



q-suite User Manual

Warehouse Management Solutions
for individual users and
small businesses



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1. q-suite Overview

q-suite is an easy-to-use, modular suite of mobile WMS applications. These applications are designed to allow users to gather information in the warehouse using mobile devices, generate reports, and export data for analysis. q-suite provides businesses with the information they require to gain visibility and insight into their inventory and warehouse operations.

q-suite is comprised of three application modules: q-count, q-track and q-move. Each module is designed to fulfill a specific role within a warehouse/asset management system. q-count is a module that supports cycle counting functionality; q-track is an asset tracking program, and q-move is an inventory management application.

The data that is collected through the q-suite modules is stored in a flat file format as comma-delimited values. The flat file data can subsequently be transferred from a mobile device to a permanent storage repository such as a database or ERP system.

1.1 Getting Started

To fully utilize the features of q-suite, you will need to be able to import and export data. In order to transfer data to and from your mobile device, you will require a method to connect your Windows Mobile / Windows CE device to a computer.

One way to accomplish this is to dock your device in its cradle and connect it to a computer using a USB cable. The connectivity options that are supported by a mobile device (i.e. Ethernet, Bluetooth) will vary. Please refer to your hardware documentation for specific information on data synchronization options.

In addition to a docking cradle and cable, you may also require an additional piece of software installed on your computer to synchronize with a mobile device. Computers with a Windows XP/2000 operating system should install the Microsoft ActiveSync data transfer utility. Windows Vista users should install Windows Mobile Device Center. Both utilities are available as a free download from Microsoft.

Data Transfer Utilities

Windows XP/2000: [Microsoft ActiveSync 4.5](#)

Windows Vista: [Windows Mobile Device Center](#)

1.2 Product Activation

Each installation of q-suite requires a product key before it can be used. This key is obtained through the activation process. If you have just installed q-suite on a

handheld device, a product activation screen will appear the first time the application is launched.

Q-Suite

Note: This software requires a product key. There are two methods available to obtain a key.

Option 1) Online activation
(Internet connection required)

Option 2) Manual activation



Figure 1: Product activation options

There are two methods available to obtain a product key: manual or online activation. Select your preferred method of activation and click [Next] to proceed.

1.3 Online Activation

Online activation can be used to obtain a product key directly from the handheld device over an internet connection. Therefore in order to use online activation, the handheld must have an internet connection; you can verify this by using a browser to navigate to a known internet address. Internet access on a handheld could be provided through a Wi-Fi network, a wide area network (WAN) or through internet connection sharing with a host computer via ActiveSync.

Once you have ensured that the device has internet access, simply enter the user name and password for your qdata BEAM account and click on the [Activate] button. The application will then register your copy of q-suite over the internet and obtain a product key.

Q-Suite

Online activation

To activate online, please enter your qdata user name and password.

User name:

Password:

Activate

Back



Exit

Figure 2: Online activation

If you perform a reinstall of q-suite, you may need to re-activate your product. Re-installing and activating q-suite on a previously activated handheld device will not consume a product key.

1.4 Manual Activation

If an internet connection is not available on your handheld device, a secondary option is to activate the software manually using the qdata BEAM website (<http://qdata.com/Beam/login.aspx>).

In the product activation option screen, select the manual activation option and click [Next]. This will display an activation code which is used to obtain a product key for the software.

Q-Suite

Manual activation

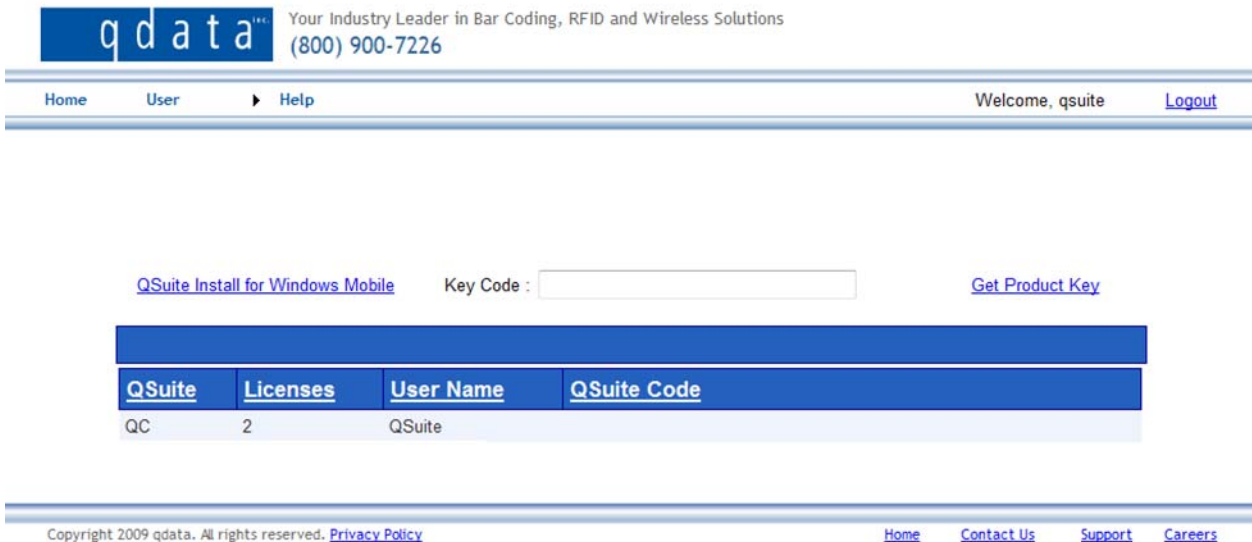
Contact your qdata sales representative with the activation code below to obtain a product key.

E956E-E010D-F30F0-03A65- A70B3-15532-432D5-1321F	▲ ▼
---	--------



Figure 3: Activation code

Log into your BEAM account from a computer and enter the activation code. Click on the 'Get Product Key' link to submit the activation code and download a license file. Transfer the downloaded License.xml file to the \Program Files\Q-Suite folder on the handheld device to complete the activation process.



The screenshot shows the BEAM website interface. At the top left is the qdata logo with the tagline "Your Industry Leader in Bar Coding, RFID and Wireless Solutions" and the phone number "(800) 900-7226". A navigation bar includes "Home", "User", and "Help" (with a dropdown arrow), and a welcome message "Welcome, qsuite" with a "Logout" link. Below this is a section for activation with a link "QSuite Install for Windows Mobile", a "Key Code" input field, and a "Get Product Key" link. A table displays the following data:

QSuite	Licenses	User Name	QSuite Code
QC	2	QSuite	

At the bottom, a footer contains "Copyright 2009 qdata. All rights reserved. Privacy Policy" and navigation links for "Home", "Contact Us", "Support", and "Careers".

Figure 4: BEAM website

Note: If your copy of q-suite was pre-installed by qdata, it may already have been activated during the staging process.

1.5 Login Screen

After activation, upon launching q-suite, the login screen will be displayed as shown below.



Figure 5: Login screen

Any alphanumeric value can be supplied for the user field. After entering a value for the user, press [Enter] or click the [Login] button to proceed. The password field is not currently used, and may be left blank. To quit the application, click the [Exit] button on the lower menu bar.

1.6 Main Menu

After logging into q-suite, the main menu will be displayed. The main menu is a starting point from which the three application modules in q-suite can be launched. To launch an application, click on the corresponding button.



Figure 6: Main menu with application buttons

Clicking the [Menu] button on the lower menu bar displays a [Setup] and [Exit] option. To quit the application, click on the [Menu] button and then [Exit]. To enter the configuration screen and change application settings, click on [Menu] [Setup].

1.7 Configuration

Clicking on the [Setup] option in the main menu will launch the configuration screen. The configuration screen consists of a series of tabs that organize the application settings. The system tab contains global settings that are common to all of the q-suite modules.

The printer setup section enables users to setup a connection to a printer for wireless printing. To do this, enter the IP address of a network printer that is accessible to the mobile device, and also its network printer port (typically 9100). Click the [Test] button to print a test page and verify that the settings are working.

Click the [Save] button to save any configuration changes to file. Click [Close] to exit the configuration screen and return to the main menu. The other configuration tabs are documented in the sections for each respective application module.

Configuration

Printer Setup

Printer IP

Port #

System Q-Count Q-Track Q-Move

Close Save

Figure 7: Configuration screen

2. q-count

q-count is the cycle-counting module within Q-suite; it can be used to gather information on inventory levels for both serialized and non-serialized parts.

2.1 Data Collection Fields

Cycle count information is gathered through a series of data collection fields shown in the table below.

Field Name	Description	Data Type	Field Length
WHSE	Warehouse	String	32
LOC	Location	String	32
PART	Part number	String	32
DESC	Description (Read-only)	String	256
SERIAL	Serial number	String	64
QTY	Quantity	Integer	N/A

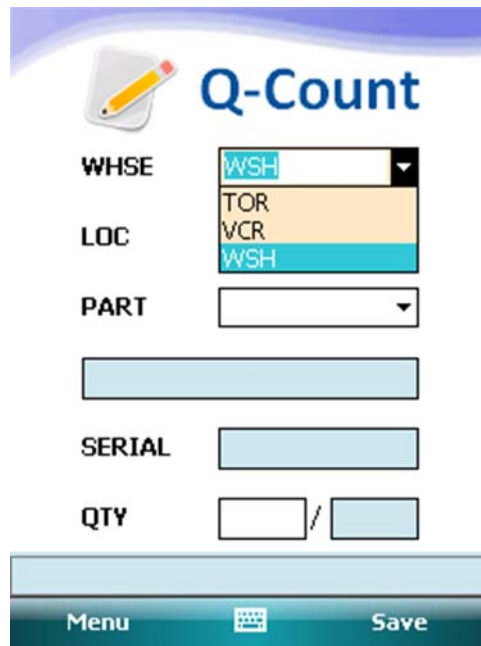
The WHSE, LOC and PART fields are dropdown lists that can be used optionally to select a value from a list, or scan a value from a barcode. After selecting a value, press 'Enter' to submit the input and the focus will switch to the next sequential field. Alternatively, you may also input a value by scanning a barcode. Repeat this process until all the data fields have been filled and click [Save] to complete a cycle

count operation. A more detailed view of the cycle count process is provided in the following section.

Note: The barcode scanner should be configured to generate a carriage return keystroke after completing a scan. This is how q-suite is able to determine the end of a scan operation.

2.2 Cycle Count Procedure

1) Select/scan a warehouse



The screenshot shows the 'Q-Count' application interface. At the top left is an icon of a notepad and pencil. The title 'Q-Count' is displayed in blue. Below the title are several input fields: 'WHSE' with a dropdown menu showing 'WSH' selected and a list of options (WSH, TOR, WCR, WSH) below it; 'LOC' with a dropdown menu; 'PART' with a dropdown menu; a large empty text input field; 'SERIAL' with a text input field; and 'QTY' with two text input fields separated by a slash. At the bottom is a dark blue bar with 'Menu', a keyboard icon, and 'Save' buttons.

Figure 8: Warehouse field

2) Select/scan a location

The screenshot displays the 'Q-Count' application interface. At the top left is a pencil icon. The title 'Q-Count' is in blue. Below the title are several input fields: 'WHSE' with a dropdown menu showing 'WSH'; 'LOC' with a dropdown menu showing 'LOC1' selected and a list of options 'LOC1', 'LOC2', and 'LOC3' visible; 'PART' with a dropdown menu showing 'LOC2' selected and a list of options 'LOC1', 'LOC2', and 'LOC3' visible; a large empty text field; 'SERIAL' with an empty text field; and 'QTY' with two empty text fields separated by a slash. At the bottom is a dark blue bar with 'Menu', a keyboard icon, and 'Save'.

Figure 9: Location field

3) Select/scan a part number

After scanning a part, the description (if available) will automatically be populated in the description field below it. The total part quantity, based on the location and part number, will also be populated. In this example, there are 12 items in inventory for part 02202806 in location LOC1. In addition, the serial field will be enabled or disabled depending on whether the part is serialized.

The screenshot shows the 'Q-Count' application interface. At the top left is a pencil icon. The title 'Q-Count' is in blue. Below the title are several input fields:

- WHSE**: A dropdown menu with 'WSH' selected.
- LOC**: A dropdown menu with 'LOC1' selected.
- PART**: A dropdown menu with '57700622872' selected.
- Description**: A text box containing 'Complex contraption'.
- SERIAL**: An empty text box.
- QTY**: A text box with a slash and a box containing '0'.

 At the bottom is a dark blue bar with 'Menu', a keyboard icon, and 'Save'.

Figure 10: Part and description fields

4) Scan a serial number (if required)

This screenshot is similar to Figure 10, but the **SERIAL** field is now populated with the text 'SERIAL01'. The other fields (WHSE, LOC, PART, description, QTY) and the bottom navigation bar remain the same.

Figure 11: Serial number field

5) Enter count quantity

The screenshot displays the 'Q-Count' application interface. At the top left is a pencil icon. The title 'Q-Count' is in blue. Below it are several input fields: 'WHSE' with a dropdown menu showing 'WSH', 'LOC' with a dropdown menu showing 'LOC1', 'PART' with a dropdown menu showing '57700622872', a text field containing 'Complex contraption', 'SERIAL' with a text field showing 'SERIAL01', and 'QTY' with two adjacent text fields showing '8' and '12'. At the bottom is a dark blue navigation bar with 'Menu', a keyboard icon, and 'Save'.

Figure 12: Quantity field

After entering a quantity value, press 'Enter' or click the [Save] button to complete the cycle count operation. This will store the information that was entered in a database so that the information can later be reviewed in a summary report or exported to a text file.

2.3 Inserting New Field Values

Whenever data is entered into a field, q-count will validate the input against a database to verify whether the data exists. This helps to prevent incorrect data from being entered inadvertently. However, there are valid instances when a user may wish to input values that do not exist in the database, such as inserting a new field value.

When q-count encounters a new field value, it will display a prompt to the user to ask whether they wish to insert the new value. Clicking [Yes] will insert the value into the database, while [No] will cancel the operation.

In the special case where a new part value is inserted, q-count will also prompt the user to determine whether the part is serialized or not.

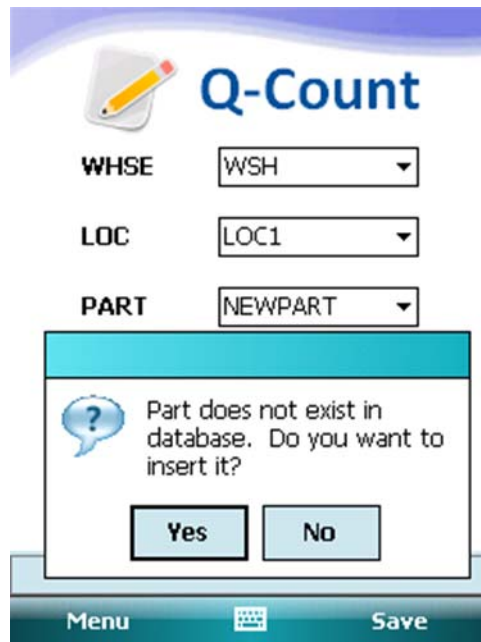


Figure 13: Insert new value prompt

2.4 Cycle Count Report

q-count includes a feature to generate a cycle count summary report. To view the report, click on [Menu] [Report] from the q-count screen.

Cycle Count Report

	Part	Qty	Whse	Loc
▶	057700622872	12	WSH	LOC1

Figure 14: Cycle count report

This report displays and summarizes the cycle counting results. It can also be printed by clicking [Menu] [Print Report]. The document will be sent to the network printer that was setup earlier in the system configuration screen.

Additionally, the cycle count data can be exported to a comma-separated text file format by clicking on [Menu] [Export Data]. This will generate a date-stamped text file in the q-suite folder on the mobile device, which can be transferred to a computer through ActiveSync.

2.5 Importing Data

q-count uses a database to store cycle count results and related information, which includes data such as lists of warehouses, parts and serial numbers. In order to populate the fields in q-count with this data, the user must provide an initial set of data via an xml file whose contents are imported when q-suite is launched.

The xml import file used by q-count (as well as q-move) is named PartData.xml. This file is located in the \q-suite file folder on the mobile device. The xml data within the file needs to adhere to a certain structure in order to be imported correctly. The following example illustrates the expected structure.

```
<?xml version="1.0" encoding="utf-8" ?>
<Root>
  <WhseList>
    <Whse>TOR</Whse>
    <Whse>WSH</Whse>
    <Whse>VCR</Whse>
  </WhseList>

  <LocList>
    <Loc>LOC1</Loc>
    <Loc>LOC2</Loc>
    <Loc>LOC3</Loc>
  </LocList>

  <PartList>
    <PartItem>
      <Part>02202806</Part>
      <Desc>Wonderful widget</Desc>
      <Serialized>False</Serialized>
      <SerialList>
      </SerialList>
    </PartItem>
    <PartItem>
      <Part>064900407949</Part>
      <Desc>Perpetual pendulum</Desc>
      <Serialized>True</Serialized>
      <SerialList>
        <Serial>SERIAL01</Serial>
        <Serial>SERIAL02</Serial>
      </SerialList>
    </PartItem>
  </PartList>
</Root>
```

```

    <Serial>SERIAL03</Serial>
    <Serial>SERIAL04</Serial>
  </SerialList>
</PartItem>
<PartItem>
  <Part>057700622872</Part>
  <Desc>Complex contraption</Desc>
  <Serialized>True</Serialized>
  <SerialList>
    <Serial>SERIAL05</Serial>
    <Serial>SERIAL06</Serial>
    <Serial>SERIAL07</Serial>
    <Serial>SERIAL08</Serial>
  </SerialList>
</PartItem>
<PartItem>
  <Part>06493331</Part>
  <Desc>Tropical tonic</Desc>
  <Serialized>False</Serialized>
  <SerialList>
  </SerialList>
</PartItem>
</PartList>
</Root>

```

All xml data is contained within the <Root> xml tag. <WhseList> contains a list of warehouses to be imported. Similarly, <LocList> holds a list of warehouse locations.

The <PartList> structure holds a list of <PartItem> objects. Each <PartItem> contains a part number <Part>, a description <Desc>, a Boolean true/false <Serialized> attribute and a <SerialList>.

2.6 User Defined Fields

In addition to the core data collection fields described in the preceding sections, the q-count and q-track modules also support the ability to create user defined fields (UDFs) that enable a user to design a custom data collection interface.



Figure 15: UDF configuration screen

The UDF configuration screen can be accessed by clicking on [Menu] [Customize]. This will bring up a screen that displays an editable list of all currently defined UDFs in the application module.

By clicking the [Up]/[Down] buttons, it is possible to change the order of the fields as they are displayed in the q-count screen. The name of each UDF can be edited directly in the [Name] textbox. The field type cannot be changed once a field has already been created. The [List Data] dropdown is used to configure data sources to populate a UDF, and is relevant only for list-type fields.

In order to create a new UDF, click on the [Add...] button. This will bring up the new field property window, which is used to define the attributes of each UDF when it is first created.

New Field Properties

Name

Type Text
 List

List Data



Figure 16: New field property screen

This screen allows a user to specify the UDF type by using either the [Text] or [List] options. A text-type field enables a user to enter a text string as an input value. Alternatively, a list-type field allows a user to select a value from a collection of predefined values. Once the field properties have been specified, click on the [Add] menu button to insert the field and return to the UDF configuration screen. After making any changes to the UDF properties, click on the [Save] menu button to save and apply the edits.

2.6.1 Importing UDF List data

One of the configurable field properties described in the preceding section was the list data property. The purpose of this property is to point to a data source that is used to populate a list field.

These data sources are imported into q-suite using an xml data file which can contain multiple sets of data for populating list fields. This xml file should be named UdfData.xml, and is located in the \q-suite directory.

A sample set of xml data is provided below which illustrates the format that the data must conform to in order to be imported into q-suite.

```
<?xml version="1.0" encoding="utf-8" ?>  
<Root>  
  <Clouds>  
    <Data>Pyrocumulus</Data>  
    <Data>Cumulonimbus</Data>
```

```

<Data>Cirrus</Data>
<Data>Altostratus</Data>
<Data>Lenticular</Data>
</Clouds>
<Design>
<Data>Baroque</Data>
<Data>Gothic</Data>
<Data>Byzantine</Data>
<Data>Classical</Data>
<Data>Postmodern</Data>
</Design>
</Root>

```

2.7 q-count Configuration

In addition to the general q-suite system configuration, there are also configuration options specific to the q-count module. These can be accessed in the q-count tab as shown below.

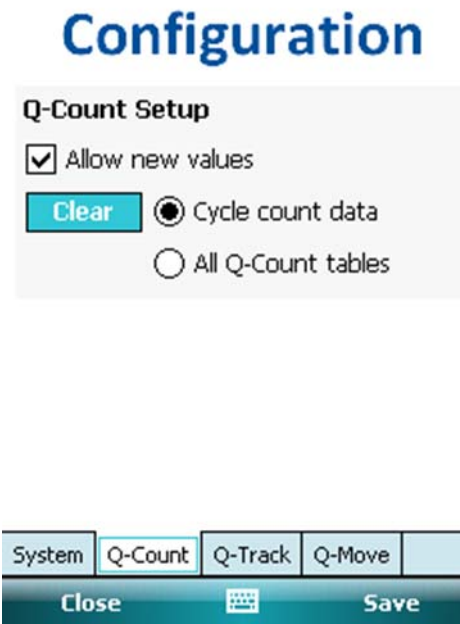


Figure 17: q-count configuration tab

The [Allow new values] checkbox specifies whether new field values can be inserted into the database during the cycle counting process. If the option is unchecked, any input entered that does not match an existing value will be cancelled.

There is also a [Clear] button, which allows the user to purge data from the application. If the [Cycle count data] option is selected, then clicking the [Clear]

button will delete only the cycle count data. This allows the user to reset the data when they wish to perform a new cycle count.

When the [All q-count tables] option is selected, q-count will purge all data from its tables, including stored inventory information such as part numbers, locations and serials. Use this option before importing a new initial set of data via an xml file. Click [Save] to save settings.

3. q-track

q-track is an asset tracking module; it can be used to gather information and notes on company assets.

3.1 Data Collection Fields

Asset tracking information is gathered through a series of data collection fields shown in the table below.

Field Name	Description	Data Type	Field Length
ASSET	Warehouse	String	32
DESC	Description (Read-only)	String	256
LOC	Location	String	32
COND	Asset condition	String	32
NOTES	Miscellaneous notes	String	512

The ASSET, LOC and COND fields are dropdown lists that can be used optionally to select a value from a list, or scan a value from a barcode. After selecting a value, press 'Enter' to submit the input and the focus will switch to the next sequential field. Alternatively, you may also input a value by scanning a barcode. Repeat this process until all the data fields have been filled and click [Save] to save the data. A more detailed view of the asset tracking process is provided in the following section.

3.2 Asset Tracking Procedure

- 1) Select/scan an asset

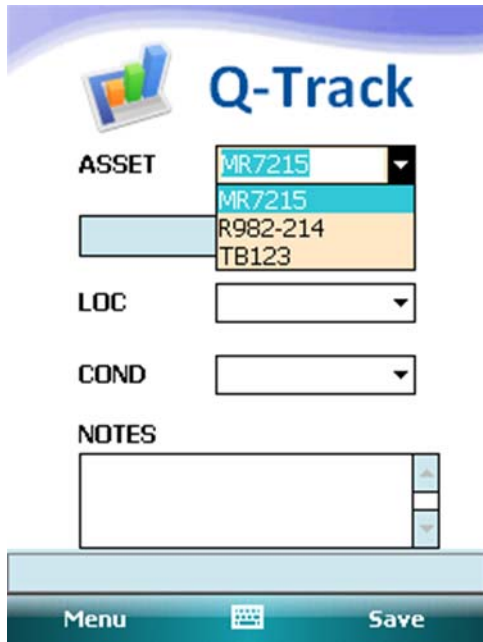


Figure 18: Asset field

After scanning an asset, the description will automatically be populated in the read-only description field below. In addition, the corresponding location, condition and notes field values will be populated (if available) based on the selected asset.

2) Select/scan a location

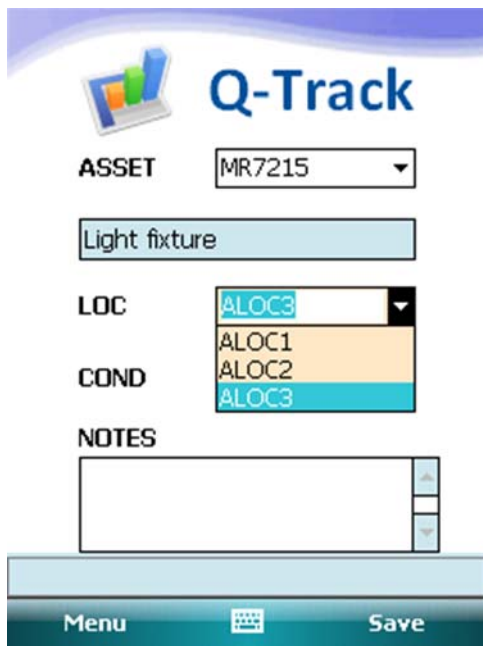


Figure 19: Location field

3) Select an asset condition

The screenshot shows the Q-Track application interface. At the top left is a logo with a bar chart and the text "Q-Track". Below the logo are several input fields: "ASSET" with a dropdown menu showing "MR7215", a text field containing "Light fixture", "LOC" with a dropdown menu showing "ALOC3", and "COND" with a dropdown menu showing "Good". The "COND" dropdown is open, displaying a list of options: "Excellent", "Very good", "Good" (highlighted in blue), "Fair", and "Poor". Below the dropdown is a "NOTES" text field. At the bottom of the screen is a navigation bar with "Menu", a keyboard icon, and "Save".

Figure 20: Condition field

4) Record notes related to the asset

The screenshot shows the Q-Track application interface. At the top left is a logo with a bar chart and the text "Q-Track". Below the logo are several input fields: "ASSET" with a dropdown menu showing "MR7215", a text field containing "Light fixture", "LOC" with a dropdown menu showing "ALOC3", and "COND" with a dropdown menu showing "Good". Below the dropdown is a "NOTES" text field containing the text "Fluorescent lamp needs to be changed.". At the bottom of the screen is a navigation bar with "Menu", a keyboard icon, and "Save".

Figure 21: Notes field

After collecting the required asset-related data, click the [Save] button to save the record. This will store the data that was just entered in a database so that the information can be retrieved for editing at a later time, and also to generate an asset summary report for review and export.

3.3 Asset Track Report

q-count includes a feature to generate an asset track summary report. To view the report, click on [Menu] [Report] from the q-track screen.

Asset Track Report

Asset	Loc	Cond
MR7215	ALOC3	Good
R982-214		
TB123		

Menu

Figure 22: Asset track report

This report displays and summarizes the data that was collected during the asset tracking process. It can also be printed by clicking [Menu] [Print Report]. The document will be sent to the network printer that was setup earlier in the system configuration screen.

Additionally, the asset data can be exported to a comma-separated text file format by clicking on [Menu] [Export Data]. This will generate a date-stamped text file in the Q-suite folder on the mobile device, which can be transferred to a computer through ActiveSync.

3.4 Importing Data

To populate the fields in q-track with the necessary data, an xml data file containing asset-related field data is required. This file is named AssetData.xml, and is located in the \q-suite directory on the mobile device.

A sample set of xml asset data is provided below which illustrates the format that the data must conform to in order to be imported into the q-track module.

```
<?xml version="1.0" encoding="utf-8" ?>
<Root>
  <AssetLocList>
    <Loc>ALOC1</Loc>
    <Loc>ALOC2</Loc>
    <Loc>ALOC3</Loc>
  </AssetLocList>

  <CondList>
    <CondItem>
      <Cond>Excellent</Cond>
      <Rank>1</Rank>
    </CondItem>
    <CondItem>
      <Cond>Very good</Cond>
      <Rank>2</Rank>
    </CondItem>
    <CondItem>
      <Cond>Good</Cond>
      <Rank>3</Rank>
    </CondItem>
    <CondItem>
      <Cond>Fair</Cond>
      <Rank>4</Rank>
    </CondItem>
    <CondItem>
      <Cond>Poor</Cond>
      <Rank>5</Rank>
    </CondItem>
  </CondList>

  <AssetList>
    <AssetItem>
      <Asset>TB123</Asset>
      <Desc>Workbench</Desc>
    </AssetItem>
    <AssetItem>
      <Asset>R982-214</Asset>
      <Desc>Liquid canister</Desc>
    </AssetItem>
    <AssetItem>
      <Asset>MR7215</Asset>
      <Desc>Light fixture</Desc>
    </AssetItem>
  </AssetList>
</Root>
```

```
</AssetList>  
</Root>
```

All xml data is contained within the <Root> xml tag. <AssetLoclist> contains a list of asset locations to be imported. <CondList> holds a list of asset conditions. Each <CondItem> in the list must have a <Cond> and <Rank> associated, which is used to sort conditions in descending order when displayed in a dropdown list.

The <AssetList> structure holds a list of <AssetItem> objects. Each <AssetItem> contains an asset number <Asset>, and a description <Desc>.

3.5 User Defined Fields

The user defined field (UDF) functionality for q-track is identical to that of q-count. Please refer to the documentation contained in the q-count section of the manual for an overview.

4. q-move

q-move is the inventory management module; it can be used to perform inventory receiving, inventory shipping and inventory transfers. This functionality is organized into three different sections, each visible as a tab in the q-move screen as shown below.

The screenshot displays the 'Q-Move' application interface. At the top, there is a logo of a cardboard box and the text 'Q-Move'. Below the logo, there are several input fields: 'PO #' and 'LINE' are dropdown menus; 'WHSE' and 'LOC' are also dropdown menus; 'PART', 'DESC', and 'SERIAL' are text input fields; and 'RECV / ORD QTY' consists of two text input fields separated by a slash. Below these fields are three tabs: 'Receiving', 'Shipping', and 'Transfers'. At the bottom of the screen, there is a dark blue bar with the text 'Menu', a small icon, and 'Save'.

Figure 23: Receiving, shipping and transfers tab

4.1 Receiving Tab

4.1.1 Data Collection Fields

Inventory receiving is performed through a series of data collection fields shown in the table below.

Field Name	Description	Data Type	Field Length
PO #	Purchase order	String	32
LINE	Order line	String	32
WHSE	Warehouse for receiving	String	32
LOC	Location for receiving	String	32
PART	Part number (Read-only)	String	32
DESC	Description (Read-only)	String	256
SERIAL	Serial number	String	64
RECV QTY	Received qty	Integer	N/A
ORD QTY	Order qty remaining to be received (Read-only)	Integer	N/A

The PO #, LINE, WHSE and LOC fields are dropdown lists that can be used optionally to select a value from a list, or scan a value from a barcode. After selecting a value, press 'Enter' to submit the input and the focus will switch to the next sequential field. Alternatively, you may also input a value by scanning a barcode. Repeat this process until all the data fields have been filled and click [Save] to save and confirm the receiving operation. A more detailed view of the inventory receiving process is provided in the following section.

4.1.2 Receiving Procedure

- 1) Select/scan a PO #

The image shows the Q-Move application interface. At the top, there is a logo of a cardboard box and the text "Q-Move". Below the logo, there are several input fields and buttons. The "PO #" field is a dropdown menu with "PO-12345" selected. To its right is a "LINE" dropdown menu. Below "PO #" is a "WHSE" dropdown menu with "PO-SR21" selected. To its right is a "LOC" dropdown menu. Below these are text input fields for "PART", "DESC", and "SERIAL". There are also two small input fields for "RECV / ORD QTY". At the bottom, there are three buttons: "Receiving", "Shipping", and "Transfers". At the very bottom, there are three buttons: "Menu", a keyboard icon, and "Save".

Figure 24: PO # field

After selecting or scanning a PO #, the line field will automatically populate with the corresponding lines for the purchase order.

2) Select/scan an order line

The image shows the Q-Move application interface. At the top, there is a logo of a cardboard box and the text "Q-Move". Below the logo, there are several input fields and buttons. The "PO #" field is a dropdown menu with "PO-12345" selected. To its right is a "LINE" dropdown menu with "2" selected. Below "PO #" is a "WHSE" dropdown menu. To its right is a "LOC" dropdown menu with a list of options: "1", "2", and "3". Below these are text input fields for "PART", "DESC", and "SERIAL". There are also two small input fields for "RECV / ORD QTY". At the bottom, there are three buttons: "Receiving", "Shipping", and "Transfers". At the very bottom, there are three buttons: "Menu", a keyboard icon, and "Save".

Figure 25: Line field

After selecting the order line from which to receive the inventory, the part and description fields will be automatically populated with the associated values for the selected order line.

3) Select/scan a warehouse and location to receive the inventory



The screenshot displays the Q-Move software interface. At the top, there is a logo consisting of a brown cardboard box icon and the text "Q-Move" in blue. Below the logo, the interface features several input fields and buttons:

- PO #**: A dropdown menu with "PO-12345" selected.
- LINE**: A dropdown menu with "2" selected.
- WHSE**: A dropdown menu with "VCR" selected.
- LOC**: A dropdown menu with "LOC1" selected.
- PART**: A text input field containing "057700622872".
- DESC**: A text input field containing "Complex contraption".
- SERIAL**: An empty text input field.
- RECV / ORD QTY**: A text input field with a slash and "10" to its right.
- Receiving**, **Shipping**, and **Transfers**: Three buttons arranged horizontally.
- Menu** and **Save**: Two buttons at the bottom of the interface, with a keyboard icon between them.

Figure 26: Warehouse and location fields

4) Scan a serial number (if required)

Q-Move

PO # PO-12345 LINE 2

WHSE VCR LOC LOC1

PART 057700622872

DESC Complex contraption

SERIAL P00000001

RECV / ORD QTY / 10

Receiving Shipping Transfers

Menu Save

Figure 27: Serial field

If the part that is being received is serialized, the application will prompt you to scan the serial number.

5) Enter the received quantity

Q-Move

PO # PO-12345 LINE 2

WHSE VCR LOC LOC1

PART 057700622872

DESC Complex contraption

SERIAL P00000001

RECV / ORD QTY 1 / 10

Receiving Shipping Transfers

Menu Save

Figure 28: Received quantity field

After entering a quantity value, press 'Enter' or click the [Save] button to complete the inventory receiving operation. This will update the inventory and purchase order tables in the database to reflect the items that were received into the warehouse. This information can also be reviewed in a summary report and exported to a text file.

4.2 Shipping Tab

4.2.1 Data Collection Fields

Inventory shipping is performed through a series of data collection fields shown in the table below.

Field Name	Description	Data Type	Field Length
CO #	Customer order	String	32
LINE	Order line	String	32
WHSE	Warehouse for receiving	String	32
LOC	Location for receiving	String	32
PART	Part number (Read-only)	String	32
DESC	Description (Read-only)	String	256
SERIAL	Serial number	String	64
SHIP QTY	Shipped qty	Integer	N/A
ORD QTY	Order qty remaining to be shipped (Read-only)	Integer	N/A

The data collection fields and inventory shipping procedure is very similar to the receiving process, with the exception that instead of receiving inventory, items are shipped from inventory via customer orders. A more detailed view of the inventory shipping process is provided in the following section.

4.2.2 Shipping Procedure

- 1) Select/scan a CO #

The image shows the Q-Move application interface. At the top, there is a logo of a cardboard box and the text "Q-Move". Below the logo, there are several input fields:

- CO #**: A dropdown menu with "CO-7750" selected. A secondary dropdown menu is open, showing "CO-7750" (highlighted in blue) and "CO-912QT" (highlighted in yellow).
- LINE**: A dropdown menu.
- WHSE**: A dropdown menu with "CO-912QT" selected.
- LOC**: A dropdown menu.
- PART**: A text input field.
- DESC**: A text input field.
- SERIAL**: A text input field.
- SHIP / ORD QTY**: Two text input fields separated by a slash.

 At the bottom, there are three tabs: "Receiving", "Shipping", and "Transfers". Below the tabs is a dark blue bar with "Menu" and "Save" buttons, and a keyboard icon in the center.

Figure 29: CO # field

After selecting or scanning a CO #, the line field will automatically populate with the corresponding lines for the purchase order.

2) Select/scan an order line

The image shows the Q-Move application interface. At the top, there is a logo of a cardboard box and the text "Q-Move". Below the logo, there are several input fields:

- CO #**: A dropdown menu with "CO-7750" selected.
- LINE**: A dropdown menu with "1" selected. A secondary dropdown menu is open, showing "1" (highlighted in blue) and "2" (highlighted in yellow).
- WHSE**: A dropdown menu.
- LOC**: A dropdown menu.
- PART**: A text input field.
- DESC**: A text input field.
- SERIAL**: A text input field.
- SHIP / ORD QTY**: Two text input fields separated by a slash.

 At the bottom, there are three tabs: "Receiving", "Shipping", and "Transfers". Below the tabs is a dark blue bar with "Menu" and "Save" buttons, and a keyboard icon in the center.

Figure 30: Line field

After selecting the order line from which to receive the inventory, the part and description fields will be automatically populated with the associated values for the selected order line.

3) Select/scan a warehouse and location to receive the inventory



The screenshot displays the Q-Move software interface. At the top, there is a logo consisting of a brown cardboard box icon and the text "Q-Move" in blue. Below the logo, the interface features several input fields and buttons:

- CO #**: A dropdown menu with "CO-7750" selected.
- LINE**: A dropdown menu with "1" selected.
- WHSE**: A dropdown menu with "TOR" selected.
- LOC**: A dropdown menu with "LOC3" selected.
- PART**: A text input field containing "064900407949".
- DESC**: A text input field containing "Perpetual pendulum".
- SERIAL**: An empty text input field.
- SHIP / ORD QTY**: A text input field with a slash, containing an empty field followed by "100".
- Below the quantity field, there are three buttons: "Receiving", "Shipping", and "Transfers".
- At the bottom of the interface, there is a dark teal bar with three buttons: "Menu", a keyboard icon, and "Save".

Figure 31: Warehouse and location fields

4) Scan a serial number (if required)

Q-Move

CO # LINE

WHSE LOC

PART

DESC

SERIAL

SHIP / ORD QTY /

Receiving Shipping Transfers

Menu

Figure 32: Serial field

If the part that is being shipped is serialized, the application will prompt you to scan the serial number.

5) Enter the shipped quantity

Q-Move

CO # LINE

WHSE LOC

PART

DESC

SERIAL

SHIP / ORD QTY /

Receiving Shipping Transfers

Menu

Figure 33: Shipped quantity field

After entering a quantity value, press 'Enter' or click the [Save] button to complete the inventory shipping operation. This will update the inventory and customer order tables in the database to reflect the items that were shipped from the warehouse. This information can also be reviewed in a summary report and exported to a text file.

4.3 Transfer Tab

4.3.1 Data Collection Fields

Inventory transfer is performed through a series of data collection fields shown in the table below.

Field Name	Description	Data Type	Field Length
WHSE1 (left)	Origin warehouse	String	32
LOC1 (left)	Origin location	String	32
WHSE2 (right)	Destination warehouse	String	32
LOC2 (right)	Destination location	String	32
PART	Part number	String	32
DESC	Description (Read-only)	String	256
SERIAL	Serial number	String	64
QTY	Shipped qty	Integer	N/A
INV QTY	Part quantity remaining in inventory (Read-only)	Integer	N/A

Figure 34: Inventory transfer tab

The arrows in the screen above indicate the direction of inventory transfer. The WHSE and LOC fields on the left side of the arrows represent the origin/source of the inventory to be transferred. The corresponding WHSE and LOC fields on the right of the arrows denote the destination for the transfer. A step-by-step illustration of the inventory shipping process is provided in the following section.

4.3.2 Transfer Procedure

- 1) Select/scan an origin warehouse and location for the inventory transfer

The image shows the Q-Move interface with the following fields and values:

- WHSE:** VCR (selected) → [] (empty)
- LOC:** LOC1 (selected) → [] (empty)
- PART:** [] (empty)
- DESC:** [] (empty)
- SERIAL:** [] (empty)
- QTY:** [] / [] (empty)
- Buttons:** Receiving, Shipping, Transfers, [] (empty)
- Footer:** Menu, [] (empty), Save

Figure 35: Origin warehouse and location

The origin and destination warehouses and locations could be the same, depending on the nature of the inventory transfer.

2) Select/scan a destination warehouse and location

The image shows the Q-Move interface with the following fields and values:

- WHSE:** VCR (selected) → WSH (selected)
- LOC:** LOC1 (selected) → LOC2 (selected)
- PART:** [] (empty)
- DESC:** [] (empty)
- SERIAL:** [] (empty)
- QTY:** [] / [] (empty)
- Buttons:** Receiving, Shipping, Transfers, [] (empty)
- Footer:** Menu, [] (empty), Save

Figure 36: Destination warehouse and location

3) Select/scan the part to be transferred

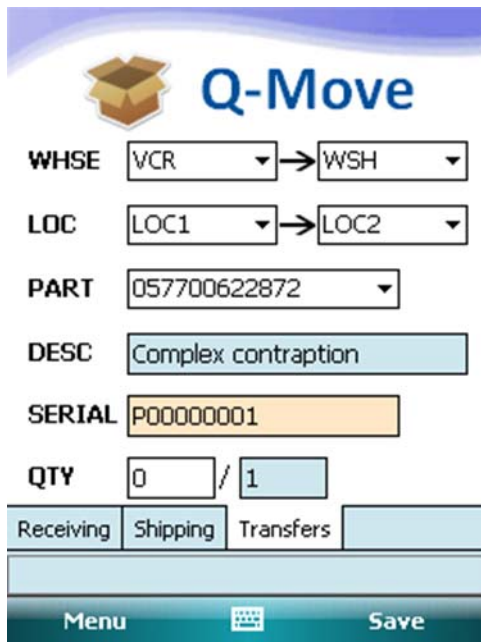
The screenshot shows the Q-Move application interface. At the top, there is a logo with a cardboard box and the text "Q-Move". Below the logo, there are several input fields and buttons:

- WHSE:** A dropdown menu with "VCR" selected, followed by an arrow pointing to another dropdown menu with "WSH" selected.
- LOC:** A dropdown menu with "LOC1" selected, followed by an arrow pointing to another dropdown menu with "LOC2" selected.
- PART:** A dropdown menu with "057700622872" selected.
- DESC:** A text field with "02202806" above it and "057700622872" below it.
- SERIAL:** A text field with "064900407949" above it and "06493331" below it.
- QTY:** Two input fields separated by a slash, both currently empty.
- Buttons:** "Receiving", "Shipping", and "Transfers" are visible as buttons. Below them is a "Menu" button and a "Save" button.

Figure 37: Part field

After the part has been entered, the part description field will be populated automatically. In addition, the inventory quantity will be computed (based on the part and the origin warehouse and location).

4) Scan a serial number (if required)



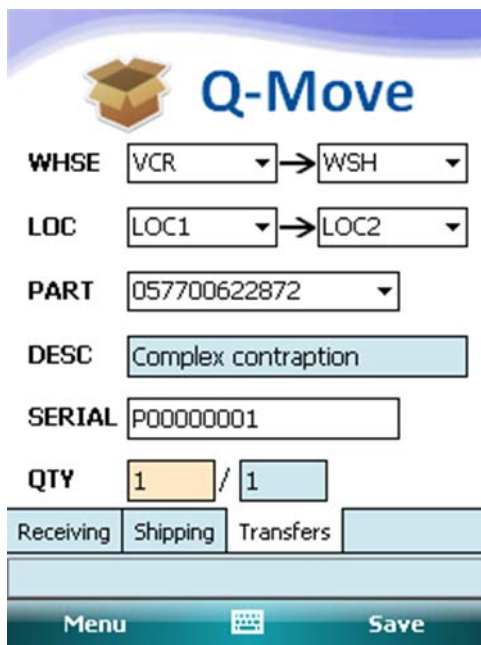
The image shows a software interface titled "Q-Move" with a box icon. It contains several input fields:

- WHSE:** Two dropdown menus, the first containing "VCR" and the second containing "WSH", connected by a right-pointing arrow.
- LOC:** Two dropdown menus, the first containing "LOC1" and the second containing "LOC2", connected by a right-pointing arrow.
- PART:** A dropdown menu containing the value "057700622872".
- DESC:** A text input field containing "Complex contraption".
- SERIAL:** A text input field containing "P00000001".
- QTY:** Two text input fields separated by a slash, containing "0" and "1".

 Below these fields are three tabs: "Receiving", "Shipping", and "Transfers". At the bottom is a dark blue bar with "Menu", a keyboard icon, and "Save" buttons.

Figure 38: Serial field

5) Enter the transfer quantity



This image is identical to Figure 38, but the "QTY" field now shows "1" in the first input box and "1" in the second input box, indicating that the transfer quantity has been updated.

Figure 39: Transfer quantity field

After entering a quantity value, press 'Enter' or click the [Save] button to complete the inventory transfer operation. This will update the inventory table to reflect the

transfer of part inventory from one warehouse/location to another. As with receiving and shipping, a summary report of inventory transfers is available for viewing and data export.

4.4 Inventory Reports

There are four different reports available in the q-move module: inventory, receiving, shipping and transfer. Each report summarizes information relevant to the

Inventory Report

Part	Qty	Whse	Loc	Serial
057700622872	1	WCR	LOC1	P000

◀ | III | ▶

Inventory Receiving Shipping Transfers

Menu 

Figure 40: Inventory tab report

This report displays the current inventory levels of all parts, including the quantity available, warehouse/location and serial numbers. The inventory levels will reflect the net result of all receiving, shipping and transfer operations.

Inventory Report

	PO	Line	Part	Recv	Ord
▶	PO-12345	1	02202806	0	25
	PO-12345	2	057700622872	1	10
	PO-12345	3	06493331	0	12
	PO-SR21	1	064900407949	0	100
	PO-SR21	2	06493331	0	50

Inventory
Receiving
Shipping
Transfers

Menu

Figure 41: Receiving tab report

The report displayed in the receiving tab is a summary of the current status of all purchase orders, organized by order line, part number and received/order quantity.

Inventory Report

	CO	Line	Part	Ship	Order
▶	CO-7750	1	0649004079	25	100
	CO-7750	2	06493331	0	50
	CO-912QT	1	02202806	0	25
	CO-912QT	2	0577006228	0	10
	CO-912QT	3	06493331	0	12

Inventory
Receiving
Shipping
Transfers

Menu

Figure 42: Shipping tab report

Similarly, the shipping tab report provides an overview of the status of all customer orders.

Inventory Report

Whse1	Loc1	Whse2	Loc2	Part
VCR	LOC1	WSH	LOC2	05770062287

Inventory	Receiving	Shipping	Transfers
-----------	-----------	----------	-----------

Menu

Figure 43: Transfer tab report

Lastly, the transfer tab report displays all of the inventory transfer operations that have been completed.

4.5 Importing Data

The q-move module uses the same PartData.xml file as q-count to import part-related data such as part numbers, descriptions and warehouse/location lists.

In addition, an OrderData.xml file is also required, which defines a list of purchase orders and customer orders to be fulfilled using the receiving and shipping functions. The structure of the OrderData.xml file is explained below.

```
<?xml version="1.0" encoding="utf-8" ?>
<Root>
  <POList>
    <POItem>
      <PO>PO-12345</PO>
      <Date>1/31/2009</Date>
      <LineList>
        <LineItem>
          <Line>1</Line>
          <Part>02202806</Part>
          <OrderQty>25</OrderQty>
        </LineItem>
      </LineList>
    </POItem>
  </POList>
</Root>
```



```
<LinItem>
  <Line>2</Line>
  <Part>057700622872</Part>
  <OrderQty>10</OrderQty>
</LinItem>
<LinItem>
  <Line>3</Line>
  <Part>06493331</Part>
  <OrderQty>12</OrderQty>
</LinItem>
</LineList>
</POItem>
<POItem>
  <PO>PO-SR21</PO>
  <Date>1/31/2009</Date>
  <LineList>
    <LinItem>
      <Line>1</Line>
      <Part>064900407949</Part>
      <OrderQty>100</OrderQty>
    </LinItem>
    <LinItem>
      <Line>2</Line>
      <Part>06493331</Part>
      <OrderQty>50</OrderQty>
    </LinItem>
  </LineList>
</POItem>
</POList>
```

```
<COList>
  <COLItem>
    <CO>CO-912QT</CO>
    <Date>1/31/2009</Date>
    <LineList>
      <LinItem>
        <Line>1</Line>
        <Part>02202806</Part>
        <OrderQty>25</OrderQty>
      </LinItem>
      <LinItem>
        <Line>2</Line>
        <Part>057700622872</Part>
        <OrderQty>10</OrderQty>
      </LinItem>
      <LinItem>
        <Line>3</Line>
        <Part>06493331</Part>
        <OrderQty>12</OrderQty>
      </LinItem>
    </LineList>
  </COLItem>
  <COLItem>
    <CO>CO-7750</CO>
    <Date>1/31/2009</Date>
```

```
<LineList>
  <LineItem>
    <Line>1</Line>
    <Part>064900407949</Part>
    <OrderQty>100</OrderQty>
  </LineItem>
  <LineItem>
    <Line>2</Line>
    <Part>06493331</Part>
    <OrderQty>50</OrderQty>
  </LineItem>
</LineList>
</COLItem>
</COList>
</Root>
```

The <POList> contains a list of purchase orders to be imported. Each <POLItem> in the list has a <PO> and <Date> field as well as a <LineList>, which holds an array of <LineItem> elements that belong to the purchase order. Each <LineItem > specifies the line number, <Line>, part number <Part>, and order quantity, <OrderQty>. Using this format, it is possible to define any number of purchase orders to be imported to the application.

The <COList> structure is nearly the same as the <POList>, except that the data contained within this section is used for specifying a list of customer orders.