DSP-232+

Timewave

Technical Data Sheet

Multimode Data Controller

The plug and play DSP-232 is Timewave's newest 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.

Sound Card Interface

The DSP-232 seamlessly switches between PC-based data programs such as PSK-31 and internal DSP-232 modems such as Pactor. Changing from a sound card modem to a data controller modem doesn't requir re-wiring of your station! The flexible design permits simultaneous reception and display of signals with a PC program and the DSP-232. Transformer-isolated audio inputs and outputs use standard stereo audio cables for quick and easy connections.

Connect with the DSP-232

Timewave gives you multiple input and ouput jacks for optimum connection flexibility. There are separate jacks for each radio I/O, sound card interface, and CW keying. There is even an extra jack for your sound card speaker!

Features

- ***DSP Modems***
- ***9600 & 1200 bps Packet***
- ***All standard HF & VHF modes***
- ***Sound Card Interface w/transformers***
- ***242K Mailbox***
- ***Full MailDrop facility for Packet, PACTOR, and AMTOR***
- ***Two switchable radio ports with rear-panel AFSK adjustments***
- ***MARS, Marine & Euro modems***
- ***GPS commands are remotely programmable***
- ***CW Keying jack +/-***
- ***Memory ARQ***
- ***USB (RS-232 option available)***

Specifications for the DSP -232

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	256K Lithium battery-backed
ROM	128K
Hardware HDLC	Zilog 85C30 SCC
Power requirements	+12 to +16 VDC @ 450 mA
Input/Output Connections	
Radio interface	One 5-pin DIN connector, one 8-pin DIN
Direct FSK outputs	Normal/Reverse, One 5-pin DIN connector
CW keying output	+50 VDC @ 100 mA max - 3.5 mm jack
Sound Card Interface	Audio in - two parallel 3.5 mm jack Audio out - 3.5 mm stereo jack
Auxiliary I/O	two 5V logic level inputs - 3.5 mm stereo jack onr 5V logic level inputs - 3.5 mm stereo jack one 5v logic level outputs - One 5-pin DIN connector
Terminal interface	USB Mini-B or optional RS-232-C DB-9 connector
Terminal data rates	USB full speed or 300-19200 bps w/ RS-232 option
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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