



STU II/III Encryption Service Saturn B/M Mini-M

6/3 - 2000

STU Encryption

ner 970115 249/1

NERA
TELECOMMUNICATIONS

Changing the way you
communicate

Secure voice/Fax/Data

Secure voice/Fax & Data Systems

STU-III is a US DoD standard (1984)

- Type 1** **Classified (US DoD, Defence Contractors)**
- Type 2** **Unclassified (US Government Agencies)**
- Type 3** **Sensitive (US Citizens and/or Companies)**
- Type 4** **Sensitive (Foreign Organisations and Governments)**
- Type 3E** Exportable type 3 applications
- Type 4E** Exportable type 4 applications

STU-IIB is a Nato version

also used by some non-Nato countries like Australia and New Zealand

Secure voice/Fax/Data

Saturn A is an analogue system and poses no problem to STU communications

Saturn M/B and WorldPhone are digital systems with low-bit-rate voice codex

The voice codex are not transparent to modem signalling

Exception: Saturn B supports 2.4 kbps in the voice channel.

4.8 kbps may also work, but can not be guaranteed

A special STU interface (MES+LES) is needed for transporting STU through M/B and WorldPhone (similar to fax interface)

Secure voice/Fax/Data

STU Operation

The STU telephone is connected to the 2-wire Tel port of the MES

**A standard Inmarsat voice call is initiated
Pressing the 'Secure' button on the STU phone
will make the connection secure after 5-10 seconds**

**The 'Clear' button may be pressed to go back
to Inmarsat voice mode**

Secure voice/Fax/Data

Inmarsat has not specified any STU interface, but has allowed other implementations

Comsat has specified and designed a proprietary STU-III interface

Stratos has used ICTI (“Innovative Communications Technologies, Inc”) to specify a proprietary STU-III/STU-IIB interface

Secure voice/Fax/Data

Comsat

STU-III for Saturn M
2.4 kbps (Special version)

STU-III for Saturn B
9,6 kbps (Special version from May 2000)

LES'es with STU-III support

AOR-E, AOR-W Southbury

IOR Kuantan

POR Santa Paula

Secure voice/Fax/Data

Stratos

STU-III/IIB for Saturn B & M + mM

M	2.4 kbps, 4.8 kbps
B	2.4 kbps, 4.8 kbps, 9.6 kbps
Mini-M	2.4 kbps

LES'es with STU-III/IIB support

AOR-E, AOR-W:	Laurentides
IOR, POR	Perth (Mini-M support 010199)

Secure voice/Fax/Data

The correct LES must be used.

This is a special problem for LES initiated calls

STU is a paid service on the MES

The Service must be enabled (Opening Code)

Only STU-III and STU-IIB are supported.

Several variants exists

NOTE!

Comsat STU-III interface for Saturn M

does not work with low signal strength when going secure

Secure voice/Fax/Data

Summary

Available STU service (Stratos) for Nera WorldPhone product :

2.4 kbps STU-III/IIB (via following LESs)

AOR-E, AOR-W: Laurentides

IOR, POR Perth (Mini-M support 010199)

Available STU service for Saturn B&M product :

(Stratos STU III/IIB)

M 2.4 kbps, 4.8 kbps

B 2.4 kbps, 4.8 kbps, 9.6 kbps

Comsat STU III only :

M (x) 2.4 kbps (via following LESs) :

AOR-E, AOR-W Southbury

IOR Kuantan

POR Santa Paula

B (yy) 9k6 LES TBA

(x) Special diskette required for Comsat STU III version

(yy) Will soon be implemented (April / May 2000)