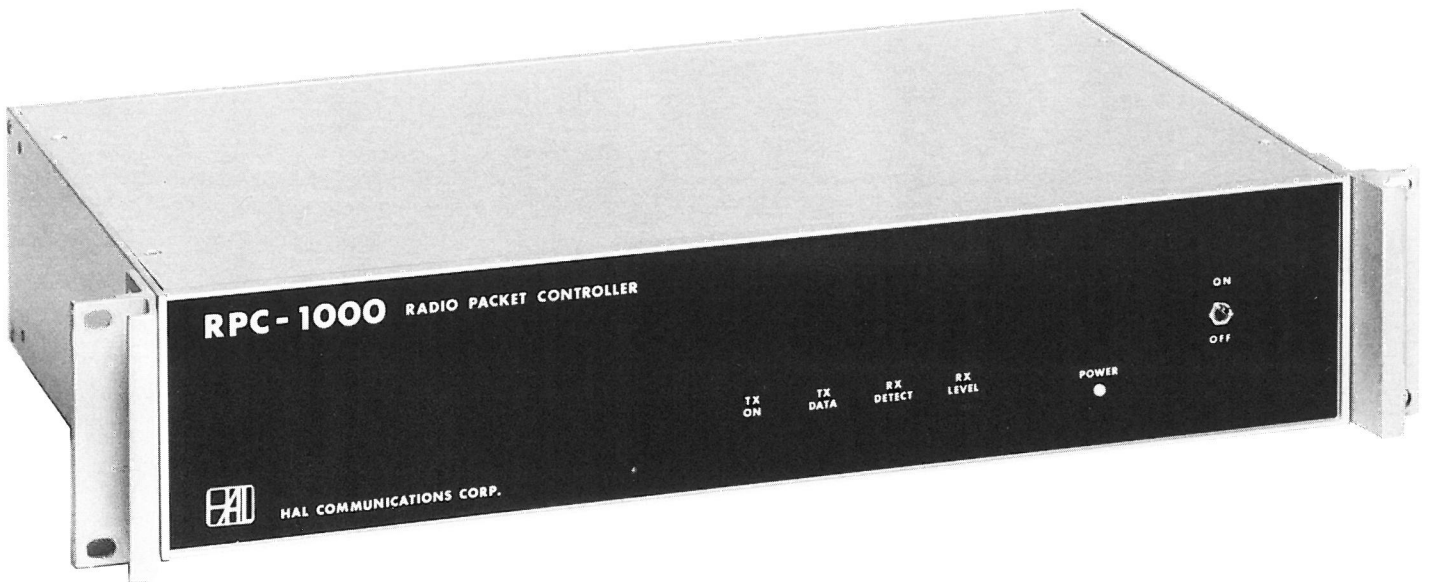




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RPC-1000

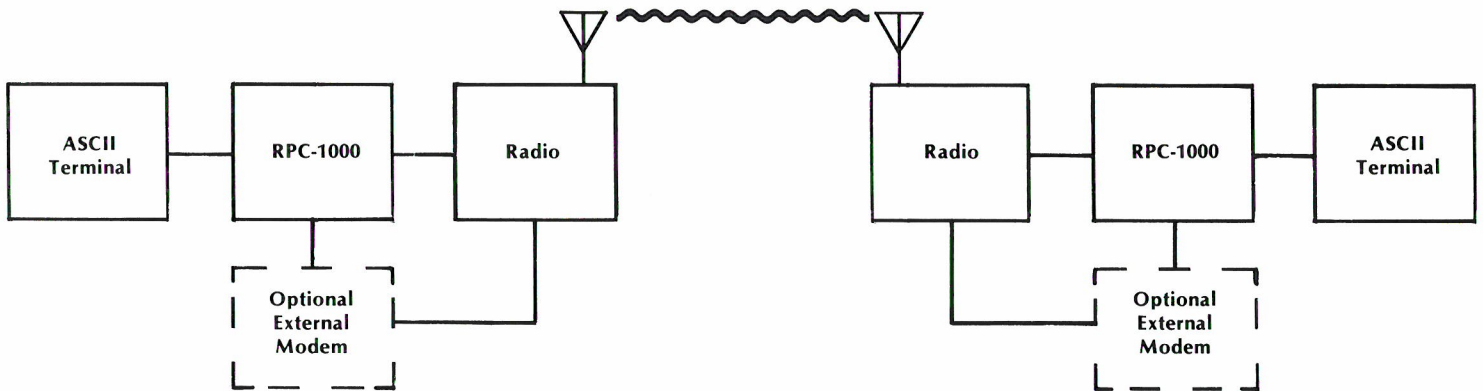
Radio Packet Controller



The RPC-1000 Radio Packet Controller adds fast, error-free data communications to a radio link. The RPC-1000 uses Packet Radio protocol based on X.25 to provide error-free data communications. Data transmission rates of 45 baud to 4800 baud are supported by the RPC-1000. An external modem must be used at rates higher than 1200 baud. Several radio links may occupy the same frequency at the same time, thus relieving frequency congestion. The RPC-1000 may even operate as a relay station or repeater between two other stations. Any ASCII terminal or computer may be used as the communications device. The RPC-1000 takes characters from the terminal and bundles them into transmission "packets". Each packet contains the source and destination callsigns, the data being sent, and error checking information. Only complete packets are transmitted. If the receiving station does not acknowledge receipt of an error-free transmission, the sending station will repeat the packet until an acknowledgement is received. This burst transmission method allows several two way links to simultaneously occupy the same frequency. Each packet sending station waits for a clear moment on the channel to transmit. The RPC-1000 is housed in a rack-mount cabinet or can be table mounted if desired.

RPC-1000

Typical Packet System



SPECIFICATIONS

Port Descriptions:

- Terminal Port:** For connection to the communications device. Will accept 7 or 8-bit ASCII code from 50 to 19,200 baud. RS-232C format.
- Radio Port:** Provides receive audio signal to RPC-1000, transmit audio tones from RPC-1000 and push-to-talk control for the radio transmitter.
- External Modem Port:** Provides RS-232C connections for an external modem when required. For example, noise levels on HF circuits may require a sophisticated HF modem for proper signal demodulation.

Operational Features:

- Packet Structure:** The RPC-1000 automatically bundles packets of data to be sent via a radio link. The RPC-1000 is based on the accepted CCITT X.25 standard. Each packet contains the destination and origination callsigns and error checking information. Packet data structure can be defined by the user as single lines of text, groups of characters separated by any specific character, or groups of characters separated by time intervals. The maximum size of a packet of text is 128 characters.
- Starting a Connection:** Each packet link begins with the "Connect" command followed by the callsign of the destination station. The RPC-1000 then automatically calls that station and established a link.
- Sending Data:** Data is simply typed into the communications terminal and automatically bundled into packets for transmission to the receiving station. The receiving station automatically acknowledges correctly received packets.
- Ending a Connection:** To end the link, the operator uses the "Disconnect" command. The link is automatically terminated at this point.
- Relay of Messages:** Messages can be relayed through a third packet station by commanding the RPC-1000 to "Connect ... via" the callsign of the relay station.

Internal Modem:

1000 Hz shift audio modem (1200/2200 Hz tones). Will transmit and receive data up to 1200 baud.

Front Panel Indicators:

- TX On:** Indicates that the transmitter is being keyed.
- TX Data:** Indicates that data is being sent.
- RX Detect:** Indicates that data is being received.
- RX Level:** For adjustment of internal modem threshold.

Rear Panel Connections:

- Terminal Port:** DB-25S connector for RS-232C.
- Radio Port:** DB-9S connector with audio input, audio output, and push-to-talk control lines.
- External Modem Port:** DB-25P connector for RS-232C hookup to an external modem.

Physical Specifications:

- Size:** 3.5" H x 10.0" D x 19.0" W, rack mounting. (8.9 x 25.4 x 48.3 cm) Width is reduced to 16.75" (42.5 cm) without rack mounting adaptors.
- Weight:** 8 lbs. (3.63 kg) net, 11 lbs. (5.0 kg) shipping.
- Cabinet Finish:** Natural aluminum with irridite finish; black mar-resistant front panel.
- Power:** 110 or 220 VAC, 50 or 60 Hz; 20 watts.

Optional Equipment:

- DS3100 ASR Terminal:** For use as the communications terminal.
- ST-8000 HF Modem:** External Model for demanding HF radio circuit use.

Specifications subject to change without notice.



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