DSP-232

Timewave

Technical Data Sheet

Multimode Data Controller

The plug and play DSP-232 is Timewave's new multi-mode data controller designed around a high-speed, digital signal processor which provides the ultimate in signal filtering, modem performance, and flexibility. Timewave is known for excellent filtering systems. Digital signal processing combined with memory ARQ, true DCD, and hardware HDLC provide the best filtering available. Once you see the features, the upgrade capability, and the affordability, your view of multi-mode controllers will be changed forever.

Power Filtering with DSP

The DSP-232 continues the Timewave tradition of quality signal filtering technology. Incoming signals are digitized by a high speed, analog-to-digital converter. The digitized data is then digitally filtered and analyzed by the on-board digital signal processor. The processed demodulated signals are then passed to a second processor for protocol conversion. The reverse procedure takes place when you transmit. DSP gives the DSP-232 a better shape-factor than analog filters. In addition to the DSP, we've included PACTOR memory ARQ for reduced errors. All this makes the DSP-232 the data controller of choice for those who want to connect in poor HF conditions.

Packet Power

Run 9600 or 1200 bps VHF and 300 bps HF packet. This is a true DCD state machine for hearing signals with an open squelch when operating 9600 and 1200 bps packet. Full-duplex packet capability lets you speed up communications by sending and receiving simultaneously. KISS mode provides compatibility with the TCP/IP protocol. There are even special GPS capabilities which allow mapping and tracking in packet.

Global Positioning System

A GPS-specific command set is included in the DSP-232. These commands allow the controller to be used in Stand Alone Tracking, where you take the unit mobile and transmit your position to other packet operators using Automatic Packet Reporting System software. Remote programming allows you to set and change vital GPS commands from a remote location. You can also use Timewave's optional APRS adapter cable to connect a GPS receiver and a DSP-232 to a single COM port on your computer. The DSP-232 is GPS and ULTIMETER-II compatible which allows you to set up a weather net or to hear weather nets.

Features

- ***DSP Modems***
- ***9600 & 1200 bps Packet***
- ***All standard HF & VHF modes***
- ***Mailbox expandable to 242K***
- ***Full MailDrop facility for Packet, PACTOR, and AMTOR***
- ***Two switchable radio ports with rear-panel AFSK adjustments***
- ***Compatible with GPS and ULTIMETER II weather stations***
- ***GPS commands are remotely programmable***
- ***CW Keying jack***
- ***Memory ARQ***

Connect with the DSP-232

Timewave gives you both the direct FSK and the AFSK options for optimum flexibility. There are two radio connections (one for each radio port), two receive audio connections (one for each radio port), plus an RS-232 computer interface.

Specifications for the TW-232DSP

DSP Filters, demodulator	16 bit Analog Devices 2105 with 16 bit A/D-D/A
Modulator	Phase continuous sinewave, AFSK generator
Modulator output level	5-200 mV RMS
Processor system	Motorola 68340 running at 16.7 MHz
RAM	128K Lithium battery-backed
ROM	128K
Hardware HDLC	Zilog 85C30 SCC
Power requirements	+12 to +16 VDC @ 500 mA
Input/Output Connections	
Radio interface	One 5-pin DIN connector, one 8-pin DIN
Direct FSK outputs	Normal/Reverse
Scope outputs	Mark, space
CW keying output77	+50 VDC @ 100 mA max
Terminal interface	RS-232-C DB-9 connector
Terminal data rates	300-19200 bps
Gound	8-32 Threaded Stud on back panel
Physical	
Dimensions	9.35" (237 mm)W x 7.9" (201 mm)D x 2.3" (58 mm)H
Weight	3 lbs (1.36 kg)

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