SyntheSys

JTIDS/Link 16
## Technical Paper - Terminals

There are many different types of JTIDS Terminals. They vary according to size, capability and the type of platform to which they are fitted.

- ➤ Early JTIDS Terminals were referred to as **CLASS 1 TERMINALS**
- ➤ These handled only JTIDS-IJMS
- ➤ The most well known Class 1 Terminal is the HUGHES Improved Terminal (HIT)
- ➤ The HIT is found in ADGE sites and is used to communicate with E-3 AWACS aircraft

- ➤ JTIDS terminals, capable of Link 16 operations, are known as **CLASS 2 TERMINALS** and are made by a variety of manufacturers
- ➤ Different types of **CLASS 2 TERMINALS** include Class 2M and Class 2H, the latter have an extra high power amplifier
- ➤ There are also LVTs and MIDS terminals

- ➤ This is a current Class 2 tactical aircraft terminal similar to those found in the F3, F15 and F14

- ➤ Class 2 terminals can be bi-lingual. That is, they can process both Link 16 and IJMS messages
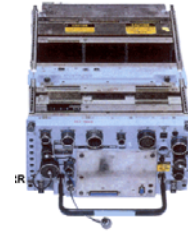
JTIDS terminals consist of 5 main parts:
- ➤ A **SECURE DATA UNIT** which holds the cryptovariables
- ➤ An **INTERFACE UNIT (IU)** which joins the platform (ship, aircraft, tank etc.) to the JTIDS system
- ➤ A **DIGITAL DATA PROCESSOR (DDP)** which performs the JTIDS functions
- ➤ A JTIDS transceiver and antenna system
- ➤ A **HIGH POWER AMPLIFIER** for Class 2H terminals which allow the transmitted power to be increased from 200W to 1000W
- ➤ A **Transceiver** and antenna system

The **IU** runs a programme called the **Subscriber Interface Computer Programme (SICP)**. The **SICP** interfaces between the host systems and the JTIDS systems:
- ➤ Navigation data
- ➤ Weapons and fuel
- ➤ Sensor data
- ➤ Track data

The **DDP** runs a programme called the **Network Interface Computer Programme (NICP)**. The **NICP** looks after the JTIDS technicalities such as:
- ➤ Protocol management
- ➤ Synchronisation
- ➤ Encryption and decryption
- ➤ Passing data to and from the transceivers
- ➤ Relative Navigation

A typical JTIDS Class 2 terminal structure