IT*Script*Net® Batch ä

Version 2.4

Create Powerful Data Collection
Solutions - Simply and Easily

User Guide

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Introduction

Welcome

Welcome to **IT*Script*Net**®, the easy-to-use software that allows you to quickly and easily create data collection solutions for portable terminals. **IT*Script*Net** is designed to be easy-to-use, yet powerful enough to support the most sophisticated applications. With **IT*Script*Net** you will be designing data collection programs in no time! Designing your program is simple--you can see the flow of the data collection program graphically and can dictate exactly how each of your responses and fields are to be answered. **IT*Script*Net** includes a New Program Wizard that will immediately create data collection programs for common applications or will serve as a starting point for customized solutions. A group of Ready-To-Go® Applications is provided to let you start collecting data right away. **IT*Script*Net** even includes a Simulator so you can try out your program at the PC before deploying your solution to the actual data collection terminals.

IT*Script*Net supports a variety of portable data terminals. For a complete listing of supported terminals, please refer to our web site **http://www.z-space.com.**

There are 3 editions in the **IT*Script*Net** product family. **IT*Script*Net Batch** is for creating Batch data collection programs where each piece of data collected corresponds to a prompt in the program. The **IT*Script*Net Batch Plus** product takes Batch Data Collection to the next level by adding Multi-Prompts and a rich set of screen elements, printing support, and other developer features. **IT*Script*Net® OMNI** is the RF-enabled evolution of the **IT*Script*Net** product family that includes wireless communication functionality for radio frequency (RF) applications, and allows you to create real-time RF data collection solutions. Every feature in **IT*Script*Net® Batch** and **IT*Script*Net® Batch Plus** is included in **IT*Script*Net® OMNI**, making it the all-inclusive tool for data collection.

Regardless of the features you need for your data collection solution and the **IT*Script*Net** product you are using, you will find that **IT*Script*Net** is easy to use and extremely powerful and flexible.

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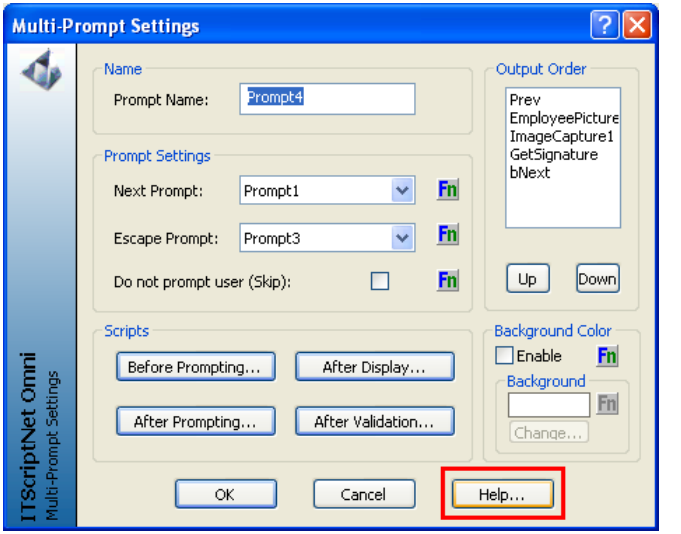
Online Help

IT*Script*Net provides online Help. All of the topics discussed in the User Guide can be accessed through the online help. There are two types of online help. The HTML Help is built-in to the program and can be accessed from the main menu and from any **Help…** button throughout the program. The second type of help is the context-sensitive help designed to quickly provide basic information on any screen control by pressing F1 or by clicking on the **'?'** button and then clicking on a screen control.



Technical Support

If you need technical support on this product, please contact your reseller or hardware manufacturer. You can also access technical support at **http://www.z-space.com**, or by emailing **support@z-space.com**, or by calling (440) 899-7370 during normal business hours.

ITScriptNet Licenses

IT*Script*Net can be licensed in two ways: by PC, or by Device.

For PC-Based licensing, **IT*Script*Net** requires a license for each PC it is installed on in order to run without a demo mode limitation. By purchasing and registering the proper **Batch** product licenses the user will have full access to all of the functions and features of the licensed software. Each license can only be registered on one computer. The user may move licenses from one computer to another by un-registering the license and re-registering as many times as necessary.

For Device-Based licensing, **IT*Script*Net** requires a license for each device in order to run without a demo mode limitation. A terminal with a device license can communicate with any computer running the software whether that computer has a PC license or not. Device licenses, once registered on a terminal, can not be removed or moved to a different terminal.

Demo Mode Limitations

Programs designed using the demo version of **IT*Script*Net** are limited to collecting and downloading 10 records. This is typically enough to test the program design and communication capabilities of the software.

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PC Licenses

IT*Script*Net PC Licenses consist of two (2) levels of licensed software products:

Program Designer

The Program Designer is used to develop data collection programs for the terminals and Pocket PC and Windows CE devices. The software is always licensed on a per PC basis. A user may develop unlimited programs with a single Designer license. The Program Designer license also includes the Upload and Download communication utilities, which allow the user to upload data collection programs and related files to terminals and to download collected data from the terminals to the PC. There is no limit on the number of terminals that can communicate with a Program Designer licensed PC.

Runtime

An **IT*Script*Net Runtime** license can be obtained for a PC that is only required to upload data collection programs and related files to terminals, and to download collected data from the terminals to the PC, and does not need program design features. There is no limit on the number of terminals that can communicate with a Runtime licensed PC. The Runtime Serial Number is registered from the Upload Utility.

Device Licenses

IT*Script*Net Device Licenses apply to portable data collection terminals, and allow the terminal to download collected data to any PC running the Upload or Download utilities without requiring a PC license on that computer. Please note that you still must design your data collection program with a Program Designer that has a PC license. Otherwise your program will still have the demo mode limitation.

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Installing the Software

Installation Requirements

IT*Script*Net has the following installation requirements:

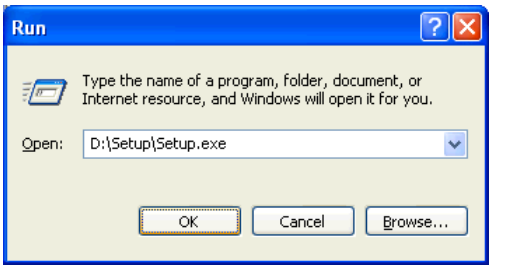
- Windows 98, Windows Me, Windows NT4SP4, Windows 2000, Windows XP, or higher
- Minimum RAM: 16 MB (32 MB for Windows NT, Windows 2000, Windows XP)
- Minimum hard drive space required: 30 MB (60 MB for full installation)
- Screen resolution of 800x600 or higher recommended.
- One or more supported portable data collection terminals configured for batch data collection or RF data collection
- Available serial or USB Port for communication with the portable data collection unit for batch data collection
- Wireless LAN/Access Point configured for communication with portable terminals for RF data collection.
- The online help system requires Internet Explorer 4.0 or higher for HTML. If you do not have Internet Explorer 4.0 or higher, the online help system may not function, although the rest of the program will.

If your system does not meet these requirements, the program may not run properly.

Installing ITScriptNet

IT*Script*Net uses an installation setup program to step you through the installation process.

To install the program, put the CD-ROM in your drive. The setup program will run automatically. If it does not, then select **Start->Run**, and enter **x:\setup\setup.exe** where **x:** is the letter of your CD-ROM drive.



After the setup program is done with its initialization, you will see the *Welcome* screen. Press **NEXT** to continue the installation.

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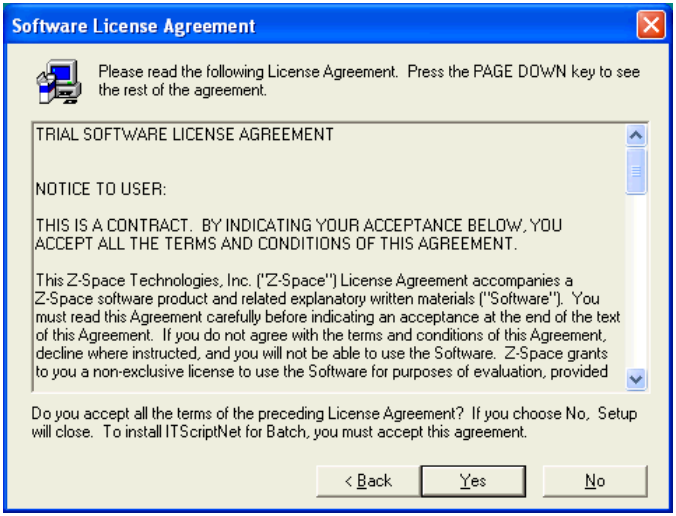
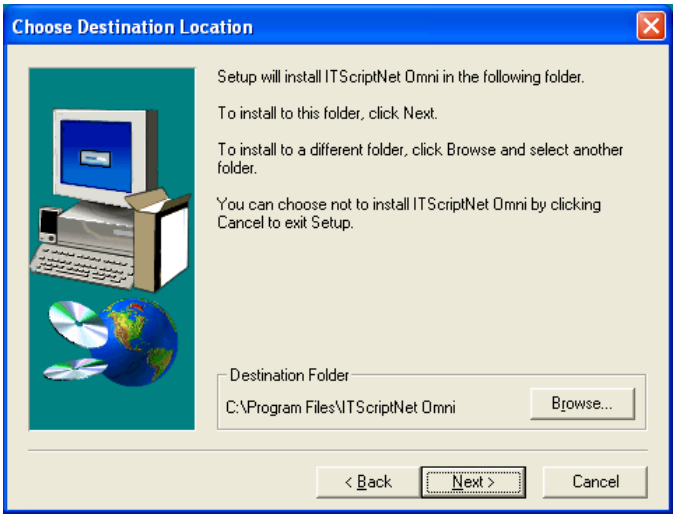
The next screen is the *Software License Agreement* screen. Please read the license agreement, and if you agree, press **Yes**. If you choose No, the installation program will exit.



The next screen shows the location where the program will be installed. You can also **Browse** to put the program into a different location. Click **Next** to accept the destination folder.



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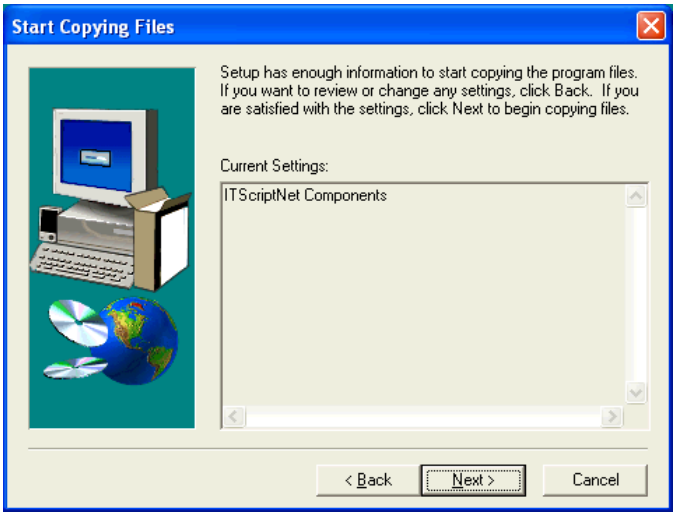
When the setup program has enough information to start copying files, you will see a list of the components to install. This list may vary somewhat depending on your PC's configuration, but will always install the **IT*Script*Net** components.



Click **Next** again to continue with the installation process. Depending on your operating system and system configuration, the installation program may alert to reboot your PC and to rerun the installation program. This will be required if the DCOM Microsoft component needs to be installed (DCOM is included in the operating system for Windows 98 and higher).

Congratulations! Setup is complete!

After the program has been successfully installed, you can optionally launch the **IT*Script*Net** System Console at the end of the setup process, or run **IT*Script*Net** from the Start button. The **IT*Script*Net** System Console is the central location for launching all **IT*Script*Net** programs. There are communications utilities for sending programs and data to the terminals and receiving collected data in batch mode, installing clients on the portable devices, licensing and more. You can find more information about working with a specific model of data collection terminal in the device-specific User Guides.

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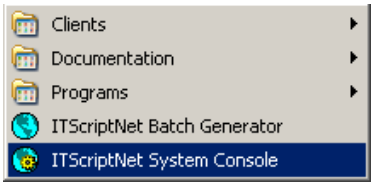
System Console

The **IT*Script*Net** installation process will place a shortcut to the **IT*Script*Net** System Console on your desktop. Alternately, you can navigate (as pictured at the right) from the Start button to: Start→Programs→ITScriptNet Batch → System Console.



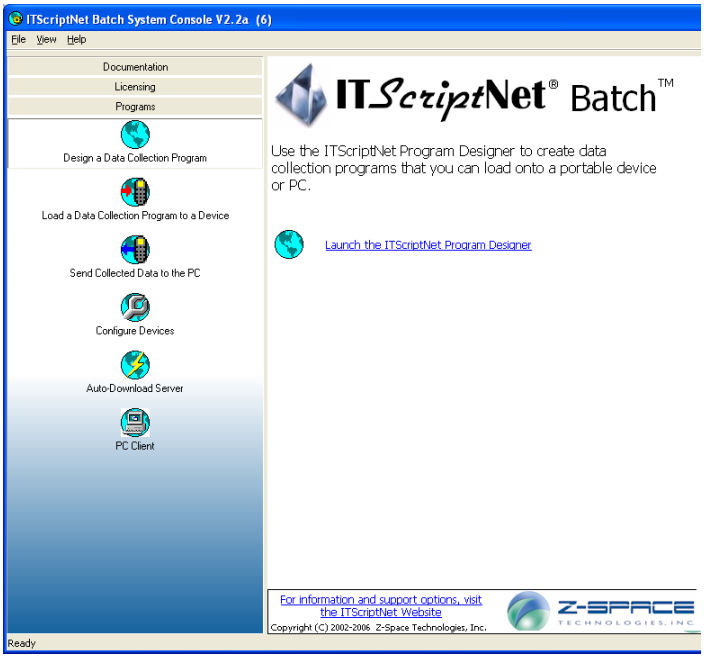
Console Overview

The *System Console* allows you to easily view and navigate the setup, program design, and communication links in **IT*Script*Net**.

The initial view (shown at right) displays a list of the Program components which make up the **Batch** software. Selecting an item in the pane on the left will display instructions and a link to that component in the pane on the right.

Each of the four buttons at the top of the left pane will drop down more component links for Documentation and Licensing.

Each of these component links may also be accessed by navigating to Start→ Programs→ITScriptNet Batch.



For detailed information on each component in this view, please refer to the corresponding sections in this User Guide.

If you have downloaded a demo version of the software and prefer to run the **Batch** Designer before registration of the product, a registration window will appear. You will be able to run the software prior to registration by clicking on the **Continue** button to skip the registration process and begin the program.

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What To Do First

After **IT*Script*Net** has been installed to your computer, you must register the software in order to remove the demo mode limitation:

Licensing

In the *Console* view, click on the **Licensing** button and the Registration window will appear (shown at right).

There are three license registrations for the **IT*Script*Net** product:

- Designer program
- Runtime communication utility
- Terminal Packs

In the Licensing view, click on each link next to the yellow padlock icon to register your **IT*Script*Net** products.

For more detailed instructions on the Registration process, please refer to the **Registration** section in this User Guide.

Device Configuration

After you have registered your products, your will need to configure your devices. The *System Console* provides a link to make this process quick and easy!

In the left pane of the *Console*, select **Configure Devices**. In the right pane, a drop-down box is available which displays a list of device clients installed with your **IT*Script*Net** software. Select your device type from the list.

Adjacent to the device drop-down box is a link to **Install Client to Device**. Clicking this link will launch the client installation. Follow the on-screen instructions to install the client to your device.

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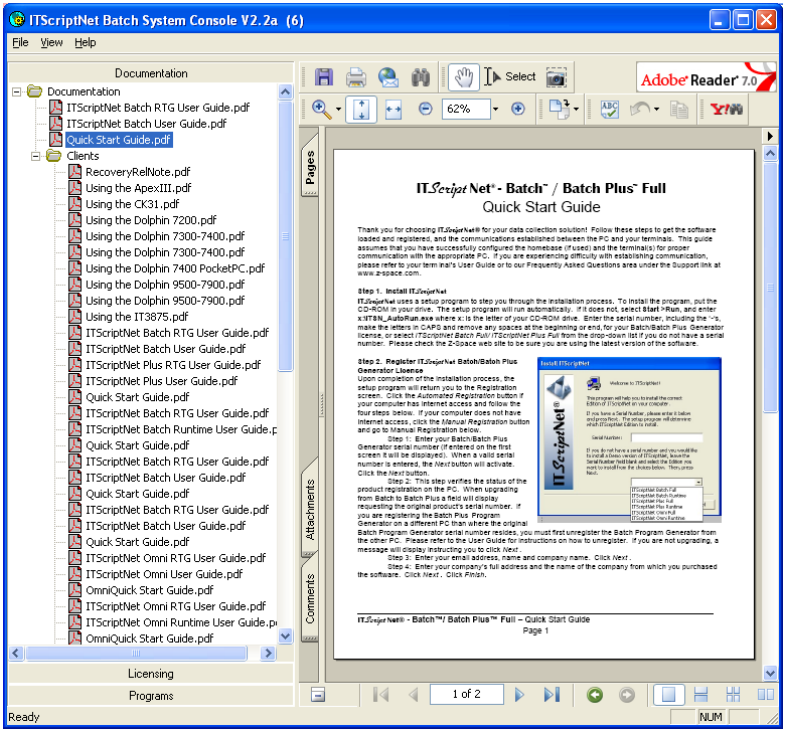
Documentation

The *System Console* **Documentation** link displays a list of the PDF documents installed with the software. Selecting a document link in the left pane displays the document in the right pane. This is a fast and easy way to access the many **IT*Script*Net** guides available.

These documents can also be accessed from:
Start→Programs→ ITScriptNet Batch→ Documentation.



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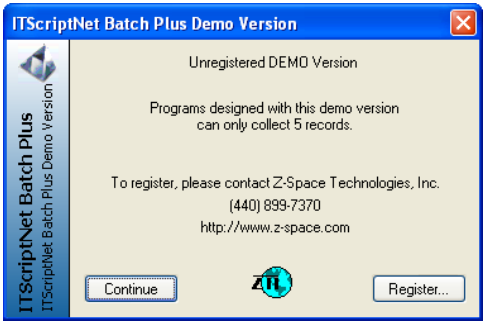
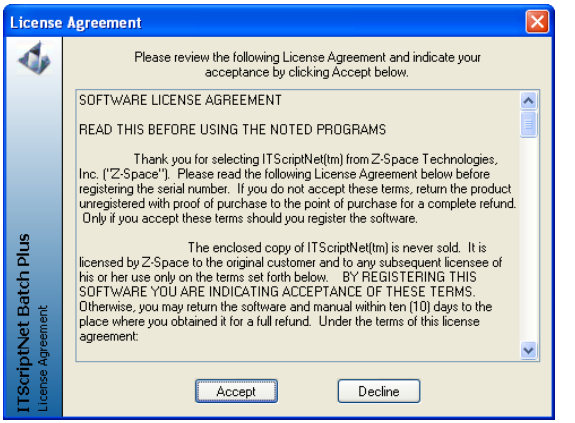
PC License Registration

If you are using PC Licenses to register **IT*Script*Net**, you can also access registration from the System Console. You will need to register the software in order to remove the communication limitations from demo mode. If you have downloaded a demo version of the software, you will be able to run the software prior to registering by clicking on the **Continue** button to skip the registration process and begin the program. If you do not register, the software will remain in demo mode.



Registration need only be done once and takes only a few minutes. It's as easy as 1-2-3! Click the **Register** button to go to the *License Agreement* screen and read the license agreement. By registering the software you are licensed to full use of the software. If you accept the terms of the license agreement, click the **Accept** button to continue with the registration. If you click the **Decline** button, you can continue to use the software under the terms of the trial license agreement that you accepted when installing the software.



Automated Registration

To register your copy of **IT*Script*Net**, click on the Automated Registration button. This registration process requires an active Internet connection.

If the software is installed on a computer that does not have an Internet connection, please skip to the Manual Registration section which follows.

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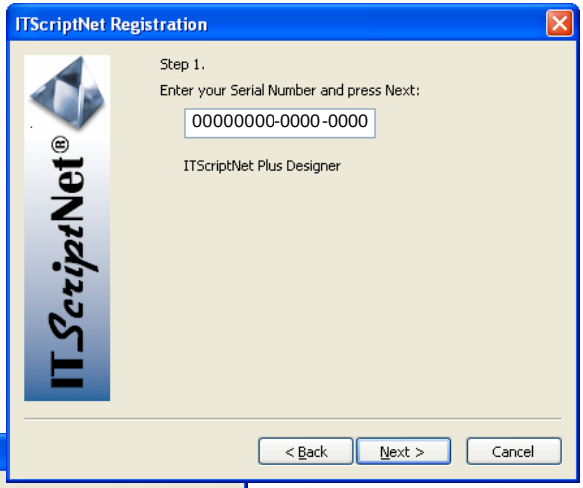
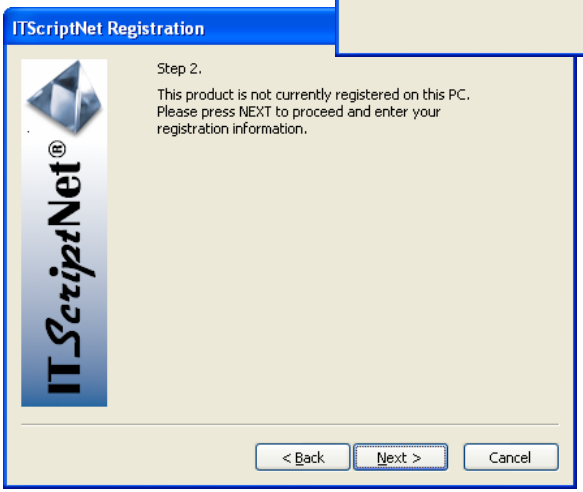
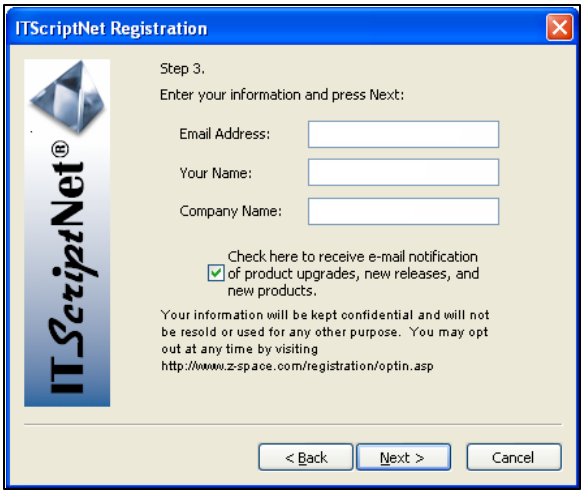
Step 1 requires that you enter the serial number that you received via email or with your boxed product. Enter the serial number *exactly* as it appears including the dashes. When you have entered the serial number correctly, the **Next** button will activate.



Step 2, please read the message, then click on **Next.**



Step 3, fill in the required information. Click **Next.**



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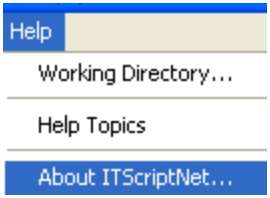
The next window to appear will display a message indicating that your software registration is complete.

If you have created any data collection programs in an un-registered demo mode, you will need to re-save the programs using your registered software. You will also need to send these programs to the terminals which will then allow the terminals to collect an unlimited number of records.

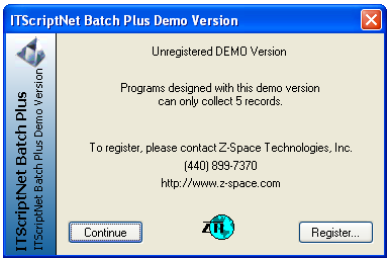
If you ever need to know your serial number, you can find it in the *About* dialog box accessible from the *Help* menu.



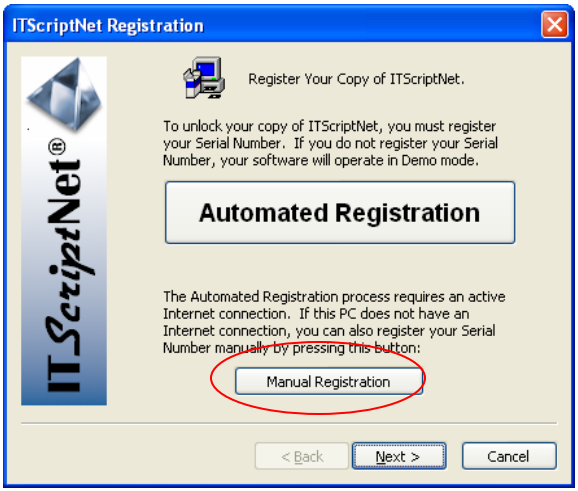
Manual Registration

If the software is installed on a computer that does not have an Internet connection, you can register manually from a different computer which does have Internet access, or call Z-Space Technologies, Inc.

Manual Registration need only be done once and takes only a few minutes. It's as easy as 1-2-3! To begin Manual Registration, click the **Register** button, accessed through the Help/About menu item, to go to the *License Agreement* screen and read the license agreement. By registering the software, you are licensed to full use of the software. If you accept the terms of the license agreement, click the **Accept** button to continue with the registration. If you click the **Decline** button, you can continue to use the software under the terms of the trial license agreement that you accepted when installing the software.



Click on the Manual Registration button, as shown at right, to begin the manual registration process.



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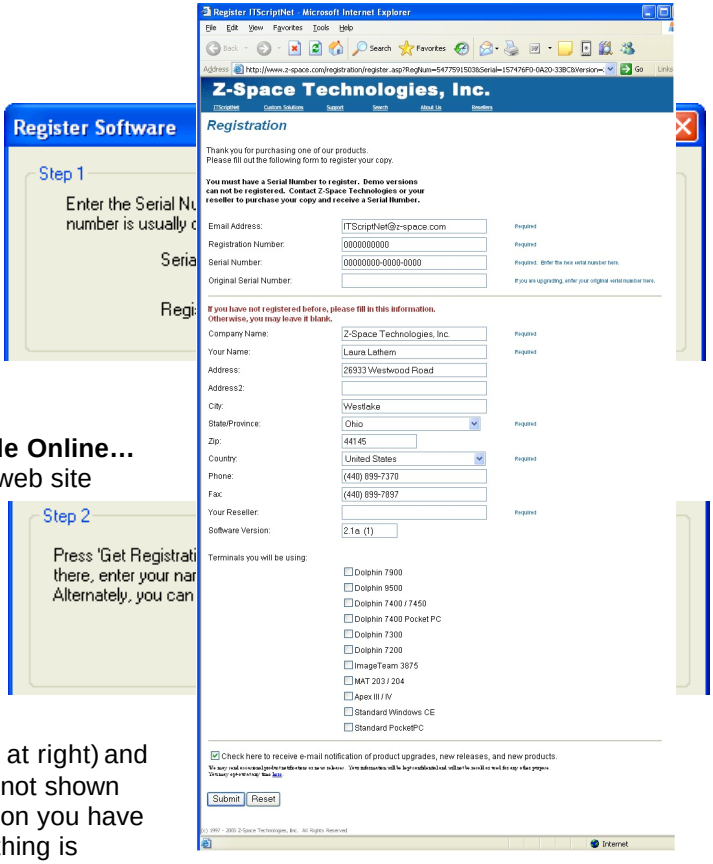
The *Register Software* screen shows the 3 steps needed to register manually.



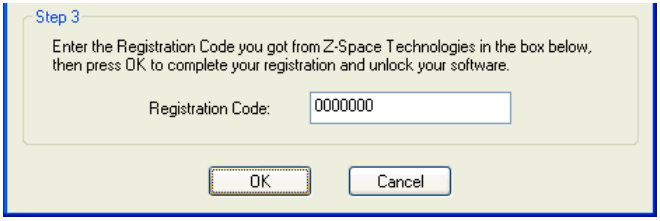
Step 1 requires that you enter your serial number. The serial number is normally found on the bottom of the box, and on the sleeve of the CD-ROM.

Enter the serial number *exactly* as it appears, including the dashes. When you have entered the serial number correctly, the **Get Registration Code Online…** button will activate.

Step 2, click on the **Get Registration Code Online…** button to access the Z-Space registration web site automatically if your PC has Internet access, or, if you need to use a different PC for web access, go to: **http://www.z-space.com/registration** to manually enter the serial number and registration number into the web site registration form.

Fill out the online registration form (shown at right) and click the **Submit** button. In the next view, not shown here, the web site will display the information you have entered and ask you to confirm that everything is correct. After you click the **Confirm** button on the web site, the registration web site will generate and display the **Registration Code** to unlock your software.

Step 3. On the computer on which the software is installed, type (or paste) the registration code generated by the registration web site into the input box in Step 3 (below). Make sure you have entered the Registration Code number exactly as displayed on the registration web site. Press the **OK** button to complete the registration process.



You can also call Z-Space Technologies at (440) 899-7370 and our friendly and helpful staff will assist you.

Tip: You can select the Registration Number on the website and right-click your mouse to bring up a menu so that you can click the copy menu item. Then, back in **IT*Script*Net**, you can right-click with your mouse on the Registration Number field and select Paste. This will allow you to avoid having to actually type this number.

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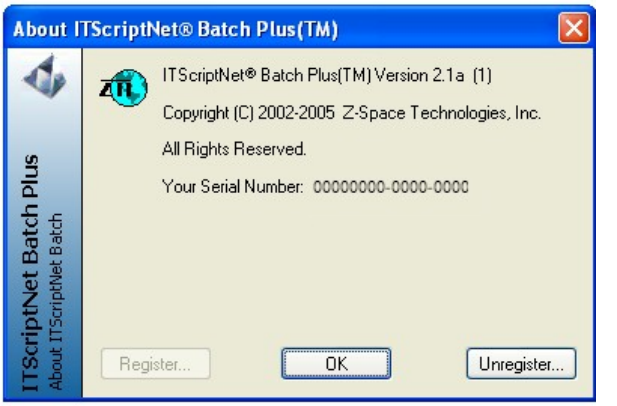
Unregistration

Because the registration for **IT*Script*Net** is specific to each PC, you will need to un-register the software in the event that you need to move the software's registration to a different PC. The un-register process is accessible from the *About* box and is essentially the reverse of registration. The *About* screen displays your serial number and the selection button to Unregister your software.



Click on the **Unregister** button.

Automated Unregistration

To unregister your copy of **IT*Script*Net,** click on the Automated Unregistration button which will take you to the Unregister page on the Z-Space web site. The unregistration process requires an active Internet connection.

The software will ask you to confirm that you want to unregister your software. Click OK in the next message box, and your serial number is released and can be used to register the software on another PC.

If the software is installed on a computer that does not have an Internet connection, please click on the Manual Unregistration button on the bottom, as shown at right. Follow the procedure, which is similar to the registration process by manually entering the serial number at:
http://www.z-space.com/registration/unregister.asp
or call Z-Space Technologies at (440) 899-7370 for assistance.

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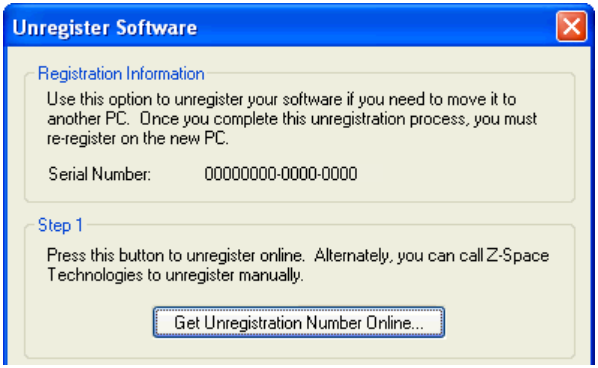
Manual Unregistration

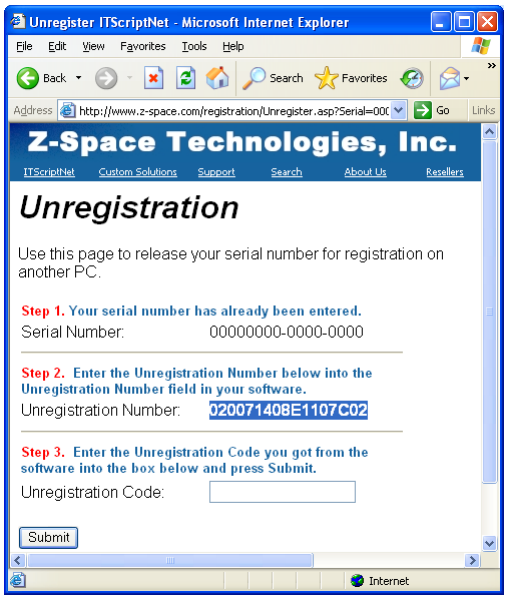
If the software is installed on a computer that does not have an Internet connection, you can unregister manually from a different computer which does have Internet access.

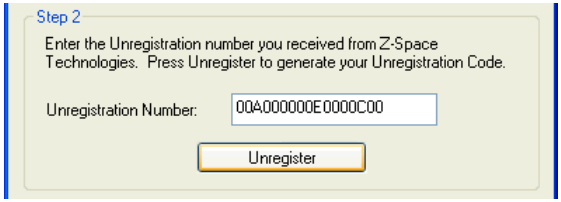
Step 1, click on the **Get Unregistration Number Online…** button.



This will take you to the Unregister page on the Z-Space web site.

Step 2, copy the Unregistration Number from the web site shown for Step 2 into the Step 2 Unregistration Number field in ITScriptNet. Tip: You can select the Unregistration Number on the website and right-click your mouse to bring up a menu so that you can click the copy menu item. Then back in **ITScriptNet**, you can right-click with your mouse on the Unregistration Number field and select Paste. This will allow you to avoid having to actually type this number. When the Unregistration Number has been entered, click on the **Unregister** button. This will un-register your copy of **ITScriptNet** on your PC, but Step 3 is also necessary to complete the process.





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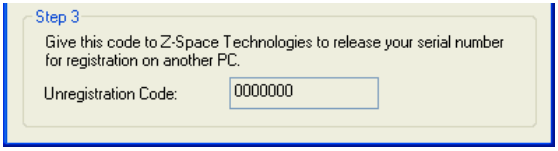
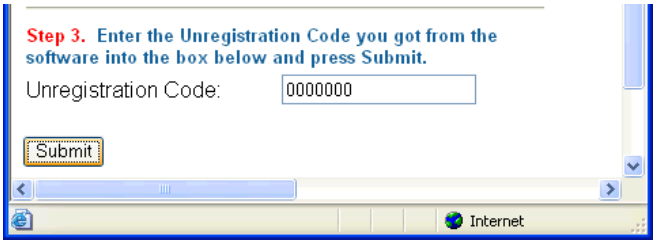
Step 3, copy the Unregistration code from the Step 3 box in **IT*Script*Net** to the website's field for Step 3 and press the **Submit** button on the web site.





The web site will confirm that your software has been un-registered. Your serial number is now released and can be used to register the software on another PC.

As with registration, you can manually enter the serial number at **http://www.z-space.com/registration/unregister.asp** or call Z-Space Technologies at (440) 899-7370 for assistance.

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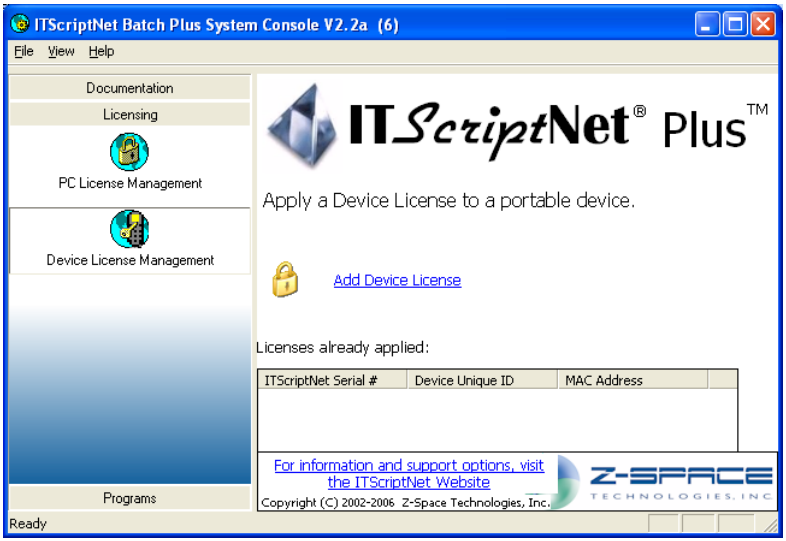
Device License Registration

If you are using Device Licenses instead of PC Licenses, you must apply the licenses to each terminal using the **IT*Script*Net** System Console. All Device License serial numbers begin with a T.

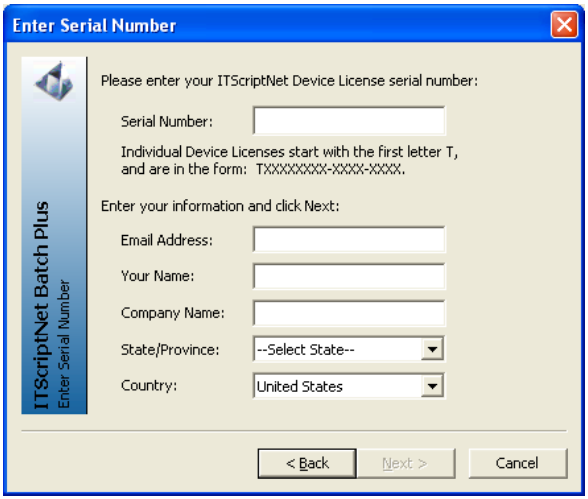
To begin, launch the ITScriptNet System Console and click the **Licensing** Tab, followed by the **Device License Management** button.

Click **Add Device License** to start the licensing process.

You will be prompted to read and accept the license agreement, then you will be presented with some instructions. Please read these and then click Next.



Enter your Device License Serial Number and Contact information, and press Next.



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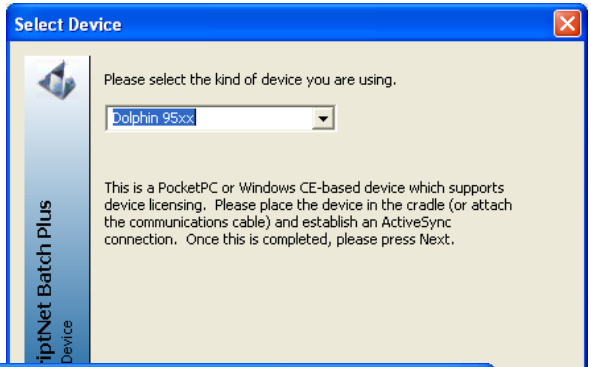
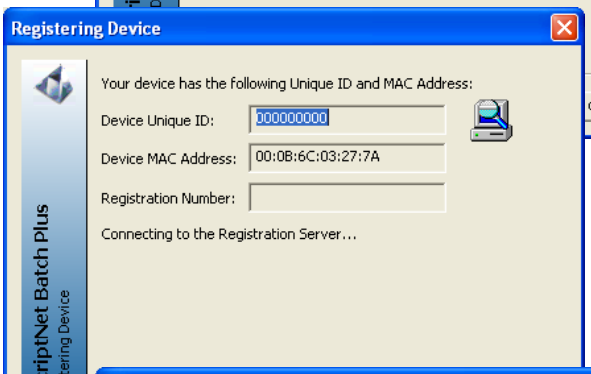
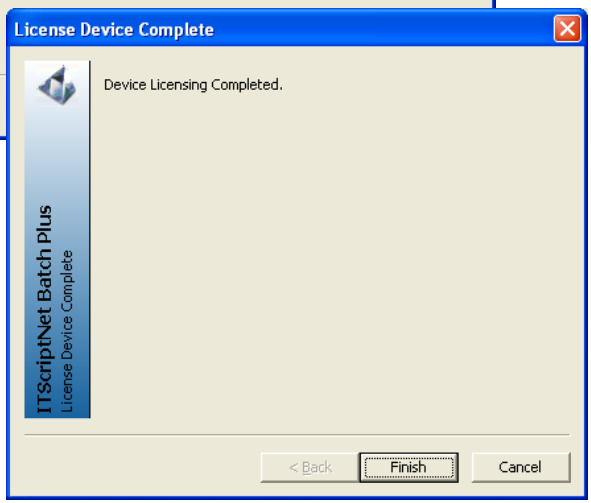
Select the type of device you are using. Please read the instructions below the device type. For PocketPC and Windows CE-based devices, you will need to create an ActiveSync connection to your device and install the client first. You do not need to create a partnership, but simply a Guest connection is OK.



The registration process will attempt to connect to the device and retrieve its Unique ID and MAC Address for registration.



If the registration is successful, you will see the completion message. If there is a problem, you will have the option of retrying your registration.



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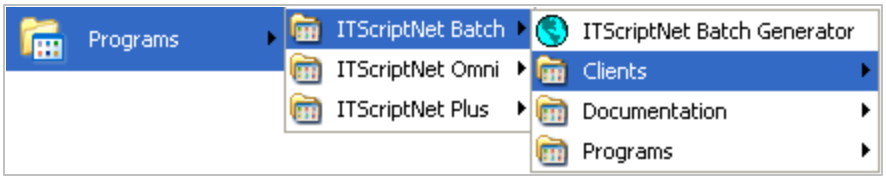
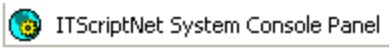
Installed Components



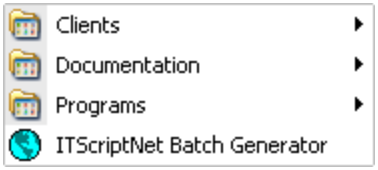
After the program has been successfully installed, you can run **IT*Script*Net** from the Start button. You will notice several folders and programs in the **IT*Script*Net** program group.

System Console



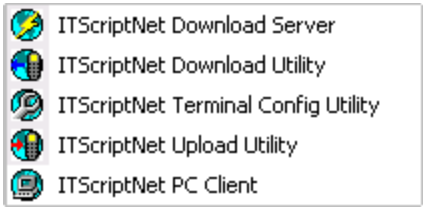
The **IT*Script*Net** System Console is the starting point for all of the other **IT*Script*Net** programs and utilities. From here you can design programs, install clients, manage licenses, and upload and download data.

Program Generator



The **IT*Script*Net Batch** Generator program is installed in the root of the program group. The Generator is the application used to design the data collection programs. The program group also contains folders for Clients, Documentation, and Programs.

Programs



In addition to the Generator, the **IT*Script*Net Batch** package includes several other applications. These are accessible from the Programs folder in the program group. Each application that is part of the **IT*Script*Net** package has a dedicated section describing it in detail later in this User Guide.

Download Server

The Download Server is the application that supports **IT*Script*Net's** Autodownload feature. This application, when running, can receive and process data from a terminal simply by placing the terminal in its Home Base, cradle, or connecting it to its communication/charge cable.

Download Utility

The Download Utility allows data to be received from the terminal and processed.

Terminal Configuration Utility

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This utility application allows the configuration settings for a terminal to be controlled from the PC. Most of the configuration settings for a terminal can also be controlled from the Client application's Configuration screen.

Upload Utility

The Upload Utility sends a program to the terminal along with any validation files or support files that go with the data collection program.

PC Client

The PC Client utility allows an operator to collect data on a PC using the same data collection programs as the portable terminals.

Clients

The Client is the **IT*Script*Net** component that runs on the terminal and receives data collection programs designed with **IT*Script*Net**, runs the data collection programs to collect data, and then sends the data back to the PC for processing. All the Windows CE and PocketPC devices require a Microsoft ActiveSync connection to be established prior to installing the client application on the terminal. Once established, simply run the Client Install program for your terminal type. Documentation for each specific device is located in the **Documentation -> Client Guides** program group.

Documents

The documentation for **IT*Script*Net** is always supplied electronically and installed as part of installation. You can access **IT*Script*Net's** documentation from the Documentation folder in the program group.

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Getting Started

This chapter provides a brief overview of **IT*Script*Net** and emphasizes the use of the Ready-To-Go® Applications and the New Program Wizard to get started creating data collection solutions immediately!

Data Collection Solution Overview

Here is a list of the basic steps to create and deploy a data collection solution with **IT*Script*Net**. Each of the basic steps includes references to the areas in this User Guide with more information.

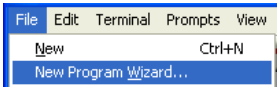
	Step	See this Section for More Info
1	Install ITScriptNet	*Installing ITScriptNet*
2	Register	*Installing ITScriptNet - Registration*
3	Design Data Collection Program – you can use a Ready-To-Go Application, the New Program Wizard, or the sample programs to get started	*Getting Started*
4	Test Data Collection Program in Simulator	*Terminal Menu - Simulate*
5	Install the ITScriptNet Client on your Terminal	See the Section specific to your Terminal
6	Upload Program (Send to Terminal) and Collect data using your data collection program	*Terminal Menu – Send Program to Terminal* OR *Upload Utility*
7	Download Data (Receive data from Terminal)	*Terminal Menu – Receive a File from the Terminal* OR *Download Utility*

Ready-To-Go Applications

The Ready-To-Go Applications are a set of data collection programs designed with **IT*Script*Net**. Several may have come pre-loaded on your terminal! Ready-To-Go Applications are never limited to 10 records so they are perfect for demos and to use right away to get started collecting data. The Ready-To-Go Applications are installed with **IT*Script*Net** and are located in the Ready-To-Go-Apps subdirectory where you installed **IT*Script*Net**. The Ready-To-Go Applications might also be a good starting point for the design of your data collection program. However, if you do modify any of the Ready-To-Go Applications, you will need to purchase and register **IT*Script*Net** in order to remove the demo communication limitations. Details about the Ready-To-Go Applications can be found in the Ready-To-Go Application Guide that is installed with **IT*Script*Net**.

New Program Wizard

The New Program Wizard is designed to get your programs up and running quickly. In as few as 8 clicks, you can have a basic data collection program up and running. Select *New Program Wizard* from the *File* Menu. Follow the instructions on the screen as the Wizard guides



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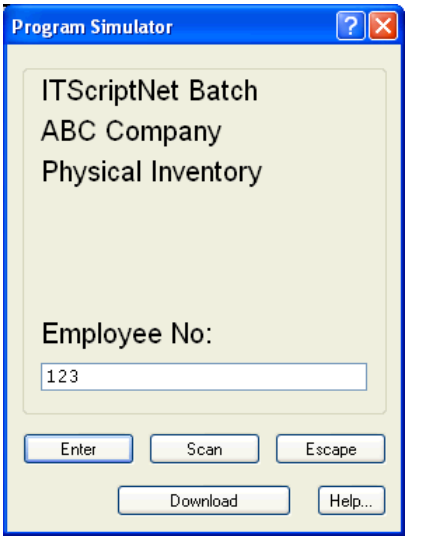
you through the process of creating a data collection program.

Simulator



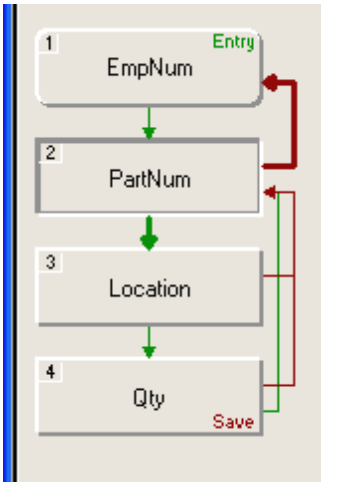
After creating a data collection program, it is a good idea to use the simulator. This will allow you to review the prompts so that you can easily identify any changes you wish to make. It is easier and faster to test your program from the simulator screen than it is to test with the portable terminal. You can start the simulator by clicking on the *Simulate* menu item found under the *Terminal* main menu item, or by clicking on the simulate icon on the toolbar.

Program Design Concepts

This section describes the basic concepts of designing data collection programs with **IT*Script* Net**.

Prompts

The data collection programs that **IT*Script* Net** creates are based on Prompts. Each program contains a series of one or more prompts. The program flows from one prompt to the other as the user enters data. One type of prompt is called a *Single-Prompt.* Each prompt may require input from the user or be used to display information. All three editions of **IT*Script* Net (Batch, Plus,** and **OMNI)** support Single-Prompts.



There is also a second type of prompt called Multi-Prompt. **IT*Script* Net Plus** and **OMNI** support the use of Multi-Prompts. A Multi-Prompt can utilize a richer set of design elements. There are two types of elements, input and display, that enhance the user's efficiency by making it easier to navigate the program and by entering multiple pieces of data on a single screen.

Both Single-Prompts and Multi-Prompts are explained in full detail in their own sections of this User Guide.

Looping

Generally, prompts for data collection are presented to the user one after another in a logical order. The order of the prompts within the program determines the order of the prompts presented to the user at data collection time. When the user gets to the end of the prompts, the data collected is

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saved and the user will need to start again at the first prompt to collect another set of data. Each pass through the prompts generates a record in the stored data. When downloaded to a text file, each record will be represented by one row of text. When downloaded to a spreadsheet or database, each record of collected data corresponds to a row in Excel or a record in a database.

In the example shown, there are four prompts: EmpNum, PartNum, Location, and Qty. The short green arrows show the flow of the program. In this case, the user will be prompted for PartNum after successfully entering the EmpNum. After PartNum comes Location, then Qty.

However, when the user successfully enters the quantity on the Qty prompt, the program loops back up to PartNum and not EmpNum. The green arrow from the Qty prompt up to the PartNum prompt indicates that the looping structure for this example program skips the EmpNum after the first loop through the prompts. **IT*Script*Net** allows you to design programs to collect data *efficiently*. If an employee enters his employee number, EmpNum, once, it is unlikely that it will be necessary for him to enter it for every record. The data collection process can be made more efficient by minimizing entry of repetitive data. In this example, the designer of the program has decided that after the first time through the loop, the program should not prompt for EmpNum. Since the user is not prompted for EmpNum, the program holds the response and saves it as if it were entered for all subsequent prompting loops.

The green arrows show the prompt looping structure as the program flows from one prompt to another on a successful prompt response.

The red arrows indicate the program flow when the user presses the Escape key to exit the prompt. The Escape will abort the current prompt and jump to the prompt shown by the red arrow. In our example, if the user escapes during the Location prompt or during the Qty prompt, the program will move back to PartNum. The user can then respond to the PartNum prompt (the EmpNum will still be retained). If the user escapes while on the PartNum prompt, however, the program will move back to the EmpNum, or the beginning of the program. If the user escapes from the first prompt, the program will exit the data collection program entirely and return the user to the main terminal menu.

The program flow, or looping, can be more complex than described here. Using In-Prompt Scripts (described later in this User Guide), the data collection program can be made to have conditional branching. With conditional branching, the state of the program, the data collected, and/or the value of program variables determine the next prompt (or escape prompt) while the program is running. The green and red arrows that indicate program flow do not reflect possible conditional branching defined in the prompt's scripts.

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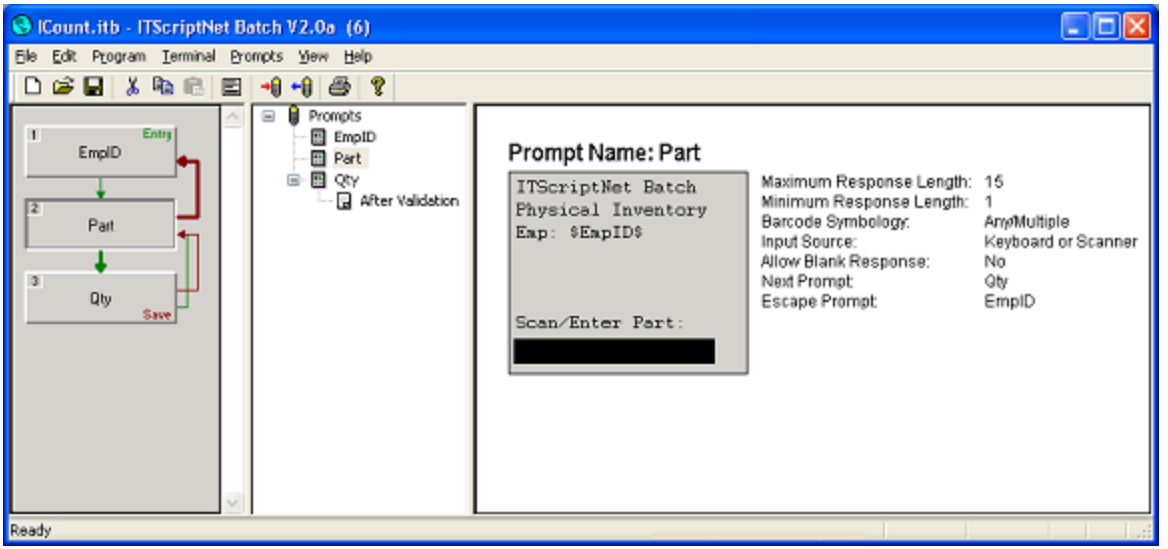
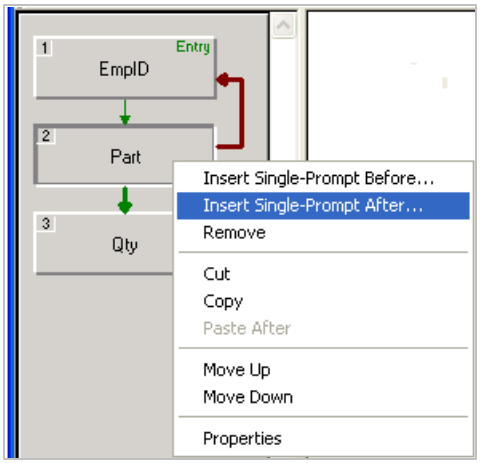
Design Environment

A Single-Prompt is a prompt in **IT*Script*Net** that collects one piece of data. **IT*Script*Net Batch Plus** and **IT*Script*Net OMNI** also have a Multi-Prompt feature that allows for collecting more than one piece of data per prompt. The **IT*Script*Net** design environment contains several sections each geared towards helping you design data collections programs.



Prompt Flow

The left side of the main window is the prompt list. The prompt list is like a flow chart showing the order of the prompts. Each prompt is listed. There is a green arrow connecting the prompts showing the path from prompt to prompt after a successful prompt response. Red arrows show the path the prompt specified as the Escape Prompt. The Prompt area allows you to control several prompt-level actions.



Creating a Single-Prompt

To create a new prompt, right-click on a prompt and select the Insert Single-Prompt After or Insert Single-Prompt Before menu item from the popup menu. You

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can also select one of these Insert menu items from the Prompts main menu.

Copy a Single-Prompt

You can also create a new prompt by right-clicking on a prompt, selecting copy, right-clicking on the same or another prompt and selecting Paste After. You will be prompted to enter a new name for the new prompt. Copying prompts can save time since all of the settings and scripts for the prompt will be copied to the new prompt.

Remove a Prompt

Prompts can be deleted by right-clicking on a prompt and selecting the Remove menu item. You will be asked to confirm deleting the prompt since removing a prompt can not be undone. The Remove menu item is also available from the Prompts main menu.

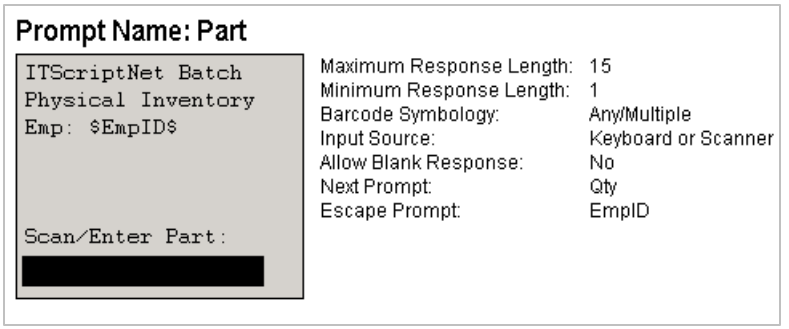
Move Up/Move Down

You can move prompts relative to each other with the Move Up and Move Down menu items. Access the Move Up and Move Down menu items from either the right-click menu or from the Prompts main menu item.

Properties

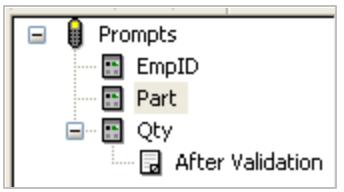
The Properties menu item will bring up the Prompt Settings screen. This screen defines the properties, or settings, for the prompt. Each of these settings is described in a later section.

Main Design Area



For Single-Prompts, the main design area provides a visual representation of the prompt. The prompt's settings are listed next to the visual representation for quick reference. The representation of the prompt will be slightly different depending on the terminal type. You can double-click on the prompt shown to bring up the Prompt Settings screen.

Script Tree



The Script Tree is located between the Prompt Flow area and the Main Design area. The Script Tree area in the design environment is optional. It can be turned on or off from the View Menu. The Script Tree area can also be resized. The main purpose of the Script Tree is to provide a view of your data collection program that shows all the prompts and any in-prompt scripts in a collapsible tree format for easy access. Please refer to the section in this User Guide on In-Prompt Scripts for

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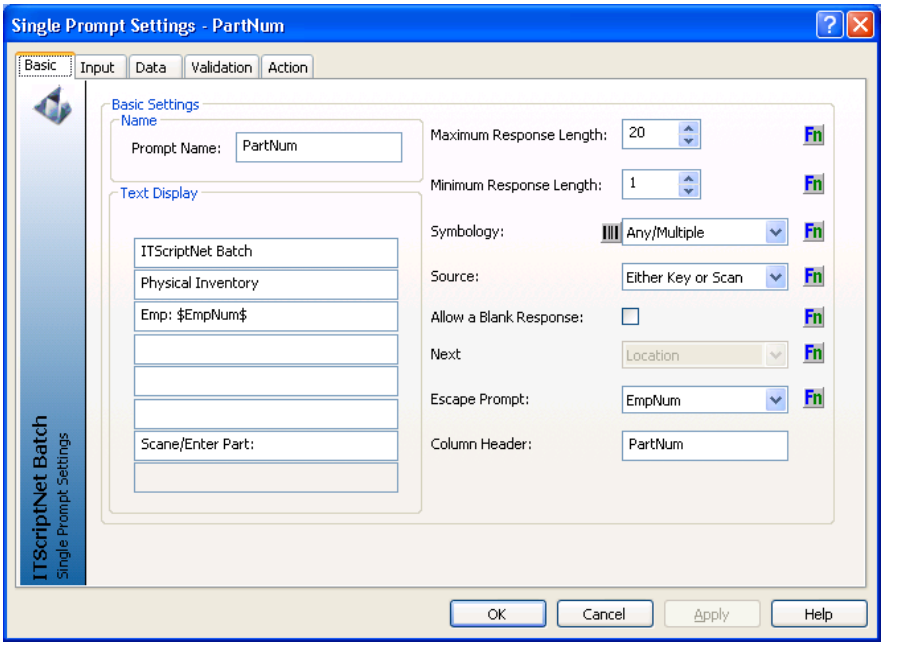
more information on scripts. The Script Tree also provides an alternate means of accessing your prompts and in-prompt scripts. Double-Click on either a prompt or a script in the Script Tree to bring up either the prompt's Settings screen or the In-Prompt Script Editor.

Single Prompt Settings

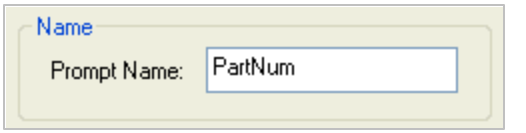
Each prompt has a set of properties, or settings. When a prompt is created, **IT*Script*Net** sets these properties to default settings, but each property for each prompt can be set during program design. Each prompt setting can also be determined during runtime with the use of In-Prompt scripts. Please refer to the In-Prompt Scripts section in this User Guide for more information. The Prompt Settings allow **IT*Script*Net** to have the *flexibility* to create almost any data collection solution.

The *Prompt Settings* screen can be accessed from the *Properties* menu item under the *Prompts* main menu. The *Prompt Settings* screen can also be accessed by right-clicking on a prompt and selecting *Properties…* from the pop-up menu. You can also double-click on the prompt in any of the areas in the main design environment to access the Prompt Settings screen.



Basic Tab

Prompt Name



The most basic property for a prompt is the prompt's name. The name you give to your prompt will be used throughout the program to refer to that prompt. The prompt name is displayed in the flowchart along the left side of the main application screen. The other prompts in the program may need to refer to the prompt in order to display information from that prompt or to set up the prompt's looping structure. It is a good idea to give the prompt a name that will reflect the prompt's data. The prompt name can be up to 20 characters and may contain letters or numbers. The following characters may not

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be used on prompt names: # $ @ + - * . / = < > ( ) & as these characters are reserved for prompt substitution and variables (see Text Display section). The words 'Alias' and 'Timestamp' are also not permitted since using these as prompt names would conflict with the alias and timestamp information that is always captured for each record.

Text Display

The text display area on the *Prompt Settings* screen determines what will be displayed on the portable data terminal screen when the user is prompted to enter data. The number of lines available as text display will vary depending on the type of portable terminal currently configured for the program. The last line of the display is always reserved for the user to enter a response and is therefore not available as display area. You can enter any text that you wish to be displayed to the user so that the user has enough information to be able to input an appropriate response during data collection.

Prompt Substitution

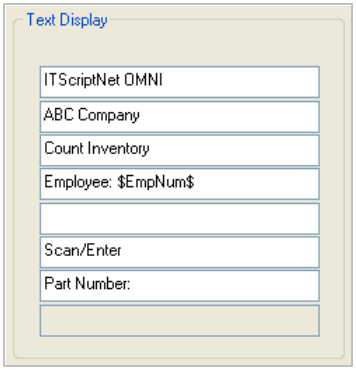
There are three prompt substitutions that can be made in the Text Display area.

<u>'$' Substitution</u>

If you enter a prompt name surrounded by '$', i.e. '$EmpNum$', the terminal will substitute the last value collected for that prompt. Displaying results of previous prompts is a recommended program design strategy for creating user-friendly data collection solutions since it provides users easy reference to their previous responses during data collection

<u>'#' Substitution</u>

If you enter a prompt name surrounded by '#', i.e. '#EmpNum#', the terminal will substitute the last lookup file field for that prompt. Lookup fields are described in more detail in the section about the Validation Tab, below.



<u>'@' Substitution</u>

If you enter a variable name surrounded by '@', i.e. '@Desc@', the terminal will substitute the value of the user-defined variable. User-defined variables are described in more detail in the In-Prompt Scripts section of this User Guide.

Examples:
In the *Prompt Settings* screen shown here, the first three lines of display text are simply text that identify the company and the data collection program.
The fourth line of display text is more complex. The "Emp: " portion of the fourth line is fixed text. However, the fixed text is followed by a special marker that will cause the program to display the response results of the prompt named within the $ markers. If during data collection, the user entered "ABC" as the data input response to the EmpNum prompt, then the fourth line of the display text for the PartNum prompt would read "Emp: ABC".

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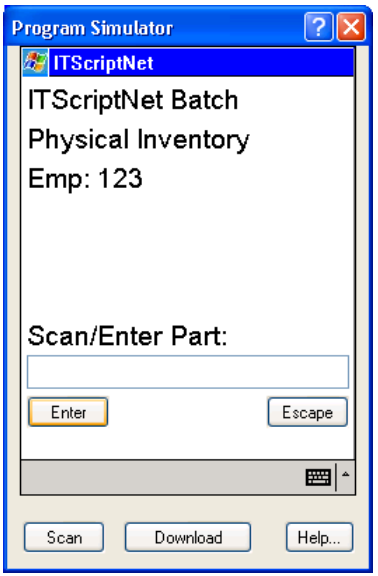
Text Effects

Control characters can be embedded in the text display area to change the appearance of the text. The table shows the control characters and the text effects available. The text effects that are available differ from terminal to terminal. As an example, if the “Emp: $EmpNum$” display text example were changed to “Emp: \V$EmpNum$”, the result on the terminal would display the employee number data in bold and reverse and the user would see “Emp: 123”.

Control Character	Text Display Effect	Terminals
\B	Bold	All non-DOS
\R	Reverse	All terminals
\V	Bold and Reverse	All non-DOS
\N	Normal	All terminals
\C0	Color-Black	WinCE / PocketPC / PC
\C1	Color-Blue	WinCE / PocketPC / PC
\C2	Color-Green	WinCE / PocketPC / PC
\C3	Color-Red	WinCE / PocketPC / PC
\C4	Color-Yellow	WinCE / PocketPC / PC
\C5	Color-Magenta	WinCE / PocketPC / PC
\C6	Color-Orange	WinCE / PocketPC / PC
\C7	Color-Teal	WinCE / PocketPC / PC
\C8	Color-Gray	WinCE / PocketPC / PC
\C9	Color-White	WinCE / PocketPC / PC

ITScriptNet supports color text on WinCE and PocketPC devices, and the PC Client. There are additional Text Effects available to change colors in the same way that Bold and Reverse are selected. These text effects are listed in the table. You can combine Color effect with Reverse and Bold to achieve reverse or bold color.



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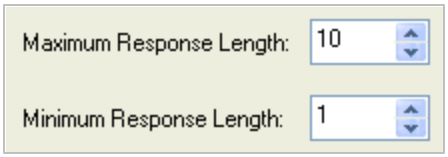
Maximum and Minimum Response Lengths



The maximum and minimum response lengths are properties that set limits on the length of the response entered for the prompt. The limits of the number of characters for a response are the most basic form of validating data. For example, if each employee has a time clock number that is 3 or 4 digits, then the settings for the Employee clock number prompt can be set to require at least 3 characters/digits and no more than 4. When collecting data a user will not be able to enter a response longer than the maximum response length. If the user enters a response that is less than the minimum response length, the program will issue a warning to that effect, and the user will not be permitted to move to the next prompt unless the response is within the minimum and maximum response lengths. If the response is scanned, the program will still check the length of the scanned response and will reject any response that does not meet the response length criteria.

Symbology

For those devices on which **IT*Script*Net** supports the capabilities of the laser scanner or imager the Symbology property will be enabled. Consult the terminal specific sections supplied with this software to determine if this featured is supported for your device. The prompt setting for Symbology is used to limit the allowed barcode symbology when scanning a response to a prompt. There are many different barcode symbologies. A barcode symbology is an algorithm for encoding data into a barcode. Some of the more common symbologies are: Code 39, I2of5, Code 128, and UPCA. The prompt can be set to accept any barcode symbology (the terminal has to be able to decode the symbology, please refer to documentation on the specific portable terminal you are using for a list of symbologies compatible with your hardware). The Any/Multiple selection will allow a user to scan any symbology that is configured as a default for the scanner/imager for your hardware. The Any/Multiple setting for the Symbology prompt property is the default for **IT*Script*Net** for any new prompts that you create.

The Symbology prompt property can be set to accept only one type of barcode symbology. To select a single symbology, select it from the list. The default settings for the symbology on your terminal will be used. By way of example, let's say that your warehouse uses Code 39 barcodes for your part numbers. However, the boxes also contain UPC codes for those products. When collecting data, you want to insure that the Code 39 barcode is scanned and not the UPC code. By setting the prompt to only accept Code 39, the program will reject the UPC codes and any other symbology. Specifying a specific symbology is a means of validating your data and *maximizing data accuracy*.

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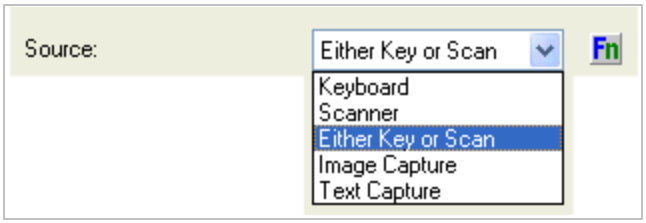
Depending on your data collection needs, you may need to customize the Symbology prompt setting. In our example above, the warehouse had Code 39 and UPC part numbers. Let's say that now you need to be able to scan either a Code 39 or a UPC, but still do not want to allow any other symbologies. You can do this by clicking on the button with the barcode icon to bring up the *Advanced Barcode Settings* screen.

Please refer to the section in this User Guide describing the *Advanced Barcode Settings* screen. The *Advanced Barcode Settings* screen will also allow you to control each parameter available for one or more symbologies. If you do not customize the barcode symbology settings, the default settings for the one symbology specified or all symbologies will be used. The defaults are appropriate for most data collection applications, but if you need to control the settings more precisely, **IT*Script*Net** allows you access and full control of the symbologies. If the *Advanced Barcode Settings* screen is used to customize the symbology behavior for a prompt the barcode icon will change colors to provide an easy visual indicator that customized symbology settings are in use.

Source

For those devices in which ITScriptNet supports the capabilities of the laser scanner or imager the Source property will be enabled. Consult the terminal specific sections supplied with this software to determine if this featured is supported for your device. The prompt setting for source specifies whether the response to the prompt can be entered only on the terminal's keypad, only by scanning a barcode, or by either keypad or scan. By default, prompts are set to allow either keypad or scan for data entry. Depending on the application, requiring barcode scans will *reduce data collection time* (scanning is faster than punching in the data on a keypad) and *maximize accuracy*.



For data collection terminals equipped with an image reader to support image capture, two additional input sources are available: Image Capture and Text Capture. Image capture collects an image (in jpg or png format) for the prompt. Text capture is also an image capture, but optimized for capturing signatures or other text. Storing images as part of your collected data adds a new dimension for data collection. Image/text capture is essential for delivery confirmation applications, documenting damage, storing images of assets, or any application where a picture can be worth a thousand words.

Allow a Blank Response

This prompt setting will allow a blank response. By default, this setting is turned on meaning a response is not required to move on to the next prompt. If the box is not checked, the user is required to enter a valid response before moving on to the next prompt. Allowing a

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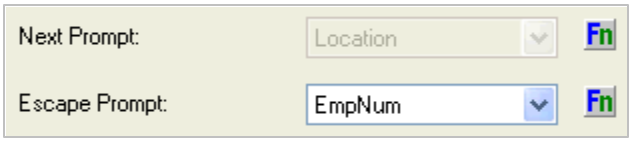
blank response is useful for displaying messages and informational text to the user. Prompts that are used for optional information can be set to allow a blank response. As an example, a note field that allows a user to enter special notes would often be blank unless the user had a special circumstance that required keying in a note.

Next Prompt and Escape Prompt



The Next Prompt and Escape Prompt settings specify where a prompt fits into the overall prompting structure and program loop. When a response to a prompt is successfully entered, the program will proceed to the next prompt. If the user hits the Escape key instead, the program jumps to the Escape Prompt. The Next prompt is shown graphically with the green arrow and the Escape prompt is represented graphically by the red arrow. For every prompt except the last one, the Next Prompt setting cannot be changed and always shows the next prompt in the sequence. For the last prompt of the program this setting can be changed to control where the program loops after the last prompt is accepted. The Escape Prompt can be selected from the list of prompts. If no Escape Prompt is selected, the program will behave as if the preceding prompt has been specified as the Escape Prompt. Please refer to the section on Prompt Looping for more information.

Database Field/Column Header/Field Header

This property specifies where the data collected for this prompt is stored after it is sent to the PC and processed. Depending on the settings specified in the *Configure Receive* screen, this field may have different meanings.

If the program is configured to send its data to a Microsoft Access file or an ODBC data source, the target database field must be set up properly so the data collected can be sent to the desired field. A field from the target database must be selected from the list of fields. The fields in the list are the fields defined for the database and table that are established on the *Configure Receive* screen. The <Ignore> selection can be chosen and the collected data for this prompt will be ignored when the collected data is sent to the database. Fields are output to Access and ODBC if the field specified here exists and the maximum length of the prompt is not zero.

If the program is configured to send its data to a Microsoft Excel file, this setting will become the column header for the data. For Excel files, if this field is left blank, the Prompt Name will be used as the column header. To skip this field and not output it, you will need to use the *Customize Field Layout* screen accessible from the *Configure Receive* screen.

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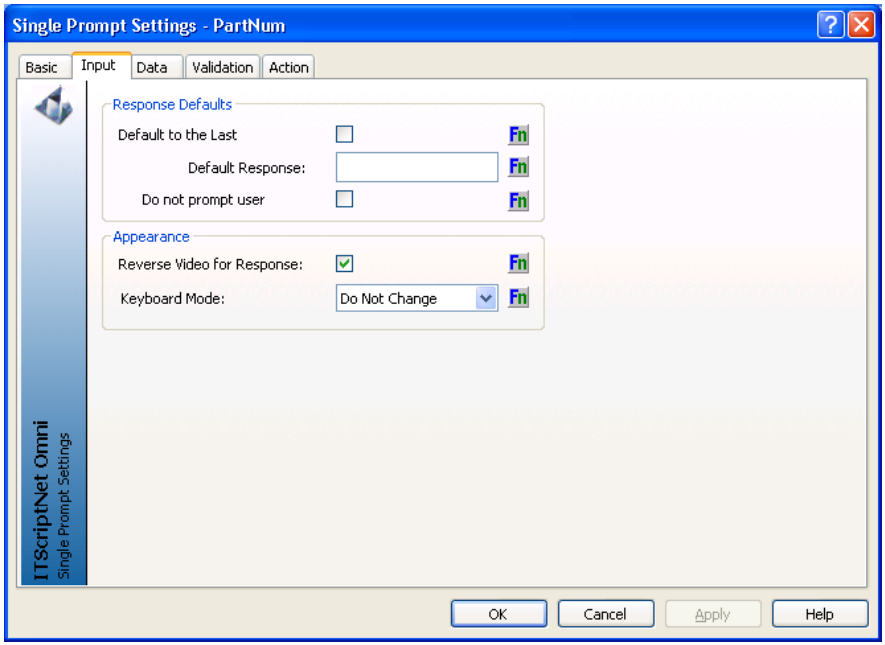
If the program is configured to send its data to a text file with a header, this setting will become the field header for the data in the output file. For text files with headers, if this field is left blank, the Prompt Name will be used as the column header. To skip this field and not output it, you will need to use the *Customize Field Layout* screen accessible from the *Configure Receive* screen.

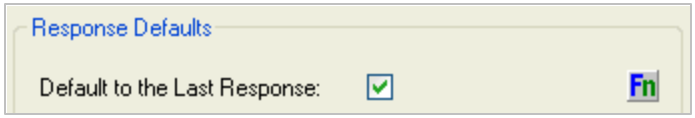
Input Tab

Response Defaults

The Response Defaults settings can set the default response to a specific value or the value of the response from the last data record collected. When creating a new prompt, the response default is initially set to no default. When in this state, the user will have to enter data for the prompt each time through the prompting loop during data collection.



Using response defaults, the *Default to the Last Response* option can be enabled and will cause the response to default to the previous response. The user will still be able to change the response, but can save time by accepting the default. This feature is useful when a prompt will often have the same information for several prompting loops. For example, an asset physical inventory requires a location. The user would enter a location and then scan all the asset tags within that location before moving on to the next one. With the *Default to Last Response* option enabled, the location need only be entered the first time and then the field will default to that location until the user moves to another location and then enters a new location code.



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The other option available for the response default is to actually set a response default that will always be shown as the default response for the prompt. The example shows a value of '100' as the default response for this prompt. This might be useful as an employee code, for example, in a situation where employee 100 is primarily responsible for collecting data with the program. Another employee could enter or scan his employee code to override the default, but having the default value saves time during data collection most of the time because the user simply can accept the default by pressing the Enter key.

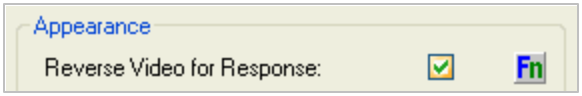
Do Not Prompt User

There is a checkbox for the "Do Not Prompt User (Skip)" option. Normally, this box is unchecked and the prompt is displayed to the user. If checked, the prompt will be hidden (skipped). This is useful for certain special circumstances. One scenario where this option is useful is when a field of fixed data needs to be in the collected data file (to satisfy data processing), but it is not desired that the user be prompted for this data. Since each prompt represents a piece of collected data and vice-versa, the skipped prompt can have a default value set to a specific value that is required to be in the collected data file. One example of such an application would be if the collected data file represents transactions, and the transaction code is a required element in the data. The default value would be set to the transaction code, and the prompt would be skipped from the user's perspective. The transaction code would be able to be in the collected data file even though the user never input a response for that prompt.

Appearance

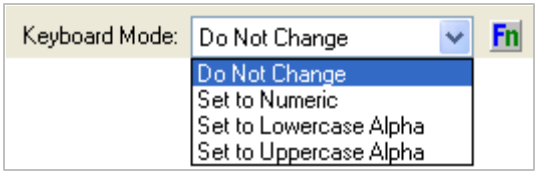
Reverse Video for Response

The Appearance settings box has two properties. The first is the *Reverse Video for Response* property. If this option is checked, the last line of the screen for data collection will appear in reverse video. The default is to display the response area in reverse video. The reverse video option is only applicable to **IT*Script*Net** supported DOS-based terminals.



Keyboard Mode

The *Keyboard Mode* property determines whether or not the keypad mode for the terminal will be set explicitly. If this property is *Set to Numeric*, **IT*Script*Net** will force the device into numeric data entry mode. Using this property is especially useful when designing data collection programs for devices that have keys that are combination alpha/numeric. If the prompt requires the user to enter a quantity, for example, automatically switching the terminal into numeric key mode will save the user time since the user will not have to switch the keypad into numeric mode. A prompt can also be configured to *Set to Uppercase Alpha* or *Set to Lowercase Alpha*, which are useful when the prompt's data is expected to be alphabetic. The default for this property is *Do Not Change*, which



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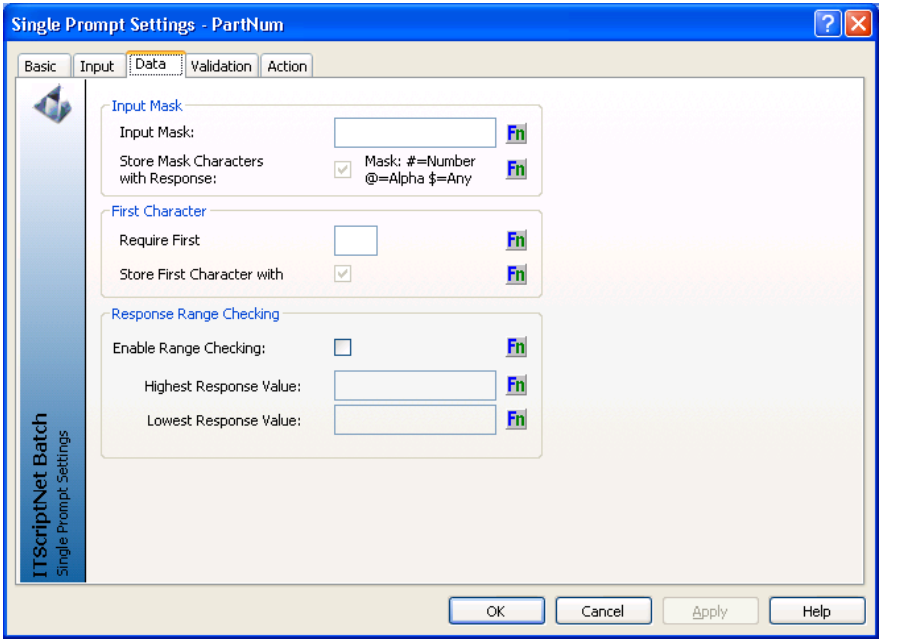
means that **IT*Script*Net** does not change the keypad mode for the prompt. The options available in this list will depend on the terminal type selected for the program.

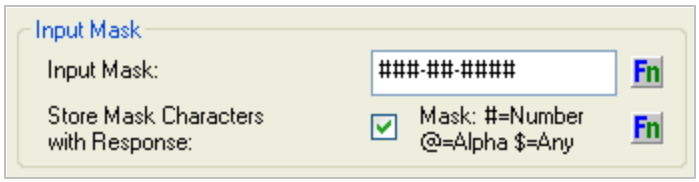
Data Tab

The Data tab has options for controlling the format that data must match. This allows the program to reject invalid data immediately and provide feedback to the operator.



Input Mask

If the Input Mask is used for a prompt, the user will be required to enter data conforming to the input mask in order for the data to be accepted as a valid response to the prompt. The mask is entered as a string of characters. Any required character can be entered as well as any of the three wildcard placeholders in the mask. The # sign requires a number between 0-9 in that location in the input string. A @ symbol requires an alphabetic character (A-Z or a-z) and the $ is a placeholder for any character. In the example shown, the input mask is ###-##-####. This input requires 3 numeric characters, then a dash ('-'), then 2 more numeric characters, another dash ('-'), and then 4 numeric characters to complete the input. This input mask would correspond to a social security number. The input mask by default will store the whole input string, but by unchecking the 'Store Mask Characters with Response' box, the response can be stored without the specific mask characters. In our social security number format example, the number would be stored without the dashes if this option were turned off. **IT*Script*Net** has many data validation options in addition to the input mask. It is therefore important that all the validations be considered when designing the validation scheme for each prompt so that the validations can work together. If you specify an Input Mask, the Maximum and Minimum Length properties will automatically be set to match the length of the Input Mask and cannot be changed.



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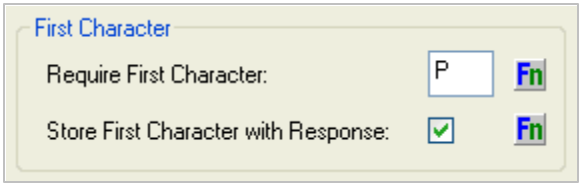
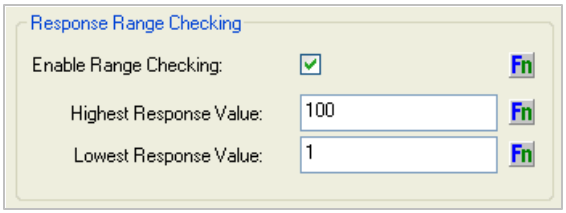
First Character



The First Character data validation feature allows the program designer to require the response to the prompt to start with the character specified. In the example shown, the letter 'P' is specified as the required first character. If the user scans a barcode or enters data that starts with something other than 'P', the response will be rejected. This feature is perfect for automotive industry labels that require part number barcodes to start with the letter P followed by the part number. The benefit of encoding a 'P' for part number or an 'L' for location (or any other key letter) within a barcode is that the user is protected from scanning the wrong barcode. This type of protection is especially useful if the label contains several different barcodes. The designer of the program has the option of specifying whether or not to store the first letter with the response. In the case of the part number following the letter 'P', it would often be advisable to remove the 'P' prior to storing the part number response so that the collected data can be processed without an extra step to remove the first character 'P'.

Response Range Checking



The Response range checking is another data validation feature of **IT*Script*Net**. When range checking is enabled, the response must be a numeric value. Negative and decimal values are permitted. The value of the response will be compared to the high and low response values. If the response entered is within the bounds of the range, the response will be accepted. If the response is higher than the highest response value or lower than the lowest response value set for the range, the response will be rejected and the user will get a message stating that the response was out of range. Enabling the range checking for responses is another way to *increase accuracy* of the data you collect.

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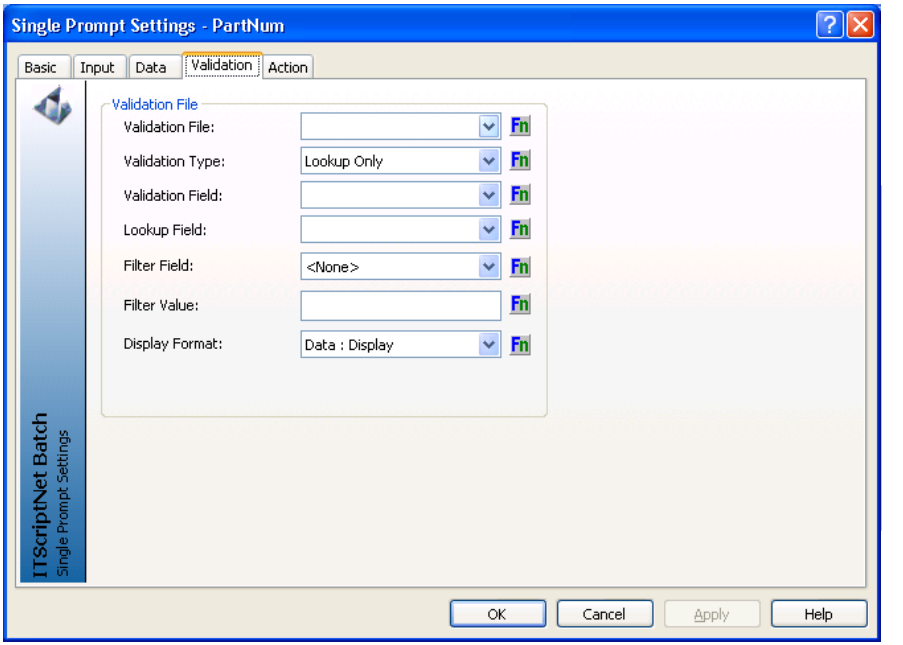
Validation Tab



Validation Files

Validation files are text files that can be used to ensure that the operator enters accurate data. When the operator enters a prompt response, the entered data can be compared to the data in the validation file to make sure it is allowed. Additionally, a second field can be retrieved from the validation file and displayed to the operator. Typical uses might include:

- Part Number/Description lookups and validations
- Location Validation
- Employee Number Validation
- Order Picking
- Route/Delivery Lists
- Many More….

The validation text file must be defined from the *Validation Files* screen before a prompt can be configured to use the validation text file. Please refer to the *Validation Files* Screen section of this User Guide for more information on setting up the validation file for your data collection program.

For the purposes of this section, we will assume that a text file named Validate.txt has been setup for use by our data collection program. The text file contains a part number and a description.

Validation File

The drop-down selection box for the validation file will contain a list of all the validation files that have been identified for use by this program from the *Validation Files* screen. You can select which file you want to use to validate the response for this prompt.

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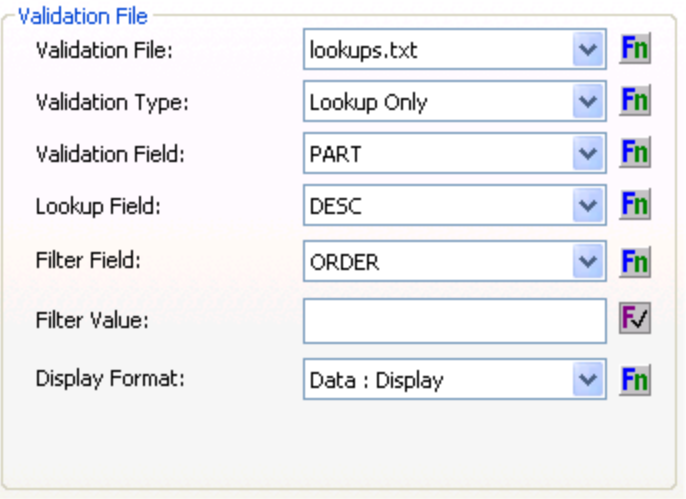
Validation Type

The second validation drop-down box contains the type of validation. There are four possible validation types.

- **Lookup Only**
  This is used to perform a lookup, but does not require the response to exist.
- **Must Be Found**
  This mode means that the entered data must exist in the lookup file. If the response entered is not found in the validation file, the response is rejected.
- **Must Not Be Found**
  This mode means that the entered data must NOT exist in the lookup file. If the response is already in the lookup file the response is rejected.
- **Pick From List**
  The *Pick From List* validation type causes the prompt to present the user with a list of choices to choose from instead of entering the data. The Validation field and the Lookup field are the data displayed to the user on the terminal as a list.

Validation Field

The third drop-down selection is the field name to be used to validate this prompt. When the Validate.txt file was added to the list of validation files for this program, the definition for that file was also configured. One of the fields in the file was named 'Part' and the description included in the validation was named 'Desc'. In our example, this prompt that we are validating is the part number so the Part field is selected as the Validation Field.



Lookup Field

The description, which has been defined to be in the Desc field, is selected in the fourth drop-down selection as the information to lookup as the result of the validation. The description can be displayed to the operator later by using the # marker in the display text for a later prompt. The Lookup data is not stored in the collected data file. Only the entered responses are stored in the collected data file.

In the special case of the picklist, the user is presented with a list consisting of both the Validation Field and the Lookup Field. When the user selects his choice from the list, the value of the Validation Field (in our example, the Part number) is stored as the response to the prompt. Using In-Prompt Scripts (See the *In-Prompt Scripts* Section of the User Guide), the picklist information

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can be customized to display other fields in addition to (or instead of) the Validation Field and the Lookup Field, which is the standard picklist behavior.

Filter Field

The Filter Field selection applies only to Picklists. It is used to apply a filter to the validation file so that only matching records are added to the picklist. For example, if you were filling a Picklist from an Order Items file, you might specify an Order Number field as the filter field, and a specific order number as the Filter Value so that only items on that order are listed in the Picklist. Select one of the fields from the validation file, or <None> if you do not want to filter the file.

Filter Value

This is the value that should be used to filter the validation file. You can enter a value, or use the In-Prompt Script to override the Filter Value so you can filter by the value of another prompt or variable.

Display Format

This field allows you to control how data is displayed in the Picklist. The standard format is to display both the Data (the Validation Field) and the Display (the Lookup Field), in the format Data : Display. You can also specify to display just the Data field, or just the Display field.

Override Display Field

This In-Prompt script is only available for Picklists. This script allows you to control the way data is presented in the picklist even further than the Filter and Display options already described. This script is executed once for each record in the validation file. The result of the script is used as the text to display in the picklist, overriding the default display. If the script returns an empty string, the record will not be added to the picklist. You can reference the fields in the validation file record using the *PickListField* function. This allows you to completely control the way data is presented in a Picklist.

The picklist can also be combined with the default prompt setting. If the prompt is configured to use a picklist and a default value is used, the default value will be the default selection in the picklist. This combination will allow the user to save time on the prompt by pre-selecting the most-common selection from a picklist.

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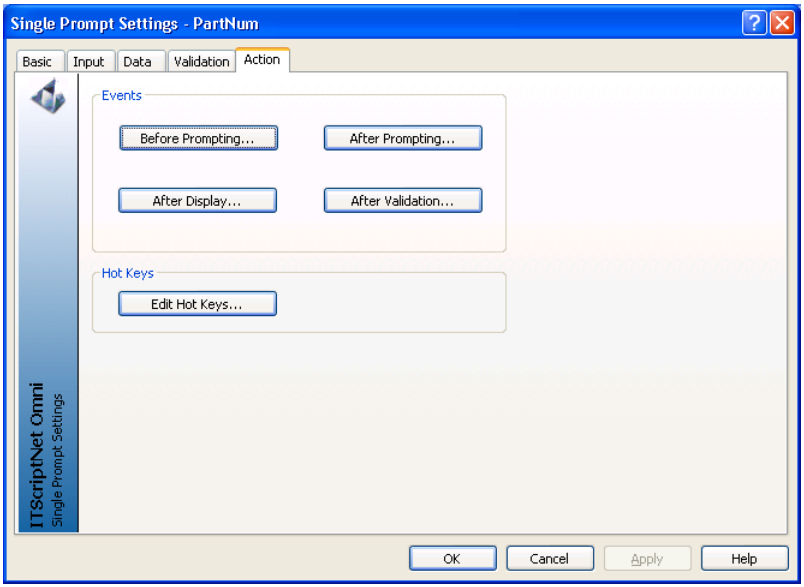
Action Tab

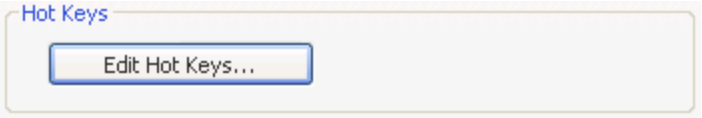


The Action tab contains the settings to control the behavior of the prompt before it is displayed, after it is displayed, after data has been entered, and after the data has been validated.

Events

The Events area allows you to include In-Prompt Scripts for the prompt. In-Prompt scripts allow additional functionality to be included in your programs. The Before Prompting script will execute before the prompt is displayed. This script is especially useful for performing lookups or calculations that will be displayed to the user. The After Display script runs immediately after the prompt is displayed to the user. The third In-Prompt script is the After Prompting script. It runs after the user has performed an action that would cause the program to go to the Next prompt. The After Prompting script runs after the user takes the action that would cause the program to go to the Next prompt but before the built-in validations for each of the elements on the prompt run, such as whether or not to allow a blank response. Lastly, after the built-in validations run, the After Validation In-Prompt script is run. This script allows a final opportunity to check for any undesirable data, perform any lookups, or do any calculations prior to leaving the prompt and moving to the next prompt. Please refer to the section on In-Prompt scripts for more information.

Hot Keys



The Hot Keys button allows you to specify Hot Keys that are available on the prompt. For more information, see the *Hot Key Editor* section of the User Guide.

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Image and Text Capture in Single-Prompt

If your terminal is equipped with an **IT*Script*Net**-supported imager, you can capture images and text as part of the data you collect. Select Image Capture or Text Capture as the prompt's Input Source on the *Prompt Settings* screen.

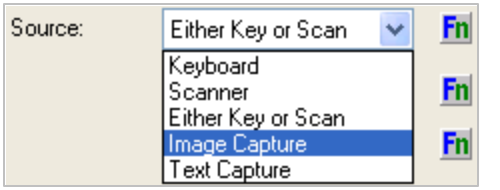

Image Capture

The terminal will take a 256-grayscale JPG image using the imager.

Text Capture

The terminal will take a 2-color (black and white) PNG image using the imager. This image is suitable for signature captures and other text capture. The image is optimized for clearly readable text. Text Capture is available only on the WinCE and PocketPC terminals.

Image Download

When the collected data is received by the PC from the terminal, the images are handled in one of two ways.

- **Image file download**
  If you select Text File or Excel format, or if the field in an Access or ODBC database is Text format, the image files will be placed in the same directory as the processed data file, and the field in the data file will contain the file name of the image.
- **Image embedding**
  This is an advanced feature. If you are collecting to Access or ODBC and the field is of type OLE Object or IMAGE (ADO adLongVarBinary), the image will be embedded in the database and the image file (originally stored in the directory with the .itb file) will be deleted. Note that the image is embedded as a BLOB, not as an OLE object. You will not be able to place the image on an Access report, but you will be able to display it using software that recognizes the image, such as Crystal Reports.

Image filenames

The filename for the image is constructed using the terminal alias and a datetime string. This reduces the chances of duplicate image filenames from different terminals.

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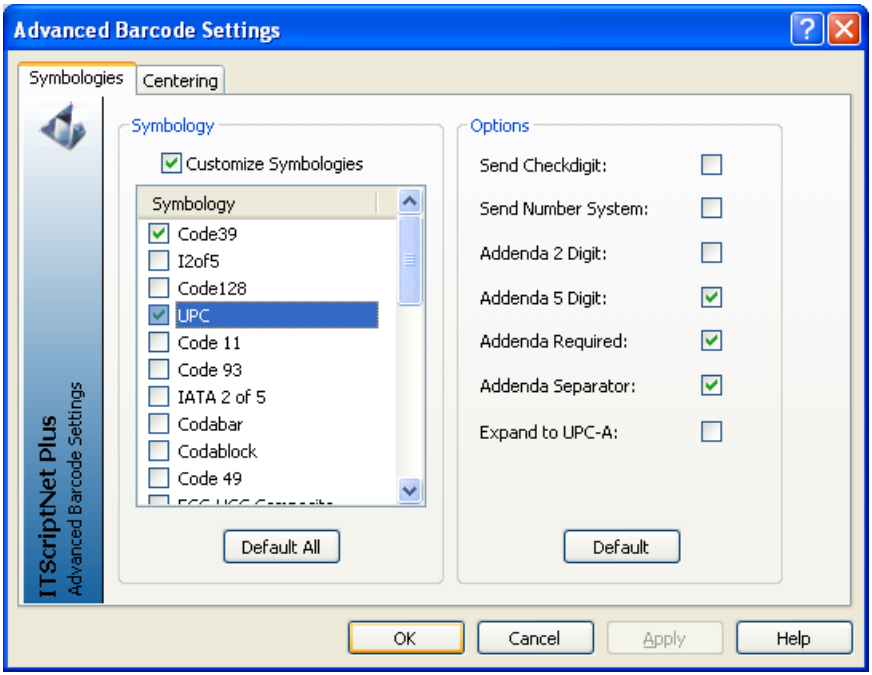
Advanced Barcode Settings

This section applies to specific terminal clients that are supported by **IT*Script*Net** that also support the following features. If your terminal is not supported these features will be disabled. The Advanced Barcode Settings screen allows you to fully customize bar code scanning as a response to the data input element. The screen is accessed from the button next to the Symbology Settings on any element that is able to accept scans as a response type.

Symbologies Tab



The portable data collection terminals can be configured with scan engines with different capabilities. Each engine supports a different set of symbologies, and various options within those symbologies. Using the basic Symbology selection on the *Prompt Settings* screen allows you to specify a symbology that must be scanned, but all scans will use the scan engine defaults. The *Advanced Symbology Settings* screen provides access to the underlying scan engine settings, and gives greater control of exactly how barcodes are to be scanned, validated, and how data will be returned.

The *Advanced Symbology Settings* screen is accessed by clicking the button with the barcode icon to the left of the Symbology drop-down box on the *Prompt Settings* screen. Please note that this screen is only available when the **Any/Multiple** symbology selection is chosen. If a specific symbology is selected, this button is disabled.

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Customize Symbologies

This check box controls whether the customized symbology settings will be effective. If this box is not checked, no customization will be performed, and all barcodes will be enabled and scanned according to their defaults. If checked, the scan engine will be configured according to the settings specified on the rest of the Advanced Symbology Settings screen.

Caution:
Some Portable Terminals take a significant amount of time to configure their scan engines. If Customized Barcode Symbologies are enabled, you may see a performance impact on the terminal. Specifically, terminals with slower processors can sometimes take several seconds to configure the scan engine for customized options.

Symbology

The symbologies supported by the terminal's scan engine are listed here. Each symbology can be enabled or disabled by checking or clearing the checkbox to the left of the symbology in the list. This allows you to specify a single symbology or multiple symbologies as valid symbologies for the prompt.

When you click on a symbology name, the options available for the symbology appear to the right in the Options area.

Options

The Options area displays the scan engine options for the selected symbology on the selected terminal type. Each terminal has a different set of options. For more information on specific symbologies and options, please consult your data collection terminal documentation.

Options can be either Checkboxes or Input fields. If an option is a checkbox, you can check it to enable the option, or uncheck it to disable the option. Examples of checkboxes may include enabling check digits, whether to return start and stop characters in the data, etc.

If an option is an input field, you can type a numeric value for the field. Examples of numeric values may include maximum or minimum lengths for a symbol.

Default

Click the **Default** button to reset the values of the Options to the scan engine defaults for the selected symbology.

Default All

Click the **Default All** button to reset the values of the Options to the scan engine defaults for ***all*** symbologies. This action does not change the status of the checkboxes for which symbologies are enabled. All symbologies will reset to the default parameter values regardless of whether the symbology is checked or not.

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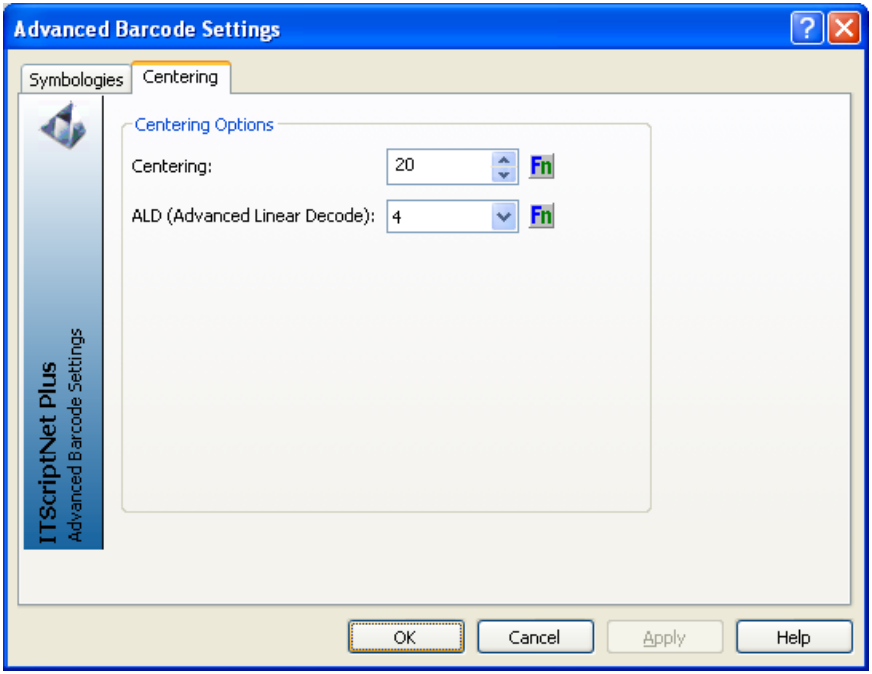
Centering Tab



This tab covers both Centering and Advanced Linear Decoding options for the mobile computers equipped with HandHeld Products Imagers.

Centering

The centering setting will turn on the centering feature of HandHeld Products imagers. The centering feature defines a region relative to the center of the image. The region is defined in pixels and is X pixels wide and X pixels high around the center of the image where X is the centering value. If a symbology to decode is found to be within or touching that region, the symbol will be decoded. If the symbol is not found in or touching this region, the symbol will be ignored. A centering setting of zero will disable this feature and any symbol within the imaged area will be decoded. The centering feature is useful when you have an application where multiple barcodes may be in view of the imager at the same time and you want to limit the barcode that is decoded to be the one in the center of the image. A value of 20 for the centering option works well for these applications.

ALD (Advanced Linear Decode)

The ALD setting turns on the HandHeld Products Imager's Advanced Linear Decode feature. The ALD provides faster decode performance on linear (1-D) barcodes. A value of 0 turns ALD off. The Values from 1-6 will determine the vertical range around the center of the imager that ALD uses to locate the symbol to decode. A value of 1 is the smallest region and a value of 6 specifies the full vertical height.

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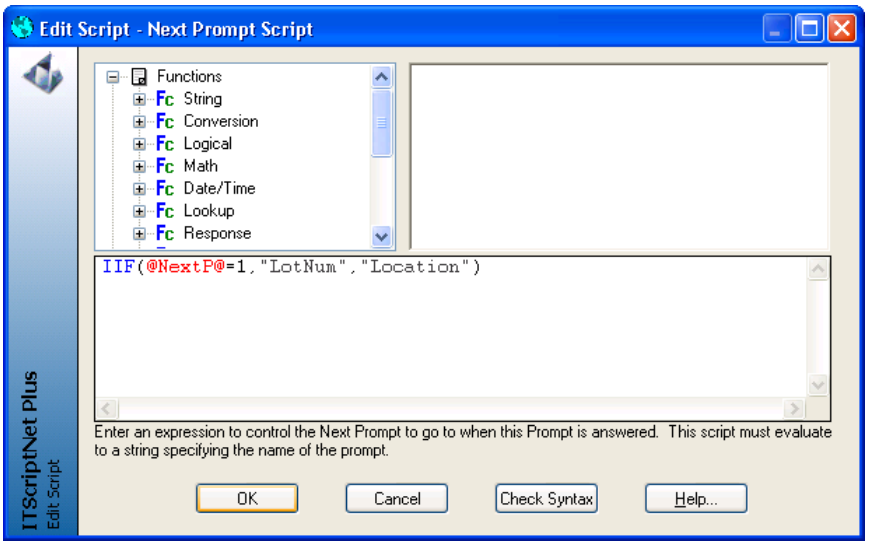
In-Prompt Scripts

IT*Script*Net's Prompt Settings give the designer of a data collection program a great deal of flexibility to customize a data collection solution with no programming. In **IT*Script*Net Batch Plus** and **OMNI** editions, the variety of element types and the broad range of element settings available add another dimension of flexibility in program design, again with no programming. With **IT*Script* Net**'s In-Prompt Scripts, the possibilities are virtually endless.

In-Prompt Scripting adds an amazing level of power to **IT*Script*Net** programs. Using these simple-to-write scripts, you can control any setting in the program at run-time. This allows the data collection program to adapt to the inputs made on the terminal and to change its behavior accordingly.

Setting Scripts

Almost every prompt or element setting in **IT*Script*Net** has an in-prompt script that allows the value for the setting to be determined programmatically. This means that the setting value can be based on data that has been collected or the value of program variables as opposed to being a value set at design-time.



The In-Prompt script for a setting script can contain any number of lines of code. However, the last line of code in the script must evaluate to a value that is appropriate for the setting. The last line of the script evaluates during run-time to a value used to set the property value. For example, if the In-Prompt Script is a script to change the Max Length of the prompt, then the script must evaluate to a number appropriate for a Max Length. If the script is for the barcode symbology, then the In-Prompt Script must evaluate to one of the symbology constants. The bottom of the script editor screen provides information as to the type of expression that is required for the setting. In the example shown, the In-Prompt Script is for the Next Prompt setting. Thus, the result of the script expression must evaluate to a name of a prompt (string).

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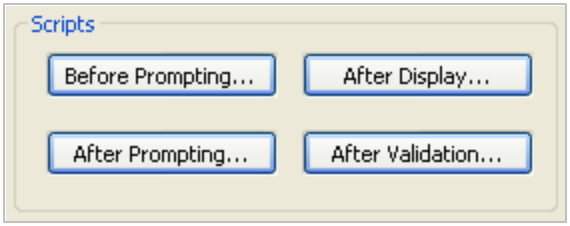
Prompt-Level Scripts

The prompt-level scripts allow you to add additional functionality to your programs by allowing scripts to be run at specified points in the sequence of prompt evaluation.



Before Prompting

This script is executed before the prompt is displayed to the terminal operator. You can use this script to generate the text to be displayed for the prompt, or to determine values to use for elements for Multi-Prompts.

After Display

The After Display script runs immediately after the prompt is displayed to the user. For Multi-Prompts, it is a good place to add functions that control the element that has the focus.

After Prompting

This script is executed after the operator collects the data for the prompt but before the built-in validations are checked (i.e. Mask, Range Checking, etc). You can use this script to modify the collected data or to perform additional custom validations.

After Validation

This script is executed after the built-in validations are checked. You can use this script to modify the collected data or to perform additional custom validations.

Event Scripts

Event scripts are another type of in-prompt scripts available for Multi-Prompt elements. These scripts are attached to events for elements. Most of the element types have event scripts available when the element receives the input focus, loses the focus, or is clicked by the user.

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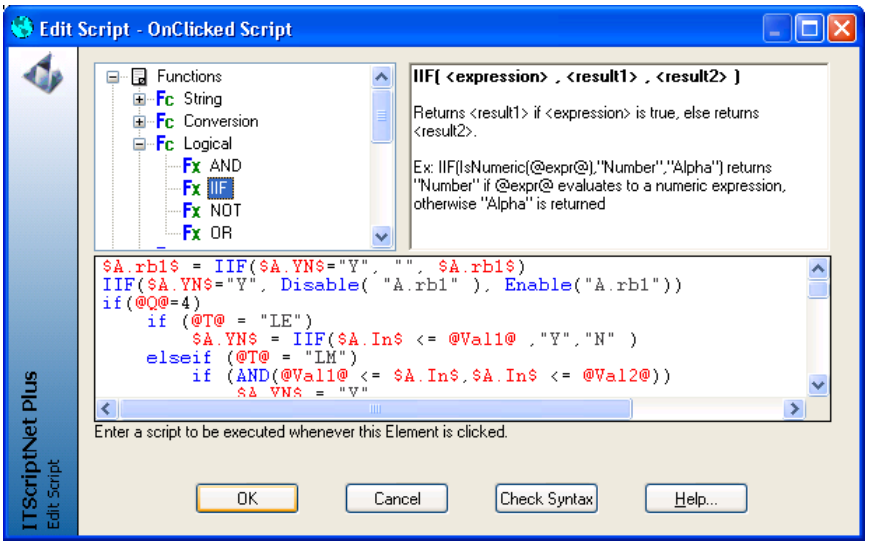
Script Editor Screen

Clicking on an In-Prompt Script button will bring up the *Edit Script* screen where the In-Prompt Script for a specific prompt property or advanced property can be edited. The Script Editor screen is resizable, and saves its size and position if they are changed.

Script Element Tree

The top-left area contains a dynamic list of the functions, lookups, responses, etc. available to the script. Double-clicking an element in the list will insert the item into the script. This always-available reference makes writing the In-Prompt script easy since you do not have to memorize functions and programming syntax.



Function Definition Area

The top-right area displays the name, arguments, and description for the function selected on the left. An example using the function is also provided.

Script Area

The bottom portion of the Script Editor Screen is the area to write the in-prompt script. The script can be any number of lines long and can include functions, variables, keywords, etc.

Note: If the script is used to determine the value of a prompt or element setting, then the last line of the script must evaluate to a value that is valid for that setting. If the script is a prompt-level script or an event script, there is no restriction on the last line of the script.

Syntax-Coloring

The In-Prompt script is syntax-colored to assist in writing the scripts. Key words and function names are in blue. Variable names, including responses to prompts and user-defined variables, are in red. Strings are gray and constants are green. The syntax-coloring helps to identify the elements in an in-prompt script more readily and makes the script easier to read and use.

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Script Comments

You can insert comments in your scripts by starting the comment line with a semi-colon. The entire line in the script will be disregarded when the script runs. You cannot start a comment in the middle of a line in the script.

Check Syntax

The **Check Syntax** button will cause **IT*Script*Net** to run a trial evaluation of the In-Prompt Script and will either inform the user that the expression evaluated OK or will inform the user of a syntax problem. The **Check Syntax** button only checks syntax and is not able to truly and fully test the expression since there are no real values for the script elements at design time.

Writing Scripts

In-Prompt Script Components

The syntax of scripts in **IT*Script*Net** is simple. Every script is composed of Literal Strings, Constants, Functions, Variables, and Operators.

Using Literal Strings in Scripts

A Literal String is a fixed piece of data. Literal strings are always enclosed in double-quotes. For example, “Description”, “QtyPrompt” and “Data Invalid” are all Literal Strings. You can use literal strings in expressions, assign them to variables, or assign them to responses.

Using Constants in Scripts

IT*Script*Net includes many constants which can be used in scripts. Constants are names that are translated into a value. Constants have been defined to translate barcode symbologies, input sources, True and False, etc. For example, you can use TRUE instead of 1, and FALSE instead of 0. These constants may be used as the parameters of a function or comparison. Using constants makes the script more readable and does not require you to know the underlying values. The constants are located in the tree for easy access on the Edit Script screen where they are grouped according to their category. Many of the constants are related to a function or a set of functions. For example, the ResponseSource() function will return a value indicating whether the user entered the response via keyboard, scanner, image, etc. If you need to test the response source to see if the response was entered on the keypad, you could use the constant srcKeyboard as shown:

@rs@ = IIF(srcKeyboard = ResponseSource(), "Last Response Keyed", "Not Keyed")

Using Functions in Scripts

Functions are small processing units that convert data from one form into another. **IT*Script*Net** has a wide variety of functions available for In-Prompt Scripts. The functions are grouped into

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categories to make accessing the functions in the Script Editor tree easier. Most functions take one or more parameters and return a string or numeric result. For example:

Left("ABC123", 3) would return "ABC"

Note that Logical operations in **IT*Script*Net** are functions, not operators. For example, to test for AND you would use:

AND(TRUE, FALSE) returns FALSE.

There are well over a hundred functions available. Some of the categories of functions include: String Functions, Math functions, Conversion Functions, Notification Functions, Lookup Functions, and more. The Lookup Functions are especially important since they allow access in the scripts of both Validation Files data and the data collected in the program. For a full listing of the **IT*Script*Net** functions with descriptions and examples, please refer to the Function Reference in this User Guide or the Script Editor Screen's Element Tree.

Using Keywords in Scripts

IT*Script*Net has groups of *Keywords* that add the ability to loop and perform conditional execution of blocks of code. One group of Keywords includes the IF(<expression>), ELSE, ELSEIF(<expression>), and ENDIF. Multiple script lines can be in each segment of the IF block so that you can control the execution for many lines of code at once. An IF block must have one IF and a corresponding ENDIF and one or more statements that will execute if the expression is true. An IF block may also contain many ELSEIF segments as well as an ELSE segment. Two other groups of keywords provide the capability to have looping logic in your scripts so that a segment of script code can execute multiple times though a loop within an In-Prompt script. These are FOR/NEXT and WHILE/WEND. One important rule for using keywords is that the keyword can not be nested with functions and the keyword must appear on its own line in the script with only its expression, if applicable. Please refer to the Function and Keyword Reference in this User Guide for more information about using Keywords.

Using Responses and Lookups in Scripts

You can access the data you collected in your scripts two ways:

Responses

The data collected by the operator is stored in Response variables. These variables are accessed by using the prompt name surrounded by '$'. For example, if you have a single-prompt named "PartNo", you can access the data by referencing *$PartNo$*. You may also assign a value to these variables in a script. This gives you the ability to override the collected data, if necessary.

Lookups

If you performed a validation file lookup, the data you retrieved is available in a Lookup variable. These are accessed by using the prompt name surrounded by '#'. For example, if your PartNo prompt is validated against a validation file, the data you looked up can be accessed as *#PartNo#*. These variables may also be assigned in a script.

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Using User Variables in Scripts

In addition to Response and Lookup variables, you may also create User-Defined variables. These are variables that you assign and use in your scripts. User-Defined variables are accessed by surrounding the name in '@'. For example, *@UserVar@* is a user defined variable. The following characters may not be used in user variable names: # $ @ + - * . / = < > ( ) & as these characters are reserved. You do not have to declare these variables, but you may simply assign to them and evaluate them. They will be created as they are referenced. User defined variables keep their data as long as the data collection program is active. Once you escape back to the Main Menu these variables are no longer available. User defined variables may be used in scripts, in the Display Text in Single-Prompts, and in the Text Setting of Text elements.

Using Operators in Scripts

The list of operators supported in **IT*Script*Net** are shown in the table. You may use literals, functions, or variables on either side of the operator.

Addition	+
Subtraction	-
Multiplication	*
Division	/
Greater Than	>
Less Than	<
Greater Than or Equal	>=
Less Than or Equal	<=
Equal	=
Not Equal	<>
String Concatenation	&

Data Types

Scripting in **IT*Script*Net** is typeless. This means that all data is treated as strings except when numeric processing is performed, at which time the data will be converted into a numeric value. When converting from a string to a numeric value, the conversion stops at the first non-numeric characters. For example, "123.25AB" would be converted to 123.25. Some functions that require numeric parameters will display a syntax error if a non-numeric parameter is given.

Other In-Prompt Scripting Notes

How Scripts are Evaluated

Scripts allow nesting of functions and parameters. Scripts are always evaluated from the innermost parameter outward, and from left to right. You may nest functions as deeply as necessary. Scripts can assign data to variables. Each line of the script is executed sequentially and can either be an assignment or an evaluation. For example, the following is a valid In-Prompt Script:

@UserVar@ = Left($Descr$,10)
Beep()

This script would assign the left 10 characters of the data collected in the prompt named 'Descr' to the user-defined variable 'UserVar', and then would beep.

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Conditional Branching

Using an In-Prompt Script for the Next Prompt field allows you to perform conditional branching. The results of the script should specify the name of the next prompt to display. This allows you to control the program flow by changing the next prompt. You can also use an In-Prompt Script to evaluate the Escape Prompt.

Saving Data.

Data is saved when the last prompt in the flowchart is accepted. This means that when using conditional branching, if the last prompt is not processed, your data will not be saved!

If your program does not lend itself to a common last prompt, there are two approaches to ensure your data is saved.

1. Add a Hidden (Skipped) prompt as the last prompt that all paths flow through. Even though the hidden prompt is not shown, it will cause the data to be saved.
2. Add a confirmation or summary prompt. You can add a prompt with a zero Max Length and Min Length, and it will be displayed but the only valid input will be to press ENTER or ESCAPE. You can display a summary of the collected information and allow the operator to press ENTER to save.

Note: You can also use the fact that the program saves on the last prompt to create programs that do not collect data, but are used simply to perform lookups. In this case, simply have the second-to-last prompt use an In-Prompt script on the Next Prompt field to loop back to the first prompt. The last prompt will never be displayed, and no data will be saved.

Using the Picklist Special Function

The *Override Display Field* in-prompt script is different from the others. This script is called once for every line in the validation file that is being used to fill the *Pick From List* on a single-prompt. This function allows you to change the format of the string displayed in the list, or to exclude a record from appearing in the list. You use the *PicklistField* function to retrieve the value of a validation file field.

Picklists

For Picklists, the *PicklistField* function is used to format a string to be displayed in the list instead of the standard text that is composed of the Validation field and the Lookup Field. You can also skip records from the Validation file by returning an empty string from this script.

Hidden (Skipped) Prompts

No scripts are run for Skipped Prompts except the Hidden Script, Next Prompt Script, and the Default Response Script.

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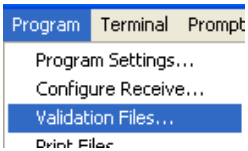
Maximum Length

You may use an in-prompt script to control the maximum length property. However, the collected data will be truncated at the length you specified at design time, even if you adjust the maximum length to a larger value. If you need to adjust the maximum length, you should set the design-time value to the largest size you might need, and then set shorter limits at run-time in the in-prompt script.

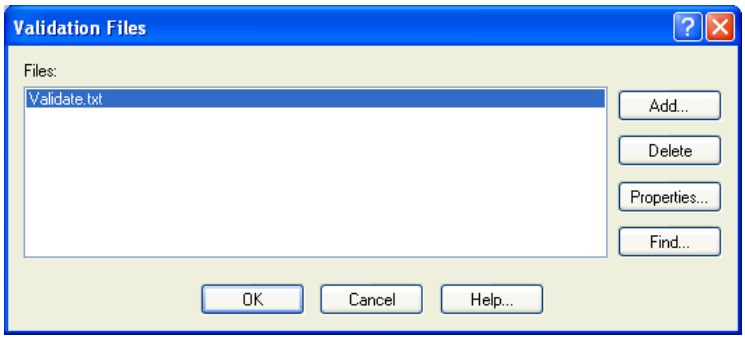
Configuring Validation Files



An **IT*Script*Net** data collection program can use multiple validation files. Validation files are used so that responses to prompts can be validated against a set of data to determine if the response is acceptable. Use of validation files helps assure that the data collected is accurate. Each validation file to be used to validate data for a prompt within a program must be defined for the program on the *Validation Files* screen. You specify the file name and create fields within the file. It is recommended that the file name be 8 characters or less if the data collection program is to be run on a DOS-based terminal.

Validation File List

To add a validation file to the program, click on **Program** on the menu bar and select **Validation Files** form the drop down list. In the Validation Files window, click on the **Add...** button. Text file validation files are existing fixed-field length text files. These text files can be created by exporting data from Excel, Access, other data sources, or created in an application such as Notepad. If a validation file is no longer needed by the program, select the file from the list and click on the **Delete** button to delete the file from the list of validation files for the current data collection program.



The **Find...** button will allow you to browse for the selected validation file. This is useful if you receive a data collection program from another **IT*Script*Net** user who has a different directory structure and the validation file must be located in a different folder.

Long/Short Filename Note

When adding files to the Validation Files list, you will be warned if your filename is a long file name. Be aware that DOS-based terminals only support short filenames. If you use long file names, they will be translated to short names before they are loaded into the terminal. Normally, this presents no problem, although there is a risk that the short file name may not be found on another PC. For this reason, we recommend that you use short file names whenever possible.

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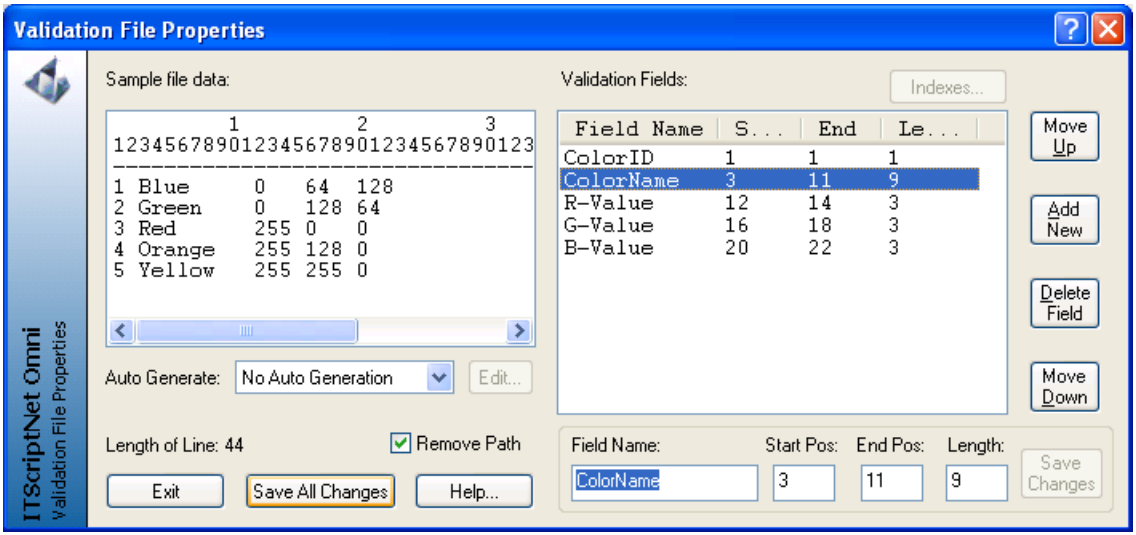
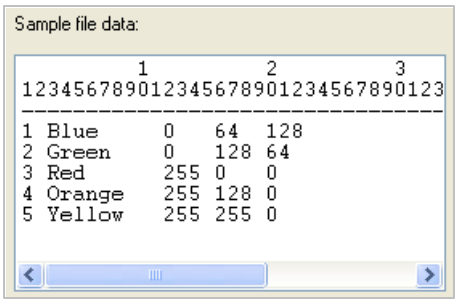
Validation File Properties

After adding a validation file to the list, the validation file must be defined by clicking on the **Properties…** button. The *Validation File Properties* screen will be displayed. This screen will allow you to define the validation file by specifying names and lengths for each field in the file. Save the Validation file settings by clicking on the **Save All Changes** button after making changes to the validation file properties.



Sample File Data



The left side of the screen shows a sample of your text file. The top lines displayed are a ruler to help identify the format of the text file.

Field Name

It is necessary to define fields contained within the text file. In the example shown, the first character in the text file is the identification number for the color. The name of the color is a separate field in the file. Each validation file field that you will need in your data collection program must be defined on the Validation File Properties screen so that the program can make the fields available for use to your program.

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Start Position, Length

Along with the name of the field, the starting character position and the length of each field must be specified. In our example, the ColorName field starts at position 3 and ends at position 11. The ruler at the top of the sample data will help easily identify the starting and ending positions for each field.

Add New, Delete Field

Click the **Add New** button to add a new field definition to the validation file. The area for specifying the name of the field and its start and end characters will default to be ready for your new field. After entering the information for the field name and the start and the end position or length, click the **Save Changes** button. The **Delete field** button will delete the selected validation field from the list.

Move Up, Move Down

The **Move Up** and **Move Down** buttons adjust the order of the list of fields by moving the selected validation field in the list up or down.

Remove Path

Checking the Remove Path checkbox will cause the validation file to be stored without a path. The validation file will be assumed to be in the same directory as the ITB file. Use this option when you will be moving your ITB file and validation files to another PC with a different directory structure.

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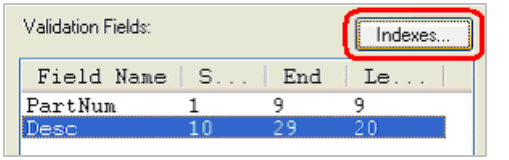
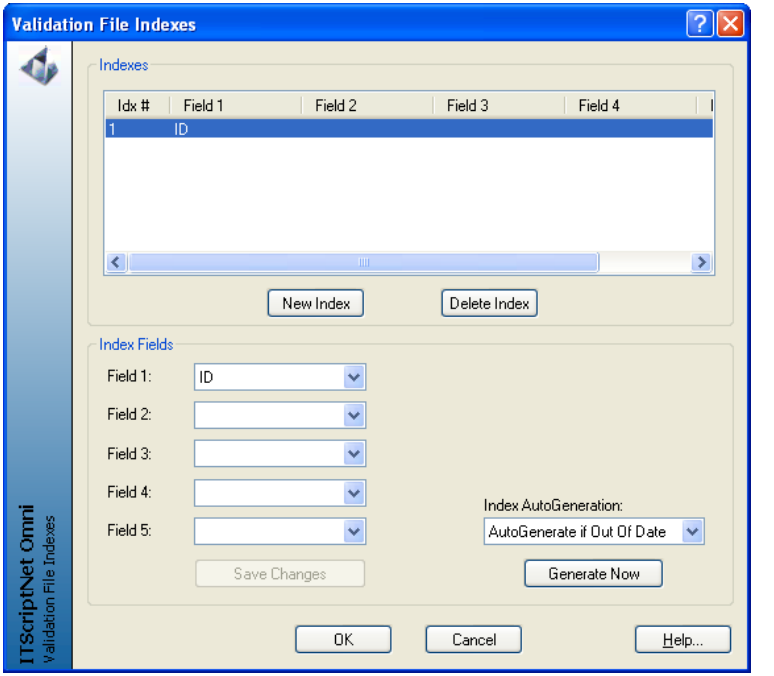
Validation File Indexes



The *Validation File Properties* screen has an **Indexes** button. This button is disabled until you save your field changes. Click on the **Indexes** button to bring up the *Validation File Indexes* Screen. This screen allows you to define one or more index files for the validation file. Index files will improve the performance of lookups against large validation files. Indexed validation files that are large will realize a significant decrease in the time required for a lookup. Index files do take up file space on the terminal, so there may be some situations where index files cannot be used. Very small validation files will benefit less from index files than larger validation files because the lookup speed is already short for small validation files.



New Index

To add an index to the validation file, click on the **New Index** button. This will activate the drop-down boxes in the Index Fields section of the screen. Select the field or fields for the index and click on the **Save Changes** button. Your new index file will be added to the list at the top of the screen.

Delete Index

An index can be deleted from the validation file by selecting the index from the list at the top of the screen and clicking the **Delete Index** button.

Generate Indexes

Each index defined for a validation file will be generated to a separate file with an .ix? extension. You can generate an index manually by selecting the index from the list of indexes at the top of the screen and clicking on the Generate Now button. You can also have the index created automatically by selecting the appropriate *Index AutoGeneration* option. You can specify to generate the index file manually, on every upload, or only if the existing index file is older than the corresponding validation file. Index files are sent to the terminal with the validation file when a data collection program is sent to the terminal. It is recommended to allow the index files to be created automatically if out of date, so that the index file is always current and in-sync with the validation file.

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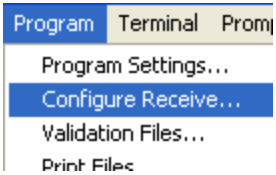
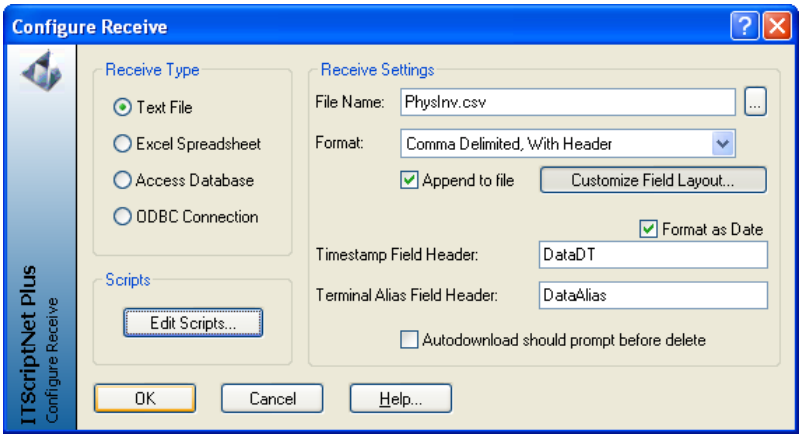
Configure Receive

The *Configure Receive* main menu item will display the screen that allows you to configure what **IT*Script*Net** will do with the collected data after it retrieves the data from the terminal. Click on Program on the menu bar and select Configure Receive.



Receive Type

IT*Script*Net supports four download formats: Text File, Microsoft Excel, Microsoft Access, and ODBC. The detailed download settings on the right side of the screen will change depending on the download format you select on the left side of the screen.



Text File

Use this option to receive your collected data into a text file. Click on the Text File option as the Receive Type on the left side of the screen to configure your data collection program to receive its data in text file format.

File Name

This field allows you to specify the name of the file in which you want your collected data to be stored. You may use the **'...'** (Browse) button to browse for an existing file, or simply type the name of a new file that you want to be created. If you specify a fully qualified path name, that path will be used when downloading your collected data file. If a file name only is specified, the file will be placed in the same directory as the ITB file when downloading.

Format

You can select between fixed-width text files or comma-delimited text files. You can further dictate whether the comma-delimited text file includes field headers in the first row of the file. If you choose to use a comma-delimited file and name the file with a .CSV extension, you will be able to open the file directly in Microsoft Excel. The data collected for all prompts in the data collection program will be included in the output file format in the order that they appear in the program. You can use the Customize Field Layout option to configure which fields to include in the data output and the order of the fields. See the Customize Field Layout section later in this chapter for more information.

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Append To File

This option controls whether the collected data will be appended to the end of the data file if it already exists, or if the existing file will be deleted and replaced with a new file containing only the new data. Check the box to have your new data appended to the existing file. Uncheck the box to have a new file created each time. If the file does not exist, it will be created.

Timestamp Field Header

If you select Fixed Width or Comma-Delimited Without Headers, this field is disabled. If you select Comma-Delimited With Headers, this field specifies the name that will be given to the Timestamp field in the file. Each record collected in the terminal has a date and time stamp attached to it. When the PC receives the data, the timestamp is kept with the record. If you leave this field blank, the timestamp will not be saved in the output file.

Format As Date

This option is only available when using Comma-Delimited format. If checked, the date will be stored in a localized date format. If unchecked, the date will be in YYYYMMDDHHNNSS format where YYYY is the 4-digit year, MM is the month, DD is the day, HH is the hour, NN is the minute, and SS is the second.

Alias Field Header

If you select Fixed Width or Comma-Delimited Without Headers, this field is disabled. If you select Comma-Delimited With Headers, this field specifies the name that will be given to the Alias field in the file. Each record collected in the terminal has the terminal's Alias attached to it. When the PC receives the data, the alias is kept with the record. If you leave this field blank, the alias will not be saved in the output file. The Terminal Alias is set on the terminal's configuration screen.

Autodownload Prompt Before Delete

This option on the *Configure Receive* screen will control whether or not the data for the data collection program will be automatically deleted after being downloaded with the Autodownload Server application. There are several means of getting collected data from the terminals to the PC for receipt and processing. One of these methods is via the Autodownload Server. The Autodownload Server will allow collected data to be sent to the PC automatically when the user places the terminal in the cradle. The default behavior is to have the collected data be deleted after this automatic transfer to minimize user involvement in the process. When checked, this option will cause the terminal to prompt the user before deleting the collected data after transfer. In some cases this may be desirable so that there is a user involved to confirm that the data was transferred and processed as expected before the data is deleted from the terminal. The Autodownload Sever application has a dedicated section in the User Guide for further information.

Customize Field Layout

This button is used to change the order in which fields will be placed in the output file, and is described in detail later in this document.

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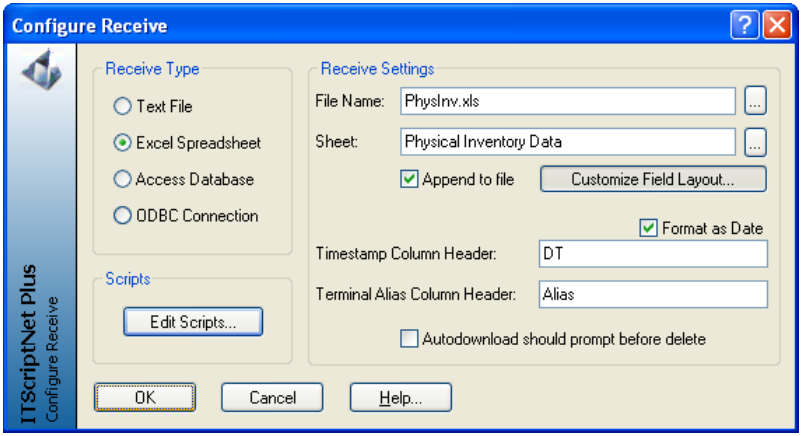
Excel Spreadsheet

Use this option to receive your collected data into a Microsoft Excel spreadsheet. Click on the Excel Spreadsheet option as the Receive Type on the left side of the screen to configure your data collection program to receive its data into Microsoft Excel. You must have Excel installed on your PC to be able to receive your collected data into an Excel file.

File Name



This field allows you to specify the name of the spreadsheet file in which you want your collected data to be stored. You may use the **'...'** button to browse for an existing spreadsheet, or simply type the name of a new spreadsheet that you want to be created. If you specify a fully qualified path name, that path will be used when downloading your collected data file. If a file name only is specified, the file will be placed in the same directory as the ITB file when downloading.

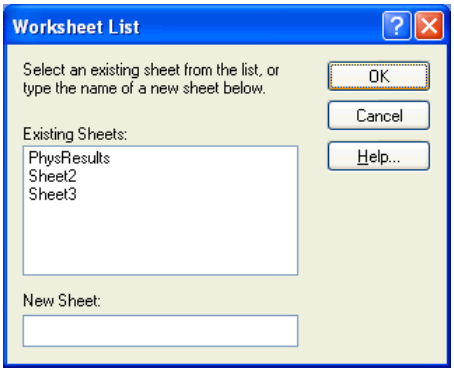
The data collected for all prompts in the data collection program will be included in the output file format in the order that they appear in the program. You can use the Customize Field Layout option to configure which fields to include in the data output and the order of the fields. See the Customize Field Layout section later in this chapter for more information.

Sheet Name

This field allows you to specify the name of the sheet within the spreadsheet file in which you want your collected data to be stored. You may type the name of an existing sheet or a new sheet that you want to be created. You may also use the **'...'** button to select an existing sheet from the spreadsheet using the Worksheet List.

Worksheet List

This screen displays a list of the sheets in the spreadsheet. You may select an existing sheet, or enter a new sheet name in the New Sheet line.



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Special Sheet Names

There are three special codes you may use as sheet names. These codes cause the sheets to be named dynamically. The valid codes are:

CODE	OPERATION
$DATE$	Names the sheet using the current date. The format will be MM-DD-YY.
$TIME$	Names the sheet using the current time. The format will be HH'MM'SS
$DATETIME$	Names the sheet using the current date and time. The format will be MM-DD-YY HH'MM'SS

Append To File

This option controls whether the collected data will be appended to the end of the sheet if it already exists, or if the existing data will be overwritten and replaced with the new data. Check the box to have your new data appended to the existing file. Uncheck the box to have the new data overwrite the old data.

Timestamp Column Header

This field specifies the name that will be given to the Timestamp column in the spreadsheet. Each record collected in the terminal has a date and time stamp attached to it. When the PC receives the data, the timestamp is kept with the record. If you leave this field blank, the timestamp will not be saved in the output file.

Format As Date

If checked, the date will be stored in a localized date format. If unchecked, the date will be in YYYYMMDDHHNNSS format where YYYY is the 4-digit year, MM is the month, DD is the day, HH is the hour, NN is the minute, and SS is the second.

Alias Field

This field specifies the name that will be given to the Alias column in the sheet. Each record collected in the terminal has the terminal's Alias attached to it. When the PC receives the data, the alias is kept with the record. If you leave this field blank, the alias will not be saved in the output file. The Terminal Alias is set on the terminal's configuration screen.

Autodownload Prompt Before Delete

This option on the *Configure Receive* screen will control whether or not the data for the data collection program will be automatically deleted after being downloaded with the Autodownload Server application. There are several means of getting collected data from the terminals to the PC for receipt and processing. One of these methods is via the Autodownload Server. The Autodownload Server will allow collected data to be sent to the PC automatically when the user places the terminal in the cradle. The default behavior is to have the collected data be deleted after this automatic transfer to minimize user involvement in the process. However, this option, when checked will cause the terminal to prompt the user before deleting the collected data after transfer. In some cases this may be desirable so that there is a user involved to confirm that the data was transferred and processed as expected before the data is deleted from the terminal. The Autodownload Sever application has a dedicated section in the User Guide for further information.

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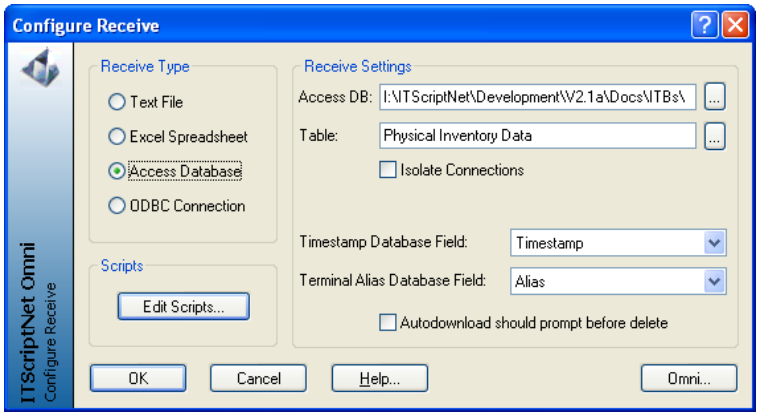
Customize Field Layout

This button is used to change the order in which fields will be placed in the output file, and is described in detail later in this document.

Access Database

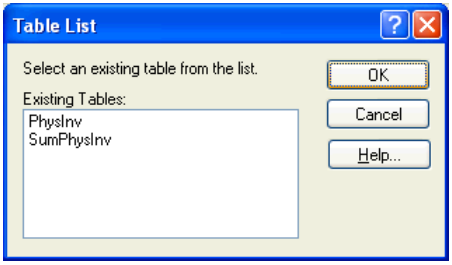


Use this option to receive your collected data into a Microsoft Access database. Click on the Access Database option as the Receive Type on the left side of the screen to configure your data collection program to receive its data into Microsoft Access. You must have ADO2.5 or higher installed on your PC to receive your data into an Access database. The setup program should have automatically installed ADO 2.5, but you can also download ADO from Microsoft's Universal Data Access web site at **http://www.microsoft.com/data** (download MDAC 2.5).

Access Database

This field allows you to specify the name of the database file in which you want your collected data to be stored. You may use the **'…'** button to browse for an existing database or type the name of the database in the field. The database must exist. The receive process will not create the database if it does not exist.

Table



This field allows you to specify the name of the table within the database file in which you want your collected data to be stored. You may type the name of an existing table or use the **'…'** button to select an existing table from the database using the Table List. You must specify an existing table. The table will not be created if it does not exist.

Isolate Connections

This checkbox allows you to specify that you want updates to the Access Database to be isolated, so that only one download process can update the database at a time. This option is available in the **IT*Script*Net OMNI** edition only.

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Timestamp Field

This field specifies the name that will be given to the Timestamp field in the table. Each record collected in the terminal has a date and time stamp attached to it. When the PC receives the data the timestamp is kept with the record. You may specify the name of an existing field or select <Ignore> if you do not want the timestamp data to be saved.

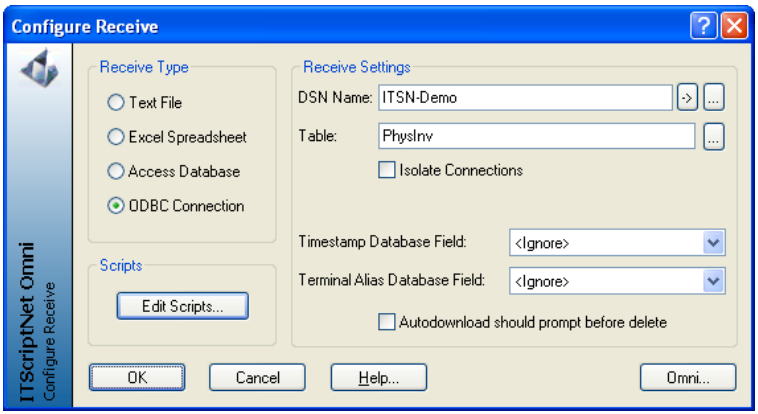
The download process will automatically detect the field type in the database, and adjust the data accordingly. If your field is a Text type, the field must be a 14-character text field. The timestamp data will be in YYYYMMDDHHNNSS format where YYYY is the 4-digit year, MM is the month, DD is the day, HH is the hour, NN is the minute, and SS is the second. If your field is a Date/Time type, the data will be converted into a Date type and assigned to the field.

Alias Field

This field specifies the name that will be given to the Alias field in the table. Each record collected in the terminal has the terminal's Alias attached to it. When the PC receives the data, the alias is kept with the record. You may specify the name of an existing field or select <Ignore> if you do not want the alias data to be saved. The Terminal Alias is set on the terminal's configuration screen.

Autodownload Prompt Before Delete

This option on the *Configure Receive* screen will control whether or not the data for the data collection program will be automatically deleted after being downloaded with the Autodownload Server application. There are several means of getting collected data from the terminals to the PC for receipt and processing. One of these methods is via the Autodownload Server. The Autodownload Server will allow collected data to be sent to the PC automatically when the user places the terminal in the cradle. The default behavior is to have the collected data be deleted after this automatic transfer to minimize user involvement in the process. However, this option, when checked will cause the terminal to prompt the user before deleting the collected data after transfer. In some cases this may be desirable so that there is a user involved to confirm that the data was transferred and processed as expected before the data is deleted from the terminal. The Autodownload Sever application has a dedicated section in the User Guide for further information.



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ODBC Database

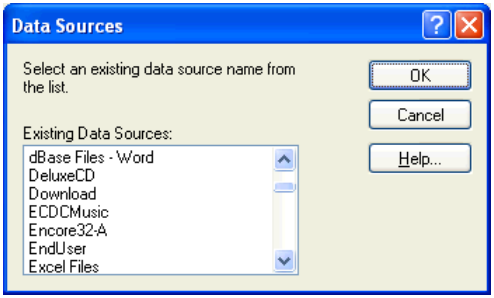
Use this option to receive your collected data into a database with an ODBC data source. Click on the ODBC Connection option as the Receive Type on the left side of the screen to configure your data collection program to receive its data into ODBC. This is an advanced topic. If you are unsure how to work with ODBC data sources, contact your system administrator. You must have ADO2.5 or higher installed on your PC to receive your data into a database with ODBC. The setup program should have automatically installed ADO 2.5, but you can also download ADO from Microsoft's Universal Data Access web site at **http://www.microsoft.com/data** (download MDAC 2.5).

DSN Name

This field allows you to specify the name of the ODBC data Source in which you want your collected data to be stored.

You may use the **'...'** button to browse for an existing

data source, or type the name of the data source in the field.



If you specify a data source name (DSN), the data source must exist. The receive process will not create the data source if it does not exist.

Connection String Data Link

You can build a connection string for **IT*Script*Net** to use without first creating a DSN. Use the Data Link button to bring up the Data Link Properties screen

and follow the steps of choosing a Provider and setting Connection properties to build a connection string. The connection string contains all the information necessary for **IT*Script*Net** to access the ODBC Connection without a predefined DSN.

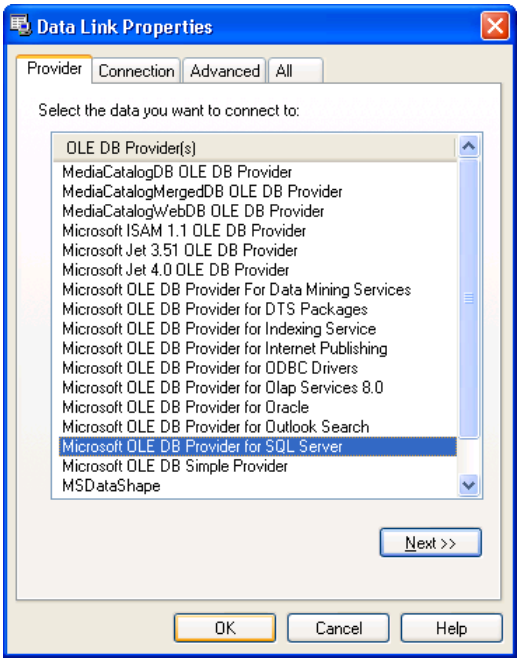


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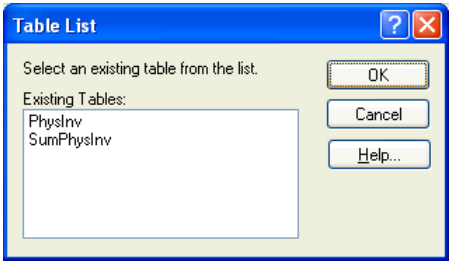
Table



This field allows you to specify the name of the table within the database file in which you want your collected data to be stored. You may type the name of an existing table or use the **'...'** button to select an existing table from the data source using the Table List. You must specify an existing table. The table will not be created if it does not exist.

Isolate Connections

This checkbox allows you to specify that you want updates to the Database to be isolated, so that only one download process can update the database at a time. This option is available in the **IT*Script*Net OMNI** edition only.

Timestamp Field

This field specifies the name that will be given to the Timestamp field in the table. Each record collected in the terminal has a date and time stamp attached to it. When the PC receives the data, the timestamp is kept with the record. You may specify the name of an existing field or select <Ignore> if you do not want the timestamp data to be saved.

The download process will automatically detect the field type in the database, and adjust the data accordingly. If your field is a Text type, the field must be a 14-character text field. The timestamp data will be in YYYYMMDDHHNNSS format where YYYY is the 4-digit year, MM is the month, DD is the day, HH is the hour, NN is the minute, and SS is the second. If your field is a Date/Time type, the data will be converted into a Date type and assigned to the field.

Alias Field

This field specifies the name that will be given to the Alias field in the table. Each record collected in the terminal has the terminal's Alias attached to it. When the PC receives the data, the alias is kept with the record. You may specify the name of an existing field or select <Ignore> if you do not want the alias data to be saved. The Terminal Alias is set on the terminal's configuration screen.

Autodownload Prompt Before Delete

This option on the *Configure Receive* screen will control whether or not the data for the data collection program will be automatically deleted after being downloaded with the Autodownload Server application. The Autodownload Server will allow collected data to be sent to the PC automatically when the user places the terminal in the cradle. The default behavior is to have the collected data be deleted after this automatic transfer to minimize user involvement in the process. When checked, this option will cause the terminal to prompt the user before deleting the collected data after transfer. In some cases this may be desirable so that there is a user involved to confirm that the data was transferred and processed as expected before the data is deleted from the terminal. The Autodownload Sever application has a dedicated section in the User Guide for further information.

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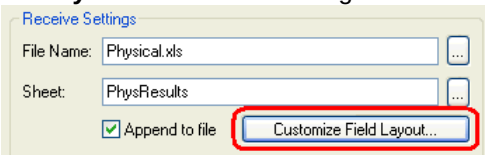
Customize Field Layout

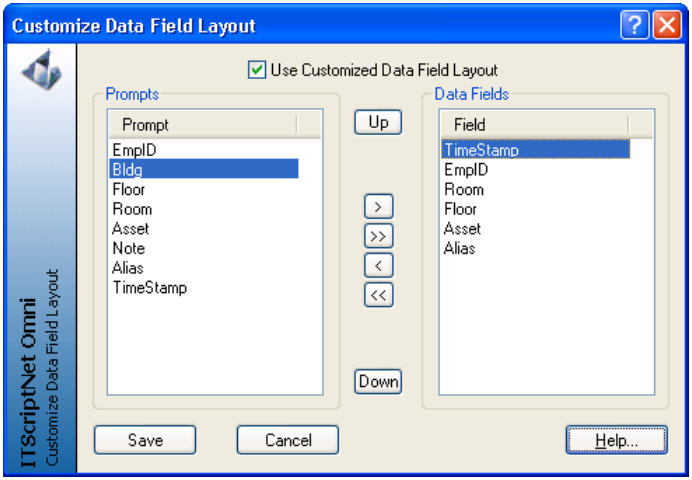
The *Configure Receive* screen includes the **Customize Field Layout…** button. Clicking this button displays the *Customize Data Field Layout* Screen. This screen is where a text or Excel output file can be customized. Normally, the order of the fields in a text or Excel output file are in the same order as the prompts in the program and the responses for all prompts appear in the data output file. This screen allows the order of these fields to be customized so that the fields can match up to a specific desired format. The output data file can also be customized to omit the fields for selected prompts.



The top of the screen contains a checkbox that determines whether or not customization is active.

The left side of the screen contains a list of the prompts and elements in the data collection program. The terminal Alias and Timestamp are also in the list because the Alias and Timestamp are captured for each record.

The right side of the screen is the list of data fields to appear in the output file (either a text file or Excel file depending on the settings chosen on the *Configure Receive* screen). You can use the arrow keys in the middle of the screen to add or remove data fields from the right-hand list. You can use the **Up** and **Down** buttons to manipulate the order of the fields in the list. Only the fields in the right-hand list will be included in the output file if the customized data checkbox is checked. The order of the fields in the output data file will match the order of the fields in the right-hand list.



In the example shown, there are many fields that were not specified to be included in the output file. Also, the order of the fields has been changed so that the first element in the output file will be the Timestamp. At any time, if the checkbox is unchecked, the data output file will revert to the normal default output file.

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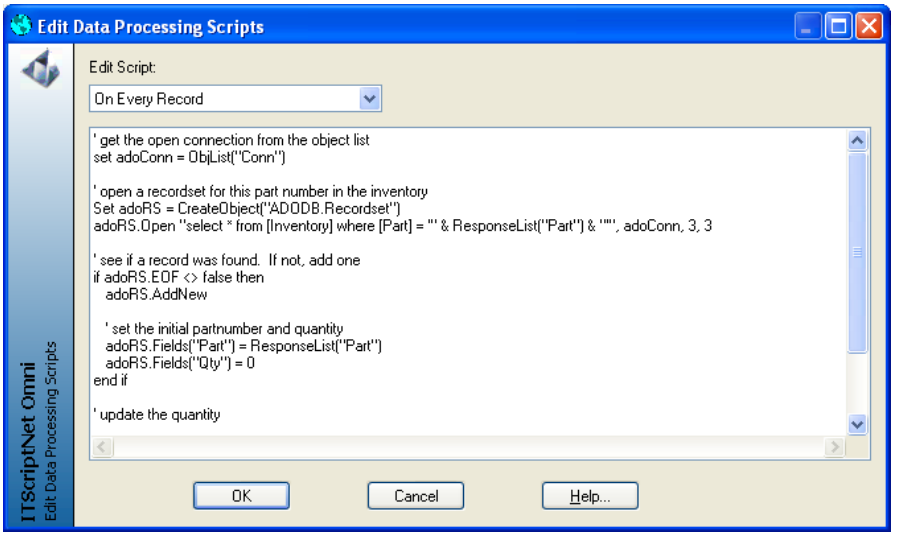
Data Processing Scripts

The *Configure Receive* screen includes the **Edit Scripts** button. Clicking this button displays the *Edit Data Processing Scripts* screen. This is an area where VBScripts can be defined for the data collection program's data processing. These VBScripts run to process the collected data as the PC receives the data. These scripts are optional.

Types of Data Processing Scripts

There are several scripts that can be used. Each runs at a different time during the download process. To select the script to edit, use the *Edit Script* dropdown box. The script code can then be edited in the editing window below.



Before Uploading

This script runs once before any files are uploaded to the terminal from the PC. This script could be use to copy support or validation files, start a validation file generation process in Host software, or any other task that needs to be accomplished before uploading to the terminal. Note that this script runs before any automatic Validation File or Index File generation.

After Uploading

This script runs once after all of the files have been uploaded to the Terminal from the PC. This script could be used to clean up any files that were sent to the terminal, or any other task that should happen after the Upload process.

Before Downloading

This script runs once before the data is downloaded from the Terminal to the PC. This script could be used to prepare a download directory, or perform any other task that should be done before the data is downloaded from the Terminal.

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Before Processing Data

This script runs once after the collected data is received, but before processing. This would typically be a script that would open connections to existing databases or perform other set-up tasks.

For Each Record

This script runs for each record before the native **IT*Script*Net** processing occurs. This script usually contains the bulk of the processing logic. The logic of the script could be complex enough to update several tables based on the data content or could tap into existing business logic.

After Processing Data

This script runs once after all records have been processed and often is used to send messages to the user, close database connections, or perform any other final tasks before processing is considered complete.

Accessing the Collected Data from the Scripts

The collected data is available to the **For Each Record** script in a pre-defined collection named **ResponseList**, keyed by the Prompt Name for single prompts and by “Prompt.Element” for Multi-Prompts. For example, if you have a single prompt named "Prompt1", you can access the data collected for that prompt by using **ResponseList("Prompt1**"). If you have a Multi-Prompt named “Prompt2” that has an element named “ElementA”, you can access the data collected for that element by using **ResponseList("Prompt2.ElementA**"). You may make changes to the collected data and save those changes back to the **ResponseList**. Changes made in this way will be saved in the collected data file. Any collected data fields that are not modified will be saved as they were collected. See the Script Sample for an example.

Note that the ResponseList is only available in the *For Each Record* script.

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Passing Objects Between Scripts

You can pass objects (such as Database Connections, Recordsets, or COM Objects) between the scripts using the predefined collection named **ObjList**. This collection is keyed by a name you specify. For example, you could store a database connection as **ObjList("Connection").** The **ObjList** retains the objects placed into it from one script to the next. See the Script Sample for an example.

Note that the ObjList is only available in the *Before Processing Data, For Each Record,* and *After Processing Data* scripts.

Skipping Records

You can force a record to be skipped and not placed in the collected data file. To do this, set the pre-defined variable named **ProcessRecord = 0**. This will cause the data record to be skipped as though it had not been collected.

Sample Script

The following is a sample script using the Download scripts:

Before Processing Script:

```
set adoConn = CreateObject("ADODB.Connection")
adoConn.Open "DSN=Function"
Set adoRS = CreateObject("ADODB.Recordset")
adoRS.Open "select * from function where ID = -1", adoConn, 3, 3
set ObjList("Conn") = adoConn
set ObjList("RS") = adoRS
```

The script creates and opens a database connection an empty recordset, then stores them in the ObjList so they will be available to the other scripts.

For Each Record Script:

```
set adoRS = ObjList("RS")
adoRS.AddNew
adoRS.Fields("PrePrompt") = ResponseList("preprompt")
strDate = trim(ResponseList("timestamp"))
adoRS.Fields("RealDate") = mid(strDate,5,2) & "/" & mid(strDate,7,2) &
"/" & left(strDate,4) & " " & mid(strDate, 9, 2) & ":" & mid(strDate,
11,2) & ":" & mid(strDate,13,2)
ResponseList("Alias") = "NewTerm"
adoRS.Update
```

This script is run once for each record. The recordset is retrieved from the ObjList, then the data for the fields is read from the ResponseList. In this sample, the timestamp field is reformatted and the alias is changed. Note that you can change the data and assign it back to the ResponseList.

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The changed data will be processed as though the terminal operator had collected it. The other fields in ResponseList are saved unchanged.

After Processing Script:

```
set adoConn = ObjList("Conn")
set adoRS = ObjList("RS")
adoRS.Close
adoConn.Close
set adoRS = nothing
set adoConn = nothing
```

This script cleans up by closing the recordset and database connection.

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File Menu

New / New Program Wizard

The first two menu items under the File main menu item will create new data collection programs. The *New* menu item will create a blank program with one prompt. You can also create a new program by clicking on the *New Program Wizard* menu item, which will walk you through the process of quickly creating a program using the New Program Wizard. The wizard is a great way to create a simple program or to form the basis for a more complicated program. It is also a good way for users who are new to **IT*Script*Net** to become familiar with prompts and their properties.

Open

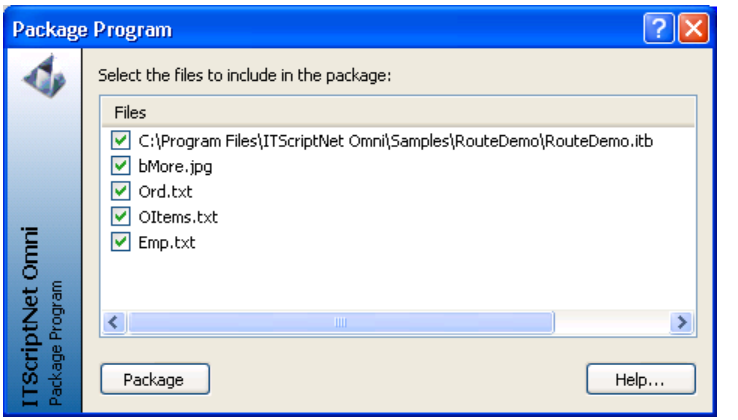
The *Open* menu item will allow you to open an **IT*Script*Net** program. A standard Windows file open screen will assist you in browsing for the file you wish to open. **IT*Script*Net** programs use an .ITB file extension.

Save / Save As

The *Save* menu item will save the **IT*Script*Net** program that you are working on to a file. The file will be saved to the drive, folder, and file name that you opened. The *Save As…* will open the standard Windows save screen, which will allow you to save the program to any drive or file name that you wish.

Package Program

This option is used to create a ZIP file containing the data collection program and all of the support and validation files. This is useful when you need to send a complete set of files to another location. You can package the program and email it or burn it to a CD-ROM.



When you load the screen, the list shows the Data collection program and all support or validation files. Each file has a checkmark indicating that it will be included in the package. You can uncheck any files that you do not want included. Click Package to specify the filename and create the package.

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Print / Print Preview / Print Setup

The *Print* menu item will print your program's prompts in flowchart form exactly as they are displayed in the left-hand side of the main application window. The printout will also include the detailed property information for the selected prompt. **IT*Script*Net** also includes the standard Windows Print Preview feature and the *Print Setup* screen.

Recently Used Files

IT*Script*Net will track your most recently used **IT*Script*Net** programs (.ITB files) and will list them under the *File* menu. You can select one of your recent files from the menu, and the program files will be opened just as if you had used the *Open* menu item and browsed for the file. The recently used file list is a convenient shortcut for opening your files quickly.

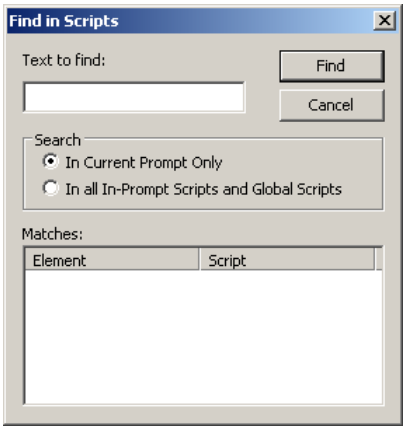
Exit

Selecting the *Exit* menu item will close **IT*Script*Net**. Make sure any changes have been saved before exiting.

Edit Menu

Cut / Copy / Paste

These menu items will allow you to cut or copy and then paste prompts as described in the Prompting Sequence section of this User Guide.



Find

The *Find* menu item allows you to search your in-prompt scripts for a specific word or phrase. You can choose to search in the current prompt only, or search in all prompts. If the word or phrase is found, the matching scripts will be displayed in the *Matches* list at the bottom of the dialog box. You can double-click one of these entries to edit the script.

Properties

The *Properties* menu item will display the *Prompt Settings* screen for the selected prompt. Refer to the Prompt Settings section of this User Guide for a complete description of each prompt setting available in **IT*Script*Net**.

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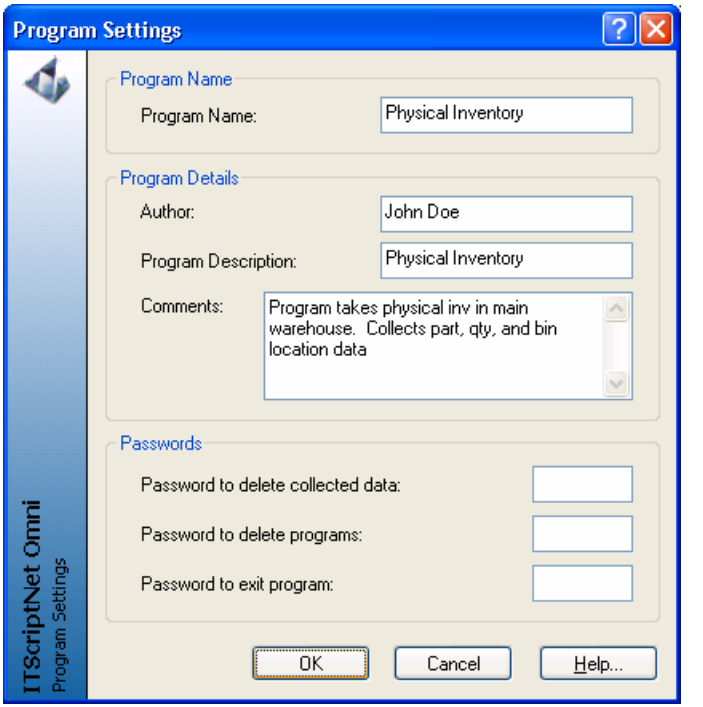
Program Menu

The *Program* menu has options to allow you to control options global to the entire program.

Program Settings

The *Program Settings* screen allows you to set your data collection program's name, additional information, and associated passwords.



Program Name

This field allows you to set the name that will be displayed on the terminal when selecting a data collection program from the list of programs on the terminal. If you leave this field blank, it will be defaulted to the same name as the program file.

Program Details

The Program Details allow you to enter some additional information about your program. These fields are all optional.

Author

This program detail allows you to record the author of the data collection program.

Program Description

The Program Description field is used to store a short description of the data collection program.

Comments

The comments field is a place to record notes about the data collection program to describe its purpose, revision history, etc.

Passwords

There are several passwords that can be assigned to a data collection program to add security to sensitive program functions. None of the passwords are required. They are optional security measures.

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Password to Delete Collected Data

You may specify a password that must be entered on the terminal in order to delete the collected data file. This password is only effective when selecting the *Delete Data* menu option on the terminal. The data may be deleted after using the *Send Data to PC* option without the password. If no password is specified, any user can delete the data.

Password to Delete Programs

You may specify a password that must be entered on the terminal in order to delete a program using the *Delete Program* menu. If no password is specified, any user can delete the program. Because **IT*Script*Net** supports multiple data collection programs on a given terminal, the operator must specifically delete a program from the terminal if it is no longer used. Deleting the unused data collection program from the terminal will keep the terminal's resources free for other data collection programs or data files.

Password to Exit Program

The last password option is that you can specify a password that must be entered on the terminal in order to exit this program's data collection. This means that a user that does not have this password will not be able to get back to the **IT*Script*Net** main menu.

Configure Receive

This menu item will display the screen that allows you to configure what **IT*Script*Net** will do with the collected data after it retrieves the data from the terminal. A complete description of this menu item's screen can be found in the *Configure Receive* section of this User Guide.

Validation Files

An **IT*Script*Net** data collection program can use multiple validation files. Validation files are used so that responses to prompts can be validated against a set of data to determine if the response is acceptable. Use of validation files helps assure that the data collected is accurate. Each validation file to be used to validate data for a prompt within a program must be defined for the program on the *Validation Files* screen. A complete description of this menu item's screen can be found in this User Guide in the *Configuring Validation Files* section.

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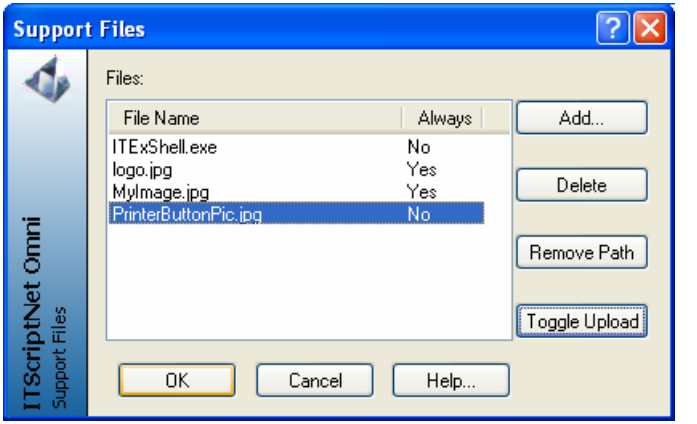
Support Files

The *Support Files* screen lists additional files that will be sent to the Portable Terminal along with the program and validation files. This allows Image files, Shell programs, or other required files to be sent with the **IT*Script*Net** program to the terminal.



File List

The File List shows the full path to any supporting files that will be sent to the terminal any time the data collection program is sent to the terminal. Note: If you are using a DOS-based terminal make sure that all supporting file names are Short names that fit the 8.3 naming convention.

Add and Delete

Click the **Add** button to add a new supporting file to the list. When you click the **Add** button you will be able to browse for the support file that you wish to add. Click the **Delete** button to delete the selected supporting file from the list.

Remove Path

The **Remove Path** button will strip the path from the file name. If the path is removed, **IT*Script*Net** must be able to locate the supporting file in the same directory as the data collection program (.itb file). It is often useful to remove the paths from the support files and keep the supporting files in the same directory as the .itb file so that if the files are moved they can be moved together without the need to reset the paths on each supporting file. The capability to have no paths specified also makes the solution easier to deploy.

Toggle Upload

The **Toggle Upload** button will change the value of the 'Always' column for the selected support file in the list. If the value in the 'Always' column is 'Yes' then the toggle upload button will cause it to say 'No' and vice versa. When the data collection program is uploaded to the terminal, the support files normally get sent to the terminal also. If the 'Always' column is set to 'Yes' then the support file will always be sent with the data collection program. If the column is set to 'No', then the user's options selected on the upload screen will determine if the file gets sent. The purpose behind this feature is to minimize upload time for programs that have many or large supporting files. Often support files that are images or .WAV files would not change, but the program may be frequently uploaded in order to maintain current dynamic validation files. The toggle upload feature will allow the user to minimize the upload time by sending only those support files marked as 'Always'.

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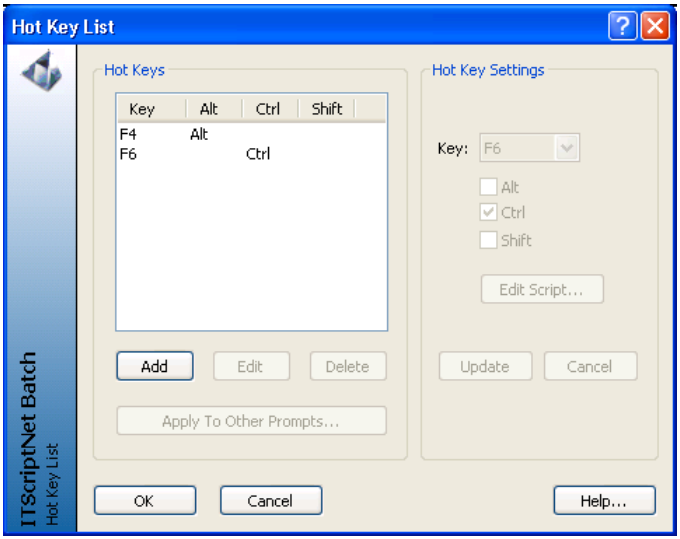
HotKey Editor

IT*Script*Net supports executing a script in response to a Hotkey press. This key can be in combination with the Ctrl, Alt, or Shift keys. These hotkeys are supported on the WindowsCE, PocketPC terminals, and the PC Client only. DOS-based terminals do not support Hot Keys.

Hotkeys can be configured in two places: At Program Level, and at Prompt Level. When a hotkey is pressed, the client will check the Prompt settings first, and if the hotkey is not configured for that prompt, the Program configuration will be checked. This allows you to create Program level hotkeys that work on every prompt, but override them on a specific prompt if necessary.

The Hot Key List screen is used to configure the hotkeys for the program or a prompt. A Hotkey can be any Function Key from F1 to F24, or a Letter or Number key in combination with the Ctrl, Alt, or Shift keys. Function keys can be used as Hot Keys with or without Alt or Ctrl, but Letter and Number keys can only be Hot Keys in conjunction with Alt or Ctrl, and can not be used as hotkeys by themselves.



Add

Press ADD to Add a hotkey to the list. This activates the KEY dropdown box, the Alt, Ctrl, and Shift checkboxes, and the Edit Script button. Select the desired Function key and options, and press Edit Script to enter the script to be executed when the Hotkey is pressed. Press Update to save the hotkey into the list, or Cancel to abort the edit.

Edit

Select a hotkey in the list and press Edit. This activates the KEY dropdown box, the Alt, Ctrl, and Shift checkboxes, and the Edit Script button. Make whatever changes you want, and press Update to save. You can also press Cancel to abort your edit.

Delete

Select a hotkey and press Delete to remove the hotkey from the list.

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Apply To Other Prompts.

This button will create a copy of the currently selected hotkey on each prompt. You can use this option when you want to have similar processing on each prompt, but do not want to use a Program level hotkey.

Key

Select the key to be used as the Hot Key. Note that Letter and Number keys also require that Alt or Ctrl be selected, but Function Keys do not.

ALT / CTRL / SHIFT

Select these check boxes to specify any modifiers to the Hot Key.

Edit Script

While configuring a Hot Key, you can use this button to write the script to be executed when the hotkey is pressed. This brings up the standard In-Prompt Script Editor screen.

Update

Press this button to save your changes to the Hot Key back into the list.

Cancel

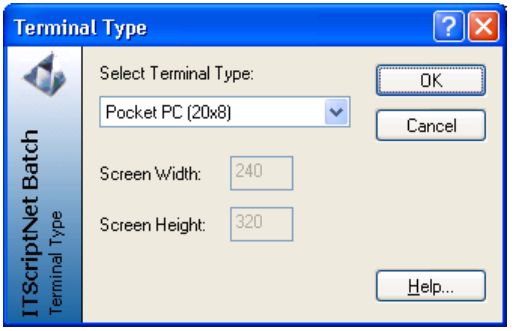
This button cancels your changes and exits the Edit mode.

Terminal Menu

The *Terminal* menu contains the features that control how the program interfaces to the actual data collection terminals.

Select Terminal

The *Select Terminal* menu item will bring up the *Terminal Type* screen. This screen sets the data collection terminal for which you are designing the program. The supported terminals are listed in the drop-down selection list. Select the type of terminal that you have and click OK to configure your program to use the selected terminal. Selecting the type of data collection terminal lets **IT*Script*Net** know how to configure the program for your terminal including



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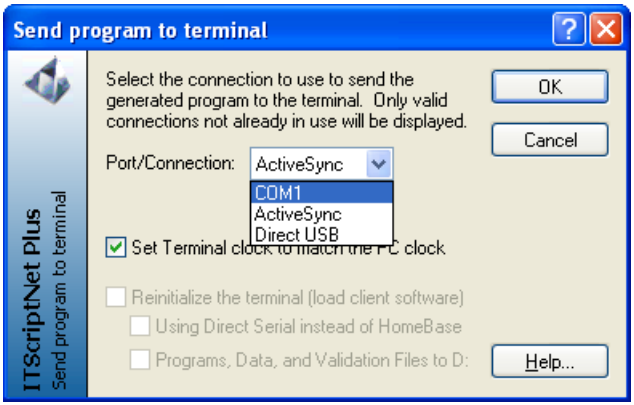
setting the display for the proper terminal screen size and whether or not to enable image capture features.

If your device supports a variable screen size, for example the PC Client, the Screen Width and Screen Height controls will be active, and will allow you to change the size of the data collection program main window. If your terminal has a fixed screen size, then these controls will be set to their default values and disabled.

Send Program to Terminal

When you have finished designing your data collection solution, it is time to send your program to the portable terminal. Select the *Send Program to Terminal* menu item.

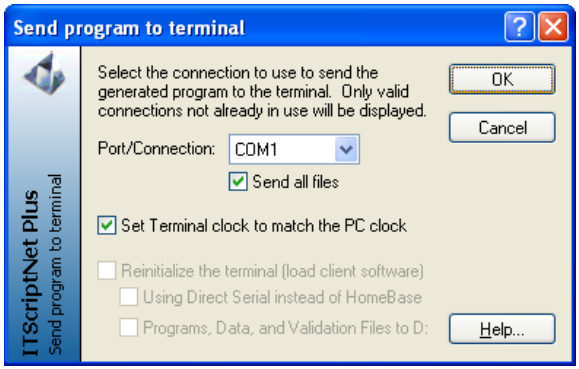


Port/Connection

You must specify which port or connection to use to connect to your terminal from the options available to you, which will depend on your terminal type, the available ports on your PC, and which **IT*Script*Net** edition you are using. The available ports or connections will be displayed in the drop-down list. The COM and USB ports are physical ports on the PC whereas the Microsoft ActiveSync Connection will use an existing ActiveSync link to a terminal. ActiveSync itself has options that specify the port within ActiveSync. The RF connection option will use a wireless LAN connection to the terminal and is only an option available in the **IT*Script*Net OMNI** package. Regardless of the port/connection selected, the terminal must be configured to match. Refer to the terminal section for your terminal for more details on configuring the terminal for communication. Note that for serial communications, the baud rate and communication settings are not configurable – they will be set to the factory default settings that come set in the terminal.

Send All Files

By default, the Send All Files option will be checked so that the upload will send the data collection program, its validation files, and all supporting files to the terminal. However, not all support files always need to be sent. The *Support Files* screen allows the program designer to designate which support files should always be uploaded with the data collection program.



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Set Terminal Clock

There is an option to send the date and time to the client terminal. The clock option defaults to 'on' so that the terminal's clock is kept up-to-date. This is important for data collection since the date and time of each record is recorded. This option can be unchecked to not send the date and time, if desired.

Reinitialize (Load Terminal Client)

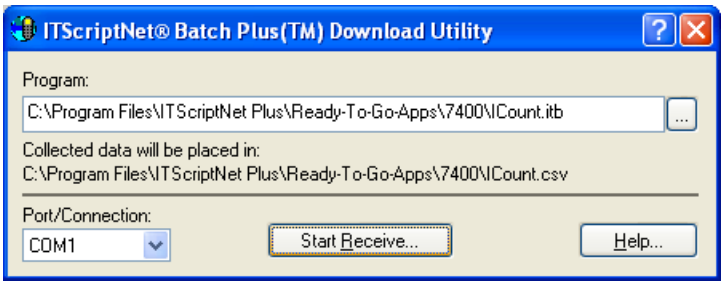
When sending your program to an **IT*Script*Net** supported DOS terminal, you can enable the option to reinitialize the terminal in addition to sending your data collection program. Reinitializing the terminal will send the **IT*Script*Net** Client software to the terminal in addition to your data collection program. **IT*Script*Net** Client software is a program that runs on the terminal and works with your data collection program to prompt the user, collect responses, and collect and store the data. You must enable the 'Reinitialize Terminal' option the first time that you send your program to the terminal in order to load the **IT*Script*Net** Client Software. After the first time, it will generally not be necessary to reinitialize the terminal unless you need to install an upgrade for the **IT*Script*Net** Client Software. Only the DOS terminals have the Reinitialize option. The Windows CE-based devices and the Pocket PC devices require that you load the client software through ActiveSync, so it is not an option when sending data to those terminals. Please see the section in this User Guide for your terminal for more specific information.

OK

Click on the **OK** button to begin the process of sending your program. You will need to follow the directions on your screen, as the upload procedure is specific to each type of terminal. For more help, please see the section in this User Guide for your specific type of terminal.

Receive a File from the Terminal

After data has been collected, you will need to retrieve the data from the terminal. Select the *Receive a File from the Terminal* menu item from the *Terminal* main menu item.



Program

You must specify the name of the program whose data you wish to retrieve. This will be filled in automatically with the name of the current program. With **IT*Script*Net** you can have several data collection programs loaded into the terminal at the same time, so it is necessary to specify from

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which of the data collection programs you wish to retrieve data. The receive screen will display the location where it will place the collected data file.

Port/Connection

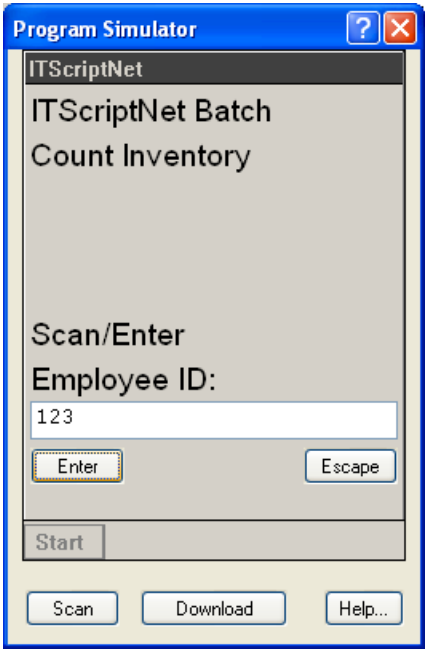
You must also specify which port or connection to use to connect to your terminal from the options available to you. The available ports or connections will be displayed in the drop-down list. The options available will depend on your terminal type and the available ports on your PC. The COM and USB ports are physical ports on the PC whereas the Microsoft ActiveSync Connection will use an existing ActiveSync link to a terminal. ActiveSync itself has options that specify the port within ActiveSync. The RF connection option will use a wireless LAN connection to the terminal and therefore is only an option available in the **IT*Script*Net OMNI** package. Regardless of the port/connection selected, the terminal must be configured to match. Refer to the terminal section for your terminal for more details on configuring the terminal for communication.

Start Receive

When you are ready, click the **Start Receive…** button to begin the process of retrieving your data. You will need to follow the directions on your screen, as the download procedure is unique to each kind of terminal. For more help, please see the section in this User Guide for your specific type of terminal.

Simulator

After creating a data collection program, it is a good idea to use the simulator. This will allow you to review the prompts so that you can easily identify any changes you wish to make. It is easier and faster to test your program from the simulator screen than it is to test with the portable terminal.



You can start the simulator by clicking on the *Simulate* menu item found under the *Terminal* main menu item, or by clicking on the simulate icon on the toolbar.

The display of the simulator accurately reproduces the terminal screen. The simulator will display each prompt and will use the prompt's settings to emulate how the program will operate once it is sent to the terminal.

For single prompts, click the **Enter** button to simulate the user pressing the ENTER button on the terminal. The **Escape** button will simulate the terminal's ESCAPE key. For Multi-Prompts (available in the Plus and OMNI packages), the program designer must include buttons or other means for the user to advance from one prompt to the next.

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To simulate a scan, press the **Scan** button. This displays the Scan Simulator screen, which allows you to select a barcode symbology and enter the data. This simulates a barcode scan and returns the data along with the symbology to the simulator.

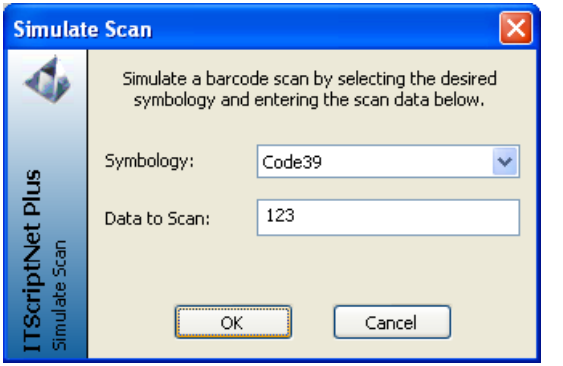

Image capture or text capture prompts will display a message box as a placeholder in the simulator.

The **Download** button will simulate the process of retrieving the data from the terminal by taking the data entered in the simulator and performing the defined procedure with the data. If the program is configured to create a text file, the simulator will create a text file. If the program is configured to append data into an Access table, the simulator will do the same. The simulator thus reviews and tests not only the data collection process, but will review and test the data processing also. The simulator will allow you to run trial end-to-end tests of your data collection solution.

Prompts Menu

The *Prompts* menu has options to allow you to control how your prompts will be displayed and has access to the *Properties* for each of your prompts in your data collection program. Each of these menu items is described in more detail in the *Single-Prompt* and *Multi-Prompt* sections of this User Guide.

Insert Before / Insert After

These options insert a new prompt before (or after) the currently selected prompt.

Remove

This option removes the currently selected prompt.

Move Up / Move Down

This option changes the sequence of the prompts by swapping the selected prompt with the one above it for *Move Up*, or with the one below it for *Move Down*.

Properties

The *Properties* menu item under the *Prompts* main menu item is another means of accessing the *Prompt Settings* screen.

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View Menu

The items in the view menu control aspects of the **IT*Script*Net** design environment.

Advanced

When the *Advanced* menu option is enabled (with a checkmark) the main application window will display the selected prompt's settings and advanced settings. If the Advanced feature is not checked (disabled), the advanced prompt settings will not be displayed.

Side Banners

This option toggles the descriptive side banners along the left edge of each screen. These banners display the screen name as well as the software edition. You can turn the banners on or off with this option.

Toolbar

This menu option will toggle the toolbar on and off. The default is to show the toolbar.

Status Bar

This menu option will toggle the status bar on and off. The default is to show the status bar.

Script Tree

This option toggles the Script Tree view on the main screen. The script tree shows the prompts, elements, and In-Prompt scripts used in the data collection program. It is a compact and very useful view of the data collection program. More information about the Script Tree can be found in both the *Single-Prompt* and *Multi-Prompt* sections of this User Guide.

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Language Support

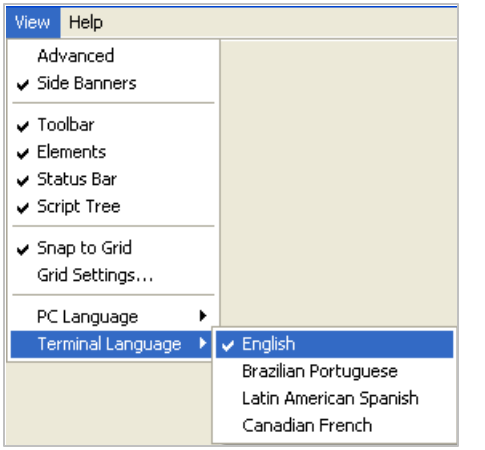
IT*Script*Net supports multiple languages on the handheld terminals. This allows you to change the language of the menus and error messages that your terminal operators will see. At this time, all PC programs are in English.

Changing the Terminal Language

Each PC program has a menu selection to change the terminal language. The language selection is saved so each time you open the program the language setting is retained.

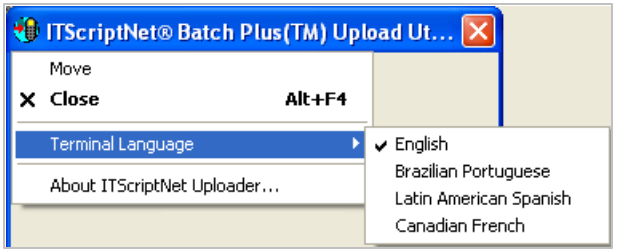
Generator

The **IT*Script*Net** generator has a language selection option on the View menu.



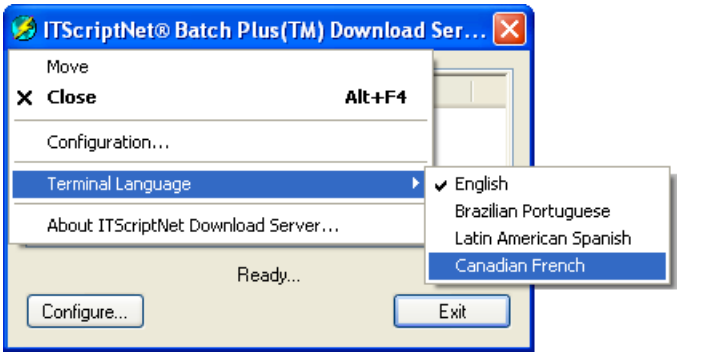
Upload Utility

The **IT*Script*Net** Upload Utility has a language selection option on the System Menu.



Autodownload Utility

The Autodownload utility has a language selection option on the System Menu.



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Terminal Support for Languages

When you upload a program to the terminal from the PC, the language file for the selected language will be sent to the terminal. You may need to reboot the terminal or exit and restart the **IT*Script*Net** client for the language changes to take affect.

All menus, error messages, and configuration screens will be displayed in the selected language. The prompts in your **IT*Script*Net** programs will not be changed, so you will need to design your programs in the language you want the terminal operator to see.

The Language files are installed into the terminal-specific subdirectories under the main **IT*Script*Net** program directory. The terminal language files have a file extension that corresponds to the ISO 3 letter code for the language. When an ITB is sent to the terminal, the correct language file is renamed to a BIN file and sent to the terminal.

The language for the terminal is determined only by the terminal language selection described in this section. The design of the data collection program (ITB file) does not determine the terminal language.

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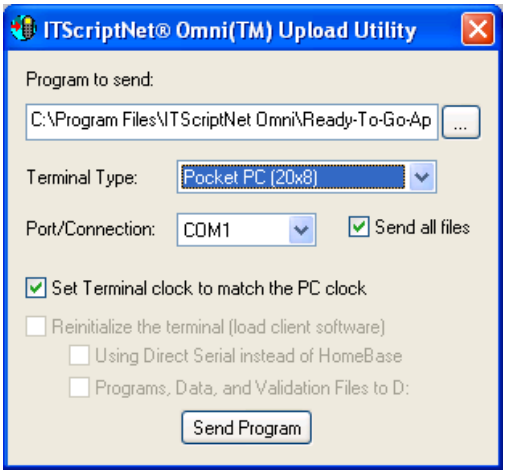
Upload Utility

The *Upload Utility* can be used to load a program in the terminal.



Program to Send

Select the program to send using the '**...**' button or by typing the file name in the box.

Terminal Type

Select the correct Terminal Type to match the portable data collection terminal you are using.

Port/Connection

You must specify which port or connection to use to connect to your terminal from the options available to you. The options available will depend on your terminal type, the available ports on your PC, and which edition of **IT*Script*Net** that you have. The available ports or connections will be displayed in the drop-down list. The COM and USB ports are physical ports on the PC. The Microsoft ActiveSync Connection will use an existing ActiveSync link to a terminal. ActiveSync itself has options that specify the port within ActiveSync. The RF connection option will use a wireless LAN connection to the terminal and therefore is only an option available in the **IT*Script*Net OMNI** package. Regardless of the port/connection selected, the terminal must be configured to match. Refer to the terminal section for your terminal for more details on configuring the terminal for communication. Note that for serial communications, the baud rate and communication settings are not configurable – they will be set to the factory default settings that come set in the terminal.

Send All Files

By default, the Send All Files option will be checked so that the upload will send the data collection program, its validation files, and all supporting files to the terminal. However, not all support files always need to be sent. The *Support Files* screen in the Generator application allows the program designer to designate which support files should always be uploaded with the data collection program.

Set Terminal Clock

There is an option to send the date and time to the client terminal. The clock option defaults to 'on' so that the client terminal's clock is kept up-to-date. This is important for data collection since the date and time of each data collection record is recorded. This option can be unchecked to not send the date and time, if desired.

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Reinitialize (Load Terminal Client)

When sending your program to an **IT*Script*Net** supported DOS terminal, you can enable the option to reinitialize the terminal in addition to sending your data collection program. Reinitializing the terminal will send the **IT*Script*Net** Client software to the terminal in addition to your data collection program. **IT*Script*Net** Client software is a program that runs on the terminal and works with your data collection program to prompt the user, collect responses, and collect and store the data. You must enable the 'Reinitialize Terminal' option the first time that you send your program to the terminal in order to load the **IT*Script*Net** Client Software. After the first time, it will generally not be necessary to reinitialize the terminal unless you need to install an upgrade for the **IT*Script*Net** Client Software. Only the DOS terminals have the Reinitialize option. The Windows CE-based devices and the Pocket PC devices require that you load the client software through ActiveSync, so it is not an option when sending data to the terminal. Please see the section in this User Guide for your type of terminal for more specific information.

Send Program

Click on the **Send Program** button to begin the process of sending your program. You will need to follow the directions on your screen, as the upload procedure is specific to each terminal type. You can create a shortcut to this utility and specify the name of the ITB file as the command line parameter. This will automatically fill the *Program To Send* field with the name of the ITB file you want to send.

Command Line Parameters

There is a command line parameter that you can use to generate validation files and index files without uploading the data to the portable terminal. The command line takes the format

ITBatchULxxxx /Vy <filename.itb>

Where xxxx indicates the edition of the software, and Vy is one of the following:

/VU	Generate validation files marked as 'On Every Upload'
/VM	Generate validation files marked as 'Manual'
/VA	Generate validation files marked as 'On Every Upload' or 'Manual'
/V	Same as /VA

After each file is generated, index files will also be created, as specified by the Index File Autogeneration setting. After the files are generated, the Upload Utility exits.

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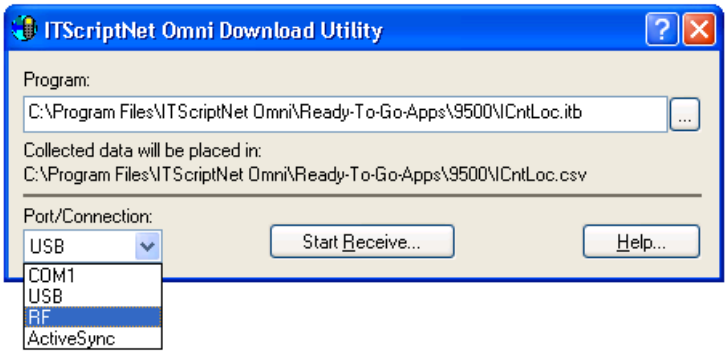
Download Utility

The Receive Data (Download) Utility may be used to retrieve data from the terminal.

Program



You must specify the name of the program whose data you wish to retrieve. Note that the receive screen will display the location where it will place the collected data file. You can also create a shortcut to this utility and specify the name of the ITB file as the command line parameter. This will automatically fill the *Program* field with the name of the ITB file you want to retrieve. Creating a shortcut such that the user does not have to browse for the data collection program will save a user some time when downloading data.

Port/Connection

You must also specify which port or connection to use to connect to your terminal from the options available to you. The available ports or connections will be displayed in the drop-down list. The options available will depend on your terminal type and the available ports on your PC. The COM and USB ports are physical ports on the PC whereas the Microsoft ActiveSync Connection will use an existing ActiveSync link to a terminal. ActiveSync itself has options that specify the port within ActiveSync. The RF connection option will use a wireless LAN connection to the terminal and therefore is only an option available in the **IT*Script*Net OMNI** package. Regardless of the port/connection selected, the terminal must be configured to match. Refer to the terminal section for your terminal for more details on configuring the terminal for communication.

Start Receive

When you are ready, click the **Start Receive…** button to begin the process of retrieving your data. You will need to follow the directions on your screen, as the download procedure is unique to each kind of terminal. For more help, please see the section in this User Guide for your specific type of terminal.

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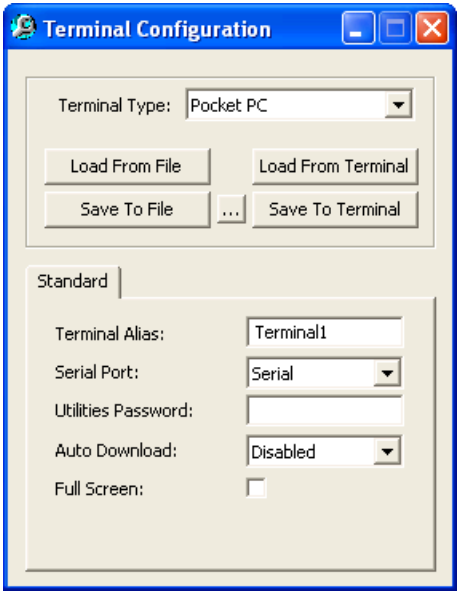
Terminal Configuration Utility

The Terminal Configuration utility is used to manage the configuration of terminals from the PC.

Terminal



Terminal Type

Select the type of terminal to configure. This determines the communications methods available and the default filename of the configuration file.

Load From File

This button allows you to browse for a copy of the terminal configuration file on the PC and load it. This can be used to store a standard configuration that is applied to multiple terminals.

Save To File

This button allows you to save the current configuration to a disk file on the PC. This can be used to store a standard configuration to be applied to multiple terminals.

Load From Terminal

This option attempts to load the configuration directly from the terminal. If the terminal is a Windows CE or PocketPC device, you must establish an ActiveSync connection to the terminal first, and then this utility will use RAPI to connect directly to the terminal and load the configuration. If the terminal is DOS based, this option uses YModem to transfer the configuration file from the terminal.

Save To Terminal

This option attempts to save the configuration directly to the terminal. If the terminal is a Windows CE or PocketPC device, you must establish an ActiveSync connection to the terminal first, and then this utility will use RAPI to connect directly to the terminal and save the configuration. If the terminal is DOS based, this option uses YModem to transfer the configuration file to the terminal. Note: Changes will not take effect on the terminal until the client software is restarted.

[...]

This option sets the configuration filename on the terminal. You would not normally need to change this, as the utility sets it automatically when you select the terminal type. However, if you installed the client into a different directory than the default, you can use this option to change the path to the configuration file.

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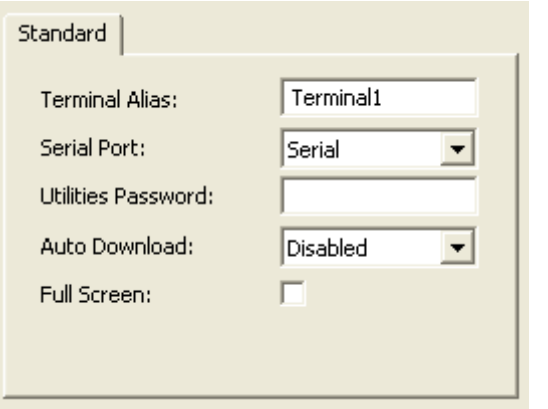
Standard Tab



Terminal Alias

This is the alias for the terminal that is saved in the collected data records. If you leave this field blank, the terminal will construct an alias. See the terminal section of this User Guide for details on this setting.

Serial Port

This option allows you to select the communications port that the terminal will use for upload and download. The options available here will depend on the terminal type selected.

Utilities Password

This option sets a password that the terminal operator must enter to access the utilities menu or exit the client software.

Full Screen

On Windows CE and PocketPC devices, this option sets the client into full screen mode. For more information on this setting, see the terminal specific section of this User Guide.

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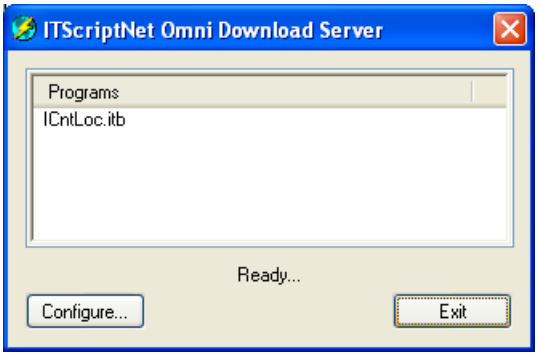
Using Auto-Download

IT*Script*Net supports an auto-download feature that simplifies retrieving data from the portable terminal for programs in manual data collection mode. Using Auto-Download, the operator simply places the portable terminal in the Homebase, and the data will be retrieved automatically. The user does not have to select any menu items or click any buttons. All of the data processing that would normally be performed by the download utility will still be done. You can also configure the auto-download utility to resend the program and any validation files and/or support files back to the terminal after the data has been retrieved. This allows you to keep your data files current on the terminal without having to manually upload them.

You can also configure Auto-download so that the data does not download immediately when the terminal is placed in the cradle, but when the operator selects Send Data to PC from the terminal Main Menu. The operator does not need to do anything at the PC. See the section on Manual Downloading for more details.

In order for a data collection program to auto-download, the **Download Server** (from the **IT*Script* Net** Programs group on the PC) must be configured to perform auto-download for that data collection program, and the terminal must be configured to select the auto-download port. When the portable terminal is placed in the Homebase, the terminal and the Download Server exchange information about which programs have collected data and which programs are allowed to auto-download. This allows you to permit certain programs to use this feature while excluding others.

Normally, after downloading data, the terminal will prompt the user to ask whether the collected data can be deleted. During autodownload, however, the collected data will normally be deleted from the terminal automatically without a prompt to the user. This default behavior is intended to minimize the amount of user intervention required. If it is desirable to have the user be prompted prior to the data being deleted from the terminal after the autodownload, there is an option on the *Configure Receive* screen in the Generator Application that can turn on the prompt before deleting.



The Download Server runs as a Task Tray icon, so it can run in the background on your PC. However, when the data is being downloaded, the download status screen is displayed. When the program is running in the Task Tray, you can double-click its icon to bring up the main screen again. Clicking the X button on the screen minimizes the Download Server to the Task Tray but does not exit. To completely exit the Download Server, you must click the **Exit** button on the Download Server main screen. Only one instance of the download server should be running at a time.

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The main screen for the Download Server is shown. Any program that has been configured for Auto-Download will be listed.

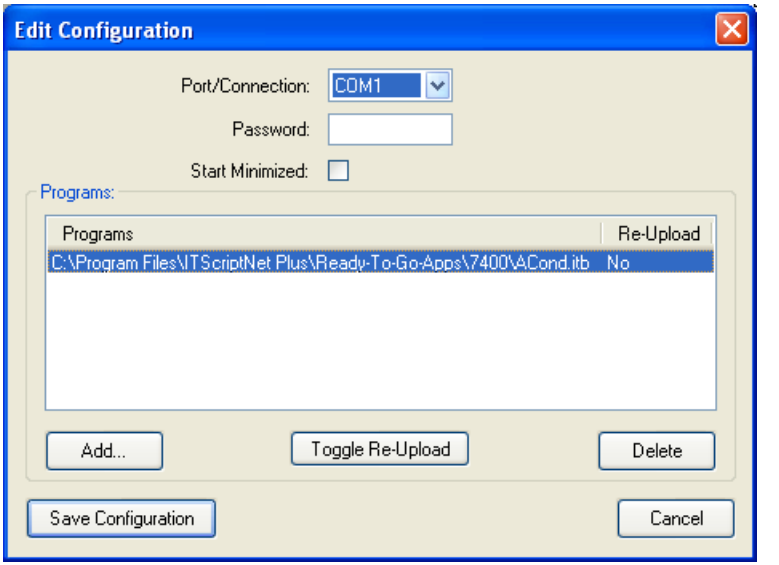
Exit

Click Exit to completely shutdown the Download Server. No data will be downloaded once you exit the Download Server.

Configure Auto-Download

This button brings up the *Edit Configuration* screen. This screen is used to determine which programs can use auto-download. Use the **Add** and **Delete** buttons to add or remove programs from the auto-download list.

Each program in the auto-download list is configured separately to Re-Upload. Select a program from the list and click the **Toggle Re-Upload** button to change the Re-Upload state from No to Yes. If Re-Upload is set to Yes, the program and its associated files (validation files, index files, support files, etc.) will be resent to the terminal after the data is downloaded and processed. The Re-Upload feature can be used to keep the data collection program and the validation files up-to-date.



The Port/Connection drop-down is used to select the serial port or USB port from your PC to your terminal's docking cradle. The port you select must not be in use by any other program or the Download Server will report an error. Auto-download can use Serial ports, Direct USB, or ActiveSync.

The Password field allows you to specify a password that must be entered by anyone who clicks the **Configuration** button or attempts to Exit the Download Server. If the password field is left blank, no password prompt will be displayed.

Click the **Save Configuration** button to save your changes, or click **Cancel** to exit without saving.

Configure the Terminal

The terminal must be configured to allow Auto-downloading and must match the port/connection specified in the Download Server. Please refer to the terminal-specific user guide for the terminal

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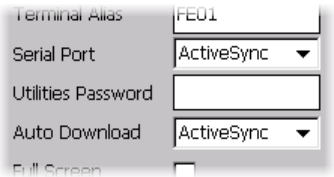
type you are using. You will need to use the client configuration screen to select the port to use for Auto-download.

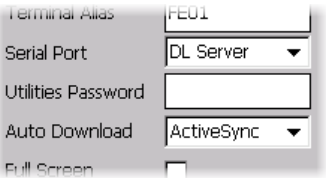
There are two communications port selections on the client configuration screen. The Serial Port is used to select the communications method used for normal upload / download with the Upload or Download utilities. The Auto Download port is used to select the communications method to use with the Auto Download Server. The exception is the DL Server selection for Serial Port, which is used to control automatic or manual downloads.

Automatic Downloading



To enable automatic downloading, the Auto Download serial port must be set to the communications method you are using. The Serial Port can be any setting except DL Server. In this case, the terminal will automatically try to connect to the Auto Download server as soon as it is placed in the cradle, using the port specified in the Auto Download setting. You will still be able to communicate manually with the upload and download utilities.

Manual Downloading



To enable manual downloading using the Auto-Download server, the Auto Download serial port must be set to the communications method you are using. The Serial Port must be set to DL Server. When you place the terminal in the cradle, it will not automatically try to connect to the Auto Download server. You can use the LoadProgram or SendData to PC buttons to manually start the communications. You can also use the *Load Program* or *DownloadData* script functions to initiate communications. With this configuration, you can not use the standard upload / download utilities to communicate with the terminal.

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String Functions

Exact

Syntax:	Exact(<String1> , <String2>)
Parameters:	
<String1>	The first string to test
<String2>	The second string to test
Returns:	Returns 1 if <string1> exactly matches <string2> (except for case), returns 0 otherwise.
Examples:	Exact(@MyString@,"Hello") = 1 if @MyString@ is a variable with the value of "Hello"
Notes:	The string comparison is case insensitive.

InStr

Syntax:	InStr(<Start>, <String> , <SearchFor>, <CaseSensitive>)
Parameters:	
<Start>	Starting position to search <String>. The first character is position 1.
<String>	The string to search
<SearchFor>	The string to search for within <String>
<CaseSensitive>	1 to perform a case-sensitive search; 0 ignores case
Returns:	Returns the position of the first match from the start position of the first character in the SearchFor string. Returns 0 if SearchFor string is not found.
Examples:	InStr(1,"Hello World",”o",1) returns 5.
Notes:	Locates the string <SearchFor> within <String>. If found, the position of the first character of the matching string is returned.

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InStrRev

Syntax:	InStrRev(<Start>, <String> , <SearchFor>, <CaseSensitive>)
Parameters:	
<Start>	The character position to start searching from
<String>	The string to search
<SearchFor>	The string to search for within <String>
<CaseSensitive>	Whether to perform a case-sensitive search
Returns:	The character position of the first character of the matching string in <String>.
Examples:	InStrRev(1,"Hello World","o",1) returns 8
Notes:	Same as InStr, but the search works from right to left. The search always starts from the right end of the string, but stops searching at <Start>.

IsNumeric

Syntax:	IsNumeric(<Expression>)
Parameters:	
<Expression>	A string containing the characters to be tested.
Returns:	Returns 1 (same as TRUE) if the expression is numeric (contains no alpha characters), else 0 (same as FALSE).
Examples:	IsNumeric("7") returns TRUE
Notes:	The digits 0 - 9 and '.' are considered numeric. Leading plus or minus signs are allowed. Everything else causes a FALSE return.

LCase

Syntax:	LCase(<String>)
Parameters:	
<String>	The string to be converted to lowercase
Returns:	Returns <String> converted to all lowercase
Examples:	LCase("Hello") returns "hello".
Notes:	All alphabetic characters are converted to lowercase. Numeric and punctuation characters are not changed.

Left

Syntax:	Left(<String> , <Num>)
Parameters:	
<String>	The string from which the characters should be returned
<Num>	The number of characters to be returned
Returns:	Returns a substring of <String> containing the left <Num> number of characters.
Examples:	Left("Hello",2) returns "He"
Notes:	The <String> parameter may be a string or numeric expression.

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Len

Syntax:	Len(<String>)
Parameters:	
<String>	The string whose length is to be calculated.
Returns:	Returns the number of characters in <String>.
Examples:	Len("Hello") returns 5.
Notes:	The <String> parameter may be a string or numeric expression.

LTrim

Syntax:	LTrim(<String>)
Parameters:	
<String>	The string to trim
Returns:	Returns <String> with all leading spaces removed.
Examples:	LTrim(" Hello ") returns "Hello ".
Notes:	The <String> parameter may be a string or numeric expression.

Mid

Syntax:	Mid(<String> , <Start>, <Num>)
Parameters:	
<String>	The string from which the characters should be returned.
<Start>	The starting position within the string. The first character is position 1.
<Num>	The number of characters to return
Returns:	Returns a substring of <String> starting with the <Start> position with a length of <Num> characters.
Examples:	Mid("Hello", 2, 3) returns "ell".
Notes:	The <String> parameter may be a string or numeric expression.

Pad

Syntax:	Pad(<String>, <Length>)
Parameters:	
<String>	The string to be padded
<Length>	The number of characters of the returned string
Returns:	The <String> padded with spaces to the length <Length>
Examples:	Pad("Hello",10) returns "Hello ".
Notes:	Adds trailing spaces to force the string to be the length specified.

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Replace

Syntax:	Replace(<String>, <Replace>, <ReplaceWith>, <CaseSensitive>)
Parameters:	
<String>	The string in which replacements are to be made
<Replace>	The string to replace
<ReplaceWith>	The string to replace with
<CaseSensitive>	Whether to perform a case sensitive search
Returns:	Returns the string with <Replace> replaced with <ReplaceWith>
Examples:	Replace("ABC 123 xyz", "123", "9", 0) returns "ABC 9 xyz"
Notes:	Set <CaseSensitive> to 1 to enable case-sensitive replacement, else set it to 0 to allow replacement regardless of case. This function replaces all instances of the <Replace> string.

Rept

Syntax:	Rept(<String>, <Number>)
Parameters:	
<String>	The string to repeat
<Number>	The number of times to repeat the string
Returns:	Returns a string that contains <String> repeated <Number> times
Examples:	Rept("Hello",3) returns "HelloHelloHello"
Notes:	The parameter <String> may be string or numeric data. The <Number> parameter will be treated as an integer.

Right

Syntax:	Right(<String> , <Num>)
Parameters:	
<String>	The string from which the characters should be returned
<Num>	The number of characters to be returned
Returns:	Returns a substring of <String> containing the right <Num> of characters
Examples:	Right("Hello",2) returns "lo"
Notes:	The <String> parameter may be a string or numeric expression.

RTrim

Syntax:	RTrim(<String>)
Parameters:	
<String>	The string to be trimmed
Returns:	Returns <String> with any trailing spaces removed
Examples:	RTrim(" Hello ") returns " Hello"
Notes:	Trims trailing spaces

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Search

Syntax:	Search(<String> , <Search> , <StartPos>)
Parameters:	
<String>	The string to search
<Search>	The characters to search for
<StartPos>	The starting position within <String> to search.
Returns:	Returns the position that any character from <Search> appears within <String>, starting from <StartPos>. If no character from <Search> is found in <String>, the length of the string is returned.
Examples:	Search("Hello World", "eo", 1) returns 2.
Notes:	Searches for any one of a set of characters within a string.

Space

Syntax:	Space(<Length>)
Parameters:	
<Length>	The number of spaces to format into the string
Returns:	Returns a string containing spaces of the length specified
Examples:	Space(5) returns " "
Notes:	Creates a string of <Length> spaces

Split

Syntax:	Split(<String> , <Char>, <Result1>, <Result2>, ...)
Parameters:	
<String>	The string to split
<Char>	The character at which to split.
<Result1>	The string to receive the first substring
<Result2>	The string to receive the second substring
	You may specify any number of result strings to receive the data.
Returns:	Returns the number of strings parsed. The data will be in Result1, Result2, etc.
Examples:	Split("Hello World"," ",Result1, Result2) returns 2 and puts "Hello" in Result 1 and "World" in Result2.
Notes:	Parse the <String> at the character specified by <Char> into the result strings <Result1>, <Result2>, etc. Any number of result strings may be specified.

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SplitN

Syntax:	SplitN(<String> , <Char>, <Index>)
Parameters:	
<String>	The string to split
<Char>	The character at which to split.
<Index>	Specifies which substring to return.
Returns:	Returns the value in the <Index> position.
Examples:	SplitN("ABC!DEF!GHI","!", 2) returns "DEF".
Notes:	Parse <String> using the <Char> as the separator, returning the value in the <Index> position. The first value is referenced by <Index> 1.

StrComp

Syntax:	StrComp(<String1> , <String2>)
Parameters:	
<String1>	The first string to compare
<String2>	The second string to compare
Returns:	Returns 1 if <String1> is greater (sorts after) <String2>. Returns 0 if <String1> and <String2> match. Returns -1 if <String1> is less than (sorts before) <String2>.
Examples:	StrComp("Hello","World") returns -1
Notes:	This comparison is case-sensitive.

StrDup

Syntax:	StrDup(<Length> , <String>)
Parameters:	
<Length>	The number of times to repeat <String>
<String>	The string to be repeated
Returns:	Returns a string that contains the first character of <String> repeated <Length> times.
Examples:	StrDup(5, "Hello") returns "HHHHH"
Notes:	The <String> parameter may be a string or numeric expression.

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Subst

Syntax:	Subst(<String>, <Start>, <Length>, <Replace>)
Parameters:	
<String>	The string to replace in
<Start>	The starting position of the replacement within <string>
<Length>	The length to replace
<Replace>	The replacement string
Returns:	Returns <String> with the <Length> number of characters from the <Start> position replaced by the string in <Replace>.
Examples:	Subst("Collect Asset Data", 9, 5, "Inventory") returns "Collect Inven Data".
Notes:	Both <String> and <Replace> may be string or numeric expressions.

Text

Syntax:	Text(<Data>, <Mask>)
Parameters:	
<Data>	The source data to be formatted
<Mask>	The mask to use for formatting the text.
Returns:	Returns the data formatted according to the mask
Examples:	Text("4405551212","(???) ???-????") = "(440) 555-1212"
Notes:	The Mask character is ?. Any other character is literal. You may use the escape char: \, i.e. \? = literal ?.

Trim

Syntax:	Trim(<String>)
Parameters:	
<String>	The string to be trimmed
Returns:	The <String> with all leading and trailing spaces removed
Examples:	Trim(" Hello ") returns "Hello"
Notes:	Trims leading and trailing spaces

UCase

Syntax:	UCase(<String>)
Parameters:	
<String>	The string to be converted to uppercase
Returns:	Returns <String> will all alpha characters converted to uppercase
Examples:	UCase("Hello") returns "HELLO”.
Notes:	Converts the string to all uppercase

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Conversion Functions

Asc

Syntax:	Asc(<Char>)
Parameters:	
<Char>	A string containing the character to be converted
Returns:	Returns the ASCII character code for the first character in <Char>
Examples:	Asc("A") = 65
Notes:	Converts a character to its ASCII equivalent

Chr

Syntax:	Chr(<Num>)
Parameters:	
<Num>	Numeric value to be converted
Returns:	Returns the character associated with a specified ASCII character code
Examples:	Chr(65) = "A"
Notes:	The value of <Num> should be between 0 and 255

Format

Syntax:	Format(<Num> , <Numdecimals>, <Sep>, [thousep], [decsep])
Parameters:	
<Num>	The number to format
<Numdecimals>	How many decimal places to keep
<Sep>	Whether to use a thousands separator
[thousep]	Optional character to use as thousands separator
[decsep]	Optional character to use as decimal separator
Returns:	Returns the number as a string with the number of decimals specified
Examples:	Format(@Num@, 2, 1) = "17,345.21" where @Num@ = 17345.2142
Notes:	Set the <Sep> parameter to 1 to include ',' as the thousands separator. If <Sep> is set to 0, no separator will be used. Optionally, you can specify the Thousands separator and Decimal Separator. The default Thousands separator is ',' and the default Decimal separator is '.' if not specified.

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Val

Syntax:	Val(<String>)
Parameters:	
<String>	The string to be converted
Returns:	Returns an integer representation of the string in <String>
Examples:	Val("124a6") returns 124
Notes:	Converts the string from left to right, stopping at the first non-numeric character.

Logical Functions

And

Syntax:	AND(<Expression1> , <Expression2>)
Parameters:	
<Expression1>	Logical expression to be evaluated
<Expression2>	Logical expression to be evaluated
Returns:	Returns 1 (same asTRUE) if <Expression1> and <Expression2> are both non-zero, else 0 (same as FALSE).
Examples:	AND(IsNumeric("5"), IsNumeric("7")) returns 1 (TRUE)
Notes:	AND is a function, not an operator. The parameters should evaluate to logical expressions. Before testing, VAL() will be performed on each expression. Any non-numeric value is considered FALSE. Any non-zero Numeric value is considered TRUE. Values starting with numeric digits will be converted up to the first non-numeric character.

IIF

Syntax:	IIF(<Expression> , <Result1> , <Result2>)
Parameters:	
<Expression>	Logical expression to be evaluated
<Result1>	The expression to be returned if <Expression> is true
<Result2>	The expression to be returned if <Expression> is false
Returns:	Returns <Result1> if <Expression> is true, else returns <Result2>
Examples:	IIF(IsNumeric(@expr@),"Number","Alpha") returns "Number" if @expr@ evaluates to a numeric expression, otherwise "Alpha" is returned.
Notes:	The <Expression> should evaluate to a logical expression. Before testing, VAL() will be performed on <Expression>. Any non-numeric value is considered FALSE. Any non-zero Numeric value is considered TRUE. Values starting with numeric digits will be converted up to the first non-numeric character.

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Not

Syntax:	NOT(<Expression>)
Parameters:	
<Expression>	Logical expression to be evaluated.
Returns:	Returns 0 (same as FALSE) if <Expression> is non-zero, else 1 (same as TRUE).
Examples:	NOT(IsNumeric("5")) returns 0 (FALSE)
Notes:	NOT is a function, not an operator. The parameter should evaluate to a logical expression. Before testing, VAL() will be performed on the expression. Any non-numeric value is considered FALSE. Any non-zero Numeric value is considered TRUE. Values starting with numeric digits will be converted up to the first non-numeric character.

Or

Syntax:	OR(<Expression1>, <Expression2>)
Parameters:	
<Expression1>	Logical expression to be evaluated.
<Expression2>	Logical expression to be evaluated.
Returns:	Returns 1 (same as TRUE) if either <Expression1> or <Expression2> are non-zero, else 0 (same as FALSE).
Examples:	OR(IsNumeric("A"), IsNumeric("7")) returns TRUE
Notes:	OR is a function, not an operator. The parameters should evaluate to logical expressions. Before testing, VAL() will be performed on each expression. Any non-numeric value is considered FALSE. Any non-zero Numeric value is considered TRUE. Values starting with numeric digits will be converted up to the first non-numeric character.

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Math Functions

Abs

Syntax:	Abs(<Value>)
Parameters:	
<Value>	A numeric value to be converted
Returns:	Returns the absolute value of <Value>, ignoring sign.
Examples:	Abs(3.5) = 3.5 Abs(-3) = 3
Notes:	Conversion stops at the first non-numeric character. Numeric characters are digits, '-', and '.'

Fix

Syntax:	Fix(<Value>)
Parameters:	
<Value>	A number to be converted to an integer
Returns:	The integer portion of <Value>
Examples:	Fix(3.5) = 3, Fix(-3.8) = -3
Notes:	Removes the fractional part of <Value> and returns the resulting integer value. The largest number supported is +/- 2147483648.

Int

Syntax:	Int(<Value>)
Parameters:	
<Value>	A number to be converted to an integer
Returns:	Returns the largest integer which is less than or equal to <Value>
Examples:	Int(3.5) = 3, Int(-3.2) = -4
Notes:	Use Int when you want the number to be less than <Value>. Use Fix to truncate the fractional portion. For positive numbers, Int and Fix return the same result. For negative numbers, they do not. The largest number supported is +/- 2147483648.

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Mod

Syntax:	Mod(<Value1> , <Value2>)
Parameters:	
<Value1>	The numerator for the division.
<Value2>	The denominator for the division.
Returns:	Returns the remainder of the division of <Value1> by <Value2>
Examples:	Mod(6,2) = 0 Mod(11,3) = 2
Notes:	The expressions <Value1> and <Value2> will be converted to integer data. The conversion stops at the first non-integer character. The largest number supported is +/- 2147483648.

Quotient

Syntax:	Quotient(<Value1> , <Value2>)
Parameters:	
<Value1>	An integer used for the numerator
<Value2>	An integer used for the denominator
Returns:	Returns the integer results of the division of <Value1> by <Value2>
Examples:	Quotient(6,2) = 3 Quotient(13,3) = 4
Notes:	The expressions <Value1> and <Value2> will be converted to integers. The expressions will be converted up to the first non-numeric character. The largest number supported is +/- 2147483648.

Rand

Syntax:	Rand( )
Parameters:	None
Returns:	Returns a random number between 0 and 32767.
Examples:	Rand( )
Notes:	The random number generator is seeded on the first call to this function.

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Round

Syntax:	Round(<Value> , <Numplaces>)
Parameters:	
<Value>	A numeric value to be rounded
<Numplaces>	The number of decimal places to round to
Returns:	Rounds <Value> to the nearest decimal place indicated by <Numplaces>.
Examples:	Round(7257.28456,0) = 7257 Round(7257.28456,2) = 7257.28 Round(7257.28456,-2) = 7300
Notes:	The <Value> will be converted to numeric data. The conversion will stop at the first non-numeric character.

Sgn

Syntax:	Sgn(<Value>)
Parameters:	
<Value>	The numeric data to test for sign
Returns:	-1 if <Value> is less than 0 0 if <Value> is equal to 0 1 if <Value> is greater than 0
Examples:	Sgn(3.5) = 1
Notes:	The <Value> will be converted to numeric data. The conversion will stop at the first non-numeric character.

Sqr

Syntax:	Sqr(<Value>)
Parameters:	
<Value>	A numeric expression
Returns:	Returns the square root of <Value>
Examples:	Sqr(9) = 3 Sqr(8) = 2.828
Notes:	The <Value> will be converted to a numeric value. The conversion stops at the first non-numeric character. If a negative number is supplied, the square root of the absolute value will be taken.

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Date/Time Functions

Date

Syntax:	Date([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Date() returns “08/18/2005” on August 18th, 2005.
Notes:	Returns the current date if the parameter is not specified.

Day

Syntax:	Day([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Returns:	Returns the day of the month
Examples:	Day() returns 18 on the 18th of the month.
Notes:	Returns the current day if the parameter is not specified.

Hour

Syntax:	Hour([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Hour returns 14 from 2:00pm to 2:59pm.
Notes:	The result is always in 24-hour time. Returns the current hour if the parameter is not specified.

Minute

Syntax:	Minute([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Minute returns 15 at quarter after each hour.
Notes:	Returns the current minute if the parameter is not specified.

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Month

Syntax:	Month([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Month() returns 8 in August.
Notes:	Returns the current month if the parameter is not specified.

Now

Syntax:	Now()
Parameters:	None
Returns:	The current date and time, in the format MM/DD/YYYY HH:MM:SS
Examples:	Returns “08/18/2005 23:13:26” at 11:13:26pm on August 18th, 2005.
Notes:	Returns the current time and date.

Second

Syntax:	Second([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Second() returns 30 at 30 seconds past each minute.
Notes:	Returns the current second if the parameter is not specified.

Time

Syntax:	Time([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Time() returns "23:13:26" at 11:13:26pm.
Notes:	Returns the current time if the parameter is not specified.

Year

Syntax:	Year([datetime])
Parameters:	
[datetime]	An optional DateTime string. If not specified, the current system date/time is used. Must be in the format MM/DD/YYYY HH:MM:SS.
Examples:	Year() returns 2005 in 2005.
Notes:	Returns the current year if the parameter is not specified.

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DateDiff

Syntax:	DateDiff(<Datetime1>, <Datetime2>, <Interval>)
Parameters:	
<Datetime1>	Starting date / time
<Datetime2>	Ending date / time
<Interval>	Type of interval to calculate. Valid options are "Y" (years), "M" (months), "D" (days), "H" (hours), "N" (minutes), "S" (seconds).
Returns:	The time interval between the two dates.
Examples:	DateDiff("01/05/2005 11:13:52", "01/05/2005 12:15:33", "H") returns 1.
Notes:	Calculates the time interval from <Datetime1> to <Datetime2>. Note that <Datetime> must be in the format MM/DD/YYYY HH:NN:SS. To get a positive number for the result, <Datetime1> should be less than <Datetime2>.

DateAdd

Syntax:	DateAdd(<Datetime>, <Interval>, <Amount>)
Parameters:	
<Datetime>	Starting date / time.
<Interval>	The type of interval to add. Valid options are "Y" (years), "M" (months), "D" (days), "H" (hours), "N" (minutes), "S" (seconds).
<Amount>	The number to add to the starting date / time.
Returns:	The resulting date time.
Examples:	DateAdd("01/05/2005 11:13:52", "D", 4) returns "01/09/2005 11:13:52".
Notes:	Calculates the date / time resulting from adding the <Interval> to the <Datetime>. Note that <Datetime> must be in the format MM/DD/YYYY HH:NN:SS.

BuildDate

Syntax:	BuildDate(<Year>, <Month>, <Day>, <Hour>, <Minute>, <Second>)
Parameters:	
<Year>	The year to use for building the date / time.
<Month>	The month to use for building the date / time.
<Day>	The day to use for building the date / time.
<Hour>	The hour to use for building the date / time.
<Minute>	The minute to use for building the date / time.
<Second>	The second to use for building the date / time.
Returns:	The resulting date time.
Examples:	BuildDate (2005, 1, 9, 11, 13, 52) returns "01/09/2005 11:13:52".
Notes:	Calculates the date / time resulting from the parameters specified.

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DayOfYear

Syntax:	DayOfYear([Datetime])
Parameters:	
[Datetime]	Optional. If specified, this is the datetime to use for calculating the Date of the Year.
Returns:	The day of the year (Julian date) for the specified datetime or current date.
Examples:	DayOfYear ("01/09/2005 11:13:52") returns 9.
Notes:	Returns the Day of the Year, as a number, for a date/time with Jan 1st = 1. If the [Datetime] parameter is specified, it will be parsed for the date. If it is not specified, the current date will be used. Note that [Datetime] must be in the format MM/DD/YYYY HH:NN:SS.

DayOfWeek

Syntax:	DayOfWeek([Datetime])
Parameters:	
[Datetime]	Optional. If specified, this is the datetime to use for calculating the Date of the Week.
Returns:	The day of the week for the specified datetime or current date.
Examples:	DayOfWeek ("01/09/2005 11:13:52") returns 1.
Notes:	Returns the Day of the Week, as a number, for a date/time with Sunday = 1, Monday = 2, etc. If the [Datetime] parameter is specified, it will be parsed for the date. If it is not specified, the current date will be used. Note that [Datetime] must be in the format MM/DD/YYYY HH:NN:SS.

DateCompare

Syntax:	DateCompare(<Datetime1>, <Datetime2>)
Parameters:	
<Datetime1>	The starting date for the comparison.
<Datetime2>	The ending date for the comparison.
Returns:	A number indicating the result of the comparison.
Examples:	DateCompare("01/10/2005 11:13:52", "01/09/2005 06:32:51") returns 1.
Notes:	Compares two dates. Returns -1 if <Datetime1> is earlier than <Datetime2>. Returns 1 if <Datetime1> is later than <Datetime2>. Returns 0 if both dates are equal. Note that <Datetime> must be in the format MM/DD/YYYY HH:NN:SS.

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DateFormat

Syntax:	DateFormat(<Datetime>, <Format>)
Parameters:	
<Datetime>	The date / time to format.
<Format>	Specifies the format to return.
Returns:	A date / time formatted according to the specification.
Examples:	DateFormat("01/10/2005 11:13:52", "M") returns “01/10/2005”.
Notes:	Reformats a Date/Time for display purposes. Valid format specifiers are: M: MM/DD/YYYY S: MM/DD/YY D: DD/MM/YYYY E: DD/MM/YY T: HH:NN:SS (24-hour) A: HH:NN:SS am/pm H: HH:NN (24-hour) P: HH:NN am/pm This function is for display only. Note that <Datetime> must be in the format MM/DD/YYYY HH:NN:SS.

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Lookup Functions

CountCollect

Syntax:	CountCollect(<Field1>, <Value1>, ...)
Parameters:	
<Field1>	Prompt name of the field in the collected data file
<Value1>	Value to match
…	You may specify up to 5 Field/Value pairs
Returns:	Returns the number of matching records
Examples:	CountCollect(“sku”, “12345”) returns the number of records in the collected data file where the data collected for the prompt named “sku” is “12345”.
Notes:	Counts the number of records in the collected data file matching the specified criteria. If no match fields are specified, the total count of all collected records is returned.

DeleteCollect

Syntax:	DeleteCollect (<all> , <Field1>, <Value1>, ...)
Parameters:	
<all>	Pass “1” to delete all matching records, or “0” to delete just the first match.
<Field1>	The prompt name of the field in the collected data file to match
<Value1>	The value to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Nothing
Examples:	DeleteCollect(“1”, “sku”, “12345”) deletes all collected data records where the value of the “sku” prompt is “12345”.
Notes:	At least one match field and value must be specified.

LastCollect

Syntax:	LastCollect(<Lookup>)
Parameters:	
<Lookup>	The prompt name of the field to retrieve
Returns:	Returns the last value collected for the prompt named <Lookup>
Examples:	LastCollect(“sku”) returns the last value collected for the prompt named “sku”.
Notes:	This function returns the last data collected.

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LastCollectRecord

Syntax:	LastCollectRecord( )
Parameters:	None
Returns:	Returns the last collected data record.
Examples:	@record@ = LastCollectRecord() returns the last record collected.
Notes:	This function returns the last data collected.

LookupCollect

Syntax:	LookupCollect(<Lookup>, <Field1>, <Value1>, ...)
Parameters:	
<Lookup>	The Prompt Name of the field in the collected data file to lookup
<Field1>	The Prompt Name of a field in the collected data file to match
<Value1>	The data to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Returns the value of a field in the collected data file
Examples:	LookupCollect(“qty”, “sku”, “12345”) returns the data collected for the prompt named “qty” where the value collected for the field named “sku” was “12345”.
Notes:	Performs a lookup from the collected data file. <Lookup> is the prompt name of the field to lookup. <Field1>, <Field2>, etc specify the prompt name of a field to match. <Value1>, <Value2>, etc specify the values of those fields in the collected data. Up to 5 match fields can be specified in this way. If more than one record matches the criteria specified, only the oldest first collected (oldest) record will be returned.

LookupCollectRecord

Syntax:	LookupCollectRecord(<Field1>, <Value1>, ...)
Parameters:	
<Field1>	The Prompt Name of a field in the collected data file to match
<Value1>	The data to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Returns the entire collected data record matching the field / value pairs.
Examples:	@record@ = LookupCollectRecord(“sku”, “12345”) returns the collected data record where the value collected for the field named “sku” was “12345”.
Notes:	Performs a lookup from the collected data file. <Field1>, <Field2>, etc specify the prompt name of a field to match. <Value1>, <Value2>, etc specify the values of those fields in the collected data. Up to 5 match fields can be specified in this way. If more than one record matches the criteria specified, only the oldest first collected (oldest) record will be returned.

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LookupCollectReverse

Syntax:	LookupCollectReverse(<Lookup>, <Field1>, <Value1>, ...)
Parameters:	
<Lookup>	The Prompt Name of the field in the collected data file to lookup
<Field1>	The Prompt Name of a field in the collected data file to match
<Value1>	The data to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Returns the value of a field in the collected data file
Examples:	LookupCollectReverse(“qty”, “sku”, “12345”) returns the data collected for the prompt named “qty” where the value collected for the field named “sku” was “12345”.
Notes:	Performs a lookup from the collected data file. <Lookup> is the prompt name of the field to lookup. <Field1>, <Field2>, etc. specify the prompt name of a field to match. <Value1>, <Value2>, etc. specify the values of those fields in the collected data. Up to 5 match fields can be specified in this way. If more than one record matches the criteria specified, only the last collected (most recent) record will be returned.

LookupCollectReverseRecord

Syntax:	LookupCollectReverseRecord(<Field1>, <Value1>, ...)
Parameters:	
<Field1>	The Prompt Name of a field in the collected data file to match
<Value1>	The data to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Returns the last collected data record matching the field/value pairs.
Examples:	@record@ = LookupCollectReverseRecord(“sku”, “12345”) returns the data collected where the value collected for the field named “sku” was “12345”.
Notes:	Performs a lookup from the collected data file. <Field1>, <Field2>, etc. specify the prompt name of a field to match. <Value1>, <Value2>, etc. specify the values of those fields in the collected data. Up to 5 match fields can be specified in this way. If more than one record matches the criteria specified, only the last collected (most recent) record will be returned.

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LookupParseCollectField

Syntax:	LookupParseCollectField(<Field>, <Record>)
Parameters:	
<Field>	The field in the collected data record to return
<Record>	A stored record from the collected data file previously retrieved with the *LookupCollectRecord* function
Returns:	The data from the field <field> in the stored record
Examples:	LookupParseCollectField(“Prompt1.Textbox”, @Record@) returns the value in the “Prompt1.Textbox” field from the record stored in the user variable @Record@
Notes:	Parses a field from a collected data record. The field to parse should be given in <Field>. The data record should be in <Record> and be the result of the *LookupCollectRecord* or *LookupCollectRecordReverse* function.

LookupParseValidationField

Syntax:	LookupParseValidationField(<File>, <Field>, <Record>)
Parameters:	
<File>	The validation file to use for the lookup
<Field>	The field in the validation file to return
<Record>	A stored record from the validation file previously retrieved with the *LookupValidationRecord* function
Returns:	The data from the field <Field> in the stored record
Examples:	LookupParseValidationField(“val.txt”, “description”, @Record@) returns the value in the “description” field of the validation file “val.txt”, from the record stored in the user variable @Record@
Notes:	Parses a field from a validation file record. The filename without path should be in <File>. The validation file must have been defined in the *Validation Files* screen, even if it is not being used on the *Advanced Prompt Settings* screen. The field to parse should be given in <Field>. The data record should be in <Record> and be the result of the *LookupValidationRecord* function.

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LookupValidation

Syntax:	LookupValidation(<File>, <Lookup>, <Field1>, <Value1>, ...)
Parameters:	
<File>	The validation file to use for the lookup
<Lookup>	The field in the validation file to return
<Field1>	The field to match
<Value1>	The value to match
…	Up to 5 Field/Value pairs may be specified
Returns:	The data from the field <Lookup> in the record matching the Field/Value criteria
Examples:	LookupValidation(“val.txt”, “description”, “sku”, “12345”) returns the value in the “description” field of the validation file “val.txt”, from the record where the “sku” field is equal to “12345”.
Notes:	Performs a lookup from a validation file. The filename without path should be in <File>. The field to lookup should be given in <Lookup>. The fields to match are given in <Field1>, <Field2>, etc. The value of each field is given in <Value1>, <Value2>, etc. Up to 5 match fields can be specified in this way. The validation file must have been defined in the *Validation Files* screen, even if it is not being used on the *Advanced Prompt Settings* screen.

LookupValidationRecord

Syntax:	LookupValidationRecord(<File>, <Field1>, <Value1>, ...)
Parameters:	
<File>	The validation file to use for the lookup
<Field1>	The field to match
<Value1>	The value to match
…	Up to 5 Field/Value pairs may be specified
Returns:	The record matching the Field/Value criteria
Examples:	@Record@ = LookupValidationRecord("val.txt", "sku", "12345") returns the record (all the fields) from the validation file “val.txt” where the “sku” field is equal to “12345”.
Notes:	Performs a lookup from a validation file and returns the entire record. The filename without path should be in <file>. The fields to match are given in <Field1>, <Field2>, etc. The value of each field is given in <Value1>, <Value2>, etc. Up to 5 match fields can be specified in this way. The validation file must have been defined in the *Validation Files* screen, even if it is not being used on the *Advanced Prompt Settings* screen. Use the *LookupParseValidationField* function to parse individual fields from the returned record.

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PickListField

Syntax:	PickListField(<Field>)
Parameters:	
<Field>	The name of the field to return
Returns:	The data from a field in a validation file
Examples:	PickListField(“descr”) returns the value of the “descr” field in the validation file for this record.
Notes:	This function is used only in the PickList In-Prompt Script. As each record is added to the picklist, the PickList In-Prompt Script is called. You can format the text to be displayed in the picklist. This function can be used to retrieve the value of a validation file field.

SaveCollectedData

Syntax:	SaveCollectedData( )
Parameters:	None
Returns:	Nothing
Examples:	SaveCollectedData ( ) saves the current values of all prompts to the collected data file.
Notes:	This function causes a collected data record to be written, using the current values of all prompts and elements. This is exactly like accepting the last prompt in the program. This function is only support on Windows CE and PocketPC clients, and the PC Client. It is not supported on DOS devices.

SumCollect

Syntax:	SumCollect (<Lookup>, <Field1>, <Value1>, …)
Parameters:	
<Lookup>	The prompt name of the field in the collected data file to sum
<Field1>	The prompt name of the field in the collected data file to match
<Value1>	The value to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Returns the sum of the specified field matching the criteria
Examples:	SumCollect(“qty”, “sku”, “12345”) returns the sum of the data collected for the “qty” field in the collected data file where the data collected for the prompt named “sku” is “12345”.
Notes:	Sums the values in the collected data file matching the specified criteria. <Lookup> specifies the prompt name of the field in the collected data file to sum. <Field1>, <Field2> etc specify the prompt name of the field in the collected data file to match. <Value1>, <Value2> etc specify the values to match. If no match fields are specified, the sum for all collected records is returned.

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UpdateCollect

Syntax:	UpdateCollect (<Field>, <Data>, <All>, <Field1>, <Value1>, ...)
Parameters:	
<Field>	The name of the prompt in the collected data to update
<Data>	The data to store as the new value.
<All>	Pass “1” to update all matching records, or “0” to update just the first match.
<Field1>	The prompt name of the field in the collected data file to match
<Value1>	The value to match
	Up to 5 Field/Value pairs may be specified
Returns:	Nothing
Examples:	UpdateCollect(“qty”, “10”, “1”, “sku”, “12345”) updates all collected data records where the value of the “sku” prompt is “12345”, and sets the “qty” field to “10”.
Notes:	At least one Match field and Value must be specified.

UpdateCollectField

Syntax:	UpdateCollectField (<record> , <field>, <data>)
Parameters:	
<record>	The collected data record.
<field>	The name of the field to update.
<data>	The data to place into the field.
Returns:	Nothing
Examples:	UpdateCollect(@record@, “qty”, “10”) updates the collected data record in @record@, setting the “qty” field to “10”.
Notes:	This function updates a collected data record in a string variable. This function is used in conjunction with *LookupCollectRecord* or *LookupCollectRecordReverse* to allow changing the values of any number of fields on a collected data record. You must call *UpdateCollectRecord* to write the record back to the collected data file.

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UpdateCollectRecord

Syntax:	UpdateCollectRecord (<record>, <All> , <Field1>, <Value1>, …)
Parameters:	
<record>	The collected data in a string variable.
<All>	Pass “1” to update all matching records, or “0” to update just the first match.
<Field1>	The prompt name of the field in the collected data file to match
<Value1>	The value to match
…	Up to 5 Field/Value pairs may be specified
Returns:	Nothing
Examples:	UpdateCollectRecord(@record@, “1”, “sku”, “12345”) updates the collected data records where the value of the “sku” prompt is “12345”.
Notes:	At least one Match field and Value must be specified. After retrieving a collected data record into a string with *LookupCollectRecord* or *LookupCollectRecordReverse*, use *UpdateCollectField* to change the values. Finally, use *UpdateCollectRecord* to save those changes back to the collected data file.

Response Functions

ResponseSource

Syntax:	ResponseSource()
Parameters:	None
Returns:	Returns the Source of the last input. Valid sources are srcKeyboard, srcScanner, srcImage, or srcText.
Examples:	ResponseSource() returns srcScanner if the last input was scanned.
Notes:	Returns the Source of the last input.

ResponseSymbology

Syntax:	ResponseSymbology()
Parameters:	None
Returns:	Returns the Symbology of the barcode scanned for the last response.
Examples:	ResponseSymbology() returns 1 (bcCode39) if the last barcode scanned was Code 39.
Notes:	Returns the barcode symbology of the last scan. See the Constants list for the symbology IDs.

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ValidationFail

Syntax:	ValidationFail(<String> , [element])
Parameters:	
<String>	The error message to be displayed on the terminal display
[element]	Optional. The name of the element to receive the keyboard focus.
Returns:	Nothing
Examples:	ValidationFail("Error", “prompt1.textbox1”)
Notes:	This function may be used in the After Prompting and After Validation scripts. Call to cause the validation of this response to fail. The terminal will display the message you place in <String>. If this function is called multiple times in a script, the message from the first occurrence will be displayed. If a multi-prompt element name is specified in [element], the keyboard focus will be set to this element when the notification message is closed. If the <String> parameter is an empty string, no message will be displayed but the validation will still fail, and the focus will be set to the element specified in [element].

Notification Functions

Beep

Syntax:	Beep()
Parameters:	None
Returns:	Nothing
Examples:	Beep()
Notes:	Causes the terminal to beep a high-pitched beep.

Buzz

Syntax:	Buzz()
Parameters:	None
Returns:	Nothing
Examples:	Buzz()
Notes:	Causes the terminal to buzz a low-pitched buzz.

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EnableCentering

Syntax:	EnableCentering(<Size>)
Parameters:	
<Size>	Size of the region around the aimer to locate symbols
Returns:	Nothing
Examples:	EnableCentering(20)
Notes:	Enables Centering for a HandHeld Products Imager. This restricts the area in which the imager will locate barcodes. This function is only supported on imager-equipped terminals. Setting <Size> to zero disables centering.

EnableAimer

Syntax:	EnableAimer(<Time>)
Parameters:	
<Time>	Specifies the length of time to show the aiming dot, in tenths of a second.
Returns:	Nothing
Examples:	EnableAimer(50)
Notes:	Enables the Laser Aimer on laser-equipped scanners that support an aiming dot. This turns on the laser for a short time before beginning to sweep, to help locate the laser on the barcode.

EnableALD

Syntax:	EnableALD(<Size>)
Parameters:	
<Size>	Size of the region around the aimer to locate symbols
Returns:	Nothing
Examples:	EnableALD(1)
Notes:	Enables Advanced Linear Decoding for a HandHeld Products Imager. This restricts the area in which the imager will locate barcodes. This function is only supported on imager-equipped terminals. Setting <Size> to zero disables ALD.

ExitProgram

Syntax:	ExitProgram( )
Parameters:	None
Returns:	Nothing
Examples:	ExitProgram( )
Notes:	Causes the data collection program to exit and return to the Client's main menu. Supported for PocketPC Devices, CE Devices, and PC Client. Not supported on DOS Devices.

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FlashLEDs

Syntax:	FlashLEDs()
Parameters:	None
Returns:	Nothing
Examples:	FlashLEDs()
Notes:	Causes the terminal to flash the SCAN and DECODE LEDs for ½ second.

GetBatteryLife

Syntax:	GetBatteryLife( )
Parameters:	None
Returns:	Returns the remaining battery life percentage from 0 to 100.
Examples:	@ret@ = GetBatteryLifeStatus( )
Notes:	If the battery change status cannot be determined, this function returns -1, or on some devices, 255. The Simulator and PC Client always return -1.

GetPowerStatus

Syntax:	GetPowerStatus( )
Parameters:	none
Returns:	Returns 1 if external power is applied, or 0 if not.
Examples:	@ret@ = GetPowerStatus( )
Notes:	Determine whether the portable device is being powered by a cradle or charge cable.

GoToPrompt

Syntax:	GoToPrompt(<Prompt> , <Validate>)
Parameters:	
<Prompt>	The name of the prompt to move to next.
<Validate>	Whether to validate the prompt before advancing to the prompt specified.
Returns:	Nothing
Examples:	GoToPrompt (“Prompt4” , 1)
Notes:	Causes the data collection program to go to the specified prompt. If <Validate> is not zero, the data for the prompt will be saved into the elements, and they will be validated. If the validation fails, the program will not move to the new prompt. Supported for PocketPC Devices, CE Devices, and PC Client. Not supported on DOS Devices.

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Message

Syntax:	Message(<Message> , <Caption> , <Button1> , <Button2>)
Parameters:	
<Message>	The message text to display
<Caption>	The window caption to display
<Button1>	Text for the first button
<Button2>	Text for the second button. The 2nd button may be omitted by using the empty string (“”) for the <Button2> text.
Returns:	Either a 1 or a 2 depending on which button is pressed (or clicked)
Examples:	@Data@ = Message("Are you sure?", "Confirm", "<Yes>", "<No>")
Notes:	Displays a message to the user. The message text is in <Message>, and the window caption is in <Caption>. You may specify text for one or two buttons using <Button1> and <Button2>. If <Button2> is an empty string, only <Button1> will be displayed, and it will be centered. This function returns 1 or 2 corresponding to whether button1 or button2 is pressed.

PlaySound

Syntax:	PlaySound(<Soundfile>)
Parameters:	
<Soundfile>	The name of a WAV file to play
Returns:	Nothing
Examples:	PlaySound(“sound.wav”)
Notes:	Causes the terminal to play a WAV file. Supported on the Windows CE and Pocket PC devices. The WAV file must be in the program directory, or the terminal will simply beep.

SetPowerDownMode

Syntax:	SetPowerDownMode(<mode>)
Parameters:	
<mode>	The powerdown mode to set
Returns:	Nothing
Examples:	SetPowerDownMode(1)
Notes:	Sets the device power down mode for Windows CE or PocketPC/Windows Mobile devices. The possible modes are: 0=Standard. The device suspends after a period of inactivity. 1=Unattended. The device will turn off the screen and buttons, but programs will continue to run. On most devices, the GPRS and Bluetooth radios will continue to run, but WiFi is usually powered down. 2=Always On. The device will stay on and running, and will not suspend. In all cases, this mode stays in effect until the Data Collection program is exited back to the Main Menu, where the Standard mode is set.

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Keywords

IF

Syntax:	IF(<expression>)
Parameters:	
<expression>	Logical expression to be evaluated

Examples:	IF(@UserVar@ = 1)
	  @Count@ = @Count@ + 1
	ENDIF

Notes:	An IF Statement. This can take the form:
	IF(<expression>)
	  Statements
	ELSEIF(<expression>)
	  Statements
	ELSE
	  Statements
	ENDIF

ELSE

Syntax:	ELSE
Parameters:	None

Examples:	IF(@UserVar@ = 1)
	  @Count@ = @Count@ + 1
	ELSE
	  @UserVar@ = 0
	  Message("Tap OK to Continue","User Message","OK","")
	ENDIF

Notes:	See IF

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ELSEIF

Syntax:	ELSEIF(<expression>)
Parameters:	
<expression>	Logical expression to be evaluated

Examples:	IF(@UserVar@ = 1)
	  @Count@ = @Count@ + 1
	ELSEIF (@UserVar@ = 0)
	  @Count@ = @Count@ - 1
	ENDIF

Notes:	See IF

ENDIF

Syntax:	ENDIF
Parameters:	None
Examples:	See IF
Notes:	See IF

FOR

Syntax:	FOR(<init>, <expression>, <update>)
Parameters:	
< init >	Statement to initialize the FOR loop
< expression >	If the expression evaluates to TRUE, the statements in the FOR loop execute. If the expression evaluates to FALSE, the FOR loop is done
< update >	The statement that increments the looping variable, the update executes after the statements in the FOR loop execute for its current pass through the loop.
Examples:	FOR(@Var@=1,@Var@<10,@Var@=@Var@+1) Message("Next Count: " & @Count@,"User Message","OK","") NEXT
Notes:	A FOR Loop. This can take the form: FOR(<init>, <expression>, <update>) Statements NEXT

NEXT

Syntax:	NEXT
Parameters:	None
Examples:	See FOR
Notes:	See FOR

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EXITFOR

Syntax:	EXITFOR
Parameters:	None

Examples:	FOR(@Var@=1,@Var@<10,@Var@=@Var@+1)
	  @Msg@ = Message("Count: " & @Var@,"User Message","OK","Stop")
	  IF (@Msg@ = 2)
	  EXITFOR
	  ENDIF
	NEXT

Notes:	Exits a FOR Loop

WHILE

Syntax:	WHILE(<expression>)
Parameters:	
<expression>	Logical expression to be evaluated

Examples:	@Count@ = 0
	WHILE(@Count@ < 10)
	  @Count@ = @Count@ + 1
	  Message("Count: " & @Count@,"User Message","OK","")
	WEND

Notes:	A WHILE Loop. This can take the form: WHILE(<expression>) Statements WEND

WEND

Syntax:	WEND
Parameters:	None
Examples:	See WHILE
Notes:	See WHILE

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EXITWHILE

Syntax:	EXITWHILE
Parameters:	None

Examples:	WHILE(TRUE)
	  IF (@Count@ => 10)
	  EXITWHILE
	  ENDIF
	  @Count@ = @Count@ + 1
	WEND

Notes:	Exits a WHILE loop

EXIT

Syntax:	EXIT
Parameters:	None

Examples:	FOR(@Var@=1,@Var@<10,@Var@=@Var@+1)
	  @Msg@ = Message("Count: " & @Var@,"User Message","OK","Stop")
	  IF (@Msg@ = 2)
	  EXIT
	  ENDIF
	NEXT

Notes:	Exits a Script

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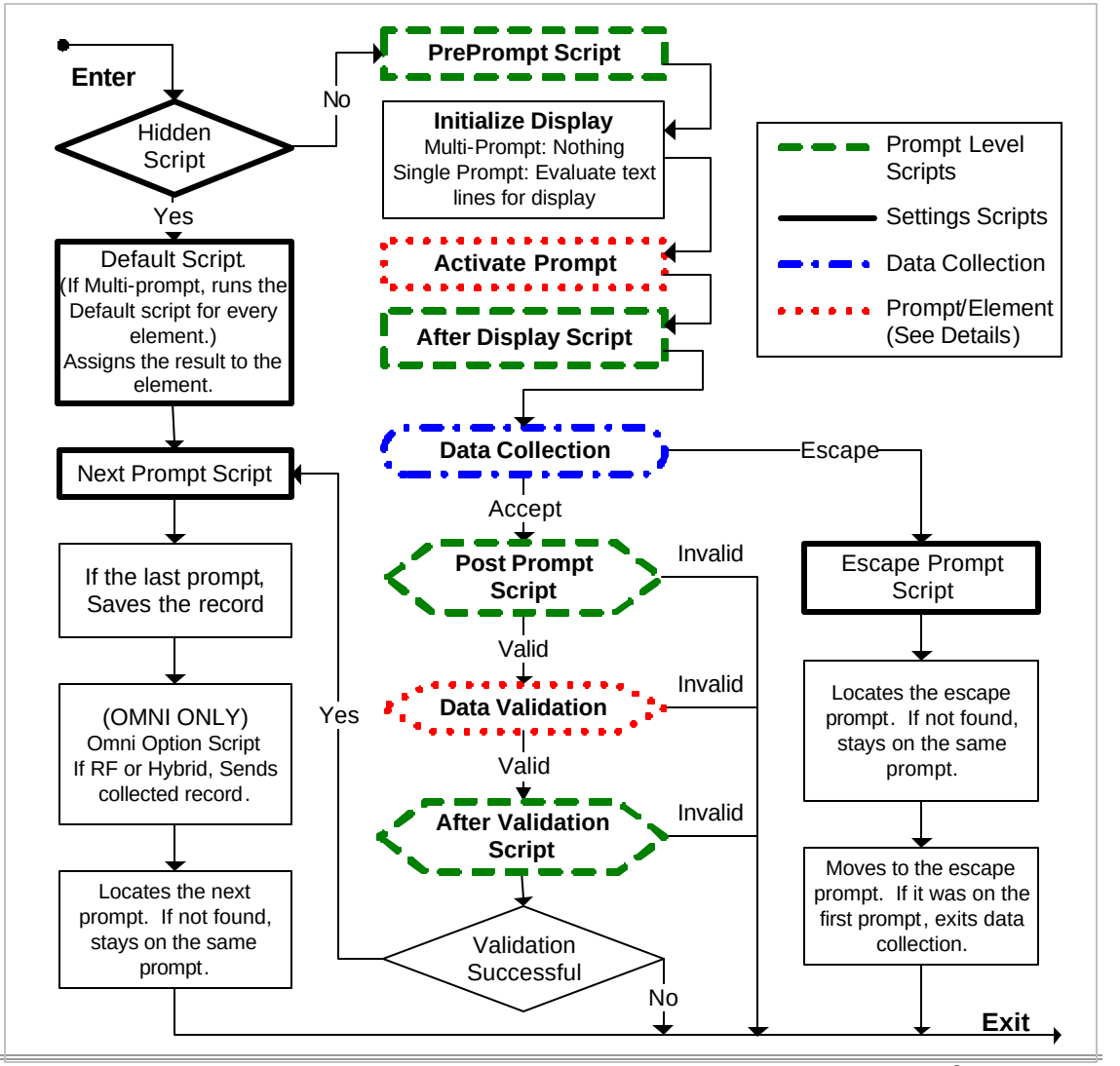
Script Sequencing Reference

This section documents the order in which scripts are executed under various conditions.

Prompt Lifecycle

This diagram shows the basic lifecycle of a prompt. As a user enters data and moves from prompt to prompt in the data collection program, each prompt proceeds through a series of steps to activate the prompt, run the various In-Prompt scripts, collect data, and evaluate which prompt to



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go to next. Most of the time, the details of the exact order of these steps and scripts within the life-cycle of a prompt is not important. However, there may be times when the interaction between In-Prompt scripts is such that the exact order of execution needs to be clearly understood. This section will clarify the order of Prompt scripts.

Single Prompt

The life cycle of a Single-Prompt starts with a check on whether of not the prompt is a Hidden prompt. The Hidden setting is one of the settings on the *Advanced Settings* screen for a Single Prompt. If there is an In-Prompt Script that determines if the prompt is hidden, it is executed to find out if the prompt will be hidden or not. If the Prompt is hidden, only the Default script and the Next Prompt script will run before the prompt exits and a new prompt is begun. In most cases, the prompt will not be hidden and the prompt will execute fully as shown in the diagram. The Pre-Prompt Script (which is accessed from the *Before Prompting* button on the *Advanced Settings* screen is then run followed by **IT*Script*Net** calculating the display text to initialize the display. When a Single Prompt is displayed, the Activation scripts are run. These are In-Prompt scripts to determine many of the settings for a prompt. The order of the In-Prompt scripts for activation is:

In-Prompt Scripts for Activation
Max Length
Min Length
Input Source
Allow Blank
First Character
Reverse
Default To Last
Default Value
Mask
Validation Type
If the prompt is a Picklist, the following scripts are also run:
Validation File
Validation Field
Lookup Field
Picklist Script (once per record as added to the list).

Once the prompt has been activated and displayed, the After Display script (defined in the Advanced Settings screen) is run. The user now is able to enter or scan data as a response to the prompt. After the data is entered, the Post-Prompt script is executed (This is the script behind the After Prompting button on the Advanced Settings screen).

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IT*Script*Net then handles the built-in validations on the data that was entered. The first step towards data validation is to run any of the settings scripts to establish what various data validation settings values will be.

In-Prompt Scripts for Data Validation
Store First Char
Store Mask
Range Checking
Range Hi Value
Range Lo Value
Validation File
If the prompt is a Picklist, the following scripts are also run:
Validation File
Validation Field
Lookup Field

The entered data can now be checked against the built-In Validations in the following order:

Built-In Validations
Allow Blank
Min Length
Max Length
First Character
Mask
Range
Validation (Must Be found, etc).

After **IT*Script*Net** runs the built-in validation checks on the data, the After Validation In-Prompt script is run before final determination is made as to whether the data entered has passed. If the data is determined to be valid, the Next Prompt In-Prompt script is run and the program proceeds to the next prompt.

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