FURUNO

OPERATOR'S MANUAL

INMARSAT-C
SHIP EARTH STATION

MODEL   FELCOM 10

(Version 4.0B)

FURUNO ELECTRIC CO., LTD.
NISHINOMIYA, JAPAN

• Your Local Agent/Dealer

*00080265800*

FURUNO

WARNING AGAINST HIGH TENSION

The operation of this equipment involves the use of high voltage, which endangers human life. Although the design of the equipment has been made in due consideration of measures to insure the operator's safety, adequate precaution must be exercised when reaching inside the equipment for the purpose of maintenance and service. Do not change a component or inspect the equipment with the voltage applied. A residual charge may exist in some capacitors with the equipment turned off. Always short all supply lines to the chassis with an insulated screwdriver or a similar tool prior to touching the circuit.

FIRST AID IN CASE OF ELECTRIC SHOCK

When a victim struck by electricity is found, first switch off the equipment via the main switch on the equipment or the ship's distribution board. If this is not possible, protect yourself with dry insulating material (a wooden plate or rod, cloth, your belt, etc.) and pull the victim clear of electricity. If the victim is not breathing himself, apply artificial respiration according to the "Method of Artificial Respiration". Do not give up halfway. Perseverance and continual efforts are important in artificial respiration.

METHOD OF ARTIFICIAL RESPIRATION

Lay the victim on his back. Position yourself beside the victim's head and pinch his nose by your thumb and forefinger to prevent air leakage. Insert the thumb of your other hand between the victim's teeth and lift his chin up. Then, place the arm (the one closing the victim's nose) on the victim's forehead and press the head down so that the victim's head is given a maximum backward tilt with the chin prominent and the neck bent back. Seal the victim's mouth with your mouth and blow therein about half of the deeply inhaled air every time. After exhaling, turn your head to watch for a chest contraction, whilst inhaling deeply in readiness for the next blowing. Repeat the movements faster for the first 1 to 2 minutes and 12 times per minute thereafter.
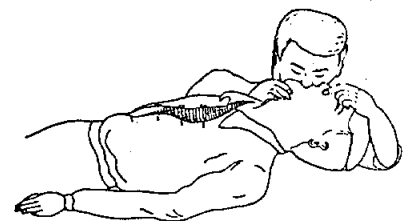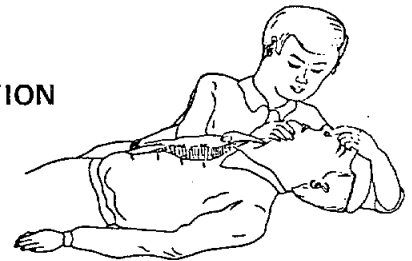
WARNING

Hazardous microwave radiation can cause severe injury or illness.

Keep at least 60cm from radome.

Radiation Level	At
10W/m^2	60cm

ABBREVIATED INSTRUCTIONS FOR TELEX COMMUNICATION

Overview

This chapter provides abbreviated instructions for telex communication —from turning the power on to Logout.
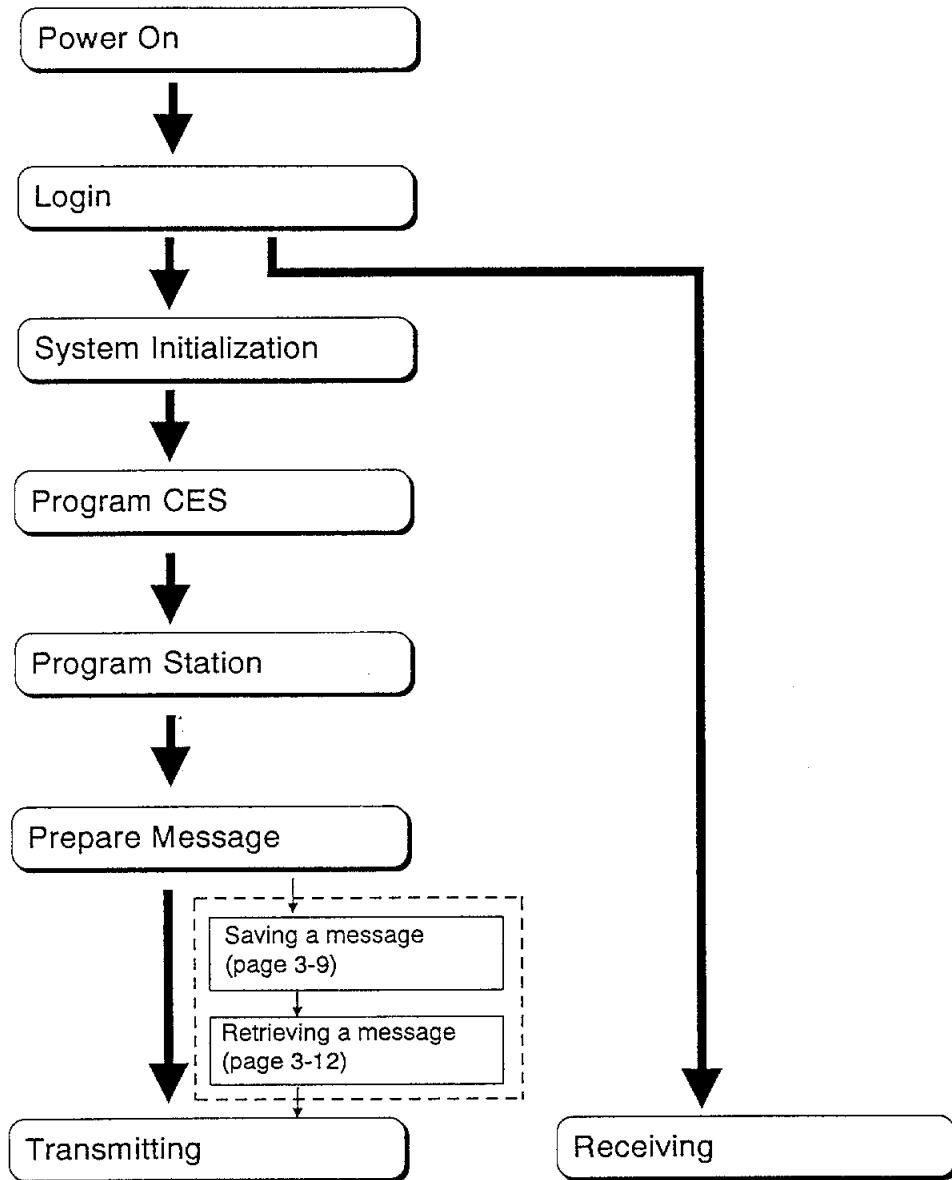Note that you should enter the system settings by referring to "SYSTEM INITIALIZATION" in the following cases.

- operates as an EGC receiver
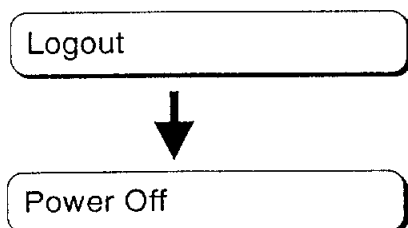- operates with two sets of Terminal Units

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Operational Overview

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     │     ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐    │
     │     │ ┌─────────────────┐  │     │
     │     │ │ Saving a message│  │     │
     │     │ │ (page 3-9)      │  │     │
     │     │ └─────────────────┘  │     │
     │     │ ┌─────────────────┐  │     │
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     │     │ └─────────────────┘  │     │
     │     └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘    │
     ▼                                  ▼
┌─────────────────────┐    ┌─────────────────────┐
│  Transmitting       │    │  Receiving          │
└─────────────────────┘    └─────────────────────┘
```
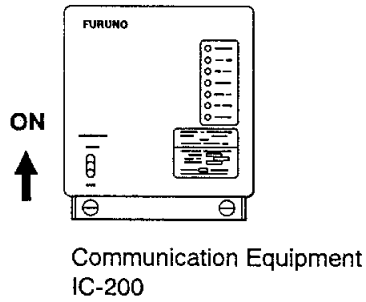
The FELCOM 10 should be turned on for the duration of a voyage.
If you do not use the unit for a prolonged period, for example, vessel is in dry dock, you must logout before turning off the power.

```
┌─────────────────────┐
│  Logout             │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│  Power Off          │
└─────────────────────┘
```

Turning the Power On

Procedure

1. Turn the Communication Equipment on.

Communication Equipment
IC-200

2. Turn the Terminal Unit on.

Terminal Unit
IC-500

Keyboard KB-500

3. Turn the Printer on.

Printer PP-500
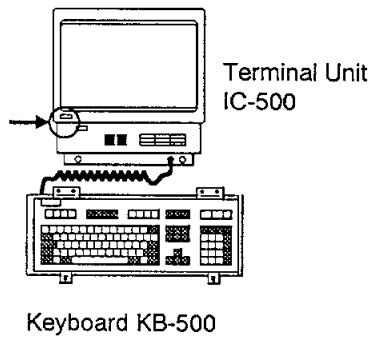
OFF POWER ON
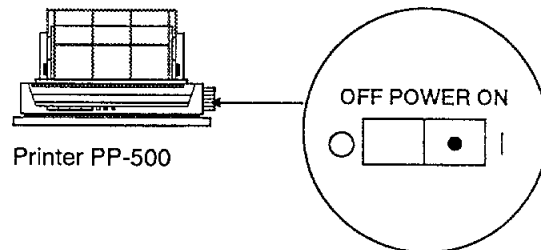
Login

Introduction   "Login" operation registers your ship to a NCS to enable communication in the Inmarsat-C system.

Note   The initial login operation (called "commissioning") may be done two or three days after receiving a IMN (Inmarsat Mobile Number) from the Routing Organization.

Procedure   1. Press **F4** to display the Command menu.

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    1: Abort
    2: Login
    3: Logout
    4: Scan NCS
    5: Select NCS
    6: Stop Alarm
```
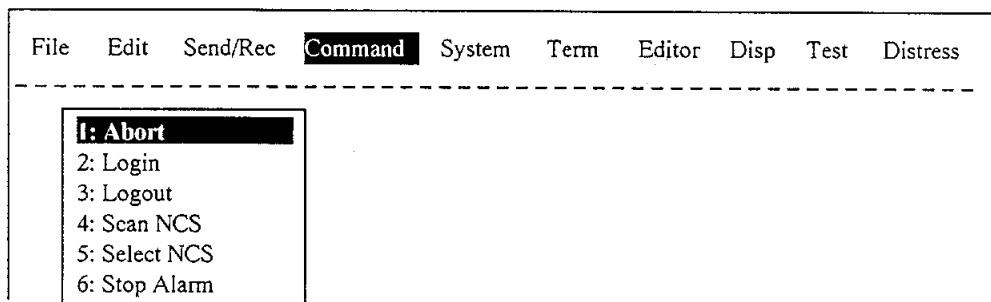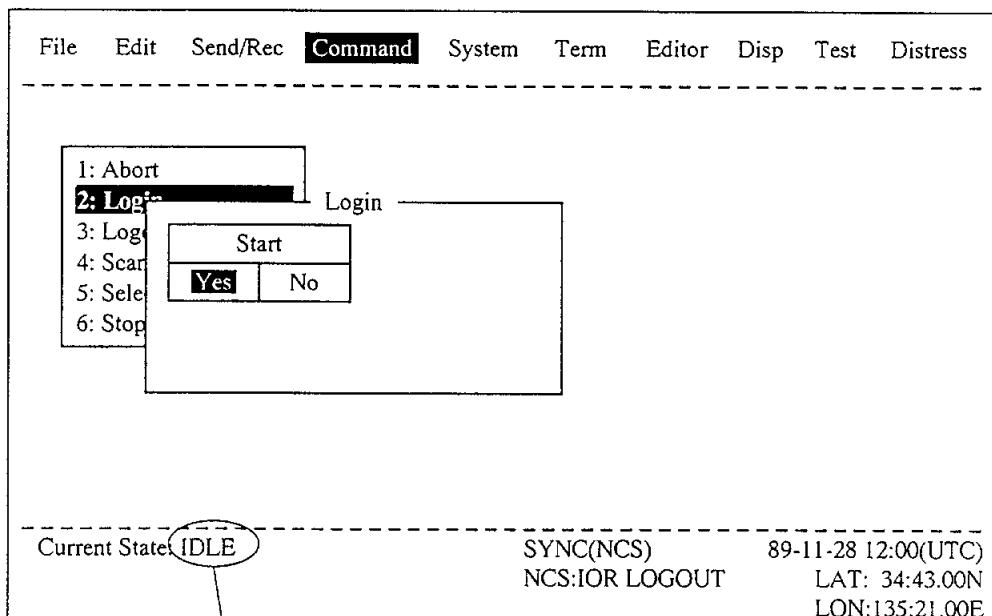
2. Press **2** to select Login.
Check that the Current State indication shows IDLE.

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    1: Abort
    2: Log              Login
    3: Log
    4: Scar      Start
    5: Sele    Yes    No
    6: Stop



Current State IDLE                         SYNC(NCS)          89-11-28 12:00(UTC)
                                           NCS:IOR LOGOUT           LAT: 34:43.00N
                                                                   LON:135:21.00E
```

Confirm that IDLE appears. If it does not, login operation can not be done.

3. Press **Enter**.

The FELCOM 10 starts login and LOGIN appears at the bottom of the screen and blinks.

```
 File    Edit    Send/Rec   [Command]   System   Term   Editor   Disp   Test   Distress
 ─────────────────────────────────────────────────────────────────────────────

    ┌─────────────┐
    │ 1: Abort    │
    │ 2: Login    ├──── Login ──────────────────┐
    │ 3: Logou    │                              │
    │ 4: Scan     │   Starting Login Process.    │
    │ 5: Select   │   Press any key to escape.   │
    │ 6: Stop     │                              │
    └─────────────┘                              │
                                                 │
                                                 └──────────────┘

                        ┌──── LOGIN appears.              Blinking
                       /                                 /
                      /                                 /
                     ↙                                 /
 ───────────────────────────────────────────────────────────────────────
 Current State: LOGIN              SYNC(NCS)          89-11-28 12:00(UTC)
 CALLING                           NCS:[LOGIN]             LAT: 34:43.00N
                                                      LON:135:21.00E
```
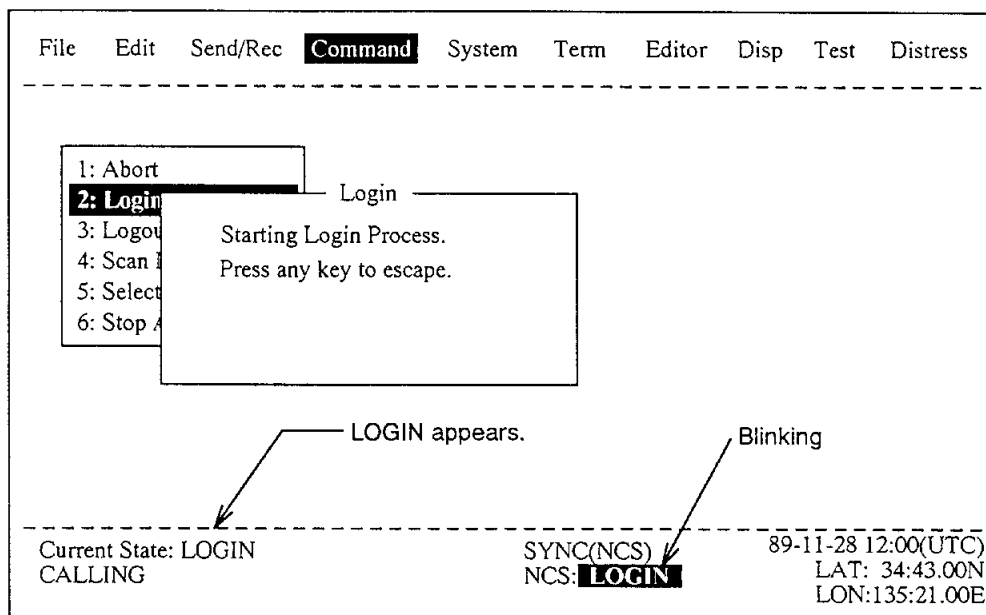
After completing the login, "Successful login" appears on the display.

System Initialization

Introduction
This section provides simplified instructions for entering the system settings. For further detail, refer to "SYSTEM INITIALIZATION" on page 2-2 to 2-5.

Procedure
1. Press **F5** to display the System menu.

2. Press **Enter** or **1** to display the System Setup screen.

```
 File    Edit    Send/Rec    Command    System   Term    Editor    Disp    Test    Distress
 ---------------------------------------------------------------------------------------
                                  System Setup
  ┌─┐
  │1:│ System Date (UTC)   9█-06-13   (YY-MM-DD)
  │2:│ ......................................................................
  │3:│ Preferred NCS        Auto/ AOR(WEST)/ AOR(EAST)/ POR/ IOR
  │4:│ ......................................................................
  │5:│ SES Operation Mode  INMARSAT-C/ EGC
  │6:│ Nav Port            OFF/ Auto/ GPS/ SATNAV/ LC/ LA/ DECCA/ OMEGA
  │7:│ DTE2 Port Sub-addr.
  └─┘ Message Output Port  DTE1/ DTE2/Auto (Depend on Sub Addr)
      EGC Output Port      DTE1/ DTE2/DTE1+DTE2 Port
      Polling Output Port  DTE1/ DTE2/Auto (Depend on Sub Addr)


 ------------------------------------------------------------------------------
 Current State: IDLE                   SYNC(NCS)              91-06-13 12:00(UTC)
                                       NCS:IOR LOGIN              LAT: 34:43.00N
                                                                 LON:135:21.00E
```

3. Enter date.
   1. Enter the last two digits of current year.
   2. Press → to advance the cursor to the month setting.
   3. Enter current month in two digits.
   4. Press → to advance the cursor to the day setting.
   5. Enter current day in two digits.

4. Press ↓ to advance the cursor to the Preferred NCS.

5. Press the arrow keys to select NCS.

6. Press ↓ twice to advance the cursor to the Nav Port.

7. Select the navigational equipment connected to the FELCOM 10.

OFF	No connection
Auto	Select this setting for multiple navigation device connection.
GPS	GPS
SATNAV	Satellite Navigator
LC	Loran C
LA	Loran A
DECCA	Decca
OMEGA	Omega

8. Press **Enter**.

Note

It is not necessary to change the settings of the following items.

SES Operation Mode	INMARSATC
DTE2 Port SubAddr	(No input)
Message Output Port	DTE1
EGC Output Port	DTE1
Polling Output Port	DTE1

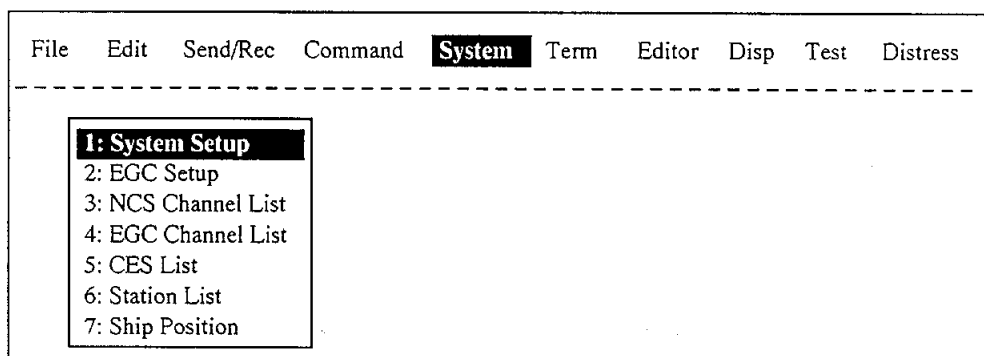Refer to pages 2-3 to 2-5 for the above settings.
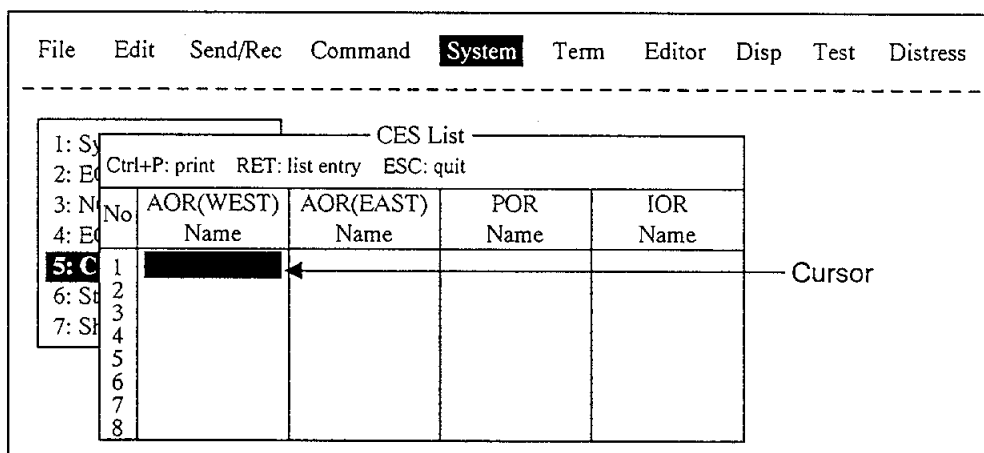
Programming the CES List

Introduction   The CES list provides storage for up to 44 CES IDs per ocean region.

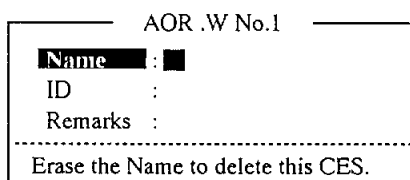**Procedure**   1. Press **F5** to display the System menu.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

     ┌──────────────────────────┐
     │ 1: System Setup          │
     │ 2: EGC Setup             │
     │ 3: NCS Channel List      │
     │ 4: EGC Channel List      │
     │ 5: CES List              │
     │ 6: Station List          │
     │ 7: Ship Position         │
     └──────────────────────────┘
```

2. Press **5**. The CES List appears.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  1: S┌──────────────┐────── CES List ──────────────────────────┐
  2: E│ Ctrl+P: print   RET: list entry   ESC: quit             │
  3: N│No│ AOR(WEST)  │ AOR(EAST)  │ POR      │ IOR      │
  4: E│  │   Name     │   Name     │ Name     │ Name     │
  5: C│ 1│██████████  │◄───────────────────────────────────────── Cursor
  6: S│ 2│            │            │          │          │
  7: S│ 3│            │            │          │          │
      │ 4│            │            │          │          │
      │ 5│            │            │          │          │
      │ 6│            │            │          │          │
      │ 7│            │            │          │          │
      │ 8│            │            │          │          │
```

3. With arrow keys place the cursor where no data is entered in region desired. Using the figure above as an example, the cursor is placed in the AOR(WEST) column.

4. Press **Enter**.

The cursor is on the Name line.

```
┌────────── AOR .W No.1 ──────────┐
│  Name      : █                  │
│  ID        :                    │
│  Remarks   :                    │
│ ─────────────────────────────── │
│  Erase the Name to delete this CES. │
└─────────────────────────────────┘
```

5. Enter CES name (maximum 15 characters).

6. Press ↓ to advance the cursor to the ID line.

7. Enter CES ID.
   The table on page 2-21 shows all current and future CES IDs.

8. Press ↓ to advance the cursor to the Remarks line.

9. If desired, enter remarks, using up to 20 characters.

10. Press **Enter** to register the CES.

11. To register another CES, repeat steps 3—10.

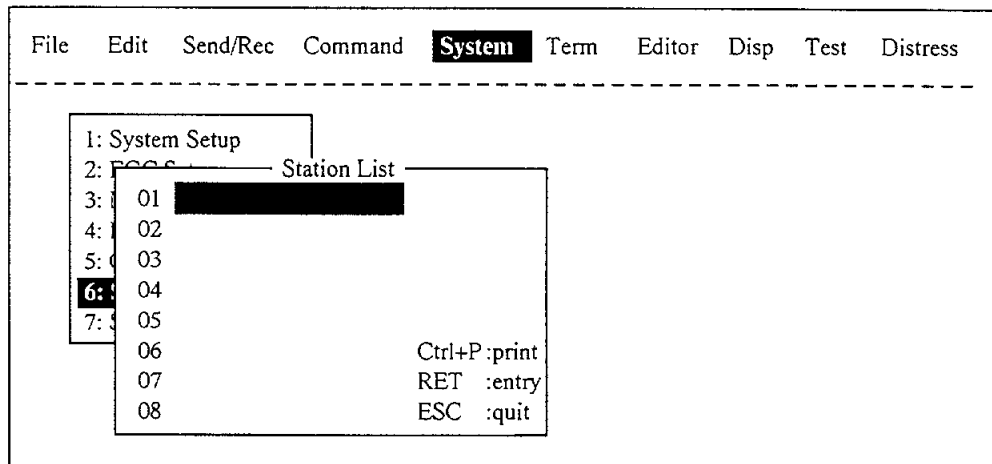12. To return to the default display, press **Esc** twice.
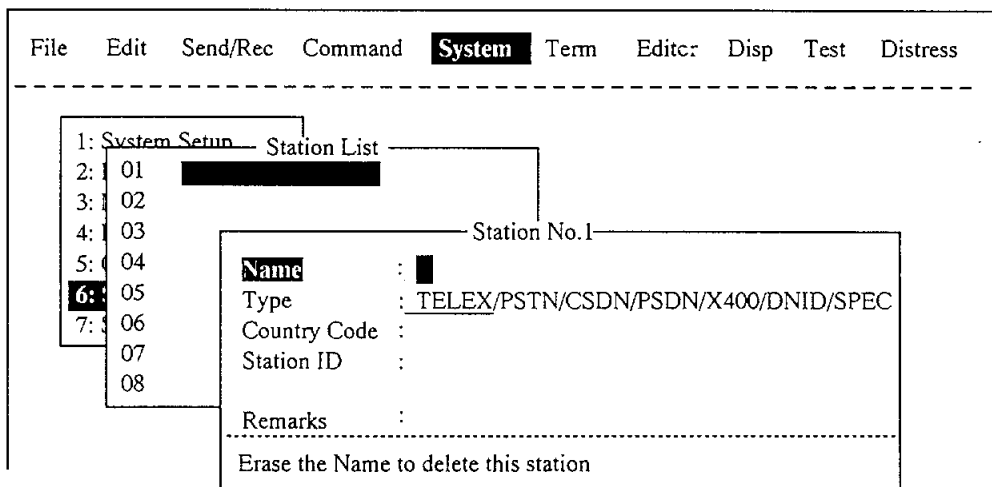
Programming the Station List

Introduction   The Station List provides an "address book" for programming up to 64 station IDs.

Procedure   1. Press **F5** to display the System menu.

2. Press **6** to display the Station List.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
---------------------------------------------------------------------------------------------

  1: System Setup
  2:              ┌──── Station List ────────────────┐
  3: │   01  ████████████████████
  4: │   02
  5: │   03
  6: │   04
  7: │   05
       06                          Ctrl+P :print
       07                          RET    :entry
       08                          ESC    :quit
```

3. Place the cursor on a blank line by pressing ↓ .

4. Press **Enter**.
   The cursor is on the Name line.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
---------------------------------------------------------------------------------------------

  1: System Setup ── Station List ──────────┐
  2: │ 01  ████████████████████
  3: │ 02
  4: │ 03               ┌──────── Station No.1 ──────────────────────┐
  5: │ 04               Name           : █
  6: │ 05               Type           : TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC
  7: │ 06               Country Code   :
       07               Station ID     :
       08
                        Remarks        :
                        --------------------------------------------------
                        Erase the Name to delete this station
```

5. Enter name of station, using up to 15 characters.

6. Press ↓ to advance the cursor to the Type line.

7. Select TELEX by operating arrow keys.

8. Press ↓ to advance the cursor to the Country Code line.

9. Enter telex network number. For ship-to-shore telex, enter international telex country code; ship-to-ship telex, enter ocean region. A list of international telex country codes begins on page A-3 in the Appendix.

Ocean region

AOR-WEST	584
AOR-EAST	581
POR	582
IOR	583

10. Press ↓ to advance the cursor to the Station ID line.

11. Enter telex subscriber number (for land) or SES Inmarsat Mobile Number (for vessel). Up to 15 characters, including space, can be entered.

12. Press ↓ to advance the cursor to the Remarks line.

13. If desired, enter remarks, using up to 20 characters.

14. Press **Enter** to complete station input.

13. To program another station, repeat steps 3—12.

15. To return to the default display, press **Esc** twice.

Preparing a Message

Introduction   Preparing a message is quite simple; just type text in the work area via the keyboard.

Procedure   1. Press **F1** to display the File menu.

2. Press **Enter** or **1** to select New.
   The text editor screen appears. The cursor is on the first line.

```
┌─────────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  ┌────────────────────< 1:UNTITLED 1 >─────────────────────┐ │
│  │ ■                                                        │ │
│  │  \──── Cursor                                            │ │
│  │                                                          │ │
│  │                                                          │ │
│  │                                                          │ │
│  │                                                          │ │
│  │                                                          │ │
│  └──────────────────────────────────────────────────────────┘ │
│  Current Status: IDLE          SYNC(NCS)         89-11-28 12:00(UTC) │
│                                NCS:IOR LOGIN     LAT: 34:43.00N      │
│                                                  LON:135:21.00E      │
└─────────────────────────────────────────────────────────────┘
```
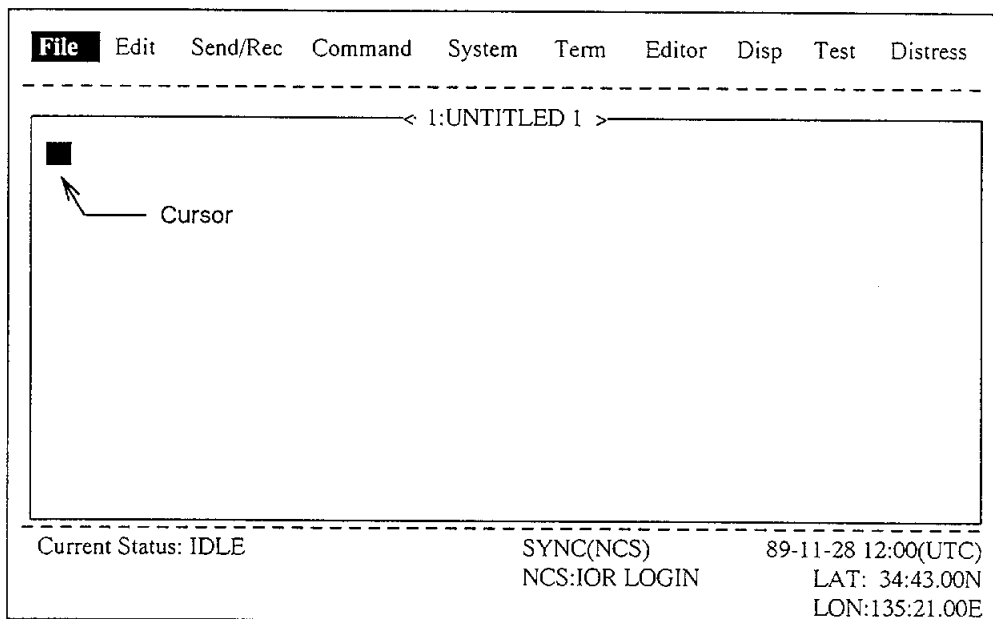
3. Type your message just as would do with an ordinary typewriter or word processor.

Transmitting

Introduction   This section shows you how to transmit a message you've just typed. For how to transmit a message stored on a floppy disk, see page 4-6.

Procedure   1. Press **F3** to display Send/Rec menu.

2. Press **Enter** or **1** to select Send.
   The Send menu appears.

```
File     Edit     Send/Rec     Command     System     Term     Editor     Disp     Test     Distress
- - - - - - - - - - - - - - - - - - - < 1:UNTITLED 1 > - - - - - - - - - - - - - - - - - - - - - - - - -
        ┌──────────────────── Send ────────┐
    │ 1: Send  │                              │
    │ 2: Data  │ 1: Send Message             │
    │ 3: Recei │ 2: Cancel                   │
    │ 4: EGC   │ 3: Request Delivery         │
    │ 5: Log   │ 4: Message Status           │
        └──────────────────────────────────┘
```

3. Press **Enter** or **1** to display the Send Message screen.

```
File     Edit     Send/Rec     Command     System     Term     Editor     Disp     Test     Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
┌──────────── Send ────────┐
│ 1: Send   │              │┌──── Send Message ──────────────────────┐
│ 2: Data R │              ││                                         │
│ 3: Receiv │ 2 │ Priority │ Normal / Distress                       │
│ 4: EGC    │ 3 │ Message File        Message now being edited   Size 12345
│ 5: Log    │ 4 │ Station Name
│           │       Destination Type      TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC
│                   Country/Ocean  Code
│                   Station ID
│                   CES ID
│                   Confirmation          ON / OFF
│                   Send Delay            00 : 00
│                   Delivery Delay        Immediate / Deferred
│                       space : open table              RET : Send Start
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Current State: IDLE                   SYNC(NCS)                91-2-28 12:00(UTC)
                                      NCS:IOR LOGIN               LAT: 34:43.00N
                                                                 LON:135:21.00E
```

4. Press ↓ twice to advance the cursor to the Station Name.

5. Tap the space bar.
    The station list appears.

6. Select a station with the arrow keys.

7. Press **Enter**.
    The station selected appears on the Station Name line. Destination
    Type, Country/Ocean Code and Station ID are entered automatically.
    The cursor moves to the CES ID line.

8. Tap the space bar.
    The CES list appears.

9. Select a CES with the arrow keys.

10. Press **Enter**.
    The CES ID selected appears on the CES ID line.

11. Press **Enter**.
    The Send Message confirmation screen appears.

12. Press **Enter** to send the message.
    The message "Message is entered in sending Buffer." appears and the
    message prepared is printed out.

Note

It is not necessary to change the settings of the following items.

Confirmation	**ON**
Send Delay	**00:00**
Delivery Delay	**Immediate**

Refer to pages 4-4 and 4-5 for above settings.

Receiving

Introduction

No operation is required for reception.
The printer PP-500 prints out a receive message automatically.
(Except confidential messages. Refer to page 4-20.)

Note

1. An audible alarm may be set to sound when a message is received. Refer to "Setting the receive alarm" on page 4-19.
2. A received message can be displayed by operating the keyboard. Refer to "Displaying and printing receive messages" on page 4-20.

Logout

Introduction   Logout cancels the registration of your ship to a NCS of the Inmarsat-C system.

Note   Logout operation should be done before turning the power off.
If you do not logout before turning off the FELCOM 10, the CES may attempt to send a message from a correspondent. **It may charge the correspondent, even if you never receive the message.**

Procedure   1. Press **F4** to display the Command menu.

2. Press **3**. The logout screen appears.

```
  File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 ─────────────────────────────────────────────────────────────────────────────────

   ┌──────────────┐
   │ 1: Abort     │
   │ 2: Log┌──────┴─────┐Logout ───────────────┐
   │ 3: Lo │    Start   │                       │
   │ 4: Sca│ ┌─────┬────┐                       │
   │ 5: Sel│ │ Yes │ No │                       │
   │ 6: Sto│ └─────┴────┘                       │
   └───────┤                                    │
           │                                    │
           └────────────────────────────────────┘


 ─────────────────────────────────────────────────────────────────────────────────
   Current State: IDLE                    SYNC(NCS)           89-11-28 12:00(UTC)
                                          NCS:IOR LOGIN          LAT: 34:43.00N
                                                                 LON:135:21.00E
```
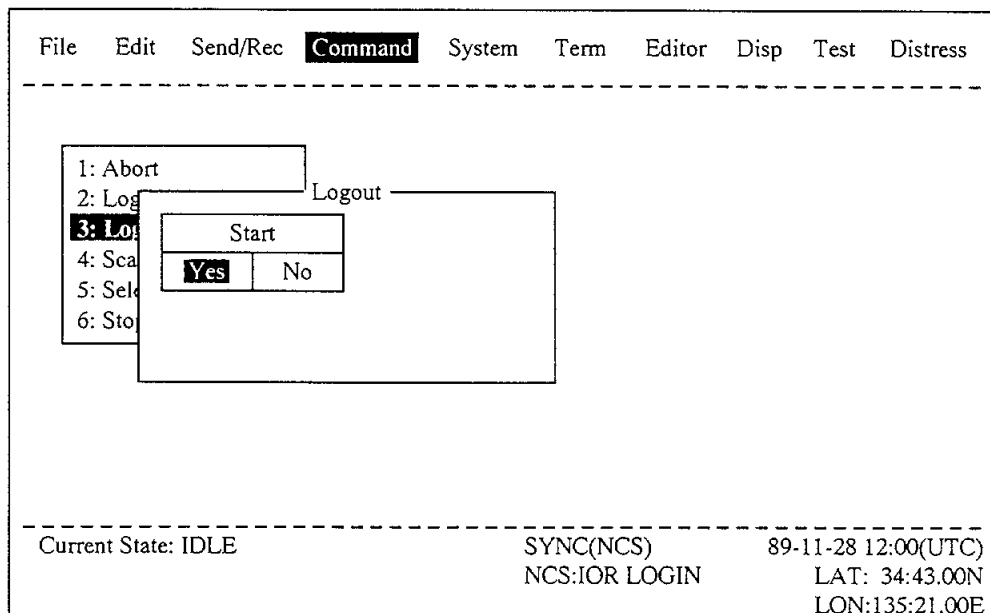
3. Press **Enter** to start logout.
     Logout begins and "Starting Logout process" appears on the display.

     After completing the logout, "Successful logout" appears.

4. Now you can turn off the power to the FELCOM 10.

Table of Contents

* These items are not displayed in 2nd DTE

FOREWORD

Furuno Electric Company thanks you for considering and purchasing the FELCOM 10 INMARSAT-C Ship Earth Station. We are confident you will discover why the Furuno name has become synonymous with quality and reliability.

Comprised of a lightweight and compact antenna unit (weight: 5 kg) and a communication unit, the FELCOM 10 provides the full range of distress and general communication services for mobile and fixed terrestrial subscribers in the INMARSAT-C communication network. Its compact size permits installation where space is limited.

While Furuno designs and manufactures this equipment with much attention to operation and maintenance simplicity, familiarity with it is important for good performance. Please read and follow the recommended procedures for operation, maintenance and installation.

This manual explains the principle of the Inmarsat-C system on pages 5 to 10.
If you want to get more detailed information, however, please refer to "Inmarsat-C Maritime User's Manual" published by Inmarsat headquarters. (It is free of charge.)
The following shows the address, telephone, fax and telex numbers of Inmarsat headquarters.

> *Inmarsat-C Maritime Customer Relations Officer*
> *Maritime Services Operations Department*
> *International Maritime Satellite Organization (Inmarsat)*
>
> *Address:*   *99 City Road, London EC1Y 1AX, UK*
>
> *Telephone:*   *+44 71 728 1000 (Switchboard)*
> *Fax:*   *+44 71 728 1192*
> *Telex:*   *297201 INMSAT G*

Features

■ Attractively styled antenna unit

■ Built in Enhanced Group Call (EGC) receiver permits operation as EGC-only receiver.

■ Communication unit accepts a wide variety of peripheral equipment including navigation device, Distress Message Controller, (DMC), personal computer and remote panel.

■ Connection of 2nd Data Terminating Equipment (DTE) for operation from bridge, etc.

■ Store-and-forward telex communication (public telex network).

■ Data reporting and Polling

■ Self test programs for maintenance.

■ Terminal unit provides floppy disk drive for unlimited storage of received and transmitted messages on floppy disks.

■ Menu driven operation.

About This Manual

A word about the organization of this manual: It is laid it in a user-friendly manner as possible. We realize a machine like this with its many, many functions can be a little intimidating to even the experienced SES operator. This is why we have arranged this manual in a series of sections that start at a basic level and proceed forward in complexity in a logical manner.

The best way to acquaint yourself with the many facilities this unit has to offer is to turn it on and try keying in the examples provided in each of the sections. In hardly no time at all you'll be enjoying the benefits of the INMARSAT-C system.

INMARSAT-C	This chapter explains the INMARSAT-C system.
FELCOM 10 System Configuration	Review this chapter to learn about the components which make up the FELCOM 10.
Operational Overview	This chapter introduces basic operations.
System Initialization	Read this chapter to learn how to initialize the FELCOM 10.
Message Handling	You will learn how to use the text editor in this chapter, to prepare, edit and save messages.
INMARSAT-C Communication	Read this chapter to learn how to transmit and receive in the INMARSAT-C system.
Data reporting and Polling	This chapter explains the data reporting setting and polling reception.
Distress Alert	This chapter tells you how to prepare and transmit the distress alert, and conduct distress communications.
Maintenance	The maintenance chapter presents information for keeping the FELCOM 10 in top operating condition.
Printer PP-500	Read this chapter to learn how to operate and maintain the optional printer.
Appendix	The appendix presents the specifications of the FELCOM 10, international telex country codes, international telex abbreviations, glossary of acronyms, error messages and alerts, international telegraphy alphabet.

Typographical Conventions

In this manual, the names of keys appear in boldface and typeface different from the text. For example, the **Enter** key. Names of switches and lamps appear in upper case. For example, POWER switch and LEVEL lamp.

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INMARSAT-C SYSTEM

This section provides an overview of the INMARSAT-C Satellite Communication System.

The INMARSAT-C Satellite Communication system provides worldwide telex and data transmission and reception of written information to owners of a INMARSAT-C transceiver or a terrestrial telex network via satellite.

Communication mode is store-and-forward method, which means all information sent are stored to a coast earth station and then delivered to designated party.

An EGC (Enhanced Group Call) receiver is built in the FELCOM 10 to receive the following types of messages, broadcast from a coast earth station.

- SafetyNET^{TM} - governments and maritime authorities can use this service to distribute maritime safety information to ships within selected areas.
- FleetNET^{TM} - commercial subscription organizations or shipping companies can use this service to transmit trade information (for example company news or market prices), simultaneously to a selected group of ships, to provide up-to-the-minute information, necessary for competitive operations.

FELCOM 10 allows you to make *distress calls* which are given immediate priority over all other calls, and are routed automatically to a land-based *Rescue Co-ordination Centre (RCC)*.

Besides its primary application of ship-shore, shore-ship or ship-ship communications, the INMARSAT-C service has also proved beneficial to transportation concerns who have found it indispensable for communicating with their vehicles. In this manual, however, we will concentrate on ship applications, the main application.

Contents

System Configuration
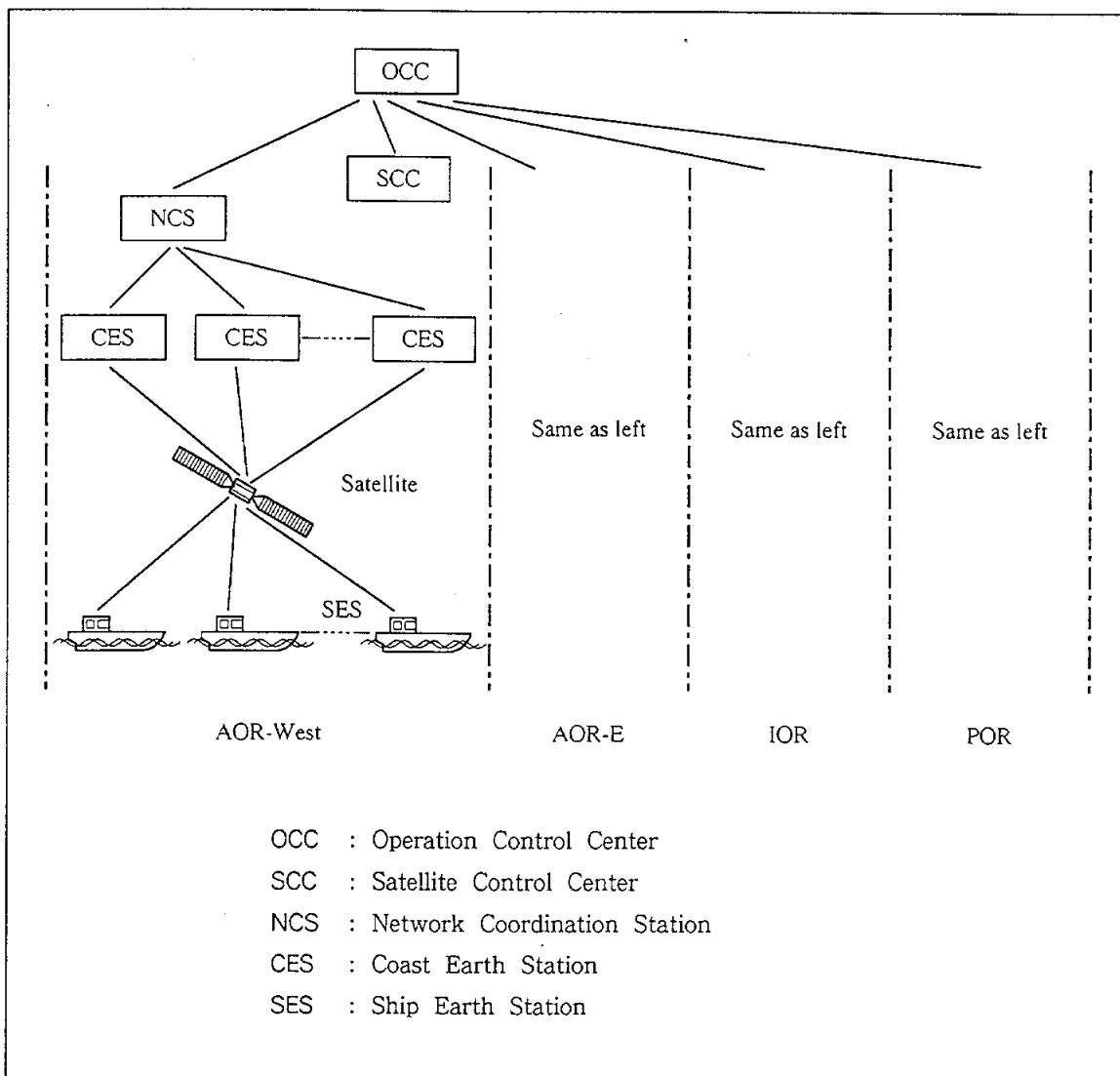
Figure 1 INMARSAT-C Satellite Communication System

The INMARSAT-C system consists of the Operation Control Center (OCC), Satellite Control Centers (SCC), Network Coordination Stations (NCS), Coast Earth Stations (CES) and Ship Earth Stations (SES). The OCC is the nerve center of the system and is located at INMARSAT's London headquarters. The OCC coordinates a wide range of activities in the INMARSAT system, including commissioning of ship earth stations.

The INMARSAT-C system divides the world into four regions and each region is covered by its own satellite.

Table 1 INMARSAT System Satellites

Region	Satellite	Satellite Position
AOR-West	Inmarsat–2, F4	54.0° W
AOR-East	Inmarsat–2, F2	15.5° W
IOR	Inmarsat–2, F1	64.5° E
POR	Inmarsat–2, F3	178.0° E

In each region there is one NCS and several CESs. The NCS keeps tracks of all INMARSAT-C transceivers in its region and broadcasts information such as navigational warnings, weather reports and news. The CES provides the link between the SES and the terrestrial telecommunications networks via satellite
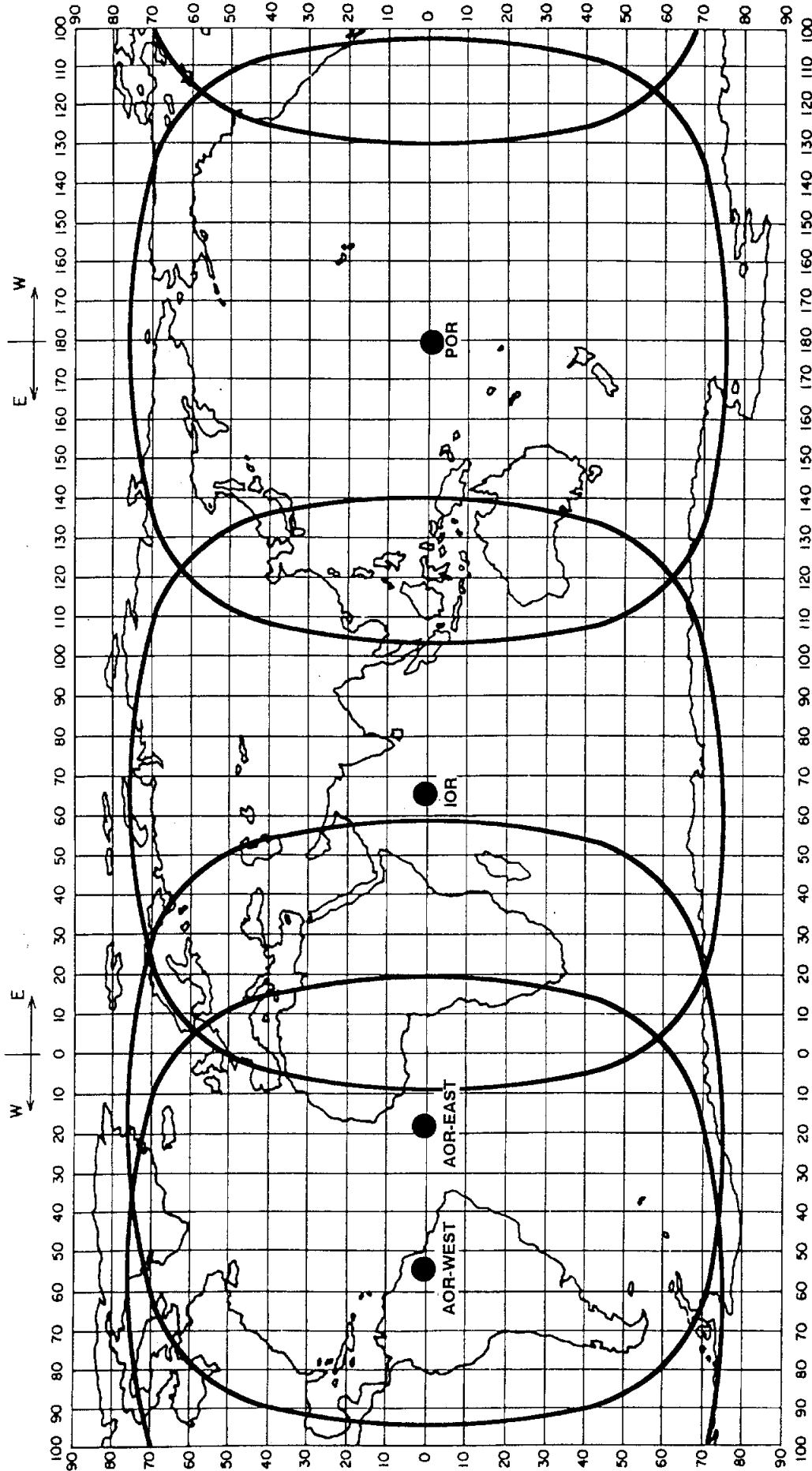
AREA	SATELLITE NAME	POSITION
POR	INMARSAT-2, F3	178° E
IOR	INMARSAT-2, F1	64.5° E
AOR-EAST	INMARSAT-2, F2	15.5° W
AOR-WEST	MARECS-B2	54.0° W

Figure 2 Coverage Area of Satellites

Communications Network

Figure 3 shows the INMARSAT-C communications network.
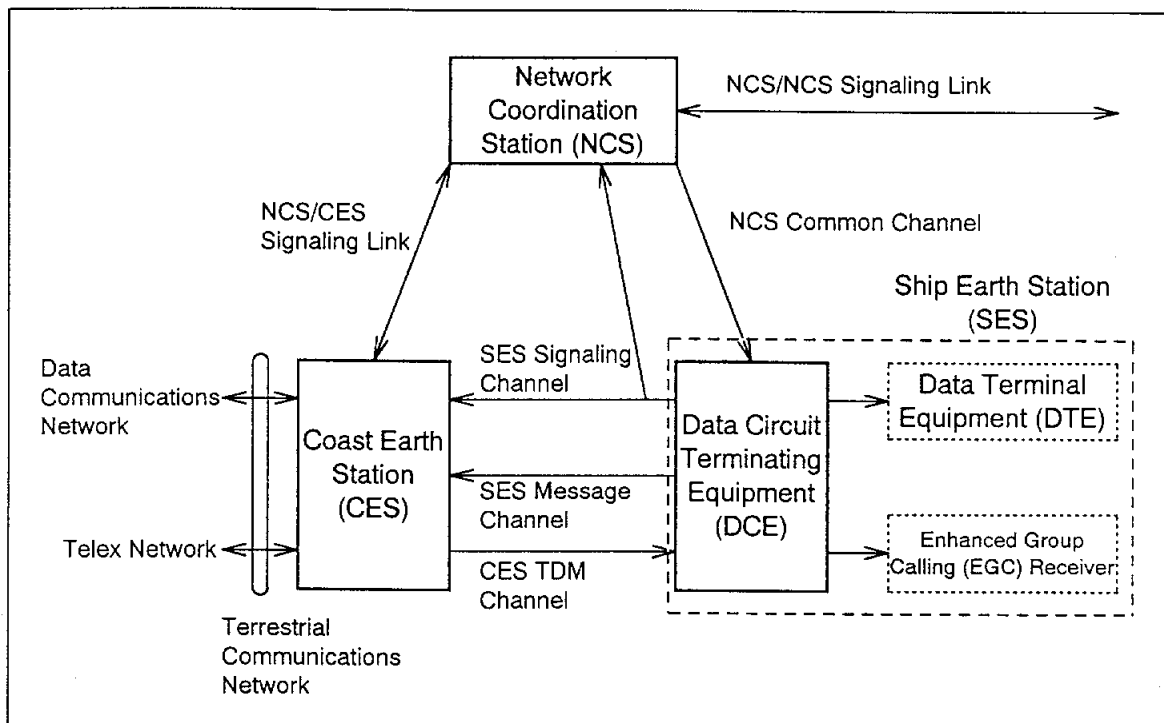
Figure 3 INMARSAT-C Communications Network

NCS common channel

The NCS has two major functions:
1) Transmitting information on a common channel.
2) Transmitting EGC messages to SES.

NCS/CES signaling link

This is the link between NCS and all CES in its region. All EGC messages pass through this link.

CES TDM channel

This channel carries the circuit control signal for SES and transmits messages from CES to SES.

SES message channel

This channel carries messages from SES to CES.

SES signaling channel

This channel transmits requests, distress alerts, data reports, etc. In addition, it carries login and logout from SES to NCS.

NCS/NCS signaling link

This is the link between NCSs. It exchanges data between SESs operating in different ocean regions.

SES interface

The SES consists of the Data Circuit Terminating Equipment (DCE) and the Data Terminal Equipment (DTE). The DCE consists of the antenna unit and the communication unit. And the DTE consists of the terminal unit, keyboard and printer, or a personal computer.

Terrestrial network interface

The major functions of the CESs in INMARSAT-C are:
1) Telex store-and-forward conversion
2) Handling EGC messages
3) Handling distress alerts
4) Data Reporting and Polling

types of SES

There are three types of SES: class 1, class 2 and class 3. The FELCOM 10 is a class 2 SES.

Class 1

1) Transmits messages to CES
2) Receives messages from CES

Class 2

1) The functions of class 1 plus operation as an EGC receiver when not transmitting or receiving.
2) EGC-only receiver

Class 3

The functions of class 1 plus simultaneous operation as a EGC-only receiver.

FELCOM 10 SYSTEM CONFIGURATION

The basic FELCOM 10 system consists of the DCE, comprised of an antenna unit and a communication unit. The communication unit has inputs for connection of external equipment including Distress Message Controller (for example, FURUNO DMC-5), navigator, Distress Message Button and up to two sets of DTEs, comprised of a printer, terminal unit and keyboard, or personal computer.

The terminal unit provides for unlimited storage of transmitted and received messages on floppy disks. Further, it contains a text editor for composing messages.
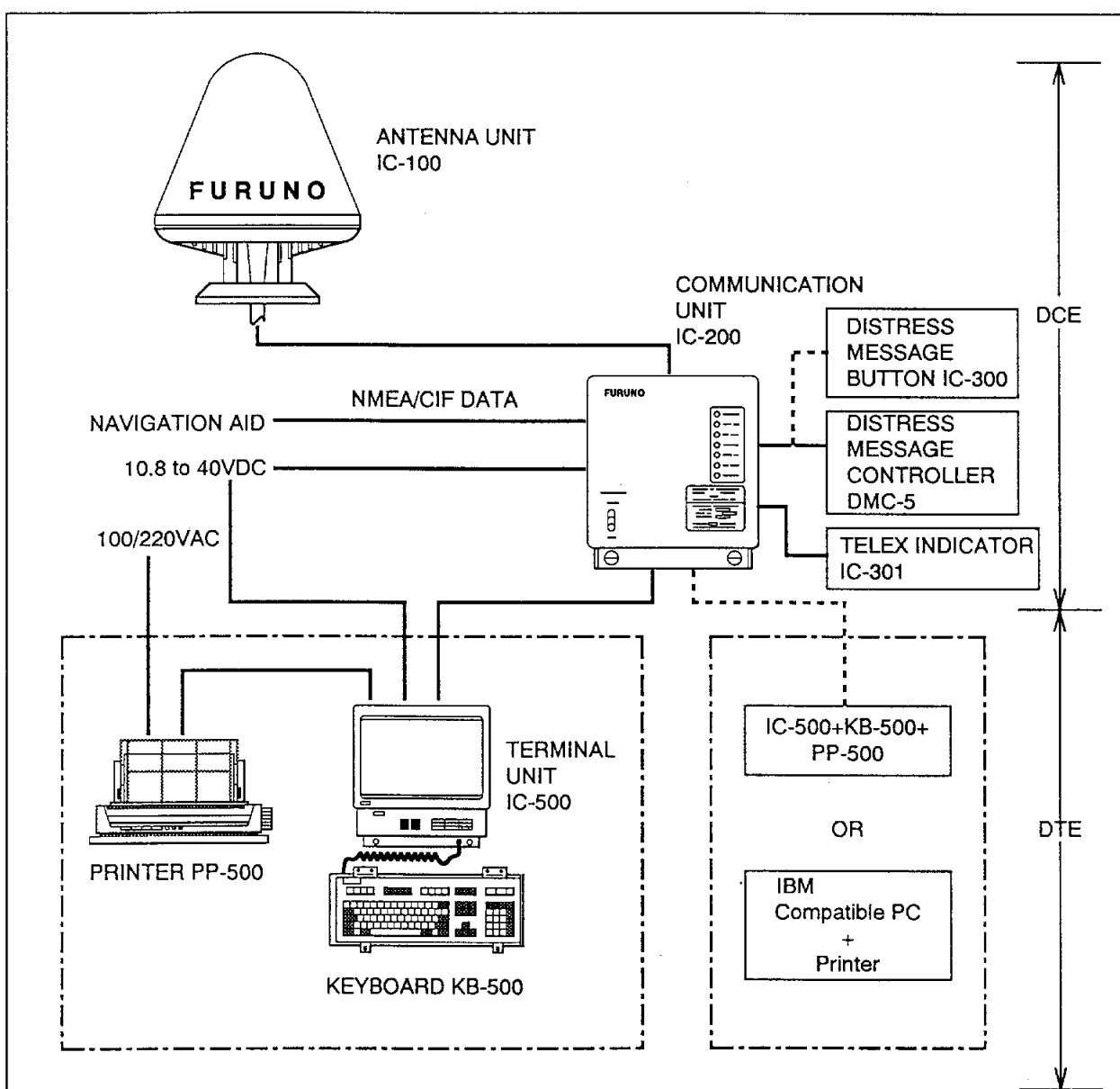
Figure 4 FELCOM 10 System Configuration

The following equipments can be additionally connected to the FELCOM 10.

Received Call Unit (IC-301)

The IC-301 releases an audible alarm when a message (except EGC broadcast) is received. (Refer to page 4-25 for more details.)

Distress Alert Unit (IC-300)

The IC-300 enables transmission of the distress alert from remote locations; for example, ship's bridge and informs a receipt of an EGC distress or urgent message with a buzzer and lamp. (Refer to page 6-12 for more details.)

Distress Message Controller (DMC-5)

The DMC provides for transmission and monitoring of the distress alert in multiple communications unit applications. (Refer to operator's manual of the DMC-5.)
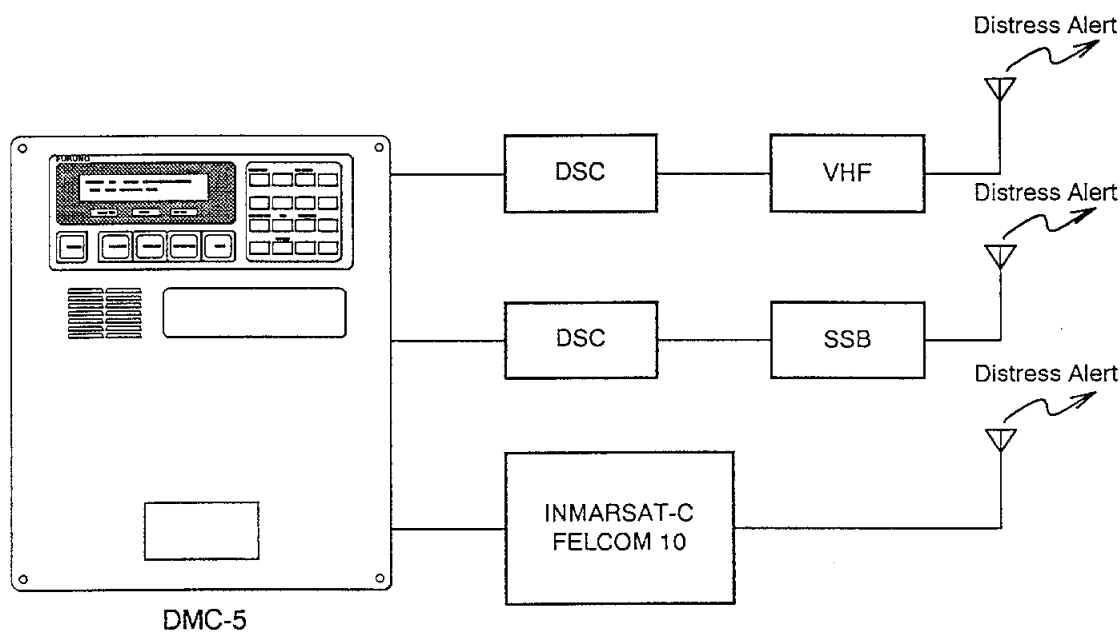
Figure 5 Distress Message Controller System

OPERATIONAL OVERVIEW

This chapter introduces you to the components of the FELCOM 10 system and gets you started in operation.

Contents

The Communication Unit

The communication unit is the heart of the FELCOM 10 system, transmitting and receiving messages and alerting you to equipment fault.

On its front panel you should see the POWER switch and seven lamps. Normally, the power is left on while underway. The lamps show operational status and self-test sequence.
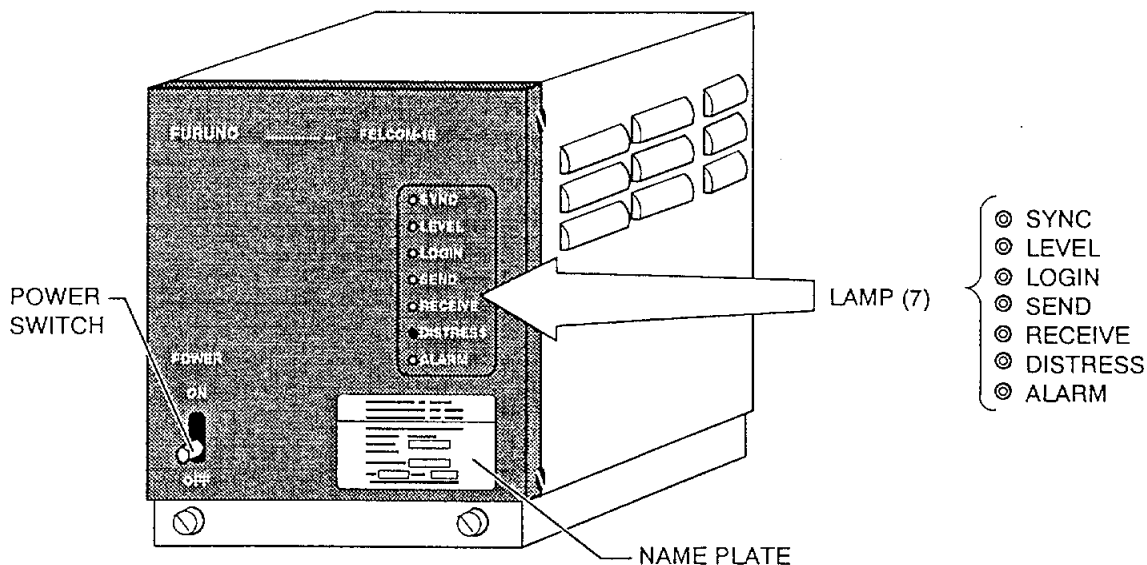
Figure 1-1 Communication Unit IC-200

Self test

When the communication unit is turned on it conducts a series of self-tests to check itself for proper operation. The test sequence is shown by the lamps on the front panel as follows:

1) When turning on the power an audible alarm is released and all lamps light for five seconds, then go off.
2) Each lamp blinks one by one from bottom to top.
3) Each lamp extinguishes one by one from bottom to top.
4) All lamps blink once and the audible alarm sounds.
5) All lamps go off. (End of test)

If the self-test detects equipment fault the (red) ALARM lamp blinks continuously and the lamp corresponding to the offending device lights. More on the functions of these lamps in the chapter on maintenance.

Normal operation and the front panel lamps

Having successfully completed the self test, the communication unit automatically starts to synchronize itself with the satellite signal. If the level of the satellite signal is normal the LEVEL lamp lights. Synchronization normally takes about 30 seconds, at the completion of which the SYNC lamp lights. (Synchronization can take as long as 2–3 minutes in some instances.)

The other lamps light up in the following conditions:

LOGIN	Lights when the FELCOM 10 is logged in at a NCS.
SEND	Lights during transmission.
RECEIVE	Lights when a message comes and goes off after printing it out.
DISTRESS	Starts blinking when the distress alert is transmitted, and stops blinking and remains lit when the distress acknowledge signal is received from CES.
ALARM	Blinks while the audible alarm is sounding.

When the audible alarm sounds

The audible alarm sounds in the following circumstances:

1) EGC distress or urgent message is received.
   (To silence the alarm, press **F4**, then **6** keys to execute the Stop Alarm command on the Command menu.)

2) During the interval between the transmission of the distress alert (by own vessel) and the receiving of the distress acknowledge signal from CES.
   (The alarm stops when the distress acknowledge signal is received.)

3) The system status monitor detects equipment fault.
   (To silence the alarm, press any key.)

The ALARM lamp lights, the audible alarm sounds and the terminal unit displays which alarm is sounding.

The Terminal Unit IC-500

The terminal unit consists mainly of a CRT and a floppy disk drive. All operations are carried out from the terminal unit, through an easy-to-understand menu system.
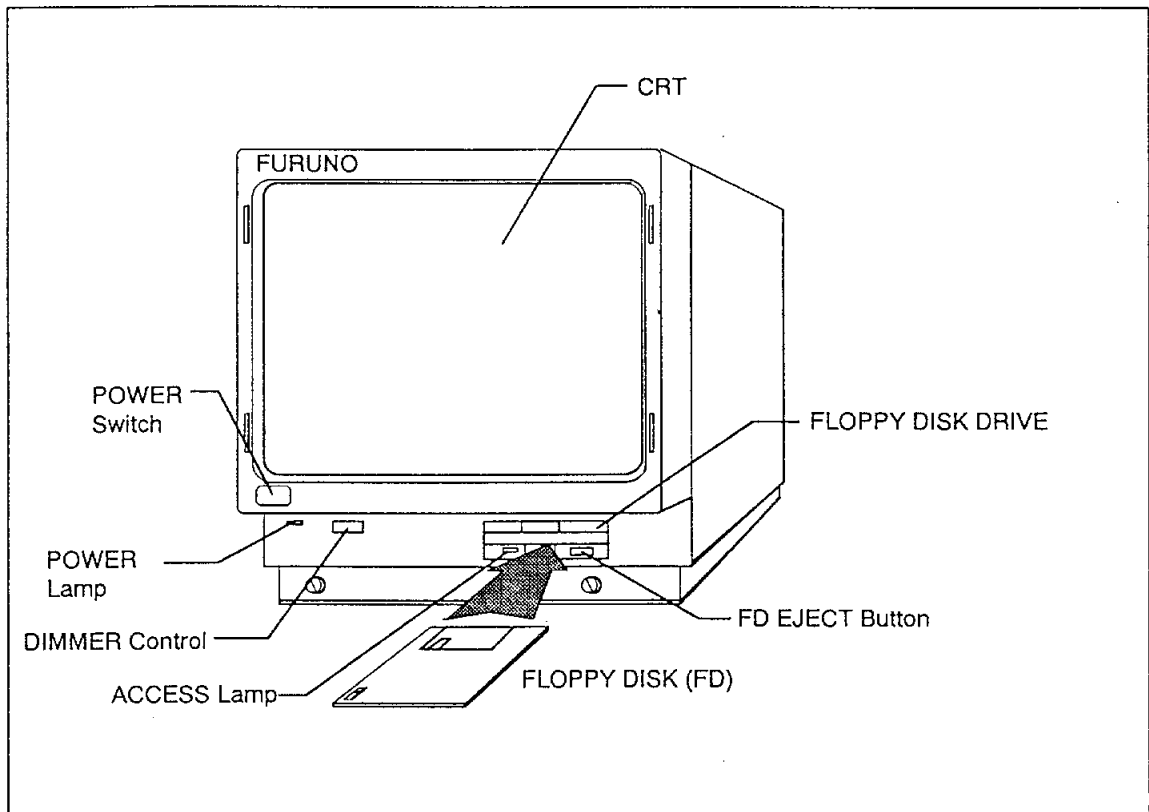
Figure 1-4 Terminal Unit IC-500

To turn on the unit, press the POWER switch. (The lamp above the switch lights when the power is on.)

A control for adjustment of screen brilliance is next to the POWER lamp.

Floppy disk drive

The terminal unit provides a floppy disk drive for storing transmitted and received messages on floppy disks.

Floppy disk

The floppy disk used with the system is a (commonly available) 2DD (double sided double density) 3.5" floppy disk. Figure 1-5 illustrates the parts of a floppy disk.
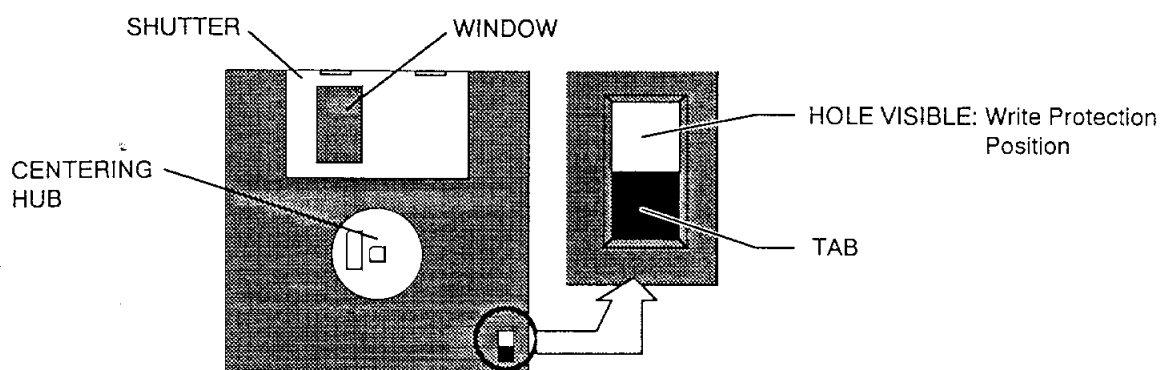
Figure 1-5 Parts of the Floppy Disk

The shutter closes to protect the magnetic surface of the disk from foreign material and sharp objects, when the floppy is not being accessed. Thus you should not attempt to open it manually.

inserting and removing a floppy disk

First confirm that the terminal unit is on. Then, insert the disk into the drive such that the arrow on the disk is pointing forward and is on the left. Release hold of the disk when the eject button pops out, indicating the disk is properly inserted. **NEVER TURN ON THE POWER WITH A FLOPPY DISK INSERTED IN THE DRIVE.**

To remove a floppy disk, first confirm that the (orange) access lamp on the drive is off, then press the eject button. **NEVER REMOVE A FLOPPY DISK WHILE THE ACCESS LAMP IS LIT, SINCE THIS MAY ERASE INFORMATION STORED ON THE DISK.**

care and handling

Proper care and handling of the disk is important for preserving the information stored there.

Keep disks away from direct sunlight, heat sources, and active gases. Do not place a disk near any magnetic field, since this erases all information stored on the disk. Television sets, telephones and large appliances are common objects which emit magnetic fields. Keep your disks at least a foot — preferably more — away from such devices. After use, replace the disk in its protective case and store it in a cool, clean place. You should always label your disks so you can know what you have stored on them and to help find the disk you need quickly.

write protection tab

Each floppy disk has a write protection tab which prevents accidental erasure of information stored on the disk. To disable writing to the disk, move the tab downward. (See Figure 1-5.)

Printer PP-500 (optional supply)

The printer prints out transmitted and received messages. The POWER switch is on the right side of the unit. A lamp on the switch lights when the power is on. If the paper is set correctly the SELECT lamp also lights. When both these lamps are lit the printer is ready to print information received from the terminal unit.
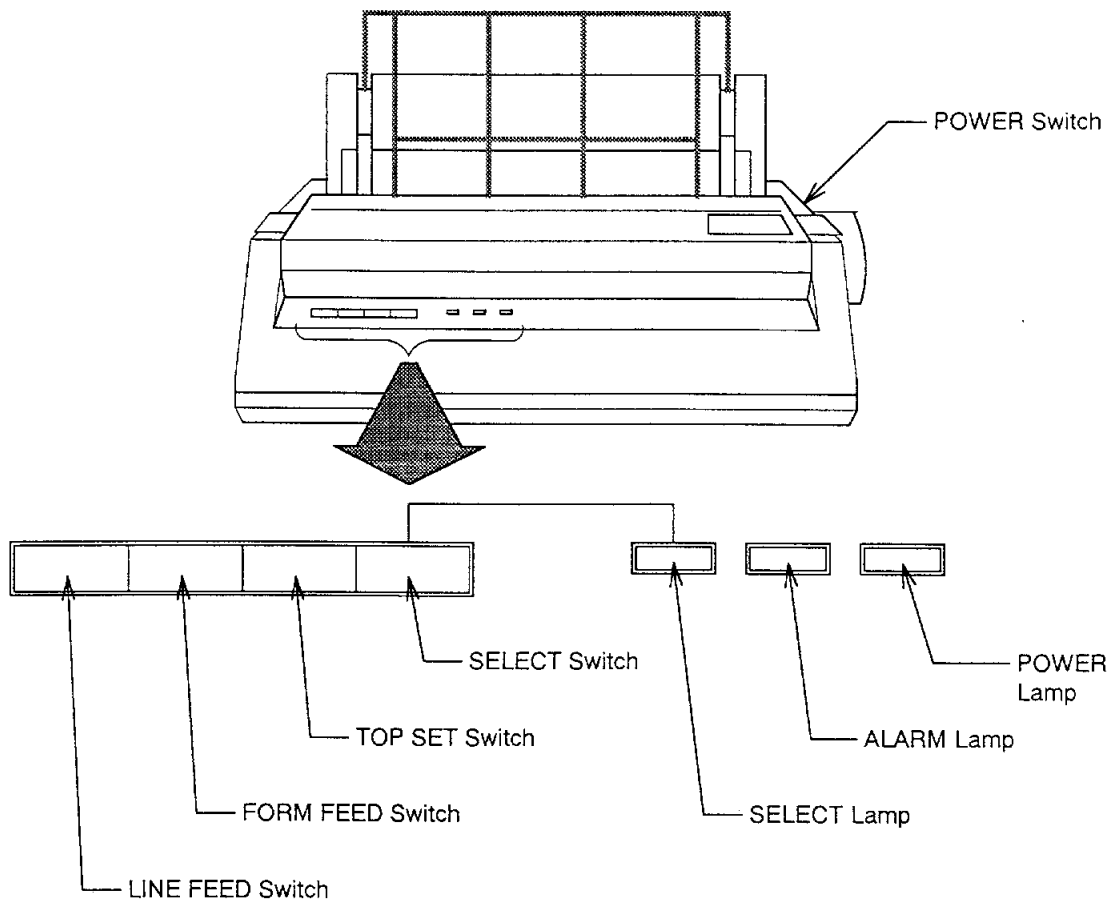
Figure 1-6 Printer PP-500

Keyboard KB-500

The keyboard is an IBM type alphabet keyboard with cursor controls for operating the system. The keyboard is powered from the terminal unit through the supplied connection cable.

The FELCOM 10 is almost 100% keyboard controlled. Operation is simplified by the use of menus which you access by pressing function keys, numbered F1–F10 at the top of the keyboard. Figure 1-7 shows the location of keys.
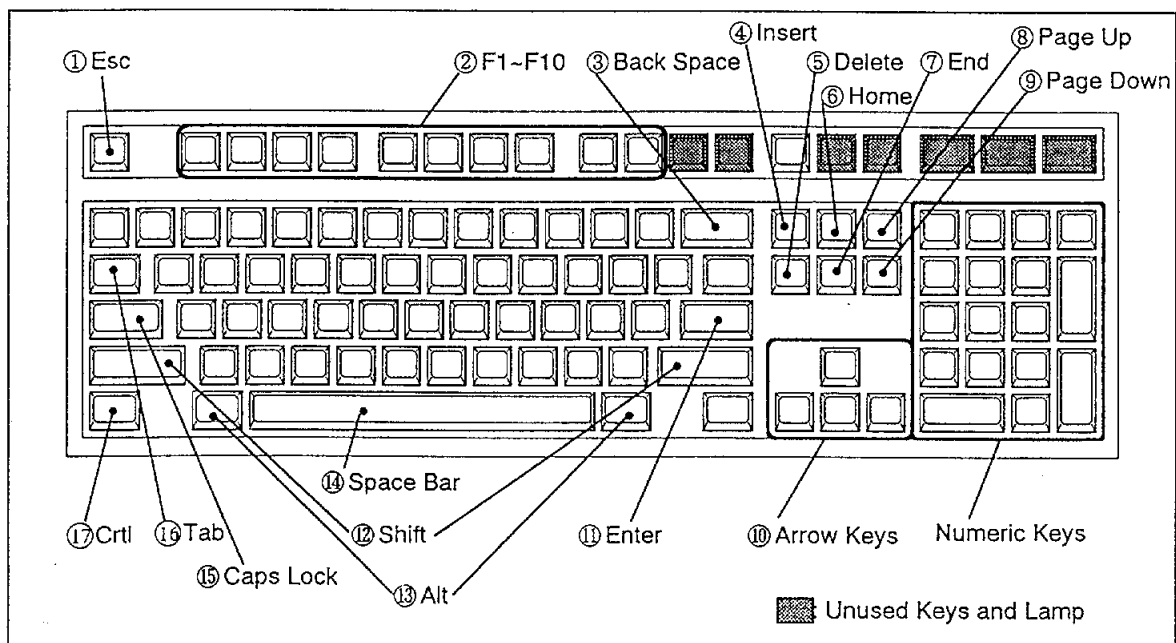
Figure 1-7 Keyboard

Note: All dip switches located at the bottom of the keyboard should be set to "OFF".

Description of keys

1. Esc	Cancels key input and returns to previous display screen.
2. F1–F10	These are the function keys. They select menus.
3. Back Space	Deletes the character to the left of the cursor.
4. Insert	Works the same as PASTE function. See page 3-6.
5. Delete	Deletes the character to the right of the cursor.
6. Home	Moves the cursor to the top of a message being edited.
7. End	Moves the cursor to the bottom of a message being edited.
8. Page Up	Goes to the previous page of the edit screen.
9. Page Down	Goes to the next page of the edit screen.
10. [↑], [↓], [←], [→]	Control the cursor.
11. Enter	Registers key input.
12. Shift	Selects upper or lower case letter. Press and hold down the key to get upper case letters. Note that only upper case letters are used in telex.
13. Alt	Facilitates the shortcut key operation when combined with an alphabet key.
14. Space Bar	Inserts a space when pressed. In addition, it displays file list, partial view of a file, etc. depending on menu.
15. Caps Lock	Turns upper case letter input on or off. CAPS appears on the display when the keyboard is set for upper case letter input.
16. Tab	Inserts horizontal tab characters. The number of tab characters the key can insert per line of text can be programmed for two, four or eight tabs.
17. Ctrl	Works as follows, by pressing an alphabet key while holding down the Ctrl key.

Ctrl + [E]	Same as [↑]
Ctrl + [X]	Same as [↓]
Ctrl + [S]	Same as [←]
Ctrl + [D]	Same as [→]
Ctrl + [M]	Same as Enter.
Ctrl + [[]	Same as ESC.
Ctrl + [H]	Same as Back Space.
Ctrl + [I]	Same as Tab.
Ctrl + [V]	Same as Ins.
Ctrl + [P]	Starts printing on some screens.

NOTE: In telex, lower case, #, &, *, $ or % are not used. A full list of characters useable in telex appears on page A-9 in the Appendix.

Function menus

The function menus, which you access by pressing the function keys (F1–F10) at the top of the keyboard, control most operations of this unit.
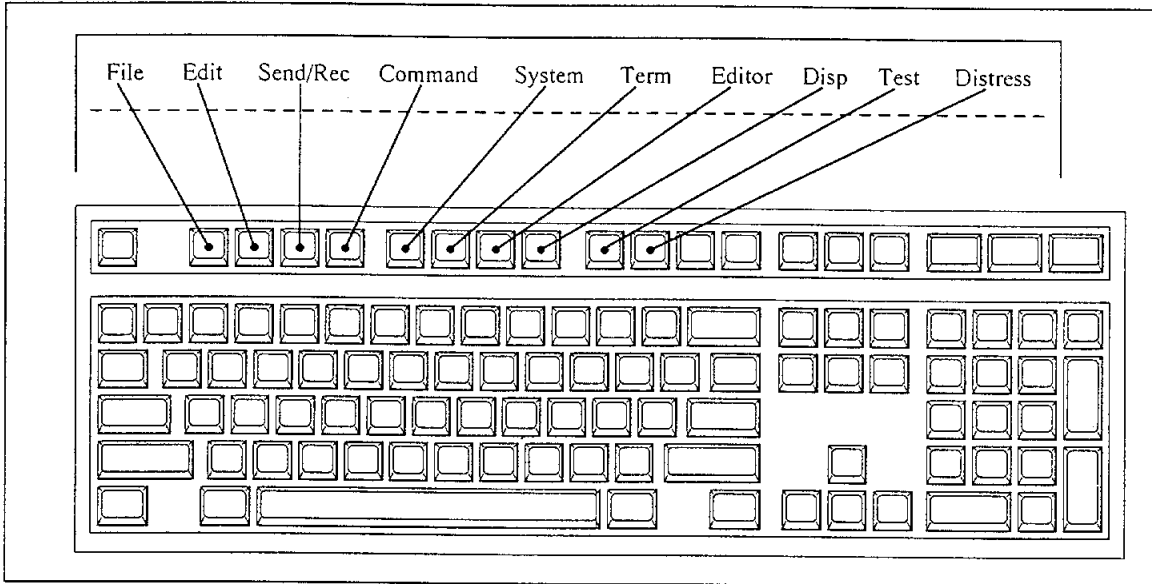
Figure 1-8 Function Menus

To get into the File menu, for example, press F1. The indication File appears in reverse video and the File menu shows up on the screen.
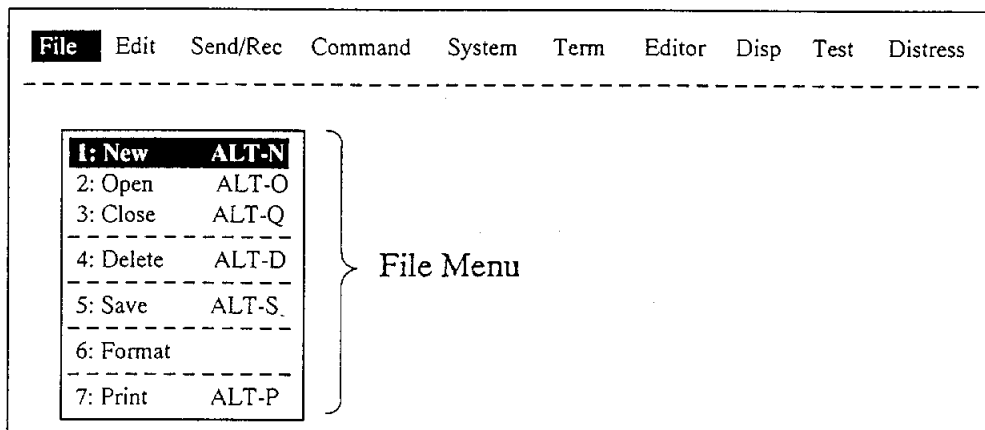
Figure 1-9 File Menu

reverse video

As you move the cursor down through a menu, each menu option, initially shown as white on black, reverses to black on white. This highlighting indicates that the item is available for selection. In Figure 1-9, for example, "New" is available for selection. Pressing the arrow key can select the item available followed by the Enter key. Or pressing the numerical key executes the item with that number.

underline

The underline on menu screens shows current selection. In Figure 1-10, for example, the underline is beneath Auto Log Print OFF, Receive Alarm OFF and DTE Type Main.
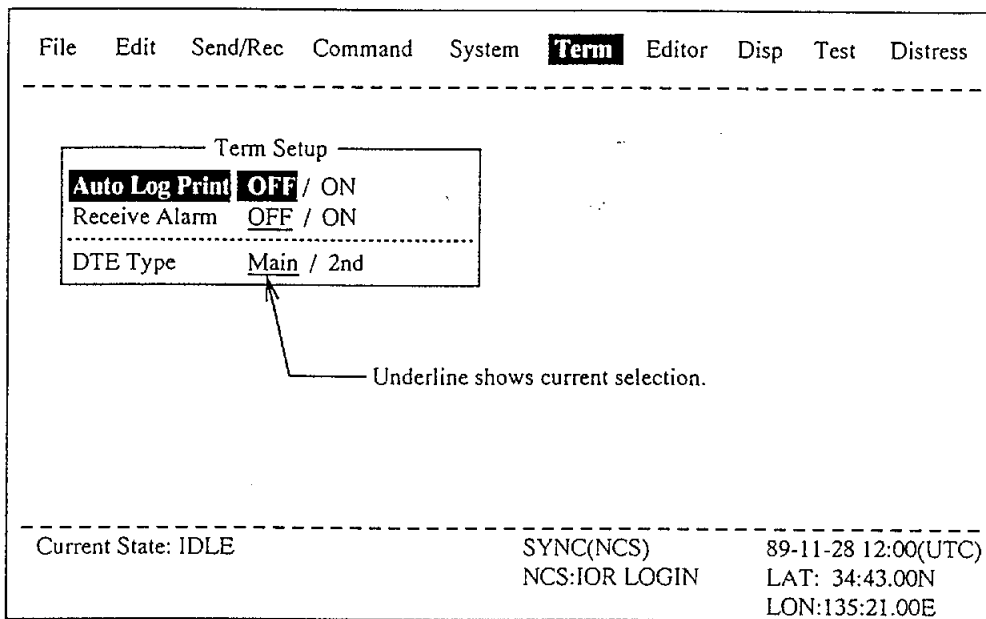
Figure 1-10 Term Menu

Shortcut Key Operation

The FELCOM 10 provides the key board shortcuts shown below for commonly used functions. These shortcuts can be used without pressing a function key.

Short Cut Key	
ALT + N	Same as **NEW** in File menu
ALT + O	Same as **OPEN** in File menu
ALT + Q	Same as **CLOSE** in File menu
ALT + D	Same as **DELETE** in File menu
ALT + S	Same as **SAVE** in File menu
ALT + P	Same as **PRINT** in File menu
ALT + X	Same as **UNDO** in Edit menu
DELETE	Same as **CUT** in Edit menu
ALT + C	Same as **COPY** in Edit menu
INSERT	Same as **PASTE** in Edit menu
HOME	Same as **GOTO TOP** in Edit menu
END	Same as **GOTO BOTTOM** in Edit menu
ALT + V	Same as **CHANGE WINDOW** in Edit menu

Display Control

The function keys, arrow keys, **Esc** key and **Enter** key control the display.

Figure 1-11 shows how these keys work.
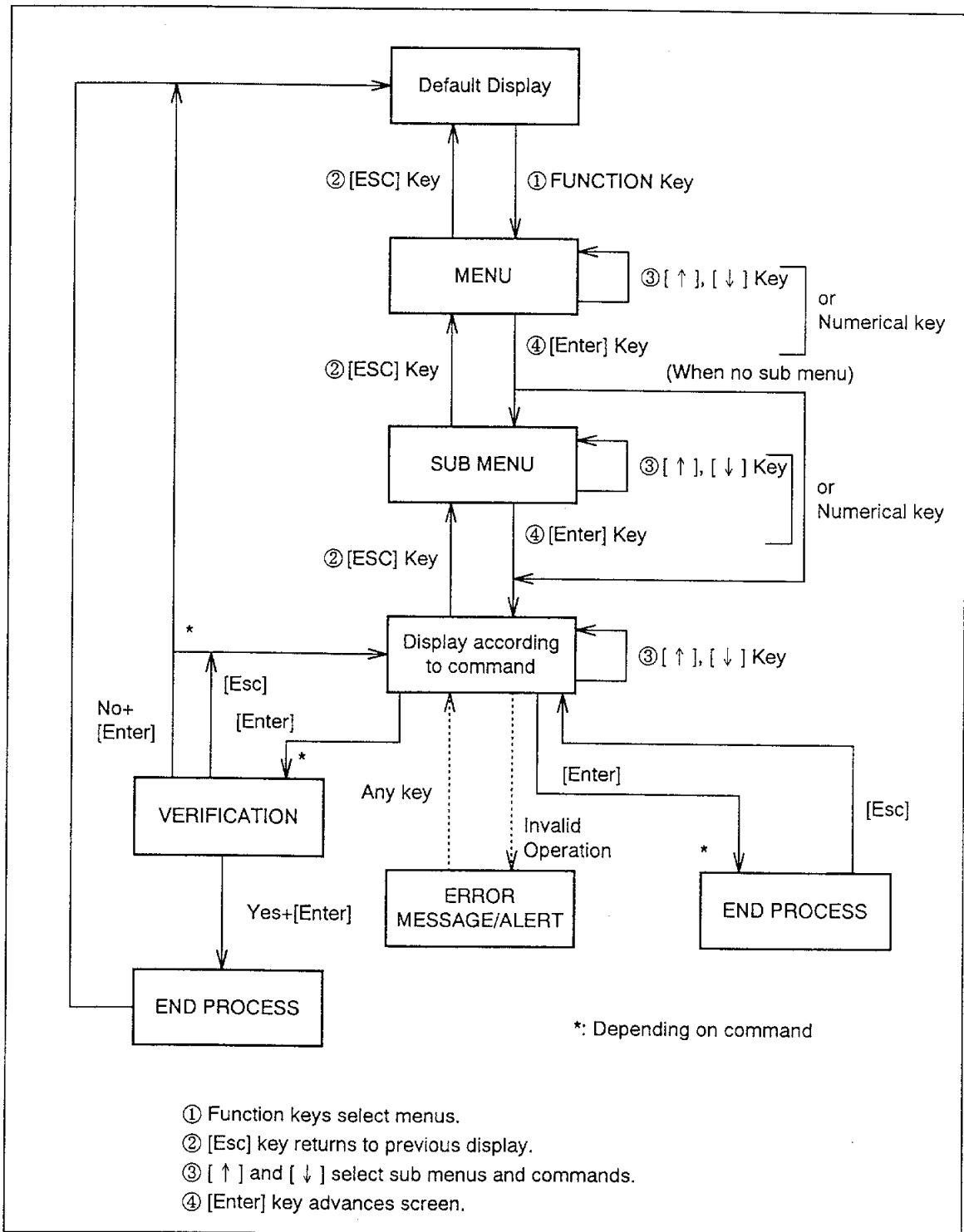
Figure 1-11 Keys Used for Display Control

For example, you want to display a received message. First, press **F3** to select the Send/Rec menu.
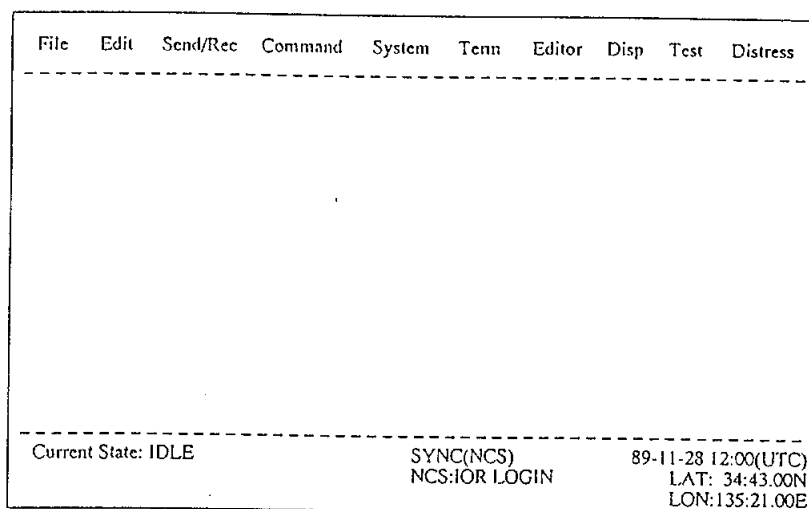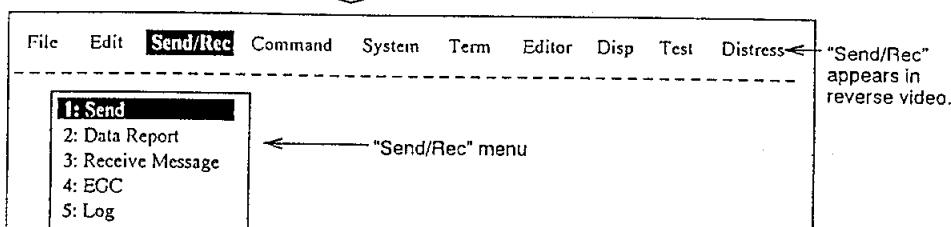
Press [2] to select Receive Message. The following screen appears.
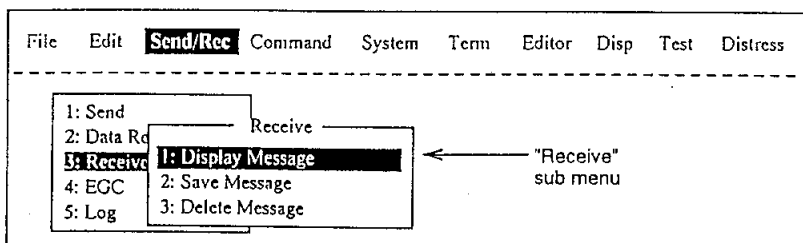
Press [1] to display the received message list.
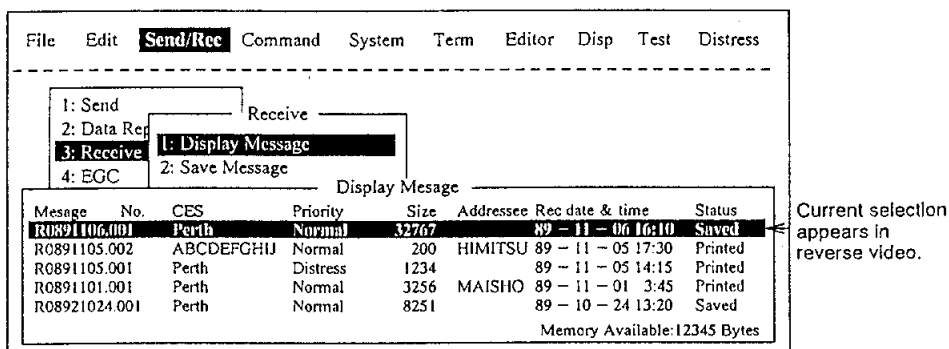
Select the message you want to display by pressing [↑] and [↓] followed by the **Enter** key.

Display Indications

The display is divided in three sections:

1) The menu area
2) The working area
3) The operational status area
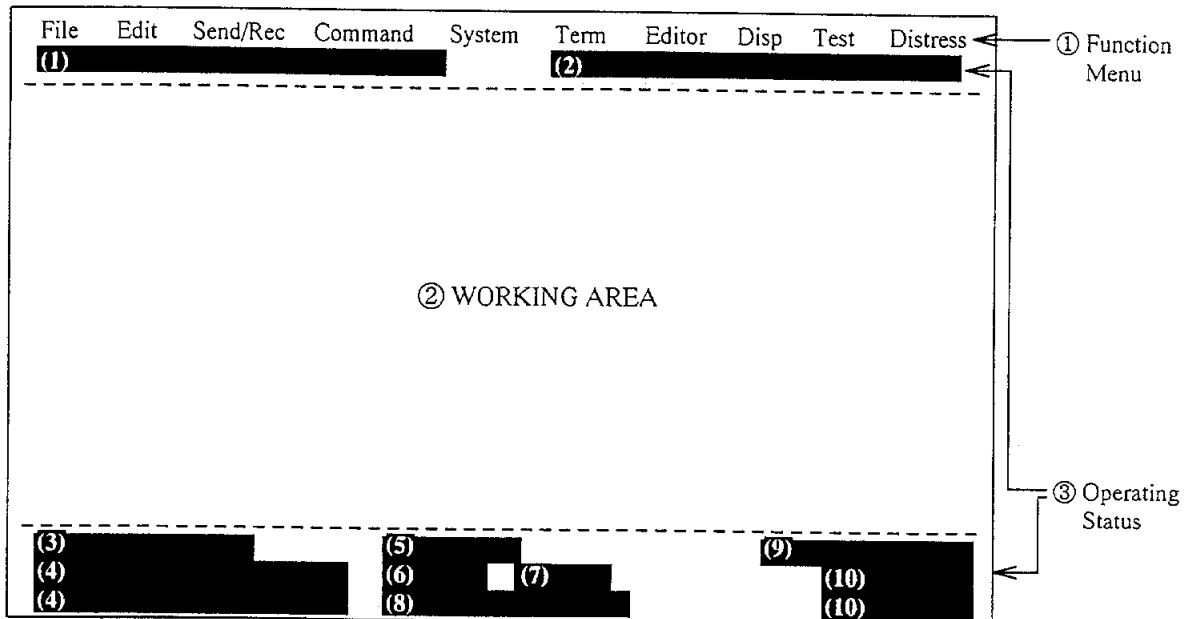
Figure 1-12 Location of Display Indications

(1) Distress alert information

No display (no distress alert)

Distress Alert Activated

Distress Alert Test Activated

Distress Alert Acknowledge Received

(2) Communication network mode

No display	Normal operation
Restoration Mode (blinking)	Problem at NCS.
Restoration Mode (reverse video)	Previously designated CES is transmitting the NCS common channel signal.

(3) Communication unit status

Idle	Idle (awaiting receiving, awaiting transmitting)
Idle (pending)	Awaiting reply from CES
Sending	During message transmission
Receiving	During receiving
Login	Logging in with NCS
Logout	Logging out with NCS
Distress Alert	When own vessel is transmitting the distress alert.
Data Report	During transmission of data report
Testing	PV testing
Test Setup	Requesting PV testing
Scanning	NCS scanning
EGC RECEIVER (reverse video)	EGC-only receiver operation
Delivery Status Req.	When transmitting delivery status request
Forced Clearing	When stopping receiving, transmitting, or scanning

(4) Communication unit remarks

This area provides remarks about communication unit status.

(5) Frame synchronization

Blank	When changing channel, or during transmission
SYNC (NCS)	Synchronizing with NCS
SYNC (CES)	Synchronizing with CES
UNSYNC	Out of synchronization
Retuning	Under synchronization to NCS or CES

(6) Ocean region receiving

No display	Out of synch with satellite
AOR-W	Atlantic Ocean Region-West
AOR-E	Atlantic Ocean Region-East
IOR	Indian Ocean Region
POR	Pacific Ocean Region

(7) Logging status

LOGOUT	Logged out with ocean region
LOGIN	Logged in with ocean region
LOGIN (blinking)	Logging in with ocean region

(8) Other information

No display	No receive message in memory, or printer is in operation.
REC. MESSAGE EXISTS (blinking)	Displayed when a routine message is not printed out, or a message is confidential.
DATA REPORT (reverse video)	When data report is activated.

(9) Date and time display

The date (set at system settings) and time (set by satellite) appear and are updated every minute.

(10) Ship's position

Ship's position can be displayed on the terminal unit if the DCE receives navigation input. If there is no navigation input manually input L/L position, entered on the Ship Position screen, appears here.

Error Messages and Alerts

The terminal unit displays error messages and alerts to call your attention to misoperation, failed operation and system error. A list of error messages and alerts appears on pages A-13 through A-15 in the Appendix.

```
 File    Edit    Send/Rec   Command    System    Term    Editor   Disp   Test   Distress
 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _


                                    Untitled 1
  FROM FRONTIER

  TO   FURUNO


      Warning message....




                   ERROR MESSAGE/ALERT
```
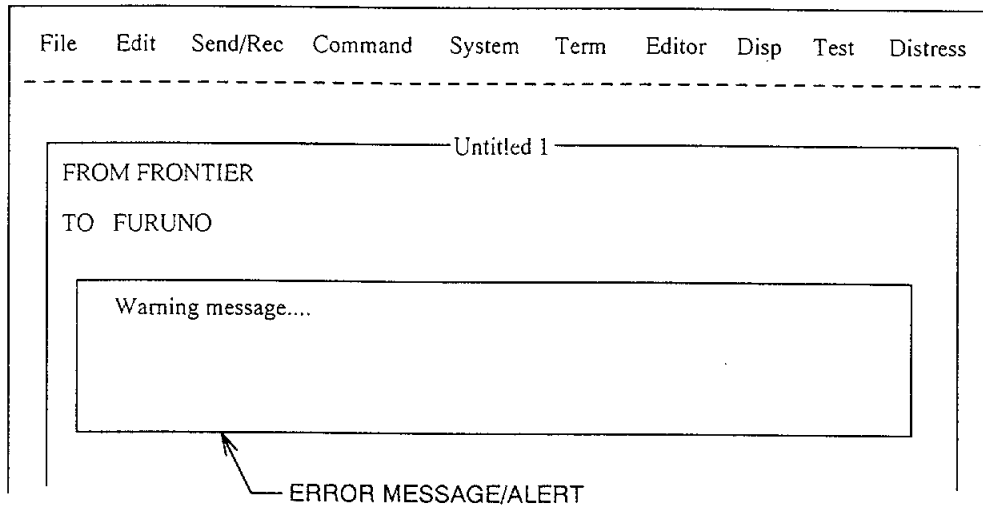
Figure 1-13 Location of Error Messages and Alerts

To erase an error or an alert, press any key.

Silencing the Audible Alarm

Some error messages and alerts are accompanied by the audible alarm. This alarm can be silenced, in most instances, by pressing any key. If the alarm cannot be stopped in this manner, go to the Command menu to stop it. Note that the distress alert alarm cannot be stopped by either method; it automatically stops when the distress acknowledge signal is received from CES.

silencing the alarm by the command menu

1. Press **F4** to call up the Command menu.

```
 File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 ------------------------------------------------------------------------------------

        ┌────────────────────┐
        │ 1: Abort           │
        │ 2: Login           │
        │ 3: Logout          │
        │ 4: Scan NCS        │
        │ 5: Select NCS      │
        │ 6: Stop Alarm      │
        └────────────────────┘




 ------------------------------------------------------------------------------------
 Current State: IDLE              SYNC(NCS)              89-11-06 12:00(UTC)
                                  NCS:IOR LOGIN             LAT:  34:43.00N
                                                            LON:135:21.00E
```
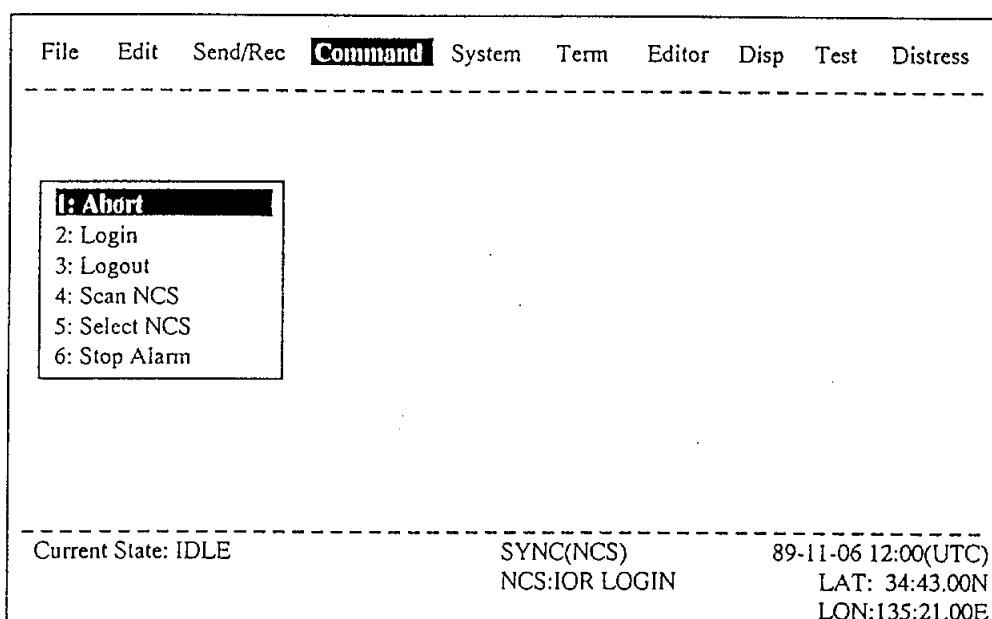
Figure 1-14 Command Menu

2. Press [6] key to stop the alarm. Control is returned to the default display screen.

> *Note: When the Distress Alert Unit IC-300 receives an EGC distress or urgent message, the alarm sounds. To silence it, follow the procedure shown above. NEVER press the DISTRESS button on the IC-300.*

Personal Computer Connection

The DTE may consist of the terminal unit IC-500 or a personal computer. For personal computer connection a system program disk (supplied) is required to boot up the computer. Operation by a computer is the same as with the terminal unit except when turning on the power.

PC Requirements

Applicable PC	:	Toshiba T-1000SE/1200 or IBM-AT compatible
Memory required	:	640K bytes
Graphics	:	Any one of CGA/EGA/VGA
Disk Drive	:	2DD × 1 (See note.)
Operating System	:	MS-DOS Version 3.0 or later

Note: A hard disk drive is desirable to boot up quickly and to handle large message files. Please note however that hard disks are more susceptible to vibration effects. Where this is a potential problem use a floppy disk.

Contents of distribution disk

CONFIG.SYS	:	System configuration file
FELCOM.BAT	:	Terminal Software start-up file
STDC.EXE	:	Terminal Software main program file
TERMFILE.DAT	:	Terminal definition file
EDITFILE.DAT	:	Editior definition file

Installing software and starting up

■ Floppy disk model

● Making working disk

1. Format a new 2DD floppy disk with the "/S" switch. (The "/S" switch makes the disk bootable.)

2. Copy the following files from the MS-DOS system disk to the formatted disk.

ANSI. SYS

MODE. COM

3. Copy all files from the distribution disk (from FURUNO) to the formatted disk.

● Starting up procedure

    1. Insert the working disk.

    2. Turn on the personal computer.

```
A>__
```

    2. Type the word, FELCOM.

```
A>FELCOM__
```

    3. Press the **Enter** key.

       The screen should look something like the one below.

```
A>FELCOM
Initializing......
```

    4. After the system program is loaded (it takes about one minute), the default display screen appears.

```
File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

■ For hard disk model

    ● Installing software

       1. Make a directory on the hard disk.

          To make the directory FELCOM, type MD FELCOM and then press the Enter key.

```
C>MD  FELCOM⤶
```

       2. Copy MODE. COM (of the MS-DOS system) into above directory.

       3. Then, copy all files from the distribution disk into the directory, except for CONFIG. SYS.

       4. Add the following lines to the CONFIG. SYS file.

          FILES = 20

          DEVICE = ANSI. SYS

● Start-up procedure

1. Turn on the PC.

2. Move into the directory containing the terminal program. (If the directory is FELCOM, for example, type CD FELCOM and press the **Enter** key.)

```
C > CD  FELCOM ⏎
```

3. Type the word, FELCOM.

4. Press the **Enter** key to start the terminal software.

   The following appears.

```
FELCOM 10
INMARSAT-C SHIP EARTH STATION


CONTROL TERMINAL Software for PC Ver☐  ◄─────── Program Version No.
Copyright (C) 1990 FURUNO Electric Co., ltd


Now loading...

Initializing
```

5. After the system program is loaded, the default display screen appears.

```
   File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
  _____








  _____
                                        SYNC(NCS)          00-00-00 00:00(UTC)
                                        NCS:IOR LOGIN       LAT:000:00.00N
                                                            LON:000:00.00E
```

How to turn off the power of the PC

To quit from the Inmarsat-C software, do the following.

         1. When you finish the job, press **F1** to display the File menu.

File	Edit	Send/Rec	Command	System	Term	Editor	Disp	Test	Distress

```
1: New        ALT-N
2: Open       ALT-O
3: Close      ALT-Q
----------------
4: Delete     ALT-D
----------------
5: Save       ALT-S
----------------
6: Print      ALT-P
----------------
7: Quit
```
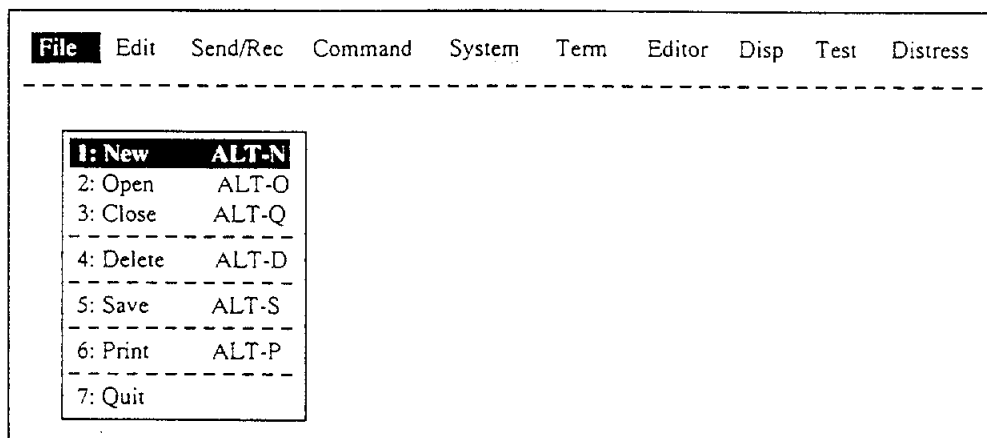
         2. Press [7] key to quit from the Inmarsat-C software. The display should look something like the one shown below.

```
C >
```

         3. Turn off the PC, or do another job.

SYSTEM INITIALIZATION

This chapter provides the information necessary for initializing the FELCOM 10. Once the FELCOM 10 is initialized you need do no more than press a few keys to get fully automatic transmission and reception.

You are given the Inmarsat Mobile Number (IMN) which is assigned to the SES by INMARSAT. For the FELCOM 10, it is not necessary to key the IMN into the terminal.

Contents

System Settings

Two sets of DTEs

The communication unit provides two sets of connectors (DTE1, main; DTE2, 2nd) for connection of two DTEs. It is preset at the factory for operation by one DTE (main DTE). For connection of two DTEs, change the DTE type system setting in 2nd DTE as follows:

procedure

1. Press **F6** to select the Term menu.

```
 File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
------------------------------------------------------------------------------------


          ┌──────────── Term Setup ────────────┐
          │ Auto Log Print   OFF / ON           │
          │ Receive Alarm    OFF / ON           │
          │·····································  │
          │ DTE Type         Main / 2nd         │
          └──────────────────────↑──────────────┘
                                 │
                                 └──── Underline shows current selection.




------------------------------------------------------------------------------------
 Current State: IDLE                     SYNC(NCS)            89-11-28 12:00(UTC)
                                         NCS:IOR LOGIN        LAT: 34:43.00N
                                                              LON:135:21.00E
```
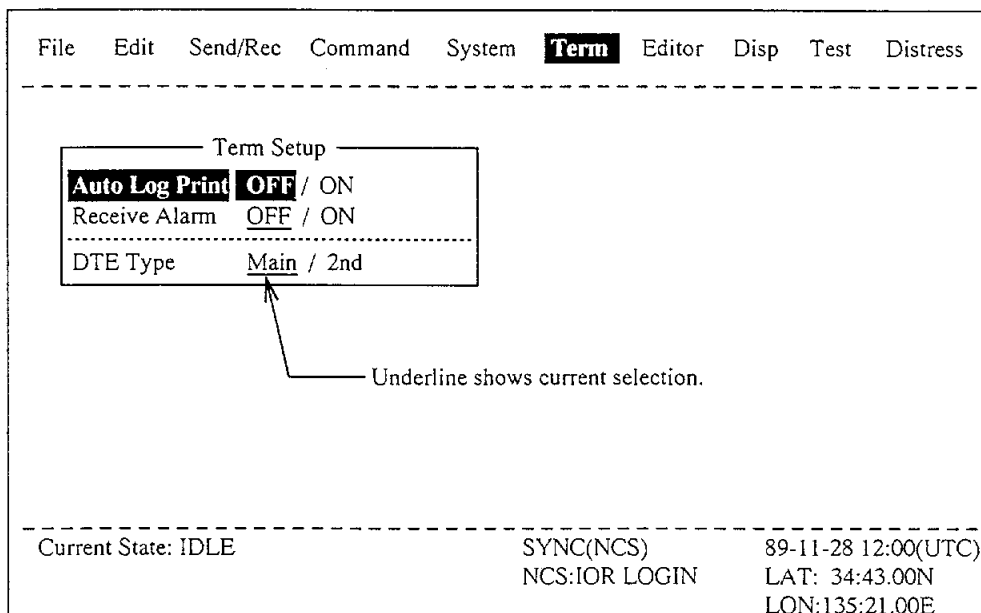
Figure 2-1 Term Menu

2. Press [↓] to send the cursor to the DTE Type line.

3. To select 2nd (DTE), press [→]. 2nd appears in reverse video.

4. Press the **Enter** key.

5. To confirm selection, press **F6** again. The 2nd is under lined.

6. Press the **Esc** key to return to the default display.

System setup

The System Setup screen provides for input of date, and selection of NCS, SES operating mode (INMARSAT-C or EGC-only receiver), navigation input format, option port, output port and EGC ouput port. This setup is possible in main DTE only.

procedure

1. Press **F5** to select the System menu. System Setup appears in reverse video in the System menu.

```
  File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    ┌─────────────────────┐
    │ 1: System Setup     │  *
    │ 2: EGC Setup        │  *
    │ 3: NCS Channel List │  *
    │ 4: EGC Channel List │  *
    │ 5: CES List         │
    │ 6: Station List     │              * These items are not displayed
    │ 7: Ship Position    │  *             in 2nd DTE.
    └─────────────────────┘
```
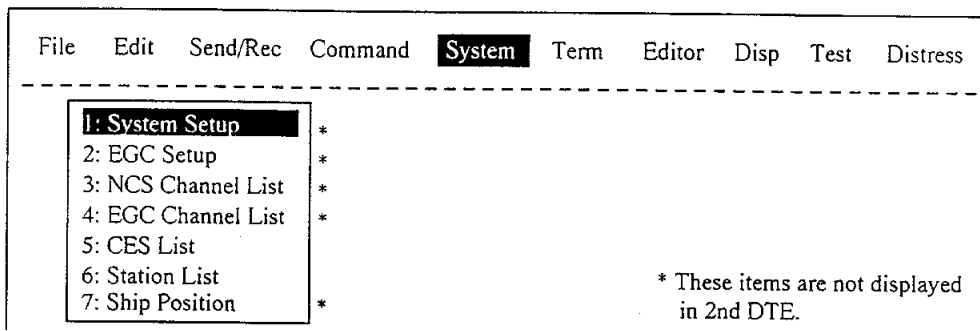
Figure 2-2 System Menu

2. Press the **Enter** key to display the System Setup screen.

   NOTE: If the communication unit is off or its interconnection cable has loosened or is damaged, "No response from communication unit." appears.

```
  File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    ┌───────────────── System Setup ─────────────────┐
  │1│ System Date (UTC)  90-06-13   (YY-MM-DD)       │
  │2│ ............................................... │
  │3│ Preferred NCS       Auto/ AOR(WEST)/ AOR(EAST)/ POR/ IOR │
  │4│ ............................................... │
  │5│ SES Operation Mode  INMARSAT-C/ EGC            │
  │6│ Nav Port            OFF/ Auto/ GPS/ SATNAV/ LC/ LA/ DECCA/ OMEGA │
  │7│ DTE2 Port Sub-addr. 001                        │
    │ Message Output Port DTE1/ DTE2/Auto (Depend on SubAddr) │
    │ EGC Output Port     DTE1/ DTE2/DTE1+DTE2       │
    │ Polling Output Port DTE1/ DTE2/Auto (Depend on SubAddr) │
    └─────────────────────────────────────────────────┘
```

Figure 2-3 System Setup Menu

3. The cursor is on the System Date line. Enter date on this line.

a) Enter last two digits of current year.
b) Press [→] to advance the cursor to the month setting.
c) Enter current month.
d) Press [→] to advance the cursor to day setting.
e) Enter day.

NOTE: To skip valid entries in a line, press [→].

4. Press [↓] to advance the cursor to the Preferred NCS line.

5. Select appropriate NCS (Auto, AOR-West, AOR-East, POR or IOR) by operating arrow keys. The FELCOM 10 will then search for the NCS signal of that ocean region each time it is turned on. In the Auto setting, all NCS signals are searched to find the most suitable NCS; thus, scanning can take quite some time. (For reference, the coverage range of each satellite is shown in the figure on page 8.)
   The "Preferred NCS" setting is used only when the FELCOM 10 is turned on. If you want to change the NCS channel while working, refer to "Selecting NCS channnel" on page 7-7.

6. Press [↓] to advance the cursor to the SES Operation Mode line.

7. With arrow keys select operating mode, either INMARSAT-C or EGC. In the IN-MARSAT-C setting, this unit provides telex communications and operates as an EGC receiver when not transmitting or receiving. The EGC setting enables EGC-only receiver operation. In this case EGC RECEIVER appears in reverse video at the bottom of the screen.

8. Press [↓] to advance the cursor to the Nav Port line.

9. Select the navigation device which is interfaced to the FELCOM 10.

   OFF: No connection

   Auto: Select this setting for multiple navigation device connection. The FELCOM 10 automatically selects ship's position information in the order of GPS, SATNAV, LC, LA, DECCA and OMEGA.

   GPS, SATNAV, LC (Loran C), LA (Loran A), DECCA and OMEGA

   NOTE: If there is no navigation equipment connection (Nav Port setting is "OFF"), you should input dead reckoning position in the ship position line of the SYSTEM menu. Refer to page 2-26.

10. Press [↓] to send the cursor to the DTE2 Port Sub-addr line.

11. For multiple DTE connection, the DTE2 port sub address (numbered 1–255) can be attached to receive messages to designate which DTE of the recipient a message is to be sent to. For undesignated, set to 1.

12. Press [↓] to send the cursor to the Message Output Port line.

13. With the arrow keys, select the DTE where you want receive messages to be stored.

DTE1:   All receive messages are routed to the main DTE connected to
                         DTE1 on the communication unit, regardless of sub address.

DTE2:   All receive messages are routed to the 2nd DTE connected to
                         DTE2 on the communication unit, regardless of sub address.

Auto: Select to route messages with sub address 000 to the main DTE,
                         and messages with the sub address of the 2nd DTE to the 2nd
                         DTE. All other messages are routed to the main DTE.

*NOTE: If there is no connection at DTE2 port and DTE2 or Auto is selected, messages
cannot be read from the communication unit. In this case connect the DTE to DTE2
port, or set Message Output Port to DTE1.*

14. Press [↓] to advance the cursor to the EGC Output Port line.

15. Select the DTE where you want to store received EGC messages. With the right and left
    arrow keys select DTE1, DTE2, or DTE + DTE2. To route receive messages to both the
    main and 2nd DTE, select DTE + DTE2.

16. Press [↓] to send the cursor to the Polling Output Port line.

17. With the arrow keys, select the DTE where you want receive messages to be stored, in
    the same manner as the Message Output Port setting.

18. Press the Enter key to register all system setup settings and return to the default display.

19. The date, time (from satellite) and ship's L/L position appear at the lower right-hand
    corner of the screen.

Login and Logout

Each time the DTE and communication unit are turned on register your vessel with the INMARSAT-C system, to enable communications between your vessel and CES. This is called login. The first time you login you must do it manually; thereafter the NCS does it for you automatically, even when you move to another ocean region.
Note that the distress alert can be transmitted and EGC messages received regardless of whether you are logged in or not.

If you will not be using the FELCOM 10 for a prolonged period **you should logout from the INMARSAT-C system, before turning off the power** to the communication unit. The IN-MARSAT-C system will then register you as inactive, notifying anyone trying to call you that you are currently unavailable. If you do not log out before turning off the power, the CES attempts to send a message from your correspondent. **It may charge your correspondent, even if you never receive the message.**

NOTE: The communication unit should be idle ("Current State: IDLE" appears at the bottom of the screen) for login and logout.

Login

procedure

1. Confirm that "SYNC (NCS)" appears at the lower of the screen.

2. Press **F4** to display the Command menu.

```
┌──────────────────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec  ▐Command▌  System   Term   Editor  Disp  Test  Distress │
│ ─────────────────────────────────────────────────────────────────── │
│   ┌─────────────────────────┐                                        │
│   │ ▐1: Abort▌               │                                        │
│   │ 2: Login                │                                        │
│   │ 3: Logout               │                                        │
│   │ 4: Scan NCS             │                                        │
│   │ 5: Select NCS           │                                        │
│   │ 6: Stop Alarm           │                                        │
│   └─────────────────────────┘                                        │
└──────────────────────────────────────────────────────────────────────┘
```
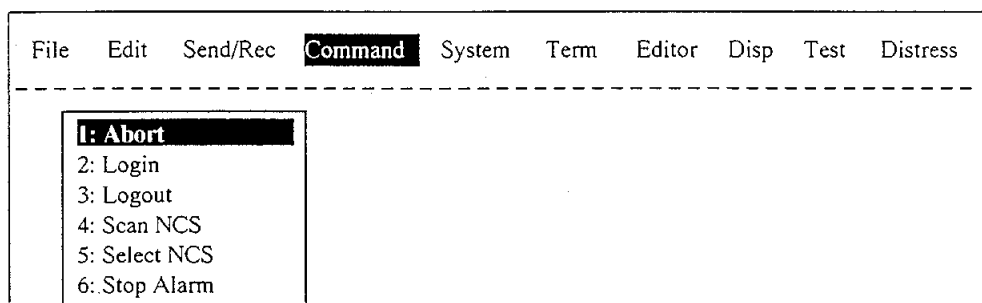
Figure 2-4 Command Menu

3. Press [2] key. The Login screen appears.

```
┌──────────────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec  ▉Command▉  System   Term   Editor  Disp  Test   Distress  │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
│                                                                    │
│   ┌──────────────────────┐                                         │
│   │ 1: Abort             │                                         │
│   │ ▉2: Log▉─┐────── Login ──────────────────┐                    │
│   │ 3: Log│  Start     │                      │                    │
│   │ 4: Scar│ ┌────┬────┐                       │                    │
│   │ 5: Sele│ │▉Yes▉│ No │                       │                    │
│   │ 6: Stop│ └────┴────┘                        │                    │
│   └────────┘                                     │                   │
│                                                  │                   │
│                                                  └───────────────────┘│
│                                                                    │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
│  Current State: IDLE                SYNC(NCS)         89-11-28 12:00(UTC)  │
│                                     NCS:IOR LOGOUT    LAT:  34:43.00N  │
│                                                       LON:135:21.00E  │
└──────────────────────────────────────────────────────────────────┘
```
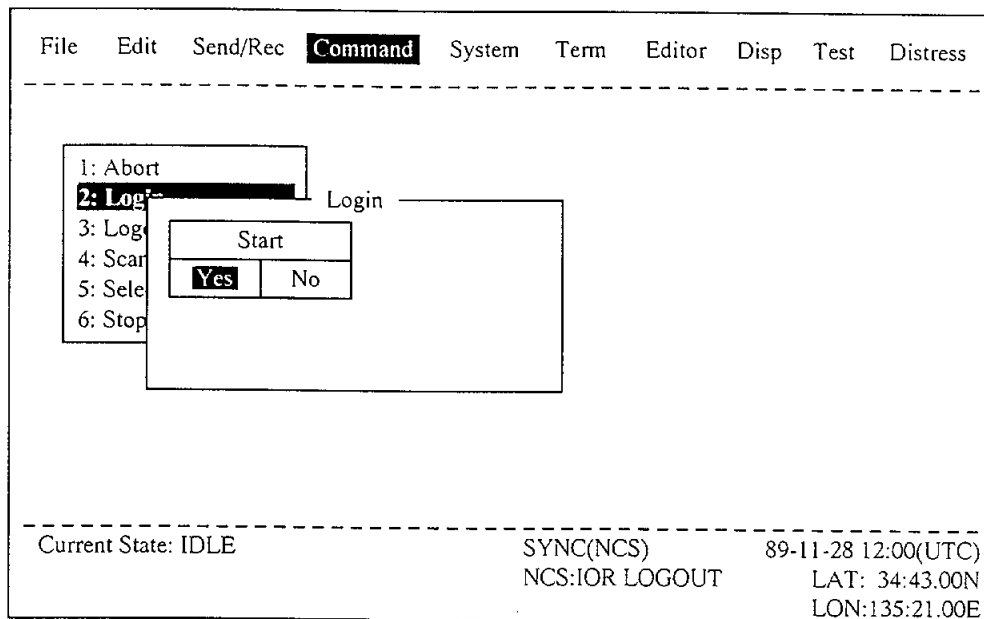
Figure 2-5 Login Screen

NOTE: When the communication unit is not idle, "Communication Unit is not IDLE now. Cannot start login." appears. Press any key to return to the default display. Wait until the communication unit becomes idle.

4. Press the **Enter** key to start login, or select No and press the **Enter** key to escape.

5. LOGIN begins and the screen should now look something like Figure 2-6. The indication LOGIN appears in blinking reverse video.

```
┌──────────────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec  ▉Command▉  System   Term   Editor  Disp  Test   Distress  │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
│                                                                    │
│   ┌──────────────────────┐                                         │
│   │ 1: Abort             │                                         │
│   │ ▉2: Login▉─┐──── Login ──────────────────┐                     │
│   │ 3: Logou│                                 │                     │
│   │ 4: Scan N│ Starting Login Process.        │                     │
│   │ 5: Select│                                │                     │
│   │ 6: Stop A│ Press any key to escape.       │                     │
│   └──────────┘                                │                     │
│                                               └──────────────────────┘│
│                                                                    │
│              ┌──────── LOGIN replaces IDLE.        ┌ Blinking during login.│
│              │                                     │                │
│  ─ ─ ─ ─ ─ ─ ↓─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─↓─ ─ ─ ─ ─ ─ ─  │
│  Current State: LOGIN               SYNC(NCS)         89-11-28 12:00(UTC)  │
│  CALLING                            NCS:▉LOGIN▉       LAT:  34:43.00N  │
│                                                       LON:135:21.00E  │
└──────────────────────────────────────────────────────────────────┘
```
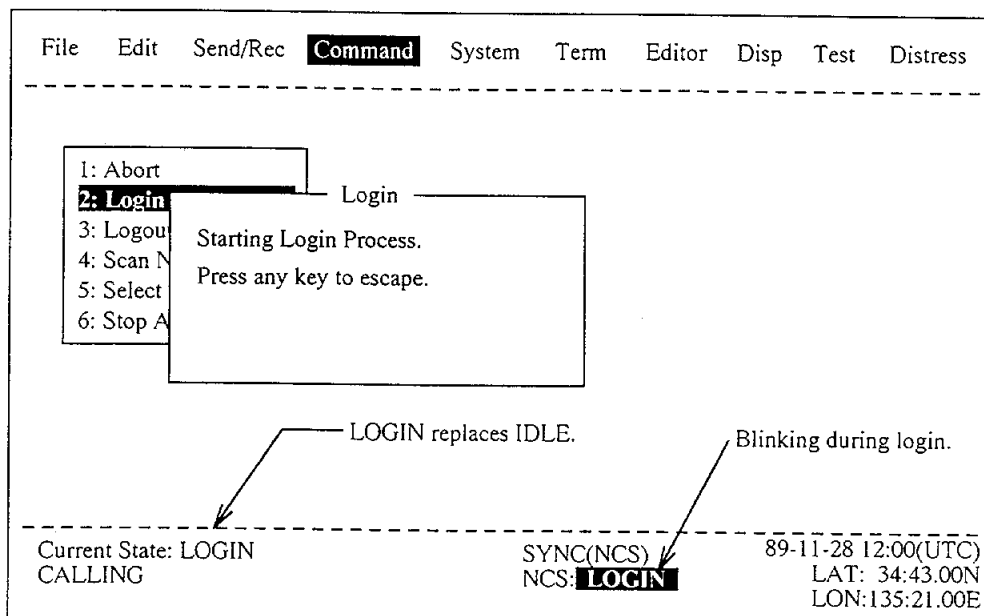
Figure 2-6 Appearance of Display Screen During Login

6. When login is completed, "Successful login" appears. The communication unit goes into Idle state and LOGIN stops blinking and the ocean region you logged in with appears on the screen.

7. Press any key to return to the default display.

Logout

procedure

1. Press **F4** to display the Command menu.

2. Press [3] key. The logout screen appears.

> *NOTE: When the communication unit is not idle, "Communication Unit is not IDLE now. Cannot start logout." appears. Press any key to return to the default display. Wait until the communication unit becomes idle.*

```
File    Edit    Send/Rec   [Command]  System   Term   Editor   Disp   Test   Distress
-------------------------------------------------------------------

   ┌─────────────┐
   │ 1: Abort    │
   │ 2: Log │──── Logout ──────────────────────┐
   │ [3: Lo│   ┌──────────────┐                 │
   │ 4: Sca│   │    Start      │                 │
   │ 5: Sel│   │ [Yes] │  No   │                 │
   │ 6: Sto│   └──────────────┘                 │
   └───────┘                                     │
           └─────────────────────────────────────┘


-------------------------------------------------------------------
Current State: IDLE               SYNC(NCS)          89-11-28 12:00(UTC)
                                  NCS:IOR LOGIN       LAT: 34:43.00N
                                                      LON:135:21.00E
```
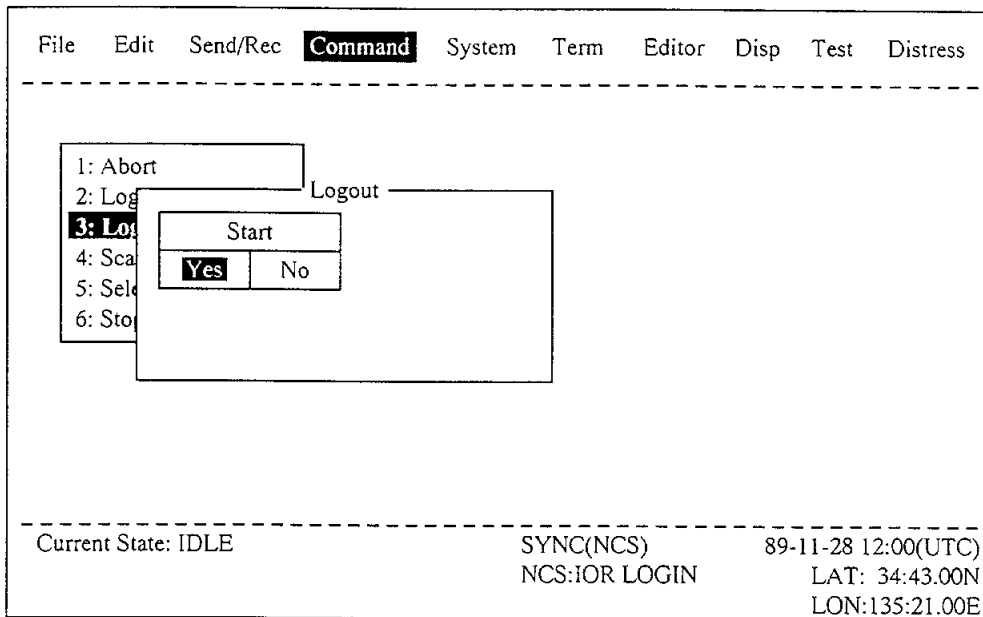
Figure 2-7 Command Menu, Logout Screen

3. Press the **Enter** key to start logout, or select No and press the **Enter** key to escape. Logout begins and the screen now looks something like Figure 2-8.

```
┌─────────────────────────────────────────────────────────────────────┐
│  File    Edit    Send/Rec  ▊Command▊  System   Term   Editor  Disp  Test  Distress │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│                                                                       │
│    ┌──────────────┐── Logout ──────────────┐                          │
│    │ 1: Abor      │                         │                          │
│    │ 2: Logi      │ Starting Logout Process.│                          │
│    │▊3: Logo▊     │                         │                          │
│    │ 4: Scan      │ Press any key to escape.│                          │
│    │ 5: Sele      │                         │                          │
│    │ 6: Stop      │                         │                          │
│    └──────────────┘─────────────────────────┘                          │
│                                                                       │
│                                                                       │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  Current State: LOGOUT                SYNC(NCS)         89-11-28 12:00(UTC) │
│  CALLING                              NCS:▊LOGOUT▊      LAT:  34:43.00N │
│                                                         LON:135:21.00E │
└─────────────────────────────────────────────────────────────────────┘
```
                                                    LOGOUT appears in
                                                    blinking reverse video.
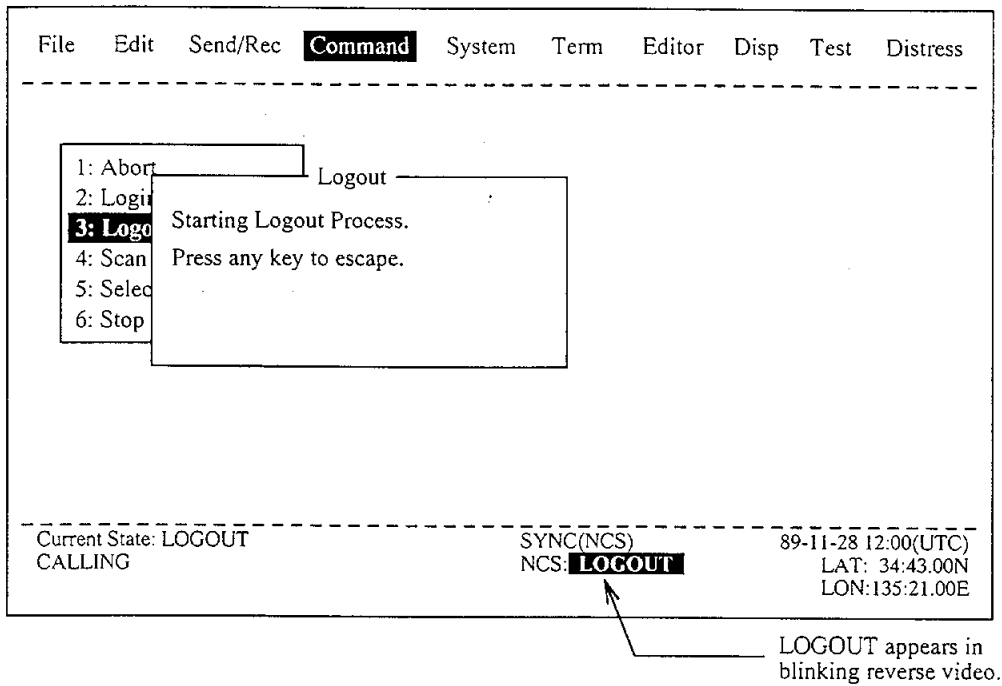
Figure 2-8 Appearance of Display Screen During Logout

4. When logout is completed, "Successful logout" appears. The Current State returns to IDLE and LOGOUT stops blinking.

5. Now you can turn off the power of the FELCOM 10.

EGC Settings

What is the EGC (Enhanced Group Call) service?

The EGC service enables EGC information providers to send safetyNET™ or FleetNET™ messages via a CES to select groups of ships, or to all ships within a defined geographical area.

To send an EGC message, the information provider prepares the message, and then accesses the national or international telex network and sends the message to the CES. The CES processes and forwards it to the NCS for the ocean region. Then NCS broadcasts the message throughout the ocean region.

Although all SESs can receive the EGC message, the message is accepted only by those receivers that have been pre-programmed for the area or group conditions contained in the message. All other EGC receivers reject the message.

Two EGC services are available.

1) SafetyNET™

> This provides a means for Information Providers to distribute Maritime Safety Information (MSI) from shore-to-ship. Authorized Information Providers include:
>
> a. Hydrographic Offices, for navigational warnings
>
> b. National Weather Services, for meteorological warnings and forecasts
>
> c. Rescue Co-ordination Center, for shore-to-ship distress alerts and other urgent information
>
> d. International Ice Patrol, for North Atlantic ice hazards

2) FleetNET^{TM}

> This service allow authorized Information Providers such as commercial subscription services, shipping companies and governments, which have registered with a CES that supports FleetNET^{TM}, to broadcast messages to selected group of SESs.
>
> Typical applications of FleetNET^{TM}
>
> a. Fleet or company broadcasts
>
> b. News broadcasts
>
> c. Commercial weather services
>
> d. Market quotations
>
> e. Government broadcasts to all vessels on a country's registration

EGC settings

The FELCOM 10 will receive EGC messages directed to its present position and Navarea without further programming.
The EGC Setup screen lets you select additional areas for which you wish to receive messages and also the Navtex station and type of message for Coastal Warning (NAVTEX Re-broadcast).

procedure

1. Press **F5** to call up the System menu.

```
File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     ┌──────────────────────┐
     │ 1: System Setup       │
     │ 2: EGC Setup          │
     │ 3: NCS Channel List   │
     │ 4: EGC Channel List   │
     │ 5: CES List           │
     │ 6: Station List       │
     │ 7: Ship Position      │
     └──────────────────────┘
```
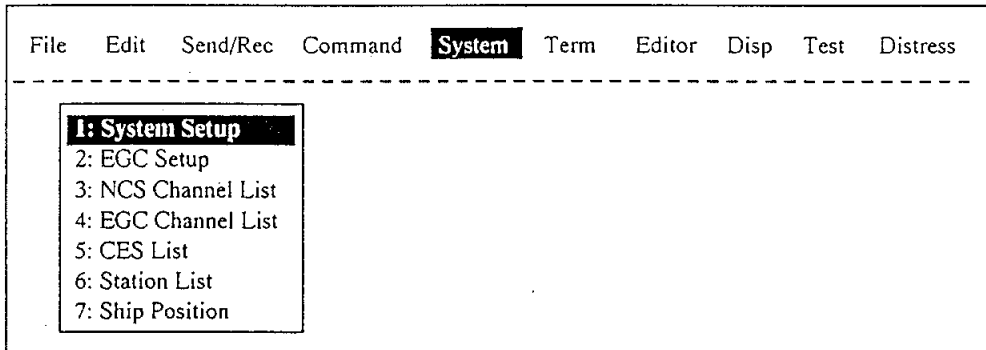
Figure 2-9 System Menu

2. Press [2] key. The following screen appears.

```
File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    ┌── EGC Setup ──┐
    │ 1: System     ┌─────────── EGC Setup ──────────────────────┐
    │ 2: EGC S      │ Receive EGC Area                            │
    │ 3: NCS C      │ Additional Position        35:00 N  135:00 E│
    │ 4: EGC C      │        Navarea             12 -- --         │
    │ 5: CES Li     │                                             │
    │ 6: Station    │ Waypoint (from NAV Equipment)  OFF/ON        │
    │ 7: Ship Pc    │---------------------------------------------│
    └───────────    │ NAVTEX                                      │
                    │   Station Code      ABDEGHIKLNOPQRSUYWZ      │
                    │   Type of Message (Cannot reject other report)│
                    │     Ice reports      OFF/ON    OMEGA messages  OFF/ON │
                    │     Meteo. forecasts OFF/ON    SATNAV messages OFF/ON │
                    │     Pilot service    OFF/ON    Other navaid msg OFF/ON│
                    │     DECCA messages   OFF/ON    QRU(no message)  OFF/ON│
                    │     LORAN messages   OFF/ON                   │
                    └─────────────────────────────────────────────┘

Current State: IDLE                    SYNC(NCS)           91-08-10 12:00(UTC)
                                       NCS:IOR LOGIN            LAT: 34:43.00N
                                                               LON:135:21.00E
```

Figure 2-10 EGC Setting Screen

3. The cursor is on the Manual Position line. Here, you can enter L/L position of an ocean region you want to receive broadcasts for.

To enter position:

a) Enter latitude degrees.
b) Press [→] to advance the cursor to latitude minutes.
c) Enter latitude minutes.
d) Press [→] to advance the cursor to latitude polarity.
e) Enter N, or S.
f) Press [→] to send the cursor to longitude degrees.
g) Enter longitude degree and minutes.

4. Press [↓] to send the cursor to the Navarea line.

5. Enter additional Navarea(s) (up to three) for which you want to receive broadcasts. Figure 2-11 shows the Navareas of the world.
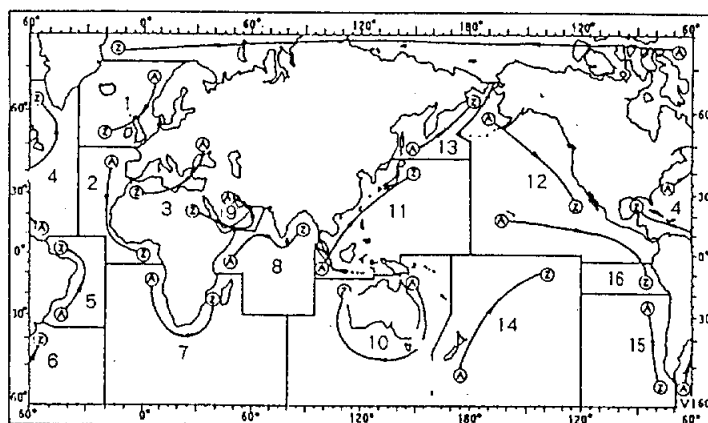
Figure 2-11 Navareas

6. Press [↓] to send the cursor to the Waypoint line.

7. Select ON to receive broadcasts from the area of a waypoint selected on the navigation device.

8. Press [↓] to advance the cursor to Station Code line of NAVTEX.

9. Enter the navtex station code (A–Z) of the navarea. For details about navtex stations, consult the operator's manual of the navtex receiver.

10. Using the arrow keys, select the navtex broadcasts you wish to receive.
Note that navtex message types "Coastal navigational information", "Meteorological warning" and "Search and rescue alert" cannot be deleted, as they are considered essential to navigation.

11. Press the **Enter** key to register all EGC settings and return to the default display.

Programming EGC channels

The EGC Channel List in the System menu lets you store EGC channels.

In the current INMARSAT-C system there are four EGC channels, one for each satellite. These four channels are pre-programmed into the unit and marked in the EGC Channel List with asterisks. When more EGC channels become available you can add them to the list.

procedure

1. Press **F5** to display the System menu.

2. Press [4] key. The EGC Channel List display appears.

```
File    Edit    Send/Rec    Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

    1: System Setup      ┌─ EGC Channel List ──────────┐
    2: EGC Setu          │        RET: exit      ESC:quit │
    3: NCS Cha  ─────────┤
    4: EGC Ch   11080 *  │ 12580 *  │ 10840 *  │ 11088 *  │
    5: CES List
    6: Station Li
    7: Ship Posi
```

Figure 2-12 EGC Channel List

3. Current EGC channels are marked with an asterisk. These channels cannot be changed.

4. With the arrow keys place the cursor where there is no data entered.

5. Enter EGC channel frequency code.

NOTE: The EGC channel frequency code range is 8000–14000. Any frequency code entered which is out of this range will display "Invalid Frequency Code." Clear the error message by pressing any key, press the **Back Space** *key to clear wrong frequency, then enter correct frequency.*

6. To enter another frequency code, repeat steps 4 and 5.

7. Press the **Enter** key to register input.

Programming NCS Channels

This section shows you how to add NCS channels to the NCS Channel List. Up to 19 channels can be listed per each ocean region. In the current INMARSAT-C system only four NCS channels exist. These channels are marked in the list with an asterisk.

Below is the procedure for adding NCS channels, when they become available.

procedure

1. Press **F5** to display the System menu.

2. Press [3] key. The NCS Channel List appears.

| File | Edit | Send/Rec | Command | **System** | Term | Editor | Disp | Test | Distress |

- -

1: System Setup
2: EGC Setu
3: NCS Cha
4: EGC Cha
5: CES List
6: Station Li
7: Ship Posi

NCS Channel List

RET: set   ESC:quit

No	AOR(WEST)		AOR(EAST)		POR		IOR	
	ID	Freq	ID	Freq	ID	Freq	ID	Freq
1	0**44**	11080 *	144	12580 *	244	12580 *	344	10840 *
2	0		1		2		3	
3	0		1		2		3	
4	0		1		2		3	
5	0		1		2		3	
6	0		1		2		3	
7	0		1		2		3	
8	0		1		2		3	

Figure 2-13 NCS Channel List

3. Current NCS common channels are marked with an asterisk. These channels cannot be changed.

4. Place the cursor where there is no data entered.

5. Enter NCS channel ID number.

6. With [→] advance the cursor to the frequency column.

7. Enter NCS channel frequency code.

NOTE: The ID number range is 45–63 and frequency code range, 8000–14000. Any ID or frequency entered which is not within those ranges will display "Invalid NCS ID Code.", or "Invalid Frequency Code.", respectively. Clear the error message by pressing any key, press the **Back Space** *key to clear wrong data, then enter correct data.*

8. To enter another NCS channel, repeat steps 4-7.

9. To quit, press the **Enter** key. The System menu appears.

Programming the CES List

The CES List provides for storage of up to 44 CES names per ocean region. When the CES table in Send menu is opened, CES names entered in this CES List will be displayed along with their IDs. See page 4-8.

procedure

1. Press **F5** to display the System menu.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

        1: System Setup
        2: EGC Setup
        3: NCS Channel List
        4: EGC Channel List
        5: CES List
        6: Station List
        7: Ship Position
```
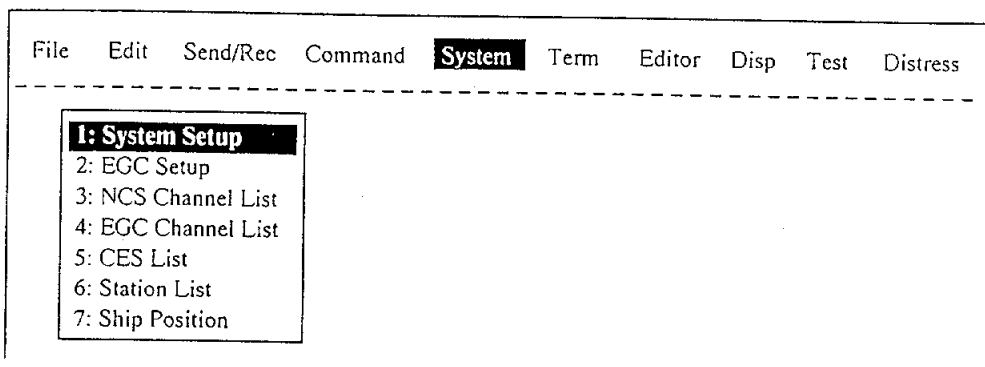
Figure 2-14 System Menu

2. Press [5] key. The CES List appears.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  1: S                              CES List
  2: E   Ctrl+P: print   RET: list entry   ESC: quit
  3: N
  4: E   No   AOR(WEST)    AOR(EAST)      POR         IOR
              Name         Name           Name        Name
  5: C   1    SOUTHBURY    SOUTHBURY
  6: St  2    GOONHILLY
  7: SI  3                                PERTH       PERTH
         4                                SINGAPORE   BURUM
         5                                            EIK
         6
         7
         8
```
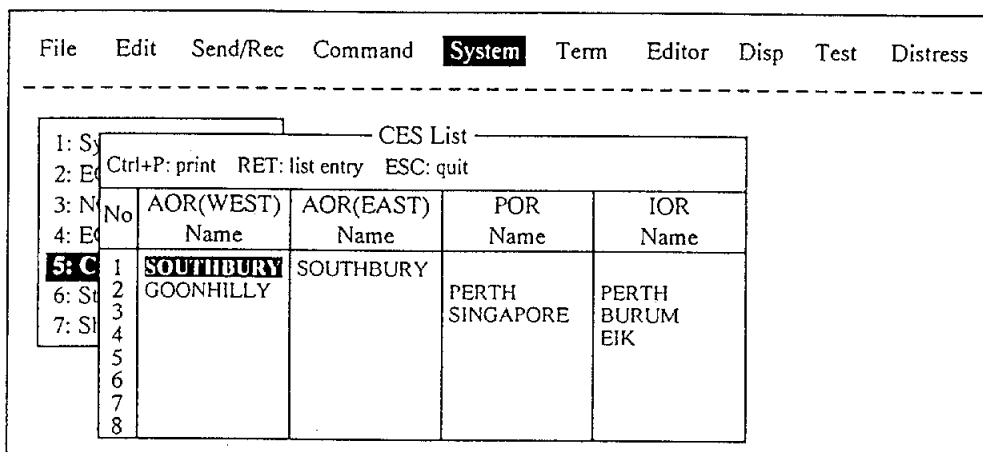
Figure 2-15 Sample CES List

3. With the arrow keys place the cursor where no data is entered.

4. Press the **Enter** key.

```
┌─────────────────── CES List ──────────────────┐
│ Ctrl+P: print   RET: list entry      ESC: quit │
├──┬───────────┬───────────┬──────────┬──────────┤
│No│AOR(WEST)  │AOR(EAST)  │  POR     │  IOR     │
│  │  Name     │  Name     │  Name    │  Name    │
├──┼───────────┴───────────┴──────────┴──────────┤
│ 1│SOUTHBURY Iharoki AOR .W No.3 ──────┐         │
│ 2│GOONHI                              │         │
│ 3│        Name    : █                 │         │
│ 4│        ID      :                   │         │
│ 5│        Remarks :                   │         │
│ 6│        ---------------------------------     │
│ 7│        Erase the Name to delete this CES.    │
│ 8│                                              │
└──┴──────────────────────────────────────────────┘
```

Figure 2-16 CES Registration Screen (AOR WEST)

5. The cursor should be on the Name line. Enter CES name (maximum 15 characters) there.

6. Press [↓] to advance the cursor to the ID line.

7. Enter CES ID. The table on page 2-19 shows all current and future CES IDs.

8. Press [↓] to send the cursor to the Remarks line.

9. If desired, enter remarks, up to 20 characters.

10. Press the **Enter** key to register that CES.

11. To register another CES, repeat steps 3-10.

12. To return to the default display, press the **Esc** key twice.

Editing the CES list

1. Do steps 1 and 2 on the page 2-15 to display the CES List.

2. With the arrow keys place the cursor on the CES you want to edit.

3. Press the **Enter** key.

```
File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─

  1: System Setup ──────── CES List ────────────
  2: E  Ctrl+P: print   RET: list entry   ESC: quit
  3: N ┌────┬──────────┬──────────┬──────────┬──────────┐
  4: E │ No │ AOR(WEST)│ AOR(EAST)│   POR    │   IOR    │
  5: C │    │  Name    │  Name    │  Name    │  Name    │
  6: S │ 1  │          │          │ Perth    │ Perth    │
  7: S │ 2  │          │          │          │          │
       │ 3  │          ──── IOR No.1 ────
       │ 4  │     ┌─────────────────────────────┐
       │ 5  │     │ Name    : Perth    █        │
       │ 6  │     │ ID      : 302               │
       │ 7  │     │ Remarks : Australia         │
       │ 8  │     │ ··························   │
             └─────│ Erase the Name to delete this CES. │
                   └─────────────────────────────┘

─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
                              SYNC(NCS)        89-11-28 12:00(UTC)
                              NCS:IOR LOGIN    LAT: 34:43.00N
                                               LON:135:21.00E
```
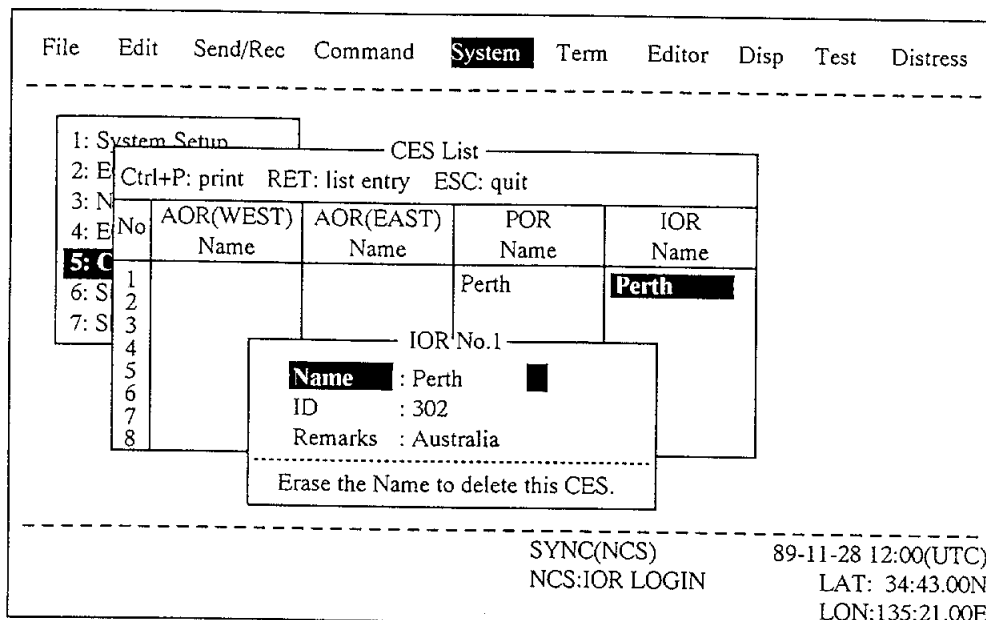
Figure 2-17 CES Registration Screen (IOR)

4. The cursor should be on the Name line. To delete the CES, press the **Back Space** key to delete the name.

5. To edit an entry, place the cursor on the item you want to edit, delete item by pressing the **Back Space** key, then enter new data.

6. Press the **Enter** key to save changes.

Printing the CES list

procedure

1. Call up the CES List on the display.

2. While pressing and holding down the Ctrl key, press the P key.

3. Printing begins.

4. Check the CES List printout for correctness.

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  CES List (Printed at 91-07-08 19:30)
  +++   AOR (WEST)   +++
  No.   Name           CES ID      Remarks
  01    SOUTHBURY      001         USA
  02    GOONHILLY      002         UK

  +++   AOR (EAST)   +++
  No.   Name           CES ID      Remarks
  01    SOUTHBURY      101         USA

  +++   POR   +++
  No.   Name           CES ID      Remarks
  01    Santa Paula    201         USA
  02    PERTH          202         AUSTRALIA

  +++   IOR   +++
  No.   Name           CES ID      Remarks
  01    Perth          302         AUSTRALIA
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

Figure 2-18 Sample CES List Printout

Table 2-1 CES IDs

CES Name	AOR West	AOR East	IOR	POR
Perth			302	202
Goonhilly	002	102		
France Telecom		121	321	
Burum	012	112	312	
Blavand		131		
Eik		104	304	
Sentosa			*	210
Tangua	014	114		
Nakhodka				212
Odessa		107	307	
Maadi		103		
Arvi			306	
Umm al Aish		106		
Fucino		105		
Thermopylae			305	
Jeddah			315	
Ibaraki				
Yamaguchi			*303	*203
Santa Paula				201
Lisbon				
Southbury	001	101		
Ata		110	310	
Kumsan			308	208
Raisting		115		
Beijing			311	211
Psary		116	316	
Boumehen			314	
Buitrago		*		
Laurentides	032	132		
NCS	044	144	344	244

NOTES

1) Asterisks indicate planned stations.

Programming the Station List

The FELCOM 10 provides an "address book" for programming up to 64 station IDs.

procedure

1. At the default display, press **F5** to display the System menu.

2. Press [6] key to display the Station List.

```
  File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

     1: System Setup
     2:  ┌──────── Station List ─────────┐
     3:   │ 01  FURUNO                    │
     4:   │ 02  INMARSAT                  │
     5:   │ 03  TAKAHASHI                 │
     6:   │ 04  ABCD                      │
     7:   │ 05                            │
         │ 06              Ctrl+P :print  │
         │ 07              RET    :entry  │
         │ 08              ESC    :quit   │
         └───────────────────────────────┘
```
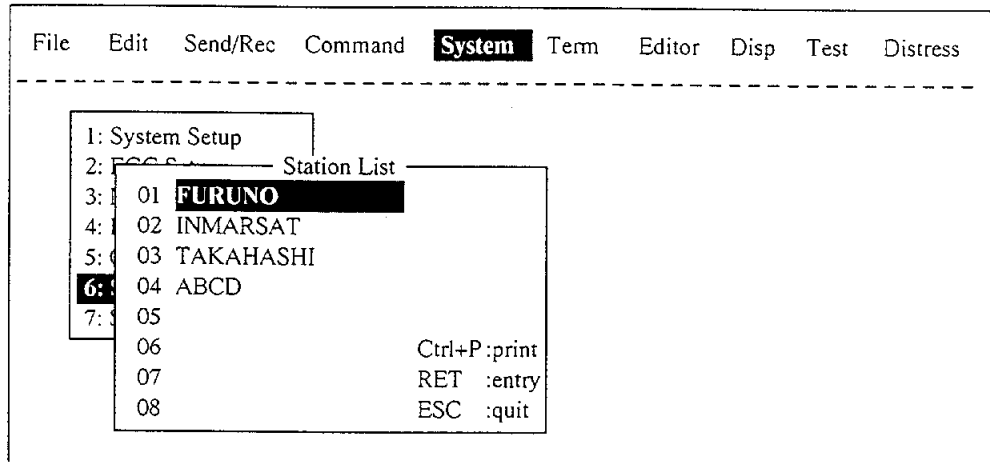
Figure 2-19 Sample Station List

3. Place the cursor on a blank line by pressing [↓].

4. Press the **Enter** key.

```
  File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

    1: System Setup ─── Station List ──┐
    2: │ 01  FURUNO                     │
    3: │ 02  INMARSAT                   │
    4: │ 03  TAKAHASHI ──────────────── Station No.4 ──────────────┐
    5: │ 04  ABCD    ┌ Name          :█                            │
    6: │ 05          │ Type          :TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC
    7: │ 06          │ Country Code  :                             │
       │ 07          │ Station ID    :                             │
       │ 08          │                                             │
                     │ Remarks       : ...........................│
                     └ Erase the Name to delete this station. ─────┘
```
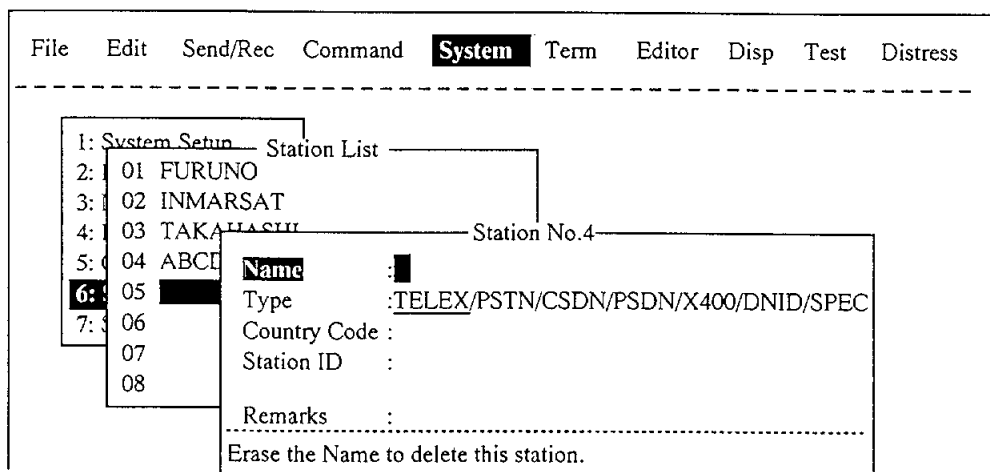
Figure 2-20 Station List Programming Screen

5. The cursor should be on the Name line. Enter name of station, using up to 15 characters.

6. Press [↓] to send the cursor to the Type line. Select communications format.

TELEX: Telex communication

PSTN: Public Switched Telephone Network (see note 1 below.)
            — to an office facsimile machine.

CSDN: Circuit Switched Data Network (for future use)

PSDN: Public Switched Data Network
            — to an office computer via a data network using X.25 standard.

X. 400:   E-mail (electronic mail) Service (for future use)

DNID: Data Network ID — not used.

SPEC: Ship-to shore requests for safety service, accessed by using special 2-digit
            codes (See note 2 below.)

NOTE 1.When the PSTN is selected, the "Modem Type" selection display appears below the Station ID line. Advance the cursor to this display then press space bar. The modem type list appears and select "T30 (FAX)" then press Enter key. For further details, refer to page 4-16.

NOTE 2. When the SPEC is selected on the Type line, the Country Code line disappears. Enter 2 digit codes on the Station ID line. Refer to page 4-14 for further details.

7. Suppose that the "TELEX" is selected. Press [↓] to advance the cursor to the Country Code line.

8. Enter telex network number. For ship-to-shore telex, enter international telex country code; ship-to-ship telex, enter ocean region. A list of international telex country codes begins on page A-3 in the Appendix.

Ocean Region

AOR-East: 581
POR: 582
IOR: 583
AOR-West: 584

9. Press [↓] to send the cursor to the ID line.

10. Enter telex subscriber number (for land) or SES Inmarsat Mobile Number (for vessel). Up to 15 characters, including space, can be entered.

11. Press [↓] to advance the cursor to the Remarks line.

12. If desired, enter remarks, using up to 20 characters.

13. Press the Enter key to complete station input.

14. To program another station, repeat steps 3-13.

15. To return to the default display, press the Esc key twice.

Editing the station list

procedure

1. Call up the Station List.

2. Press the **Enter** key.

```
   File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
 ┌───────────────────────────────────────────────────────────────────────────────────
 │
 │  1: System Setup ── Station List ─────────────
 │  2:  │ 01 FURUNO                            │
 │  3:  │ 02 INMARSAT                          │
 │  4:  │ 03 12345678901234 ──────── Station No.1 ──────────────────
 │  5:  │ 04 ABCD  │ Name        :FURUNO ■                            │
 │  6:  │ 05 XXXX  │ Type        :TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC │
 │  7:  │ 06       │ Country Code :72                                 │
 │      │ 07       │ Station ID   :5644 – 325                         │
 │      │ 08       │ Remarks      :Nishinomiya Japan                  │
 │      └──────────│ Erase the Name to delete this station.          │
 │                 └─────────────────────────────────────────────────
```
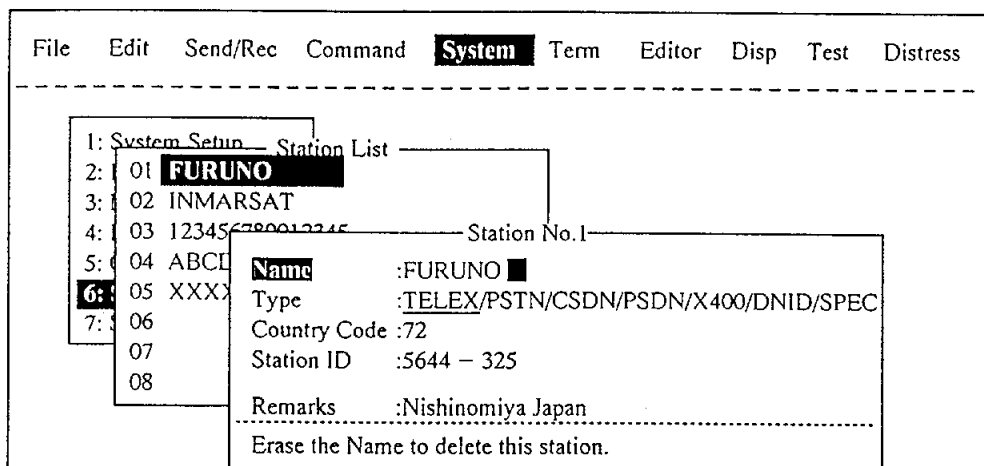
Figure 2-21 Station Registration Screen

3. The cursor is on the Name line. To delete a station, press the **Back Space** key to erase station name, and then press the **Enter** key.

4. To edit a station name, place the cursor on the character you want to edit.

5. Press the **Back Space** key to erase that character, then enter correct character.

6. Press the **Enter** key to save changes.

7. To return to the default display, press the **Esc** key twice.

Printing the station list

procedure

1. Call up the Station List.

2. While pressing and holding down the **Ctrl** key, press the **P** key.

3. Printing begins.

4. Check the Station List printout for correctness.

Figure 2-22 Sample Station List Printout

Entering Own Ship's Position

When there is no navigation device connected, select OFF on the Nav Port line in the System Setup menu, as explained at page 2-4. In this case enter ship's position manually, using the following procedure.

1. Press **F5** to select the System menu.

```
File    Edit   Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

    1: System Setup
    2: EGC Setup
    3: NCS Channel List
    4: EGC Channel List
    5: CES List
    6: Station List
    7: Ship Position
```
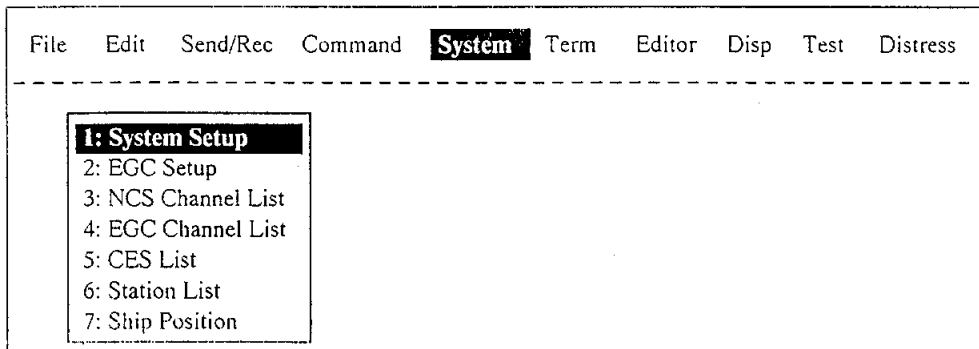
Figure 2-23 System Menu

2. Press [7] key. The following screen appears.

```
File    Edit   Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

    1: System Setup
    2: EGC Setup
    3: NCS Channel List
    4: EGC Channel List
    5: CES List
    6: Station Lis┌──────Ship Position──────┐
    7: Ship Posi  │ LAT      00:00.00N      │
                  │ LON     000:00.00E      │
                  │ PRESS RET to validate setting │
                  └─────────────────────────┘
```
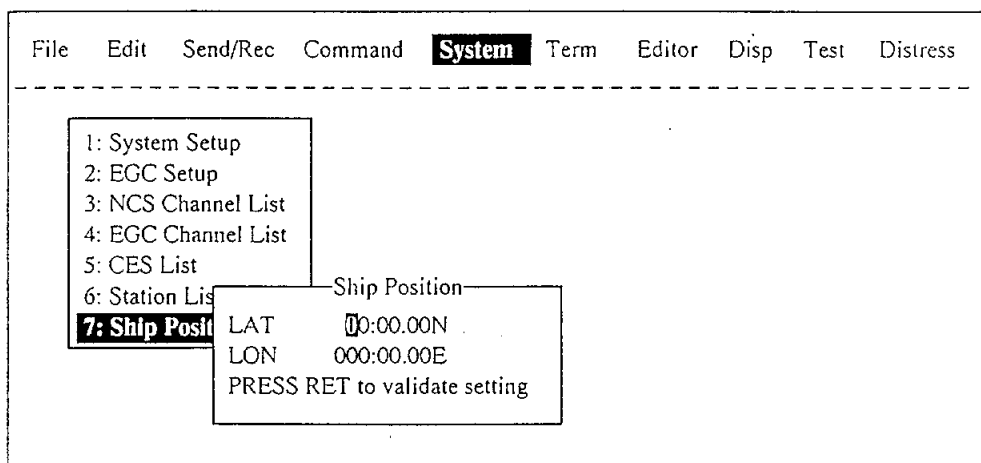
Figure 2-24 Ship Position setting screen

3. Enter latitude of your position.

4. Press [↓] key to advance the cursor to the LON line.

5. Ente longitude of your position.

6. Press the **Enter** key.
   The ship position appears at the lower right-hand corner of the screen. It blinks continuously after 10 minutes to request update. This position data is also entered on the "Update Distress Alert" screen. (Refer to page 6-5.)

MESSAGE HANDLING

This chapter describes how to create, edit, save and print messages.

Contents

Preparing a Message

There are two types of message; rutine message and confidential message.
Preparing a routine message is quite simple; just type text in the work area by the keyboard.

Messages can be assigned a name and saved to a floppy disk for later use. A message may contain maximum 32,000 characters (32 kybtes) of information.

procedure

1. Press **F1** to display the File menu.

```
┌────────────────────────────────────────────────────────────────────────┐
│ █File  Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  ┌──────────────────────┐                                                │
│  │ █1: New      ALT-N█  │                                                │
│  │  2: Open     ALT-O   │                                                │
│  │  3: Close    ALT-Q   │                                                │
│  │  ─ ─ ─ ─ ─ ─ ─ ─ ─   │                                                │
│  │  4: Delete   ALT-D   │                                                │
│  │  ─ ─ ─ ─ ─ ─ ─ ─ ─   │                                                │
│  │  5: Save     ALT-S   │                                                │
│  │  ─ ─ ─ ─ ─ ─ ─ ─ ─   │                                                │
│  │  6: Format           │                                                │
│  │  ─ ─ ─ ─ ─ ─ ─ ─ ─   │                                                │
│  │  7: Print    ALT-P   │                                                │
│  └──────────────────────┘                                                │
└────────────────────────────────────────────────────────────────────────┘
```
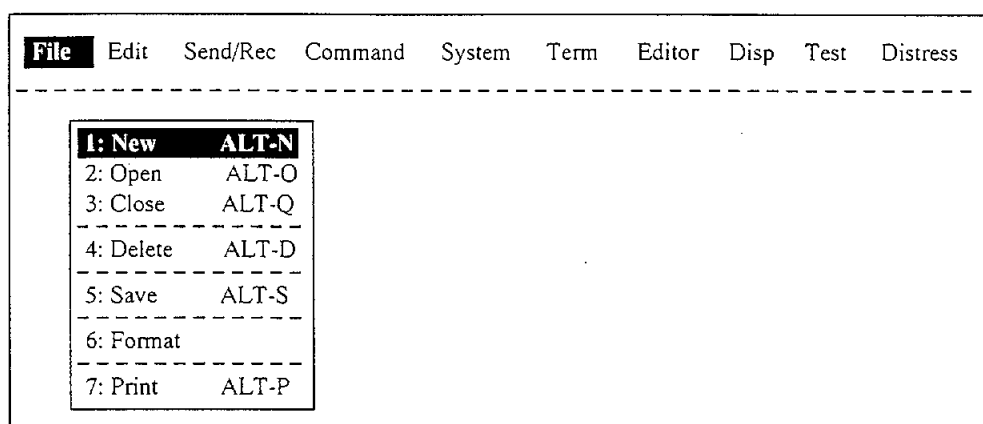
Figure 3-1 File Menu

2. Press the **Enter** key to select New. The display should now look something like Figure 3-2.

```
┌────────────────────────────────────────────────────────────────────────┐
│ █File  Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  ┌──────────────── < 1:UNTITLED 1 -> ──────────────────┐                 │
│  │ ■                                                    │                 │
│  │  \                                                   │                 │
│  │   \── Cursor can be a square or an underline         │                 │
│  │       and blinking or non-blinking.                  │                 │
│  │                                                      │                 │
│  │                                                      │                 │
│  │                                                      │                 │
│  └──────────────────────────────────────────────────────┘                │
└────────────────────────────────────────────────────────────────────────┘
```
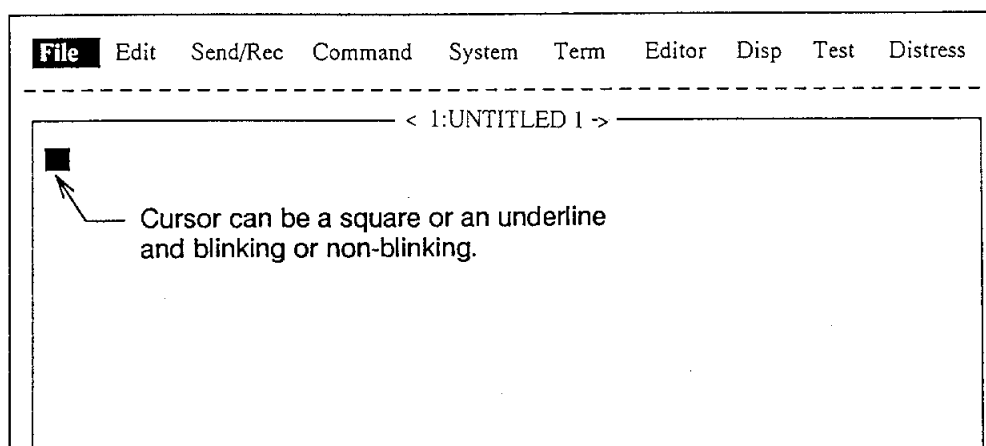
Figure 3-2 Text Editor Screen

NOTE: If the Text Editor screen does not appear and "close" screen appears, see "Opening a file when working area full" on page 3-14.

3. A cursor is on the first line. Type your message just as would do with an ordinary typewriter or word processor.

Routine message

The previous page shows the procedure for preparing a routine message.
When a partner SES receives a routine message, the message is displayed and printed out immediately.

Confidential message

If communicating with another FELCOM 10, you can prepare a confidential message by entering "S???-addressee code(-password):" in first line of message text. You can also receive confidential messages containing this header from a land subscriber or any other SES.
There are two types of confidential message; message with addressee code and message with both addressee code and password.
When a FELCOM 10 receives a confidential message, the message is not displayed and printed out immediately. To display or print out the contents of the received message, the recipient should perform the key sequences shown on pages 4-20 and 4-22.

Explanation of addressee code and password

Caller and recipient agree beforehand on both the addressee code and the password. The addressee code can be the title of the recipient; for example, CAPTAIN. The password could be the classification of the message; for example, SECRET.

Preparing message with addressee code

To prepare, enter S, 3 question marks, hyphen, addressee code, colon and text of message.

```
                                ┌── Be sure to enter colon.
  ┌──────────────────────┬──────────────────────────────
  │                       ▼
  │  S??? ─ addressee code:   (text of message)
  │              ▲
  maximum 8 characters ──┘
```
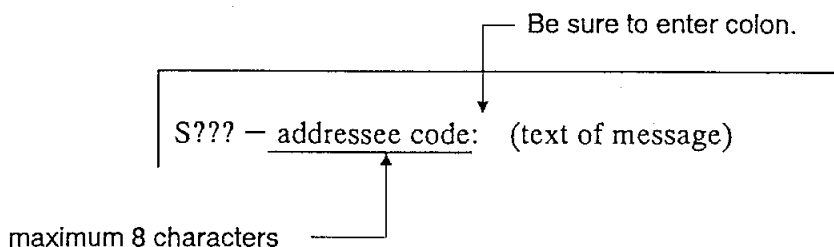
Preparing message with both addressee code and password

To prepare, enter S, 3 question marks, hyphen, addressee code, hyphen, password, colon and text of message.

```
                           Be sure to enter colon.
  ┌──────────────────────────────┬───────────────────
  │                                ▼
  │  S??? ─ addressee code ─ password:   (text of message)
  │              ▲              ▲
  maximum 8 characters ──┘
```
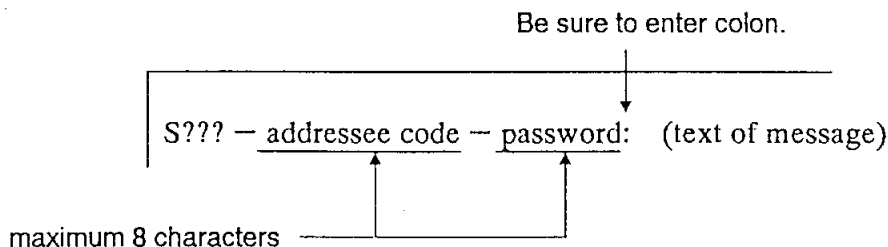
When the recipient receives a message with both addressee code and password, he must enter the password to view contents of the message.

Editor menu

The Editor menu sets the parameters of the text editor.

procedure

1. press **F7** to display the Editor menu.

```
File    Edit    Send/Rec   Command    System   Term   [Editor]  Disp   Test   Distress
-----------------------------------------------------------------------------------------
      ┌────────── Editor Setup ──────────┐
      │ [Line No.]    :[OFF]/ ON          │
      │ ................................  │
      │ Cursor Figure: Block / Underline  │
      │ Cursor Blink : OFF / ON           │
      │ ................................  │
      │ Tab Width    : 2 / 4 /8           │
      └───────────────────────────────────┘




- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Current State: IDLE                    SYNC(NCS)              89-11-28 12:00(UTC)
                                       NCS:IOR LOGIN               LAT:  34:43.00N
                                                                  LON:135:21.00E
```
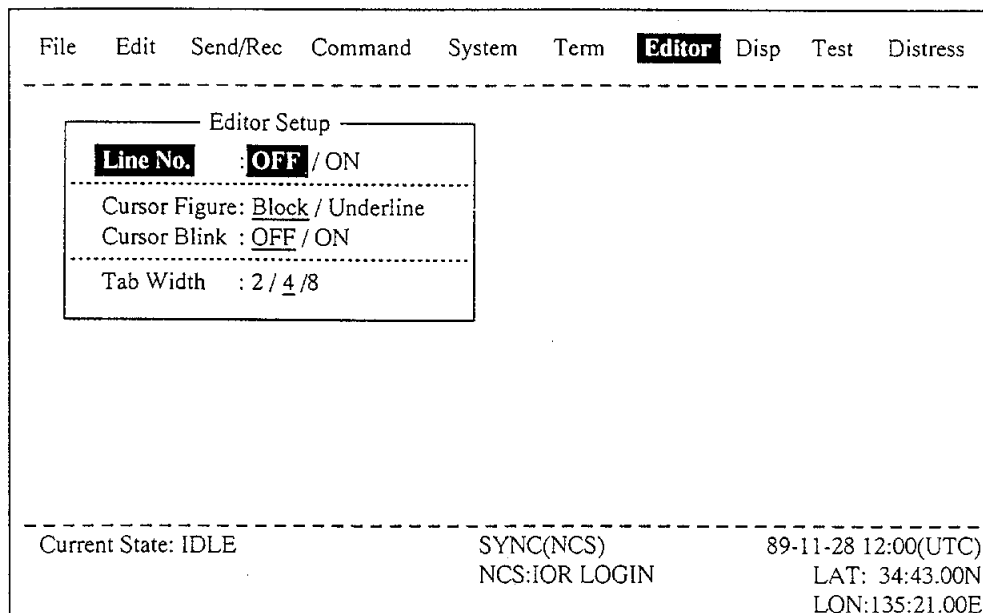
Figure 3-3 Editor Setup Menu

2. Figure 3-3 shows the factory settings (underlined). To change settings, use the up and down arrow keys to advance the cursor between lines and select settings with the right and left arrow keys. After selecting settings, press the **Enter** key.

Line No.:	Turns the line number display on or off.
Cursor Figure:	Selects cursor appearance, either ■ (Block) or underline.
Cursor Blink:	Turns cursor blink on or off.
Tab Width:	Sets horizontal tab width; 2, 4 or 8 tabs per line.

```
┌──────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│ ──────────────────────────────────────────────────────── │
│   ┌──────────────────< 1:UNTITLED 1 >──────────────────┐ │
│   │ 001█                                                │ │
│   │  ↖                                                  │ │
│   │    \                                                │ │
│   │     \                                               │ │
│   │      \__ Line Number                                │ │
│   │         Automatic input if turned on in Editor Setup menu. │ │
│   │                                                     │ │
│   │                                                     │ │
└──────────────────────────────────────────────────────────┘
```
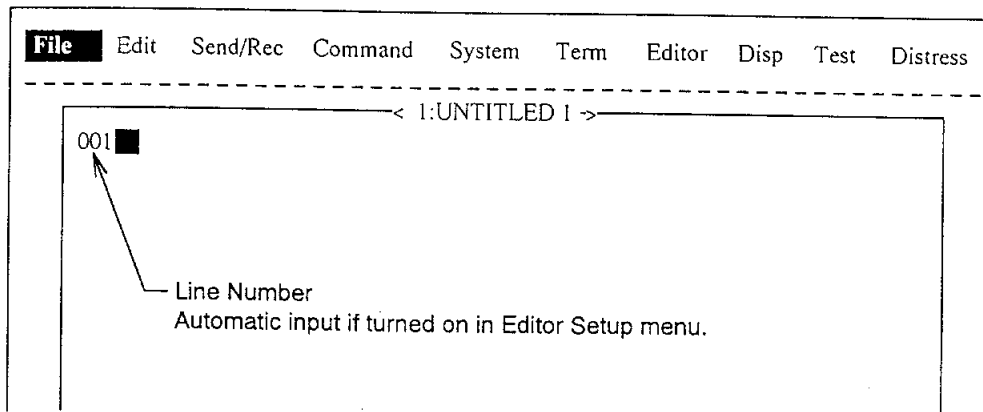
Figure 3-4 Text Editor Screen

Cursor placement

The Edit menu provides commands which let you immediately place the cursor at the top or bottom of a file.

procedure

1. Press **F2** to display the Edit Menu.

2. To place the cursor at the top of the current file, press [5] key. To place the cursor at the bottom of the current file, press [6] key.

■ The following keyboard shortcuts can be used instead of the above procedure.

• Pressing the **Home** key places the cursor at the top of the current file.

• Pressing the **End** key places the cursor at the bottom of the current file.

Cutting and pasting

procedure

1. Place the cursor on the first character of the text to be cut.

2. Highlight the text to be cut by pressing [→] key while pressing and holding the **Shift** key. You can use the right and left arrow keys to adjust the highlight. The figure below shows the appearance of highlighted text.

```
┌───────────────────────── < 2:UNTITLED 2 > ─────────────────────────┐
│                                                                     │
│ WE ARE CONFIDENT THAT YOU WILL ENJOY MANY YEARS OF OPERATION        │
│ WITH THIS INMARSAT STANDARD C SHIP EARTH STATION FELCOM 10.         │
│ CONGRATULATION ON YOUR CHOICE OF FURUNO FELCOM 10                   │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 3-5 Appearance of Highlighted Text

3. Press **F2** to select the Edit menu.

```
┌───────────────────────── < 2: UNTITLED  2 > ──────────────────────┐
│ WE┌────────────────────────┐U WILL ENJOY MANY YEARS OF OPERATION   │
│ WI│ 1: Undo        ALT-X   │DARD C SHIP EARTH STATION FELCOM 10.    │
│ CO│────────────────────────│OICE OF FURUNO FELCOM 10                │
│   │ 2: Cut         DEL     │                                        │
│   │ 3: Copy        ALT-C   │                                        │
│   │ 4: Paste       INS     │                                        │
│   │────────────────────────│                                        │
│   │ 5: Goto Top    HOME    │                                        │
│   │ 6: Goto Bottom END     │                                        │
│   │────────────────────────│                                        │
│   │ 7: Change Window ALT-V │                                        │
│   └────────────────────────┘                                        │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```
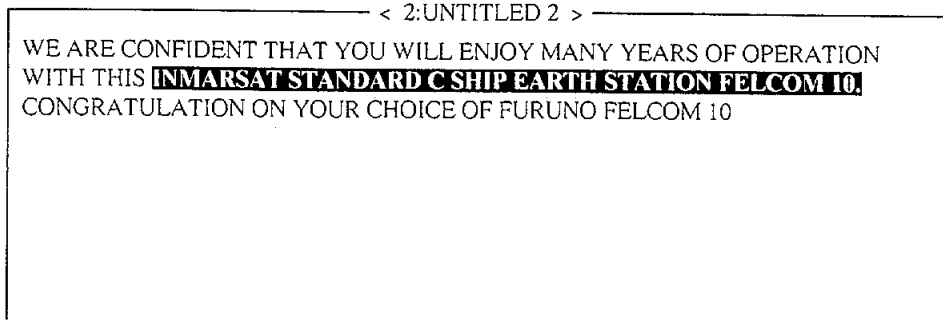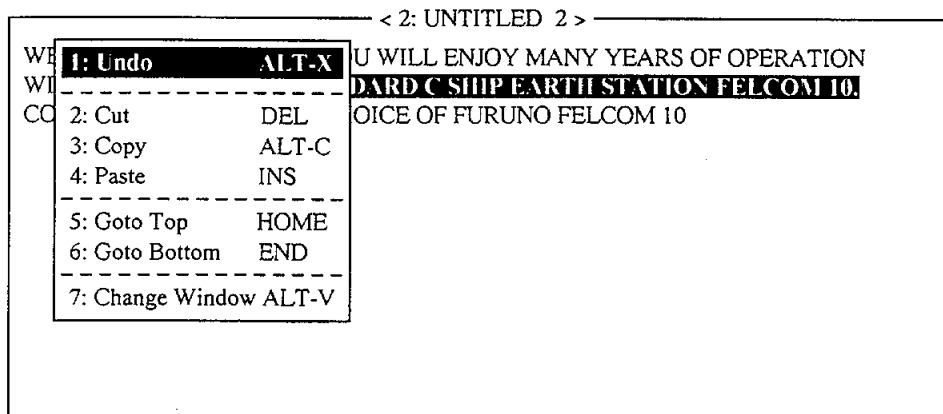
4. Press [2] key. The highlighted text is cut and the remaining text is reformatted. If a mistake is made, you can restore the text by immediately selecting Undo in the Edit menu.

5. To move text to a new location after it has been cut, place the cursor at the exact spot in the message where the cut text is to start. When the text cursor is placed correctly, press F2 and then [4] key (Paste).

■ The following keyboard shortcuts also execute the above procedure.

1. Do the same procedure of the above items 1 and 2.

2. Press the **Delete** key. The "cut" command is executed.

3. Place the cursor at the exact spot in the message where the cut text is to start.

4. Press the **Insert** key. The "paste" command is executed.

Copying and pasting

procedure

1. Select the text you want to copy.

```
─────────────────< 2:UNTITLED 2 >─────────────
┌───────────────────────────────────────────────────────┐
│ THE FURUNO FELCOM 10 INMARSAT STANDARD C SHIP EARTH STATION, A │
│ SATELLITE COMMUNICATIONS ███ PACKAGE FOR VIRTUALLY        │
│ EVERY VESSEL.                                            │
│                                                          │
│                                                          │
│                                                          │
│                                                          │
│                                                          │
└───────────────────────────────────────────────────────┘
```
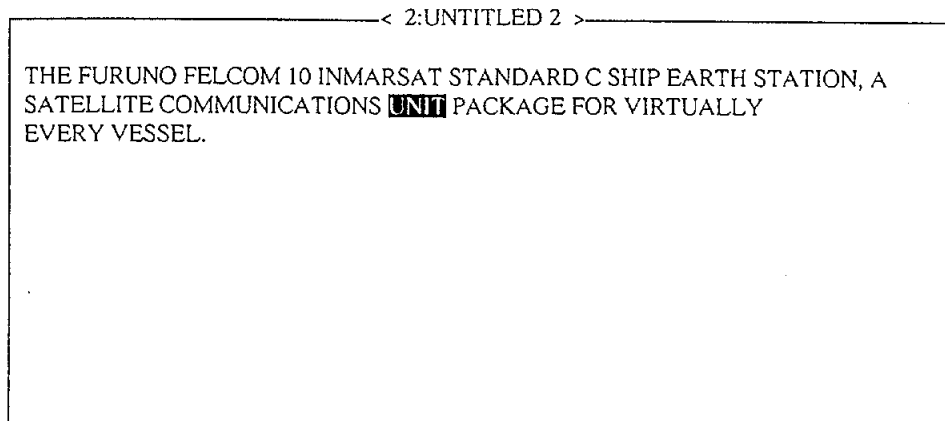
Figure 3-6 Appearance of Highlighted Text

2. Press **F2** to display the Edit menu.

3. Press [3] key. The text selected is copied to the internal memory.

4. Place the cursor at the exact spot on the message where the copied text is to start.

```
─────────────────< 2:UNTITLED 2 >─────────────
┌───────────────────────────────────────────────────────┐
│ THE FURUNO FELCOM 10 INMARSAT STANDARD C SHIP EARTH STATION, A │
│ SATELLITE COMMUNICATIONS UNIT PACKAGE FOR VIRTUALLY       │
│ EVERY VESSEL.                                            │
│ ██◄───── Cursor                                          │
│                                                          │
│                                                          │
└───────────────────────────────────────────────────────┘
```
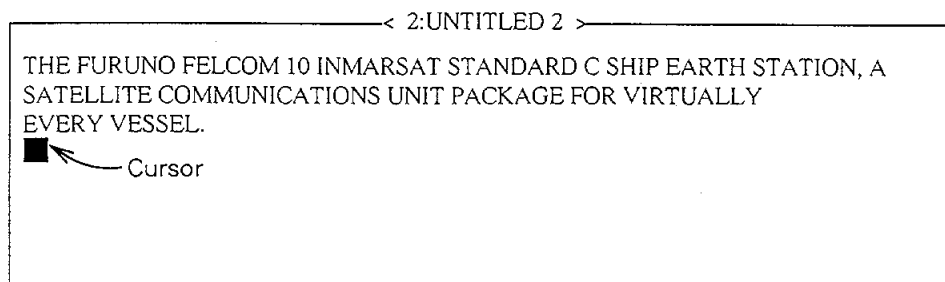
Figure 3-7 Cursor Located Where Text is to be Pasted

5. Press F2 followed by [4] key. The text is placed at the cursor location.

```
┌──────────────────────< 2:UNTITLED 2 >──────────────────┐
│ THE FURUNO FELCOM 10 INMARSAT STANDARD C SHIP EARTH STATION, A │
│ SATELLITE COMMUNICATIONS UNIT PACKAGE FOR VIRTUALLY              │
│ EVERY VESSEL.                                                    │
│ UNIT ■                                                           │
│                                                                  │
│                                                                  │
│                                                                  │
└──────────────────────────────────────────────────────────────┘
```
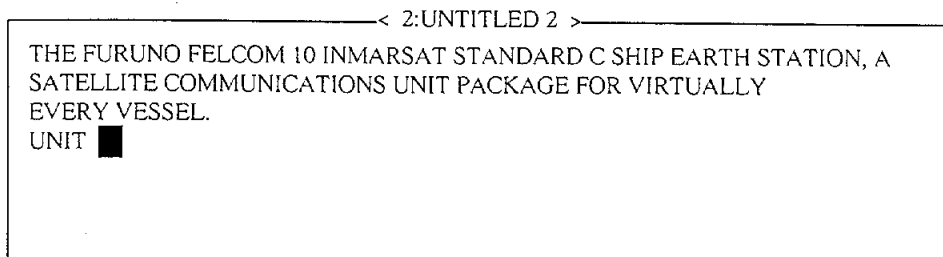
Figure 3-8 Text Pasted at Cursor Location

■ The following keyboard shortcuts perform the same operation as above.

1. Select the text you want to copy.

2. Press [C] key while holding down the **Alt** key.

3. Place the cursor at the exact spot on the message where the copied text is to start.

4. Press the **Insert** key.

Undo

If you are editing a file and you want it to look like it did when you started use the Undo feature to return the file to its most recent state. For example, you have cut text but want to restore it. Then, you would select Undo in the Edit menu to restore the text to its most recent location. (Or press [X] key while holding down the **Alt** key for the same procedure.)

Saving a Message

Now that you've created a message you'll probably want to save it to a floppy disk. To save a message to a floppy disk the disk must be formatted. Formatting prepares the disk so information can be written to its surface. You have to format a disk only once. You can reformat a disk you have used before, however, in which case, all prior information on the disk is erased.

Formatting a floppy disk (By using IC-500 Terminal Unit)

procedure

1. Insert a blank floppy disk into the disk drive.

2. Press the **F1** key.

3. Press [6] key.

4. The screen asks "OK to format FD?".

```
┌──────────────────────────────────────────────────────────────────────┐
│  █File█  Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│        ┌──────────────────── < ABC  > ────────────────────┐           │
│        │  ┌──────── Format ────────┐                       │           │
│        │  │ OK to format FD?  █Yes█ │                      │           │
│        │  │                   ┌───┐ │                      │           │
│        │  │                   │No │ │                      │           │
│        │  │                   └───┘ │                      │           │
│        │  └────────────────────────┘                       │           │
│        │                                                   │           │
│        └───────────────────────────────────────────────────┘          │
└──────────────────────────────────────────────────────────────────────┘
```
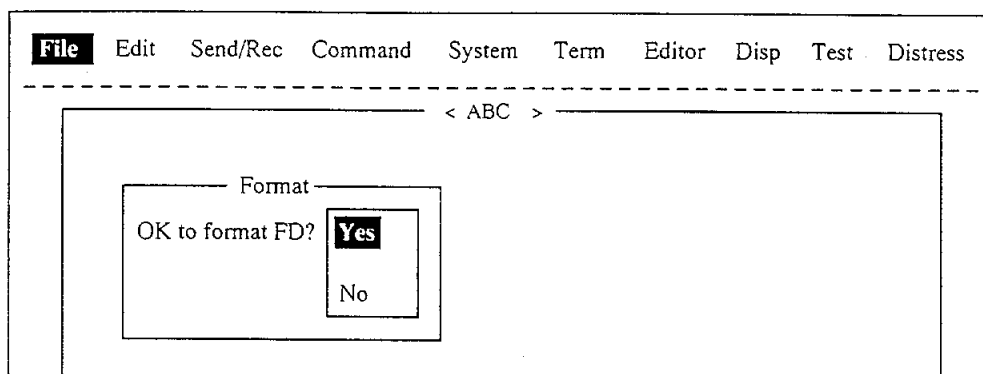
Figure 3-9 FD Format Confirmation Screen

5. Select Yes to format the disk. Press the Enter key to begin formatting.

   NOTE: If there is no floppy disk in the drive, "FD not inserted in drive. Press any key to escape." appears on the display.

6. "Now Formatting" appears on the screen during formatting. Also, the access lamp on the disk drive lights. DO NOT remove the disk during formatting.

7. When formatting is completed (about one minute), "Formatting Completed." appears on the display and the access lamp goes off. You can now return to the default display by pressing any key.

Saving a message

You can save a message two ways: Save it without losing your place on the screen (called "save"), or save it before clearing the screen or exiting (called "close").

save

1. Press **F1** to display the File menu.

2. Press [5] key. The screen should look something like Figure 3-10.

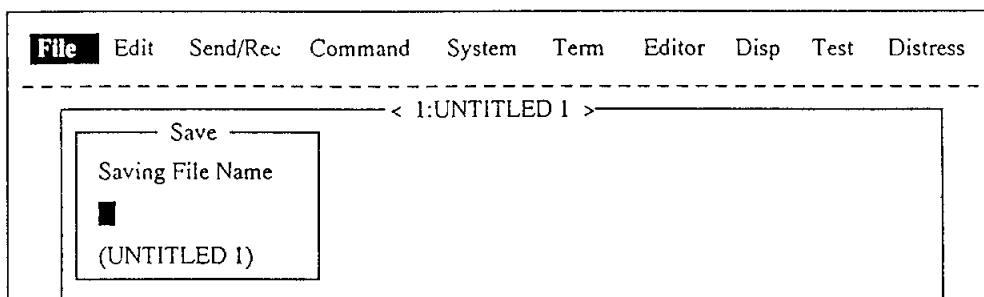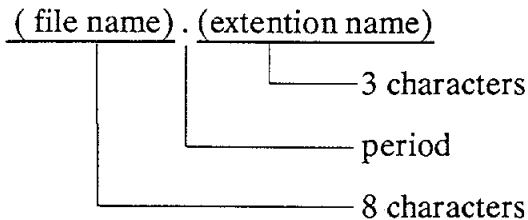■ Instead of the above steps 1 and 2, press [S] key while holding down the **Alt** key.

```
┌─────────────────────────────────────────────────────────────────┐
│  ███ File  Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│   ┌──────────────────────┬──< 1:UNTITLED 1 >──────────────────────┐ │
│   │  ┌──── Save ────┐     │                                        │ │
│   │  Saving File Name      │                                        │ │
│   │  ■                      │                                        │ │
│   │  (UNTITLED 1)          │                                        │ │
│   └──────────────────────┘                                         │ │
└─────────────────────────────────────────────────────────────────┘
```

Figure 3-10 Save Screen

3. Enter a file name, up to eight characters with extention name (three characters) as shown below.

```
( file name) . (extention name)
    │            │     └────── 3 characters
    │            └──────────── period
    └───────────────────────── 8 characters
```

4. Press the **Enter** key. "SAVING" appears on the display and the access lamp on the disk drive lights. DO NOT remove the disk while the access lamp is lit.

5. The access lamp goes off when saving is completed.

close

1. Press **F1** to display the File menu.

2. Press [3] key. The prompt "Save File?" appears on the screen.

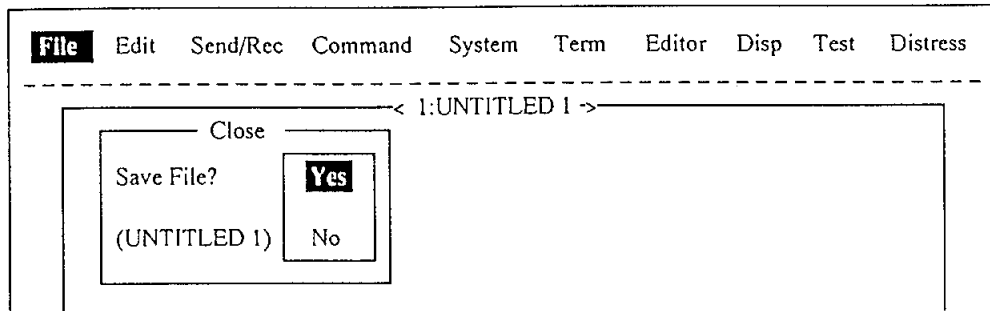■ Instead of the above steps 1 and 2, press [Q] key while holding down the **Alt** key.

```
┌─────────────────────────────────────────────────────────────────┐
│ ▐File▌  Edit   Send/Rec  Command   System   Term   Editor  Disp  Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│      ┌──────────────────────< 1:UNTITLED 1 ->───────────────────┐ │
│      │  ┌──── Close ────┐                                       │ │
│      │  │               │                                       │ │
│      │  │ Save File?  ┌─────┐                                   │ │
│      │  │             │ Yes │                                   │ │
│      │  │ (UNTITLED 1)│ No  │                                   │ │
│      │  └─────────────┴─────┘                                   │ │
│      │                                                          │ │
└─────────────────────────────────────────────────────────────────┘
```

Figure 3-11 File Menu, Close File Prompt

3. To save the message, press the **Enter** key. (If you do not want to save the message, press [↓] followed by the **Enter** key.)

```
┌─────────────────────────────────────────────────────────────────┐
│ ▐File▌  Edit   Send/Rec  Command   System   Term   Editor  Disp  Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│      ┌──────────────────< 1:UNTITLED 1 >──────────────────────┐  │
│      │  ┌──── Save ────┐                                      │  │
│      │  │ Saving File Name                                    │  │
│      │  │ ■                                                   │  │
│      │  │ (UNTITLED 1)                                        │  │
│      │  └──────────────┘                                      │  │
└─────────────────────────────────────────────────────────────────┘
```
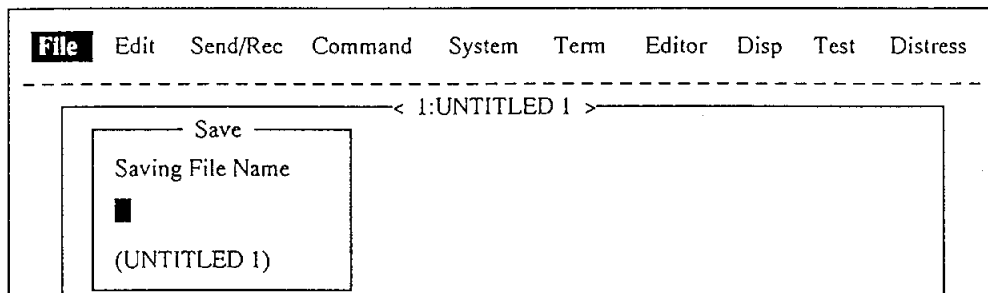
Figure 3-12 Appearance of Display During File Saving

4. Enter a file name.

5. Press the **Enter** key. Saving begins and the access lamp on the drive lights.

6. At the same time the access lamp goes the message is saved and the screen is cleared. Control is returned to the default display.

Opening a File

The internal memory provides two working areas (called working area 1 and working area 2) to which you can load one file (message) each; but only one file can be displayed on the CRT at a time. A special function called change window permits switching between two files.
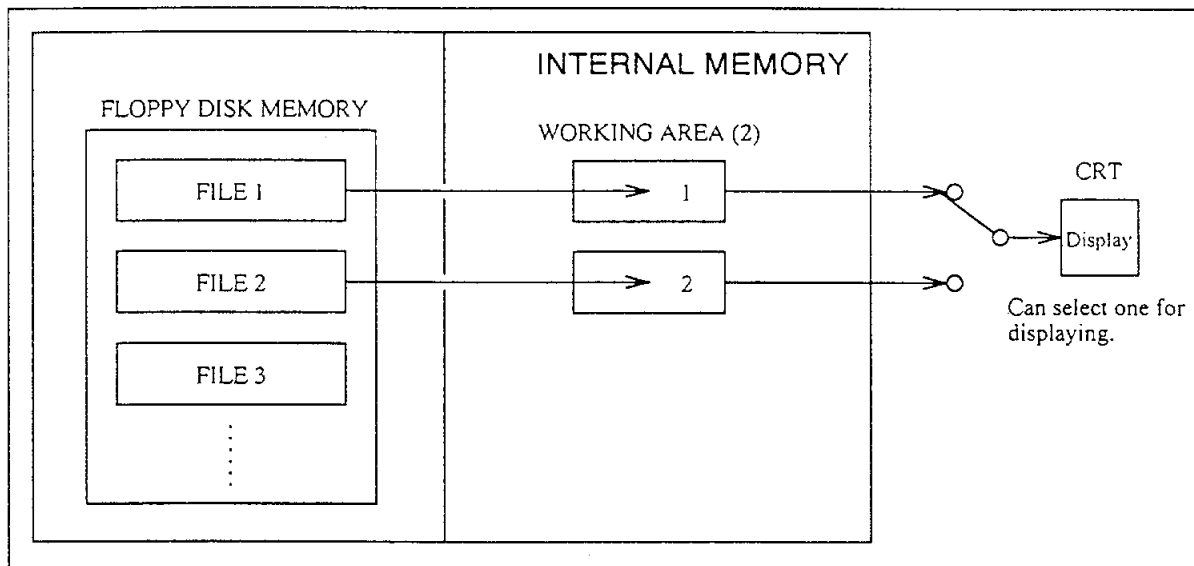

Figure 3-13 How to Select a File for Display on the Screen

procedure

1. Set the floppy disk containing the file you wish to open in the disk drive.

2. Press F1 to display the File menu.

3. Press [2] key. The screen shows a list of the files stored in the floppy disk.

■ Instead of the above steps 2 and 3, press [O] key while holding down the Alt key.

```
┌──────┐
│ File │  Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
└──────┘
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
 ┌──────────────────────── Open ─────────────────────────────────┐
 │                                              ┌─View window─┐   │
 │   File Name    Size        Date      Time    │             │   │
 │  ▐FURUNO▐    ▐1110▐     ▐91-01-19▐ ▐15:19▐    │             │   │
 │   USA          256     91-01-16     8:40     │             │   │
 │   QUEEN        561     91-01-01     1:00     │             │   │
 │                                              │             │   │
 │                                              │             │   │
 │   3 Files exist          24785k bytes free   │             │   │
 │   Space:  display part view                  └─────────────┘   │
 └────────────────────────────────────────────────────────────────┘
```
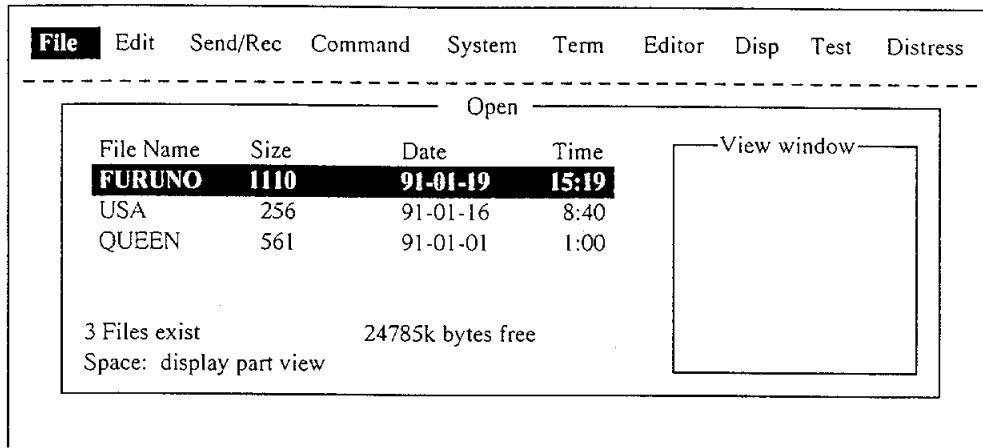
Figure 3-14 Sample File List

4. Select a file by using the up and down arrow keys.
   When you press the space bar, a first part of the file selected appears in the View Window.

5. Press the **Enter** key.

   NOTE: When both working areas are occupied, Close screen appears. See page 3-10. Like the message says, close a file in order to open another file.

6. The message "Loading" appears on the screen during loading. A few moments later the contents of the file appear on the screen and the title bar shows the file name. You may repeat the above procedure to load a second file into a working area. You can switch between files by selecting Change Window in the Edit menu. Figure 3-15 illustrates how to switch between files with Change Window.
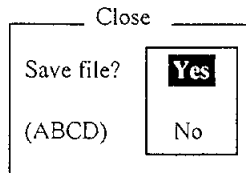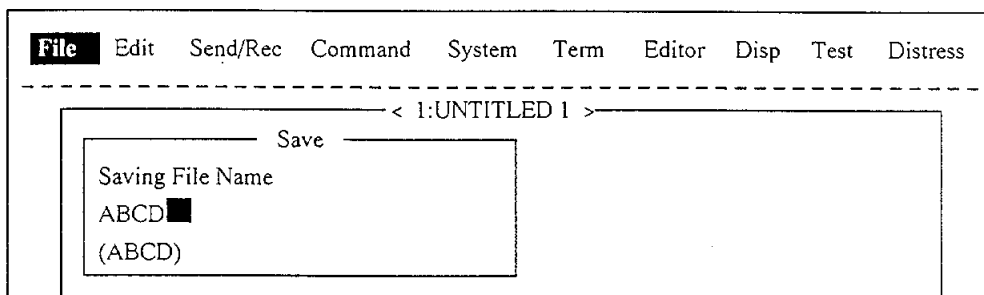
```
┌──────────────────────────────────────────────────────────────────┐
│  ┌─── ABC ───┐                              ┌─── FURUNO ───┐       │
│  │           │          ─────────────►      │             │       │
│  │           │          ◄─────────────      │             │       │
│  │           │                              │             │       │
│  │           │       ① [F2]                 │             │       │
│  │           │       ② [7]                  │             │       │
│  └───────────┘       OR                     └─────────────┘       │
│                      [ALT] + [V]                                   │
│                                                                    │
│   How to alternate display of files in working area 1 ans 2        │
└──────────────────────────────────────────────────────────────────┘
```
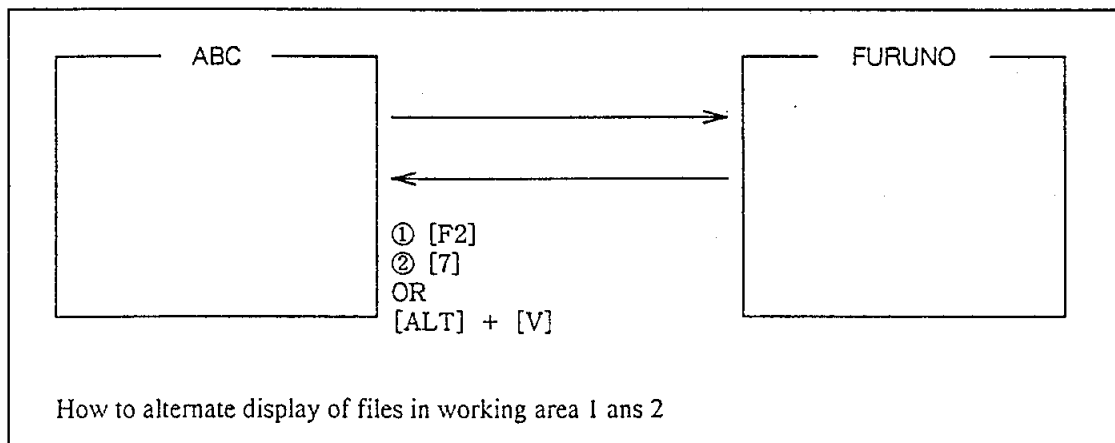
Figure 3-15 How the Change Window Feature Works

Opening a File when Working Area full

When the working areas 1 and 2 are loaded, if you press the [F1] key followed by the **Enter** key to open a new file, the following appears to indicate that a loaded file in the working areas should be closed.

```
 _____ Close _____
|                    |
| Save file?  ┌─────┐|
|             │ Yes │|
|             │     │|
| (ABCD)      │ No  │|
|             └─────┘|
|_____|
```

To save the file on the screen, press the **Enter** key. (If you don't need to save the file, press the [↓] key followed by the **Enter** key. The editing screen appears.)

```
┌──────────────────────────────────────────────────────────────────┐
│ File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│        ┌──────────────── < 1:UNTITLED 1 >────────────────────┐    │
│        │ ────── Save ──────                                  │    │
│        │ Saving File Name                                    │    │
│        │ ABCD█                                               │    │
│        │ (ABCD)                                              │    │
│        └─────────────────────────────────────────────────────┘    │
│                                                                    │
└──────────────────────────────────────────────────────────────────┘
```

Enter file name followed by the **Enter** key. Than the editing screen appears.

Saving a File Under a New Name

You may want to use a portion of an existing file to a create another file and save the newly created file under a new name.

procedure

1. Call up a file.

2. Edit the file.

3. Press **F1**.

4. Press [3] or [5] key.
   When you press [5] key, the figure something like the one shown in Figure 3-16 appears. When you press [3] key (close command), press the **Enter**, then a display similar to Figure 3-16 appears.
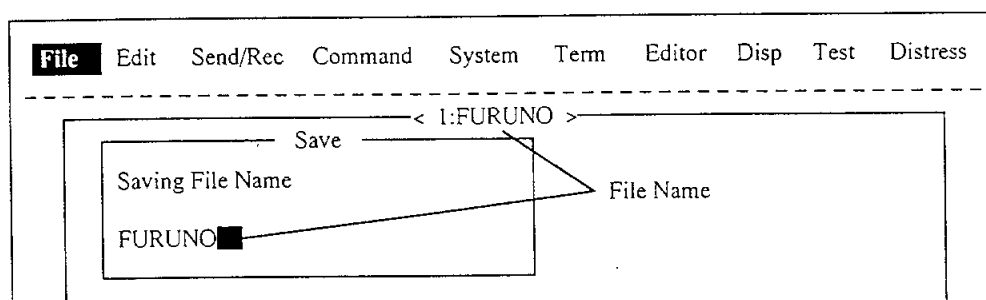
Figure 3-16 Save Screen

5. Press the **Back Space** key to delete original file name. Enter file name for new file.

6. Press the **Enter** key.

NOTE: Should you decide to save the file under the original name, skip step 5. The following appears.
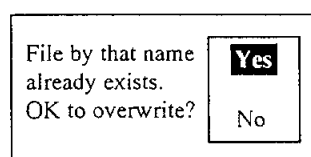
7. Press the **Enter** key again.

Printing a File

You can print out a hard copy of a file stored in a floppy disk.

procedure

1. Press **F1** to display the File menu.

2. Press [7] key. A list of files stored on the disk appears.

```
 File    Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
---------------------------------------------------------------------------------------


                                        Print
                  ┌──────────────────────────────────────┐   ┌─View Window───┐
                  File Name    Size       Date       Time │   │               │
                  FURUNO       1110       91-01-19   15:19 │   │               │
                  USA          256        91-01-16   8:40  │   │               │
                  QUEEN        561        91-01-01   1:00  │   │               │
                                                           │   │               │
                  3 Files exist           24785k bytes free│   │               │
                  Space:  display part view                │   └───────────────┘
---------------------------------------------------------------------------------------
 Current State: IDLE                 SYNC(NCS)              91-2-06 12:00(UTC)
                                     NCS:IOR LOGIN          LAT: 34:43.00N
                                                            LON:135:21.00E
```
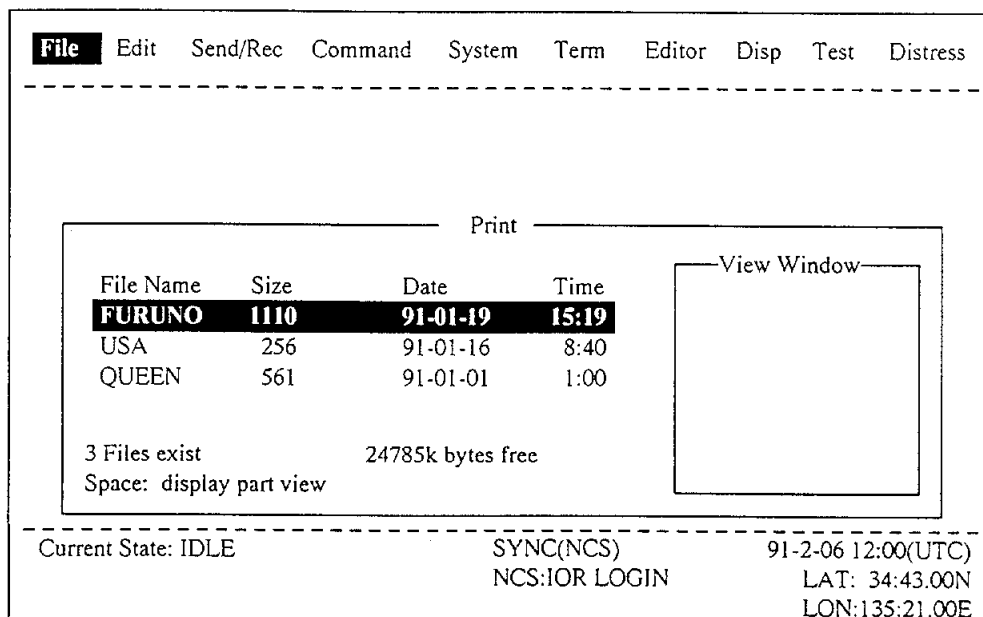
Figure 3-17 Sample Print Screen

3 . Select a file by using [↑] and [↓].

To get a partial display of the file, tap the space bar. A portion of the file appears in the View Window.

4. Press the **Enter** key to start printing.

Combining Files

In the procedure below we'll combine file A and B.

procedure

1. Open file A.

2. Open file B. File B appears on the display.

3. Place the cursor at the beginning of the file. While pressing and holding down the **Shift** key press [↓] to highlight the entire file. (You can also select portion of the file.)

4. Press [C] key while holding down the **Alt** key. This places file B in the memory.

5. Press [V] key while holding down the **Alt** key. File B is erased and File A appears on the display.

6. Press the **End** key followed by the **Enter** key to place the cursor at the end of the file.

7. Press the **Insert** key.
   The file B is inserted at the end of the file A.

Deleting a File

procedure

1. Press **F1** to display the File menu.

2. Press [4] key. A list of files stored on the disk appears.
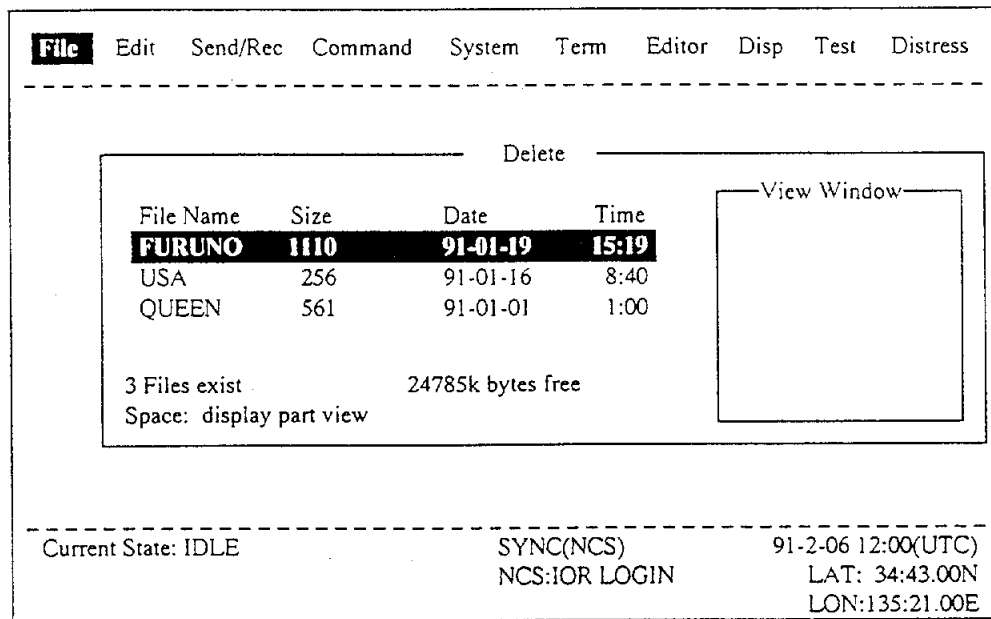
Figure 3-18 Sample Delete Screen

3. Select the file you want to delete. To verify the contents of that file, tap the space bar.

4. Press the **Enter** key.
   The prompt "OK to delete file?" appears.
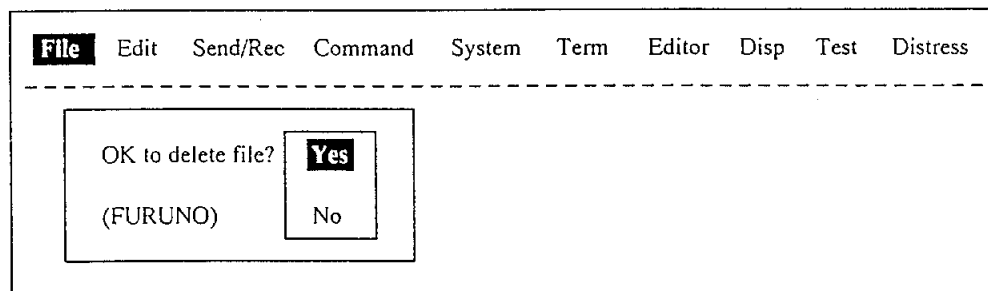
Figure 3-19 Prompt for Verification of File Delete

5. Press the **Enter** key to delete the file, or press [↓] and the **Enter** key to escape.

INMARSAT-C COMMUNICATION

This chapter explains how to transmit and receive in the INMARSAT-C system.

Before conducting any communications, be sure to log in with the NCS in your area.

Contents

Transmission

Transmitting a message by INMARSAT-C store-and-forward telex is somewhat akin to sending a letter: You create the message and attach the address of the recipient. The address of the recipient in the INMARSAT-C system is his telex number for land-line or SES Inmarsat Mobile Number (IMN).

The message can be one you've just prepared or one stored in a floppy disk. (Messages cannot be transmitted by means of direct keyboard input.)

Transmitting prepared message

This section explains routine telex transmission. For distress communication, see page 6-10. For 2-digit code services and PSTN (FAX) communication, see pages 4-14 and 4-16, respectively.

procedure

1. Prepare message.

2. Press **F3** to display the Send/Rec menu.

```
   File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
  _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
  ┌─────────────────────────< 1:UNTITLED 1 >──────────────────────────┐
  │┌─────────────────┐                                                 │
  ││ 1: Send         │                                                 │
  ││ 2: Data Report  │                                                 │
  ││ 3: Receive Message                                                │
  ││ 4: EGC          │                                                 │
  ││ 5: Log          │                                                 │
  │└─────────────────┘                                                 │
  │                                                                    │
  │                                                                    │
  │                                                                    │
  │                                                                    │
  │                                                                    │
  │                                                                    │
  _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
  Current State: IDLE               SYNC(NCS)            91-2-28 12:00(UTC)
                                    NCS:IOR LOGIN              LAT: 34:43.00N
                                                               LON:135:21.00E
```
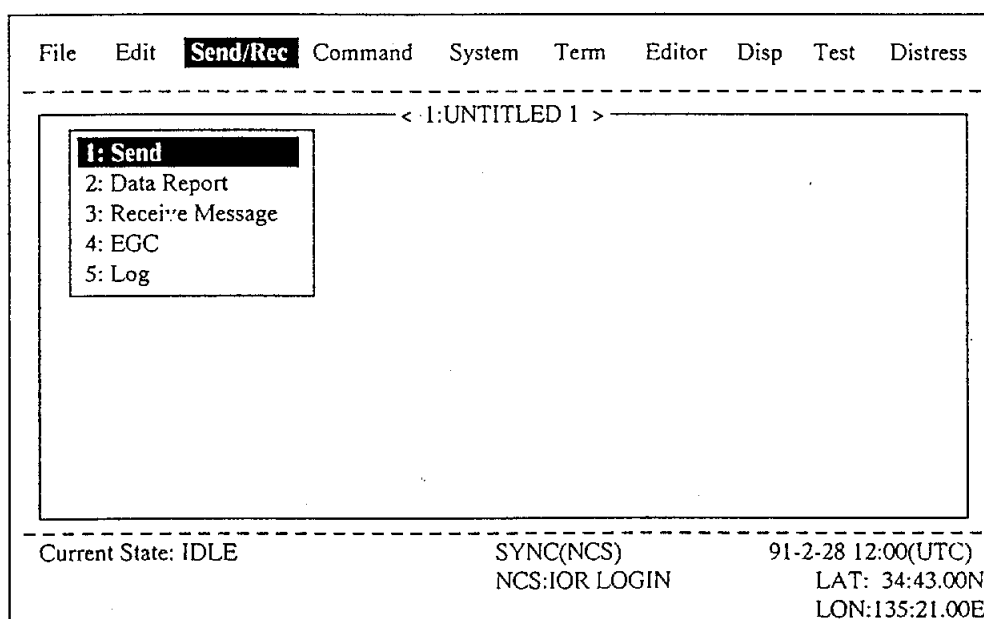
Figure 4-1 Send/Rec Menu

3. Press the **Enter** key or [1] key to display the Send sub menu.
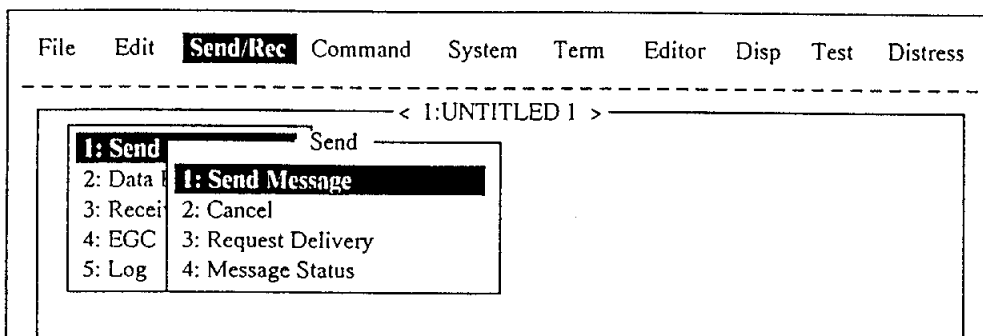
Figure 4-2 Send Sub Menu

4. Press the **Enter** key or [1] key. The Send Message screen appears. The cursor is on the Priority line and "Normal" is selected.

NOTE: An error message may appear in the conditions below:

Unit is not logged-in. — Error message: Cannot start to send. (not Logged-in)
Unit operates as an EGC-only receiver — Error Message: Cannot start to send. (EGC receiver)
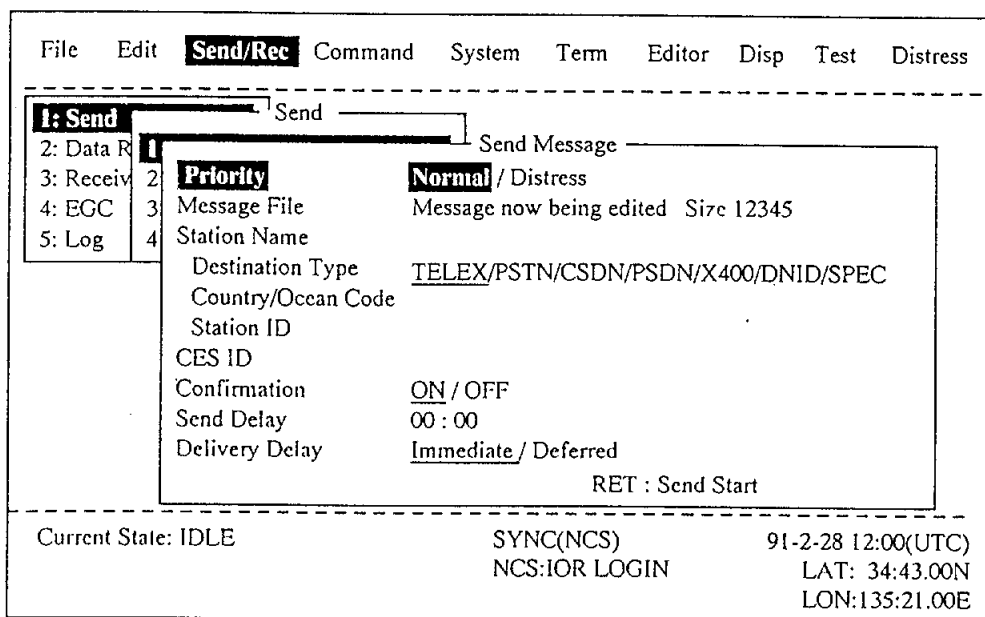

Figure 4-3 Send Message Display Screen

The message file line displays "Message now being edited" when the currently displayed file is to be transmitted.

5. Press [↓] three times to place the cursor on the Country/Ocean Code line. (The priority remains "Normal". You don't need to enter a station name. The Destination Type is now telex.)

6. Key in either international telex country code of recipient (ship-to-shore) or ocean region (ship-to-ship). A list of international telex country codes begins on page A-3 in the Appendix.

   Ocean Region

   AOR-East: 581
   POR: 582
   IOR: 583
   AOR-West: 584

7. Press [↓] to send the cursor to the Station ID line.

8. Key in either recipient's telex subscriber number (ship-to-shore) or receiving SES INM (ship-to-ship).

9. Press [↓] to advance the cursor to the CES ID line.

10. Enter CES ID.

    NOTE: If the CES ID entered is invalid, "Cannot use this CES. Please check network configuration." appears.

11. Press [↓] to send the cursor to the Confirmation line.

12. To receive confirmation from the coast station when message has been delivered to recipient, select ON. If not required, select OFF.

13. Press [↓] to send the cursor to the Send Delay line.

14. If you are going to send a message after passing a set time, enter a time up to 99 hrs 59 mins.
    (The Send Delay is used to time message arrival to suit recipient office hours.)

15. Press [↓] to go to the Delivery Delay line.

16. The Delivery Delay line requests the CES for immediate or deferred transmission to the recipient designated. Select either immediate or deferred by pressing the right and left arrow keys. There are no CESs offering "Deferred" service as of July 1993. For information on this service, check with the CES in use.

17. Confirm all settings and then press the **Enter** key. A prompt asks you if it is alright to start transmission.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  ┌──────────┐ ┌──────── Send ────────┐                                    │
│  │ 1: Send  │ │                      └─ Send Message ─────────────────┐    │
│  │ 2: Data R│ │                                                       │    │
│  │ 3: Receiv│ 2 Priority          Normal / Distress                   │    │
│  │ 4: EGC   │ 3 Message File      Message now being edited  Size 12345 │    │
│  │ 5: Log   │ 4 Station Name                                           │    │
│  └──────────┘     Destination Type    TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC  │
│                   Country/Ocean Code   720                                 │
│                   Station ID           5644-325          ┌──────────────┐  │
│                 CES ID                 302 (Perth)       │  Send Start  │  │
│                 Confirmation           ON / OFF          ├──────────────┤  │
│                 Send Delay             00 : 00           │  Yes    No   │  │
│                 Delivery Delay         Immediate / Deferred └──────────┘   │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  Current State: IDLE              SYNC(NCS)            91-2-28 12:00(UTC)   │
│                                   NCS:IOR LOGIN        LAT: 34:43.00N       │
│                                                        LON:135:21.00E       │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 4-4 Send Message Confirmation Screen

18. Press the **Enter** key to send the message to the message buffer. (To escape, select No and press the **Enter** key.) The message "Message is entered in sending Buffer." appears. At the same time, the message prepared is printed out.

   NOTE: The message buffer can only hold one message. However a second message may be sent to the buffer by assigning a Send Delay to it.

   When the message buffer is full, "Cannot enter this message to sending Buffer." appears to alert you.

19. Press any key to return to the default display.

20. The message(s) will be transmitted according to Send Delay settings. "Current State: SENDING" appears at the bottom of the screen during transmission.

21. After the message is transmitted "Successful Sending message" appears and its particulars are sent to the Display Log. More on this in a later section ("Display Log").

TRANSMIT MESSAGE STATUS

The terminal unit displays transmit message status as follows:

"Message Send failed." This appears if the message could not be transmitted because of satellite malfunction, signal degradation, or no reply from CES. Try to transmit the message again.

"Message Send rejected." This appears when the CES rejects the message because of unpaid subscriber's fee, or other reasons.

"Message Send pending." This appears when the circuits at the CES are busy. Your message will be transmitted when a circuit becomes clear.

Transmitting stored message

1. Close any open files.

2. Insert floppy disk containing file to be sent. (Be sure to insert the floppy disk completely in the drive. Otherwise, "FD not inserted in drive." appears.)

3. Press **F3** to display the Send/Rec menu.

4. Press the **Enter** key or [1] key to display the Send sub menu.

5. Press the **Enter** key or [1] key to display the Send Message sub menu. The cursor is on the Priority line and the "Normal" is selected.
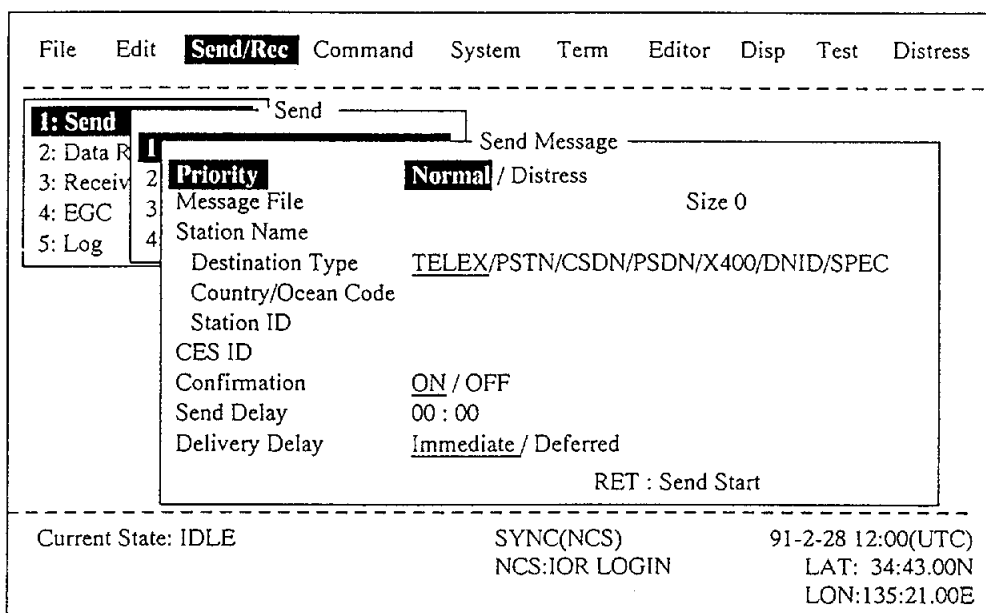
```
  File     Edit    Send/Rec   Command    System    Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 ┌─────────────┐          ┌─ Send ─────────┐
 │ 1: Send     │┌─┐       └────┐ Send Message ──────────────────────────────────┐
 │ 2: Data R   ││ │            │                                                 │
 │ 3: Receiv   ││2│ Priority        Normal / Distress                           │
 │ 4: EGC      ││3│ Message File                            Size 0              │
 │ 5: Log      ││4│ Station Name                                                │
 └─────────────┘└─┘   Destination Type   TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC    │
                      Country/Ocean Code                                        │
                      Station ID                                                │
                    CES ID                                                      │
                    Confirmation      ON / OFF                                  │
                    Send Delay        00 : 00                                   │
                    Delivery Delay    Immediate / Deferred                      │
                                                    RET : Send Start            │
                                                                                │
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 Current State: IDLE                  SYNC(NCS)            91-2-28 12:00(UTC)
                                      NCS:IOR LOGIN             LAT: 34:43.00N
                                                              LON:135:21.00E
```

Figure 4-5 Send Message Screen

6. Press [↓] key to advance the cursor to the Message File line (Priority remains Normal). Enter the file name manually, or select it from the message file list of the floppy disk as follows.

a) Tap the space bar to display Message File list.

```
  File     Edit    Send/Rec   Command    System    Term    Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 ┌──────────┐          ┌─ Send ─────────┐
 │ 1: Send  │┌─┐       └────┐ Send Message ──────────────────────────────┐
 │ 2: Data  ││ │ Message File ────── Message File ──────── Side 0 ───────┐
 ┌──────────────────────────────────┐ ┌──────── View Window ───────────┐
 │ File Name    Size    Date    Time │ │                                │
 │ T0891128.003 12345  89 - 11 - 28  15:30 │ FROM FRONTIER              │
 │ ABC           2345  89 - 11 - 28  13:00 │ TO FURUNO                  │
 │ FURUNO        3457  89 - 11 - 28  11:00 │ FR00 - 891128 -            │
 │ TAKAHASHI      934  89 - 11 - 24  19:00 │ THE QUICK BROWN FOX JUMPS 0│
 │ INMARSAT      1934  89 - 11 - 21   3:05 │ ABCDEFGHIJKLMNOPQRSTUVWX   │
 │ FRONTIER      1029  89 - 11 - 18   8:20 │   :                        │
 │                                         └────────────────────────────┘
 │ 20 File (s) exist. 1234K bytes free.    │
 │ Space: display part view                │
 └─────────────────────────────────────────┘
```

Figure 4-6 Sample Message File Screen

b) Select a file with up and down arrow keys.
c) To get a partial display of the file selected, tap the space bar. A portion of the file appears in the View Window.
d) Press the **Enter** key. The Message File screen appears with the file selected and the cursor moves to the Station Name line.

7. Enter station name.

a) Tap the space bar. The Station Name List appears.


```
File    Edit   [Send/Rec]  Command   System  Term   Editor  Disp  Test  Distress
 ┌─────────────────── Send ──────────────┐ Send Message ───────────
 │ 1: Send │    │                         └ Station Name ───── Side 0
 │ 2: Data │ 1 │ ┌──── Message File ──────────────────────────────┐
 │ 3: Rece │ 2 │ │                                                 │
 │ 4: EGC  │ 3 │ │  Station Name        Type      Code    ID       │
 │ 5: Log  │ 4 │ │  FURUNO  J           TELEX     720     5644 – 325│
 └─────────┘   │ │  ASDF                TELEX     342     1234567890│
               │ │  XXXXXXXXXXXXXX      XXXXX     XXX     XXXXXXXXXXXXXX│
               │ │  XXXXXXXXXXXXXX      XXXXX     XXX     XXXXXXXXXXXXXX│
               │ │                                                 │
               │ │                                                 │
               │ └─────────────────────────────────────────────────┘
               │   Delivery Delay       Immediate / Deferred
               │   Priority             Normal / Distress
               │   [Space : Open Table]              RET : Send Start
               └──────────────────────────────────────────────────
 Current State: IDLE               SYNC(NCS)           91-2-28 12:00(UTC)
                                   NCS:IOR LOGIN       LAT: 34:43.00N
                                                       LON:135:21.00E
```

Figure 4-7 Sample Station List

b) Select station by operating the up and down arrow keys.
c) Press the **Enter** key.
d) The station selected appears on the Station Name line. Destination Type, Destination Code and Station ID are entered automatically. The cursor moves to the CES ID line.

8. Enter CES ID manually, or select it from the CES Table on page 2-17.

    To select it from the CES Table.

    a) Tap the space bar to display the CES Table.

```
┌──────────────────────────────────────────────────────────────────────────┐
│  File    Edit   Send/Rec   Command   System   Term   Editor  Disp  Test  Distress │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  ┌1: Send──────Send ──────┐  ┌──Send Message──────────────┐                │
│  │2: Data │ I │ Priority    Normal / Distress      Side 0  │                │
│  │3: Rece │ 2 │          ┌──────CES ────────────────┐      │                │
│  │4: EGC  │ 3 │ Name        CES ID   Remarks         │      │                │
│  │5: Log  │ 4 │ ▓Perth      302      IOR▓            │      │                │
│  └─────────┘   │ Perth       202      POR             │      │                │
│               │ Singapore   210      POR             │      │                │
│               │             203                      │      │                │
│               │             201                      │      │                │
│               │ Delivery Deay    Immediate / Deferred│      │                │
│               │ Priority         Normal / Distress   │                      │
│               │ ▓Space : Open Table▓      RET : Send Start │                │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  Current State: IDLE              SYNC(NCS)           91-2-28 12:00(UTC)    │
│                                   NCS:IOR LOGIN          LAT: 34:43.00N     │
│                                                         LON:135:21.00E      │
└──────────────────────────────────────────────────────────────────────────┘
```

Figure 4-8 Sample CES Table Screen

    b) Select CES with up and down arrow keys.
    c) Press the **Enter** key.
    d) The Send Message screen appears with selected CES displayed on the CES ID line.
       The cursor moves to the confirmation line.

9. The remaining steps are the same as the step 12 thru step 21, in the previous section.

    NOTE: If a file name which was entered manually does not exist, when the **Enter** *key is pressed to send it to the message buffer, "Input Error: Message File" appears. Press any key to erase the error message then enter correct name.*

Canceling transmission

As noted earlier a transmit message is held in the buffer, usually until it is transmitted satisfactorily.

To cancel transmission on a message held in the buffer, do the following:

procedure

1. Press **F3** to display the Send/Rec menu.

2. Press [1] key to display the Send sub menu.

3. Press [2] key. The Cancel screen appears.

```
┌──────────────────────────────────────────────────────────────────────────┐
│    File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress │
│   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - │
│   ┌ 1: Send ─────────── Send ───────┐                                     │
│   │ 2: Data │ 1: Send Message        │                                     │
│   └─────────┴─────────────────────┘ Cancel ─────────────────────────┐   │
│    No.    Message File  Station   CES          Priority  Send Status  Delivery │
│    01     ABC           FURUNO    Perth         Normal    Waiting              │
│    02     FELCOM 10     FUSA      SANTAPAULA   Normal    Sending             │
│                                                                              │
│                                                                              │
│   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -   │
│    Current State: IDLE              SYNC(NCS)          91-2-28 12:00(UTC)     │
│                                     NCS:IOR LOGIN      LAT: 34:43.00N          │
│                                                        LON:135:21.00E          │
└──────────────────────────────────────────────────────────────────────────┘
```
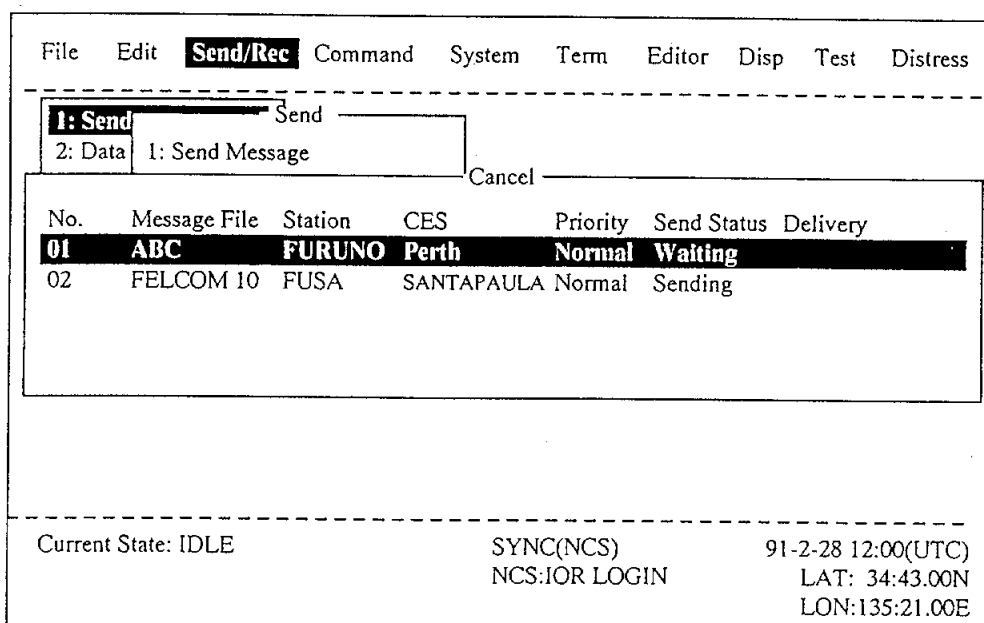
Figure 4-9 Sample Cancel Screen

Send Status

Waiting:	Waiting to transmit message.
Sending:	Now sending message.
Fail:	Failed transmission
Rejected:	Message rejected by CES.
Pending:	CES circuits occupied.

4. Select message you want to cancel, by operating the up and down arrow keys.

5. Press the **Enter** key. A prompt asks you if it is alright to cancel transmission on that message.

```
┌─────────────────────── Cancel ─────────────────────────┐
│ No.    Message File  Station    CES        Priority  Send Status  Delivery │
│ ▐01    ABC           FURUNO  Perth       Normal  Waiting▌         │
│ 02     FELCOM 10    FUSA       SANTAPAULA Normal   Sending        │
│                                            ┌──────────────┐       │
│                                            │    Cancel     │       │
│                                            ├──────┬───────┤       │
│                                            │ Yes  │  No   │       │
│                                            └──────┴───────┘       │
└─────────────────────────────────────────────────────────┘
```

Figure 4-10 Cancel Menu with Cancel Prompt

6. Press the **Enter** key to cancel transmission, or select No and press the **Enter** key to escape.

```
┌─────────────────────── Cancel ─────────────────────────┐
│ No.    Message File  Station    CES        Priority  Send Status  Delivery │
│ ▐01    ABC           FURUNO  Perth        Normal  Waiting▌        │
│ 02     FELCOM 10    FUSA       SANTAPAULA Normal   Sending        │
│                                                              │
│ No.01 (ABC) is canceled.                                    │
│                                                              │
│ Press any Key                                               │
└─────────────────────────────────────────────────────────┘
```

Figure 4-11 Cancel Display

7. Press any key to return to the default display.

Confirming delivery status (message status list)

You can automatically receive delivery status of messages you send to a CES, by selecting "Confirmation ON" in the Send Message menu. (Delivery status can also be confirmed manually. See the next section.) Messages transmitted which request delivery status appear in the Message Status List.

The Message Status List holds delivery status information of up to 30 messages. When the list is fulled, the oldest entry is deleted.

procedure

1. Press **F3**.

2. Press [1] key to display the Send sub menu.

3. Press [4] key. The Message Status List appears. You can scroll the list by pressing the up and down arrow keys.

```
 File     Edit    Send/Rec   Command   System   Term    Editor   Disp   Test   Distress
 _____
  ┌─────────────┐  Send ──────────────┐
  │ 1: Send     │                      │
  │ 2: Data │ 1: Send Message          │
  └─────────┴────────────┬─ Message Status List ─────────────────────────────────┐
  │ No. Message File  Station      CES     Priority  Send Status          Delivery │
  │ 01  ABC           FURUNO       Perth   Normal    Waiting                       │
  │ 02  DEF           FURUNO       Perth   Normal    Sending                       │
  │ 03  GHI           ASDFASDF     202     Normal    91 − 03 − 20  9:40   OCC(002)  │
  │ 04  JKL                        303     Normal    91 − 03 − 18 20:16            │
  │ 05  MNO           ABCDEFGHIJ   123     Normal    91 − 03 − 18 16:09   Complete  │
  │ 06  edit msg.002               202     Normal    91 − 03 − 18  9:48   EEE(001)  │
  │ 07  edit msg.001               Perth   Normal    91 − 03 − 16 12:34   ?????     │
  └─────────────────────────────────────────────────────────────────────────────┘

  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
   Current State: IDLE              SYNC(NCS)              91-2-28 12:00(UTC)
                                    NCS:IOR LOGIN               LAT: 34:43.00N
                                                                LON:135:21.00E
```

Figure 4-12 Sample Message Status List

description of message status list

No.:   Message number

Message File: File name. For no file name, "edit msg. 00X" appears (X = number from 001-999).

Station: Name of remote party (recipient)

CES: The CES which received the message.

Priority: Normal or distress

Send Status: The transmission status from the SES (own ship) to the CES; waiting or sending, and date and time of transmission for messages transmitted.

Delivery: The delivery status from the CES to the recipient.
                           Complete: message transmitted successfully
                           White space: delivery status not yet received
                           Reason for no delivery:

OCC(002): Delivery tried (twice), but recipient busy.
ABS: Absent subscriber
BK: Message aborted
BMC: No end of message or end of transmission received
DER: Out of Order
DTE: Remote DTE clearing
EOS: Element of Service not subscribed (X.400)
FMT: Format error
IAB: Invalid answerback
INC: Inconsistent Request (X.400)
INF: Call the Network Information service
INV: Invalid Call
ITD: Awaiting delivery
LDE: Maximum message length exceeded
LPE: Local Procedure Error
NA: Access Barred
NC: Network Congestion
NCH: Subscriber's number has been changed
NP: Not Obtainable
NRC: Reverse charging acceptance not subscribed
RIS: Recipient Improperly Specified (X.400)
RDI: Redirected call
RPE: Remote Procedure Error
RSB: Retransmission still being attempted
TMD: Maximum number of addresses exceeded
UNK: Unknown status (e.g. when the Logical channel number is zero)

Note: The meaning of the codes are CES specific.

Manually requesting delivery status

You can request a CES for delivery status of a message you have transmitted there within the past 24 hours.

procedure

1. Press **F3**.

2. Press [1] key to display the Send sub menu.

3. Press [3] key. The Request Delivery Status display appears.

```
File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
-----------------------------------------------------------------------------
 1: Send              Send
 2: Data  1: Send Message
                              Request Delivery Status
 No. Message File   Station      CES        Priority   Send Status        Delivery
 01  ABC            FURUNO       Perth      Normal     89 - 11 - 06 16:10
 02  edit msg.002   FURUNO       Perth      Normal
```
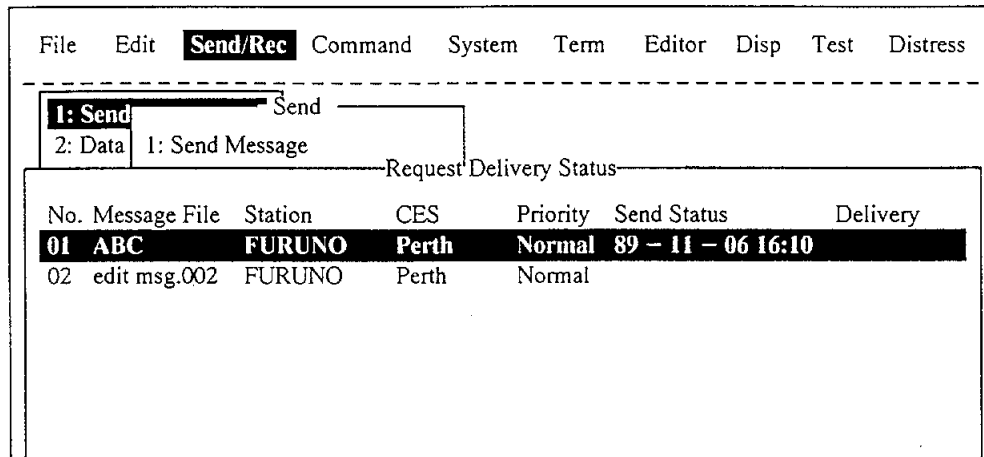
Figure 4-13 Request Delivery Status Display

4. Select a file with the up and down arrow keys.

5. Press the **Enter** key. A prompt asks you if you want to request delivery status on that message.

```
File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
-----------------------------------------------------------------------------
 1: Send              Send
 2: Data  1: Send Message
                              Request Delivery status
 No. Message File   Station      CES        Priority   Send Status        Delivery
 01  ABC            FURUNO       Perth      Normal     89 - 11 - 06 16:10
 02  edit msg.002   FURUNO       Perth      Normal

                                               Start
                                               Yes   No
```
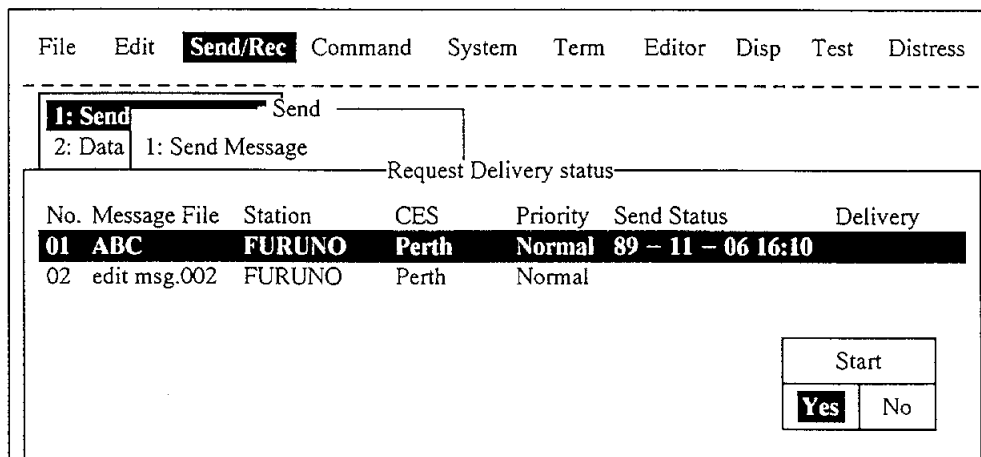
Figure 4-14 Sample Message File List

6. Press the **Enter** key to request status. "Request started" appears on the display. (To cancel request, select No and press the **Enter** key to escape.)

7. "Press any key." appears on the display; press any key to return to the default display.

8. Some minutes later, the reply from the CES appears in the Delivery column of the Request Delivery Status screen.

The 2-digit code services

In addition to your terminal being able to send and receive messages, a range of special safety and general maritime services, known as the 2-digit code services, may be accessed on your FELCOM 10. The list on the next page shows the 2-digit code services available.

To access a 2-digit code service;

1. Using the text editor, prepare the message, or request that you want to send. (Refer to page 3-2.)

2. Press **F3** to display the Send/Rec menu.

3. Press the **Enter** key to display the Send sub menu.

```
 File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 ────────────────────────────── < 1:UNTITLED 1 > ──────────────────────────
 ┌──────────────────────── Send ────┐
 │ 1: Send│
 │ 2: Data│  1: Send Message
 │ 3: Rece│  2: Cancel
 │ 4: EGC │  3: Request Delivery
 │ 5: Log │  4: Message Status
 └────────┘
```
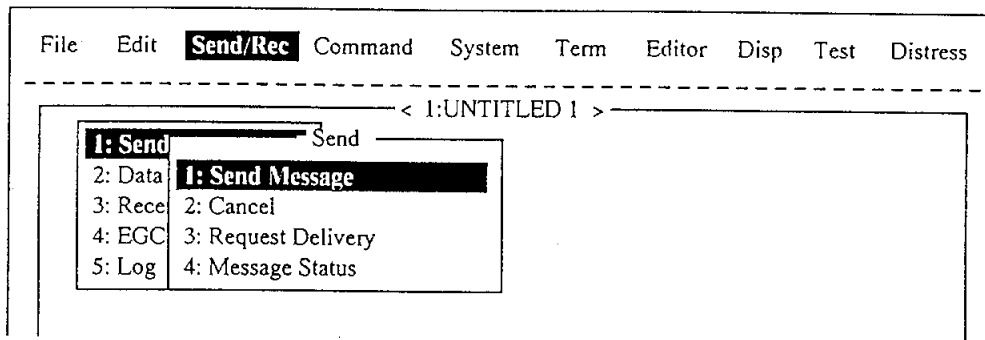
Figure 4-15 Send Sub Menu

4. Press the **Enter** key to display the Send Message screen.

```
 File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 ┌──────────────────────── Send ────┐
 │ 1: Send│
 │ 2: Data │  │              Send Message ──────────
 │ 3: Recei│ 2│  Priority         Normal / Distress
 │ 4: EGC  │ 3│  Message File     Message now being edited   Size 12345
 │ 5: Log  │ 4│  Station Name
 └─────────┘  │     Destination Type   TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC
              │     Country/Ocean Code
              │     Station ID
              │  CES ID
              │  Confirmation      ON / OFF
              │  Send Delay        00 : 00
              │  Delivery Delay    Immediate / Deferred
              │                          RET : Send Start
 Current State: IDLE            SYNC(NCS)            91-2-28 12:00(UTC)
                                NCS:IOR LOGIN            LAT: 34:43.00N
                                                         ON:135:21.00E
```

Fig 4-16 Send Message Display Screen

5. Press [↓] twice to place the cursor on the Destination Type line.
(The priority remains "Normal".)

6. Press [→] to select "SPEC" (Special).

7. Press [↓] to place the cursor on the Station ID.

8. Key in 2-digit code.

For maritime safety service;

32	Medical Advice	Used for requesting medical advice.
38	Medical Assistance	Used for requesting medical assistance.
39	Maritime Assistance	Used for requesting maritime search and rescue assistance.
41	Meteorological reports	Necessary for ease of addressing weather reports from ships to meteorological centres.
42	Navigational Hazards and warnings	Used for making urgent navigational meteorological danger reports.
43	Ship position reports	Used for routing of messages to ship safety reporting systems.

For general utility;

31	Maritime enquiries	Desirable for requesting information including service offerings.
33	Technical assistance	Desirable for addressing technical enquiries to appropriate personnel.
37	Time and charges requested at end of call	Desirable for mobile operator when sending traffic for a third party.

9. Press [↓] to advance the cursor to the CES ID line.

10. Enter CES ID.

11. Press the **Enter** key. A prompt appears asking if it is alright to start transmission.
(The Confirmation, Send Delay and Delivery Delay remain "ON", "00:00" and "Immediate" respectively. If necessary, change these settings before pressing the **Enter** key.

12. Press the **Enter** key to send the message prepared.

13. Press any key to return to the default display.

The message will be transmitted according to Send Delay setting. "Current State: SENDING" appears at the bottom of the screen during transmission.

After the message is transmitted "Successful Sending message" appears and its particulars are sent to the Display Log.

Note 1: At present, not all CESs are offering the 2-digit code services. To find out which CESs are offering the services, contact the CES Operations Co-ordinator directly.

Note 2: Some 2-digit code services may be provided free of charge by CESs, while other services are chargeable, in some cases at reduced rates. For information, contact the CES directly.

Inserting the distinations of a fax terminal

You can send a text message to a Group 3 type fax terminal which is connected to the international PSTN(telephone) land line, provided the CES selected supports fax delivery.

procedure

1. Prepare message. (To send stored file, close any open files.)

2. Press **F3** to display the Send/Rec menu.

3. Press the **Enter** key or [1] key to display the Send sub menu.

4. Press the **Enter** key or [1] key. The Send Message screen appears. The cursor is on the Priority line and "Normal" is selected.

5. The message file line displays "Message now being edited." when the currentry displayed file is to be transmitted. To send a stored file, select the file from the file list.

6. Press [↓] to advance the cursor to the Destination Type line.
   Press [→] to place the cursor on the PSTN landlines.

7. Press [↓] to advance the cursor. The cursor is now on the Country/Ocean Code line.

```
 File     Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
---------------------------------------------------------------------------------
 1: Send            Send
 2: Data                      Send Message
 3: Recei  2: Priority           Normal / Distress
 4: EGC    3: Message File       Message now being edited   Size 12345
 5: Log    4: Station Name
              Destination Type    TELEX/PSTN/CSDN/PSDN/X400/DNID/SPEC
              Country/Ocean Code  █
              Station ID
              Modem Type
              CES ID
              Confirmation        ON / OFF
              Send Delay          00 : 00
              Delivery Delay      Immediate / Deferred
                                              RET : Send Start
```

PSTN landlines Display Screen

8. Key in international telephone code of recipient. A list of international telex /telephone country codes begins on page A-3 in the Appendix.

9. Press [↓] to send the cursor to the Station ID line. Then enter facsimile number.

10. Press [↓] to send the cursor to the Modem Type line.

11. Tap the space bar to display the list of modem types.
    Press **Enter** to select "T30 FAX". (Other modem types are not supported.)

   Note: To select the station from the Station List, tap the space bar while the cursor is on the Station Name Line. The Station Name List appears. You can select the station this way instead of steps 6 through 11.

12. Press [↓] to advance the cursor to the CES ID line.

13. Enter CES ID.

   Note: If the CES ID entered is invalid, "Cannot use this CES. Please check network configuration." appears.

14. Press [↓] to send the cursor to the Confirmation line.

15. To receive confirmation from the coast station when message has been delivered to recipient, select ON. If not required, select OFF.

16. Press [↓] to send the cursor to the Send Delay line.

17. If you are going to send a message after a certain time has elapsed, enter a time up to 99 hrs 59 mins.
   (The Send Delay is used to time message arrival to suit recipient office hours.)

18. Confirm all settings and then press the Enter key. A prompt appears asking if it is alright to start transmission.

19. Press the **Enter** key to send the message to the message buffer. (To escape, select No and press the **Enter** key.) The message "Message is entered in sending Buffer." appears.
   At the same time, the message prepared is printed out.

20. Press any key to return to the default display.

21. The message(s) will be transmitted according to Send Delay settings. "Current State: SENDING" appears at the bottom of the screen during transmission.

22. After the message is transmitted "Successful Sending message" appears and its particulars are sent to the Display Log.

Receiving

Each time the FELCOM 10 receives a message it automatically registers, saves, prints (except messages with passwords) and files it.

1) registration

Each message received is assigned a receive message number. This number is also used when the file is saved to a floppy disk.

```
R          0          9  1     0  1     1  5   .    0  0  1

Receive    0: main     year    month    day         receive
           DTE                                       message no.
           1: 2nd DTE
```

2) display log

The Display Log shows message number, priority, date and time of transmission, CES ID and file size (in bytes) of the latest 50 received and transmitted messages.

3) printing

Printing of a message begins (except messages with passwords) as soon as it is received.

4) saving and filing

The DTE saves and files it to the Display Message List. (For installations with both a main and a 2nd DTE, the system settings menu enables selection of receive message storage location.) The Display Message List shows the following:

receive message no.
CES ID
priority
file size (in bytes)
message classification
password for confidential messages
date and time of transmission
status

Setting the receive alarm

An audible alarm may be set to ring when a routine message is received. The factory setting is OFF.

procedure

1. Press **F6** to display the Term menu.

```
  File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 -----------------------------------------------------------------------------------
 ┌──────────── Term Setup ────────────┐
 │ Auto Log Print  OFF / ON            │
 │ Receive Alarm   OFF / ON            │
 │- - - - - - - - - - - - - - - - - - │
 │ DTE Type        Main / 2nd          │
 └─────────────────────────────────────┘



  Current State: IDLE              SYNC(NCS)           91-2-28 12:00(UTC)
                                   NCS:IOR LOGIN        LAT: 34:43.00N
                                                        LON:135:21.00E
```
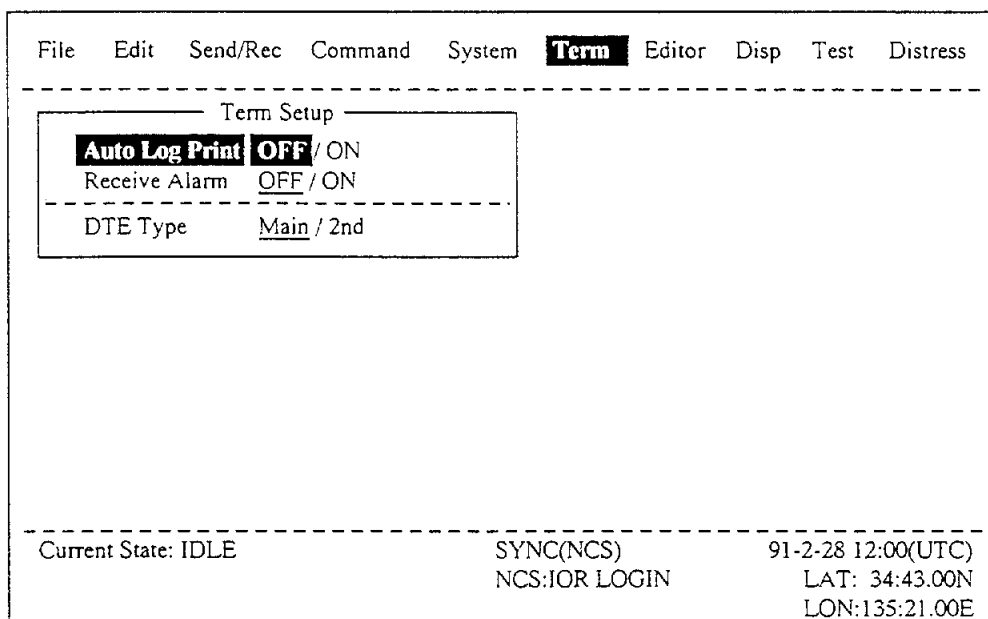
Figure 4-17 Term Menu

2. Press [↓] to send the cursor to the Receive Alarm line.

3. To enable the alarm, select ON. The alarm will be released for one second when a message is received.

4. Press the **Enter** key.

Displaying and printing receive messages

displaying

1. Press **F3**.

2. Press [3] key. The Receive sub menu appears.
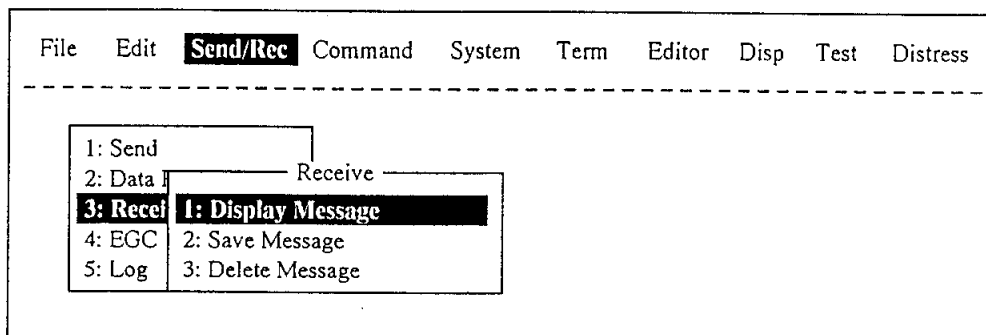
Figure 4-18 Receive Sub Menu

3. Press [1] key. The Display Message screen appears.
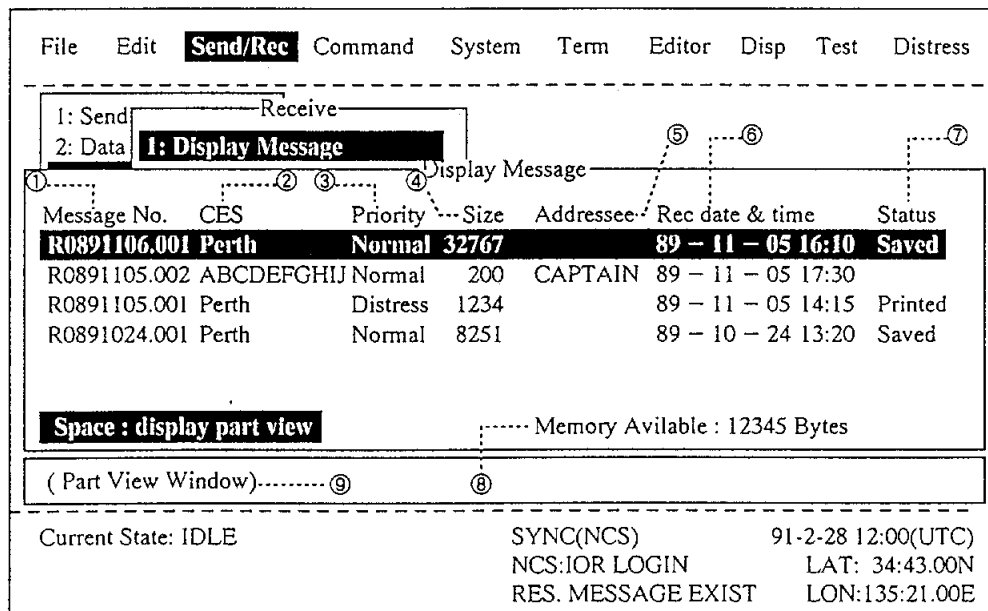
Figure 4-19 Sample Display Message Screen

Description of Display Message list

Message No.:	Receive message no.
CES:	CES name
Priority:	Normal or distress
Size:	Size of file in bytes
Addressee:	Addressee code appears for confidential messages. Nothing appears for routine messages.
Rec date & time:	Date and time message was received.
Status:	Printed: message printed Saved: message saved to floppy disk No display: not yet printed confidential message, or printer malfunction
Memory available:	Memory available in DTE

4. Select a file by pressing the up and down arrow keys. To get a partial display of a file selected, tap the space bar. A part of the file appears in the View Window.

5. Press the **Enter** key for routine messages and messages with addressee code (no password). Your selection appears on the display.

```
  File     Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
┌──────────────────Display Receive Message < R0891123.002-> ─────────────────┐
│ FROM FURUNO                                                                  │
│                                                                              │
│ TO FRONTIER                                                                  │
│                                                                              │
│   THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.                               │
│                                                                              │
│   ABCDEFGHIJKLMNOPQRSTUVWXYZ. 1234567890                                     │
│                                                                              │
│                                                                              │
│                                                                              │
│                                                                              │
│                                                                              │
│                                                                              │
│ Ctrl + P : print                                                             │
└──────────────────────────────────────────────────────────────────────────┘
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
  Current State: IDLE                    SYNC(NCS)           91-2-28 12:00(UTC)
                                         NCS:IOR LOGIN       LAT: 34:43.00N
                                                             LON:135:21.00E
```
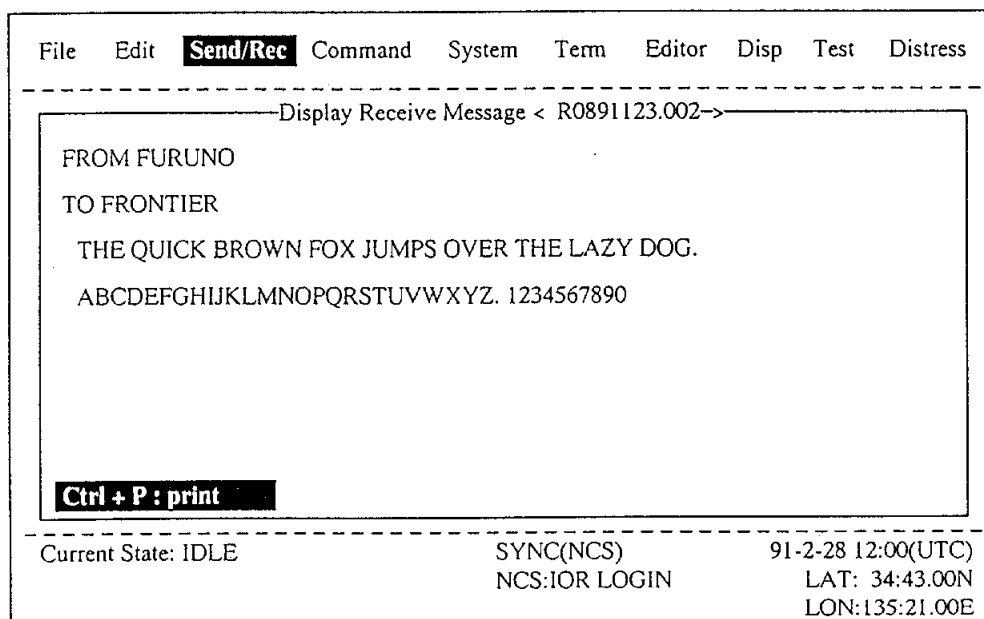
Figure 4-20 Sample Receive Message

6. For messages with both addressee code and password, a Password window appears. Enter the password corresponding to the addressee code and then press the **Enter** key. If the password is entered incorrectly an alarm sounds. Reenter the password.

```
File    Edit    Send Rec   Command   System   Term   Editor   Disp   Test   Distress
 ------------------------------------------------------------------------------------
 1: Send  ┌──────── Send ────────┐
 2: Data  │ 1: Send Message      │
          └───────┬──────────────┘
                  └─ Display Message ─────────────────────────────────────┐
   Message No.   CES         Priority   Size   Addressee   Rec date & time      Status
   R0890620.003 Perth        Normal     32767              89 – 11 – 06 16:10   Saved
   R0890620.002 ABCDEFGHIJ   Normal     200    CAPTAIN     89 – 11 – 05 17:30
   R0891105.001 Perth        Distress   1234               89 – 11 – 05 14:15   Printed
   R0891024.001 Perth        Normal     8251               89 – 10 – 24 13:20   Saved

                                                  Memory Avilable : 12345 Bytes
 ┌────────────────────────┐
 │ PASS WORD : _ _ _ _ _ ■ │          Confidential message
 └────────────────────────┘
 ------------------------------------------------------------------------------------
   Current State: IDLE                 SYNC(NCS)            91-2-28 12:00(UTC)
                                       NCS:IOR LOGIN        LAT: 34:43.00N
                                       RES. MESSAGE EXIST   LON:135:21.00E
```

Figure 4-21 Location of Password

The screen can be scrolled with the up and down arrow keys.

printing

7. While pressing and holding down the **Ctrl** key press **P**. The printer starts printing the message on the screen.

```
 ----------------------------------------------------------------------------------
  Receive Message (SECRET)
                   ↗
                   └───────────────────── Appears only for confidential messages
  Message No.      : R0910323.001
  Message Ref. No. : 00000000
  CES              : CES or CES ID
  Priority         : Normal   (or Distress)
  Message Size     : 12345 bytes
  Receive Date & Time : 91 – 03 – 23

                                           ┌── Text
  abcdefghijklmnopqrstuvwxyz...
 ----------------------------------------------------------------------------------
```
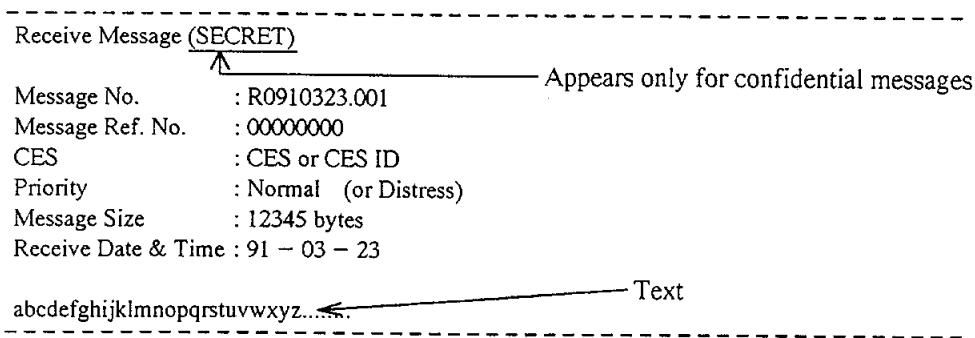
Figure 4-22 Sample Receive Message Printout

Saving a receive message to a floppy disk

1. Press **F3**.

2. Press [3] key to display the Receive sub menu.

3. Press [2] key. The Save Message screen appears.

```
File    Edit   Send/Rec  Command   System   Term   Editor  Disp  Test  Distress
------------------------------------------------------------------------
  1: Send┌──────Receive──────┐
  2: Data│ 1: Display Message │
         └───────────────┐ Save Message ───────────────
  Message No.  CES         Priority  Size  Addressee  Rec date & time   Status
  R0891106.001 Perth       Normal   32767              89 – 11 – 05 16:10 Saved
  R0891105.002 ABCDEFGHIJ  Normal    200   CAPTAIN    89 – 11 – 05 17:30 Printed
  R0891105.001 Perth       Distress 1234              89 – 11 – 05 14:15 Printed
  R0891101.001 Perth       Normal   3256   OFFICER    89 – 11 – 01  3:45 Printed
  R0891024.001 Perth       Normal   8251              89 – 10 – 24 13:20 Saved

  Space : display part view              Memory Available : 12345 Bytes

  ( Part View Window)
------------------------------------------------------------------------
  Current State: IDLE            SYNC(NCS)            91-2-28 12:00(UTC)
                                 NCS:IOR LOGIN          LAT:  34:43.00N
                                                        LON:135:21.00E
```

Figure 4-23 Sample Save Message Screen

4. Select file with the up and down arrow keys. To display a portion of the file selected, tap the space bar.

5. For confidential messages enter password. This password will also be saved to the floppy disk.

6. Press the **Enter** key to copy the file to the floppy disk. The access lamp on the disk drive lights and "Saving to FD" appears during saving.

   NOTE: If a file by that name already exists on the floppy disk, "A file by that name already exists on FD." appears.

7. When saving is completed, the access lamp goes off.

Deleting a receive message from the internal memory

procedure

1. Press F3.

2. Press [3] key.

3. Press [3] key. The Delete Message screen appears.

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
--------------------------------------------------------------------------------
 1: Send┌────────Receive────────┐
 2: Data│ 1: Display Message     │
        │              └─ Delete Message ─────────────────────────────────┐
 Message No.   CES        Priority  Size  Addressee  Rec date & time    Status
 R0891106.001 Perth       Normal    32767            89 − 11 − 05 16:10  Saved
 R0891105.002 ABCDEFGHIJ  Normal    200   CAPTAIN    89 − 11 − 05 17:30  Printed
 R0891105.001 Perth       Distress  1234             89 − 11 − 05 14:15  Printed
 R0891101.001 Perth       Normal    3256  OFFICER    89 − 11 − 01  3:45  Printed
 R0891024.001 Perth       Normal    8251             89 − 10 − 24 13:20  Saved

 Space : display part view              Memory Available:  3317 Bytes

 ( Part View Window)

 Current State: IDLE                SYNC(NCS)            91-2-28 12:00(UTC)
                                    NCS:IOR LOGIN        LAT: 34:43.00N
                                                         LON:135:21.00E
```

Figure 4-24 Sample Delete Message Screen

4. Select the message you want to delete. To display a part of that message (except confidential messages), tap the space bar.

5. To view a portion of a confidential file, enter the password and then tap the space bar.

6. Press the Enter key. You are asked to confirm.

7. Press the Enter key to delete the message, or select No and press the Enter key to escape.

8. To delete another message repeat steps 4-7.

9. To return to the default display, press the Esc key 3 times.

Received Call Unit IC-301 (optional supply)

The IC-301 releases an audible alarm when a normal priority message (except distress priority message and EGC broadcast) is received. You can silence the audible alarm by pressing the RESET button.
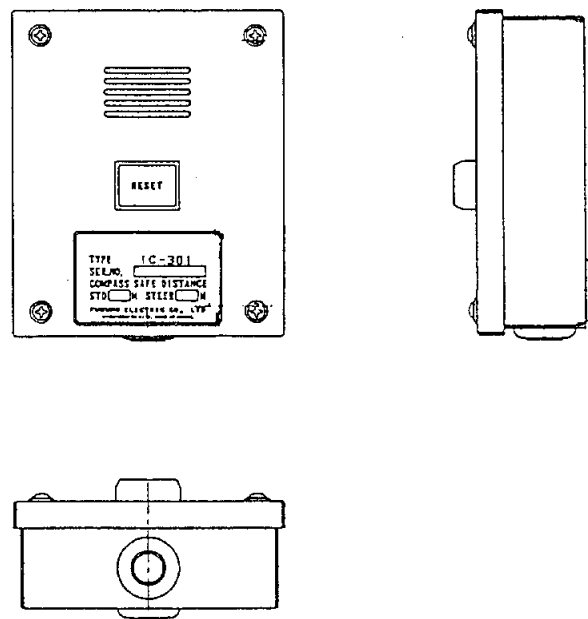
Figure 4-25 Received Call Unit

Display Log

The Display Log stores the particulars of the latest 50 received and transmitted messages. When the log is full, the oldest 25 messages are deleted.

displaying and printing the display log

1. At the default display, press **F3**.

2. Press [5] key. The Display Log appears.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  File    Edit   Send/Rec  Command   System   Term    Editor  Disp  Test  Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─   │
│ ┌──────────────────────┐                                                  │
│ │ 1: Send              │     ④      ⑤      ⑥        ⑦   ⑧   ⑨        ⑩    ⑪ │
│ │ 2: Data Report       │ ───────────── Display Log ───────────────         │
│ │ ② ③                  │                                                   │
│ │    S/R  Message No.   Type   Pri  Date      Time  CES Station    Size Cond│
│ │①  01  S   T0891110.001 TELEX  Nrm  89 – 11 – 10 19:10 302 FURUNO  12345 Success│
│ │   02  R   R0891110.001 TELEX  Dis  89 – 11 – 10 19:25 302 ─ ─ ─ ─ ─  365   ─   │
│ │                       PSTN                                          Fail  │
│ │                       PSDN                                                │
│ │                       X400                                                │
│ │   ⋮                   (etc.)                                              │
│ │   50  (max)           │                                                   │
│ │ ▐ Ctrl + P : print ▌  │                                                   │
│ └──────────────────────┘                                                   │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─     │
│  Current State: IDLE                  SYNC(NCS)           91-2-28 12:00(UTC)│
│                                       NCS:IOR LOGIN          LAT: 34:43.00N  │
│                                                             LON:135:21.00E  │
└─────────────────────────────────────────────────────────────────────────┘
```

Figure 4-26 Sample Display Log

3. To scroll the Display Log screen, press the down key several times.

4. To print the log, press and hold down the **Ctrl** key and press **P**. "Now printing" appears on the screen.

   To stop printing, press the **Esc** key.

description of display log

S/R:	Send or Receive message
Message No.:	Message no. or file name
Type:	Currently, TELEX, PSTN, PSDN or SPEC (2-digit code service).
Pri:	Normal or distress
Date:	Date message was received (or transmitted).
Time:	Time message was received (or transmitted).
CES:	ID of CES which handled the message

Station: Transmitting station name. Blank for unregistered station or
                            receive message.
Size: Size of message in bytes
Cond: Transmission results. Blank if receive message.
                                 Success: successful transmission
                                 Fail: failed transmission
                                 Rejected: message rejected by CES

Automatic printing of display log

The Display Log can be printed out automatically every 24 hours.

procedure

1. Press **F6**. The Term menu appears.

```
File    Edit    Send/Rec    Command    System   [Term]   Editor   Disp   Test   Distress
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
┌──────────── Term Setup ────────────┐
│  Auto Log Print   [OFF] / ON        │
│  Receive Alarm    OFF / ON          │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
│  DTE Type         Main / 2nd        │
└─────────────────────────────────────┘




─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
  Current State: IDLE                 SYNC(NCS)            91-2-28 12:00(UTC)
                                       NCS:IOR LOGIN             LAT:  34:43.00N
                                                                 LON:135:21.00E
```
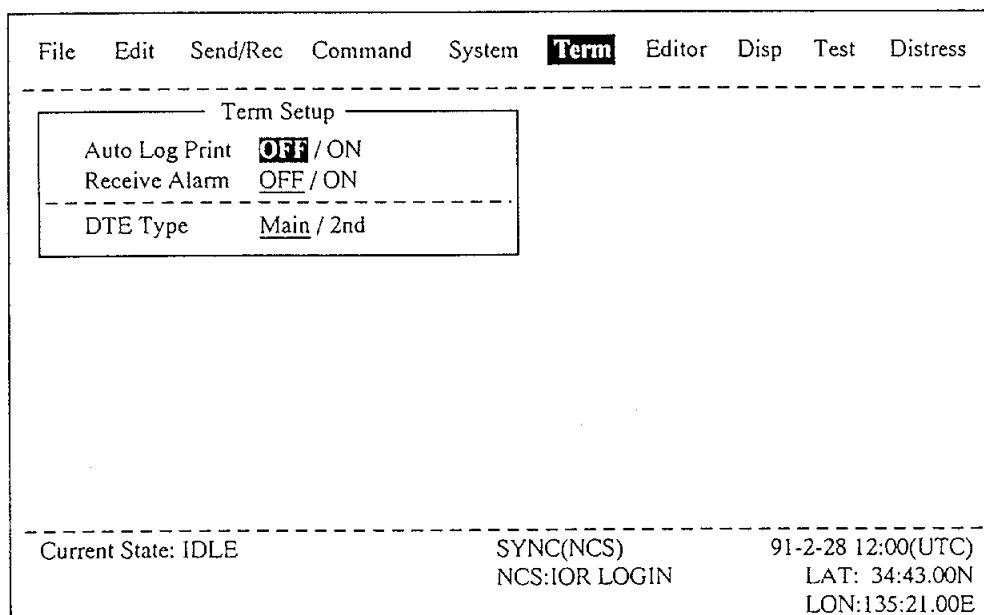
Figure 4-27 Term Menu

2. Select Auto Log Print ON with the [→] key.

3. Press the **Enter** key.

EGC Messages

EGC messages are automatically received, printed, and saved to the DTE.

The memory capacity for EGC messages is 32k bytes. When the memory is full, the oldest information is deleted.

Displaying and reprinting EGC messages

procedure

1. Press **F3**.

2. Press [4] key. The EGC sub menu appears.

```
   File    Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress
   --------------------------------------------------------------------------------
      1: Send              ┌── EGC ──────────┐
      2: Data Rep   ┌──────┤ 1: Display Message │
      3: Receive    │ 2: EGC Network ID       │
      4: EGC        └─────────────────────────┘
      5: Log

   Current State: IDLE          SYNC(NCS)          91-2-28 12:00(UTC)
                                NCS:IOR LOGIN          LAT:  34:43.00N
                                                       LON:135:21.00E
```
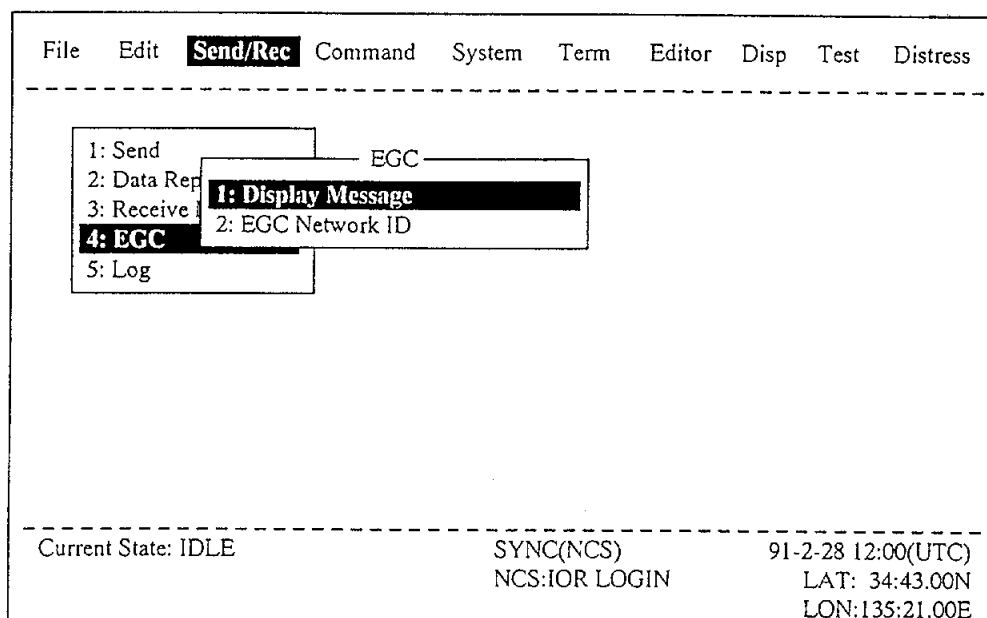
Figure 4-28 EGC Sub Menu

3. Press [1] key. The most recently received EGC message appears.

```
┌─────────────────────────────────────────────────────────────────────┐
│  File    Edit   Send/Rec   Command   System   Term   Editor  Disp  Test  Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│   ┌─────────────────── Display EGC Message ───────────────────┐   │
│   │ EGC Message – – – WMO Meteorological Warning – – –        │   │
│   │ Message Sequence No. : 12345                              │   │
│   │ CES                  : Perth                              │   │
│   │ Priority             : Routine                            │   │
│   │ Size                 : 45 bytes                           │   │
│   │ Receive Date & Time  : 91 – 03 – 23   15:30               │   │
│   │                                                           │   │
│   │ ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890........             │   │
│   │                                                           │   │
│   │                                                           │   │
│   │                                                           │   │
│   │  Ctrl + P : print   P : previous   N : next               │   │
│   └───────────────────────────────────────────────────────────┘   │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  Current State: IDLE          SYNC(NCS)        91-2-28 12:00(UTC)  │
│                               NCS:IOR LOGIN       LAT: 34:43.00N   │
│                                                   LON:135:21.00E   │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 4-29 Sample Display EGC Message Screen

4. To scroll the message, use the up and down arrow keys.

5. The N and P keys function to display the next and previous messages, respectively.

6. To print the message appearing on the display, press and hold down the Ctrl key and press the P key. To stop printing, press the Esc key.

Displaying EGC closed network ID (ENID)

To join the FleetNET™ service, an SES must be registered with the Information Provider. The Information Provider adds the SES to the group which is to receive the service by downloading a Group Call ID, via a CES which supports FleetNET™ broadcasts, uniquely addressed to the SES. The SES stores the ID and can accept broadcasts from the Information Provider. The SES operator can not change this stored EGC closed network IDs (ENIDs). Up to 64 ENIDs are stored at non-volatile memory.

The ENID stored can be accessed for downloading and deleting via the satellite path. It is possible for SES operator to inhibit (or activate as required), via the DTE, selected ENIDs previously downloaded.

Along with the ENID, the name of the information provider is stored. In the event that a download command is received and the ENID storage area is full, then an ENID which has been inhibited (de-activated) by the SES operator will be overwritten. If none has been inhibited, then the new download is not accepted.

Follow the procedure below to inhibit (or activate) an ENID.

procedure

1. At the default display, press **F3** to display Send/Rec menu.

2. Press [4] key to display EGC sub menu.

3. Press [2] key. The EGC closed network ID list appears.

```
File   Edit   [Send/Rec]  Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

    1: Send                 ┌─── EGC ───────
    2: Data Rep ┌─────────────────────┐
    3: Receive  1: Display Message   ┌─EGC--Network-ID-List──────────────┐
    [4: EGC]   [2: E                 │
    5: Log                           RET: Activate  SPACE: Inhibit  Ctrol+P: Print  ESC: Quit
                                     Mark '*' means activation
                                     01 * 00001   202  FURUNO
                                     02 * 00002   202  FURUNO
                                     03 * 04001   202  FURUNO
                                     04 * 04002   202  FURUNO
                                     05 * 04003   202  FURUNO
                                     06 * 04005   202  FURUNO
                                     07 * 04006   202  FURUNO
                                     08 * 04007   202  FURUNO

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  Current State: IDLE                   SYNC(NCS)            91-2-28 12:00(UTC)
                                        NCS:IOR LOGIN            LAT: 34:43.00N
                                                                LON:135:21.00E
```

Figure 4-30

4. Using the down and/or up arrow keys, select an ENID you want to inhibit (or re-activate).

5. Press the Space bar to inhibit (or **Enter** key to reactivate).

6. Press the **Esc** key to display the default screen.

Receiving a Distress or an Urgent Message

When the FELCOM 10 receives a distress or an urgent message, an alarm buzzer sounds on the terminal unit and, the Distress Alert Unit IC-300 or the Distress Message Controller DMC-5 when connected.

To silence the alarm buzzer, press **F4**, then [6] keys.

DATA REPORTING AND POLLING

This chapter explains data reporting settings and polling reception.

Data Reporting

Data reporting provides an automatic data transmission at regular (preset) intervals from your ship to your office. The data are position, speed, bearing and other data sent from a navigational equipment or an interface unit.
The data transmitted from the FELCOM 10 is temporarily stored in a data reporting file at the CES. When an operator at your office accesses the CES, which then delivers the data to the office. Some CESs may deliver it without accessing.

Data reporting can be initiated by setting a data report on the FELCOM 10 or receiving a polling command from your office.

FELCOM 10 offers two types of data reporting as follows:

● Data report ——— on SES signalling channel
        Refer to "Setting a data report" below.

● Message report — on SES message channel
        Refer to "Setting a message report" on page 5-4.

Setting a data report

Procedure

1. Press **F3** to display Send/Rec menu.

2. Press **2** to display Data Report menu.

```
 ┌─────────────────────────────────────────────────────────────────┐
 │  File   Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress  │
 │ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
 │  ┌──────────────────── < 1:UNTITLED 1 > ─────────────────────┐  │
 │  │ ┌─────────────┬─────────Data-Report──────────┐            │  │
 │  │ │ 1: Send     │ 1: Data Report               │            │  │
 │  │ │ 2: Data Re  │ 2: Message Report            │            │  │
 │  │ │ 3: Receive  │ 3: Data Network ID           │            │  │
 │  │ │ 4: EGC      └──────────────────────────────┘            │  │
 │  │ │ 5: Log                                                   │  │
 │  └──────────────────────────────────────────────────────────┘  │
 └─────────────────────────────────────────────────────────────────┘
```
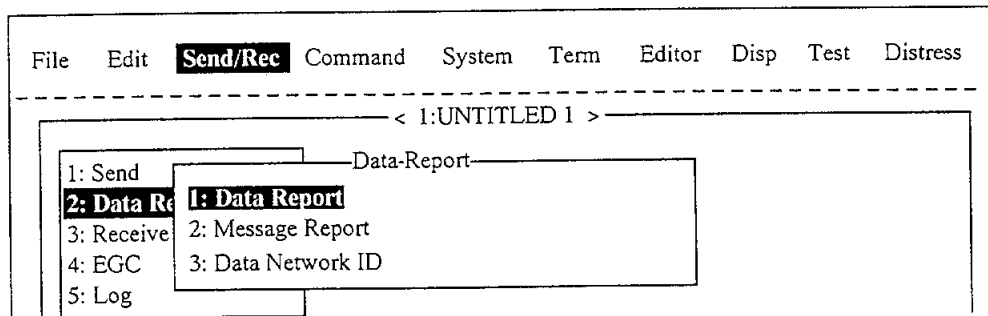
Figure 5-1 Data Report Menu

3. Press the **Enter** key or [1] key to display Data Report setting screen. The cursor is on the Status line and "ON" is selected.

```
┌────────────Data-Report────────────┐
│ Data Report Programming            │
│  Status                   ON/OFF   │                Daily is selected
│  Report Length            1/2/3    │
│  Destination                       │
│    DNID                   00004    │
│    CES ID                 101      │
│    Member ID              003      │──────  Daily is selected
│  Activation         Regular Interval/Daily ──────►  Regular Interval/Daily
│    Interval Time          00:10              Start Time 1  __:__
│    Report Times          1/No Limit          Start Time 2  __:__
│                                              Start Time 3  __:__
│                                              Start Time 4  __:__
│                                    │
│  Press RET key to validate setting │
└────────────────────────────────────┘
```

Figure 5-2 Data Report Setting Screen

4. Select ON or OFF with the arrow keys.

    ON: Data report on

    OFF: Data report off

5. Press [↓] to advance the cursor to the Report Length.

6. Select 1 or 2 with the arrow keys.

    1:     position

    2:     position, speed, bearing, depth

    3:     spare (not used)

7. Press [↓] to advance the cursor to the Destination.

8. Tap the space bar to display DNID list.

9. Select DNID desired with the arrow keys.
   (CES ID and Member ID are automatically selected with DNID.)

10. Press [↓] key to advance the cursor to the Activation.

11. Select Regular Interval or Daily with the arrow keys.

12. Press [↓] key.

    • When Regular Interval is selected on step 11,

        (1) Key in the Interval Time.

        (2) Press [↓].

        (3) Key in the Report times or select "No limit".

    • When Daily is selected on step 11,

        (1) Key in the start time at Start Time 1.

(2) Press [↓].

(3) If necessary, key in the start time of Start Time 2-4.

13. Press **Enter** to register the above settings.

Setting a message report

Procedure

1. Press **F3** to display the Send/Rec menu.

2. Press [2] to display the Data Report menu.
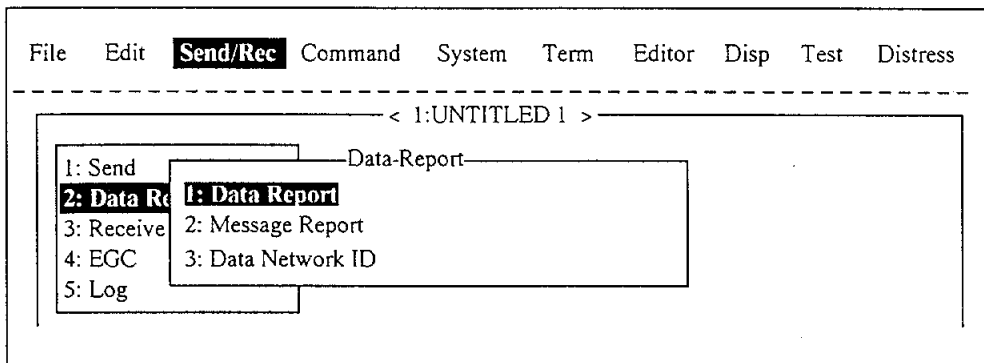
Figure 5-3 Data Report Menu

3. Press [2] to display the Message Report.
   The cursor is on the PIN Code line.
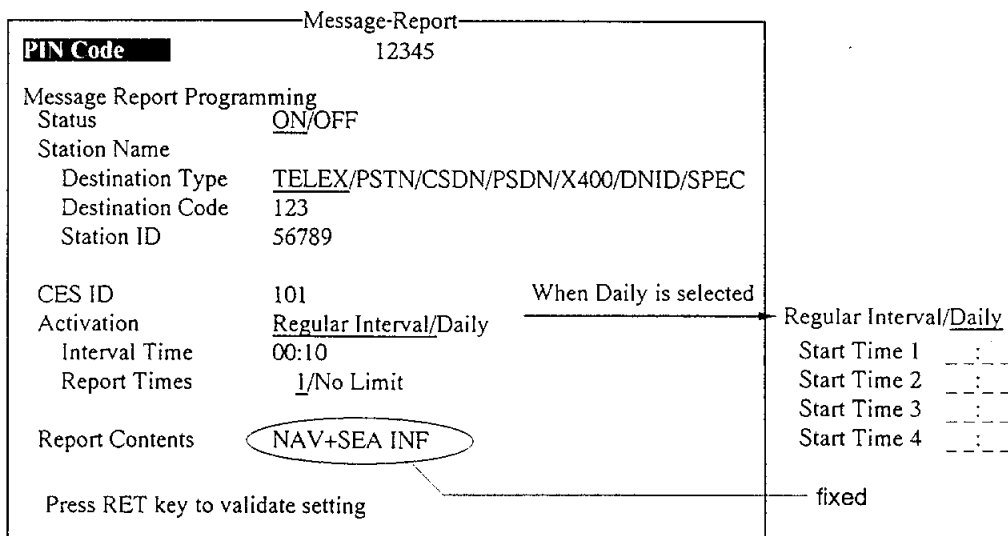
Figure 5-4 Message Report Setting Screen

4. Key in the PIN code.
   PIN code (max. 8 digits) should be agreed upon with your receiving party beforehand.

5. Press [↓].

6. Select ON or OFF with the arrow keys.

>   ON: Message report on
>   OFF: Message report off

7. Press [↓].

8. Tap the space bar to display the station list.

9. Select the station with the arrow keys.

10. Press **Enter**.

11. Press [↓]. The cursor is on the CES ID line.

12. Tap the space bar to display the CES list.

13. Select the CES with the arrow keys.

14. Press [↓].

15. Select Regular Interval or Daily with the arrow keys.

16. Press [↓].

   ● When Regular Interval is selected on step 15,
      (1) Key in the interval time.
      (2) Press [↓].
      (3) Key in the report times or select "No Limit".
   ● When "Daily" is selected on step 15,
      (1) Key in the start time at Start Time 1.
      (2) Press [↓].
      (3) If necessary, key in the start time of Start Time 2-4.

17. Press **Enter** to register the above settings.

Polling

When the FELCOM 10 receives a polling command, it automatically transmits data depending on the command to your office. The data are position, speed, bearing and other data sent from a navigational equipment or an interface unit.
A polling command from your office can also activate data report or message report if the setting is completed on the FELCOM 10. If a polling command with a file name is received, the FELCOM 10 transmits the file to your office.

Polling command

This paragraph provides how to make the polling command **at your office.**

There are two kinds of polling commands; one is sent on SES signalling channel and the other is sent on SES message channel.

Polling command on SES signalling channel

Inquire a coast station to make the polling command because the format may be different depending on coast stations.

Polling command on SES message channel

To make the polling command, enter D???, hyphen, PIN code (max. 8 digits), hyphen, file name (stored in the floppy disk of the FELCOM 10), colon and text of message.

> D???-PIN code-file name: (text of message)

Polling reception

No operator intervention is required during polling reception.

The printer PP-500 prints out the status of polling reception and data transmission in response to a poll as shown on the next page.

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
POLLING Message   - - - Program Unreserved Data Reporting  - - -
DNID          : 0004    CES ID           : 101  (Southbury)
Sub Address  : 000     Member Number : 001  Response: No Response
Receive Data & Time : 93-04-15  00:01 (UTC)


Start Frame : 00030     Interval :00030
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
93-04-15  00:01(UTC)
Data Report Program has been initiated by Polling.


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
POLLING Message   - - - Initiate Unreserved Data Reporting   - - -
DNID          : 0004    CES ID           : 101  (Southbury)
Sub Address   : 000     Member Number : 001  Response: Data Report
Receive Data & Time : 93-04-15  00:01 (UTC)


Start Frame : 00030     Interval :00030
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Data Reported (Poll Response)

CES          : Southbury        Date     : 93-04-15
DNID         : 00004            Time     : 00:03 (UTC)
Member No.   : 001

Position     LAT    10:14.03N
             LON   124:36.81E
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
93-04-15  00:06(UTC)
Successful Data Report Sending.
```

DNID (Data Network Identification)

If you make a contract with information providers, DNID are downloaded from the information providers via CES to the FELCOM 10 on your ship.

Up to 64 DNIDs can be downloaded to the FELCOM 10.

Displaying DNID

1. Press F3 to display the Send/Rec menu.

2. Press [2] to display the Data Report menu.

3. Press [3] to display the DNID.

```
─────────────────────Data Network ID─────────────────────
  RET: Activate   SPACE: Inhibit   Ctrl+P: Print   ESC: Quit
  Mark '*' means activation.
  No.  Act  DNID   CES   Subaddr  Member   Text
  01   *   00004   101    000      001
  02   *   00004   101    002      003
  03   *   23456   101    002      223
  04   *   03333   101    002      044
  05   *   03333   101    000      044
  06   *   07777   101    000      099
  07   *   09999   101    000      088
  08
  09
  10
```

Figure 5-5

NOTE: DNID with "" mark are activated, i.e. available for use.*

Enabling/Disabling DNID

DNID can be enabled or disabled by the following procedure.

Procedure

1. Press arrow keys to place the cursor to the desired DNID.

2. Press **Enter** key to enable the DNID. (* mark appears.)
   Press **Space** bar to disable the DNID. (* mark disappears.)

   NOTE 1. A poll is cancelled when corresponding DNID is disabled while "running data program (poll)" is displayed.

DISTRESS ALERT

This chapter presents the procedures for preparing and transmitting the distress alert, conducting distress communications, and testing the distress alert.

Contents

Transmitting the Distress Alert

procedure

1. Press F10 to display the Distress menu.

```
File    Edit    Send/Rec   Command    System    Term    Editor    Disp    Test    Distress
────────────────────────────────────────────────────────────────────────────
│ 1: Activate Distress Alert │
│ 2: Update Distress Alert   │
│ 3: Activate Distress Alert Test │
└────────────────────────────┘
```
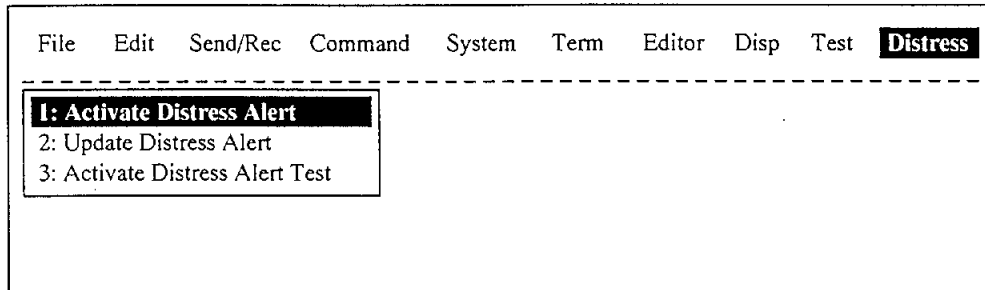
Figure 6-1 Distress Menu

2. Press [1] key or Enter key to display the Activate Distress Alert screen. An audible alarm sounds. (The alarm cannot be stopped through the keyboard.)

```
File    Edit    Send/Rec   Command    System    Term    Editor    Disp   Test    Distress
────────────────────────────────────────────────────────────────────────────
│ 1: Activate Distress Alert │─ Activate Distress Alert ──────────
│ 2: Update Distress │ CES ID       202   (Perth)
│ 3: Activate Distres │ Position      LAT  35:00N
                                      LON135:00E
                       Protocol      Maritime / Other
                       Nature        Unspecified
                       Course        123
                       Speed         013 KTS


                        Enter message parameter.
                        Press RET to validate setting.

────────────────────────────────────────────────────────────────────────────
  Current State: IDLE              SYNC(NCS)              91-2-06 12:00(UTC)
                                   NCS:IOR LOGIN             LAT: 34:43.00N
                                                             LON:135:21.00E
```

Figure 6-2 Sample Activate Distress Alert Screen

3. The display shows distress alert settings. CES ID, Position, Course and Speed set at the Update Distress Alert screen appear on this screen. If you need to change these settings, change them. Specially, select the nearest CES to your vessel in your ocean region.

The nature of distress can be set at this screen.

a) Press [↓] to go the Nature line.
b) Tap the space bar. A list of distress reasons appears.

```
  File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
------------------------------------------------------------------------------------
 1: Activate Distress Alert Activate Distress Alert ─────────────┐
 2: Upd  CES ID            202  (Perth)          ┌──── Nature ────────┐
 3: Acti Position          LAT  35:00N           │ Unspecified        │
                           LON135:00E            │ Fire/Explosion     │
         Protocol          Maritime / Other      │ Flooding           │
         Nature            Unspecified           │ Collision          │
         Course            123                   │ Grounding          │
         Speed             013 KTS               │ Listing            │
                                                 │ Sinking            │
               Enter message parameter.          │ Disabled & Adrift  │
               Press RET to validate setting.    │ Abandoning ship    │
                                                 │ Further assistance required │
                                                 │ Piracy or Armed Attack │
------------------------------------------------└──────────────────────┘
 Current State: IDLE                    SYNC(NCS)           91-2-06 12:00(UTC)
                                        NCS:IOR LOGIN       LAT: 34:43.00N
                                                            LON:135:21.00E
```

Figure 6-3 Nature of Distress List

c) Operate the arrow keys to select appropriate nature of distress.
d) Press the Enter key. Nature of distress selection appears on the Activate Distress Alert screen.

4. Press the **Enter** key. A prompt asks you if it is alright to transmit the distress alert.

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   ▌Distress▐

┌─────────────────────────────┐  ─ Activate Distress Alert ──────────────────┐
│ 1: Activate Distress Alert  │                                              │
│ 2: Update Distres │ CES ID            202                                  │
│ 3: Activate Distr │ Position          LAT    35:00N                        │
└───────────────────┘                   LON  135:00E                         │
                      Protocol          Maritime / Other                     │
                      Nature            Collision                            │
                      Course            123                    ┌─────────────┤
                      Speed             013 KTS                │ Send Start  │
                                                               ├──────┬──────┤
                          Select "Yes" to send distress        │ Yes  │ ▌No▐ │
                                                               └──────┴──────┘
```

Figure 6-4 Activate Distress Alert Screen

5. Press [←] key or [Y] key to select YES.

6. Press the **Enter** key to transmit the distress alert to the CES designated on the CES ID line. The display should look similar to Figure 6-5.

blinking

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   ▌Distress▐
▌Distress Alert Activated▐

┌─────────────────────────────┐  ─ Activate Distress Alert ──────────────────┐
│ 1: Activate Distress Alert  │                                              │
│ 2: Update Distres │ CES ID            202                                  │
│ 3: Activate Distr │ Position          LAT    35:00N                        │
└───────────────────┘                   LON  135:00E                         │
                      Protocol          Maritime / Other                     │
                      Nature            Collision                            │
                      Course            123                                  │
                      Speed             013 KTS                              │
                                                                             │
                                                                             │
                      Starting Distress Alert Process.                       │
                      Press any key to escape.                               │
                                                              └──────────────┘

Current State : DISTRESS ALERT          SYNC(NCS)           91-2-06 12:00(UTC)
CALLING                                 NCS:IOR LOGIN          LAT:  34:43.00N
                                                               LON:135:21.00E
```

Figure 6-5 Appearance of Screen During Transmission of Distress Alert

Your vessel's ID, L/L position, nature of distress, speed and course are sent to the CES designated.

7. When you receive acknowledgement of the distress alert from the CES, the message "Distress Alert Acknowledgement Received" appears in blinking reverse video and the distress alert alarm stops.
If you cannot receive the acknowledgement signal, the message "Timeout! Distress Alert not acknowledged. Distress Alert abandoned. Please re-send Distress Alert." appears Retransmit the distress alert.

Updating the Distress Alert

You can prepare a distress alert to get the distress alert out (to a CES) as fast as possible. The "Update Distress Alert" function provides minimum distress reporting information: CES ID, vessel position, nature of distress, and course and speed of vessel.

procedure

1. Press **F10** to display the Distress menu. Note that this key overrides any operation.

```
  File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
─────────────────────────────────────────────────────────────────────────────────────────────
  ┌─────────────────────────────────┐
  │ 1: Activate Distress Alert      │
  │ 2: Update Distress Alert        │
  │ 3: Activate Distress Alert Test │
  └─────────────────────────────────┘
```
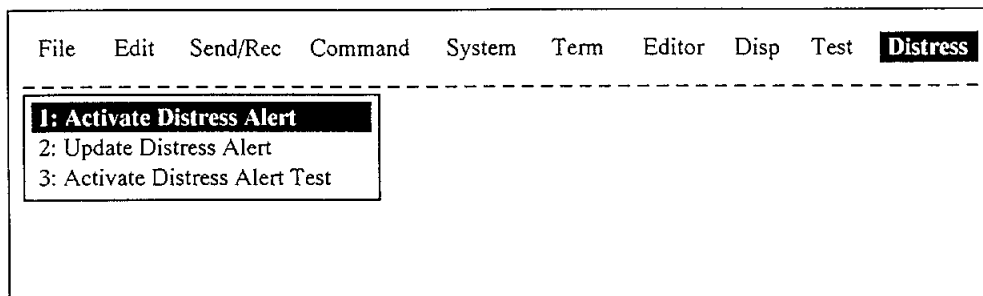
Figure 6-6 Distress Menu

NOTE: When a terminal unit is set to "2nd DTE" on the Term Setup menu, the distress alert cannot be changed from a 2nd DTE. A 2nd DTE provides only for transmission of the distress alert.

2. Press [2] key. The display should look something like Figure 6-7.

```
  File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
─────────────────────────────────────────────────────────────────────────────────────────────
  ┌─ 1: Activate Distress Alert ──┐ Update Distress Alert ──────────────┐
  │ 2: Update Distres  CES ID          144                              │
  │ 3: Activate Distres Position       LAT 35:00N                       │
  │                                    LON135:00E                       │
  │                     Protocol       Maritime / Other                 │
  │                     Nature         Unspecified                      │
  │                     Course         123                              │
  │                     Speed          013 KTS                          │
  │                                                                     │
  │                       Enter message parameter.                      │
  │                       Press RET to validate setting.                │
  │                       SPACE : Open Table                            │
  └─────────────────────────────────────────────────────────────────────┘
─────────────────────────────────────────────────────────────────────────────────────────────
  Current State: IDLE              SYNC(NCS)              91-2-06 12:00(UTC)
                                   NCS:IOR LOGIN          LAT: 34:43.00N
                                                          LON:135:21.00E
```

Figure 6-7 Update Distress Alert Screen

3. CES ID 144 always appears at initial state. This is the ID of AOR-E NCS, preprogrammed at the factory. Tap the space bar to display the CES ID list. Select a suitable CES by the [↓] key followed by the **Enter** key.

NOTE: If there is navigation input you need only to enter a CES ID; the navigation input provides position, course and speed automatically.

4. For no navigation input manually enter position, course and speed. If this information is automatically input go to step 5.

manually entering position, course and speed

a) Key in latitude degrees.
b) Press [→] to advance the cursor to the latitude minutes location.
c) Key in latitude minutes.
d) Press [→] to send the cursor to the latitude polarity location.
e) Key in polarity.
f) Press [↓] to advance the cursor to the LON line.
g) Enter longitude as same as latitude.

h) Press [↓] to go to the Course line. Enter course if necessary.
i) Press [↓] to go to the Speed line. Enter speed if necessary.

5. Press the **Enter** key. The screen should now look something like Figure 6-8.

```
┌─────────────────────────────────────────────────────────────────┐
│  File   Edit   Send/Rec   Command   System  Term  Editor  Disp  Test  ▐Distress▐ │
│ ─────────────────────────────────────────────────────────────── │
│  ┌──────────────────────┐  ─ Update Distress Alert ──────────┐  │
│  │ 1: Activate Distress Alert │                               │  │
│  │ ▐2: Update Distres▐  CES ID        202                     │  │
│  │ 3: Activate Distres│ Position       LAT 35:00.N            │  │
│  │ └────────────────────┘              LON135:00.E            │  │
│  │                       Protocol       Maritime / Other      │  │
│  │                       Nature         Unspecified           │  │
│  │                       Course         123                   │  │
│  │                       Speed          013 KTS  ┌──────────┐ │  │
│  │                                               │  Update   │ │  │
│  │                              Select "Yes" to update ▐Yes▐  No │ │
│  │                                               └──────────┘ │  │
│  └──────────────────────────────────────────────────────────┘  │
│ ─────────────────────────────────────────────────────────────── │
│  Current State: IDLE          SYNC(NCS)          91-2-06 12:00(UTC) │
│                               NCS:IOR LOGIN      LAT: 34:43.00N     │
│                                                  LON:135:21.00E    │
└─────────────────────────────────────────────────────────────────┘
```

Figure 6-8 Update Distress Alert Screen, Requesting Confirmation of Settings

6. Press the **Enter** key to register the information you've just entered, or select No and press the **Enter** key to escape.

If you update the distress alert correctly, "Distress Alert updated. Press any key." appears.

In case of error "Update error! Try again. Press RET to end update." appears. Check the message for error.
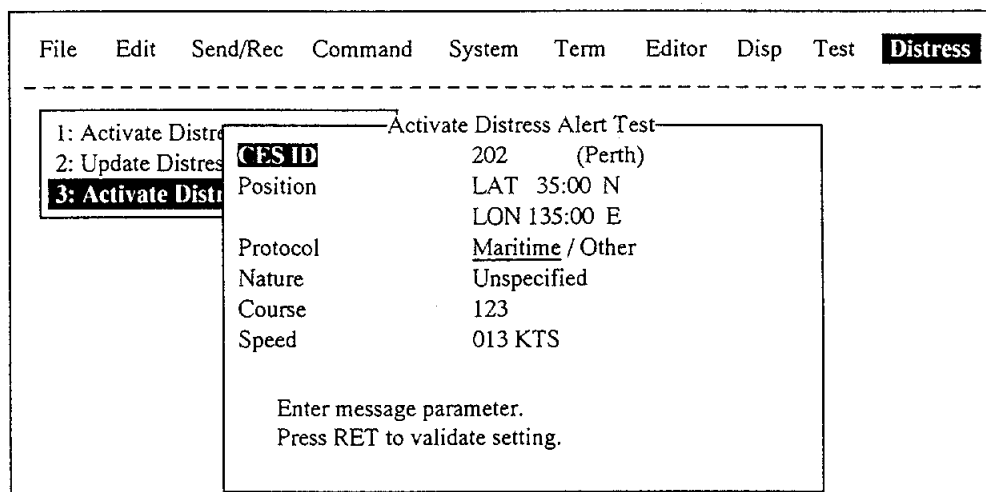
* If the navigation device is not connected, it is needed to update the position, course and speed periodically.

Testing the Distress Alert

The distress alert test is automatically conducted by executing the Performance Verification (PV) test (by pressing [F9], then [1] key). If you want to do it manually, however, follow the procedure shown below. Note that it is better not to operate the F10 key to avoid unintentional transmission of the distress alert.

procedure

1. Receive permission from a CES to test distress alert by PV test. Press **F10** to display the Distress menu. (or wait for two minutes and the alert test is automatically conducted.)

2. Press [3] key. The Activate Distress Alert Test Screen appears.

```
File    Edit    Send/Rec    Command    System    Term    Editor    Disp    Test    Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 1: Activate Distr ┌─────────── Activate Distress Alert Test ───────────┐
 2: Update Distres │ CES ID          202        (Perth)                 │
 3: Activate Dist  │ Position        LAT  35:00  N                      │
                   │                 LON 135:00  E                      │
                   │ Protocol        Maritime / Other                   │
                   │ Nature          Unspecified                        │
                   │ Course          123                                │
                   │ Speed           013 KTS                            │
                   │                                                    │
                   │      Enter message parameter.                      │
                   │      Press RET to validate setting.                │
                   │                                                    │
                   └────────────────────────────────────────────────────┘
```

Figure 6-9 Activate Distress Alert Test Screen

3. If necessary, change settings.

4. Press the **Enter** key. The display should look something like Figure 6-10.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  File    Edit    Send/Rec   Command    System    Term    Editor   Disp   Test  ▐Distress▌│
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─    │
│   ┌─────────────────┐                                                     │
│   │ 1: Activate Distr┌──────────Activate Distress Alert Test──────────┐   │
│   │ 2: Update Distres│▐CES ID▌            202        (Perth)          │   │
│   │▐3: Activate Distr▌│ Position          LAT  35:00 N                │   │
│   └───────────────── │                   LON 135:00 E                │   │
│                      │ Protocol          Maritime / Other            │   │
│                      │ Nature            Unspecified                 │   │
│                      │ Course            123            ┌────────────┤   │
│                      │ Speed             013 KTS        │ Send Start  │   │
│                      │                                  ├──────┬──────┤   │
│                      │     Select "Yes" to send distress│▐Yes▌ │  No  │   │
│                      │                                  └──────┴──────┘   │
└─────────────────────────────────────────────────────────────────────────┘
```
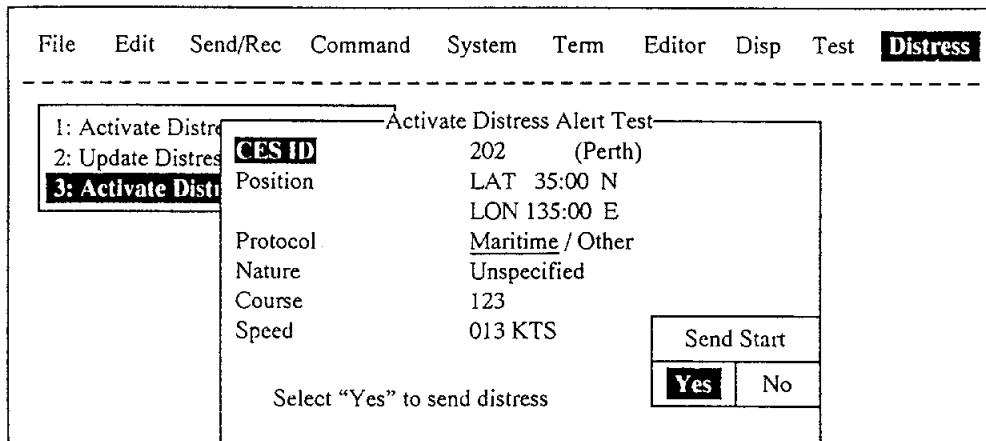
Figure 6-10 Activate Distress Alert Test Screen

5. Press the **Enter** key to start the test.

6. Transmission begins and the screen now looks similar to Figure 6-11.

```
┌─────────────────────────────────────────────────────────────────────────┐
│  File    Edit    Send/Rec   Command    System    Term    Editor   Disp   Test  ▐Distress▌│
│ ▐Distress Alert Test Activated▌                                           │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─    │
│   ┌─────────────────┐                                                     │
│   │ 1: Activate Distr┌──────────Activate Distress Alert Test──────────┐   │
│   │ 2: Update Distres│▐CES ID▌            202                         │   │
│   │▐3: Activate Distr▌│ Position          LAT  35:00 N                │   │
│   └───────────────── │                   LON 135:00 E                │   │
│                      │ Protocol          Maritime / Other            │   │
│                      │ Nature            Unspecified                 │   │
│                      │ Course            123                         │   │
│                      │ Speed             013 KTS                     │   │
│                      │                                               │   │
│                      │                                               │   │
│                      │ Starting Distress Alert Test Process.         │   │
│                      │ Press any key to escape.                      │   │
│                      └───────────────────────────────────────────────┘   │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─    │
│  Current State : DISTRESS ALERT TEST      SYNC(NCS)          91-2-06 12:00(UTC)│
│  CALLING                                  NCS:IOR LOGIN          LAT:  34:43.00N│
│                                                                 LON:135:21.00E │
└─────────────────────────────────────────────────────────────────────────┘
```

blinking

Figure 6-11 Appearance of Screen During Distress Alert Testing

7. When you receive the distress acknowledgement signal from the CES the display shows "Distress Alert Acknowledgement Received".

Distress Communications

The **distress alert** provides the minimum distress reporting requirements: own vessel's ID, speed, course and L/L position and nature of distress. After receiving the distress alert acknowledgement, if necessary, send detailed information as follows.

procedure

1. Press F1 followed by the **Enter** key to display the editor screen.

2. Prepare distress communication message. Figure 6-12 shows a sample distress message.

```
MAYDAY MAYDAY MAYDAY

THE NAME IS·············Ship's name

I NEED HELP············· : Type of assistance required
```

Figure 6-12 Sample Distress Communication Message

3. Press **F3**.

4. Press the **Enter** key twice. The screen should like similar to Figure 6-13.
   The cursor is on the Priority line.

```
┌──────────────────────────────────────────────────────────────────┐
│   File    Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│  ┌─────────────────────────────────────────────────────────────── │
│  ┏━━━━━━━┓ ━━━━━━━┐Send ────────┐                                   │
│  ┃ 1: Send┃      │                └Send Message────────┐           │
│   2: Data R ┃ ┏━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┐ │
│   3: Receiv  2┃┃ Priority        ┃ Normal ┃/ Distress              │ │
│   4: EGC    3┃ Message File        Message now being edited  Size 12345 │
│   5: Log    4┃ Station Name                                         │ │
│            └━┛   Destination Type   TELEX                          │ │
│                  Country/Ocean Code                                │ │
│                  Station ID                                        │ │
│                CES ID                                              │ │
│                Confirmation        ON / OFF                        │ │
│                Send Delay          00 : 00                         │ │
│                Delivery Delay      Immediate / Deferred            │ │
│                                          RET : Send Start          │ │
│                └───────────────────────────────────────────────────┘ │
│  ───────────────────────────────────────────────────────────────── │
│   Current State: IDLE              SYNC(NCS)         91-2-28 12:00(UTC) │
│                                    NCS:IOR LOGIN     LAT: 34:43.00N │
│                                                      ON:135:21.00E  │
└──────────────────────────────────────────────────────────────────┘
```

Figure 6-13 Send Message Screen

5. Press [→] key to select "Distress". An audible alarm sounds.

6. Press [↓] key to go the CES ID line.

7. Key in the ID of the CES where the distress alert was transmitted to.

8. Press the Enter key. The display should look similar to Figure 6-14.

```
┌──────────────────────────────────────────────────────────────────┐
│   File    Edit   Send/Rec  Command   System   Term   Editor   Disp   Test   Distress │
│  ─────────────────────────────────────────────────────────────── │
│  ┏━━━━━━━┓ ━━━━━━━┐Send ────────┐                                   │
│  ┃ 1: Send┃      │                └ Send Message ────────┐         │
│   2: Data R ┃ ┏━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┐             │
│   3: Receiv  2│ Priority        Normal / Distress                  │
│   4: EGC    3│ Message File     Message now being edited  Side 126  │
│   5: Log    4│ Station Name                                        │
│   └──────────┘   Destination Type   TELEX                          │
│                  Country/Ocean Code  000                           │
│                  Station ID          00000000      ┌───────────┐   │
│                CES ID                202 (Perth)    │ Send Start│   │
│                Confirmation          ON / OFF       ├───────────┤   │
│                Send Delay            00 : 00        │ Yes │ No  │   │
│                Delivery Deay         Immediate / Deferred          │
│                                                     └───────────┘   │
│  ───────────────────────────────────────────────────────────────── │
│   Current State: IDLE              SYNC(NCS)         91-2-28 12:00(UTC) │
│                                    NCS:IOR LOGIN     LAT: 34:43.00N │
│                                                      LON:135:21.00E │
└──────────────────────────────────────────────────────────────────┘
```

Figure 6-14 Send Message Screen with Send Start Confirmation Prompt

9. Press the Enter key to transmit the distress message to the CES, or select No and press the Enter key to escape.

NOTE: Country/Ocean Code and Station ID are not required in a distress message.

Distress Alert Unit IC-300 (optional supply)

The IC-300 provides:

- Distress alert transmission
  It enables transmmission of the distress alert from remote location.
- Remote Alarm
  It informs a receipt of an EGC distress or urgent message.

Distress Alert Transmission

Operation

1. Press the DISTRESS button.

   The lamp inside the button flashes slowly and an audible alarm sounds. Five seconds later, the distress alert is transmitted and the lamp flashes faster. When you receive acknowledgement of the distress alert from a CES, the lamp lights continuously and the audible alarm sounds continuously.

   ■ To cancel the distress alert before transmission, press the button again within 5 seconds.

DISTRESS Button
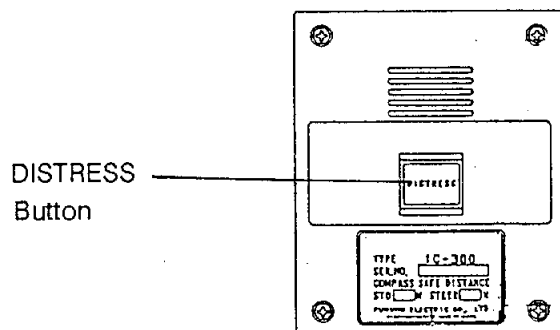
Figure 6-13 Distress Alert Unit IC-300

Remote Alarm

When the FELCOM 10 receives an EGC distress or urgent message, the lamp lights and a buzzer sounds. Note that this function is disabled by changing the internal jumper wire. Contact your dealer to change the setting.

To silence the alarm, press [F4] and [6] keys of the Terminal Unit in this order. DO NOT press the DISTRESS button.

OTHER FUNCTIONS

This chapter describes how to control the communication unit by the main DTE, scan NCS and select EGC channel.

Contents

Stopping the Communication Unit (DCE)

You can stop the communication unit during transmitting, receiving or scanning.

procedure

1. Press **F4** to display the Command Menu.

```
 File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 ----------------------------------------------------------------------------------
  1: Abort
  2: Login
  3: Logout
  4: Scan NCS
  5: Select NCS
  6: Stop Alarm




                        Scanning NCS channel.

 ----------------------------------------------------------------------------------
 Current State: SCANNING              SYNC(NCS)          91-2-06 12:00(UTC)
                                      NCS:IOR LOGIN       LAT:  34:43.00N
                                                         LON:135:21.00E
```
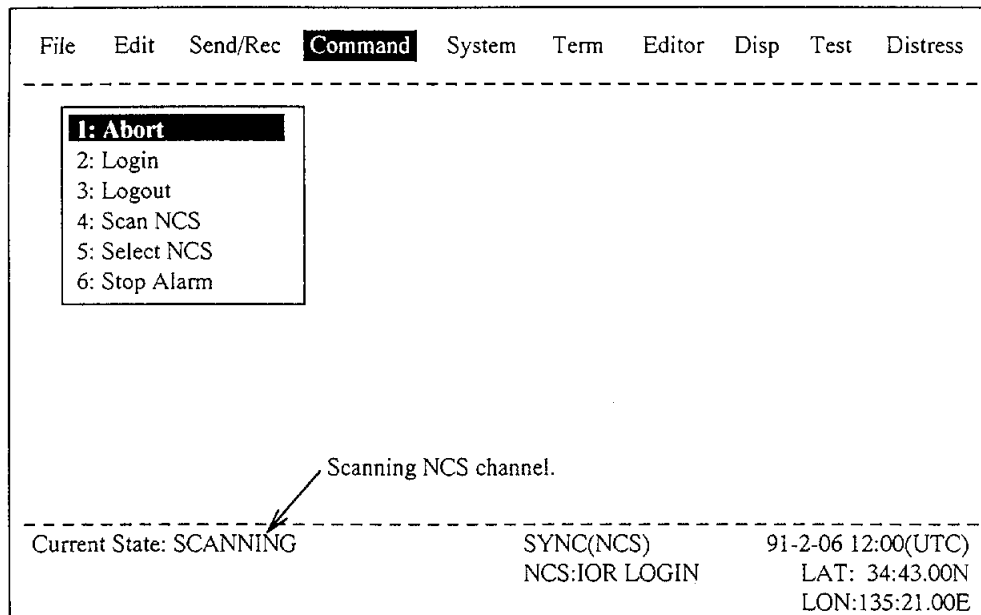
Figure 7-1 Command Menu

NOTE: If the FELCOM 10 is set to operate as an EGC-only receiver, the menu looks like this:

```
  1:Abort
  2: Login
  3: Logout
  4: Select EGC Ch.
  5: Stop Alarm
```
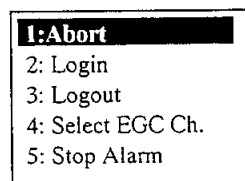
Note also that the Command Menu on a 2nd DTE shows:

```
  Stop Alarm
```

2. Press the **Enter** key or [1] key to select Abort.

```
 ┌──────────────────────────────────────────────────────────────┐
 │   File    Edit    Send/Rec  [Command]  System   Term   Editor  Disp  Test   Distress │
 │  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
 │                                                                │
 │   ┌─────────────┬──────────────────────── Abort ──────┐        │
 │   │ 1: Abort    │                                      │        │
 │   │ 2: Login    │   Now scanning NCS                   │        │
 │   │ 3: Logout   │                                      │        │
 │   │ 4: Scan NC  │                                      │        │
 │   │ 5: Select N │              ┌────── Abort ──────┐   │        │
 │   │ 6: Stop Ala │              │   Yes    │   No    │   │        │
 │   │             └──────────────┴──────────┴─────────┘            │
 │                                                                │
 │  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
 │   Current State: SCANNING           SYNC(NCS)          91-2-06 12:00(UTC) │
 │                                     NCS:IOR LOGIN        LAT:  34:43.00N   │
 │                                                          LON:135:21.00E   │
 └──────────────────────────────────────────────────────────────┘
```
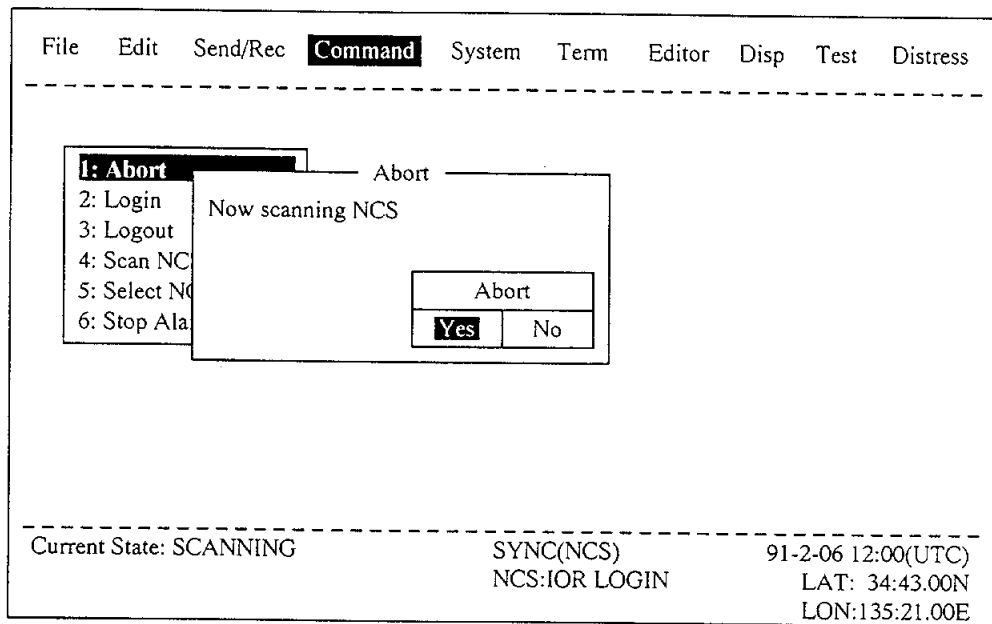
Figure 7-2 Abort Screen

3. Press the **Enter** key to abort. (To escape, select No and press the **Enter** key.) The message "Forced Clearing" replaces either Sending, Receiving or Scanning at the bottom of the screen.

NOTE: Aborting is possible in sending, receiving or scanning. If attempted in other operating modes "Cannot abort current process." appears.

NCS Scanning

The communication unit automatically tunes itself to the NCS selected at the System Setup screen. You can, however, re-tune to another NCS which has stronger signal at the over-lapped ocean region. Scanning is possible only when the communication unit is IDLE and FELCOM 10 is set to operate as an INMARSAT-C transceiver.

If the communication unit is not idle, "Communication Unit is not Idle now. Cannot start scan." appears. Press any key to escape then wait until the unit is idle.

procedure

1. Press F4 to display the Command menu.

2. Press [4] key. The Scan NCS screen appears.

```
   File    Edit    Send/Rec   [Command]   System   Term   Editor   Disp   Test   Distress
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


      1: Ab┌───────── Scan NCS ──────────┐
      2: Lo │  ┌───────────────┐         │
      3: Lo │  │ 1: Auto        │         │
      [4: Sc│  │ 2: AOR(West)   │         │
      5: Sel│  │ 3: AOR(East)   │         │
      6: Sto│  │ [4: POR      ] │         │
            └  │ 5: IOR         │         │
               └───────────────┘         │
                    ┊                     │
                    └········ NCS you are currently tuned to appears in reverse video.

 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   Current State: IDLE              SYNC(NCS)           91-2-06 12:00(UTC)
                                    NCS:IOR LOGIN       LAT:  34:43.00N
                                                        LON:135:21.00E
```
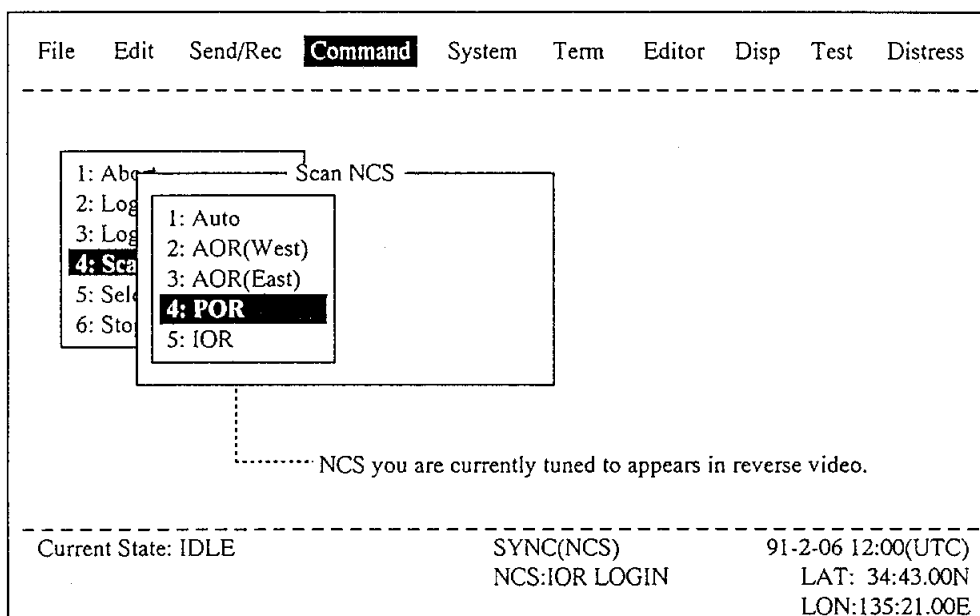
Figure 7-3 Scan NCS Screen

3. The NCS you are currently tuned to appears in reverse video. To select another NCS, operate the up and down arrow keys.

4. Press the Enter key.
   If Auto is selected, FELCOM 10 scans all NCSs in turn. If a particular ocean region is selected, FELCOM 10 scans all channels of that NCS. NCSs will begin using multiple channels when the third generation satellites come into use.

```
 File   Edit   Send/Rec  Command  System  Term  Editor  Disp  Test  Distress
------------------------------------------------------------------------
  1: Abort
  2: Log          ┌──────── Scan NCS ────────┐
  3: Log          │ 1: Auto                  │
  4: Sca          │ 2: AOR(West)             │
  5: Sel          │ 3: AOR(East)             │
  6: Sto          │ 4: POR        ┌─ Start ─┐│
                  │ 5: IOR        │ Yes │ No ││
                  │               └────────┘ │
                  └──────────────────────────┘
```
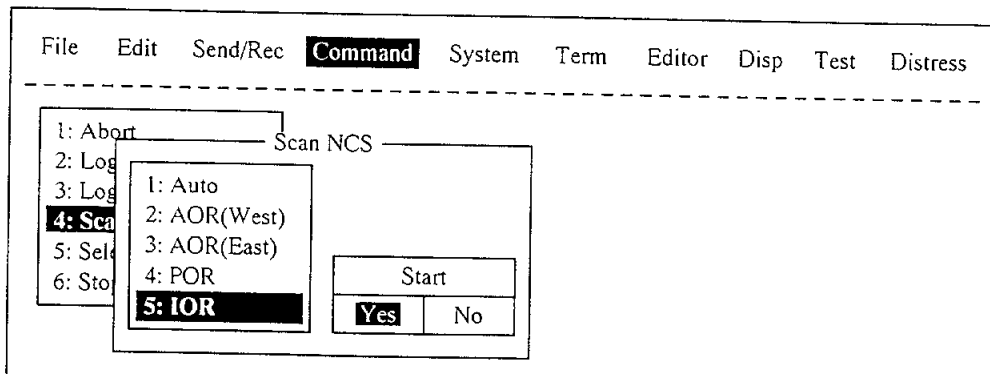
Figure 7-4 NCS Scan Confirmation Screen

5. Press the **Enter** key to start the scanning, or select No and press the **Enter** key to escape.

The message "Starting Scan Process. Press any key to escape." appears during the scanning.

Selecting EGC Receiving Channel

EGC channel can be selected when the DTE is set to operate as an EGC-only receiver. This procedure is shown for reference; currently there is only one EGC channel per NCS.

procedure

1. Press **F4** to display the Command menu.

2. Press [4] key. The EGC channel the EGC receiver is currently tuned to appears on the display in reverse video.

```
┌──────────────────────────────────────────────────────────────────────┐
│  File    Edit    Send/Rec   █Command█   System   Term   Editor  Disp  Test   Distress │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│                                                                        │
│     ┌──────────────┐                                                   │
│     │ 1: Abort     │                                                   │
│     │ 2: Login   ┌─┴──── Select EGC Ch. ───────────┐                   │
│     │ 3: Logout  │           RET: select   ESC:quit │                  │
│     │ █4: Select█ ├───────┬────────┬────────┬────────┤                 │
│     │ 5: Stop A│  │█11080█│ 12580  │ 10840  │ 11088  │                 │
│     └──────────│  │       │        │        │        │                 │
│                │  │       │        │        │        │                 │
│                └──┴───────┴────────┴────────┴────────┘                 │
│                                                                        │
│  ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
│  Current State:█EGC RECEIVER█        SYNC(NCS)          91-2-06 12:00(UTC) │
│                                      NCS:IOR LOGIN         LAT: 34:43.00N  │
│                                                           LON:135:21.00E  │
└──────────────────────────────────────────────────────────────────────┘
```
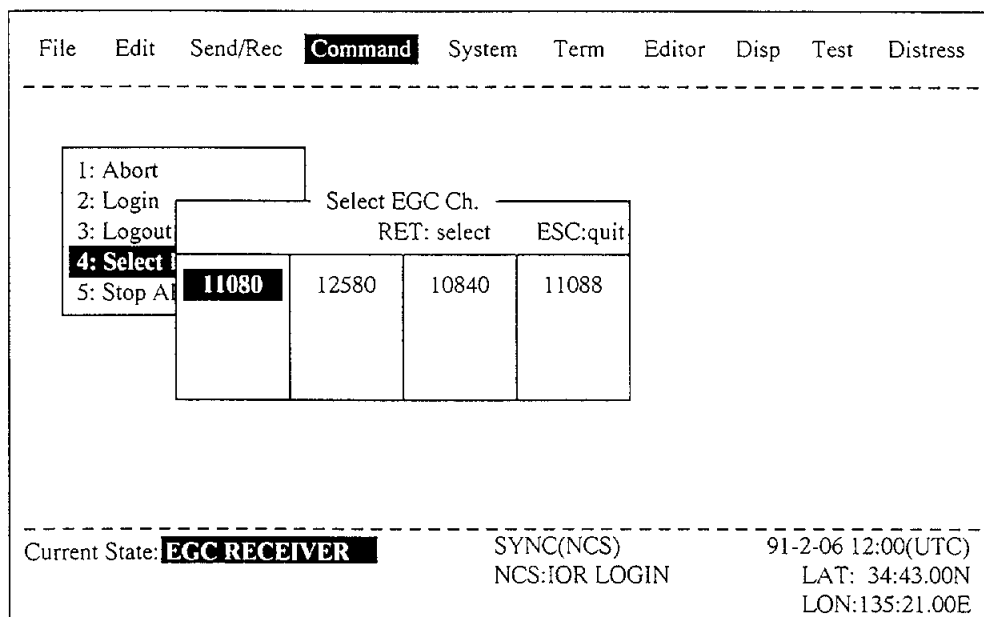
Figure 7-5 EGC Receive Channel Selection Screen

3. Select desired channel by operating the arrow keys.

4. Press the **Enter** key to start the tuning.

Selecting NCS Channel

NCS channel can be selected by the following procedure.
Currently, each satellite transmits one global beam. In the future, the satellites will transmit multiple spot beams, i. e., the NCS will have multiple channels.

procedure

1. Press F4 to display the Command menu.

2. Press [5] key. The NCS Channel List appears. NCS channels programmed at page 2-15 appear on the list.

```
 File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

   1: Abort
   2: L                         NCS Channel List
   3: L                                                RET: set     ESC:quit
   4: S   NO   AOR(WEST)   AOR(EAST)        POR              IOR
   5:S         ID    Freq   ID    Freq    ID    Freq    ID     Freq
   6: S   1   044  11080 *  144  12580 *  244  12580 *  344  10840 *
          2
          3
          4
          5
          6
          7
          8
```

Fig. 7-6 NCS Channel List

3. Select the one you want with the arrow keys.

4. Press the **Enter** key. The unit tunes to the channel selected.

This page intentionally left blank.

MAINTENANCE

This chapters provides the information necessary for the maintenance and checking of the FELCOM 10, including the location of circuit boards (see pages 8-22 through 8-24).

Contents

Safety Information

DANGER

This equipment uses high voltage electricity which can shock, burn, or cause death.

TO THE USER: While the equipment has been designed with consideration for the operator's safety, precautions must always be exercised when reaching inside the equipment for the purpose of maintenance or service. DO NOT work inside this equipment unless familiar with these electrical circuits and correct electrical safety procedures.

TO THE SERVICE TECHNICIAN: Always make sure the electrical power is turned off before attempting to change a component or inspecting the inside of the equipment. A residual charge may also exist in capacitors, even with the equipment turned off at the CRT circuit of the Terminal Unit.

WARNING

Hazardous microwave radiation can cause severe injury or illness.

Keep at least 60cm from radome.

Radiation Level	At
$10W/m^2$	60cm

General Checking and Maintenance

This section presents simple maintenance and troubleshooting procedures. **BE SURE THE POWER IS OFF BEFORE CONDUCTING ANY MAINTENANCE PROCEDURES** (except cleaning the terminal unit).

Cleaning the terminal unit and communication unit

These units can be cleaned with a soft, dry cloth. DO NOT use chemical solvents. They may remove paint and markings. Exercise caution when cleaning the display screen of the terminal unit.

Checking connectors and earth terminal

The connectors and earth terminal on the rear panel of the communications unit and terminal unit should be checked periodically for tightness. If the earth terminal has rusted, clean it.

Floppy disk drive head

The floppy disk is coated with a magnetic material which stores information entered into the disk. If this material is damaged by foreign material adhering to the disk drive head it may not be possible to read from or write to the disk. Clean the head regularly with a cleaning floppy disk to prevent loss of data.

When the power can't be turned on (power lamp does not light)

1) Check the power cable connector on both the rear panel of the terminal unit and communication unit for tightness. Is the ship's mains switchboard turned on?

2) On the terminal unit, check the breaker on the rear panel. If it has tripped it will be protruding several millimeters. Reset it if necessary.

3) On the rear panel of the terminal unit, disconnect the power cable. Connect a multimeter to the power cable connector and confirm that it reads between 10.8 and 40 VDC. (pin #1: positive, pin #2: negative)

4) On the rear panel of the communication unit, disconnect the power cable. Connect a multimeter to the power cable connector and confirm that it reads between 10.8 and 40 VDC. (pin #1 and #2: positive, pin #3 and #4: negative)

Self Tests

The communication unit and the terminal unit are equipped with self tests which check them for proper operation.

Self test at power application (communication unit)

1) The communication unit performs the following tests:

a) ROM sum test
b) RAM read and write test
c) DP RAM read and write test
d) VITERBI decoder test
e) LED test (all LEDs blink five times in one second)

If the unit finds no fault it goes into normal operation. If device error is found an audible alarm sounds and LED(s) light to show offending device. In case of error replace appropriate p.c. board.

Table 8-1 Lighting LED and Device Error

LED (lighting)	Device Error
SYNC	CPU1 ROM error (CPU Board)
LEVEL	CPU1 RAM error (CPU Board)
LOGIN	CPU2 ROM error (CPU Board)
SEND	CPU2 RAM error (CPU Board)
RECEIVE	DP-RAM error (CPU Board)
DISTRESS	VITERBI error (VITERBI Board)
ALARM	Blinking for device error.

NOTE: The terminal unit is not checked for proper operation at power application.

Terminal unit self test

ROM and RAM test

1. At the default display, press F9 to display the Test menu.

```
  File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  1: PV Test
  2: Self Test
```
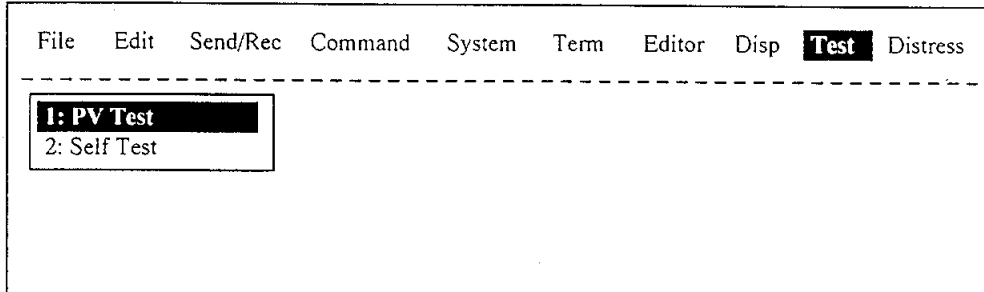
Figure 8-1 Test Menu

2. Press [2] key. The Self Test sub menu appears (main DTE only).

```
  File    Edit   Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  1: PV Te          Self Test
  2: Self T      1: Terminal
                 2: Communication Unit
                 3: Printer
```
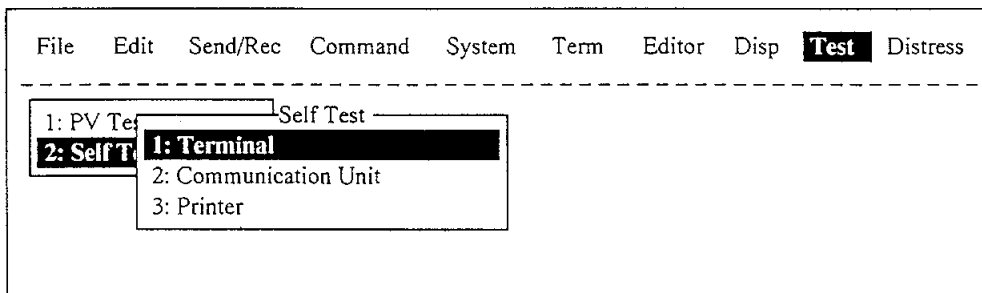
Figure 8-2 Self Test Sub Menu

3. Press the Enter key or [1] key. The Terminal sub menu appears.
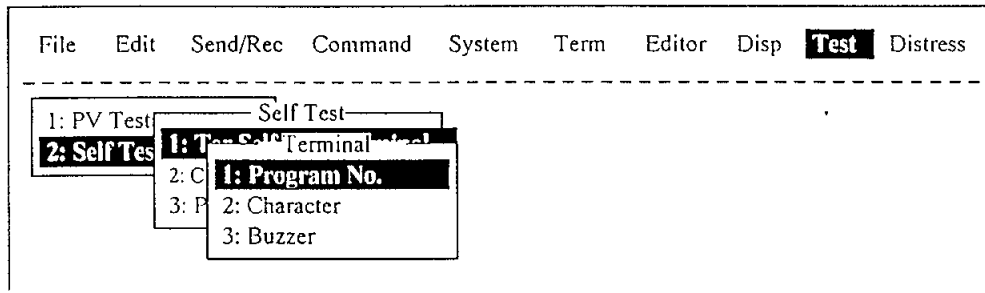
Figure 8-3 Terminal Sub Menu

4. Press the **Enter** key or [1] key. The program no. of the terminal unit appears along with a prompt which asks if you want to start the self test..
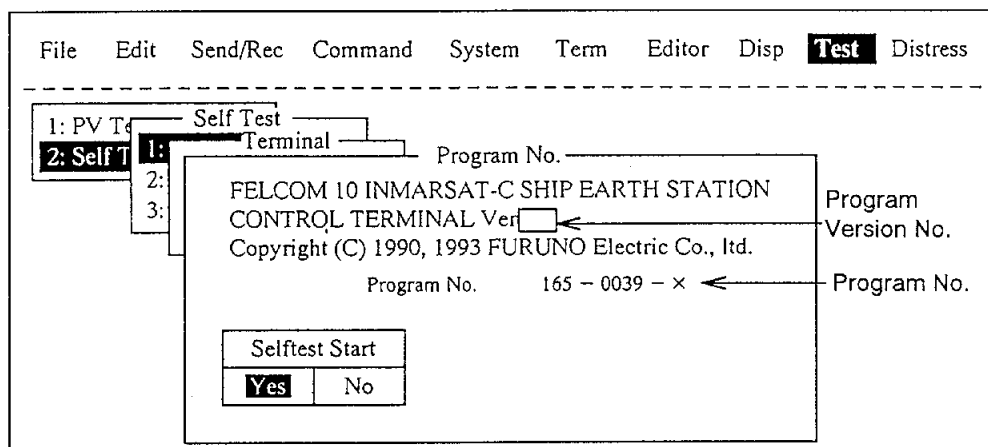
Figure 8-4 Program No. Display Screen

5. Press the **Enter** key to start the test, or select No and press the **Enter** key to escape.

The message "Now Terminal Self-testing (cannot abort)." appears in reverse video during the self test. Note that the self test cannot be stopped once it is started.

6. When the test is completed, the display shows the results.

```
                    ─── Program No. ───
 ┌─────────────────────────────────────────┐
 │  FELCOM 10 INMARSAT-C SHIP EARTH STATION  │  Program
 │  CONTROL TERMINAL Ver [   ]◄──────────────┼── Version No.
 │  Copyright (C) 1990 FURUNO Electric Co., Ltd.
 │
 │        Program No.     165 – 0039 – ×  ◄──┼── Program No.
 │  ROM  OK
 │  RAM1 OK    RAM5  OK    RAM9  OK    RAM13 OK
 │  RAM2 OK    RAM6  OK    RAM10 OK    RAM14 OK
 │  RAM3 OK    RAM7  OK    RAM11 OK    RAM15 OK
 │  RAM4 OK    RAM8  OK    RAM12 OK    RAM16 OK
 └─────────────────────────────────────────┘
```
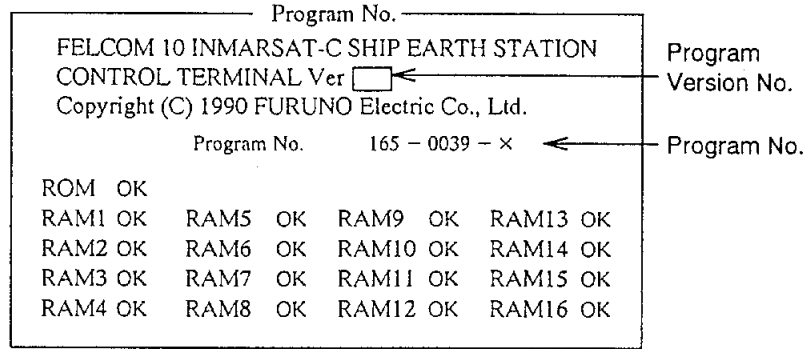
Figure 8-5 Sample ROM and RAM Self Test Results

OK or NG (No Good) appears next to each RAM and ROM tested. NG displays release of the audible alarm. For any NG display, replace the CONTROL Board and then conduct the self test again.

7. Press any key to return to the Terminal sub menu.

character test

8. Press [2] key. All ASCII characters appear on the screen continuously. Confirm that no irregular characters appear.

```
┌──────────────────────────────────────────────────────────────────────┐
│ File   Edit   Send/Rec   Command   System   Term   Editor   Disp  Test  Distress │
│ ──────────────────────────────────────────────────────────────────── │
│ ┌─ I: PV T┌──── Self Test ────┐                                        │
│ │        │        Terminal    │──Character ───────────────────────── │
│ │ !"#$%&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnop │
│ │ !"#$%&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopq │
│ │ "#$%&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqr │
│ │ #$%&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrs │
│ │ $%&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrst │
│ │ %&'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstu │
│ │ &'()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuv │
│ │ '()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvw │
│ │ ()*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwx │
│ │ )*+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwxy │
│ │ *+, – ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwxyz │
│ ────────────────────────────────────────────────────────────────── │
│ Current State: IDLE        SYNC(NCS)            91-2-06 12:00(UTC) │
│                            NCS:IOR LOGIN        LAT: 34:43.00N     │
│                                                 LON:135:21.00E     │
└──────────────────────────────────────────────────────────────────────┘
```

Figure 8-6 Appearance of Screen During Character Test

9. To stop the test, press the **Esc** key. The Terminal sub menu appears.

buzzer test

10. Press [3] key to start the buzzer test. The buzzer sounds continuously.

```
 ┌──────────────────────────────────────────────────────────────────┐
 │  File   Edit   Send/Rec   Command   System   Term   Editor   Disp   [Test]   Distress │
 │ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ │
 │ ┌────────┬─Self Test──────────┐                                    │
 │ │ 1: PV T│    ┌──Terminal──┐──┐                                    │
 │ │ 2: Self│ TRI│      Buzzer ──┤                                    │
 │ │        └────│─────────────┘ │                                    │
 │              │ Press ESC key to stop buzzer.│                       │
 │              └──────────────────┘                                   │
 └──────────────────────────────────────────────────────────────────┘
```
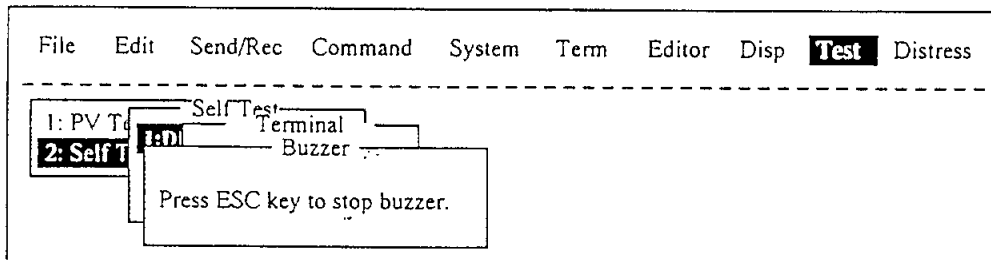
Figure 8-7 Terminal Unit Buzzer Test

11. To stop the buzzer, press the **Esc** key. The terminal sub menu appears.

12. To finish the Terminal test, press the **Esc** key.

13. To escape the Self Test, press the **Esc** key three times.

14. To escape the test fucility, press the **Esc** key four times. Default screen appears.

Testing the communication unit through the keyboard

This test can only be initiated from the main DTE. Be sure the comunication unit is idle.

procedure

1. Press F9 to display the Test menu.

2. Press [2] key.

3. Press [2] key. The communication unit self test screen appears.
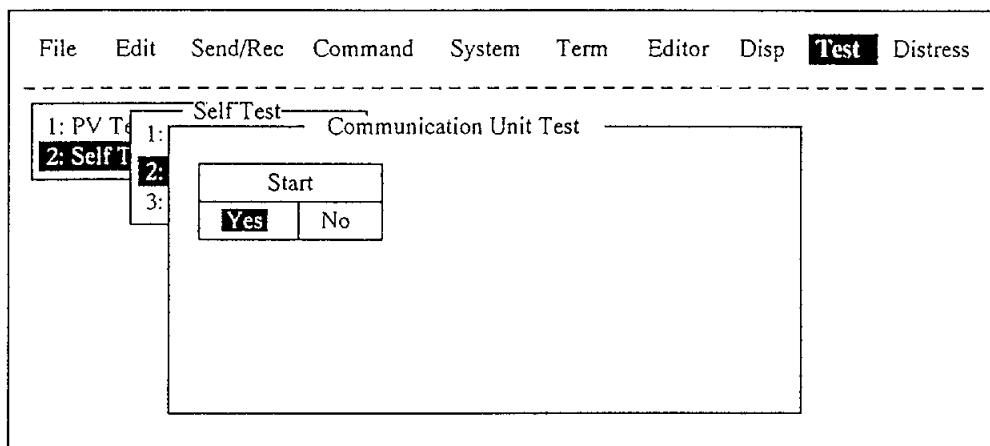
Figure 8-8 Communication Unit Self Test Start Verification Screen

4. Press the Enter key to start the test, or select No and press the Enter key to escape.

The message "Now Communication Unit testing" appears in blinking reverse video during testing.

5. When the test is completed the screen shows the results of the test.

```
  File    Edit    Send/Rec    Command    System    Term    Editor    Disp   [Test]  Distress
-------------------------------------------------------------------------------
  ┌─────────┐ ┌─SelfTest─────┐
  │ 1: PV T │ │1:│─────────Communication Unit Self Test─────────┐
  │ 2: Self T│ │2:│  CPU1   165 – 0040 – ***    CPU2   165 – 0041 – ***
            └─│3:│  ROM        OK              ROM        OK
              │  │  RAM1       OK              RAM1       OK
              └──┘  RAM2       OK              RAM2       OK
                    DP-RAM     OK              RAM3       OK
                    Viterbi    OK              RAM4       OK
                                               DP-RAM     OK

                    Press any key to escape.
```
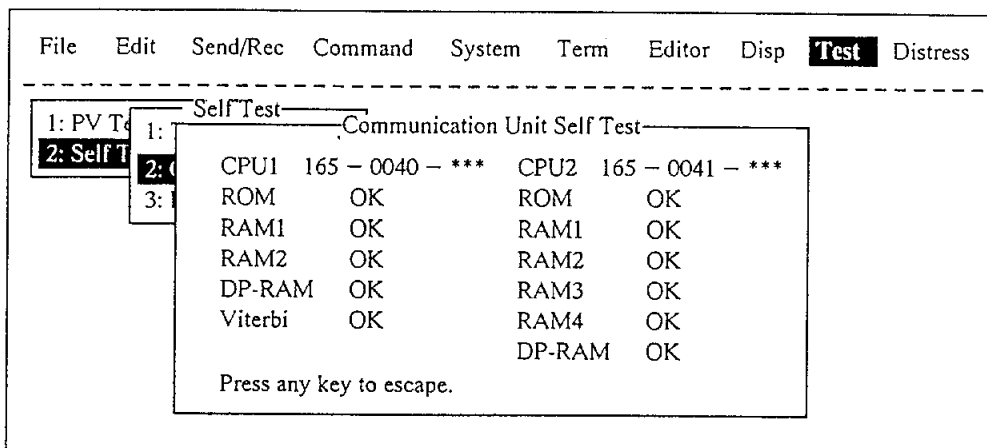
Figure 8-9 Sample Communication Unit Self Test Results

Either OK or NG appears next to each ROM and RAM tested. NG display causes releases the audible alarm. For defective ROM or RAM replace the CPU Board; defective Viterbi, replace the VITERBI Board.

6. Press any key to finish the Communication Unit test.

Testing the printer through the keyboard

This test can only be initiated from the main DTE.

procedure

1. At the default display, press **F9** to display the Test menu.

2. Press [2] key.

3. Press [3] key. The Printer Test screen appears on the screen and the printer starts printing ASCII characters continuously.

```
   File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
  ┌─────────SelfTest────────┐
  │ 1: PV T  ┌───────── Printer Test ──────────┐
  │ 2: Self  │ 1: Te │
  │          │ 2: Co │ Now test printing.
  │          │ 3: Pr │
  │                  │ Press ESC key to stop pronting.
```
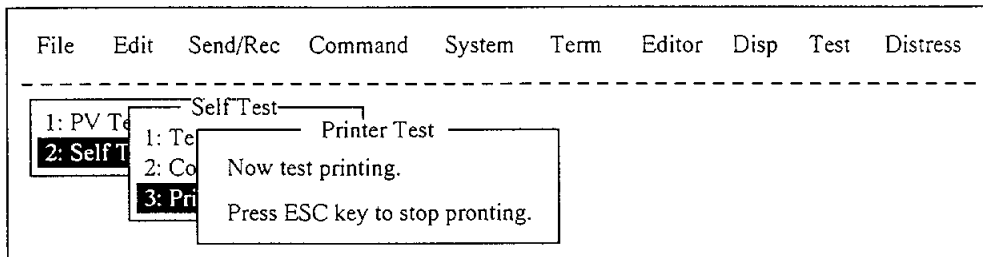
Figure 8-10 Printer Test Screen

```
!"#$%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnop
!"#$%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopq
"#$%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqr
#$%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrs
$%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrst
%&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstu
&'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuv
'()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvw
()*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwx
)*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwxy
*+, − ./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_abcdefghijklmnopqrstuvwxyz
```

Figure 8-11 Sample Printer Test

If the printer is turned off or malfunctioning, "Printer error!!" appears. Check the printer.

4. To stop the test press the **Esc** key.

Performance Verification (PV) Test

Before the FELCOM 10 can be used in the INMARSAT-C system, it must undergo a commissioning procedure. This procedure involves the (first) PV test which verifies that the FELCOM 10 can both transmit and receive information.

After the FELCOM 10 is installed, normally the installing technician confirms that the unit is functioning properly and is logged in with the INMARSAT-C system.

When a NCS receives an initial login attempt it transmits the Network Configuration table to the transceiver making the login. The Network Configuration table lists the CESs available for message traffic.

At the same time the NCS verifies if this was the first login attempt from that unit. If it is, the NCS instructs an idle CES to start a PV test with that unit.

The PV test consists of message reception test, message transmission test and distress alert test.

The results of the test appear on the PV Test Result display.

Note that the test cannot be conducted from a 2nd DTE. Note also that the test can be initiated by a CES.

PV test sequence

1) The SES requests NCS to conduct PV test.
2) Select PV Test on the Test menu.
3) The NCS acknowledges request for testing.
4) The SES, upon receiving acknowledgement from NCS, goes into pending state.
5) NCS will select a (not busy) CES to perform the test.
6) The CES transmits test message to the SES.
7) Then, SES transmits test message to the designated CES.
8) CES receives test message.
9) Distress alert testing. The SES transmits the distress alert test automatically within two minutes after completion of step 8.
10) When the distress alert test is finished the results of the test are sent to SES.

The entire PV test can be conducted automatically (taking about 15 minutes in total).

<u>procedure</u>

1. The communication unit is in idle condition and logged in.

2. Press **F9** to display the Test menu.

3. Press the **Enter** key.
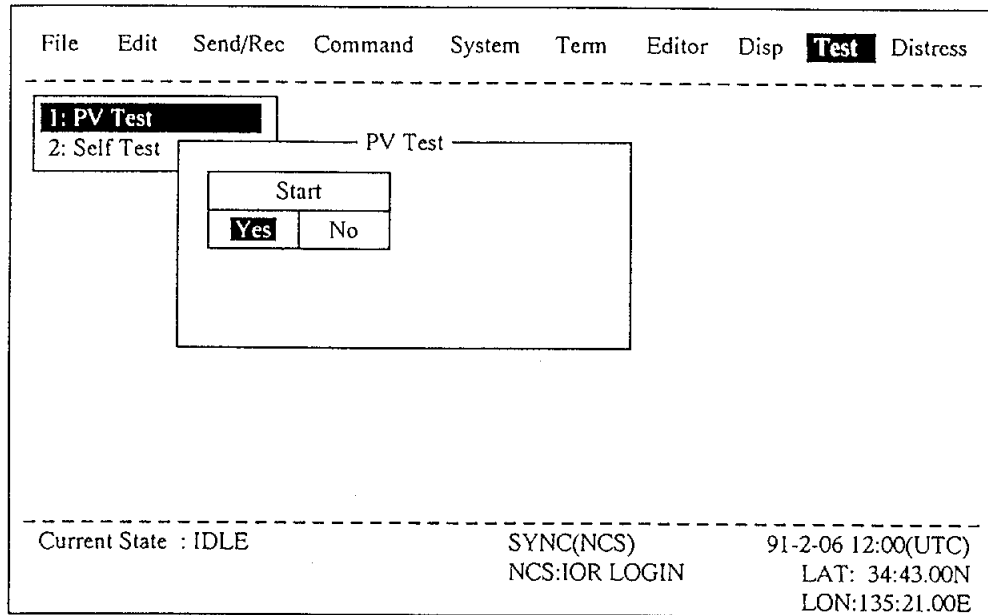
Figure 8-12 PV Test Confirmation Screen

NOTE: If the communication unit is not idle when the test is initiated the screen displays "SES is not idle now. Cannot start PV Test."

And if not logged in, "Cannot start PV Test. (not Logged-in)" appears.

4. Press the **Enter** key to transmit the PV test request to NCS.
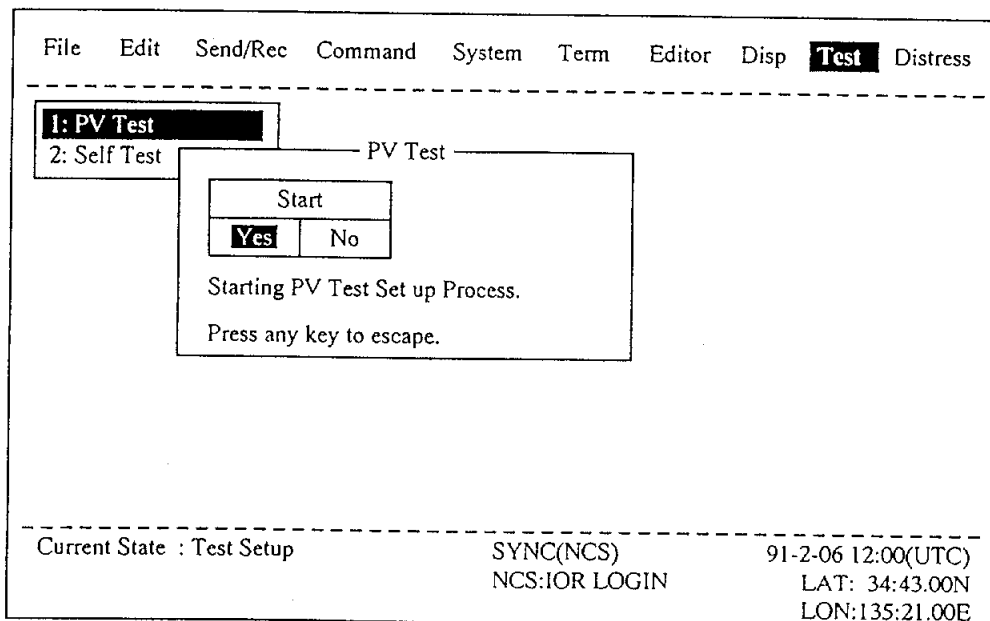
Figure 8-13 PV Test Screen

5. Return to the default display by pressing any key.

6. The screen displays "Current State: Idle (pending!)" when the acknowledge signal is received from the NCS.

7. When testing begins the screen displays "Current State: Testing".

8. Transmit a message to the CES. The CES, after acknowledging receipt of your message, transmits a message.

9. Though a prompt asks you to test distress alert, do not press any key. The alert test is automatically conducted two minutes later.

10. When testing is completed the indication Testing is replaced by IDLE.

11. The test results appear on the Disp menu. (The next section shows how to interpret the results.)

Results of PV test

procedure

1. At the default display, press **F8** to display the Disp menu.

```
 File     Edit    Send/Rec   Command    System    Term    Editor   Disp   Test    Distress
 -----------------------------------------------------------------------------------------
   | 1: System Status Monitor |
   | 2: Network Configuration |
   | 3: PV Test Result        |
```
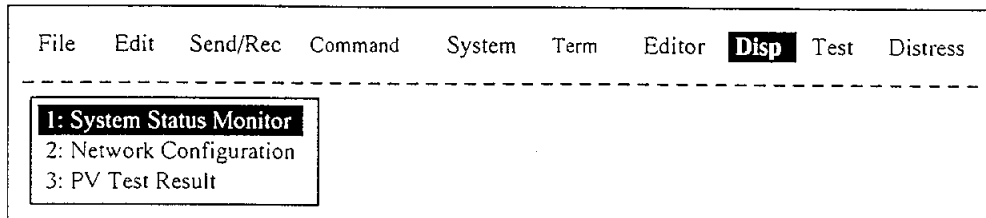
Figure 8-14 Disp Menu

2. Press [3] key. The results of the PV test appear on the display.

```
 File     Edit    Send/Rec   Command    System    Term    Editor   Disp   Test    Distress
 -----------------------------------------------------------------------------------------
                            ——— PV Test Result ———
   Test Date & Time      91 – 03 – 07 17:00 (UTC)
   ------------------------------------------------------------
   Attempts                First Attempt
   BBER                    Pass
   Shore-to-Ship Attempts  First
   Ship-to-Shore Attempts  First
   Distress Alert          Pass (Test OK)
   Signal strength         Pass ( > Greater than Std level +3dB)
   ------------------------------------------------------------
   Overall Result          Pass (Applicable tests pass)
```
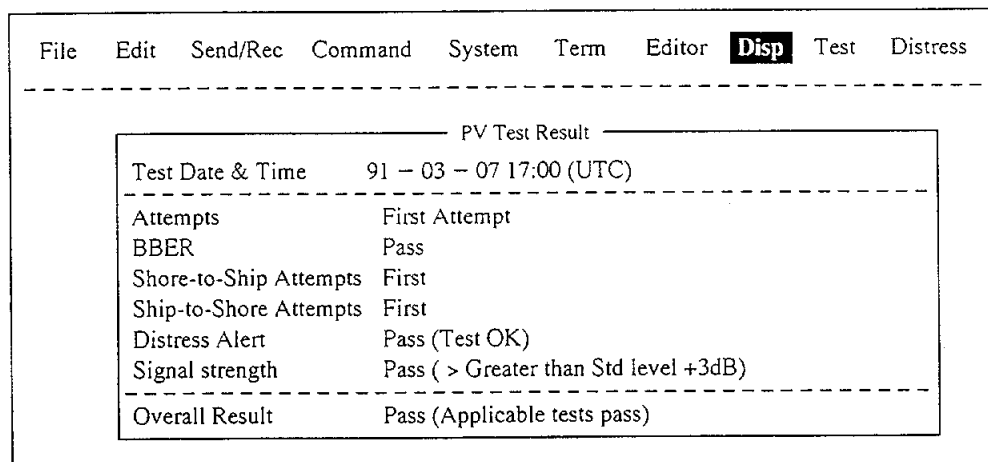
Figure 8-15 Sample PV Test Results

NOTE: If the communication unit is off or malfunctioning, "DCE error: No response from DCE!!" appears. Check the connection between the communication unit and the terminal unit.

3. To escape, press any key. The default display appears.

interpreting the PV tests results display

Test Date & Time:	Date and time of test
Attempts:	Number of times the PV test was conducted.
BBER:	Bulletin Board Error Rate (%). Pass appears for no error.
Shore-to-Ship Attempts:	Number of tests initiated by CES.
Ship-to-Shore Attempts:	Number of tests initiated by SES.
Distress Alert:	"Pass (Test OK)" appears for successful testing.
Signal Strength:	"Pass" appears if signal strength is greater than +3 dB.
Overall Result:	"Pass" appears for satisfactory completion of test.

Interpreting Information Displays

This section shows how to interpret the system status monitor and the network configuration display, both provided in the Disp menu.

System status monitor

procedure

1. Press **F8** to display the Disp menu.

2. Press the **Enter** key or[1] key to display the System Status Monitor. To return to the default display, press the **Esc** key.

```
┌─────────────────────────────────────────────────────────────────────┐
│  File    Edit    Send/Rec   Command   System   Term   Editor  Disp  Test   Distress │
│ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─  │
│              ┌──────────────── System Status Monitor ───────────────┐ │
│              │ Date          91 − 03 − 06      BBER          002     │ │
│              │ Time          13:30 (UTC)       C/N           OK (38 dB) │ │
│              │ Position      LAT  35:00.00N     Send Level    OK (116) │ │
│              │               LON 135:00.00E     RxIF AGC Level OK (100) │ │
│              │ Waypoint      LAT  35:00.00N     REF Offset Freq OK (69 Hz) │ │
│              │               LON 135:00.00E     Synthe 1st local OK     │ │
│              │ Course        120  DEG               3rd local  OK      │ │
│              │ Speed         16   KTS           Synthesizer   OK       │ │
│              │ Current NCS   244 (POR) LOGIN       TX2nd Local OK      │ │
│              │ Current Channel  SES CC          Antenna Cable OK       │ │
│              │ Current TDM   UNSYNC             Water Temperature 21.5 DEG │ │
│              │ SES Status    Busy               Water Current        │ │
│              │                                    Direction  120 DEG   │ │
│              │ Communication Unit  12345 Bytes free   Speed    2.2 KTS │ │
│              │                 .                Depth         50       │ │
│              └────────────────────────────────────────────────────────┘ │
└─────────────────────────────────────────────────────────────────────┘
```

Figure 8-16 System Status Monitor Display

interpreting the status monitor display

Date:	Current date
Time:	Current time
Position:	Vessel's position (either manual entry or automatic input by navigation aid)
Course:	Heading
Speed:	Ship's speed
Waypoint:	Position of waypoint selected on navigation aid
Current NCS:	NCS your vessel is logged in with
Current Channel:	Channel in use
Current TDM:	Current TDM
SES Status:	Operational status of SES
BBER:	Bulletin Board Error Rate (%)
C/N:	Check of circuit status with CES, receiving circuit in antenna unit, TX/RX IF Board in communication unit and DEMOD Board. OK appears for more than 31. NG for error.
Send Level:	TX level check. TX level varies with antenna cable length. At transsmission, OK appear for more than 103. At reception OK appears for less than 51.
RX IF AGC Level:	Check between the receiving circuit of the antenna unit and the TX/RX IF Board in the communication unit. OK appears for more than 80.
REF Offset Freq:	Operating normally if SYNC lamp on communication unit lights during synchronizing. If it does not light check RX Synthesizer or REF Board. OK appears for less than 150.
Synthe 1st Local:	Check of 1LO Board in antenna unit.
Synthe 3rd Local:	Check of TX/RX IF Board 3rd local oscillator (communications unit).
Synthesizer:	Check of RX SYN section in the communication unit.
TX 2nd Local:	Check of TX/RX IF Board 2nd local TX.

NOTE: For individual NG, replace corresponding board. If several NGs appear, try replacing the REF Board.

Antenna Cable:	NG appears for discontinuity or short in cable.
Temperature:	Water temperature
Water Current	
Direction:	Tidal current direction
Speed:	Tidal current speed
Depth:	Depth of water
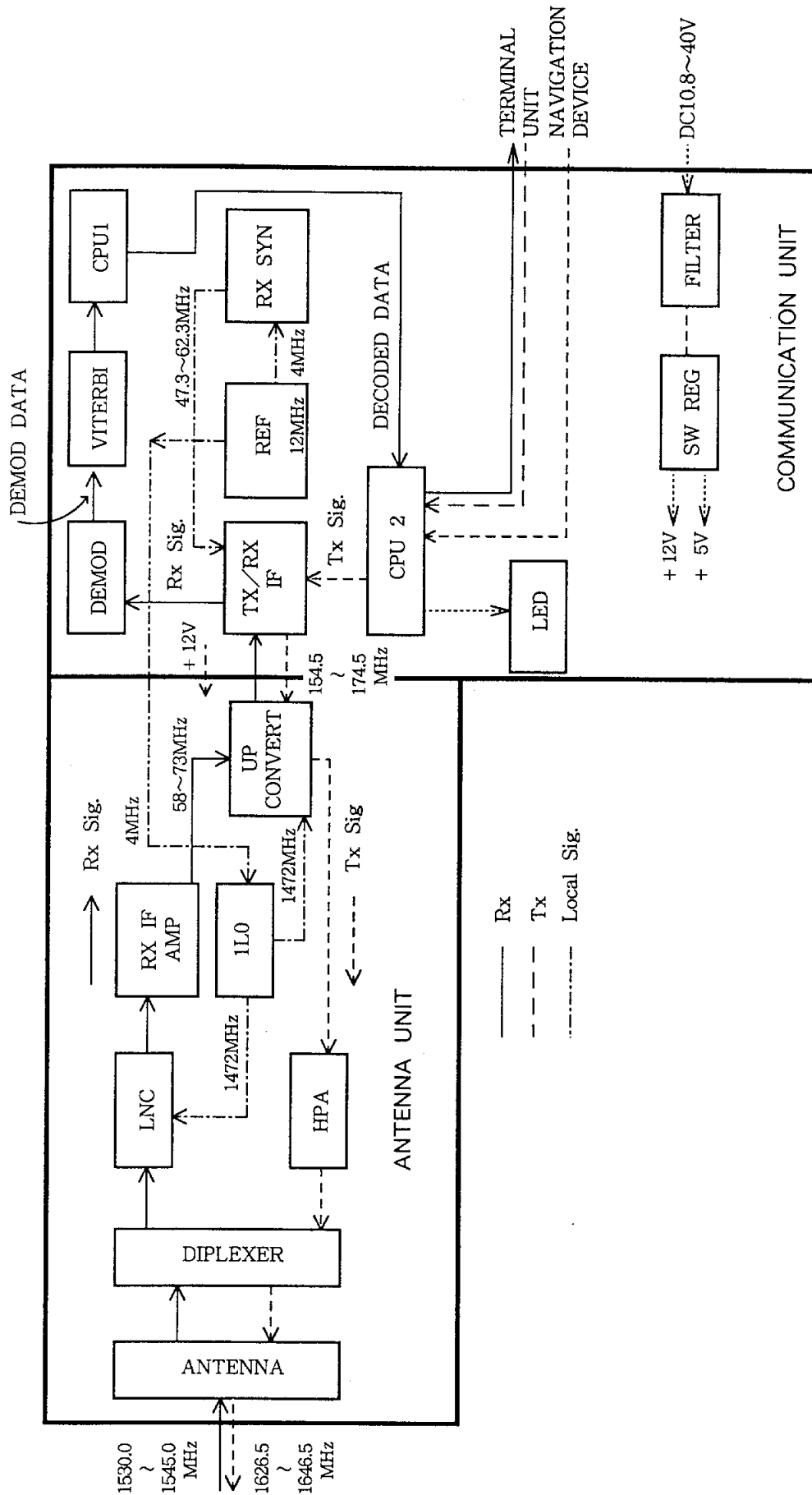
Figure 8-17 TX/RX Circuit Block Diagram

CES service network display

The Network Configuration display shows the services available from all the CES in the area your vessel is currently logged in with. Each time you log in with a NCS, the NCS automatically downloads this display to the FELCOM 10.

procedure

1. At the default display, press **F8** to display the Disp menu.

2. Press [2] key. The Network Configuration display appears. To return to the default display, press the **Esc** key.

```
File    Edit    Send/Rec   Command   System   Term   Editor   Disp   Test   Distress
─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
    ┌─ 1 ────────────── Network Configuration ───────────────┐
    │ 2  CES ID   Name          Status    .  Services      TDM Ch.         │
    │ 3  201                     00000000    ASCTMDNF       12345           │
    │    202      Perth          00000000    ASCTF          12333           │
    │    203                     00000000    ASCT           12351           │
    │    207                     00000000    ACT            12410           │
    │    210      Singapore      00000000    ASCTN          12430           │
    │    211                     00000000    ACT            12510           │
    │    212                     00000000    ASCTNF         12555           │
    └────────────────────────────────────────────────────────┘

─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
Current State: IDLE              SYNC(NCS)             91-2-06 12:00(UTC)
                                 NCS:IOR LOGIN             LAT: 34:43.00N
                                                          LON:135:21.00E
```

Figure 8-18 (CES) Network Configuration Display

interpreting the network configuration display

CES ID: CES ID number

Name: Name of CES

Status: Special code used by CES to show status. It does not affect the
               INMARSAT-C ship earth station operator.

Services: Services that CES provides.

               A: Distress alert
               S: Safety network, safety information
               C: INMARSAT-C communications
               T: Store-and-forward telex
               M: Half-duplex telex
               D: Half-duplex data communications
               N: Closed network
               F: Fleet network

TDM Channel: Channel that CES uses.

Location of Parts

Antenna unit
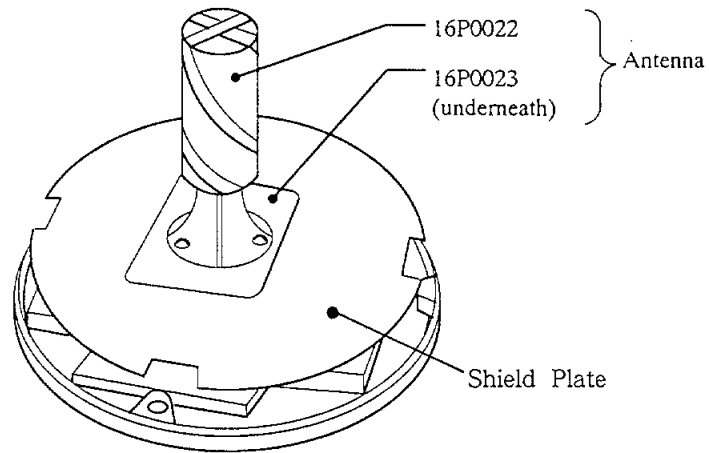
Figure 8-19 Antenna Unit, radome cover removed
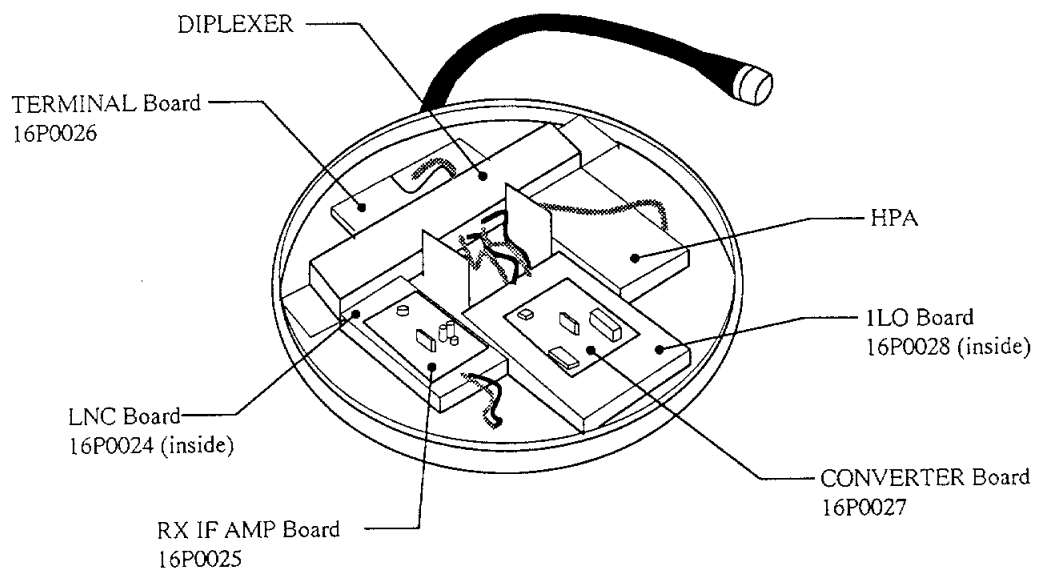
Figure 8-20 Antenna Unit, antenna and SHIELD board removed

Communication unit
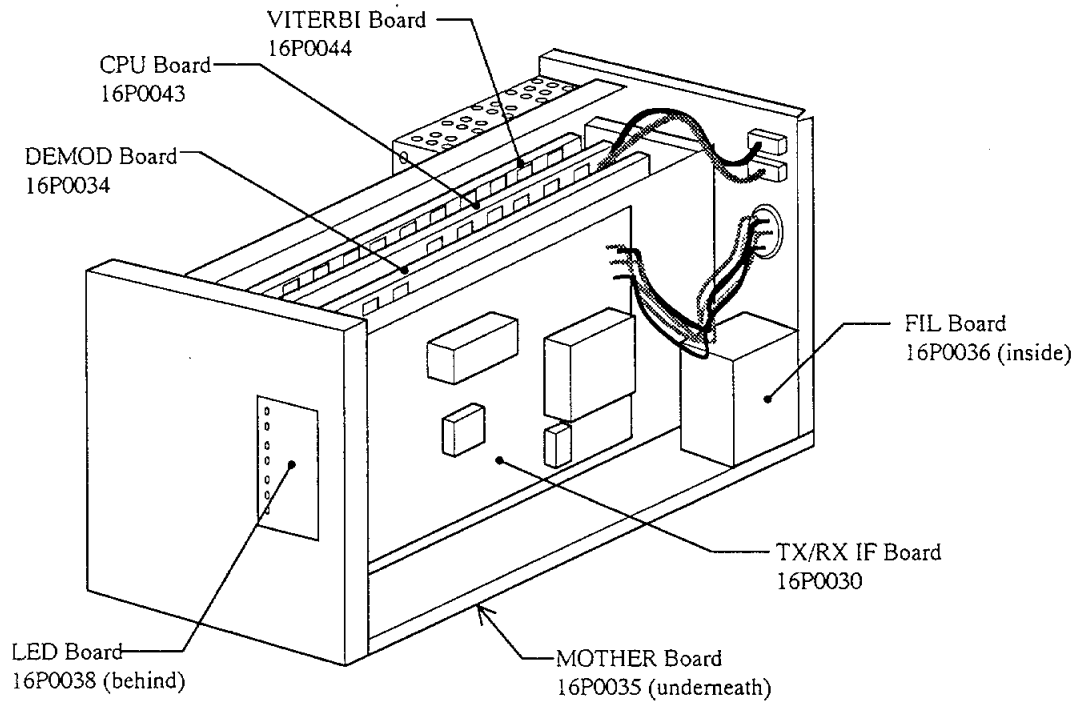
Figure 8-21 Communication Unit, cover removed, right side view
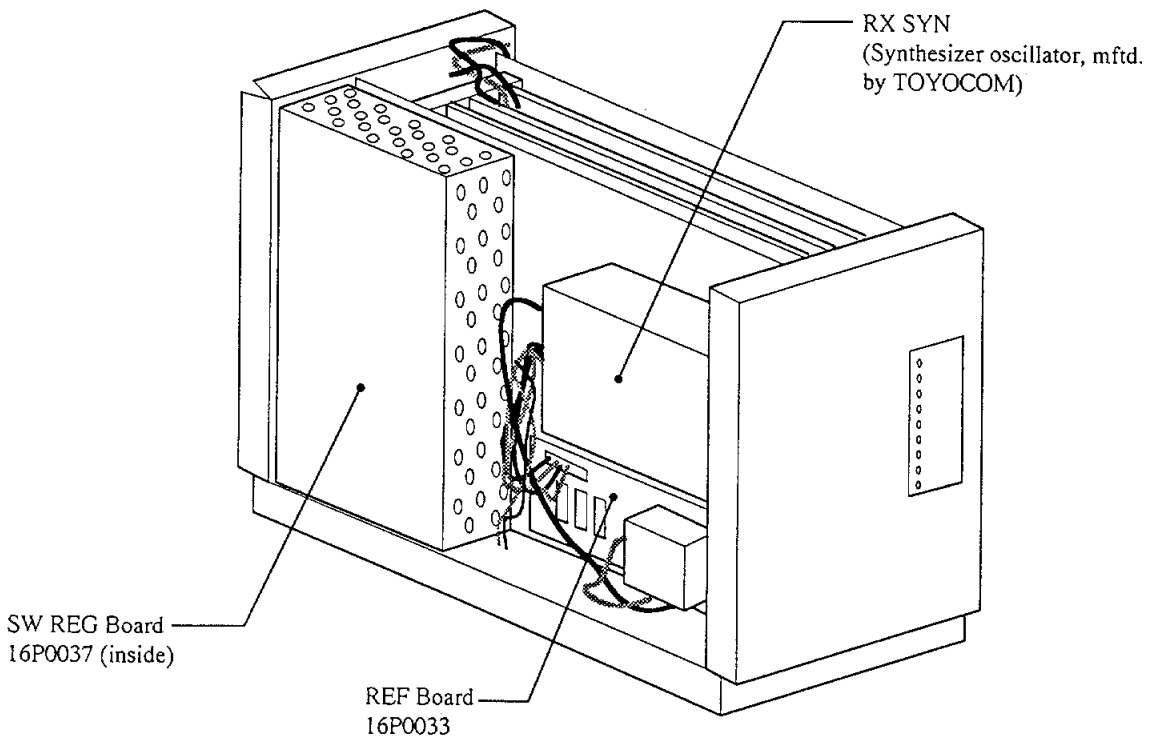
Figure 8-22 Communication Unit, cover removed, left side view

Terminal unit

REAR PANEL

CONTROLBoard
05P0386

RESET SW

RS-232C INTERFACE Board
05P0371
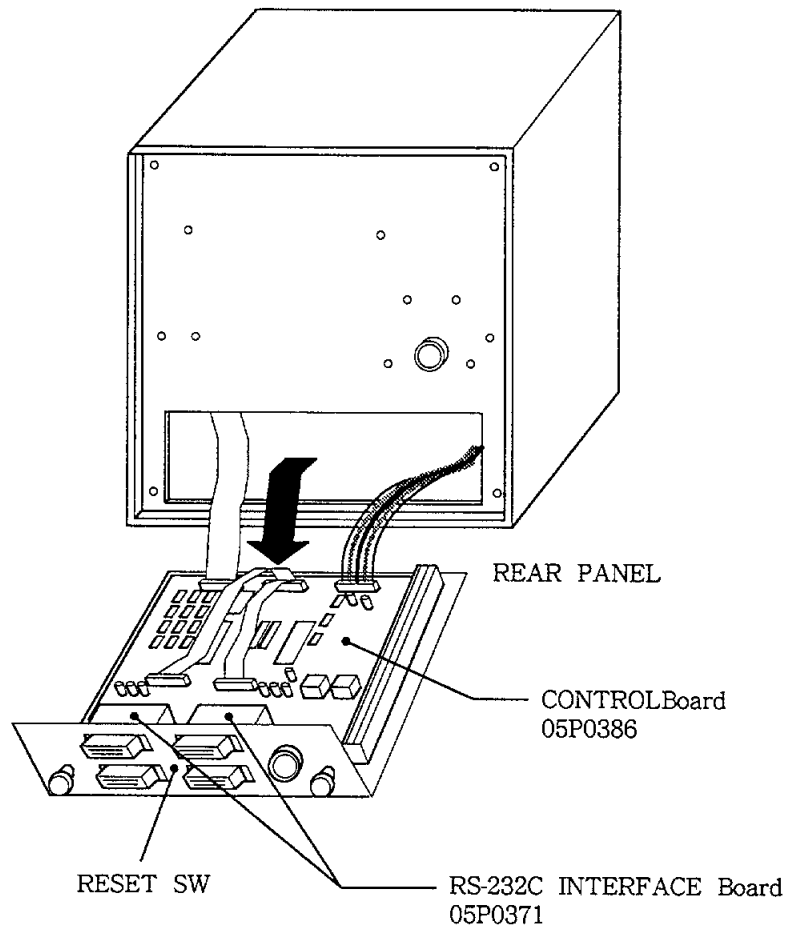
Figure 8-23 Terminal Unit, rear view

PRINTER PP-500

This chapter explains operation and maintenance of the printer (optional supply).

Contents

① POWER Switch

⑤ SELECT Switch

⑥ TOP SET Switch

⑦ FORM FEED Switch

⑧ LINE FEED Switch

② POWER Lamp

③ ALARM Lamp

④ SELECT Lamp

Figure 9-1 Printer PP-500

Handling Precautions

- ● Be sure to remove the protective plate inside the unit before operation.
- ● Be sure the AC power plug is firmly plugged in.
- ● Do not place objects on top of the printer nor lean against it.
- ● Should you accidentally drop something in the printing mechanism, turn the power off before retrieving the object.
- ● Turn the power off before replacing the ribbon cartridge or setting a new roll paper.
- ● The printing head is HOT to the touch after printing. Allow the head to cool before servicing or checking the unit.
- ● The printing head is sensitive to extreme temperatures, high humidity and dust.
- ● Be sure the POWER and SELECT lamps are lit and the ALARM lamp is off before using the printer.

Description of Controls

POWER switch

The POWER switch turns the printer on and off. The printer should always be on so it can automatically print receive messages.

POWER lamp

This lamp lights when the power is on.

ALARM lamp

The ALARM lamp lights when there is paper outage, paper slippage or the self test detects an error. Whenever it lights the printer cannot be operated.

SELECT lamp, SELECT switch

The SELECT switch selects and deselects the printer. When the printer is deselected (not communicating with the terminal unit), the SELECT lamp goes off.

TOF SET switch

The TOF SET switch automatically sets the paper for manual paper feed, when the printer is deselected. (TOF is an acronym meaning Top Of Form.)

FORM FEED switch

At times, data that is not followed by a form feed command may remain in the printer's memory. The FORM FEED switch automatically issues a form feed command to eject a page with data from memory, when the printer is deselected.

LINE FEED switch

The LINE FEED switch's main function is to advance the paper by one line, while the printer is deselected. It functions also to enable the self test, when pressed and held while turning the power on.

Loading the Roll Paper

procedure

1. Turn the power to the printer off.

2. Peel off the tape attached to the end of the roll paper. Cut off the roll paper by a few centimeters.

3. Insert the roll paper shaft into the roll paper.
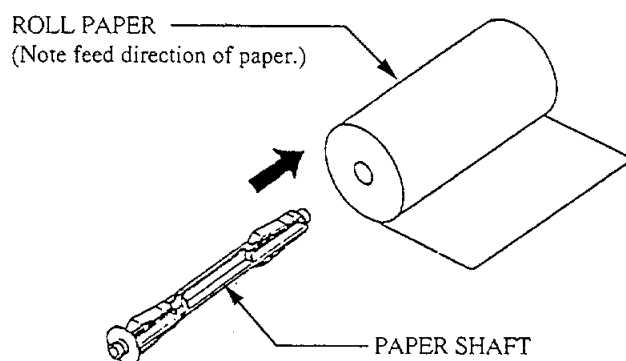
Figure 9-2 Loading the Roll Paper Shaft to the Roll Paper

4. Insert the roll paper into the stand so the printing side of the paper is face down.
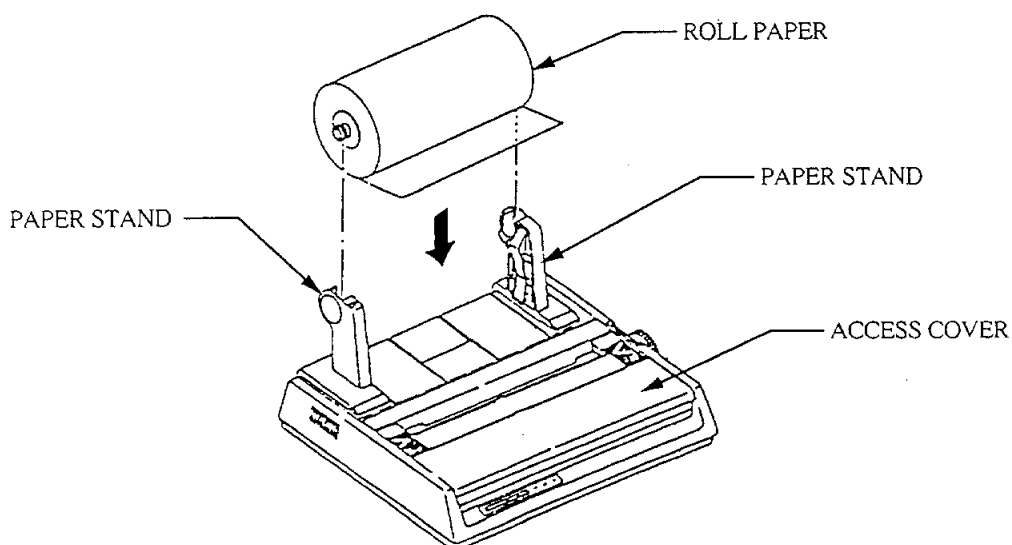
Figure 9-3 Loading the Roll Paper to the Roll Paper Holder

5. Take the access cover off.

6. Place the printing head in the center of the printer.

7. Release the paper bail.
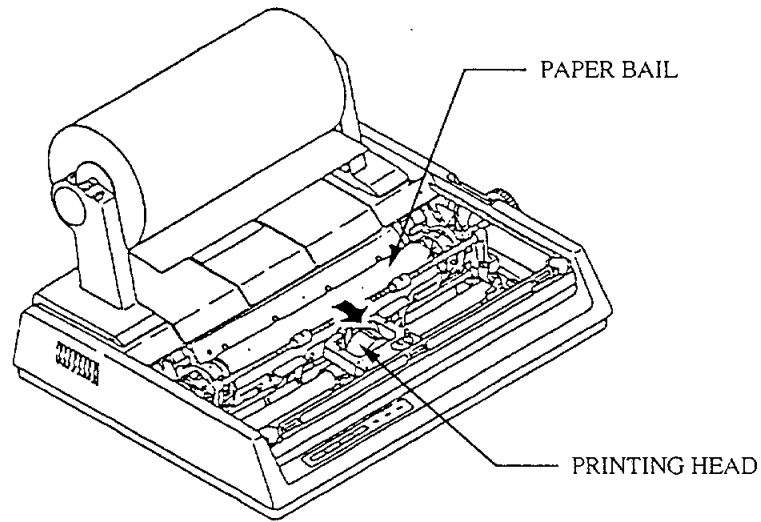
Figure 9-4 Printer with Access Cover Removed

8. Insert the paper into the paper insertion slot and under the platen. Turn the platen knob to feed the paper around the platen.

9. If the paper is shifted, unlock the paper release to adjust the paper. Lock the paper release.
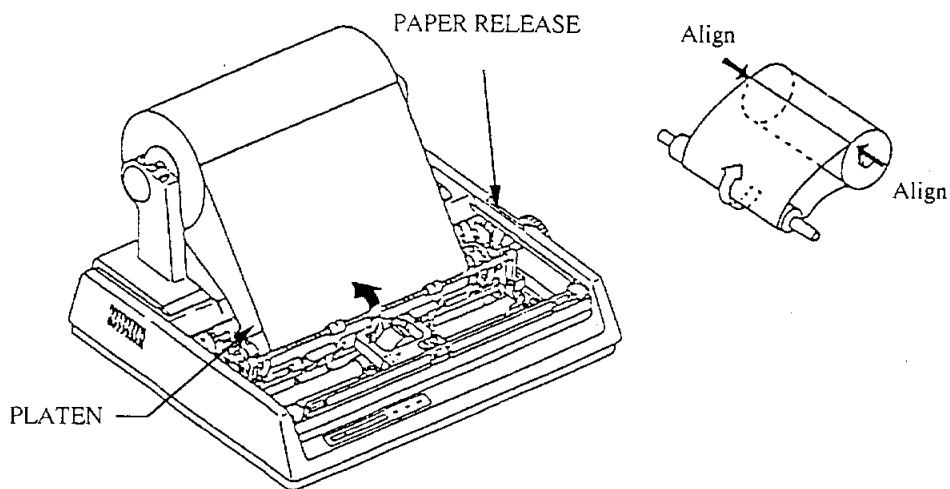
Figure 9-5 How to Insert the Roll Paper

10. Lower the paper bail.

11. Re-set the access cover.

OPENING

ACCESS COVER
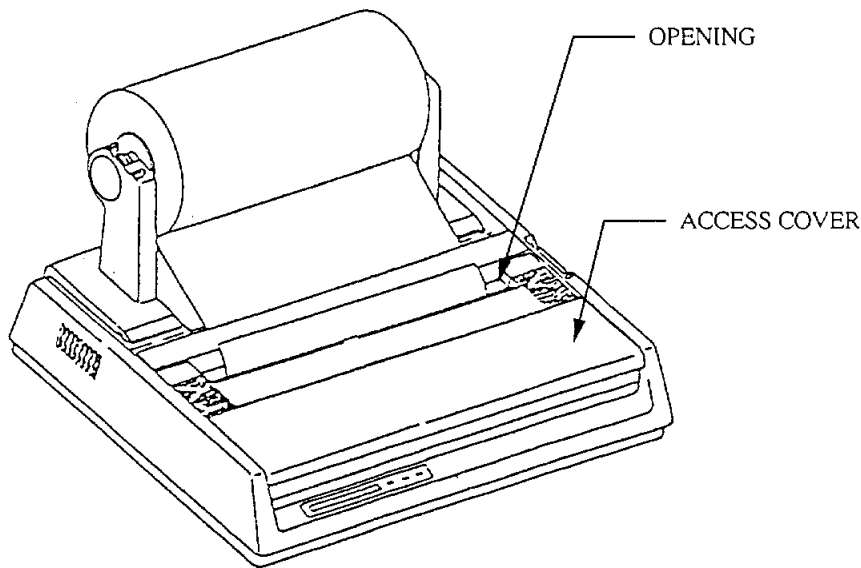
Figure 9-6 Printer, Front View

END OF PAPER SENSOR

The printer has a sensor in its paper feed slot which detects end of paper. When about 25 mm of the roll paper remains, printing is stopped and the ALARM lamp lights. Printing is stopped also when the roll paper is torn or folded.

The sensor will not activate for paper which attaches its end to the paper core by adhesive, since the paper does not come off the core.

Loading the Ribbon Cartridge

The ribbon cartridge is not load to the printer at the factory. Load it as follows.

CAUTION

The printing head is HOT to the touch after printing. Allow it to cool before replacing the ribbon cartridge.

procedure

1. Turn the power to the printer off.

2. Take the access cover off.

ACCESS COVER
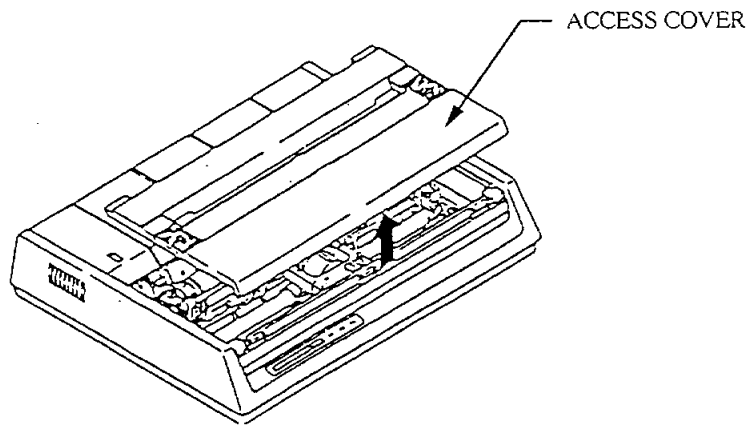
Figure 9-7 Removing the Printing Head Mechanism Cover

3. Place the printing head in the center of the printer.
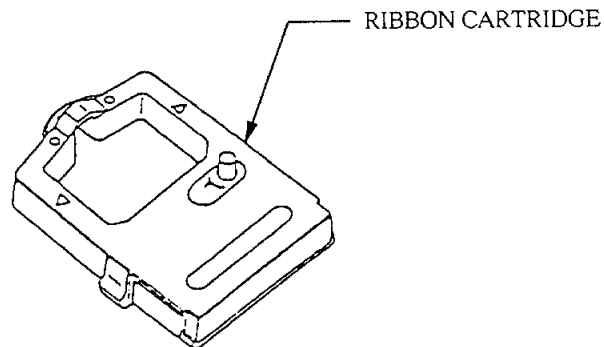
RIBBON CARTRIDGE

Figure 9-8 Ribbon Cartridge

4. Before loading the ribbon cartridge, turn the ribbon advance knob to take up slack.

5. Engage the rear guides of the ribbon cartridge with the bosses on the cartridge slot.
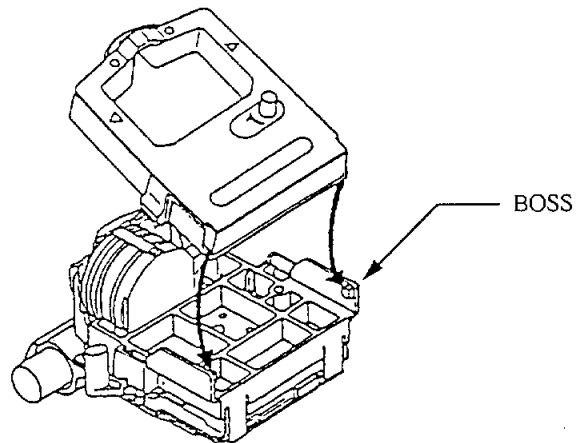
Figure 9-9 Mating the Rear Guides with the Bosses in the Cartridge Slot

6. Lower the front end of the cartridge into the cartridge slot. A "snap" is released to indicate it is correctly engaged.
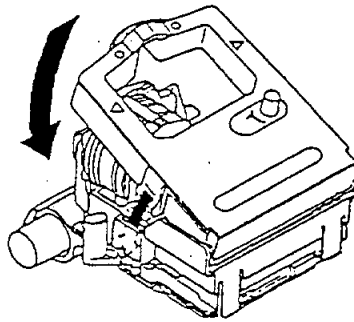
Figure 9-10 Loading the Ribbon Cartridge to the Cartridge Slot

7. Confirm that the cartridge is properly engaged.
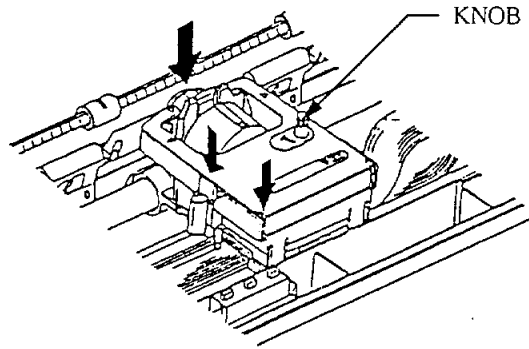
KNOB

Figure 9-11 Ribbon Advance Knob

8. Turn the ribbon advance knob to confirm that the ribbon can be advanced. Confirm that the ribbon is positioned correctly between the printing head and the platen and is not twisted.

HEAD EDGE ——— ,——— PLATEN

RIBBON PROTECTOR
RIBBON ———

(WRONG)   (WRONG)   (CORRECT)
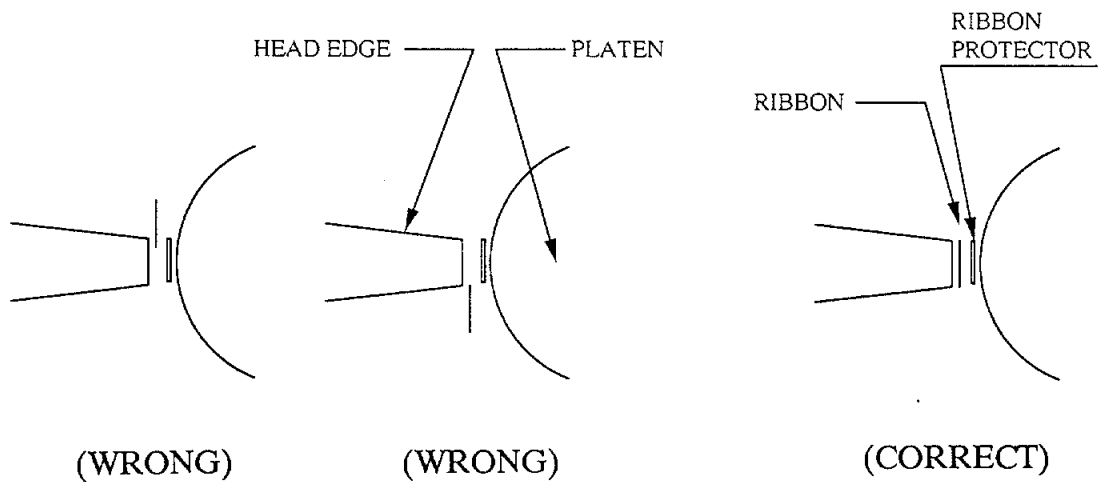
Figure 9-12 Correct Positioning of the Ribbon

Removal

procedure

1. Turn the power to the printer off.

2. Take off the printing head mechanism cover.

3. Place the printing head in the center of the printer.

4. Grasp the cartridge widthwise.

5. Lift the front end of the cartridge and then lift up the whole cartridge.
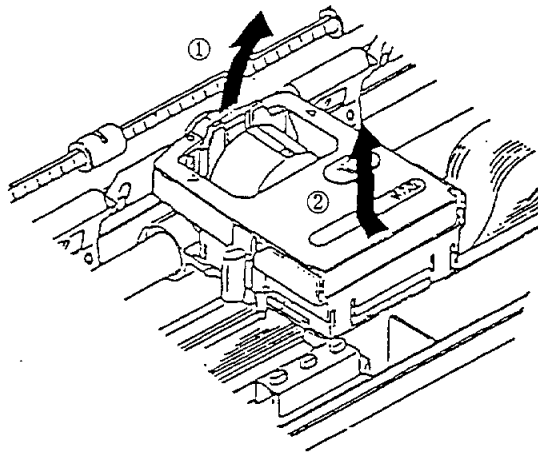
Figure 9-13 Removing the Ribbon Cartridge

Protective Plate

A protective plate is installed in the carriage to immobilize it during shipment. Remove this plate before operating the printer. Keep the plate so it can be reused if the printer has to be sent to the factory for servicing.
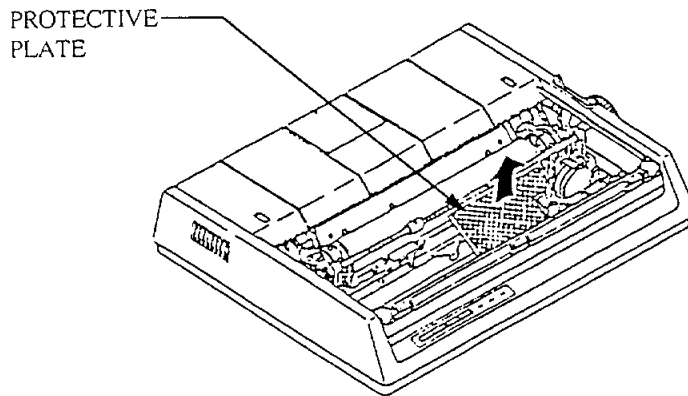
Figure 9-14 Location of the Protective Plate

Cleaning

Exterior

Accumulated dust may be removed with a soft cloth. For stubborn dirt, use water and a mild soap. Be careful not to get mechanical parts and electronic devices wet. **Do not use solvents to clean exterior surfaces. They may remove paint and markings.**

Interior

Use a hand-held vacuum to remove accumulated dust. **BE SURE THE PRINTER IS OFF BEFORE CLEANING.**

Self Test

The printer has a self test which checks it for proper operation.

procedure

1. Confirm that the ribbon cartridge and paper are set. Turn the power off.

2. Disconnect the interface connection cable.

3. While pressing and holding the LINE FEED switch, turn the power on. Release the LINE FEED switch when the printer starts printing. A test pattern is printed out continuously.

4. To cancel printing, press the SELECT switch.

Replacement of Fuse

The printer has two fuses (1.5 A, 1.25 A) which protect it against reverse polarity and overvoltage. If a fuse blows find out the cause before replacing it. If it blows after replacement, call for service.

procedure

1. Turn the power off. Unplug the power plug.

2. Dismount the roll paper holder.

3. Take the access cover off.

4. Remove the right-hand side platen knob.

5. Remove the two screws fixing the upper cover.

6. Slide the upper cover backward to remove it.

7. The figure below shows the location of each fuse.

FUSE (1.5A)
(on CONTROL Board)

FUSE (1.25A)
(on POWER Board)
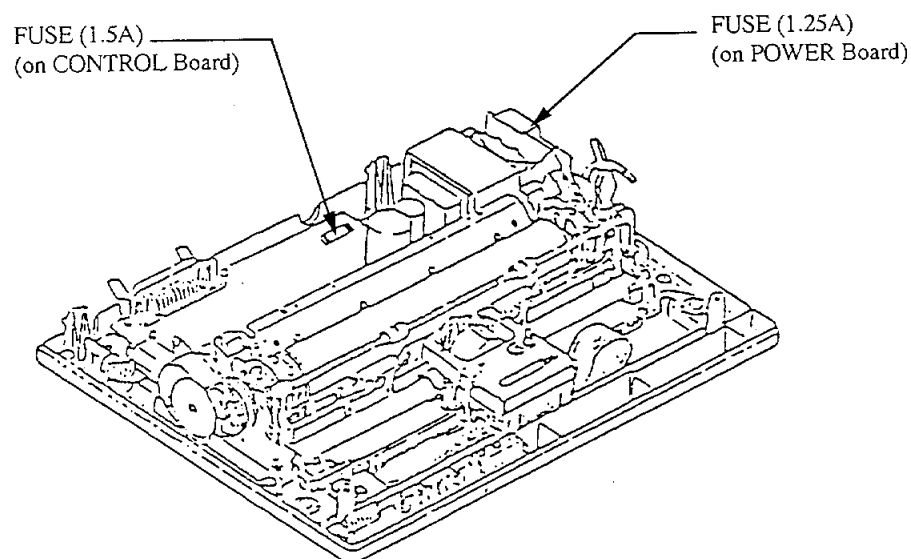
Figure 9-15 Location of Fuses in the Printer

Troubleshooting

The printer has lamps which light to indicate equipment fault.

Power supply

1) All lamps off.

- AC power is not supplied to the printer.
- Check for loosened or unplugged power plug.
- Check for blown fuse.

2) SELECT lamp off, ALARM and POWER lamps lit.

- End of paper.
- Confirm that roll paper is set correctly.
- Check for torn or wrinkled paper.

3) SELECT lamp blinking, ALARM and POWER lamps lit.

- Move the printing head back and forth. If it is difficult to move, check for foreign material on the printing head rail.

Printer

1) SELECT lamp off, ALARM and POWER lamps lit.

- End of paper.
- Set a new roll paper.
- If there is paper remaining check it for misalignment or tears.

2) SELECT lamp blinking, ALARM and POWER lamps lit.

- Move the printing head back and forth. If it is difficult to move, check for foreign material on the printing head rail.

APPENDIX

Contents

Specifications

Transmitting Frequency	1626.5 to 1646.5 MHz
Receiving Frequency	1530.0 to 1545.0 MHz
Antenna	Omnidirectional
G/T	Better than -23 dB/K (elevation angle 5°)
EIRP	12 to 16 dBW (elevation angle 5°)
Modulation	BPSK
Modulation Rate	1200 sps
Coding	Convolutional coding with coding rate 1/2 and constraint length 7
Decoding	Viterbi decoder
Transmission Speed	600 bps
Operating Environment	Above deck equipment
	temperature: -35°C to +55°C relative humidity: 95% (at 40°C)
	Below deck equipment
	temperature: 0°C to +45°C relative humidity: 95% (at 40°C)
Navigation Equipment Interface	NMEA0183 or FURUNO CIF
Ship's Mains	Communication unit and Terminal unit: 10.8 to 40VDC [100/120/220/240VAC by optional rectifier unit PR-251] Printer: 100/120/220/240VAC, 1ø, 50/60Hz
Power Consumption	IC-100 & IC-200: ⎡ Receiving 24W ⎣ Transmitting 144W IC-500: 41W PP-500: 33VA
Color	Antenna unit: 2.5 PB3.5/10 Communication unit and Terminal unit: cover: 2.5GY5-1.5 panel: N3

International Telex Country Code List

Area and Country	Telex Country Code	Remarks
Afghanistan	79	
Alaska	200	
Albania	604	
Algeria	408	
American Samoa	770	
American Virgin Is.	208	Telex calls to former WUI subscribers, insert the figure "9" after the destination code "208".
Andorra	590	
Angola	991	
Anguilla	391	
Antigua & Barbuda	393	
Argentina	33	Disregard the figure "0" at head of subscriber number.
Armenia	684	
Aruba	303	Subscriber numbers are 2XXX or 5XXX
Ascension	939	Manual calls 3XXX
Australia	71	
Australian External Territories	766	Norfolk Island 3XXX Cocos-Keeling Island 6XXX Christmas Island 7XXX
Austria	47	
Azerbaijani Rep.	(784)	
Azores Is.	404	Destination code is the same as for Portugal.
Bahamas	297	
Bahrain	490	
Bangladesh	780	
Barbados	392	
Belarus	681	
Belgium	46	
Belize	371	
Benin	972	
Bermuda	290	
Bhutan	890	
Bolivia (Rep. of)	371	
Bolivia (ENTAL)	309	
Bosnia-Hercegovina	600	
Botswana	962	
Brazil	38	Disregard the figure "0" at head of subscriber number.
British Virgin Is.	292	
Brunei (Negara Brunei Darussalam)	809	
Bulgaria	67	
Burkina Faso	978	
Burundi	903	

Area and Country	Telex Country Code	Remarks
Cambodia	807	Kampuchea Rep.
Cameroon	970	
Canada	21	Disregard the figure "0" at head of subscriber number.
	26	
Canary Is.	52	Destination code is the same as for Spain.
Cape Verde	993	
Cayman Is.	293	
Central Africa Rep.	971	
Chad	976	
Chile	34	TCH subscirbers 2XXXXX
		VTR subscribers 3XXXXX
		VTR/CM subscribers 4XXXXX
		ENTEL subscribers 5XXXXX
		TEXCOM subscribers 6XXXXX
China	85	
Christmas Is. (Aus)	766	Australian External Territories
Cocos-Keeling Is.	766	Australian External Territories
Colombia	35	Disregard the figure "0" at head of subscriber number.
Comoros	994	Manual calls
Congo	981	
Cook Is.	772	
Costa Rica	376	
Cote d' Ivoire	983	Ivory Coast
Croatia	599	
Cuba	28	
Cyprus	605	
Czech Rep.	66	
Denmark	55	
Diego Garcia	938	
Djibouti	979	
Dominica	394	
	201	RCA subscribers 4XXXXX
Dominican Rep.	202	For subscriber number beginning with 346, disregard "346" at head of subscriver number.
	241	AGEM IR subscribers 61XX
Ecuador	308	
Egypt	91	
El Salvador	373	
Estonia	537	
Ethiopia	980	

Area and Country	Telex Country Code	Remarks
Falkland Is. (Malvinas)	306	
Faroe Is.	502	
Fiji	701	
Finland	57	
France	42	
French Polynesia	702	
Gabonese Rep.	973	
Gambia	996	
Georgia	683	
Germany	41	
Ghana	94	
Gibraltar	405	
Greece	601	
Greenland	503	
Grenada	395	
Guadeloupe	299	
Guam (RCA)	700	
Guatemala	372	
Guiana	300	
Guinea	995	
Guinea Bissau	969	
Guyana	295	
Haiti	203	RCA subscribers 9XXX
	704	RCA subscribers 8XXX or 2968XX
	705	ITT subscribers 743XXX
Hawaii	708	WUI subscribers 63XXX or 63XXXX
	709	WUH subscribers 39XXXX
	773	DATATEL
Honduras	374	
Hong Kong	802	
Hungary	61	
Iceland	501	
India	81	
Indonesia	73	Disregard the figure "0" at head of subscriber number.
Iran	88	
Iraq	491	
Ireland	500	
Israel	606	Disregard the figure "0" at head of subscriber number.
Italy	43	
Jamaica	291	
Japan	72	KDD (for 5 digits)
	720	NTT
Jordan	493	

Area and Country	Telex Country Code	Remarks
Kazakhstan	(785)	
Kenya	987	
Kiribati	761	Subscriber numbers are 770XX
Korea (Demo, People's Rep. of)	(899)	
Korea (Rep. of)	801	
Kuwait	496	
Kyrgystan	(788)	
Lao	804	
Latvia	538	
Lebanon	494	
Lesotho	963	
Liberia	997	
Libya	901	
Liechtenstein	45	
Lithunia	539	
Luxemburg	402	
Macau	808	
Macedonia	597	
Madagascar	986	Subscriber number beginning with 4, 5, 7, 8 and 9 can be reached by Manual Calls.
Madeira Is.	404	Destination code is the same as for Portugal.
Malawi	904	
Malaysia	84	
Maldives Is.	896	
Mali	985	
Malta	406	TELEMALTA
	403	GTC
Mariana Is.	760	
Marshall Is.	765	
Martinique	298	
Mauritania	974	
Mauritius	966	
Mexico	22	Disregard the figure "0" at head of subscriber number.
Micronesia	764	
Moldova	682	
Monaco	42	Destination code is the same as for France.
Mongolia	800	
Montserrat	396	
Morocco	407	
Mozambique	992	
Myanmar (formerly Burma)	83	
Namibia	908	
Nauru	775	
Nepal	891	

Area and Country	Telex Country Code	Remarks
Netherlands	44	
Netherlands Antilles	390	
New Caledonia	706	
New Zealand	74	
Nicaragua	375	
Niger	975	2XXXX other numbers are for Semi-automatic calls.
Nigeria	905	
Niue Is.	776	
Norfolk Is.	766	
Norway	56	
Oman	498	
Pakistan	82	
Palau	763	
Panama	377	TRT subscribers
	378	AACR subscribers
	379	INTEL subscribers
Papua New Guinea	703	
Paraguay	305	
Peru	36	
Philippines	75	PHILCOM subscribers 2XXXX
		RCPI subscribers 7XXXX
		GMCR subscribers 4XXXX
		ETPI subscribers 6XXXX
		CAPWIRE subscribers 1XXXX
		For PTT subscribers, insert the figure "8" after the destination code "75".
Poland	63	Disregard the figure "0" at head of subscriber number.
Portugal	404	
Puerto Rico	205	RCA subscribers 2XXX
	206	ITT subscribers 345XXX
	207	C&W, WUI subscribers
	209	ACPR (PRCA) subscribers
Qatar	497	
Reunion	961	Subsciriber numbers are 916XXX
Romania	65	Disregard the figure "0" at head of subscriber number.
Russian Federation	64	
Rwanda	909	
Saipan	760	
San Marino	505	
Sao Tome & Principe	967	Manual calls
Saudi Arabia	495	

Area and Country	Telex Country Code	Remarks
Senegal	906	
Seychelles	965	
Sierra Leone	998	
Singapore	87	
Slovak Rep.	66	
Slovenia	598	
Solomon Is.	778	
Somalia	900	
South Africa	95	Cape Town subscribers XXXXXX Bophuthatswana subscribers 08XXXX Transkei subscribers 09XXX
Spain	52	
Spanish North Africa	52	
Sri Lanka	803	
St. Helena	960	Manual calls 4XXX
St. Kitts & Nevis	397	
St. Lucia	398	
St. Pierre & Miquelon	204	
St. Vincent & the Grenadines	399	
Sudan	984	
Suriname	304	
Swaziland	964	
Sweden	54	
Switzerland	45	
Syria	492	
Tajikistan	(787)	
Taiwan	769	
Tanzania	989	
Thailand	86	
Togo	977	
Tokelau	762	
Tonga	777	
Trinidad & Tobago	294	
Tunisia	409	
Turkey	607	
Turkmenistan	789	
Turks & Caicos Is.	296	
Tuvalu	774	
U. A. E.	893	
Abu Dhabi		2XXXX, 3XXXX, 5XXXX
Ajman		695XX
Dubai		4XXXX
Fujairah		8XXXX
Ras Al Khaimah		9XXXX
Sharjah		68XXX
Umm Al Qaiwain		697XX

Area and Country	Telex Country Code	Remarks
Uganda	988	
Ukraina	680	
United Kingdom	51	
United Arab Emirates	893	
Upper Volta	978	Same as "Burkina Faso".
Uruguay	32	
Uzbekistan	(786)	
U. S. A.	23	CCI subscribers 7XXXXXX ITT subscribers 4XXXXX, 4XXXXXX, 4XXXXXXXXX RCA subscribers 2XXXXX WUI subscribers 6XXXX, 6XXXXX, 6XXXXXX
U. S. A. (Mainland)	23	TRT subscribers 1XXXXX, 1XXXXXXXXX FTCC subscribers 8XXXX, 8XXXXX GRPHNET subscribers 36XXXXX, 37XXXXX For WUT subscribers, insert the figure "0" after the destination code "23".
	25	Telex calls to TWX subscribers whose numbers do not contain "0" as the third figure of the 10 figure code can be made as Semi-automatic calls.
Vanuatua	771	
Vatican	504	
Venezuela	31	
Viet Nam	805	Subscriber number beginning with 561XXX can be made using manual calls
Wallis & Futuna Is.	707	
Western Samoa	779	
Yemen	806	Formerly Yemen (P. D. Rep. of)
(Rep. of)	895	Formerly Yemen (Arab Rep.)
Yugoslavia (Former)	62	
Zaire	982	Telex calls to places other than Kinshasa Subscriber beginning with 2XXXX can be made as Semi-automatic calls.
Zambia	902	
Zanzibar	990	
Zimbabwe	907	

Ocean Area	Telex Ocean Region Access	Remarks
AOR – W	584	Atlantic Ocean-W
AOR – E	581	Atlantic Ocean-E
POR	582	Pacific Ocean
IOR	583	Indian Ocean

International Telex Abbreviations

Abbreviation	Meaning
ADV	Advise
ACK	Acknowledge
AGN	Again
BI (GS)	Good bye
BK	I cut off.
CFM	Confirm
COL	Collation
CRV	How do you receive?
DER	Out of order
DWN	Down
EEE	Error
FM	From
GA	Go ahead.
MNS	Minutes
MOM	Wait (Waiting)
MUTI	Mutilated
NA	Correspondence to this subscriber is not admitted.
NC	No circuits
NCH	Subscriber's number has been changed.
NP	The called party is not or no longer is a subscriber.
NR	Indicate your call number.
OCC	Subscriber is engaged.
OK	Agreed.
P (or 0)	Stop your transmission.
PLS (PSE)	Please
PPR	Paper
R (RCD)	Received
RAP	I will call you again.
RD	Read
RE	Referring to
RPT	Repeat
SRY	Sorry
SVP	Please
TAX	What is the charge?
TEST MSG	Please send a test message?
THRU	You are in communication with telex position
TKS (TNX)	Thanks
TLX	Telex

International Telegraphy Alphabet

No.	FIGURES	LETTERS	No.	FIGURES	LETTERS
1	–	A	17	1	Q
2	?	B	18	4	R
3	:	C	19	'	S
4	✚	D	20	5	T
5	3	E	21	7	U
6	□	F	22	=	V
7	▪	G	23	2	W
8	▨	H	24	/	X
9	8	I	25	6	Y
10	BELL	J	26	+	Z
11	(	K	27	CARRIAGE RETURN	
12	)	L	28	LINE FEED	
13	.	M	29	LETTERS	
14	,	N	30	FIGURES	
15	9	O	31	SPACE	
16	0	P	32	BLANK	

Glossary of Acronyms

Acronym	Meaning
AOR-E	Atlantic Ocean Region-East
AOR-W	Atlantic Ocean Region-West
BB	Bulletin Board
BBER	Bulletin Board Error Rate
BPSK	Binary Phase Shift Keying
BS	Back Space
CES	Coast Earth Station
C/N0	Carrier to Noise Power Spectral Density
CNID	Close Network ID
CPU	Central Processing Unit
CSDN	Circuit Switched Data Network
CDE	Data Circuit Terminating Equipment
DP-RAM	Dual-Port Random Access Memory
DTE	Data Terminal Equipment
EGC	Enhanced Group Call
EIRP	Equivalent Isotopically Radiated Power
FD	Floppy Disk
G/T	Gain to Noise Temperature Ratio
HPA	High Power Amplifier
IA5	International Alphabet No. 5
ID	Identity
IMO	International Maritime Organization
INMARSAT	International Mobile Satellite Organization
IOR	Indian Ocean Region
ISDN	Integrated Services Digital Network
ITU	International Telecommunications Union
LNA	Low Noise Amplifier
MSI	Maritime Safety Information
NAVAREA	Navigational Area
NAVTEX	MF Navigational Broadcast Service
NCS	Network Coordination Station
NMEA	National Maritime Electronics Association
OCC	Operation Control Center
PEP	Packet Error Probability
POR	Pacific Ocean Region
PSDN	Packet Switched Data Network
PSTN	Public Switched Telephone Network
PVT	Performance Verification Test
RAM	Random Access Memory
RCC	Rescue Coordination Center
ROM	Read Only Memory
SCC	Satellite Control Center
SES	Ship Earth Station
SFU	Store and Forward Unit
SOLAS	Safety of Life at Sea
TDM	Time Division Multiplex
TDMA	Time Division Multiple Access
UTC	Coordinated Universal Time
WMO	World Meteorological Organization

Error Messages and Alerts

A file by that name already exists on FD.

This message appears when you attempt to copy a file from the internal memory to a floppy disk but a file by that name already exists on the disk.

Cannot use this CES. Please check network configuration.

You input an invalid CES ID.

Cannot abort current process.

The terminal unit displays this message if you try to stop the DCE in operating condition other than sending, receiving or scanning.

Cannot activate distress alert test.

Distress alert testing cannot be done without permission from CES.

Cannot enter this message to sending Queue.

This message appears when a message is sent to the message queue but it is full (two messaages maximum).

Cannot start PV Test. (not Logged-in)

You cannot start PV testing without first logging in.

Cannot start to send. (EGC Receiver)

Transmission is not possible when the FELCOM 10 operates as a EGC-only receiver.

Cannot start to send. (not Logged-in)

A message cannot be transmitted without first logging in.

Close a file in use to make a new file.

The working areas are full (capacity: two files). Close a file to load a file to a working area.

Communication Unit is not Idle now. Cannot start login.

Cannot login when the communication unit is not idle.

Communication unit is not Idle now. Cannot start scan.

This message appears when the FELCOM 10 operates as a EGC-only receiver and scanning is initiated when the communication unit is not idle. Wait until the unit is idle before starting scanning.

Communication Unit is not Idle now. Cannot start logout.

Cannot logout when communication unit is not idle.

Current State : Idle (pending!)

This message appears when a CES affirmatively acknowledges your request for PV testing.

Current State : Testing

You will see this display during PV testing.

DCE Error : No response from DCE!!

This message appears when you try to display the PV test results but there was no response from the communication unit because it is off or its interconnection cable is disconnected or damaged.

Distress Message updated. Press any key.

This message appears after you have correctly updated the distress message.

Distress Alert Acknowledgement Received

This alert will appear when the CES transmits the distress acknowledge signal to your vessel.

FD not inserted in drive.

You need to insert a floppy disk into the drive.

FD not inserted in drive. Press any key to escape.

This message appears if you attempt to format a disk and there is no disk in the drive.

File by that name already exists. OK to overwrite?

This alert asks you if it is alright to overwrite an existing file name.

Formatting Completed.

This alert appears upon completion of floppy disk formatting.

Input Error : Message File

You have manually input an invalid file name.

Invalid Frequency Code.

This message appears when a wrong frequency code is entered in the EGC Channel List or NCS Channel List.

Invalid NCS ID Code.

This alert appears when a wrong NCS ID code is entered.

Loading

Appears during loading of a file to a working area.

Message file is too big (partial transmission possible).

The size of the file you want to send is larger than 31,500 bytes. (The file can be sent, but only the first 32,000 bytes of information will be received.)

Message is entered in sending buffer.

Before a message is transmitted it is sent to the message queue. This alert informs you the message has been accepted by the message queue.

Message Send failed.

Could not send message because of satellite malfunction, etc.

Message Send pending.

All circuits occupied at CES.

Message Send rejected.

This alert appears when the CES rejects a message because of unpaid subscriber's fee or other reasons.

No response from communication unit!

This message will appear if the communication unit is turned off or its interconnection cable is disconnected or damaged.

Now Self-testing Terminal. (cannot abort)

Appears during testing of terminal unit.

Now printing

Appears during printing.

Now Formatting

Appears during formatting of floppy disk.

OK to delete file?

This alert verifies if it is alright to delete a file.

OK to format FD?

This alert verifies if it is alright to format a floppy disk.

Printer error!!

The printer is off or malfunctioning.

Request started

This message appears when requesting delivery status of a message.

SAVING

You will see this message when saving a file.

SES is not idle now. Cannot start PV Test.

This message means you will have to wait until the communication unit is idle to start the PV test.

Starting Scan Process Press any key to escape.

This prompt appears before NCS scanning starts.

Update error! Retry again. Press RET to update end.

This message appears if the distress alert message was updated incorrectly.

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