



**Wavelink Telnet Client  
Industrial Browser  
Reference Guide**

tn-rg-browser-20080801

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# Chapter 1: Introduction

This document provides information about using and developing for the Telnet Client Industrial Browser.

This section provides the following information:

- Document Assumptions
- Document Conventions
- About the Telnet Client Industrial Browser

## Document Assumptions

This document assumes that the reader has the following:

- Knowledge of wireless networks and wireless networking protocols.
- Knowledge of TCP/IP, including IP addressing, subnet masks, routing, BootP/DHCP, WINS, and DNS.
- Knowledge of Wavelink Telnet Client.
- Knowledge of web page development, including implementation of META tags and IDA commands.

## Document Conventions

The following table lists the document conventions used in this manual.

Courier New

Any time you type specific information into a text box (such as a file name), that option appears in the Courier New text style. This text style is also used for any keyboard commands that you might need to press.

Examples:

Type `Enter` to continue.

Press `CTRL+ALT+DELETE`.

**Bold**

Any time you interact with an option (such as a button or descriptions of different options in a dialog box), that option appears in the **Bold** text style.

Examples:

Click **Open** from the **File** Menu.

Select the **Update** option.

*Italics*

Any time this document refers to another section within the document, that section appears in the *Italics* text style. This style is also used to refer to the titles of dialog boxes.

Examples:

See *Configuring WEB Emulation Parameters* on page 14 for more information.

The *Script Editor* dialog box appears.

## About the Telnet Client Industrial Browser

Wavelink Telnet Client includes an Industrial Browser interface that gives you the ability to access web-based applications from a mobile device. The

Industrial Browser supports PocketPC 2003, Windows Mobile 5.0, Windows 2000/XP, and Windows CE .NET 4.2/5.0.

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**NOTE** The Industrial Browser is included in Telnet Client 6.0 and later versions.

---

## Licensing

The Telnet Client Industrial Browser requires a license for full functionality. You can use the Telnet Client Industrial Browser without a license, but you will be limited to the demo version, which does not provide full Telnet Client functionality.

There are two ways to license Telnet Client Industrial Browser:

- If you do not currently have a Telnet Maintenance license, you can purchase a Telnet Client 6.0 Standalone Browser license. (A separate Browser Maintenance license is also available.)
- If you currently have a Telnet Maintenance license, you can purchase an Industrial Browser add-on license. (Browser Maintenance is included.)

---

**NOTE** To obtain Telnet Client licenses, please contact Wavelink Customer Service. *Appendix A: Wavelink Contact Information* on page 41 provides Wavelink contact information.

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## Chapter 2: Configuring Host Profile and Emulation Parameters

This chapter provides information about the following:

- Configuring the Industrial Browser Host Profile
- Configuring WEB Emulation Parameters

### Configuring the Industrial Browser Host Profile

Before you can use the Industrial Browser, you must create a Host Profile for WEB emulation. A Host Profile defines the parameters that the Telnet Client should use when it attempts to initiate a Telnet connection with a specific host.

You may configure as many WEB emulation Host Profiles for the Telnet Client as you wish.

---

**NOTE** For more information about creating Host Profiles, refer to the *Telnet Client User Guide*.

---

#### To create a Host Profile:

- 1 Access the *Edit Host Profiles* dialog box.
- 2 From the **Type** drop-down menu, select **WEB**.
- 3 Enter the host **Name** and **Address** in the appropriate text boxes and click **OK**.

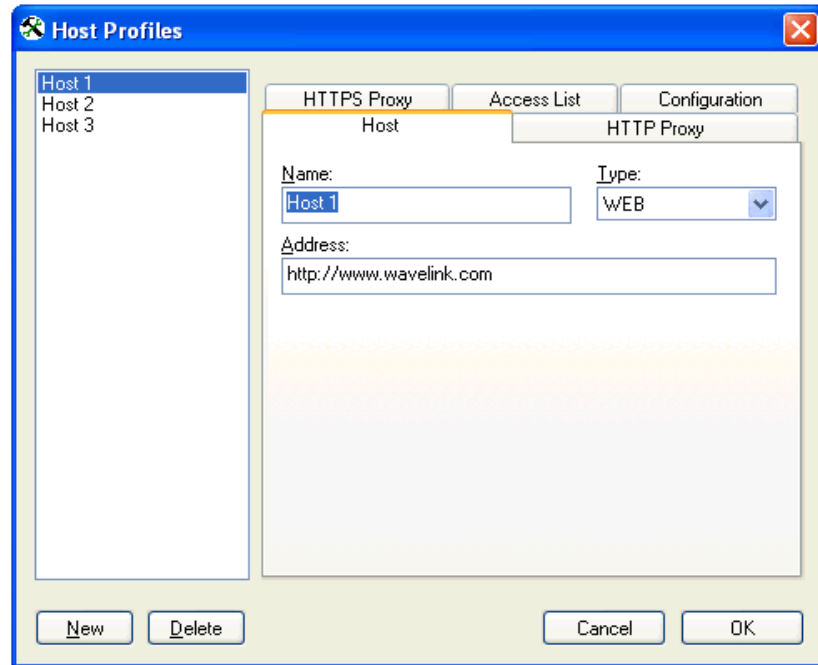
---

**NOTE** You may enter a subnet-specific address rather than an IP address or a DNS name. For more information, refer to *Wavelink Telnet Client User Guide*.

---

The WEB emulation Host Profile is created.

When you configure the Host Profile for WEB-type emulation, various tabs appear offering different options for WEB settings.

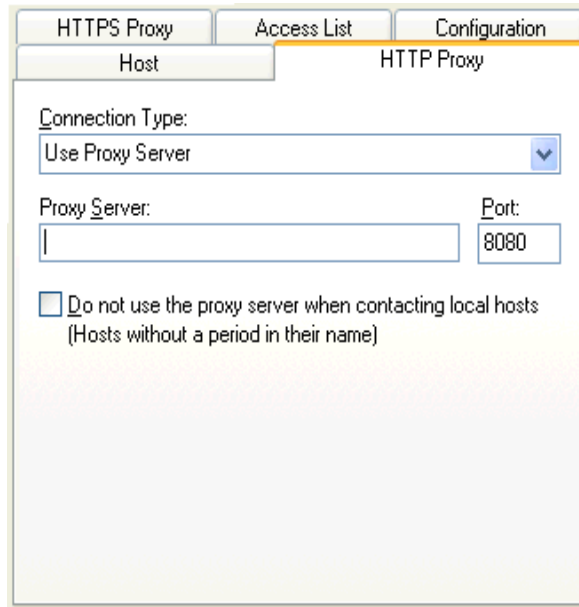


**Figure 2-1.** *Configuring WEB Settings*

The following sections describe the parameters of each tab used to configure WEB emulation settings in the *Host Profiles* dialog box.

### **HTTP Proxy Tab**

Use the **HTTP Proxy** tab to configure proxy connections for WEB emulation.



**Figure 2-2.** *Configuring the HTTP Proxy Tab*

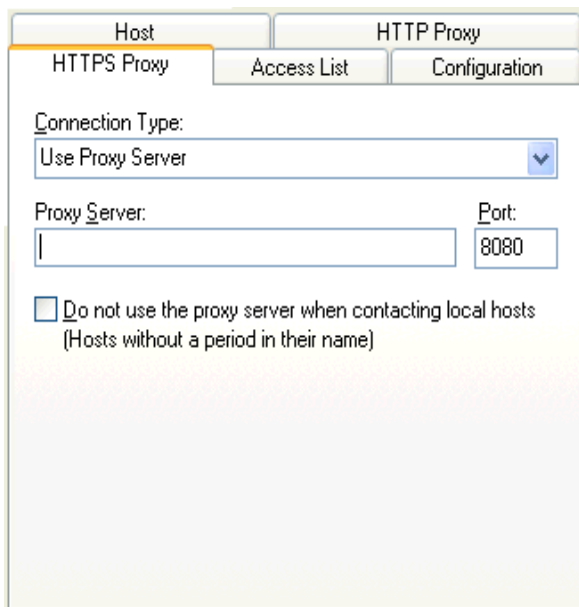
The following list describes the options and configurable parameters in the **HTTP Proxy** tab.

- |                        |   |
|------------------------|---|
| <b>Connection Type</b> | Indicates the type of connection for the Host Profile to use.                         |
|                        | <b>Possible Values:</b> <Direct Connection> <Use Explorer Default> <Use Proxy Server> |
|                        | <b>Default Value:</b> <Direct Connection>   |
| <b>Proxy Server</b>    | Indicates the location of the proxy server.   |
|                        | <b>Possible Values:</b> Any valid IP address, host name, or web address.              |
|                        | <b>Default Value:</b> <None>  |

|  |  |
|--|--|
| <b>Port</b>  | Indicates the network port for the proxy server.<br><b>Possible Values:</b> Any valid port number.<br><b>Default Value:</b> <8080>   |
| <b>Do not use the proxy server when contacting local hosts</b> | Indicates whether the Telnet Client should use the proxy server when contacting hosts that reside on the same network.<br><b>Possible Values:</b> <Enabled> <Disabled><br><b>Default Value:</b> <Disabled> |

## HTTPS Proxy Tab

Use the **HTTPS Proxy** tab to configure secure proxy connections for WEB emulation.



The screenshot shows a configuration window with two main tabs: "Host" and "HTTP Proxy". The "Host" tab is selected and contains three sub-tabs: "HTTPS Proxy", "Access List", and "Configuration". The "HTTPS Proxy" sub-tab is active. The configuration area includes a "Connection Type:" dropdown menu set to "Use Proxy Server". Below this are two input fields: "Proxy Server:" (empty) and "Port:" (set to "8080"). At the bottom, there is a checkbox labeled "Do not use the proxy server when contacting local hosts (Hosts without a period in their name)", which is currently unchecked.

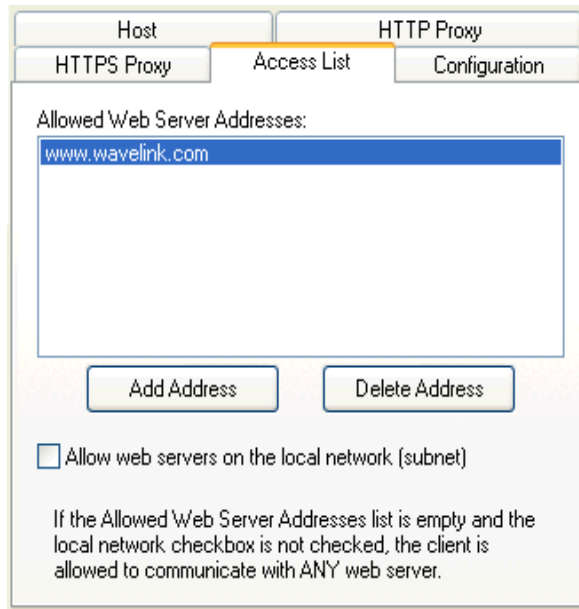
**Figure 2-3.** Configuring the HTTPS Proxy Tab

The following list describes the options and configurable parameters in the **HTTPS Proxy** tab.

|  |  |
|--|--|
| <b>Connection Type</b>   | Indicates the type of connection for the Host Profile to use.<br><br><b>Possible Values:</b> <Direct Connection> <Use Explorer Default> <Use Proxy Server><br><br><b>Default Value:</b> <Direct Connection>        |
| <b>Proxy Server</b>  | Indicates the location of the proxy server<br><br><b>Possible Values:</b> Any valid IP address, host name, or web address.<br><br><b>Default Value:</b> <None>   |
| <b>Port</b>  | Indicates the network port for the proxy server.<br><br><b>Possible Values:</b> Any valid port number.<br><br><b>Default Value:</b> <8080>   |
| <b>Do not use the proxy server when contacting local hosts</b> | Indicates whether the Telnet Client should use the proxy server when contacting hosts that reside on the same network.<br><br><b>Possible Values:</b> <Enabled> <Disabled><br><br><b>Default Value:</b> <Disabled> |

## **Access List Tab**

Use the **Access List** tab to configure which web addresses can be accessed by the Telnet Client Industrial Browser.



**Figure 2-4.** *Configuring the Access List Tab*

The following list describes the options and configurable parameters in the **Access List** tab.

**Allowed Web Server Addresses**

Lists the web addresses that the Telnet Client is permitted to connect with.

**Possible Values:** Any valid IP address, host name, or web address.

**Default Value:** <None>

**Allow web servers on the local network (subnet)**

Indicates whether the Telnet Client can connect with any web server or only with servers on the local network.

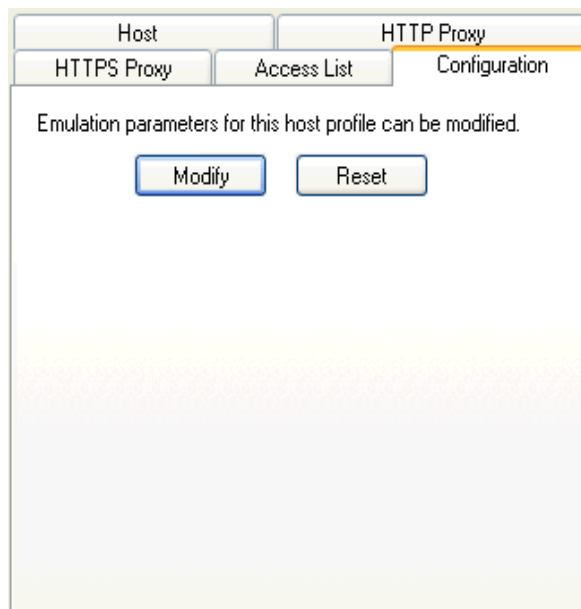
**Possible Values:** <Enabled> <Disabled>

**Default Value:** <Disabled>

- Add Address** Select this button to add a new IP or web address to the list of addresses that Telnet Client is permitted to connect with.
- Delete Address** Select this button to delete any address in the list.

## Configuration Tab

Use the **Configuration** tab to modify emulation parameters for the Host Profile.



**Figure 2-5.** *Configuration Tab*

Select **Modify** to access the Configuration Manager or **Reset** to restore default settings.

---

**NOTE** For more information about emulation parameters, refer to *Configuring WEB Emulation Parameters* on page 14

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## Configuring WEB Emulation Parameters

You can manually configure certain Telnet Client emulation parameters on a per-host basis.

---

**NOTE** For more information on configuring Emulation Parameters, see the *Telnet Client User's Guide*.

---

You can configure parameters for WEB emulation from the **WEB** tab in the in the *Settings* dialog box. You can also configure parameters by accessing the Configuration Manager from the **Configuration** tab in the Host Profile.

The following table describes the configurable options in the **WEB** tab.

|                                      |  |
|--------------------------------------|--|
| <b>WEB Allow Compression</b>         | Determines whether the browser will automatically decompress any compressed information it receives.<br><br><b>Possible Values:</b> <Yes> <No><br><br><b>Default:</b> <Yes?                      |
| <b>WEB Allow Cookies</b>             | Indicates whether the web server is able to access cookies on the client.<br><br><b>Possible Values:</b> <Yes> <No><br><br><b>Default:</b> <Yes>   |
| <b>WEB Automatic SIP</b>             | Determines whether the SIP keyboard is automatically displayed when the cursor is moved to an edit field.<br><br><b>Possible Values:</b> <Enabled> <Disabled><br><br><b>Default:</b> <Disabled>  |
| <b>WEB Default Scanner Auto Keys</b> | Determines the default post-scan action for web pages without Tab or Enter key META tags<br><br><b>Possible Values:</b> <No Keys> <Enter> <Tab> <Enter and Tab><br><br><b>Default:</b> <No Keys> |



---

|                                |  |
|--------------------------------|--|
| <b>WEB Default Text Size</b>   | Indicates whether the default text size should be used when the browser first appears.<br><br><b>Possible Values:</b> <Smallest> <Smaller> <Medium> <Larger> <Largest> <No Change><br><br><b>Default:</b> <No Change>                    |
| <b>WEB Detect Out-Of-Range</b> | Indicates whether Telnet will prevent the user from interacting with a web page if the Wireless LAN adapter is not associated with an access point.<br><br><b>Possible Values:</b> <Enabled> <Disabled><br><br><b>Default:</b> <Enabled> |
| <b>WEB Display Images</b>      | Determines if embedded images and/or placeholders should be displayed on web pages.<br><br><b>Possible Values:</b> <Enabled> <Disabled><br><br><b>Default:</b> <Enabled>   |
| <b>WEB Engine Type</b>         | Indicates the type of web engine that should be used. The Enhanced engine is required to support several advanced features.<br><br><b>Possible Values:</b> <Standard> <Enhanced><br><br><b>Default:</b> <Enhanced>                       |
| <b>WEB Error 404 Override</b>  | Determines whether a custom or standard 404 error message is displayed.<br><br><b>Possible Values:</b> <Display Standard 404 Error Messages> <Custom Message><br><br><b>Default:</b> <Display Standard 404 Error Messages>               |

---

|  |  |
|--|--|
| <b>WEB Error Messages</b>                      | Determines whether server error messages relayed from the server are displayed.<br><br><b>Possible Values:</b> <Server Error Messages> <Local Error Messages><br><br><b>Default:</b> <Server Error Message>  |
| <b>WEB Error No Connection Override</b>        | Determines whether a custom or standard error message is displayed when WEB Emulation is unable to connect to a server.<br><br><b>Possible Values:</b> <Display Standard No Connection Messages> <Custom Message><br><br><b>Default:</b> <Display Standard No Connection Messages> |
| <b>WEB Fast Keyboard Support</b>               | Indicates whether an alternate method to pass keypresses to WEB Emulation is used.<br><br><b>Possible Values:</b> <Enabled> <Disabled><br><br><b>Default:</b> <Disabled>   |
| <b>WEB HTTP Version for Direct Connections</b> | Determines if the HTTP 1.0 or HTTP 1.1 protocol should be used for direct (non-proxy) connections.<br><br><b>Possible Values:</b> <HTTP 1.0> <HTTP 1.1><br><br><b>Default:</b> <HTTP 1.1>  |
| <b>WEB HTTP Version for Proxy Connections</b>  | Determines if the HTTP 1.0 or HTTP 1.1 protocol should be used through proxy connections.<br><br><b>Possible Values:</b> <HTTP 1.0> <HTTP 1.1><br><br><b>Default:</b> <HTTP 1.0>   |
| <b>WEB Out-Of-Range Message</b>                | Allows you to customize the out-of-range message that is displayed on the mobile device.<br><br><b>Possible Values:</b> <Any><br><br><b>Default Message:</b> <Network Out Of Range>  |

**WEB Play Background Sounds** Determines whether sounds embedded in the web page will be played.

**Possible Values:** <No> <Yes>

**Default:** <Yes>

---

**NOTE** Sounds will only be played if supported by the mobile device sound card.

---

**WEB SAP Keyboard Support** Indicates whether functions on SAPWebConsole pages can be activated by the keyboard.

**Possible Values:** <Enabled> <Disabled> <Auto-Detect>

**Default:** <Auto-Detect>

**WEB Scan Data Insertion Method** Determines the method used to feed scan data to a web page.

**Possible Values:** <All At Once> <Keyboard Data>

**Default:** <All At Once>

**WEB Show Progress Bar** Indicates whether the browser should display a progress bar during a web download.

**Possible Values:** <Yes> <No>

**Default:** <Yes>

**WEB Underline Links** Determines if links (anchors) on the web page will be underlined.

**Possible Values:** <No> <Yes>

**Default:** <Yes>

---

**NOTE** This is not supported on Pocket PC and Windows Mobile devices.

---

**WEB User Agent** Specifies the value that is included with the HTTP header information sent by the device to the web server.

**Possible Values:** Any valid User Agent value.

**Default:** <The value that Internet Explorer or Pocket Internet Explorer would use on the device>

## Chapter 3: Using the Industrial Browser

This chapter provides information about using the Telnet Client Industrial Browser, including the following:

- Basic Navigation
- Specifying the Home Page
- Using the WEB Virtual Emulation Keyboard

### Basic Navigation

The Telnet Client Industrial Browser interface provides basic commands for navigating web pages.

#### To navigate within the Industrial Browser:

- 1 Connect to a WEB emulation session.
- 2 Tap and hold on the screen.

A menu appears.

- 3 From this menu, you can select from the following options:

|                |  |
|----------------|--|
| <b>Back</b>    | Returns the browser to the previous web page.                    |
| <b>Forward</b> | Returns to the screen displayed before <b>Back</b> was selected. |
| <b>Stop</b>    | Stops the web page from loading.                                 |
| <b>Refresh</b> | Reloads the current web page.                                    |

|                  |  |
|------------------|--|
| <b>Home</b>      | Returns the browser to the specified home page.  |
| <b>Text Size</b> | Displays a menu with the following text size options: <ul style="list-style-type: none"> <li>• Largest</li> <li>• Larger</li> <li>• Medium</li> <li>• Smaller</li> <li>• Smallest</li> </ul> |

## Specifying the Home Page

The home page is the first page users will see when connecting to the Industrial Browser; it is also the page users will be returned to when they select **Home**. The home page will be the location you set up in the Host Profile for WEB emulation. This can either be an IP address or a specific web address. Refer to *Configuring the Industrial Browser Host Profile* on page 7 for more information.

## Using the WEB Virtual Emulation Keyboard

The Telnet Client Industrial Browser contains a default emulation keyboard. You can access the keyboard through the Telnet Client **Options** menu.

Figure 3-1 shows the Telnet Client virtual emulation keyboard for WEB emulation.

|            |     |           |         |       |
|------------|-----|-----------|---------|-------|
| Back       | Fwd | Stop      | Refresh | Home  |
| Prev Sess  |     | Next Sess |         | Close |
| Key Clicks |     | Quiet     | Info    | Diags |
| Alpha      | Num | Func      | Punc    | Cfg   |
|            |     | Off       | ←       | →     |
|            |     |           |         | ↓     |

**Figure 3-1.** Telnet Client WEB Virtual Emulation Keyboard

The following list describes the function of the keys in the WEB virtual emulation keyboard.

|                   |   |
|-------------------|---|
| <b>Back</b>       | Returns the browser to the previous web page.   |
| <b>Fwd</b>        | Returns to the screen displayed before <b>Back</b> was selected.  |
| <b>Stop</b>       | Stops the web page from loading.  |
| <b>Refresh</b>    | Reloads the current web page.   |
| <b>Home</b>       | Returns the browser to the specified home page.   |
| <b>Prev Sess</b>  | Cycles to the previous Telnet Client session.   |
| <b>Next Sess</b>  | Cycles to the next Telnet Client session.   |
| <b>Close</b>      | Disconnects the session. (Only available when the session is connected.)  |
| <b>Key Clicks</b> | Turns key clicks on/off   |
| <b>Quiet</b>      | Turns quiet mode on/off.  |
| <b>Info</b>       | Shows/hides the following information about the mobile device: <ul style="list-style-type: none"><li>• Telnet Client version information</li><li>• MAC address</li><li>• IP address</li><li>• ESSID</li></ul> |
| <b>Diags</b>      | Allows you to access the Telnet Client diagnostic tools.  |

|                   |  |
|-------------------|--|
| <b>Alpha</b>      | Displays the alpha keys for WEB emulation, including: <ul style="list-style-type: none"><li>• a-z</li><li>• Shift, Ctl, Alt</li><li>• Esc, Tab, Caps, Enter, Space</li></ul> |
| <b>Num</b>        | Displays the numeric keyboard for WEB emulation, including: <ul style="list-style-type: none"><li>• 0-9</li><li>• Shft</li><li>• Esc, Tab, Ins, Enter, Space</li></ul>       |
| <b>Func</b>       | Displays the function keys for WEB emulation, including: <ul style="list-style-type: none"><li>• F1-F24</li></ul>  |
| <b>Punc</b>       | Displays the punctuation keys for WEB emulation, including: <ul style="list-style-type: none"><li>• Punctuation keys</li><li>• Enter, Space</li></ul>                        |
| <b>Cfg</b>        | Displays the virtual emulation keyboard.   |
| <b>Off</b>        | Hides the virtual keyboard.  |
| <b>Arrow Keys</b> | Moves the web page up and down or from side to side.   |



## Chapter 4: Developing Web Pages for the Industrial Browser

This chapter provides information about the META tags and IDA commands supported by the Telnet Client Industrial Browser. You can use these tags to develop custom web pages that enable specific functionality in the Industrial Browser. The following sections are included:

- META Tags
- IDA Commands

### META Tags

META tags are included at the top of a web page between the <HEAD> and </HEAD> tags. They are evaluated in the order they appear in the web page (from top to bottom). The Industrial Browser is designed to work only with tags it recognizes; it will ignore tags it does not recognize. If a META tag starts with the `iBrowse_` prefix, that prefix will be ignored. For example, `iBrowse_ScannerNavigate` is the same as `ScannerNavigate`.

Each META tag has the following format:

```
<meta http-equiv="action_name" content="action_type">
```

In the preceding format, the `action_type` can be a URL, an IDA action, or a JavaScript function. Some actions allow the action type to include replacement values; a `'%s'` or `'%d'` or `'%ld'` string can be used to indicate where each replacement item belongs.

---

**NOTE** These strings are interchangeable and can be used in any format that you prefer.

---

You can also use META tags in conjunction with a `"wls:"` type to launch Telnet scripts from a web page. For more information, refer to *Wavelink Telnet Client Scripting Reference Guide*.

The following are META tags supported by the Telnet Client Industrial Browser:

- `BatteryNavigate`

- OnAllKeys, OnKey..., OnKey0x...
- OnStartup, IDA
- PowerOn
- Printing
- Scanner
- ScannerNavigate, ScannerProcessed
- SignalNavigate
- SpeechFromText
- SpeechSetting
- TextFromSpeech
- Symbolologies

## BatteryNavigate

The `BatteryNavigate` META tag is used to handle changes in the battery strength or the AC line status. The action occurs when the battery strength changes or when the device is plugged in or unplugged.

The four main arguments (from left to right) are: the AC line status, the strength of the main battery from zero to 100, the strength of the backup battery from zero to 100, and the main battery chemistry. A battery strength of 255 means “unknown”.

The following are the AC line status values:

```
#define AC_LINE_OFFLINE           00
#define AC_LINE_ONLINE           01
#define AC_LINE_BACKUP_POWER     02
#define AC_LINE_UNKNOWN          255
```

The following are the battery chemistry values:

```
BATTERY_CHEMISTRY_ALKALINE      01
BATTERY_CHEMISTRY_NICD         02
```

|                           |     |
|---------------------------|-----|
| BATTERY_CHEMISTRY_NIMH    | 03  |
| BATTERY_CHEMISTRY_LION    | 04  |
| BATTERY_CHEMISTRY_LIPOLY  | 05  |
| BATTERY_CHEMISTRY_ZINCAIR | 06  |
| BATTERY_CHEMISTRY_UNKNOWN | 255 |

### **OnAllKeys, OnKey..., OnKey0x...**

The `OnKey...` and `OnKey0x...` META tags describe an action that will occur if a particular key is pressed. The key values that are evaluated are the same key values used by Keyboard Creator.

The `OnKey0x` format requires a hexadecimal number, while the `OnKey` format will require a decimal format. The key value is also case sensitive.

For example:

`OnKey50` and `OnKey0x32` will both respond to the 2 key.

`OnKey65` and `OnKey97` would be used to respond to both the upper and lowercase A.

The `OnAllKeys` tag will perform the prescribed action each time a key is pressed. The action type can include one argument, which is the string representing the decimal value of the key.

---

**NOTE** Due to browser limitations, some keys (such as `Tab`) may not always be handled by this tag.

---

### **OnStartup, IDA**

The `OnStartup` and `IDA` META tags allow you to specify actions that will be taken when the web page is first loaded. The action type must be one of the action types described in *IDA Commands* on page 31.

### **PowerOn**

The `PowerOn` META tag is used when the device turns on.

## Printing

You can send data to the printer by including the data in the META tags. Use the `Print_Continue` and `Print_Finish` action names to specify the print data. The print data is in the action type of these META tags. The print data in each META tag should all be on the same line and should not be more than 1024 characters in length; however the total print data can be larger than 1024 characters. In addition to standard characters, you can use the following:

- `\r` to specify a return character
- `\n` to specify a newline character
- `\t` to specify a tab character
- `\\` to specify a backslash character
- `\##` or `\x##` to specify any other character, where `##` is replaced with a two-digit hexadecimal number

`Print_Continue` should be used for all but the last section of print data, and `Print_Finish` should be used for the last section of print data.

---

**NOTE** If desired, the action names `Print_Done`, `Print_Final`, `PLSeriesLabel_Print` and `ZebraLabel_Print` can be used instead of `Print_Finish`.

---

The META tag `Print_Callback` can be used to specify the action that will occur after the printing is completed. The argument will be 0 if the printing was successful, or a non-zero number if the printing failed.

---

**NOTE** If desired, the action names `Print_Complete`, `ZebraLabel_Complete` and `PLSeriesLabel_Complete` can be used instead of `Print_Callback`.

---

The META tag `Print_Setup_TP` can be used to specify the IP Address and port of the printer if using TCP printing. If this tag is used, it must be specified before the `Print_Finish` tag. The format is `address:port`.

For example:

```
<meta http-equiv="Print_Setup_TP"
content="192.168.1.59:7429">

<meta http-equiv="Print_Continue"
content="\22First Line\22\r\n">

<meta http-equiv="Print_Continue"
content="\22Middle\22\r\n">

<meta http-equiv="Print_Finish"
content="\22Last Line\22\r\n">

<meta http-equiv="Print_Callback"
content="printresult.htm&status=%s"
```

## Scanner

If the action name is `Scanner` and the action type is `Enable` or `Resume`, the scanner will be enabled when the page is first loaded. If the action type is `Disable` or `Suspend`, the scanner will be disabled when the page is first loaded.

There are four additional scanner action types supported by Telnet Industrial Browser:

- `AutoTab`
- `AutoEnter`
- `AutoEnterAndTab`
- `NoAuto`

The `AutoTab`, `AutoEnter`, and `AutoEnterAndTab` action types will enable the scanner and will cause the scan data to be followed by an enter or tab key (or both). The `NoAuto` action type will enable the scanner and will clear the scanner key value (if a value is specified by the emulation parameters).

Once enabled or disabled, the scanner will stay in that state until some other action (such as a META tag or IDA action) changes the state or until the user changes sessions.

You can also use WEB Default Scanner Auto Keys and WEB Default Scanner State emulation parameters to configure the default scanner action on web pages with no applicable META tags. For more information on emulation parameters, see *Configuring WEB Emulation Parameters* on page 14.

## **ScannerNavigate, ScannerProcessed**

The `ScannerNavigate` META tag is used to handle raw scan data. The `ScannerProcessed` tag is similar, but gives the scan data after it has been modified by the scan handlers, etc. in the Emulation Parameters.

If the action type has zero to three arguments, then the arguments are (from left to right): the barcode data, the symbology type, and the time stamp.

If the action type has four or five arguments, then the arguments are (from left to right): the barcode data, source scanner name, symbology type, time stamp, and barcode length.

---

**NOTE** Refer to the following section for supported symbology types.

---

## **SignalNavigate**

The `SignalNavigate` META tag is used to handle changes in the signal strength of the wireless network connection. The action occurs when the signal strength changes or when the device disconnects from the wireless network.

The three arguments (from left to right) are: signal strength, connected ESSID, and device MAC address. The signal strength is zero to 100. Strength -1 means "unknown." Strength -2 means "disconnected from the wireless network." ESSID and MAC addresses may be "<unknown>." (Available on Windows-CE devices only.)

## **SpeechFromText**

The `SpeechFromText` META tag plays the string specified by the "content" flag.

For example:

```
<meta http-equiv="SpeechFromText" content="I will speak  
this sentence.">
```

## SpeechSetting

The `SpeechSetting` META tag changes one or more speech values.

For example:

The following META tag will change the Text-to-Speech settings for language and voice:

```
<meta http-equiv="SpeechSetting"
content="tts_language=American English, tts_voice=Tom">
```

## TextFromSpeech

The `TextFromSpeech` META tag will play the string specified by the "content" flag. This META tag function is identical to the `SpeechFromText` META tag.

## Symbologies

You can enable and disable different symbologies by using the symbology as the action name, and `Enabled` or `Disabled` as the action type. The symbologies supported by Telnet Client Industrial Browser are as follows:

|                  |               |             |
|------------------|---------------|-------------|
| AUSTRALIA_POSTAL | CUECODE       | PLANET      |
| AZTEC            | D2OF1ATA      | PLESSY      |
| AZTECMESA        | D2OF5         | POSICODE    |
| BOOKLAND         | DATAMATRIX    | POSTNET     |
| BRITISH_POSTAL   | DUTCH_POSTAL  | QRCODE      |
| CANADA_POSTAL    | EAN8          | RSS14       |
| CHINA_POSTAL     | EAN13         | RSSEXPANDED |
| CODABAR          | I2OF5         | RSSLIMITED  |
| CODABLOCK        | JAPAN_POSTAL  | SIGNATURE   |
| CODE11           | KOREA_POSTAL  | TELEPEN     |
| CODE16K          | MACROPDF      | TLC39       |
| CODE32           | MACROMICROPDF | TRIOPTIC39  |
| CODE39           | MAXICODE      | UCC128      |
| CODE49           | MATRIX2OF5    | UPCA        |
| CODE93           | MICROPDF      | UPCE        |
| CODE128          | MSI           | UPCE0       |
| COMPOSITE        | OCR           | UPCE1       |
| COUPONCODE       | PDF417        | WEBCODE     |

In addition to the preceding symbologies, the value `ALL_DECODERS` can be used to enable or disable all the symbologies.

For example:

To enable only UPCA, use the META tags in this order

```
<meta http-equiv="ALL_DECODERS" content="Disabled">
```

```
<meta http-equiv="UPCA" content="Enabled">
```

The prefix `Scanner_` can also be used with all symbologies.

## Element-Specific Actions

The following META tag options are also supported for individual elements:

- `OnAllKeys`, `OnKey...`, `OnKey0x...`
- `Scanner`
- `Symbologies`

The options can be specified in the tag that creates the element on the web page. If the element is selected (active), then the option will be applied. When the tag is not selected (inactive), then the settings will revert back to those specified by the META tags for the web page.

Unlike the META tags, where `http-equiv` is used to specify the action name and `content` is used to specify the action type, a simple `action_name="action type"` format is used.

For example:

The following tag will cause the Scanner to be enabled when the tag is selected on the web page.

```
<input name="item1" id="item1" type="text"  
Scanner="Enable">
```

The following tag will enable the scanner only while the tag is selected. The scanner will be disabled otherwise.

```
<meta http-equiv="Scanner" content="Disable">
```



---

**NOTE** You can use the META tag `OnStartup` with an action of `IDA_SCAN_ENABLE` or `IDA_SCAN_DISABLE` to change the scanner state only when the page is first loaded.

---

To use element-specific Symbologies, you can either use the Symbology name or prefix the Symbology name with the string `"Scanner_"`.

For example:

The following tag will enable the scanner, AutoTab after an item is scanned, and turn off all Symbologies except `Code128`.

```
<textarea name="item2" Scanner=AutoTab
Scanner_All_Decoders=Disable Scanner_Code128=Enable>
```

The `Code128` enable item must come after the `All_Decoders` item or it will be disabled when the `All_Decoders` item is processed.

## IDA Commands

IDA commands are special values used to invoke a device action, program action, or emulator action within the Telnet Industrial Browser. These values can be specified in many of the special META tags described above, as URLs for the user to click on, or called inside JavaScript functions.

For example:

```
<a href="ida:IDA_SESSION_DISCONNECT">
Close the session</a>
```

-Or-

```
<script language=javascript>
function OnError( )
{
    // Disconnect the Session
    location.href = "ida:IDA_SESSION_DISCONNECT" ;

    // Alternate Method
    document.location = "ida:IDA_SESSION_DISCONNECT" ;
}
```

```
        // Another Alternate Method
        window.navigate ( "ida:IDA_SESSION_DISCONNECT" ) ;
    }
</script>
```

---

**NOTE** It is recommended that each IDA command be preceded by the `ida` prefix; however, the command will generally work without the prefix.

---

The following are IDA commands supported by the Telnet Industrial Browser:

- IDA\_COLDBOOT
- IDA\_COLDBOOT\_PROMPT
- IDA\_KEYBOARD\_WEB, IDA\_KEYBOARD\_SHOW, or IDA\_KEYBOARD\_UP
- IDA\_KEYBOARD\_NUM or IDA\_KEYBOARD\_NUMERIC
- IDA\_KEYBOARD\_NONE, IDA\_KEYBOARD\_HIDE, or IDA\_KEYBOARD\_DOWN
- IDA\_PROGRAM\_EXIT
- IDA\_PROGRAM\_EXIT\_PROMPT
- IDA\_REPRINT
- IDA\_SCAN\_DISABLE or IDA\_SCAN\_SUSPEND
- IDA\_SCAN\_ENABLE or IDA\_SCAN\_RESUME
- IDA\_SCAN\_FORWARD
- IDA\_SESSION\_S1, IDA\_SESSION\_S2, IDA\_SESSION\_S3, IDA\_SESSION\_S4
- IDA\_SESSION\_DISCONNECT
- IDA\_SESSION\_DISCONNECT\_PROMPT
- IDA\_SESSION\_NEXT

- IDA\_SESSION\_PREVIOUS
- IDA\_SIP\_SHOW or IDA\_SIP\_UP
- IDA\_SIP\_HIDE or IDA\_SIP\_DOWN
- IDA\_SIP\_TOGGLE or IDA\_SIP\_TOGGLEHIDE
- IDA\_SUSPEND or IDA\_SUSPEND\_DEVICE
- IDA\_SUSPEND\_PROMPT
- IDA\_URL\_BACK or IDA\_BACK
- IDA\_URL\_BACK or IDA\_BACK
- IDA\_URL\_BACK\_DISABLE or IDA\_BACK\_DISABLE
- IDA\_URL\_BACK\_ENABLE or IDA\_BACK\_ENABLE
- IDA\_URL\_FORWARD or IDA\_FORWARD
- IDA\_URL\_FORWARD\_DISABLE or IDA\_FORWARD\_DISABLE
- IDA\_URL\_FORWARD\_ENABLE or IDA\_FORWARD\_ENABLE
- IDA\_URL\_HOME or IDA\_HOME
- IDA\_URL\_HOME\_DISABLE or IDA\_HOME\_DISABLE
- IDA\_URL\_HOME\_ENABLE or IDA\_HOME\_ENABLE
- IDA\_URL\_REFRESH or IDA\_REFRESH
- IDA\_URL\_STOP or IDA\_STOP
- IDA\_WARMBOOT
- IDA\_WARMBOOT\_PROMPT
- IDA\_ZOOM\_DISABLE or IDA\_FONT\_DISABLE
- IDA\_ZOOM\_ENABLE or IDA\_FONT\_ENABLE

- IDA\_ZOOM\_LARGER or IDA\_FONT\_LARGER
- IDA\_ZOOM\_LARGEST or IDA\_FONT\_LARGEST
- IDA\_ZOOM\_MEDIUM or IDA\_FONT\_MEDIUM
- IDA\_ZOOM\_MINUS or IDA\_FONT\_MINUS
- IDA\_ZOOM\_PLUS or IDA\_FONT\_PLUS
- IDA\_ZOOM\_SMALLER or IDA\_FONT\_SMALLER
- IDA\_ZOOM\_SMALLEST or IDA\_FONT\_SMALLEST

### **IDA\_COLDBOOT**

This command causes the device to perform a cold boot.

### **IDA\_COLDBOOT\_PROMPT**

This command gives the user the option to perform a cold boot or cancel the action.

### **IDA\_KEYBOARD\_WEB, IDA\_KEYBOARD\_SHOW, or IDA\_KEYBOARD\_UP**

These commands cause the emulation on-screen keyboard to be displayed.

### **IDA\_KEYBOARD\_NUM or IDA\_KEYBOARD\_NUMERIC**

These commands cause the numeric on-screen keyboard to be displayed.

### **IDA\_KEYBOARD\_NONE, IDA\_KEYBOARD\_HIDE, or IDA\_KEYBOARD\_DOWN**

These commands cause the emulation and numeric on-screen keyboards to be hidden.

### **IDA\_PROGRAM\_EXIT**

This command causes the device to exit the current program.

## **IDA\_PROGRAM\_EXIT\_PROMPT**

This command gives the user the option to exit the program or cancel the action.

## **IDA\_REPRINT**

This command causes the last data supplied to the printer to be sent again. The print data will remain available until something else is printed or until the session is disconnected.

## **IDA\_SESSION\_S1, IDA\_SESSION\_S2, IDA\_SESSION\_S3, IDA\_SESSION\_S4**

These commands cause the device to switch to the specified session.

## **IDA\_SCAN\_DISABLE or IDA\_SCAN\_SUSPEND**

These commands disable the bar code scanner. When the bar code scanner is disabled, pressing the mobile device trigger will have no effect.

## **IDA\_SCAN\_ENABLE or IDA\_SCAN\_RESUME**

These commands enable the bar code scanner. The bar code scanner will not scan for bar codes unless the mobile device trigger is pulled.

---

**NOTE** You can use the META tag `OnStartup` with an action of `IDA_SCAN_ENABLE` or `IDA_SCAN_DISABLE` to change the scanner state only when the page is first loaded.

---

## **IDA\_SCAN\_FORWARD**

This command disables the barcode scanner and processes a trigger press as a key press. This command only functions on scanners that support trigger-press forwarding; on all other scanners, the command performs the same action as `IDA_SCAN_DISABLE`.

## **IDA\_SESSION\_DISCONNECT**

This command disconnects the session and closes the Industrial Browser.

**IDA\_SESSION\_DISCONNECT\_PROMPT**

This command gives the user the option to disconnect the session and close the Industrial Browser, or cancel the action.

**IDA\_SESSION\_NEXT**

This command opens a new session.

**IDA\_SESSION\_PREVIOUS**

This command causes the device to return to the previous session.

**IDA\_SIP\_SHOW or IDA\_SIP\_UP**

These commands cause the SIP on-screen keyboard to become visible.

**IDA\_SIP\_HIDE or IDA\_SIP\_DOWN**

These commands cause the SIP on-screen keyboard to become hidden.

**IDA\_SIP\_TOGGLE or IDA\_SIP\_TOGGLEHIDE**

These commands will cause the SIP on-screen keyboard to become visible if it is hidden, or hidden if it is visible.

**IDA\_SUSPEND or IDA\_SUSPEND\_DEVICE**

These commands cause the device to suspend itself.

---

**NOTE** For CE devices, this is similar to pressing the power button.

---

**IDA\_SUSPEND\_PROMPT**

This command gives the user the option to suspend the device or cancel the action.

**IDA\_URL\_BACK or IDA\_BACK**

These commands cause the Industrial Browser to display the screen previous to the current screen. If there are no previous screens, no action will be taken.

---

## **IDA\_URL\_BACK\_DISABLE or IDA\_BACK\_DISABLE**

These commands disable the **Back** menu option so it cannot be selected by the user.

---

**NOTE** The `IDA_URL_BACK` or `IDA_BACK` commands are not affected and will still work.

---

## **IDA\_URL\_BACK\_ENABLE or IDA\_BACK\_ENABLE**

These commands enable the **Back** menu option so it can be selected by the user. The menu option could still be disabled if there is no page to go back to.

## **IDA\_URL\_FORWARD or IDA\_FORWARD**

These commands cause the Industrial Browser to display the screen that was being displayed before the last **Back** command. If there was no previous screen, no action will be taken.

## **IDA\_URL\_FORWARD\_DISABLE or IDA\_FORWARD\_DISABLE**

These commands disable the **Forward** menu option so it cannot be selected by the user.

---

**NOTE** The `IDA_URL_FORWARD` or `IDA_FORWARD` commands are not affected and will still work.

---

## **IDA\_URL\_FORWARD\_ENABLE or IDA\_FORWARD\_ENABLE**

These commands enable the **Forward** menu option so it can be selected by the user.

---

**NOTE** The menu option could still be disabled if there is no page to return to.

---

## **IDA\_URL\_HOME or IDA\_HOME**

These commands cause the Industrial Browser to proceed to the location specified by the current Host Profile. It is completely independent from the

location for any other web browsers on the device.

### **IDA\_URL\_HOME\_DISABLE or IDA\_HOME\_DISABLE**

These commands disable the **Home** menu option so it cannot be selected by the user.

---

**NOTE** The `IDA_URL_HOME` or `IDA_HOME` commands are not affected and will still work.

---

### **IDA\_URL\_HOME\_ENABLE or IDA\_HOME\_ENABLE**

These commands enable the **Home** menu option so it can be selected by the user.

### **IDA\_URL\_REFRESH or IDA\_REFRESH**

These commands cause the web page to be reloaded. The server will be queried to verify that the page contents are up-to-date.

### **IDA\_URL\_STOP or IDA\_STOP**

These commands cause the web page to stop loading. If the web page is already fully loaded, this action has no effect.

### **IDA\_WARMBOOT**

This command causes the device to perform a warm boot.

### **IDA\_WARMBOOT\_PROMPT**

This command gives the user the option to perform a warm boot or cancel the action.

### **IDA\_ZOOM\_DISABLE or IDA\_FONT\_DISABLE**

These commands disable the **Text Size** menu so it cannot be selected by the user.

---

**NOTE** The IDA options to set the zoom level (text size) are not affected and will still work.

---



---

### **IDA\_ZOOM\_ENABLE or IDA\_FONT\_ENABLE**

These commands enable the **Text Size** menu so it can be selected by the user.

### **IDA\_ZOOM\_LARGER or IDA\_FONT\_LARGER**

These commands cause the Industrial Browser to display the text using a large text size.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_LARGEST or IDA\_FONT\_LARGEST**

These commands cause the Industrial Browser to display the text using the largest text size supported by the browser.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_MEDIUM or IDA\_FONT\_MEDIUM**

These commands cause the Industrial Browser to display the text using a medium text size.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_MINUS or IDA\_FONT\_MINUS**

These commands cause the Industrial Browser to display the text using the next-smaller text size than the current text size.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_PLUS or IDA\_FONT\_PLUS**

These commands cause the Industrial Browser to display the text using the next-larger text size than the current text size.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_SMALLER or IDA\_FONT\_SMALLER**

These commands cause the Industrial Browser to display the text using a small text size.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

### **IDA\_ZOOM\_SMALLEST or IDA\_FONT\_SMALLEST**

These commands cause the Industrial Browser to display the text using the smallest text size supported by the browser.

---

**NOTE** This is a global setting. Other Telnet sessions, Internet Explorer, and Pocket Internet Explorer will default to using this text size as well.

---

---

## **Appendix A: Wavelink Contact Information**

If you have comments or questions regarding this product, please contact Wavelink Customer Service via e-mail or telephone.

**Email:** [customerservice@wavelink.com](mailto:customerservice@wavelink.com)

**Phone:** 1-888-699-WAVE(9283)



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