PK-96 Packet TNC

Information Super Skyway

Timewave has been researching and developing wireless digital communication devices for 19 years, providing digital operators with the most reliable and powerful equipment available. The performance of the PK-96 shows Timewave's commitment to quality. The PK-96 is a plug-in and go 9600/1200 bps TNC loaded with exciting features. Timewave engineered the PK-96 to allow people to easily step up to 9600 bps. This was accomplished by employing proven TNC hardware, utilizing Timewave's powerful command set, and including convenient features not found in other TNCs.

Versatility in Modems
The 9600/1200 bps PK-96 comes with 1200 bps AFSK tone signaling, as well as 9600 bps K9NG and G3RUH compatible direct frequency modulation, making it a truly high performance data controller. There is even a modem disconnect header for installing other modems. The PK-96 not only makes an excellent terrestrial data controller, it can also be used for high-speed data links between packet systems. In addition to the modems, we have included separate TX pots for 1200 bps and 9600 bps on the back panel, plus an external reset to return the TNC to factory defaults.

Data Carrier Detect (DCD)
The PK-96 has a "true" DCD state machine for open squelch operation which allows communication even when your contact's signal is weak.

Hardware HDLC
The PK-96 utilizes an HDLC hardware controller for accurate protocol conversion at 9600 bps. The HDLC chip acts as a co-processor, helping the PK-96 send and receive more data in a shorter amount of time.

Full Featured MailDrop
In addition to the speed, the PK-96 comes standard with 100K (128K RAM) of battery-backed MailDrop memory. The MailDrop controls 3rd party traffic, mail forwarding, and reverse forwarding to your local BBS. There are also commands allowing you to choose who may or may not connect to the PK-96.

Gateway as a Node

The Gateway firmware acts as a full service node. Three users can use your PK-96 as a Gateway, you can communicate with another station, someone can be leaving you a message in your mailbox, and others can digipeat through your TNC-all at once. Gateway also lets you identify TCP/IP, TheNet, and NETROM stations. As with MailDrop, you have control of which call signs can use your Gateway. Gateway has two heard lists: one for stations heard and one for nodes heard.

TheNet Compatible

Now network node builders can add a 9600 bps port to their TheNet network node with no hassles. Dave Roberts, G8KBB, has written a special TheNet X-1J firmware version specifically designed for the PK-96. This special firmware is only available from Timewave.

Software Included

A demo copy of PK-Term for Windows is now included with every PK-96. This Windows 95/98/ME/2000/NT menu-driven software from CSS makes operating the PK-96 easy, plus it has added features such as on-screen help, macro key facility, and much more! Also included is a copy of the shareware program GPS mapping program WinAPRS™. WinAPRS allows you to see on computerized maps where other APRS™ users are-even track them when mobile!

GPS Firmware

The PK-96 includes GPS compatible firmware. The PK-96 is compatible with Automatic Packet Reporting System (APRS™™) software. A shareware version is included with your purchase of a PK-96.

Remote GPS programming features add power to your TNC. The firmware allows remote programming of GPS commands. This is very handy when the TNC is installed in a vehicle-you don't need to take the unit out to change commands. The firmware also allows remote polling, so you don't have to wait for the TNC to transmit-you can force it from a remote location. Some GPS connected receivers can even be remotely programmed via the PK-96.

The firmware also allows the TNC's time and date to be set from the GPS satellite. A radio control head button can be configured to send GPS information with the touch of a finger. Two NMEA strings (the data containing location information) can be

programmed into the TNC. New GPS receivers give all the information you need in one string: latitude, longitude, course, and speed. We included the second string parsing ability in case where you own an old GPS receiver which doesn't have all the information in one string.

GPS configurations:

1) Stand Alone Tracking. This is where you connect a GPS receiver and a radio to your PK-96 in your vehicle. The position information received from the GPS receiver is beaconed via packet radio so others can track you.

2) Hardware Single Port Mode. This is where you use the optional AEA APRS™ Adapter Cable (shown below) to connect the GPS receiver and the TNC to one serial port on the computer. The application is the same as Dual Port Mode, however a computer serial port is saved. Laptop computer users will appreciate this because most only have one port. You can take this set up mobile and see on the computer screen where you are heading and where other users are heading too!

3) APRS Dual Port Mode. This is where you connect the TNC and the GPS receiver to separate serial ports on your home computer. Running APRS software, you can receive position information from other users and actually see them on your computerized map.

4) ULTIMETER II™ Stand Alone Weather Station. ULTIMETER II is a home weather station kit available from Pete Bros. You can set up the weather station, connect it to your TNC, and transmit weather information to others in your area. Weather nets can be established with help from friends. All the position and weather information can be seen from the APRS™ maps. You can really get creative with this set up. You can use the Ultimeter II temperature gauge in your home freezer and remotely access this information to see if your freezer is on, making sure meat doesn't go bad. Imagination is the limit.

Features:

- 9600/1200 bps Packet ready
- Gateway as a Node
- GPS firmware standard
- Remotely programmable GPS commands
- Stand Alone Tracking
- Windows Control Software demo included
- APRS^{TM} software demo included
- Timewave/AEA Host Mode
- Advanced command set
- Identify TCP/IP, TheNet & NetRom
- Hardware HDLC for accuracy
- True DCD to hear weak signals
- TheNet X-1J Node firmware option available
- APRS^{TM} Adapter Cable available
- External reset button
- Separate external TX adjustments for 9600 and 1200 bps

Specifications

Demodulator	1200/G3RUH and K9NG compatible 9600
Modulator	Phase continuous AFSK 1200/9600 bps direct FSK
Modulator output level	5 mV-1 V RMS rear panel adjustable
Processor system	Hitachi 64180
RAM	128K standard
ROM	64K maximum
Hardware HDLC	Zilog Z8530
Power Requirements	+12 to +16 Vdc @ 400 mA
Radio interference	5-pin DIN connector
Terminal Interface	RS-232C DB-25 connector
Terminal data rates	Autobaud setting at 300, 600, 1200, 2400, 4800, 9600 bps; and 19,200 bps

Physical

Dimensions	6.13" (156mm)W x 7.4" (188mm)D x 1.35" (34mm)H
Weight	1.2 lbs. (0.54 kg)