iGPS-BT User Manual

FCC Notices

This device complies with Part 15(b and c) of the FCC Rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Class B

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

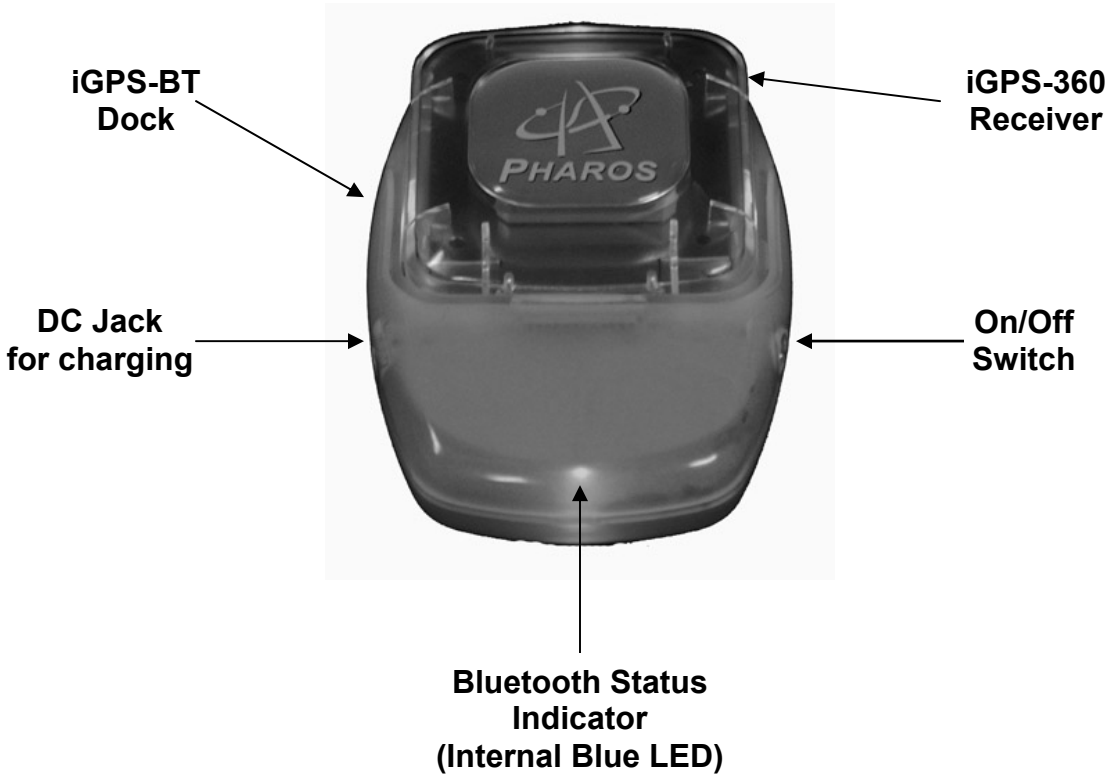
FCC ID# Q7M-IGPS-BT

CE Notices

This device has been tested and found to comply with CE marking according to the R&TTE Directive, 99/5/EEC. The test standards are listed below:

CE/LVD	EN60950: 1992+A1+A2+A3+A4+A11
CE/EMC	EN301 489-17 V 1.1.1: 09-2000
	EN301 489-1 V 1.3.1: 09-2001
Radio Spectrum	EN300 328-1 V 1.3.1: 12-2001
	EN300 328-2 V 1.2.1: 12-2001

I. iGPS-360 Receiver and Bluetooth Dock



DC Jack

- Plug either the DC charging adapter (included in PT200 and PT300) or AC battery charger (included in PT100 and PXT02 accessory) into the DC Jack to charge the battery.
  Refer to III. Battery charging instructions.
- iGPS-BT will need to be charged for approximately 2-3 hours before initial use.

On/Off Switch

- Turns the iGPS-BT on or off. Blue LED's will light up when powered.

Bluetooth Status Indicator (Internal Blue LED)

- Blinking: Searching for Bluetooth signal
- Steady: Bluetooth communication established, ready to use.

II. iGPS-BT Setup (see walkthrough guides at the end of this section)

1. The iGPS-BT will need to be charged for two to three hours before initial use.

2. Turn on the iGPS-BT. The status indicator will blink as it searches for a Bluetooth connection.

3. Launch the Bluetooth configuration software on your mobile device. (This should be provided by the manufacturer of your Bluetooth device)

4. Have the Bluetooth configuration software search for any Bluetooth devices present. It should detect the iGPS-BT and list it as an available device (a "**Pharos iGPS-BT**" icon should be displayed).

5. Select the "Pharos iGPS-BT" device. Depending on your Bluetooth software, this should bring up a screen that will ask for a PIN Code or Security PIN. Enter the following PIN code:

   IMPORTANT
   PIN Code: 12345678
   (Please memorize this code for future use)

6. After the PIN number is entered, a connection between your mobile device and the iGPS-BT should be established. The blue LED on the iGPS-BT dock will change from blinking to a steady glow.

7. Once a connection is established, check the properties of the iGPS-BT in the Bluetooth configuration software and make a note as to what number COM port is assigned to it. The navigation software that will be used will require this COM port number. Or check the COM port setting for your Pocket PC in the Quick Start Guide.

   For more information regarding the iGPS-BT setup, please visit our Support → Product Support → Bluetooth Setup page at www.pharosgps.com.

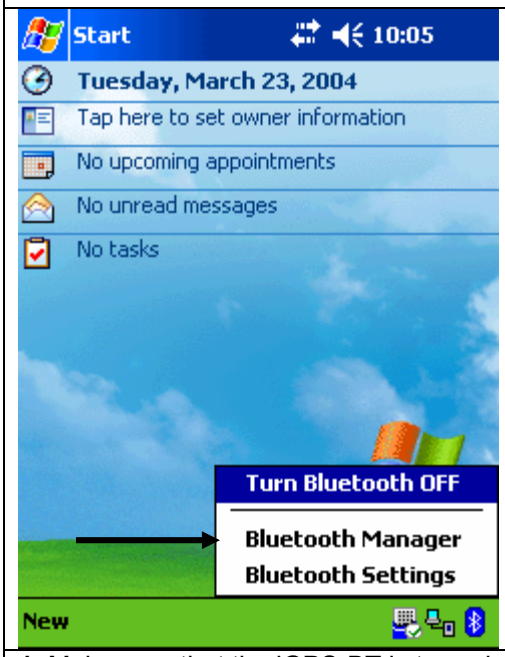
Hints & Tips

- GPS receiver must have a direct view to the sky. GPS receiver does not work well indoors.
- If possible, make sure the GPS is stationary when getting the initial satellite position lock. Allow 1-2 minutes at initial start-up for the GPS receiver to acquire a satellite lock for tracking.
- Make sure that the communication (COM) port is configured correctly in the navigation software being used to ensure proper functioning of the GPS system.

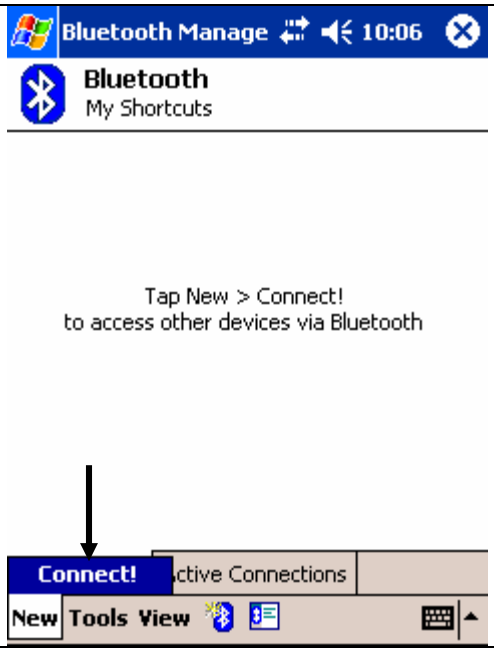
Walkthrough Guides

iGPS-BT Setup for Pocket PCs with built-in Bluetooth Technology running the Windows Mobile Pocket PC OS

Steps 1 – 10: How to Pair the iGPS-BT with your Pocket PC's Bluetooth Manager
Steps 11 – 15: Establishing a Bluetooth Connection using Ostia

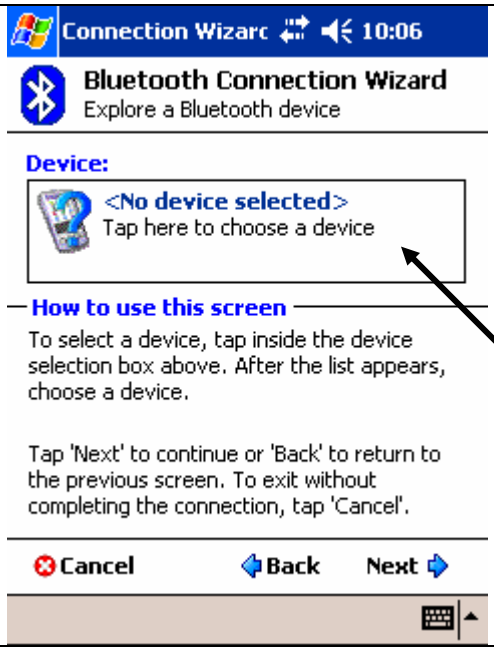


1. Make sure that the iGPS-BT is turned on (the blue light will be flashing). Tap the Bluetooth icon in the lower right-hand corner and select "**Bluetooth Manager**"



2. To create a shortcut, tap on "**New**", "**Connect**" (For some devices, you may not need to select "Connect" before proceeding to the next step)

3. Select "**Explore a Bluetooth device**", and tap on "**Next**"



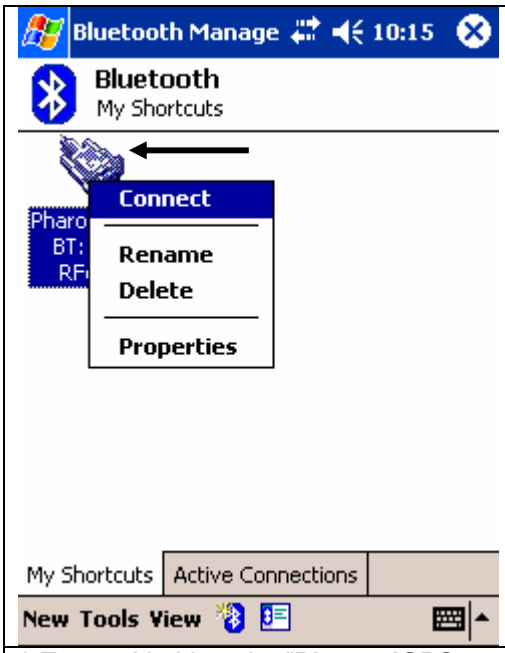
4. To create the connection to the Pharos iGPS-BT, select: "**Tap here to choose a device**"

5. Provided that your iGPS-BT is turned on and fully charged, it will be discovered. Tap on the "**Pharos iGPS-BT**" icon to select it

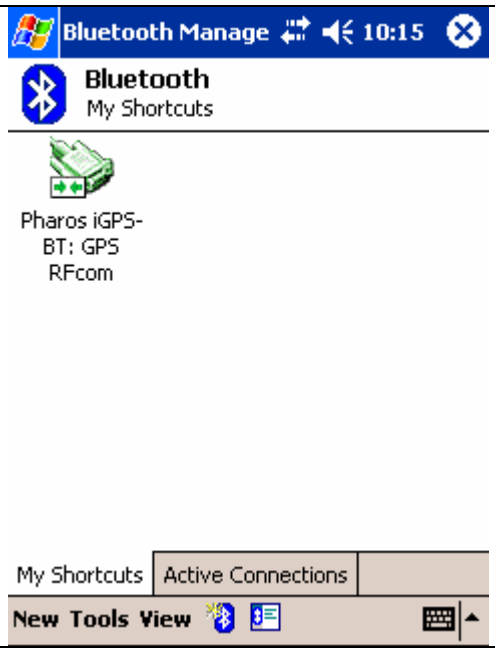
6. Enter the Passkey: **12345678**, and select "**OK"** in the upper right-hand corner

7. Select "**GPS RFcom**" so that it becomes highlighted, and tap on "**Next**"

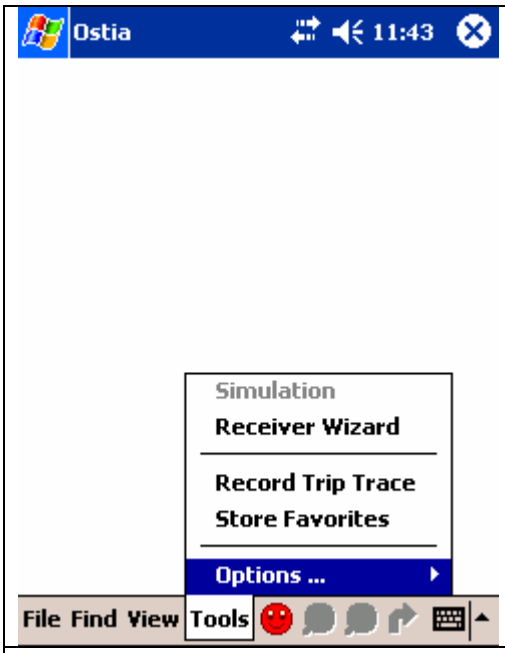
8. The shortcut has been created. Tap on "**Finish**"



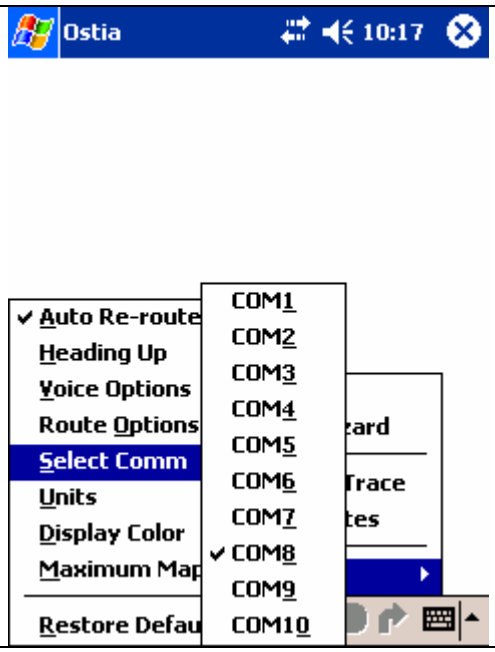
9.Tap and hold on the "**Pharos iGPS-BT: GPS RFcom**" icon, select "**Connect**" from the Menu that appears



10. Once the GPS has a connection, the icon will change to Green. You will also notice that the Blue light on the GPS itself is now a solid, steady Blue.

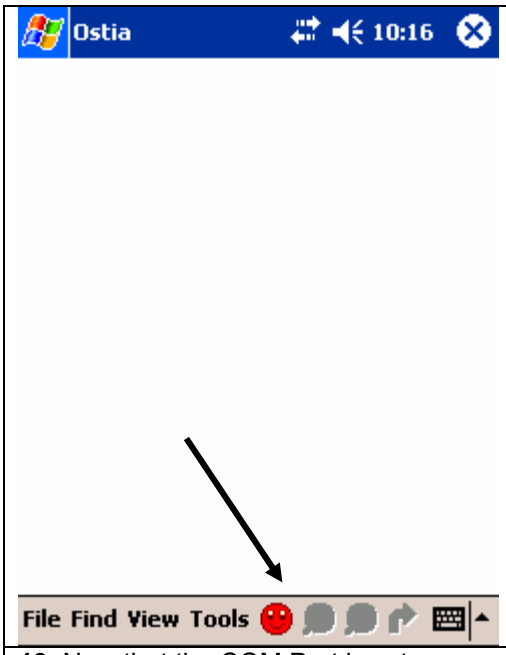


11. Open **Pharos Ostia** on your Pocket PC, click through the Warning screens, and tap on "**Tools**", "**Options**"…

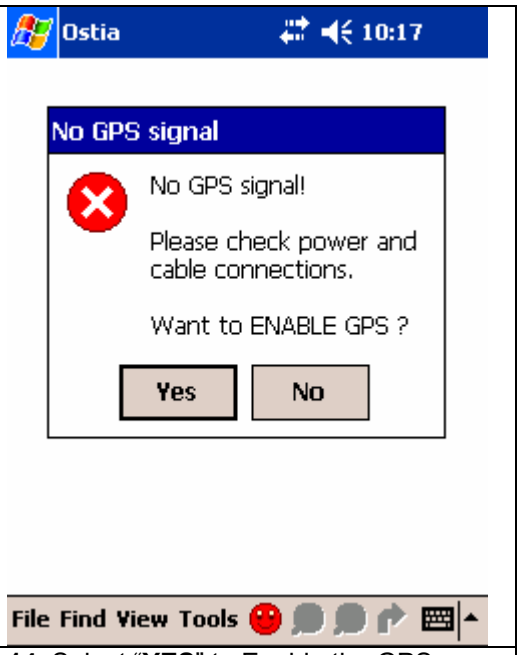


12. …"**Select Comm**". To select the appropriate COM Port for your Pocket PC (with built-in Bluetooth Technology), refer to the list here:

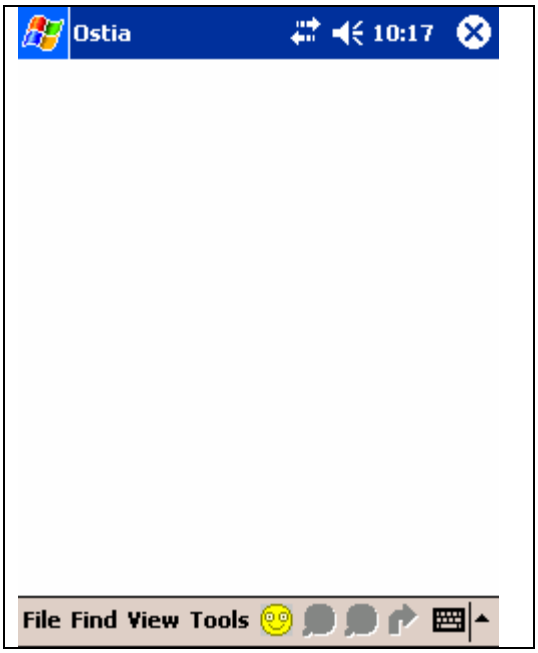
iPAQ 22XX/**51**XX/**54**XX/**55**XX – **COM8**
iPAQ 41XX/**43**XX **– COM6**
iPAQ 194X **– COM5**
Dell Axim X3i/X30 – COM7
Toshiba e80X **– COM6**
ASUS A620BT/A716 – COM6
HTC XDAII – COM4



13. Now that the COM Port is setup, you can Enable the GPS by tapping on the **RED** Smiley face



14. Select "**YES**" to Enable the GPS



For Bluetooth setup on other devices, please visit: www.pharosgps.com for walkthrough guides under the Support section.

III. Battery charging instructions

The Pharos Bluetooth Dock (BT Dock) for the GPS receiver includes a rechargeable and replaceable Li-Polymer battery. The optional Power Accessory Kit (PXT02), which contains a spare battery, battery charging holder, and an AC battery charger can be purchased from Pharos. Below are three common ways to charge the battery (and PDA).

A. Charging the battery in the car (or at home) with DC charging adapter:

1. Charging both battery and PDA in the car simultaneously

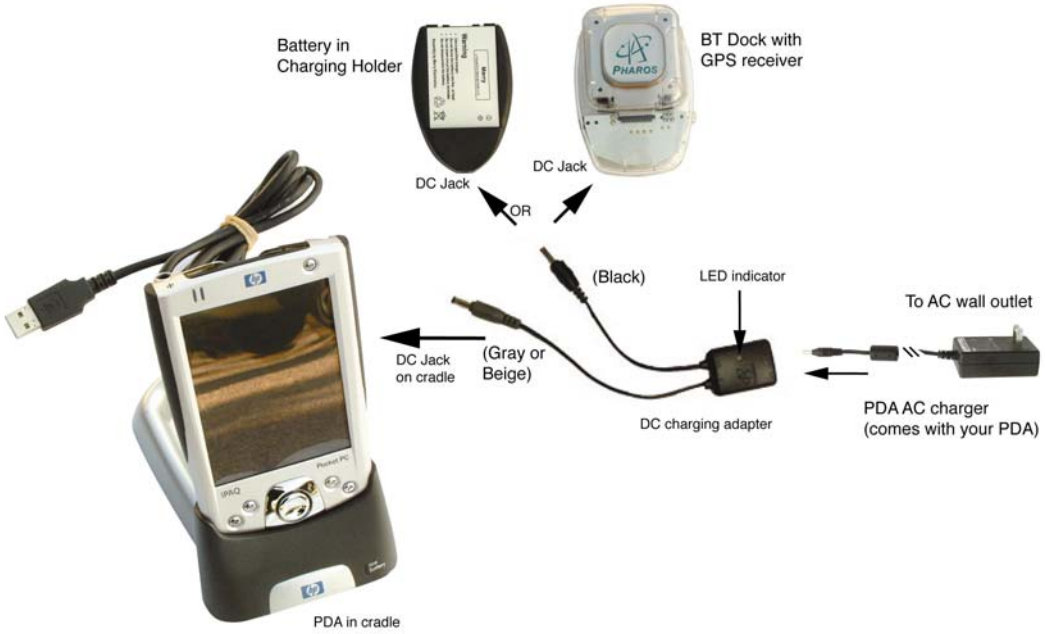
Plug the DC plug (black) from the DC charging adapter into the DC jack on the BT Dock (or the battery charging holder with the battery loaded – PXT02) then make sure the car charger is plugged into the car cigarette lighter jack (red LED is on) and is connected to the DC charging adapter. When the LED indicator turns green, the battery is fully charged.

Connect the DC plug (gray or beige) to the PDA (some PDAs require a charging adapter which comes along with the PDA) to charge the PDA simultaneously.

2. **Charging both battery and PDA at the home simultaneously**

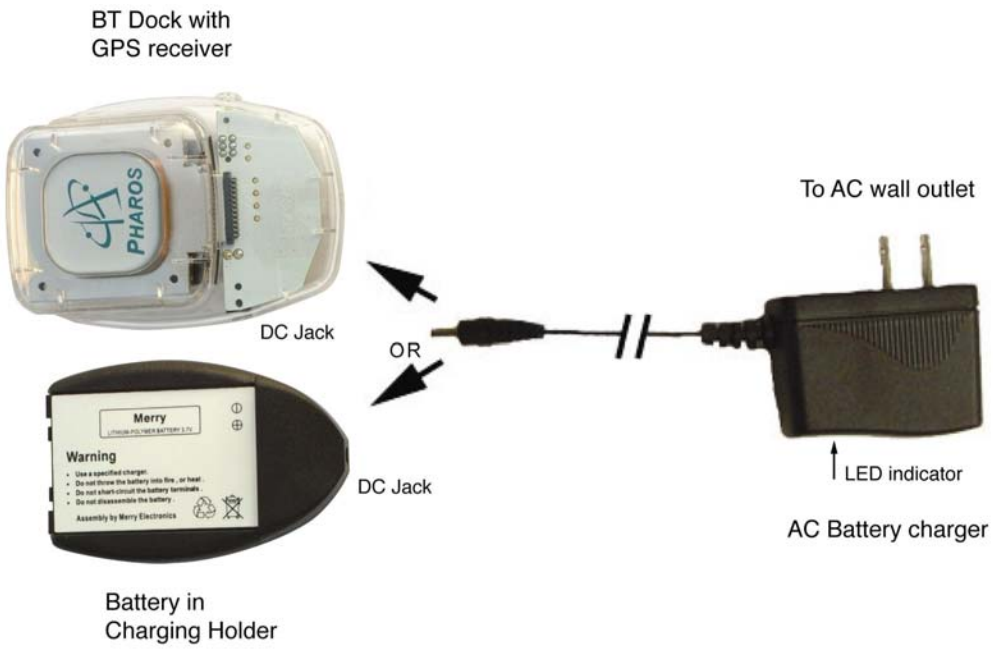
Plug the DC plug (black) from the DC charging adapter into the DC jack on the BT Dock (or the battery charging holder with the battery loaded – PXT02) then make sure the PDA AC charger is plugged into the AC wall outlet and is connected to the DC charging adapter. When the LED indicator turns green, the battery is fully charged.

Set the PDA in the cradle (comes with your PDA) and then connect the DC plug (gray or beige) to the DC jack on the PDA cradle to charge the PDA simultaneously.



B. Charging the battery at home with AC battery charger:

Plug the DC plug of the AC Battery charger (optional – in PXT02) into the DC jack on the BT Dock (or the battery charging holder with the battery loaded – PXT02) then plug the AC charger into the AC wall outlet. When the LED indicator turns green, the battery is fully charged.


BT Dock with
GPS receiver
PHAROS
DC Jack
OR
To AC wall outlet
Merry
Warning
DC Jack
LED indicator
AC Battery charger
Battery in
Charging Holder

Battery Precautions (w: WARNING!)

1.**w** Reverse charging is not acceptable.
2. Charge before use. The cells/batteries are delivered in an uncharged state.
3.**w** Do not charge/discharge with more than our specified current (400mA).
4.**w** Do not short circuit the cell/battery, permanent damage to the cell/battery may result.
5.**w** Do not incinerate or mutilate the cell/battery.
6. Do not solder directly to the cell/battery.
7.**w** The life expectancy may be reduced if the cell/battery is subjected to adverse conditions like: extreme temperature, deep cycling, excessive overcharge, or over-discharge.
8.**w** Store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment.

Note: Please follow the instructions whenever you use or dispose of your battery pack.

a. Use provided charger only.
b. Do not incinerate the battery.
c. Do not disassemble or modify the battery.
d. Do not allow metal objects to contact or short circuit the battery terminal.
e. Avoid exposure to excessive heat (> 60°C or 140°F), moist, or caustic environments.
f. Stop using the battery whenever there are unusual conditions (for example: deformed, discolor, peculiar smell, leakage, etc.)
g. Must be recycled or disposed of according to the local waste disposal agency.

IV. iGPS-BT GPS Receiver Specifications

Performance	
Chipset	SiRF StarIIe/LP
Antenna	Integrated patch antenna
Frequency	L1, 1575.42 MHz
Sensitivity	-140 dBm (typical)
Channels	12 Channel all-in-view tracking
Acquisition time (Avg.)	Cold Start: 60 sec
	Warm Start: 40 sec
	Hot Start: 5 sec
Reacquisition	0.1 sec
Position update	1 Hz
Accuracy	Position: 10 meters 2D-RMS, SA off
	Velocity: 0.1 meter/second, SA off
	Time: 1 microsecond synchronized to GPS time
	Datum: WGS-84
Electrical Power	
Battery	720mAh Li-Polymer rechargeable/replaceable battery
Battery charger	AC battery charger optional, DC charging adapter (works with car charger – in car or PDA AC charger – at home) included. Constant current charging circuit included in both AC and DC battery charger.
Operation time	6 hours minimum continuous use with full charge > 6 hours in trickle power mode
Interface	
Connection	Communicate with Host Platform via Bluetooth(Class2) Serial Profile
Protocol	NMEA-0183 (V2.3) standard
Data rate	4800 bps
NMEA message	GGA, GSA, GSV, and RMC
WAAS/EGNOS	Enabled
Trickle power	Programmable
Bluetooth spec	Frequency band: 2400-2483.5 MHz
	Data rate: up to 721 Kbps
	Security: data encryption up to 128-bits
	Typical range: up to 32 feet (10 meters)
Physical	
Dimension	60 mm x 85 mm x 25 mm
Weight	85 grams
Environmental	
Operation temperature	-20°C to 60°C (-4°F to 140°F)
Dynamics	Altitude < 20 km
	Velocity < 900 km/h
	Acceleration < 3g

Specifications are subject to change without prior notice.

V. Precautions

- Position fixing may not be available when this receiver is used near high-voltage wire, electronics equipment that generates electrical noise, or mobile phones in operation at 1.5 GHz. The noise from PDA or PC may deteriorate the GPS receiver performance.
- Note that some glass material containing metal, such as UV resistant windows may screen out signals from GPS satellites.
- GPS satellites are under the control of the U.S. Department of Defense. Therefore, services provided for general consumers are subject to change without prior notice. Pharos is not liable for losses caused by such changes.
- Do not touch the connectors of the Bluetooth Dock with fingers or insert foreign substances; otherwise, a failure may be caused.
- Do not expose the receiver to direct sunlight for a long period of time; near heating equipment; a place that can become hot, or high levels of humidity.
- Do not expose or submerse the device to moisture, liquids, or harsh environments to avoid damaging it..
- Dropping the receiver, heavy impact, or excess vibration may cause damage or malfunction.
- Use a soft cloth to wipe dirt off this receiver. If dirt is severe, dampen a soft cloth with diluted neutral detergent, securely wring it out, and wipe off the dirt. Do not use a spray-type detergent; highly volatile solvent, such thinner and benzene; or a chemical cloth. Otherwise, deformation or discoloration may be caused.

VI. Package contents

PT200: Bluetooth Pocket GPS Navigator™
Ostia software and street level maps
iGPS-360 receiver
iGPS-BT Dock with Li-Polymer battery
DC charging adapter
Car charger
Vent mounted PDA Holder
Friction mounting pad
Belt case

PT 300: Bluetooth Pocket GPS Navigator™ Premium
It includes PT200 plus PXT01 (CF Adapter Kit), PXT02 (Power Accessory Kit), and PXT03 (Travel Carrying Case)

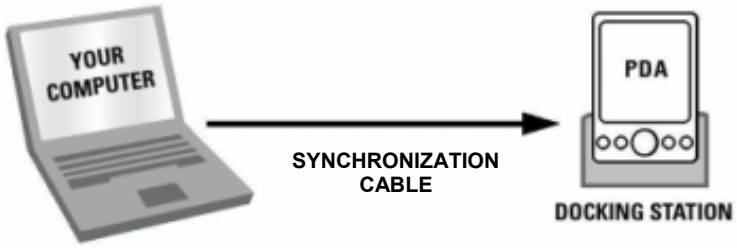
PT100: Bluetooth iGPS Receiver
iGPS-360 receiver
iGPS-BT Dock with Li-Polymer battery
AC battery charger
Belt case

Note: Contents may vary- see the box or contents list.
New products may not be listed here.

VII. Quick Start Guide for Ostia Navigation Software(for PT200/PT300)

1. Install the Pharos Ostia & MapFinder Software

- Insert the CD-ROM. If Auto-Run is enabled for your CD-ROM, the Setup program will run automatically. If not, run the Setup program on the CD-ROM.
- Select “Install Ostia” to install the navigation software to your Pocket PC and follow the on-screen instructions.
- Select “Install MapFinder” to install the map loading utility to your Desktop/Laptop PC and follow the on-screen instructions.



2. Install Map Data

- Insert map CD, MapFinder will appear.
- Type a city name or zip code in the search field, then click "Search“.
- Double click on the appropriate result (to the right).
- -OR- Double click sections directly on the map to select multiple maps.
- Right click on the map to bring up the command menu and choose where you want the maps to be transferred to.
- You will have the option to copy the maps directly to your Pocket PC or to your PC hard drive for later use.
- If you choose to extract maps to your PC hard drive, you can use MapFinder later to transfer the maps to your Pocket PC or Memory Card.

PLEASE NOTE: IN EITHER CASE MAPS SHOULD RESIDE IN THE “\My Documents” DIRECTORY OF THE POCKET PC OR MEMORY CARD. MAPFINDER WILL AUTOMATICALLY CREATE THE “\My Documents” FOLDER.

Create a Route Using the Pharos Pocket GPS Navigator

Start in a safe area with a clear view of the open sky (GPS does not work well indoors), then proceed with the following steps*:*

- On the PDA, start running the Pharos Ostia program.
- Click “File” then “Open” and select the map(s) you want to use.
- In the “Find” menu, select your destination using “Recent Destination,” “Contacts,” “Favorites,” “Address,” “Intersection,” or “Point of Interest.”
- Click the “Happy Face” icon then click “Yes” to Enable GPS.
- Wait approximately 60 seconds for a red arrow to appear indicating your current position on the map.
- In the “Find” menu click “New Route” to calculate a route from your current position to the selected destination. The calculated route will be highlighted on the map in light blue.
- Start driving along the blue route with the advisory of the voice/sound prompts and on-screen graphics.
- A “Favorite” can be used to find a specific Latitude and Longitude point on the map that can then be used to find the nearest street which can be selected as either the Origin or Destination.

Additional Tips

- If you should miss a turn or make a wrong turn, the voice prompt will inform you that “You are off route.” Simply press the Pocket PC’s “Action Button” (Refer to your PDA manual to identify the “Action Button”) to have a new route calculated from your current position to the selected destination. To have the program automatically generate a new route when you go off route, access the “Tools”/”Options…” menu, and then check “Auto Re-route.”
- Under “Tools"/”Options…,” check "Heading Up" to choose the vehicle’s forward direction as the orientation of the map on the PDA display. This option will display a compass in the bottom, right-hand corner of the map. North up is the default map orientation.
- In the “View” menu, click “GPS Info” to view Compass Information (Lat., Lon., Alt., Time, Speed, and Distance) about the current position of the iGPS receiver.
- In the “View” menu, click “Text Directions” to view turn-by-turn text directions for your route with street names and distances between each.

Please refer to the Ostia User’s Manual for detailed instructions.

VIII. Troubleshooting

For any troubleshooting assistance, please check the Frequently Asked Questions section at www.pharosgps.com.

IX. Warranty

The iGPS-BT Receiver is warranted by Pharos to the original purchaser to be free from defects in material workmanship under normal use for a period of one year from the date of purchase (three months for the battery). During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or a similar model) at Pharos' option without charge for parts or labor. This warranty will not apply if the product has been misused, abused, or altered.
To obtain warranty service, you must take or send the product, postage paid, with a copy of your sales receipt or other proof of purchase and the date of purchase to Pharos at 411 Amapola Avenue, Torrance, CA 90501, USA. Prior approval and RMA number must be included for your warranty return to be accepted.

X. Return Policy

- Our goal is for every customer to be satisfied with each purchase, and we will make every effort to resolve any issues you may have.
- All non-defective returns must be shipped with the original packaging with all original components within the first 30 days from purchase. There is a 15% restocking fee on all non-defective returns. Shipping charges are not refundable. The customer is responsible for returning items to Pharos at their own expense. Any return(s) that were not purchased directly from Pharos, please contact the reseller where it was purchased from.
- All defective returns for either repair or replacement will be processed and returned to the customer within 3 business days of receipt. For items beyond the 1year warranty, a repair charge of $35 to $50 or a replacement charge of $95 to $150 will be due. For items sent to us after 90 days from purchase, an $8.50 shipping and handling fee will be due upon completion of repair or replacement.

Every return, defective or not, MUST have prior written approval from Pharos. The RMA number MUST be marked on the outside of the package otherwise it will be rejected. The RMA form must also be included in the box with the customer's information and reason for return. Proof of purchase must also be attached.

PHAROS
Lighthouse of the 21st Century

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