Telefax Transmission

From:	
Name:	Emnetu Tesfay
Company	MTB A/S
Address:	Ulakroken 12, 4028 Stavanger
Fax No.:	51-544878

To:	
Name:	Newix
Company:	Government of Eritrea
Address:	Asmara, Eritrea
Fax No.:	095-873-1334152

Date: 23.02.94	Time:	Page 1 of 4	If problem call: 51503126

Message:

I acknowledge receipt of your telefax dated 19.02.94. Following is the information you required.

Saturn Mp (mini phone)

Manufacturer:	ABB NERA, Norway
System:	Digital (voice / fax / data)
Type:	Portable
Diamension:	All in one briefcase 40.5 x 29 x 12 cm.
Weight:	9 kg.
Transmission speed:	2400 bit/sec telefax; 2400 BPS data; 4.8 KBPS digital voice.
Operation cost per minute:	32 NOK per minute x 4= 128 NOK
Pick time:	No pick time. Same charge 24 hours.
Terminal price:	17.500 USD (current USD exchange rate 7.475)
Delivery time:	7 weeks after order date.

Comment: This new terminal is now available in the market. 350 sold since december and about 200 in the queue. This terminal is very light and reasonable price. Transmission cost is also reasonable if used mostly for voice (telephone). But if the need is heavy telefax trafic this should not be the choice. It is very slow 2400 KB and takes 4 times the time to transmit in Saturn Bp.

Saturn Bp (mini phone)

Manufacturer:	ABB NERA, Norway
System:	Digital (voice / fax / telex / data)
Type:	Portable
Diamension:	70 x 60 x 30 cm.
Weight:	29 kg (including its aluminium luggage)
Transmission speed:	9600 bit/sec. telefax; 64 KBPS data transfer 16 KBPS digital voice; telex at 50 Baud.
Operation cost per minute:	30 NOK (04.00 - 22.00)
Pick time:	26.50 NOK (22.00 - 04.00)
Terminal price:	24.000 USD (dependent on exchange rate)
Delivery time:	Sometime in september 1994

Regarding transmission cost for the different terminals, as you can see in the chart above, the manufacturers seem to follow certain logic. That is if the transmission speed is high the terminal price rises and the operation cost for the user is cheap. If the transmission speed is low then the cost of the terminal is less and the operation cost high. The only brochure for Saturn B is following in the next pages.

I will be away from Stavanger for some weeks so if decision is made to procure let me know quick so that I can write the purchase order and arrange its shipment before I leave.

Regards,

ABB Nera PRODUCT INFO.

August 1993

New Saturn B Terminal

The Inmarsat B system is the digital successor to the Inmarsat A system. The new system offers improved services at lower charges.

Less Expensive Calls

Land Earth Stations have already announced charges pr. minut in the following range:

Service	Inmarsat B	Inmarsat A
Telephone	USD 4-5	(USD 6-9)
Telex	USD 3-4	(USD 4)
Telefax/Data	as telephone	

Greater Capacity

The congestion problems now being experienced on Inmarsat A will be solved for Inmarsat B due to the wider frequency band and less channel spacing (Inmarsat B will have more than five times the capasity of Inmarsat A).

Full Emergency Support

The Inmarsat B system is IMO approved for all GMDSS ship earth station services.

New Services Worldwide

The Inmarsat B system provides global access to the international telephone, telefax and data services, including:

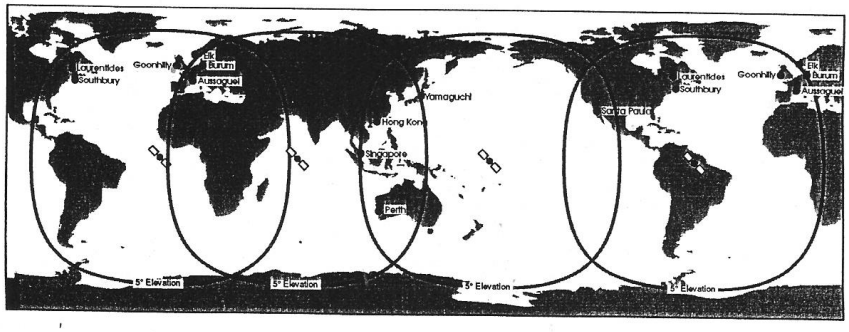
- High quality 16 kbps digital voice
- Group III telefax at 9.6 kbps
- High quality data transfer up to 9.6 kbps
- High Speed Data service at 64 kbps
- Telex at 50 baud

Greater Convenience

The Inmarsat B system supports several new facilities, including:

- Network information
- Information on operational LES
- Information on operational satellite
- Reception of emergency calls
- Up to 99 IDs on same terminal

All these new features are available in the new Saturn B terminals described on the following pages.



Planned Inmarsat B LES 93/94

Saturn B

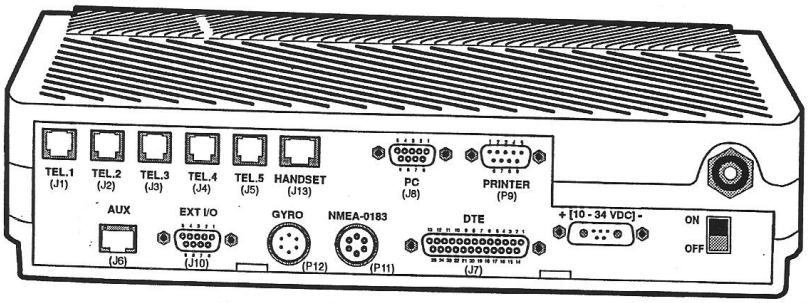
The Saturn B family of terminals are the digital successors to the Saturn A terminals.

Saturn B terminals are available for a wide range of applications, from complete ship stations with high-volume traffic to lightweight terminals as used by journalists on assignment. There are three main types:

- Saturn Bm - marine, for ship stations
- Saturn Bt - transportable, for temporary stations
- Saturn Bp - portable, for hand carrying.

All three types can be configured for Class 1 (voice, telefax, data and telex) or Class 2 (voice, telefax and data) and can be implemented to support optional Duplex High Speed Data (64 kbps).

The basic Saturn B terminal comprises three main units: an Antenna & RF unit, a Main Control Unit and the User Equipment.



Rear of Saturn B terminal

Antenna Unit

The three types of Saturn B terminal differ primarily by the accuracy and complexity of the Antenna and RF Unit:

- Saturn Bm: Stabilized parabolic antenna
- Saturn Bt: Sectional parabolic antenna
- Saturn Bp: Collapsible flat antenna

Main Control Unit

All Saturn B terminals use varieties of the same basic Main Control Unit (MCU), which supports interfaces (depending on terminal type) including:

- 1 Handset
- 5 two-wire telephones
- 1 AUX
- 1 PC Control
- 1 Printer
- 1 Data terminal (DTE)
- 1 Gyro
- 1 NME A-0183
- 1 External I/O
- 1 DC power

A Saturn B terminal is completely controlled from the Display Handset, so the Main Control Unit has no user controls, other than an "on" pilot light on the front panel and an on-off switch on the back panel.

- Setting of time and date
- Readout of Bulletin Board records
- Readout of Status Records
- Indication of signal strength
- Indication of cause upon call failure
- Test Diagnostics

Telephone Connectors

The five RJ11 two-wire connectors can be configured for:

- Standard two-wire DTMF telephones
- Group III telefax
- PABX

and support:

- Dialling of subscriber number
- Short number dialling
- Re-dial of last used number
- Selection of LES

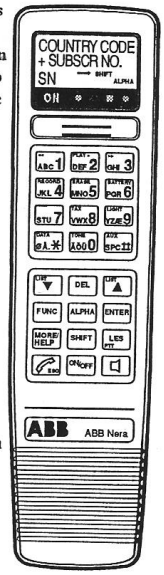
AUX Connector

The four-wire AUX connector is for DTMF and E&M signalling with the same functions as the two-wire connections.

Display Handset

The handset resembles - and is as easy to use as - the handset of a cellular telephone, with an alphanumeric display and two keypads. It provides complete terminal control, including:

- Dialling of subscriber number
- Short number editing (up to 99 numbers can be stored)
- Re-dial of last number dialled
- Setting of default LES
- Antenna control (Bm)
- Setting of preferred LES for distress operation
- Setting of preferred LES for stand-alone operation
- Selection of Ocean Region
- Setting of geographical position



Handset

DTE Connector

The 25-pin RS232 Data Terminal Equipment connector provides a Hayes AT compatible modem interface with data rates up to 9600 bps.

The DTE connector is also used for the optional High Speed Data (64 kbps) with X.21, V.35 and V.36 interfaces.

Gyro Connector

The 6-pin round plug is used in the Saturn Bm for a gyrocompass input to provide heading information. The interface automatically adapts to most types of gyrocompasses, both step-by-step and synchro types.

NME A-0183 Connector

The 6-pin round receptacle is used to connect navigation equipment that provides position information used in the selection process for area broadcast calls.

External I/O Connector

A 9-pin connector for external peripherals, such as emergency buttons and alarms.

Power Input Connector

A D-Sub 7-pin power input plug for 10 to 34 VDC.

A wide range of power supplies may be used, depending on the type of terminal and use.

PC Control connector

The 9-pin RS232 PC Control connector interfaces a Personal Computer with menu driven system control software providing:

- Telex communication with editing and message storage and retrieval (Class 1)
- Terminal monitoring and control with the same functions as the Display Handset
- Registration of outgoing calls
- Access codes for outgoing calls

Various PCs may be used, from laptops/notebooks to desktops.

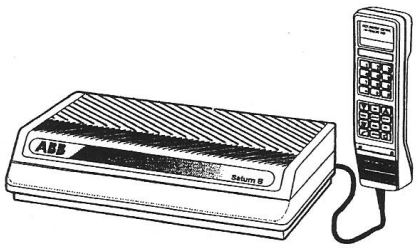
Printer Connector

The printer connector is a 9-pin RS232 interface for printing messages such as:

- Alarms
- Call registration
- Hard copies of telex messages (Class 1)
- Broadcast messages

Antenna and RF Connector

A coaxial connector for the single-cable connection to the Antenna & RF Unit.



MCU with handset

Saturn Bm

The marine version Saturn Bm is intended for ship-board installation and can provide Class 1 (voice, telefax and telex) or Class 2 (voice and telefax) services. Both versions can be equipped with Duplex High Speed Data (64 kbps).

The Antenna & RF Unit consists of a stabilized parabolic antenna and RF equipment enclosed in a radome, of the same size as the current Saturn 3S.90.

The Main Control Unit has all connectors necessary for the control and user equipment, such as:

- Five external two-wire telephones, telefaxes or PABX lines.
- Four-wire DTMF with E&M connection
- DTE equipment for up to 9.6 kbps or optional 64/56 kbps.

For Class 1 terminals, a PC provides the user interface for telex and control functions.

Saturn Bt

The Saturn Bt is a transportable terminal intended for fixed and semi-fixed installations. It can provide the same high quality voice and data services as Saturn Bm, and is primarily intended for use in areas with poor or non excisting communication, and for back-up and disaster communication.

The entire terminal is packed in a single suitcase and consist of the following units:

- Main Control unit with handset
- Sechtionalized antenna with feed
- RF unit
- Power supply
- Bracket for wall or roof mounting of antenna and RF unit
- Connection cables and accessories.

The suitcase has space for telefax machine or a PC.

The Main Control Unit is the same as for the marine version.

The RF unit and the sechtionalized antenna is designed for outdoor mounting either with the suitcase as a platform or fixed to a bracket for wall or roof installation.

Saturn Bp

The portable Saturn Bp is a lightweight terminal designed for hand carrying. The entire terminal is integrated into a robust custom-designed case consisting of two main units:

- The Main Control Unit and the Display Handset
- The Antenna and RF Unit which features a collapsible flat antenna

The terminal offers the same services and functions as does the Saturn Bm, except for the antenna control (which is not necessary). The integrated design permits rapid setup and easy operation under all conditions. The terminal can be operated either with the antenna integrated with the case, or with the antenna remotely located.

Its built-in wide range universal AC/DC power supply allows operation from virtually any power source.

The Saturn Bp is weatherproofed, so it may be operated over a wide range of temperatures and conditions including rain and snow.

Availability

Saturn Bm Marine Class 2	Nov-Dec 1993
Saturn Bm Marine Class 1	April 1994
Saturn Bm Marine GMDSS	April 1994
Saturn Bt Transportable Class 2	Nov-Dec 1993
Saturn Bt Transportable Class 1	March-April 1994
Saturn Bp Portable Class 2	September 1994
Saturn B DHSD enhancement	May-June 1994