

Exhibit 7. User Manual

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PCS CDMA Wireless Modem Users Guide



1. Introduction

This document is a user guide for the PCS Wireless modem, or PCS Access Terminal. The wireless modem provides the fastest fully mobile wireless link available to the internet, at data rates of up to 2.4Mbps (peak data rate on the forward link).

1.1 Product Information

- Dual receive chain for diversity support
- Compact size : 7" x 4.5" x 0.8"
- Lightweight : 12 ounces
- Ethernet interface to host P.C.
- RS-232 debug port.
- Hardware support for USB (no software support at this time).

- Internal battery provides 1 hour of **continuous** transmission on the reverse link. Total operating time / standby time figures are not yet available.
- AC adapter for fixed operation / battery charging.
- Cigarette lighter adapter for in car operation /battery charging.
- ANSI J-STD-18 design goal.

Note : This device contains no user serviceable parts, and shall only be opened by authorized Qualcomm personnel. The modem contains highly sophisticated electronics, which may be damaged if the modem is opened. The modem contains an internal lithium ion polymer battery, which can easily be damaged or cause damage if the modem is opened by unauthorized personnel.

Caution

The modem must be used in a configuration that ensures a minimum line-of-sight separation distance of 20cm (8 inch) is maintained at all times between the modem transmit antenna and any personnel. The transmit antenna location is shown in figure 1-1.

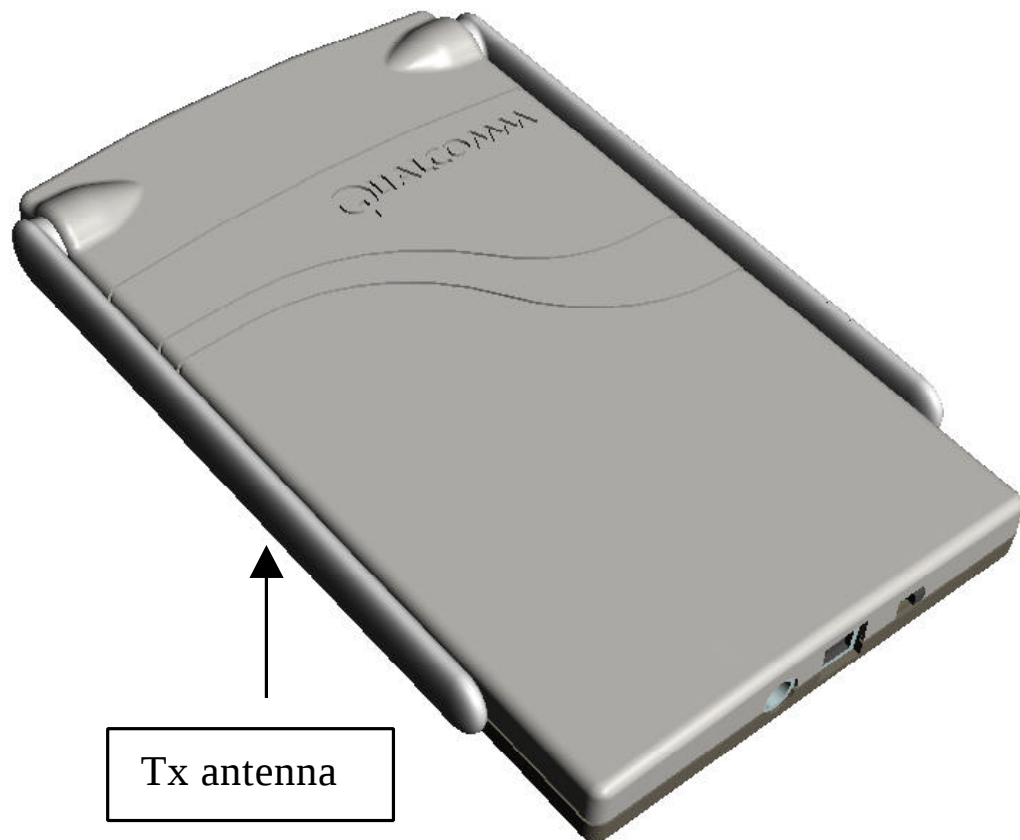


Figure 1-1 PCS Access Terminal

1.2 Usage Agreement

The following describes the restrictions on the use of the HDR Access Terminal.

The HDR System and its components are proprietary and confidential property of QUALCOMM and contain proprietary information. The end user agrees not to open or attempt to access the contents of the HDR System provided by QUALCOMM for the Customer Trial. The end user further agrees not to reverse engineer, decompile, translate or disassemble any component or software provided as part of the HDR System. QUALCOMM will utilize various means of securing the equipment that will make it evident to QUALCOMM if the integrity of the equipment has been compromised.

These restrictions shall apply to all HDR Systems provided by QUALCOMM to the end user. The confidential nature of the HDR System, its components and hardware shall survive the termination of any agreements between the parties relating to confidentiality and/or the HDR System. Additionally, the end user agrees to provide written notification of these specific restrictions to all customers and other parties that receive the HDR System or any component thereof. The end user further assumes responsibility for enforcement of these restrictions upon any party that receives the HDR System or any component thereof directly or indirectly.

2. External Connectors/Power Switch

The unit contains the following external connectors. Their positions are shown in the figures 2-1 and 2-2 below.

- Power
- USB
- Ethernet / RS-232

The ON/OFF switch is the slider switch positioned next to the USB connector. To turn the unit on, slide the switch away from the USB connector.

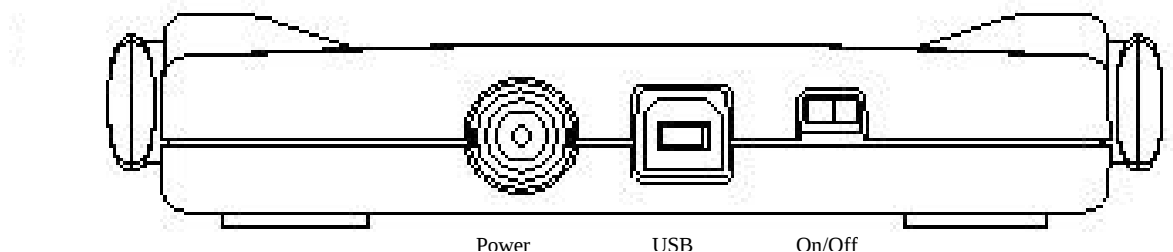


Figure 2-1 Modem End view

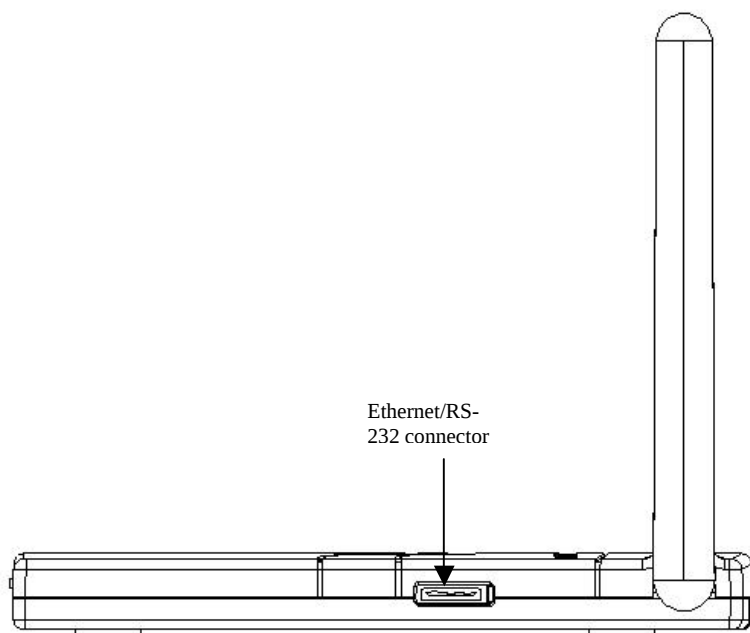


Figure 2-2 Modem Side view

2.1 Charging the battery

The modem uses a lithium ion battery pack to provide power for mobile operation. This battery is internal and inaccessible to the user. To operate safely the battery requires a unique current – voltage profile that can only be provided by the AC adapter or the cigarette lighter adapter included with the modem. Do not attempt to operate or charge the battery with any power supply other than the ancillaries supplied with the kit. If the ancillaries are not available, request replacements from Qualcomm. **If unapproved chargers are used, damage to the modem will ensue.**

To operate the modem from a household power source, plug the AC adapter into the household power outlet (110V, 60Hz), and connect the output of the AC adapter to the modem. The adapter will operate the modem and charge the battery. The average charge time is two hours. This charge time will increase if the modem is in use.

The Cigarette Lighter Adapter (CLA) ancillary is supplied to allow the user to operate the modem from a vehicle electrical outlet.

The external adapter will charge the battery with the modem power switch in the on or off position.

2.2 Computer Connectivity

The Modem can be connected to a P.C. or to a hub via one of the ethernet dongles supplied with the kit.

The ethernet dongle labeled with the Qualcomm part number 364-18578-0000 is a straight through cable for connection to a hub. This cable is terminated with a female RJ45 receptacle.

The ethernet dongle labeled with the Qualcomm part number 364-18578-0001 is a cross over cable for direct connection to a PC. This cable is terminated with a with a male RJ45 receptacle.

Both dongles attach to the modem via the connector on the side of the unit. This is a keyed connector, and can only be used with the Qualcomm supplied dongles.

3. Modem LEDs

The modem contains four LEDs. If desired, the modem can be attached to the back of a laptop so that the LEDs are visible over the top of the monitor.

The functions of the LEDs are as follows

3.1 Power LED

Orange (continuous)	:	initializing
Orange (flashing)	:	battery not fully charged
Green (flashing)	:	battery fully charged
Red (flashing)	:	battery is low, connect to DC power immediately to avoid loss of connection.

3.2 Tx LED

Green (flashing)	:	Transmitting data on traffic channel
Red (flashing)	:	Transmit Error
Orange (flashing)	:	Transmitting access probes (LED Engineering Mode)

3.3 Rx LED

Green (flashing)	:	Receiving traffic channel data
Red (flashing)	:	Received bad packets (CRC failure)
Orange (flashing)	:	Received Control Channel data (LED Engineering Mode)

3.4 Service LED

Green (flashing)	:	Access Terminal (AT) Registered with HDR network
Orange (flashing)	:	Searching for HDR network
Red (flashing)	:	Fault

3.5 Modem Installation

The modem is installed on the back of a laptop by means of four velcro pads.

The antennae must meet the following criteria for optimum performance

- When deployed, the antennae must be above the screen of the laptop, so that the antennae are not obstructed by the laptop display.
- Both antennae must be deployed or the modem performance will be severely degraded

The pictures below show the optimum installation arrangement for a modem on a laptop.



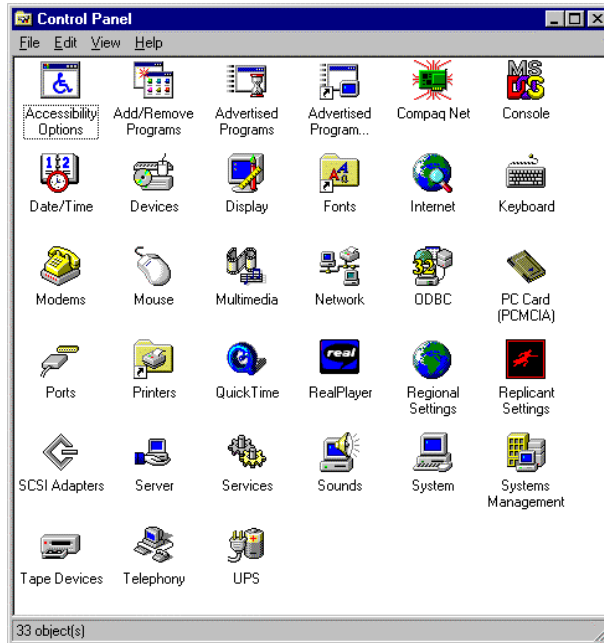
Figure 3 Modem Installed on a laptop front view



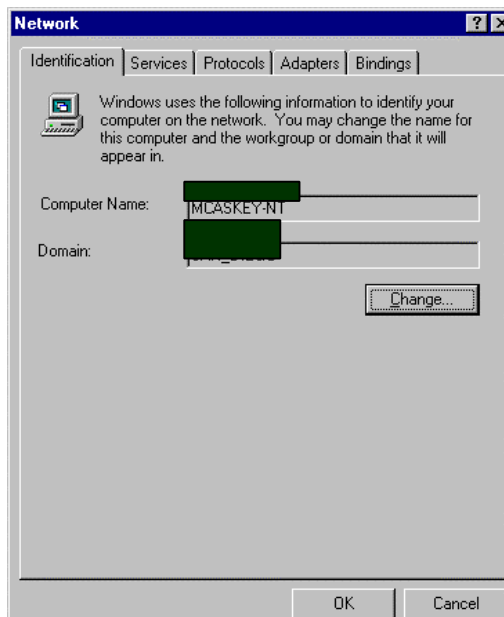
Figure 4 Modem installed on a laptop side view

4. PC Configuration

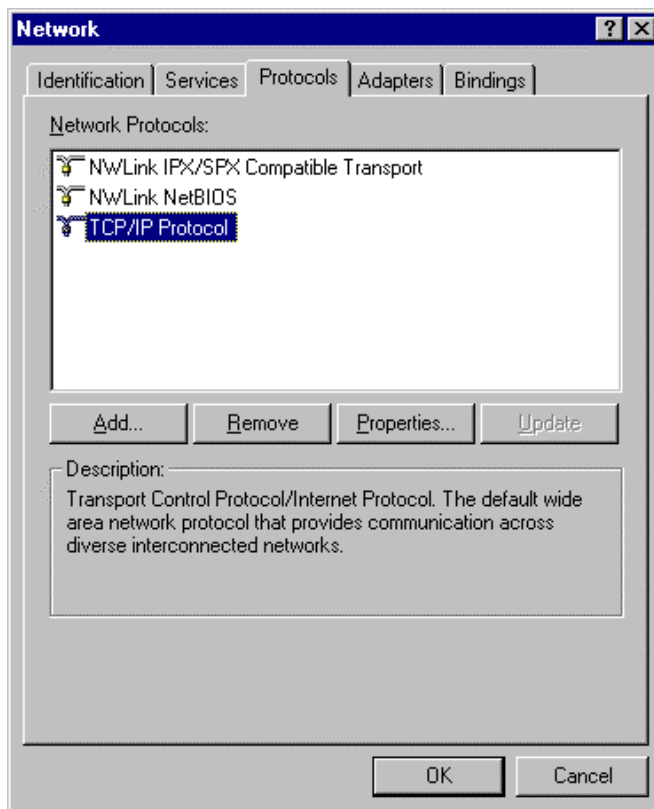
Step 1 : go to the control panel, and double click on the network icon



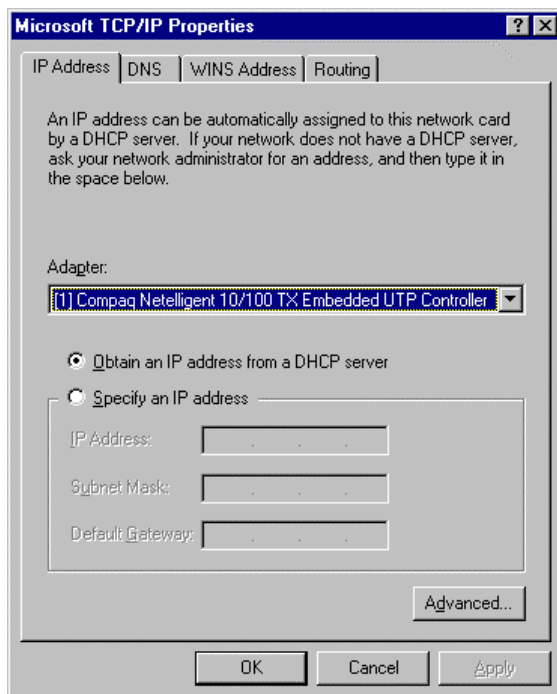
Step 2 : Select the Protocols tab



Step 3 :double click on the TCP/IP Protocol entry



Step 4 : check the “Obtain an IP address from a DHCP server” button, press the "OK" button and then reboot the machine if requested.



Laptop configuration is now complete. For updating Hornet AT software see
80-0262-1 HDR SYS REL 6.0 SW INSTALLATION USER GUIDE