



Infor Distribution A+

Warehouse Management Overview

This overview explains the various functions provided by Warehouse Management (W/M), and the concepts associated with each. Most of the W/M functions are maintained in the software as options. With these options, you can use W/M in the manner that you know will provide the greatest benefit to your warehouse operations. This flexibility allows you to tailor W/M in the manner best suited to your policies and procedures.

When you are done reading this section, you will have an understanding of the major functions offered by W/M. Once you understand the functions that are available, you can determine which ones are applicable to your business. You should then proceed to read the following sections which explain how these functions are used.

The basic procedures that you will perform using W/M are:

- Defining your warehouse and items
- Receiving and putting away inventory
- Moving inventory to replenish warehouse locations
- Picking, packing, and shipping items
- Counting items in your warehouse

The last two topics in this section explain how you can use lot items for lot control and serial number items for serial number tracking.

Note: If you have Radio Frequency installed, many of the warehouse floor processing activities involved in performing the basic warehouse procedures may be done through that module instead. Refer to the Radio Frequency User Guide for details.

Warehouse and Item Definition

Before you can start using W/M, you must define the layout of your warehouse and how your items are stored in the warehouse. W/M offers flexibility in how you create these definitions, allowing your definition to be as general or specific as required.

Location Definition

Location Number Format

W/M provides flexibility in defining the location number format. Up to 12 characters may be used, and sub-divisions into as many as 5 segments are allowed. Each segment, which represents a sub-division of your warehouse, may be alphabetic or numeric.

For example, if you identify warehouse locations by rows, bins, and shelves, you can set up your warehouse location number to reflect this. Assume that rows are identified alphabetically, and bins and shelves are identified numerically. Additionally, assume you cannot have more than 999 shelves per row, and more than 999 bins per shelf. You can set up the format of your warehouse location number as follows:

Location Number Format Information

Segment	Name	Length	Type	Heading
1	Row	2	Alpha	Rw
2	Shelf	3	Numeric	Sh
3	Bin	3	Numeric	Bin

With this format definition, you will key warehouse location numbers in W/M in the format: Rw.Sh.Bin.

Important

Be certain to give careful thought and consideration to the format that you will define for your warehouse location numbers. Once it is defined, it will be used for entering warehouse locations throughout Distribution A+ and will be stored in W/M files in the specified format. It should accurately reflect the current and future potential of your warehouse(s), since it cannot be changed once it has been defined.

Warehouse Locations

After deciding the location number format, you define individual warehouse locations. For each location, you specify how it is used in your warehouse, what its size is and where it is in relation to other locations.

Note: A copy feature is provided to assist in defining multiple locations that are similar. Refer to Location Master Maintenance (MENU WMFILE) for detailed information.

How Locations Are Used

The locations in your warehouse may be used in different ways. You may have numerous small locations near your shipping dock that are used for picking and large locations in less accessible areas that are used for bulk storage. Some of your picking locations may always contain the same item all of the time, while some of your bulk storage locations may contain the same or different items. You may have special locations that are used to store specific types of items, like frozen foods in a freezer section or valuable items in a cage.

Location definition in W/M allows you to define attributes for any of these conditions (and several others) that represent how you use your warehouse locations. To take full advantage of W/M's location management functions, you will need to define the characteristics of each location.

Location Size

The size of warehouse locations is defined in cubic measurements (inches, feet, yards, centimeters, or meters) that are consistent for all locations. Since items may also be assigned a cubic size (in the same unit), W/M knows how many items that a location can store, how much space in the location is utilized, and how much space in the location is available for a particular item.

Location Placement

You may assign a picking sequence to each of your warehouse locations. The picking sequence of each location in a warehouse should be unique so that each location has a relative placement in the warehouse. This placement should correspond with the most efficient travel path in your warehouse.

When items are picked for shipment, they are sequenced on the Pick List by the picking sequence. This ensures that items are picked with the least amount of excess movement and the greatest amount of picking efficiency.

Location Labels

Location information printed on Location Labels consists of location number, location description, and location size, as well as item identification information if an item is permanently stocked in that location.

If bar coding is applicable, the location number and description will print on the label, with the location number barcoding. The use of barcoding is determined through Warehouse Management Options Maintenance (MENU WMFILE). Particularly useful when using barcoding and R/F, a scan of the Location Label provides Distribution A+ with all the location data needed for a variety of tasks, such as inventory counting or picking. Location Labels are described in detail in Location Labels (MENU WMREPT).

System-Defined Locations

The following system-defined locations are created when you install Warehouse Management:

System Defined Locations

Location Number	Use
44.444.44	Receiving Dock
55.555.55	Shipping Dock
66.666.66	Manual Put-Away
77.777.77	Returns
88.888.88	Backorder Staging Area
99.999.99	Unknown Location

Item Definition

Item Types

There are four item types that may be used in Warehouse Management:

Item Types

Item Type	Definition
Lot	Lot items are received, stored, and shipped in groups (lots), and may optionally be set up to require unique lot numbers and expiration dates; they are used for lot control. (Also included are lot items defined as Case Quantity Items.)
Serial	Serial number items are assigned a unique serial number that is recorded when received and when shipped.
Serial Tracking	Serial tracking items are assigned a unique serial number that is recorded when the item is shipped.
Regular	Regular items are those that are neither lot nor serial number items. An item's type is defined through Item Master Maintenance (MENU IAFILE).

You determine which item types may be used throughout Warehouse Management.

Lot Items/Lot Items Defined as Case Quantity Items

Lot items are received and stored in groups, or lots, and may be used for lot control. With lot control you can effectively manage items that are date sensitive or cost sensitive, manage dye lots, or measure availability. For each lot item that is received, a lot number must be recorded.

Lot items may optionally be set up to require unique lot numbers in Item Master Maintenance (MENU IAFILE). If unique lot numbers are required for a lot item, each lot number received for this item will be checked to ensure that it does not already exist in inventory that is on-hand or in any inventory receipt transaction.

For date sensitive lots, you can require that an expiration date also be assigned when the lot is received. In W/M, these lot items are sequenced by their expiration date when being selected for shipment.

Note: Case quantity items that use expiration dates and blank lot numbers should not be set up as requiring unique lots.

Additionally, lot items, that are processed in cases (e.g., as opposed to boxes or a mix of boxes and eaches), may be defined as case quantity items. You can select either the case quantity unit of measure or the stocking unit of measure as the item's default unit of measure, and throughout W/M, function keys are available to toggle between displays of item quantities in the case quantity or the stocking U/M.

The quantity of items per case are defined for each item. You may define case quantity items to have variable or fixed quantities. Define the quantity as variable if the quantity of items in a case is not always the same; you can change the quantity per case when the case is received. You cannot change the quantity per case of fixed case quantity items when the item is received. After receiving or pre-receiving a case quantity item, the lot number is modified to contain the quantity of items in the case.

The case quantity field length is determined to be either 4 (e.g., -0012) or 6 (e.g., -000012) through Warehouse Management Options Maintenance (MENU WMFILE). If a length of 4 had been previously selected and since then it has been determined that a length of 6 is necessary, a conversion option is available through MENU WMMAST. This conversion may only occur once and an edit must be passed prior to the conversion. Refer to Convert Case Quantities in Lot Numbers (MENU WMMAST) for details.

Note: Lot shipment and receipt history transactions are not retained for fixed case quantity items with no actual lot number (quantity per case only) or expiration date.

Also for case quantity items, you can print Case/Shipping Labels for an entire case of items when picking and shipping a case.

Serial/Serial Tracking Items

Serial number items are each assigned a unique serial number used to differentiate and identify individual items. There are two types of serial number items in W/M:

- standard serial numbers, and
- tracking serial numbers.

The types are distinguished depending on the time that the serial numbers are recorded in W/M for the items: receipt and shipment time (standard), or shipping time only (tracking).

Regular Items

Regular items are those that are not lot or serial number items. Neither a lot or serial number is ever specified when regular items are received, moved, or shipped.

Product Dimensions

When shipping an order, you can use the W/M boxing feature to automatically select the boxes used to pack and ship items. If you want to do this, you must specify the product dimensions (length, width, and height) of each item, in the dimension unit of measure. These dimensions are used to calculate the item's cubic size, which in turn, is used to determine if an item can fit not only in a box, but also in a warehouse location.

If you do not wish to use boxes in W/M, you are not required to maintain product dimensions. You should, however, define the cubic sizes of your items (in the cubes unit of measure) to correspond to your warehouse locations. This lets you know how many items can be stored in a location, how much space in a location is utilized by an item, and how much space in the location remains unused.

How Items Are Stored

Each of your items in a warehouse may have different storage requirements. You can address these requirements when defining an item through Item Master Maintenance (MENU IAFILE) and Item Balance Maintenance (MENU IAFILE). For instance:

- You can define a maximum pick quantity to an item in a location, so the location is not depleted from inventory for a single order.
- When putting away an item, you can assign an override warehouse location to that item. The override location is automatically selected by W/M; you are not required to select the location. This location selection is based on the item's physical definition created through Item Master Maintenance (MENU IAFILE) and Item Balance Maintenance (MENU IAFILE).
- If an item has storage conditions that require that it be stored in a specific section of the warehouse, you can include this location class in the item definition.
- You can define a put-away message that prints on documents used when putting away the items.
- You can specify a minimum put-away quantity for an item to avoid scattering an item throughout the warehouse.
- You can define a maximum put-away quantity to avoid crushing items stored on pallets, or to limit the quantity of items stored in a single location.
- You can assign an item to the specific pallet that it is usually received on (if any), so the size of the pallet is considered when selecting locations during put-away. If you do this, you need to indicate the quantity of items that are stored on the pallet.

Item definition in W/M allows you to define these and several other attributes that reflect how your items should be handled.

Item Labels

Item information printed on the Item Labels consist of item number, two lines of item description, country of origin of the item if the item is set up to track country of origin, and, if applicable, lot number and expiration date or serial number. When you are first establishing your warehouse locations/items, you might want to print Item Labels by location to help identify where all your items should be placed. After establishing item placement, Item Labels should be printed by item number, not location. Additionally, if you are using barcoding, as determined through Warehouse Management Options Maintenance (MENU WMFILE), some of this information will be bar coded.

Item Labels provide quick-look item data for warehouse tasks such as inventory put-away, moving, or picking. The option to have Item Labels print automatically when Put-Away Lists print is available through Warehouse Management Options Maintenance (MENU WMFILE). Item Labels are described in detail in Item Labels (MENU WMREPT).

Barcode Labels

Warehouse Management barcode labels interface directly with the T.L. Ashford barcoding software. This interface allows you to easily modify labels and use an extensive range of printer output queues in Warehouse Management Options Maintenance (MENU WMFILE) that are supported by T.L. Ashford.

You MUST purchase T.L. Ashford software to print barcode labels using Distribution A+ Version 3.0 or higher.

Receiving and Putting Away Items

There are various functions available to record how items are received and put away in your warehouse. Like all W/M functions, you select the ones that pertain to your operations.

If Radio Frequency is installed and is being used for receiving and put away, a process distinct from what is explained here is used. Refer to the Radio Frequency User Guide for details about Radio Frequency receiving and put away.

Location Selection

As discussed in the previous section, different items have different storage requirements, and different locations are used in different ways. To maximize warehouse utilization, you want to select the most suitable locations for your items when putting them away.

Location and Cycle Codes

When putting away items in your warehouse, you can optionally rank items and locations using location codes and cycle codes. Location codes are assigned to warehouse locations, and cycle

codes are assigned to items. They are used to match items with locations, depending on their performance and preference.

Locations that are close to the shipping dock in your warehouse probably have a higher preference when picking items for shipment than locations that are far from the shipping dock. In this scenario, you can assign location codes that reflect your preference of warehouse locations.

For example,

- Locations very close to the shipping dock are the “Best” locations: Assign location code A.
- Locations near the shipping dock are “Good” locations: Assign location code B.
- Locations furthest away from the shipping dock are “Fair” locations: Assign location code C.

Likewise, some of your items may be excellent in terms of volume and profit, and others are not. For items in this scenario, you can define and assign cycle count codes that reflect the performance of the items.

For example,

- High volume, high profit items are your “Best” items: Assign cycle code A.
- Regular volume/profit items are your “Good” items: Assign cycle code B.
- Low volume/profit items are “Fair” items: Assign cycle code C.

With these assignments, you can put away the best items in the best locations, good items in good locations, and fair items in fair locations. With W/M automatic put-away, you define which items should (or should not) be put away in which locations.

Furthermore, cycle count codes (created through Inventory Accounting) do not have to be manually assigned to items. They may be assigned automatically by W/M by running Warehouse Planning Report (MENU WMREPT), which allows you to rank your items based on sales quantity or quantity picked for the current or previous year. Once items are ranked, they can be assigned cycle count codes respective to their position in the ranking. These cycle count codes can then be used in establishing intervals at which certain items in certain warehouses will be counted. If the cycle count scheduler is utilized, the system will automatically select the items to be counted based on their cycle count codes.

Pallet Information

Items that are received on pallets may be assigned to a single pallet ID code, which contains the definition of the pallet’s length, width, height, and cubic size. Likewise, locations may be assigned a pallet class, which consists of one or more pallet ID codes that can fit into the location. Only items having a pallet ID code that is defined for the pallet class assigned to a location can be put away in that location.

For applicable locations, the location is examined to determine if there is enough room to store a given number of pallets. The length of the pallet must be able to fit into the depth of the location. If it does, you can specify how many pallets deep are put away. When pallets are stacked, you can specify how many pallets high are put away. For crushable items, you can assign a maximum put-away quantity, which is the maximum quantity of items per single pallet stack, to ensure that pallets of the item are not stacked too high.

Pre-receiving

Pre-receiving is an W/M function that allows you to specify the locations where items on a purchase order will be stored when they are received. This reserves locations for a quantity of items that were ordered on a purchase order before the items are actually received. You can select a quantity of items from the purchase order and specify the location, quantities, lot or serial numbers (if applicable), and pallet information (if applicable) for the items to put away. You may then print a Put-Away List and optionally Put-Away Labels which indicate where the items should be stored.

Since warehouse locations, quantities, and other put away information is specified when pre-receiving, you do not need to specify the same information again when entering purchase order receipts in either Purchasing or W/M. You need only to verify that the put away information provided when the order was pre-received accurately reflects the items that are received. Change the put away information where applicable.

Receiving

Receipt of inventory is processed via purchase order processing or receiver processing. The major differences in the two processes can be briefly described as follows:

- The creation, approval, and posting of receipts using purchase order processing occurs only in Purchasing (PO). The creation, approval, and posting of receipts using receiver processing may occur in PO or W/M.
- Purchase order processing requires the manual creation of a receipt group with a unique ID. Receiver processing requires the manual creation of a receiver which, at a future time, will automatically create a receipt group with a system assigned ID.
- Purchase order processing:
 - Allows receipt of one purchase order at a time - although you can have several PO receipts in a receipt group
 - Allows purchase orders to be partially received in a receipt group
- Receiver processing:
 - Allows the inclusion of items from more than one of a vendor's purchase orders into the receiver/receipt group
 - Allows purchase orders to be partially received in the receiver
 - Allows you to select portions of a receiver/receipt group to post

Since individual receiver line items can be processed, posting is immediate, and the approval and posting of receivers can occur in the warehouse, the receipt of inventory and the availability of inventory seem to occur almost simultaneously.

Note: Receivers (or individual receiver line items) must be approved prior to being selected for put-away.

Auto Put-Away

When orders are pre-received, you can use the W/M automatic put-away (auto put-away) function to select the warehouse locations where items on the order should be stored. With data that you

define for a warehouse, you determine the methods by which locations are selected. You can define some locations to ignore auto put-away, such as front line picking locations that should be replenished only from bulk locations.

The data needed to determine how auto put-away will select locations includes the following (in any sequence):

- Where the item is already stored
- Empty locations with the same location/cycle code
- Empty locations that are less desirable (lower location/cycle code)
- Shared locations with the same location/cycle code
- Shared locations that are less desirable (lower location/cycle code)

You may further limit the locations selected by specifying location limits. Locations not selected are ignored by auto put-away.

In addition, home slot auto put away can be used to put items away in locations that are near their designated home slot location.

When pre-receiving case quantity items, auto put-away stores the items in full cases. Cases are not broken and stored in multiple locations. If a partial case is pre-received, auto put-away selects a location for the individual items. For pallets, auto put-away considers the conditions and restraints for location selection as previously explained.

Put-Away Lists and Labels

After pre-receiving an order, you may print a Put-Away List and optionally Put-Away Labels, which show the items, country of origins (if applicable), locations, quantities, pallets, and lots or serial numbers to be put away. These locations are held by W/M for two days. This prevents the locations from being used by other items.

When the items on the order are physically received, the Put-Away List and Put-Away Labels may be used to store the inventory. Then, the inventory receipts are entered and posted through Purchasing or optionally, where applicable, through Warehouse Management.

Put-Away Lists may be printed from a variety of screens in Distribution A+ and reprints are available. The option to automatically print Put-Away Labels whenever a Put-Away List is printed is available, as is the choice to include barcodes on the labels. Put-Away Lists are described in Warehouse Management (MENU WMMAIN), and Put-Away Labels are described in Put-Away Labels (MENU WMMAIN).

You may also choose to have Item Labels automatically print when the Put-Away List is printed. Refer to Item Labels (MENU WMREPT) for details about these labels.

Miscellaneous Receipts

To accommodate the receipt of items for which a purchase order has not been created, W/M allows you to create miscellaneous receipts when pre-receiving. You identify the items to put away and their respective quantities. You then continue with pre-receiving to select the locations, quantities, lot or serial numbers, or pallet information (if applicable) for the items to be put away.

Miscellaneous receipts are not verified and posted through Purchasing. Instead, they are posted through Inventory Accounting's Transaction Entry.

Manual Put-Away

If you choose not to pre-receive items using auto put-away, or if locations cannot be found using the data provided to auto put-away, you can manually put away items. W/M displays used and available locations.

Used Locations

Used locations are those where the item is currently stored. They display on a screen which shows the locations in the sequence in which the items were stored (arrival or FIFO sequence). Lot items with expiration dates, however, display in sequence by expiration date so the lots that expire the soonest display first. For items without expiration dates, you can define an individual location to always display first or may change the sequence of locations as desired. This sequence is important since it is used by Order Entry when selecting the locations from which items should be picked.

Available Locations

Available locations are those that currently do not contain the item but which could be used to store the item. When available locations are displayed, you can limit the locations for certain conditions. You can display empty locations only or locations having the same location class as the item to put away. Additionally, you can specify location limits to display locations for a range of location number segments, location depths, and picking sections. For each available location, W/M indicates the amount of space left in the location (in cubes), and capacity remaining in the location (in units of the item to put away).

There is also a function key (F10) available that will position the available locations list to the next location that is large enough to hold the entire quantity to put away. This is useful when putting a large quantity of an item away, to avoid rolling through possibly several screens in order to find the first location that will fit the quantity to store.

Moving Inventory for Replenishment

W/M has functions available for moving inventory within your warehouse that increase the productivity of your handlers and the efficiency of overall warehouse utilization. Typically, inventory moves are used to replenish picking locations from bulk locations.

System-determined moves can be generated for items permanently stored in a location. A permanent item location is one which stores quantities of a selected single item. This location is also assigned a restock level and a restock quantity. When the quantity of items in this location falls below the restock level, an inventory move to replenish the location to the restock quantity is

displayed. You may then select the warehouse location that the items are to be moved from to replenish the location.

Moves may be generated in one of the following ways:

- **Manually**
Manual moves may be performed through Warehouse Management (MENU WMMAIN). The desired items, quantities and locations may be keyed and the F11 function key will allow you to perform the specified move according to your selections.
- **Interactively**
The interactive suggested process provides suggestions regarding quantities and locations, but allows you to manually override suggested quantities and determine whether or not the move will be performed immediately. If the move is not immediate, you also may determine when a Move List will be printed to include this move.
- **Automatically**
The automatic suggested move process suggests items, locations, and quantities, and simultaneously generates a Move List for all automatically created suggested moves.
- **Radio Frequency (R/F) Moves (If Radio Frequency is installed)**
The automatic suggested move process with R/F suggests items, locations, and quantities, and simultaneously generates the Move Labels for all automatically created suggested moves. If the R/F warehouse option Replenishment Trigger is defined as R, as determined through Radio Frequency Options Maintenance (MENU RFFILE), suggested moves will be generated automatically throughout W/M and R/F during processes where the restock quantities are changed or shelf quantities are reduced.

Moves generated through any of these move processes may be reviewed through the Move Management Screen accessed through Warehouse Management (MENU WMMAIN) or through Move Maintenance (MENU WMMAIN). If necessary, all suggested moves also may be modified through Move Maintenance (MENU WMMAIN). Once moves have been completed, you may confirm them through Warehouse Management (MENU WMMAIN) or post them through Move Post (MENU WMMAIN).

Note: Posting occurs for an entire run, while confirming occurs for individual moves within a run. Confirms are not processed through the Transaction Processor.

When it is determined that moves are to be accomplished, Move Lists and Move Labels are available to assist in the performance of the tasks. Pertinent data such as the “to” and “from” location as well as the item identification and quantity is provided to help ensure the move is performed accurately. Move Labels can be automatically printed when Move Lists are printed, and barcodes can be included. For details about Move Lists and Move Labels, refer to Warehouse Management (MENU WMMAIN).

Manual Moves

W/M allows you to manipulate your inventory by performing manual moves. Manual moves allow you to select items, locations, and quantities to move without system-generated suggestions. From the *Warehouse Management Selection* Screen, accessed through Warehouse Management (MENU WMMAIN), you can enter an item and quantity to store. After pressing ENTER on this screen, the Used Locations Screen will display, allowing you to manually select “to” and “from” locations. Through function keys, the Used Locations Screen offers information helpful

in performing manual moves, such as lists of available quantities and locations. After making your selections, press the F11 function key to create the manual move.

Interactive Suggested Moves

W/M can display suggested inventory moves for any permanent item location through the F9 function key on the Warehouse Management Selection Screen, accessed through Warehouse Management (MENU WMMAIN). This interactive move process will suggest items, quantities and locations, but allows you to manually manipulate the suggested moves. At your discretion, you may adjust quantities, choose locations, and generate Move Lists to include the moves. Moves generated through the interactive process will display on the Move Detail Screen, accessed through Move Maintenance (MENU WMMAIN), where the quantity and unit of measure may be altered. This screen also allows you to delete moves, if desired.

Urgent Moves

While displaying suggested inventory movements, you have the option to display only those inventory moves that are considered urgent. An inventory move is urgent if the quantity of items in a permanent location is zero.

Normal Moves

After selecting the inventory moves required to replenish the permanent item locations, you should print a Move List and, if desired, Move Labels to distribute to the warehouse personnel who physically perform the inventory move. If, however, the physical inventory move is performed before it is recorded in W/M (i.e., it is an immediate move), you will not need the Move List nor the Move Labels, and are not required to print them. Regardless if a Move List is printed or not, all inventory moves are retained for future inquiry.

Automatic Suggested Moves

Another means to identify possible inventory moves in your warehouse is to use the W/M automatic suggested move processing function. This is a process which determines suggested inventory movements in the same manner as interactive suggested moves, this time using the Suggested Move Report and the move maintenance process.

Suggested Move Report

Using the Suggested Move Report, W/M brings those picking locations that require replenishment to your attention. Each move is assigned a move number to allow for easy tracking and tracing of activities. Through Suggested Move Report (MENU WMMAIN), you can print a Suggested Move Report as well as a Move List and/or Move Labels.

The Suggested Move Report prints those permanent item locations that require replenishment for an entire warehouse or any range of locations or picking sections. Refer to the Cross Applications

User Guide for details about rules for using ranges. This report is sequenced by location, for those locations that require replenishment.

Additionally, the Suggested Move Report is a turn-around document that may be used when physically performing the moves and recording any changes made to those suggested.

Automatic Suggested Moves with Radio Frequency

Another means to identify possible inventory moves in your warehouse is to use the R/F automatic suggested move processing function. This is a process by which R/F suggests items, locations, and quantities, and simultaneously generates Move Labels for all automatically created suggested moves.

When the R/F warehouse option Replenishment Trigger is defined as R, as determined through Radio Frequency Options Maintenance (MENU RFFILE), suggested moves will be generated automatically throughout W/M and R/F during processes where the restock quantities are changed or shelf quantities are reduced.

Additionally, to utilize this feature, the Print Move Labels with Moves option in Warehouse Management Options Maintenance (MENU WMFILE), should be set to Y.

Moves may automatically be suggested with R/F during the following processes:

- During Location Maintenance
For example, if you change restock quantities on a forward pick location, Distribution A+ will at that time determine if locations need to be replenished. A move will be created and a Move Label will be generated.
- During the Move Post
For example, during any move post, if the shelf quantity on a forward pick location is reduced, Distribution A+ will determine if locations need to be replenished. A move will be created and a Move Label will be generated.
- During the I/A Transaction Post
For example, if during the Post process, the shelf quantity on a forward pick location is reduced, Distribution A+ will determine if locations need to be replenished. A move will be created and a Move Label will be generated.
- During the Shipment History Post
For example, if during Day-End Processing, a reduction of shelf quantities for shipments is detected and/or a shelf quantity on a forward pick location is reduced, Distribution A+ will determine if locations need to be replenished. A move will be created and a Move Label will be generated.

Move Management

The Move Management Screen, accessed through Warehouse Management (MENU WMMAIN) by pressing the F10 function key, may be used to reprint Move Lists and review, verify, and, if applicable, confirm manual or suggested moves. Using this screen to confirm a pending move eliminates the need to submit a Transaction Processor job through Move Maintenance (MENU WMMAIN). Note, however, that Move Management serves as a review/confirmation tool only; any modification of moves can be accomplished through Move Maintenance (MENU WMMAIN).

Picking, Packing, and Shipping

W/M provides functions to ensure that items are picked and shipped efficiently; handler productivity is increased, and product handling order turn-around time is decreased.

Picking

W/M helps you to make the item picking process in your warehouse efficient. Efficient picking occurs when warehouse personnel can pick the greatest quantity of items with the least amount of physical movement in the warehouse, while accurately picking the correct items in the exact quantities. This is done using W/M picking sections, picking documents, and automatic location reservations.

Picking Sections

You may assign each of the locations in your warehouse to a picking section. At least one picking section must be defined for each warehouse. A picking section is a group of locations that are used in a similar manner. For example, all of the bulk locations in your warehouse may be in one picking section, while all of the permanent item locations may be in another picking section. In some warehouses, one person may be responsible for an entire picking section. Regardless of the similarity of locations, W/M allows you to assign any number of locations to a given picking section in a warehouse.

For each picking section, a definition is created to indicate how that section is to be used in your warehouse. If Print Summary Pick Lists = L in Warehouse Management Options (MENU WMFILE), you can define if items in the picking section will print on the Pick List (usually for permanent item picking locations), or on the Summary Pick List (usually for bulk item storage locations) or both. If applicable, you can specify if items in that picking section should be boxed when they are picked (refer to boxing in this section).

If you have Radio Frequency installed on your system, you set up and maintain pick section control values for RF Directed Picking through Picking Sections Maintenance (MENU WMFILE). At least one picking section must be defined for each warehouse that wishes to use RF Directed Picking. You have the ability to set how handlers are to retrieve orders by picking section (i.e., retrieve by scanning orders, scanning containers, or via the user defined pick queue), whether or not they are to use the user defined pick queue, and whether or not you wish to be prompted for Start and End locations for each picking section. Additionally, you may set maximum trip sizes for orders, containers, cubes, and weight.

Pick List

A Pick List can be generated through Order Entry or W/M. Depending upon selections made for your Pick Lists, the content of the Pick List will vary. These selections include:

- Whether prices will be included for the indicated company, determined through Order Entry Options Maintenance (MENU XAFIL);
- Whether prices will be included for the indicated customer, determined through Customer/Ship to Master Maintenance (MENU ARFIL);

- Whether pick list headings will print, determined through Order Entry Options Maintenance (MENU XAFILE) when Print Pick List Headings has been defined as Y.

Additionally, the information on a Pick List includes picking section identification, warehouse locations, and lot or serial numbers (if applicable). If you are using the boxing function, box information also prints on the Pick List. You may also determine the sequence in which multiple Pick Lists print: by order priority, carrier sequence, and/or picking section. This allows you to determine which orders are picked first.

Summary Pick List

For each group of Pick Lists that are printed, you may print a Summary Pick List. This is a single document that prints the items to be picked from bulk locations for that group of Pick Lists. Summary Pick Lists may be used for bulk or wave picking, in which all items for a group of orders are picked from bulk sections of the warehouse and brought to a staging area. At the staging area, the individual Pick Lists may be used to pack the items for each order.

Summary Pick Lists may print items in sequence by order priority or by carrier; you may print subtotals for each item and location to pick, and determine if each line from the original order will print. You also have the option to print Case/Shipping Labels when the Summary Pick List prints.

Case/Shipping Labels

For items printed on a Summary Pick List, you also may print Case/Shipping Labels that contain item and shipping information for those items included on the Summary Pick List. These labels can be printed for case quantity items and regular (non case-quantity) items.

In the warehouse, Case/Shipping Labels may be applied to the cases or boxes of items to be picked from bulk storage. These in turn are brought to the shipping dock, where the order may be reviewed with items picked (and optionally boxed) from the fixed picking location, before being shipped. For details about Case/Shipping Labels, refer to Shipping Labels (MENU WMMAIN).

Auto-reserve

The locations where items should be picked from, as printed on the Pick List and Summary Pick List, may be selected manually (on the Location Reservation Screen) when the order is created or ship confirmed, or automatically when using the W/M auto-reserve function during Pick List generation.

With auto-reserve, W/M automatically selects the warehouse locations and lots or serial numbers (if applicable) to be picked before the Pick List for the order is printed. This eliminates the need for you to select the locations.

To ensure the use of the FIFO method of inventory control, locations are selected in arrival sequence (the first location where the item was stored is the first location picked, and so on), or expiration date sequence for lot items that require expiration dates. You may, however, define a front-line picking location to always be used first.

Required lot expiration dates can be checked against the current date to ensure the items are not expired, if so determined through Warehouse Management Options Maintenance (MENU

WMFILE). If they have expired, auto-reserve will not select those lots for processing. You may also identify, through the same option, a number of days (up to 999) to add to the expiration date (for calculation purposes only), so that if today's date plus the identified number of days is not later than the expiration date, the lot items may still be used in auto-reserve processing. Regardless as to whether or not auto-reserve will use the lot items for this reason, you may still manually select an expired lot through Order Entry when entering your orders via Enter, Change & Ship Orders (MENU OEMAIN). If you do manually select such an item, a warning message will be displayed for you.

Any items in a location that have not previously been reserved will be assigned to the order of the Pick List being printed. If there is not enough inventory in the location, the next location is used. The selection stops when all ship quantities have been reserved or the quantity of available stock is exhausted.

You may assign a maximum pick quantity for an item in a permanent item location to ensure that front-line picking locations are bypassed and bulk locations are used when picking inventory in large quantities. For case quantity items, W/M attempts to pick whole cases before reserving unit quantities. Individual units are reserved after all available cases have been reserved.

If, during the auto-reserve process of the Pick List print, the quantity ship value on a sales order could not be reserved to match the quantity to ship, the Pick List print function will adjust the quantity ship value and back ordered value for a line item. Distribution A+ will first reserve the line item and, if the quantity ship value cannot be fully reserved, Distribution A+ will then adjust the quantity shipped value to the amount reserved; the quantity back ordered value will be increased by the difference between what was originally shipped on the order and what was reserved to ship. The quantity reserved will then become the quantity shipped.

For example, if you enter an order for a quantity of 10 items and the quantity ship value equals 10 and the backorder quantity equals 0, the following occurs when the auto-reserve feature is active:

- The warehouse locations are searched to reserve the desired quantity only 5 of the 10 items are found
- The printed Pick List then identifies that only 5 items are available for reservation by indicating 5 in the quantity Ship field
- The Pick List also identifies that the additional requested 5 items are on backorder by indicating 5 in the B/O field

Therefore, the quantity on backorder reflects the difference between the original ship quantity on the order and what was reserved through auto-reserve.

Note: This feature only applies for items whose warehouse definition has been set to allow for the auto-reserve before pick for regular, serial, and/or lot items. Kit items are excluded from this feature.

Additionally, Order Entry and the Open Order Inquiry will reflect the quantity that appears on the Pick List.

Packing

To assist you with item handling and packaging, you may optionally use W/M's boxing function. For any or all picking sections in your warehouse, W/M will suggest the boxes that you should use to pack the items on an order; the Pick List will print this box information.

Box Selection

In order to use the boxing function, you must specify the linear dimensions (length, width, and height) of your items, as well as a definition of each of the shipping boxes that are available. The box definition consists of the box's linear dimensions, the box type (which indicates if the box is used for unique items), the head space (free space in a box), the minimum fill percent (to avoid using a box that is too big), and the box's maximum weight restriction.

Using this size/dimension criteria, W/M selects which box(es) should be used to ship the items on an order. It attempts to use the smallest box that is big enough for an order while accommodating restrictions of the item and the box. For example, it checks if the dimensions of the box are adequate for the dimensions of the item; it checks the weight of the item to ensure that it is not too heavy for the box; it examines if the box is filled adequately. If the conditions are not met, another box is examined for selection. This process continues until an appropriate box is selected.

The selected boxes and items to pack in each box are printed on the order's Pick List. For orders that use more than one box, you have the option to advance to a new page each time the box number changes when printing the Pick List.

Box Maintenance

If, for some reason, the boxes selected are not actually filled as specified by W/M, you can change the contents of the box. This includes removing items from a box, filling a box with unboxed items on an order, or taking items from one box and storing them in a different box. If an additional box is required, you may create and fill the new box.

In addition to maintaining the contents of each box, you may print Case/Shipping Labels for the boxes containing the items printed on the Pick List. You may also print a new label for an item on an order that was not specified by W/M to be boxed, but has been boxed anyway, or an item that has been moved from its original box to a new box. If any of the Case/Shipping Labels (or other labels that are printed with the Summary Pick List) are damaged, you may reprint those labels.

Shipping

Boxes

Once boxes are packed and cases are labeled, you may confirm box shipments. In the warehouse, this process involves entering, in W/M, the number of each box that is shipped. If desired, you may tailor W/M to update the order status to invoice ready to print after the last box on an order is confirmed. By confirming shipment of the individual boxes on an order, you will not need to perform a shipping confirmation in Order Entry.

Note: If shipping confirmation is performed here, a Pack List will be printed if requested through Order Entry Options Maintenance (MENU XAFIL).

Confirming box shipments in this manner allows for monitoring the process, thus ensuring boxes are not lost. A box that is filled and not ship confirmed will appear on the Unshipped Box Report.

Running this report daily ensures that all orders placed are shipped. This allows you to research the circumstances of unshipped boxes, and to quickly find the box.

Box History

When using the boxing function, you have the option to retain box history. If you choose to do this, W/M retains a history file of all of the boxes that were shipped and, if desired, their contents. This history may be retained for a specified number of days, until payment for the order is received, or both.

Additional Confirmation Methods

If you do not use the optional boxing function, you must perform a shipping confirmation in Order Entry before the order may be invoiced if Radio Frequency is not installed on your system. The warehouse locations and, if applicable, the lot or serial numbers of each item shipped must be entered in W/M. You may do this when the shipping confirmation is performed or when the order is entered. If you use the auto-reserve function, you need only to verify the locations, lot, and serial numbers for the items that were picked.

If Radio Frequency is installed on your system, the option to automatically set the Order Status to "Ready for Invoice" after all picks for an order have been "Pick Confirmed" may be set through Radio Frequency Options (MENU RFFILE). If you select **Y** through this option, the order status will be changed to "Ready for Invoice" after all items have been picked. Additionally, if the **Print Pack List after Ship Cnfrm** field is set to **Y** through Order Entry Options Maintenance (MENU XAFILE), Pack Lists will automatically print for an order after that order has been ship confirmed.

It should be noted that both the Warehouse Management option to change the status after the last box is confirmed for shipment and the Radio Frequency option to change the status after all items have been picked may not be set to **Y** simultaneously.

Counting Items

To maintain an accurate status of your item quantities, the inventory stored counts in W/M need to match the actual quantities stored in your warehouse. If there are any discrepancies between the quantities reported by W/M and the actual quantities, they should be remedied. Obtaining accurate inventory counts is done by performing either a physical inventory for your entire warehouse or a number of cycle counts for portions of your warehouse throughout the year.

Regardless of which method you use, W/M provides a systematic approach. Features of this systematic approach include:

- Printing Count Sheets, which initiates the counting process by first freezing the database inventory counts.

Important

Inventory transactions may still occur after printing Count Sheets, but before beginning the physical counting process. If such transactions do occur, you can recalculate the frozen values using Refreeze Physical Inventory Counts (MENU WMPHYS). This ensures that all such inventory transactions are accounted for and do not create a variance when comparing frozen values to actual values.

Also, once the process of physically counting the inventory begins, items should not be physically put into or removed from locations being counted.

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- Physical inventory and cycle counts which are always performed by location. You may select any number of locations by location number, location contents (i.e., item number), or type of location (i.e., location class).
 - Establishing cycle count intervals for items assigned certain cycle count codes. Automatic scheduling of cycle count code items within a particular warehouse can be done via the Cycle Count Scheduler (MENU WMPHYS).
 - Keying results into W/M after completing the physical counting of inventory and indicating the figures on the previously printed Count Sheets. At this point you can identify missing Count Sheets and research variances between the actual and system quantities.

Note: Before counting begins, you can run Refreeze Physical Inventory Counts (MENU WMPHYS) to refreeze inventory counts if any inventory transactions occurred before counting began and after the Count Sheets printed.

- Printing of Count Verification Sheets to “double check” those locations whose counts differ from any other count previously recorded or the counts that were frozen when the physical inventory was started.
- Printing of a Valuation Report before updating W/M with the new location counts.

Lot Control

Lot items are received, stored, and shipped in groups or lots. Lots are used to maintain a continuous monitoring process of a set of many items from the manufacturer to the customer. For the distributor, this lot control may be required from the time that a lot is received, to the time that the lot is shipped.

Application

Date Sensitive Lots

Lots are commonly used for date sensitive merchandise such as food and pharmaceutical goods. The lot with the earliest receiving date should certainly be shipped before a lot with a more recent

receiving date. If a shipment needs to be recalled per the manufacturer, the recall is made by lot number.

Cost Sensitive Lots

Lots may also be used for cost sensitive items. Since W/M allows you to assign a cost to an individual lot, you may divide a shipment of an item into different lots for costing purposes. Each lot of items can have a different cost. This type of lot control is useful when dealing with a commodity having frequent cost variations.

Dye Lots

You may control dye lots (e.g., of paint or carpeting) in W/M. Although two shipments, each containing a roll of carpeting, may identify the same item number and color specifications, different dye lots in the manufacturing process may cause slight, but noticeable, variations in color between the two rolls. With lot tracking, the availability of an item from a specific lot can be easily determined.

Measuring Availability

Additionally, lots may be used for goods stored by the roll or the spool. If you assign each roll of carpeting or spool of wire its own lot number, you can determine the quantity that is available on the roll or spool in square yards, feet, or other units of measure.

Lots in W/M

With W/M, you can designate an item to be a lot item and optionally require an expiration date for that lot. Additionally, you indicate if the lot number should print on any Invoices containing the item.

When a lot item is received, you must specify the lot number and the quantity of items in that lot. One shipment of items may contain several or only one lot. You will not be able to post purchase order receipts for the lot items until you record the lot numbers of all lot items received.

When putting away or moving inventory, you must also specify an item's lot number. One lot may be split up over multiple warehouse locations.

When shipping a lot item, you must also specify the number of the lot from which that item is shipped.

Serial Number Tracking

Serial number tracking, like lot control, allows you to monitor the status of items in your warehouse. Unlike lot items, however, serial numbers are assigned to individual items, not to a group of items.

Serial number items are usually items that are monitored for internal control and warranty purposes. W/M allows you to use two types of serial number items: standard and informational.

Standard Serial Number Items

For a standard serial number item, you must specify the serial number of that item when it is received, put away, moved, ordered, and shipped. Like lot items, standard serial number items are monitored constantly while in the warehouse.

Informational Serial Number Items

Informational serial number items are not monitored constantly. The only time that serial numbers need to be keyed into W/M for such an item, is when that item is shipped. This is useful if you want to track serial numbers after they have been shipped, perhaps for warranty purposes, but do not need to constantly monitor the specific item when it is in your warehouse.