BATTERY MANAGEMENT USER GUIDE

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Revision History

| Change | Date | Description | |
|------------|----------|--------------------------------|--|
| -01 Rev A | 03/2014 | Initial release. | |
| -01 Rev B | 09//2014 | Update supported devices list. | |
| -01 Rev. C | 11/2014 | Update supported devices list. | |
| —01 Rev. D | 3/2015 | Zebra Rebranding. | |

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Chapter

Battery Management Application Installation

The Battery Health application supports the devices and operating systems listed below.

Table 1: Supported Devices

| Device | Operating System | |
|--------|--|--|
| MC65 | Windows Embedded handheld 6.5.3 | |
| MC67 | Windows Embedded handheld 6.5.3 | |
| MC9200 | Windows CE7 Windows Embedded handheld 6.5.3 | |
| WT4100 | Windows CE7 | |

Installing on a Windows Mobile Device

Prerequisites:

Download the installation package from the Support Central web site. Go to www.zebra.com/support.

Save the package to a folder on the host computer and un-compress the zip file.

Procedure:

- 1 Connect the device to a host computer is a cradle or USB cable.
- 2 Locate the BHSetupWM.cab file on the host computer.
- 3 Use ActiveSync to copy the BHSetupWM.cab file to the /temp folder on the mobile computer.
- 4 On the mobile computer, touch Start.
- 5 Touch File Explorer.
- 6 Navigate to the /temp folder.
- 7 Locate the BHSetupWM.cab file.

Figure 1: File Explorer



- 8 Touch the file to launch the installation package.
- 9 Touch OK.

Figure 2: Install CAB File

| Choose a location to install "Motorola Solutions BH": |
|---|
| Device |
| ◯ \Cache Disk |
| ○ \Application |
| Space Needed: 969 KB Space Available: 4173020 KB |
| Install Cancel |

10 Touch Install.

The package installs and then the device reboots.

Installing on a Windows CE Device

Prerequisites:

Download the installation package from the Support Central web site. Go to www.zebra.com/support.

Save the package to a folder on the host computer and un-compress the zip file.

Procedure:

- 1 Connect the device to a host computer is a cradle or USB cable.
- 2 Locate the BHSetupCE7.cab file on the host computer.
- 3 Use ActiveSync to copy the BHSetupCE7.cab file to the /temp folder on the mobile computer.
- 4 On the mobile computer, touch StartProgramsWindows Explorer.
- 5 Open the /temp folder.
- 6 Locate the BHSetupCE7.cab file.

Figure 3: File Explorer

| File Edit View Go | ? | × |
|-----------------------|---|----------|
| | | |
| | | |
| BHSetupC DWLog DWStar | | |
| E7 | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | . |

7 Touch the file to launch the installation package.

Figure 4: Install CAB File

| Install Moto 🗈 💣 ? OK 🗙 | |
|---------------------------------------|--|
| 🖄 \Program Files | |
| Coffice Wavelink Command Prompt | |
| Name: BH | |
| Type: | |

8 Touch OK.

The package installs the application on the device.

9 Perform a cold boot. See the device's User Guide for information.

Uninstalling on a Windows Mobile Device

Procedure:

- 1 To Start > Settings > System.
- 2 Select Remove Programs.
- 3 Select BH.

Figure 5: Remove Programs Window



4 Touch Remove.

5 Select Yes to remove the application.The device removes the application and then reboots.

Uninstalling on a Windows CE Device

Procedure:

- 1 To Start > Settings > Control Panel.
- 2 Select Remove Programs.
- 3 Select BH.

Figure 6: Remove Programs Window

| Remove Programs 🛛 ? OK 🗙 | | |
|---|--|--|
| Remove Programs | | |
| To remove a program, select it and then press Remove. | | |
| Samples.C startUpCtl BH | | |
| | | |
| Remove. | | |
| | | |
| | | |

- 4 Touch Remove.
- 5 Select Yes to remove the application.The device removes the application and then reboots.

Chapter 2

Battery Management Usage

The Battery Health service provides an estimate of battery health based on a number of different measurements, beyond just capacity.

Battery Health Indication — WinMobile

The Battery Health dialog box is accessible from the Status Bar. Touch the Status Bar and then the Battery icon.

Figure 7: Status Bar



Touch the Battery icon to view the Battery Health dialog box.

Figure 8: Battery Health Dialog Box



- **Battery Power** Indicates the current battery power, represented as a percentage of the total battery capacity.
- **Battery Health** Indicates the battery health using a five star-rating rating system based on a predefined battery usage count threshold value. If the battery falls below any of these values, it is assigned to a lower star-rating.
- Cycle Count Displays the current battery usage count of the battery (configurable).

The background color also indicates the battery health.

Figure 9: Battery Background Color

| Battery Health ok | Battery Health ok | Battery Health ok |
|--|--|---|
| Battery Power: 100% Battery Health: The second s | Battery Power: 98% Battery Health: ★★★☆☆☆ Used | Battery Power: 98% Battery Health: ★☆☆☆☆☆ Battery should be replaced |
| Cycle count: 100 | Cycle count: 200 | Cycle count: 300 |

- Green Indicates that the battery is healthy.
- Yellow Indicates that the battery is reaching the end of its useful life.
- Red Indicates that the battery should be replaced.

The inside of the battery icon indicated the battery charge level. The white area indicates the current charge status of the battery used.

After a pre-defined time period, the dialog box disappears.

The Battery health dialog box can be set to appear after the device resumes from suspend mode or depending upon the health status. See *Battery Management Configuration - WinMobile on page 21*.

Battery Health Indication – WinCE

The Battery Health icon appears in the Task Tray.

Figure 10: Task Tray Icon



Touch the icon to view the Battery Health dialog box.

Figure 11: Battery Health Dialog Box



- Battery Power Indicates the current battery power, represented as a percentage of the total battery capacity.
- Battery Health Indicates the battery health using a five star-rating rating system based on a predefined battery
- usage count threshold value. If the battery falls below any of these values, it is assigned to a lower star-rating.
- Cycle Count Displays the current battery usage count of the battery (configurable).

The background color also indicates the battery health.

Figure 12: Battery Background Color



- Green Indicates that the battery is healthy.
- Yellow Indicates that the battery is reaching the end of its useful life.
- Red Indicates that the battery should be replaced.

The inside of the battery indicates the battery level. The white area indicates the charge level.

After a pre-defined time period, the dialog box disappears.

The Battery health dialog box can be set to appear after the device resumes from suspend mode or depending upon the health status. See *Battery Management Configuration - WinCE on page 22*.

Chapter 3

Configuration

Configure the Battery Management Software to using the Battery management tab in the Power application.

Battery Management Configuration - WinMobile

The Battery Health dialog box is configurable using the **BatteryMgmt** tab in the **Power** settings applet. Touch **Start** > **Settings** > **Power** to open the **Power** applet.

Figure 13: BatteryMgmt Tab



- Enable Battery Health Check to enable the Battery health feature.
- Show popup UI on device-resume
 - Always The Battery Health dialog box will display every time the device resumes from suspend.
 - Once for each Rating decrease The Battery Health dialog box will display every time the Rating decrease to the next lower value.
 - Always for **** and lower The Battery Health dialog box will display when the Rating is four * and lower every time the device resumes from suspend.
 - Always for *** and lower The Battery Health dialog box will display when the Rating is three * and lower every time the device resumes from suspend.
 - Always for ** and lower The Battery Health dialog box will display when the Rating is two * and lower every time the device resumes from suspend.
 - Always for *-star and lower The Battery Health dialog box will display when the Rating is one * and lower every time the device resumes from suspend.
- Show cycle-count in UI Check to display the battery usage count in the Battery Health dialog box.
- Seconds to auto-dismiss UI Set the number of seconds after displaying the Battery Health dialog box that the dialog box disappears.
- Edit descriptions for Rating Select button to edit the text that appears for each rating.

The background color also indicates the battery health.

Figure 14: Edit Rating

| Ratings Description 🛛 💭 🏹 🕂 🎟 9:30 |
|---|
| Change the text for each Rating, to be displayed in the Popup UI. |
| Only supported Ratings are displayed |
| ***** Restore Default |
| Excellent |
| Preview: ** Poor, replace soon |
| |



Note: Any changes made to the Battery Health software takes effect after the next device-resume.

Battery Management Configuration - WinCE

The Battery Health dialog box is configurable using the **BatteryMgmt** tab in the **Power** settings applet. Touch **Start** > **Settings** > **Control Panel** > **Power** to open the **Power settings** applet.

Figure 15: BatteryMgmt Tab

| Power settings OK × |
|---|
| Battery Advanced BatteryMgmt RunTime USE |
| Current Battery Health: ***** |
| Enable Battery Health |
| Add health colour to the Taskbar Battery tray icon |
| Show popup UI on device Edit descriptions for Ratings |
| Always |
| |
| |
| |

- Enable Battery Health Check to enable the Battery health feature.
- Add health colour to the Taskbar Battery tray icon Adds or removes the health indicator (green, yellow, red) from the icon on the taskbar.
- Show popup UI on device-resume
 - Always The Battery Health dialog box will display every time the device resumes from suspend.
 - Once for each Rating decrease The Battery Health dialog box will display every time the Rating decrease to the next lower value.
 - Always for **** and lower The Battery Health dialog box will display when the Rating is four * and lower every time the device resumes from suspend.
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 - Always for ** and lower The Battery Health dialog box will display when the Rating is two * and lower every time the device resumes from suspend.

- Always for *-star and lower The Battery Health dialog box will display when the Rating is one * and lower every time the device resumes from suspend.
- Show cycle-count in UI Check to display the battery usage count in the Battery Health dialog box.
- Seconds to auto-dismiss UI Set the number of seconds after displaying the Battery Health dialog box that the dialog box disappears.
- Edit descriptions for Rating Select button to edit the text that appears for each rating.

The background color also indicates the battery health.

Figure 16: Edit Rating

| Ratings Description | ОК |
|--|--|
| Change the text for each Rating, t displayed in the Popup UI. |) be |
| Only supported Ratings a displayed | e |
| Restore Defau | Preview: |
| Excellent | server and a server and a server a serv |

Touch the drop-down box to select the rating level. Enter the new text in the text box which the HTML bold code. Touch OK to return to the previous screen.



Note: Any changes made to the Battery Health software takes effect after the next device-resume.