Four Slot Ethernet Cradle

This section describes how to set up and use a Four Slot Ethernet cradle with the MC75A. For cradle communication setup procedures refer to the *MC75A Integrator Guide*.

The Four Slot Ethernet cradle:

- Provides 5.4 VDC power for operating the MC75A.
- Connects the MC75A (up to four) to an Ethernet network.
- Simultaneously charges up to four MC75A devices.

Charging

Insert the MC75A into a slot to begin charging.

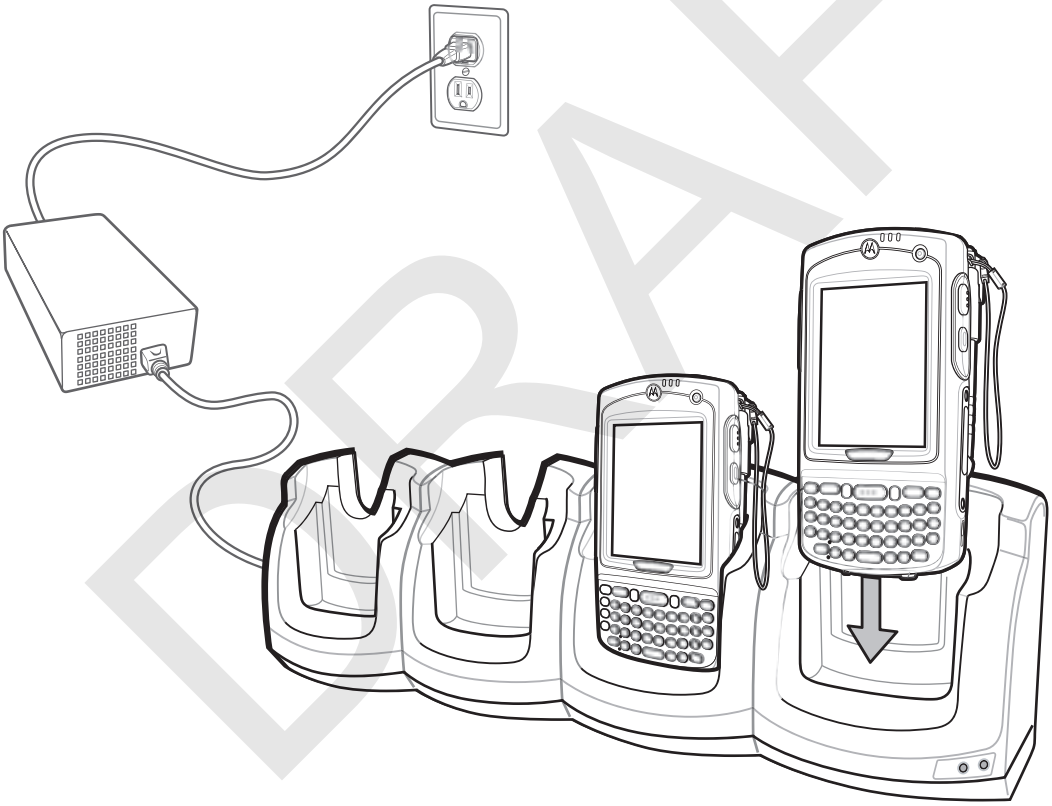

Figure 7-3 *MC75A Battery Charging*

Battery Charging Indicators

The MC75A's charge LED shows the status of the battery charging in the MC75A. See *Table 1-2 on page 1-7* for charging status indications.

The 3600 mAh battery fully charges in less than five hours and the 4800 mAh battery fully charges in less than seven hours.

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Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the MC75A.

To accomplish this, for small periods of time, the MC75A or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC75A or accessory indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 1-2 on page 1-7*.

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Four Slot Charge Only Cradle

This section describes how to set up and use a Four Slot Charge Only cradle with the MC75A.

The Four Slot Charge Only cradle:

- Provides 5.4 VDC power for operating the MC75A.
- Simultaneously charges up to four MC75A devices.

Charging

Insert the MC75A into a slot to begin charging.

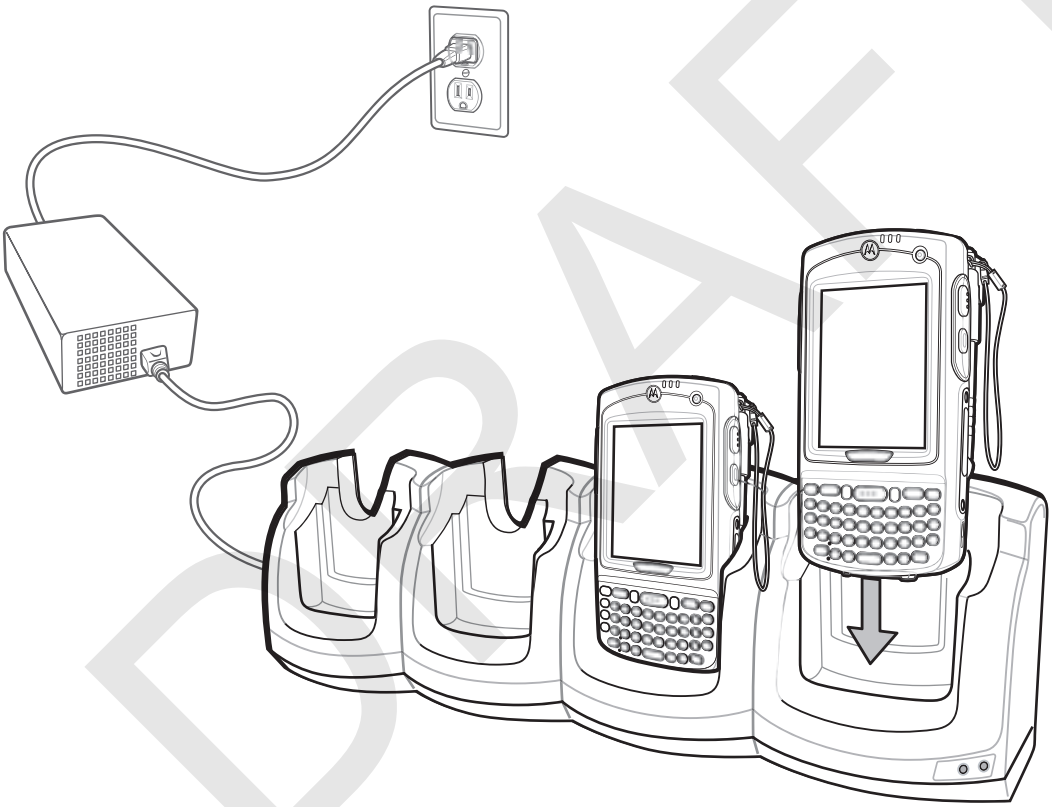

Figure 7-4 *MC75A Battery Charging*

Battery Charging Indicators

The MC75A's charge LED shows the status of the battery charging in the MC75A. See *Table 1-2 on page 1-7* for charging status indications.

The 3600 mAh battery fully charges in less than five hours and the 4800 mAh battery fully charges in less than seven hours.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the MC75A.

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To accomplish this, for small periods of time, the MC75A or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC75A or accessory indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 1-2 on page 1-7*.

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VCD7X00 Vehicle Cradle

This section describes how to use a VCD7X00 vehicle cradle with the MC75A. For cradle installation and communication setup procedures refer to the *MC75A Integrator Guide*.

Once installed in a vehicle, the cradle:

- holds the MC75A securely in place
- provides power for operating the MC75A
- provides a serial port for data communication between an MC75A and an external device (e.g., a printer)
- re-charges the battery in the MC75A
- re-charges a 3600 mAh or 4800 mAh spare battery.

Charging the MC75A Battery

Insert the MC75A into the vehicle cradle to begin charging. A click indicates that the MC75A button release locking mechanism is enabled and the MC75A is locked in place.

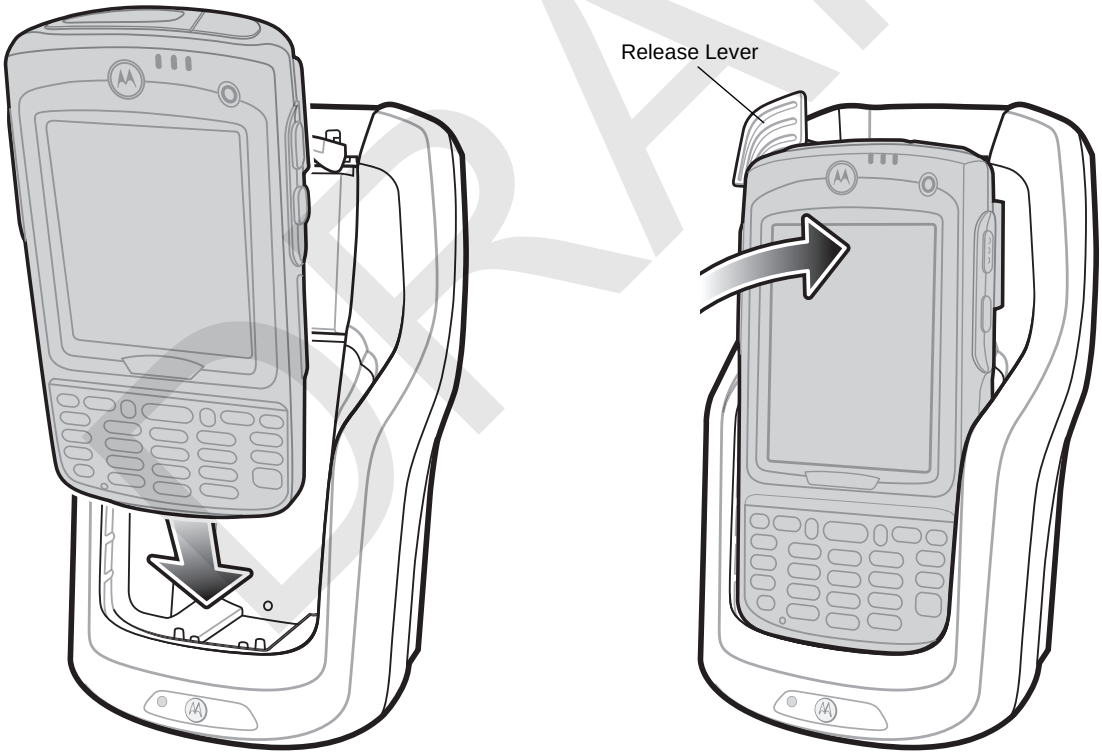

Figure 7-5 *MC75A Battery Charging*

CAUTION Ensure the MC75A is fully inserted in the cradle. Lack of proper insertion may result in property damage or personal injury. Motorola is not responsible for any loss resulting from the use of the products while driving.

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Removing the MC75A

To remove the MC75A, hold back the release lever on the cradle and pull the MC75A up and out of the cradle.

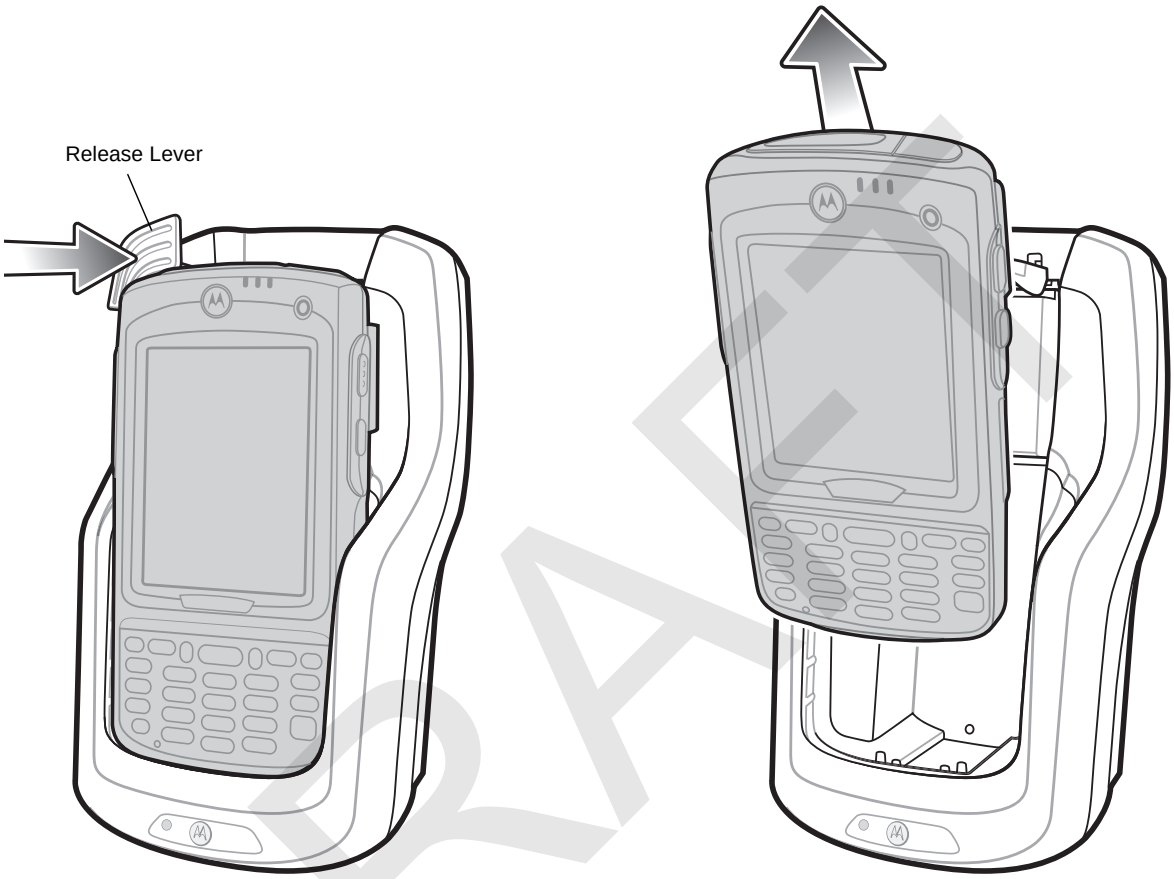

Figure 7-6 *Removing the MC75A*

Charging the Spare Battery

Insert a spare battery to begin charging:

1. Lift the battery release lever.

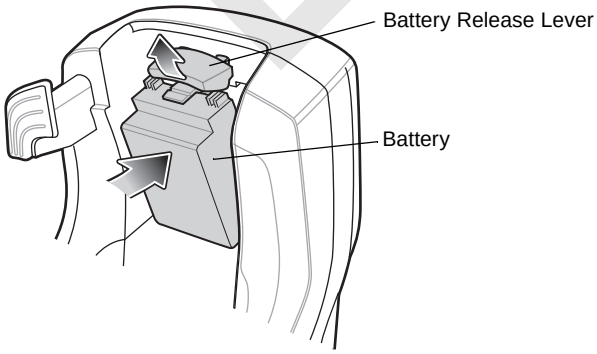

Figure 7-7 *Inserting the Spare Battery*

2. Insert the spare battery in the spare battery charging slot in the cradle with the charging contacts facing up and to the rear of the cradle.

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3. Release the battery release lever. The battery release lever locks the spare battery into place.

To remove a spare battery, hold back the battery release lever and lift the battery from the spare battery slot.

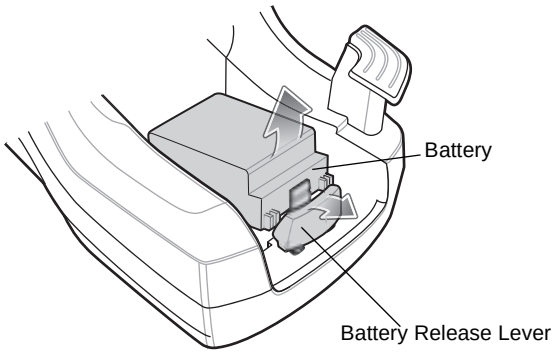

Figure 7-8 *Removing the Spare Battery*

Battery Charging Indicators

The Vehicle Cradle charges the MC75A's main battery and a spare battery simultaneously.

The MC75A's charge LED indicates the status of the battery charging in the MC75A. See *Table 1-2 on page 1-7* for charging status indications.

The spare battery charging LED on the cradle indicates the status of the spare battery charging in the cradle. See *Table 7-3* for charging status indications.

The 3600 mAh battery fully charges in less than five hours and the 4800 mAh battery fully charges in less than seven hours.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the MC75A.

To accomplish this, for small periods of time, the MC75A or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC75A or accessory indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 1-2 on page 1-7* and *Table 7-3*.

Table 7-3 *Vehicle Cradle Spare Battery LED Charging Indicators*

Spare Battery LED (on cradle)	Indication
Off	Battery is not charging; battery is not inserted correctly in the cradle; cradle is not powered
Slow Blinking Amber	Spare battery is charging.
Solid Amber	Charging complete.
Fast Blinking Amber	Charging error.

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Four Slot Battery Charger

This section describes how to use the Four Slot Battery Charger to charge up to four MC75A batteries.

MC75A Battery Shim Installation

Before charging a spare battery, snap the MC75A shim into the battery slot as shown in *Figure 7-9*.

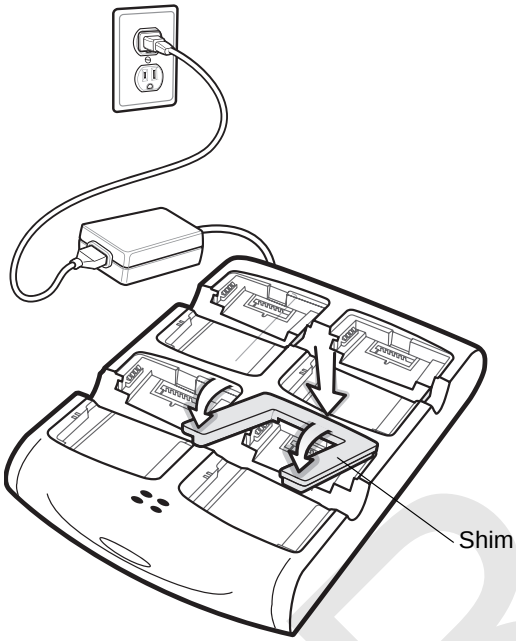

Figure 7-9 *MC75A Battery Shim Installation*

NOTE To purchase additional shims, contact your local account manager or Motorola, Inc. Part number: KT-76490-01R.

Spare Battery Charging

1. Connect the charger to a power source.
2. Insert the spare battery into a spare battery charging well and gently press down on the battery to ensure proper contact.

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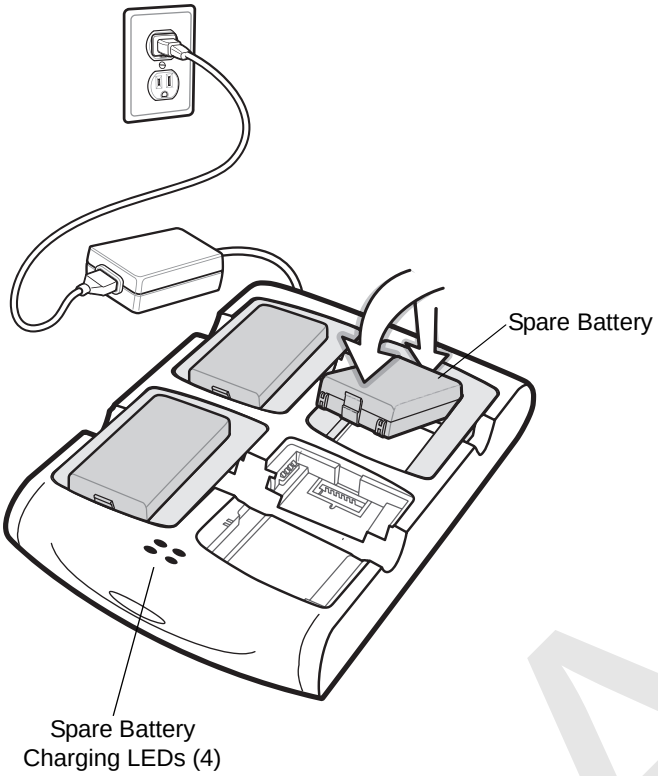

Figure 7-10 *Four Slot Battery Charger*

Battery Charging Indicators

The charger has an amber LED for each battery charging well. See *Table 7-4* for charging status indications. The 3600 mAh battery fully charges in less than five hours and the 4800 mAh battery fully charges in less than seven hours.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the MC75A.

To accomplish this, for small periods of time, the charger alternately enables and disables battery charging to keep the battery at acceptable temperatures. The charger indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 7-4*.

Table 7-4 *Spare Battery LED Charging Indicators*

LED	Indication
Off	No spare battery in slot; battery is not charging; battery is not inserted correctly in the charger; charger is not powered.
Slow Blinking Amber	Spare battery is charging.
Solid Amber	Charging complete.
Fast Blinking Amber	Charging error.

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Magnetic Stripe Reader (MSR)

This section describes how to set up and use the snap-on MSR with the MC75A. The MSR snaps on to the bottom of the MC75A and removes easily when not in use.

When attached to the MC75A, the MSR allows the MC75A to capture data from magnetic stripe cards. To download MSR data capture software, visit the Motorola web site at http://www.symbol.com/support.

With the MSR attach, the MC75A can still be charged by placing the MC75A with MSR into a cradle or connecting to a charging cable.

Attaching and Removing the MSR

To attach, slide the MSR onto the bottom of the MC75A and secure by snapping the arms into the MC75A housing.

Figure 7-11 *MSR Installation*

To remove the MSR open the arms and pull the MSR from the MC75A.

NOTE When attaching a cable with a cup connector through the MSR to charge the device, you cannot swipe cards.

Using the MSR

Install an MSR enabled application onto the MC75A.

To use the MSR:

1. Attach the MSR to the MC75A.
2. Power on the MC75A.
3. Launch the MSR application.
4. Swipe the magnetic stripe card through the MSR, with the magnetic stripe on the card facing down. Swipe the card in either direction, from left to right or from right to left. For best results, gently press down on the card while swiping to ensure contact with the bottom of the reader.

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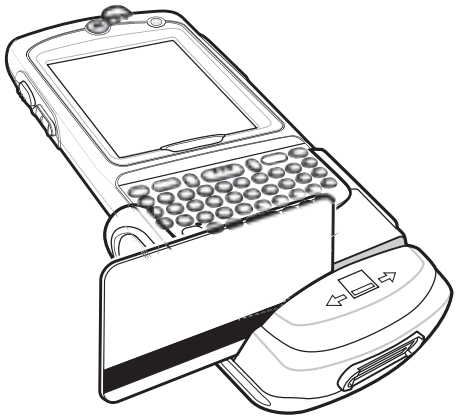

Figure 7-12 *Magnetic Stripe Card Swiping*

5. The application indicates if the data has been read correctly.

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Debit Card Reader

The DCR7X00-100R Debit Card Reader (DCR) snaps onto the bottom of the MC70/MC75A mobile computer to allow easy data capture with the swipe of a magnetic stripe card and personal identification number (PIN) entry using a numeric keypad. This guide describes how to install and use the DCR.

Getting Started

When using the DCR for the first time, charge the DCR in a cradle for a minimum of three hours.

Installation

1. Align the DCR with the bottom of the MC75A and push up until the locking tabs snap into place.

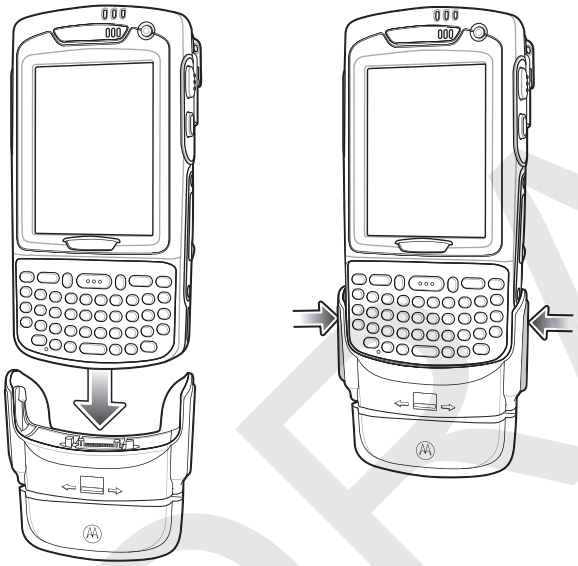

Figure 7-13 *DCR Installation*

2. Pull on the DCR to ensure it is securely connected to the MC75A.

Removal

To remove the DCR from the MC75A, push in the bottom of the two locking tabs and pull the DCR from the MC75A.

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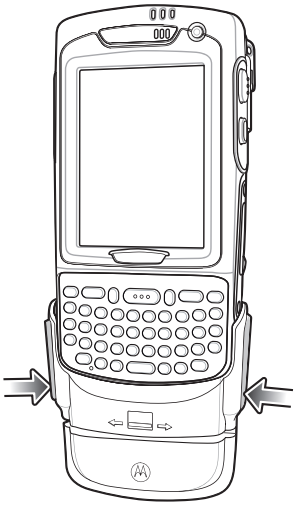

Figure 7-14 *DCR Removal*

Credit Card Transactions

Launch a transaction application on the MC75A. In the application, select Credit Card transaction.

Swipe the credit card through the magnetic stripe reader (MSR) slot, orienting the magnetic stripe as shown. Data encoded on the credit card is captured and, depending on the application, may display in an application data field.

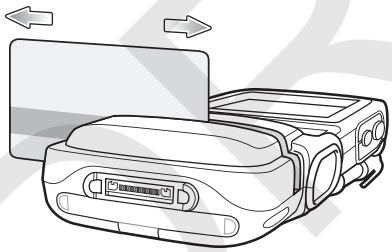

Figure 7-15 *Swipe Card*

NOTE Swipe the card in either direction, from left to right, or right to left. For best results, gently press down on the card while swiping to ensure contact with the bottom of the slot.

Debit Card Transactions

Launch a transaction application on the MC75A. In the application, select Debit Card transaction.

Swipe the debit card through the MSR slot, orienting the magnetic stripe as shown. Data encoded on the debit card is captured and, depending on the application, may display in an application data field.

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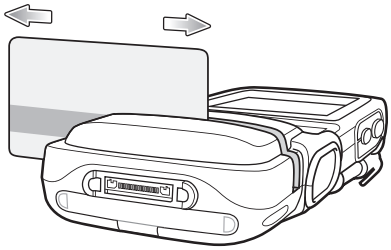

Figure 7-16 *Swipe Card*

NOTE Swipe the card in either direction, from left to right, or right to left. For best results, gently press down on the card while swiping to ensure contact with the bottom of the slot.

Turn the MC75A over and present the DCR keypad to the customer. The customer enters their PIN following the instructions on the DCR display.

Figure 7-17 *Enter PIN on DCR*

Keypad

The back of the DCR contains a display and a numeric keypad for entering data.

Figure 7-18 *DCR Keypad*

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Table 7-5 *Keypad Key Descriptions*

Key	Description
Numeric	Used to enter PIN.
Cancel	Cancels the current transaction.
Clear	Clears the entered data.
Enter	Submits the entered data.

Display Messages

The follow messages may appear on the DCR display:

ENTER PIN - A PIN is required to complete the transaction.

PIN ERR - The entered PIN is not between 4 and 12 characters.

CANCELED - The transaction was cancelled by the user.

COMPLETE - The transaction was completed.

KEYCLEAR - The DCR was tampered with or the battery completely discharged. The DCR must have the key re-injected. See your system administrator.

BATT OK - Battery is significantly charged.

BATT LOW - Battery charge is low. Re-charge as soon as possible.

STAND BY - DCR is performing a firmware check. This occurs if it has been powered off for more than 24 hours.

Check the DCR Battery Level

When the DCR is not used for extended periods of time or in storage it must be charged periodically to maintain the battery charge. Motorola recommends charging the DCR once every three months.

If the DCR battery fully discharges the debit function will be inoperable but the MSR will still function for credit card transactions. Return the DCR for service.

NOTE While the DCR is being used in normal operation (application is accessing the DCR port), the DCR charges from the MC75A.

To check the battery level:

1. Remove the DCR from the MC75A.
2. Press and hold the **5** key until the battery status displays on the DCR display.
   - **BATT OK** - Battery is significantly charged

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- **BATT LOW** - Battery charge is low.

If **BATT LOW** displays, charge the DCR for approximately three hours.

To charge the DCR, place it in a cradle or connect it to a charging cable. The DCR also charges when connected to the MC75A and the transaction application is running.

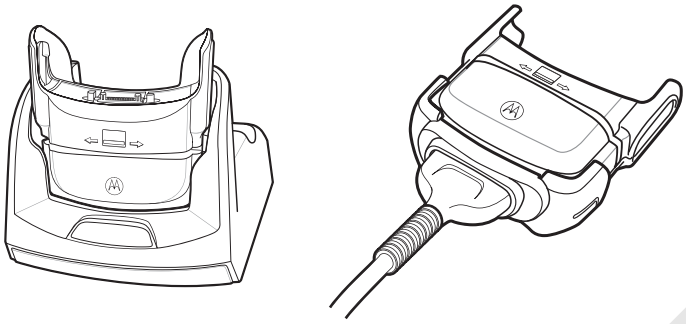

Figure 7-19 *Charging the DCR*

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Snap-on Mobile Payment Module with Chip and PIN

The DCR7X00-200R Snap-on Mobile Payment Module with Chip and PIN smart card reader snaps onto the bottom of the MC75A mobile computer to allow easy data capture with magnetic stripe cards, EMV compliant Chip and PIN cards and personal identification number (PIN) entry using a numeric keypad. This guide describes how to install and use the module.

Installation

NOTE The module only functions when attached to the MC70/MC75.

1. Align the module with the bottom of the MC75A and push up until the locking tabs snap into place.

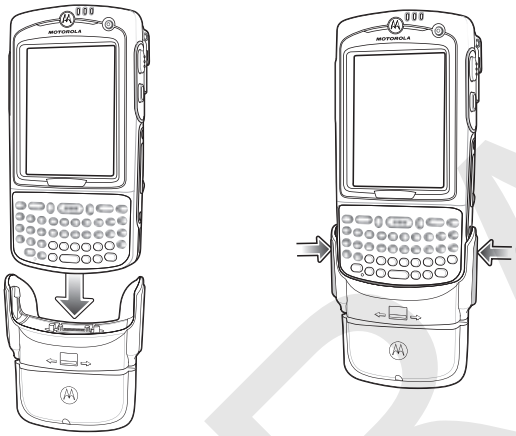

Figure 7-20 *Attach Module to MC75A*

2. Pull on the module to ensure it is securely connected to the MC75A.

Removal

To remove the module from the MC75A, push in the bottom of the two locking tabs and pull the module from the MC75A.

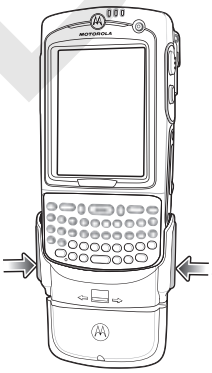

Figure 7-21 *Press Latches In to Lock*

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Credit Card Transactions

NOTE Credit Card transactions will function without an encryption key injected but will not function if a tamper event occurs.

Launch a transaction application on the MC75A. In the application, select Credit Card transaction.

Swipe the credit card through the magnetic stripe reader (MSR) slot, orienting the magnetic stripe as shown. Data encoded on the credit card is captured and, depending on the application, may display in an application data field.

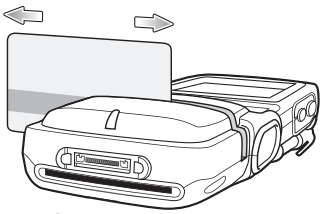

Figure 7-22 *Swipe Card*

NOTE Swipe the card in either direction, from left to right, or right to left. For best results, gently press down on the card while swiping to ensure contact with the bottom of the slot.

Debit Card Transactions

NOTE Debit Card transactions will only function with an encryption key injected. It will not function if a tamper event occurs.

Launch a transaction application on the MC75A. In the application, select Debit Card transaction.

Swipe the debit card through the MSR slot, orienting the magnetic stripe as shown. Data encoded on the debit card is captured and, depending on the application, may display in an application data field.

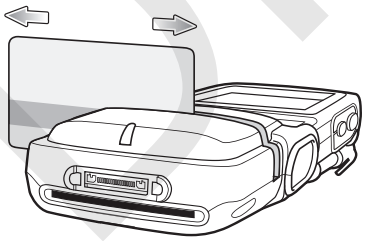

Figure 7-23 *Swipe Card*

NOTE Swipe the card in either direction, from left to right, or right to left. For best results, gently press down on the card while swiping to ensure contact with the bottom of the slot.

Turn the MC75A over and present the keypad to the customer. The customer enters their PIN following the instructions on the display.

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Figure 7-24 *Enter PIN*

Chip and PIN Transactions

NOTE Chip and PIN transactions will function without an encryption key injected but will not function if a tamper event occurs.

Launch a transaction application on the MC75A. In the application, select Chip and PIN transaction.

Customer inserts the Chip and Pin card into the slot, orienting the card with the contacts facing down and toward the DCR keypad.

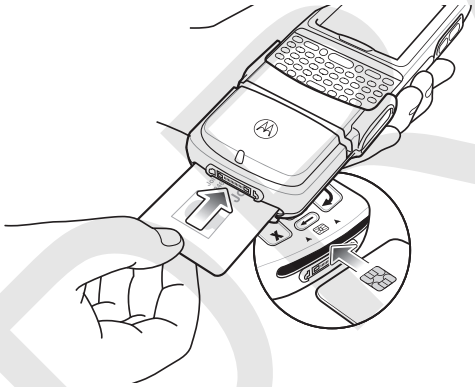

Figure 7-25 *Insert Card*

Customer turns the MC75A over, and enters their PIN following the instructions on the display.

Customer removes the card when transaction is complete.

Keypad

The back of the module contains a display and a numeric keypad for entering data.

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Figure 7-26 *Keypad*

Table 7-6 *Keypad Button Descriptions*

Key	Description
Numeric	Used to enter PIN.
Cancel (Red)	Cancels the current transaction.
Clear (Yellow)	Clears the entered data.
Enter (Green)	Submits the entered data.

Display Messages

After connecting the module to the MC70/MC75 and an application opens the COM port, the following displays:

Figure 7-27 *Display*

Line 1 indicates the model number and the firmware version. The firmware version displays after the model number. In this example the firmware version is 0.09.

Line 2 indicates the keyload code. Each characters of the keyload code represents a different key type.

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Table 7-7 *Keyload Codes*

Display	Operating Status
D - - - - D M M - - D - - M M - M M - - - - - M M - - - - -	Normal
d - - - - d m m - - d - - m m - m m - - - - - m m	Return to key injection facility.
* * * * * Blank display	Return to Motorola for service.

The follow messages may appear on the display:

Table 7-8 *Display Messages*

Message	Description
Line 1: Line 2: Enter PIN	Instructs the user to enter their PIN.
Line 1: PIN Line 2: ENT to Accept	Displays “*” as PIN is entered and instructs the user to press enter key when done.

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Headset

Use the headset to communicate via Voice-Over-IP (VOIP) or for audio playback and telephony applications. To connect the headset, remove the plug from the headset jack at the top of the MC75A and insert the headset connector. Contact a Motorola representative for compatible headsets.

For best performance, Motorola recommends a 2.5mm jack headset, p/n 50-11300-050R.

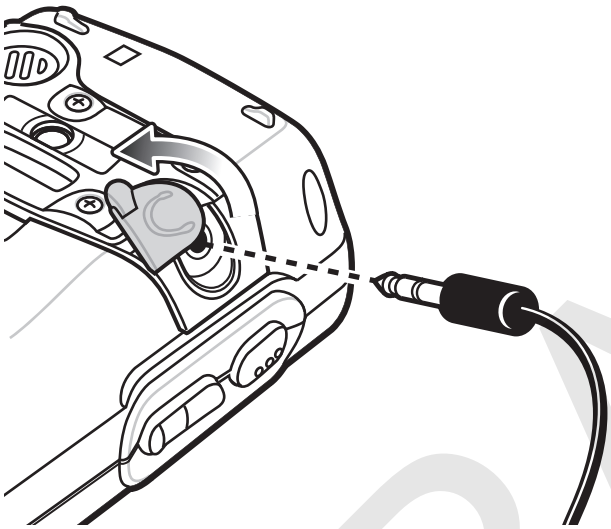

Figure 7-28 *Headset Connection*

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Cables

This section describes how to set up and use the cables. The cables are available with a variety of connection capabilities.

The following communication/charge cables are available:

- Serial (RS232) Charge cable (9-pin D female with power input receptacle)
- USB Client Charge cable (standard-A connector and a barrel receptacle for power)
- Auto charge cable
- DEX cable
- Modem inverter cable
- Charge only cable.

The following printer cables are available directly from Motorola:

- O'Neil Printer cable
- Zebra Printer cable.

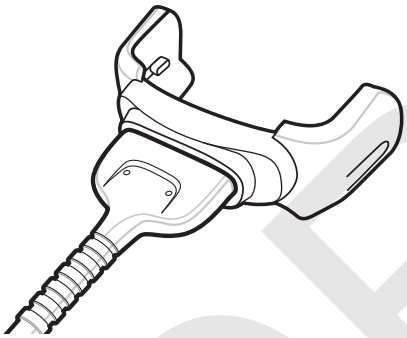

Figure 7-29 *Cables*

Communication/charge cables:

- Provide the MC75A with operating and charging power when used with the Motorola approved power supply.
- Synchronize information between the MC75A and a host computer. With customized or third party software, it can also synchronize the MC75A with corporate databases.
- Provide serial connection through the serial pass-through port for communication with a serial device, such as a host computer. For communication setup procedures, refer to the *MC75A Integrator Guide*.
- Provide USB connection through the USB pass-through port for communication with a USB device, such as a host computer. For communication setup procedures, refer to the *MC75A Integrator Guide*.

Dedicated printer cables provide communication with a printer.

Battery Charging and Operating Power

The communication/charge cables can charge the MC75A battery and supply operating power.

To charge the MC75A battery:

1. Connect the communication/charge cable power input connector to the Motorola approved power source.

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2. Slide the bottom of the MC75A into the connector end of the communication/charge cable and gently press in until it latches into the MC75A. The MC75A amber Charge LED indicates the MC75A battery charging status. The 3600 mAh standard battery charges in less than five hours and the 4800 mAh standard battery charges in less than seven hours. See *Table 1-2 on page 1-7* for charging status indications.
3. When charging is complete, remove the cable by gently pulling the MC75A and the cable apart.

LED Charge Indications

The amber Charge LED on the MC75A indicates battery charging status. See *Table 1-2 on page 1-7* for charging status indications.

Charging Temperature

Charge batteries in temperatures from 0°C to 40°C (32°F to 104°F). Charging is intelligently controlled by the MC75A.

To accomplish this, for small periods of time, the MC75A or accessory alternately enables and disables battery charging to keep the battery at acceptable temperatures. The MC75A or accessory indicates when charging is disabled due to abnormal temperatures via its LED. See *Table 1-2 on page 1-7*.4

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Chapter 8 Maintenance & Troubleshooting

Introduction

This chapter includes instructions on cleaning and storing the MC75A, and provides troubleshooting solutions for potential problems during MC75A operation.

Maintaining the MC75A

For trouble-free service, observe the following tips when using the MC75A:

- Do not scratch the screen of the MC75A. When working with the MC75A, use the supplied stylus or plastic-tipped pens intended for use with a touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the MC75A screen.
- A screen protector, p/n KT-67525-01R, is applied to the MC75A. Motorola recommends using this to minimize wear and tear. Screen protectors enhance the usability and durability of touch screen displays. Benefits include:
  - Protection from scratches and gouges
  - Durable writing and touch surface with tactile feel
  - Abrasion and chemical resistance
  - Glare reduction
  - Keeping the device's screen looking new
  - Quick and easy installation.
- The touch-sensitive screen of the MC75A is glass. Do not to drop the MC75A or subject it to strong impact.
- Protect the MC75A from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- Do not store or use the MC75A in any location that is dusty, damp, or wet.
- Use a soft lens cloth to clean the MC75A. If the surface of the MC75A screen becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.
- Periodically replace the rechargeable battery to ensure maximum battery life and product performance. Battery life depends on individual usage patterns.

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Removing the Screen Protector

A screen protector is applied to the MC75A. Motorola recommends using this to minimize wear and tear. Screen protectors enhance the usability and durability of touch screen displays.

To remove the screen protector, lift the corner using a thin plastic card, such as a credit card, then carefully lift it off the display.

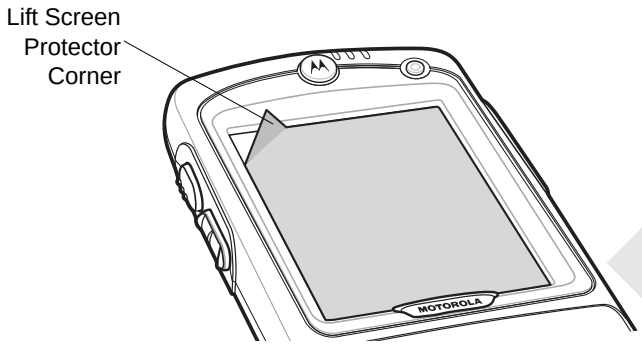

Figure 8-1 *Removing the Screen Protector*

CAUTION Do not use a sharp object to remove the protector. Doing so can damage the display.

NOTE Not using a screen protector can affect warranty coverage. To purchase replacement protectors, contact your local account manager or Motorola, Inc. These include screen protector installation instructions. Part number: KT-67525-01R Screen Protector 3/pk.

Battery Safety Guidelines

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non commercial environment.
- Follow battery usage, storage, and charging guidelines found in the user's guide.
- Improper battery use may result in a fire, explosion, or other hazard.
- To charge the mobile device battery, the battery and charger temperatures must be between +32 ºF and +104 ºF (0 ºC and +40 ºC)
- Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact Motorola Enterprise Mobility support.
- For devices that utilize a USB port as a charging source, the device shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- To enable authentication of an approved battery, as required by IEEE1725 clause 10.2.1, all batteries will carry a Motorola hologram. Do not fit any battery without checking it has the Motorola authentication hologram.
- Do not disassemble or open, crush, bend or deform, puncture, or shred.

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- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.
- Battery usage by children should be supervised.
- Please follow local regulations to promptly dispose of used re-chargeable batteries.
- Do not dispose of batteries in fire.
- Seek medical advice immediately if a battery has been swallowed.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- If you suspect damage to your equipment or battery, contact Motorola Enterprise Mobility support to arrange for inspection.

Cleaning

WARNING! **Avoid exposing this product to contact with hot oil or other flammable liquids. If such exposure occurs, unplug the device and clean the product immediately in accordance with these guidelines.**

CAUTION Always wear eye protection.

Read warning label on compressed air and alcohol product before using.

If you have to use any other solution for medical reasons please contact Motorola for more information.

Materials Required

- Alcohol wipes
- Lens tissue
- Cotton tipped applicators
- Isopropyl alcohol
- Can of compressed air with a tube.

Cleaning the MC75A

Housing

Using the alcohol wipes, wipe the housing including keys and in-between keys.

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Display

The display can be wiped down with the alcohol wipes, but care should be taken not to allow any pooling of liquid around the edges of the display. Immediately dried the display with a soft, non-abrasive cloth to prevent streaking.

Scanner Exit Window

Wipe the scanner exit window periodically with a lens tissue or other material suitable for cleaning optical material such as eyeglasses.

Connector

1. Remove the main battery from mobile computer. See *Replacing the Main Battery on page 1-9*.
2. Close battery door.
3. Dip the cotton portion of the cotton tipped applicator in isopropyl alcohol.
4. Rub the cotton portion of the cotton tipped applicator back-and-forth across the connector on the bottom of the MC75A. Do not leave any cotton residue on the connector.
5. Repeat at least three times.
6. Use the cotton tipped applicator dipped in alcohol to remove any grease and dirt near the connector area.
7. Use a dry cotton tipped applicator and repeat steps 4 through 6.

CAUTION Do not point nozzle at yourself and others, ensure the nozzle or tube is away from your face.

8. Spray compressed air on the connector area by pointing the tube/nozzle about ½ inch away from the surface.
9. Inspect the area for any grease or dirt, repeat if required.

Cleaning Cradle Connectors

To clean the connectors on a cradle:

1. Remove the DC power cable from the cradle.
2. Dip the cotton portion of the cotton tipped applicator in isopropyl alcohol.
3. Rub the cotton portion of the cotton tipped applicator along the pins of the connector. Slowly move the applicator back-and-forth from one side of the connector to the other. Do not let any cotton residue on the connector.
4. All sides of the connector should also be rubbed with the cotton tipped applicator.

CAUTION Do not point nozzle at yourself and others, ensure the nozzle or tube is away from your face.

5. Spray compressed air in the connector area by pointing the tube/nozzle about ½ inch away from the surface.
6. Ensure that there is no lint left by the cotton tipped applicator, remove lint if found.
7. If grease and other dirt can be found on other areas of the cradle, use lint free cloth and alcohol to remove.

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8. Allow at least 10 to 30 minutes (depending on ambient temperature and humidity) for the alcohol to air dry before applying power to cradle.

   If the temperature is low and humidity is high, longer drying time is required. Warm temperature and dry humidity requires less drying time.

Cleaning Frequency

The cleaning frequency is up to the customer's discretion due to the varied environments in which the mobile devices are used. They may be cleaned as frequently as required. However when used in dirty environments it may be advisable to periodically clean the scanner exit window to ensure optimum scanning performance.

Troubleshooting

MC75A

Table 8-1 *Troubleshooting the MC75A*

Problem	Cause	Solution
MC75A does not turn on.	Battery not charged.	Charge or replace the battery.
	Battery not installed properly.	Install the battery properly. See *Installing the Main Battery on page 1-4*.
	System crash.	Perform a warm boot. If the MC75A still does not turn on, perform a cold boot. See *Resetting the MC75A on page 2-17*.
Rechargeable battery did not charge.	Battery failed.	Replace battery. If the MC75A still does not operate, perform a warm boot, then a cold boot. See *Resetting the MC75A on page 2-17*.
	MC75A removed from cradle while battery was charging.	Insert MC75A in cradle and allow to charge.
	Extreme battery temperature.	Battery does not charge if ambient temperature is below 0°C (32°F) or above 40°C (104°F).
Cannot see characters on display.	MC75A not powered on.	Press the red **Power** button.

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Table 8-1 *Troubleshooting the MC75A (Continued)*

Problem	Cause	Solution
During data communication, no data transmitted, or transmitted data was incomplete.	MC75A removed from cradle or disconnected from host computer during communication.	Replace the MC75A in the cradle, or reattach the communication cable and re-transmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software was incorrectly installed or configured.	Perform setup. Refer to the *MC75A Enterprise Digital Assistant Integrator Guide* for details.
No sound.	Volume setting is low or turned off.	Adjust the volume. See *Adjusting Volume on page 2-12*.
MC75A shuts off.	MC75A is inactive.	The MC75A turns off after a period of inactivity. If the MC75A is running on battery power, set this period from 1 to 5 minutes, in one-minute intervals. If the MC75A is running on external power, set this period to 1, 2, 5, 10, 15, or 30 minutes. Check the **Power** window by selecting **Start** > **Settings** > **Power** icon. Select the **Advanced** tab and change the setting for a longer delay before the automatic shutoff feature activates.
	Battery is depleted.	Recharge or replace the battery.
	Battery is not inserted properly.	Insert the battery properly. See *Installing the Main Battery on page 1-4*.
Tapping the window buttons or icons does not activate the corresponding feature.	Screen is not calibrated correctly.	Re-calibrate the screen. See *Calibrating the Screen on page 1-7*.
	The system is not responding.	Warm boot the system. See *Resetting the MC75A on page 2-17*.
A message appears stating that the MC75A memory is full.	Too many files stored on the MC75A.	Delete unused memos and records. If necessary, save these records on the host computer (or use an SD card for additional memory).
	Too many applications installed on the MC75A.	Remove user-installed applications on the MC75A to recover memory. Select **Start** > **Settings** > **System** and tap the **Remove Programs** icon. Select the unused program and tap **Remove.**

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Table 8-1 *Troubleshooting the MC75A (Continued)*

Problem	Cause	Solution
MC75A keeps powering down to protect memory contents.	The MC75A's battery is low.	Recharge or replace the battery.
	The internal Bluetooth radio is powered on for a long time.	Because this mode requires battery power, power it off when not needed.
The MC75A does not accept data capture input.	Scanning application is not loaded.	Load a scanning application on the MC75A. See the system administrator.
	Unreadable bar code.	Ensure the symbol is not defaced.
	Distance between exit window and bar code is incorrect.	Place the MC75A within proper scanning range.
	MC75A is not programmed for the bar code.	Program the MC75A to accept the type of bar code being scanned.
	MC75A is not programmed to generate a beep.	If the MC75A does not beep on a good decode, set the application to generate a beep on good decode.
	Battery is low.	If the scanner stops emitting a laser beam upon a trigger press, check the battery level. When the battery is low, the scanner shuts off before the MC75A low battery condition notification. Note: If the scanner is still not reading symbols, contact the distributor or Motorola.

Bluetooth Connection

Table 8-2 *Troubleshooting Bluetooth Connection*

Problem	Cause	Solution
MC75A cannot find any Bluetooth devices nearby.	Too far from other Bluetooth devices.	Move closer to the other Bluetooth device(s), within a range of 10 meters.
	The Bluetooth device(s) nearby are not turned on.	Turn on the Bluetooth device(s).
	The Bluetooth device(s) are not in discoverable mode.	Set the Bluetooth device(s) to discoverable mode. If needed, refer to the device's user documentation for help.

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Table 8-2 *Troubleshooting Bluetooth Connection (Continued)*

Problem	Cause	Solution
When trying to connect a Bluetooth phone and MC75A, the phone thinks a previously paired MC75A is used.	The phone remembers the name and address of the MC75A it last paired with via the Bluetooth radio.	Manually delete the pairing device and name from the phone. Refer to the phone's user documentation for instructions.
There is a delay in the Bluetooth stack re-initializing during a resume from suspend.	This is normal behavior.	No solution required.
The Bluetooth connection drops.	The MC75A suspends and the Bluetooth radio power turns off.	When the MC75A suspends the Bluetooth connection is dropped. Re-connect the Bluetooth connection when the MC75A returns from suspend mode.

Single Slot USB/Serial Cradle

Table 8-3 *Troubleshooting the Single Slot USB/Serial Cradle*

Symptom	Possible Cause	Action
LEDs do not light when MC75A or spare battery is inserted.	Cradle is not receiving power.	Ensure the power cable is connected securely to both the cradle and to AC power.
	MC75A is not seated firmly in the cradle.	Remove and re-insert the MC75A into the cradle, ensuring it is firmly seated.
	Spare battery is not seated firmly in the cradle.	Remove and re-insert the spare battery into the charging slot, ensuring it is firmly seated.

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Table 8-3 *Troubleshooting the Single Slot USB/Serial Cradle (Continued)*

Symptom	Possible Cause	Action
MC75A battery is not charging.	MC75A was removed from cradle or cradle was unplugged from AC power too soon.	Ensure cradle is receiving power. Ensure MC75A is seated correctly. Confirm main battery is charging under **Start** > **Settings** > **Power**.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	The MC75A is not fully seated in the cradle.	Remove and re-insert the MC75A into the cradle, ensuring it is firmly seated.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).
	Extreme battery temperature.	Battery does not charge if ambient temperature is below 0°C (32°F) or above 40°C (104°F).
Spare battery is not charging.	Spare battery inserted incorrectly.	Re-insert the spare battery so the charging contacts on the battery align with the contacts on the cradle.
	Spare battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).
During data communication, no data transmits, or transmitted data was incomplete.	MC75A removed from cradle during communications.	Replace MC75A in cradle and retransmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software is not installed or configured properly.	Perform setup as described in the *MC75A Enterprise Digital Assistant Integrator Guide.*

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Four Slot Ethernet Cradle

Table 8-4 *Troubleshooting the Four Slot Ethernet Cradle*

Symptom	Cause	Solution
During communication, no data transmits, or transmitted data was incomplete.	MC75A was removed from cradle during communications.	Replace MC75A in cradle and retransmit.
	MC75A has no active connection.	An icon is visible in the status bar if a connection is currently active.
Battery is not charging.	MC75A removed from the cradle too soon.	Replace the MC75A in the cradle.Tap **Start** > **Settings** > **Power** to view battery status.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	MC75A is not inserted correctly in the cradle.	Remove the MC75A and reinsert it correctly. Verify charging is active. Tap **Start** > **Settings** > **Power** to view battery status.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).

Vehicle Cradle

Table 8-5 *Troubleshooting the Vehicle Cradle*

Symptom	Possible Cause	Action
MC75A battery charging LED does not light up.	Cradle is not receiving power.	Ensure the power input cable is securely connected to the cradle's power port.
MC75A battery is not recharging.	MC75A was removed from the cradle too soon.	Replace the MC75A in the cradle.
	Battery is faulty.	Replace the battery.
	MC75A is not placed correctly in the cradle.	Remove the MC75A from the cradle, and re-insert correctly. If the battery still does not charge, contact customer support. The MC75A battery charging LED slowly blinks amber when the MC75A is correctly inserted and charging.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).

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Table 8-5 *Troubleshooting the Vehicle Cradle*

Symptom	Possible Cause	Action
No data transmitted, or transmitted data was incomplete.	MC75A removed from cradle during communication.	Replace MC75A in cradle and retransmit.
	No null modem cable was used.	Some external devices require a null modem cable. Retransmit using a null modem cable.
	Incorrect cable configuration.	See the system administrator.
	Cable missing or disconnected.	Re-connect cable.

Four Slot Battery Charger

Table 8-6 *Troubleshooting The Four Slot Battery Charger*

Symptom	Possible Cause	Action
Battery not charging.	Battery was removed from the charger or charger was unplugged from AC power too soon.	Re-insert the battery in the charger or re-connect the charger's power supply.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	Battery contacts not connected to charger.	Verify that the battery is seated in the battery well correctly with the contacts facing down.
	Ambient temperature of the cradle is too warm.	Move the cradle to an area where the ambient temperature is between 0°C (32°F) and 35°C (95°F).

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Cables

Table 8-7 *Troubleshooting the Cables*

Symptom	Possible Cause	Action
MC75A battery is not charging.	MC75A was disconnected from AC power too soon.	Connect the power cable correctly. Confirm main battery is charging under **Start** > **Settings** > **Power**.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	The MC75A is not fully attached to power.	Detach and re-attach the power cable to the MC75A, ensuring it is firmly connected.
During data communication, no data transmits, or transmitted data was incomplete.	Cable was disconnected from MC75A during communications.	Re-attach the cable and retransmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software is not installed or configured properly.	Perform setup as described in the *MC75A Integrator Guide.*

Magnetic Stripe Reader

Table 8-8 *Troubleshooting the Magnetic Stripe Reader*

Symptom	Possible Cause	Action
MSR cannot read card.	MSR removed from MC75A during card swipe.	Reattach MSR to MC75A and reswipe the card.
	Faulty magnetic stripe on card.	See the system administrator.
	MSR application is not installed or configured properly.	Ensure the MSR application is installed on the MC75A. Ensure the MSR application is configured correctly.

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Table 8-8 *Troubleshooting the Magnetic Stripe Reader (Continued)*

Symptom	Possible Cause	Action
MC75A battery is not charging.	MC75A was removed from MSR or MSR was unplugged from AC power too soon.	Ensure MSR is receiving power. Ensure MC75A is attached correctly. Confirm main battery is charging under **Start** > **Settings** > **Power**.
	Battery is faulty.	Verify that other batteries charge properly. If so, replace the faulty battery.
	The MC75A is not fully attached to the MSR.	Detach and re-attach the MSR to the MC75A, ensuring it is firmly connected.
During data communication, no data transmits, or transmitted data was incomplete.	MC75A detached from MSR during communications.	Reattach MC75A to MSR and retransmit.
	Incorrect cable configuration.	See the system administrator.
	Communication software is not installed or configured properly.	Perform setup as described in the *MC75A Integrator Guide.*

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Appendix A Technical Specifications

MC75A Technical Specifications

The following tables summarize the MC75A's intended operating environment and technical hardware specifications.

MC75A

Table A-1 *MC75A Technical Specifications*

Item	Description
Physical Characteristics	
Dimensions	MC75A0: Length: 15.2 cm (6.00 in.) Width: 8.4 cm (3.30 in.) Depth: 4.4 cm (1.70 in.) MC75A6/8: Length: 17.9 cm (7.05 in.) Width: 8.4 cm (3.30 in.) Depth: 4.4 cm (1.70 in.)
Weight	MC75A0: 364 g (12.84 oz) - with 1950 mAh battery 398g (14.04 oz) - with 3600 mAh battery MC75A6/8: 389 g (13.72 oz) - with 1950 mAh battery 423 g (14.92 oz) - with 3600 mAh battery
Display	Transflective color 3.5" VGA with backlight, TFT-LCD, 65K colors, 480 W x 640 L (VGA size)
Touch Panel	Glass analog resistive touch
Note 1: Total output power can be either USB or serial or a combination of both that cannot exceed 200 mA.	

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Table A-1 *MC75A Technical Specifications (Continued)*

Item	Description
Backlight	LED backlight
Main Battery	Rechargeable Lithium Ion 3.7V, 1950, 3800 or 4800 mAh Smart Battery
Backup Battery	NiMH battery (rechargeable) 15 mAh 2.4V (not user-accessible)
Expansion Slot	User accessible microSD slot (with secure cover).
Network Connections	Ethernet (via cradle) Full-speed USB, host or client, Bluetooth
Notification	Vibrator and LED
Keypad Options	Numeric, DSD, QWERTY, AZERTY and QWERTZ
Audio	Speaker, receiver, microphone, headset jack, software support for full duplex record and playback (stereo)
Performance Characteristics	
CPU	Marvell PXA320 processor at 806 MHz
Operating System	MC75A0: Microsoft® Windows Mobile™ 6.5 Classic MC75A6/8: Microsoft® Windows Mobile™ 6.5 Professional
Memory	256MB RAM/1GB FLASH
Interface/Communications	RS-232, USB 1.1, IrDA
Output Power (Note 1)	USB: 5 VDC @ 200 mA max. Serial: 5 VDC @ 200 mA max.
User Environment	
Operating Temperature	-10°C to 50°C (14°F to 122°F)
Storage Temperature	-40°C to 60°C (-40°F to 140°F) - without battery
Charging Temperature	32°F to 104°F / 0° C to 40° C
Humidity	95% non-condensing
Drop Specification	1.5 m (5 ft.) drop to concrete, at ambient temperature 23°C (73°F). 1.2 m (4 ft.) drop to concrete, over operating temperature range. Meets and Exceeds MIL-STD 810G.
Tumble	1,000 0.5 m (1.6 ft.) tumbles (2,000 drops)
Electrostatic Discharge (ESD)	+/-15kVdc air discharge, +/-8kVdc direct discharge, +/-8kVdc indirect discharge
Sealing	IP54
Note 1: Total output power can be either USB or serial or a combination of both that cannot exceed 200 mA.	

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