

Mobile Collection Hardware Installation Guide



Identification

Mobile Collection Hardware Installation Guide 04/28/2008 TDC-0770-001

Copyright

© 2007 - 2008 Itron, Inc. All rights reserved.

Trademark Notice

Itron is a registered trademark of Itron, Inc. All other product names and logos in this documentation are used for identification purposes only and may be trademarks or registered trademarks of their respective companies.

Suggestions

If you have comments or suggestions on how we may improve this documentation, send them to TechnicalCommunicationsManager@itron.com If you have questions or comments about the software or hardware product, contact Itron Technical Support:

Contact

- Internet: www.itron.com
- E-mail: support@itron.com
- Phone: 1 800 635 8725

Disclaimers

RF EXPOSURE

To comply with FCC requirements, maintain a separation distance of at least 40.0 centimetres between the antenna and all persons.

ELECTROMAGNETIC COMPATIBILITY

Use only approved accessories with this equipment. In general all cables must be high quality, shielded, correctly terminated, and normally restricted to 2 meters in length. The Mobile Collector Lite employs special provisions to avoid radio interference and should not be altered or substituted.

Unapproved modifications or operation beyond or in conflict with these instructions for use, may void authorization by the authorities to operate the equipment.



WARNING! Do not visually monitor or physically adjust the Mobile Collection system while driving. While driving, rely on the beeps produced when meter data is collected to indicate proper system operation. Visually monitoring or adjusting the Mobile Collection system while driving will divert your attention from your safe driving responsibilities. Attention to driving is your primary responsibility, along with following all the applicable driving regulations.

Contents

oter 1 Using th	ne MC3 System	
_	ystem	
Mobile Col	ection Hardware Kit	
	3 System.	
	Sled	
	Seat Belt Pretensioner	
	e Junction Box	
	Dock	
	ching the GoBook XR-1 to the Dock	
	PCMCIA Flash Card Adapter	
	ne MC3	
Connecting	the GoBook XR-1 to the MC3	
	Connectors	
	necting the Power Cables	
	necting the Antenna	
	necting Side-Looker Antennas	
	necting the Data Cables	
	Dider GoBooks to the MC3	
	ching the GoBook III to the Vehicle Dock	
	C3 System ing the Cables	
nter 2 Using	the Mohile Collection 2 x System	
_	the Mobile Collection 2.x System	
About the Mobile	Collection 2.x System	
About the Mobile Mob	Collection 2.x System	
About the Mobile Mob Mob	Collection 2.x System le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX	
About the Mobile Mob Mob Flash Card	Collection 2.x System le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader	
About the Mobile Mob Mob Flash Card Compact F	Collection 2.x System le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader lash Cards	
About the Mobile Mob Mob Flash Card Compact F LEDs	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader lash Cards	
About the Mobile Mob Flash Card Compact F LEDs Locking Me	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader lash Cards	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader. lash Cards echanism ectors	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX Reader. lash Cards echanism ectors ector Sled	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX. Reader. lash Cards echanism ectors. ector Sled g Systems.	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX. Reader lash Cards ectars ectors ector Sled g Systems nting Options	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX Reader lash Cards ectars ectors ector Sled g Systems nting Options ck / Pedestal Option	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX Reader lash Cards ectors ector Sled g Systems nting Options ck / Pedestal Option ile Collection 2.x System	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX Reader lash Cards ectars ector Sled g Systems nting Options ck / Pedestal Option ile Collection 2.x System Mobile Collector 2.x to the Sled	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th	Collection 2.x System. Ile Collector 2.x Radio - GoBook III	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the	Collection 2.x System. le Collector 2.x Radio - GoBook III	
About the Mobile Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX. Reader. lash Cards ectanism ector Sled g Systems nting Options ck / Pedestal Option ile Collection 2.x System Mobile Collector 2.x to the Sled e Antennas and Power Cables GoBook to the Mobile Collector 2.x ch the GoBook MAX to the Mobile Collector	
About the Mobile Mob Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the Attach the	Collection 2.x System. le Collector 2.x Radio - GoBook III le Collector 2.x Radio - GoBook MAX. Reader. lash Cards ectanism ectors ector Sled g Systems nting Options ck / Pedestal Option ile Collection 2.x System. Mobile Collector 2.x to the Sled e Antennas and Power Cables GoBook to the Mobile Collector 2.x ch the GoBook MAX to the Mobile Collector ch the GoBook III to the Mobile Collector	
About the Mobile Mob Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the Attach	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX. Reader. Iash Cards ectars. ectors. ector Sled g Systems. nting Options ck / Pedestal Option ile Collection 2.x System. Mobile Collector 2.x to the Sled e Antennas and Power Cables GoBook to the Mobile Collector 2.x ch the GoBook MAX to the Mobile Collector ch the GoBook III to the Mobile Collector ch the GoBook MAX to the Vehicle Dock.	
About the Mobile Mob Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the Attach	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX. Reader. Iash Cards ectanism ectors. ector Sled g Systems. nting Options ck / Pedestal Option ile Collector 2.x System. Mobile Collector 2.x to the Sled e Antennas and Power Cables. GoBook to the Mobile Collector 2.x. ch the GoBook MAX to the Mobile Collector. ch the GoBook III to the Mobile Collector ch the GoBook MAX to the Vehicle Dock. ch the GoBook III to the Vehicle Dock.	
About the Mobile Mob Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the Attac Attac Attac	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX. Reader Iash Cards ectanism ectors ector Sled g Systems nting Options ck / Pedestal Option ile Collection 2.x System Mobile Collector 2.x to the Sled e Antennas and Power Cables GoBook to the Mobile Collector 2.x ch the GoBook MAX to the Mobile Collector ch the GoBook III to the Mobile Collector ch the GoBook III to the Vehicle Dock ch the GoBook III to the Veh	
About the Mobile Mob Mob Flash Card Compact F LEDs Locking Me Rear Conn Mobile Coll GoBook Mounting Direct Mou Vehicle Do Installing the Mob Attach the Connect th Attach the Attact the Attact	Collection 2.x System. Ile Collector 2.x Radio - GoBook III Ile Collector 2.x Radio - GoBook MAX. Reader. Iash Cards ectanism ectors. ector Sled g Systems. nting Options ck / Pedestal Option ile Collector 2.x System. Mobile Collector 2.x to the Sled e Antennas and Power Cables. GoBook to the Mobile Collector 2.x. ch the GoBook MAX to the Mobile Collector. ch the GoBook III to the Mobile Collector ch the GoBook MAX to the Vehicle Dock. ch the GoBook III to the Vehicle Dock.	

	43
Removing the Mobile Collection 2.x System	44
Unlock and Remove the GoBook	
Disconnect the Cables	
Remove the Mobile Collector from the Sled	
Chapter 3 Using the EkaNet System	47
EkaNet System for Mobile Demand Reset	47
EkaNet Compatibility	
About the EkaNet Components	
Installing the EkaNet System	
Removing the EkaNet System	
Chapter 4 System Maintenance	57
RF Antenna Maintenance	57
Cleaning	57
Replacing Gaskets	
Inspecting and Replacing Filters	
Service Bulletins Mobile Collection 2.5 / GoBook III Power Plug Issue	
2.x System Maintenance	58

Using the MC3 System

This chapter introduces you to the features, functions, and components of Mobile Collection 3.0 (MC3) system.

About the MC3 System

The MC3 is Itron's powerful, next-generation mobile collection system for electric, gas and water providers. It offers advanced radio technology for unsurpassed performance, along with a sophisticated mapping application utilizing GPS technology that provides a visual indication of endpoint location.

For more information, see:

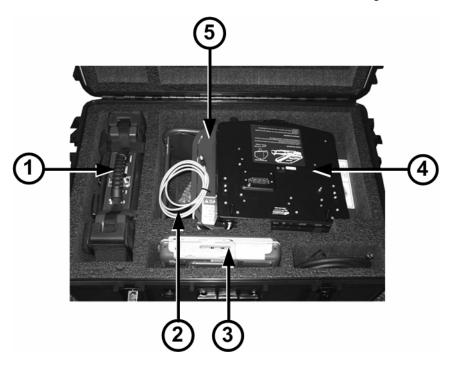
- Installing the MC3 System on page 2
- Removing the MC3 System on page 25



If your vehicle has a passenger-side airbag, Itron strongly recommends disabling it when the Mobile collection system is installed. The force of the airbag deploying could damage the laptop, radio, or other components of the system.

Mobile Collection Hardware Kit

The Mobile Collection 3.0 hardware kit contains the following items:



ID	ltem	Description	
1	MC3 radio	Includes a mounting harness and straps for installing the system in your vehicle.	
2	USB cable	Comes attached to the dock and attaches to the GoBook. Provides communication between GoBook and MC3 radio.	
3	GoBook XR-1	Runs the Mobile Collection software to collect reads. The MC3 radio is also compatible with the GoBook III laptop.	
4	GoBook dock	The GoBook, power cables, and communication cables attach to the dock.	
5	Sled	Installs in the vehicle's passenger seat with the attached seat belt pretensioner. Sleds are available for both the XR-1 and GoBook III.	
Not Pictured	Cables	Connects the MC3 and GoBook dock to the junction box.	
	Power junction box	Attaches to the sled or to a pedestal mount. Provides power to the GoBook, MC3 radio, and optional equipment.	
		The junction box must be installed prior to first use. See Installing the Junction Box on page 5 for more information.	
	Omni-mount antenna	Attaches to the top of the vehicle and receives endpoint transmissions.	
	Type N to TNC	Connects older antennas to the MC3 radio.	
	adapter	This adapter is only needed if you are using an MC3 radio with an older omni-mount antenna (such as one from a v2.5 system) that is already installed on your vehicle.	



The Itronix documentation refers to the laptop receptacle as a *cradle*; Itron uses the term *dock* to identify this piece of equipment. The term *dock* is used repeatedly throughout this manual; however, *dock* and *cradle* are interchangeable.

Installing the MC3 System

This chapter guides you through the installation of the Mobile Collector radio (MC3) and GoBook XR-1 laptop computer.

Before installing these Mobile Collection system components, the procedures in the Mobile Collector Vehicle Preparation Guide and Mobile Collector Sled and Pretensioner Installation Guide must be completed.



WARNING! Install the Mobile Collection system in the vehicle as described in this document and those listed above. Failure to do so could lead to injury or death from unsecured components during a collision.

About the Sled

The Mobile Collector sled is used to securely fasten the GoBook in the vehicle. It is placed on the passenger seat and secured with a seat belt and pretensioner.



Watch the Mobile Collector Safety Video and read the Mobile Collector Sled and Pretensioner Installation Guide (*TDC-0708-xxx*) to learn how to correctly install the sled in your vehicle. These materials are located in a plastic sleeve on the underside of the sled.

The sled has the GoBook dock attached to it, which serves as a locking base and also provides power and communications to the laptop.

A power junction box ships in the Mobile Collector kit and needs to be attached to the sled. When attached, the junction box on the sled should be facing passenger side door of the vehicle (the junction box is attached in the example below).

Install the sled on the passenger seat before mounting the MC3 radio. The sled must be installed with the seat belt pretensioner; see About the Seat Belt Pretensioner on page 4 for more information.



The sled components are shown below.

ID	Item	Description
1	Mobile Collector sled	Attaches to the vehicle passenger seat with the seat belt and pretensioner system.
2	Junction box	Provides power to the various Mobile Collection components. The junction box must be attached prior to first use.
3	GoBook dock	Attaches to the GoBook and provides a secure base for the laptop while in the vehicle. Docks are available for use with both XR-1 and GoBook III models.

About the Seat Belt Pretensioner

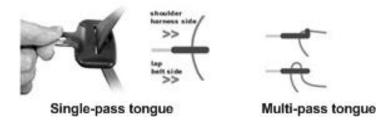
The seat belt pretensioner makes the modern three-point safety harness in your vehicle function similarly to an old-fashioned lap seat belt. By using the pretensioner mechanism to cinch the mounting hardware very firmly into the junction of the seat back and the seat pad, the pretensioner and radio mount restricts potentially hazardous equipment movement during impact.



Modern three-point harnesses are designed to be forgiving to occupants to lessen injury. By preventing the pay-out of seat belt webbing designed to protect people and instead using the pretensioner to immobilize equipment, a higher degree of protection is provided in the event of a collision.

Through standardized crash testing of the Mobile Collection system, Itron has determined that preventing extensive rotation of the Mobile Collection equipment in a driver's side impact reduced the stress on mechanical systems to acceptable levels. Decreasing the amount of equipment rotation towards the driver prevents the fasteners holding the GoBook and its dock to the sled from separating in a crash.

The seat belt pretensioner can be used in vehicles equipped with single-pass and multiplepass seat-belt tongues.



To install the seat belt pretensioner

• Follow the procedures in the *Mobile Collector Sled and Pretensioner Installation Guide (TDC-0708-xxx)*. A DVD showing the installation is also included with your kit. These materials are located in a plastic sleeve on the underside of the sled.

Installing the Junction Box

The junction box takes power from the vehicle and distributes it to the MC3 radio, GoBook, and an optional EkaNet radio (when installed).

Before you can install the MC3 system for the first time, the junction box must be installed on either the sled or a pedestal mount.

Once installed, the junction box should remain attached to the sled or pedestal.

To install the junction box

- 1. Remove the junction box from the MC3 kit.
- **2.** Locate the sled or pedestal mount on which the junction box will be installed. In the following example, a sled is used.
- **3.** Using a Phillips screwdriver, remove the two screws holding the junction box bracket in place.



4. Slide one end of the junction box into position over the bracket that is still attached; be sure to orient the junction box according to the label on the sled or pedestal. The junction box has a recessed edge that the bracket fits into.



- 5. Insert the other bracket (the one you removed) into the junction box, making sure that both screw holes are visible through the bracket.
- 6. Insert and tighten both screws to secure the junction box to the sled or pedestal.

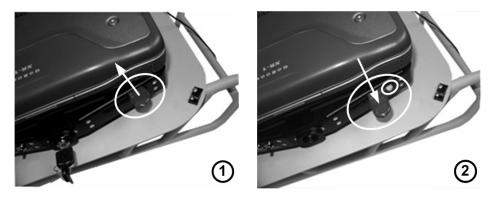
About the Dock

The Mobile Collector dock is used to secure the GoBook to either the sled or a pedestal mount in your vehicle. It has connections for power and communications between the GoBook and Mobile Collector radio.

When the XR-1 is attached, the dock must be locked to properly secure the laptop. While in the locked state, the dock's locking mechanism extends out further from the sled than when in the unlocked position. A green button also appears next to the locking mechanism when the dock is locked.

To lock or unlock the dock for the XR-1, push the mechanism in, move it toward the keys on front of the dock, and then slide it back toward its original position; the mechanism works in a "V" pattern to lock or unlock the dock.

The examples below show the dock on a sled in the unlocked (1) and locked (2) positions, with an XR-1 attached.



A dock is also available for use with the GoBook III laptop; see Attaching the GoBook III to the Vehicle Dock on page 22 for more information.

Attaching the GoBook XR-1 to the Dock

1. Make sure the dock is in the unlocked position.

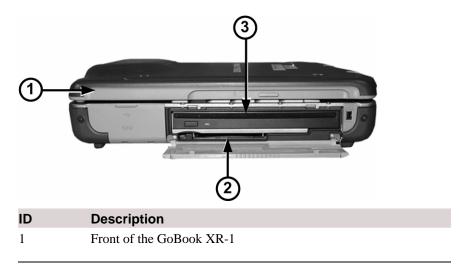
2. Angle the front of the GoBook down, toward the front of the dock (where the key and locking mechanism are). Notice the connectors and guide posts (1) near the back of the sled base. These help ensure proper placement of the GoBook.



- 3. Push the back of the laptop down on to the connectors.
- **4.** When the laptop is in place, engage the dock locking mechanism to secure the connectors to the laptop and prevent it from moving.
- **5.** Push the keyed mechanism in on the front of the dock to further secure the GoBook to the dock. This helps prevent the GoBook from being stolen. (Use the supplied key to release the lock later.)

Using the PCMCIA Flash Card Adapter

The GoBook has a PCMCIA slot that, with an adapter, you can use to read compact flash cards.



The PCMCIA slot is on the right side of the GoBook, just below the CD drive.

ID	Description
2	PCMCIA slot
3	CD drive

The compact flash card should come installed from the factory. If it is not installed or you wish to replace cards, use the following procedures.

To insert the flash card adapter

1. Slide the flash card into the PCMCIA adapter.



- 2. Open the CD drive / PCMCIA slot compartment on the right-hand side of the GoBook.
- 3. Slide the adapter into the PCMCIA slot on the GoBook until it clicks into place.



To remove the flash card adapter

1. Open the CD drive / PCMCIA slot compartment on the right-hand side of the GoBook.



2. Push the button in until the adapter pops out of the slot.

- **3.** Pull the adapter the rest of the way out.
- 4. Remove the compact flash card from the adapter.

Mounting the MC3

The MC3 is mounted in a harness that can be attached to either a bucket- or bench-seat in a vehicle. The harness contains clips on the top for mounting it on a bucket seat, and clips on the side for bench seat mounting. The MC3 is shipped in its vehicle mount, with the straps set up for a bucket seat. The bench straps are included in the container the MC3 was shipped in.

Mount the sled before mounting the MC3 on the seat.

If you are using a sled to secure the GoBook, be sure to mount the MC3 high enough on the seat that the sled and laptop will fit easily beneath it. If you are using a pedestal mount, the MC3 can be attached lower if desired.

To mount the MC3 on the seat

- 1. If the MC3 radio has been removed from its harness:
 - Slide the radio into its harness, with the MC3 label showing through the opening on the front of the harness.

•



2. Strap the mount to either the front or the back of the passenger-side seat back. Position the unit within the mount so that when it is strapped to the seat back, the unit's connectors face *toward the passenger-side door*.

Secure it in place by buckling the two diagonal corner straps (1).

• **Sled Systems** If you will be installing a sled, be sure to mount the MC3 high enough on the seat back so that the sled and laptop will fit beneath the radio on the seat.



• **Pedestal Systems** If you will be attaching the GoBook to a dock on a pedestal, the MC3 radio can be attached lower on the seat. This configuration is shown in the following examples.

Depending on whether the vehicle has a separate passenger-side bucket seat or a bench seat, do one of the following:

π H

• **Bucket Seat** Extend the mounting straps from the driver-facing side of the vehicle mount (1), and then wrap them around the seat back and buckle them to the opposite side of the vehicle mount (2).



• **Bench Seat** Connect the optional bench-seat straps to the buckles on the bottom of the vehicle mount.

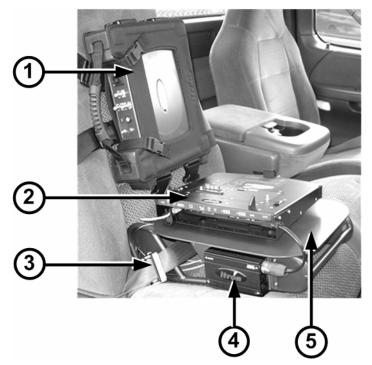
Push the free ends of the straps between the seat cushion and the seat back (1), and then extend them up and over the top of the seat back and connect them to the buckles on the top of the vehicle mount (2).



3. Tighten the straps until the MC3 is snug against the seat back.

Connecting the GoBook XR-1 to the MC3

The MC3 rides in a harness that attaches to bucket- or bench-style passenger seat. The sled for the GoBook XR-1 is equipped with a dock for the computer and a junction box for power connectors (the junction box must be attached to the sled prior to use). The sled should be mounted on the seat before the MC3 radio is attached. The MC3 must be mounted high enough on the seat so that the right side ports on the GoBook are accessible, as shown in the example below.

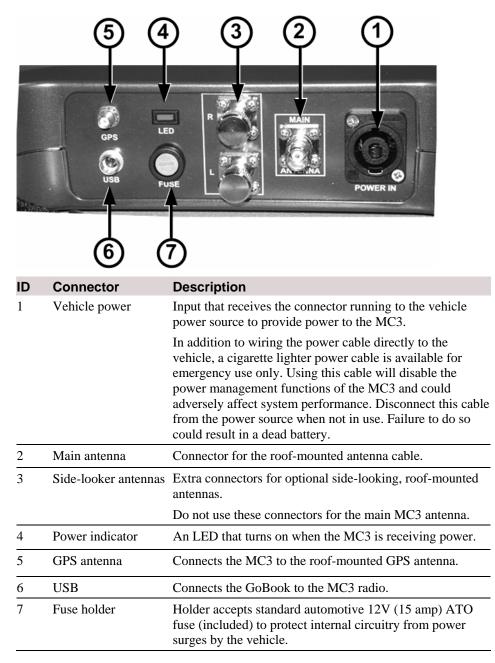


ID	Component	Description
1	MC3 radio	Houses components necessary for collecting mobile reads, such as the processors, receivers, and GPS equipment.
2	Laptop dock	Provides a communication link between the GoBook and the MC3 radio. Also provides power to the laptop.
3	Seat belt pretensioner	Secures the sled in the vehicle.
		A properly installed sled is vital to ensure your safety while collecting reads.
4	Junction box	Receives power from the vehicle and distributes it to the MC3 radio, GoBook, and optional equipment.
5	Sled	Attaches to the passenger seat of a vehicle and secures the GoBook and dock in place.

MC3 Connectors

The top of the MC3 radio contains the power and communications connectors, as well as a fabric and rubber handle used to carry the radio.

The connections on the MC3 are described in the following table.



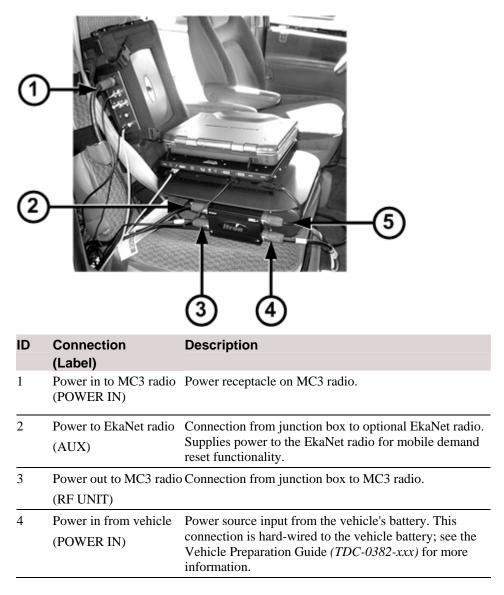
Connecting the Power Cables

Power to the Mobile Collection components is distributed through the junction box on the side of the sled. There are three power cables that must be connected:

- Vehicle power to the junction box
- Junction box to the GoBook dock
- Junction box to the MC3

There is a fourth outlet on the junction box called **AUX**. It is for powering the EkaNet radio, an optional device for mobile demand reset functionality.

The example below shows an MC3 radio and sled for a GoBook XR-1 with all the power cables connected.

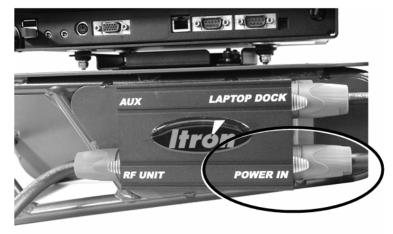


ID	Connection (Label)	Description
5	Power out to laptop dock (LAPTOP DOCK)	Connection from junction box to the laptop dock. The laptop dock secures the GoBook in place while you drive a route, and provides power and communication connections for the laptop. The dock is attached to either a sled or pedestal mount in the vehicle (a sled is pictured in this example).

To connect the vehicle power to the sled

• Plug the vehicle power cable into the **POWER IN** receptacle on the junction box. Pull the silver tab on the power cable back, insert the connector into the junction box, twist the connector so the silver tab lines up with the labeling on the junction box, and release the tab to lock it into place.

The other end of the power cable is hard-wired to the vehicle battery as described in the *Mobile Collection Vehicle Preparation Guide (TDC-0382-xxx)*.



To connect power to the GoBook dock

1. Plug the red and blue end of the cable into the **LAPTOP DOCK** receptacle on junction box. Pull the silver tab on the power cable back, insert the connector into the junction box, twist the connector so the silver tab lines up with the labeling on the junction box, and release the tab to lock it into place.



2. Plug the pigtail end into the dock connector.



To connect power to the MC3

1. Plug one end of the cable into the **RF UNIT** receptacle on the junction box. Pull the silver tab on the power cable back, insert the connector into the junction box, twist the connector so the silver tab lines up with the labeling on the junction box, and release the tab to lock it into place.



2. Plug the other end into the **POWER IN** receptacle on the MC3.



Connecting the Antenna

Next, connect the omni-mount RF antenna to the radio.

This antenna has either a fixed-base that is permanently attached to the vehicle, or a magnetic base that can be attached to and removed from the vehicle as necessary.

To connect the antenna

• Connect the omni-mount RF antenna cable to the MAIN ANTENNA connector on the MC3. Be sure to properly tighten the connector; a loose connection can lead to poor radio and read performance.



When using older antenna cables with type N connectors along with the MC3 radio, a type N to TNC adapter is required; this adapter is included in the MC3 kit.

Attach the adapter securely to both the antenna cable and MC3 to ensure optimal radio performance. Should you need another adapter or are not able to locate the adapter in the ship kit, you will need to contact your Itron representative or Customer Service (1.800.635.8725) to place an order for an adapter (part number CON-0419-001).



Connecting Side-Looker Antennas

The MC3 radio supports an additional set of antennas that help gather additional reads from endpoints located on the sides of the vehicle.

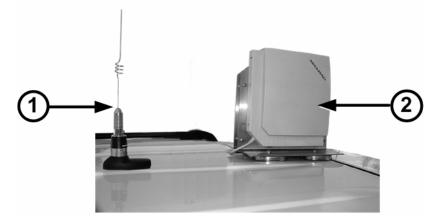
The side-looker antennas are an *optional* component of the MC3 system that can help improve read coverage in certain situations (contact your Itron representative for more information). Two additional antennas are connected to one antenna base, which is then installed on the vehicle.

Side-looker antennas attach to the top of the vehicle with several strong magnets. If your vehicle has a fiberglass top, the antennas may not bond securely to the vehicle; Itron *does not* recommend the use of side-looker antennas with fiberglass-topped vehicles.



To connect the side-looker antennas

1. Mount the side-looker antennas (2) on top of the vehicle, two feet in front of or behind the primary RF omni-mount antenna (1).



2. Route the antenna cables into the vehicle.

3. Remove the caps covering the side-looker antenna ports, identified by R and L on the MC3 radio in the vehicle.



4. Connect the side-looker antenna cables to the R and L antenna inputs on the MC3 radio.



Connecting the Data Cables

There are two communications cables for receiving and transferring GPS and meter data between MC3 and the GoBook:

- A USB cable from the GoBook dock to the MC3
- A serial cable from the EkaNet radio to the GoBook dock (only for electric meter mobile demand reset).

123		
ID	Connection (Label)	Description
1	RF radio antenna (MAIN ANTENNA)	RF radio antenna connection on MC3 radio. Receives endpoint signals.
2	GPS antenna (GPS)	GPS antenna connection to MC3 radio. Receives GPS signal for vehicle location and tracking.
3	USB data cable (USB)	USB data output from MC3 radio. Data is transferred from the radio to the laptop through this cable.
4	USB data cable	USB data input on the laptop dock. Data from the MC3 radio is transferred to the Mobile Collection software running on the laptop.
5	Serial cable to EkaNe (O)	etSerial port connection from the laptop dock to an optional EkaNet radio. The cable transfers data from EkaNet equipped endpoints to the laptop for mobile demand reset functionality.

The following picture shows a Mobile Collection system with all the data cables connected.

A CONTRACTOR OF A CONTRACTOR O

To connect the USB data cable

1. Ensure that the rectangular end of the USB cable (1) is inserted into the GoBook dock USB port.



The USB cable is connected to the dock at the factory and is secured with a cable tie. **DO NOT** remove this cable tie or unplug the USB cable from the dock. The cable tie helps ensure a secure connection and should never be disconnected. The cable tie also ensures that the correct COMM port is used for GPS communications with the Mobile Interface software. Using a different USB port will prevent the MC3 radio from communicating properly with the software.



2. Plug the round end of the USB cable into the MC3 radio by pulling the connector sleeve back, plugging the connector in to the receptacle, and releasing the sleeve.



Attaching Older GoBooks to the MC3

This section explains how to connect older GoBook models to the MC3.

- **GoBook III** This GoBook can be attached directly to the vehicle dock, mounted on a pedestal by the driver or on a sled (similar to the GoBook XR-1).
- **GoBook MAX** This GoBook must be attached to the vehicle dock on a pedestal mount; no sled option is available.

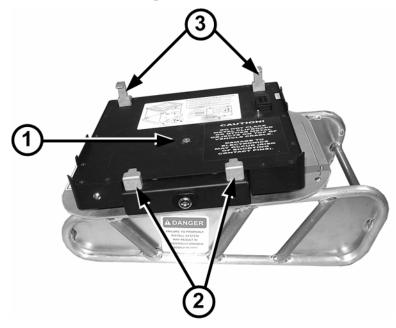
Attaching the GoBook III to the Vehicle Dock

You can attach the GoBook III to a vehicle dock on a sled or pedestal near the driver. The vehicle dock must be installed on the sled or pedestal before attaching the GoBook III. Refer to the *Itronix Vehicle Cradle Installation Guide* for detailed instructions.

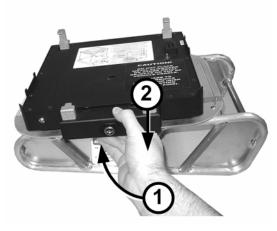
The Itronix documentation refers to the laptop receptacle as a *cradle*; Itron uses the term *dock* to identify this piece of equipment. The term *dock* is used repeatedly throughout this manual; however, *dock* and *cradle* are interchangeable.

To attach the GoBook III to the vehicle dock

1. Ensure that the vehicle dock is in the unlocked position. When locked, a steel pin (1) is visible on the top of the vehicle dock; this pin helps secure the GoBook III in place. When unlocked, this pin is not visible. The front (2) and rear (3) mounting guides are also extended out to the perimeter of the dock when unlocked.



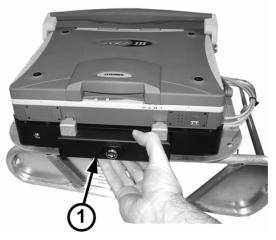
• To unlock the dock, push in underneath the locking mechanism (1) and then pull the handle out (2) as shown.



2. Lower the GoBook III onto the vehicle dock, making sure that the two rear locking mechanisms on the top of the vehicle dock fit into the mating holes on the GoBook underside.

P)

3. Once the GoBook is properly aligned on the vehicle dock, push the locking mechanism in (1) to secure it. This locks the pin in place on the underside of the GoBook and also engages the mounting guides.



4. One end of the USB data cable comes attached to the vehicle dock; attach the other end to the USB port on the MC3.

The USB cable is connected to the dock at the factory and is secured with a cable tie. **DO NOT** remove this cable tie or unplug the USB cable from the dock. The cable tie helps ensure a secure connection and should never be disconnected. The cable tie also ensures that the correct COMM port is used for GPS communications with the Mobile Interface software. Using a different USB port will prevent the MC3 radio from communicating properly with the software.



5. Connect the antennas and power cables for the MC3 as described earlier in this document.

Removing the MC3 System

At some point, you may need to remove the Mobile Collection system from the vehicle.



Before removing any Mobile Collection system components, be sure to stop the Mobile Interface software, shut down the GoBook, and turn off the vehicle power. See the *Mobile Collection User's Guide (TDC-0380-xxx)* for more information.

To remove the GoBook from the vehicle dock

- **1.** Stop processing reads.
- 2. Complete routes.
- 3. Export routes.
- 4. Shut down all open applications and then shut down the GoBook.

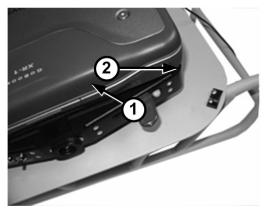


CAUTION If you accidently disconnect the GoBook from the MC3 radio before shutting down Windows and the laptop, the following message appears:

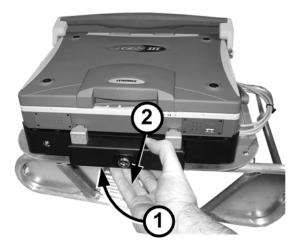
Unsafe Removal of Device

Before clicking **OK**, clear the **ShowUnplug/Eject** icon on the Taskbar box. If you do not clear this box, you will not be able to properly shut down the system in the future.

- 5. Close the GoBook screen.
- **6.** Turn off the vehicle.
- 7. Disconnect any cables attached directly to the GoBook.
- 8. If unlocking the GoBook from the vehicle cradle:
 - **GoBook XR-1** Push the locking mechanism in and slide it toward the keys on front of the dock (1), and then push it in a little further and pull it back to the starting position to unlock the dock (2).



• **GoBook III** Push in underneath the locking mechanism (1) and then pull the handle out (2) as shown.



9. Gently lift the GoBook up and away from the cradle.

Disconnecting the Cables

Disconnect the cables from the MC3 and leave them in the vehicle for the next installation of the system.

To disconnect the cables

- 1. Complete the procedure To remove the GoBook from the vehicle dock on page 25.
- 2. Unplug the cables from the MC3 radio.
- 3. Unplug all the cables from the GoBook dock EXCEPT for:
 - The USB cable (both XR-1 and GoBookIII docks).
 - The power cable that is hard-wired to the dock for GoBookIII installations.
- 4. Unplug the cables from the sled or pedestal junction box.
- 5. Release the mounting clips on the MC3 harness and remove the MC3 radio.
- 6. Unbuckle the seat belt securing the sled to the passenger seat and remove the sled from the vehicle. Leave the pretensitoner attached to the seat belt.

Using the Mobile Collection 2.x System

This chapter describes how to install and use legacy versions of the Mobile Collector radio.

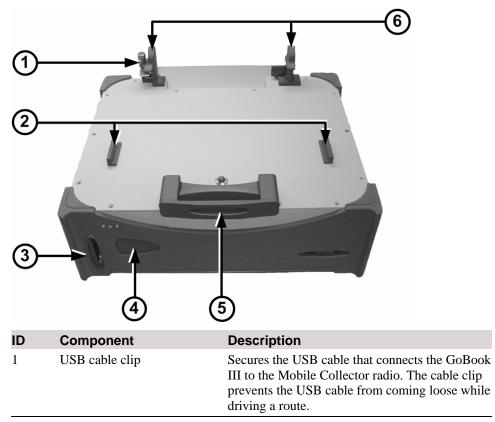


If your vehicle has a passenger-side airbag, Itron strongly recommends disabling it when the Mobile collection system is installed. The force of the airbag deploying could damage the laptop, radio, or other components of the system.

About the Mobile Collection 2.x System

The Mobile Collector 2.x radio houses the transmitter, receivers, and other electronics required to communicate with endpoints.

There are two versions of the Mobile Collector radio; one for use with the GoBook MAX and one for use with the GoBook III. Both versions contain the same features and functionality, but may look slightly different, depending on the version of GoBook you are using.



Mobile Collector 2.x Radio - GoBook III

_

ID	Component	Description
2	Mounting guides	Hold the GoBook in place, and assist you in placing the GoBook on the radio in the proper location.
3	Flash card reader	Provides data backups when configured through the Mobile Administration function.
4	LEDs	Indicate system power, operation, and flash card status.
5	Locking mechanism	Secures the GoBook to the top of the radio.
6	Screen rests	Provide support for the GoBook III screen.

Mobile Collector 2.x Radio - GoBook MAX

()- (2-		
ID	Component	Description
1	Mounting guides	Hold the GoBook in place, and assist you in placing the GoBook on the radio in the proper location.
2	Flash card reader	Provides data backups when configured through the Mobile Administration function.
3	LEDs	Indicate system power, operation, and flash card status.
4	Locking mechanism	Secures the GoBook to the top of the radio.
5	Screen rest	Provides support for the GoBook MAX screen.