



INTRODUCTION to the SATCOM-C® SATELLITE COMMUNICATIONS SYSTEM

For the 1999 Telstra Sydney to Hobart Yacht Race

Overview

The Telstra Satcom-C service provides reliable text and data communications and is accessed through Telstra's sophisticated Land Earth Station (LES) in Perth. The Satcom-C system* installed aboard your yacht has been configured to automatically transmit your position.. In addition, the Satcom-C system (with printer attached) will automatically print and receive SafetyNET / EGC messages by the Bureau of Meteorology and AusSAR, to assist your participation in this year's Race.

If your yacht is equipped with a laptop PC, suitable software (e.g. Thrane Capsat-C Software) and cable the system can also be used to send and receive email messages. The Satcom-C unit also complements the safety equipment, including HF/VHF radio apparatus, mandated by the Cruising Yacht Club of Australia for entrants in this year's race through a built-in distress alert alarm, described below. The functions outlined above are only possible if the system is operating correctly.

System Operation

An indication of correct operation can be determined by the following observations:

- Are both the Power light and Login light ON?

If the Power light and Login light are both ON, then the system is OK.

If both the Power light and Login light are OFF, check the battery supply to the unit.

If, however, only the Login light is OFF, then turn the unit OFF, check connectors, antenna cables, obstruction of antenna, and then switch the power ON.

Distress Function

The Satcom-C system has an in-built Distress Alert feature which can be activated if the crew deem themselves to be in a life-threatening situation.

The alarm light on the Satcom-C unit will then flash while the distress alert is sent and will go steady once the distress has been acknowledged. The vessel's current position will then be passed onto the appropriate Rescue Co-ordination Centre (RCC). Normally the RCC will respond via a message on the Satcom-C printer (you may be asked to confirm the distress).

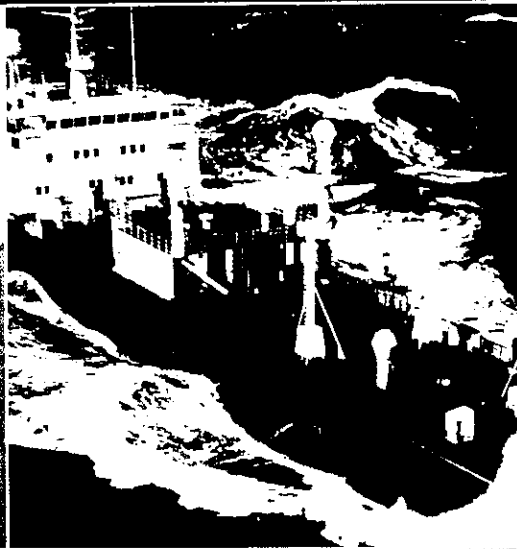
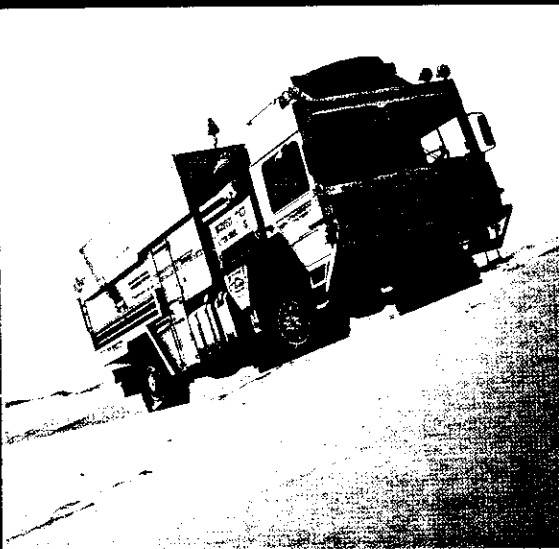
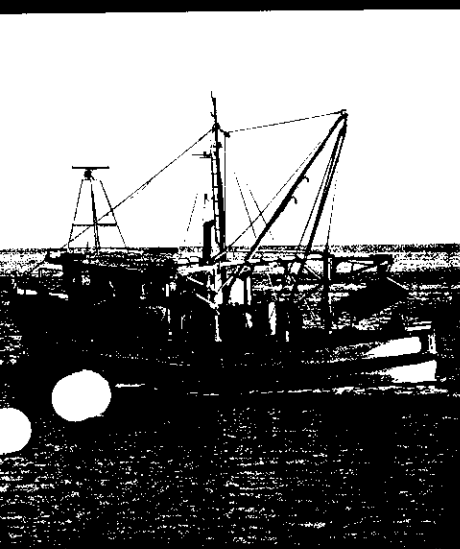
Distress - Press both STOP & ALARM buttons for 5 seconds to send an alarm to the RCC.

Weather & Navigation Safety Broadcasts (SafetyNET / EGC Messages)

The Satcom-C system will print regular weather and navigation information broadcast by the Bureau of Meteorology and AusSAR. If a Distress or Urgent Priority message is received, the Satcom-C unit will emit a continuous alternating tone alert. The STOP button can be pressed to acknowledge reception (Pressing STOP will cancel the alert). No audible alert is given when routine or safety priority messages are received.

* **Please Note** : This information refers specifically to the Thrane & Thrane 3022D Capsat Terminal, Antenna and Citizen Printer.

elstra



SATCOM-C[®]

**SECURE GLOBAL DATA
COMMUNICATIONS
NOW WITH INTERNET EMAIL**

Global Satellite

Low Cost Satellite Data Communications

For reliable and cost effective text and data communications from almost anywhere in the world, you can't beat the versatility of Telstra *Satcom-C*[®].

Accessed through Telstra's sophisticated Land Earth Station (LES) in Perth, Telstra *Satcom-C* is an essential communications tool for businesses with mobile assets. With its compact and lightweight equipment, the service offers secure two-way communication between fixed installations and mobiles, allowing you to send messages to and from remote locations, on land or at sea, 24 hours a day.

With the option of using Email, telex, fax, X.25 packet data or PSTN, Telstra *Satcom-C* is indispensable for all your maritime and remote area communication needs. You can exchange messages, receive information from automatic data gathering systems and operate remote monitoring and control devices - all with the security of an individual ID number.

Telstra *Satcom-C* also enables sophisticated vehicle tracking applications and effective vessel monitoring systems. And for added safety to comply with the Global Maritime Distress and Safety System (GMDSS), Telstra *Satcom-C* is the perfect choice.

Internet Email extends the office environment and reaches out to family and friends

With the introduction of Telstra *Satcom-C* Email, you now have the flexibility of being able to exchange text messages between Internet users and *Satcom-C* mobiles, allowing even better communication reach, both commercially and socially.

Internet users around the world who register with Telstra can send Email to *Satcom-C* mobiles in any ocean region by using the simple addressing format:

4xxxxxxx@telstra.ves.net (where 4xxxxxxx is the *Satcom-C* mobile number)

Sending Email from mobiles is easy. Create a once only Address Book entry of Special or Special Access Code '28'. This entry may be required per Ocean Region.

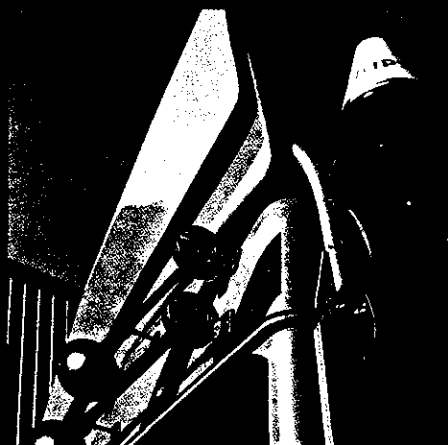
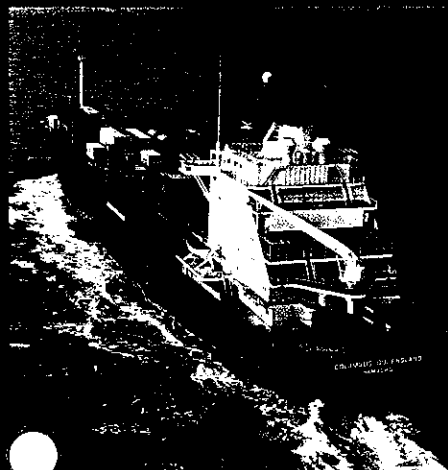
You then simply enter the Internet address as the very first line of the message formatted as, for example:

INET:awilliams@bigship.com.au

The message follows on the next line.

Note: You must always include "INET:" as the first five characters of each Email address. To send multiple addresses, enter one address per line.

Telstra *Satcom-C* Email is also competitively priced. There are no additional registration or subscription fees for mobile or Internet users and, since delivery is via the Internet, there are no landline delivery charges. Also, mobile users have the benefit of being able to send a message to multiple terrestrial Internet addresses for a single satellite link charge.



Wide range of communication applications

Telstra *Satcom-C* is an essential communications tool for all sorts of businesses, from commercial shipping and fishing through to forestry.

You can:

- send text messages up to 32 kilobytes in length in both directions. Each message is uniquely addressed, ensuring it's received only by the designated terminal
- transmit information in short data reports, up to 32 bytes, at prearranged intervals
- facilitate polling so the user's base can interrogate mobiles at any time, triggering the automatic transmission of required information – ideal for acquiring information from vehicles or vessels, or to interrogate automatic data gathering platforms, at fixed or variable intervals
- link or integrate the Telstra *Satcom-C* service with a wide variety of navigation systems to provide a highly reliable, 24 hour, global position reporting capability. Position data can be transmitted on demand or automatically, at fixed intervals, back to control stations
- use the Telstra *Satcom-C* service to automatically generate and send a special priority distress message to search and rescue authorities or, from a land mobile, a priority message to a customer designated number
- access SafetyNET to provide an efficient and low cost means of transmitting maritime safety information to a group of vessels at sea – used by hydrographic, meteorological, coast guard and search and rescue authorities
- use FleetNET to send commercial information to a virtually unlimited number of predefined mobile terminals simultaneously – ideal for effective fleet management and information subscription services.

Assistance at Sea

From merchant ships to commercial and deep sea fishing, as well as ocean going yachts, Telstra *Satcom-C* has a place on board your vessel. It is an essential and valuable management tool that can be easily integrated on board for the benefit of crew members and for business.

The Fishing Industry

Telstra *Satcom-C* can increase the safety and efficiency of a vessel by keeping track of fleets via position reporting, sending catch reports

back to base, keeping abreast of changes in weather forecasts and navigational warnings or relaying personal messages to crew members.

Telstra *Satcom-C* also provides specific business advantages and can be used to broadcast vital market information or quickly re-direct fleet members at the push of a button.

Ocean Going Yachts

For cruising and racing yachts setting out on trips around the world, the Telstra *Satcom-C* service is your lifeline to shore.

You can send position reports at regular intervals, receive weather and navigational information and, in the event of an emergency, send a distress message to a rescue coordination centre.

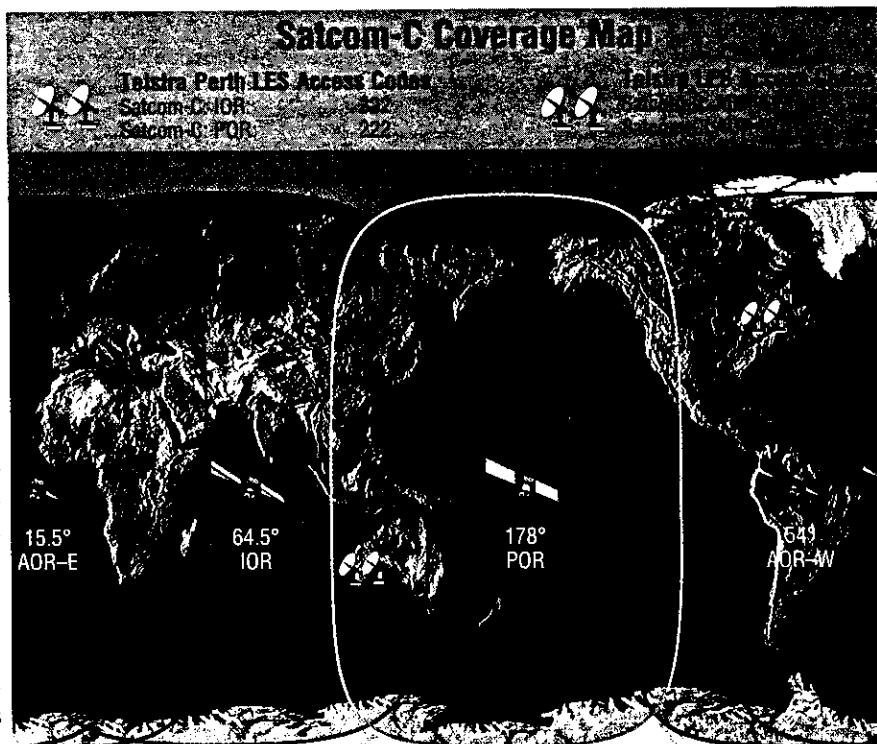
Essential Marine Safety

From February 1999, the Global Maritime Distress and Safety System (GMDSS) comes into force, making it essential for vessels to have reliable satellite communications on board.

The benefit for you is that when you're in trouble at sea you simply push a button and Telstra *Satcom-C* will send a pre-recorded distress message to the search and rescue authorities, advising the vessel's position when the vessel's terminal is combined with a navigation receiver.

Efficiency on Land

Telstra *Satcom-C* can provide quality and affordable communications when terrestrial links are not available.



Vehicle Tracking - the way of the future

Telstra *Satcom-C* combined with a Global Positioning System (GPS) can effectively facilitate automatic vehicle tracking. It can impact on customer service, asset and labour productivity and driver safety, helping you stay competitive as the demands on business continue to change.

Terminals are lightweight and compact so they can be easily affixed to the roof of a truck, bus or even a train.

SCADA Applications

Telstra *Satcom-C* offers a wide range of supervisory control and data acquisition (SCADA) capabilities, including:

- automatic monitoring of remote areas from a central control facility, even from thousands of kilometres away
- regular, automatic checks of alarms and other security systems through polling
- quick access to central databases from outlying locations
- back-up communications capabilities for personnel in the event of primary equipment failure
- written confirmation of communications
- tracking of the transport of valuable or hazardous cargo
- group call transmissions or emergency alerts to many locations simultaneously, for example, in the event of a bushfire.

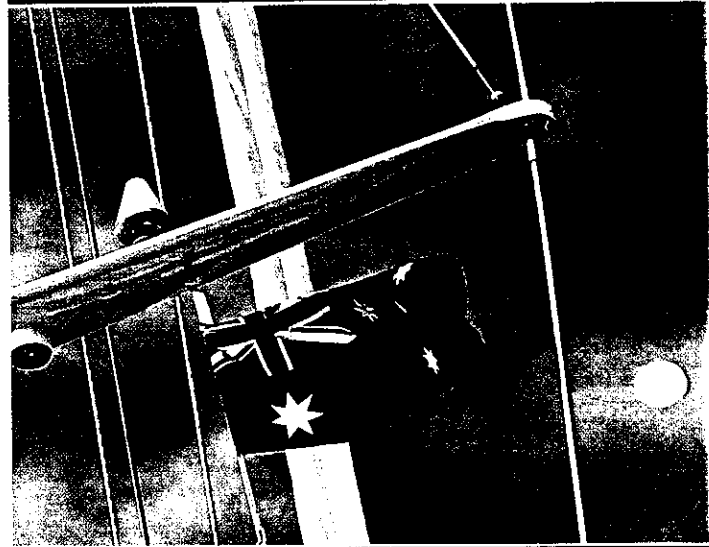
Lightweight and Transportable

Telstra *Satcom-C* is designed for both fixed and mobile applications. The equipment is small, lightweight and transportable and can be powered by a generator, batteries, solar panels or mains power.

Simple to Operate

To take advantage of the benefits of Telstra *Satcom-C*, all you need to do is commission an approved *Satcom-C* compatible terminal and then use the Telstra LES (Land Earth Station) access codes which are:

Atlantic Ocean Region West	022
Atlantic Ocean Region East	122
Pacific Ocean Region	222
Indian Ocean Region	322



For further information about Telstra *Satcom-C*, the Perth LES or any of our mobile communication services, call the Telstra Customer Service Centre on

FREECALL™ 1800 810 023*

FREEFAX™ 1800 811 373*

(within Australia)

or from outside Australia

International Phone: +61 7 5490 9090

International Fax: +61 7 5490 9094

Email: custsvc@qciemrs1.telstra.com.au

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* A free call unless from a mobile phone which will be charged at the applicable mobile rate. FREECALL and FREEFAX not available from Satcom terminals.