

TracerPlus

For Windows Mobile/CE

USER GUIDE

TracerPlus Version 7
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Portable Technology Solutions



TracerPlus

for Windows Mobile/CE

User Guide

Users of TracerPlus 5.0, 6.0 and 7.0:

Refer to the **TracerPlus Desktop User Guide** for all configuration and admin instructions. Due to advances in TracerPlus and TracerPlus Desktop, many features can only be accessed and configured using TracerPlus Desktop. Chapters 4 through 9 are provided as a courtesy to legacy users who may want information on how some of the older settings can be configured directly on the device.

Download TracerPlus Desktop and the TracerPlus Desktop User Guide
here: www.tracerplus.com

TracerPlus
Version 7

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TracerPlus

for Windows Mobile/CE

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Chapter 1: Introduction

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1.1 What is TracerPlus?

TracerPlus is the central title in the family of TracerPlus Mobile Data Collection and Integration applications. In tandem with the free PC based design and deployment software [TracerPlus Desktop](#), the **TracerPlus** mobile client application provides all the necessary tools to easily create and manage enterprise class mobile data collection applications. The **TracerPlus** mobile client itself serves as a platform on the mobile device. Your custom apps are then created in **TracerPlus Desktop** and deployed to the mobile client for use in the field.

A TracerPlus application is typically divided into sub-applications/electronic forms called **Sessions**. At its most basic level, a session can be considered an electronic data entry form on the PDA, with an underlying database table. Each session is configured to contain/control a particular user process (e.g. Warehouse Receiving) while an overall **TracerPlus** application might be made up of many sessions (Receiving, Shipping, Inventory, etc). It's now easier than ever to match data scanned into these sessions directly into your existing databases.

Although **TracerPlus** retains the ability to manually import and export data between existing databases and mobile devices using text files, automated advanced data integration is possible via one of three software programs developed to work hand in hand with the **TracerPlus** Mobile client. [TracerPlus ODBC Link](#) is available for batch (USB) data transfer to almost any database. For real-time sharing over WIFI/WAN and Cellular networks to those same databases, [TracerPlus Wireless Server](#) is available. Lastly, with the release of [TracerPlus Connect for Microsoft Excel](#), it's now possible to sync data directly with Excel™ spreadsheets.

TracerPlus is also commonly connected to management systems including Service Alliance, Remedy, HP Asset Center and PeopleSoft (now Oracle).

If you or your company have a data collection need, **TracerPlus** is the right choice. TracerPlus is compatible with most Windows Mobile, and CE.Net terminals. In particular, TracerPlus is extremely well suited for barcode enabled terminals offered by Motorola/Symbol, Intermec, Honeywell (formerly PSC), Datalogic and many other manufacturers.

Common TracerPlus Applications

- Inventory Management
- Fixed Asset Management
- Field Inspections
- Mobile Sales
- Route Accounting
- Attendance/Event Tracking
- Remote Store Management
- Computer Management
- Job Material Management
- Time Tracking
- Event Attendee Tracking

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All users of TracerPlus should use **TracerPlus Desktop** to build their mobile forms. Although this manual does provide detailed instructions regarding how to create some applications directly on your mobile device, these instructions are primarily to provide backwards compatibility to user of TracerPlus 4 and earlier. Download **TracerPlus Desktop** free of charge [here](#). Many of the newer and more powerful features of TracerPlus can ONLY be configured through TracerPlus Desktop.



Throughout this manual, this icon will alert you to the fact that the following process should be completed using TracerPlus Desktop whenever possible.

1.2 New Features in TracerPlus Version 7.0

TracerPlus 7.0 builds on the already vast collection of advanced features, making TracerPlus 6.0 a truly exceptional data collection tool. These new features include:

- Email and text message capabilities for instant reporting and alerts
- RFID tag writing support
- RFID Tag Scanning now supports reading multiple tag memory banks
- Data Lookup capability for all field types
- SmartForm: Directs scanned data to pre-defined field
- Dynamic Parsing
- Keep Alive: Provides the option to maintain the connection to Wireless Server between data transfers.

These new capabilities added to the existing tools of earlier versions make TracerPlus more powerful, more intuitive, and faster than ever. Other particularly powerful features introduced in previous versions (primarily accessible via TracerPlus Desktop) include:

- Data View visible Within Entry Screen with live editing through placement of a Grid Control
- Configurable Font Size, Color and Style
- Custom Colors for Tabs, Labels, Buttons and other Form Controls.
- Custom validation error messages
- Configurable goto field on validation errors
- Native Motorola RFID and Micro Kiosk support
- Ability to launch external applications from the TracerPlus Entry Form
- Conditional Lookups with AND / OR relationships
- Re-designed Calculation configuration tab improves abilities and ease of use
- Image Lookups
- One to Many - Record updates based on settable key fields
- Live license registration via TracerPlus Desktop
- Duplicate/Move Sessions within a Project
- Configurable Launcher
- Performance improvements in Data Entry area for calcs/lookups/data display

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- Custom login profiles to manage multiple users
- Full screen mode offers more real estate on device screen
- Configurable Camera/Image Capture Field Types. (Professional version only)
- Integrated Wireless Capabilities (Pro only-Requires one license of TracerPlus Wireless Server installed on a host PC or Server).
- TracerPlus Desktop import support added (Import previously created applications from PDAs directly into TracerPlus Desktop for quick and easy editing.)
- Windows Mobile 6.x Compatible.
- 3G Wireless network support (requires 3G mobile device).
- TracerPlus SmartConnect directs wireless data through WIFI when available.
- Added SQLCE database support, allowing 400% more data.
- Improved WWAN/WIFI connectivity including auto-connect.
- Expanded Customization features including RFID configuration, up to 251 entry fields and Janam XM65 support.
- Improved filtered dropdown performance.
- Custom validation audible sounds supported.
- Significant performance improvement in wireless look-up speeds.
- User configurable database location (Storage card, custom folder, etc).
- Maximum record capacity increased from ~20k records to > 100k+ records.
- Expanded the range of supported printers and mobile terminals.
- Improved Entry Form Skin features.
- Keyboard Shortcuts added to support Non-Touch screen devices (MT2000, MC1000, WT Series)

For a full list of the features in TracerPlus and TracerPlus Desktop, visit: http://www.tracerplus.com/tracerplus/feature_matrix.php

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TracerPlus is available in two Editions; **Standard** and **Professional**. One of the features available in the **Professional** version of **TracerPlus** is the ability to use Inter-related (lookup) tables, enabling users to define sessions that reference other sessions for field data. This not only automates a number of steps by pre-populating specified fields, but significantly reduces the potential for error. Common uses for this feature include incorporating price lists and part lists into a mobile sales application, using previous inspection conditions to monitor maintenance schedules and referring to address or other locations to assist in validating Inspection procedures.

TracerPlus also includes the ability to include an extremely powerful and flexible **Mobile Printing** component. The ability to print is included in **TracerPlus Professional** and available as a separate purchase as a plug-in with **TracerPlus Standard**. The ability to print via TracerPlus enables users to print individual records and reports directly from the PDA. Any number of user configurable reports are available for printing receipts and labels in the field. Have a wireless network printer? TracerPlus now supports this feature. Simply enter the IP address and port and TracerPlus data will print to a local wireless printer.

For more information about the differences between the **Standard** and **Professional** Editions, views the **TracerPlus Feature Matrix** at www.tracerplus.com

1.3 Free Trial

TracerPlus is provided on a trial basis for no fee in order to offer businesses the opportunity to gain hands on experience with the features and advantages of the TracerPlus suite of applications. In addition, TracerPlus Desktop is provided entirely free of charge, allowing for an extended opportunity to experiment with creating mobile forms.

The limitations of the trial download restricts the session usage to 3, only allows 5 records to transfer to and from a database and provides only a limited print capability. Once purchased, a Registration Code will be provided via a personalized process. This **Registration Code** will unlock all limitations, enabling it for full use without the need for reinstallation.

1.4 Learning TracerPlus and Using TracerPlus Desktop

Prior to the release of **TracerPlus Desktop**, TracerPlus mobile applications were configured on the PDA. With the many features introduced in version 7.0 and the increased integration TracerPlus Desktop 7.0, this has not only become obsolete but also limiting in that certain new features can only be enabled and configured using TracerPlus Desktop. The majority of the configuration and administrative sections of this manual are provided for legacy users of TracerPlus 5 and earlier as a comparative source.

Note: Download TracerPlus Desktop and read the TracerPlus Desktop Manual for information on creating your mobile applications.

For additional help, PTS has also provided a series of training videos that provide insights and tips about how to best use TracerPlus. These videos can be found at www.tracerplus.com

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1.5 Integrating TracerPlus using either Batch or Wireless Modes

TracerPlus is available in both batch and wireless versions allowing users to send data via ActiveSync or connect wirelessly to a data source to a host PC. This flexibility makes it possible to integrate TracerPlus with most programs and databases. Below is a list of the more popular programs and databases TracerPlus can integrate with.

Excel (via TracerPlus Connect)
Microsoft Access
Microsoft SQL Server
Oracle
MySQL
People Soft
FileMaker
FoxPro
Most other ODBC compliant databases

TracerPlus is pre-configured to operate in batch (USB) mode, which transfers data via **Microsoft® ActiveSync** (Windows 2000, XP) or **Windows Mobile Device Center** (Vista, 7) when the mobile device is physically connected to the host PC. As mentioned above, data can be manually transferred in one of six user specified file formats or via one of two configurable alternatives designed to simplify and automate the process; **TracerPlus Connect for Microsoft Excel** and **TracerPlus ODBC Link** (for most standard database systems)

For more detailed information about manually transferring data TracerPlus batch file formats and how they can be configured, see Chapter 4.

TracerPlus can also operate in wireless mode, allowing multiple users to view, edit and share data from a centralized database over a wireless network in real-time. In order to enable TracerPlus wireless capabilities, **TracerPlus Wireless Server** must be installed and configured on a host PC or Server. In addition, users of TracerPlus **Standard** require one copy of the **Wireless Plug-in** for each license installed on a mobile device. **TracerPlus Professional** is provided with wireless capabilities and as a result does not require the additional purchase of the aforementioned plug-in.

TracerPlus Standard Users: To learn more about the **TracerPlus Wireless Plug-in**, refer to [Section 7.1](#).

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1.6 TracerPlus and Barcode/RFID enabled Devices

TracerPlus is designed to speed data entry with or without a barcode enabled PDA. Drop-down menus, time/date stamps and auto submit features allow users to collect data faster and more accurately. However, to take advantage of the full power of TracerPlus, we recommend using a barcode enabled PDA. A partial list of the current (and past) barcode enabled PDAs supported by TracerPlus are listed below.

In addition to the growing selection of barcode enabled Windows Mobile and CE devices available, RFID (Radio Frequency Identification) is becoming more commonplace. In response, TracerPlus now supports Motorola RFID natively and PTS can work with you to develop RFID solutions with other devices.

Currently Supported Windows Mobile 2003, 5.x, 6.x, Windows CE, and CE.Net Barcode and PDAs Terminals include:

- Symbol PPT8800 Series**
- Motorola MC35 Series**
- Symbol MC50 Series**
- Motorola MC1000 Series**
- Motorola MT2000 Series**
- Motorola MC55MC55a Series**
- Motorola MC65 Series**
- Symbol MC70 Series**
- Motorola MC75/MC75a Series**
- Symbol MC3000 Series**
- Motorola MC3100 Series**
- Symbol MC9000 Series**
- Motorola MC9500 Series**
- Motorola ES400 Series**
- Motorola WT4000 Series (Wearable)**
- Motorola MK500 Series (Kiosk)**
- Motorola MK4000 Series (Kiosk)**
- (Note: Symbol is a division of Motorola)*
- Most Honeywell devices (HHP, MetroLogic)**
- Most Intermec devices**
- Most Unitech devices**
- Most Opticon devices**
- Most DataLogic devices (PSC)**
- Most Psion devices**
- Most Janam Windows Mobile Devices**

TracerPlus with Socket Plug-in scanner is compatible with the following devices:

- IPAQ**
- Dell Axim**
- Most Casio Handhelds**

Some Windows Mobile cell phones and PDAs (excluding Windows Mobile Phone Edition)

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1.7 PTS Support

As a registered **TracerPlus** user, you receive free e-mail support for 30 days from the date of purchase. During this period, we are available to answer **TracerPlus** questions as well as general bar code questions. Our goal is to provide TracerPlus users the tools and information to capitalize on the efficiencies of bar code data acquisition. Please visit www.tracerplus.com to learn more. To contact PTS technical support, please e-mail support@tracerplus.com.

PTS is now offering Comprehensive Support Agreements, including phone support and free software upgrades during the support plans active period. One and three year plans are available. For more information, contact your authorized reseller or PTS directly.

Additional Support and Educational References:

An easy to use knowledge base is available for all users to answer the most common TracerPlus questions. The knowledge base is located at www.tracerplus.com/kb

PTS provides a series of free training webinars over the course of the year, with regular announcements via email. To begin receiving these announcements, join our [Mailing List](#). Some of these webinars are also recorded and posted on www.tracerplus.com in order to provide a more flexible alternative to those unable to attend our live demos.

PTS also hosts a TracerPlus User Group. The group was created to offer our users a communication channel in which to discuss TracerPlus. You can join the TracerPlus User Group at [Yahoo Groups](#)

The TracerPlus.com Solution Center provides sharable mobile application samples with the TracerPlus community. TracerPlus.com will serve as a central hub for providing solutions, services, reseller and partner information as well as providing an outlet for other aspects regarding the TracerPlus software family.

1.8 PTS Services

Custom Application Setup Service (Session Setup)

If you do not have the time to learn TracerPlus, our **Custom Application Setup Service** may be an option. A PTS representative or authorized **Solution Partner** will work with you to create a session that meets your specifications. After the session is developed they will train you in the use of the session and will work to fine tune it to your exact needs. This service is like having a custom program developed at off the shelf prices. Additional information can be found at our [TracerPlus Solution Center](#).

Chapter 2: Installation

This chapter explains in detail the steps for installing TracerPlus. To launch TracerPlus after installation, tap the **Start Menu** on the mobile device, then open your **Programs** Folder and tap the **TracerPlus** icon.

2.1 System Requirements

- Windows 98/NT/2000/XP/Vista/7
- **ActiveSync** version 3.5 or higher for 98/NT/2000/XP users.
- **Windows Mobile Device Center** for Vista and Windows 7 Users
- A PDA or bar code enabled terminal running Windows Mobile (Windows Mobile Embedded), Pocket PC, CE version 3.0 or higher or CE.Net.
- **TracerPlus Professional Wireless** requires a host PC or Server with **TracerPlus Wireless Server** installed.
- **TracerPlus Standard Wireless** requires the Wireless Plug-in in addition to a host PC or Server with **TracerPlus Wireless Server** installed.

Note: References and instructions relating to ActiveSync in this manual also apply to the Windows Mobile Device Center on the Vista operating system. Naming procedures of future versions of the proprietary Windows syncing software is controlled by Microsoft and subject to change without notice.

2.2 Installation using TracerPlus Desktop

With **TracerPlus Desktop** installed on your PC, first connect your device to your PC and allow ActiveSync or WMDC to launch. Select **Install TracerPlus to PDA** from the TracerPlus Desktop Tools Menu. Follow the onscreen prompts. You will be instructed to complete the installation by following instructions on the PDA. Installing TracerPlus via TracerPlus Desktop does not create a separate **Start Menu** folder. All documentation is included within the existing TracerPlus Desktop **Start Menu** folder.

2.3 Installation via the .exe File

1. Download **tracerp_ppc.exe** from TracerPlus.com or another authorized reseller.
2. Connect Your Device to your PC. Allow ActiveSync or WMDC to launch.
3. Double-click **tracerp_ppc.exe** to launch the installer.
4. Follow the standard installation instructions. During Installation you will be asked to complete the process on the PDA.

After Installing, you will have a **TracerPlus 6** folder in your PC **Start Menu**. This will provide access User Guides, Registration info and an installer link to install to additional PDAs

Chapter 2: Installation

2.4 Purchasing and Registering TracerPlus

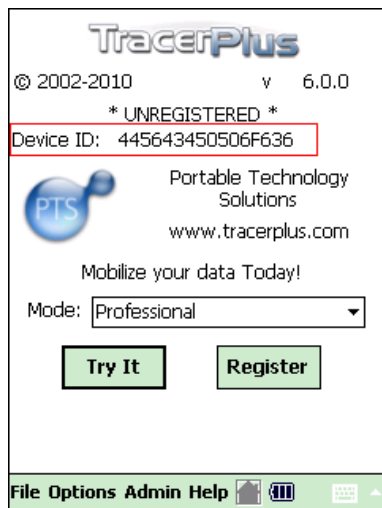
As previously mentioned the initial TracerPlus installation is offered as a trial and therefore requires purchase and registration for full functionality. TracerPlus can be purchased via authorized resellers. Visit www.tracerplus.com for more information. Registering TracerPlus removes the functionality restrictions of the trial/evaluation without requiring re-installation to the device. Additional benefits of registration include 30-days of free support, upgrade news and future promotional opportunities.



Registering licenses of TracerPlus has been simplified through **TracerPlus Desktop**. This method is described in detail in **Chapter 10** of the **TracerPlus Desktop** manual

However, TracerPlus can still be registered without TracerPlus Desktop. To register TracerPlus, we require the **Device ID** of the mobile device, a **Redemption Link**, and an E-mail address.

The **Redemption Link** is a unique ID generated for each license of our software you have purchased and emailed to you. TracerPlus is registered by pairing this Redemption Link with the Device ID of a particular mobile device. The **Device ID** can be found on the TracerPlus splash screen.



When entering this information manually, it is important that you copy the Device ID exactly as it appears on the TracerPlus splash screen; capitalization and spacing are critical. The ability of TracerPlus Desktop to register devices removes this potential problem by automatically detecting the Device ID.

It is also important to select the proper mode (Standard or Professional) that you purchased. Failing to do so will result in a registration error.

Chapter 2: Installation

How to Register without using TracerPlus Desktop:

1. After purchasing TracerPlus, you will receive a **Redemption Link** email. When purchasing multiple licenses, you will receive an email with multiple Redemption Links.
2. Confirm that the most recent version of TracerPlus has been installed on your mobile device, and then locate the **Device ID** by launching TracerPlus. The Device ID is highlighted in the above screen shot.
3. On your PC, click on **Start Menu → Programs → PTS → TracerPlus 6**, and select **Registration Info**. This will direct you to the registration section of www.tracerplus.com. Complete, review and submit the Registration Info form.
4. Once this step is completed, your registration code is e-mailed to the address provided. This process usually takes one hour but we ask that you allow one business day in the event of heavy traffic or any other delay.
5. After receiving your code, restart the **TracerPlus** application on the mobile device.
6. Click the **Register** button in the TracerPlus Splash Screen.
7. Enter your **Registration Code** at the Code prompt.
8. If the Registration Code is valid, you will receive a **Thank you for Purchasing TracerPlus** message.

2.5 Removing TracerPlus

In the unlikely event that you would like to remove TracerPlus from your PDA, follow these simple instructions.

1. Use the Add/Remove Programs feature in MS Windows via control panel to remove PTS TracerPlus from your PC.
2. On your PDA, navigate to **Start → Settings → System → Remove Programs**. Highlight TracerPlus and select **Remove**.

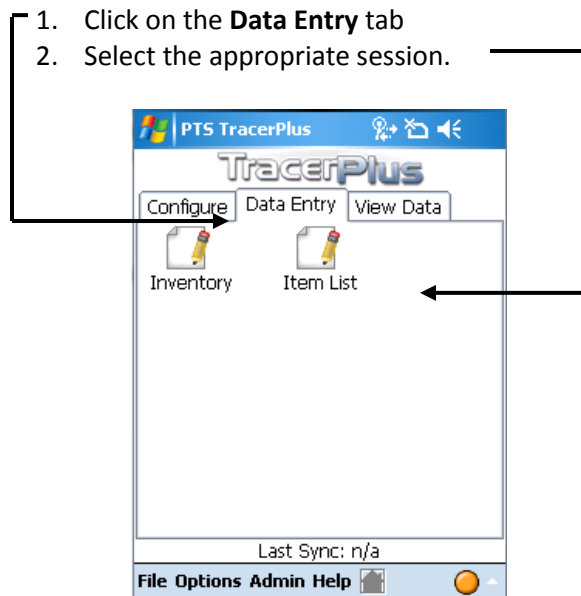
Chapter 3: Navigating TracerPlus

Chapter 3: Navigating TracerPlus

Once sessions and fields have been configured, the applications deployed and the method of data exchange has been determined (ODBC, Wireless, Excel, etc), TracerPlus is ready to begin collecting data. The processes of data entry, collection, administration and exchange are outlined below.

3.1 Entering Data

To enter data in TracerPlus, the user must first select the appropriate session.



Entry Screen

The **Entry Screen** is the area in which the user enters data. The fields are presented to the user with the customized fields as they were configured. The user enters data for each field presented. When the data is being scanned, the system controls the flow to the next field based on the Field Settings previously set up. This screen contains three buttons. These are discussed below.

Chapter 3: Navigating TracerPlus

PTS TracerPlus

Session 02 Records: 0

Part Number 10002386

Quantity 24

Description PVC Valve

In Stock ☒

Code 22894

Carrier FedEx

ID 10070

Date 21/27/2010

Time 12:21 PM

Done Submit Clear All

File Options Admin Help

Done Button

Click the Done button when you have finished entering data and would like to return to the Launcher. You will be prompted as to whether you would like to save the last record. Answer appropriately. You will now be returned to the Launcher.

Submit Button

Clicking the Submit button submits the current record to the database. After clicking this button, the focus is set to the field that was set as the Session Start On field. Refer to **Section 3.2.1** for more information on setting a Start On field.

Clear All Button

Clicking the Clear All button clears all data from all fields for this record. Notice that the focus will reset to the 'Start On' field. Also notice that any Default values selected in the Field Settings are not recognized. Fields set to read-only are not cleared.



Refresh Button

The refresh button is displayed to the right of any **Lookup**, **Calculated**, or **Filtered Drop Down Field**. When this button is pressed a refresh of this field is performed using the appropriate logic for that field.

Note: A lookup and re-calc is also performed on a successful scan or down arrow key press.

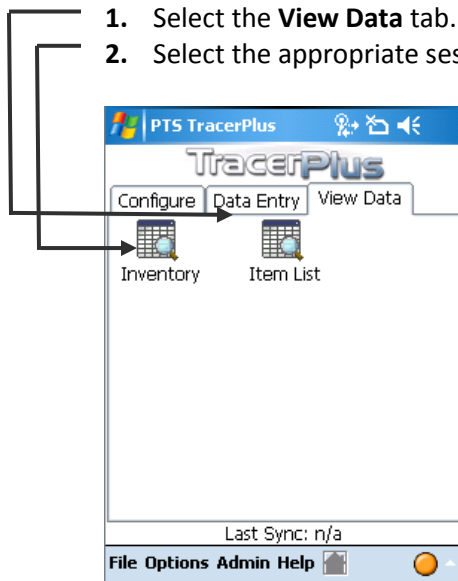
3.2 Editing Data from the View Data Screen

The **View Data Screen** is the area where the user can review, edit and search for records previously entered. The user can delete or edit a record by selecting it and then tapping a function key. To learn more about record searching, refer to **Section 5.4**.

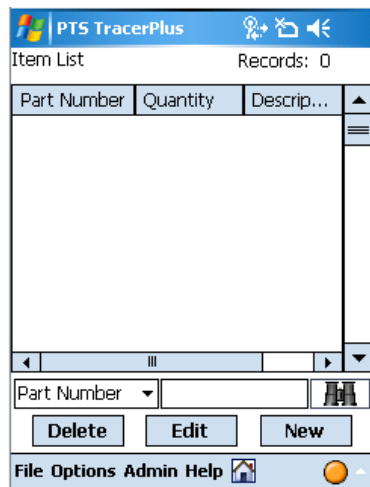
Chapter 3: Navigating TracerPlus

To access the View Data Screen:

1. Select the **View Data** tab.
2. Select the appropriate session.



This will open the View Data Screen shown below.



Delete

Click the Delete button to delete the selected record.

Edit

Click the Edit button to edit the record in the Data Entry screen.

New

Click the **New** button to add records in the Data Entry screen.

Delete All

To delete all records from the session, select **Options→Delete All**. This will remove all records from the session.

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Note: When the data table is filtered, performing a **Delete All** will remove records that match the currently set filter.

3.3 Quick Buttons

TracerPlus specializes in streamlining screen interaction. We do this through implementation of several unique features. This allows for very fast and accurate data entry. One of the features to aid in this is using the **Up/Down/Enter** keys on your PDA.

The **Up Arrow** key allows the user to move up one field on the **Entry Screen**. Note that this does not follow the 'Go To' field settings. It simply moves up one field on the **Entry screen**.

The **Down Arrow** and **Enter** keys allow the user to move down one field in the **Entry Screen**. The **Down** and **Enter** keys are actually used to trigger the '**After Scan**' rules and TracerPlus behaves just like it would after receiving a valid bar code scan. If, for example, the **Auto Submit** flag is enabled for the current field, and the user presses the **Down Arrow** or **Enter key**, the current record is submitted and all of the After Scan field settings for the field are respected; including the 'Go To' Field. This is especially useful for the users that do not have a bar code enabled PDA.

3.4 Finding Data

While in the View Data Screen, TracerPlus users can search the session database by using the **Filter** feature. Follow the directions below to use the **Filter** feature.

1. Select a field to search.
2. Scan or enter data into the Filter Field.
3. Click the Filter button.

The first screenshot shows the 'PTS TracerPlus' interface with a table titled 'Item List' containing one record: Part Number 123000000016, Quantity 0, In Stock False. Below the table is a dropdown menu for selecting a field to filter by. The 'Part Number' field is selected. Below the dropdown are buttons for 'Delete', 'Edit', and 'New'. The second screenshot shows the same interface, but the 'Part Number' field in the dropdown is now populated with the value '123000000016'. The 'Filter' button is highlighted.

If you are manually entering data, you must click the **Filter** button. If you are scanning data, this is done automatically when you scan a bar code value. Additionally, there is a session setting that enhances the operation of this **Filter** feature. By enabling the **Edit on Scan/Find in Grid**

Chapter 3: Navigating TracerPlus

checkbox in the TracerPlus Desktop Session Settings, TracerPlus will allow you to change the data after locating a specific record. You can also set this on the device by setting the option to **Edit on Find**. Refer to **Section 3.2.1** for more information regarding these PDA settings.

Removing the Filter

To remove the filter, simply press the **Filter** button again. This will refresh the data grid and display all data in the current session.

Note: Using a filter, multiple records may be found in the table. When using the Edit on Find feature, the first value in the filter will be displayed in the Entry Form.

3.5 Sorting data from the View Data Screen

Clicking on any column header in the View Data Screen allows for ascending or descending sorting. By clicking on the column headers the data in the View Data Screen can be sorted in a number of different ways. By tapping a column header you will get the following results:

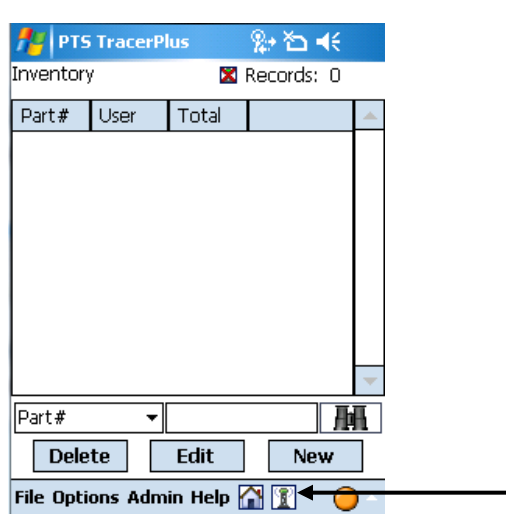
Tap once to sort the grid in ascending order.

A second tap sorts the grid in descending order.

A final tap returns the grid to displaying the data in 'natural' order.

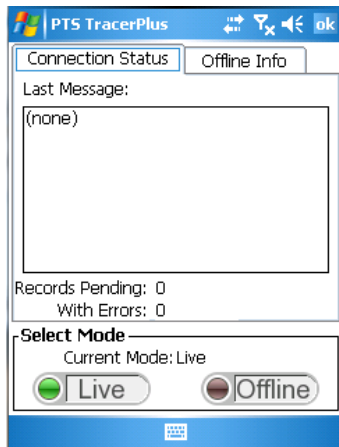
3.6 Accessing Wireless Status Information

The wireless status icon allows the user to determine whether they are connected to a wireless network. Live mode is when a TracerPlus user is connected to the Wireless Server and sharing data real time over the user's wireless network. In Offline mode the user is collecting data and saving locally on the PDA. This data can then be sent wirelessly back to the Wireless Server when a network connection is made using the Wireless Status form. To access the Wireless Status form, click on the Wireless Status toolbar icon or navigate to **Options→Wireless Status**.



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After selecting the Wireless Status option the following dialog will be displayed.



Live

Pressing the **Live** button will close the Wireless Status form and set the user in Wireless Live mode. If the user is already in **Live** mode they will remain in this mode. When in Live mode no data is stored locally on the PDA, it is sent back to the Wireless Server. If a wireless connection is unavailable, TracerPlus uses its integrated Store and Forward Technology to save the data locally until a connection is established.

Offline

Pressing **Offline** will close the Wireless Status dialog and switch the user into Offline Mode. If the user is already in Offline mode they will remain in this mode. Offline mode allows the user to collect data and store it locally on the PDA.

Connection Status Tab

The Connection Status Tab displays any information regarding the current wireless connection settings.

Current Mode Label

The Current State Label at the top of the form displays the current mode, the two possible options are Live and Offline mode.

Last Message

The Last Message information box will display the last error message to come from the Wireless Server or any pertinent connection information requiring the user's attention.

Records Pending

Displays the number of records stored locally in batch mode.

With Errors

Displays records stored locally which failed during send.

Chapter 3: Navigating TracerPlus

The screenshot shows the 'PTS TracerPlus' application window with the 'Offline Info' tab selected. The interface includes a title bar with standard window controls. Below the title bar, there are two tabs: 'Connection Status' and 'Offline Info'. The 'Offline Info' tab displays the following elements:

- Records Pending: 0
- With Errors: 0
- A 'Send Now' button.
- A data grid with the following headers: Err_Code, Status, Part#, and User. The grid is currently empty.
- Navigation buttons: 'Edit', 'Delete', and 'Delete All'.
- A 'Select Mode' section with 'Current Mode: Live' and two radio buttons: 'Live' (selected) and 'Offline'.

Offline Info Tab

Select the Offline info tab to view data collected when in Offline Mode. From this form queued records can be sent to the Wireless Server, or modified. The grid displays all records currently queued. The first two columns in the grid are **Err_Code** and **Status**. During a batch send if the record fails to post the error will be displayed in these two columns

Records Pending

Displays the number of records stored locally in batch mode.

With Errors

Displays records stored locally which failed during send.

Send Now

Press the **Send Now** button to send all locally stored records to the Wireless Server. While the transfer is in progress a count will be displayed of the number sent and the total records. If any records contain errors they will save locally along with an error code and status.

Edit

Select a record in the grid and press **Edit** to open the record in the entry form for editing. This is only available in Offline mode.

Delete

Select a record in the grid and press **Delete** to delete from the local records.

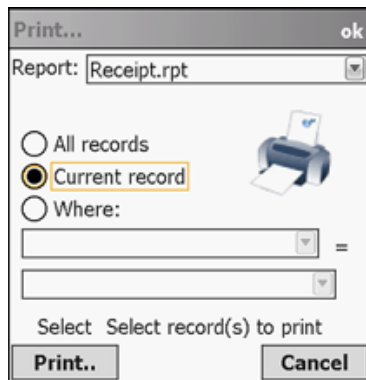
Delete All

Selecting **Delete All** will remove all the Offline records from the current session.

Chapter 3: Navigating TracerPlus

3.7 Print Prompt Dialog

When File → Print is selected the following printer dialog is shown.



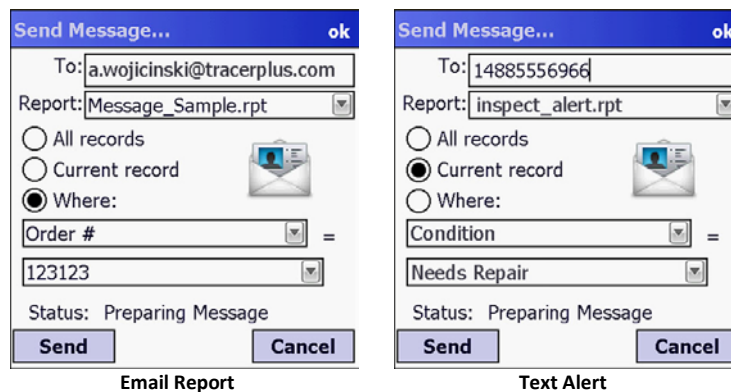
This dialog allows you to select specific records to print. The options include all records, current record or use a filter to choose a range. To set a filter:

1. Select the field to filter on from the drop down.
2. Enter filter criteria.

Note: The Print Prompt Dialog box is not editable when the “Start Print Automatically” option is checked in **TracerPlus Desktop** and will only appear momentarily before printing begins.

3.8 Message Prompt Dialog

When File→Message is selected the following messaging dialog is shown.



This dialog allows you to select specific records to send via email or text message. The options include all records, current record or use a filter to choose a range. To set a filter:

3. Select the field to filter on from the drop down.
4. Enter filter criteria.

Note: The Message Prompt Dialog box is not editable when the “Send Message Automatically” option is chosen in **TracerPlus Desktop** and will only appear momentarily .

Chapter 4: Managing Data

Chapter 4: Managing Data

4.1 Transferring Data from the PDA to the PC

Portable Technology Solutions provides a number of ways to transfer data collected in the field to a back-end database system. The Three most popular, and efficient methods; [TracerPlus ODBC Link](#) , [TracerPlus Wireless Server](#) and [TracerPlus Connect for Microsoft Excel](#) provide ways to sync data between mobile devices and host databases automatically and with consistent accurate results. However, it is also possible to transfer data between the PC and PDA manually via import and export commands available from the PDA menu options. This section outlines all of the features available for manual PC processing.

4.1.1 How Data Can Be Sent Manually to the PC

TracerPlus transfers all session data to the PC via standard import/export options. Importing and exporting allows for exchange of data between the PDA and the PC during ActiveSync. Depending on your ActiveSync settings, the mapping to these TracerPlus generated files can be done automatically. Before initiating the process the user must first select **File->Export Data** on the PDA. Imported and Exported data is available on the PDA at **\\My Documents\TracerPlus7\Data\Exported** and **\\My Documents\TracerPlus7\Data\For_Import**. These links provide you access to all of your incoming and outgoing TracerPlus data. Each session defined on the PDA generates its own independent data file. These files are appropriately named using the session number of each given session.

You can see the session number of any given session from the Session Settings screen. It is important to note these session numbers prior to renaming the session and when looking for your data. The filename for each session is **Sxx_data.txt** where:

xx = the session number for that session.

For example, if you have 2 sessions defined on the PDA, the first session listed would generate a file named **S01_data.txt** and the second defined file generates a file named **S02_data.txt**.

4.1.2 Manually Importing TracerPlus Data in an MS Excel Worksheet

MS Excel allows text files to be opened directly in Excel, so for the occasional need, it is fairly easy to open and view TracerPlus data files manually. The steps involved are outlined below. However, if your business uses Excel as a primary database, then **TracerPlus Connect for Microsoft Excel** is recommended.

1. In MS Excel, select File→Open.
2. Browse to the TracerPlus generated text file.
3. Select the file and Click **Open**.
4. Answer any questions regarding the type of data file as is appropriate.

Chapter 4: Managing Data

5. You should now see your TracerPlus data displayed in MS Excel in a familiar spreadsheet format.

4.2 Syncing Data from the PC to the PDA

As mentioned above, data transfer from the database to TracerPlus enabled mobile devices in the field has been radically simplified by the additions of [TracerPlus Connect for MS Excel](#), [TracerPlus ODBC Link](#) and [TracerPlus Wireless Server](#). However, TracerPlus 7.0 continues to include processes which allow you to send database info from the PC manually to your TracerPlus sessions on the PDA. The following sections outline these manual processes. For example, if an inventory control manager needs to distribute pick lists, they save the inventory file to the `\\MyDocuments\TracerPlus7\Data\For_Import` folder on the PDA for later import to TracerPlus. If a maintenance manager needs to distribute jobs, he distributes the job files to the maintenance personnel's `\\My Documents\TracerPlus7\Data\For_Import` folder.

Many of our customers connect their TracerPlus sessions with 3rd-party databases to give their current systems added functionality. These data files can easily be created and distributed by exporting databases from many popular databases programs.

4.2.1 Sending Session Data to the PDA

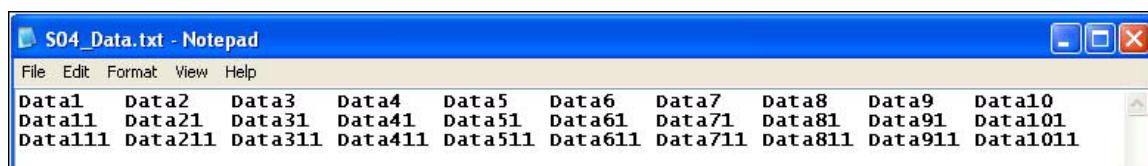
All data prepared for upload to the PDA must be copied and stored in a folder called `\For_Import`. This folder must be located under the `\\My Documents\TracerPlus7\Data\` folder on the PDA. These folders are automatically created when running TracerPlus on the PDA.

TracerPlus allows tab-delimited files to be sent from the PC to the PDA. The data file must be named exactly the same as the data generated by the Export process. So, for example, if you want to upload data for Session 2 on the PDA, the filename must be `S02_data.txt` and must be located in the `\For_Import` folder as described above. Once the PDA is ActiveSynced the user simply has to select **File→Import Data** on the PDA and the data will be available in **TracerPlus**. Also note that appending `_auto` (i.e. `S02_data_auto.txt`) to the end of the filename causes TracerPlus to automatically attempt an import upon next application start. This eliminates the need for the mobile user to manually perform the **File→Import** process.

The required file definition for sending session data from the PC to the PDA is as follows. `<CR>` indicates a carriage-return (line break), and `<tab>` indicates a tab character.

```
Field1<tab>Field2<tab>Field3....<tab>Field9<tab>Field10<CR>
Field1<tab>Field2<tab>Field3....<tab>Field9<tab>Field10<CR>
```

Below is a sample data file prepared for upload to a TracerPlus session.



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Note: If you define data for a session number that does not exist on the PDA, it will be ignored.

Note for New Users of Windows: Some versions of Windows will not display the file extension (e.g., “.txt”). On those systems, if you save a file as “S01_data.txt”, it will actually store the file as “S01_data.txt.txt”. This file will not be recognized by TracerPlus. To check the actual name of a file you’ve created, right-click on it in Windows Explorer and choose “Properties”.

4.2.2 Creating Session Data Files with Excel

To create a session data file with Excel, follow these steps.

1. Open the file in MS Excel.
2. Select **File** from the Menu bar.
3. Select **Save As**.
4. In the Save As dialog box, select **Save As Type: Text (Tab Delimited)**.
5. In order to avoid potential folder visibility issues within MS Excel’s Save As Dialog Box. Save your session to your desktop as **S01_data.txt.**, then transfer manually to the PDA. (In addition, Session 2 should be saved as S02_data.txt, etc.)
6. Close the MS Excel file, then copy the saved document to the **TracerPlus7\Data\For_Import** folder.
7. Perform a **File→Import** from TracerPlus on the PDA once an ActiveSync has been performed.
8. Delete the file initially saved on your Desktop to avoid future versioning problems.

Note: These files can also be saved directly from Excel to the **For_Import** folder located on your Device if your copy of Excel displays your mobile device in the Save As Dialog Box.

4.2.3 Sending Drop-Down Lists to the PDA



It is highly Recommend that drop down list be created in TracerPlus Desktop. However, TracerPlus also allows the user to prepare and manage Drop-Down lists manually and for later upload to the PDA running TracerPlus. The filename of list data to be uploaded must be named **SxxFyy.txt** where

xx = the session number

yy = the field number

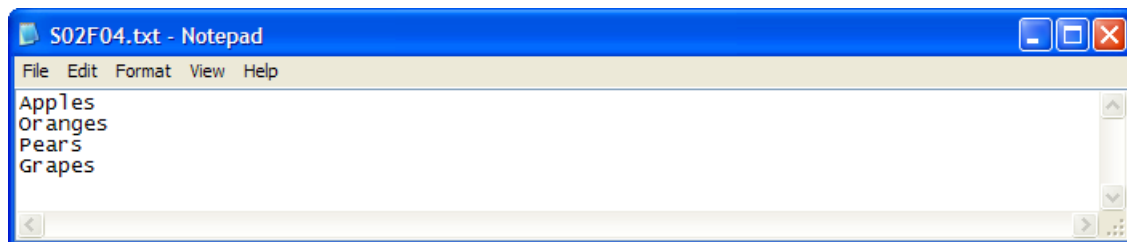
Chapter 4: Managing Data

For example, if you want to send the list contents for session 2 in the 4th field, the filename must be named **S02F04.txt** or **S02F04_auto.txt**. The **_auto** suffix tells TracerPlus to automatically import that file upon the next application start.

Note: Simply sending the list contents for a particular session and a particular field does not automatically define that field as a drop down list. This must still be set in the **Field Settings** and is normally configured in TracerPlus screen of the PDA application. Please refer to **Chapter 6** for instructions on setting field properties.

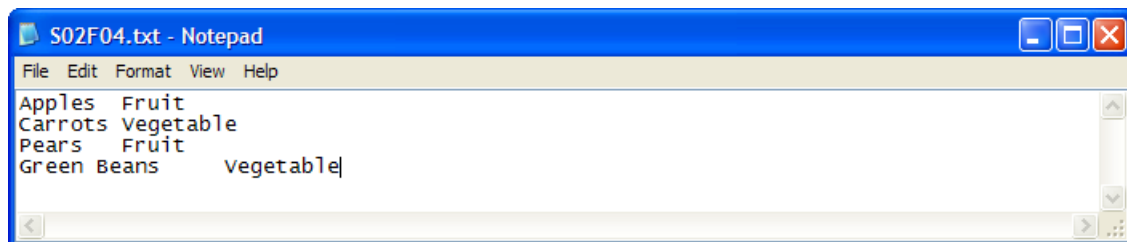
The format for the list files is very simple. Each list element must be stored on its own line. Since there is only one field, there is no need for a **<tab>** delimiter between fields.

A sample of what this data must look like is as follows.



To Import drop down data including filter values, use a **tab** delimited text file with two columns. The first column is used as the display value, while the second column is the filter value. The import file name is the same as when not including the filter values.

Here is a sample of what a drop down list including filter data may look like.



Chapter 5: Configuring Sessions on the Device

TracerPlus allows users to create up to 32 unique data capture programs. These unique programs are called Sessions. Sessions are easily accessed from the **View Data Screen**, where captured data can be viewed and searched. With the release of [TracerPlus Desktop](#) as a free download, there is now very little need to configure Sessions on the device. However, in the event that a quick change needs to be made where there is no access to a PC, having the ability to make that change on the device can be helpful.

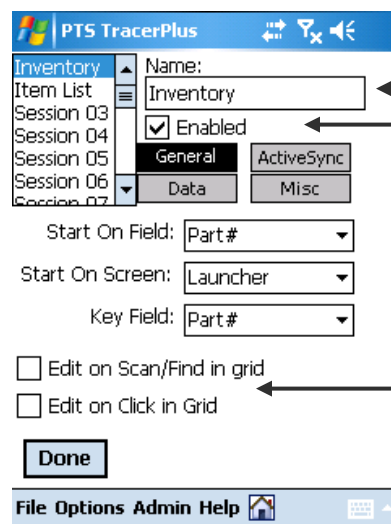
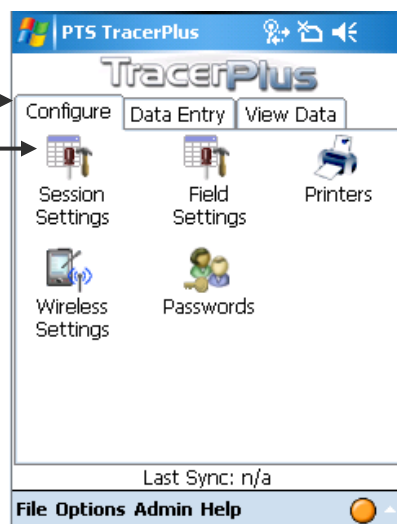
Note: Many of the new features introduced in TracerPlus 6.0 and 7.0 can only be configured through TracerPlus Desktop.

5.1 Configuring Session Attributes



The first step in creating a TracerPlus Session is to assign a name. This name is displayed in the session menu, and is selected by the user when collecting data, editing field settings, or editing session settings. To create a Session name, follow the steps below.

1. From the launcher screen, select the **Configure** tab.
2. Select **Session Settings**.
3. Check the **Enabled** checkbox
4. Enter the name of the session you are creating.
5. Configure your session's **General, ActiveSync, Data and Misc.** attributes. These are described in detail in **Section 5.2**. When you are finished, press the **Done** button. If you do not need to modify the session, the default settings are used and you can proceed directly to **Chapter 6 - Field Settings**.



Chapter 5: Configuring Sessions on the Device

5.2 Session Settings Explained



5.2.1 General Session Settings

General Session Settings are used to control the general operating characteristics of the session.

The screenshot shows the "PTS TracerPlus" application window. On the left is a tree view with "Inventory" selected. The main area shows the "General" tab for the selected session. It includes a "Name:" field with "Inventory" entered, an "Enabled" checkbox which is checked, and three tabs: "General" (selected), "ActiveSync", "Data", and "Misc". Below these are three dropdown menus: "Start On Field:" set to "Part #", "Start On Screen:" set to "Launcher", and "Key Field:" set to "Part #". There are two unchecked checkboxes: "Edit on Scan/Find in grid" and "Edit on Click in Grid". A "Done" button is at the bottom left. The bottom of the window has a menu bar with "File", "Options", "Admin", and "Help".

Start On Screen

Select the screen the user will enter when first start TracerPlus. The user can choose between starting on the View Data Screen, Data Entry or the (default) Launcher screen.

Note: This option only takes effect when this session was the last one used; each session has its own settings.

Start On Field

Select the first field the user is focused on when **New** is selected from the data view screen. This setting is commonly selected to control what data must be entered when the program is initially opened.

Example: A session is created to capture package delivery information. Date and Time stamps are captured in fields 1 and 2. The bar-coded Package ID will be entered into Field 3. In this scenario the Start On is set to Field 3 since Field 1 and 2 are entered via automatic date and time stamps.

Key Field

The Key Field is used as the index field for the TracerPlus session data. This enables increased speed in searching TracerPlus records. Select the field most used for searching.

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Edit on scan/Find in grid

Select **Edit on scan/Find in grid** to automatically open records in the data entry screen when a record is located using 'Find' or scanning on the View Data screen.

Note: The field selected from the Find drop down menu, located in the Data View Screen, defines the field that is being searched.

Example: A session is created to perform an inventory audit. The goal of the audit is to quickly find items in the TracerPlus database and compare the database values to the actual inventory levels. To speed this process, the Edit on scan/Find in grid setting is enabled. When an item is scanned in the find field and located in the database, the matching record is automatically brought up in the data entry screen for editing.

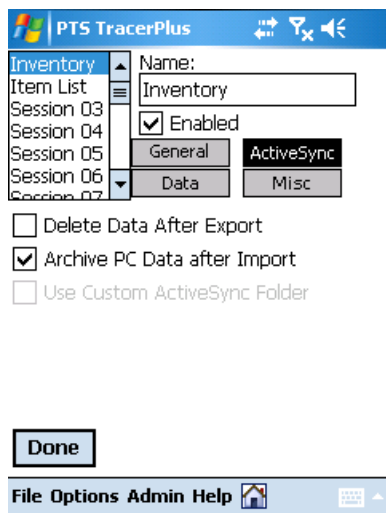
Edit on Click in Grid

A similar option for automatically editing a record is the behavior of editing a record immediately upon clicking it in the grid. Selecting this option is very useful for the user who is performing a lot of edits to existing data.

Note: When this option is selected, it is not possible to delete a single selected record from the grid. The user must turn this option off before being able to delete single records. The Delete All menu choice behavior is not affected.

5.2.2 ActiveSync Settings (Windows Mobile Device Center in Windows Vista)

Import/Export settings are used to control how data is moved from your PDA to PC when not using TracerPlus ODBC Link software.



Delete Data After Export

Select **Delete Data After Export** if the data should be removed from the PDA database after a successful export. Note that if data is not successfully exported, as a safety precaution, it will not be deleted from the PDA Database even when this option is enabled.

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Archive PC Data After Import

Select **Archive PC Data After Import** if you wish to archive any files imported to the PDA during an import. Any data files imported to the PDA are renamed with a prefix of “old_” on the PC after a successful import if this option is selected. Import files include both list contents as well as any session data needing import to the PDA.

Note: Without this option, your upload files will be uploaded every time you perform an import, which may cause the import process to take longer than necessary.

Use Custom ActiveSync Folder

Not Available in this version.

5.2.3 Data Storage and Transfer Settings

Data settings are used to control the format of the session’s data file exported via File->Export.



Export As

This option allows the user to select from one of six possible data formatting types

Text (Tab delimited)

This formatting option embeds a <tab> character between every transferred field. Each record is terminated with a Carriage Return/Line Feed (CRLF)

Text (Comma delimited)

This formatting option wraps each field in quotation marks and separates each field with a comma. Each record is terminated with CRLF.

Text (Fixed Width)

This formatting option transfers all fields using a fixed width. Any space remaining at the end of Field data is padded with spaces. Use of the Max Length field setting is also used to dictate the width of each fixed width field. The maximum length of any given field is 64 chars. Each record is terminated with CRLF.

XML

This formatting option allows data to be transferred in XML format. This is very useful for customers when importing into existing systems.

HTML

This formatting option transfers all data in HTML table formats. This provides a formatted representation of the collected data that can be viewed as a web page.

This formatting option separates each field with a comma. Each record is terminated with CRLF.

Append to Existing File

By default, TracerPlus appends new data to any existing data file in the **\Exported** folder located on the mobile device. When this option is selected, the new data file is added to the pre-existing file if it exists. If this option is not selected, any previously transferred data is deleted and a new file is created on each export operation. A new file is created if it does not exist regardless of this setting.

Send Non-Visible Fields

By default, TracerPlus does include non-visible fields in the data file. When this option is selected, non-visible fields will be sent to the export file. Refer to **Chapter 6** on how you might use this option.

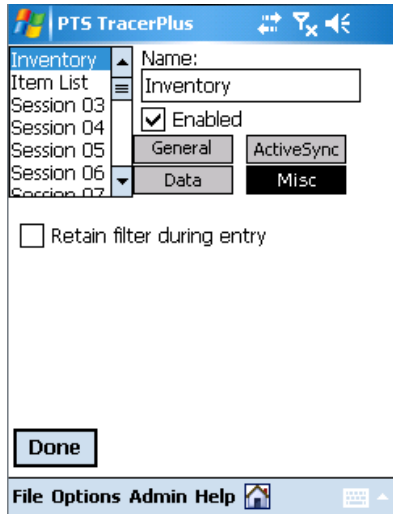
Include Field Names

By default, TracerPlus does not include field names in the export data file. When this option is enabled, the user configured field names are provided in the generated data file. Depending on the file format, this is represented in different ways. For all of the text data transfers, the field names are included as a header record, being transferred as the first line of the data file. For the XML and HTML formats, the field names are included in the general formatting of the data file.

Chapter 5: Configuring Sessions on the Device

5.2.4 Miscellaneous Settings

These settings are used to change the behavior of the session's data table filtering.



Retain filter during entry

Use this option to set the state of the current filter when entering the entry form. When the data table is filtered and the “Retain filter during entry” option is selected, the current filter is applied when in the entry form. This option also affects the auto find on scan option. When a filter is retained, the entry form can only be used to find data that matches the currently selected filter. The record count also reflects the filtered record count.

5.3 Deploying Configured Sessions to Multiple Users



Please refer to **Chapter 9 Section 9.3** for a detailed look into how to deploy session configuration to your entire workforce.



Tip: An easy way to reset a session to defaults is to disable and re-enable the desired session. In the Session Settings form, select the session you would like to reset. Uncheck the Enabled checkbox. A prompt is displayed asking if you would like to restore the session to defaults. Simply select Yes and re-enable the session to restore the default settings.

Chapter 6: Configuring Field Settings on the Device

As with Session Settings, the procedure for configuring Field Settings has been simplified greatly with TracerPlus Desktop. In addition some of the newer features now available in TracerPlus 7.0 can only be selected and configured from within TracerPlus Desktop. After a session is created, fields within that session may also require configuration. Before configuration, all available fields within the session are in a default state. TracerPlus Standard has 10 fields available for configuration and TracerPlus Professional has 50 available fields.

Customizing your session settings and field settings is not required, as the default settings will work perfectly for many users. However, to fully realize the power of TracerPlus, some of these settings may need modification for your specific needs. Proper field configuration speeds up data acquisition and help to prevent data input errors. Again this depends on your specific collection requirements.

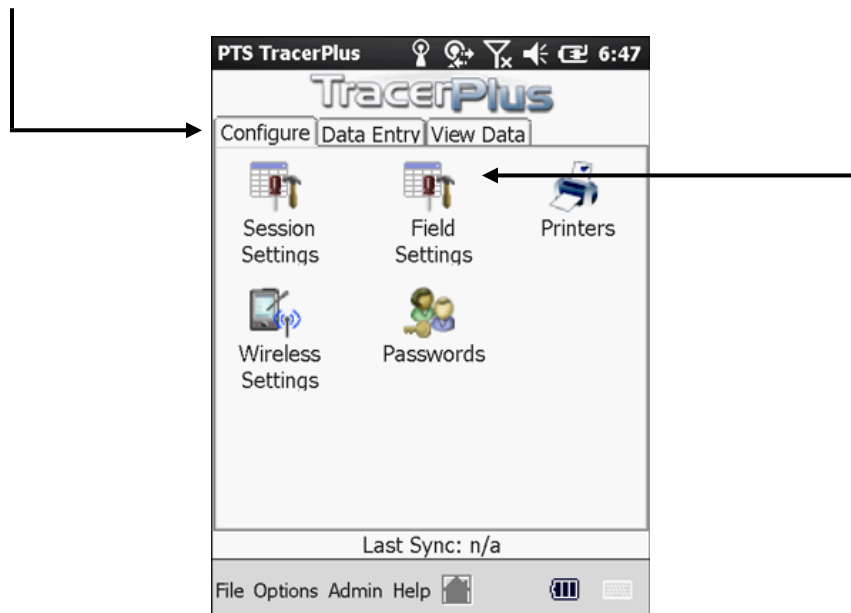
In this chapter, you will learn how to set up fields for your specific application. **Section 6.3** explains the various TracerPlus field settings in more detail. Each Field Setting is also described in detail in the **TracerPlus Desktop** manual.

6.1 Configuring Field Settings



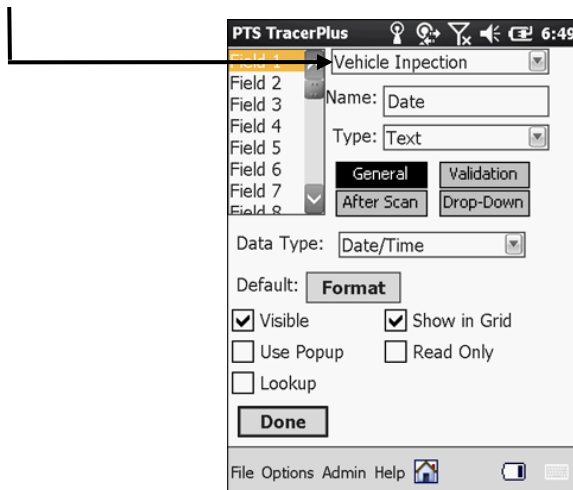
Below we go through the steps required to configure field settings.

1. From the TracerPlus Launcher Screen, select the **Configure** tab.
2. Select **Field Settings**.



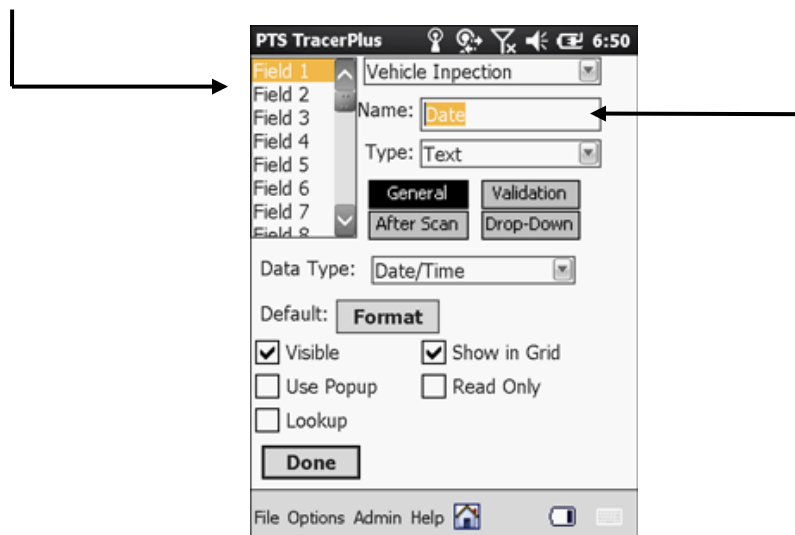
Chapter 6: Configuring Field Settings on the Device

3. Select a TracerPlus session.



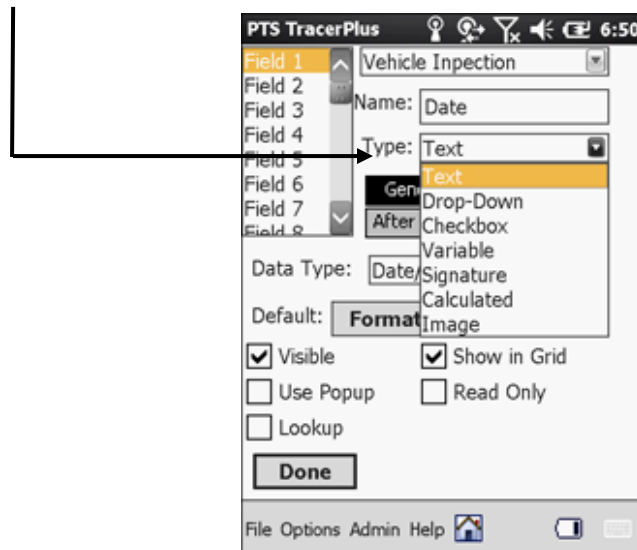
4. Select a field to configure.

5. Enter the field **Name**.

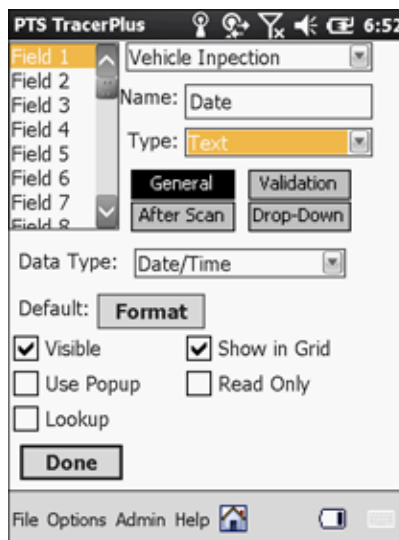


Chapter 6: Configuring Field Settings on the Device

6. Select a **Field Type**. Section 6.2 discusses these field types in more detail.



7. Enter **General** field settings. Section 6.2.2 discusses these settings in more detail.



8. Enter additional field settings. Refer to Sections 6.2.3 through 6.2.5 for more detail on the other available field settings options.

9. Repeat steps 4 through 8 to configure additional fields.

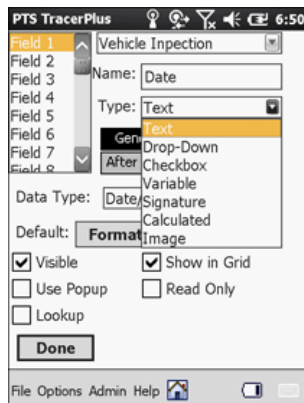
Chapter 6: Configuring Field Settings on the Device

6.2 Field Types



The Field Type setting is used to control what type of data is entered for this field. TracerPlus has seven available field types outlined below.

Note: Previous versions included **Data Lookup** functionality as a Field Type. In version 7.0, this has been upgraded to a **Field Setting** (see Section 6.3.4). This provides expanded capabilities by allowing lookups on the various Field Types.



Field Type	Version	
	Standard	Professional
Text	✓	✓
Drop-Down	✓	✓
Checkbox	✓	✓
Variable	✓	✓
Signature	✗	✓
Calculated	✗	✓
Image	✗	✓

6.2.1 Text

Text fields should be chosen when data is to be entered via a bar code, keyboard, or graffiti. The Text type does not restrict input in any way, and can store up to 64 characters.

6.2.2 Drop-Down

Drop-Down fields allow the user to select from a pre-defined list of items. Drop-Down fields offer a quick, error free way to enter data from a select list of choices. Section 6.2.5 provides more detailed information regarding drop down lists.

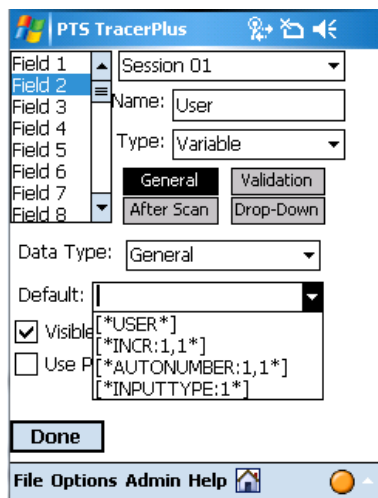
6.2.3 Check Box

Check box fields are used when simple Yes/No, True/False, On/Off selections are made. Check boxes should be used whenever possible to speed data entry and limit data entry error.

6.2.4 Variable

Variable fields are used to automatically enter values such as User or Auto Number field. To set a Variable field the user selects the value they would like to enter in the field from the drop down menu. The selected setting will then appear in the "Default" field value in the Settings screen. By default, **Variable** field values are populated when the record is first created. To update the variable each time it is submitted, simply enable the **Update Value** option for that field. Refer to Section 6.2.4 for more information regarding **Update Value**.

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USER

When **USER** is selected the field is automatically filled with the PDA ID of the device. If utilizing [User Logins](#) this field will be populated with the logged in user name.

INCR:1,1

When INCR:1,1 is selected, the field is set to be an auto-incrementing field. The first digit represents the starting value while the second digit represents the increment value. The default setting INCR:1,1 starts the record as a value of 1 and increment by 1 for every following scan of a previously scanned bar code. This feature can automate a lot of data entry tasks that involve counting items.

This field setting option is dependent on the Auto Find on Scan Field setting. Refer to the appropriate Session and Field settings section of this manual for more information in this area.

The INCR variable type can also be used to count backwards by setting the second number to a negative value.

AUTONUMBER:1,1

The **AUTONUMBER** variable type is used as an auto incrementing value that increments on each submit irrespective of any field data. This value can be started at different values by changing the number directly following the colon. It may also be incremented by the value specified after the comma. The default is to start at one and increment by one.

NOTE: Resetting the AUTONUMBER value

To change or reset the current AUTONUMBER value the session configuration file must be modified. To do this open the corresponding session configuration file in a text editor, this file can be found in the System folder of the PDA. In the AUTONUMBER field which needs to be modified look for the autonumber="" attribute and change to the value required. Save the file and copy back over to the System directory on the handheld.

INPUTTYPE

The **INPUTTYPE** variable is used to display the method of data entry in a particular field. The method of entry can be keyboard input or a barcode scan. If the method of entry was a barcode scan the INPUTTYPE field will be populated with the type of barcode that was scanned. To configure an INPUTTYPE field simply select the INPUTTYPE variable from the drop down and enter the field needed to capture the input type. As an example, if the variable setting for Field 2 is "INPUTTYPE: 5", Field 2 data will contain information about **how** data for Field 5 was entered.

6.2.5 Signature (Professional Version Only)

When a field is specified as a **Signature** field, a popup is displayed when the user selects this field in the Entry screen. This popup can then be signed and when the user clicks **Done** the signature is saved in the database. When a session is exported signatures are stored in a separate subfolder **\Exported\Bin**. Note: When a signature has been entered the field says "-- Signature exists --" and the signature is not saved until the user submits the record in the Entry screen.



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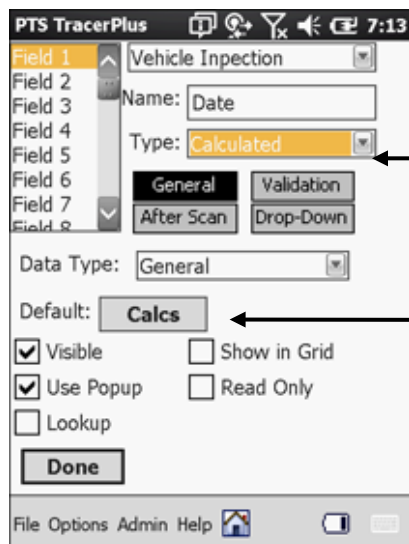
6.2.6 Calculated (Professional Version Only)

A **Calculated** field is used to perform simple mathematical operations between fields and with constant values, string concatenations, and field data parsing. This is useful for invoicing or mobile receipt printing. With calculated fields you can add, subtract, multiply or divide two fields, or perform these operations with a numerical constant such as tax or discounts. It is also possible to use the Left, Mid and Right parse functions to extract field data based on defined Start and Stop points.

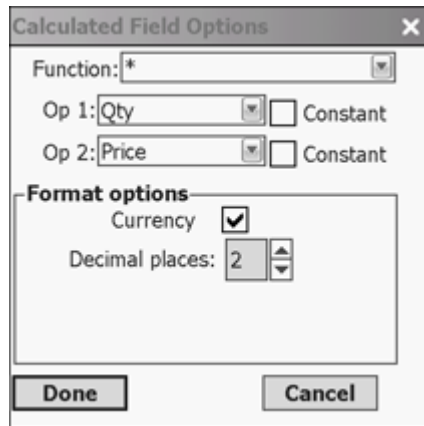
Note: Calculation functions have been expanded and the configuration simplified. However, these additional abilities can only be accessed through **TracerPlus Desktop**.

Configuring a Calculated Field

1. Select the field you would like to configure.
2. Select Calculated from the **Type** drop down.
3. Then click on **Calcs** in the General Field Settings.
4. The Calculated Field Options dialog box is shown.



Calculated Field Options dialog



Function

The **Function** drop down is used to select the operation to be performed for the calculated field.

Basic Functions

- (+) – Depending on the field's data type the addition operator will add the 2 operands together. A string concatenation will be performed if the data type of the selected field is **General**. If the field's data type is **Number**, a mathematical addition operation will be performed.
- (-) – The subtract operator will subtract operand 2 from operand 1. This operation is only available for a field data type of number.
- (*) – The multiplication operator will multiply the two operands. This operation is only available for a field data type of number.
- (/) – The division operator will divide operand 1 by operand 2. This operation is only available for a field data type of number.
- Min** – The **Min** operation is used to select the minimum value between 2 operands. For example, operand 1 is 10 and operand 2 is 5 the configured calculated field will contain the value 5 when the operation is complete.
- Max** – The **Max** operation takes the maximum value between two operands.
- LEFT** – See advanced functions below.
- MID** – See advanced functions below.

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RIGHT – See advanced functions below.

GPS_LATITUDE – See advanced functions below.

GPS_LONGITUDE – See advanced

Op 1

From the **Op 1** drop down select the field you would like as the first **Operand** in the calculation. You can also select **Constant**. This allows you to enter an alpha-numeric value in place of a field.

Op 2

From the **Op 2** drop down select the second **Operand** in the calculation or select Constant to enter a constant value.

Constant

When Constant is selected the Operand selector becomes a text box and allows you to enter the alpha-numeric constant to be used in the calculation.

Format Options

The format options allow you to format the result from the calculation in a number of ways. Select Currency to add a dollar symbol (\$) to the beginning of the string. The decimal places allow you to change the number of decimal places displayed. This can range from zero to six.

Advanced Functions

- LEFT** – The **LEFT** function is used to extract or parse field data from the beginning of the string to the **Stop** value.
- MID** – The **MID** function is used to extract field data from the defined **Start** point to the defined **Stop** point.
- RIGHT** – The **RIGHT** function is used to extract field data starting at the right side of the string to the defined **Stop** point.

NOTE: When selecting a **LEFT**, **MID**, or **RIGHT** function the Calculated Field Options dialog will change to accommodate the new options. The dialog is shown below.

Calculated Field Options

Function: MID

Source: Field1

Parse settings

Start

Type:	Value:	Occurrence:
CHAR	P	1

Stop:

Type:	Value:
INDEX	5

Done Cancel

Source

The Source is the field that will contain the string to be parsed. For example, the user would like to extract the first 5 characters from a barcode scanned into the first field. The source would then be Field1.

Parse settings

Within the **Parse settings** group box the options for **LEFT**, **MID**, and **RIGHT** will appear. These options include a **Start** and a **Stop** point. For the **LEFT** and **RIGHT** functions only a Stop point is configurable since the Start point is at the beginning and end of the string respectively. For a **MID** parse the user must specify both points.

Start

A Start point is available when a **MID** function is selected. The Start point defines where the parse is to begin.

Stop

The Stop point defines the point at which the parse should end.

Type

There are two available types, **INDEX**, and **CHAR**. An **INDEX** type is used to define a specific index or length of a resulting string. A **CHAR** is used to match a character or **ASCII** value.

Value

The value is the defined delimiter. When it is of type **INDEX** an integer value is required in the value field. For a Start point the value specifies the index in the string where the parse should start. For a Stop point of type **INDEX** the value specifies how many characters to include. When a delimiter is of type **CHAR** any valid character delimiter can be used, this includes **ASCII** characters in **HEX** notation.

Occurrence

The **Occurrence** field is only available for delimiters of type **CHAR**. The Occurrence option is useful if the string to be parsed contains multiple

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instances of the same delimiter. For example, the barcode being scanned has three fields of data separated by the tab character, and the user would like only the middle field. To extract this value, two **CHAR** Start and Stop points should be defined. The Start point will be the First tab character and the Stop point will be the second tab character. So, for the Start point the occurrence will be one and for the Stop point the occurrence should be set to two.

GPS_LATITUDE

When selecting the **GPS_LATITUDE** function the selected field will be populated with the devices current latitude. This function requires a supported GPS device connected to the PDA. (Section 1.6)

GPS_LONGITUDE

The **GPS_LONGITUDE** function will populate the selected field with the devices current longitude. This function requires a supported GPS device connected to the PDA. (Section 1.6)

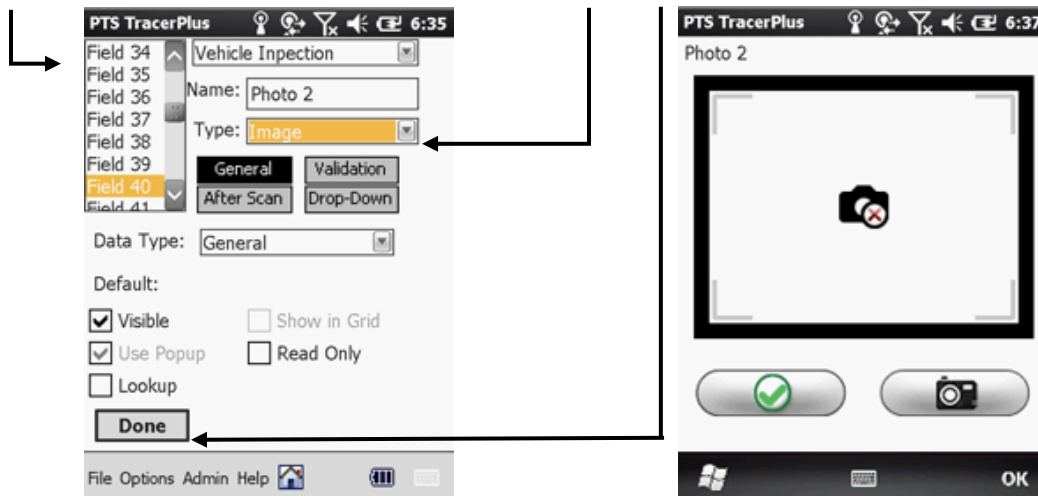
Note: The data type of a calculated field is important. If the data type is set as general the only available functions are (+), LEFT, MID, or RIGHT. The (+) function will perform a string concatenation between the two operands if the data type is set to String. If the data type is Number the specified mathematical operation is performed on the two operands.

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6.2.7 Image (Professional version only)

When a field is selected as an **Image** field type, the user can capture camera images for a given data collection record. This is only supported on devices running Windows Mobile 5.0 and greater. Of course, the PDA must also have a digital camera installed. When selecting this field type, your data entry form displays a button allowing the user to launch the camera dialog. This dialog allows you to view a previously taken picture or capture a new one. Once captured, this image is stored against the current record. When exporting, this image is exported to the data folder under a subfolder called **\Exported\Bin**.

To configure a field for image capture, select the field you would like to configure, select **Image** from the Type drop down, then click **Done**.



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6.3 Field Settings



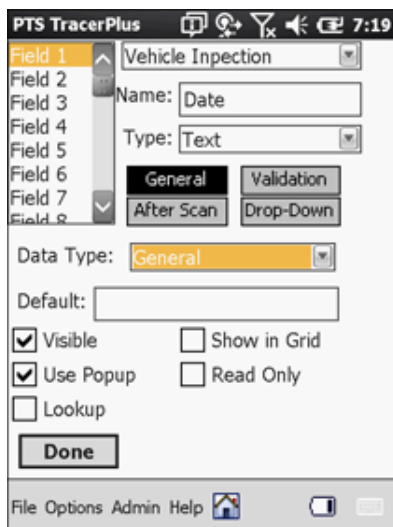
Once **Field Types** have been determined, additional attributes need to be assigned to each field.

6.3.1 General Field Settings

General Field Settings allow the user to define the most basic field attributes. These settings allow a TracerPlus user to remove visibility of a field, establish default values, numeric only fields, and read only fields.

Data Type

The Data Type **represents the format of the expected data for the selected field.**



General

General is set to accept all data types in a field.

Number

Number is set when the field is only used for numeric data. When a field's Data Type is set to Number, it does not accept any Alpha characters.

Date/Time

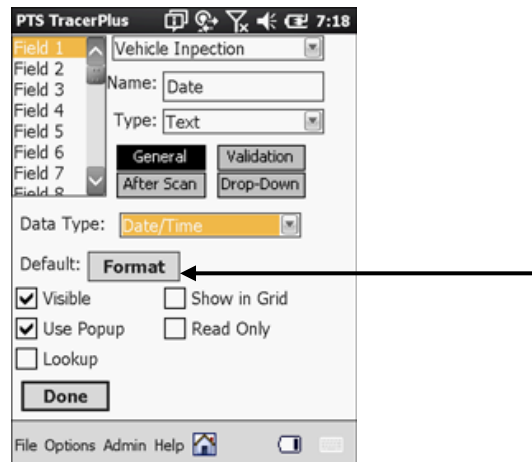
The Date/Time format is used to enter formatted Date and Time values. These formats are configurable using the date time format configuration screen. The default format is the user's system default.

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Configuring a Date Time Format

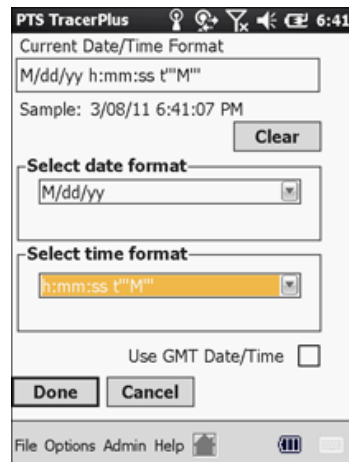
The system default is used as the default time format. However, it is possible to change this format to any type the user requires.

1. Select Date/Time from the Data Type drop down.
2. Click on the Format button which appears.



Date Time Format Configuration Screen

After the Format button has been pressed the Format configuration screen is displayed. From this screen the user can configure a preset list of formats or create their own using the Current Date/Time Format edit box.



Current Date/Time Format

From this field the user can enter the format desired by entering valid Date/Time format characters. These characters are described in detail in [Appendix A1](#).

Clear

Use the Clear button to remove the currently set format.

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Select date format

This list contains pre-configured date/time formats. Select one from the list and it will be added to the Current Date/Time Format string.

Select time format

This list contains pre-configured time formats. Select one from the list and it will be added to the Current Date/Time Format string.

Use GMT Date/Time

Select Use **GMT (Greenwich Mean Time) Date/Time** to display the current GMT Time in the current user selected format.

Done

Press the Done button to save the format string and return to the Field Settings.

Cancel

Return to the Field Settings form without saving.

Default

The **Default** represents the value that is initially used for the selected field. For example, you may set up one of your fields to represent a quantity. Likewise, you might want to set the **Default** for that field to be 1.

Note: If the user clicks the **Clear All** button from the data entry screen, this default value is cleared, as well.

Default values can also be entered using **Variable** field settings. Refer to Section **6.2.1** for more information.

Visible

This option is normally selected and allows a field to be viewed or hidden in the data entry screen. A field's visibility should be turned off when it is not being used in a session or if the default contents need to be stored but not seen by the user as in some cases of Date/Time stamping of an individual record.

Show in Grid

When **Show in Grid** is selected, the field is visible in the View Data Screen grid. Fields are displayed in their numeric order in the grid.

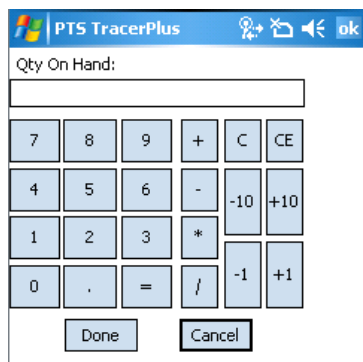
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Use Popup

This option is only valid when the Data Type for a field supports it. Currently only **Date** and **Numeric** data/field types allow for the optional pop-up dialogs. This option is ignored in all other data type settings. When a valid field is tapped with this option selected, a popup dialog appears. Below the two different popup types are explained.

Numeric Popup Dialog (Professional Version Only)

The **Numeric Popup Dialog** works like a calculator. When a valid field is tapped the current numeric value in that field is placed in the calculator. The user can then do simple math calculations on that value. When **Done** is pressed the value is entered into the corresponding field in the Entry screen.



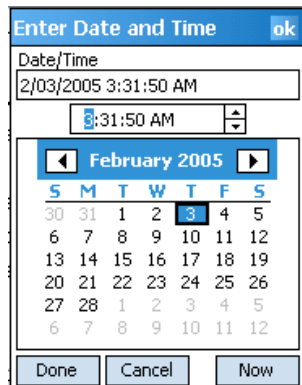
Numeric Popup Dialog Button Definitions

+10	:	Adds 10 to the current value
- 10	:	Subtracts 10 from the current value
+1	:	Adds 1 to the current value
- 1	:	Subtracts 1 from the current value
C	:	Clears the value
CE	:	Reverts the value back to the original, when the Popup first came up
Done	:	Performs any final calculations and returns the user to the Entry screen
Cancel	:	Returns the user to the Entry screen and reverts value back to original

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Date Time Popup Dialog (Professional Version Only)

The Date Time popup is used to select dates and times from a calendar and time picker. These values can be formatted to any locale using the date time format options.



Read Only

When the **Read Only** option is selected, the user does not have the ability to enter data in the selected field. This is commonly used in conjunction with default values and **Variable** type fields.

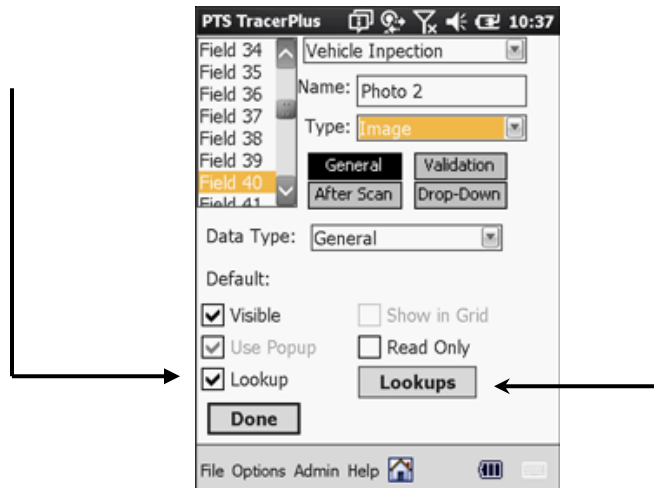
Lookup (Professional Version Only)

Note: Beginning with TracerPlus version 7.0, the lookup configuration has been moved to Field Settings. As a result, lookup capabilities can be performed on most of the Field Types described above in section 6.2. Only the Variable Field Type is exempt since the purposes of that type do not mesh with the need to lookup comparative data.

A Lookup field is populated with data from another session (source). When properly configured, a Lookup field matches the defined relationships between the current session and the source session. If that record is found in the lookup session, the assigned field data is populated in the current session's assigned field. As an example, this could be a customer name based on an entered customer number, or a part description based on an entered part number.

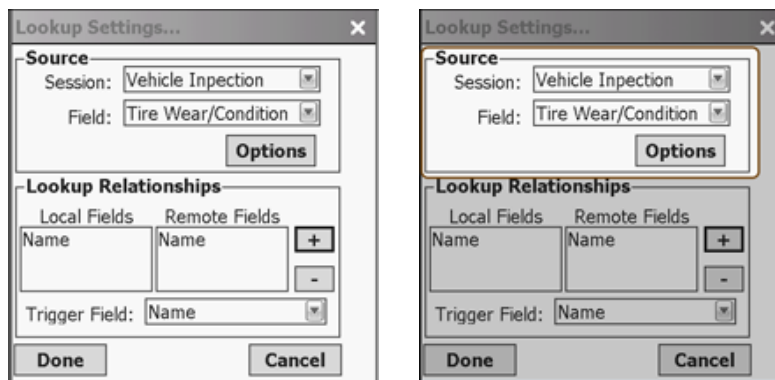
To configure field Lookup capabilities, enable the **Lookup checkbox** on the **General Setting** screen.

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2. Then configure the following settings.

Lookup Settings



Source

The source section is where the user defines the data required from the lookup session.

Session

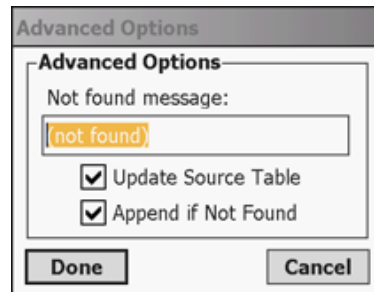
Select the session from where you would like to get data.

Field

Select the field data needed from the selected lookup session.

Options

Select **Options** to configure advanced settings for this lookup, the following dialog is displayed.



Not Found Message

Configure this option to display a custom message if matching data is not found in a lookup table.

Update Source Table

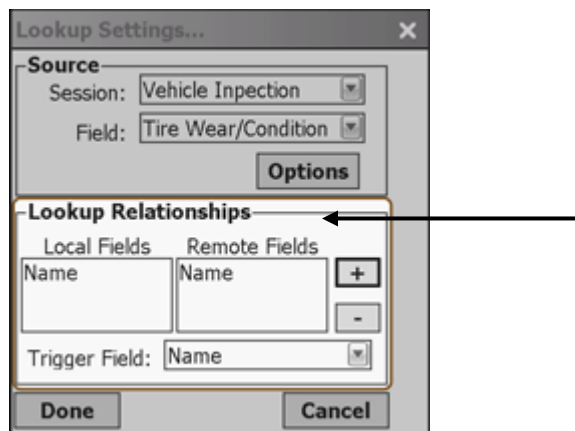
This option allows the user to update the data found in a source table. If a successful lookup is performed any changes made to that field update the field in the source session.

Append if Not Found

Use **Append if Not Found** to post a new record if the lookup is unsuccessful. This option will post the relationship values along with any source fields with the same relationships.

Lookup Relationships

The Lookup relationships are used to define the fields which are matched in order to get the field data from the source session. There can be multiple fields added as lookup relationships. For example, the user would like to grab a line item from a session of orders. To do the lookup the relationships should be defined to match the order number and the line item required.



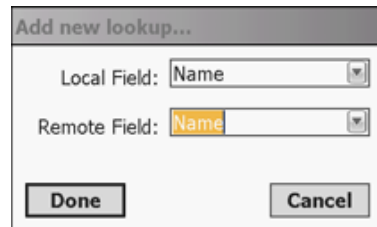
Local Fields and Remote Fields

These list boxes show the current relationships created for this lookup. To add or remove relationships use the buttons to the right.

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Plus (+)

Add a relationship. When selected the Add relationship dialog box (shown below) is displayed.

A dialog box titled "Add new lookup...". It contains two dropdown menus: "Local Field:" with "Name" selected, and "Remote Field:" with "Name" selected. At the bottom are "Done" and "Cancel" buttons.

Local Field

The local field is the field from the **current** session which will be matched against the remote field when performing the lookup.

Remote Field

The remote field is the field from the source session which will be matched against the local field when performing the lookup.

Minus (-)

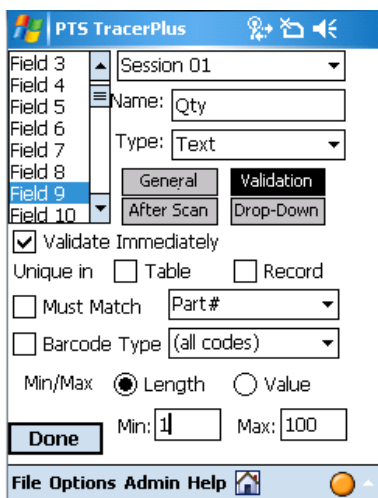
The Minus button will remove the selected relationship.

Trigger Field

The **Trigger Field** is the field that causes a lookup to be performed. When there are multiple relationships set, a lookup will not be performed until a successful scan or the down key is pressed within the **Trigger Field**.

6.3.2 Validation Field Settings

Validation Field Settings allow the user to exhibit controls that check the accuracy of the entered data.

A screenshot of the "PTS TracerPlus" application window showing the "Validation" tab for "Field 9". The "Name" field is set to "Qty" and the "Type" is "Text". There are tabs for "General", "Validation", "After Scan", and "Drop-Down". Under "Validation", the "Validate Immediately" checkbox is checked. There are checkboxes for "Unique in" with options "Table" and "Record". There is a "Must Match" checkbox with a dropdown set to "Part#". There is a "Barcode Type" checkbox with a dropdown set to "(all codes)". There are radio buttons for "Min/Max" with "Length" selected. At the bottom, there are input fields for "Min:" (set to 1) and "Max:" (set to 100). A "Done" button is at the bottom left. The application menu bar at the bottom includes "File", "Options", "Admin", and "Help".

Validate Immediately

This option represents whether or not a field should be validated immediately after it is entered. When **Validate Immediately** is not selected and **Validation** settings do exist, the field data will still be validated when the record is submitted.

Unique in Table

When selected, this option prevents duplicate data values within the current session. If a field is submitted and it violates the **Unique in Table** setting, an audible alarm and error message is displayed.

Unique in Record

When selected, this option prevents duplicate data values within the current record. If a field is submitted and it violates the **Unique in Record** setting, an audible alarm and error message is displayed.

Must Match

When selected, the user is prompted to select another field to match. When enabled, this option allows the user to mandate that the value in the current field must match the selected field exactly. If a field is submitted and it violates the **Must Match** setting, an audible alarm and error message is displayed.

Barcode Type

When enabled, and a **Barcode Type** is selected from the drop down list, the barcode scanned in the Entry screen must match the selected type. If a barcode type other than the one selected is scanned, an audible alarm and error message is displayed.

Min/Max

This option can be set in one of two modes; **Length** or **Value**. When set to **Length** the string length of the field will be checked using the **Min** and **Max** values described below. When set to **Value** the numeric value of the field will be checked using the **Min** and **Max** values described below.

Min

This option allows the user to validate an entry based on the minimum number of characters required or the minimum numeric value, depending on the **Min/Max** mode selected. If a field is submitted with less than the “**Min**” setting, an audible alarm and error message is displayed. Setting a Min of 1, for example, prevents the user from leaving that field blank, or if in Value mode it will prevent the user from submitted a value less than 1.

Max

This option allows the user to validate an entry based on the maximum number of characters allowed or the maximum numeric value allowed. If a field is submitted with more than the “**Max**” setting, an audible alarm and error message is displayed. Specify a Max Length of zero to disable this rule. Fields in TracerPlus can store up to 64 characters.

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6.3.3 After Scan Field Settings

After Scan field settings are designed to increase data entry speed and accuracy. Repetitive data capture scenarios such as inventory audits lend themselves to the efficiencies of these settings. It is recommended that these features be activated whenever possible. **'After Scan'** rules are triggered by a completed bar code scan, choosing an item from a drop down list or pressing the **Down Arrow/Enter/Tab** key on your PDA.

Auto Submit

This option represents whether or not to automatically submit this record following an **'After Scan'** event for this field. If this option is chosen for the selected field, the system automatically submits the record and sets the focus to the field selected in the **Go To** prompt for the selected field. The form is then ready for a new record.

Clear On Submit

This option is used to tell the system whether to clear the selected field after submitting the current record in the Entry screen. If the current record is submitted as a result of an **'After Scan'** event or by clicking the **Submit** button, all the fields with this option selected are cleared. If the field has a Default Value, that value is used instead of a blank entry. Turning off Clear On Submit is especially useful if several records in a row will share a value for a field – it saves the user the time of re-entering the same data when entering several new records.

Auto Find on Scan

This option allows the user to perform a lookup of entered data for this field. If the item is found, the user is moved to this record and is placed in edit mode for this record.

Update Value

When this option is selected, Variable field data is updated to represent the variable value at the time that the record was **submitted** as opposed to the default operation of using the time that the record was **created**. This is really only relevant for date/time based fields and should usually be turned off in any variable field. This is useful when you want to track the date/time a record was edited, rather than created.

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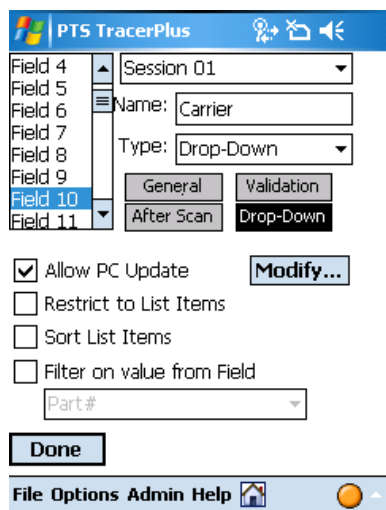
Note: If Update Value is selected for a Lookup field the field will perform a lookup when the record is submitted. If Update Value is selected for a Calc field the field will perform a calculation when the record is submitted.

Go To

This option allows the user to control the '**tab order**' for the selected field. After a user performs a successful scan while in the focus of the selected field, the system sets the focus to whichever field is selected as the **Go To** Field. The user typically uses this feature to control the '**flow**' of data entry. Alternatively, the Down Arrow key represents an '**After Scan**' event for those PDAs that are not bar code enabled.

6.3.4 Drop-Down Lists

Drop Downs allow TracerPlus users to create their own **Drop-Down** list menus for specific fields. TracerPlus gives the user the ability to create these lists either directly on the PDA or from a file on the PC via an ActiveSync data transfer followed by a File→ Import.



Allow PC Update

This option allows the user to create drop-down lists on the PC. During File→Import, these lists are loaded into the field and overwrite any existing drop-down information saved on the PDA. For this reason, we offer the ability to disable the PC Update option. This gives the user the ability to avoid accidentally overwriting any existing list information created on the PDA.

If you wish to allow list contents to be uploaded from the PC for a particular session and list, this option should be checked. If you wish to prohibit the PDA from getting updated list contents from the PC, simply uncheck this option. **Chapter 4** refers to PC Operations in more detail. Please refer to that chapter for more details regarding list updates from the PC.

Restrict to list items

This option allows you to restrict drop down selections to only items contained in the list. If this is not selected, the user can alternatively enter 'free-form' text as a drop down item entry.

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Note: When Restrict to list items is selected 'free form' text is disabled. If a record is being edited which contains field data that does not exist in the drop list, the field will be blank in the Entry Form.

Sort List Items

Setting this option presorts the items in a list. This sort is performed as an alphanumeric descending sort.

Sort List items

Setting this option presorts the items in a list. This is performed as an alphanumeric descending sort.

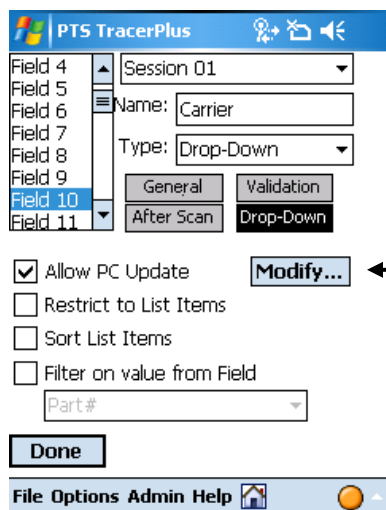
Filter on value from Field

Select the field used to set the filter value. When a value is entered into the field selected, the drop down being configured is filtered based on this value. For example, the user would like to filter a drop list by location. The Filter on value from Field would be set to the location field.

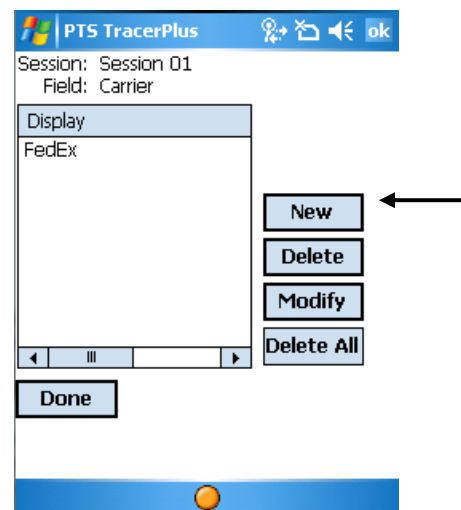
Modify

Select the **Modify** button to directly edit the list contents on the PDA. We discuss the steps in creating drop-down list items in the following section.

1. Select **Modify**.



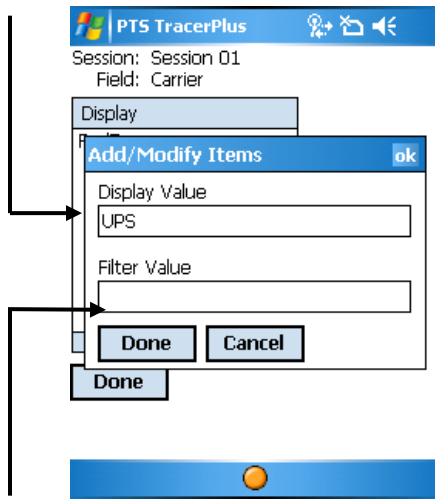
2. Select **New**.



3. Enter a List Item via keyboard. Click **Done** when finished

Chapter 6: Configuring Field Settings on the Device

4. Repeat steps 2 through 3 to add additional list items.



5. If a filter for the drop down list is being used enter this value in the **Filter Value** field. This **Filter Value** will be matched against the **Filter on value from Field** selected from the Drop-Down field settings tab.

TracerPlus **List Items** can be edited and deleted in the TracerPlus **Lists** screen. Simply choose the value to be edited and select the appropriate button.

NOTE: List Items may also be deployed to multiple users. In most multi-user cases, the PC update option would be used. Refer to Chapter 4 for more information regarding this powerful feature.

Chapter 7: TracerPlus Wireless Connectivity and Mobile Printing

7.1 Wireless Plug-in (Included in TracerPlus Professional)

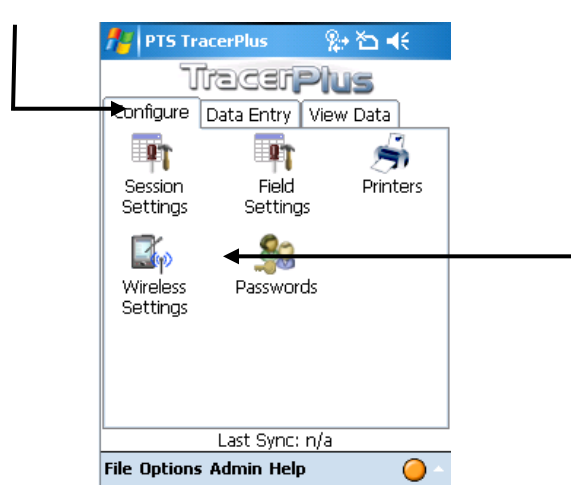


To enable the wireless connectivity, an evaluation or registered version of [TracerPlus Wireless Server](#) must be configured on the host PC.

For **TracerPlus Standard** users, the **Wireless Plug-in** must also be licensed and enabled in TracerPlus. The TracerPlus Wireless Plug-in can be purchased with your TracerPlus license or at a later date. users, the **Wireless Plug-in** is already included in with the purchase of **TracerPlus Professional**.

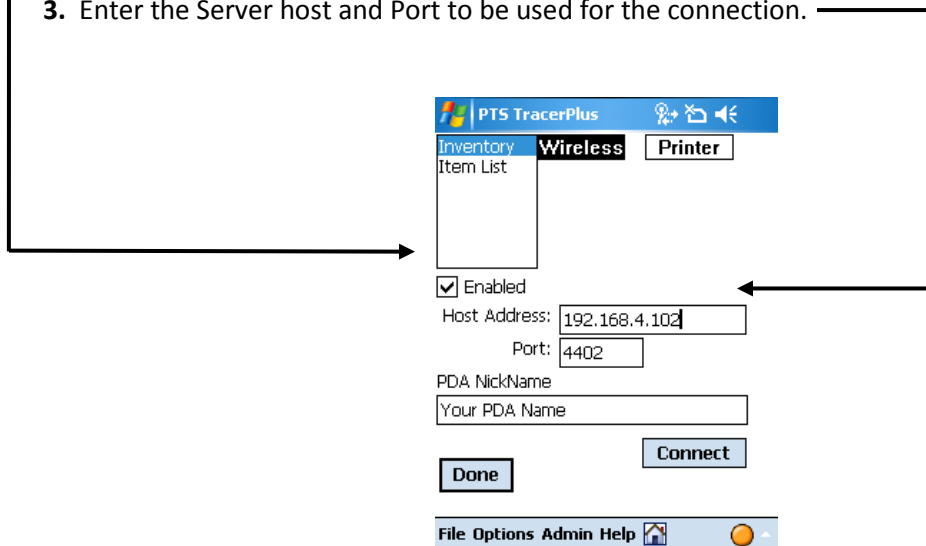
To enable the **Wireless Plug-in** on your device, follow the directions below:

1. From the Launch screen, select the **Configure** tab and click on the **Wireless Setting** icon.



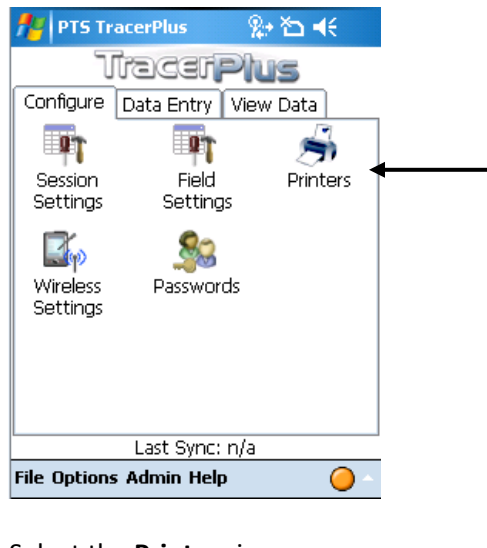
2. Check **Enabled**.

3. Enter the Server host and Port to be used for the connection.



7.2 Mobile Printing

1. From the Launch screen click on the **Configure** tab.



2. Select the **Printers** icon.
3. Check **Enabled**.
4. Select the printer you want to use from the drop down list.
5. Select the report you want to use from the drop down list.
Note: The report is the format you would like to print in. You can select one of the pre-configured reports that come with TracerPlus, or you can create your own. Please refer to the TracerPlus print format manual for more information.
6. Select the default print option when you select File→Print. This includes All records, Current record, or Prompt for filter.

Start Print Automatically

Select this if you would like TracerPlus to print automatically when you select File→Print.

Auto Print on Submit

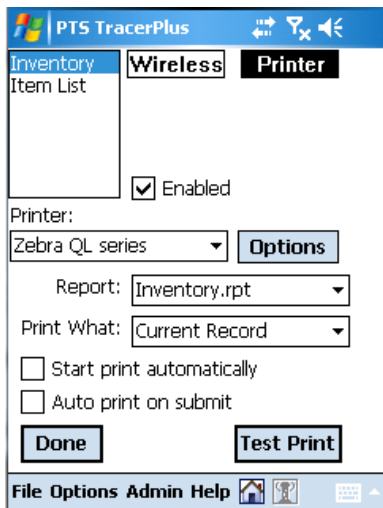
This option allows you to print automatically when a record is submitted in the entry screen.

Test Print

Press this to test printer settings. This is the only option available when TracerPlus has not been registered for the Print Plug-in.

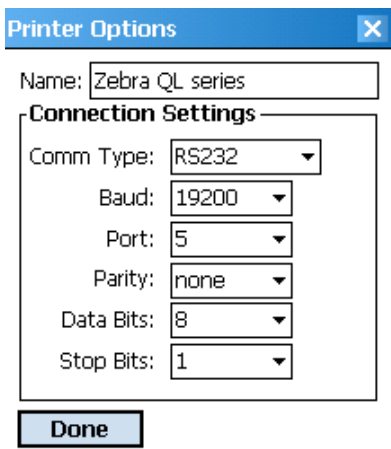
Options

Use the **Options** button to configure the connection settings for the selected printer.



Print Options Dialog

To configure the printer select the **Options** button. The following dialog will be displayed.



The **Print Options** dialog allows you to select how the printer is connected to the handheld. Available options are RS232, and TCP/IP.

To configure a cabled connection (RS232):

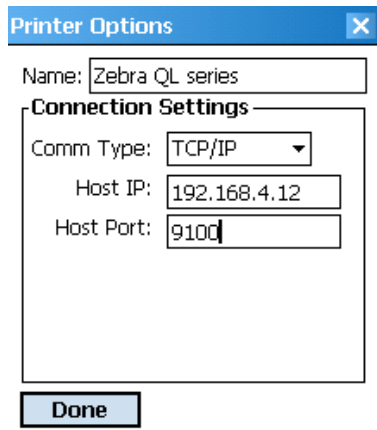
1. Select **RS232** from the **Comm Type** drop down.
2. Select the appropriate settings for your handheld and connected printer.

Another available option is a TCP/IP connection to the printer. Using a wireless handheld with TracerPlus and a networked printer you can print wirelessly using TracerPlus.

To configure a TCP/IP connection:

Chapter 7: Plug-ins and External Devices

1. Select **TCP/IP** from the **Comm Type** drop down.
2. The following options will then be displayed.



Printer Options [X]

Name:

Connection Settings

Comm Type:

Host IP:

Host Port:

Done

3. Enter the **Host IP** address, and **Host Port** of the printer.
4. If all settings are correct, TracerPlus will now print to the configured network printer.

Note: For More information on Custom Print Reports, See the TracerPlus Print Guide

Chapter 8: Skins



One of the more impressive abilities of [TracerPlus Desktop](#) is the intuitive drag and drop **Form Designer**. Developed to mimic tools and actions found in many graphics programs, the **Desktop Form Designer** offers clear advantages in both ease of use and access to new TracerPlus features. For this reason, using the TracerPlus Desktop Form Designer is the obvious choice. However, functionality for creating custom forms on the PDA remains for legacy users.

8.1 TracerPlus Entry Skins

TracerPlus continues to offer users the ability to create custom forms on the PDA. Now utilizing the power of the Entry Skins advanced users can completely customize the look and feel of their forms. Allowing users the ability to speed data collection and organize data fields. A default Entry skin is located in the TracerPlus Skins folder on the handheld. Below is a screen shot of a customized Entry Skin.

PTS TracerPlus 4:07

Boiler Test Records: 1

ID 10-010207

Read Chems Cond Job Cust Sys

Service Tech ID 02663A00-0D41D255

Time In 4:06:17 AM

Time Out 4:06:17 AM

Service Date 1/07/2004

System Status OK

of Systems Insp 6

Cust Signature - Signature Exists -

Done Submit Clear All

File Options Admin Help

PTS TracerPlus 4:15

Boiler Test Records: 1

ID 10-010207

Read Chems Cond Job Cust Sys

	Added	UOM	Left	UOM
Inh	5	Gal.	2	Gal.
Chem2	1	Pt.	12	Pt.
Chem3	3	Gal.	1	Gal.

Done Submit Clear All

File Options Admin Help

8.1.1 Entry Skin Configuration

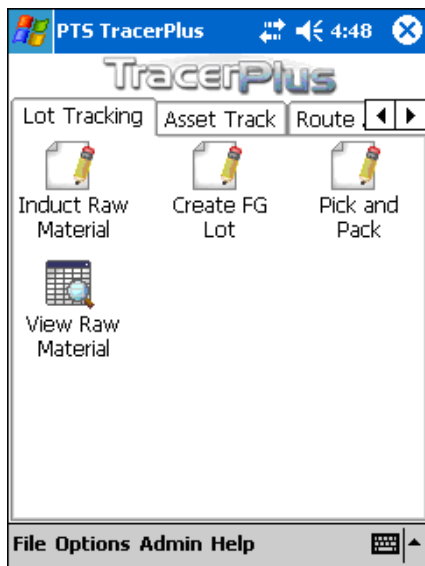
The Entry Skin is configured using an XML file. This XML file contains coordinates for all the fields, labels, and tab controls if being used. The skins file is name in the following format Sxx_entrskin.tsc, where xx is the session number, and is located in the Skins folder.

<controls>	Starting tag of a block of controls (Controls include fields, labels, and buttons).
<control>	Use the control tag to define a new form control.
• left	Left side control
• width	Sets the width of the control.
• top	Use to set the top of the control.
• height	Sets the height of the control.
• controlindex	Each control should be listed with an index, starting from 0 to the last control. This is used as an identifier for alignment.
• laligncontrolindex	the lalign attribute is used to align the left side of a control to the index set for the attribute.
• type	Defines the type of form control to draw.
• DB	The DB type is a database entry control, such as a field or a drop down. The type is defined in the Field Settings.
• STATIC	Creates a static label control.
• BUTTON	Creates an entry control button
• BITMAPBUTTON	A button control that can display a user defined image as the button.
<options>	Extra options specific to the control type.
• caption	When the label is set to type STATIC, if a caption is present this will be the value of the label.
• align	The align attribute is used for a STATIC type control. This will set the text alignment for the label. Possible values include left, center and right.
• dbsourceindex	The dbsourceindex attribute is used to associate a control with a particular field in TracerPlus. For instance, the first control is used to input data into Field1 in TracerPlus, the source index would be set to 0.
• action	A button type control can perform different actions when clicked. To define an action use the action attribute. Possible values include: 0 (submit), 1 (Done), 2 (Clear All), 5 (Return to the launcher screen), 6 (Print).
• buttonup	The buttonup attribute is used for BITMAPBUTTON control types. Use the buttonup attribute to set the bitmap filename of the button when in a non clicked state.
• buttondown	The buttondown attribute is used to define the bitmap filename when a user clicks the selected BITMAPBUTTON control.
<pagecontrol>	Opening tag of a Page control.
• left	Left side of the page control
• width	Sets the width of the page control.
• top	Use to set the top of the page control.
• height	Sets the height of the page control.
<pages>	Starting tag of a group of pages
<page>	Creates a new page on the page control. A page can contain a

Chapter 8: Skins

	group of controls.
• caption	The name attribute adds the title for the page. This title is added to the tab on the page control.
• pageindex	Each page must contain a valid index. The index starts at 0 and increments for each page created.

8.2 TracerPlus Session Launch Screen



The TracerPlus Session Launch screen is used to easily navigate TracerPlus sessions and allows easy data entry and data viewing. Although a default launcher file is created automatically in TracerPlus, the option is available to customize the launcher to group sessions to form an organized menu of applications. To reconfigure the launch screen, a **Launcher.tsc** file must be created and placed in the **\My Documents\TracerPlus7\SystemInfo\Skins** folder on the PDA. This file can easily be created in Notepad or other text editing programs.

8.2.1 Launcher Configuration

To configure the TracerPlus Session Launch screen an XML file named Launcher.tsc must be created and placed in the **\My Documents\TracerPlus7\SystemInfo\Skins** folder. An example Launch file is located in the Appendix of this manual. The file is made up of the following tags.

Important: When modifying the Launcher file the “useroverride” attribute must be set to true. When set to false TracerPlus will attempt to modify the launcher file when session setting changes are made and overwrite any user changes to the launcher file.

<launcher>	This is the root node (or tag) of the Launcher file. It can contain the version attribute.
-------------------------	--

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useroverride	The useroverride attribute must be set to true if the user wishes to modify the Launcher file.
<pages>	The starting node (or tag) of the individual launch pages to be created. (Tag must be closed with </pages>.)
<page>	To create a new launch tab the page tag is used. This tag contains the page index and the name attributes.
page index	A zero based index of the pages. (The first page should be labeled "0")
name	This attribute defines the actual visible name which appears on the new tab being created. (example "View Data")
<sessions>	The sessions tag marks the beginning of the session being added to the current page.
<session>	Use the session tag to define a new session to be added to the current page and to encapsulate session attributes.
index	The zero based index of the session this shortcut should point to.(The first session should be labeled "0")
caption	The text which will display below the session icon.
cell	The location on the screen where the shortcut will be displayed. This can be a value between 0 and 8 with 0 being the top left cell, and 8 being the lower right cell.
view	Use the "view" attribute to specify whether the shortcut will open the data entry screen or the view data screen. Options are 1 – View Data, and 2 – Data Entry Screen. Other view options (3 and up) are reserved for program specific shortcuts and should not be used or altered.
icon	Use the "icon" attribute to define a custom icon to be displayed for the session shortcut. This should be a 28x28 pixel bitmap (.bmp) image, with a color depth of no more than 255 colors. The bitmap file will be placed in the Skins folder

The Launcher Shortcut

When using the Session Launch screen an icon on the file menu will appear to the right of the Help menu. This icon is used to return to the Launch screen. Pressing this at any point will return the user to the launch screen on the last tab used.



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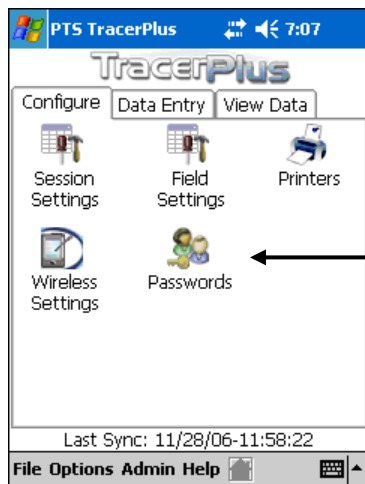


Once sessions are configured, it is customary to implement password protection so field personnel cannot alter the session settings. When a **Password** is set, a user is required to enter this **Password** to access any areas protected by the **TracerPlus Admin Settings**. Administrators commonly **Enable Protection** for **Session Settings** and **Field Settings**. These settings can be more efficiently configured in [TracerPlus Desktop](#). In addition, Desktop provides more configuration features allowing for more precise management of multiple users. As with all configuration features of TracerPlus, it is highly recommended that TracerPlus Desktop be used to configure these settings.

However, in order to provide a smooth transition for previous TracerPlus Users, the previous procedures for configuring **Password Protection** remains available as an alternative. These past methods on how to set passwords and set protection levels for program settings and data are described below.

9.1 Setting Passwords

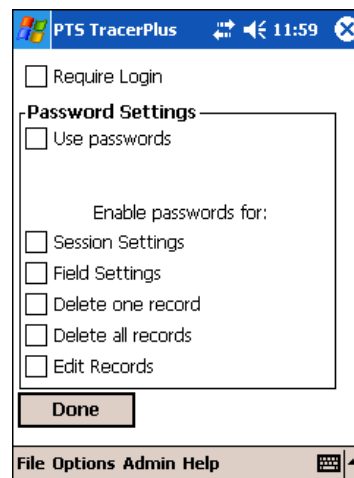
1. Select **Passwords** from the Launcher.



2. Select **Use Password**

3. Enter your **Password**

4. Enter additional protection levels; **Session Settings, Field Settings, Delete One Record, Delete All Records and Edit Records**



9.1.1 Enable Protection for

Session Settings

When protection is enabled for **Session Settings**, the user is required to enter a password to edit or add sessions.

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Field Settings

When protection is enabled for **Field Settings**, the user is required to enter a password to edit or add field information.

Delete One Record

When protection is enabled for **Delete One Record**, the user is required to enter a password to delete a record from the data view screen.

Delete All Records

When protection is enabled for **Delete All Records**, the user is required to enter a password to delete all records from the menu bar.

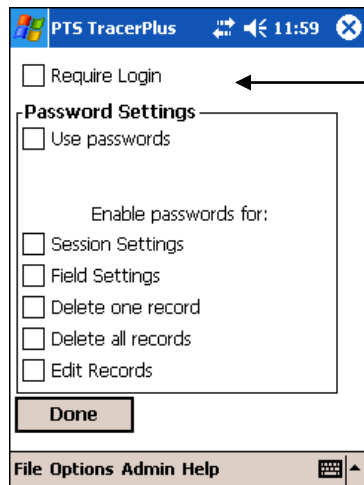
Edit Records

When protection is enabled for **Edit Records**, the user is required to enter a password to edit a record.

9.2 User Logins

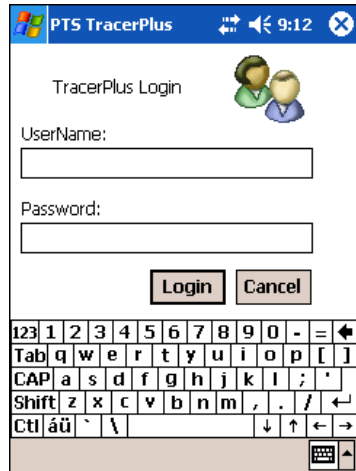
User logins can be used to restrict access to TracerPlus. To enable user logins, simply click the Require Login checkbox from the Passwords screen. When enabled, users are presented with a login screen before access to TracerPlus is granted. A valid username and optional password is required. Through the login interface, administrators have the ability to limit access to any given session on a user basis. See the TracerPlus Users file below for an example of a valid users.tsc configuration file.

To enable user logins go to **Admin→Passwords** and check **Require Login**.



User Login Screen

When **Require Login** is selected, the next time TracerPlus is started the user login screen will be displayed.



Username

Enter a valid username, if the username is incorrect or does not exist the user cannot continue.

Password

Enter a valid password for the current username. This password can be left blank.

Login

Once a valid username and password have been entered press **Login** to enter TracerPlus.

Cancel

Press **Cancel** to exit TracerPlus from the Login Screen.

Configuring a TracerPlus User

TracerPlus users are defined in the **users.tsc** file in the TracerPlus system directory (**\My Documents\TracerPlus7\SystemInfo\System**). The users.tsc file is a simple XML document made up of two tags (<users>, and <user>). To define a new user, add a <user> tag between the root <users> tag. A user tag has three attributes the name, password, and session mask. The following is an empty user tag.

Empty User Tag

```
<users>
<user name="" password="" sessionmask="" />
</users>
```

Note: The users.tsc file will need to be created manually, as this is not created during the installation process. Optionally, creation of this file is offered in our popular ODBC Link PC application

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name

The name tag is used to define the new user's login name.

password

Enter the new user's password in the password attribute. This is an optional attribute.

Sessionmask

The session mask is used to define the sessions the current user can view. It is a simple 32 character (1 for each session in TracerPlus) string of 1's and 0's. 1 meaning the user can view the session, 0 meaning they cannot. This is an optional attribute. If it does not exist, the user has access to all defined sessions.

TracerPlus User Example

```
<user name="user1" password="swordfish"
sessionmask="111000000000000000000000000000" />
```

In this example **user1** has a password **swordfish**, and the user can only view session 1, 2, and 3.

9.3 Deploying Configured Sessions to Multiple Users



Deploying sessions to the mobile device has been made much more straightforward through TracerPlus Desktop. In almost all cases, simply using the Build/Deploy option within TracerPlus Desktop will be the preferred method. However, for the instances that TracerPlus Desktop is unavailable, the alternatives are described below.

9.3.1 How to Copy One PDA Configuration to Other PDAs

All TracerPlus session configurations are saved in separate files (TracerPlus Session Configuration Files) located in **\\My Documents\\TracerPlus7\\SystemInfo\\System**.

Each saved session is named in the following format: "**Sxx_config.tsc**" where:
xx = the session unique identifier.

Example: Session 1 on your PDA would be named **S01_config.tsc**.

This file is available for backup of your existing session settings or is especially useful in transferring settings from one PDA to any other PDA in your deployment.

To transfer session settings to another PDA, simply move this "**Sxx_config.tsc**" file to the **\\My Documents\\TracerPlus\\SystemInfo\\System** folder on the destination PDA.

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Note: The Session identifier (xx) in “Sxx_config.tsc” is used to control what session identifier is used in the destination PDA. If this session identifier already exists on the destination PDA, those previous settings will be overwritten. If this session identifier does not exist, this imported session is simply added as new.

9.3.2 File Names Used by TracerPlus

This section lists the various file names used by TracerPlus on the PC. It is here for your reference in deploying and troubleshooting your TracerPlus configuration.

Note that sessions are identified by their session number, e.g. “**S01**”, and fields are identified by their field number, e.g. “**F02**” (with “S01F02” indicating the first session and second field).

Upload/Download Filenames:

Data Records	S01_Data.txt	(in the \Data subfolder)
Drop-Down Lists	S01F02.txt	(in the \Data subfolder)
Session configuration	S01_config.tsc	(in the \SystemInfo\System subfolder)
Registration Code	registration.tsc	(in the \SystemInfo\System subfolder)
Session names	sessions.tsc	(in the SystemInfo\System subfolder)
Main Launcher Screen	Launcher.tsc	(in the SystemInfo\Skins subfolder)
Data Entry Form	S01_entryskin.tsc	(in the SystemInfo\Skins subfolder)

Note: Any of the data files used can be set to automatically import simply by appending the **_auto** suffix to the filename. S01_data.txt would become S01_data_auto.txt

Appendix

Appendix A1: Date and Time Formatting characters

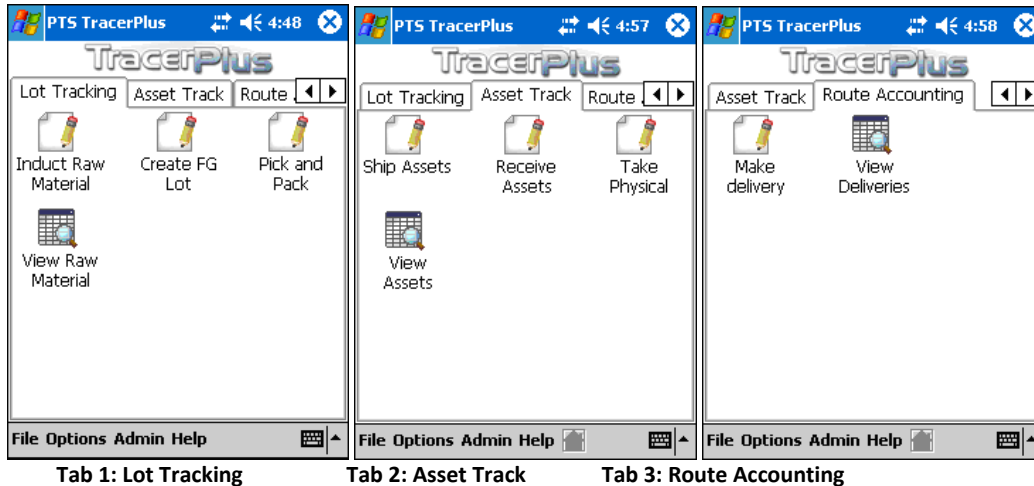
d	The one-digit or the two-digit day.
dd	The two-digit day. Single-digit day values are preceded by a zero.
ddd	The three-character weekday abbreviation.
dddd	The full weekday name.
gg	The period and era string that is contained in the CAL_SERASTRING value that is associated with the specified locale. Windows CE ignores this element if the date to be formatted does not have an associated era or period string.
h	The one-digit or the two-digit hour in 12-hour format.
hh	The two-digit hour in 12-hour format. Single-digit values are preceded by a zero.
H	The one-digit or the two-digit hour in 24-hour format.
HH	The two-digit hour in 24-hour format. Single-digit values are preceded by a zero.
m	The one-digit or the two-digit minute.
mm	The two-digit minute. Single-digit values are preceded by a zero.
M	The one-digit or the two-digit month number.
MM	The two-digit month number. Single-digit values are preceded by a zero.
MMM	The three-character month abbreviation.
MMMM	The full month name.
t	The one-letter A.M. and P.M. abbreviation (that is, "AM" is displayed as "A").
t'"M'"	The two-letter A.M. and P.M. abbreviation (that is, "AM" is displayed as "AM").
y	The year is displayed as the last two digits, but with no leading zero for any year that is less than 10.
yy	The last two digits of the year. For example, 1998 would be displayed as "98".
yyyy (also yyy)	The full year. For example, 1998 would be displayed as "1998".

Appendix

Appendix A2: The TracerPlus Session Launcher

Example Session Launch file

To create three tabs similar to these below, review the following Launcher.tsc file.



The following example will create the three sample pages shown above.

```
<launcher version="5.0.0" useroverride="true">
  <pages lastselectedtab="0">
    <page index="0" name="Lot Tracking">
      <sessions>
        <session index="0" caption="Induct Raw Material" cell="0" view="2" icon="" />
        <session index="1" caption="Create FG Lot" cell="1" view="2" icon="" />
        <session index="2" caption="Pick and Pack" cell="2" view="2" icon="" />
        <session index="2" caption="View Raw Material" cell="3" view="1" />
      </sessions>
    </page>
    <page index="1" name="Asset Track">
      <sessions>
        <session index="5" caption="Ship Assets" cell="0" view="2" icon="" />
        <session index="6" caption="Receive Assets" cell="1" view="2" icon="" />
        <session index="7" caption="Take Physical" cell="2" view="2" icon="" />
        <session index="6" caption="View Assets" cell="3" view="1" />
      </sessions>
    </page>
    <page index="2" name="Route Accounting">
      <sessions>
        <session index="11" caption="Make delivery" cell="0" view="2" icon="" />
        <session index="11" caption="View Deliveries" cell="1" view="1" icon="" />
      </sessions>
    </page>
  </pages>
</launcher>
```

Appendix

Appendix A3: TracerPlus Keyboard Shortcuts

The following document provides information regarding navigation within TracerPlus using keyboard shortcuts. This guide may be useful for any device but is especially relevant for any device running without a touch screen.

Function	Key	Examples
Combo/List Box Item Select	Up/Down	Any combo/list box.
Sub-Form switching	F1-F4	Field Settings General, After Scan, etc.
Tab Switching	Left/Right	Launcher, Wireless Status.
Window Scroll	Alt Up/ Alt Down	Field Settings.
Control/Button Selection	Tab	Any form with multiple controls.
Click/Un-Click Check box	Space bar	Allow checking/un-checking of check boxes.