# Packet Communicator

The Kantronics KPC-3+ and the KPC-9612+ are engineered for dependable and versatile digital communications. These units reflect many years of Kantronics experience and are built with an eye toward emerging applications. The KPC-3+ can fill a variety of roles, including basic packet, GPS/APRS<sup>™</sup>, and telemetry. The

KPC-9612+ is a multi-port, multi-speed data controller capable of over the air speeds up to 38.4 kbps. In use around the world, Kantronics Packet Communicators set the standard by which others are measured!

## KPC-3+/KPC-9612+ FEATURES:

- "NEWUSER" mode provides a quick start for packet newcomers.
- Large capacity internal mailbox and mail forwarding feature.
- GPS operation mode allows use with APRS<sup>™</sup> or other geolocation software.
- NEW Remote Control and telemetry functions with two A/D inputs and two control line outputs.
- HCII Motorola central processor.
- Digital audio drive control, set from keyboard or remote control.
- Low current requirements
- 9-V battery power capability

- Network node functions with standard "KA" Node or optional K-Net <sup>™</sup> firmware.
- Optional K-Net node network firmware retains regular TNC functions.
- BBS, KISS, XKISS, HOST, TERMINAL, GPS, and MODEM operating modes.
- Upgradeable as new firmware is released.
- "Online" HELP feature
- 128 k memory standard; 512 k optional
- Comes with data connector, data wire, coaxial power plug, detailed manual, software

**KPC-3+** 

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Use with base, mobile or hand-held radios.



### KF C-7012+

## **KPC-9612+ ADDITIONAL FEATURES:**

- Dual Port 1200/9600 bps operation standard.
- Port I supports 1200 bps

- Port 2 supports 4800, 9600, 19,200, 38,400 bps with DFSK modulation
- Multiple user mailbox flashes Mail lamp for up to 10 call signs





#### SPECIFICATIONS – KANTRONICS KPC-3+

Dimensions (HWD)	0.8" x 5.2" x 5.2" or 21 mm x 133 mm x 133 mm (w/o projections)
Weight	II oz or 0.32 kg
Power Requirements	6 V dc ~ 25 V dc, less than 30 mA (LEDs on, unit active) 6V dc ~ 25 V dc, less than 15 mA (LEDs off, unit inactive)
Plug	Coaxial, center pin positive 2.1 mm
Internal	Circuit Board accommodates user installed 9-V battery connector
Connection Ports	DB-9 female (radio) DB-25 female (computer/data terminal)
Watchdog timer	2.5 min (approx)
External Carrier Detect	Pulldown to ground
A/D Converter	Two inputs; 0 ~ 5V dc 8-bit accuracy
Data Rate	1200 bps (recommended); 300,400, 600
PTT Output	Open drain, +50V dc max, 200 mA max
Audio Output	Continuously adjustable 1 mv p-p – 4 v p-p
Output impedance	600 ac coupled
Modulation	1200 bps FSK full duplex CCITTV.23 1300 Hz/2100 Hz
Audio Input	
Sensitivity	5 mV p-p
Dynamic Range	70 dB
Input Impedance	Unbalanced, I0K ; 600 with Jumper J3 installed
Max input voltage	± 12V dc; 35V p-p sinusoidal
Operating Modes	Packet,WeFax,KISS, XKISS,HOST, GPS, MODEM
LED Indicators	Power, Xmit, Rcv, Connected, Status, Mail (user option on/off)
Remote Control Access	External Reset
Operating Protocols	AX.25 Levels 1 and 2 (user selectable)
Compliance	FCC Class B; Europe – CE Conformity

## KPC-3+/KPC-9612+ Applications Include:

- Keyboard to keyboard" communications.
  Digipeater
  Personal Mail Box
  Local area node
  Remote control devices
  Remote access of telemetry
  Network node operation (requires optional K-Net<sup>™</sup> firmware)
  Multi frequency "node stacking" capability (with K-Net<sup>™</sup> firmware)
  BBS operations and message forwarding
  GPS positioning transmitting and tracking
- (NMEA-0183 data required)
- Data storage and retrieval
- EMWIN Weather Information (additional software required)



#### SPECIFICATIONS – KANTRONICS KPC-9612+

Dimensions (HWD)	0.8" x 6.7" x 6.9" or 20 mm x 170 mm x 175 mm (w/o projections)
Weight	18 oz. or 0.5 kg (approx)
Power Requirements	5.5 V dc ~ 25 V dc, 45 mA (LEDs on, unit active)
Plug	Coaxial, center pin positive 2.1 mm
Internal	Circuit Board accommodates user installed 9-V battery connector
External	DB-9 female (radio port I); DB-15 female (radio port 2)
Connection Ports	DB-25 female (computer/data terminal)
Watchdog timer	3 min (port I), 40 s (port 2) (approx.)
External Carrier Detect	Pulldown to ground
A/D Converter	Two inputs; 0 ~ 5V dc 8-bit accuracy Z in = 20 k
Data Rate Port I	4800, 9600, 19,200, 38,400 bps
PTT Output	Open drain, +50V dc max, 200 mA max
Audio Output Port I	Continuously adjustable 1 mv p-p ~ 4 v p-p
Audio Output Port 2	2 mV p-p ~ (J20) off; 80 mV p-p (J20 on)
Output Impedance	<ul><li>600 , ac coupled (port1):</li><li>600 , ac or dc coupled (port2)</li></ul>
Modulation Port I	1200 bps FSK full duplex CCITT V.23 1300 Hz/2100 Hz
Modulation Port 2	Gaussian Filtered DFSK with normal bandwidth of 0.3, 0.5 or full Duplex 4800, 9600, 19,200, 38,400 bps
Audio Input	
Sensitivity Port I	5 mV p-p ~ 35 V p-p
Sensitivity Port 2	Low: 15 mV ~ 200 mv p-p (J 16 on); High 80 mV ~ 2 V p-p (J20 on)
Dynamic Range	Port 1: >70 dB;Port 2: >20 dB (either range)
Input Impedance	Unbalanced, 10 k , 600 with Jumper J3 installed
Max Input voltage	Port I: ± 12V dc; 35V p-p; Port 2: ± 25V dc 25V p-p
Equalization	Port 1: None or Fixed; Port 2; Variable, Software controlled
RX S/N	$0 \sim 3 \vee dc (Zout = 2.2 k)$
Operating Modes	Packet,WeFax,KISS, XKISS,Host, GPS,Paging, Mode
LED Indicators	Power, Xmit, Rcv, Connected, Status, Mail
Remote Control Access	All controller functions, user defined password
External Reset	Pulldown to ground
Operating Protocols	AX.25 version I and 2 (user selectable)
Compliance	FCC Class B; Europe CE – Conformity

# Additional KPC-9612+ Applications:

- Send and receive files
- Send and receive paging signals (POCSAG 512, 1200, 2400)

1200<>9600 gateway

You can carry a KPC-3+ into the field as a GPS mobile "tracker" or as a mobile data terminal. Its flexible power requirements (6 - 25 V dc) allow for maximum versatility. You can achieve many hours of use by installing a 9-V battery inside the KPC-3+. Battery life can be extended by disabling the LED displays through a simple keyboard command.



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