PK-232/DSP/BAL

Multimode Data Controller

Timewave's Powerful DSP Technology + 600 Ohm Balanced Line Radio I/O

Timewave's customers swear by their DSP filters and PK-232 owners love the flexibility and reliability of the most popular data controller ever built. The PK-232/DSP rolls it all into one! The PK-232/DSP brings a new level of performance to the legendary PK-232 with sharp, accurate filters for all the data modes. Weak signals magically appear from the noise and QRM bounces off the new filters for cleaner copy with fewer errors than the old analog filters.

More Filters, Better Filters, Automatic selection

The PK-232 was designed in 1985 before the advent of affordable DSP technology. The filters in today's analog TNC's were state-of-the art in 1985, but they pale beside the performance of DSP filters. (We know a bit about RTTY/data filters - old and new. Timewave built a DSP Terminal Unit for the U.S. Navy in 1988, before most amateur radio companies could even spell DSP! Unfortunately, $3000 for a TU was a little high for the average ham, so we put DSP on hold for the ham market until 1993.)

The PK-232/DSP brickwall filters have tighter bandwidth and steeper skirts for improved noise and QRM rejection. New PK-232 firmware (Ver. 7.2) allows a wider selection of filters than the original PK-232, so the filter can match the mode. The correct DSP filter is automatically selected when you choose a new mode. In RTTY, Timewave's proven Twin Peak Filters pluck the mark and space tones from the noise and QRM for great copy. In PACTOR, the filter bandwidth automatically changes when the baud rate shifts in response to the error rate of the link. In Morse (CW), the operator

Features

- **Digital Signal Processor**
- **16 Bit A/D-D/A**
- **18 DSP Filters**
- **Twin Peak RTTY Filters**
- **Adaptive PACTOR filters**
- **100 Hz CW Filter**
- **Automatic Operation**
- **All standard modes**
- **Balanced I/O for System Application**

can preset either 100 Hz or 200 Hz bandwidth. The PK-232/DSP is completely compatible with all existing software terminal programs for the PK--232.

The PK-232/DSP comes with a complete cable and connector set, in addition to Timewave's on-line and telephone support.

All the Proven Modes

The PK-232/DSP supports all the PK-232 modes - PACTOR, VHF/HF Packet, AMTOR/SITOR, Baudot, ASCII, Morse, HF Weather FAX, TDM, and NAVTEX.

Specifications for the PK-232/DSP

DSP Filters, demodulator	16 bit AAnalog Devices 2104 with 16 bit A/D-D/A for Optimum filters for each mode, limiter, 4-pole discriminator, 5-pole post-detection low-pass filter
Modulator	Phase continuous sinewave, AFSK generator
Modulator output level	5-200 mV RMS
Processor system	Zilog Z-80, ADSP2104
RAM	32K Lithium battery-backed
ROM	128K
Hardware HDLC	Zilog 85C30 SCC
Power requirements	+12 to +16 VDC @ 570 mA (700 mA. recommended)

Input/Output Connections

Radio interface	1 600 Ohm Balanced, 1 Unbalanced, two 5-pin connectors, front panel selectable
Direct FSK outputs	Normal/Reverse
Scope outputs	Mark, space
CW keying outputs	+100 VDC @ 200 mA max and –25 VDC @ 30 mA max
Terminal interface	RS-232-C 25-pin DB-25 connector
Terminal data rates	Autobaud settings at 300, 600, 1200, 2400, 4800, & 9600 bps

Physical

Dimensions	11" (279mm)W x 8.25" (210mm)D x 2.5" (64mm)H
Weight	3 lbs (1.35 kg)

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