

INTERFACING KANTRONICS KWM-1200 PLUS MODEM TO ESP604 DATA RADIO



This application note provides the basic cable wiring information for connecting a SEA ESP604 mobile data radio to the Kantronics KWM-1200 Plus modem. Additionally, a procedure is provided for minimally configuring the PC to operate the modem with the terminal software provided with the modem. The information in this application note is believed to be correct at the time of issuance but is provided strictly as a courtesy to SEA customers without warranty.

1. Minimum system requirements:

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- 2 - Kantronics KWM-1200 Plus Modems (KPC-3) with terminal software.
- 2 - ESP604 Data Radios with AFSK data option board (ASY-0600-11) installed.
NOTE: The ASY-0600-11 must also have no jumper installed in JU3. Refer to the documentation provided with the data option board to locate JU3. This provides a gated data output which is needed for the KWM-1200 to work correctly.
- 2 - IBM compatible computers with COM 1 or COM 2 available.
MS-DOS Version 3.3 or higher, at least 384K RAM and a 3.5" floppy drive.
Hard drive is optional.
- 2 - PC to Modem cables (not supplied). Refer to section 2 for details.
- 2 - Radio to Modem cables (not supplied). Refer to section 3 for details.

2. PC to Modem cable:

KPC-3

PC

	<u>DB-25 male</u>		<u>DB-9 female</u>	
1	----- ----- ---	FG	----- ----- ---	n/c
2	----- ----- ---	TD	----- ----- ---	3
3	----- ----- ---	RD	----- ----- ---	2
4	----- ----- ---	RTS	----- ----- ---	7
5	----- ----- ---	CTS	----- ----- ---	8
6	----- ----- ---	DSR	----- ----- ---	6
7	----- ----- ---	SG	----- ----- ---	5
8	----- ----- ---	DCD	----- ----- ---	1
20	----- ----- ---	DTR	----- ----- ---	4

3. Radio to Modem cable:

	<u>KPC-3 DB-9 male</u>		<u>ESP604 DB-9 male</u>	
1	----- ----- ---	TD	----- ----- ---	3
3	----- ----- ---	PTT	----- ----- ---	7
5	----- ----- ---	RD	----- ----- ---	2
6	----- ----- ---	GND	----- ----- ---	5

WARNING!!!: Be sure to mark each end of the Radio to Modem cable as it is a DB-9 male on both ends. If the ends are reversed they will not damage the Modem or ESP604 but will prevent your system from operating.

4. ESP604 Programming:

- Program the desired modes in the ESP604 to match the REPEATER SYSTEM(S) which will be used or CHANNEL(S) for talkaround use if no repeater is being used. Refer to the ESP604 programming manual for instructions on programming for DATA operation.

A regular mode (not available on test modes) is programmed for 1200 bps data operation as follows:

Required Configuration Programming:

Data Option **BELL 202** - (AFSK data option board must be installed)
Type:

Required Mode Programming:

Type: Trunked or Conventional
Area: Site Area bit
Home: Desired home channel of site
Busy Channel Y
Lockout:
Repeater
Channel: Channel number in Home position
Data ID: RX and TX ID

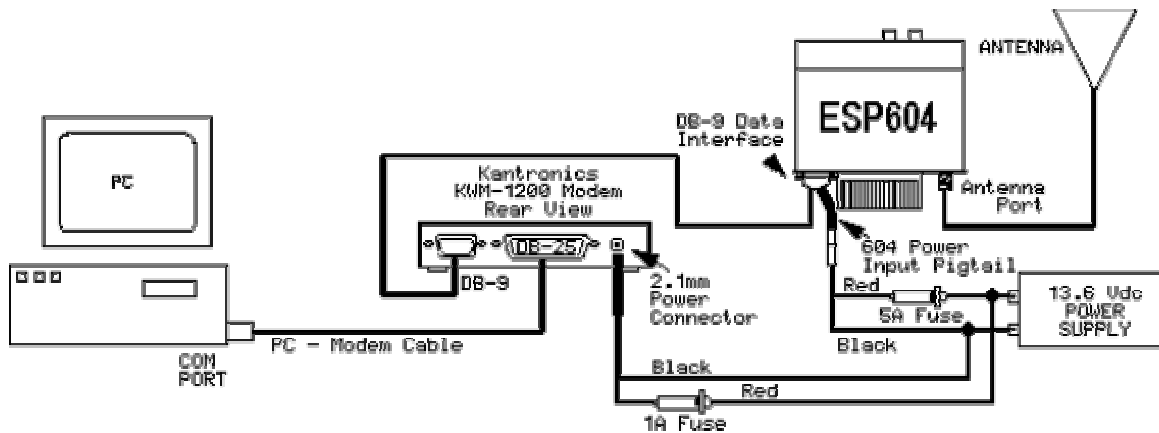
When the radio is on a mode programmed for Voice & Data, the Local Mic may key for voice operation and the MDT may key for data operation. When the radio is on a mode programmed for Data Only, only the MDT may key it. Please note if selecting Voice & Data operation, a TX and an RX ID (that do not match the Data ID) are also required for the mode programming.

5. SEA Repeater System Programming:

- Optional: Talkaround users may bypass this section.

Program repeater(s) according to the programming manual with the correct Channel Number, Area Bit and Home Channel. Test the repeaters with a couple of mobiles in voice mode to insure system is functioning properly before using the DATA mode on the mobiles.

6. System Configuration:



7. Minimum Required Software Setup Procedure:

- A. Load the 3.5" floppy disk into the computer that is provided with the modem.
- B. Select **RUN** program from the Windows **FILE** menu and type: **A:TNC**; **Press Enter**.
NOTE: If running the program in **DOS**; type: **A:TNC** at the command prompt and then **Press Enter**.
- C. Follow the instructions in the software to get to the **MAIN MENU**.
- D. At the main menu, select **PACTERM PROGRAM**.
- E. At the next menu, select **INSTALL PACTERM**.
- F. Select **DRIVE** and **PATH** that you want to store the terminal program.
- G. Once the files are copied, select **RETURN TO DOS**.
- H. At the Windows Main Menu, select **RUN** program. Type the drive and path in which the terminal program is located along with **PACTERM** and **Press Enter**. If using **DOS**, type the path along with **PACTERM** and **Press Enter** at the command prompt.
- I. EXAMPLE: C:\COMM\PACTERM
- J. Once Pacterm is loaded, select the **COM PORT** that will be used and its **BAUD RATE**.
NOTE: Do not confuse this with the modem's baud rate as the modem is set at 1200 baud. If this setting is incorrect, you will not have proper communications between the modem and the PC.
- K. The PC is now ready to send data. Duplicate this process for the second computer and modem configuration.
- L. Refer to the manual provided with the modem for specific commands and operation. There is also documentation on the disk provided that can be printed out. Follow the steps A-D above to find the documentation file.