Getting Started with RF Warehouse

Release 8.7.5

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Epicor Eclipse Release 8.7.5 Online Help Documentation

Publication Date: January 10, 2013

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RF Warehouse Management Overview

Use the Eclipse Radio Frequency (RF) Warehouse Management companion product to control and automate your entire warehouse's functions in real-time.

The RF Warehouse Management system uses radio frequency data communications that provide real-time access and integration to the system. RF data communications transmit between RF guns and workstation terminals, allowing up-to-the-minute information transmission of the following:

- Receiving and Put Away
- Picking
- Staging and Closing Orders
- Inventory Replenishment
- Product Movement
- Physical Inventory
- Cycle Counting

By using the RF Warehouse Management system, your warehouse gains real-time control over inventory. This real-time data transmission gives warehouse management the ability to:

- Make timely, well-informed decisions.
- Increase sales while lowering inventory levels.
- Reduce inventory variances to less than 0.01%.
- Reduce the number of lost sales and returns.
- Decrease your distribution cycle time.
- Improve service levels.
- Eliminate facility shutdown during physical inventory.
- Minimize personnel requirements and reduce your payroll.
- Improve warehouse space management.
- Cycle count discrepancies immediately.

RF Warehouse Management Setup Overview

Before installing and using the RF Warehouse Management system, you need to perform the following setup tasks:

- Set up all RF Warehouse Management control and authorization parameters.
- Prepare your warehouse facility and network to support the RF Warehouse Management system.
- Layout and define all warehouse areas and locations.
- Bar code all locations, products, and totes.

Setup Requirements for RF Warehouse Management

Following are the control maintenance records and authorization keys used for RF Warehouse Management.

Control Maintenance Records

Set up the following control maintenance records:

RF Main

- Default View For RF Location Maintenance
- RF Default Location Status
- RF Enable Tote Validation
- RF Enable Warehouse In Process Queue For Types
- RF Menu Default
- RF Valid Order In-Process Status

RF Conveyor

- RF Conveyor Number Of Chutes
- RF Conveyor Number Of Totes Per Chute
- RF Enable Conveyor For Picking Totes
- User To Be Messaged With RF Conveyor Errors

RF Count Parameters

- Allow Abort From Related Counts In RF
- Location Types To Be Included In RF Cycle Count
- RF Cycle Count Dollar Cutoff
- RF Cycle Count Location Priority
- RF Cycle Count Max Entries
- RF Cycle Count Min Cycle Repeat Days
- RF Cycle Count Use Rank Number
- RF Physical Count Qty Warning Level
- Stop Immediate Cycle Count When Variance Found
- Unauthorized User Finds Discrepancy In RF Cycle Cnt By Loc

RF Inventory Allocations

- Inventory Allocation Method

RF Inventory Allocations for Picking

- Pick By Location Based On Receive Date
- Use Location Expiration Dates

RF Inventory Management

- Warehouse Status Queue Non-Manifest Picking Statistics

RF Maintenance

- Product Location Quantity Movement

RF Manifest Maintenance

- Valid Package Type

RF Picking

- Consolidate RF Product Picks
- Default Zone For OE Quick Scan
- Display Weight On RF Pick Select Screen
- Force Valid Picker IDs
- Lock Tote To Order In RF Picking
- Print RF Excluded Items Work Ticket
- RF Allow Staging Of Individual Totes
- RF Automatically Close Order After Staging
- RF Automatically Stage And Close Quick Picks
- RF Automatically Select Next Order To Pick
- RF Create Immediate Cycle Count When Location Picked Negative
- RF Display Hazard Description And Print Pick Ticket
- RF Enable Check For B/O Of Ship Complete Order
- RF Enable Delayed Picking
- RF Generate Pick Ticket When Order Closed
- RF Manifest Report To Run After Truck Loading
- RF Notify Guns On Pick Up Now Order
- RF Null Pick Group
- RF # Of Manifest Stops To Pick For Same Stage Locn
- RF Open Tote Staging Label Format
- RF Order Status After All Items Are Picked
- RF Order Status After All Items Are Staged
- RF Pick Into Stage Locn Before Prior Manifest Stop Is Loaded

- RF Pick Selection Sort
- RF Scan Final Tote Location At Order Close
- RF Scan Pick Selections
- RF Stage - Only Display Scanned Tote
- RF Stage - Require Staging Location And Package Qtys
- RF Stage - Ship Vias That Do No Require Package Qtys
- RF Tote Status Before Loading Trucks
- RF Valid Product Loc Pick Statuses
- RF Verify Pick Qty
- RF Warn User At Order Close If All Totes Are Not Staged

RF Receiving and Put Away

- Default Response For Direct Put-Away Location Change
- Display Product Rank In RF Receiving/Put Away
- Enable 856 Advanced Shipping Notice In RF Receiving
- Enable Product Locations By UOM
- Lock Warehouse Zone To Tote In RF Receive Verify
- Prompt To Print Lot Barcode Labels In RF Receive Verify
- RF Enable Hot Tote Warning For Avail
- RF Hot Tote Warning Tune
- RF Overstock Type
- RF Put Away Method
- RF Putaway Primary Location Override Warning
- RF Receive Verify Default Receiving Option
- RF Receive Verify Prompt To Enter Quantity
- RF Receive Verify Suggest Location Based On Lot Entered
- RF Scan Location To Tote For Immediate Put Away
- RF Tag Viewing User Defined Label
- RF Use B/O Days On B/O'd Receipt
- RF Valid Product Loc Rec Statuses
- RF Verify Put-Away Qty
- RF W/H Area To Store Hot Nonstock Items
- RF W/H Area To Store Hot Nonstock Transfer Items
- Split Picking/Receiving On RF Orders Based Upon Units Of Measure

RF Replenishment

- RF Default To Customer Backorder Status
- RF Replenishment Task Size

RF Returns

- SOE Return/Credit Default Parameters

RF Serial Numbers

- Prompt For Serial Number Entry In RF
- RF Exclude Unverified Receipts From Inprocess Onhand
- Store Serial Numbers By Location

POE Substitutions

- Default B/O Days For Purchase Orders

SOE Picking

- Notify User When Quantity Backordered

General Forms

- Label Printing Default Print Selection

Authorization Keys

Assign the following authorization keys:

RF Main

- RF.AUDIT.OVRD
- RF.BO.SHIP.COMPLETE
- RF.CHANGE.FINAL.LOC
- RF.COUNT.ABORT
- RF.COUNT.ABORT.IM
- RF.LOAD.OVRD
- RF.LOCATION.TYPE
- RF.PICK.QTY.INCREASE
- RF.PRD.PU.EDIT
- RF.PUTAWAY.OVRD.LOC
- RF.RECV.PUTAWAY.BO.QTY
- RF.RECV.VERF.BO.QTY

RF Product Location

- PRD.LOCATION.MAINT
- PRD.TAG.LOC.MOVE

RF Warehouse Tracking

- USER.PICK.GRP.MAINT
- WHSE.INPROCESS.ASSIGN
- WHSE.INPROCESS.CLOSE
- WHSE.INPROCESS.EDIT
- WHSE.ZONE.ALLOC.OVRD

Warehouse Preparation for RF Installation

Before an Eclipse RF Project Manager installs the RF Warehouse Management system, we recommend you complete the following tasks to prepare your warehouse.

Your RF Project Manager will visit your site before installation to review, plan, and identify all processes for implementation.

Prepare Your System

1. Obtain additional user licenses, if necessary. Each activated RF terminal needs an Eclipse user license. If you require additional licenses, you can order them in two steps:
   - Order the first group for receiving.
   - Order the balance at a later date before you activate picking.
2. Check if your hardware can support additional users.

   Adding RF terminals demands system resources from your file server, including the processor, disk, and memory.

Prepare Your Warehouse Facility

1. After reviewing your warehouse facility, design an optimum navigation guide through the facility. This guide facilitates picking, receiving, and put away for large orders.
2. Clean your warehouse facility.

   As you scan each product to a location or area within the warehouse or yard, you are defining that product location to the RF system. Neat and uncluttered aisles help in scanning and defining product location.
3. If you break your warehouse into pick groups so multiple pickers can pick an order simultaneously, create a staging or packing area where orders are placed until completely packed and ready to ship.
4. Order or move racking to optimize warehouse space and product flow.

   If you add or move racking, walls, or doors after the RF site survey, you may affect your RF coverage.
5. Schedule the RF site survey.
   - You need an RF site survey to determine the placement of RF access points - radio frequency units with antennas - in your warehouse. This site survey guarantees RF coverage.
   - During the RF site survey, the RF technician determines the number and locations of RF access points needed. You must then install the RF access points and related antennas to provide the radio coverage necessary so that RF guns can access the system.

Bar Coding Set Up

1. Order and install RF hardware and bar coding equipment based on the RF site survey.

You can order bar code printers before RF hardware, and even before the site survey. With this equipment, you can begin labeling warehouse locations. We recommend ordering one bar code printer for receiving and one for shipping.

2. Print the warehouse location bar code labels and place them in all warehouse locations.
   - Depending on your warehouse facility, you can place labels in plastic envelopes with adhesive backings. These can be moved easily when you add or change locations.
   - We do not recommend using magnetic bar code strips. They can be inadvertently moved, causing location inaccuracies.
3. Cross-reference bar codes for products in the warehouse that do not have UPC numbers loaded in the Eclipse Product file but that do have manufacturer bar code labels on the product.

Complete the RF Warehouse Management Installation

1. Schedule an Eclipse installer for on-site training of the receiving process.

   Note: Companies often begin the implementation of RF with the receiving process. By starting this way, you can bar code and identify locations for all items. If you are not currently using an RF system, we recommend that you turn on receiving at least 45 to 60 days prior to picking. This time allows you to bar code all products and locations. Schedule three to five days of training for receiving, and allow two weeks for your receivers to master the process.

2. Modify pick tickets so locations are printed on them.

   During RF receiving, items are identified by quantity in their locations. The ticket shows pickers the primary product location. If pickers remove a product from a different location, they must record it on the print ticket and adjust it through the Detailed Scheduling screen in Order Entry.

3. Identify items that have remnants, such as wire, with lot bar code labels.

   We recommend that you identify these items with lot bar code labels a month before you turn on picking. Cycle count the items and place lot bar code labels on those products.

4. In an optimum environment, just prior to turning on RF picking, perform a full physical inventory. If you decide not to take this approach, invest in daily cycle counting – after implementing picking – to adjust any product location discrepancies.

5. Schedule an Eclipse installer to train you in and turn on RF picking.

   Training for RF picking requires three to five days.

Zone Maintenance Overview

Use Zone Maintenance to segment your warehouse locations into different areas, such as **Front of Warehouse**, **Back of Warehouse**, **Yard**, and **Showroom**, in order to track locations and to make receiving and picking more efficient.

In Zone Maintenance, you define locations by assigning a range of locations to a zone and a pick group.

For example, you have 4 zones and 4 pick groups in your warehouse: F, B, Y, and S.

- Locations 01-01-A through 01-99-J are in zone and pick group F.
- Locations 01-01-K through 01-99-Z are in zone and pick group B.

Define these locations to the system by assigning them to the correct zone and pick group.

When you assign locations to zones and pick groups, you can also assign parameters to the range of locations within the zone and pick group. For example, you can define a navigation path for picking a zone.

Important: If you define locations and location details in Location Detail Maintenance, you cannot use Zone Maintenance.

Zones

Zones segment all of your inventory locations into areas, such as **Yard**, **Showroom**, **Warehouse**, and **Self-Serve**. Define zones for all of your inventory locations and use these zones to:

- Help define pick groups.
- Define areas that you do not bar code but that still hold product, such as the yard.
- Define areas to which to lock totes for receiving and put away using the **Lock Warehouse Zone To Tote In RF Receive Verify** control maintenance record.
- Define locations to queue for RF picking and to exclude from RF picking.
- Define locations to exclude from RF picking but include in RF delivery preparation.

Pick Groups

Pick groups define a location or group of locations that consolidate items for picking.

For example:

Define a pick group **F** for the *front* of your warehouse and another pick group **B** for the *back* of your warehouse. When the warehouse picker selects orders to pick, the system prompts for the pick group. If the picker enters **F**, only picks from the **F** area display.

Note: We recommend using one alpha character to define pick groups due to display restrictions when selecting orders to pick.

Along with pick groups, assign sort prefixes to determine a pick sequence for your warehouse.

For example:

Enter **0010** for the first location to pick, **0020** for the second, and **0030** for the third.

> **Note:** We recommend that you name your sort prefixes in multiples of 10. This way if you need to add a new location between two other existing pick locations, you do not need to reassign all of the sort prefixes.

The system defaults the warehouse navigation for put away and picking to a sequence based on the location layout. The pick sequence allows you to override the system-defined navigation path.

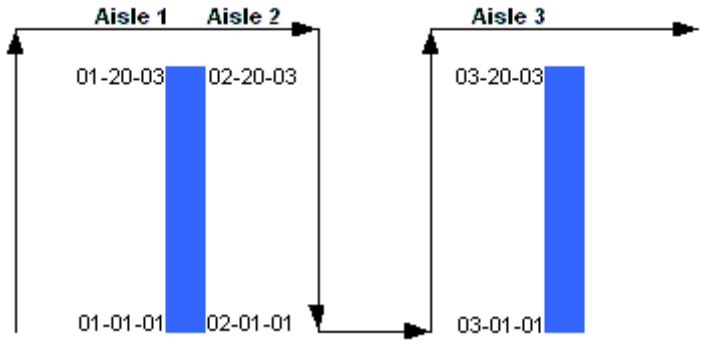
You can create a pick sequence in Zone Maintenance or in Pick Sequence Entry.

Pick sequences look like the following.

You have the pick group **F**, with the following locations:

1. 01-01-01 to 01-20-03
2. 02-01-01 to 02-20-03
3. 03-01-01 to 03-20-03

You want the pick group picked in the following order:



1. 01-01-01 to 01-20-03
2. 02-20-03 to 02-01-01
3. 03-01-01 to 03-20-03

To indicate that order, enter the following in the **SortPrefix** field:

Location	Pick Group	SortPrefix
01-01-01 to 01-20-03	**S**	**0010**
02-20-03 to 02-01-01	**S**	**0020**
03-01-01 to 03-20-03	**S**	**0030**

In Pick Sequence Entry, scan the beginning and ending location for each segment. Any time you break out of location sequence, scan the ending location and then the next beginning location. Depending on your location layout, sequencing affects whether, during picking or put away, you move up one side and down the other or choose to zigzag back and forth within the aisles.

Defining Zones and Pick Groups for RF

Use the Warehouse Zone Maintenance window to define both zones and pick groups. You can also define:

- Pick sequences.
- Ascending or descending navigation for each zone and pick group.
- Which zones are automatically excluded from RF picking, and whether to print a work ticket for these zones or to include these zones in RF system-directed loading.
- Whether a zone is picked only after all other locations have been exhausted.
- Whether yard tickets print.

  Note: Use Warehouse Location Maintenance to view zone information for a single location.

To define zones and pick groups:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Zone Maintenance** to display the Warehouse Zone Maintenance window.
2. In the **Branch** field, enter the branch number for the area you want to divide into zones.
3. In the **Zone** field, enter upper case, alpha characters to define a zone.

   For example, enter **W** for your warehouse.
4. In the **Begin Location** field, enter the beginning location for the zone.

   The system supports any alphanumeric location format up to 12 characters. You cannot use a period (.) in the name. We recommend using the aisle number, section number, shelf indicator, or the bin indicator, if necessary. For example, **01-03-07-A** (Aisle1, Section 3, Shelf 7, Bin A).

   Note: This location should follow the format defined in Product Location Layout Maintenance. Also, a location can belong only to one zone.
5. In the **End Location** field, enter the end location for the zone.

   Follow the same format as listed above for the **Begin Location** field.

   Note: This location should follow the format defined in Product Location Layout Maintenance. Also, a location can belong only to one zone.
6. In the **Pick Group** field, enter an alpha character to represent a pick group.
7. In the **Exclude Pick Queue** field, select the check box to indicate that you want the zone to be excluded from RF picking.

   Note: If select the check box, enter a printer ID in the **Printer #** field if you want a work ticket to print for the excluded zone.
8. In the **Sort Prefix** field, enter the pick sequence for each pick group to determine the put away and picking sequences for warehouse navigation.
9. In the **Sort Order** field, enter one of the following to indicate the order in which you want each zone picked:

- **A** (ascending) - The location range is picked from its beginning location to its ending location.
- **D** (descending) - The location range is picked from its ending location to its beginning location.

Note: If you do not define a path in the **Sort Prefix** or **Sort Order** fields, the system creates a path based on product location definitions in Product Location Maintenance. Such a path could follow a zone, aisle, section, and shelf order.

10. In the **Required Qty** field, select the check box to indicate if you want the zone to be picked only after other areas have been picked for the sample product.

    For example, if you want a product in your showroom (**S** zone) to be picked only after it has been picked from all other areas of your stock, select the **Require Qty** check box. Your showroom supplies are replenished first if you select this check box.

10. In the **Yard Ticket** field, select the check box to indicate you want a yard ticket to print for a zone when orders placed involve that zone.
11. In the **Pick Size** field, for Manifest Picking only, enter the maximum number of picks to allocate to a pick group.
12. Save your changes and exit the window.

Excluding Zones Using Zone Maintenance

Pre-define zones as included in or excluded from RF picking:

- The system selects locations in included zones for RF picks.
- The system does not select locations in excluded zones for RF picks. Instead the system prints work tickets to direct picks as it does in a manual picking environment.

When sales or transfer orders are entered, the system determines whether to select the ordered items for RF picks based on the allocated zone. The allocated zone can be selected in one of the following ways:

- Automatically based on the settings in the Inventory Allocation Method control maintenance record.
- Manually by a user.

When excluding zones from RF picking, set up these zones to have work tickets printed or to use with RF delivery preparation, as needed.

To exclude a zone from RF picking:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Zone Maintenance** to display the Warehouse Zone Maintenance window.
2. Display the zone to exclude from RF picking.
3. In the **Exclude Pick Queue** field, select the check box to exclude the zone from RF picking.
4. Save your changes and exit the window.

Setting Work Tickets to Print for Excluded Zones

If you exclude zones from RF picking, set the system to print work tickets. Warehouse operators use the work tickets to pick the material. If you do not set work tickets to print, the system still excludes the zones from RF picking but does not print work tickets.

To set work tickets to print for an excluded zone:

1. From the **System > System Files** menu, select **Control Maintenance** to display the Control Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. Set the Inventory Allocation Method control maintenance record to allocate necessary items from RF excluded locations.
3. Set the Print RF Excluded Items Work Ticket control maintenance record to print work tickets.
4. After setting both control maintenance records, press **Esc** to save the settings and exit the Control Maintenance screen.
5. From the **Warehouse Management > Warehouse Maintenance** menu, select **Zone Maintenance** to display the Warehouse Zone Maintenance window.
6. Display the zone to exclude from RF picking.
7. In the **Exclude Pick Queue** field, select the check box to exclude the zone from RF picking.

8. In the **Printer #** field, enter the printer ID from which to print the work tickets.

   Note: If you do not enter a printer ID, the system still excludes the zone from RF picking but does not print a work ticket.

9. Save your changes and exit the window.

Including Zones in RF Delivery Preparation

If you exclude zones from RF picking but want to use the RF system to prepare the orders for delivery, you can set the system to create in-process records for the locations. When excluding zones, set work tickets to print, and define locations in which to stage the material. When you enter orders for material in these zones, the system does the following:

- Assigns tote numbers to each order, which you use to scan the material into the RF system after picking.
- Prints both the assigned tote numbers and staging locations on the tickets.
- Creates an in-process record showing the material and tote as staged in the defined location.

Warehouse operators responsible for picking the order do the following:

- Use the tickets to pick the material and then stage the material in the defined location.
- Leave the ticket with the staged material.

Warehouse operators responsible for preparing the material for delivery then do the following:

- Go to the staged material.
- Scan the printed tote bar code from the ticket into the appropriate RF screen.
- Audit, consolidate, and load the tote holding the material, as needed.

To include a zone in RF system-directed loading:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Zone Maintenance** to display the Warehouse Zone Maintenance window.
2. Display the zone to exclude from RF picking.
3. In the **Exclude Pick Queue** field, deselect the check box to exclude the zone from RF picking but include it in RF delivery preparation.

   If you set work tickets to print, enter the printer ID from which to print the work tickets in the **Printer #** field.

   Note: If you do not enter a printer ID, the system still excludes the zone from RF picking but does not print a work ticket.

4. Save your changes and exit the window.

Defining RF Pick Sequences

Pick sequences define the location order to pick or put away product. Use the Pick Sequence Entry screen to define put away and pick sequences for pick groups.

If you have defined pick sequences in Zone Maintenance, you do not need to recreate them on the Pick Sequence Entry screen.

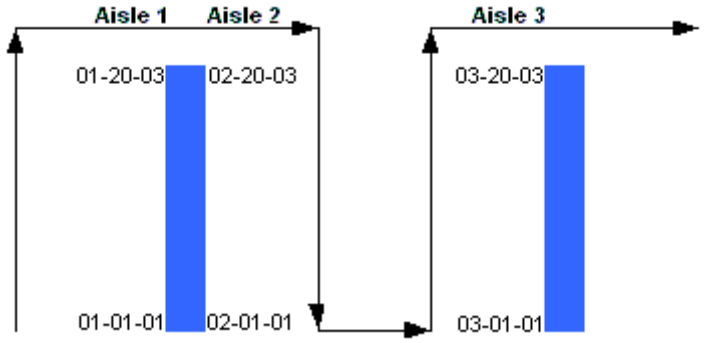
Defining Pick and Put Away Sequences

To define put away and pick sequences, physically walk around each pick group in the sequence you want warehouse personnel to pick and put away product. Scan the beginning and ending locations to create a pick sequence.

Define pick sequences for one pick group at a time.

For example:

For a pick group, define the pick sequence for the following three location groupings:



1. 01-01-01 to 01-20-03
2. 02-20-03 to 02-01-01
3. 03-01-01 to 03-20-03

After you define pick sequences for this pick group, define the next pick sequence for the next pick group.

Entering Starting and Ending Locations

On the Pick Sequence Entry screen, when you enter starting and ending locations for pick sequences, you must always enter the lowest number in the **Str Loc** field and the highest number in the **End Loc** field, even if you want the higher numbered location to be the starting position. To pick the high location first, enter **D** for descending in the **SortOrdr** field. The system begins the pick at the highest numbered location and ends it at the lowest numbered location.

For example:

Your beginning location for picking is **01-99-Z** and your ending location is **01-01-A**. Enter the following on the Pick Seq Entry screen:

- **Str Loc: 01-01-A**

- End Loc: 01-99-Z
- SortOrdr: D

Your pick starts at location **01-99-Z** and ends at **01-01-A** even though it displays in Zone Maintenance as follows:

- **Begin Loca: 01-01-A**
- **End Loca: 01-99-Z**

Marking a pick sequence as descending (**D**) alerts the system to reverse the start and end locations. Marking a pick sequence as ascending (**A**) alerts the system to pick the starting and ending locations as entered on the Pick Seq Entry screen.

Entering Significant Characters

Use significant character numbers to automatically define an ending location after you define a beginning location.

The significant character number defines, from left to right of a location, which characters remain constant in the location and which characters count up.

For example:

For location **01-01-A**, you enter the significant character number **3**. The first three characters of the location are **01-** and remain constant for the location. The characters **01-A** count up in increments of one to the ending location, which is determined by the pre-defined maximum spaces allocated to the location format -**99-Z** in this example.

Using the above example, the system would determine the following ending location:

- In the **Sig Chars** field, enter **3**.
- In the **Str Loc** field, enter **01-01-A** as your starting location.
- The system uses the first **01-** as the first three characters for the ending location.
- It then enters the maximum characters to define the rest of the location in the **End Loc** field: **99-Z**.
- The ending location is then **01-99-Z**.

Using significant characters to automatically define an ending location is an option and not a necessity. You can manually define ending locations, as well.

To sequence a zone for put away and picking:

1. From the **Warehouse Management > RF Applications > RF Main Menu > Misc** menu, select **Pick Sequence Entry** to display the Pick Seq Entry screen.

   Note: If prompted, log on to the character-based system.

2. In the **Br** field, enter the branch for which you are defining a sequence.
3. In the **Sig Chars** field, enter a significant character if you want the system to *automatically* define an ending location in the sequence. If you do not want to use significant characters, skip this step.
4. In the **Str Loc** field, scan the lowest numbered location for the pick sequence.
5. If you are *manually* defining an ending location (not using the **Sig Chars** field) do the following:

- Walk to the *ending* location of that sequence.
- In the **End Loc** field, scan in the highest numbered location for the pick sequence.

6. In the **Pick Seq** field, the system populates the next pick sequence available for the branch. If you want to define a different pick sequence, change this sequencing number.
7. In the **Zone** field, enter the zone that the pick group for which you are defining the pick sequence belongs.
8. In the **Pick Grp** field, enter the pick group for which you are defining this pick sequence, if necessary.
9. In the **Exclude** field, enter **Y** or **N** to indicate if you want the zone to be excluded from the RF Warehouse queue.
10. In the **SortOrdr** field, enter one of the following to indicate the order in which you want each zone picked:
    - **A** - Ascending. The location range is picked from its beginning location to its ending location.
    - **D** - Descending. The location range is picked from its ending location to its beginning location.
11. Press **Esc** to save the changes and exit the screen.

More Options for Defining Pick Sequences

The Pick Seq Entry screen also offers these options.

Hot Key	Function
Insert	Use to insert the current pick sequence ahead of another pick sequence.
Clear	Use to clear all pick sequences. The system prompts you to confirm the deletion.

Location Detail Maintenance Overview

Opposed to Zone Maintenance in which you validate locations by assigning zones, pick groups, and other parameters to an entire range of locations, use Location Detail Maintenance to validate locations separately by doing the following:

- Entering locations individually or by range.
- Assigning unique parameters to single locations or shared parameters to a range of locations.

When users try to place products in a location, the system validates the action against parameters defined in Location Detail Maintenance. For example, if you try to put away product in a location that is at its maximum storage capacity, the system denies the placement.

Use additional Location Detail Maintenance utilities, such as label printing, logs, reports, and queues, to help manage locations defined in Location Detail Maintenance.

Important: Set the **Enable Location Parameter Maintenance** control maintenance record to **Yes** to use Location Detail Maintenance. After this control maintenance record is enabled and you define locations in Location Detail Maintenance, the system does not respect new locations entered in Zone Maintenance. You must define and update all locations and parameters in Location Detail Maintenance.

Disable the Enable Location Parameters Database control maintenance record to define locations using Zone Maintenance.

Setup Requirements for Location Detail Maintenance

Set up the following control maintenance records for Location Detail Maintenance.

Control Maintenance Records

- Valid Location Classes
- Enable Location Parameter Maintenance
- Inventory Allocation Method

Location Parameters in Location Detail Maintenance

Location parameters determine the movement and storage of product through your warehouse. For example, define whether a location can contain more than one type of product.

Note: Use the **Inventory Allocation Method** control maintenance record to set additional parameters specific to picking allocation.

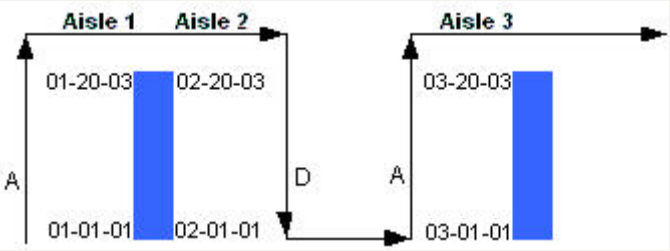
Following are location parameters that you can define for each location in Location Detail Maintenance:

Parameters	Description
Zone and **Pick Group**	The zone and pick group to assign to locations. Zone is the only parameter that the system requires you set for locations. For more information, see Zone Maintenance Overview.
Maximum Pick Quantity	The maximum quantity of product you want consolidated into one pick for the locations. Example: For example, location 01-01-A holds kitchen sinks. You want warehouse personnel to pick only one sink at a time to prevent multiple sinks in a tote from falling out of the tote and breaking. Enter 1 in this field to create picks for only one sink at a time. If you do not define a value for this parameter, there is not a limit on a pick quantity for a location. **Note:** The system does not currently allocate picks using this parameter. It instead uses settings defined in the **Inventory Allocation Method** control maintenance record, as well as general pick allocation logic. For more information, see Automated RF Pick Allocation Logic.
Exclude from RF Picking	Indicate whether to exclude the locations from RF picking.
Printing Parameters	Define whether to do the following: • Print work order tickets for excluded locations, and the printer at which to print the tickets. • Print yard tickets for orders allocated from locations. **Note:** Yard tickets print from the printer set up for manifests.

<table>
<tr><th>Parameters</th><th>Description</th></tr>
<tr><td>Sort Prefix and Sort Order</td><td>
Sequence determining the put away and picking paths for warehouse navigation.

Sort prefix defines a pick sequence for a location.
Sort order defines one of the following ways in which to pick a range of locations with the same sort prefix.

A (ascending) - The range is picked from its beginning location to its ending location.
D (descending) - The range is picked from its ending location to its beginning location.

Example:
For example, you have pick group F, with the following locations: 01-01-01 to 03-01-01. You want the locations picked in the following order:


01-01-01 to 01-20-03
02-20-03 to 02-01-01
03-01-01 to 03-20-03

Assign the following to the ranges:
<table>
<tr><th>Range</th><th>Sort Prefix</th><th>Sort Order</th></tr>
<tr><td>01-01-01 to 01-20-03</td><td>00010</td><td>A</td></tr>
<tr><td>02-20-03 to 02-01-01</td><td>00020</td><td>B</td></tr>
<tr><td>03-01-01 to 03-20-03</td><td>00030</td><td>C</td></tr>
</table>
You must assign the same sort order to all locations sharing a sort prefix. Using the above example, you cannot assign location 01-01-01 a sort order of A and location 01-02-01 a sort order of D. Because both locations have the same sort prefix, they must have the same sort order.

Note: If you do not define a sequence using the Sort Prefix or Sort Order parameters, the system creates put away and picking sequences for you. Such a path could follow a zone, aisle, section, and shelf order.

For more information, see Zone Maintenance Overview and Defining RF Pick Sequences.
</td></tr>
<tr><td>User-Defined Parameters</td><td>User-defined parameters to further classify locations.
For more information, see Setting User-Defined Parameters in Location Detail Maintenance.</td></tr>
</table>

In addition to the above parameters, use the following location parameters to restrict product placement into locations.

Note: When directing put away, the system uses the following parameters respectively to validate product placement into a location: Product Limit, Maximum Quantity, Maximum Weight, Maximum Load Factor, and Height, Width, and Length.

Restricting Parameters	Description
Maximum Quantity	The maximum quantity of product that locations can hold. Example: For example, location 01-01-A holds kitchen sinks. You can only fit five sinks into this location. Enter 5 for the maximum quantity so that the system does not direct users to put away more than five sinks into the location. If you do not define a value for this parameter, there is not a limit on the quantity of product a location can hold.
Location Class	User-defined value defining the type of product, such as pipe, that should be placed in the locations. If you do not define a value for this parameter, there is not a limit on the types of product that can be placed into a location. **Note:** Define location classes in the Valid Location Classes control maintenance record.
Product Limit	The limit of unique products that can be placed in locations. Example: For example, you enter 1 for location 01-01-A to limit the location to only one product. You put widget A in location 01-01-A. You then try to place widget B in location 01-01-A. Because the location is already holding widget A, the system forces you to select another location in which to put away widget B. If you do not define a value for this parameter, there is not a limit on the number of product types that can be placed into the location.
No Put Away	Indicate whether the system includes the locations in put away. • **Y** - The system does not include the locations in put away. You can move or replenish product into the locations. • **N** - The system includes the locations in put away. Example: For example, you are using first in first out (FIFO) logic for cans of paint. The paint that needs to be sold first is stored in location A. To maintain the integrity of the paint's receipt date, you do not want users putting away new cans in location A. Instead you want them to put away the new paint in a storage location. Set the **No Put Away** parameter to **Y** for location A. The system does not direct users to place paint in this location during the put way process, nor can users select this location during the put away process. When location A runs out of paint, users can move the cans of paint from the storage location to location A.
Price Line	The price lines associated with product held in locations. Only product with the defined price line should be placed in the locations. If you do not define a value for this parameters, the system uses the location for product in all price lines. You can also define multiple price lines for a location.

Restricting Parameters	Description
Rank	A free-form value defining the rank of product held in locations. Only product with the defined rank can be placed in the location. .
Height, Width, and **Length**	The maximum height, width, and length of a location. Only product fitting within the defined dimensions can be placed in the location. If you do not define values for these parameters, there is not a limit on a location's size. For more information, see Location Dimension Guidelines in Location Detail Maintenance.
Maximum Weight and **Maximum Load Factor**	Maximum weight or load factor that locations can support. Only product fitting within the defined dimensions can be placed in the location. If you do not define values for these parameters, there is not a limit on the weight or load factor that a location can support.

Location Dimension Guidelines in Location Detail Maintenance

Define location dimensions to direct put away based on the following:

- Location storage capacity
- Reserved product space in a location
- Product alignment in a location

Location dimensions do not limit the type of product stored in a location as long as all product being placed into the location meet defined dimensions. If you do not define location dimensions, the system simply directs put away without verifying that product can fit into a location based on its size.

Before defining location dimensions on the Additional Location Detail screen, review the following location dimension guidelines.

Location Storage Capacity

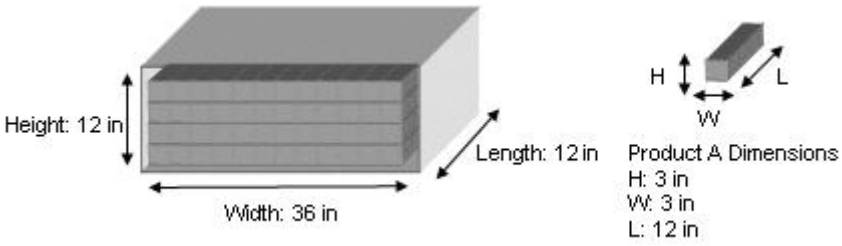
When you define location size dimensions, you are defining the location's volume and maximum storage capacity. The system determines whether product can fit into a location by comparing product dimensions and volume to the location's dimensions and volume. Product with overall dimensions and volume that are less than or equal to a location's dimensions and volume can fit into the location. If overall product dimensions and volume exceed a location's dimensions and volume, the system does not select the location for put away.

Location and product dimensions are defined by height (h), width (w), and length (l). Following are calculations used in determining overall dimensions and volume:

- Volume = h x w x l.
- Overall product height = h x number of products.
- Overall product width = w x number of products.
- Overall product length = l x number of products.
- Overall product volume = (h x w x l) x (number of products).

Example:

For example, you have location 01-01-A and 48 items of product A with the following dimensions:



Overall Product A Height = Location Height:
(3 in x 4 products = 12 in) = 12 in

Overall Product A Width = Location Width:
(3 in x 12 products = 36 in) = 36 in

Overall Product A Length = Location Length:
(12 in x 1 product = 12 in) = 12 in

Location Volume:
12 in x 36 in x 12 in = 5184 in³

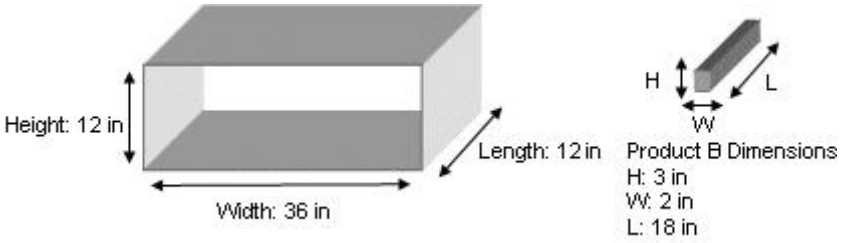
Product A Volume:
3 in x 3 in x 12 in = 108 cubic in³

Overall Volume for Product A:
108 in³ x 48 items = 5184 in³

Product A's overall dimensions and volume equals location 01-01-A's dimensions and volume. So all 48 items of product A fit into location 01-01-A. Additional product cannot fit into the location before the maximum storage capacity is exceeded. After all 48 items of product A are placed into the location, the system denies placement of additional product into the location. If items are picked from the location, storage becomes available again.

Keep in mind that a product's dimensions must fit with a location's dimensions for the system to select the location for put away.

For example, You have location 01-01-A and 48 items of product B with the following dimensions:



Overall Product B Height = Location Height:
(3 in x 4 products = 12 in) = 12 in

Overall Product A Width = Location Width:
(2 in x 18 products = 36 in) = 36 in

Overall Product A Length = Location Length:
(18 in x 1 product = 18 in) > 12 in

Location Volume:
12 in x 36 in x 12 in = 5184 in³

Product B Volume:
3 in x 2 in x 18 in = 108 in³

Overall Volume for Product B:
108 in³ x 48 items = 5184 in³

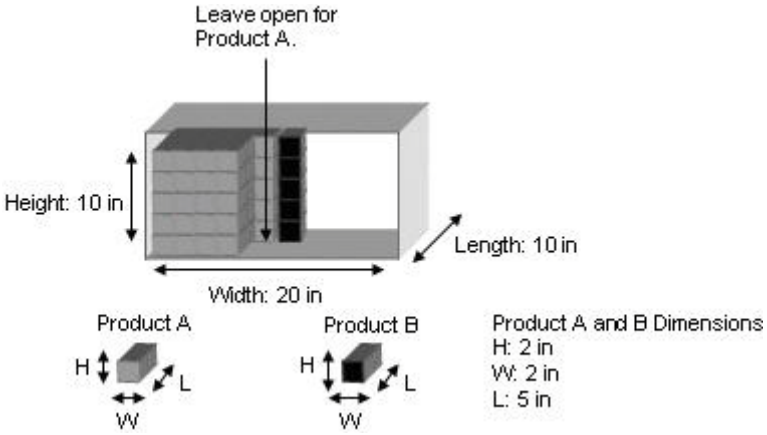
Product B's overall volume equals location 01-01-A's volume, but product B's length exceeds the location's length. Product B cannot fit into location 01-01-A because it is too long for the location, even though its overall volume fits the location.

Product Limit in Location "Rows"

The width dimension limits the placement of product into location "rows." Once one type of product takes up width of a location, the system reserves that location width for the existing product only. If you put away a different product in that same width area, the system does not recognize the placement. Instead it places the product in a new width area. The system then reserves remaining location space for products accordingly.

Example:

For example, you have location 01-01-B and products A and B with the following dimensions:

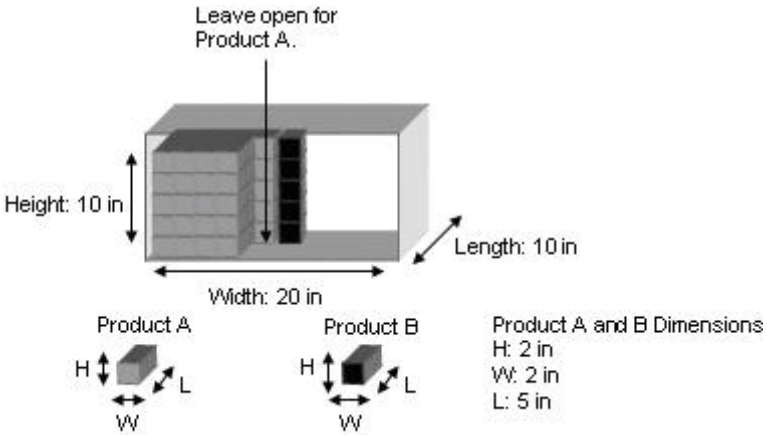


You place 45 items of product A in location 01-01-A. You stack the items two deep by five high by five wide. This placement has taken up 10 inches of the location's width, all of the width area's height, and all but five inches of the width area's length.

You now want to place five items of product B in the location. Even though there is room to place product B in front of product A, the system does not account for such placement. Once a product takes up any width of a location, the system reserves that width for the existing product only. The system places product B in a new "row" within the location.

The system now reserves the four inches of open width in front of the current items for products A and B accordingly. The remaining eight inches of width without product is open to any product.

For example, you have location 01-01-B and products A and B with the following dimensions:



You place 45 items of product A in location 01-01-A. You stack the items two deep by five high by five wide. This placement has taken up 10 inches of the location's width, all of the width area's height, and all but five inches of the width area's length.

You now want to place five items of product B in the location. Even though there is room to place product B in front of product A, the system does not account for such placement. Once a product takes up any width of a location, the system reserves that width for the existing product only. The system places product B in a new "row" within the location.

The system now reserves the four inches of open width in front of the current items for products A and B accordingly. The remaining eight inches of width without product is open to any product.

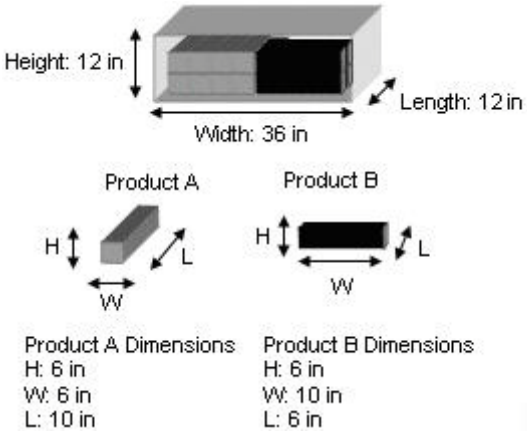
Note: The system works on the assumption that you place product in the back-left corner of a location first, stacking upward. You then stack forward, and then start again by stacking to the next width over in the back of the location.

Product and Location Width Alignment

In addition to limiting the type of product that can be placed in a location "row," the width dimension also defines the alignment of product in a location. The system calculates available location space by aligning product and location width.

Example:

For example, You have location 01-01-C and products A and B with the following dimensions:

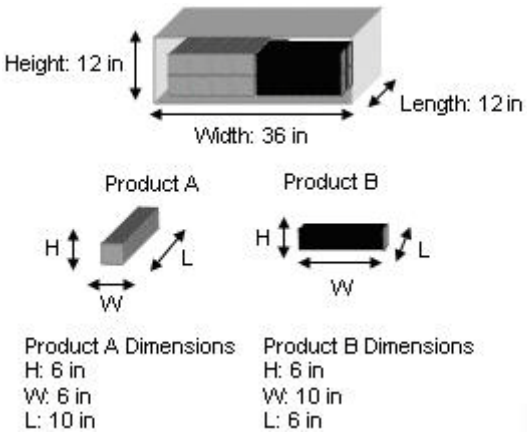


You have eight items of product A and four items of product B. Stack both products so that the products' width is aligned with the location's width.

- Place product A one deep by two high leaving 12 inches of width, height, and length left, which is enough to place product B in the location.
- Place product B perpendicular to product A, two deep by two high. This placement takes up 10 more inches of width, and 12 inches of height and length.

The remaining space that is available is limited to two inches of width and 12 inches each of height and length.

For example, you have location 01-01-C and products A and B with the following dimensions:



You have eight items of product A and four items of product B. Stack both products so that the products' width is aligned with the location's width.

- Place product A one deep by two high leaving 12 inches of width, height, and length left, which is enough to place product B in the location.
- Place product B perpendicular to product A, two deep by two high. This placement takes up 10 more inches of width, and 12 inches of height and length.

The remaining space that is available is limited to two inches of width and 12 inches each of height and length.

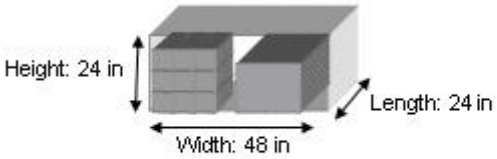
Note: The system calculates product width based on the dimensions you define in Product Maintenance.

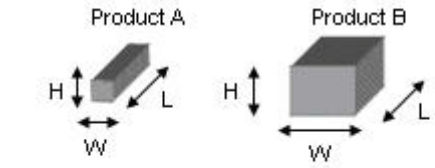
Placing Different Sized Products in a Location

Although location dimensions define both a location's storage capacity and the way in which product is placed in a location, they do not limit the location to one size of product only. As long as product can fit into a location while respecting the defined dimensions, product of varying sizes can be placed into a location.

Example:

For example, you have location 01-01-D and products A and B with the following dimensions:





Product A Dimensions	Product B Dimensions
H: 8 in	H: 18 in
W: 8 in	W: 20 in
L: 24 in	L: 24 in

Product A and B are different sizes, but both products can be placed into the location. If you stack product A one deep by three high, you leave enough room to place product B next to product A.

Defining Locations in Location Detail Maintenance Overview

Validate locations to the Advanced Warehouse system by defining them in Location Detail Maintenance.

Note: Enable the **Enable Location Detail Maintenance** control maintenance record for each branch in which you want to define warehouse locations using Location Detail Maintenance. After enabling the control maintenance record, update all locations and their parameters from Location Detail Maintenance, as opposed to using any other Location Maintenance utilities or Zone Maintenance.

When defining locations in Location Detail Maintenance, enter locations either individually or by range using the location format defined in Product Location Layout Maintenance.

For example, in Product Location Layout Maintenance, location formats are set up as follows:

Section	Number of Characters	Character Format
Zone	2	Number (##)
Aisle	2	Number (##)
Shelf	1	Letter (A)

To define a location in zone 01, aisle 10, and shelf J, enter 01-10-J.

After defining locations, assign parameters to locations.

- Use Location Detail Maintenance to assign basic parameters to individual locations.
- Use Additional Location Detail to assign additional parameters to single locations or shared parameters to a range of locations.

Defining Locations in Location Detail Maintenance

When defining locations, you can enter them individually or in a range. If you define locations by a range, use the Insert New Locations screen. Enter locations using the defined location format. For more information about location formats, see Defining Locations in Location Detail Maintenance Overview.

Assign location parameters, such as picking sequences, to each location from Location Detail Maintenance. Use Additional Location Detail to define additional location parameters, as well as parameters shared by locations.

To define locations in Location Detail Maintenance:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to define locations.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

3. In the **Start Locn** and **End Locn** fields, do one of the following:

   - If locations have not already been defined for the branch, skip the fields to display a blank screen for the branch.
   - If locations have already been defined for the branch but you do not want to view these locations, enter **New** to display a blank screen for the branch.
   - If locations have already been defined for the branch and you want to view all locations, skip the fields to display all locations defined for the branch.
   - If locations have already been defined for the branch and you want to view only some of these locations, enter a starting and ending location value for the location or range of locations to view.

4. In the **Location** field, place the cursor on a blank line and enter the location to define.

   Note: Remember to use the correct location format set up for your warehouse.

   - Press **Alt-Insert** to insert blank lines and enter locations, as needed.
   - To define a range of locations at one time, use the **Ins New** hot key.

5. For each location, define the following parameters as required:

Field	Description
Zone	Enter the zone to assign to the location.
Sort Prefix	Enter the pick sequence for the location.

Field	Description
Sort Order	Press F10 and select one of the following picking orders to assign to a range of locations: • **A** (ascending) - The range is picked from its beginning location to its ending location. • **D** (descending) - The range is picked from its ending location to its beginning location. **Note:** You must assign the same sort order to all locations sharing a sort prefix. We recommend that you assign sort prefixes to all locations before assigning sort orders. By assigning sort prefixes to all locations first, you avoid re-entering a sort order for each location sharing a sort prefix.
Pick Group	Enter the pick group responsible for the location.
Product Limit	Enter the number of unique products to which to limit the locations. **Note:** You cannot assign a product limit that is lower than the number of unique products currently stored in a location.
Location Class	Enter the location class to assign to the location.
No Ptwy	Enter one of the following to define whether to include the location in put away: • **Y** - The system does not include the location in put away. You can move or replenish product into the locations. • **N** - The system includes the location in put away.
Rank	Enter the product rant to assign to the location.

For more information about the above location parameters, see Location Parameters in Location Detail Maintenance. To assign additional parameters to a location or to assign shared parameters to multiple locations, use Additional Location Detail .

6. Press **Esc** twice to save changes and exit the screen.

More Options for Using the Location Detail Maintenance Screen

The Location Detail Maintenance screen also offers these options.

Hot Key	Function
Details	Displays the Additional Location Detail screen. Use this screen to define additional location parameters, as well as parameters shared by locations.

Hot Key	Function
Search	Displays the Location Search Parameters screen. Use this screen to limit the number of locations displayed on the Location Detail Maintenance screen by entering the values for the locations that you want to view. For example, if you want to view all locations in Aisle 01 and Section 02, enter these values. **Note:** The location values you can enter are defined in Product Location Layout Maintenance. Use the **Detail Search** hot key on the Location Search Parameters screen to display the Additional Location Detail screen. Enter additional search criteria on this screen. **Note:** To view only those locations within a selected range, you can also enter the range in the **Start Locn** and **End Locn** fields at the top of the Location Detail Maintenance screen.
Delete	Deletes the selected locations. To delete a single location, place the cursor on the location and press **Alt-Delete**. The location must be empty before you can delete it.
Print Labels	Displays the Shelf Label Printing screen for Location Detail Maintenance. Use this screen to print labels for the selected locations.
View Loc	Displays the Warehouse Location Maint screen for the location on which the cursor is placed. Use this screen to view all products held in the selected location.
Sort	Displays the Sort Order screen. Use this screen to select one of the following sorting methods for displaying locations on the Location Detail Maintenance screen: • **Sort Prefix** - Displays locations by their assigned sort prefix. • **Location** - Displays locations sequentially by location number. • **Location Class** - Displays locations by location class. • **Zone** - Displays locations by zone. • **Pick Group** - Displays locations by pick group. If you make changes to locations and then select a new sorting option, the system prompts you whether to save the changes. Enter **Y** to save the changes and re-sort the screen display.
Log	Displays the Location Activity Log Viewing screen. Use this screen to monitor all updates made to a location.
Del Loc Log	Displays the Deleted Location Activity Log Viewing screen. Use this screen to view a list of deleted locations.

Hot Key	Function
Sel Range	Use to either: • Select a range of locations to view and edit on the Additional Location Detail screen. • Select a range of locations for which to print labels. • Select a range of locations to delete. **To select a range:** 1. Place the cursor in the **S** column for the first location in the range. 2. Use the **Sel Range** hot key. 3. Place the cursor in the **S** column for the last location in the range. 4. Press **Enter**. To view only those locations within a selected range, enter the range in the **Start Locn** and **End Locn** fields at the top of the Location Detail Maintenance screen.
Sel All	Use to select all displayed locations. After selecting the locations you can do one of the following: • View and edit all displayed locations on the Additional Location Detail screen. • Print labels for all displayed locations. • Delete all displayed locations. To view only those locations within a selected range, enter the range in the **Start Locn** and **End Locn** fields at the top of the Location Detail Maintenance screen.
Clr Sel	Clears selections made with the **Sel Range** and **Sel All** hot keys.

Defining Location Ranges in Location Detail Maintenance

If you want to define locations by range instead of individually, use the Insert New Locations screen. This screen displays each segment of a location needing a value as defined in Product Location Layout Maintenance.

For example, iIf your locations are labeled by aisle, shelf, section, and bin, the screen contains a field for **Aisle**, **Section**, **Shelf**, and **Bin**. Enter values in each of these fields to define the new location.

Define a range by entering the beginning and ending locations of the range. For each location segment, enter a number by which the segment should increase.

For example, you want to define locations from 01-02-A (aisle 1, section 2, shelf A) to 01-20-Z (aisle 1, section 20, shelf Z). You want the aisle number to remain at 01 for all locations, the section number to progress through even numbers only from 2 to 20, and the shelf number to progress through the entire alphabet. Enter the following:

Segment	Beginning Value	Ending Value	Increment
Aisle	01	01	0
Section	02	20	2
Shelf	A	Z	1

When defining ranges, keep the following in mind:

- The system progresses through one location segment at a time before increasing the next segment. For example, the system defines locations 01-02-A through 01-20-A before progressing on to locations 01-02-B through 01-20-B.
- If you use two alpha characters (AA) for a location segment, the system progresses through the alpha characters as it would through numerical characters.

  Using the example above:

  - You enter AA and BD as the beginning and ending characters for Shelf.
  - The system creates locations for 01-02-AA through 01-20-AZ before increasing to locations 01-02-BA through 01-20-BD.

You can also use this screen to define an individual location. When defining individual locations, enter the same values for each segment and **0** for the increment.

To define locations by range in Location Detail Maintenance:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to insert a single location or a range of locations.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

3. Display the screen either blank or with already-defined locations, as needed.
4. Use the **Ins New** hot key to display the Insert New Locations screen.
5. In the **Begin** field for each segment heading, enter a single location or for a range of locations, enter the first location's values.

   Note: When entering segment values, use the defined location format.

6. In the **End** field for each segment heading, for a single location enter the same values that you entered in the **Begin** field or for a range of locations, enter the last location's values.

   Note: When entering segment values, use the defined location format.

7. In the **Increment By** field, enter the amount by which you want each segment of the location to increase through the range.
8. Press **Esc** to create the new locations and return to the Location Detail Maintenance screen.
9. Assign parameters to all locations, as needed.
10. Press **Esc** twice to save changes and exit the screen.

Setting User-Defined Parameters in Location Detail Maintenance

Set user-defined location parameters to further classify locations, such as differentiating between a location in the showroom and a location in the yard.

To set user-defined parameters in Location Detail Maintenance:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to enter user-defined parameters.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

3. Display locations for the branch.
4. Select the location or range of locations for which to set user-defined parameters.
5. Use the **Details** hot key to display the Additional Location Detail screen.

   The screen displays the branch in which you are working, along with the location you are editing. If you are editing a range of locations, ****Selected Range**** displays in the **Location** field.

   Note: If you are viewing a range of locations, the system warns you if the Sort Prefix and Sort Order parameters are not shared by the entire range. To continue, enter **Y** at the warning. You cannot edit the Sort Prefix or Sort Order values. You can edit all other unshared parameters, which display with three asterisks (*******) in their fields.

6. Use the **User Defined Fields** hot key to display the User Defined Location Fields screen.

   The location for which you are setting the parameters displays in the **Location** field. If you are setting parameters for more than one location, the **Location** field is blank.

7. In the **Value** column, enter a value for each user-defined field to assign to the location or locations.

   Note: The values you assign to user-defined parameters are free-form, meaning that you can assign any value you want to the parameter. User-defined fields are defined in Eclipse Dictionary Maintenance.

8. Press **Esc** to save the settings and return to the Additional Location Detail screen.
9. Press **Esc** until you have exited all screens.

Excluding Locations Using Location Detail Maintenance

Pre-define locations as included in or excluded from RF picking:

- The system selects included locations for RF picks.
- The system does not select excluded locations for RF picks. Instead the system prints work tickets to direct picks as it does in a manual picking environment.

When sales or transfer orders are entered, the system determines whether to select the ordered items for RF picks based on the allocated location's parameters. The allocated location can be selected in one of the following ways:

- Automatically based on the settings in the **Inventory Allocation Method** control maintenance record.
- Manually by a user.

When excluding locations from RF picking, set up these locations to have work tickets printed, as needed.

To exclude locations from RF picking:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to define the location parameter.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

3. Display locations for the branch.
4. Select the location or range of locations for which to set the parameter.
5. Use the **Details** hot key to display the Additional Location Detail screen.
6. In the **Excl from RF Pick** field, press **F10** and select **Yes – Exclude RF picking** to exclude the location or locations from RF picking.
7. Press **Esc** to save changes and return to the Location Detail Maintenance screen.
8. Press **Esc** twice to exit the screen.

Setting Work Tickets to Print for Excluded Locations

If you exclude locations from RF picking, set the system to print work tickets. Warehouse operators use the work tickets to pick the material. If you do not set work tickets to print, the system still excludes the location or locations from RF picking but does not print work tickets.

To set work tickets to print for excluded locations:

1. From the **System > System Files** menu, select **Control Maintenance** to display the Control Maintenance screen.

2. Set the Inventory Allocation Method control maintenance record to allocate necessary items from RF excluded locations.
3. Set the Print RF Excluded Items Work Ticket control maintenance record to print work tickets.
4. After setting both control maintenance records, press **Esc** to save the settings and exit the Control Maintenance screen.
5. From the **Whse Mgt > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.
6. In the **Branch** field, enter the branch for which to define the location parameter.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

7. Display locations for the branch.
8. Select the location or range of locations for which to set the parameter.
9. Use the **Details** hot key to display the Additional Location Detail screen.
10. In the **Excl from RF Pick** field, press **F10** and select **Yes – Exclude RF picking** to exclude the location or locations from RF picking.
11. In the **Printer Number** field, enter the printer ID from which to print the work tickets.

    Note: If you do not enter a printer ID, the system still excludes the location or locations from RF picking but does not print a work ticket.

12. Press **Esc** to save changes and return to the Location Detail Maintenance screen.
13. Press **Esc** twice to exit the screen.

Setting Work Tickets to Print for Excluded Locations

If you exclude locations from RF picking, set the system to print work tickets. Warehouse operators use the work tickets to pick the material. If you do not set work tickets to print, the system still excludes the location or locations from RF picking but does not print work tickets.

To set work tickets to print for excluded locations:

1. From the **System > System Files** menu, select **Control Maintenance** to display Control Maintenance.
2. Set the **Inventory Allocation Method** control maintenance record to allocate necessary items from RF excluded locations.
3. Set the **Print RF Excluded Items Work Ticket** control maintenance record to print work tickets.
4. After setting both control maintenance records, press **Esc** to save the settings and exit Control Maintenance.
5. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

6. In the **Branch** field, enter the branch for which to define the location parameter.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

7. Display locations for the branch.
8. Select the location or range of locations for which to set the parameter.
9. Use the **Details** hot key to display the Additional Location Detail screen.
10. In the **Excl from RF Pick** field, press **F10** and select **Yes - Exclude RF picking** to exclude the location or locations from RF picking.
11. In the **Printer Number field,** enter the printer ID from which to print the work tickets.

    Note: If you do not enter a printer ID, the system still excludes the location or locations from RF picking but does not print a work ticket.

12. Press **Esc** to save changes and return to the Location Detail Maintenance screen.
13. Press **Esc** twice to exit the screen.

See Also:

Excluding Locations Using Location Detail Maintenance

Additional Location Detail Maintenance Utilities Overview

Use the following utilities to help manage locations defined in Location Detail Maintenance:

- Shelf Label Printing - Use to print location labels from Location Detail Maintenance.
- Location Detail Maintenance Activity Logs - Use to view location activity from Location Detail Maintenance.
- Open Locations Report - Use to find locations that have not yet been assigned product.
- Warehouse Operation Queuing - Use to generate cycle counts for locations holding product that exceeds the defined parameters.

Printing Location Labels from Location Detail Maintenance

If you use Location Detail Maintenance to define all locations in your warehouse, use the Location Detail Maintenance Shelf Label Printing screen to print labels for these locations.

When you print location labels from this screen, you can select a single location, a range of locations, or all locations within a branch for which to print the labels.

To print location labels from Location Detail Maintenance:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to print location labels.

   Note: Only one user at a time can edit locations within a branch. If another user is currently editing locations in the selected branch, the system displays the branch's location information in view-only mode.

3. Display locations for the branch.
4. Select the location or locations for which to print the labels.
5. Use the **Print Labels** hot key to display the Shelf Label Printing screen.

   The screen displays the branch for which you are printing the location labels.
6. In the **Format** field, press **F10** and select a format on which to print the labels.
7. In the **Copies** field, enter the number of labels to print for each selected location.
8. Use the **Print** hot key to print the labels.
9. Press **Esc** to return to the Location Detail Maintenance screen.
10. Press **Esc** twice to exit the screen.

Viewing Location Detail Maintenance Activity

Use the following two Location Detail Maintenance Activity logs to view location creations, adjustments, and deletions.

- Location Activity Log - View when a location was created or adjusted, along with the user who created or adjusted the location and the reason for the creation or adjustment.
- Deleted Location Activity Log - View when a location was deleted, along with the user who deleted the location and the reason why the location was deleted.

Note: Updates made to locations do not display in the activity logs until you save the changes.

To view location activity in the Location Activity Log:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which you want to view location activity.
3. Display locations for the branch.
4. Select the location for which to view activity.

   Note: You can view activity for only one location at a time.

5. Use the **Log** hot key to display the Location Activity Log Viewing screen.
6. View the following information:

Field	Description
Location	Location for which you are viewing activity.
Adjusted	User who created or adjusted the location.
Date	Date on which the location activity was performed.
Time	Time at which the location activity was performed.
Comment	Activity performed for the location, such as **Location created**. **Note:** If the comment extends beyond the field, use the **View** hot key to view the entire comment.

   To limit the displayed activity, use the **Select** hot key and do the following:

   - In the **As of Date** field, enter a date for which to view all activity that occurred before the date if you want to limit the display by date.
   - In the **Adjuster** field, enter a user for whom to view location activity if you want to limit the display by user.

7. Press **Esc** to return to the Location Detail Maintenance screen.
8. Press **Esc** twice to exit the screen.

To view deleted locations in the Deleted Location Activity Log:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Location Detail Maintenance** to display the Location Detail Maintenance screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, enter the branch for which to view deleted locations.
3. Display locations for the branch.
4. Use the **Del Loc Log** hot key to display the Deleted Location Activity Log Viewing screen.
5. View the following information:

Field	Description
Date	Current date. All locations deleted on or before this date for the selected branch display in the log.
Location	Deleted location.
Adjusted	User who deleted the location.
Date	Date on which the location was deleted.
Time	Time at which the location was deleted.
Comment	Reason why the location was deleted, such as **Location name changed to x**.

   Note: Use the **View** hot key to display the Location Activity Log Viewing screen for the deleted location on which the cursor is placed.

6. Press **Esc** to return to the Location Detail Maintenance screen.
7. Press **Esc** twice to exit the screen.

RF Bar Code Labeling Overview

The RF Warehouse Management system uses bar codes to track product movement and quantity. You must bar code all locations, products, and totes that you will use in the RF system. Bar coding is a time-intensive process that you *must* perform before activating the RF system. The time spent bar coding saves you time later because your warehouse will have: accurate inventory counts, defined product locations, and directed product transport throughout your warehouse.

Begin the bar coding process by defining bar code formats. After the formats are defined, bar code all locations in your warehouse, all products, and all totes used to transport product.

This section provides information on the following tasks:

- Defining Bar Code Formats for Warehouse Locations
- Bar Coding Warehouse Locations
- Printing Tote Labels
- Printing Lot Labels
- Printing Pre-Defined Lot Bar Code Labels
- Printing Labels from RF Label Printing
- Standard RF Bar Code Labels
- RF Product Bar Coding Guidelines
- Cross-referencing Product Bar Code Labels in RF
- Printing Product Bar Code Labels in RF

Defining Bar Code Formats for Warehouse Locations

Use Product Location Layout Maintenance to define bar code formats for warehouse product locations. This is necessary to track product quantity by location, to put away product, and to pick product.

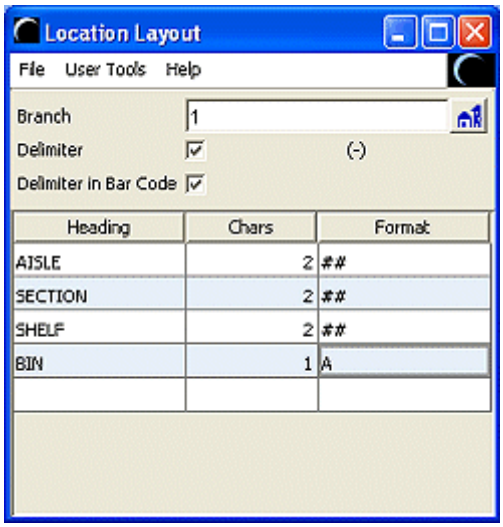
> **Note:** You can also use this screen to define additional locations in your warehouse, such as staging locations.

Using the Location Layout screen, define the following:

- Headings for each segment of your warehouse.
- Number of characters you want to represent that segment.
- Format of the characters - either alpha or numeric.

You can also separate each heading with a delimiter. The system uses a dash (-). Once you define this bar coding convention, keep it consistent for all warehouse locations.

For example, if you defined your bar code for a location as follows:



The bar code *could* be 01-01-01-C (Aisle 1, Section 1, Shelf 1, Bin C) because each aisle, section, and shelf bar code is composed of two numeric characters, represented by **#**, and each bin bar code is composed of one alpha character, represented by **A**.

> **Note:** The system supports alpha and numeric combinations of up to 12 characters including dashes. You cannot use a period (.) in the name. We recommend that you *do not* combine alpha and numeric characters in the same section of the heading, such as A1-B2-C3.

To define a bar code format for warehouse locations:

1. From the **Warehouse Management > Warehouse Maintenance** menu, select **Product Location Layout Maintenance** to display the Location Layout window.
2. In the **Branch** field, enter the branch, or select from a list of branches, for which to define bar code label layouts.

3. In the **Delimiter** field, select the check box to separate the location headings on your terminal with the delimiter, a dash (-). De-select the check box to display the location headings without the delimiter.
4. In the **Delimiter in Bar Code** field, select the check box to print delimiters, a dash (-), on the location bar code labels. De-select the check box to print location bar code labels without delimiters.
5. In the **Heading** column, define names to segment locations. For example:
   - **Aisle** - Segments the warehouse
   - **Section** - Segments aisles
   - **Shelf** - Segments the aisle sections
   - **Bin** - Segments the shelves
6. In the **Chars** column, enter the number of characters required for each segment entry.

   For example, if you want three numbers and one letter to define aisles, enter **4** for the number of characters.

   Note: Do not include delimiters, dashes (-), in this number.
7. In the **Format** column, define whether the characters are alpha, numeric, or both.

   For example, using four characters, enter **###A** to define three numeric and one alpha character as the format.
8. Save the format and exit the window.

Bar Coding Warehouse Locations

When you set up your warehouse, identify and label every location with a bar code. Remember that you define bar code formats for warehouse locations in Product Location Layout Maintenance.

Give thought to the flow of the warehouse, including setup and positioning of racking within the warehouse. In organizing your warehouse, consider the following questions if you were to have an order that includes every item in your warehouse:

- To pick this order in the most efficient manner, where would you start?
- What path would you follow to pick the entire order? Keep in mind sections of the warehouse where you have product that requires a forklift — these areas can be segmented to a different pick group. Also keep in mind areas and items that do not lend themselves to bar coding, such as pipe in the yard.

Tips for Barcoding Locations

When creating bar codes for locations, keep the following tips in mind:

- If your zone label is numeric, you can assign three digits to the first part of the sequence to indicate the zone and aisle. For example: **102-04-B** (Zone 1, Aisle 2, Section 4, Shelf B). The next section would be **204-05-C** (Zone 2, Aisle 4, Section 5, Shelf C). This approach reduces the number of overall characters required in a warehouse location.
- If you enter a location manually on an RF terminal, you must type all characters. Limiting the number of characters can be advantageous to speed up the process.
- If you use alpha characters to define a zone, segment the alpha and numeric code with a dash. For example: **W-01-03-07-A** (Zone W, Aisle 1, Section 3, Shelf 7, Bin A).

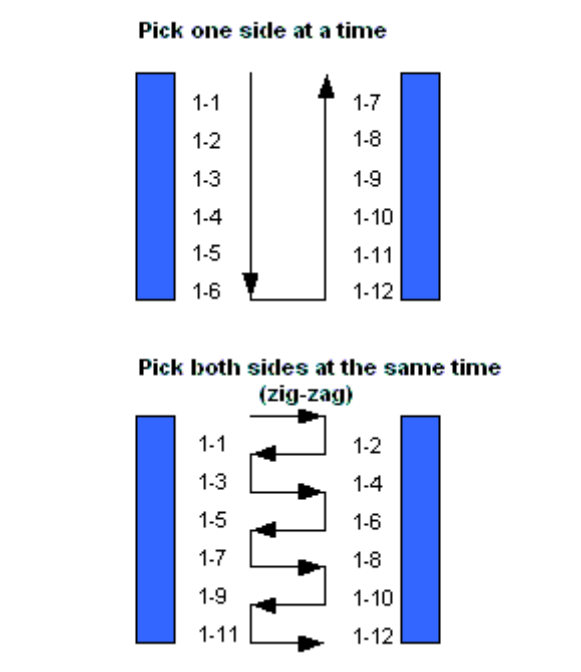
To bar code a range of shelves:

1. Display the Shelf Label Printing screen, in one of the following ways:
   - From the **Warehouse Management > Barcode Labels** menu, select **Shelf Barcode Labels**.
   - From the **Warehouse Management > RF Applications > RF Main Menu > Misc > Bar Code Labels** menu, select **Shelf Barcode Labels**.

   Note: If prompted, log on to the character-based system.
2. In the **Branch** field, enter the branch to which you are assigning bar codes.
3. In the **Format** field, if needed, enter the format in which you want the bar codes to print.

   This field populates with data from User Defined Shipping Labels.
4. In the **Copies** field, enter the number of bar code labels you want to print for individual bar codes.
5. In the following location area fields, enter the range of locations for which you want to print labels.

Use the logic defined on the Location Layout window for labeling bar code shelf locations.

Field	Set Up for Picking
Aisle	Enter the alphanumeric characters to define the first aisle for which to print labels. Set up to pick from either: • One side and then the other. • Both sides at the same time (zig-zagging).  To set up for zig-zagging, use even numbers on one side of the aisle and odd numbers on the other. This differentiating allows you to zig-zag from side to side as you work up the aisle rather than picking one side of the aisle and then coming back down the other side. Label with an alpha or numeric character or both. **Note:** The system supports alphanumeric combinations of up to 12 characters, including dashes. Once you define the warehouse logic, keep it consistent for all locations.
Section	Create sections of the aisle as you move down each aisle. Enter the sections with alphanumeric characters to define the first section within the aisle for which to print labels.

Field	Set Up for Picking
Shelf	Number the shelves from either the floor up or top down. We recommend labeling from the floor up. After identifying the aisle and section of the aisle, identify the shelf with the next number. For example, **01-03-07** (Aisle1, Section 3, Shelf 7). When numbering shelves, we recommend leaving gaps within the numbering sequence (**A,C,E** or **01,03,05**) to prevent the need to renumber in the future when shelves are added. If the numbering begins at the bottom shelf or floor, then it needs to increase as you move higher. You can reverse this order if you want to pick from the top to the bottom.
Bin	Enter alphanumeric characters to label this additional level of organization within shelves, as needed. • Code the bin location with alpha characters. For example, **01-03-07-A** (Aisle 1, Section 3, Shelf 7, Bin Location A). • If your warehouse has racking or bin locations on both sides of the aisle, use sections to differentiate between the right and left side of the aisle.

Note: You can print a range of bar code labels by entering the beginning and ending locations for each field, separating them with a dash (-) or space.

For example, enter the following to print bar code labels for locations **01-01-A**, **01-02-A**, **01-03-A**:

- **Aisle: 01-01**
- Section: 01-03
- Shelf: A-A

6. In each **By** field next to the location area fields, enter one of the following:
   - **1** - Prints every number chronologically.
   - **2** - Prints every other number.

   For example, you use the entries below:

Field	Number Range	By
Aisle	**01-01**	**1**
Section	**01-07**	**2**
Shelf	**A-A**	**1**

   Then, the system prints the following bar codes: **01-01-A**, **01-03-A**, **01-05-A**, **01-07-A**.

   Note: To print every other number in even increments, enter even numbers as your beginning and ending numbers. Enter **02-06** for your **Section** to print **01-02-A**, **01-04-A**, **01-6-A**.

7. Use the **Print** hot key to print the bar codes and exit the screen.
8. Place the bar codes on each location.

To bar code every warehouse location:

1. Display the Zone Range Label Printing screen, in one of the following ways:
   - From the **Warehouse Management > Barcode Labels** menu, select **Zone Range Label Printing**.
   - From the **Warehouse Management > RF Applications > RF Main Menu > Misc > Bar Code Labels** menu, select **Zone Range Label Printing**.

   Note: If prompted, log on to the character-based system.
2. In the **Branch** field, enter the branch to which you are assigning bar codes.
3. In the **Beginning Location** field, enter the start of the range.
4. In the **Ending Location** field, enter the end of the range.
5. In the **Location Status** field, press **F10** and select one of the following location statuses for which to print location bar codes:
   - **P** - Primary-status locations.
   - **S** - Secondary-status locations.
   - **F** - Floating-status locations.

   If you leave this field blank, bar code labels print only for Blank-status locations.

   Note: From this screen, you can only print location bar codes for locations with a **Stock** location type. To print location bar codes for other location types, such as **Defective**, use the Shelf Label Printing screen.
6. In the **Format** field, press **F10** and select the format on which to print the bar code labels, as needed. This field populates with data from User Defined Shipping Documents.
7. In the **Copies** field, enter the number of copies for each label you need to print.
8. Use the **Print** hot key to print the bar codes and exit the screen.

   Use the **Opts** hot key to schedule another time to print the bar codes.
9. Place the bar codes on each location.

Printing Tote Labels

Print labels for totes in order to track your products' movement through the warehouse. You need tote labels when:

The carts used to transport product to and from its warehouse location.

- Receiving product, you scan the tote you place it in.
- Putting away product, you scan the tote to verify that you have removed the product from the tote.
- Picking product, you scan the tote you place it in.
- Placing the product in its pre-shipment location, you scan the tote to verify that you have removed the product from the tote.
- Moving or replenishing product, you scan the tote both during the picking and put away process.

Print tote labels for all totes that you use during the receiving, put away, picking, and replenishment processes.

To print tote labels:

1. Display the Tote/Lot Label Printing screen by doing one of the following:
   - From the **Warehouse Management > Barcode Labels** menu, select **Tote/Lot Bar Code Labels**.
   - From the **Warehouse Management > RF Applications > RF Main Menu > Misc > Barcode Labels** menu, select **Tote/Lot Bar Code Labels**.

   Note: If prompted, log on to the character-based system.
2. In the **Types of Labels to Print** field, press **F10** and select **Tote**.
3. In the **Format** field, press **F10** and select the format for the label, if needed.
4. In the **Count** field, enter the number of tote labels you need to print. Each label increases by one.

   Note: The system assigns tote numbers up to 99,999. Once all numbers up to 99,999 have been assigned to totes, the system resets to the beginning tote number of 1 and re-assigns tote numbers back up to 99,999.
5. In the **Copies** field, enter the number of copies for each tote label you need to print.

   Note: In order to avoid multiple totes having the same label, we recommend that you do not print multiple tote labels. Print multiple tote labels only if you are putting them in different spots on the same tote.
6. Use the **Print** hot key to print the labels.
7. Press **Esc** to exit the screen.

Printing Lot Labels

Print lot labels for all of your lot controlled items to track the quantity of product available in a lot and to track the movement of lot controlled items through the warehouse.

For example, your warehouse stocks wire in 5000 feet reels, but sells wire in varying amounts. Assign each reel a unique lot number so that you can track where each reel is located and the amount of remaining wire on each reel.

When you receive, put away, and pick products that are lot controlled, scan both the lot label and the product bar code label. Scanning both updates the system and ensures that pickers are directed to the lot controlled item with enough available quantity to fill an order.

For example, you have an order for 500 feet of wire. Lot A has 450 feet of wire and lot B has 550 feet of wire. The system directs the picker to lot B because it has enough wire to fill the order in a single pick.

When you print lot labels from the Tote/Lot Label Printing screen, the system assigns unique lot numbers to each item in a numerical sequence. To assign pre-defined lot numbers to items, use the Product Lot Barcode Labels screen.

To print lot labels:

1. Display the Tote/Lot Label Printing screen either:
   - From the **Warehouse Management > Barcode Labels** menu, select **Tote/Lot Bar Code Labels**.
   - From the **Warehouse Management > RF Applications > RF Main Menu > Misc > Barcode Labels** menu, select **Tote/Lot Bar Code Labels**.

   Note: If prompted, log on to the character-based system.
2. In the **Types of Labels to Print** field, press **F10** and select **Lot**.
3. In the **Format** field, press **F10** and select the format for the label.
4. In the **Count** field, enter the number of lot numbers you need to assign and print. Each number increases by one.
5. In the **Copies** field, enter the number of copies for each lot label you need to print.
6. Use the **Print** hot key to print the labels.
7. Press **Esc** to exit the screen.

Printing Pre-Defined Lot Bar Code Labels

Print pre-defined lot labels for all items for which you need to track the quality or type and quantity. For example, your warehouse stocks wallpaper. Rolls on an order must be from the same lot to ensure an exact match.

Use the Product Lot Barcode Labels screen to print all pre-defined lot bar codes during receiving, or at any other time you may need a pre-defined lot label.

Important: Before using the Product Lot Barcode Labels screen to print pre-defined lot labels, add the lot label format in User Defined Receiving Labels Format Maintenance. Include the word **Lot** in the Label Format Title, and use **PLOT.OUT** as the Subroutine Name. For more information, see Maintaining User Defined Labels.

To print pre-defined lot bar code labels for products:

1. From the **Warehouse Management > RF Applications > RF Main Menu > Misc > Bar Code Labels** menu, select **Product Lot Barcode Labels** to display the Product Lot Barcode Labels screen.

   Note: If prompted, log on to the character-based system.

2. In the **Branch** field, edit the branch from which you are receiving, if necessary.
3. In the **Product** field, scan or enter the product ID.
4. In the **Lot#** field, either:
   - Enter **New** and then enter a new lot number.
   - Press **F10** and select the lot number for the product.
5. In the **# Labels** field, enter the number of labels for this lot that you need to print.
6. In the **Format** field, press **F10** and select the lot label format to use.

   Note: This format is the one defined in User Defined Receiving Labels Format Maintenance.

7. Use the **Print** hot key to print the product lot bar code labels.
8. The system alerts you that the labels are printed.
9. Press **Esc** to exit the screen.

Standard RF Bar Code Labels

Following are the standard bar code formats used in the RF Warehouse Management system. These formats are defined by your installer in User Defined Documents.

Note: Standard labels are 4 inches by 3 inches (4x3).

Warehouse Shelf Label

The warehouse shelf label displays a warehouse location.

Location Label

The location label displays both a product at a location and a location.

Product Label

The product label displays the product type, internal ID, name, and description.

Receiving Label

The receiving label displays the same information as the product label, along with the receiving date for the product.

Sales Order Label

The sales order label displays your company name and address, the sales order information, and the customer information.

Tote Label

The tote label displays a tote ID.

Lot Label

The lot label displays a lot ID.

RF Product Bar Coding Guidelines

Cross-referencing and printing product bar code labels during receiving is the most labor-intensive aspect of RF implementation. This process can take several months.

We recommend that you enter all products with a manufacturer's bar code label into the system before you turn on receiving. Contact vendors to identify which ones provide bar code labels and to notify them that you now require bar code labels. Each vendor can tell you what bar code format they use (usually UPC).

Most vendors supply UPC codes on disk, which you can upload and cross-reference into the system. You can manually cross-reference bar codes directly from an RF terminal using the Product PU Maint screen.

Once you have uploaded or manually entered bar codes into the system, use the Program Editor to run the utility FIX.UPC.CODE to trim all UPC codes that do not follow conventional 11-digit UPC formatting. The utility applies the following trimming logic:

Number of Characters in Original UPC Code	Characters Used After Trimming Logic Applied
11 character UPC code	Characters 1-11
12 character UPC code	Characters 1-11; last character trimmed
13 character UPC code	Characters 3-13; characters 1 and 2 trimmed
13 character Hoffman UPC code	Characters 1-11; characters 12 and 13 trimmed.
14 character UPC code	Characters 3-13; characters 1, 2, and 14 trimmed

As you cross-reference the UPC codes into the system, the system matches codes based on the 11 characters used defined by the trimming logic.

For products that do not have existing manufacturer's bar code labels, use the system to print a Code 128 bar code label for that product based on Eclipse internal product identification from the product file.

Note: You can also use the Product Data Warehouse companion product to load UPC codes into the system.

Cross-referencing Product Bar Code Labels in RF

Assign bar code labels to all of your inventory items. If a new product arrives with a manufacturer's bar code label that is not cross-referenced in the system, cross-reference the existing manufacturer's bar code with the system using the RF gun.

Cross-reference UPC numbers with products so that the system identifies products when scanned. From Receive Verify, access the Product PU Maint screen to cross-reference bar codes.

You must be assigned the RF.PRD.PU.EDIT authorization key to access the Product PU Maint screen. Level 1 authorization allows you access to the screen in view-only mode; level 2 authorization allows you access to the screen in edit-mode.

To cross-reference a manufacturer's bar code:

1. From the **Warehouse Management > RF Applications > RF Main Menu**, select **Recv Verify** to open the Recv Verify screen.

   Note: If prompted, log on to the character-based system.

2. In the **Product** field, enter one of the following:

   - Product number. Select the purchase order that you are receiving, and then use the **Alt-Q** hot key. Select **PU IDs**.

     Note: You can also use the **Alt-Q** hot key from the Unverified Select screen.

   - Purchase order and press **Enter** to display the Open P/O Lines screen. Select the product you want to cross-reference and use the **PuIDs** hot key.

   The Product PU Maint screen displays with the product in the first field.

3. Do one of the following to cross-reference a bar code:

   - Scan or manually enter the manufacturer's UPC code into the system. This number appears in the **UPC#** field and becomes the system's bar code for the product.
   - If the manufacturer bar code is not a valid UPC number, the system prompts you with "Invalid UPC # Format." Move the cursor to the first blank line and re-scan or manually enter the manufacturer's bar code.

4. Press **Esc** to update the bar code and exit the screen.
5. After you scan all product UPC codes, continue the receive verify process.

More Options for Cross-referencing Bar Codes

The Product PU Maint screen also offers these options.

Hot Key	Function
Set Prim	Use to assign a secondary UPC number as the primary UPC number for the product. • Place the cursor on a UPC number listed in the body section of the screen. • Use the **Set Prim** hot key. The system assigns the selected UPC number as the primary UPC number for the product. If a primary UPC number existed for the product, it becomes a secondary UPC number. **Note:** Enter as many secondary UPC numbers for a product as needed.
UD Maint	Displays the User Defined Maint screen for the displayed product. Use this screen to define up to 10 user-defined IDs for the product. The system uses these IDs to cross-reference unrecognized product IDs.
Primary	Use to edit the primary UPC code assigned to the product.

Printing Product Bar Code Labels in RF

Print bar code labels for all of your inventory. If a new product arrives without a bar code label, either:

- Create and generate a bar code label from a terminal using Purchase Order Entry or Product Label Printing.
- Create and generate a bar code from the RF gun using the Unverified Label Printing screen.

Once you have printed out the bar code labels, attach them to your products. Scan the new bar codes into the system and continue with the receiving process.

Printing Product Bar Codes Before Turning on Receiving

Use the Product Label Printing screen to create and print bar codes for all items in your warehouse before initiating the Receive Verify utility.

To print bar code labels for products before turning on receiving:

1. From the **Warehouse Management > Barcode Labels** menu, select **Product Barcode Labels** to display the Product Label Printing screen.

   Note: If prompted, log on to the character-based system.

2. In the **Br/Tr/All** field, enter the branch or territory to which the product you are printing labels for belongs, or enter **All**.
3. In the **Product** field, enter a product for which to print bar code labels.

   Use the **Products** hot key to access the Product Selection screen and enter multiple products. Press **Esc** once you have entered the products. The system displays ***Multi*** in the **Product** field.
4. In the **Serial #** field, enter the serial number if one exists for the product.

   The serial number prints on the bar code label.
5. In the **Prc Line** field, enter a price line if you want to print bar code labels for an entire product price line.

   Use the **Prc Lines** hot key to access the Price Line Selection screen and enter multiple price lines. Press **Esc** once you have entered the products. The system displays ***Multi*** in the **Prc Line** field.

   The system displays the product's primary location, which will print on the bar code.
6. In the **Location** field, press **F10** and select a different location to print for the product, if needed.
7. In the **Label Frmt** field, if a format is not already provided, press **F10** and select a label format to use for printing the bar codes.

   If you enter the user-defined shipping label in the **Label Frmt** field, the system prints a product label with both the location and product bar codes.
8. In the **Label Qty** field, enter the quantity of bar code labels to print.
9. Use the **Print** hot key to print the bar codes.
10. Use the **Status** hot key to indicate the product status, such as **Stock** or **Non Stock**.
11. Press **Esc** to exit the screen.

Printing Bar Codes to Products During the Receiving Process

Use the Unverified Label Printing screen to access open purchase order (P/O) items. Using the Unverified Label Printing screen, you can print and cross-reference bar codes.

For products without manufacturer bar codes, use the Unverified Label Printing screen to print bar code labels. The system uses the internal product ID as the bar code number.

To print bar codes using the Unverf Label Print screen:

1. From the **Warehouse Management > RF Applications > RF Main Menu**, select **Recv Verify** to display the Recv Verify screen.

   Note: If prompted, log on to the character-based system.

2. If you cannot scan a bar code or no bar code for the product exists, use the **Unverf** hot key to display the Unverified Select screen.

   On the Unverified Select screen, the system displays the current P/O and its products that have not been received. If necessary, use the **Show All** hot key to display all in-process P/Os.

3. Place the cursor next to the product or purchase order for which you want to print the label, and press **Enter**. The Unverf Label Print screen appears.

   The numbers next to each line item indicate the quantity of bar code labels to print based on the quantity from the purchase order.

4. Print the labels by doing one of the following:

   - If you want to print all suggested bar codes for all items, use the **Prt All** hot key to print the bar codes.
   - If you want to print a different quantity, enter the number of bar code labels to print next to each item. Then use the **Print All** hot key to print the bar codes.
   - If you do not want to print bar codes for all line items displayed on the screen, place the cursor next to the line items for which you want to print bar codes and press **Enter**. Use the **Prt All** hot key to print the bar codes for the selected line items.

5. Use the **IDs** hot keys, as necessary, to display the Product PU Maint screen to cross-reference manufacturers' bar codes with the system.
6. Press **Esc** to save changes and exit the screen.

Printing Bar Code Labels for Products During the Picking Process

As you are picking products, you may find that a universal bin with a location bar code on it has multiple products within the bin that do not have product bar codes. You can print a product label directly from the RF Pick screen for these products. The system uses the label format defined in the RF Picking Label Format control maintenance record.

To print a bar code label for a product during the picking process:

1. From the **Whse Mgt > RF Applications** menu, select Picking to display the Pick In Process screen.

   Note: If prompted, log on to the character-based system.

2. In the **Br** field, edit the branch for which you are picking, if necessary.
3. Use the **Slct** hot key to choose an order to pick, as needed.
4. From the Pick Select screen, use the **Labels** hot key and select the number of labels you would like to print.
5. Scan the label for the product and continue with the picking process.

RF Gun Options Overview

The RF Warehouse Management system works on either a Symbol Model 6800 series PDT RF gun or a Symbol Model 1700/1800 series Palm Powered, RF-enabled gun.

- The Symbol Model 6800 series PDT RF gun has a keyboard on which you can enter your data. This gun scans bar codes.
- The Symbol Model 1700/1800 series Palm Powered, RF-enabled gun works with a stylus, allowing you to write in data and tap on hot spots. This gun scans bar codes.

Refer to following topics to learn how to operate the RF system on the guns:

- Logging On and Off Your RF Gun
- Symbol 6800 PDT RF Gun Functions and Keyboard Mapping
- Symbol 1700/1800 Palm Powered RF Gun Functions and Keyboard Mapping
- Symbol MC9060G/MC9090G RF Gun Functions and Keyboard Mapping

Logging On and Off Your RF Gun

Before you use your RF gun, log in to Pterm and Eclipse. Use your RF gun to log in to Pterm and Eclipse, whether it is a Symbol 6800 series PDT RF gun or a Symbol 1700/1800 series Palm Powered, RF-enabled gun. Log off you RF gun once you are done using it for the day.

When setting up RF gun functions, do there following:

- In the **RF Menu Default** control maintenance record, set **RF.MAIN** as the Root Menu.
- In Terminal Setup, enter **RFTerm** in the **Type** column to define the RF terminal ID.

When logging onto a gun, RF users see only the RF Main Menu.

Symbol 6800 Series PDT RF Guns

To log on to Eclipse using your 6800 series gun:

1. Press the red power button to turn the gun on.
2. At the **D:>** prompt, enter **RF**.
3. At the **Continue**, **Configure**, **Quit** prompt, select **Continue**.

   The Eterm login prompt displays.
4. Enter your user ID.
5. Enter your Eterm password.

   The Eclipse password prompt displays.
6. Enter your Eclipse password, which may be the same as your Eterm password.

   The RF Main Menu displays on the gun's screen. You are now logged in and ready to use the gun.

   Note: A timer may be set to power off the RF gun if it has not been used for a set amount of time. To regain power, press the red power button.

To log off Eclipse using your 6800 series gun:

1. From the **RF Main Menu**, select **Logoff**.

   The system disconnects from Eclipse.
2. At the **Reconnect**, **Configure**, **Quit** prompt, you can either:
   - Select **Quit** to completely log off the gun and then press the red power button to turn off the gun.
   - Select **Reconnect** to log on again or let another user log on.
   - Leave the gun as it is, and place it into the unit charger to re-charge it.

Symbol 1700/1800 Series Palm Powered, RF-Enabled Guns

To log on to Eclipse using your Palm-powered Symbol gun:

1. From the **Home** menu, select the **Pterm icon**.

2. At the **Connect** prompt, select **yes**.

   The Eterm login prompt displays.

3. Enter your User ID.
4. Enter your Eterm password.

   The Eclipse password prompt displays.

5. Enter your Eclipse password, which may be the same as your Eterm password.

   The RF Main Menu displays on the Palm's screen. You are now logged in and ready to use the Palm as your RF gun.

To log off Eclipse using your Palm-powered Symbol gun:

1. From the **RF Main Menu**, select **Logoff**.
2. Place the gun into the unit charger to re-charge it.

Symbol MC9060G/MC9090G RF Guns

To log on to Eclipse using your MC9060G/MC9090G Series Gun:

1. Double-click on the **cterm** icon on your desktop.

   Or, from the Windows **Start** menu, select **Programs > cterm**.

2. When prompted whether to connect to Eclipse, select **Yes**.
3. Log into Eclipse as usual.

To log off of Eclipse using your MC9060G/MC9090G Series Gun:

1. From the **RF Main** menu, select **Logoff**.
2. When prompted whether to reconnect, select **No**.

RF Gun Functions and Keyboard Mapping for Symbol 6800 PDT

Your Eclipse installer re-maps the Symbol Model 6800 series PDT RF gun keyboard to work with Eclipse key functions. Use the indicated gun keys to perform the following Eclipse functions.

Note: For the table, use the following abbreviations in place of the associated special purpose keys: **Fnct** for Function key, **Ctrl** for Control key, and **Shft** for Shift key. When multiple special purpose keys are noted (such as **Sh Fu Enter**), press the **Shift**, **Function**, and **Enter** keys in that order.

To enter the following Eclipse functions:	Type one of the following on the gun:	To enter the following Eclipse functions:	Type the following on the gun:
Esc	**Clr**	**F10 (List Input options)**	**Ctrl Fnct 0**
F12 (Abort)	**Fnct Z**	**Warm boot**	**Ctrl Fnct C**
+	• **Fnct a** • Shft Fnct a • Shft Fnct i • Shft Fnct Enter	**(**	**Shft 9**
-	• **Fnct b** • Shft Fnct b • Fnct k	**)**	**Shft 0**
*	• **Fnct Ctrl** • Shft Fnct Ctrl • Shft 8	**Home**	**Fnct p**
/	• **Fnct d** • Shft Fnct d • Fnct t	**Shift-Home**	**Shft Fnct p**
‘	**Fnct h**	**End**	**Fnct q**
=	• **Fnct i** • Fnct Enter	**Shift-End**	**Shft Fnct q**
\	• **Fnct j** • Fnct r	**Insert**	**Fnct u**
[	**Fnct m**	**Shift-Insert**	**Shft Fnct u**
]	**Fnct n**	**Alt-Insert**	**Ctrl Fnct u**
;	**Fnct o**	**Delete**	**Fnct v**
‘	**Fnct r**	**Shift-Delete**	**Shft Fnct v**
,	**Fnct s**	**Alt-Delete**	**Ctrl Fnct v**
~	**Shft Fnct h**	**Page Up**	**Fnct w**

|	Shft Fnct j	Shift-Page Up	Shft Fnct w
_	Shft Fnct k	Page Down	Fnct .
{	Shft Fnct m	Shift-Page Down	Shft Fnct .
}	Shft Fnct n	Left	Fnct Up Arrow
:	Shft Fnct o	Right	Fnct Down Arrow
“	Shft Fnct r	Break	Ctrl Backspace
<	Shft Fnct s	Tab	Ctrl 9
Alt-<	Ctrl Co s	Shift-Tab	Ctrl 7
?	Shft Co t	Config	Ctrl Fnct c
>	Shft .	F1-F9	Fnct 1-9
Alt->	Ctrl Fnct .	F10	Fnct 0
!	Shft 1	F11	Fnct e
@	Shft 2	F12	Fnct z
#	Shft 3	Control-F1-F9	Fnct Ctrl Fnct 1-9
$	Shft 4	Control-F10	Fnct Ctrl Fnct 0
%	Shft 5	Control-F11	Fnct Ctrl Fnct e
^	Shft 6	Control-F12	Fnct Ctrl Fnct z
&	Shft 7	Ctrl-a through Ctrl-z	Fnct Ctrl a through z
Shift-F1-F9	Shft Fnct 1 -9	Ctrl-A through Ctrl-Z	Fnct Ctrl Shft a through z
Shift-F10	Shft Fnct 0	Alt-F1-F9	Ctrl Fnct 1-9
Shift-F11	Shft Fnct z	Alt-F10	Ctrl Fnct 0
Shift-F12	Shft Fnct z	Alt-F11	Ctrl Fnct e
Alt-a through Alt-z	Ctrl a through z	Alt-F12	Ctrl Fnct z
Alt-A through Alt-Z	Ctrl Shft a through z	Alt-0 through Alt-9	Ctrl 0 through 9

Moving the View Port on Symbol Guns

By default, Eterm attempts to center the menu screen to fit within the view port of RF guns. Use the following key functions to scroll across or up and down the screen to view the entire Eclipse screen.

To move the View Port:	Type the following on the Symbol RF Gun
Down	Co Down Arrow
Up	Co Up Arrow
Left	Co Fu Left Arrow
Left Edge	Co Fu p

To move the View Port:	Type the following on the Symbol RF Gun
Right	**Co Fu Right Arrow**
Right Edge	**Co Fu q**

Note: To view the gun's screen in a dark setting, type **Co L** to activate the lamp function.

Functions and Keyboard Mapping for Symbol 1700/1800 Palm Powered RF Gun

Your Eclipse installer re-maps the Symbol 1700/1800 series Palm Powered, RF-enabled gun keyboard to work with Eclipse key functions. The system has a special hot key to access the additional RF Inquiries menu. Use the indicated keys to perform the following Eclipse functions.

To enter the following Eclipse functions:	Press/Select the following on the RF gun:
Esc	The **Calendar** button, which is the first button from the left side.
Enter	The **Address** button, which is the second button from the left side.
F10	The **To Do List** button, which is the third button from the left side.
F12	The **Memo** button, which is the fourth button from the left side.
Alt-Q (to access the RF Inquiries menu)	The **Br** field on any of the RF screens.

In addition, do the following:

- To turn the gun's back light on or off, hold the Power button down for five seconds.
- To view graffiti help, use the stylus to draw a straight line upward from the bottom to the top of the screen.

Symbol MC9060G/MC9090G RF Gun Functions and Keyboard Mapping

Your Eclipse installer re-maps the Symbol MC9060G/MC9090G RF gun keyboard to work with Eclipse key functions. Use the indicated gun keys to perform the following Eclipse functions.

Important: Note the following information regarding the gun keys, their functions, and their abbreviations:

- The blue key near the upper-right of the keypad works like the **Function** key on other RF devices. In this document, it is referred to as the Blue key.
- The **CTRL** key works like the **ALT** key on other RF devices. Using the **CTRL** key will cause "**ALT**" to display on the screen.
- The Blue key, used in conjunction with the **CTRL** key, gives you access to the guns "Control" functions.
- When more than one key is listed, press the keys one at a time, in the order listed, to perform that function.
- Any Eclipse function marked with *, **, or *** offers a variation, which is explained in the key below the table.

To perform this Eclipse function:	Press or type this on the gun:	To perform this Eclipse function:	Press or type this on the gun:
Esc	ESC	**Up**	Up Arrow
=	Blue - w	**Down**	Down Arrow
!	SHIFT - 1	**Left**	Left Arrow
@	SHIFT - 2	**Right**	Right Arrow
#	SHIFT - 3	**Page Up***	Blue - Up Arrow
$	SHIFT - 4	**Page Down***	Blue - Down Arrow
%	SHIFT - 5	**Home***	Blue - Left Arrow
^	SHIFT - 6	**End***	Blue - Right Arrow
&	SHIFT - 7	**Insert****	Green "dot" key

*	SHIFT - 8	**Delete****	Red "dot" key
(	SHIFT - 9	**Shift-Lock**	Blue - SHIFT
)	SHIFT - 0	**Tab**	Blue - Spacebar
,	Blue - a	**Break**	Blue - Green "dot" key
<	SHIFT - Blue - a	**F1**	Blue - 1
.	Blue - b	**F2**	Blue - 2
>	SHIFT - Blue - b	**F3**	Blue - 3
' (apostrophe)	Blue - c	**F4**	Blue - 4
"	SHIFT - Blue - c	**F5**	Blue - 5
[	Blue - e	**F6**	Blue - 6
{	SHIFT - Blue - e	**F7**	Blue - 7
]	Blue - f	**F8**	Blue - 8
}	SHIFT - Blue - f	**F9**	Blue - 9
\	Blue - g	**F0**	Blue - 0
|	SHIFT - Blue - g	**F11**	Blue - .
`	Blue - j	**F12**	Blue - *
~	SHIFT - Blue - j	**Any hot key using the = sign**	CTRL - Blue - w
;	Blue - r	**Any hot key using the < sign**	CTRL - Blue - e
:	SHIFT - Blue - r	**Any hot key using the > sign**	CTRL - Blue - f
+	Blue - s	**Any hot key using the ~ sign**	CTRL - Blue - j
-	Blue - t	**Turn the screen light on**	Blue - 2

/	Blue - v		**Turn the keypad light on**	Blue - x
?	SHIFT - Blue - v			

* May be preceded by SHIFT.

** May be preceded by SHIFT or CTRL.

*** May be preceded by SHIFT, CTRL, or Blue - CTRL.

About Scroll Bars

When using screens that display more information than can fit on the screen at one time, scroll bars display along the bottom and right side of the screen.

You can also turn scroll bars on and off for other screens by selecting **Toggle Scrolling** from the **Options** menu.

Additional RF Functionality Overview

The following topics explain additional universal RF Warehouse Management functionality. Review these topics to better understand and use RF Warehouse Management:

- RF Inquiries Menu Applications
- Using Unit of Measure in Advanced Warehouse and RF
- RF Lot Control Guidelines

RF Inquiries Menu Applications

Use the RF Inquiries menu, which you can access from anywhere in RF Warehouse Management by using the **Alt-Q** function key, to access the following applications.

Note: If you are using a Palm unit, tap **Br** to access the screen list.

- **RF Loca Maint** - Displays the RF Location Maintenance screen.
- **PU IDs** - Displays the Product PU Maintenance screen.
- **Label Printing** - Displays the User Defined Document/Label Printing screen.
- **Full Loca Maint** - Displays the Product Location Maintenance screen.
- **Future Ledger** - Displays the Future Ledger screen.
- **History Ledger** - Displays the History Ledger screen.
- **Tag Viewing -** Displays the Tag Viewing screen for the item being received.
- **UM Inquiry** - Displays the Unit of Measure screen for the location displayed on the screen from which you accessed the RF Inqs screen.
- **Full PN Desc** - Displays the entire product description for the product displayed on the screen from which you accessed the RF Inqs screen.

Using Unit of Measure in RF

The RF Warehouse Management system supports unit of measure (UOM) for all product quantities. When you enter a product onto anRF screen, the system updates the quantity field with the UOM quantity. You can view and edit defined UOM's for each product on an RF screen.

To edit defined UOMs for a product on an RF screen:

1. Display the character-based system.

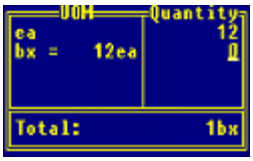
   Note: This functionality is not part of Solar Eclipse as of this release.

2. In any RF screen's quantity field, press **F10** to display the UOM screen.

   The **UOM** field lists each defined UOM for the product along with the quantity that totals each UOM.

   For example:

   In the UOM screen below, the UOM **bx** lists **12 ea**. So, 12 items are in one box.



3. In the **Quantity** field, edit the number of items for each UOM, as needed.

   For example:

   In the example above, you received 12 items all in one box. Enter **1** next to the **bx** UOM and enter **0** for the **ea** UOM.

   The **Total** field displays the total quantity for the UOM on which the cursor is placed.

4. Press **Esc** to save updates and return to the original screen.

RF Lot Control Guidelines

You may have product in your warehouse that you receive as a whole but sell in varying quantities, such as wire. Lot control these items to correctly track quantity.

For example, you order wire on large 5000 feet reels, but you sell the wire in different increments. You need to track the amount of wire you have on each reel so that you know at all times the remaining quantity on each reel.

In addition, use lots to manage remnants. Remnants are pieces of leftover product, such as wire, that you cannot cut but need to sell as a whole. If a customer asks for 50 feet of wire, and you have a remnant of 57 feet, select the remnant instead of cutting 50 feet of a 1000 feet reel. Set up remnants by assigning remnant locations in RF Location Maintenance. Set up lot controlled product in Product Location Maintenance.

Working with lot controlled items in RF Warehouse Management requires a few additional steps in the receiving and picking processes.

Receiving Lot Controlled Items

When you receive lot controlled product into inventory, you need to scan or print a lot label in addition to the product bar code label. If the vendor does not provide a lot label, use one of the following screens to print lot labels:

- Tote/Lot Label Printing screen - Prints unique lot labels for items in numerical sequence.
- Product Lot Barcode Labels screen - Prints pre-defined lot labels for items.

If the **Prompt To Print Lot Barcode Labels In RF Receive Verify** control maintenance record is set to **Y** for the branch in which you are receiving the lot controlled product, the system automatically prompts you to print lot labels during the receive verify process. The lot numbers that the system assigns are not pre-defined.

If you receive lot controlled product that you need to split during receive verify, print lot labels for each item.

For example, your purchasing agent orders 20,000 feet of wire. The vendor sends the wire in four 5000 feet reels. You cannot receive all reels as one item. Instead, print four separate lot labels and receive each reel as one lot.

During put away, the system directs you to the location for the lot controlled product as is defined in Product Location Maintenance.

Picking Lot Controlled Items

When a sales agent enters an order for lot controlled items, the Lot Selection window displays all of that product's lots and respective quantities. The sales agent can select a lot or the system can allocate the lot. If the system allocates the lot, it selects the location with the smallest amount of quantity that can fill the order in a single pick. During picking, the system directs you to the selected or allocated lot.

For example, a customer orders 1500 feet of wire. Two lots can fill the order in a single pick - lot A has 2000 feet of wire and lot B has 1600 feet of wire. The system allocates the pick to lot B because it has the smallest amount of quantity. The system then directs the picker to lot B during picking.

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