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CHAPTER 11 - PICKING

Overview

The SYNAPSE picking process can be configured by customer and by item to provide simple or relatively complex picking capabilities. Synapse can be configured to utilize three major pick methods:

- RF-based Picking
- Label-based Picking and
- Paper-based Picking

When processing RF-based picking, SYNAPSE can be configured to consider a variety of pick constraint parameters when planning pick tours, including:

- Whether or not a warehouse associate is authorized to service a particular customer account (See Security setup)
- The equipment that the warehouse associate is operating
- The current physical location of the warehouse associate
- The warehouse associate's operator mode (e.g., system directed versus operator directed)
- The picking mode that the warehouse associate is using

Warehouse associate RF terminals can display both order header and line item pick instructions that detail special handling requirements.

Various pick strategies can be employed to meet individual customer and consignee requirements, including:

- **Order Picking** – A system directed strategy where a warehouse associate picks an entire order. Synapse can suggest the appropriate number and size of cartons required, optimize the pick sequence, require warehouse associate pick confirmation, allow the warehouse associate to override a suggested pick location, direct the warehouse associate to the appropriate packing station, and print customer or consignee required labels using customized business event triggers.
- **Line Picking** – Similar to Order Picking, except that the warehouse associates pick assignment is setup to pick specific lines on an order (versus picking the entire order) and then is directed to a consolidation staging area. This works well for picking full pallets.

- **Cluster Picking** – Similar to Order Picking, except that the warehouse associate will pick multiple orders into multiple cartons during the pick assignment.
- **Batch Picking** – Similar to Order Picking, except that the warehouse associate will pick lines and orders, then is directed to a sortation area where the picks are sorted into individual orders.
- **Zone Picking** – Similar to Order Picking, except that the warehouse associate is directed to pick items from a pre-defined zone, then is directed to either deliver the picks to a sortation area or to another 'pick and pass drop off' zone where pick activities are continued by another warehouse associate (e.g., "assembly line" picking).
- **Label-based Picking**- Synapse can be configured to print pick labels for certain orders that have been released during the Wave process. Label-based picking can be configured to utilize Order Picking, Batch Picking or Zone Picking strategies. Label-based picking can be employed with or without the assistance of an RF warehouse terminal. Synapse optimizes the pick tour and the label pick document is printed. The warehouse associate then picks the order, batch or zone and applies labels to the product as the picks are made.
- **Paper-based Picking**- Synapse can be configured to support non-RF picking activities using the Paper-based Picking method. Paper-based picking, which supports only the Order Picking strategy, prints an optimized pick list for a specific order. Exceptions during the pick list must be noted manually on the pick document and manually entered into Synapse prior to generation of the final shipping documents.

Combinations of RF-based, label-based and paper-based picking methods can be deployed within the same facility.

RF Picking by Order

This picking method is used to pick an entire order and then stage it.

- From the main RF menu, select 50 – Picking.

00 Synapse Main Menu

```
10 - Receiving
20 - Returns
30 - Work
40 - Shipping
50 - Picking
60 - Kitting
70 - Misc 1
80 - Misc 2
90 - Utility
```

Selection =>50

Enter # of item

The picking menu displays:

50 Picking Menu

```
51 - Default / Any
52 - Line Item
53 - Conveyor
54 - Order
55 - Cluster
56 - Batch
57 - Replenish
58 - Sortation
59 - Sort Cluster
5A - Line Cluster
```

Selection =>_

Enter # of item

- Select 54 - Order from the Picking Menu. The System Directed Picking screen appears.

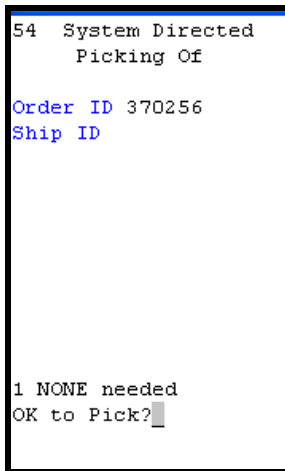
54 System Directed
Picking OfOrder ID
Ship ID

Enter order

- Type the order number in the Order ID field and press Enter.

Note: The Ship ID field is optional.

The following screen appears:



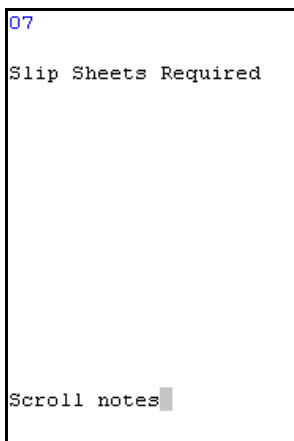
```
54 System Directed
    Picking Of

Order ID 370256
Ship ID

1 NONE needed
OK to Pick?
```

If the order needs to be packed in cartons, the number of cartons required appears on the screen. If no cartons are needed, then NONE appears on the screen with a prompt.

- Type Y (or P if there are cartons required) and press Enter.



```
07

Slip Sheets Required

Scroll notes
```

Note: If customer, order or item instructions that are marked to automatically appear on the RF exist, they will appear on the screen. Press F1 to continue.

- Enter or verify the quantity you are picking and Press Tab.

```
34 Order Pick In
INA
Order 370256*
Pick 10      EA  FULL
      10      EA   5
Itm BREAD*
BREAD

Loc PF02      Part

LP 
LP 

Verify quantity
```

- Type the LP that you are picking from and press Tab. This isn't always required depending on your facility's setup.

Note: Depending upon setup, you may need to enter other values, i.e. item, location, etc.

```
34 Order Pick In
INA
Order 370256*
Pick 10      EA  FULL
      10      EA   5
Itm BREAD*
BREAD

Loc PF02      Part

LP 612000002
LP 
LP 

Verify quantity
```

- Type the LP that you are picking onto and press Enter.

```
34 Order Pick In
INA
Order 370256*
Pick 10      EA  FULL
      10      EA   5
Itm BREAD*
BREAD

Loc PF02      Part

LP 612000002
LP 10152013001 
LP 

Verify quantity
```

The next task for your order appears.

- Continue this process until you are ready to stage your picks. Press F4. A Pick/Stage prompt appears.

Note: After all items have been picked for your order, a Pick/Stage message automatically appears at the bottom of the screen.

```
34 Order Pick In
INA
Order 370256*
Pick 1      PLT FULL
      100    CS      4
Itm CHEESE*
Cheese

Loc T244      Full
LP 000001015201301
LP

Pick/Stage?
```

You may or may not be directed to a staging location. This depends on whether a location has been assigned to the load. If you are not directed to a location, you can choose a location by entering (or scanning) the location on the screen.

```
35 Stage Picks

LP 000010152013001
  00000002252277S
Order 370256

===== Verify =====

Location
Vrfy Loc stg13

Enter Data
```

RF Cluster Picking

Cluster picking allows you to pick multiple orders (order picks) into multiple cartons during a pick assignment. Typically, you have a cart or some other picking transport with slots or positions where you can place a container/carton with a Lip label for each order.

You enter the maximum number of orders to be cluster picked under the same assignment. The RF Screen lists the orders assigned (not exceeding the maximum entered) and you enter the position number on the cart for each order. SYNAPSE directs you to pick each item and to place the item into the correct position on the cart. After placing the item in the carton at the designated position, you scan the Lip label on the carton. SYNAPSE verifies that the LIP ID is correct for the order.

At the end of the picking assignment, you stage the orders.

- From the main RF menu, select 50 - Picking. The Picking Menu displays:

```
50 Picking Menu

51 - Default / Any
52 - Line Item
53 - Conveyor
54 - Order
55 - Cluster
56 - Batch
57 - Replenish
58 - Sortation
59 - Sort Cluster
5A - Line Cluster

Selection =>55
Enter # of item
```

- Select 55 - Cluster. Enter the maximum number of orders to be cluster picked in this picking pass. This number should not exceed the number of positions on the picking cart. The wave number can also be entered to select more specific orders.

```
55 Cluster Picking

Max Orders 2
Wave: 213160
Order      Position

Enter max
```

- An assigned list of the orders will be displayed. Enter the position on the picking cart for each order. Press F4.


```

55 Cluster Picking

Max Orders  2
Wave: 213160

Order      Position
369952-1    1
369960-1    2

2 NONE needed
Data. F4-Done

```

- When the first pick is assigned, the order number and cart position of the order will appear on line 3 of the RF screen. Pick the quantity requested at the location shown and enter the lip where the item is picked from. Note: Depending on the location setup, the user may be asked to confirm other attributes as well, such as Item and Location.

```

34 Cluster Pick In
INA
Order 369960* P 2
Pick 10 EA FULL
    10 EA 2
Itm POWDER*
Powder

Loc STOR01 Part
LP 000000062900001
LP
LP

Verify quantity

```

- Enter or scan the lip of the carton in the position you are directed to place the item(s). Place the item(s) in the corresponding carton.

```
34 Cluster Pick In
INA
Order 369960*   P 2
Pick 10        EA FULL
      10        EA    2
Itm POWDER*
Powder

Loc STOR01      Part
LP 000000062900001
LP 629000001
LP 10142013888
Verify quantity
```

- Press the Enter key to go to the next pick. Continue picking until picks are complete.
- After all items have been picked, the system will prompt you with a message 'Pick/Stage' at the bottom of the screen. Enter S to stage the orders. Press Enter.

```
34 Cluster Pick In
INA
Order 369952*   P 1
Pick 1          EA FULL
      1          EA    0
Itm NAPKIN*
napkin

Loc T060        Part
LP 000010142013996
LP 000010142013996
LP 000010142013889
Pick/Stage?
```

- When you press Enter to stage your picks, you may be directed to a staging location if one has been assigned. If not, you can select a location. Enter (or scan) the location (see below) and press Enter. Note: You may need to enter the check digit if required at your facility.

```
35  Stage Picks

LP 000010142013889
   00000002252270S
Order 369952

===== Verify =====

Location
Vrfy Loc stg15

Enter Data
```

RF Line Picking

Line picking is similar to Order Picking, except that your pick assignment is for picking specific lines on an order (versus picking the entire order) and then you are directed to a consolidation staging area.

- From the main RF menu, select option 50 - Picking. The Picking Menu appears:

```
50  Picking Menu

51 - Default / Any
52 - Line Item
53 - Conveyor
54 - Order
55 - Cluster
56 - Batch
57 - Replenish
58 - Sortation
59 - Sort Cluster
5A - Line Cluster

Selection =>52

Enter # of item
```

- Select option 52 - Line Item from the Picking Menu. The Line Item Picking screen displays:

```

34 Line Item Pick In
INA
Order 370254*
Pick 1      PLT FULL
      600    EA      1
Itm NAPKIN*
napkin

Loc T060      Full
LP 000010142013997
LP 

Pick. F4-Done

```

- Enter the plate number that you are picking in the LP field and press Enter.

Note: Depending upon you facility's setup, you may need to enter the Location, Item Serial Number, etc.

- After each line pick is completed, a 'Pick/Stage?' prompt appears at the bottom of the screen.
 - Choose P to continue picking until you are ready to stage.
 - Choose S to stage the picks.

```

34 Line Item Pick In
INA
Order 370254*
Pick 1      PLT FULL
      600    EA      0
Itm NAPKIN*
napkin

Loc T060      Full
LP 000010142013997
LP 000010142013997

Pick/Stage? 

```

- When you choose S to stage your picks, the system will direct you to a staging location if one has been assigned to the order. If a location has not been assigned, you can select one by entering (scanning) a location.

Note: If your facility is set up with Check ID's you may need to enter the check ID.

```
35   Stage Picks

LP 000010142013997
   00000002252271S
Order 370254

===== Verify =====

Location
Vrfy Loc stg16

Enter Data
```

- After staging is complete, the next available line pick assignments appears on the screen. When you are finished line picking, press F1. The “Exit Picking?” message appears. Type Y.

Optimized Conveyor Pick

This processing supports a RF picking to a conveyor belt.

- The pick will be automatically staged in a designated staging area without the RF operator actually performing the separate staging step normally following a pick task or group of pick tasks.
- To optimize this activity, a choice of pick sequences is available by zone.

Setting Up Conveyor Zones

- Select Setup from the menu bar and click Facility, Location and Zones. The Facility Zone Maintenance window appears:

Facility ZET Zone PICK2 Maintenance

Zone:

Description:

Abbreviation:

Pick & Drop Location:

Default Pick Type: OrderPicking

Batch Pick Options

☐ Generate separate tasks

Sub-Task Limit:

Default Pick Direction: RF Pick

Next Line Pick By

☒ Order

☐ Pick Sequence

Count After Pick?

☐ Yes ☒ No

Pick Confirmation

☐ Location

☐ Item

☒ Container

Conveyor Picking

Staging Area:

Direction

☒ One-way

☐ Back-and-Forth

LINUX2TEST Facility ZET (Last Update by JOEL at 10/14/2013 12:47:36 PM)

- Click the insert record button to create a zone.
- Type a zone name in the Zone field.
- Enter a zone description in the Description field. This is a required field.
- Enter an Abbreviation for the zone. This is a required field.
- Enter a Pick & Drop location. This is an optional field.
- Select a Default Pick Type.
- Select a Default Pick Direction.
- Enter a valid Staging Area for the conveyor zone.

This will be the designated staging location for the license plate after the pick is completed (i.e., where the conveyor takes the product).

Note: The Zone-specific staging location will override an order-level or load-level staging location.

- A Direction radio button must be selected. After the pick sequences for the zone have been exhausted:
 - If "One-way" picking is configured, the system will find the next available pick with the lowest pick sequence within the zone.

- If "Back-and-forth" picking is configured the system will look for the next available task with a pick sequence less than or equal to the last performed pick.


Note: To prevent the picker from alternating picks on opposite sides of the conveyor belt each side can be defined as a separate zone or the picking sequence for the locations in the zone can be assigned in a manner that optimizes the conveyor configuration.

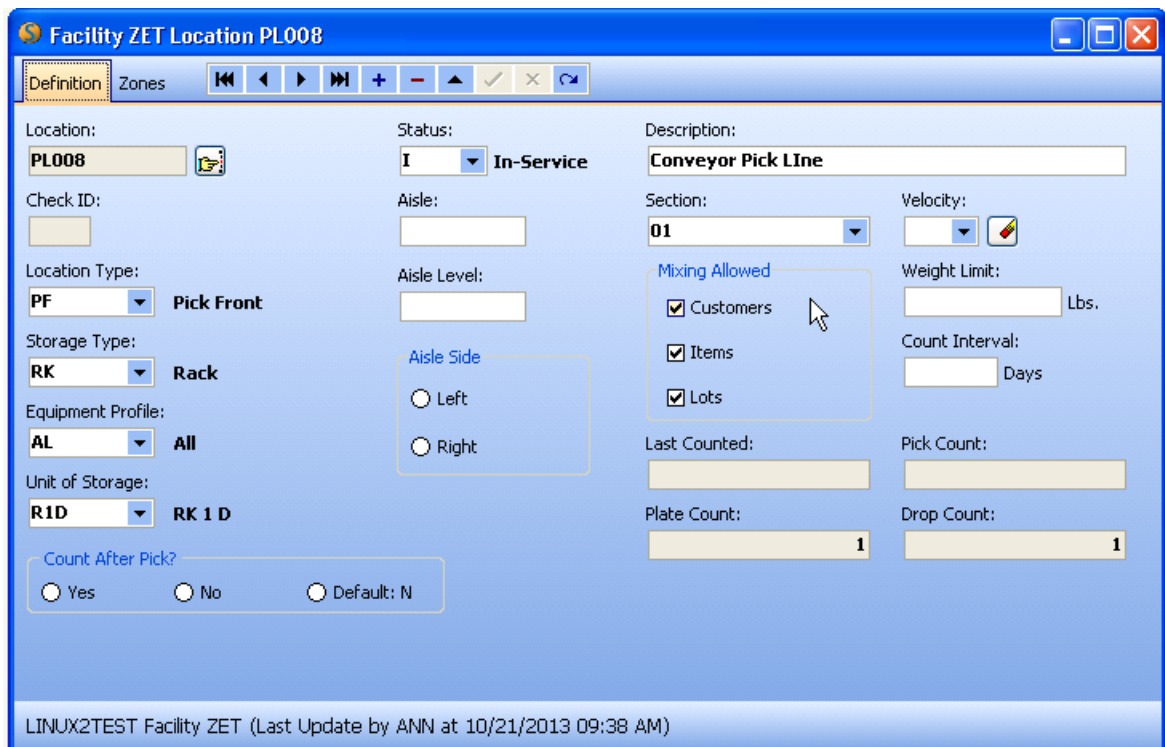
An operator will only be assigned picks in the zone of entered location.

- Click the save changes button to save the zone.

Assigning a Zone to a Location


The conveyor zone needs to be assigned to the locations from where you are conveyor picking.

- Select Setup from the menu bar and choose Facility and Location and Location Maintenance.
- Use the look-up button  to select a location from the Location Look-up screen. The Facility Location screen appears.



Facility ZET Location PL008

Definition Zones

Location: **PL008** 

Check ID:

Location Type: **PF** **Pick Front**

Storage Type: **RK** **Rack**

Equipment Profile: **AL** **All**

Unit of Storage: **R1D** **RK 1 D**

Count After Pick?
☐ Yes ☐ No ☐ Default: N

Status: **I** **In-Service**


Aisle:

Aisle Level:

Aisle Side:
☐ Left ☐ Right

Description: **Conveyor Pick Line**

Section: **01**

Velocity: 

Weight Limit: Lbs.

Count Interval: Days

Mixing Allowed
☒ Customers ☒ Items ☒ Lots

Last Counted:

Pick Count:

Plate Count: **1**

Drop Count: **1**


LINUX2TEST Facility ZET (Last Update by ANN at 10/21/2013 09:38 AM)

- Select the Zones tab. In the Picking section, use the drop down menu to select the conveyor zone.

The screenshot shows a software window titled "Facility ZET Location PL008". It has a "Definition" tab and a "Zones" sub-tab. The "Putaway" section has a "Zone:" dropdown and a "Sequence:" text field. The "Picking" section has a "Zone:" dropdown set to "ZONE2", a "Sequence:" text field, and a "Pick & Drop Loc" text field. A dropdown menu is open for the "Zone:" field, showing a table with two columns: "ZONEID" and "ABBREV". The table contains the following rows:

ZONEID	ABBREV
B-1	B-1
PICK2	Pick2
PICKING	PICK
ZONE01	ZONE 01
ZONE2	Zone2

A mouse cursor is pointing at the "ZONE2" row. At the bottom of the window, it says "LINUX2TEST Facility ZET (Last Update by ANN at 10/21/2013 09:38 AM)".

- Enter a pick sequence for the location.
- Click the save changes button .

RF Conveyor Picking (Option 53)

- Select option 53 - Conveyor Pick from the Picking Menu and press Enter.

```

50  Picking Menu

51 - Default / Any
52 - Line Item
53 - Conveyor
54 - Order
55 - Cluster
56 - Batch
57 - Replenish
58 - Sortation
59 - Sort Cluster
5A - Line Cluster

Selection =>53
Enter # of item

```


- Type a (starting) location and press Enter. The system finds the closest first pick (line, order or sortation) within the zone of the entered location according to picking sequence.

```
53 Conveyor Pick
Facility ZET
Location PL008
Enter location
```

- Type the LP that you are picking from in the LP field and press Tab.

```
34 Line Item Pick In
INA
Order 370279*
Pick 1      CS  LBL
    1      CS   1
Itm GRAPES*
grapes
Loc PL008      Part
LP 10212013001
LP
Pick. F4-Done
```

- Type the LP that you are picking to and press Enter. The next pick in the sequence appears. The first pick is automatically staged in the location you specified for the conveyor zone.

```

34 Line Item Pick In
INA
Order 370279*
Pick 1      CS  LBL
    1      CS   1
Itm APPLE*
Apple
Loc PL009      Part
LP
Pick. F4-Done

```

Additional Conveyor Picking Information

- This picking option allows an operator to remain picking in the same zone and to not have to manually stage each pick. If the operator finishes all picks for the task, everything that was picked is automatically staged at the location specified by the Zone Setup. The system then finds the next pick (if any) within the original zone based upon picking sequence. No RF prompting for staging will occur.
- Once the pick sequences within the zone have been exhausted, the system will look for the next available task with a pick sequence less than or equal to the last pick performed if "Back-and-forth" picking has been configured on the Zone setup. If One-way picking is configured on the Zone setup, the system will find the next available pick with the lowest pick sequence within the zone.
- If you try to exit from picking before all picks are complete (using the F1, F4 or F14 keys), you be asked to confirm your exit request. If you respond affirmatively, anything that was picked will automatically be staged.
- Any equipment restrictions, customer restrictions, task pre-assignment and task priority (except for active, passed and on-hold) are ignored during task determination.

PICK EXCEPTIONS

This option allows you to request an alternate location, generate a cycle count or override the pick. Some reasons that you may not be able to pick the inventory:

- Not enough inventory at the location

- Incorrect item at the location
 - Your equipment cannot get to the location
 - Inventory is there but some or all of it is damaged
 - Inventory is mixed on the pallet and there is not enough to fill the pick
 - Product is on hold
 - Product has an incorrect Date or Lot
- If you cannot pick the freight at the location, press F6. An Alt Loc (YNC)? Message appears:

```
34 Order Pick In
INA
Order 370256*
Pick 1      PLT FULL
      100    CS      4
Itm CHEESE*
Cheese

Loc T244      Full
LP 000001015201301
LP

Alt Loc (YNC)?
```

YNC stands for Yes / No / Cycle Count.

- Type Y to pick from an alternate location.
- Type N if you do not want the system to find an alternate location. The Can't Pick screen appears.
- Type C if you want to request a cycle count of the location.

RF CAN'T PICK SCREEN

When you press F6 during picking and enter N (No), the Can't Pick screen appears.

```
0A Can't Pick

===== Override =====
Reason 
LP
Qty          UOM

===== Or I Can't =====
Reason
(Equipment, etc.)
== Or No One Can ==
Reason
(Something Wrong)
Enter cant data
```

The screen is divided into 3 separate areas:

- Override
- I Can't
- No One Can

Data may only be entered in one area. When you enter a Can't Pick a cycle count task is created for the location if none currently exists. A reason is required for each area. The reason must exist in the CantPickReasons validation table. No special processing is done based upon the entered reason.

Override

- Enter a reason in the Reason field. To select a reason from a list, type ? in the field and press Enter. Can't Reasons appear:

```
07 Can't Reasons

 DM Damaged
EQ Wrong Equip
LS Loc Sh/EM
MP Mixed Pallet
OH Hold
OP Operator
WP Wron Prod

Select any item
```

Type any character next to the reason to select it and press Enter. Press Tab.

- Type the LIP number and press Tab.

Note: Any of the following fields may appear for entry: location, license plate, quantity, shipping plate, capture field. The original pick determines which of the optional fields are applicable. The "capture" field is lot, serial, user 1, user 2 or user 3.

- Type the quantity, press Tab and enter the unit of measure.

```
0A  Can't Pick
===== Override =====
Reason DM
LP 1015201301
Qty 100      UOM cs

==== Or I Can't ====
Reason
  (Equipment, etc.)
== Or No One Can ==
Reason
  (Something Wrong)
Enter cant data
```

- Press Enter. Your next assigned pick appears.

Additionally:

- The reason, original quantity, unit of measure, item, location, LP, new location, LP and quantity, are logged to the userhistory table with an event of PKOV.
- If the original pick was for replenishment, the quantity can be more than the originally requested quantity.
- The license plate cannot be overridden for a sortation pick.
- If the entered quantity is less than the original quantity, then the system will request the generation of additional picks.

I Can't

```

0A  Can't Pick

===== Override =====
Reason
LP
Qty          UOM
LP

==== Or I Can't ====
Reason
  (Equipment, etc.)
== Or No One Can ==
Reason
  (Something Wrong)
Enter cant data

```

- Tab through the fields to move the cursor to the I Can't Reason field and type a reason. Press Enter.

Note: The reason, along with the original quantity, unit of measure, item, location and LP are logged to the userhistory table with an event of PKME. The pick is placed in your "can't list" and will not be given to you until the Can't List is cleared, but can be given to another operator. A Can't List is cleared when you log in and whenever you switch equipment.

No One Can

- Tab through the fields to move the cursor to the I Can't Reason field and type a reason. Press Enter.

```

0A  Can't Pick

===== Override =====
Reason
LP
Qty          UOM
LP

==== Or I Can't ====
Reason
  (Equipment, etc.)
== Or No One Can ==
Reason
  (Something Wrong)
Enter cant data

```

Note: The reason, original quantity, unit of measure, item, location and LP are logged to the userhistory table with an event of PKNO. The pick is placed on hold.