NSGDatacom Inc.

Model 1280TA

Tactical/Airborne HF Data Modem

- ***Airborne Qualified***
- ***Supports Data Rates of 30 to 1200 bps (FSK)***
- ***16,000 bps Option Available (Di-Phase)***
- ***Synchronous or Asynchronous Operation***
- ***Full or Half Duplex Operation***
- ***Mark and Space Frequencies from 300 to 3500 Hz***

The Model 1280TA is a multi-mode HF data modem that features unparalleled flexibility in frequency and bit rate selection allowing it to be used in almost any FSK application. The modem is designed to meet rigid environmental requirements for shock, vibration, temperature, EMI, acceleration, altitude and immersion. Packaged in a ruggedized tactical/airborne enclosure, the Model 1280TA utilizes ATR style mounting for seamless installation in any airborne platform.

The modem features Mark and Space frequencies from 300 to 3,500 Hz and data rates from 30 to 1,200 bps with optional 16,000bps (Di-Phase), allowing it to be used in a variety of situations. A two-tone detection technique, used in demodulation, overcomes the irregularities of ionospheric propogation encountered in HF data communications. An Auto-Tune function is accessible from the front panel and will (at baud rates of 300 or less) fine tune the demodulator to an incoming signal .

The Model 1280TA is compatible with synchronous or asynchronous data. All operating parameters are controlled using the 16 dual-function keys on the front panel. The 10 channel non-volatile storage for operating parameters prevents loss of parameter settings and allows frequently used channel variables to be stored and recalled whenever needed. The unit can also be controlled using a remote ASCII terminal.

The 1280TA's extensive built-in test capabilities include a local loopback feature that ties the modulator output to the demodulator input. A built-in self test will provide a pass/fail response on the front panel display.

Weighing 18 pounds and requiring less than 8 watts of DC power to operate, the Model 1280TA is ideally suited for use in military airborne and mobile communications.

1280TA Specifications

Model 1280TA

Environmental

Shock: Operational: RTCA/DO-160-C, Section 7, Paragraph 7.2
Bench Handling: MIL-STD-810E, Method 516.4, Procedure VI

Vibration: BS 3G.100: Part 2: Section 3: Subsection 3.1
MIL-STD-810D, Method 514.3, Category 8

Temperature: BS 3G.100: Part 2: Subsection 3.2 aircraft class 2
subsonic, Grade "A".
Operating - 30 C to +55 C,
Non-Operating -40 C to +90 C;
In-Flight -15 C to +36 C.

Rapid Decompression: RTCA/DO-160-C, Section 4, Paragraph 4.6.2

Overpressure: RTCA/DO-160-C, Section 4, Paragraph 4.6.3

Acceleration: BS 3G.100: Part 2: Section 3, Subsection 3.6 Normal: Grade "D", Crash: Grade "G"

Magnetic Influence: RTCA/DO-160-C, Section 15, Equipment Class "Z"

Immersion: MIL-STD-810D, Method 512.2, Procedure I, Basic Leak

Humidity: MIL-STD-507.2, Procedure III, Humidity Cycles

Fungus: MIL-STD-810D, Method 508.3, 28 days

Sand and Dust: MIL-STD-810D, Method 510.2, Procedure I, Blowing Dust

Salt Fog: MIL-STD-810D, Method 509.2, 5% salt solution for 48 hours

Interface

Data: EIA-RS-422, 423, 232D, MIL-188C, or
MIL-188-114A (synchronous or asynchronous)

Audio Input: +10 to -45 dBm; 600 ohm balanced

Audio Output: +6 to -20 dBm; 600 ohm balanced

Radio Keyline: Dry contact, 48V, 100 mA,
selected delay (60 ms to 4 sec)

Remote Control: EIA-RS-422, 423, 232D, MIL-188C,
or MIL-188-114A asynchronous

Options and Accessories

Voice Plus:
Send and receive voice and data on a single channel

High Level:
Interface provides either polar or neutral operation
(20, 40 or 60 mA)

AC/DC Supply:
AC from 90 to 265 volts
DC from 11 to 32 volts

Dual Rack: Adaptor for 19" rack mount of two
1280TAs, 1280Ts or KG-84As

Physical

Size: ¾ ATR
7.6" (19.3 cm) H
X 7.5" (19.05cm) W
X 15.8" (40.13cm) D

Weight: 18 lbs (8.2kg)

Electrical

Power: Source: 11 to 32 VDC
Dissipation: 8 watts

Data Rates: 30 to 1200 bps
(110 max. in diversity)

Modes: Full duplex, half duplex

Modulation: FSK / FEK

Mark/Space Frequencies:
300 to 3500 Hz in 1 Hz increments

Shift: 60 to 3000 Hz

Diversity:
In-band 425 ± 42.5 Hz and
2805 Hz ± 42.5 Hz

Specifications subject to change without notice.

- ***Remote Controllable***
- ***AC/DC Power Options***
- ***Non-Volatile 10 Channel Memory***
- ***RX Clock Recovery***
- ***Internal or External Clock***
- ***Built-In Test Pattern Generator***

NSGDatacom Inc.
7435 New Technology Way, Frederick, Maryland 21703
Phone: 301.662.5926 Fax: 301.694.6279
www.nsgdata.com