JUE-87

INMARSAT-C
MOBILE EARTH STATION
SHIP SECURITY ALERT SYSTEM OPTION

INSTRUCTION MANUAL

JRC Japan Radio Co., Ltd.

PREFACE

Thank you for purchase of the JRC Inmarsat-C, Mobile Earth Station, **Ship Security Alert System option**.

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

ATTENTIONS BEFORE USING

- JRC can not 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 **Ship Security Alert System Option** and its accessories may change without notice for improvement.

BEFORE OPERATION

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 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 denotes 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.)

DANGER DURING OPERATION

⚠DANGER

Do not touch any internal parts of **Ship Security Alert System Option** with your hands or tools to avoid danger of electronic shock.

The lithium battery is built into JUE-87 (EME). Do not short-circuited of the terminal, do not give the high impact, and wet it to water.
Those actions are dangerous against explosion.

WARNING DURING OPERATION

⚠WARNING

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

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 check or repair the internal equipment of Ship Security Alert System option 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 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 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, or explosion by shorted circuit of lithium battery, which is affected by the impact or submerged of water.

CAUTIONS DURING OPERATION

⚠CAUTION

Before operating Ship Security Alert System Option, read the operation manual carefully. Inappropriate procedure may cause incorrect operation or malfunction.

ABBREVIATIONS

DTE	Data Terminal Equipment
EGC	Enhanced Group Call
EME	Externally Mounted Equipment
Ex. PSU	Externally Power supply Unit
FFA	Forum Fisheries Agency
IME	Internally Mounted Equipment
IMO	International Maritime Organization
INMARSAT	INMARSAT Ltd.
ISPS	International Ship and Port Facility Security
MES	Mobile Earth Station
PSU	Power Supply Unit
SOLAS	Safety of Life at Sea
SSAS	Ship Security Alert System
VMS	Vessel Monitoring System

TABLE OF CONTENTS

1. Summary of Ship Security Alert System

The latest regulations of SOLAS Chapter XI-2 and International Port and Ship Security (ISPS) code require that international voyage passenger ships and cargo ships over 500G/T must be equipped the Ship Security Alert System.

This Ship Security Alert Option connecting to INMARSAT-C JUE-87 meets the following requirements for Ships Security Alert System.

(1) SOLAS Chap. XI-2 Regulation 2&6
(2) ISPS code Part A, 9.4.18
(3) IMO MSC Resolution 136(76)/147(77)
(4) IMO MSC/Circ.1072/1073

2. Configration

2.1 Block Diagram and Installation Place Example

Security buttons shall install in the navigation bridge and at least one other location.
(SOLAS Chapter XI-1 Reguration6)
Up to four Security buttons can connect to the Junction Box.

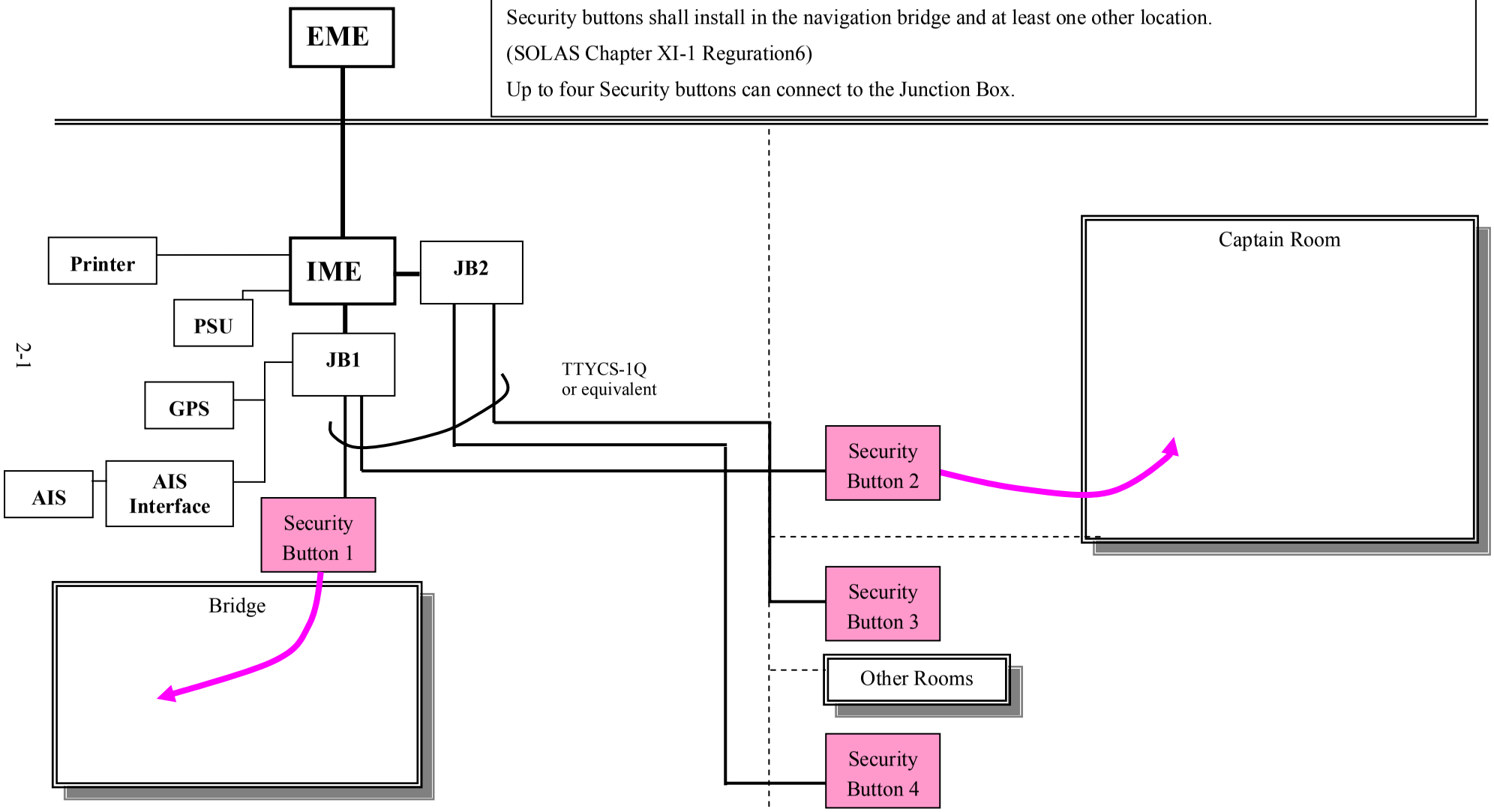
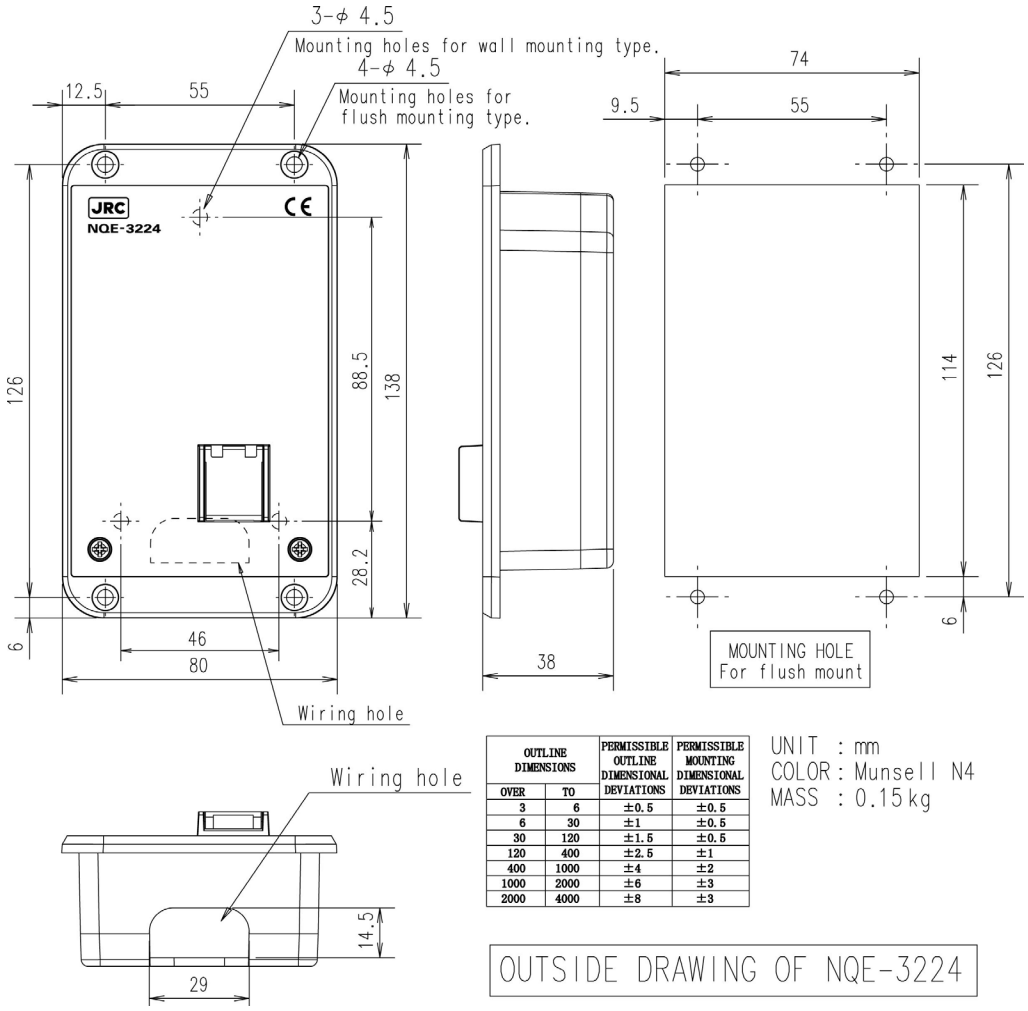


Fig.2.1a Block Diagram and Installation Place Example

2.2 Appearances and Configurations

Fig2.2a 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

Fig.2.2b Appearance and Dimensional Drawing of Security Button

3. SSAS Operation Flow

3.1 Operation flow

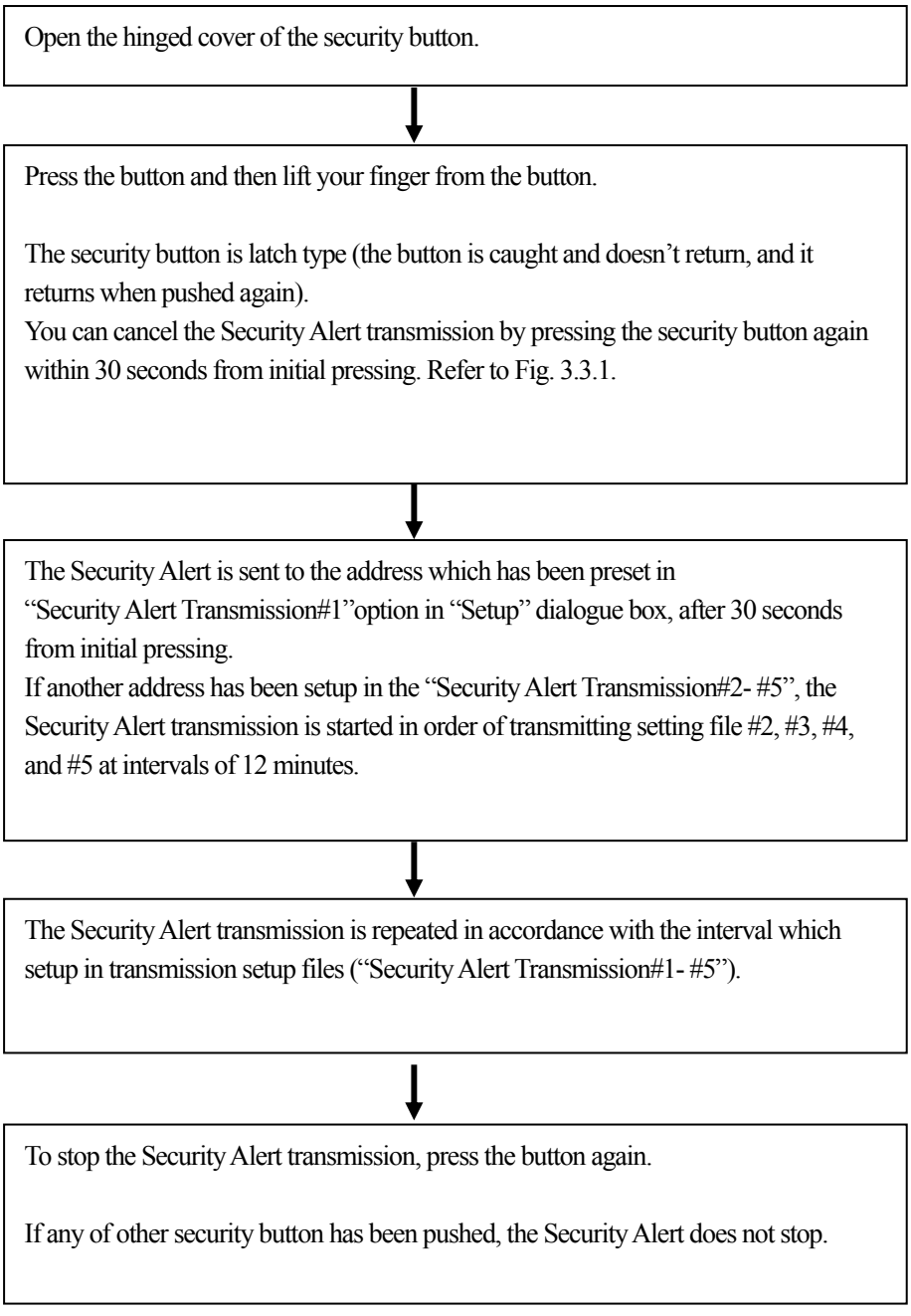


Fig.3.1 Operation Flow

3.2 SSAS Schedule Confirmation/Setting

3.2.1 Setting up SSAS Schedule

This section describes how to set up for sending the security message to the telex terminal on the terrestrial network.

NOTE

Password setting is required before setup Ship Security Alert System.
Prepare an arbitrary figure of 4-digit.

Step 1 Press <ESC> until the screen clear.

Step 2 Press <ALT> + <U> to obtain "Set up" menu box.

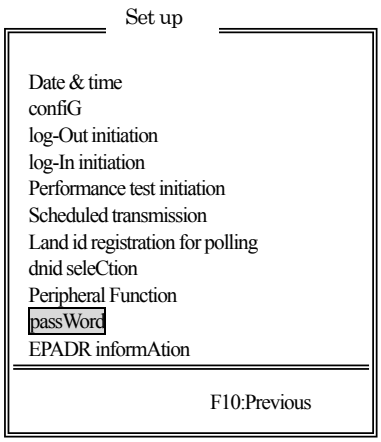


Fig.3.2.1a Setup Menu Box

[Changing and setting password]

Step 3 Procedure of "Password Change" is needed when you use this transmission in the first time, or you want to change old password. Select "passWord" key by moving cursor to "Password" and press Enter key. "Password Change" dialog box is displayed.

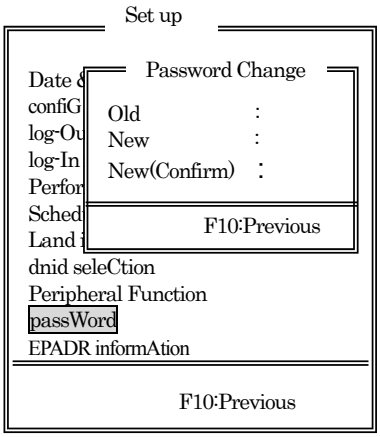


Fig.3.2.1b Password Change Dialogue Box

Step 4 Password "0000" has been set on this equipment as default password. So, you should enter the "0000" to column of "Old" in " Password Change" box, and then enter new password that you can create 4 digit numbers as you like, to "New" and "New (Confirm)". The word "OK" is displayed at the bottom of "Password Change" box.
Then, the "Password Change" procedure is completed.

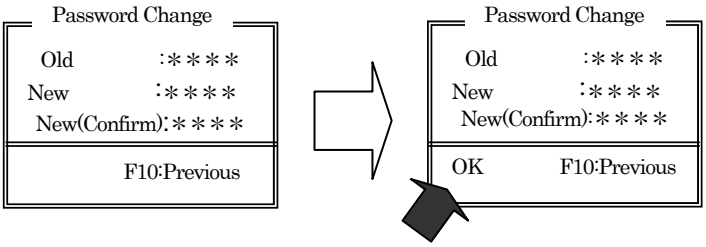


Fig.3.2.1c Password Change Dialogue Box

[Opening "Security Alert transmission" menu box using password]

Step 5 Return to Setup screen by pressing <F10> key, select "Scheduled transmission" by moving cursor, then press Enter key. "Scheduled transmission" menu box is displayed.

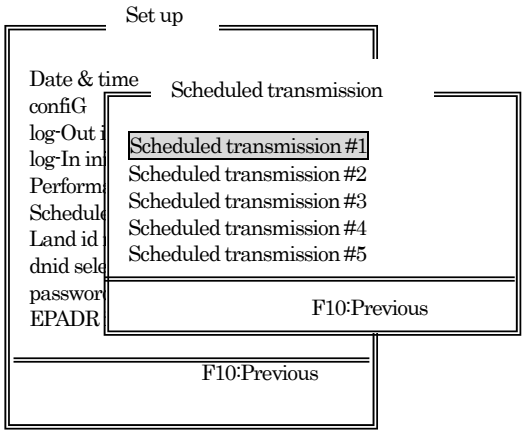


Fig.3.2.1d Scheduled Transmission Menu Box

Step 6 Press <Ctrl> + < F10> in the same time.
"Password" dialog box is displayed on the center of "schedule transmission" menu box.
Enter new password, which is set at Step 4, and then press Enter key.

If the password you entered in is not correct, buzzer is sounded and characters (displayed as ****) are all cleared.
You can enter in password again. If you entered wrong passwords at several times, this process is repeated again and again with sounding buzzer.

If you want to cancel this procedure and want to do another job, press ESC key.

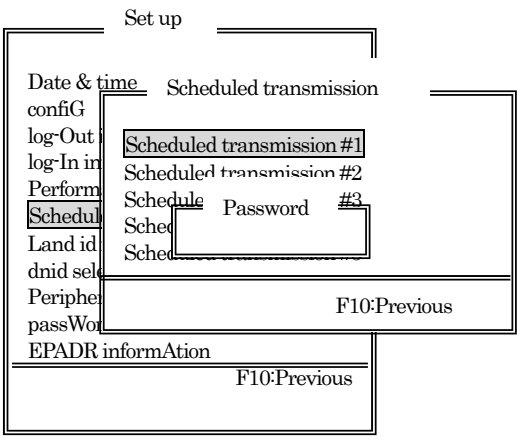


Fig.3.2.1e Password Dialogue Box

Step 7 “Security Alert transmission” menu box with “F1:SSAS TEST” is displayed.

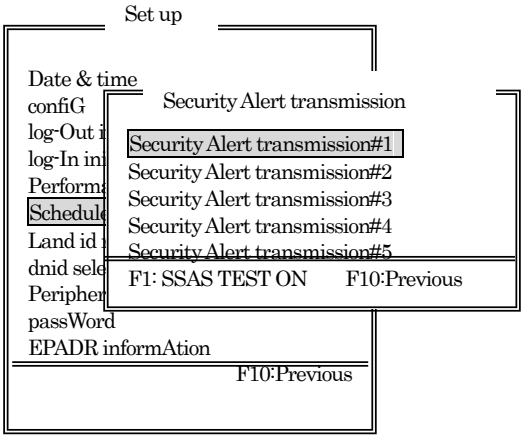


Fig.3.2.1f Security Alert transmission Menu Box

NOTE

If you press the <Enter> key instead of pressing<Ctrl>+<F10>key in the procedure of step 6, “Scheduled transmission #--“menu box is displayed.(mentioned below)
This menu box has no relation with this procedure, so, back to previous screen by pressing <F10>key, and carry out procedure of step 6, if this screen is displayed.

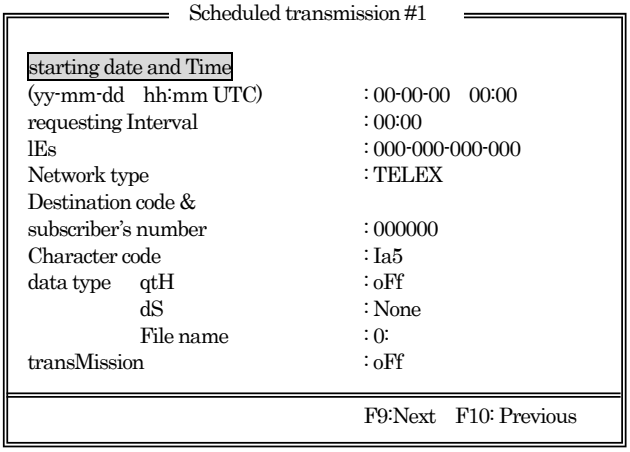


Fig.3.2.1g Scheduled Transmission Menu Box

[Setting of Security Alert transmission]

Step 8 To setup Security Alert transmission, select the “Security Alert transmission #1,” “Security Alert transmission #2,” “Security Alert transmission #3,” “Security Alert transmission #4” or “Security Alert transmission #5” by pressing the up/down arrow keys, and pressing <Enter>.

NOTE

The security message transmission should be configured in order from “Security Alert transmission #1”. The MES transmits Security Alert in order of a small number of Security Alert transmission configuration file.

e.g.

"Scheduled transmission file #1" has been selected for SSAS message transmission setup.

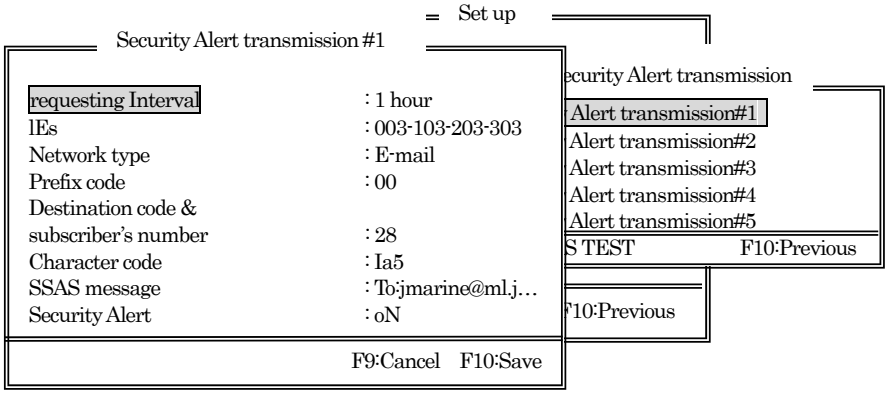


Fig.3.2.1h Setting example of Security Alert transmission #1

[Setting for requesting Interval]

Step 9 Press the down arrow key to choose "requesting Interval", and then press <Enter>.

Step 10 Enter time interval (1hour – 23 hour) to the Security Alert transmission, and then press <Enter>.

e.g.

One hour has been entered as interval to transmit the Security Alert.

requesting Interval: 1hour

NOTE

1. The minimum setting unit is one hour. Setting as unit of minutes is not available.
2. When "0 hour" has been entered as interval to transmit the Security Alert, MES will transmit the security message only one time, after 30 seconds.

[Setting for LES ID]

Step 11 Press <Enter>, and enter LES ID, and then press <Enter>.

e.g.

KDDI LES has been entered as default LES in each ocean region.

lEs: 003 – 103 – 203 – 303

(a) (b) (c) (d)

(a) LES ID used when MES logs in AOR-W.
(b) LES ID used when MES logs in AOR-E.
(c) LES ID used when MES logs in POR.
(d) LES ID used when MES logs in IOR.

[Setting of Network type]

Step 12 Press <Enter>, "Network type" menu box is displayed and then select "Telex" option by pressing the up/down arrow keys, and then press <Enter>.

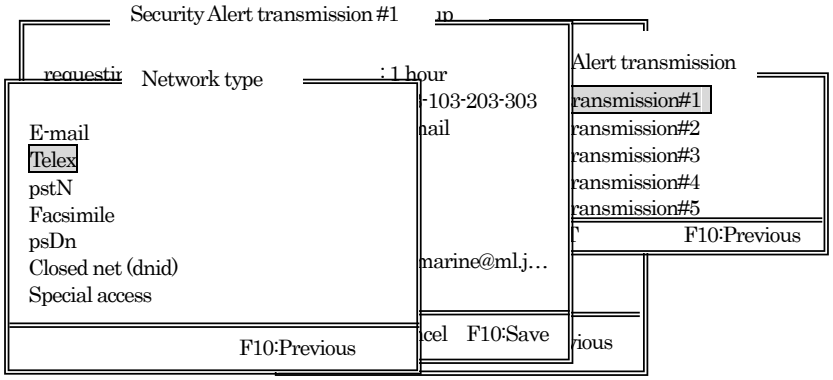


Fig.3.2.1i Network Type Menu Box

[Setting of Prefix code]

Step 13 Press <Enter>, and enter the prefix code, and then press <Enter>.

[Setting of Destination code & subscriber's number]

Step 14 Press <Enter>, and then enter the country code and subscriber's number of final destination.

e.g.

"072-0223344" has been entered as Destination code and subscriber's number.

Destination code &
subscriber's number: 072 - 1234567
(a) (b)

(a) Telex Country code
(b) Subscriber's number

[Setting of Character code]

Step 15 Press <Enter>, Select "Ia5" by pressing the up/down arrow keys, and then press <Enter>.

e.g.

Character code: Ia5 iTa2

[Setting of SSAS message]

Step 16 Press <Enter>, then message editing screen is opened. Create the message in the screen, and press <F9> (Save and quit key) for return to "Security Alert transmission #1" screen. Refer to Chapter 3.2.2 about contents of message.

* Refer to Chapter 3.2.2 for the contents of the message.

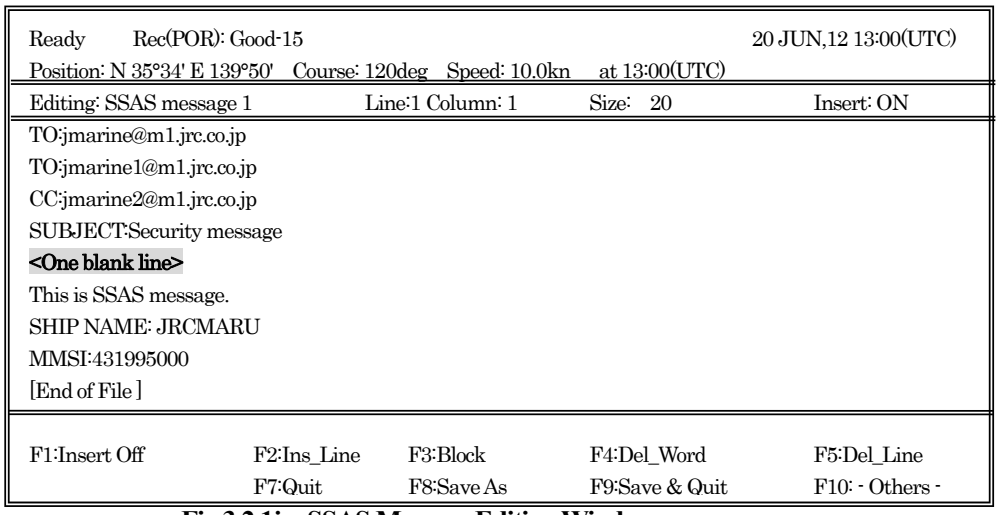


Fig.3.2.1j SSAS Message Editing Window

[Setting of Security Alert]

Step 17 Press <Enter>, select "oN" by pressing the up/down arrow keys, and then press <Enter>.

e.g.

Security Alert: oN

When "oFf" has been selected, Message is NOT sent although anyone press the security button.

Step 18 Setup is completed, and then press function key10 <**F10**> to finish the setup.

Step 19 Press function key10 <**F10**> or <ESC> to save the setup.

An example of setup of Security Alert transmission by the procedure described above is shown below.

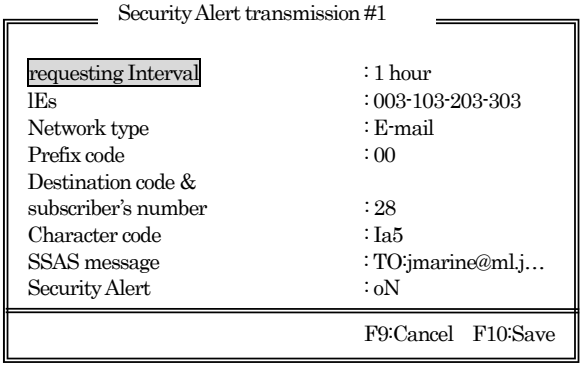


Fig.3.2.1k Setting Example of Security Alert Transmission

3.2.2 Setting up SSAS Schedule Example

3.2.2.1 E-mail

<Service Provider : KDDI>

Special Access Code: 28
LES ID: AOR-W:003, AOR-E:103, POR:203, IOR:303

Security Alert transmission #1

requesting Interval	: 1 hour
lEs	: 003-103-203-303
Network type	: E-mail
Prefix code	: 00
Destination code & subscriber's number	: 28
Character code	: Ia5
SSAS message	: TO:jmarine@ml.j…
Security Alert	: oN

F9:Cancel F10:Save

Fig.3.2.2.1a Setting Example of Security Alert transmission using E-mail (KDDI)

Ready Rec(POR): Good-15 20 JUN,12 13:00(UTC)
Position: N 35°34' E 139°50' Course: 120deg Speed: 10.0kn at 13:00(UTC)

Editing: SSAS message 1 Line:1 Column: 1 Size: 20 Insert: ON

TO:jmarine@m1.jrc.co.jp
TO:jmarine1@m1.jrc.co.jp
CC:jmarine2@m1.jrc.co.jp
SUBJECT:Security message
<One blank line>
This is SSAS message.
SHIP NAME: JRCMARU
MMSI:431995000
[End of File]

F1:Insert Off	F2:Ins_Line	F3:Block	F4:Del_Word	F5:Del_Line
	F7:Quit	F8:Save As	F9:Save & Quit	F10: - Others -

Fig.3.2.2.1b Example of Message Editing Screen (KDDI)

<Service Provider : STRATOS (XANTIC)>

Special Access Code: 28
LES ID: AOR-W:012, AOR-E:112, POR:212, IOR:312

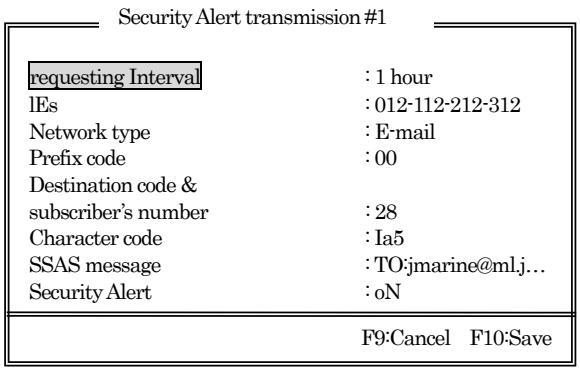


Fig.3.2.2.1c Setting Example of Security Alert Transmission Using E-mail (STRATOS)

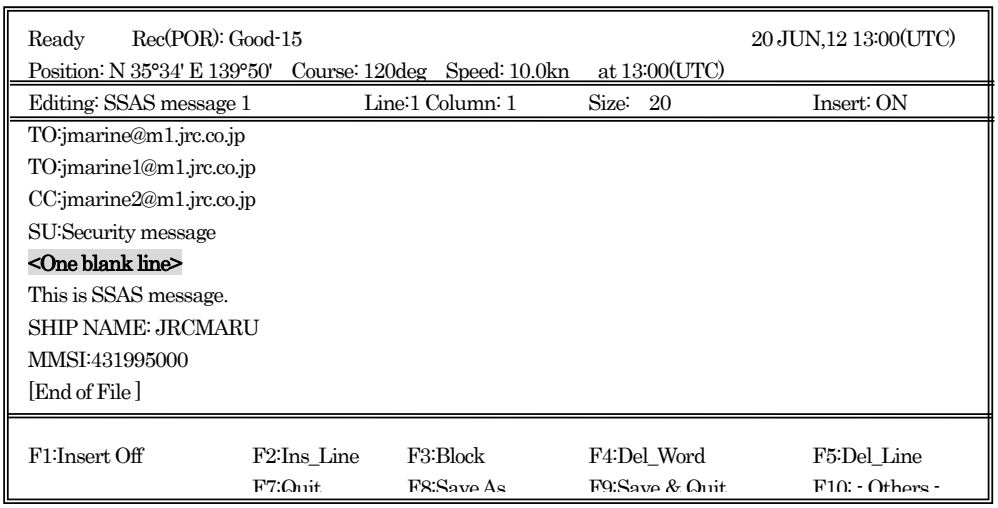


Fig.3.2.2.1d Example of Message Editing Screen (STRATOS)

<Service Provider : STRATOS>

Special Access Code: 28
LES ID: AOR-W:002, AOR-E:102, 1POR:202, IOR:302

Security Alert transmission #1

requesting Interval	: 1 hour
lEs	: 002-102-202-302
Network type	: E-mail
Prefix code	: 00
Destination code & subscriber's number	: 28
Character code	: Ia5
SSAS message	: TO:jmarine@m…
Security Alert	: oN

F9:Cancel F10:Save

Fig.3.2.2.1e Setting Example of Security Alert Transmission Using E-mail (STRATOS)

Ready Rec(POR): Good-15 20 JUN,12 13:00(UTC)
Position: N 35°34' E 139°50' Course: 120deg Speed: 10.0kn at 13:00(UTC)

Editing: SSAS message 1 Line:1 Column: 1 Size: 20 Insert: ON

TO:jmarine@m1.jrc.co.jp
TO:jmarine1@m1.jrc.co.jp
CC:jmarine2@m1.jrc.co.jp
SU:Security message
<One blank line>
This is SSAS message.
SHIP NAME: JRCMARU
MMSI:431995000
[End of File]

F1:Insert Off F2:Ins_Line F3:Block F4:Del_Word F5:Del_Line
F7:Quit F8:Save As F9:Save & Quit F10: - Others -

Fig.3.2.2.1f Example of Message Editing Screen (STRATOS)

<Service Provider : MARLINK>

Special Access Code: 28
LES ID: AOR-W:004, AOR-E:104, POR:204, IOR:304

Security Alert transmission #1

requesting Interval	: 1 hour
lEs	: 004-104-204-304
Network type	: E-mail
Prefix code	: 00
Destination code & subscriber's number	: 28
Character code	: Ia5
SSAS message	: TO:jmarine@ml…
Security Alert	: oN

F9:Cancel F10:Save

Fig.3.2.2.1g Setting Example of Security Alert Transmission Using E-mail (MARLINK)

Ready Rec(POR): Good-15 20 JUN,12 13:00(UTC)
Position: N 35°34' E 139°50' Course: 120deg Speed: 10.0kn at 13:00(UTC)

Editing: SSAS message 1 Line:1 Column: 1 Size: 20 Insert: ON

TO:jmarine@m1.jrc.co.jp
CC:jmarine1@m1.jrc.co.jp
SUB: Security message
<One blank line>
This is SSAS message.
SHIP NAME: JRCMARU
MMSI:431995000
[End of File]

F1:Insert Off F2:Ins_Line F3:Block F4:Del_Word F5:Del_Line
F7:Quit F8:Save As F9:Save & Quit F10: - Others -

Fig.3.2.2.1h Example of Message Editing Screen (MARLINK)

<Service Provider : OTESAT>

Special Access Code: EMAIL
LES ID: AOR-W:021, AOR-E:120, POR:221, IOR:305

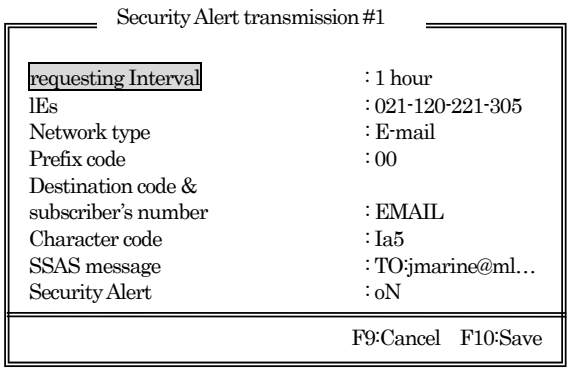


Fig.3.2.2.1i Setting Example of Security Alert Transmission Using E-mail (OTESAT)

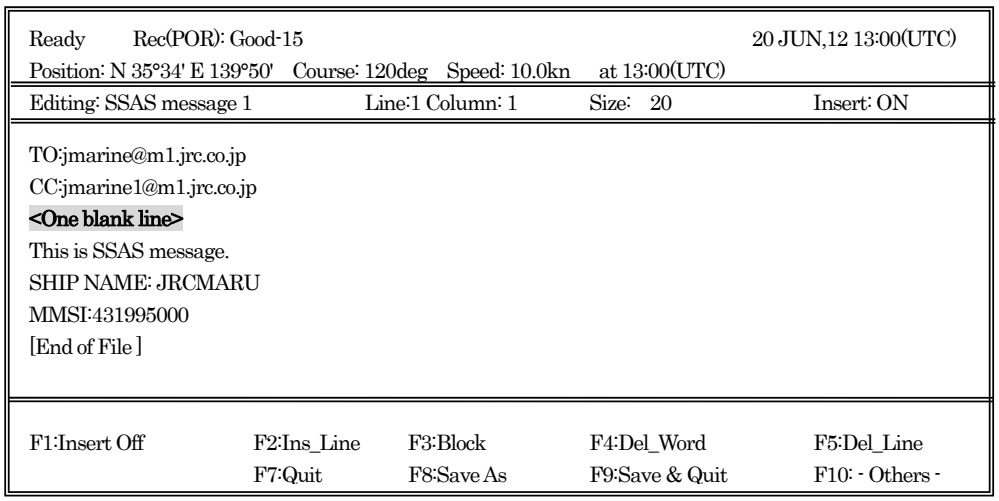


Fig.3.2.2.1j Example of Message Editing Screen (OTESAT)

<Service Provider : Vizada (FRANCE TELECOM)>

Special Access Code: 28
LES ID: AOR-W:021, AOR-E:121, 1POR:221, IOR:321

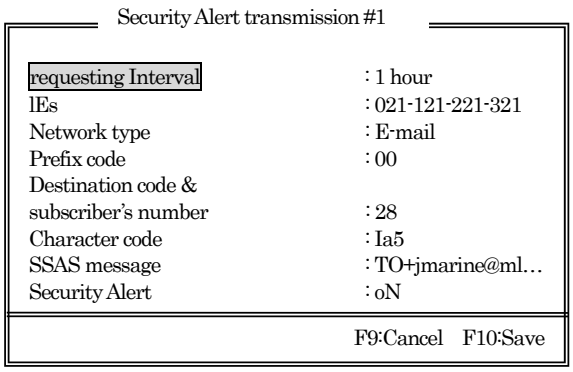


Fig.3.2.2.1k Setting Example of Security Alert Transmission Using E-mail (Vizada)

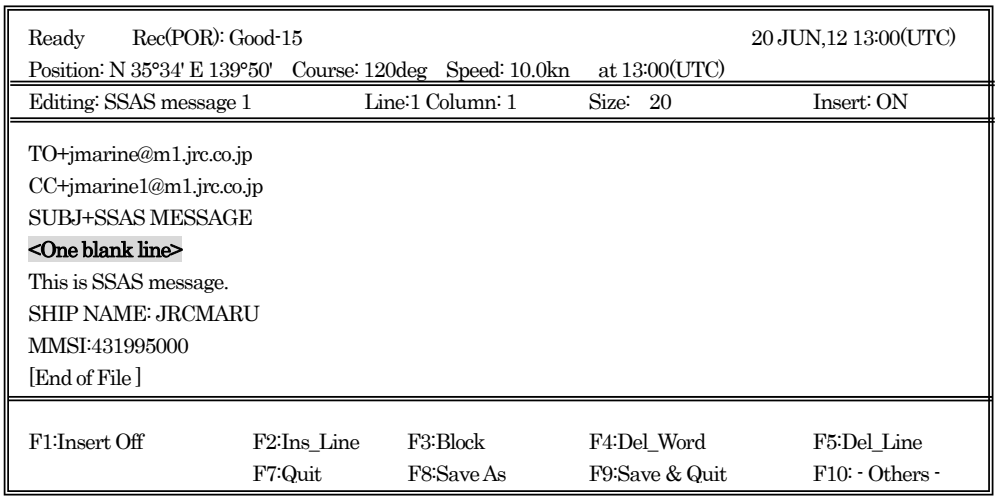


Fig.3.2.2.1l Example of Message Editing Screen (Vizada)

3.2.2.2 Facsimile

<Service Provider : KDDI>

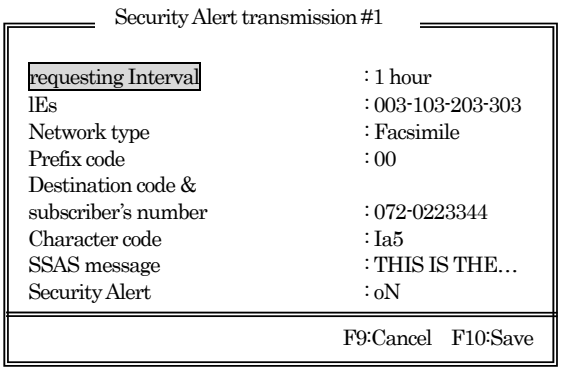


Fig.3.2.2.2a Setting Example of Security Alert Transmission Using Facsimile (KDDI)

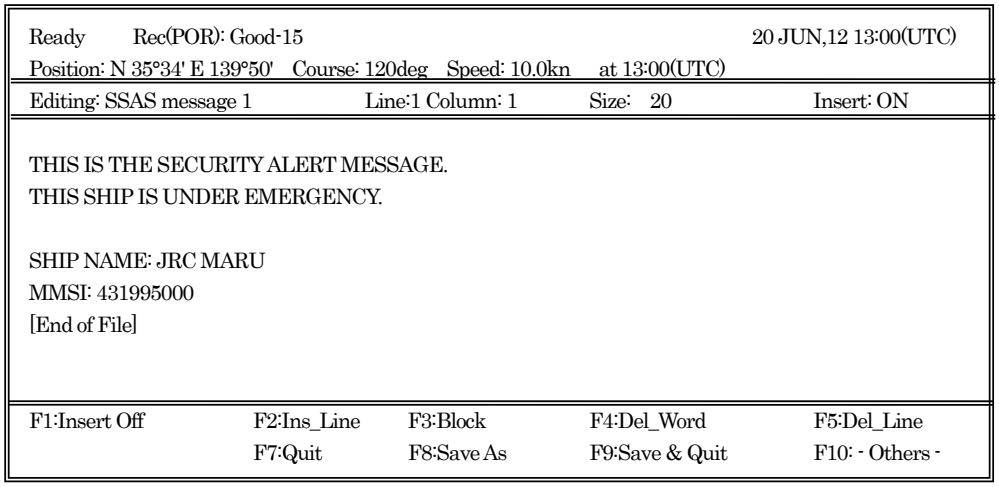


Fig.3.2.2.2b Example of Message Editing Screen (KDDI)

3.2.2.3 Telex

<Service Provider : KDDI>

Security Alert transmission #1

requesting Interval	: 1 hour
lEs	: 003-103-203-303
Network type	: Telex
Prefix code	: 00
Destination code & subscriber's number	: 072-0223344
Character code	: Ia5
SSAS message	: THIS IS THE…
Security Alert	: oN

F9:Cancel F10:Save

Fig.3.2.2.3a Setting Example of Security Alert Transmission Using Telex (KDDI)

Ready Rec(POR): Good-15 20 JUN,12 13:00(UTC)
Position: N 35°34' E 139°50' Course: 120deg Speed: 10.0kn at 13:00(UTC)

Editing: SSAS message 1 Line:1 Column: 1 Size: 20 Insert: ON

THIS IS THE SECURITY ALERT MESSAGE.
THIS SHIP IS UNDER EMERGENCY.

SHIP NAME: JRC MARU
MMSI: 431995000
[End of File]

F1:Insert Off	F2:Ins_Line	F3:Block	F4:Del_Word	F5:Del_Line
	F7:Quit	F8:Save As	F9:Save & Quit	F10: - Others -

Fig.3.2.2.3b Example of Message Editing Screen (KDDI)

3.3 Transmitting Security Alert

3.3.1 Flow Chart of Security Alert Transmission

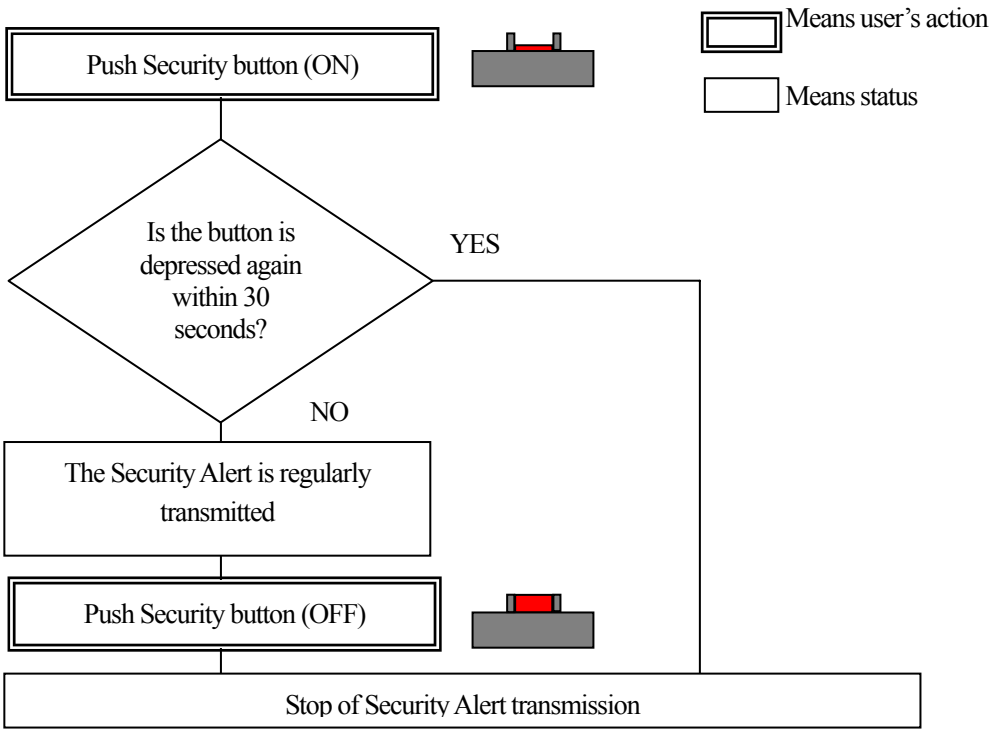


Fig.3.3.1 Transmission Flow of Security Alert

3.3.2 Security Alert Transmission Procedure

NOTE

1. Security Alert transmission causes no reactions of terminals. No LED lights and buzzer does not sound on the IME, no communication status is displayed on DTE (optional component), and nothing is printed on the Printer (optional component).
2. Scheduled transmission function is stopped during transmitting Security Alert.

Step 1 Pull open the button cover of the transparency of the security button forward.

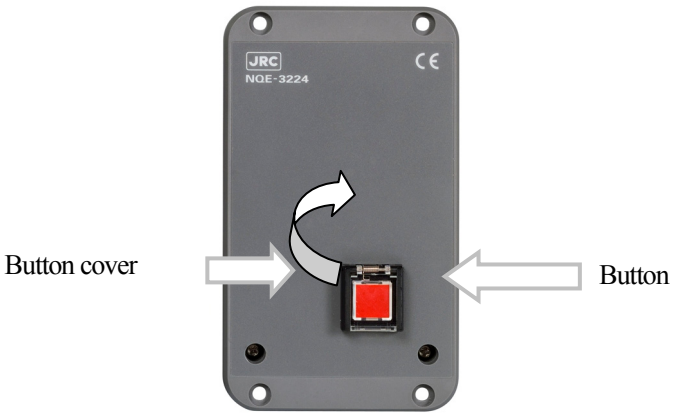
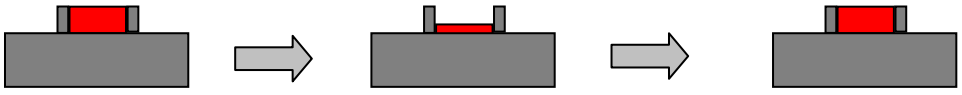


Fig.3.3.2a Opening Security Button Cover

Step 2 Push down red button (ON status: The button is pushed down).
Security Alert transmission is initiated after 30 seconds passed.



OFF status　　(Push once) (ON Status)　　(Push again) OFF Status
＜Transmission start＞　　＜Transmission cancel＞

Fig.3.3.2b Switching ON and OFF of Security Button

NOTE

＜Discontinuing transmission procedure when button is pushed by mistake＞

Push the Button again within 30 seconds: No transmission

Push the Button again after 30 seconds passed: Security Alert is transmitted only of first time, and no transmission is carried out after then.

Switch off the External Power Supply, when you want to cancel transmitting at once regardless of the time after the button is pushed.

Step 3 Security Alert is kept transmitted regularly at set intervals to the address set beforehand.

NOTE

The message of the following contents reaches the destination when the Security Alert is transmitted.

User edit message (Example)	This is a SECURITY MESSAGE Ship Name :ABCD Call Sign :DFGZ MMSI :123456789
Automatic insertion message (Example)	SECURITY SECURITY MES NO, 987654321 LAT,N12 34.56LON,E123 45.56,UTC,07.01.2004 12:34,SOG, 10.0KT,COG,20DEG

Step 4 Push the button again when you want to cancel Security Alert transmission.

NOTE

Turn off all buttons when you pushed two or more buttons at the time of transmission.
Security Alert transmission is not canceled as long as one button is remained turned on.

3.4 Security Alert Transmission Test

3.4.1 Transmission Test

This test can be done without sending real Security Alert.

NOTE

Confirm all of security buttons are turned off before you start the test transmission.
Test transmission is impossible as long as any button is remained turned on.

The test transmission can be carried out with setting up for real Security Alert transmission.

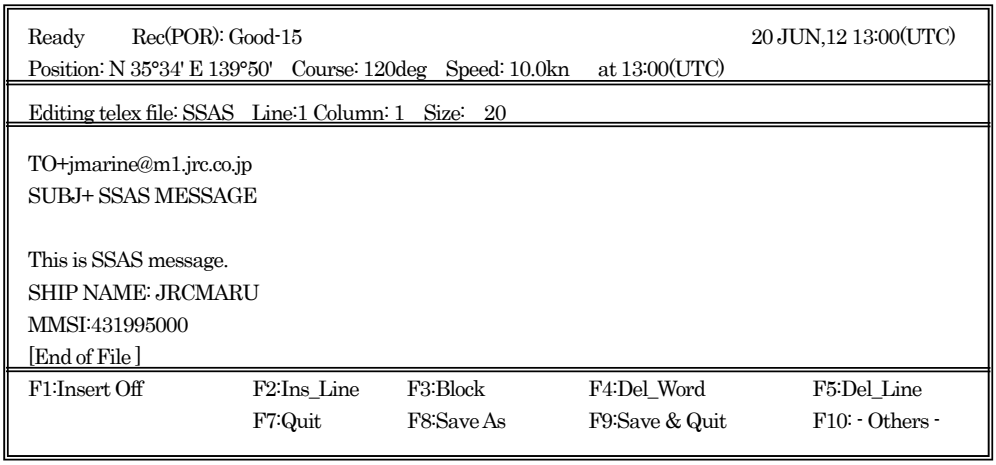


Fig.3.4.1a Example of Test Transmission Window

Destination receives following message when above window is transmitted.

```
This is SSAS MESSAGE
Ship Name :JRCMARU
MMSI      :431995000

TEST TEST(*1)
MES NO, 987654321(*2)
LAT,N12 34.56LON,E123 45.56,UTC,07.01.2004 12:34,SOG, 10.0KT,COG,20DEG(*3)
```

Fig.3.4.1b Example of Received Message of Test Transmission
(When the message of **Fig.3.4.1a** is transmitted)

*1) "TEST TEST" is written in this place at test transmission, and "SECURITY SECURITY" is written in here at real Security Alert transmission.

*2) MES NO is the number of mobile earth station. of each ship.

*3) Various information of GPS is attached automatically.

NOTE

Set the Security Alert setup before executing Test transmission.
Test transmission is not executed if the setup is not carried out yet.

NOTE

＜Time required until completing Test transmission＞

Transmission setting number
1 (5 minutes)　2 (17 minutes)　3 (29 minutes)　4 (41minutes)　5 (53 minutes)
The time required rises and falls according to the status of the line and the message length, etc.

Step 1　Press <ESC> until the screen clear.

Step 2　Press <ALT> + <U> to obtain "Set up" dialogue box.

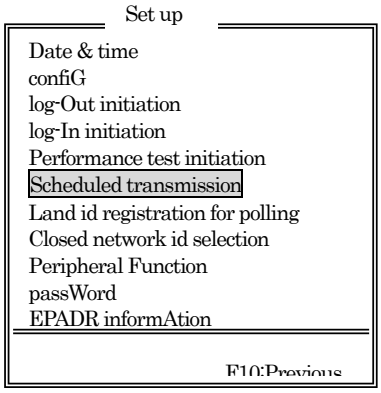


Fig.3.4.1c　Setup Menu Box Selecting Scheduled Transmission

Step 3　Select "Scheduled transmission" option by pressing the up/down arrow key, and then press <Enter>.
"Scheduled transmission" menu box is displayed.

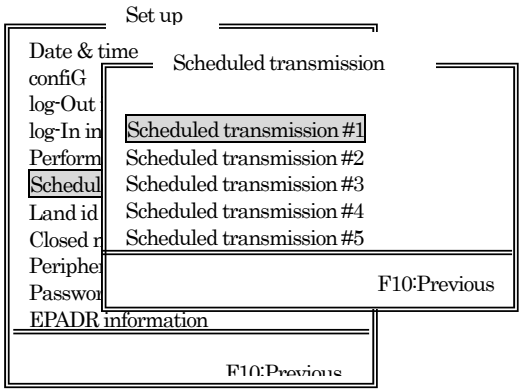


Fig.3.4.1d Scheduled Transmission Menu Box

Step4 Press <Ctrl>+function key10 <**F10**>, and then "Password" dialog box is displayed.

Step5 Enter your password and press <Enter >key. Refer to chapter 3.2 about the process of password setting.

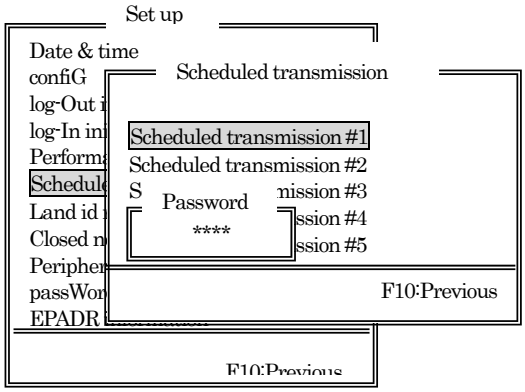


Fig.3.4.1e Password Dialogue Box

Step6 Press function key 1<**F1**>, and then the warning window is displayed.

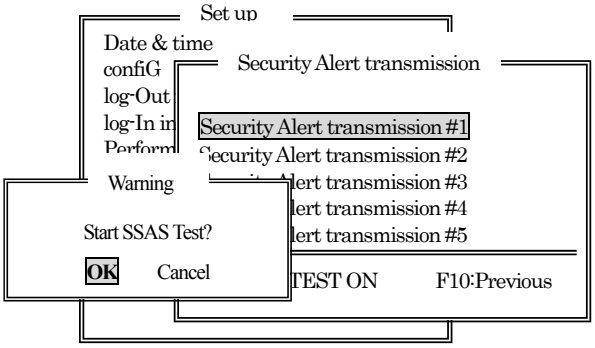


Fig.3.4.1f Warning Window (Confirming Start of the Test)

Step7 Select [OK] by cursor and press <Enter> key, then the warning window is cleared, then Security Alert transmission test is started.
The Security transmission #1 to #5 is automatically sent once, if each **[Setting of Security Alert]** is set to **[oN].**

Display of the lowest line of window is changed to [F1: SSAS TEST OFF] from [F1: SSAS TEST ON], while executing the test.

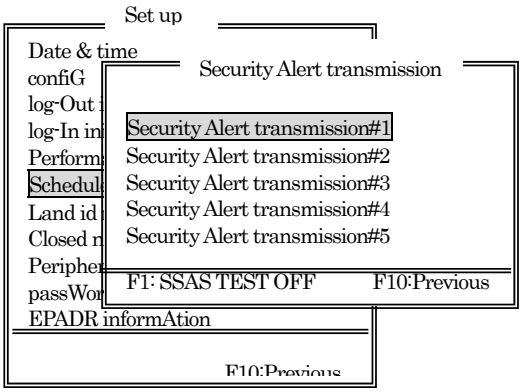


Fig.3.4.1g Security Alert Transmission Window (After the Test Transmission is Started)

* When you cancel the test, press function key1<**F1**>. And select [OK] by cursor and press <Enter>key when following warning window is displayed. The test stops.

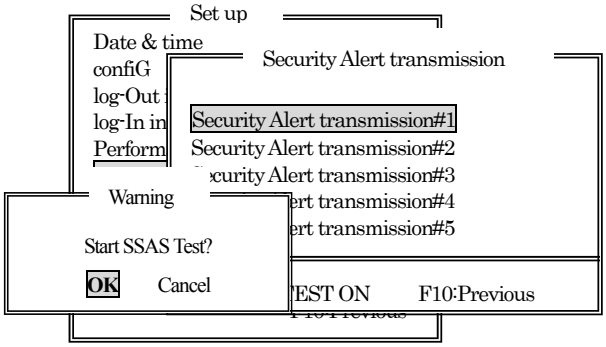


Fig.3.4.1h Warning Window (Confirming Stop of the Test)

* When you continue the test, select [Cancel] and press <Enter>key. Then the test is continued.

Step 8 Display of the lowest line of window is changed to [F1: SSAS TEST ON] again, when the Security Alert transmission test is completed.

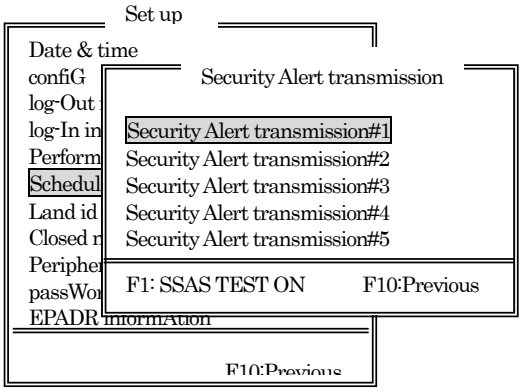


Fig.3.4.1i Security Alert Transmission Window (Test Transmission is Completed)

NOTE

1. The MES starts transmission with setup of "Security Alert transmission #1" immediately after pressing function key 1 <F1>. If the another setup has been configured, the MES starts transmission with setup of "Security Alert transmission #2" at 12 minutes after pressing function key 1 <F1>, starts transmission with setup of "Security Alert transmission #3" at 24 minutes after pressing function key 1 <F1>, starts transmission with setup of "Security Alert transmission #4" at 36 minutes after pressing function key 1 <F1>, and starts transmission with setup of "Security Alert transmission #5" at 48 minutes after pressing function key 1 <F1>.
2. This test mode remains after one hour from pressing function key 1<**F1**>.
3. Your creating message and the following message are transmitted to pre-designed destinations.
   TEST TEST
   MES NO, 123456789
   LAT,N12 34.56LON,E123 45.56,UTC,07.01.2004 12:34,SOG, 10.0KT,COG,20DEG
4. The Security Alert transmission test mode is cancelable if the power switch on the IME to OFF and ON within one hour from pressing function key 1<**F1**>.
5. Different to real transmission, the message of [arrival confirmation] is displayed on sender's DTE at test mode.

3.4.2 Security Button Test

This section describes how to initiate the security button test.
The test is used to check that the security button activates with correctly.
Real transmission is not initiated with this test.

Step 1 Press <ESC> until the screen is cleared.
Step 2 Press <ALT> + <A> to obtain "Diagnostics" menu box.

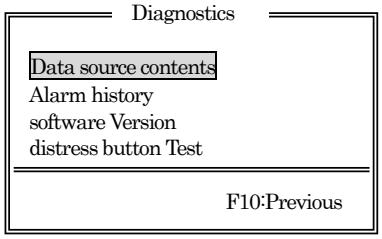


Fig.3.4.2a Diagnostics Menu Box

Step 3 Press <Ctrl>+function key10 <**F10**>, then "Password" dialog box is displayed. Enter the password.

* Regarding setup process of password, see chapter 3.2.1, Step 1 to 4.

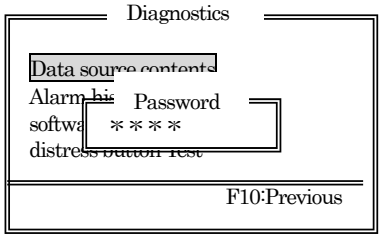


Fig.3.4.2b Password Dialogue Box

"security button Test" menu item is displayed in "Diagnostics" menu box.

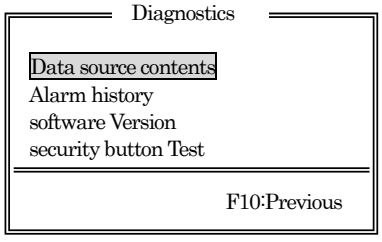


Fig.3.4.2c Diagnostics Menu Box Displays Security Button Test Menu

Step 4 Select "security button Test" option by pressing the up/down arrow keys.

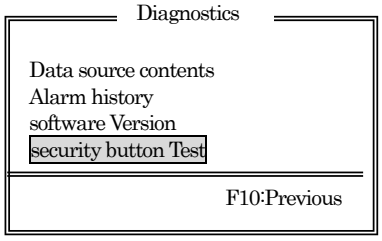


Fig.3.4.2d Diagnostics Menu Box Selecting Security Button Test

Step 5 Press <Enter>, and then “Security Button test mode” window is displayed.

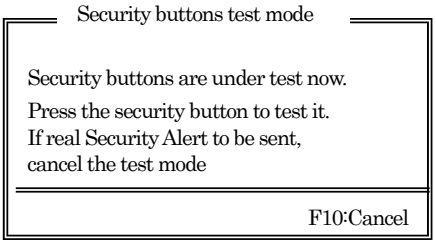


Fig.3.4.2e Ssecurity Buttons Test Mode Window

Step 6 Open the hinged cover of the Security Alert Button.

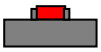
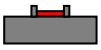


Fig.3.4.2f Opening Security Button Cover

Step 7 Push the button. “Security Button Test” status window is displayed.



e.g.

No.1 Security button has been pushed in.

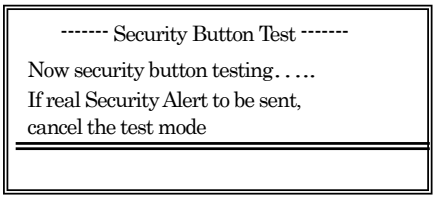
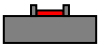


Fig.3.4.2g Security Button Test Window (When Button is Turned on)

Step 8 When the test is succeeded, the following window is displayed 30seconds after pushing the button.



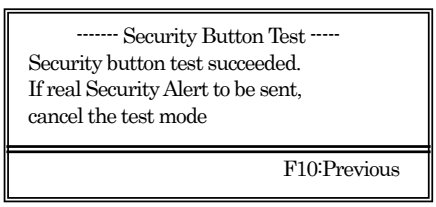
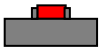


Fig.3.4.2h Security Button Test Window (When Test is Suceeded)

Step 9 Push button again to pop up the pushed button, and then press function 10 key <**F10**>, and then the following window is displayed.



If you test another button, repeat from Step 6 to Step 9.
If you cancel the security button test, go to Step 10.

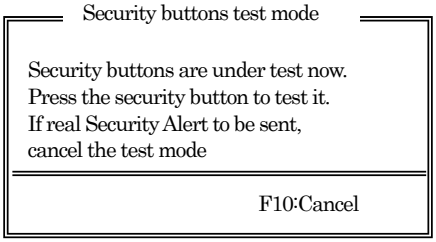


Fig.3.4.2i Security Buttons Test Mode Window

Step 10 To cancel the test mode, press function key 10<**F10**>.

NOTE

Any security button has been pushed in and power supply of MES is turned ON, the MES starts sending the Security Alert transmission.

4. MAINTENANCE

4.1 Maintenance

Maintenance decides your equipment's life. Check the following items daily for a long life and extreme performance of your equipment.

1) Keep input voltage in specific voltage range.
2) Try to compare the records with current status for finding a fault earlier.

4.2 Daily maintenance

The following table shows daily maintenance items using general tools.

⚠ WARNING

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 for you.
This equipment meets the technical standard of the Ministry of Internal affairs and Communications (MIC).

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 to our sales department or nearest branch office.

Item	Maintenance procedures
Cleaning	Clean the panel, the knob, the switch, the top cover and the button cover with a soft cloth or silicon oil. Clean the internal of the equipment with the brush or cleaner.
Fastening	Fasten the screw, the nut, the knob, the switch, and the connector.

4.3 Troubleshooting

Check all items in the following section to secure normal communication at all times. If 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.

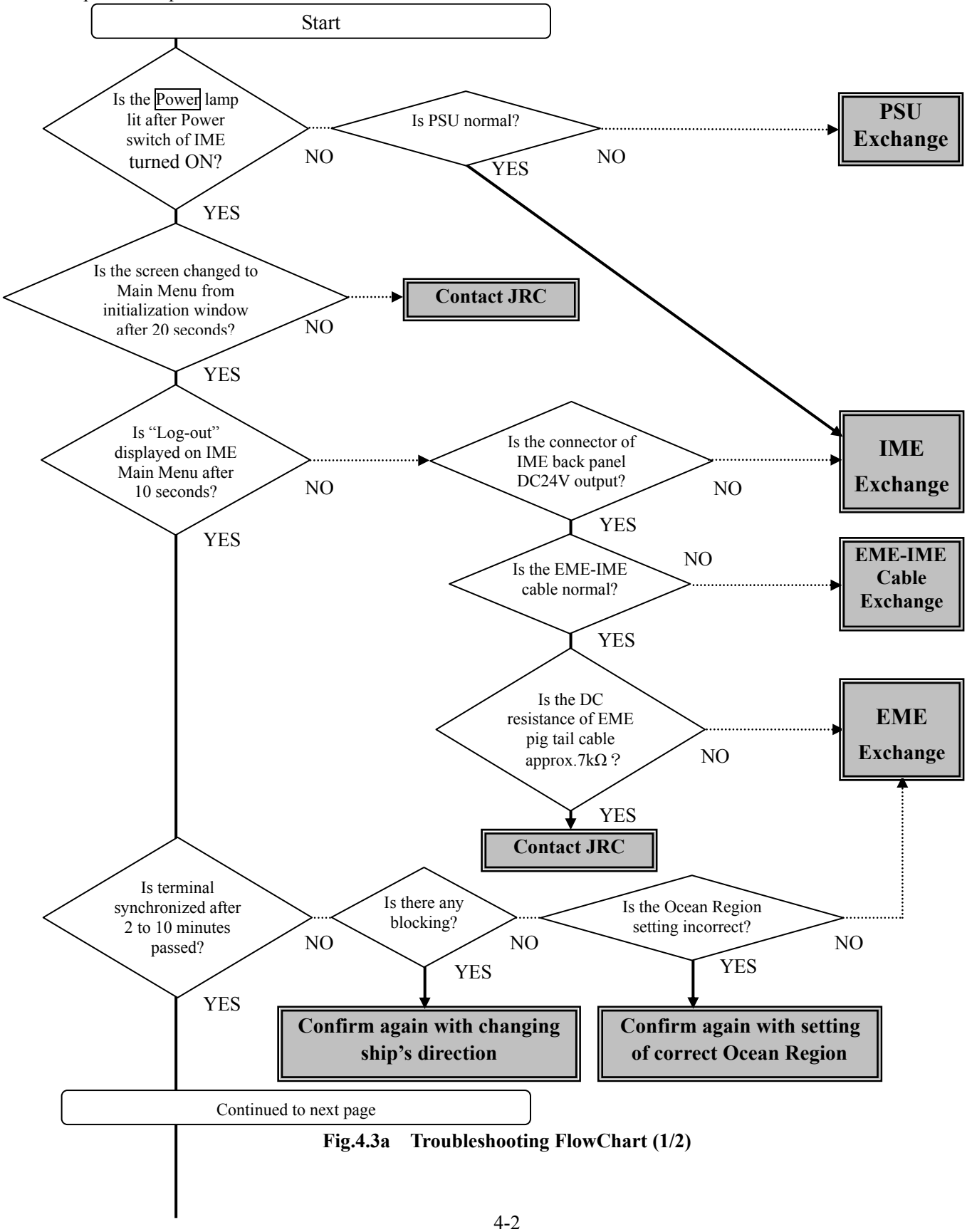


Fig.4.3a Troubleshooting FlowChart (1/2)

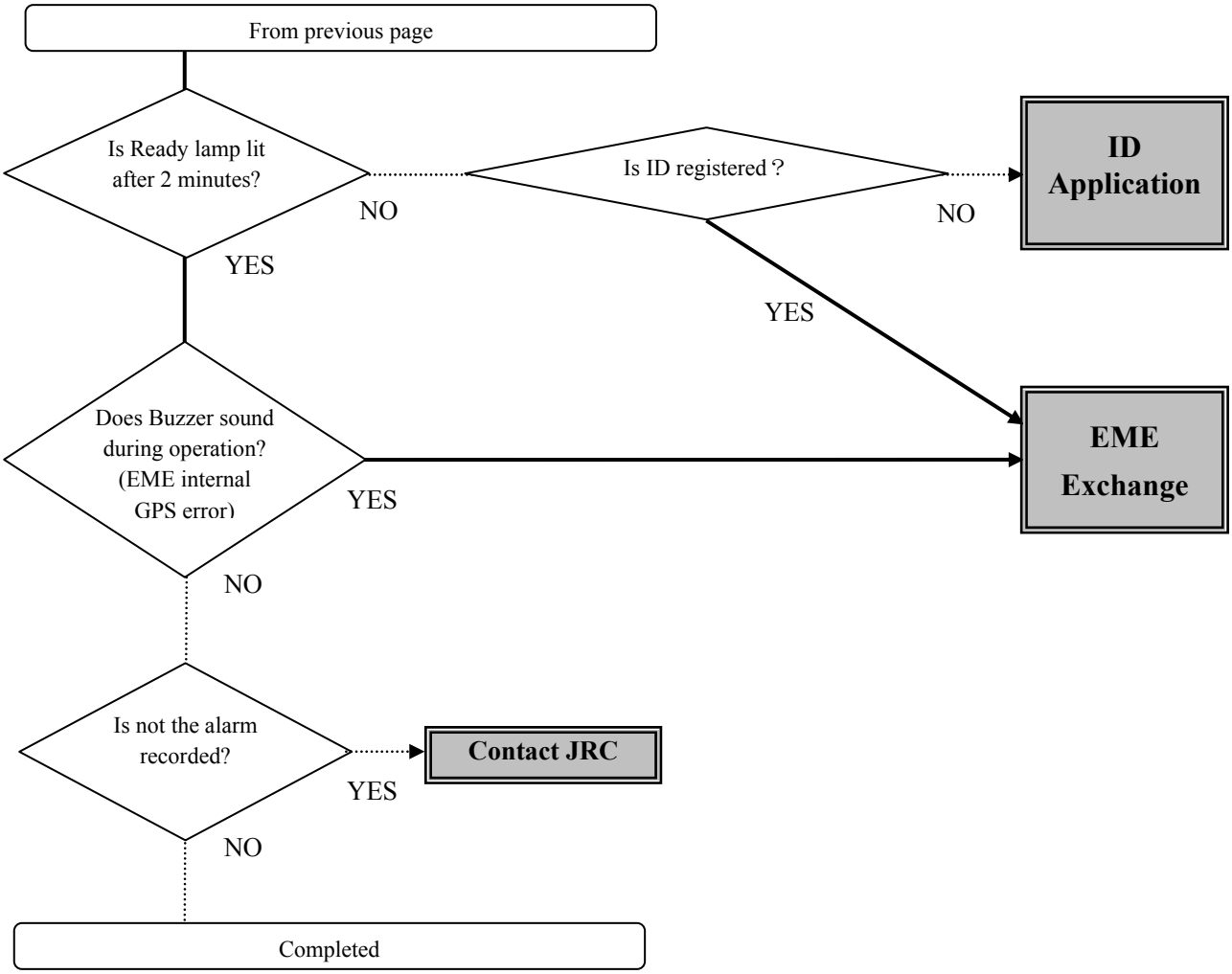


Fig.4.3b Troubleshooting FlowChart (2/2)

4.4 After Service

When ordering repair

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

In the case of fixing during the term of a guarantee

When the system malfunctioned during the guarantee period under the normal operation according to explanation and a handling description in the operation manual, the dealer or our company performs 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 installation of JUE-87 is completed.
- Failure occurred 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, and ID No. of JUE-87, MES.
- Status of the abnormality (as in detail as possible)
- Office name or organization name, address, and 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 consult the dealer from which you purchased the device, or one of our marketing offices for overhaul apart from daily services. In this case, it becomes charged.

Disposal of JUE-87

When disposing JUE-87, process it in accordance with the rules of the pertinent local government.

⚠ WARNING

Ask our agency or office to dispose JUE-87 (EME). Do not dispose JUE-87 illegally. It becomes cause of heat-up, firing, or explosion by shorted circuit of lithium battery, which is affected by the impact or submerged of water.

Please contact the dealer, 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, please refer to the list of office at the end of this manual.

5. SPECIFICATION

5.1 JUE-87 (EME and IME)

Table 5.1 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
		LAN	RJ-45 : 10 Base-T
		DTE	ITU-T V24/28, 9600 bps, D-sub 9PIN connector
		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: 2.4 kg IME: 3.4 kg

Appendix JRC Web sites

Please contact purchasing dealer, JRC agent or one of the JRC branches for any question as to the after sales service.

JRC web sites

JRC Tokyo Japan	http://www.jrc.co.jp
JRC Amsterdam	http://www.jrcams.nl
JRC Seattle	http://www.jrcamerica.com

アスベストは使用しておりません
Not use the asbestos

CODE No.7ZPSC0450

For further information,contact:

JRC *Japan Radio Co., Ltd.*
Since 1915

URL http://www.jrc.co.jp

Marine Service Department
Telephone : +81-3-3492-1305
Facsimile : +81-3-3779-1420
e-mail : tmsc@jrc.co.jp

AMSTERDAM Branch
Telephone : +31-20-658-0750
Facsimile : +31-20-658-0755
e-mail : service@jrceurope.com

SEATTLE Branch
Telephone : +1-206-654-5644
Facsimile : +1-206-654-7030
e-mail : marineservice@jrcamerica.com

01ETM ISO 9001, ISO 14001 Certified