Updates and corrections to the PacComm Operating Manual, various Technical Reference and Hardware Manuals. The current version of each manual is listed. This sheet applies to all PacComm products. Look for the section which applies to the product which you received.

ALL PRODUCTS: Power connectors are center pin positive.
Current version of operating instructions for all PacComm amateur products except the PC-100 series is Operating Manual for PacComm Packet Controllers, 4th ed., 2nd printing, April 1991 or 3rd printing, October 1991.

TINY-2 and MICROPOWER-2:
The RFDCD input on these products is different than on the TNC-2 and clones. Contact PacComm for an Application Note to correct this problem.

Current Firmware:		
	TINY-2 without PMS:	P1.1.6D4 $26
	TINY-2 with PMS:	P1.1.6D4 PMS 3.0 $FC
	European TINY-2 with PMS:	E1.1.6D4 PMS 3.0 $56
	MICROPOWER-2/PMS:	P1.1.6D4 PMS 3.0 $EE
	MICROPOWER-2/PMS/PRT:	P1.1.6D4 PRT PMS 3.0 $9A
	European MICROPOWER-2/PMS:	E1.1.6D4 PMS 3.0 $8A
	European MICROPOWER-2/PMS/PRT:	E1.1.6D4 PRT PMS 3.0 $2C

Technical Reference Manual for the TINY-2 and MICROPOWER-2, 2nd Ed., 2nd Printing, Feb. 1991.

PC-320: Current Firmware: P1.1.6D4 PMS 3.0 $B2
European PC-320 E1.1.6D4 PMS 3.0 $2F

Technical Reference Manual for the PC-320, First Ed., First Printing, August 1989:

Page 6, Radio Jack (S2) should be labeled "Pin definitions viewed from PC-320 into end of cable connector."
Page 8, Default Terminal Baud Rate is **4800** (instead of 19,200)
Page 10: JPI1: LOWER selects IRQ5 (instead of 7)
JPI2: LOWER selects IRQ7 (instead of 2)
There is a bug in the KISS module which prevents proper HF (Port 1) operation with KISS. Call PacComm for information on a temporary fix until the bug is corrected.

TNC-320: Current Firmware: P1.1.6D4 PMS 3.0 $65
European TNC-320 E1.1.6D4 PMS 3.0 $6A
Technical Reference Manual for the TNC-320, First Ed., Second Printing, June 1991.
There is a bug in the KISS module which prevents proper HF (Port 1) operation with KISS. Call PacComm for information on a temporary fix until the bug is corrected.

HandiPacket: Current Firmware: P1.1.6D4 PMS 3.0 $A2
European HandiPacket E1.1.6D4 PMS 3.0 $36
Technical Reference Manual for the HandiPacket, 1st Revised Ed., Second Printing, February 1991:

Radio cable color coding:	Black 18 Inch Cable	Gray 60 Inch Cable
Shell -	Shield	Shield
Pin 1 -	Brown	Violet
Pin 2 -	Red	Black
Pin 3 -	Orange	Yellow
Pin 4 -	Yellow	Orange
Pin 5 -	Green	Blue
Pin 6 -	Blue	Green
Pin 7 -	Violet	Brown
Pin 8 -	Black	Red

TNC-200: Current Firmware, 32k RAM: P1.1.6D4 $30; P1.1.6D4 PMS 3.0 $2F (with PMS)
European TNC-200, 32k RAM: E1.1.6D4 $DF; E1.1.6D4 PMS 3.0 $41 (with PMS)

TNC-220: Current Firmware, 32k RAM: P1.1.6D4 $0C; P1.1.6D4 PMS 3.0 $1D (with PMS)
European TNC-220, 32k RAM: E1.1.6D4 $9F; E1.1.6D4 PMS 3.0 $8F (with PMS)
Note: The SOFTDCD command is defaulted OFF, but must be set to ON for proper operation if there is no tuning indicator installed.

MC-NB96: Technical Reference Manual, Second Edition.

The MC-NB96 is shipped without the mounting connector attached to the circuit board. Solder the connector at location S1A for the TNC-200 (TNC-2, TNC-2A, PK-80), MFJ 1270/1270B/1274/1278, and PC-320. Solder the connector at location S1 for the TINY-2, MICROPOWER-2, and TNC-320. Insure that the pin 1 of the connector contacts pin 1 of the disconnect header. Pins 21-26 of the connector hang over the edge of the 20 pin disconnect header. The 26 pin connector may be shortened to 20 pin size with a knife or saw if necessary for clearance.
The Transmit Audio (TXA) coaxial cable from the MC-NB96 is labeled with a spot of gold paint or TXA label.

mm packet controllers have pin 1 of the modem disconnect header located as follows: TNC-200, TINY-2, ~~ROPOWER-2:~~ Pin nearest to board edge;TNC-220: pin closest to rear of circuit board (marked); ~~C-320:~~Pin closest to J5 marking; PC- 320: pin closest to lower edge of circuit board. ~~ut~~ traces 1 &2 and 17 &18 on the underside of the modem disconnect header of the packet controller. If recovered ~~clock~~ from the MC-NB96 is used, also cut the trace between pins 13 &14.

EM-NB96: The MC-NB96 is currently undergoing revision.

PC-100 Series (PC-105, PC-110, PC-120):
Node Manager Disks 1-2-3: April 20, 1990, Manual First Ed., April 1990

PSK-1: Current Firmware: Version 2.01, 4/21/90 $6717
Technical Reference Manual, First Edition, March 1990: (Revised AEA and Kantronics Appendices, April 1991)
Pages 4 & 5, J1 and J3: If the PSK-1 has an 8 pin DIN connector for J1 (and possibly J3), the following pin definitions apply. This makes possible using J1 for a single radio cable or both J1 and J3 for a dual radio cable installation.

Pin Nr.	J1	J3
1	TX Audio	Step Up
2	Ground	Ground
3	PTT	UHF RX Audio
4	VHF RX Audio	TX Audio
5	RFDCD	Step Down
6	Step Up	N/C
7	UHF RX Audio	N/C
8	Step Down	N/C

Page 8, Serial Port Connections: Note that two serial ports on the computer or an A/B serial switch are needed to make use of the PSK-1 telemetry/control port. One computer serial port is needed for connection to the packet controller. All incoming and outgoing packet information go through the packet controller, so the serial connection to the packet controller must always be intact. Control and telemetry information bypass the packet controller and go directly from J10 to the computer serial port.

Page 29, Jumper Definitions: JP-4 is better described as an output level test point. JP-5 gives increased output level when jumpered. JP-6 is located close to the two voltage regulators. Position 5&6 (for PK-232) is the pair of pins closest to the center of the circuit board. Position 1&2 are located closest to the edge of the board.
The following production change has been made for increased PSK-1 output. The value changes may not be shown on the schematic. R41 changed to 13k and C66 changed from 0.1uf to 0.2 uf.

Page 42-43, Appendix C, PacComm and MFJ Interfacing:
- Cut traces 1 &2, 17 &18 on the underside of the modem disconnect header on the packet controller. Factory installed units may possibly have pins 13/14 and 19/20 cut and then tied together on the cable connector.
- PacComm packet controllers have pin 1 of the modem disconnect header located as follows: TNC-200, TINY-2, MICROPOWER-2: Pin nearest to board edge; TNC-220: pin closest to rear of circuit board (marked); TNC-320:Pin closest to J5 marking; PC- 320: pin closest to lower edge of circuit board.
- Contact PacComm for assistance when interfacing to TNC-220 and TINY-2/MICROPOWER- 2 units of revision 1.4 and earlier.
- The TNC-320 and PC-320 have a 26 pin header. If connecting a 20 pin connector, gently bend pins 21-26 out of the way to allow the connector to fit. Be sure the bent pins are not shorted together. The 26 pin connector may be shortened to 20 pin size with a knife or saw if the extra long connector interferes with components on the TNC.
- Ignore references to Note 5 in the pin definition table.

Page 44-45, Appendix D, AEA Interfacing:
Ignore this Appendix and follow the instructions on the loose sheet provided with the manual.

Page 46-47, Appendix E, Kantronics Interfacing:
Ignore this Appendix and follow the instructions on the loose sheet provided with the manual.

Page 49-50, Appendix F, Radio Interfacing:
- The diagrams for Kenwood radio interfacing are mistakenly shown under the Yaesu section. The Yaesu diagrams near the top of page 50 should be on the lower part of page 49. The lower diagram on page 50 is for the Yaesu FT-726 only, not the FT-736.
PSK-1 cable color coding: 8 pin DIN cable   5 pin DIN cables   Alternate 8 pin DIN cable (Confirm with Ohmeter.)

	8 pin DIN cable	5 pin DIN cables	Alternate 8 pin DIN cable
Pin 1	Red	Yellow	Red
Pin 2	Yellow	Red	Green
Pin 3	Blue	Black	Black
Pin 4	Orange	Orange	White
Pin 5	Green	Brown	Yellow
Pin 6	Brown		Brown
Pin 7	Violet		Orange
Pin 8	Black		Blue

Updates and corrections to the PacComm Operating, Technical Reference and Hardware Manuals.

ALL PRODUCTS:

The current version of each manual is listed. This sheet applies to all PacComm products. Look for the section which applies to the product which you received.

Power connectors are center pin positive.

Current operating instructions for all PacComm amateur products except the PC-100 series is Operating Manual for PacComm Packet Controllers, 4th Ed., 3rd Printing, October, 1991.

The KISS mode may ignore DCD as if FULLDUP is ON regardless of FULLDUP setting.

TINY-2 MK-2:

Current Firmware:	TINY-2 MK-2 with PMS:	P1.1.6D4 PMS 3.0 $FC
	European TINY-2 MK-2 with PMS:	E1.1.6D5 PMS 3.0 $3C
	WA8DED TNC code in upper half of EPROM.	

Note that use of the 'DED' code will cause loss of the PMS messages and non-standard parameters in the battery backed RAM.

Technical Reference Manual for the TINY-2 MK-2 is the 3rd Edition, 1st Printing, November 1992.

The RFDCD input on these products is different than on the TNC-2 and clones. Contact PacComm for an Application Note to correct this problem.

PC-320:

Current Firmware:	PC-320	P1.1.6D4 PMS 3.0 $B2
	European PC-320	E1.1.6D4 PMS 3.0 $2F

Technical Reference Manual for the PC-320, First Ed., First Printing, August 1989:

Page 6, Radio Jack (S2) should be labeled "Pin definitions viewed from PC-320 into end of cable connector."

Page 8, Default Terminal Baud Rate is **4800** (instead of 19,200)

Page 10: JPI1: LOWER selects IRQ5 (instead of 7); JPI2: LOWER selects IRQ7 (instead of 2)

TNC-320:

Current Firmware:	TNC-320	P1.1.6D4 PMS 3.0 $65
	European TNC-320	E1.1.6D4 PMS 3.0 $6A

Technical Reference Manual for the TNC-320, First Ed., Second Printing, June 1991.

HandiPacket:

Current Firmware:	HandiPacket	P1.1.6D5 PMS 3.0 $38
	European HandiPacket	E1.1.6D4 PMS 3.0 $36

Technical Reference Manual for the HandiPacket, 1st Rev. Ed., 2nd Printing, February 1991:
The 16x clock signal is no longer routed to the 8 pin MiniDIN connector. When changing DIP switch settings, or if HandiPacket malfunctions, be sure DIP switch 'CLICKS' fully into the desired position.

Radio cable color coding:		Black 18 Inch	Gray 60 Inch	Off-White 60 Inch
	Shell -	Shield	Shield	Shield
	Pin 1 -	Brown	Violet	Black
	Pin 2 -	Red	Black	Brown
	Pin 3 -	Orange	Yellow	Red
	Pin 4 -	Yellow	Orange	Orange
	Pin 5 -	Green	Blue	Yellow
	Pin 6 -	Blue	Green	Green
	Pin 7 -	Violet	Brown	Blue
	Pin 8 -	Black	Red	Violet

TNC-200:

Current Firmware:	32k RAM, with PMS:	P1.1.6D4 PMS 3.0 $2F
	European TNC-200, 32k RAM, with PMS:	E1.1.6D4 PMS 3.0 $41

TNC-220:

Current Firmware:	32k RAM, with PMS:	P1.1.6D4 PMS 3.0 $1D
	European TNC-220, 32k RAM, with PMS	E1.1.6D4 PMS 3.0 $8F

Note: The SOFTDCD command is defaulted OFF, but must be set to ON for proper operation if there is no tuning indicator installed.

MC-NB96:

Technical Reference Manual, Second Edition.

The MC-NB96 product is manufactured on a circuit board with the identification of DFM-MC. The parts placement on this circuit board is quite different than earlier versions. The manual still refers to the older version circuit board, but all the part and connector specifications are the same. The schematic shipped with the MC-NB96 is up to date.

The MC-NB96 is shipped without the mounting connector attached to the circuit board. Solder the connector at location S1A for the TNC-200 (TNC-2, TNC-2A, PK-80), MFJ 1270/1270B/1274/1278, and PC-320. Solder the connector at location S1 for the TINY-2, MICROPOWER-2, and TNC-320. Insure that the pin 1 of the connector contacts pin 1 of the disconnect header.

The Transmit Audio (TXA) coaxial cable from the MC-NB96 is labeled with a spot of gold paint or TXA label.

PacComm packet controllers have pin 1 of the modem disconnect header located as follows: TNC-200, TINY-2, MICROPOWER-2: Pin nearest to board edge; TNC-220: pin closest to rear of circuit board (marked); TNC-320: Pin closest to J5 marking; PC- 320: pin closest to lower edge of circuit board.

Cut traces 1 &2 and 17 &18 (and 21 & 22 if present) on the underside of the modem disconnect header of the packet controller. If using recovered clock from the MC-NB96, cut the trace between pins 13 &14.

On TINY-2 and MICROPOWER-2 TNCs which are several years old, it may be necessary to shorten JPL and JPD and to bend C25 to the side to clear the MC-NB96 board.

EM-NB96:

Instruction Manual, First Edition, May 1992. The EM-NB96 Instruction Manual applies to the EM-NB96, and to the modem portion of the DT-NB96, TNC-NB96, and IPR-NB96. All of these products use the DFM-SA modem circuit board.

PSK-1 and PSK-1T:

Current Firmware: (PSK-1) Version 2.10, 12/4/91, $251A
(PSK-1T modem) Version 3.10, 12/2/91, $A4C8
(PSK-1T TNC) 1.1.6D5, 12/2/91, $2D.

Instruction Manual, Second Edition, December 1991.

Page 31, Jumper Definitions: JP-4 is an output level test point. JP-5 gives increased output level when jumpered. JP-6 is located close to the two voltage regulators. Position 5&6 (for PK-232) is the pair of pins closest to the center of the circuit board. Position 1&2 are located closest to the edge of the board.

The following production change may not be shown on the schematic. R41 changed to 13k and C66 changed from 0.1uf to 0.2 uf.

PSK-1 cable color coding:_ (Confirm with Ohmeter.)

	8 pin DIN cable	Alternate 8 pin DIN	5 pin DIN cables	Alternate 5 pin DIN
Pin 1	Red	Red	Yellow	Black
Pin 2	Yellow	Green	Red	Red
Pin 3	Blue	Black	Black	Yellow
Pin 4	Orange	White	Orange	Brown
Pin 5	Green	Yellow	Brown	Orange
Pin 6	Brown	Brown		
Pin 7	Violet	Orange		
Pin 8	Black	Blue		

PacTOR:

Current Firmware: Release 2.01, Manual:First Ed., First Printing, May 1992

Page 3, PTT setup: All units are shipped without a keying relay. The factory configuration is BR3 open, BR6 1-2 shorted which provides keying via the FET.

Page 4, FSK: For FSK, strap BR8 pins 1-2, for AFSK, strap BR8 pins 2-3.

Page 4, High Tones: All units come configured for HIGH TONES (2125/2295 Hz). Disregard the note under the High Tones heading. Production units after SN 105 have a second jumper (BR7) to configure the highpass filter for high tones.

Page 8-10, Commands: Command changes in release 2.01:
- ECHO and FREE commands are deleted.
- ARX <0/1> A value of 0 disables the ARX function, 1 enables it.
- CMsg <0/1> A value of 0 disables the Connect Message function, 1 enables it.
- CText <CTEXT> The text of the message to be sent automatically when connected to.

The latest version of PacComm packet firmware for all products except the SPRINT-2 is 3.2b.1 dated August 24, 1994. The SPRINT-2 version is 3.2.9, November 22, 1994.

Release 3.2b corrects a problem with all the products using the 8530 Serial Communications Controller IC (HandiPacket, PC-320, TNC-320, and TNC-220). 3.2b contains one new feature: The monitor command remains operative when GPS is set to ON, i.e. the monitor function is on or off depending on the setting of MON regardless of whether GPS is on or off regardless of the setting of GPS.

Release 3.2b.1 corrected a problem with occasional resetting of the HandiPacket. SPRINT-2 release 3.2.9 contains support for 64k PMS storage and the MYROSE command.

Current operating instructions for all PacComm amateur products except the PC-100 series is Operating Manual for PacComm Packet Controllers, 6th Ed., 1st Printing, May, 1994. Additional and revised commands are documented in these Release Notes.

Appendix A, AX.25 Version 2, Multi-channel TNC Firmware (version 2.6) applies only to the TINY-2 MK-2, MICROPOWER-2, PSK-1T, TNC-NB96, and IPR-NB96, *not* the HandiPacket, PC-320 or TNC-320 or SPRINT-2.

TINY-2 MK-2, MICROPOWER-2, PSK-1T, TNC-NB96, IPR-NB96

Use of the 'DED' code will cause loss of the PMS messages and non-default parameters in the battery backed RAM. You may install a shorting jumper at JPROM to disable the EPROM selection switch.

PC-320, TNC-320, and TNC-220

These three units use PacComm's dual modem system. The EPROM space required to maintain separate default parametersets for each port means there is not room to implement all of the new GPS features in release 3.2. The LOCATION, LTEXT, and LPATH commands are not supported.

If you wish to have all of the GPS features, you may request a special EPROM which contains those features but eliminates the seperate set of default parameters for each port. You may still select modems with the PORT command, but parameters such as FRACK, PACLEN will not change value automatically.

TNC-200, (also TNC-2, TNC-2A, PK-80)

PacComm only supports the 32kRAM version. Ask for the 32k RAM upgrade if your unit is a 16k model.

TNC-220

PacComm only supports the 32k RAM version. Ask for the 32k RAM upgrade if your unit is a 16k model. The SOFTDCD command must be set to ON for proper operation if there is no tuning indicator installed.

PSK-1 and PSK-1T

Current Firmware:	(PSK-1)	Version 2.10, 12/4/91, $251A
	(PSK-1T modem)	Version 3.10, 12/2/91, $A4C8
	(PSK-1T TNC)	3.3, 4/15/94

PacTOR

Current Firmware: Release 2.02

Manual:First Ed., First Printing, May 1992. Be sure to refer to the Manual Supplement for all PacTOR Jumper Settings.

Page 8-10, Commands: Command changes in release 2.02:
- ECHO and FREE commands are deleted.
- ARX <0/1> A value of 0 disables the ARX function, 1 enables it.
- CMsg <0/1> A value of 0 disables the Connect Message function, 1 enables it.
- CText <CTEXT> The text of the message to be sent automatically when connected to.

The terminal program diskette containing MeisterTerm provided with each PacTOR unit has been scanned with McAfee VIRUSCAN 1.06 virus detector.

SPRINT-2

The SPRINT-2 Standard and Satellite Models have firmware release 3.2.9 which supports RAM beyond 32k. The Node and Backbone models come with the PacComm Monitor EPROM which may be used for initial testing and then erased and replaced with network code.

Release 3.2.9 supports 64k of message storage for the PMS and contains the ROSE connection macro which operates as follows:

The MYROSE Command allows entering the callsign of the local ROSE switch.

Then a connect command to the ROSE network may be made in the form

C onnect Callsign @ Destination Switch

The connect request will be properly reformatted and sent to the local switch.

The current version of each manual is listed. This sheet applies to all PacComm products. Look for the section which applies to the product which you received.

Power connectors on all products are center pin positive.

YAPP file transfers

YAPP uses the RTS/DTR signals for flow control (as was done on the TNC-2) but all PacComm products use RTS/CTS for flow control . Therefore to avoid loss of data when using YAPP do one or both of the following: a) operate the computer to TNC link at 1200 baud or slower so that no flow control is invoked, or b) alter your cable at the TNC end - remove the wire from pin 8 and attach it to pin 4 (leaving the original pin 4 wire also attached. It is also necessary to set ECHO OFF on the transmitting TNC.

Premade Cables

Some PacComm products are supplied with premade 5 pin, 8 pin, or miniature 8 pin cables. The pinouts of the cables vary depending on PacComm's source of supply. It is necessary to check each cable with an ohm meter to determine which color code applies. The color codes below describe cables which are frequently used, but *there is no assurance that the cables supplied match any of the codes below.* **Depend on your ohm meter to check results.** Consult the Technical Manual for a diagram of pin numbers for your unit.

Type of Cable ->	8 pin DIN	8 pin DIN	8 pin DIN	8 pin DIN	8 pin DIN	5 pin DIN	5 pin DIN	5 pin DIN
Color and length of Cable ->	Molded Black 60"	Molded Black 48" or 60"	Separable Gray/black 60"	Molded Black 72"	Molded Gold Pins 72"	Molded Black 24-30"	Molded Black 30-36"	Molded White 30-36"
Shell	Shield	Shield	Shield	Shield	Shield	Shield	Shield	Shield
Pin 1	Red	Red	Orange	Red	Brown	Yellow	Black	Red
Pin 2	Yellow	Green	Green	Green	Yellow	Red	Red	Yellow
Pin 3	Blue	Black	Yellow	Black	Blue	Black	Yellow	Green
Pin 4	Orange	White	Brown	White	Green	Orange	Brown	Blue
Pin 5	Green	Yellow	White	Yellow	Violet	Brown	Orange	Black
Pin 6	Brown	Brown/Gray	Blue	Orange	Orange	n/a	n/a	n/a
Pin 7	Violet	Orange	Red	Gray	Red	n/a	n/a	n/a
Pin 8	Black	Blue	Black	Blue	Black	n/a	n/a	n/a

Type of Cable ->	8 pin MiniDIN	8 pin MiniDIN	8 pin MiniDIN	8 pin MiniDIN
Color and Length of Cable ->	Molded Black 18" Beige 60"	Molded Off-white/Gray 60"	Molded Off-white 12"/36"/60"	Molded Off-white 36"
Shell	Shield	Shield	Shield	Shield
Pin 1	Brown	Black	Brown	Orange
Pin 2	Red	Brown	Red	Brown
Pin 3	Orange	Red	Yellow	Violet
Pin 4	Yellow	Orange	Blue	White
Pin 5	Green	Yellow	Violet	Yellow
Pin 6	Blue	Green	Black	Uninsulated
Pin 7	Violet	Blue	White	Blue
Pin 8	Black	Violet	Uninsulated	Black

10 MHz models, Upgrade kits, and 'NODE' models

'10 MHz' factory built models come with 10 MHz CPU, 10 MHz SIO or 8 MHz SCC, and150 ns EPROM

'10 MHz Upgrade Kits' contain 10 MHz CPU, 10 MHz SIO or 8 MHz SCC, 150 ns EPROM, 9.8 MHz crystal, 10 pF capacitor, and instructions. Upgrade kits for the TINY-2 MK-2 and related products using the TMR 1.7 circuit board do not contain the crystal or capacitor.

'NODE' models are rated at 4.9 MHz clock speed and come without an EPROM. 10 MHz NODE models come with a blank 150 ns EPROM.

SPRINT-2

Technical Reference Manual/Interfacing Instructions, Third Edition, First Printing, October, 1994.

TINY-2 MK-2 and MICROPOWER-2, PSK-1T, TNC-NB96, IPR-NB96

Technical Reference Manual for the TINY-2 MK-2 is the 3rd Edition, 1st Printing, November 1992.

Circuit board revision TMR 1.8 jumper additions and changes:

JPB is now a three position jumper. To disconnect the battery no pins should be connected. To enable battery backup, jumper pins 1-2. To clear battery backed RAM, move the jumper to pins 2-3 for 20 seconds, then re-jumper pins 1-2.

JP1 enables the EPROM bank switch when set to 1-2. It enables software controlled bank switching when set to 2-3 and converts the EPROM switch to a GPS in-out function. (See TINY-2 MK-2/GPS).

Nine solder pad jumpers have been added to the underside of the board. Not all are of use on the TINY-2.

SP1: Normally set 2-3 to pull up spare gate. 1-2 not used.

SP2: Leave open. Not used.

SP3: Normally set to 2-3 to enable NetRom pin (9) on DE-9.

SP4: Normally set to 1-2 to select TNC internal clock. 2-3 selects external modem clock.

SP5: Normally open. Close for using MC-NB96 modem.

SP6: Normally closed. Enables STA LED.

SP7: Normally closed. Isolates MC-NB96 received audio.

SP8: Normally set 1-2 to connect power bus to PWR LED. Set 2-3 to connect PWR LED to CPU HALT line.

SP9: Normally closed. When open, disables modem audio gating.

The RFDCD input on these products is different than on the TNC-2 and clones. Contact PacComm for an Application Note containing details.

When attaching an EM-NB96 or DT-NB96 to a TINY-2, you must cut the J5 bridge between pins 9 and pins 10 on the TINY-2.

TINY-2 MK-2/GPS

See also TINY-2 above. Current production uses circuit board TMR 1.8. JP1 enables the EPROM bank switch when set to 1-2. It enables software controlled bank switching when set to 2-3 and converts the EPROM switch to a GPS in-out function. When set up for GPS, the 'EPROM' switch serves to select whether the GPS or the standard serial port connector is connected to the TNC. When the switch is 'out' commands may be given to the TNC via the serial port connector. When the switch is 'in' the serial port connector is disconnected and the internal GPS is attached to the TNC input.

PC-320

Technical Reference Manual for the PC-320, First Ed., First Printing, August 1989.

Page 6, Radio Jack (S2) should be labeled "Pin definitions viewed from PC-320 into end of cable connector."

Page 8, Default Terminal Baud Rate is 4800 (instead of 19,200)

Page 10: JPI1: LOWER selects IRQ5 (instead of 7); JPI2: LOWER selects IRQ7 (instead of 2)

TNC-320

Technical Reference Manual for the TNC-320, First Ed., Second Printing, June 1991.

HandiPacket

Technical Reference Manual for the HandiPacket, 1st Rev. Ed., 2nd Printing, February 1991

The 16x clock signal is no longer routed to the 8 pin MiniDIN connector.

When changing DIP switch settings, or if HandiPacket malfunctions, be sure DIP switch 'CLICKS' fully into the desired position.

TNC-220

The TNC-220 has been out of production since 1989. Technical Manuals are out of print. PacComm will still accept these units for repair and firmware upgrade.

DFM-MC

The circuit board designation DFM-MC (Direct FM modem card) is used on the circuit board which is sold as model MC-NB96.

MC-NB96

Technical Reference Manual, Second Edition.

The MC-NB96 product is manufactured on a circuit board with the identification of DFM-MC. The parts placement on this circuit board is quite different from earlier versions. The manual still refers to the older version circuit board, but all the part and connector specifications are the same. The schematic shipped with the MC-NB96 is up to date.

The MC-NB96 is shipped without the mounting connector attached to the circuit board. Solder the connector at location S1A for the TNC-200 (TNC-2, TNC-2A, PK-80), MFJ 1270/1270B/1274/1278, and PC-320. Solder the

connector at location S1 for the TINY-2, MICROPOWER-2, and TNC-320. Insure that the pin 1 of the connector contacts pin 1 of the disconnect header. Pin 1 is marked with a square box.

The Transmit Audio (TXA) coaxial cable from the MC-NB96 is labeled with a spot of gold paint or TXA label.

PacComm packet controllers have pin 1 of the modem disconnect header located as follows: TNC-200, TINY-2, MICROPOWER-2: Pin nearest to board edge; TNC-220: pin closest to rear of circuit board (marked); TNC-320: Pin closest to J5 marking; PC- 320: pin closest to lower edge of circuit board.

Cut traces 1 &2 and 17 &18 (and 21 & 22 if present) on the underside of the modem disconnect header of the packet controller. If using recovered clock from the MC-NB96, cut the trace between pins 13 &14.

On TINY-2 and MICROPOWER-2 TNCs which are several years old, it may be necessary to shorten JPL and JPD and to bend C25 to the side to clear the MC-NB96 board.

DFM-SA

The circuit board labeled DFM-SA (DFM modem, stand alone model) is used in the EM-NB96, and the modem portion of the DT-NB96, TNC-NB96, and IPR-NB96. The EM-NB96 Manual applies to all products which use the DFM-SA circuit board assembly.

EM-NB96

Instruction Manual, First Edition, May 1992.

The EM-NB96 Instruction Manual applies to the EM-NB96, and to the modem portion of the DT-NB96, TNC-NB96, and IPR-NB96. All of these products use the DFM-SA modem circuit board. When attaching an EM-NB96 to a TINY-2, you must cut the J5 bridge between pins 9 and pins 10 on the TINY-2 and jumper J2 pins 5-9. If the DFM-SA is part of an IPR-NB96, only J2A pins 5-9 must be connected.

The wiring of the radio connector (J1) has been changed on circuit board revision 1.3. 1200 baud connections use pins 2,6,7,8, while 9600 baud connections use pins 1-5. The schematic (page 3 of 5) dated August 30, 1993 has the J1 connector signals on pins 7 and 8 reversed. Pin 7 is actually TXA and Pin 8 is PTT.

TNC-NB96

The wiring of the radio connector (J1) has been changed on circuit board revision 1.3. 1200 baud connections use pins 2,6,7,8, while 9600 baud connections use pins 1-5. The schematic (page 3 of 5) dated August 30, 1993 has the J1 connector signals on pins 7 and 8 reversed. Pin 7 is actually TXA and Pin 8 is PTT.

PSK-1 and PSK-1T

Instruction Manual, Second Edition, December 1991.

Page 31, Jumper Definitions: JP-4 is an output level test point. JP-5 gives increased output level when jumpered. JP-6 is located close to the two voltage regulators. Position 5&6 (for PK-232) is the pair of pins closest to the center of the circuit board. Position 1&2 are located closest to the edge of the board.

Appendix F, Page 54: Correction to the Yaesu radio Microphone connections: PSK-1 J3 Pin 1 is correct. Junction of 2700 ohm resistors connects to Mic Pin 2, PSK-1 J3 Pin 5 connects to Mic Pin 3, and PSK-1 J3 Pin 4 connects to Mic Pin 7.

PacTOR

Manual:First Ed., First Printing, May 1992

Be sure to refer to the Manual Supplement for all PacTOR Jumper Settings.

Page 3, PTT setup: Units are shipped without a keying relay. The configuration is BR3 open, BR6 1-2 shorted for FET keying.

Page 4, FSK: For FSK, strap BR8 pins 1-2, for AFSK, strap BR8 pins 2-3.

Page 4, High Tones: All units come configured for HIGH TONES (2125/2295 Hz). Disregard the note in the manual under the High Tones heading. Production units after SN 105 have a jumper (BR7) to configure the highpass filter for high tones.