 0x080000	External UART data alarm
			+ 0x040000	EME-IME connection alarm
			+ 0x020000	EME Internal GPS alarm
			+ 0x010000	External GPS alarm
			+ 0x008000	TX DURATION alarm
			+ 0x004000	EME PLL1 UNLOCK alarm <Note> If this bit becomes "high", transceiver board of EME might have some troubles of PLL ICs.
			+ 0x002000	EME PLL2 UNLOCK alarm <Note> If this bit becomes "high", transceiver board of EME might have some troubles of PLL ICs.
			+ 0x001000	EME MODEM Software alarm
			+ 0x000800	EME MODEM Hardware alarm
			+ 0x000400	DISTRESS button1 alarm
			+ 0x000200	DISTRESS button2 alarm
			+ 0x000100	DISTRESS button3 alarm
			+ 0x000080	Reserved
			+ 0x000040	SECURITY ALERT button1 alarm
			+ 0x000020	SECURITY ALERT button2 alarm
			+ 0x000010	SECURITY ALERT button3 alarm
			+ 0x000008	SECURITY ALERT button4 alarm
		Status(YYYY)	0x0000	Default menu (Add the following each status value)
			+ 0x8000	READY
			+ 0x4000	SYNC
			+ 0x2000	CARRIER
			+ 0x1000	LOG IN
			+ 0x0800	EGC Mode
			+ 0x0400	Reserved
			+ 0x0200	Reserved
			+ 0x0100	Preheat
			+ 0x0080	DISTRESS button1 detection
			+ 0x0040	DISTRESS button2 detection
			+ 0x0020	DISTRESS button3 detection
			+ 0x0010	Reserved
			+ 0x0008	SECURITY ALERT button1 detection
			+ 0x0004	SECURITY ALERT button2 detection
			+ 0x0002	SECURITY ALERT button3 detection
			+ 0x0001	SECURITY ALERT buttoh4 detection

⑯	ACS:XXXX/YYYY/ZZZZ (ACS:1000/1000/0000)	Signaling Channel Control Step (XXXX)	
		Message Channel Control Step (YYYY)	
		Process Control Step (ZZZZ)	
⑰	EIC:XXXX/YYYY/ZZZZ (EIC:6363/0000/0000)	EME-IME connection success rate (XXXX)	Top 2 digit:EME->IME Last 2 digit:IME->EME
		EME-IME connection error counter (YYYY)	Top 2 digit:EME->IME Last 2 digit:IME->EME
		EME-IME connection error factor (ZZZZ)	Top 2 digit:EME->IME Last 2 digit:IME->EME
⑱	SET:WWW/X/Y/ZZZ (SET:132/2/4/100)	LES setting (WWW)	
		Preferred Ocean Region (X)	
		GPS setting (Y)	
		Data port type (ZZZ)	1st digit:DTE port main 2nd digit:DTE port #1 3rd digit:DTE port #2
⑲	MD2:SSTTUUVVWWXXYYZZ (MD2:0123456789ABCDEF) (Note)	TX I Amplitude(SS)	
		TX I DC Offset(TT)	
		TX Q DC Offset(UU)	
		TX VCONT(VV)	
		EIRP Moni(WW)	
		PA BIAS1(XX)	
		PA BIAS2(YY)	
		PA BIAS3(ZZ)	

(Note)

"MD2" values are fixed for each terminal. They show transmitter hardware set value in factory.
If MD2 values is all zeros or all "F", JUE-87 cannot transmit normally.
In that case, contact the JRC service agent and let us know about Alarm history of your JUE-87.

4.2.4 Countermeasure

If the equipment does not operate in normal even after the following procedure is performed, consult JRC service agent. Take care not to touch any parts on PC board.

Abnormal operation of IME/DTE

In case of the heavy fluctuation of the voltage or frequency of the power source, or thunderbolt and etc., IME may not operate normally. In this case, press **Del** key under holding **Ctrl** and **Alt** keys.

If above method does not work or if the keyboard is ineffective, turn off **AC POWER** and **DC POWER** on the EXT PSU (NBD-904) after turning off the IME **POWER** switch.

TX ALARM

If TX ALARM is displayed on the IME screen, reset TX ALARM to set **POWER** switch to OFF and set to ON again. If TX ALARM is displayed again in spite of the resetting TX ALARM, turn off the **POWER** switch of IME and contact JRC service network.

4.2.5 After service

4.2.5.1 When Ordering Repair

In the case of during the term of a guarantee

When it breaks down in the state of the normal operation according to explanation and a handling description in the operation manual, the dealer or our company will perform repair without any charge according to the previsions in the specific action.

However, in the following case, gratis service cannot be received even if it is during the term of a guarantee.

- When the construction report is not sent to JRC after apparatus attachment.
- Failure produced by inevitability, such as misuse, negligence, or a natural disaster, a fire, etc.

In the case of passed over the term of a guarantee

When a function can be recovered by repair, any repair is performed with charge by demand of a user.

Please inform us of the following items when ordering the repair:

- Product name, model name, date of manufacture, manufacture number
- State of the abnormality (as in detail as possible)
- Office name or organization name, address, telephone number

Recommendation of overhaul

The performances of the set may deteriorate due to the aging of parts, and so on through the rate varies depending on the conditions of use. So, it is recommendable to contact the dealer from which you purchased the device or one of our marketing offices for overhaul apart from daily services.

Disposal of JUE-87

When disposing JUE-87 process it in accordance with the rules of the pertinent local government.
For details, contact to the purchasing dealer from which you purchased, our service office or a pertinent local government.

Please contact the dealer from which you purchased the device or our marketing offices that is nearest to you for any question as to the after-sales service.

For any question: Refer to the list of office at the end of the volume.

4.3 Pop-up Window

JUE-87 has the following pop-up windows. The information window is displayed when the JUE-87 have some trouble or some warning.

(1) WARNING Window
(2) CAUTION Window
(3) ERROR Window
(4) MES Information Window
(5) Model & Country mode Compatibility Window

When the window is displayed, follow the instruction in the window. When the pop-up window is closed, press **F10** (**"Previous"**) key.

The pop-up window shows in Item 4.3.1 to 4.3.4 for example.

4.3.1 WARNING Window

The examples of the messages of WARNING window are listed in Table 4.3.1.

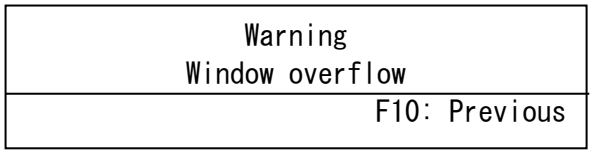


Fig.4.3.1 WARNING Window

Table 4.3.1 Message list of WARNING window

Warning Message	Cause	Countermeasure
Are you sure you want to delete the file ? [Yes] [No]		Select[No] when you want to keep the file.
Cannot display binary text.		Press F10 key when you carry on the job. The data cannot display as characters.
Do you want to overwrite it? [Yes] [No]		Select [No] when you want to keep old file, and save the new data as new file name.
Formatting will erase ALL data on the USB drive. To format the USB drive, choose Yes. [Yes] [No]		
Now EGC high priority message is receiving.		When the alarm buzzer is stopped, hold down the **ctrl** key and press **A** key. When the window is closed, press **F10** (**"Previous"**) key.
Print out Call log	The Call logging data of 90 or more calls are stored then the oldest call logging data is cleared. Therefore, print out the call logging data.	Print out the call logging according to item 3.9.2 "Print Out".
Transmitter over loaded. It may be permanent damaged.		Contact the purchasing dealer, JRC agent or one of the JRC branches.
Window overflow	Windows of the IME/DTE are opened maximum numbers.	**Press F10 key to close the window one by one, or press ESC key.**

4.3.2 CAUTION Window

The examples of the message of CAUTION window are listed in Table 4.3.2.

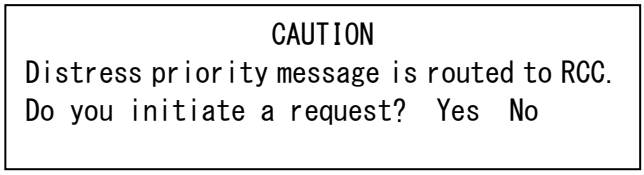


Fig.4.3.2 CAUTION window

Table 4.3.2 Message list of CAUTION window

Caution Message	Cause	Countermeasure
BAM Interface was switched to serial due to LAN connection failure. Please check LAN connection F10:Previous		Check the LAN port connection.
By current high priority request, previous request (144, 14-04-01-12: 30) is cancelled		Request again, if necessary.
Distress priority message is route to RCC. Do you initiate a request? [Yes] [No]		Press ENTER key to transmitting the distress message. Move the cursor and press ENTER not to transmitting the distress message.
EGC message storage in DCE is full. Oldest message is overwritten by the latest incoming message.		Delete unnecessary messages.
No Position Data. Press F10 key to input data.		Press **F10** and input position data.
Inmarsat-C message storage in DCE is full. Oldest message is overwritten by the latest incoming message.		Delete unnecessary data.

4.3.3 ERROR Window

The examples of message of ERROR window are listed in Table 4.3.3.

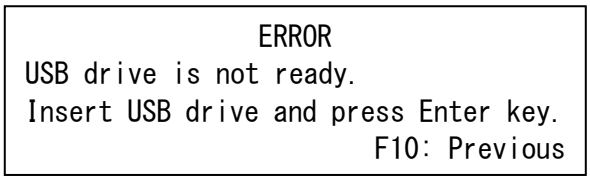


Fig.4.3.3 ERROR Window

Table 4.3.3 ERROR Message

ERROR Message	Cause	Countermeasure
Cannot create the new file.	The capacity of the USB drive is not enough.	Delete unnecessary file or use the other USB drive.
Confirm the file name.	The specified file name is wrong or it doesn't exist.	Enter correct file name.
Distress Button is disconnected. Check the connection.		
DTE failed to initialize the flash memory.		Re-boot the IME/DTE. If same message is displayed again, the IME/DTE might have a failure.
DTE was unable to complete the format. Please remove the USB drive.		
Error on System Information Writing		It seems that the restoration of the file is difficult. Taking backup of important document is highly recommended.
File ERROR! Process aborted!		
File can't be open		
Press ENTER key to retry.		
Printer is not ready. Confirm the paper and on-line.	The message is not printed out.	Press **Esc** key to clear the window, then confirm the loading of roll paper and the setting of the printer by **"Set up"** command.
Remote Distress Button is disconnected. Check the connection.		Connect the Remote Distress Button.
SA Button No. is connected incorrectly. Check the connection.		
SA Button No. is disconnected. Check the connection.		
Same name already exists. Confirm the file name.	The file name is same at the other file.	Use the other file name.
SB Controller is disconnected. Check the connection.		

ERROR Message	Cause	Countermeasure
The DTE main drive is unreadable. Press ENTER key to retry.	Cannot access the IME/DTE Flash ROM	Press ENTER key to re-read the Flash ROM. If the same window is displayed, the Flash ROM might be troubled.
The file is missing. Confirm the file name.	The file name is missing	Confirm the file name.
The USB drive is unreadable. Press Enter key to retry.		Press **Enter** key to re-read the USB drive. If the same window is displayed, the USB drive might be troubled or unformatted.
There is not enough room on the DTE main drive. Delete some files.	The capacity of the Flash ROM is not enough.	Delete unnecessary file.
USB drive is not ready. Insert USB drive and press Enter key.		Connect the USB drive and press **Enter** key
Unsuitable Density of Physical Error.		

4.3.4 MES INFORMATION Window

The examples of the messages of Information window are listed in Table 4.3.4.

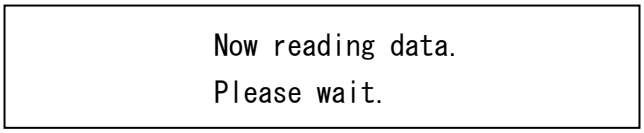


Fig.4.3.4 MES INFORMATION Window

Table 4.3.4 MES INFORMATION Message

INFORMATION message	Countermeasure
2nd LES ID Invalid Because of Demand Assigned LES	
Another Distress Alert initiated.	
Are you sure you want to rename the file?	
--Automatic test mode-- Normal communication disabled Do not press any distress button unless you are in distress.	
Cannot create new file.	
Cancelled Security Alert by No. ( ). SA Button.	
Confirm the file name.	
Current file name:	
Data report (14-04-01 16:23) sent to DNID (12345)	
Data report (003, 14-04-01 16:25) failed.	
Delete file:	
Distress Button is disconnected. Check the connection.	
Distress acknowledgement received.	
Distress Alert failed.	Retry transmission.
Distress Alert has been initiated.	
Distress Alert has not been sent to NCS. Returning to alternative NCS.	
Distress Button is disconnected. Check the connection.	
Distress Button No ( ) is connected incorrectly. Check the connection.	
------Distress Button Test----- Distress button test succeeded. If real distress alert to be sent, cancel the test mode.	Cancel the test mode when carry out real distress alert transmission.
------Distress Button Test----- Now distress button testing. If real distress alert to be sent, cancel the test mode.	Do not turn off the power switch.
Distress Buttons are under test now.	Do not turn off the power switch.

INFORMATION message	Countermeasure
Distress ( ) failed. Now retrying to request.	
Distress priority selected.	
Distress ( ) succeeded.	
DTE failed to detect the USB drive.	Confirm the USB drive connection.
DTE failed to stop the USB drive.	
EDR (003, 14-04-01-16:29) failed.	
EDR (14-04-01-16:27) sent to DNID(12345).	
EGC distress message received.	
EGC urgency message received.	
Format the USB drive complete.	
Formatting the USB drive.	
Initiate a manual scan of NCS common channel due to BBER increasing.	
Input column numbers:	
Input Max Column numbers:	
Input Merge File Name:	
Input Replace String:	
Input Save File Name	
Input Search String:	
It may be too many files on desk.	Delete unnecessary files.
LES ID for distress alert has been updated automatically.	
Log-in ( ) failed.	There is a possibility that the LES is busy or receiving level is too low. Move the position of antenna and wait a while to log in.
Log-in ( ) succeeded.	
Log-out ( ) failed.	
Log-out ( ) succeeded.	
Merge file:	
MES is not commissioned yet. The commissioning test will start automatically after the first log-in.	Carry out PV test.
Modification of this field is not possible.	
NCS operates restoration mode. Select preferred LES.	Enter ID No.
NCS scan cancelled.	
NCS scan was completed. Current NCS is ( ).	
NCS was not found with NCS scan. Confirm the preferred ocean region.	Confirm the ocean region by "Preferred ocean region".
New file name:	

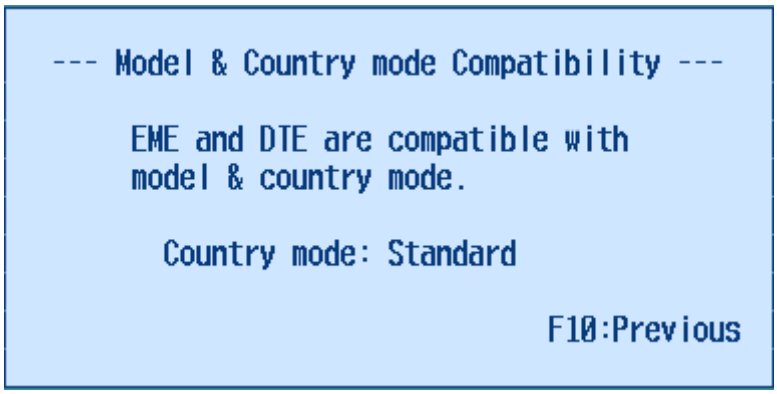
INFORMATION message	Countermeasure
Now printing. Please wait.	When the display doesn't disappear, the breakdown of the printer is thought. In this case, please OFF/ON it the power supply of the printer.
Now reading data. Please wait	Do not remove a diskette during data reading.
Performance test failed.	
Please turn off Security Button for real Security Alert.	
Previous request (144, 14-04-01-08:10) is cancelled with new request.	
Really quit without saving? [Yes] [No]	Select [Yes] to save the data.
Request (144, 14-04-01-08:10) cancelled.	
Request (144, 14-04-01-08:10) failed.	Retry transmission.
Request (144, 14-04-01-08:10) failed. Automatic request will be re-sent in 5minutes.	
Request (14-04-01-08:10) failed. Now retrying to request.	Wait until re-transmission is completed.
Request (144, 14-04-01-08:10) queued. Now waiting for announcement.	Wait the announcement from LES. Carry out "cancel call" of "Transmit" when you close down the call request.
SB test is incomplete. Confirm ALL SBs are OFF. Turn off IME and DTE.	
------ Security Button Test ------ Now security button testing. . . . . If real security alert to be sent, cancel the test mode.	
------ Security Button Test ------ Security button test succeeded. If real security alert to be sent, cancel the test mode.	
Sending Distress Alert to alternative NCS.	
Sending Distress Message.	
S&F message (14-04-01-08:10) delivered to subscribers (072123456, 07202822351)	
S&F message ( ) No delivered.	
S&F message (14-04-01-08:10) sent to LES (144).	To receive the notification of delivery to other party, make "Delivery Confirmation" to "ON" at "Transmit" window.
The attached USB drive has malfunctioned, and DTE does not recognize the attached USB drive.	Connect the USB drive again. If the same window is displayed, the USB drive might have a failure. Connect another USB drive.
The attached USB drive is not supported. DTE supports the USB drive only.	

INFORMATION message	Countermeasure
The USB drive can now be safety removed from DTE.	
The USB drive is installed and ready to use.	
The USB drive was removed before the USB drive is stopped.	
There is a possibility of the USB IC failure. All USB functions are disabled.	Connect the USB drive again. If the same window is displayed, the USB IC in the IME/DTE might have a failure.
To stop the USB drive, choose Yes. After the USB drive is stopped the USB drive can be safety removed. [Yes] [No]	
Tune to NCS (144) cancelled.	
Tune to NCS (144) failed.	Confirm whether there is a shield between the antenna and the satellite. Carry out NCS scanning again.

4.3.5 Model & Country mode Compatibility Window

(1) Display for Model Compatibility

The following message is displayed. To close this window, press F10 (“Previous”) key.



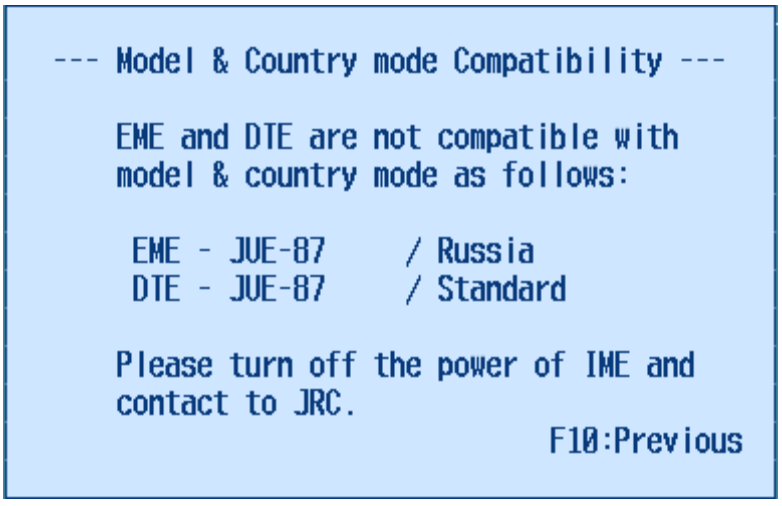
(2) Display for Model Incompatibility

① In case of EME and IME (DTE unit) are incompatible with country mode.

Example:

JUE-87 EME (Russian model) is connected to JUE-87 IME (DTE unit: Standard model).

The following message is displayed. To close this window, press F10 (“Previous”) key.

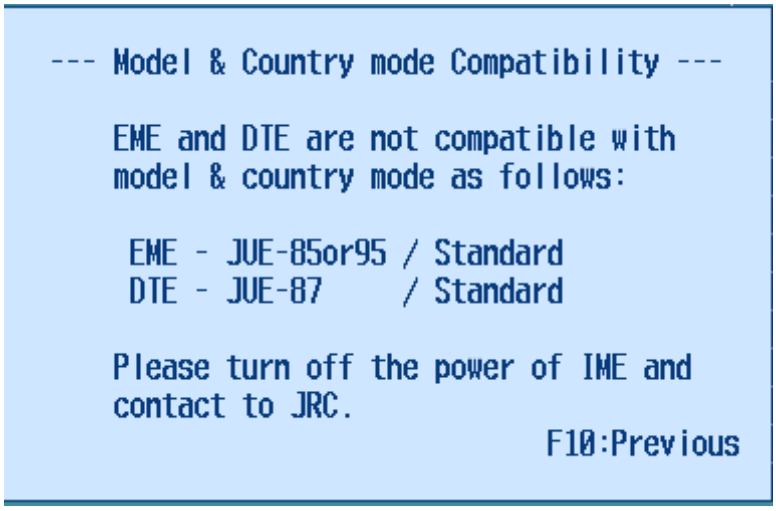


②In the case of EME and IME (DTE unit) are incompatible with model.

Example:

JUE-85EME (NAF-253GM) is connected to JUE-87 IME (DTE unit: Standard model).

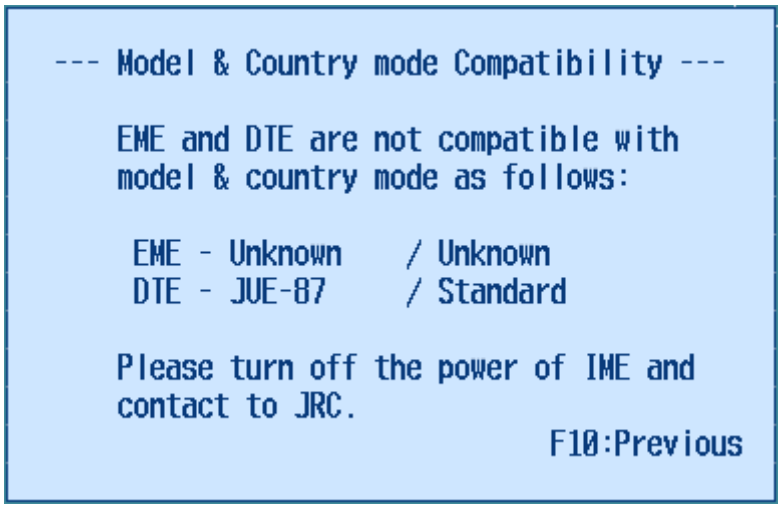
The following message is displayed. To close this window, press F10 (“Previous”) key.



Example:

JUE-95SA EME (NAF-253SA) is connected to JUE-87 IME (DTE unit: Standard model).

The following message is displayed. To close this window, press F10 (“Previous”) key.



4.4 Help Function

Hold down the **Shift** key and press **F1** key to display HELP-information. Press **F10** key or **Esc** key to return the previous mode.

CHAPTER 5. Specification

5.1 JUE-87

5.1.1 EME (NAF-253GM) and IME (NTF-318)

Table 5.1.1 Principal Specification of JUE-87

Item			Specification
Class of Inmarsat-C MES			Class 2
Frequency Range			Transmission: 1626.5 to 1646.5MHz Reception :1537.0 to 1544.2MHz
Channel Spacing:			5KHz
G/T			-23.0 dB/K minimum
EIRP			Within 14 ±2 dBW (at 5 degrees elevation angle)
Modulation			TX: 1200 symbols/sec. RX: 1200 symbols/sec. BPSK (BPSK: Binary Phase Shift Keying)
Antenna			Type: Helical antenna Pattern: Hemisphere (non directional) Polarization: Right hand circular
Power Supply	Voltage		DC +24V (+19.2 V to +31.2 V) (When standard PSU, NBD-904 is used)
	Power Consumption		Transmission：100 W Standby time：15W (EME and IME) 160 W Max. (EME, IME, DTE and Printer)
Environmental Condition	Operative Temperature		-35°C to +55°C (EME operational) -15°C to +55°C (IME)
	Storage Temperature		-40°C to +70°C
	Relative Humidity		95% (+40°C)
	Ice		25 mm (EME)
	Precipitation		100 mm/hour (EME)
	Wind		100 knots
	Vibration		Compatibility with IEC 60945
Coding			Interleaved, convolution code (R = 1/2, K = 7)
Data Rate		Transmission	600 bps
		Reception	600 bps
Max Transmission Message			8K bytes
Reception Message Storage			80K bytes (Inmarsat-C: 40K bytes, EGC: 40K bytes)
Interface		Internal GPS	JRC original
		External GPS	Input sentence: GGA, RMC, GLL, GNS, ZDA, DTM Baud rate: 4800 bps
		IME/DTE	ITU-T V24/28, 9600 bps, D-sub 9PIN connector
		LAN	RJ-45: IEC61162-450 / IGMP version3
		BAM	IEC61162-1 Output sentence: ALC, ALF, ARC Input sentence: ACN
		Printer	Centronics compatible parallel interface, Connector：D-sub 25PIN connector
International Protection			EME: IP 56-compliant IME: IP22-compliant (except for while connecting a USB device to USB drive)
Dimensions			EME: 170 mm (ϕ) × 379 mm (H) IME: 336 mm (W) × 86 mm (D) × 244 mm (H)
Mass			EME: Approx. 2.4 kg IME: Approx. 3.4 kg

5.1.2 Printer (NKG-900/NKG-800)

Table 5.1.2a Principal Specification of Printer (NKG-900)

Item	Specification
Character Coding	ASCII code
Line Interface	Parallel interface
Printer System	Impact dot
Maximum Printing Speed	200 characters/sec
Character Format	9 × 7 dot
Maximum Number of Character Per Line	80 characters/line
Roll Paper Size	Recording paper (1PLY) 105m 5ZPAL00002 Recording paper (1PLY) 98m 5ZPCM00020
Ink Ribbon	Type: 7Q1VP80S JRC Code: 7ZZJD0105 Color: Black
Power Supply	DC +24V (+19.2 to +31.2V)
Power Consumption	Approx. 35W (max)
Dimensions	390.2 mm (W) × 355.2 mm (D) × 175.8 mm (H)
Mass	Approx. 4.8kg

* NKG-900 can't exchange Print Head Unit. Therefore Print head unit isn't indicated on list.

Table 5.1.2b Principal Specification of Printer (NKG-800)

Item	Specification
Character Coding	ASCII code
Line Interface	Parallel interface
Printer System	Impact dot
Maximum Printing Speed	200 characters/sec
Character Format	9 × 7 dot
Maximum Number of Character Per Line	80 characters/line
Roll Paper Size	Recording paper (1PLY) 105m 5ZPAL00002 Recording paper (1PLY) 98m 5ZPCM00020
Print Head Unit	#SP-24090AI 5ZYWZ00001 (Option)
Ink Ribbon	Type: #SP-16051 JRC Code: 5ZZCM00003 Color: Black
Power Supply	DC +24V (+19.2 to +31.2V)
Power Consumption	Approx. 35W (max)
Dimensions	399.0 mm (W) × 376.0 mm (D) × 193.0 mm (H)
Mass	Approx. 3.7kg

5.1.3 EXT PSU (NBD-904)

Table 5.1.3 Principal Specification of EXT PSU

Item	Specification
Line voltage	AC: from +100V to +220V /DC: +24V
Line voltage range	AC:+89V to +266V/ DC:+19.2 to +31.2V
Line frequency range	47 Hz to 64Hz
Function	• DC power automatic backup at AC power failure. • DC input is only available when AC input is stopped. • DC output is only supplied through DC input (condition: over +18V and "REMOTE CONT" is short).
Control Signal	• REMOTE CONT +/- (Input): When open, DC input is not available, when short, DC input is available. • AC FAIL +/- (Output): When AC input is stopped, between + and – is open, when AC input is available, between + and – is short. (Output rating: DC 30V, 30mA)
Output	Floating type DC+24V, 8.5A (max, 5minutes) 6.5A (Continuous)
Switch	• DC INPUT: turn on/off DC input + line. • DC OUTPUT: turn on/off DC output +/- line
LED	• AC operation is lighted up, when AC input available. • DC operation is lighted up, when DC output is supplied through DC input. • DC output is lighted up, when DC output is available.
Protection	Protection by No-Fuse breaker or Fuse (DC over current only) • Over voltage (Input) +35V DC , +280V AC (Automatic protected. => Protected is removed after turn off/on.) • Over current (Output) 13.0A (AC.. automatic), 15.0A (DC … Fuse)
Others	Isolation against ground: > 1M ohm at DC 500V Temperature: Compatible with IEC 60945 Fuse: DC32V, 15A (DC+/- input)
Dimensions	168 mm(W) × 250 mm(D) × 98 mm(H)
Mass	Approx. 2.6 kg

5.2 Option

5.2.1 DTE (NDZ-227)

Table 5.2.1 Principal Specification of DTE

Item	Specification
CPU	ARM 9
Text Memory	256MB SDRAM 128MB Flash Memory
Display	10.4 inch TFT LCD color monitor 640 × 480 dot-mapped graphics (VGA)
Back Light	Cold Cathode Fluorescent Lamp (CCFL)
Keyboard	IBM compatible
Operating System	μITRON (NORTi professional Ⅲ)
Radio Modem Interface	RS-232C 9600 bps
Printer Interface	Centronics compatible parallel interface
Screensaver Function	When you use this function, backlight of DTE is automatically turned off if no key is pressed on keyboard over a given length of time (depends on the setting). Press any key to turn on backlight of DTE.
Primary Power	DC +24V (+19.2 to +31.2V) Consumption 0.5A
International Protection	IP22-compliant (except for while connecting a USB device to USB drive)
Dimensions	336 mm (W) × 89 mm (D) × 244 mm (H)
Mass	Approx. 4.6 kg (Main Unit) Approx. 0.4 kg (Keyboard)

5.2.2 Remote Distress Button (NQE-3225)

Table 5.2.2 Principal Specification of Remote Distress Button

Specification	Contents
Interface	RS-422 and binary signal (0V, +5V)
Function	
(1) Distress Button and LED	Used to Distress Alert transmission. In case of transmitting Distress Alert, open hinged cover and press the button for 4 seconds. The LED is lit during sending the Distress Alert transmission.
(2) Ready LED	Illuminates RED: Not synchronizing Illuminates GREEN: Synchronizing, able to transmitting distress.
(3) DIMMER Button	Used to adjust lamp brightness. When it is turn to the right completely, brightness becomes the maximum. When turning to the left completely, brightness becomes minimum (shines slightly).
Power Supply	DC +12V (+11.4V to +12.6V)
Dimensions	80 mm (W) × 38 mm (D) × 138 mm (H)
Mass	Approx. 0.15 kg

5.2.3 External Buzzer (NCE-5547)

Table 5.2.3a Principal Specification of External Buzzer

Specification	Contents
Interface	Binary signal (0V, OPEN)
Power Supply	DC +12V (+11.4V to +12.6V)
Dimensions	80 mm (W) × 38 mm (D) × 138 mm (H)
Mass	Approx. 0.15 kg

The buzzer sound specifications change depending on whether the BAM function is enabled or disabled. The BAM function in accordance with IEC62923-1 and IEC62923-2 standards, and the sound specifications are specified. Tables 5.2.3b and 5.2.3c show the sound status of the external buzzer when a communication is received. For details on the BAM function, refer to "5.3 Bridge Alert Management (BAM)".

Table 5.2.3b The sound status of External Buzzer when BAM function is enabled

Communication type	Communication Priority	Sound status	Shutdown
Inmarsat-C	Distress	2.2 kHz and 1.3 kHz tones sound alternately	Manually *1
	routine	800Hz tone sound	Automatically *2
EGC	Distress	Two short 2.2KHz tone sound	Manually *3
	Urgency	Two short 2.2KHz tone sound	Manually *3
	Safety	No sound	—
	routine	800Hz tone sound	Automatically *2

Table 5.2.3c The sound status of External Buzzer when BAM function is disable

Communication type	Communication Mode or Priority	Sound status	Shutdown
Inmarsat-C	Urgency	2.2 kHz and 1.3 kHz tones sound alternately	Manually *1
	Inmarsat system	800Hz tone sound	Automatically *2
EGC	Distress	2.2 kHz and 1.3 kHz tones sound alternately	Manually *1
	Urgency	2.2 kHz and 1.3 kHz tones sound alternately	Manually *1
	Safety	800Hz tone sound	Automatically *2
	routine	800Hz tone sound	Automatically *2

*1) To stop the sound, press the 'RESET' button on the panel of EXT BUZ, 'F10' key on the keyboard or 'A' key while holding down the 'Ctrl' key on the keyboard.

*2) Changing the parameter on "Peripheral function window" in "Set up menu" can extend the "Buzzer sound duration". See 3.5.3

*3) To stop the sound, press the 'RESET' button on the panel of EXT BUZ, 'F10' key on the keyboard or 'A' key while holding down the 'Ctrl' key on the keyboard. When the alert is not acknowledged, the sound will be repeated.

5.3 Bridge Alert Management (BAM) function

BAM is a specification for integrally managing alerts generated in each navigation equipment mounted on a ship at the bridge. JUE-87 is not on the management side, so it notifies the BAM management device of the alert that occurred by itself and manages the state of the alert using IEC61162-1 (Serial Port) or IEC61162-450 (LAN Port) interface according to the BAM specification. Even if the communication between JUE-87 and the BAM management device is lost, the alarm generated by JUE-87 itself is managed by JUE-87. Regarding JUE-87, it is recommended to connect the BAM function wiring to a serial port. Even if you use the BAM function on the LAN port, also wire the serial port for backup.

5.3.1 External Interface

JUE-87 uses the following sentence.

Table 5.3.1a External Interface – Input Sentence

No.	DATA	Sentence
1	Alert command	ACN

Table 5.3.1b External Interface – Output Sentence

No.	DATA	Sentence
1	Alert sentence	ALF
2	Cyclic alert list	ALC
3	Alert command refused	ARC

5.3.2 JUE-87 Alert

JUE-87 manages alerts using the "BAM Active Alert" and the "BAM Alert History". "BAM Active Alert" shows a list of alerts that are currently occurring. "BAM Alert History" shows a list of alerts that have occurred in the past.

5.3.2.1 BAM Active Alert

When an alert has occurred, the **"BAM Active Alert"** window is displayed.

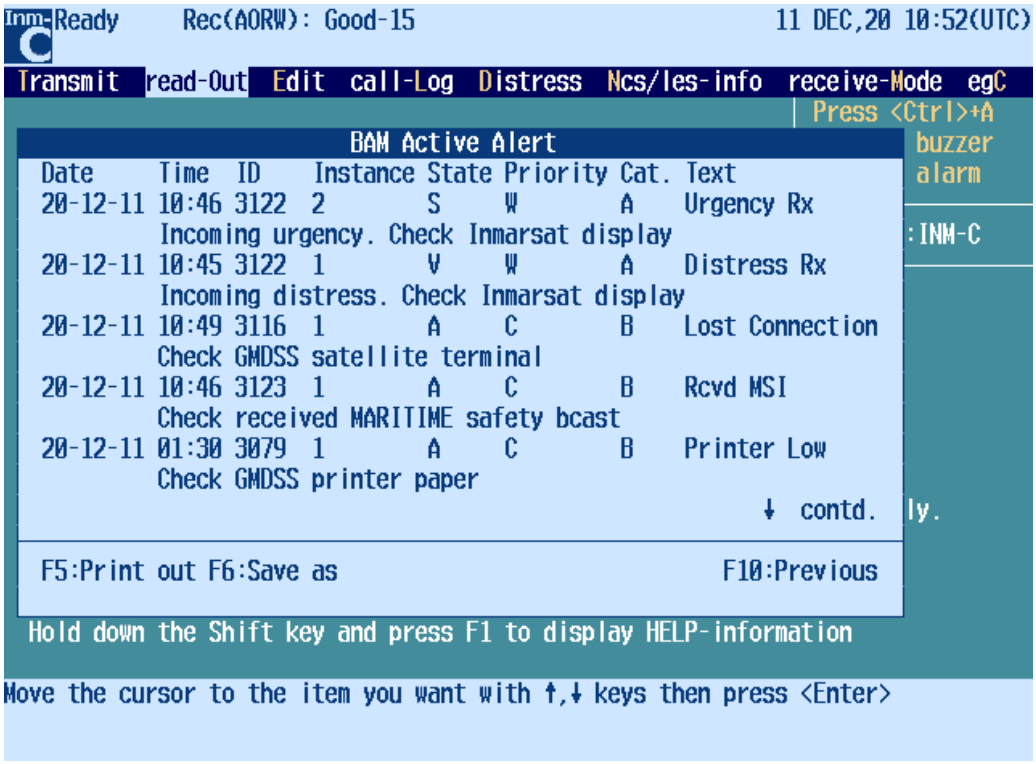


Fig.5.3.2.1a "BAM Active Alert" Window

Table 5.3.2.1 Contents of BAM Active Alert

Contents	Detailed information
Date / Time	Displays the date / time when the alert occurred.
ID	Displays the alert ID
Instance	Displays the alert instance
State	Displays the alert status V = active - unacknowledged S = active - silenced A = active - acknowledged or active
Priority	Displays the alert priority W = Warning C = Caution
Cat.	Displays the alert category A = Category A B = Category B
Text	Displays the cause of the alert

- Only alerts that are occurring are displayed.
- When a new alert is generated, it will be displayed at the top. However, alerts with a priority of "Warning" will be displayed at the top.
- Up to 5 items can be displayed on one page. If there are 5 or more alerts, you can display the 6th and subsequent alerts by pressing the [↓] key.
- By executing the alert recovery operation, the alert display disappears from the BAM active alert window.

For details on BAM alert information, see "5.3.2.3 BAM Alert List".

The **"BAM Active Alert"** window can also be confirmed by following procedure.

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **Alt** key and press **A** key on Main menu.	• **"Diagnostics"** window is displayed.	
2	• Move the cursor to the item "BAM active alert" then press **Enter** key.	• **"BAM Active Alert"** window is displayed.	
3	• To return to Main menu, press **F10** key twice or **ESC** key.	• Main menu is displayed	

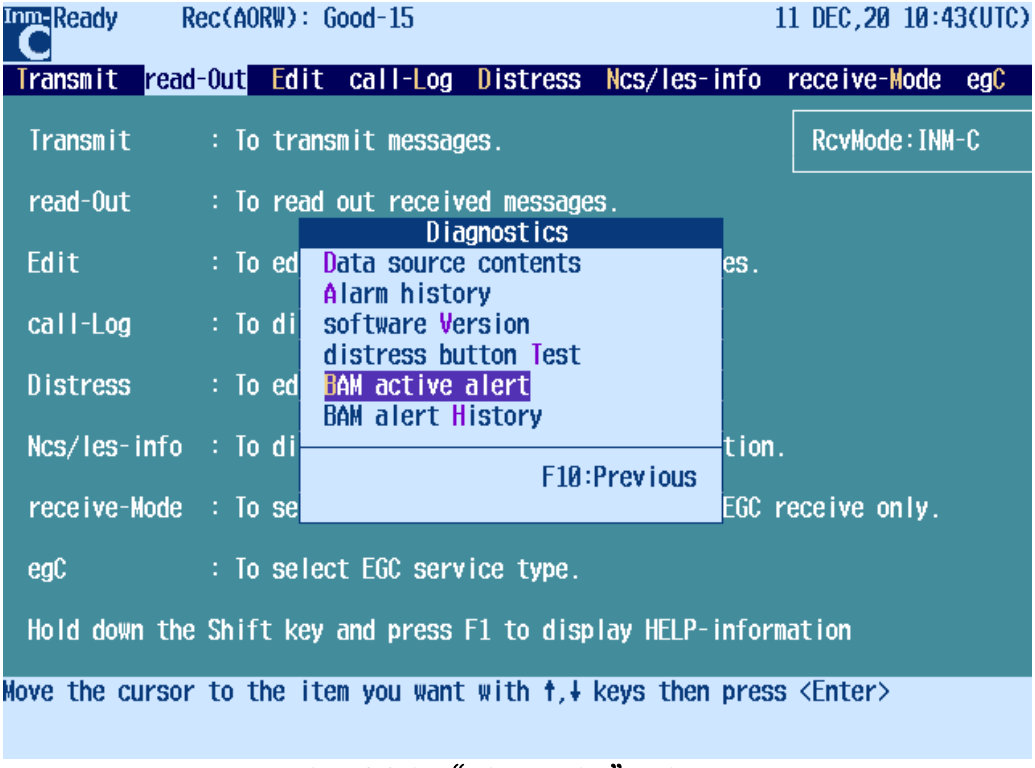


Fig.5.3.2.1b "Diagnostics" Window

5.3.2.2 BAM Alert History

The **"BAM Alert History"** window can be confirmed by following procedure.

Step	Operation	IME/DTE Response	Remarks
1	• Hold down **Alt** key and press **A** key on Main menu.	• **"Diagnostics"** window is displayed.	
2	• Move the cursor to the item "BAM alert History" then press **Enter** key.	• **"BAM Alert History"** window is displayed.	
3	• To return to Main menu, press **F10** key twice or **ESC** key.	• Main menu is displayed	

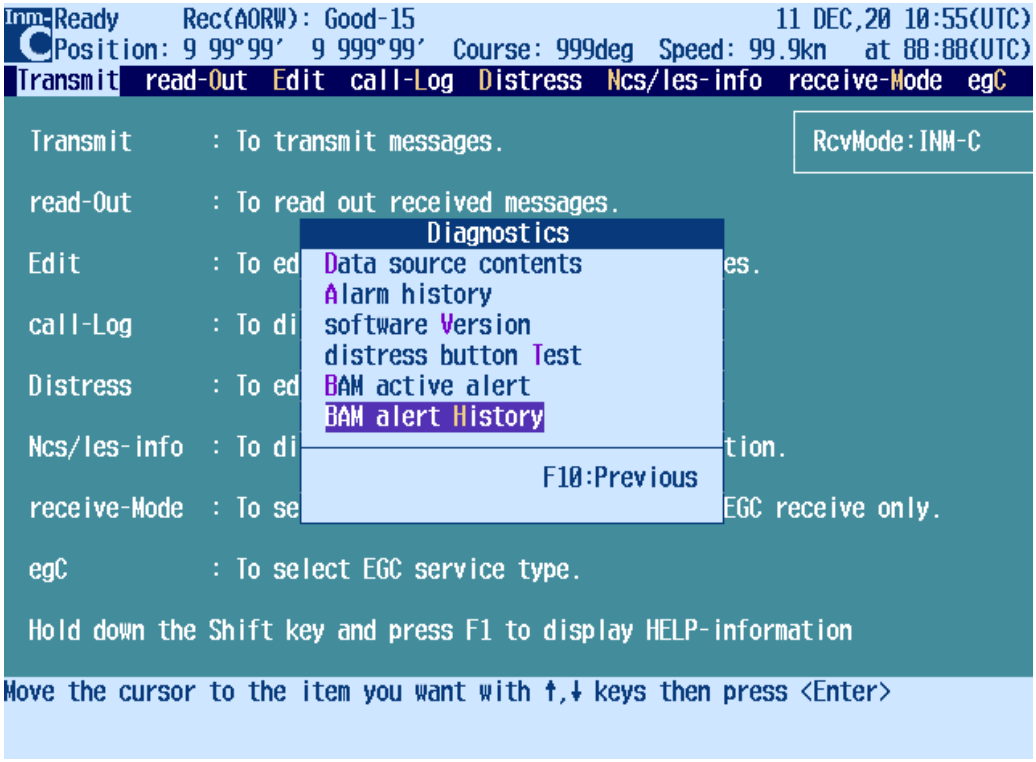


Fig.5.3.2.2a "Diagnostics" Window

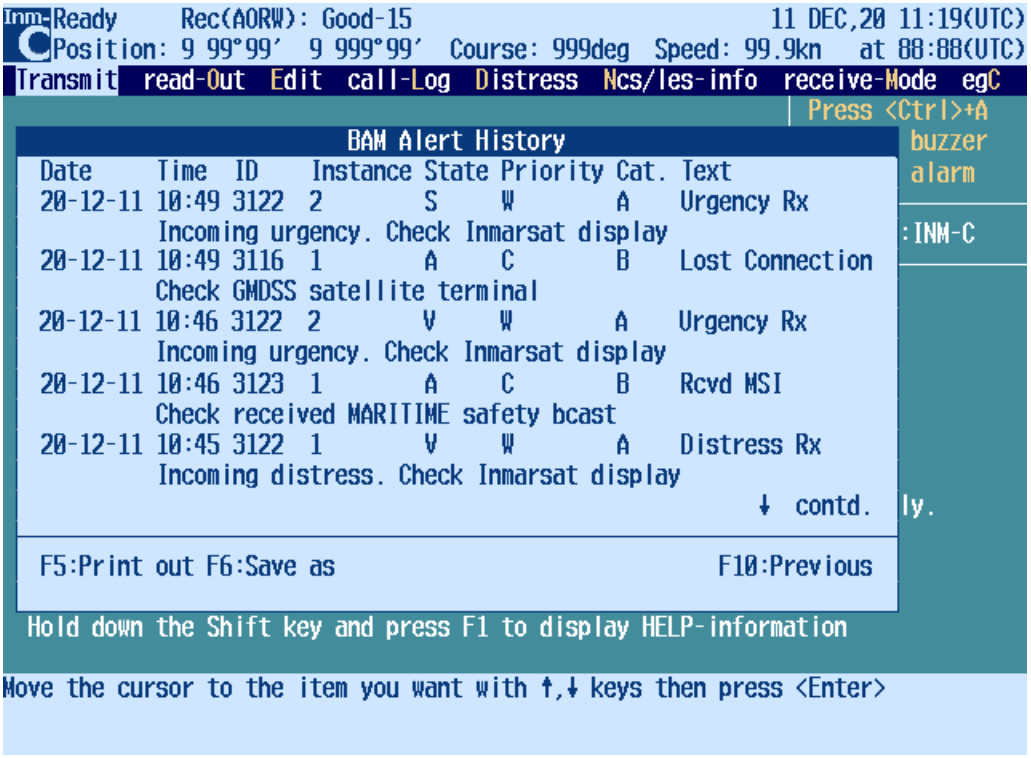


Fig.5.3.2.2b "BAM Alert History" Window

- The contents displayed are the same as BAM Active Alerts. For details on the alert contents, refer to "5.3.2.1 BAM Active Alert".
- Up to 30 events of alerts remain in the BAM alert history.
- New alerts are displayed at the top regardless of the alert priority.

For details on BAM alert information, see "5.3.2.3 BAM Alert List".

5.3.2.3 BAM Alert List

JUE-87 Alerts for BAM are as follows:

Alert ID	Cause	Priority (*1)	category	Alert instance	Alert Title (1st ALF)	Additional information (2nd ALF)	Conditions to recovery	Alert Title (1st ALF)	permission for responsibility transfer (*3)
3116	No contact with satellites	Caution	B	1	Lost Connection	Check GMDSS Satellite Terminal	Check the setting of the ocean region. Refer to 3.5.1 Selecting Preferred Ocean Region (Ncs/Les info)	—	Deny
3122	Received distress EGC	Warning	A	1	Distress RX	Incoming distress. Check Inmarsat display	Confirm the contents in the message window and press F10 (“Previous”) key.	5 minutes Warning ↓ Warning	Deny
3122	Received urgency EGC	Warning	A	2	Urgency RX	Incoming urgency. Check Inmarsat display	Confirm the contents in the message window and press F10 (“Previous”) key.	5 minutes Warning ↓ Warning	Deny
3123	Received safety EGC	Caution	B	1	Rcvd MSI	Check received Maritime safety bcast	Confirm the contents in the message window and press F10 (“Previous”) key.	—	Deny
3079	Printer paper low	Caution	B	1	Printer Low	Check GMDSS printer paper	Change the roll paper on the printer.	—	Deny
3016	Loss of position (After 3 minutes) (*4)	Caution	B	1	Lost Position	Check GMDSS terminal position lost	Set to External GPS in “Peripheral function”. Refer to 3.5.3 Setting Peripheral Function	—	Deny
3013	Manual Position older than 4h	Caution	B	1	Doubtful Pos	GMDSS update manual position	Set to External GPS in “Peripheral function” or enter to position information manually in “Distress alert”. Refer to 3.5.3 or 3.11	—	Deny

(*1) Priority
Warning: An alert indicating that the state has changed, which although is not immediately dangerous, but may become so in the near future if no action is taken. Warnings are alerts displayed for preventing possible future hazardous states. Two short 2.2KHz tone will sound when a warning alert occurs.

Caution: Alerts indicate that it is necessary to pay more than normal attention to cautions, statuses, or to the supplied information. It does not sound when a caution alert occurs.

(*2) Escalation property
An unacknowledged warning alert will be generated repeatedly every 5 minutes until it is acknowledged.

(*3) Permission for responsibility transfer
JUE-87 has no warning that can transfer responsibility. Recovery the alert by JUE-87 itself.

(*4) The date and time information are acquired from GPS data. If the connection with GPS data is lost, date and time synchronization will not be possible.

5.4 EGC Output function

JUE-87 replaces the received EGC message with the NMEA sentence (SM 1, SM 2, SM 3, SM 4 and SMB) specified by IEC61097-4 ed3.1 to the external device and outputs it via IEC61162-450 (LAN Port).

SM1 to SM4 are sentences that store Priority, Service Code, Address (EGC C1, C2, C3 code) etc. as EGC header information.

Which one of SM 1 to SM 4 is used depends on EGC Service.

Table 5.4 Correspondence between SM1 to SM4 sentence and EGC Service

Sentence	Code	EGC Service
SM1	00	All ships (general call)
	31	NAVAREA/METAREA warning, MET Forecast
SM2	13	Coastal Warning
SM3	14	Shore-to-Ship Distress Alert to circular area
	24	Urgency message, MET/NAV Warning to Circular Area
	44	SAR Co-ordination to circular area
SM4	04	Urgency message, NAV warning to rectangular area
	34	SAR Co-ordination to rectangular area

5.5 LAN connection

Refer to the inboard network settings and set the IP address of JUE-87.
For the IP address setting, refer to "3.5.3 Peripheral device settings".

Example: When the IP setting of the inboard network is 172.16.60.xxx

- IP Address: 172.16.60.247
- Subnet mask: 255.255.255.0
- Default gateway: 172.16.60.yyy (*1)
- Jcmail port number: 57211

*1 : See Inboard network settings

APPENDIX 1. INMARSAT SYSTEM COVERAGE AREAS

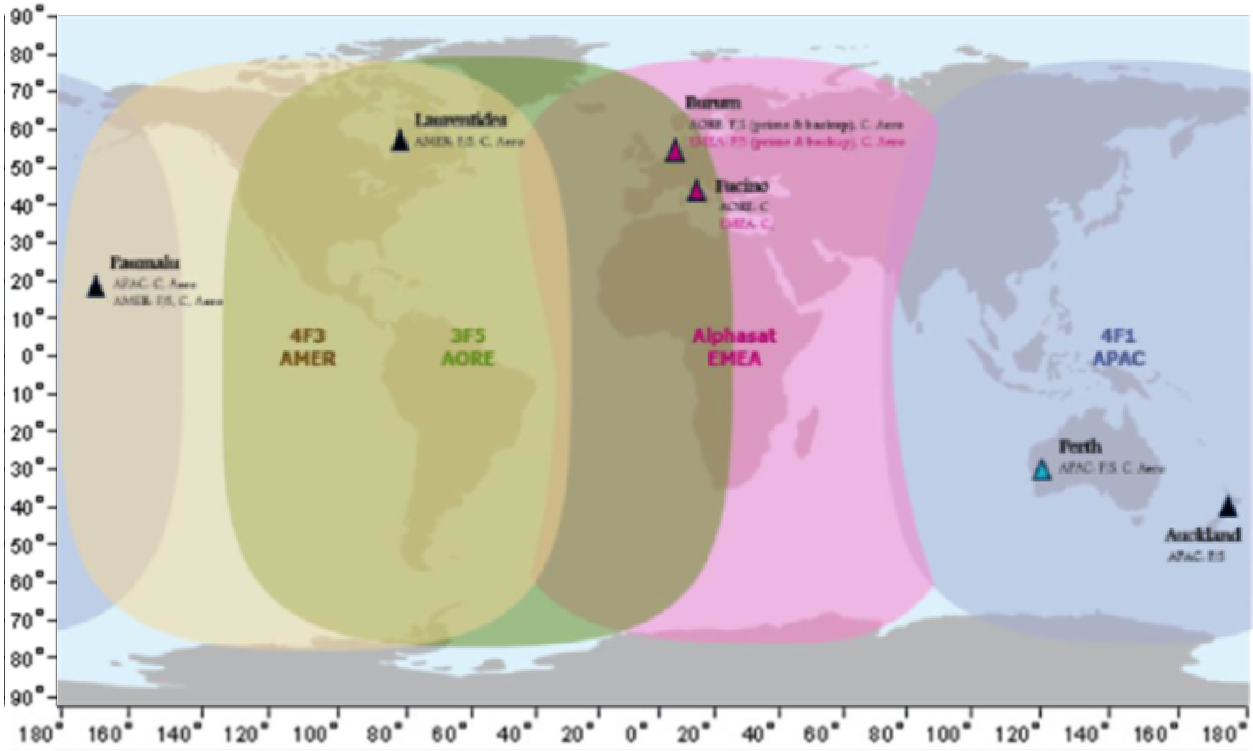


Fig.A1.1 All Ocean Region

Ocean Region	Satellite position	Display on terminal
APAC (Asia-Pacific)	143.5°E	POR
EMEA (Europe, Middle East and Africa)	25°E	IOR
AMER (Americas)	98°W	AORW
AORE (Atlantic Ocean Region East)	54°W	AOWE

APPENDIX 2. WHAT IS LRIT?

A2.1 LRIT System Summary

A2.1.1 What is LRIT?

Long-Range Identification and Tracking (LRIT) is the global monitoring system of ship's movement.

(1) LRIT system is obligation facilities of IMO.

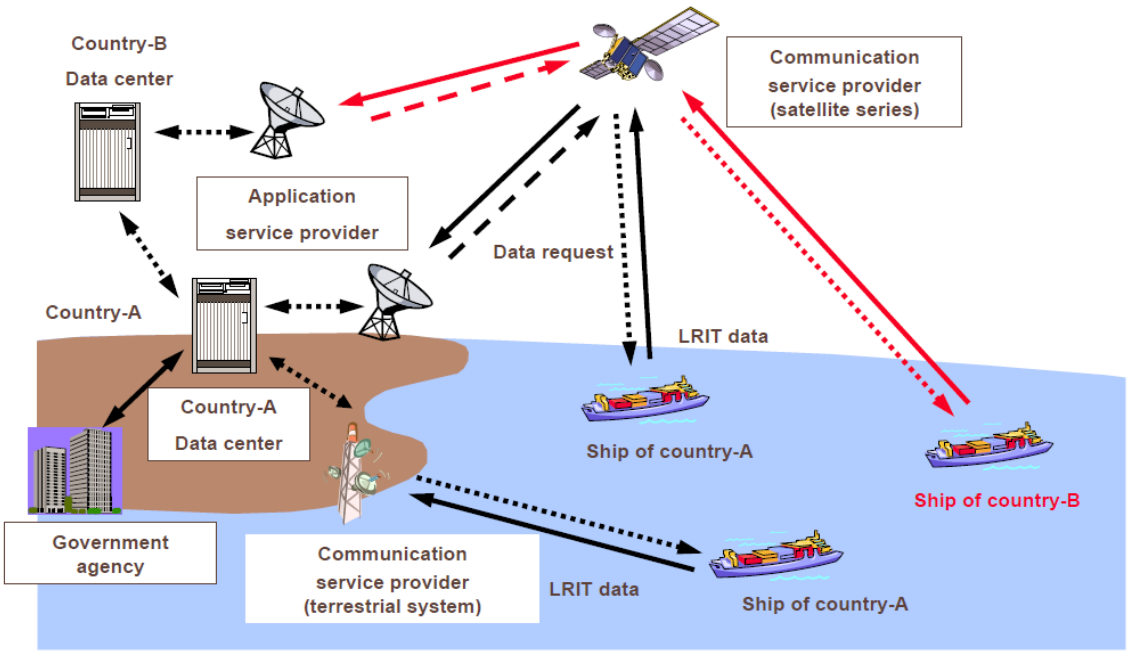
(2) It is a system that transmits peculiar information of the ship (ship's communication ID and position information) from Inmarsat-C terminals or other communication equipments, by the commands from land.

(3) Object ships are passenger ship (including high-speed passenger ship), cargo ships (including high-speed craft), and mobile offshore drilling units.

(4) The application of the rule becomes the first survey of the radio inspection after 31 December 2008.

A2.1.2 LRIT System Configuration

LRIT system is configured as following figure. LRIT information of foreign-flag ships are monitored and provided by the data centers of its own country.



A2.2 LRIT Requirements

A2.2.1 LRIT Mounting Requirements

By addition of MSC.202(81) SOLAS V 19-1

A2.2.1.1 Object ships: International Navigation Ships

Passenger ships (including high-speed passenger ships), cargo ships (including high-speed craft), and mobile offshore drilling units.

A2.2.1.2 SOLAS V, 19-1 Rule of LRIT (Mounting Requirements are Added)

Mounting LRIT is required to:

(1) A Ship which built after 31 December 2008 (excluding sea area A1 limited navigation ship).

(2) A Ship which built before 31 December 2008, and also its operation has been approved and:

1) Navigates sea area A1 and A2 or A1, A2, and A3.

Adding the LRIT function is required by the first survey of the radio inspection after 31 December 2008.

2) Navigates sea area A1, A2, A3 and A4.

Adding the LRIT function is required by the first survey of the radio inspection after 1 July 2009.

(3) A Ship navigates sea area A1 only

Mounting AIS is only required and this LRIT rule should not be applied (Above (1) and (2)).

A2.2.2 LRIT Mounting Requirement Schedule

<table>
<tr><th></th><th>Navigating sea area</th><th>31/DEC/2008</th><th>1/JUL/2009</th></tr>
<tr><td>A Ship built after 31/DEC/2008 (International navigation ship)</td><td>Except A1 limited navigation ship</td><td>Mounting LRIT equipment is required</td><td>—</td></tr>
<tr><td rowspan="5">A Ship built before 31/DEC/2008 (International navigation ship)</td><td>A1 limited</td><td colspan="2">Mounting LRIT is not required
(Mounting AIS is only required)</td></tr>
<tr><td>A1 and A2</td><td rowspan="3">Adding function or mounting equipment of LRIT is required by first survey of the radio inspection after 31/DEC/2008</td><td rowspan="3">—</td></tr>
<tr><td>A1, A2 and A3</td></tr>
<tr><td>A1, A2, A3, and A4, but normally A1, A2, and A3 only.</td></tr>
<tr><td>A1, A2, A3 and A4</td><td>—</td><td>Adding function or mounting equipment is required by the first survey of the radio inspection after 1/JUL/2009</td></tr>
</table>

(Note: JUE-85/87/95LT/75C are out of target because Inmarsat-C does not support sea area A4)

A2.2.3 Functional Requirements of LRIT Terminal

By addition of MSC.242(83), MSC.263(84) SOLAS V 19-1

(1) It can be sent LRIT information with 6 hours intervals automatically.

(2) It can be control the sending intervals (15 minutes to 6 hours) by remote control from the land.

(3) It can be sent LRIT information by polling.

A2.3 For LRIT Operation

LRIT information can be sent by Inmarsat-C Position Data Reporting service[*1].

To utilize Position Data Reporting service, downloading Data Network ID (DNID), program of Data Report, and starting command are required preliminary via satellite.

LRIT information is sent by Enhanced Data Reporting (EDR) function.

*1) Position Data Reporting service utilizes data reporting procedure which is specified by Inmarsat.

Items of the service are:

- Sending Position Data Reporting to the specified LES periodically with following the schedule with using DNID.
- Sending Position Data Reporting even the polling is sent from LES.
- The sending schedule can be changed from LES via satellite.
- Particular operation for MES equipment is not necessary.

APPENDIX 3. TELEX DESTINATION CODES LIST

Area	Destination Code	Area	Destination Code	Area	Destination Code
Afghanistan	79	Cayman Is.	293	Greece (Hellenic Rep.)	601
Albania	604	Central African Rep.	971	Greenland	503
Algeria	408	Chad	976	Grenada	395
American Samoa	770	Chile	34	Guadeloupe	299
American Virgin Is.	208	China	85	Guam	700
Andorra	590	Christmas Island	71	Guatemala	372
Angola	991	Cocos-Keeling Is.	71	Guinea	995
Anguilla	391	Colombia	35	Guinea Bissau	969
Antigua & Barbuda	393	Comoros	994	Guyana	295
Argentina	33	Congo	981	Haiti	203
Aruba	303	Cook Is.	772	Hawaii	704
Ascension	939	Costa Rica	376		705
Australia	71	Cote d'Ivoire	983		708
Austria	47	Cuba	28		709
Azerbaijan	784	Cyprus	605		773
Azores Is.	404	Czech	663	Honduras	374
Bahamas	297	Denmark	55	Hong Kong	802
Bahrain	490	Diego Garcia	938	Hungary	61
Bangladesh	780	Djibouti	979	Iceland	501
Barbados	392	Dominica	394	India	81
Belarus	681	Dominican Rep.	201	Indonesia	73
Belgium	46		202	**Inmarsat (AOR-W)**	584
Belize	371	Ecuador	308	**Inmarsat (AOR-E)**	581
Benin	972	Egypt	91	**Inmarsat (POR)**	582
Bermuda	290	El Salvador	373	**Inmarsat (IOR)**	583
Bhutan	890	Estonia	537	Iran	88
Bolivia	309	Ethiopia	980	Iraq	491
Botswana	962	Falkland Is.	306	Ireland	500
Brazil	38	Faroe Is.	502	Israel	606
British Virgin Is.	292	Fiji	701	Italy	43
Bulgaria	67	Finland	57	Jamaica	291
Burkina Faso	978	France	42	Japan	72
Burundi	903	French Guiana	300	Jordan	493
Cambodia	807	French Polynesia	702	Kazakhstan	785
Cameroon	970	Gabon	973	Kenya	987
Canada	21	Gambia	996	Kiribati	761
	26	Germany(Fed.Rep.of)	41	Korea	899
Canary Is.	52	Ghana	94	Korea(Rep.of)	801
Cape Verde	993	Gibraltar	405	Kuwait	496

Kyrgyzstan	788	Norfolk Island	766	Switzerland	45
Laos	804	Norway	56	Syria	492
Latvia	538	Oman	498	Tajikistan	787
Lebanon	494	Pakistan	82	Taiwan	769
Lesotho	963	Palau	763	Tanzania	989
Liberia	997	Panama	379	Thailand	86
Libya	901	Papua New Guinea	703	Togo	977
Liechtenstein	45	Paraguay	305	Tonga	777
Lithuania	539	Peru	36	Trinidad & Tobago	294
Luxembourg	402	Philippines	75	Tunisia	409
Macao	808		758	Turkey	607
Madagascar	986	Poland	63	Turkmenistan	789
Madeira	404	Portugal	404	Turks & Caicos Is.	296
Malawi	904	Puerto Rico	205	Tuvalu	774
Malaysia	84		206	Uganda	988
Maldives	896		209	Ukraine	680
Mali	985	Qatar	497	Abu Dhabi	893
Malta	406	Reunion	961	Ajman	
Marshall Is.	765	Romania	65	Dubai	
Martinique	298	Rwanda	909	Fujairah	
Mauritania	974	Saipan	760	Ras Al Khaimah	
Mauritius	966	San Marino	505	Sharjjah	
Mexico	22	Sao Tome & Principe	967	Umm al-Quwain	
Micronesia	764	Saudi Arabia	495	United Kingdom	51
Moldova	682	Senegal	906	Uruguay	32
Monaco	42	Seychelles	965	U.S.A.	23
Mongolia	800	Sierra Leone	998		25
Montserrat	396	Singapore	87	C.I.S.(Former U.S.S.R.)	640
Morocco	407	Slovak	666	Vanuatu	771
Mozambique	992	Solomon Is.	778	Vatican	504
Myanmar	83	Somalia	900	Venezuela	31
Namibia	908	South Africa	95	Viet Nam	805
Nauru	775	Spain	52	Western Samoa	779
Negara Brunei Darussalam	809	Sri Lanka	803	Yemen(Rep.Of)	895
Nepal	891	St. Helena	960	Area of Former	597
Netherlands	44	St. Christopher & Nevis	397	Yugoslavia	598
Netherlands Antilles	390	St. Lucia	398		599
New Caledonia	706	St. Pierre & Miquelon	204		600
New Zealand	74	St. Vincent & the Grenadines	399		62
Nicaragua	375	Sudan	984	Zaire	982
Niger	975	Suriname	304	Zambia	902
Nigeria	905	Swaziland	964	Zimbabwe	907
Niue	776	Sweden	54		

APPENDIX 4. INTERNATIONAL TELEPHONE COUNTRY CODES LIST

地域名	国番号	地域名	国番号	地域名	国番号
Afghanistan	93	Central African Rep.	236	Grenada	1
Alaska	1	Chad	235	Guadeloupe	590
Albania	355	Chile	56	Guam	1
Algeria	213	China	86	Guatemala	502
American Samoa	1	Christmas Island	61	Guinea	224
American Virgin Is.	1	Cocos-Keeling Is.	61	Guinea Bissau	245
Andorra	376	Colombia	57	Guyana	592
Angola	244	Comoros	269	Haiti	509
Anguilla	1	Congo	242	Hawaii	1
Antigua & Barbuda	1	Cook Is.	682	Hellenic(Greece)	30
Argentina	54	Costa Rica	506	Honduras	504
Aruba	297	Cote d'Ivoire	225	Hong Kong	852
Ascension	247	Cuba	53	Hungary	36
Australia	61	Cyprus	357	Iceland	354
Austria	43	Czech	420	India	91
Azerbaijan	994	Denmark	45	Indonesia	62
Azores Is.	351	Djibouti	253	**Inmarsat**	**870**
Bahamas	1	Dominica	1	Iran	98
Bahrain	973	Dominican Rep.	1	Iraq	964
Bangladesh	880	East Timor	670	Ireland	353
Barbados	1	Ecuador	593	Iridium(SAT)	8816/8817
Belarus	375	Egypt	20	Israel	972
Belgium	32	El Salvador	503	Italy	39
Belize	501	Equat. Guinea	240	Jamaica	1
Benin	229	Eritrea	291	Japan	81
Bermuda	1	Estonia	372	Jordan	962
Bhutan	975	Ethiopia	251	Kazakhstan	7
Bolivia	591	Falkland Is.	500	Kenya	254
Botswana	267	Faroe Is.	298	Kiribati	686
Brazil	55	Fiji	679	Korea	82
British Virgin Is.	1	Finland	358	Korea-DPR	850
Bulgaria	359	France	33	Kuwait	965
Burkina Faso	226	French Guiana	594	Kyrgyz	996
Burundi	257	French Polynesia	689	Laos	856
Cambodia	855	Gabon	241	Latvia	371
Cameroon	237	Gambia	220	Lebanon	961
Canada	1	Germany(Fed.Rep.of)	49	Lesotho	266
Canary Is.	34	Ghana	233	Liberia	231
Cape Verde	238	Gibraltar	350	Libya Arab	218
Cayman Is.	1	Greenland	299	Liechtenstein	423

Lithuania	370	Palau	680	Taiwan	886
Luxembourg	352	Panama	507	Tanzania	255
Macao	853	Paraguay	595	Thailand	66
Macedonia	389	Peru	51	Thuraya(SAT)	88216
Madagascar	261	Philippines	63	Togo	228
Madeira	351	Poland	48	Tonga	86
Malawi	265	Portugal	351	Trinidad & Tobago	1
Malaysia	60	Puerto Rico	1	Tunisia	216
Maldives	960	Qatar	974	Turkey	90
Mali	223	Reunion	262	Turkmenistan	993
Malta	356	Romania	40	Turks & Caicos Is.	1
Marshall Is.	692	Russia	7	Tuvalu	688
Martinique	596	Rwanda	250	UAE	971
Mauritania	222	Saipan	1	Uganda	256
Mauritius	230	Samoa	685	Ukraine	380
Mayotte	262	San Marino	378	Uruguay	598
Mexico	52	Sao Tome & Principe	239	U.S.A.	1
Micronesia	691	Saudi Arabia	966	Uzbekistan	998
Moldova	373	Senegal	221	Vanuatu	678
Monaco	377	Serbia	381	Vatican City	39
Mongolia	976	Sierra Leone	232	Venezuela	58
Montenegro	382	Singapore	65	Viet Nam	84
Montserrat	1	Slovak	421	United Kingdom	44
Morocco	212	Slovenia	386	Yemen Rep	967
Mozambique	258	Solomon Is.	677	Zambia	260
Myanmar	95	Somalia	252	Zimbabwe	263
Namibia	264	South Africa	27		
Nauru	674	Spain	34		
Nepal	977	Spanish Africa	34		
Netherlands	31	Sri Lanka	94		
Netherlands Antilles	599	St. Christophe	1		
New Caledonia	687	St. Helena	290		
New Zealand	64	St. Lucia	1		
Nicaragua	505	St. Pierre & Miquelon	508		
Niger	227	St. Vincent & the Grenadines	1		
Nigeria	234	Sudan	249		
Niue	683	Suriname	597		
Norfolk Island	672	Swaziland	268		
Norway	47	Sweden	46		
Oman	968	Switzerland	41		
Papua New Guinea	675	Syrian Arab	963		
Pakistan	92	Tajikistan	992		

APPENDIX 5. NKG-900 PRINTER INSTALLATION GUIDE

Concerning details, please refer to the installation manual for each equipment.

Contents

A5.1 Cautions for Use

- Don’t touch immediately after printing as the printing head is still very hot.
- To set the ribbon, pay attention not to twist the ribbon.
- To turn on the power again after once turned OFF, wait at least 2 seconds. If this is not respected, initialization may become wrong.
- Do not install in humid or dusty place or place exposed to direct sunshine.
- Don’t print without ribbon cassette and paper.
- Set the printer on desk or table installed evenly and stably.
- When the printer is working, its mechanism is working with rather strong force, pay attention not to approach your accessories, necktie, etc. worn on you. Those may be caught.
- Don’t put anything on the printer. If anything is dropped in the machine, at first turn OFF the power, then remove dropped thing carefully.
- Don’t wet the printer. If water etc. is fallen, turn OFF immediately the power, and wipe off liquid. And wait until the printer becomes completely dry to turn ON again.

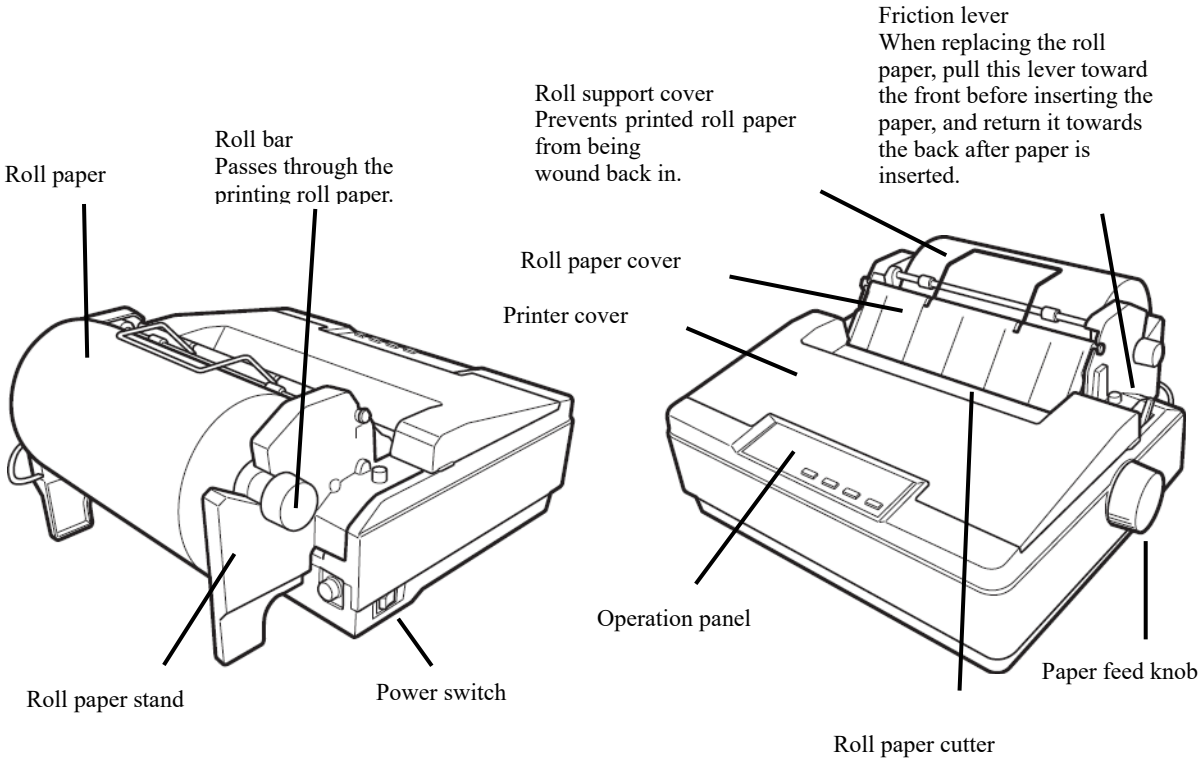
A5.2. Outline and Names of Components

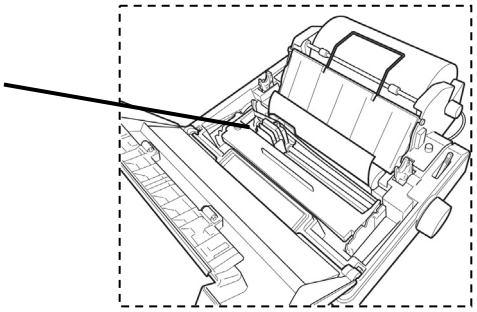
A5.2.1 Supplied Accessories

The following items are included as part your purchase

1) Printer
2) Ribbon Cartridge (Black)
3) Printer Cover
4) Roll Paper Stand
5) Fuse
6) Fix tape 2 pairs
7) Stand holding screw 2 pcs.

A5.2.2 Components Names



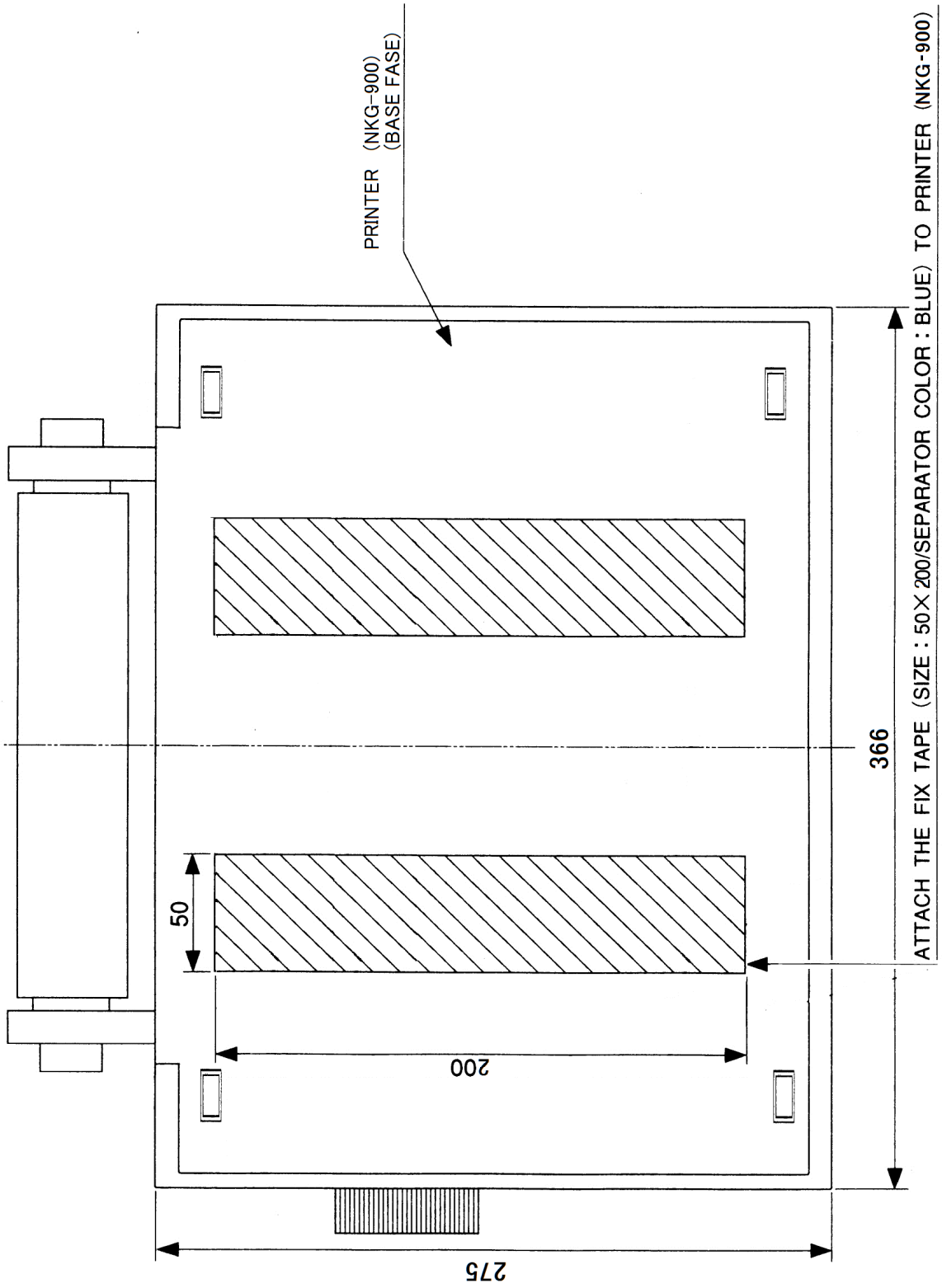


A5.3. Installation

A5.3.1 Fix Tape Attachment

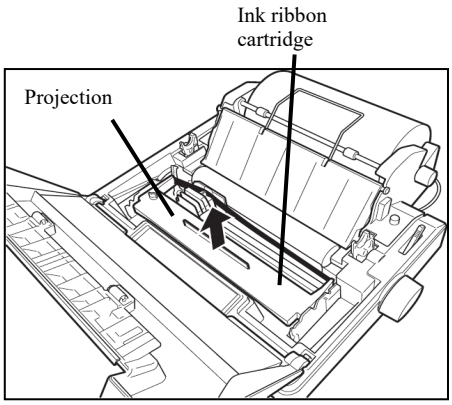
Attach fix tape to a base to fix NKG-900. Peel off a blue protection seat of fix tape, then attach fix tape according to the frame line.

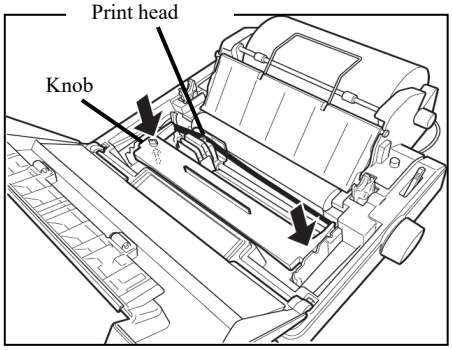
After attaching fix tape to the printer side, peel off a yellow protection seat and install printer in mounting point.

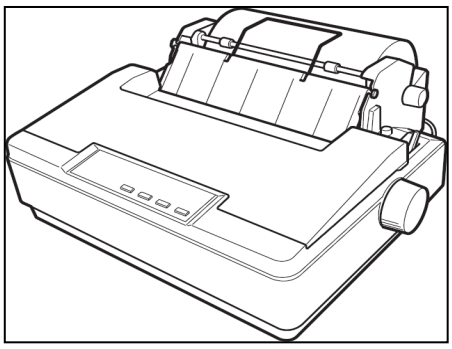


A5.3.2 Change of ink ribbon cartridge

1) Verify that the power switch remains turned OFF.
2) Open the printer cover.
3) Lift up the ink ribbon cartridge by holding the projection on the cartridge.
4) Using the knob on the new cartridge make the ribbon taut.





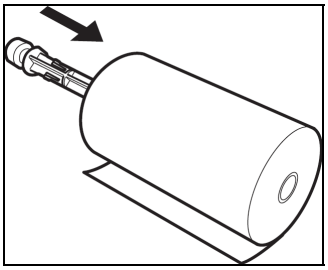


5) Manually move the print head to the left edge.
6) Attach the ribbon with such a pen so that it is between the ribbon mask and print head.
7) Push lightly from top both ends of the cartridge.
8) Turn again the cassette knob to give tension to the ribbon.
9) Close the printer cover.

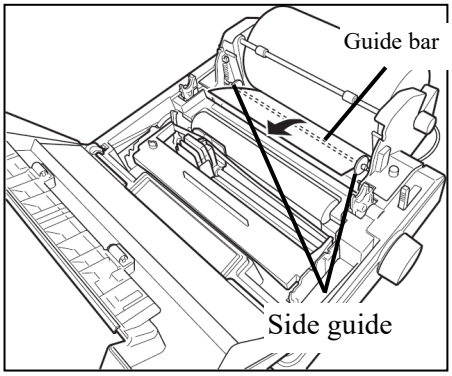
⚠ DANGER
Immediately after printing, the printing head is still very hot, don't touch it until it is cool down.

A5.3.3 Roll Paper Loading

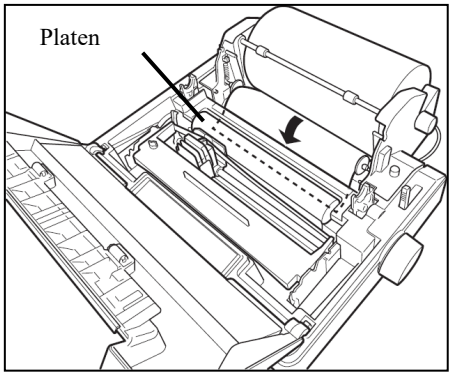
1) Verify that the power switch remains turned OFF.
2) Open the printer cover.
3) Remove the roll paper cover. At this step, pull the friction lever towards the front.
4) Pass the roll bar through the roll paper, and install the roll paper onto the roll paper stand in the right direction. When passing the roll bar through the roll paper, push the roll bar all the way in.



5) Pass the roll paper over the guide bar as shown in the figure. Adjust the side guides to the paper width.

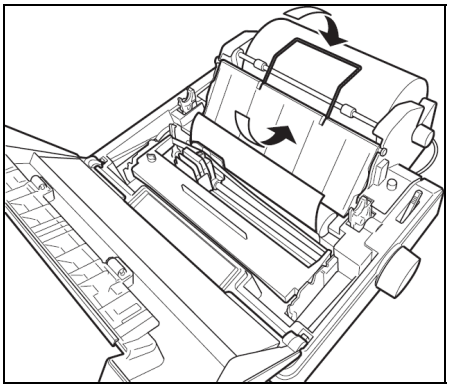


6) Insert the leading edge of the paper into the rear of the platen. Then turn the paper feed knob to feed the paper out and adjust the direction.



7) After adjusting the paper direction, return the friction lever to the back to fix the paper.

8) Restore the roll paper cover and the roll support cover, then close the printer cover.



A5.3.4 Connection of paper end near sensor

Connect a sensor cable of a roll paper stand to the sensor cable connector on the printer rear left side.

A5.3.5 Connection with Terminal

Prior to connect, verify that for both the terminal and printer their power switch is turned OFF.

1) Connect the printer cable to the parallel interface connector located on back of the printer, then, fix with locking lever.

2) Connect the other end of cable to the terminal.

A5.4. Self-printing Function

This printer is provided with self-printing function in order to check printing quality or printer's condition prior to use. However, with this self-printing function, the printer port is not checked. Prior to perform self-printing, verify at first the paper is set.

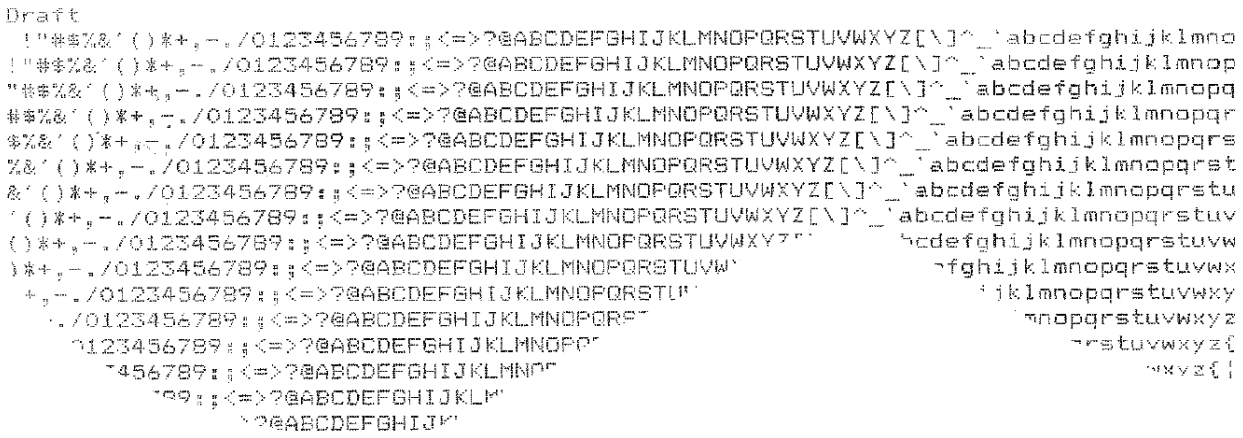
NOTE

If printing is made directly on the platen without ribbon and paper, the platen or printing head may be damaged.

Test printing

Turn ON the power while pushing [LF/FF] switch. After the initialization, alphanumeric characters is printed automatically. By turning OFF the power, self-printing stops.

[Sample]



APPENDIX 6. NKG-800 PRINTER INSTALLATION GUIDE

Concerning details, please refer to the installation manual for each equipment.

Contents

A6.1 Cautions for Use

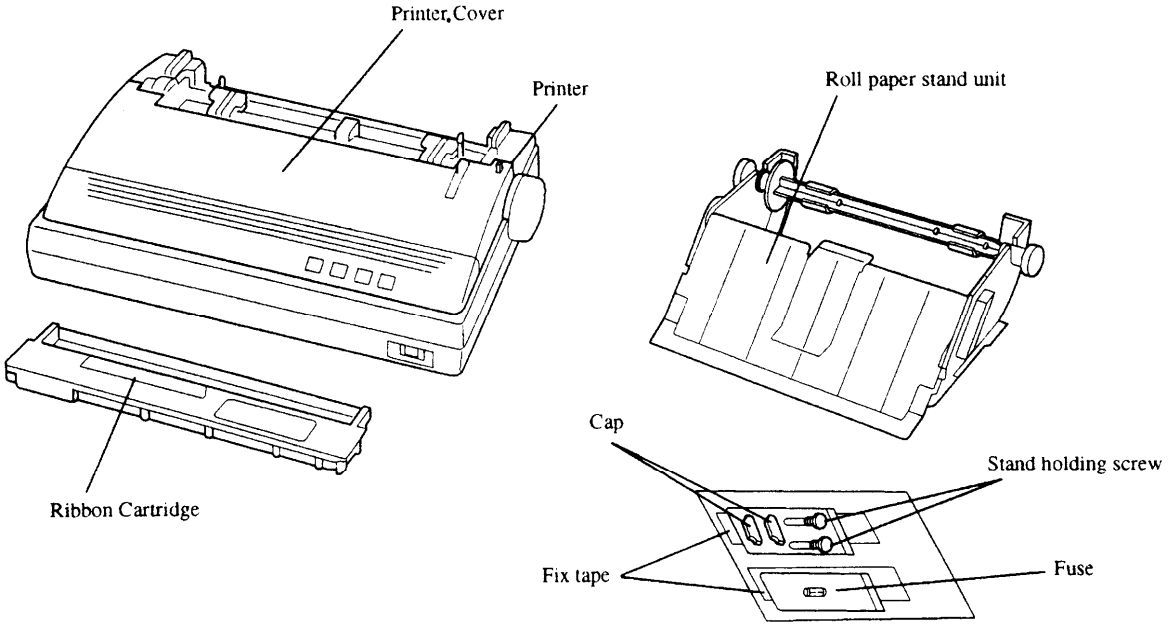
- Don’t touch immediately after printing as the printing head is still very hot.
- To set the ribbon, pay attention not to twist the ribbon.
- To turn on the power again after once turned OFF, wait at least 2 seconds. If this is not respected, initialization may become wrong.
- Do not install in humid or dusty place or place exposed to direct sunshine.
- Don’t print without ribbon cassette and paper.
- Set the printer on desk or table installed evenly and stably.
- When the printer is working, its mechanism is working with rather strong force, pay attention not to approach your accessories, necktie, etc. worn on you. Those may be caught.
- Don’t put anything on the printer. If anything is dropped in the machine, at first turn OFF the power, then remove dropped thing carefully.
- Don’t wet the printer. If water etc. is fallen, turn OFF immediately the power, and wipe off liquid. And wait until the printer becomes completely dry to turn ON again.

A6.2. Outline and Names of Components

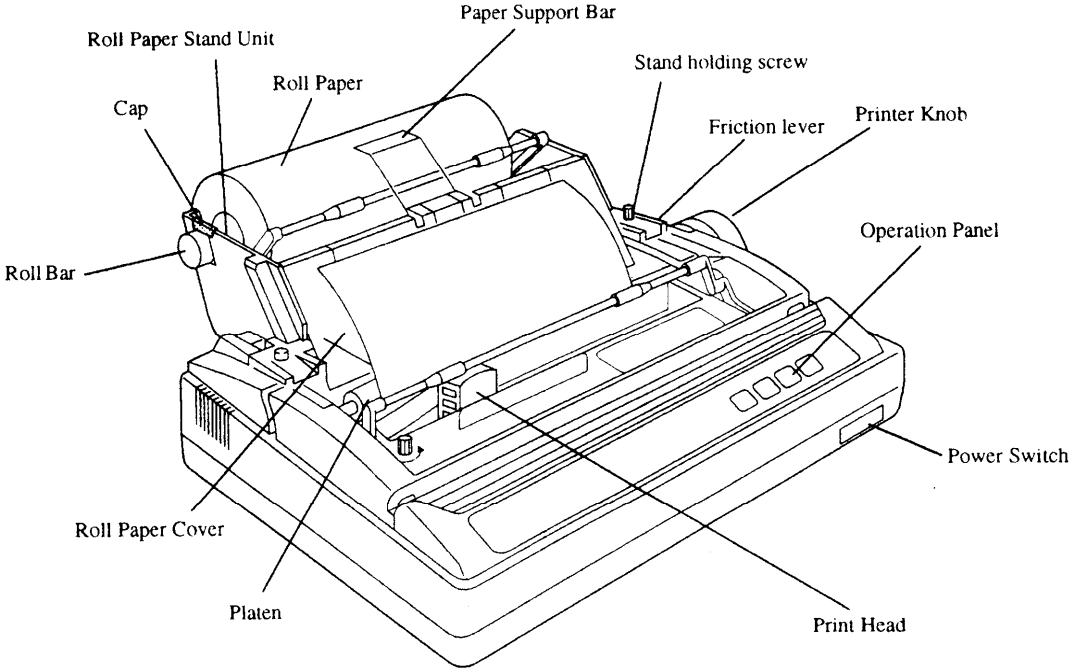
A6.2.1 Supplied Accessories

The following items are included as part your purchase

1) Printer
2) Ribbon Cartridge (Black)
3) Printer Cover
4) Roll Paper Stand Unit
5) Fuse
6) Fix tape 2 pairs
7) Cap 2 pcs.
8) Stand holding screw 2 pcs.

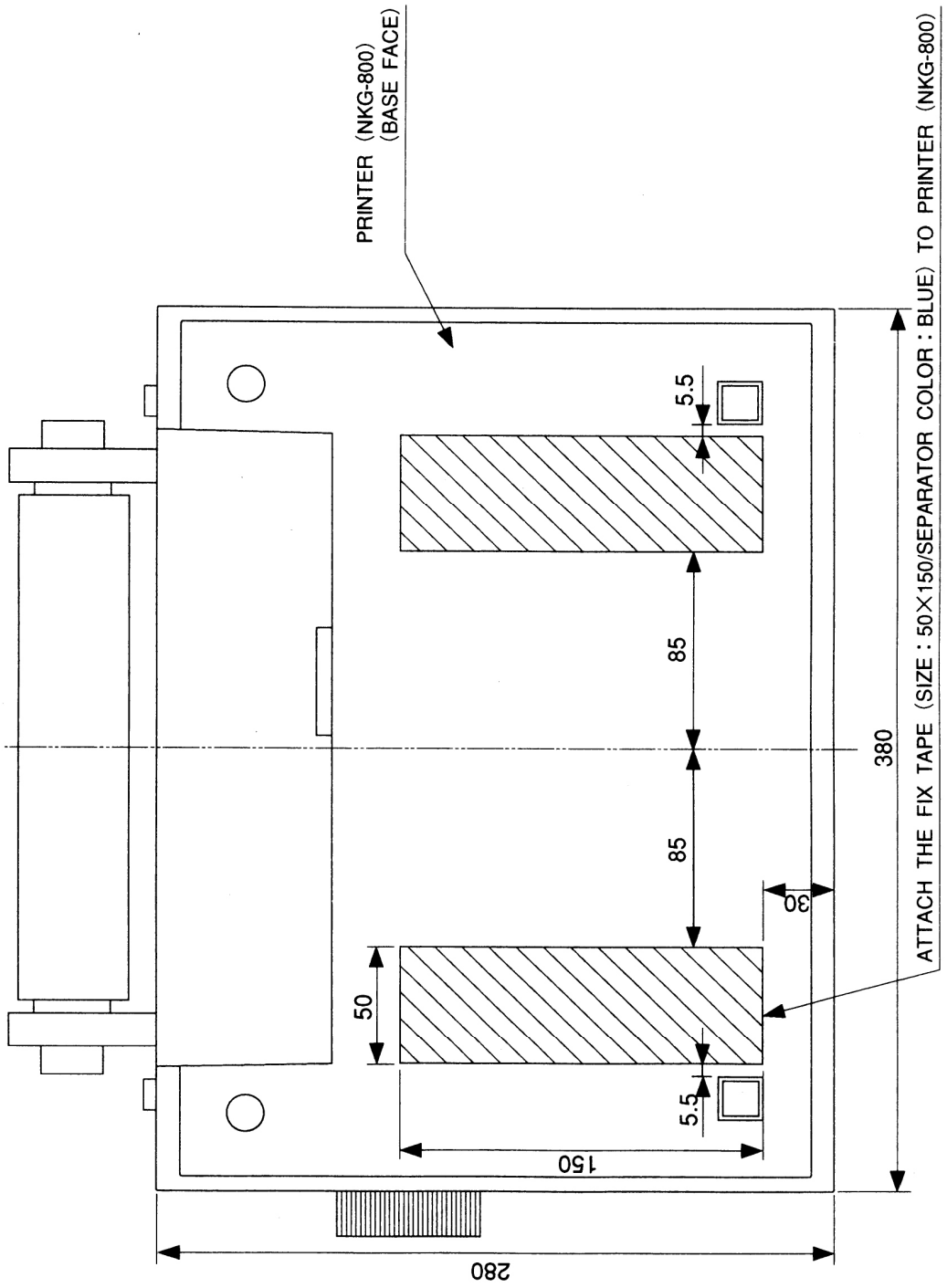


A6.2.2 Components Names



A6.3. Installation

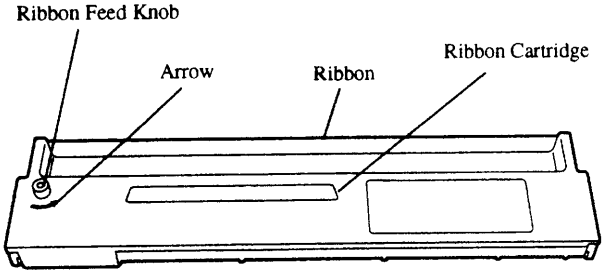
A6.3.1 Fix Tape Attachment

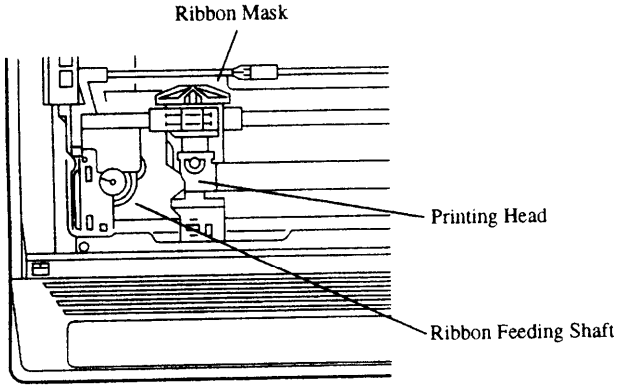


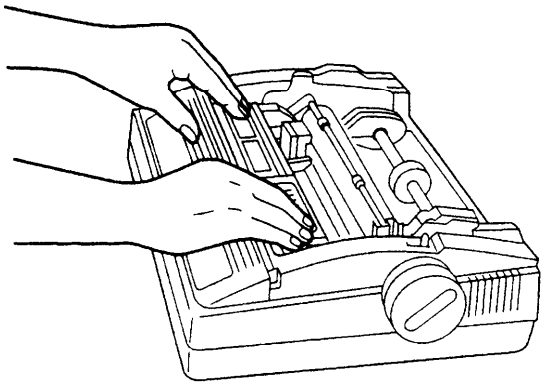
A6.3.2 Change of Ribbon Cassette-cartridge

Mounting method

1) Verify that the power switch remains turned OFF.
2) Turn the cassette knob in arrow mark direction to give tension to the ribbon.
3) In case of paper stand has been mounted, loosen stand-holding screw, and slide the paper stand backward.
4) Remove the printer cover.





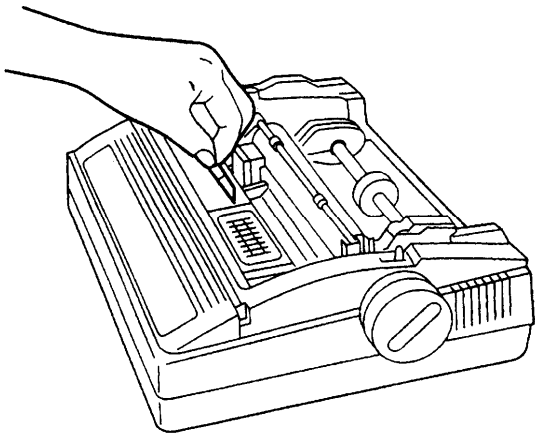


5) Move by hand the printing head to its home position (left end).
6) Put the ribbon cassette so as the ribbon is placed between the ribbon mask and printing head. At that time, arrange so as the ribbon-feeding shaft enters in a hole located under the ribbon cassette knob.
7) Push lightly from top both ends of the ribbon cassette.
8) Turn again the cassette knob to give tension to the ribbon.
9) Verify that the ribbon is correctly placed in front of the printing head.

⚠ DANGER

Immediately after printing, the printing head is still very hot, don't touch it until it is cool down.

Dismounting method

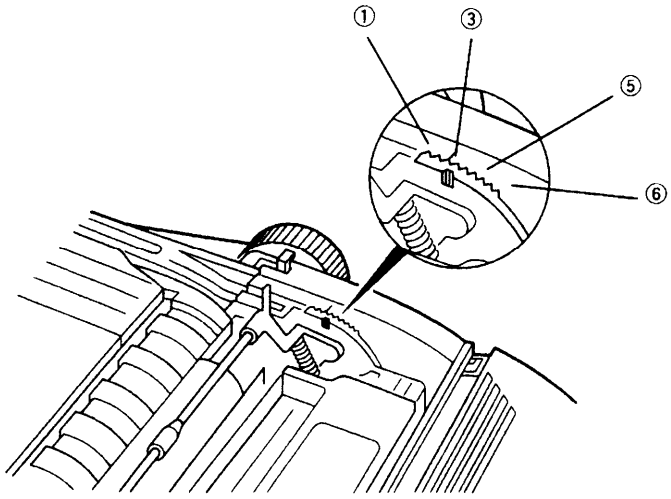


1) To change the ribbon, at first verify that the power to printer is turned OFF.
2) In case of paper stand has been mounted, loosen stand-holding screws, and slide the paper stand backward.
3) Remove the printer cover.
4) Seize the ribbon cassette knob, rise up vertically to remove.

A6.3.3 Printing Pressure Adjustment (Print Paper Thickness Adjustment)

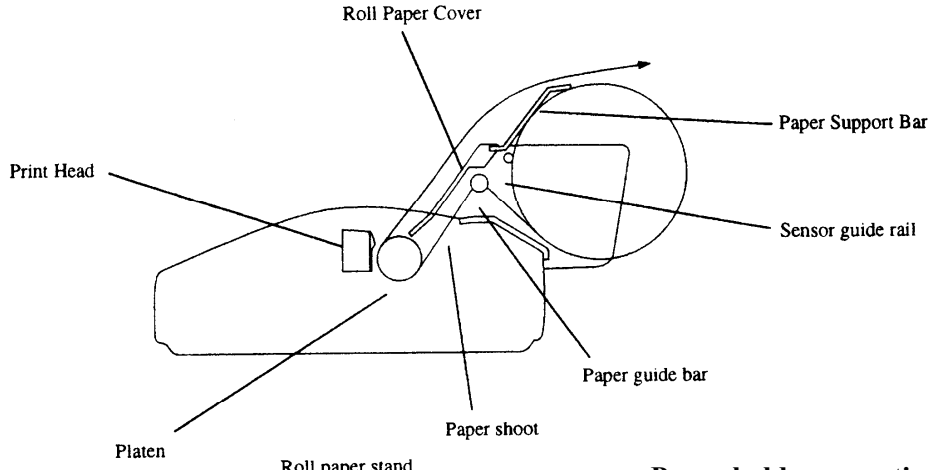
The printing pressure can be adjusted with the head adjustment lever located on right side in the printer.

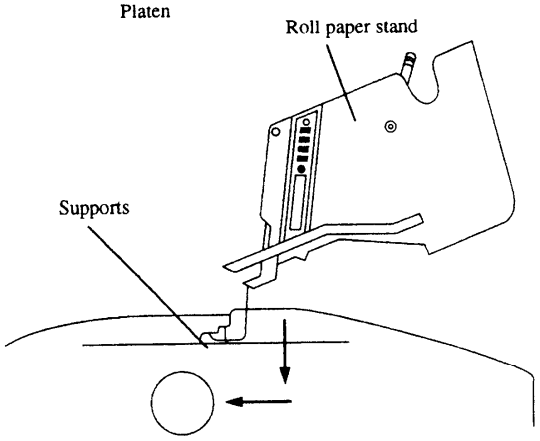
For one ply plain paper the position ③ is most suited. When shipped, this lever is set to this position. In case of 3 ply duplicating paper, either ⑤ or ⑥ becomes suitable position.



A6.3.4 Roll Paper Loading

Paper holder mounting



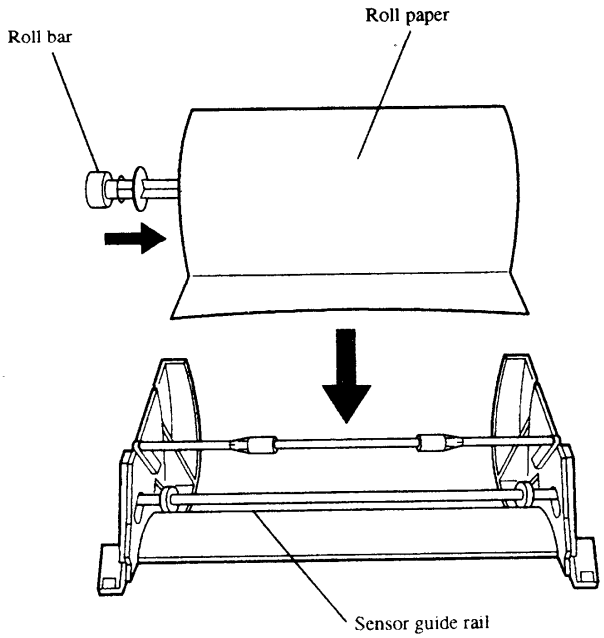


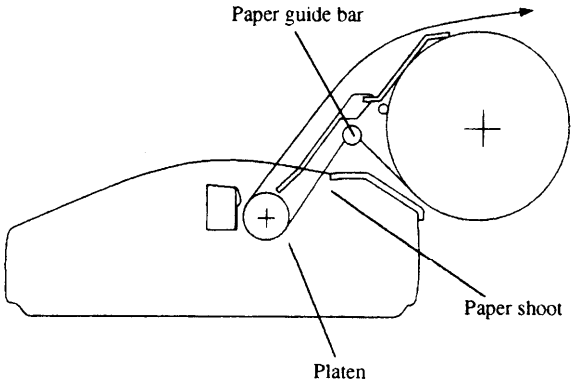
Paper holder mounting

1) Insert the roll paper stand into guides on right and left

Loading of roll paper

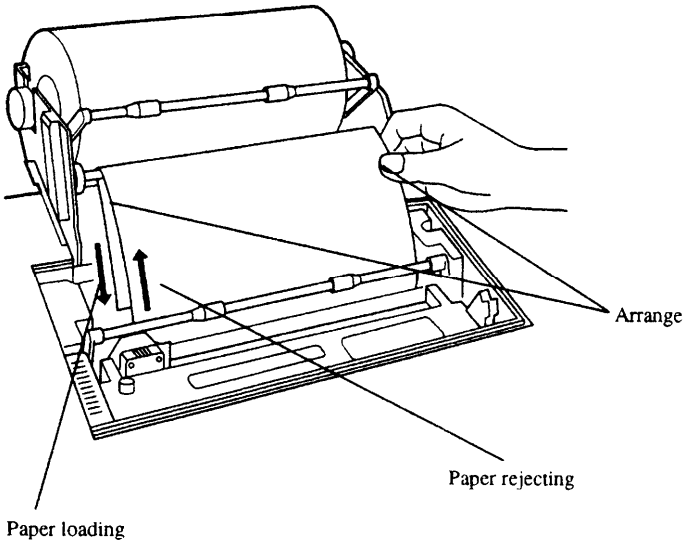
1) Cut off broken or folded end of roll paper.
2) Inset roll core to roll.
3) Pull toward you the sensor guide lever.
4) Mount the roll with roll core to roller holder. At that time, pay attention to direction of paper.
5) Mount caps above the roll bar.





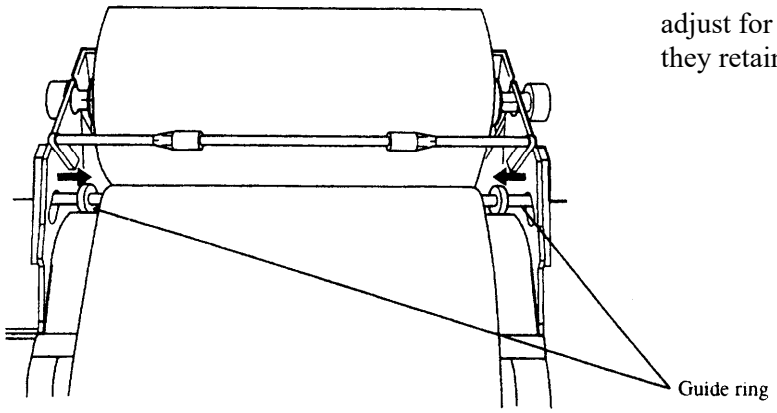
Roll paper setting

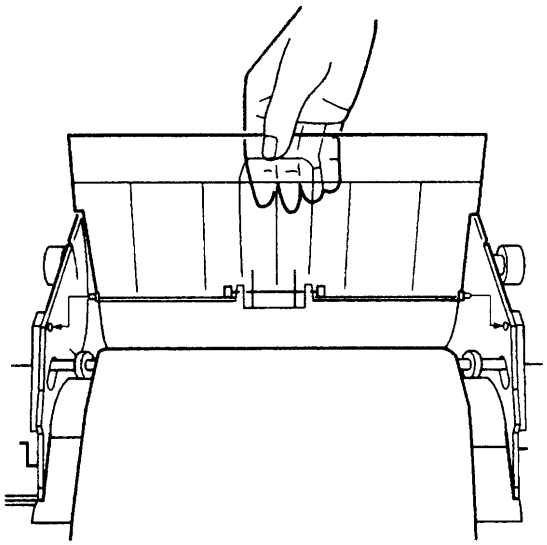
1) In case of paper stand has been mounted, loosen stand holding screws and slide the paper stand backward.
2) Remove the printer cover.
3) Push back the friction lever.
4) Pass the roll paper on paper guide bar, insert it in paper chute, pull it out from front of the platen.
5) Pull out the paper, adjust paper position for feeding and discharge side, so as paper enters straight.
6) When the position is fixed, pull the friction lever toward you.



Adjustment of guide ring

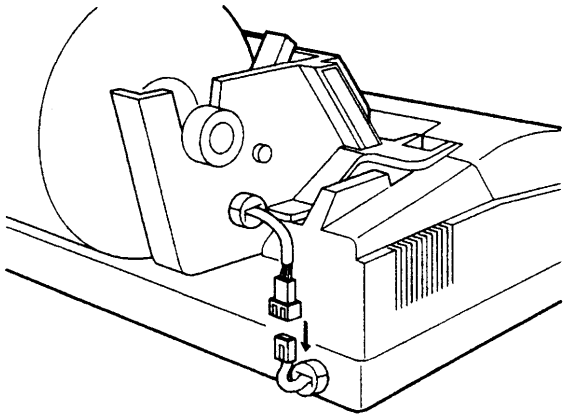
Move the right and left guide rings to adjust for paper width. Fix them so as they retain lightly the paper.





Mount of roll paper cover

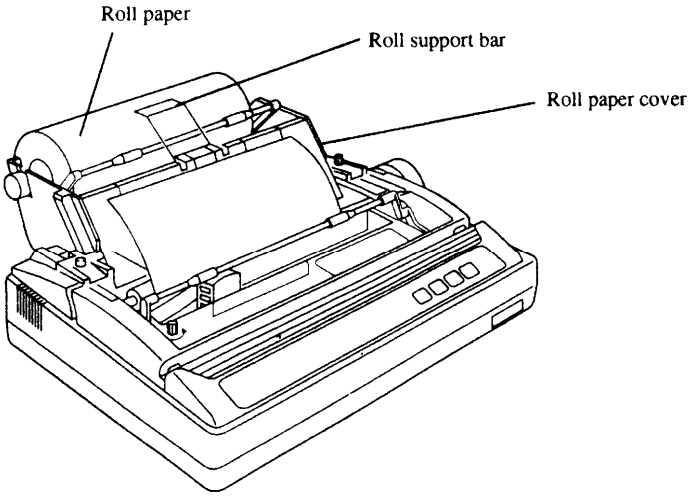
1) Mount the roll paper cover as shown in Fig.
2) Push up the paper support lever.



Connection of paper end near sensor

Connect the sensor cable on the back as shown in Fig.

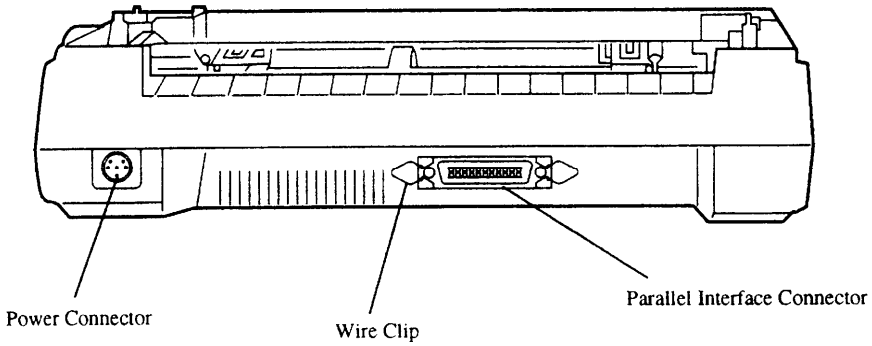
Upon accomplishment of the above, the state becomes as shown in Fig. below. Then mount the printer cover. Slide finally the paper stand forward and fix it by stand holding screws.



A6.3.5 Connection with Terminal

Prior to connect, verify that for both the terminal and printer their power switch is turned OFF.

1) Connect the printer cable to the parallel interface connector located on back of the printer, then, fix with locking lever.
2) Connect the other end of cable to the terminal.



A6.4. Self-printing Function

This printer is provided with self-printing function in order to check printing quality or printer's condition prior to use. However, with this self-printing function, the printer port is not checked. Prior to perform self-printing, verify at first the paper is set.

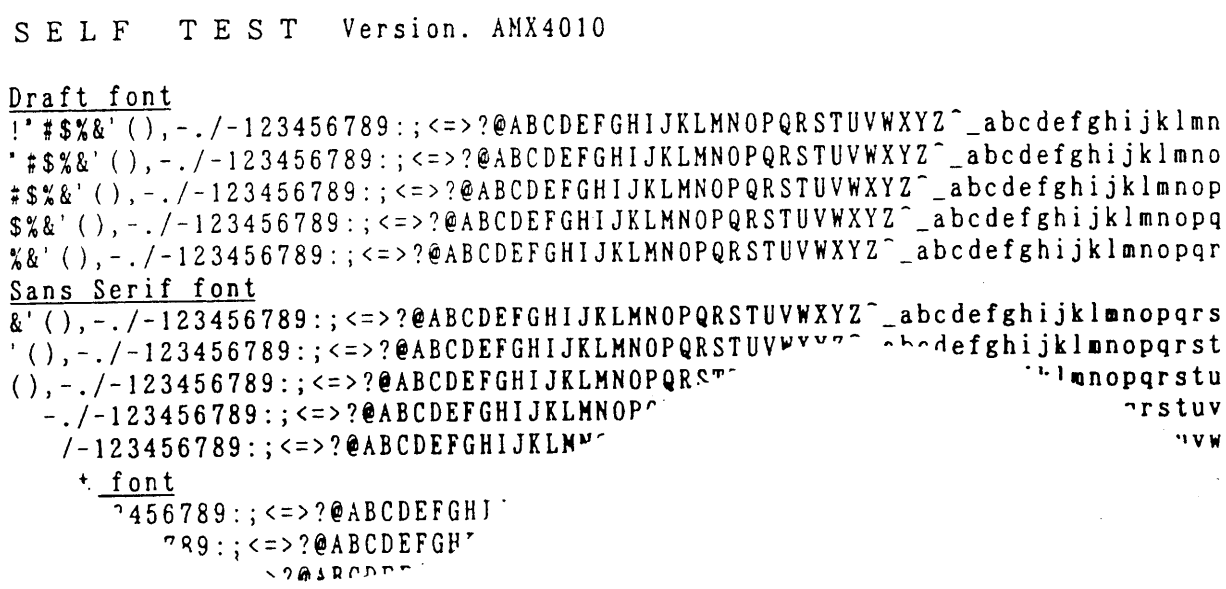
NOTE

If printing is made directly on the platen without ribbon and paper, the platen or printing head may be damaged.

Test printing

Turn ON the power while pushing [LF] switch and continue to push [LF] switch until self-printing starts. After the initialization, 5 lines each of DRAFT and NLQ are printed alternatively. By turning OFF the power, self-printing stops.

[Sample]



APPENDIX 7. JRC Service Network

Please contact the dealer from which you purchased the device or our marketing offices that is nearest to you for any question as to the after-sales service.

JRC web site	
JRC Tokyo	http://www.jrc.co.jp
JRC Seattle	http://www.jrcamerica.com
Alphatron	http://www.alphatronmarine.com

JRC Japan Radio Co., Ltd.

电器电子产品有害物资申明
日本无线株式会社

Declaration on hazardous substances
of Electrical and electronic Products
Japan Radio Company Limited

有害物质的名称及含量
(Names & Content of hazardous substances)

形式名(Type): JUE-87　　名称(Name): INMARSAT-C Mobile Earth Station

部件名称 (Part name)	有害物质 (Hazardous Substances)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
室外装置 (Exranally Mounrted Equipment)	○	○	○	○	○	○
室内装置 (Internally Mounted Equipment)	○	○	○	○	○	○
外部设备(Peripherals) ·打印机(Printer) ·选择(Options) ·电线类(Cables) ·手册(Documents)	×	○	○	○	○	○

本表格依据SJ/T 11364 的规定编制。
(This table is prepared in accordance with the provisions of SJ/T 11364.)

○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 标准规定的限量要求以下。
(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the requirement in GB/T 26572.)

×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 标准规定的限量要求。
(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.)

RE：中华人民共和国电器电子产品有害物质限制使用管理办法
Measures for the Administration of the Restricted Use of the Hazardous Substances Contained in Electrical and Electronic Products of the People's Republic of China

アスベストは使用しておりません
Not use the asbestos

For further information,contact:

JRC Japan Radio Co., Ltd.
Since 1915

URL Head office : http://www.jrc.co.jp/eng/
Marine Service Department
1-7-32 Tatsumi, Koto-ku, Tokyo 135-0053, Japan
e-mail : tmsc@jrc.co.jp
One-call : +81-50-3786-9201

ISO 9001, ISO 14001 Certified

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