CYBER TRACKER USER MANUAL

Portable iDEN Version

Table of Contents

Introduction

This guide introduces you to your Cyber Tracker a registered trademark of HISS, Inc. (Patent Pending). This guide is divided into four sections and contains the following information:

- **Section 1**: Getting Started
- **Section 2**: Installing the Software
- **Section 3**: Cyber Tracker Features
- **Section 4**: Safety Guidelines and Warranty Information

You will get the most out of your Cyber Tracker if you read each section. However, if you would like to get right to a specific feature, simply locate that section in the Table of Contents and go directly to that page. Follow the instructions in that section and you will be ready to use your Cyber Tracker in no time.

Note: *Due to updates in software, this printed guide may not be the most current version for* s *your Cyber Tracker. Visit www.hissusa.com and sign on to access the most recent version of the guide.*

Getting Started

Hardware

The following items should be included in your kit:

- Cyber Tracker
- AC/DC Power Supply
- Software
- Disassembly Tool (Commercial only)
- User Manual

Cyber Tracker Specifications

- 200MHz Intel PXA255 XScale processor.
- 32MB Synchronous DRAM.
- 16MB Intel StrataFlash.
- 2 x 16C550 compatible UART.
- 10BaseT Ethernet Interface.
- Single +12V power supply input.
- Watchdog Timer (automatic sleep and wake-up function with location check).
- Real Time Clock.
- Digital I/O (interface to switch and LED membrane).
- 4.8V, 1.8Ah NiMH battery charging circuit.
- Battery low-voltage detect.
- Battery low-voltage cut-off circuit.
- SIM card connector and SIM interface to modem board.
- Speaker amplifier for modem board audio output and connection to 0.5W speaker.
- Microphone to modem board.

Quick Steps to Activate Through Nextel/Sprint

- Confirm if you are in a Nextel/Sprint Service area

- Brief credit check - Before activation, Nextel/Sprint may check your credit and verify your identity. You must have and maintain satisfactory credit to receive and continue to receive services.

- Determine service plan

    1. Data Plan – GPS tracking every:
        a. 3 seconds
        b. 30 seconds
        c. 10 minutes

    2. Push to Talk (PTT)
        a. Minute Package
        b. Unlimited Usage

Software Installation

Technical Support

For Cyber Tracker technical support, contact Homeland Integrated Security Systems, Inc.:

Email: www.hissusa.com
Phone: 828-681-5152
Mail: Homeland Integrated Security Systems, Inc
1 Town Square
Asheville, NC 2803

Requirements

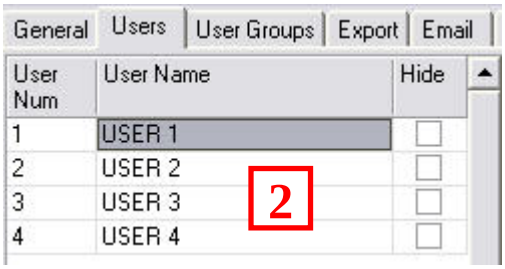
- Pre-configured Cyber Tracker
- Sprint/Nextel Total Connect service plan
- Public IP address
- Cyber Tracker application installed on the workstation

Standard/Professional User Setup

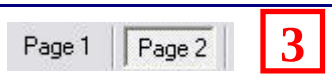
Prior to performing this setup, verify the requirements in the preceding section have been met.

1 In the Cyber Tracker application, select *Setup*.

2 Go to the *Users* tab and highlight the User that will be assigned the Cyber Tracker.



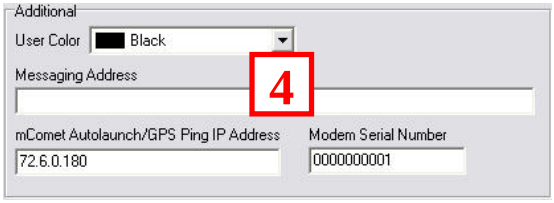
3 In the *Users* tab, select the *Page 2* tab.



4 In the *Additional* section at the bottom of *Page 2*, are the two required fields for the Cyber Tracker.

- Enter the IP address of the Cyber Tracker in the *mComet Autolaunch/GPS Ping IP Address* field.
- Enter the Serial Number of the Cyber Tracker in the *Modem Serial Number* field.

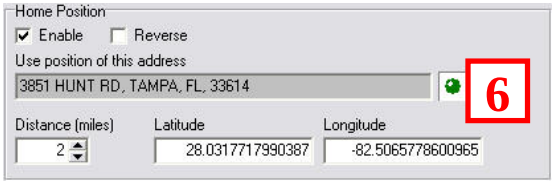
The Serial Number(SN) can be found on the device.



5 Select the *User Color* you desire the Cyber Tracker User to appear as on the map.

6 If desired, setup the Geo-fencing options in the *Home Position* section of *Page 2*.

Reference *Home Position Violation Settings* on page63 of the *Comet Tracker Workstation User Guide* for additional information.



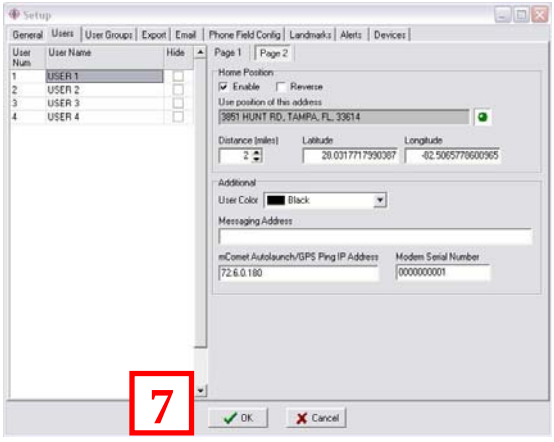
7 Repeat the preceding steps for each additional user.

When finished, select *OK* to save your settings.

Once the settings are saved and the vehicle is in the field, you should see a position within 3-5 minutes.

The Cyber Tracker is pre-configured with a GPS request interval of 60 seconds and a send threshold of 1. If you desire to change these settings, refer to the *Website GPS Settings* section.

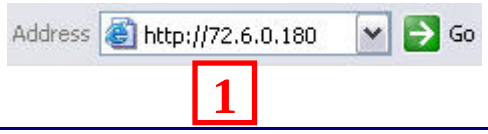
All other User settings and fields will not apply to the Cyber Tracker User after the *Modem Serial Number* field is filled.



Website GPS Settings

Each Cyber Tracker has its own internal website with configurable GPS settings. The following procedure allows you to change how often the Cyber Tracker will obtain location data from GPS satellites and how many positions are stored before sending to the Server.

1 From a web browser, type ***http://*** followed by the IP address of the Cyber Tracker.

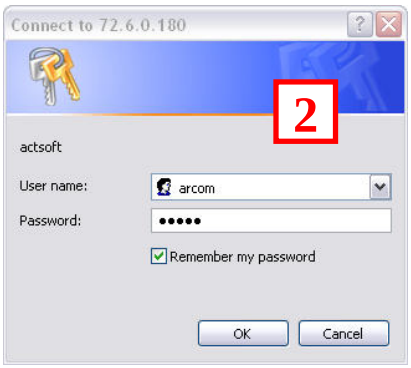


2 Enter the required Username and Password in the resulting dialog box.

The default Username and Password are:

- Username: cyber
- Password: cyber

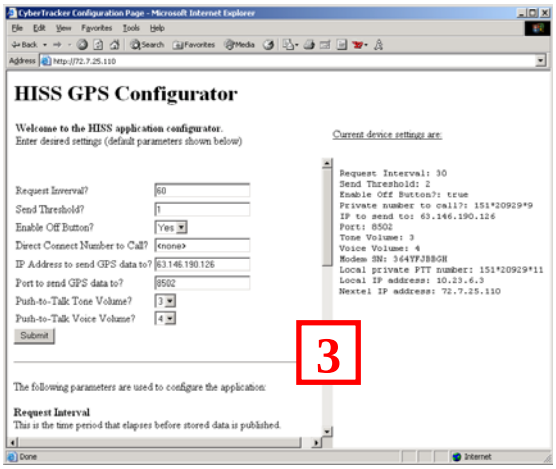
Refer to steps 11 and 12 below, to change the default username and password.



3 The *HISS GPS Configurator* page appears.

The left side of the screen initially shows factory default settings. If any values are to be updated, the correct values must be entered in all these fields before clicking the Submit button.

The right side shows the device settings as currently set up. Use this information to re-enter the configuration fields on the left, in the event that one or more of the values need to be changed. You do not need to reenter the Modem SN, local PTT or IP, or Nextel IP – these are automatically set up.



4 Enter the *Request Interval* in seconds. The Request Interval is how often the CyberTracker will obtain location data from GPS satellites. For example, to get location information every 2 minutes, enter 120.

The minimum Request Interval is 10 seconds.

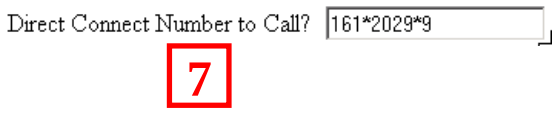
5 Enter the *Send Threshold*. The Send Threshold is the number of GPS samples which will be taken before the CyberTracker will send all location data to the ActSoft server. For example, to measure GPS locations every 15 seconds but send once per minute, enter a Request Interval of 15 and a Send Threshold of 4.

The maximum Send Threshold is 19.

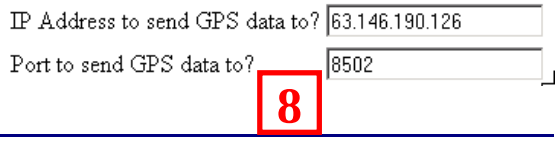
Causing the CyberTracker to report more often than 20 seconds may block all inbound PTT calls.

6 Select whether to *Enable Off Button*. Setting this to No disables the Off button, so the user may not turn off the CyberTracker. The On button is unaffected.

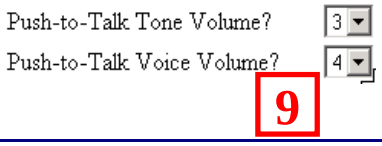
7 Enter the *Private (Direct Connect) Number to Call*, which is the number called when the PTT button is pressed. The CyberTracker may be configured to call only one pre-programmed Direct Connect number at a time, although it will accept inbound Direct Connect calls from any Nextel phone.



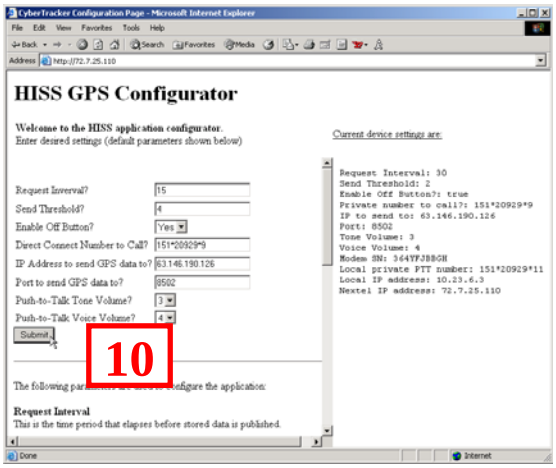
8 The *IP Address* and *Port to send GPS data to* is the public address of the ActSoft server. These should normally be left at default settings.

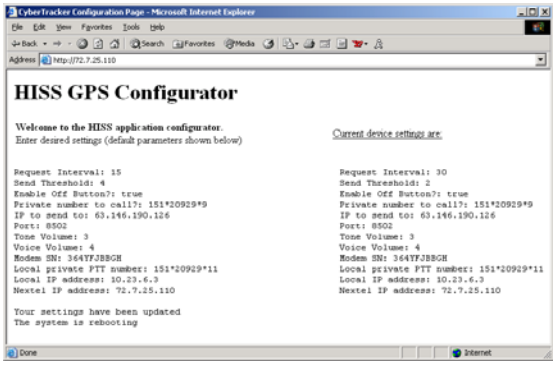


9 Set the *Push-to-Talk Tone Volume* and *Voice Volume* if necessary, with a value from 1 to 5 (5 is loudest). These set the CyberTracker speaker volume for tones and voice.

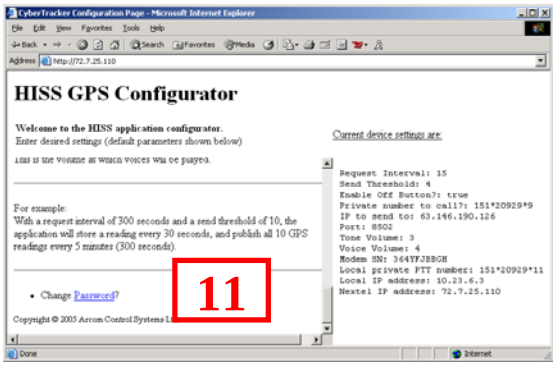


10 After configuring all fields in the left side of the Configurator screen, press the Submit button. The screen will update with the new settings, and the CyberTracker will reboot within several seconds.

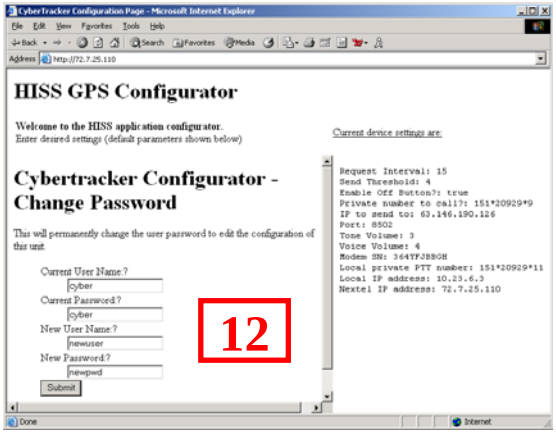




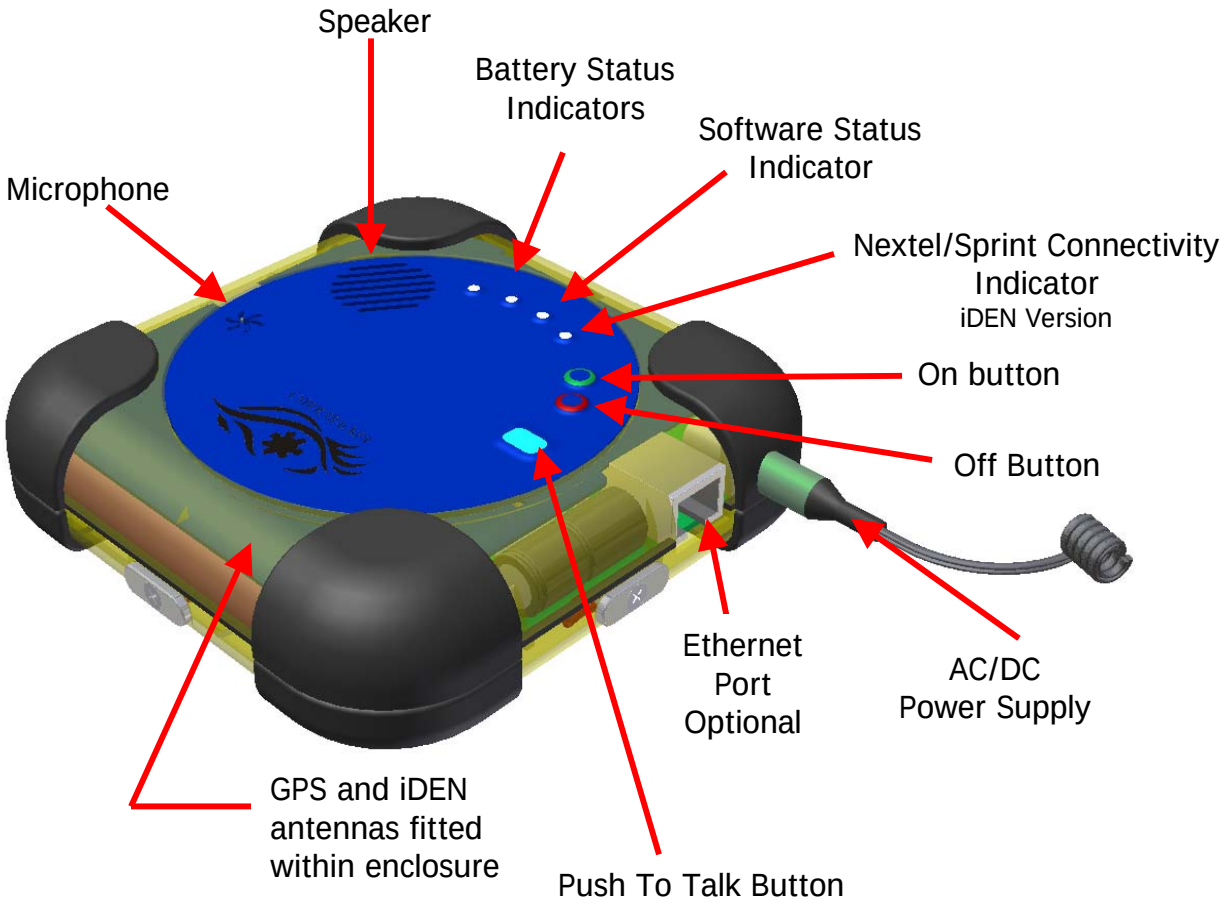
11 To change the password, scroll to the bottom of the left-hand configuration screen, and click the *Change Password* link.



12 Fill in the fields for *Current User Name/Password* and *New User Name/Password*. Click the Submit button when finished.



Cyber Tracker Features



Key Features

Antenna

- The Cyber Tracker™ has embedded GPS and iDEN antennas.

Battery

- Cyber Tracker uses a rechargeable Nickel Metal Hydride Battery Pack.
- The battery pack is contained in the Cyber Tracker and can only be replaced by an authorized service center.
- The battery pack has a built-in thermistor for over temperature/over charging protection.

  Over charging of the battery will be prevented by:

  1. Fixed maximum charge time
  2. Detection of battery charge
  3. Monitoring the temperature
  4. Monitoring the battery voltage

  The life expectancy of a battery pack will be 500 charges and/or 5 years, whichever is the shortest time.

Battery Charging

Whenever an external power supply is connected, the charging circuit performs a fast charge. After the battery capacity nears its full limit, the charger goes into a slower trickle-charge mode. The time required to fully charge the battery pack is approximately 2 hours.

Two LEDs indicate status of the battery charging circuit. See below for the meaning of the LEDs.

Charging Unit for Battery

- The Cyber Tracker™ comes with an AC/DC wall jack or optional car charger.
- When power supply is connected, the unit automatically powers on.
- The acceptable temperature range for the battery to be charged is between 0° C and 45°C (32 to 113°F). The unit will not charge if the battery detects that the temperature is outside this temperature range. The operating temperature is 0°C to 50° C (32 to 122°F).

LED meanings

Starting from left to right:

1) Bi-color battery charge LED. 

- Amber (yellow) indicates that the battery is being charged.
- Green indicates that the battery is fully charged.
- Off indicates that there is no external power supply connected.

2) Red battery Fault LED. 

- Off is normal condition.
- Red (on) indicates that there is a charging fault (if power supply is connected), or that the battery is low and nearly discharged (when running from battery).

3) Green LED 1. Operation status. 

- On solid during startup.
- Blinking quickly (twice per second) indicates that satellite GPS location was not available at the last sample. If available, the location of the cellular tower or a recently stored location will be reported instead.
- Blinking slowly (once every two seconds) indicates that a good satellite GPS position was obtained on the last sample period.

4) Green LED 2. Sprint/Nextel communication status. 

- This should light up when iDEN network connection is established by the CyberTracker and responses are being obtained from the ActSoft server.
- At startup or after three successive failures to obtain response from the ActSoft server, this light goes off.

Battery Charge LED	Battery Low / Charge Fault LED	Software status LED	Description
Off	Off	**Off**	CyberTracker is off or no battery power.
Off	Off	**On/Blinking**	CyberTracker is running from battery.
Off	**On**	Off	Battery charging fault. Unit may require power-off and on to reset fault.
Off	**On**	On/Blinking	Battery low warning.
Green	**Off**	N/A	12V present, battery at full charge.
Green	**On**	N/A	Battery charge fault – battery over/under temperature, or overcharge.
Amber	**Off**	N/A	12V present, battery being charged.
Amber	**On**	N/A	Battery charge fault – battery over/under temperature.

Push To Talk (PTT)

- Allows walkie-talkie communication with another Nextel/Sprint phone. (Must be included in your Nextel/Sprint Service Plan).
- Other phones can call the Cyber Tracker or the Cyber Tracker can make outbound calls to a single pre-programmed number using the integrated microphone and speaker.
- To use this feature, press to talk and release to listen.

Speaker / Microphone

- Keep speaker clear of items on top of Cyber Tracker.
- Speak close to microphone for maximum efficiency.
- Keep all liquids away from Cyber Tracker.

On/Off Buttons

- Enable the user to manually turn the device on and off.
- Press the On button and release to turn unit on.
- To turn off, first remove the external power supply, then press and hold the Off button until all the lights extinguish. This will usually take about 11 seconds, to allow the modem to properly shut down before losing power. The Off button may be disabled in configuration, if desired to prevent a user from disabling GPS reporting.

NOTE: If you do not hold the Off button until all lights go out, or if the CyberTracker remains connected to the external power supply, it will not fully power down and the On button will not work. To correct this situation, remove the external power supply, and press the Off button again. There will be a momentary flash on the second (red) battery LED. Now the CyberTracker can be powered on normally and/or connected to external power again.

Real Time Clock

- The real-time clock will be set by the software application from GPS time when the unit is initially switched/powered on and GPS lock is successful.

Modem

- The Cyber Tracker™ has an integrated wireless modem. The IO200 is an iDEN modem providing circuit/packet data connectivity, interconnect and dispatch calls. The modem operates in iDEN 800 MHz and 900 MHz.

- The iO200 also contains a GPS receiver, which is used to obtain location information. The GPS unit shares the same antenna as the modem.

- The IO200 modem provides:
  - Push to Talk
  - Send data
  - Receives dispatch calls

The Cyber Tracker will power down fully while charging. Removing power from the charging contacts will cause the Cyber Tracker to power up from a cold boot and run its software. Once the on signal is received, the Cyber Tracker will enable the modem and establish communications. The software will then detect that the Cyber Tracker has correctly established its present on the communication network.

Operating/Storage Temperature

The Cyber Tracker is designed to operate in a temperature between 0° C and 50 °C. Storage temperature should be within the range of –20°C to 60° C.

Technical Support

Homeland Integrated Security Systems, Inc.
http://www.hissusa.com 1-828-684-7644

Warranty/Service

HISS, INC. 1 YEAR LIMITED WARRANTY. For a period of one (1) year from the date of purchase. HISS, INC. will at its option, either pay the parts and labor charges to any authorized HISS, INC. service facility to repair or replace a defective product (with new or rebuilt parts/replacements) After this one (1) year period, you must pay all parts, shipping and labor charges.

Proof of purchase in the form of a bill of sale or receipted invoice or warranty document, which is evidence that the product is within the warranty period, must be presented to obtain warranty service. This limited warranty is not transferable to any third party, including but not limited to any subsequence purchaser or owner of the Products. Transfer or resale of Product will automatically terminate warranty coverage with respect to the Products.

The limited warranty does not cover and is void with respect to the following (i) Products which have been improperly installed, repaired, maintained or modified (including the

antenna); (ii) Products which have been subjected to misuse (including Products used in conjunction with hardware electrically or mechanically incompatible or used with accessories not supplied by HISS, Inc.), abuse, accident, physical damage, abnormal operation, improper handling and storage, neglect, exposure to fire, water or excessive moisture or dampness or extreme changes in climate or temperature; (iii)Products operated outside published maximum ratings; (iv) cosmetic damage (v) Products on which warranty sticker or Product serial numbers have been removed, altered, or rendered illegible. (vi) customer instruction (vii) cost of installation, removal or reinstallation; (viii) signal reception problems (unless caused by defect in material and workmanship) (ix) damage as the result of fire, flood, acts of God or other acts which are not the fault of HISS, INC. and which the Product is not specified to tolerate, including damage caused by mishandling and blown fuses.

This warranty does not cover customer education, instruction, and installation, set up adjustments or signal reception problems.

Use with accessories not provided by HISS, INC., Inc. or otherwise not expressly authorized by HISS, INC., Inc. may be DANGEROUS and voids the warranty.

Performance and Safety

CAUTION

To reduce the risk of fire and electric shock, always follow basic safety precautions, including the following:

1. Do not use this equipment in or near water.
2. Do not spill liquid of any kind on this product.
3. Do not disassemble this product. It contains no user replaceable parts.

BATTERY SAFETY

To reduce the risk of fire, injury, electric shock, or property damage, please read and understand the following instructions:

1. The Cyber Tracker contains a Nickel-Metal Hydride (NiMH) battery pack. This battery pack must be replaced by an authorized HISS, Inc. service center.
2. Do not place the batteries in contact with water or fire.
3. Do not open, disassemble, crush or expose the batteries to temperatures greater that 60 ° C (140°F).
4. The battery pack heats up while charging. This is normal and is not dangerous.
5. Disassembly of the battery pack voids the warranty.
6. Battery pack should always be disposed of properly.

COMPLIANCE WITH RF ENERGY EXPOSURE STANDARDS

The CyberTracker is tested to comply with the United States FCC Code of Federal Regulations, 47CFR part 2 sub-part J, regarding human exposure to radio frequency (RF) electromagnetic energy.

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standard, users in 2-way mode should hold the CyberTracker with the microphone one to two inches (2.5 to 5 cm) away from the lips while speaking. Unauthorized antennas, modifications, or attachments could damage the modem and may violate FCC regulations.

ELECTROMAGNETIC INTERFERENCE/COMPATIBILITY

NOTE: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded or configured for electromagnetic compatibility.

This device complies with part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference. If use of the CyberTracker in close proximity to other electronic devices such as television, radio, computer, etc., is observed to cause interference, move the CyberTracker to a different location for optimal use.

Use of the CyberTracker in facilities (including aircraft) where cellular phone usage is limited, or near medical devices (such as pacemakers, hearing aids, etc.) which may be subject to RF energy should be conducted in accordance with local ordinances and good judgment.

Use of the CyberTracker while driving is subject to local laws and regulations regarding the use of radios or cellular devices. Always make sure to:

- Pay full attention to the road and driving conditions
- Place the CyberTracker such that it will not distract from or block full view.
- Do not place the CyberTracker in front of, or on top of, areas where air bags might be likely to deploy in the event of an accident.
- Pull off the road and park before initiating a voice call, if driving conditions require.