NEC MH150/MH160 Mobile Handset Administration Tool

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About This Guide

The Handset Administration Tool is a software utility developed by NEC Unified Solutions, Inc. to automate the configuration of multiple NEC MH150 and MH160 Mobile Handsets and perform various administration tasks. This document explains how to use the Handset Administration Tool to administer and configure the NEC MH150 and MH160 Mobile Handset.

Please refer to the configuration and administration document that pertains to the system in your facility for exact configuration options of the handset. Specific configuration options are explained in detail in the configuration and administration document for your system.

REFERENCE

- NEC MH150/MH160 Mobile Handset Administration Guide
- NEC MH150/MH160 Deployment Best Practices Guide
- NEC WLAN Voice Gateway Administration Guide

Customer support hotline

For additional information or support on this NEC Unified Solutions, Inc. product, contact your NEC representative.

Icons and conventions

This manual uses the following icons and conventions.

CAUTION

Caution! Follow these instructions carefully to avoid danger.

NOTE

Note these instructions carefully.

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Handset Administration Tool Installation

The Handset Administration Tool is a software utility installed on a PC with a USB port. It is designed as a time-saving device for rapid administration and configuration of a number of handsets. During operation, the USB cable must be connected from the PC's USB port to the Dual Charger's USB port, as shown in Figure 2-1.

Figure 2-1 *Mobile Handset and PC connection using USB ports*
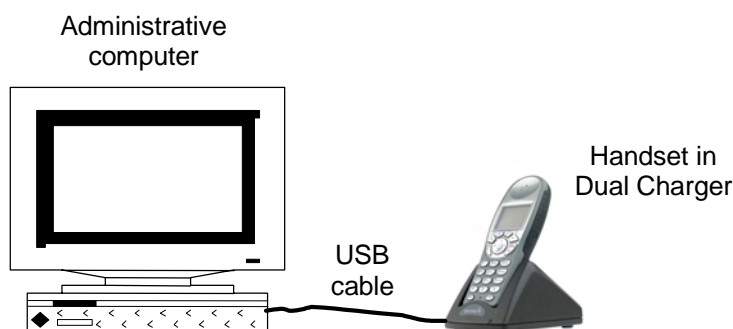
Configuration options include:
- Setting all options on the Admin menu,
- Setting all options on the Config menu,
- Recording error information to assist troubleshooting,
- Upgrading handset software.

The **Setup.exe** file on the CD will download and install the files for the Handset Administration Tool and download the files for the USB driver. The USB driver must be installed as a separate process after the Handset Administration Tool is installed.

> **NOTE**
>
> *The CD contains Setup.exe files for SRP and SIP. Please ensure that you have downloaded the Setup.exe program for your protocol.*

Necessary components:
- PC with a USB port running Windows 2000, Windows XP, or Windows Vista,
- Dual Charger for the NEC MH150 and MH160 Mobile Handset,
- Power supply for the appropriate country or region,
- A USB cable with a 5-pin *mini-USB* connector (not supplied by NEC).

Installing the Handset Administration Tool

Step 1 Locate the Setup.exe file on the CD. You may copy this file to your local drive or install from the CD. Click the **Setup.exe** file to start the installation process.

Figure 2-2 *Preparing to Install*
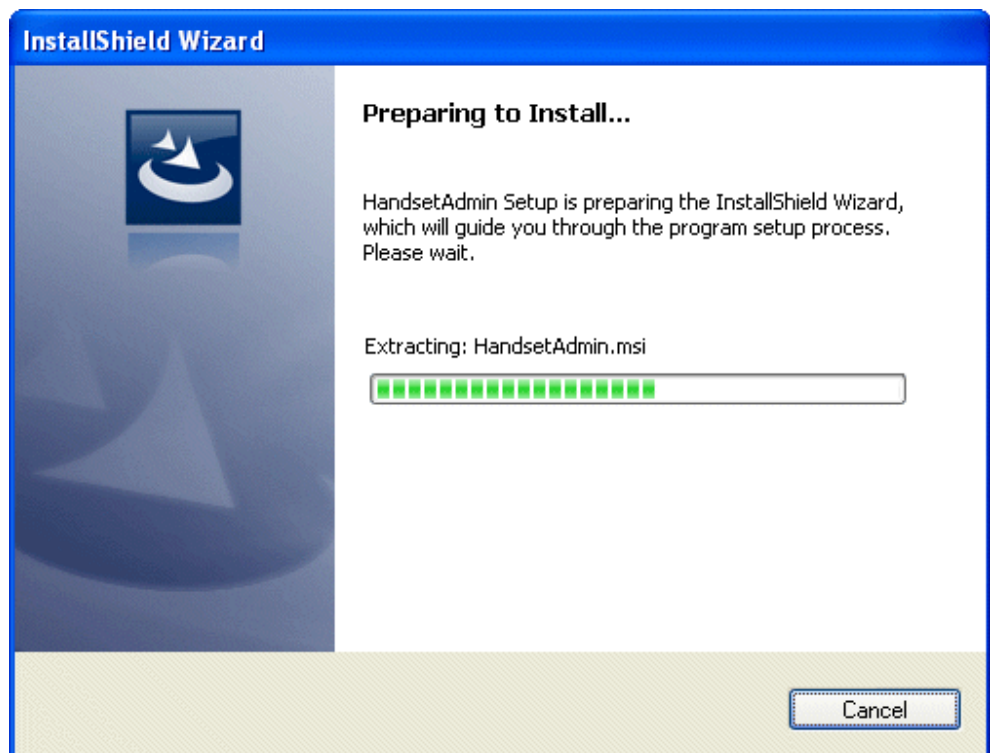
The InstallShield Wizard will continue with the install.

> *Step 2*   Click **Next** to continue

Figure 2-3 *InstallShield Wizard welcome*
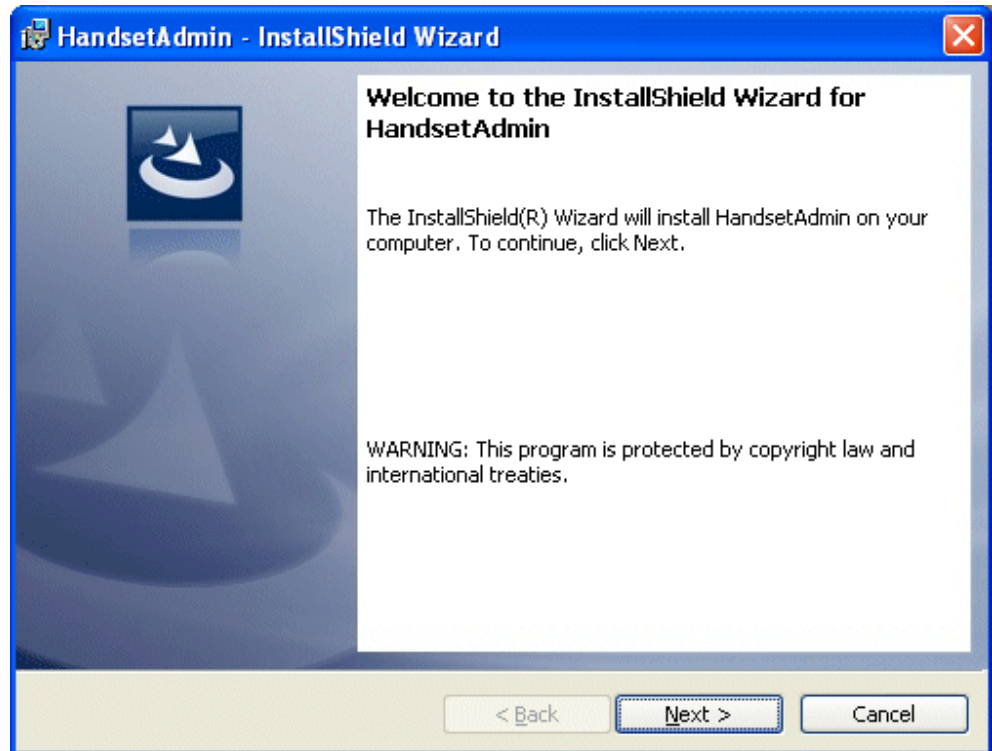
Step 3 The **Destination Folder** allows you to change the install to another folder or to simply install in the folder location displayed next to the folder icon. Click **Next** to continue

Figure 2-4 *InstallShield Wizard: Destination folder*
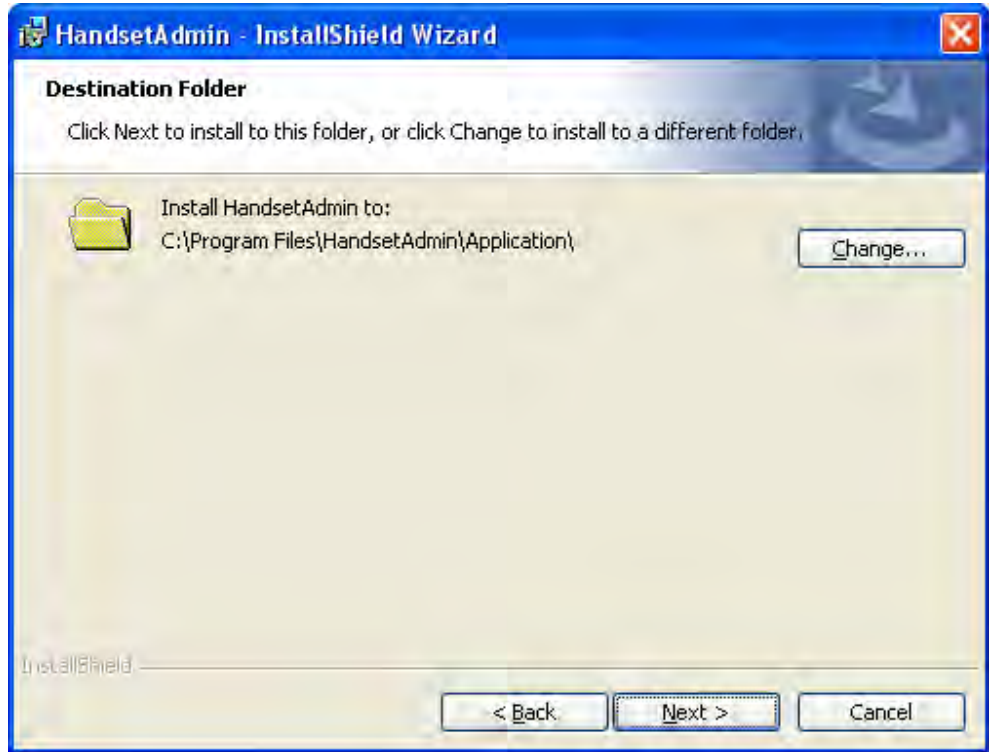
Step 4   The program is about to be installed. Click **Install** to begin.

Figure 2-5 *InstallShield Wizard read to begin installation*
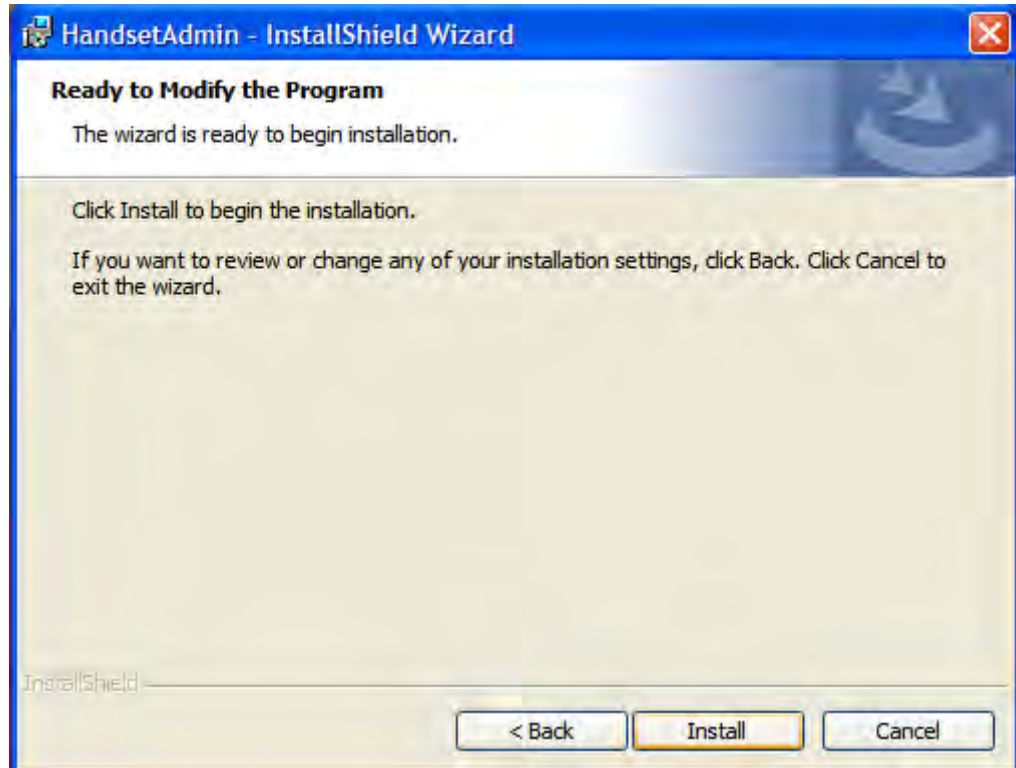
Step 5   Click **Finish** to exit the InstallShield Wizard.

Figure 2-6 *InstallShield Wizard completed*

NOTE

*The Handset Administration Tool will appear in your Programs list under the **Start** menu as **HandsetAdmin** and as an icon on your desktop. It may be launched like any other program.*

Installing the USB Driver

The USB driver installation allows the Dual Charger to be the communication link between the handset and the PC. The two files needed for the USB driver to function are named **slnkusb.sys** and **slnkusb.inf**. If the Destination Folder had not been changed in step-3, these files will be located at C:\Program Files\HandsetAdmin\Driver\

Step 1   Find the USB driver files on the PC.

Step 2   Place the Dual Charger on a flat, horizontal surface. Plug the power supply into the Dual Charger and into an appropriate wall outlet.

Step 3   Plug the USB cable into the Dual Charger and into an available USB port on the PC.

Step 4   Power off a NEC MH150 and MH160 Mobile Handset, remove the Battery Pack (optional), and place the handset in the Charger. If properly seated, the handset automatically powers up in USB mode and the handset screen displays a **USB Mode** on indication.

NOTE

*If the handset is not properly seated in the Dual Charger, the USB connection will not be made and the Battery Pack will begin charging, and the handset screen displays a **Charging…** indication. If this occurs, reseat the handset, check the connections on the USB cable, and/or remove the Battery Pack and try again.*

Step 5   Microsoft Windows will start the **Found New Hardware Wizard.** There is no need to connect to Windows Update, so select **No, not this time** and click **Next.**

Figure 2-7   *Found New Hardware Wizard: Welcome*

Step 6   The files need to be installed from a specific location, so select **Install from a list or specific location (Advanced)** and click **Next.**

Figure 2-8 *Found New Hardware Wizard: Install software for USB Device*
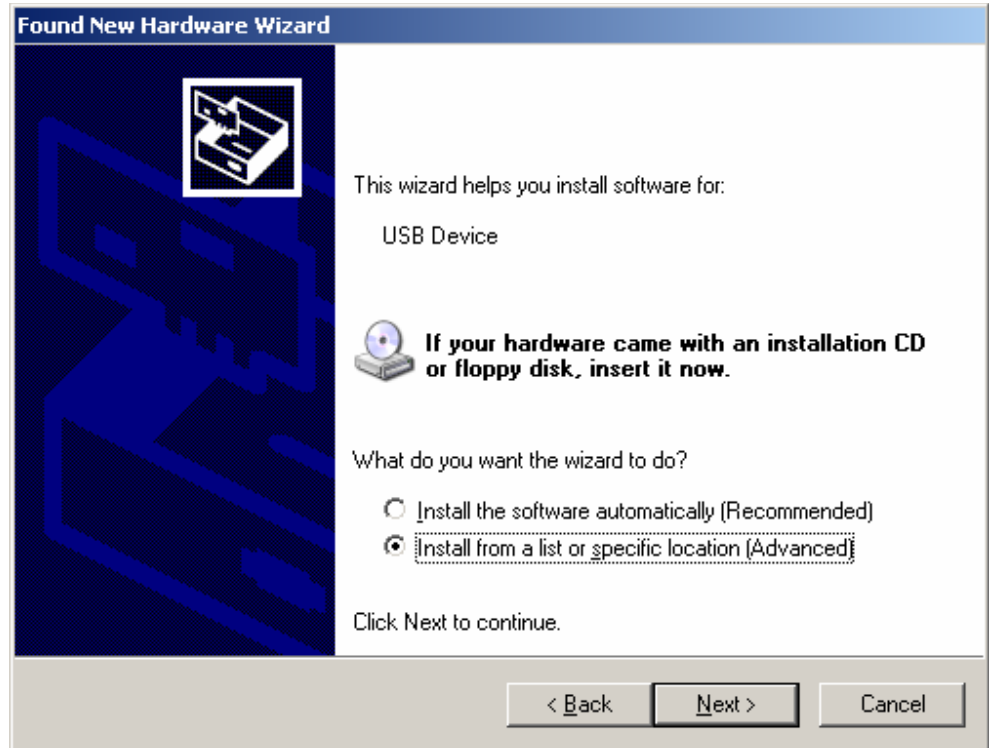
Step 7 Select **Search for the best driver in these locations.**

— Clear the check box **Search removable media**.

— Select the check box **Include this location in the search.**

— Browse the folder where the USB driver files were installed. The default location is C:\Program Files\HandsetAdmin\Driver\

— Click **Next**

Figure 2-9 *Found New Hardware Wizard: Choose search and installation options*
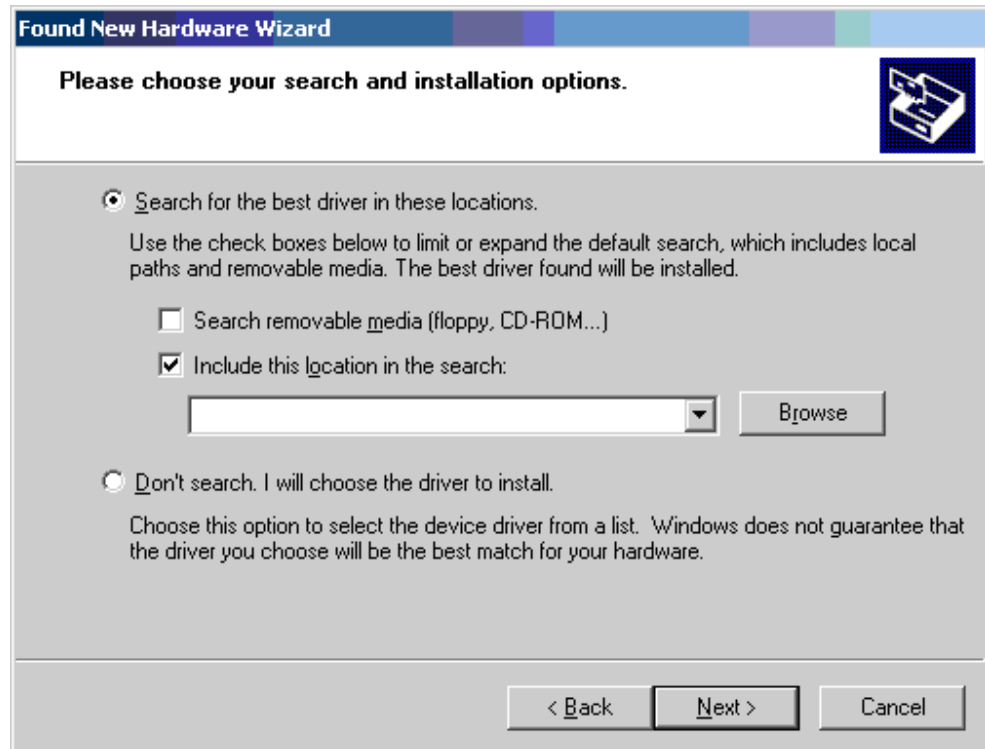
Step 8   The following warning message from the Microsoft Wizard displays. The USB driver files are proprietary to SpectraLink and were not submitted to Microsoft for testing. They were fully tested by SpectraLink to more exacting standards and will not harm your system. Click **Continue Anyway**

Figure 2-10 *Warning: Software has not passed Microsoft testing*

Step 9   Microsoft Wizard installs the USB driver software

Figure 2-11 *New software is being installed*
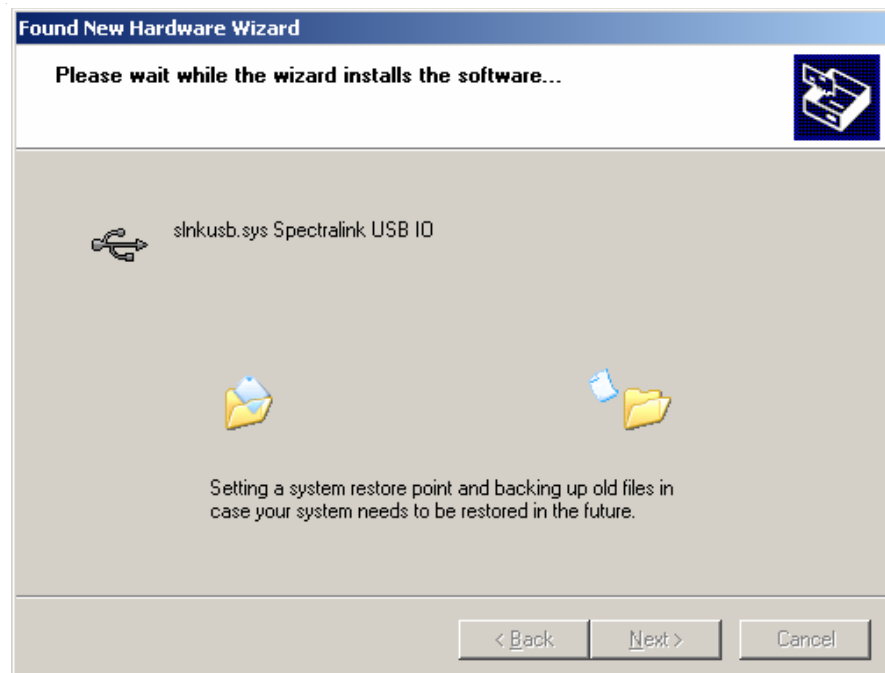
Step 10 The final screen indicates that the USB driver has been successfully installed. Click **Finish** to close the wizard and proceed with handset configuration

Figure 2-12 *Software installation completed*
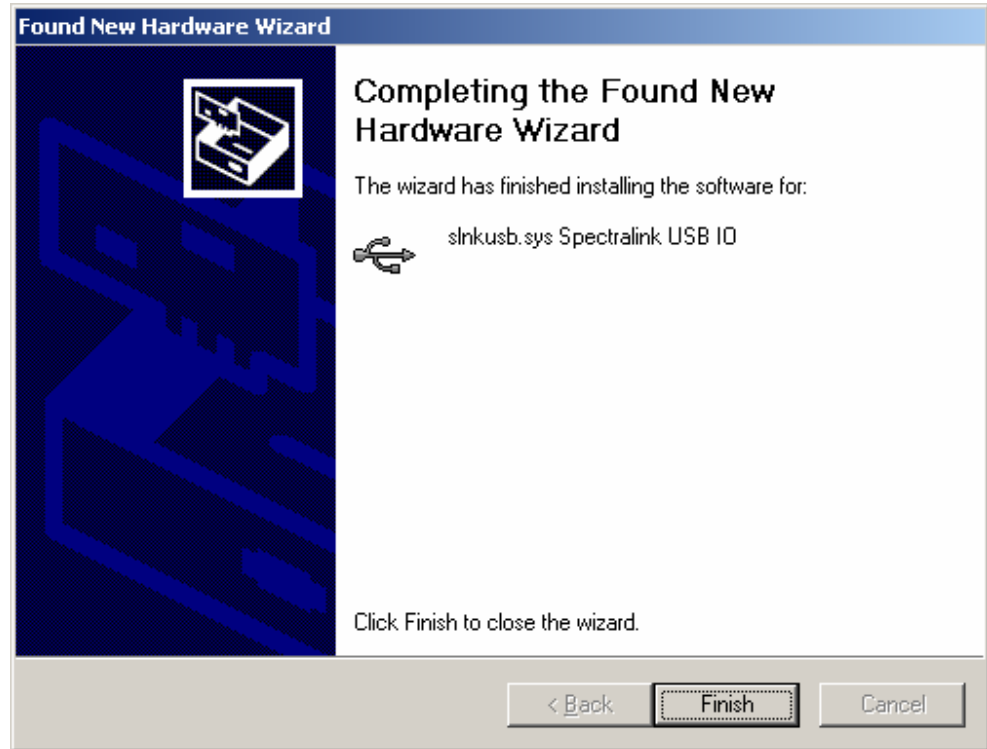
3

Using the Admin Tabs

Launch the Handset Admin program from the Start menu. You will need to accept the license agreement (Figure 3-1) the first time the program is launched and whenever an update is installed.

Figure 3-1 *End-User License Agreement*
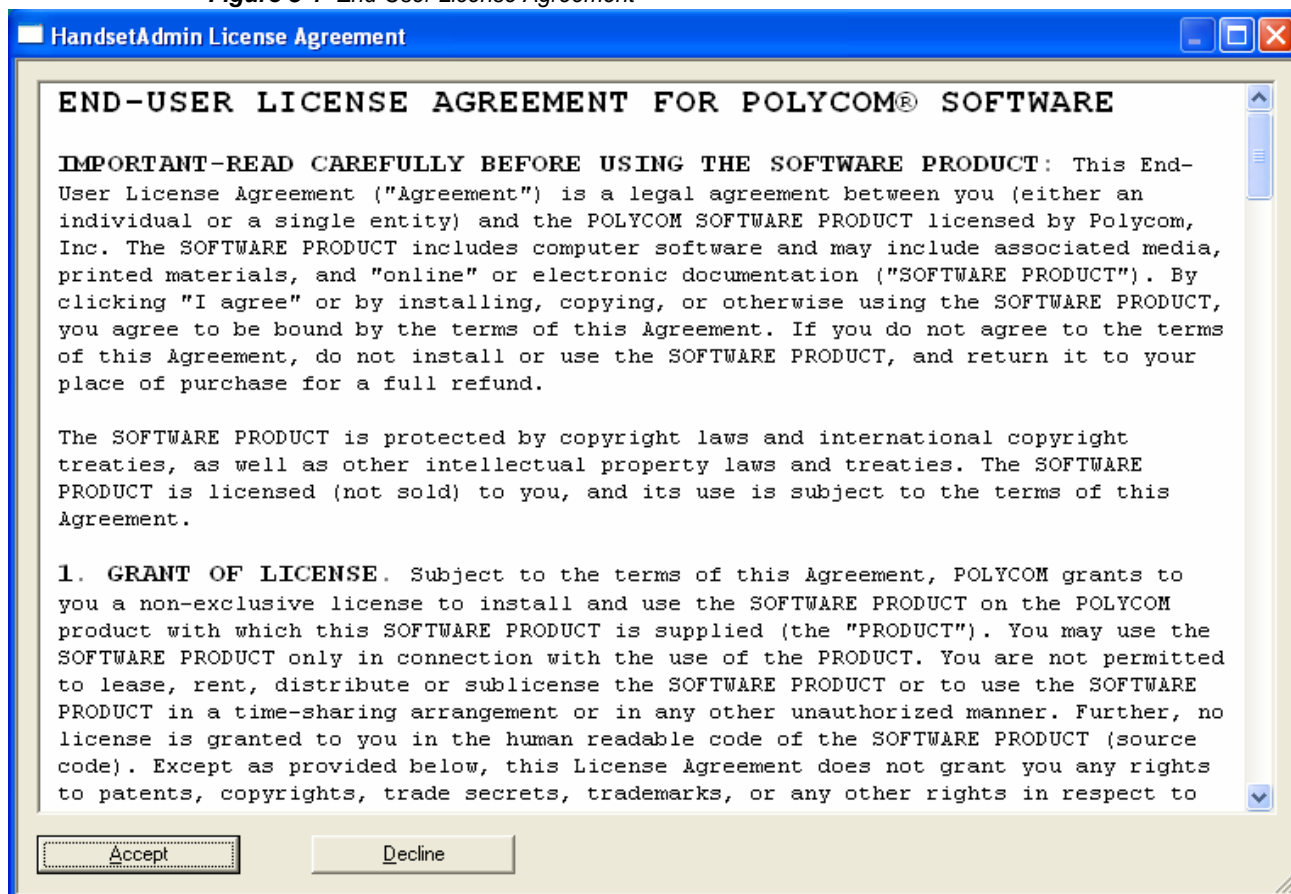
The Handset Administration Tool has two separate functional areas: the Admin Tabs and the Handset Settings Editor.

The Admin Tabs are used to connect to the handset, set and change the password, retrieve error messages, update handset software, and update the Handset Administration Tool software.

The Handset Settings Editor is used to configure handsets, as well as create, save and copy Admin menu options. See "Opening the Settings Editor" on page 4-1 for detailed instructions on using the Handset Settings Editor.

Indicators   The Handset Administration Tool uses indicators to alert you to the status of the action being performed.

- **Green** - indicates ready status.
- **Yellow** - indicates caution or attention.
- **Red** - indicates an error
- **Gray** - indicates not active status.
- **Blinking** - indicates entry is needed or waiting on system response.

NOTE

*If closed, the Admin Tabs may be opened from the **Settings Editor** by selecting the **Admin** or **View** option on the **Settings Editor** menu bar.*

Connecting the Handset

There are six tab labels that describe each of the available functions. The tab labels are: **Connect, Password, Error info, Firmware, Settings,** and **Version.** See Figure 3-2.

The **Connect** tab has a prompt line which will state one of three messages: **Power handset off, then put it in the Dual Charger**; **Enter handset's password**; or **Connected**.

Figure 3-2 Connect tab prompt:showing the next action or status.
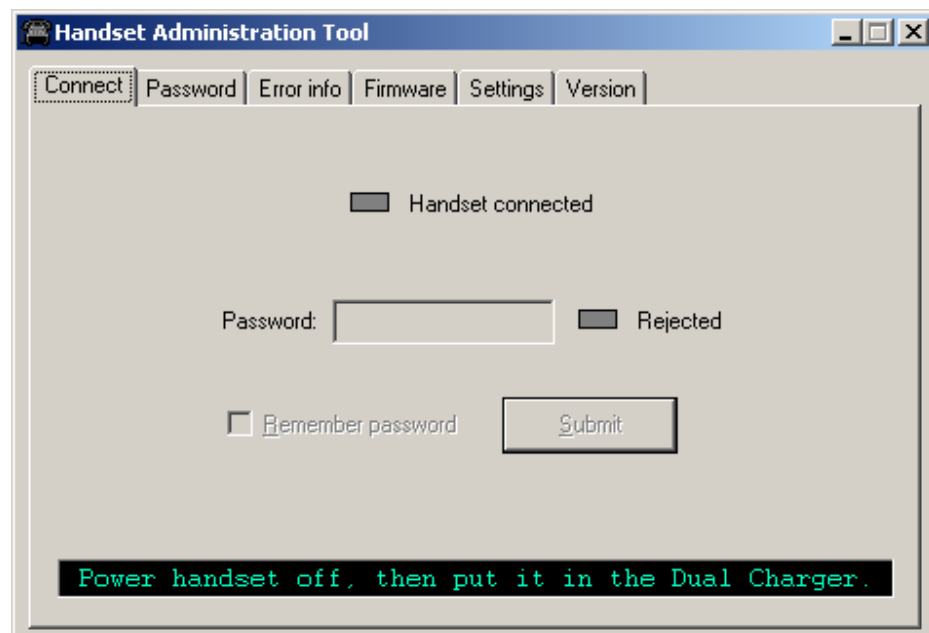
The prompt line at the bottom of the window provides information about what action should be taken or the status of the utility. See Figure 3-3.

Insert the handset into the Dual Charger and enter the password.

Figure 3-3 *Prompt to enter the password and remember password checkbox.*
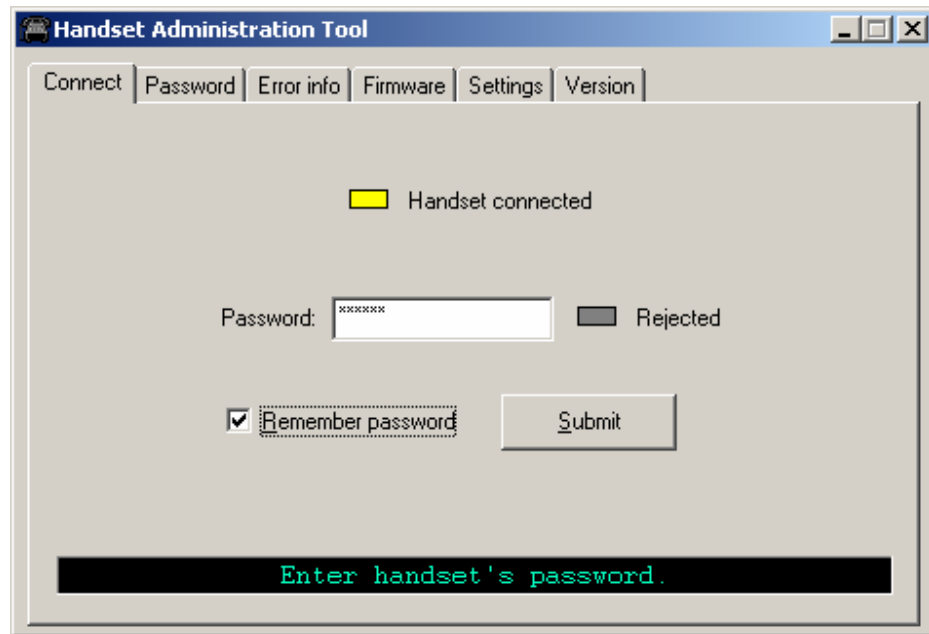
When the handset is inserted for the first time, the password must be entered. If you select the **Remember password** check box, the password is retained as the default password for all handsets. Enter the password and click **Submit.** The default password is **123456.**

Unique passwords for each handset are not remembered.

NOTE

When connection is established between the program and the handset, the **Handset connected** indicator turns green and **Connected** displays on the prompt line. The handset is now ready for configuration. See Figure 3-4.

Figure 3-4 *Connect tab prompt indicates the Mobile Handset is connected.*
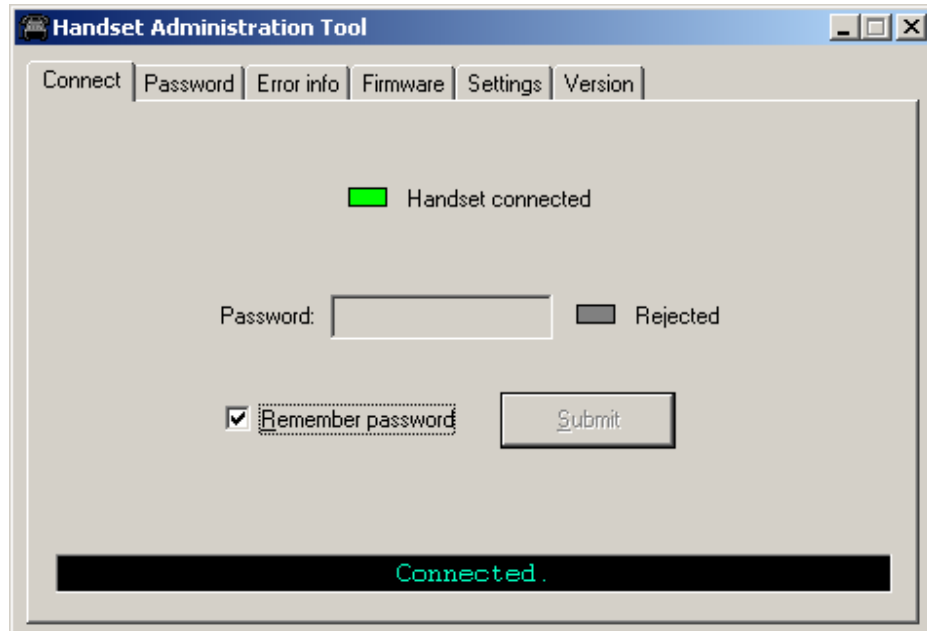
Password Configuration

The password is a security measure to restrict access to the Admin menu settings. Prior to changing a password, the existing password must be entered. The new password must be entered twice for confirmation. If a password is desired to gain access to the handset's Admin menu, select the Enable password checkbox. If no password is desired, clear the Enable password checkbox. A password may be up to 18 characters. See Figure 3-5.

Figure 3-5 Password change tab window

Character table

Table 3-1 illustrates how numbers and letters are entered on the handset's keypad. The CAPS/caps softkey toggles to allow both upper and lowercase letters. Only English characters are allowed.

Table 3-1 Handset character entry table

Key	caps	CAPS
1	1	1
2	2 a b c	2 A B C
3	3 d e f	3 D E F
4	4 g h i	4 G H I
5	5 j k l	5 J K L
6	6 m n o	6 M N O
7	7 p q r s	7 P Q R S
8	8 t u v	8 T U V
9	9 w x y z	9 W X Y Z
0	0	0
*	* - _ .! $% & ' () +	,:; / \ = @ ~
#	# <space>	

Error Information

The **Error info** tab (Figure 3-6) provides a utility to assist the NEC customer service team to troubleshoot handset errors. When directed by customer service, this utility enables you to save any errors as a file, which can then be sent to your NEC representative for handling.

Use the **Browse** button to establish the path and enter the filename. Future saves will point to this same location as the default, so that the same file may be overwritten if desired. A drop-down list box displays the most recently used filenames.

The **File time** window displays the modification timestamp of the file in the **Save error info as file** window.

Power off handset and place it in the Dual Charger.

Click the **Get file** button to save the file. The file will be copied from the handset to the location.

The **Read/Write** indicators will reflect the action as it occurs.

A progress indicator above the prompt line displays the file transfer progress.

Figure 3-6 *Error information tab screen*
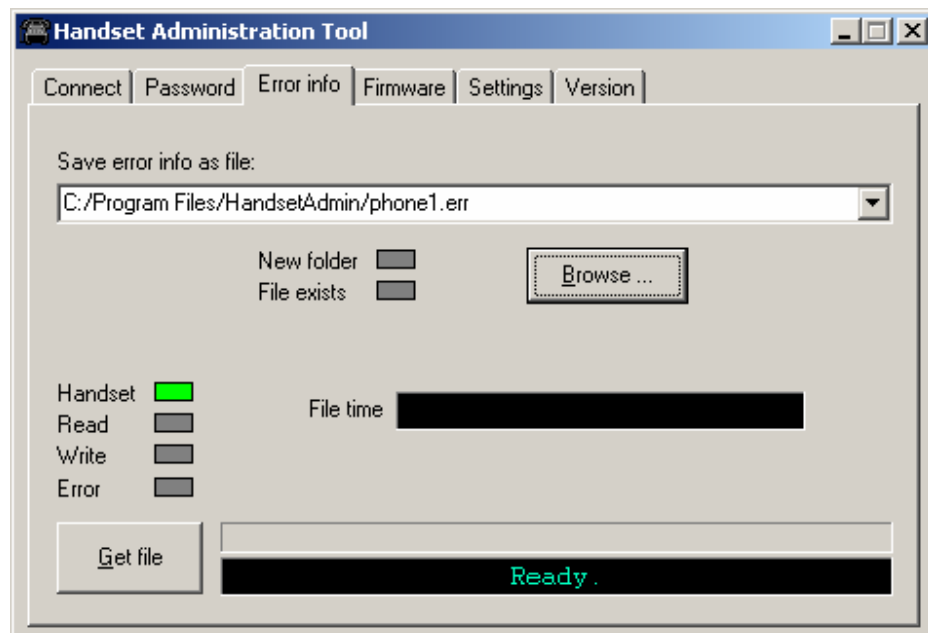
Software Updates

The **Firmware** tab allows you to copy software updates to the mobile handset's memory after they are downloaded from a website.

To install manual updates

Step 1 NEC MH150 and MH160 Mobile Handset software updates can be procured from NEC NTAC.

Step 2 Extract the bin files from the zip file to a folder set up for this purpose. Each file must be individually downloaded into the handset.

NOTE

This is not an efficient method of updating any quantity of handsets, but it works for testing new code and in extremely small installations.

CAUTION

Be aware that if there is a TFTP server broadcasting a different version of the handset code, the handsets will continue to download code over the air and revert to the different version. Remove handset code from the TFTP server or disable broadcasting before relying on this update procedure.

Step 3 Use the Browse button to locate the software file. The drop-down list box displays the most recently used filenames. The File time window displays the modification timestamp of the file in the Firmware file window.

*Figure 3-7* *Firmware tab displays current file information*
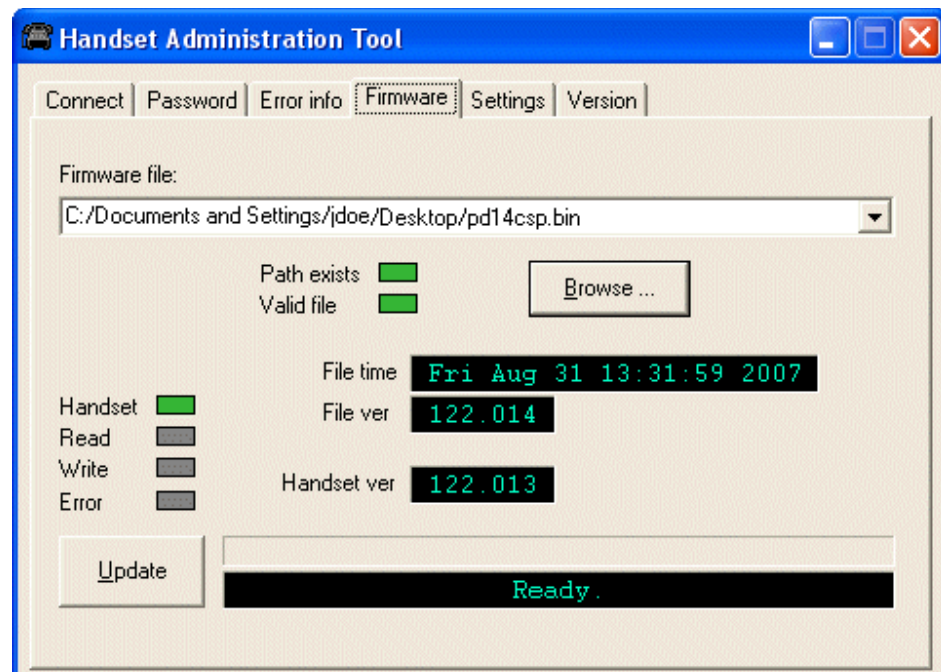
Step 4 Check the file version and handset version for comparison. Once the update is complete, the file version will have overwritten the handset version and these two file versions will match.

Step 5   Verify that the information in the **File ver** window is the correct file to be downloaded and then click the **Update** button. This file copies from the location to the handset. The **Read/Write** indicators reflect the action as it occurs.

While a firmware update is in progress, you may open other tabs and the handset indicators shown on those tables will inform you of the status of the update.

Step 6   (Conditional) Should an Error indication occur, retry the update after ensuring that the handset is properly seated and that the USB cable is in good condition and connected securely. Contact Customer Service if an error persists. See About This Guide for contact information.

Figure 3-8 *Firmware update ready to begin*
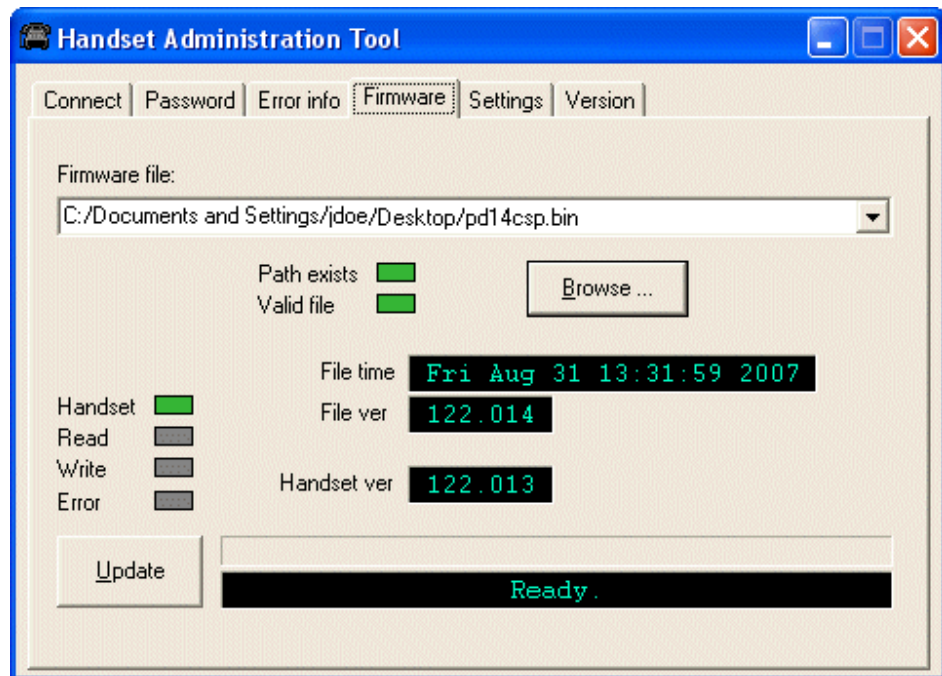
Note that the firmware file path, file time, file version and handset version shown in the above example screen are for illustration only.

Version

The **Version** tab (Figure 3-9) displays the serial number of the handset and the current version of the Handset Administration Tool software.

Figure 3-9 *Version tab displays current Handset information*
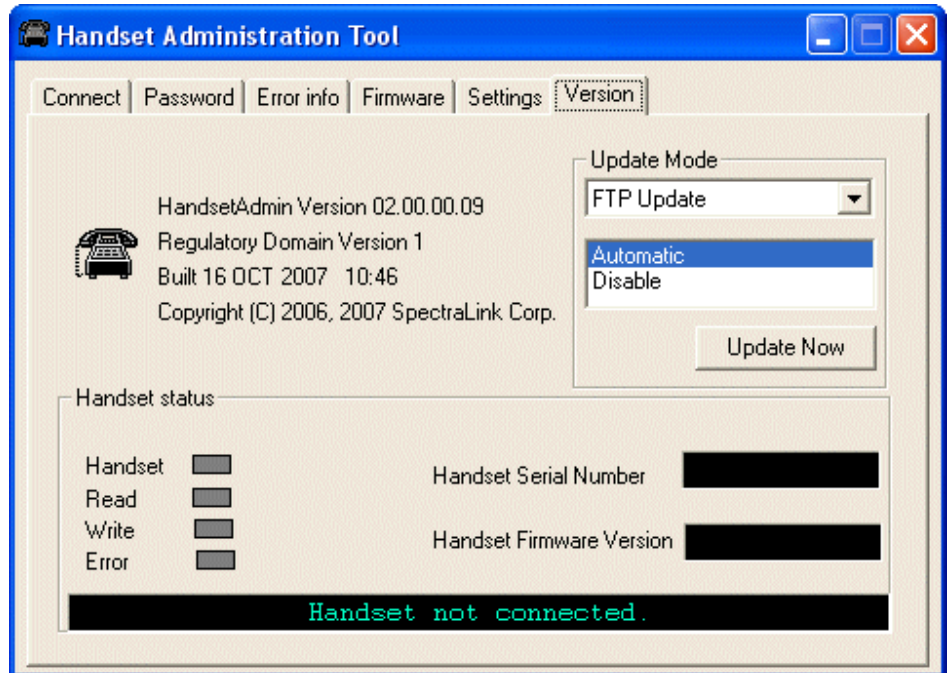
Update Mode allows you to select where and how you want to check for updates to the program. The program can be updated from either of two locations—**FTP Update** or **Local File Update**.

Updates may be installed either automatically or manually. The **Automatic** option sets the program to automatically check the FTP site for updates every time the HAT program is launched. The **Disable** option disables the automatic check and allows you to manually update the program by clicking the **Update Now** button. Any computer that is not connected to the internet should be set to **Disable**.

Depending on the **Update Mode** setting, the **Update Now** button can be used to check the FTP site for an update or to browse to a local location,

FTP Update

The FTP Update option retrieves the update from an FTP site. During the update process, the program is downloaded to the connected computer and that computer's version of the program is updated. In order to use this option, the computer must have access to the internet.

Step 1   Click **Update Now** to start the FTP update process.

Figure 3-10 *Version tab displays the FTP update progress*
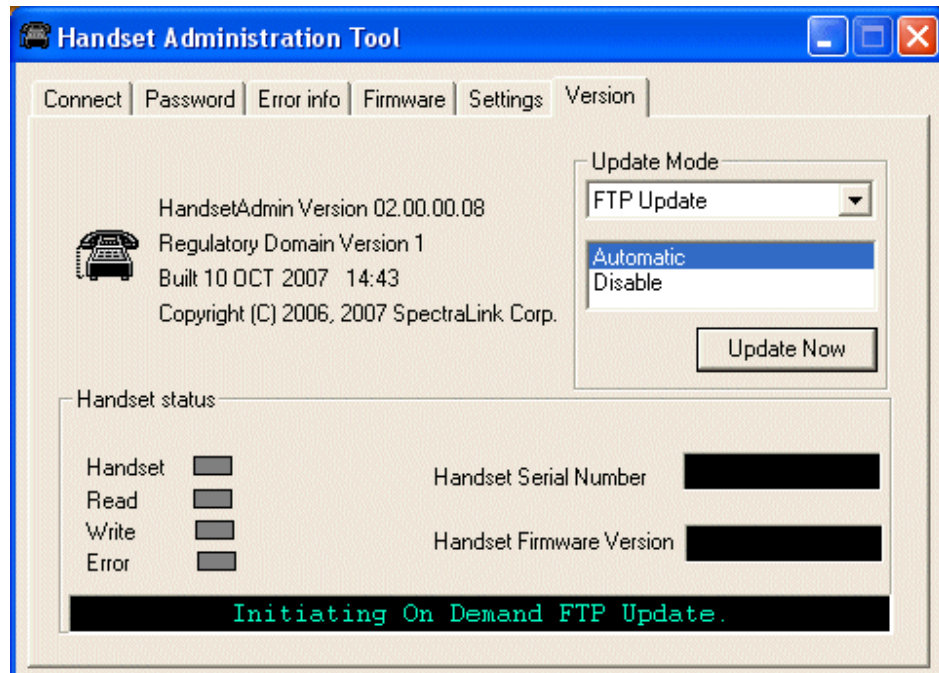
Step 2   If the Automatic option is selected, the following prompt (Figure 3-11) will appear before the update is installed. Click OK to continue.

Figure 3-11 *Mobile Handset update prompt*
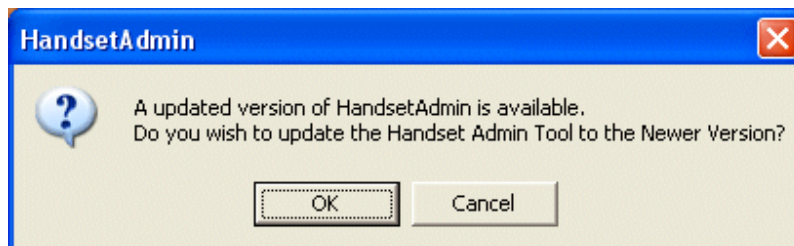
Step 3   Click OK to continue.

The update will be installed by overwriting the previous version. See Figure 3-12.

Figure 3-12 *Confirmation of new application installation*
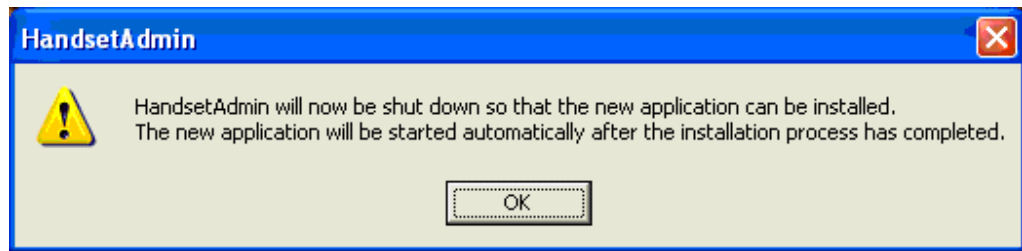
> *Step 4* Once the update is downloaded, you can copy the.pkg file to a local location and update other computers using the Local File Update option. See below.

Local File Update

You must obtain the.pkg file to perform a local update. Use the FTP update option explained above or a service option to obtain the.pkg file. Copy the.pkg file to an accessible location.

> **NOTE**
>
> *The MH Administration Tool must already be installed on any computer that is being updated. Install the MH Administration Tool software first, and then update it.*

The following procedure is used for a local file update.

> *Step 1* Open the MH Administration Tool and click the **Version** tab. See Figure 3-13.
>
> *Step 2* Click the **Local File Update** option.
>
> *Step 3* Click **Update Now**.

Figure 3-13 *Local file update initiation*
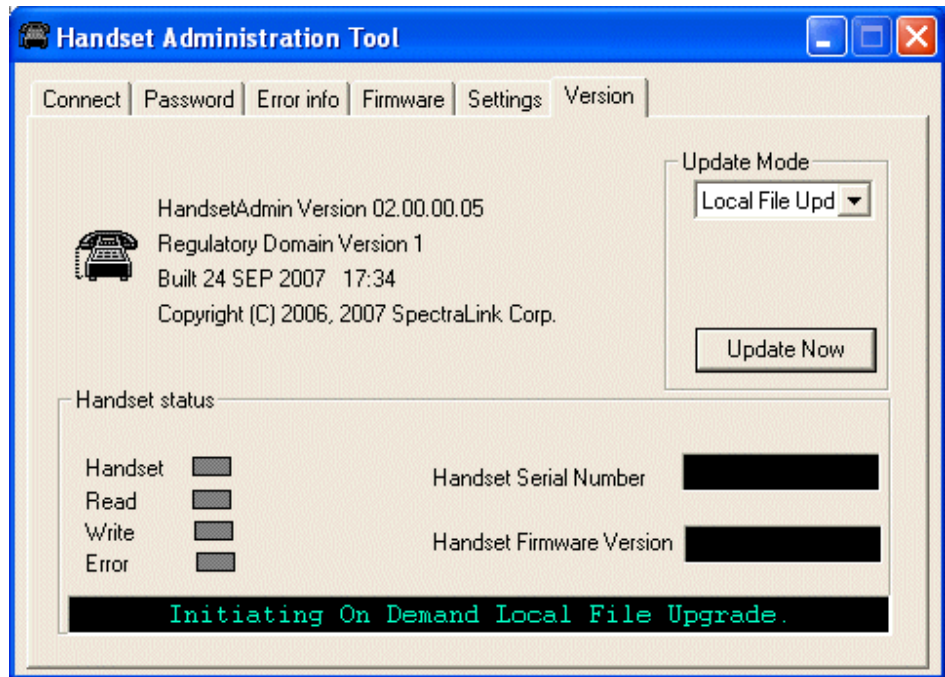
Step 4   Browse to the location of the.pkg file and click it.

Step 5   Click **OK** to continue. See Figure 3-14.

Figure 3-14 *Handset Administration Tool upgrade confirmation dialog box*
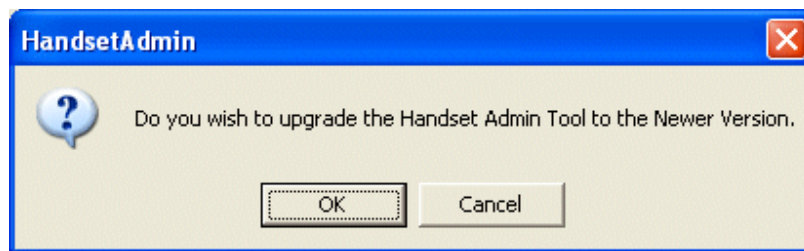
Step 6   Click **OK** to continue. This will install the update by overwriting the previous version. See Figure 3-15.

Figure 3-15 *Confirmation of HandsetAdmin shutdown*
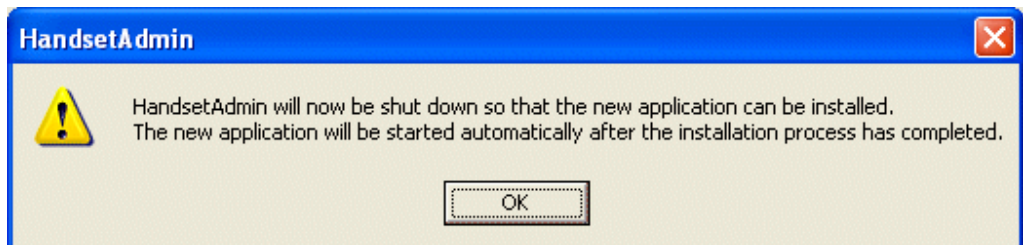
4

Using the Settings Editor

The handset has two menus with configurable options - the Admin menu and the Config menu. The Admin menu contains administrative options that can be password protected. The Config menu has options that enable the end user to customize settings for user preferences. The **Settings** tab allows you to configure both required and optional settings in the Admin and Config menus. Specific configuration requirements are detailed in the *NEC MH150 and MH160 Mobile Handset Administration Guide* document.

Opening the Settings Editor

The **Settings** tab displays the serial number of the handset and the software version being run.

To enter and modify menu settings you will need to open the **Settings Editor**. See . Click the **Show Settings Editor** button.

Figure 4-1 *Settings Editor on the Settings tab window*
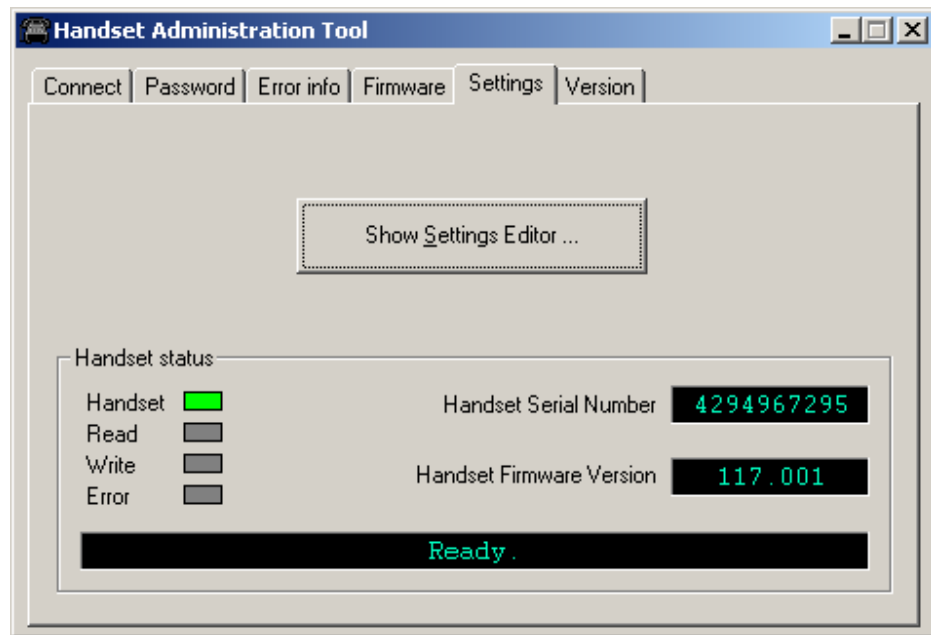
When you have opened the **Settings Editor**, you may close the Admin Tabs.

NOTE

To open the Admin Tabs again, go to the **Settings Editor** menu bar and select either **View > Admin Functions**, or any of the options listed under the Admin menu item.

The Settings Editor Screen

The **Settings Editor** is a powerful utility that allows you to edit or set any Admin menu or config menu option. The **Settings Editor** (Figure 4-2 on page 4-3) includes the following areas:

- Toolbar to execute configurations and save files
- Tabs to organize configuration options
- Radio buttons to define the type of option
- **Editable settings** that list handset options
- **Handset settings** that have either been uploaded from a handset or have been copied from **Editable settings** options to be downloaded to a handset.

NOTE

The Handset Settings Editor screen shot (Figure 4-2) is for example only and may not match the options or settings for your system's protocol.

Figure 4-2 *Handset Settings Editor Network Config screen*

Toolbar

Tabs

Radio Buttons

Options that can be edited

Options to/from the handset

The Settings Editor Toolbar

The **Settings Editor** toolbar (Figure 4-3) allows you to manage configuration files and download and upload configuration settings to and from the handset in the charger.

Figure 4-3 *Settings Editor toolbar*

File management

The three filename windows, **System**, **Group** and **User** match the three columns of radio buttons along the left side of the window. The **Sys Grp Usr** radio buttons allow you to designate the option(s) for System, Group or User files. The three windows in the File management section allow you to name, open, or save setting types as separate files.

For example, system types relate to network options such as security settings and regulatory domain. Group types relate to Push-to-talk options. User types reference name, extension and profile options.

The file indicators beside the **Save As** buttons have three colors to indicate the status of the file displayed in the window:

• **Red:** file does not exist. The filename in the window has not been saved.

• **Green:** unsaved edits. Changes made in the **Editable settings** field(s) which have not been saved to a file yet.

• **Gray:** file up-to-date. The settings have been saved.

By default, the files will be saved in the **Application** folder under the folder where the program is stored. Use the File menu to set up your own file structure, if desired.

Copy settings

The **Copy settings** arrows and checkboxes allow you to copy between the **Handset settings** column and the **Editable setting** column. The **Sys Grp Usr** checkboxes allow you to copy just the settings you require.

Upload/download and indicators

When the **Read Handset** and **Write Handset** buttons are clicked, they initiate the transfer of configuration data from or to the handset in the charger. The handset indicators change color to indicate the state of the transfer. See "Indicators" on page 3-2 for indicator color significance.

Tab Options

A tab system organizes the options. See .

Tabs on the Settings Editor window

| Phone Config | Network Config | Push-to-talk Admin | Push-to-talk User | Silent | Vibrate | Loud | Soft | Custom |

Each tab contains options from the Admin menu and/or the Config menu (see Table 4-1). Admin menu options are password protected and usually set by the system administrator. Config menu options are available to the end user but are also offered here for initial configuration of key settings. Specific options vary by protocol.

Table 4-1 *Tab options on the Settings Editor window*

Tab	Contents-Admin Menu	Contents-Config Menu
Phone config	Extension # and User Name Time Zone Daylight Saving Protected Speed dial Speakerphone Location Service	Keypad Autolock Display Contrast Hearing Aid Startup Song Predial Active User Profile
Network config	IP Addresses SSID Security Regulatory Domain Diagnostics	N/A
Push-to-talk Admin	Enabled/Disabled Priority Channel and Name Allowed Channels Name Channels	N/A
Push-to-talk User	N/A	PTT Audio Volume PTT Tone Volume Default Channel Subscribed Channels

Tab	Contents-Admin Menu	Contents-Config Menu	

Profiles:
   Silent
   Vibrate
   Loud
   Soft
   Custom
	N/A	Noise Mode
		Ring in Speaker/
		Headset
		Warning Tones
		Key Tones
		Push-to-Talk
		
		(Ring option)
		Telephone Ring
		Message Alert 1
		Message Alert 2
			
			(Ring option settings)
			Ring Cadence
			Ring tone
			Ring volume
			Vibrate Cadence
			Ring Delay

NOTE

*For user convenience and efficiency, when the **Write Handset** button is clicked, every option set under the **Handset settings** column in all nine tabs is written at the same time. Each tab's options are NOT written separately. Be sure that you set all options before copying the configuration to the handset.*

NOTE

Your handsets may have different options than those available in the Handset Administration Tool. When a handset is placed in the cradle, it is checked for certain features, such as the Regulatory Domain version. The HAT will turn controls on/off based on the information that it gathers. If your handsets have options that are not yet programmed into the HAT, those options will require manual setting if the factory default is not desired.

Creating a Configuration Plan

Although not necessary for using the Handset Administration Tool, a configuration plan can maximize its efficiency and save countless hours of handset option management. An example of a configuration plan is provided in Table 4-2, "Configuration planning worksheet sample," on page 4-8.

Organize the plan

Determine which options should be categorized as each type—system, group or user. Generally, system options are listed on the **Network** tab, group options are on the **PTT** tabs and user options are on the profile tabs. The **Phone Config** tab contains a mix of user and system types.

NOTE

Do not create a plan that saves an option in two different categories. Option categories should be established and should not overlap. Example: Speakerphone and Push-to-talk settings are typically tagged as Grp options and saved as Group files.

Create the options and save the settings

Once you have established which options will be categorized as System, Group or User, enter the configuration information into the **Editable settings** fields.

Start with the System options and enter all system-level field values, such as IP addresses, security, and reg domain. Click the Sys radio button on the left side of the window for each option. Save these settings as a System file by entering a descriptive filename in the **System** filename field and clicking **Save As**. See the example in Table 4-2, "Configuration planning worksheet sample," on page 4-8.

NOTE

Note that when a setting is changed, the option label is highlighted in yellow until it is saved.

In the same way, create each Group plan by entering the values in the fields designated as Group types. Click the **Grp** radio button on the left side of the window for each option. Save each plan under a different name in the **Group** filename field. You may have several groups—possibly divided by sets of PTT users.

It is recommended that you establish one generic **User** file that has the default (or desired) values for each **User** field. Click the **Usr** radio button on the left side of the window for each option and save the generic user file.

If desired, user settings can be saved for each user, if desired, as each handset is configured. If you determine that each handset configuration should be saved, it is easiest to do this during the configuration process. See "Downloading a configuration plan to a handset" on page 4-9.

Alternately, you can upload options from a correctly-configured handset; copy them to the Editable settings column, categorize them and save them. See "Uploading a configuration plan from a handset" on page 4-10.

Configuration planning worksheet (sample)

Use the worksheet in Table 4-2, or a similar worksheet to design your configuration plan.

Table 4-2 *Configuration planning worksheet sample*

Plan category ____System_____   Filename ___System01_____

Sys	Grp	Usr	Label	Editable Setting
			Time Zone	-7 Mountain
			Daylight Saving	DST Auto (USA)
			Protected Speed Dial Number	5555
			Protected Speed Dial Name	Security
			Assign to	1
			Speakerphone	Enabled
			Predial	Enabled

The settings in the table above are executed in Figure 4-4.

Figure 4-4 *Handset Settings Editor example*
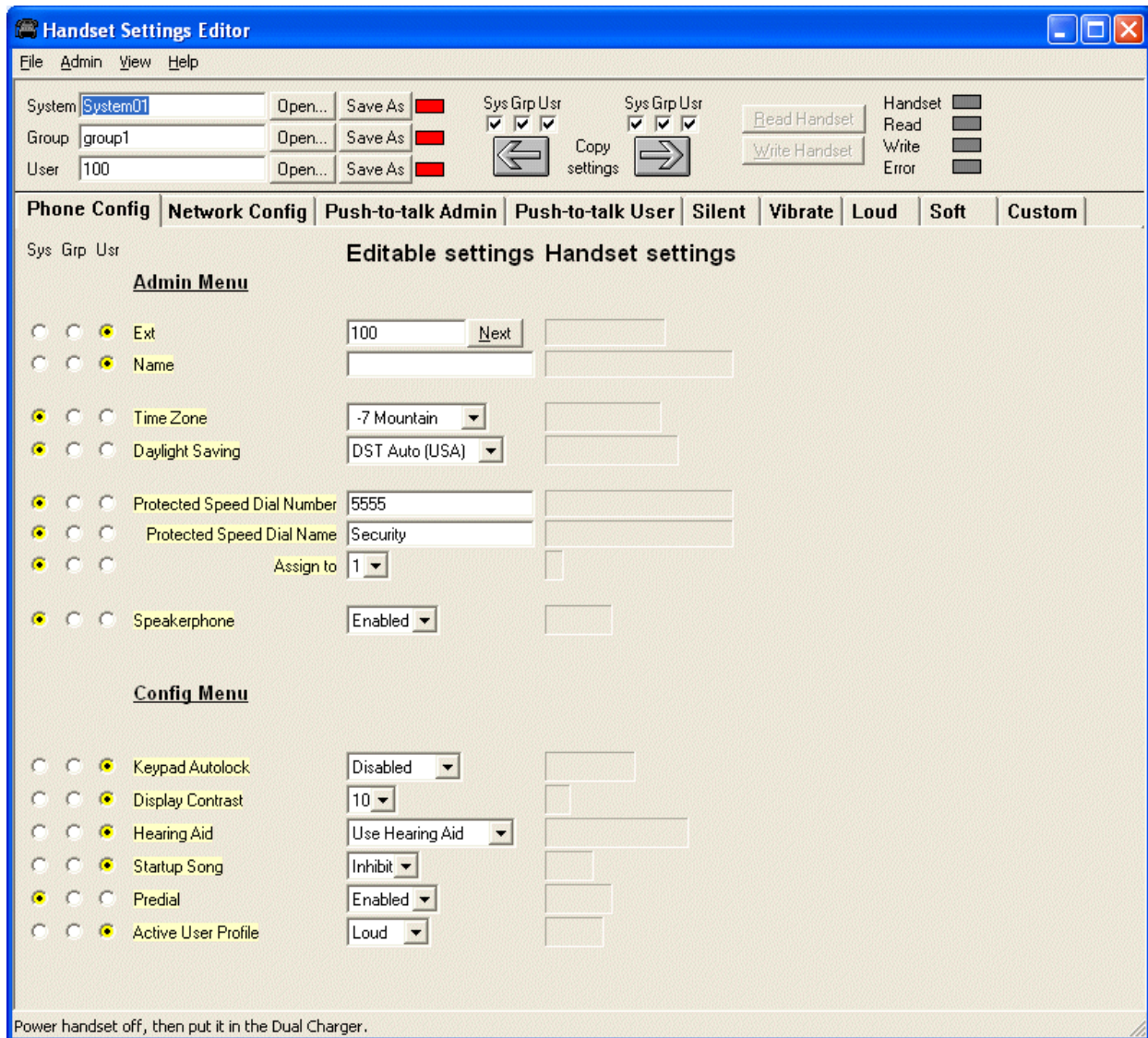
Downloading and Uploading Configuration Plans

Once your configuration plans are established, the settings are easily downloaded into the handsets.

Downloading a configuration plan to a handset

Step 1   Use the **Open** button located in the File management section on the toolbar to open the **System, Group** and **User** cfg files for this handset.

Step 2   In the **Editable settings** fields, enter the **Extension** and **User name** for this handset. Note that the **Extension** field has a **Next** button that is useful when configuring a quantity of handsets.

Step 3   Copy the settings to the **Handset settings** fields using the **Copy settings** arrow.

Step 4   Click **Write Handset.**
You may want to save the configuration, load new files or edit settings for the next handset (steps 1 and 2) during the download.

Step 5   (Conditional) If you wish to save the settings unique to this handset, enter the identifying information into the filename fields, such as user name or extension number and then click **Save As.**

Step 6   When the **Handset** indicator turns off, the download has finished and the handset may be removed from the charger.

Uploading a configuration plan from a handset

Step 1   Click the **Read Handset** button to begin the upload.

Step 2   You may copy these settings over to the **Editable settings** fields using the left **Copy settings** arrow to use them to create configuration plans as described above or to save them by user or extension.

Regulatory Domain Mismatch

The options that are available on the Settings Editor may not match the options currently enabled on the handset. This could happen if you update the software in the handset without also updating the MH Administration Tool. Or you could update the MH Administration Tool but not the handset software. In either of these situations different options may appear on the MH Administration Tool than are available in the handset.

If the Regulatory Domains in the handset are not supported by the currently installed version of the MH Administration Tool, a warning message will appear:

> **Warning: Regulatory domain support is down level with respect to this phone's firmware version. Recommend upgrading the application.**

This message indicates that the MH Administration Tool software needs to be updated. Please see "Software Updates" on page 3-7.

If it is necessary to down rev the handset and MH Administration Tool code, this message could also appear. If so, reset the handset defaults and proceed with configuration.

*For additional information or support on this NEC Unified Solutions,
Inc. product, contact your NEC Unified Solutions, Inc. representative.*

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NEC MH150/MH160 Mobile Handset Administration Tool-Installation and User Guide

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