Resurrecting a Kantronics KPC-3 TNC for Winlink Use

I recently bought four Kantronics KPC-3 TNCs at bargain basement prices because the owners could not make them work. Now that I have them working I am convinced that the lack of available documentation is the main problem. It took me two evenings to figure things out, so I decided to document my experience. Do not consider this an authoritative statement on the KPC-3 – it is a work in progress, and I would appreciate input from other users.

All four of mine had been out of use for years, and all four have firmware version 5.1.

Step 1. Do a hard reset. Locate jumper J7 on the board and connect the two pins with the jumper that is connected to one pin and power the TNC up. Shut off the power and disconnect the two pins. While you have the case off, I suggest that you replace the CR2032 backup battery.

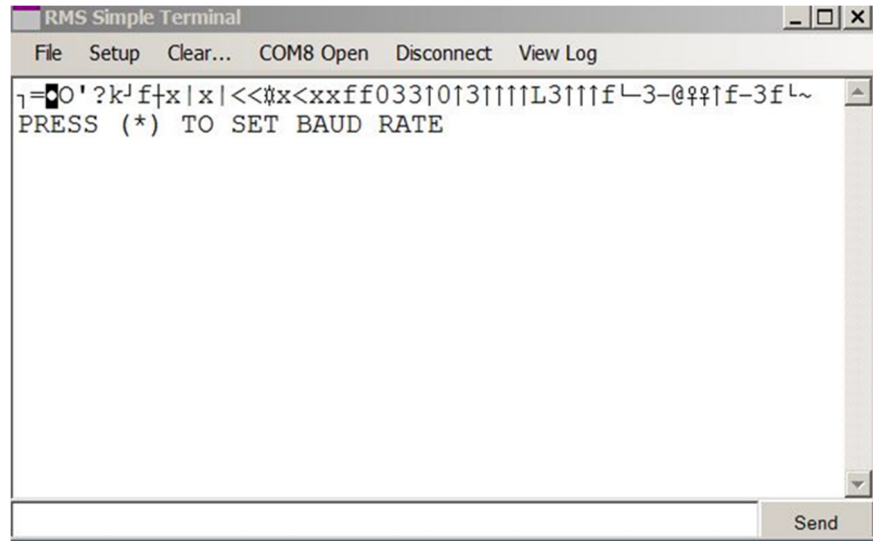**Step 2.** I recommend buying a FTDI USB to DB-25 interface cable.

This will eliminate the computer to TNC connection as a potential trouble area. The FTDI USB cables hold a port number, which makes things easier. Building a cable or using a USB to RS-232 adapter will result in variables that will make things a bit frustrating. I bought my FTDI cables from Mark Dunkle, KJ6ZWL. His eBay ID is 'bluemax49ers' and his products and support are excellent.

Step 3. Download and install the RMS Simple Term program from the Winlink website.
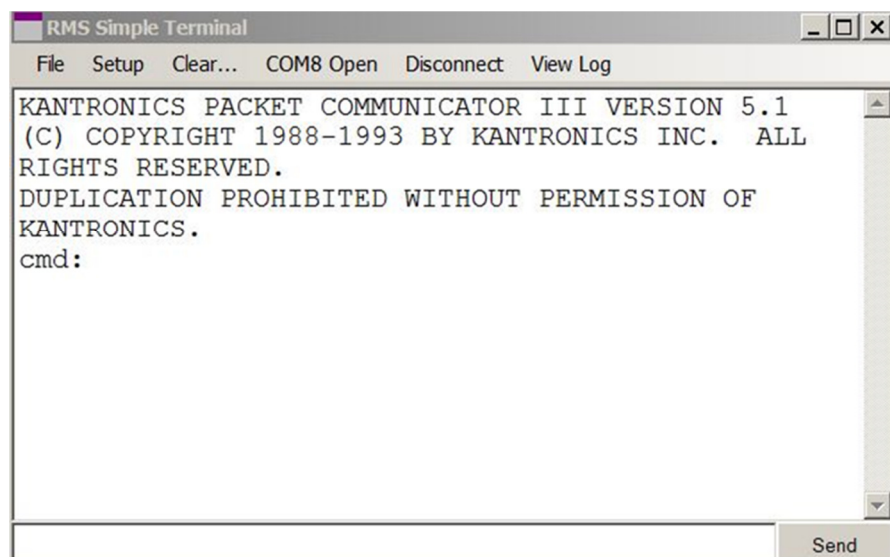
Step 4. Plug the FTDI cable into a USB port on your computer and connect the other end to the DB25 port on the TNC. Go to the Windows system manager and note the port number that your computer has assigned to the FTDI cable. Set your computer at 1200 baud, 8 data bits, no parity and one stop bit and none under Flow Control.

Step 5. In RMS Simple Term setup check the "Send Line" under Options and RTS/CTS under Handshake. Going to Send Line allows you to enter the commands and new parameters. If you don't do this it will send every command as soon as you hit the space bar. Set the baud rate at 1200.
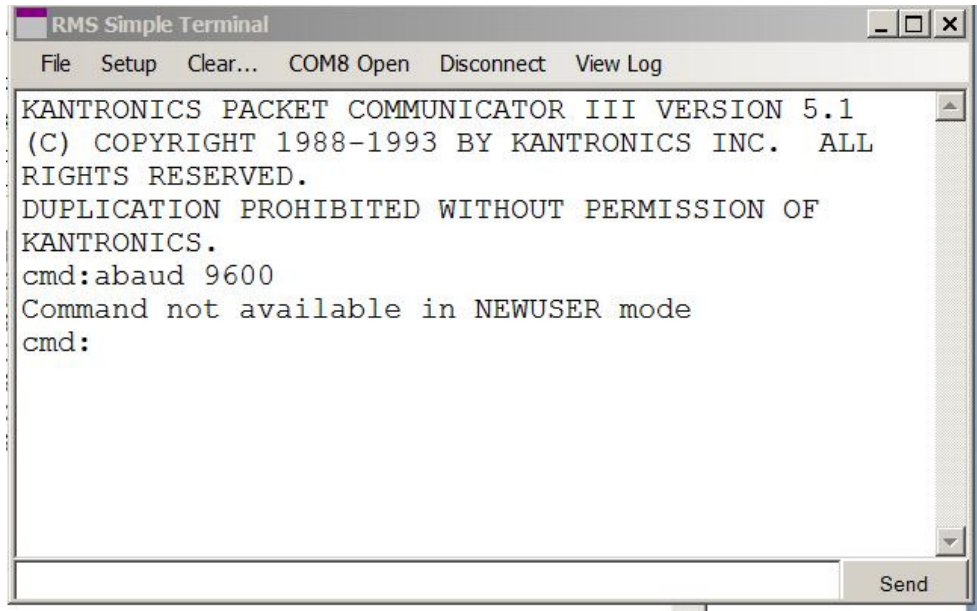
Step 6. Power up the TNC. If you have the correct port selected, gibberish will display on your PC, and eventually it will display a "PRESS (*) TO SET BAUD RATE" message. You are part way there!

After a lot of fooling around I discovered that you have to enter the (*) [Without the brackets] while the gibberish is displaying. Press (*) and hit enter and sooner or later you will get the message to enter your call sign. Do this, and the Kantronics information will display. Success!
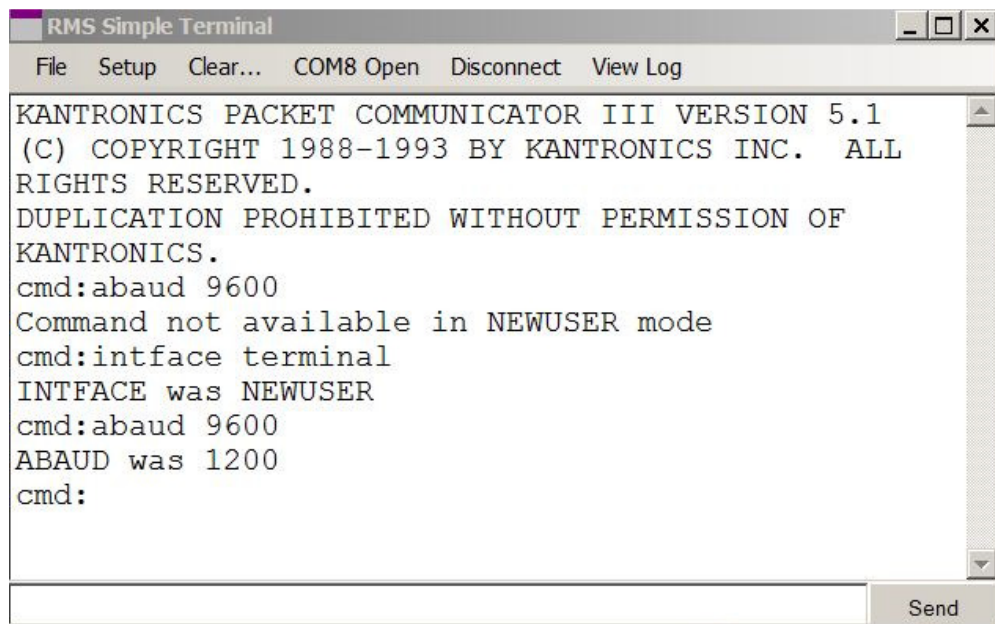
Step 7. Next change the baud rate on the TNC. If you enter the ***abaud*** command it will show 1200 baud. If you enter ***abaud 9600*** command to change it to 9600 baud it gives you the message that the command is not available in NEWUSER mode.

```
RMS Simple Terminal                                    _ □ ×
  File   Setup   Clear...   COM8 Open   Disconnect   View Log
KANTRONICS PACKET COMMUNICATOR III VERSION 5.1
(C) COPYRIGHT 1988-1993 BY KANTRONICS INC.   ALL
RIGHTS RESERVED.
DUPLICATION PROHIBITED WITHOUT PERMISSION OF
KANTRONICS.
cmd:abaud 9600
Command not available in NEWUSER mode
cmd:

                                                  Send
```

To change out of NEWUSER mode, enter ***intface terminal*** at the command prompt and press enter and you are good to go. Enter ***abaud 9600*** and it will change the baud rate. Go into RMS Simple Term setup and change the baud rate to 9600. Go into Device Manager on your computer and change the baud rate to 9600. Power the TNC off, turn the power back on and click the connect button in RMS Simple Terminal. You should get the Kantronics message.

```
RMS Simple Terminal                                    _ □ ×
  File   Setup   Clear...   COM8 Open   Disconnect   View Log
KANTRONICS PACKET COMMUNICATOR III VERSION 5.1
(C) COPYRIGHT 1988-1993 BY KANTRONICS INC.   ALL
RIGHTS RESERVED.
DUPLICATION PROHIBITED WITHOUT PERMISSION OF
KANTRONICS.
cmd:abaud 9600
Command not available in NEWUSER mode
cmd:intface terminal
INTFACE was NEWUSER
cmd:abaud 9600
ABAUD was 1200
cmd:

                                                  Send
```

Step 8. Click 'Disconnect" in RMS Simple Term, Power off the KPC-3 and then click "Connect". Power on the KPC-3 and you should get the Kantronics display.   Just to be sure, shut it all down, disconnect the power cord and let it sit overnight and test it again. If it tests OK you are now ready to build a cable to connect the KPC-3 to your radio. Soldering the 8 pin microphone connections can be maddening. Please see my projects page for plans to make a soldering jig.