



# Picker's Manual

*"No-More-Errors"*  
Batch Picking System

Avery & Associates  
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## INTRODUCTION

This manual is intended for both pickers and those who train pickers using the Avery & Associates “*No-More-Errors*” Batch Picking System. Pickers are led through the picking operation by handheld mobile computers with built-in bar code scanners. This manual details the use of the scanners.

The Avery & Associates “*No-More-Errors*” Batch Picking System scanner user interface has been designed to be very simple and intuitive to use. Many pickers will be able to use the scanners to pick after a very short training period and a little practice. They may not even need to read this manual since the scanner guides the user through a very simple set of steps which ensure fast and accurate picking of multiple orders.

This manual will be of greatest value to management and supervisors who want to understand all the features and options offered by the Avery & Associates “*No-More-Errors*” Batch Picking System and generate a plan to get the greatest value from its use. New pickers will, in many cases, be able to just pick up a scanner and start picking after only a few minutes of training and practice.

## OVERVIEW

The items to be shipped for a specific customer order are generated by an external system. That external system may be an order entry or processing system, an accounting system, or some other enterprise system. The Avery & Associates “*No-More-Errors*” Batch Picking System does not generate orders; it provides a quick and accurate tool to pick multiple orders simultaneously.

Depending on the nature of the external system, the details for each order may be exported by that external system and subsequently imported by the Avery & Associates “*No-More-Errors*” Batch Picking System. Or, the Avery & Associates “*No-More-Errors*” Batch Picking System may access the details of the orders directly from that external system. The details of how the orders are communicated from the order generation system to the Avery & Associates “*No-More-Errors*” Batch Picking System are transparent to the picker.

## BASIC PICKING OVERVIEW

This section gives an overview of picking without detailing the steps. They will be detailed later and more easily understood if the picker knows what he/she is trying to accomplish.

The purpose of the Avery & Associates “*No-More-Errors*” Batch Picking System is to enable a picker to quickly and accurately pick multiple customer orders during one “Pick Session”. A “Pick Session” is defined as a single trip through the warehouse.

The picker does not have to concern him/her self with how customer orders are generated or made known to the Avery & Associates “*No-More-Errors*” Batch Picking System. Either the picker or a supervisor will determine which set of customer orders are to be picked in a single “Pick Session”. The efficiency comes from picking multiple orders at one time.

The system assumes the picker moves through the warehouse with a cart that has a container for each order that is being picked during the pick session. To start a pick session, the user alternately enters (preferably by scanning) the Order Number and the Container ID. This associates a container with each order. After the picker has scanned the Order/Container Pairs for a pick session, he/she taps a command button which causes the scanner to build a pick list.

The pick list leads the user through the warehouse by displaying the location or slot where the user is to make the next pick and also displaying how many to pick from that location. The user enters the number of items he/she picks (or scans the number of items) and then scans the Container ID where the parts are being placed. The system verifies the picker has picked the correct number of items and places them into the correct container.

That is the basic process.

## CONFIGURING

The scanners need very little configuring and this should only be required the first time a scanner is used, or if the picking procedures and/or set up of the operation are changed.

The scanner needs to be configured to find the Server program that supports it (see Configuring IP Address Section, below). The scanner needs to be assigned a unique Unit ID (see Configuring Unit ID Section, below). Finally, the scanner needs to be configured to know the identification scheme for the containers (see Container ID Scheme Section, below).

Only a user with System Administrator privileges can configure the scanner.

**Please note again that these should require set up only once, and should not need any attention from the pickers.**

## ENTERING DATA

Most data is entered by scanning a bar code. Where data can not be scanned, the user can enter data from an “on-screen” keyboard using a stylus, or from “on-screen” buttons using his/her finger as a stylus. Every effort has been made to minimize the need to use a stylus to save wear on the screen and to eliminate the need to pick up a stylus.

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Please see the scanner documentation for how to access the “on-screen” keyboard and the documentation below for how to enter data with dedicated buttons.

**NEVER USE A SHARP OBJECT AS A STYLUS. THE SCREEN CAN BE DAMAGED. PLEASE USE THE PLASTIC STYLUS PROVIDED.** Pencils, ball point pens, paper clips, etc. should **NOT** be used. Appropriate Styli can also be bought for PDA’s at a local computer store.

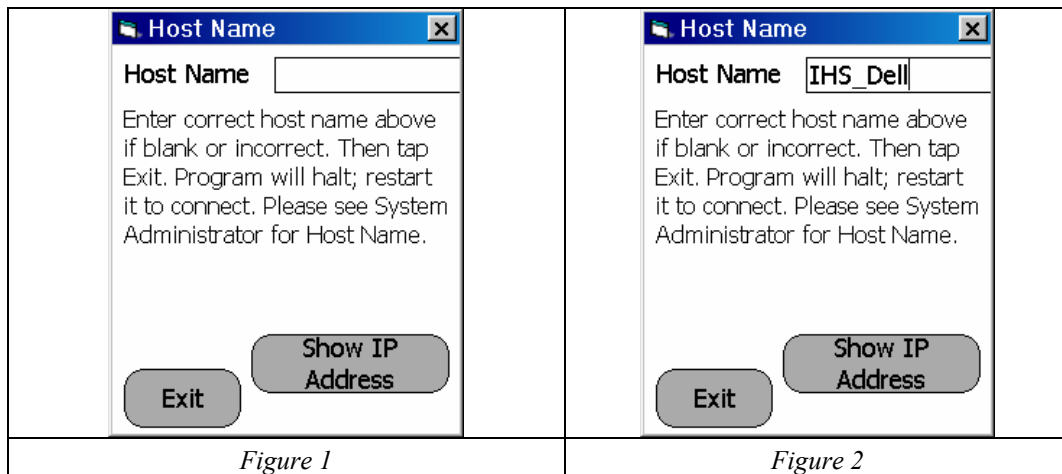
## DATA ENTRY FEEDBACK

If a user enters inappropriate data, a distinctive error code will sound and a message in red will be displayed indicating the type of error made.

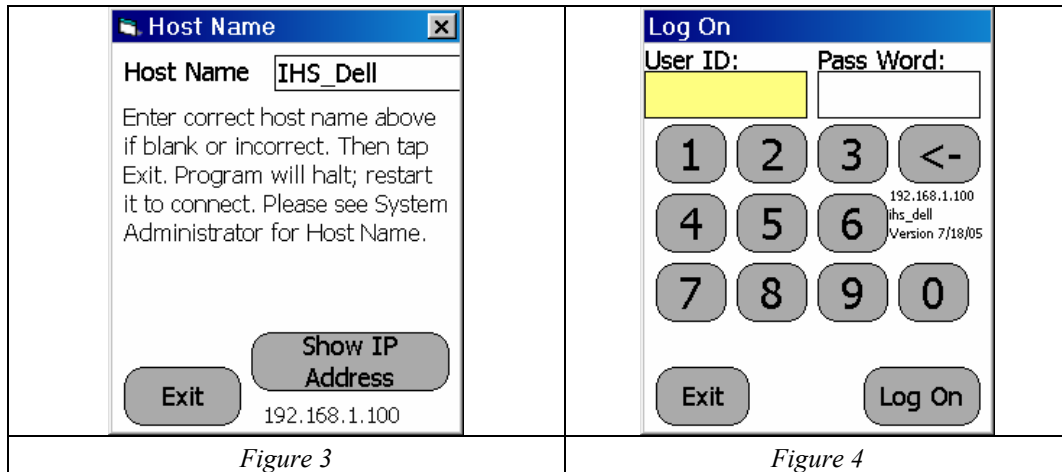
## CONFIGURING IP ADDRESS

The scanner interacts with a server program on a PC over a WIFI RF network. The scanner must be able to identify and locate the PC where the server program is running. Make sure the server is running before starting the scanner program.

The first time the scanner program is run, the screen shown in Figure 1 will appear.



Your System Administrator will give you the Host Name for the server PC. Enter that name (as is shown for IHS\_Dell) in Figure 2 and then tap the “Show IP Address” button. The IP address of the server machine should appear as seen in Figure 3; your IP address will probably be different, but should be 4 numbers separated by periods. If an IP Address does not appear, please see your System Administrator.



After the IP Address appears, tap “Exit”. The IP address will be stored in the scanner and the program will exit (halt). Restart it. The log in screen shown in Figure 4 will appear. Note that the IP Configuration screen can be selected if it is necessary to specify a different host (see Logging In Section, below).

## LOGGING IN

Each time the scanner program is started, the Log In screen shown in Figure 4 will appear (except as noted in the Configuring IP Address Section, above). Note that it shows the Host ID and IP Address as well as the version of the scanner program.

Each user will have been assigned a User ID and Pass Word by the System Administrator which must be entered into the appropriate fields on the screen. To enter data in a field, tap the field with a stylus or finger to set the focus to the field (the field with focus will be yellow) and then enter data with the scanner, “on-screen” keyboard or “on-screen” buttons.

If the User ID and Pass Word are numeric, the user can easily log in using his/her finger as a stylus without the need to use a plastic stylus. If the “on-screen” keyboard is to be used, it is necessary to use a plastic stylus as the simulated keys are too small to be selected with a finger.

Figure 5 shows a User ID of 2356 and a Pass Word of 147 entered. After entering the User ID and Pass Word, tap Log On.

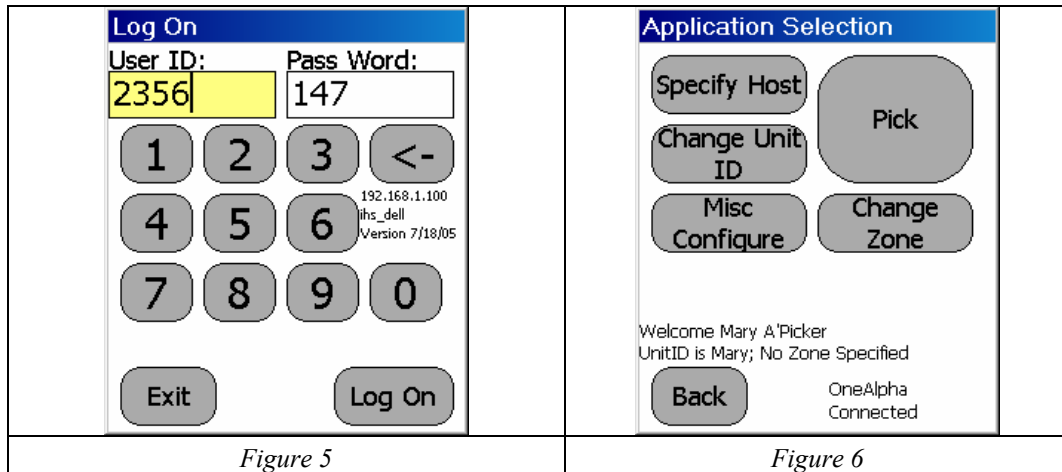


Figure 5

Figure 6

If the Unit ID and Container ID Scheme have been configured, the screen shown in Figure 6 will appear. This will be the normal behavior except the first time a scanner is used. (If the Zone Picking option has not been purchased, the Change Zone button will not be visible.)

Note that the screen is titled “Application Selection” and shows the name of the person who logged in, the Unit ID, the Container ID scheme and whether or not the scanner was able to connect to a server. Normally the user would tap ‘Pick’ to begin a pick session. From the “Application Selection” screen, the Unit ID, Container ID Scheme, and Zone information configuration screens can also be accessed.

If the Unit ID or Container ID Scheme has not been configured, the “Application Selection” screen will not appear after logging in. In its place the screens for configuring the Unit ID or Container ID Scheme will appear, but only if the user who has logged on is an administrator. If the User is not an administrator, an error tone will be heard and the user instructed to get an Administrator.

## CONFIGURING UNIT ID

After the user logs in, if the scanner has not been configured with a Unit ID, the screen for entering the Unit ID will be displayed rather than the Application Screen as shown in Figure 7. This screen can also be accessed from the Application Selection screen if it is necessary to change the Unit ID.

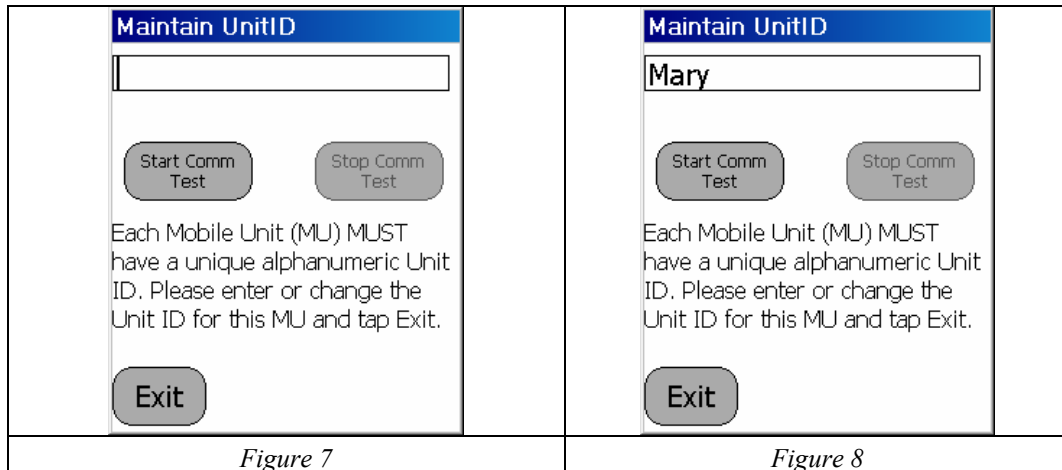


Figure 7

Figure 8

**EACH UNIT MUST HAVE A UNIQUE UNIT ID. IT IS THE RESPONSIBILITY OF THE SYSTEM ADMINISTRATOR TO MAKE SURE EACH UNIT HAS A UNIQUE ID. THIS IS WHY AN ADMINISTRATOR CAN ENTER THE UNIT ID.**

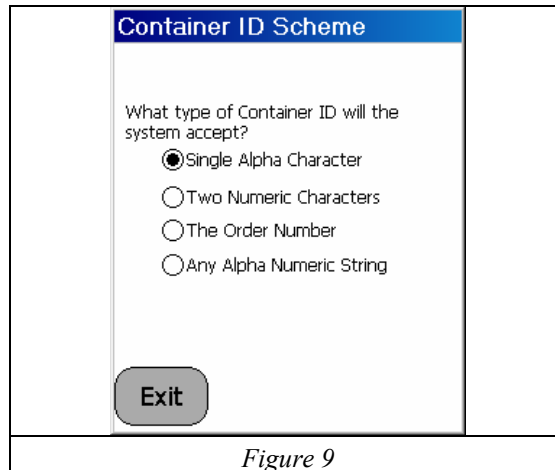
Enter the Unit ID in the field provided. Figure 8 shows an example where the Unit ID is Mary. After entering the Unit ID, tap Exit.

Note that this screen also has two buttons labeled “Start Comm Test” and “Stop Comm Test”. If the user taps “Start Comm Test”, the scanner will beep repeatedly to confirm the communication via WIFI RF with the server works. This is a feature that may be of use to a System Administrator and will be seldom used.

After tapping “Exit”, the scanner will return to the log on screen. It does this to allow a picker to log on, rather than having the System Administrator remain logged on.

## CONFIGURING CONTAINER ID SCHEME

After the user logs in, if the scanner has not been configured with a Container ID Scheme the screen for selecting the Container ID Scheme will be displayed rather than the Application Screen as shown Figure 9. This screen can also be accessed from the Application Screen if it is necessary to change the Container ID Scheme.



Select one of the Container ID Schemes and tap “Exit”. The scanner will return to the log on screen. It does this to allow a picker to log on rather than having the System Administrator remain logged on.

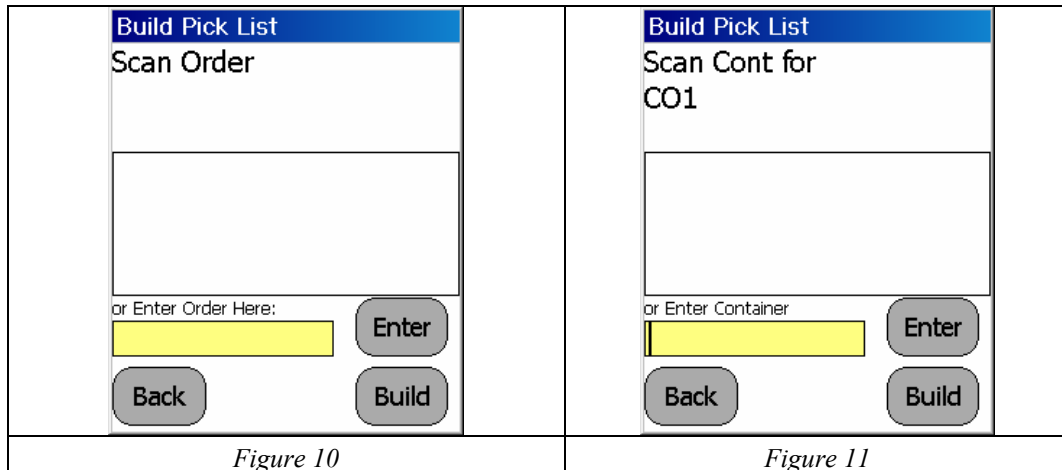
If “Single Alpha Character” is selected, picking containers must be bar coded with a single alpha character. If “Two Numeric Characters” is selected, picking containers must be bar coded with two numeric characters. If “The Order Number” is selected, picking containers must be encoded with the order number of the order being put into it. If “Any Alpha Numeric String” is selected, the containers can be bar coded that way. This forces the pickers to use the correct containers as determined by the System Administrator.

## SAMPLE DATA

This manual uses sample data where the Customer Orders are CO1, CO2, CO3, etc. The items on the orders are Item01, Item02, Item03, etc. The slots or locations are Slot01, Slot02, Slot03, etc. Obviously for your enterprise, the Order, Item and Slot numbers will be known to you.

## BUILDING THE PICK LIST

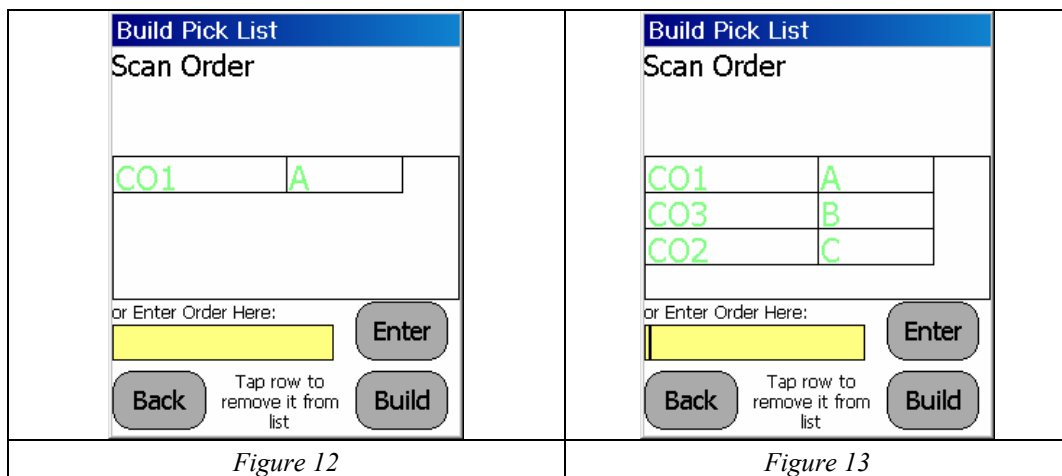
When the Build Pick List screen shown in Figure 10 appears, the user will alternately scan/enter the Order Numbers and Container ID’s to associate a container with each order. The picker will then tap the “Build” button to build the pick list.



The details of how this is done follow.

After the picker selects “Pick” from the Application Selection screen, the screen shown in Figure 10 appears. Note that the screen instructs the user to Scan Order (just under the caption near the top of the screen). Assuming the order number is bar coded, the picker will scan the order number. If a bar code is not available, the picker can enter the order ID next to the “Enter” button using the “on-screen” keyboard and tap the “Enter” button. Obviously it is faster, easier and more accurate to scan the order number than to enter it.

After the picker scans/enters the Order Number, the screen shown in Figure 11 appears. In this case, the Order Number is CO1. Note that the screen instructs the picker to Scan Cont(ainer) for CO1. The user can either scan the container or enter the container ID. After scanning/entering the Container ID, the screen in Figure 12 appears. In the figure, Container A has been associated with Order CO1.



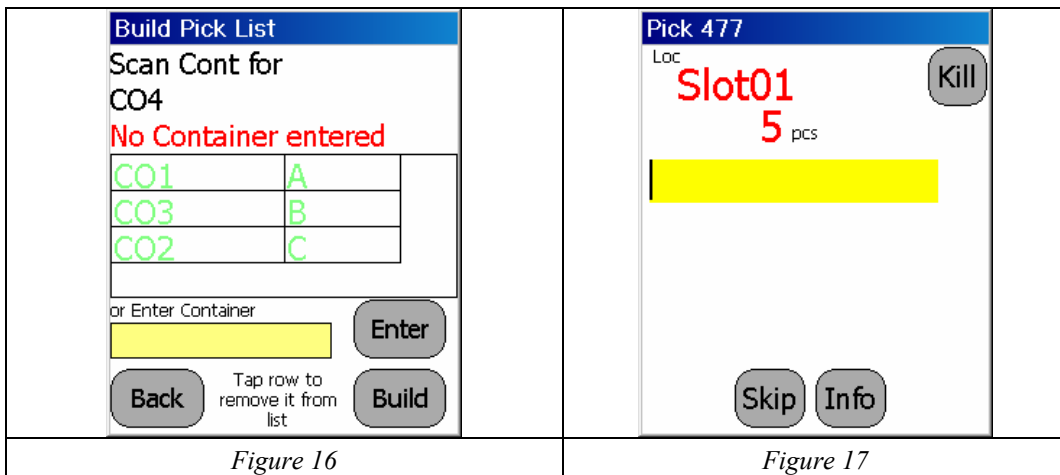
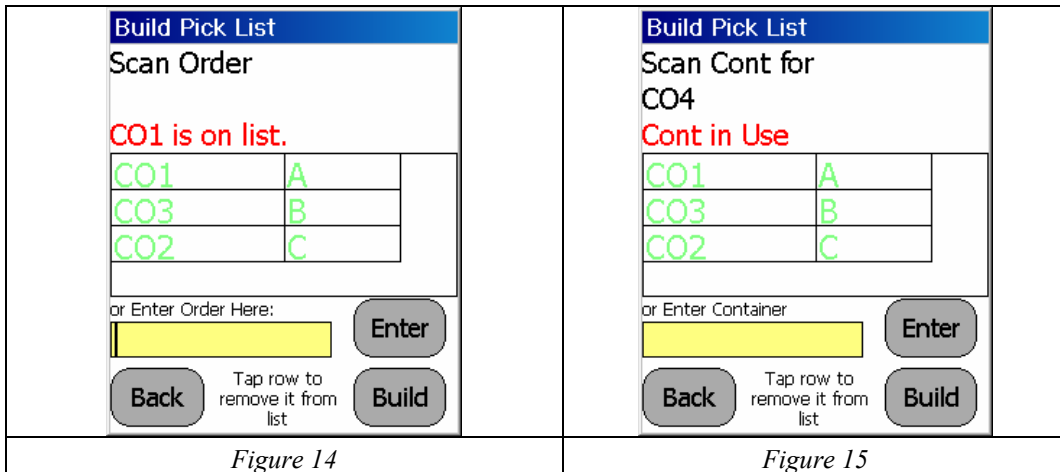
Note that the Order/Container ID pair is shown and the user is again prompted to scan an order. The picker continues to enter the pairs until all orders for a pick session have been entered. Figure 13 shows 3 order/container pairs have been entered.

If the user wants to remove an order/container pair from the tentative pick list, he/she should just tap that pair.

If the user wants to abort building a pick list, he/she should just tap “Back”.

The system will not accept the same Order or Container twice. The system will not allow an order to be picked that has already been fully picked.

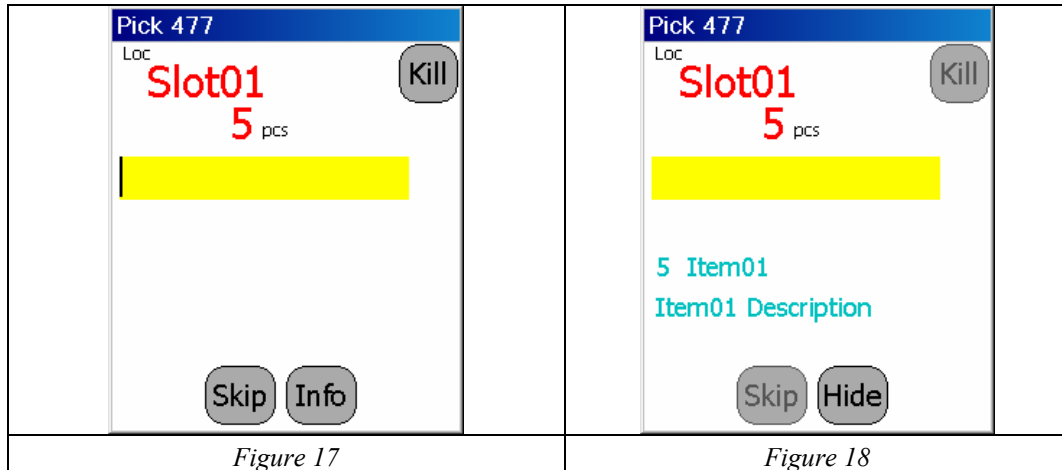
Some of the error screens are shown in Figure 14, 15 and 16. In Figure 14 the picker attempted to scan/enter Order CO1 a second time. In figure 15 the user attempted to scan/enter Container A a second time. In Figure 16, the picker tapped “Enter” but had not entered an Order Number.



After the set of Order/Container pairs has been entered, the picker should tap “Build”. A screen similar to Figure 17 will appear. Its exact appearance will be different not only because the screen shows demo data, but also because optional functionality may have been purchased. The screen shown is the basic screen with no options. Even with options, the screens are quite similar and easily recognizable.

## BASIC PICKING PROCESS (Without Options)

The basic picking process is very simple. The user is shown a slot and quantity to pick from that slot. Note the simplicity of the screen with no distracting information. In this case, Figure 17 shows the picker is to go to slot Slot01 and pick 5 items.



The picker would go to the location (slot) and scan/enter the Slot ID. If the slot is not bar coded and the user does not want to enter the slot number with a stylus, he/she can scan/enter the item that is in the slot. (When the picker enters a character with the “On-Screen” keyboard, an enter key appears that must be tapped after entering the data).

Note that if the quantity is below the threshold level and the picker scans the Item Number rather than the slot, the scanner will count that as one item picked.

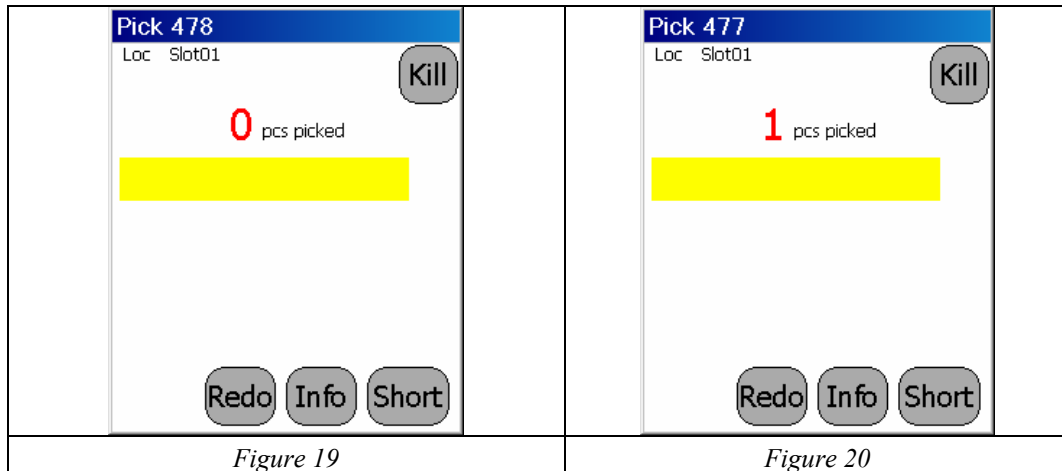
If the user wants to see information for the item that is to be picked, he/she can tap “Info”. The Item Number and Description will be shown as in Figure 18. After reading the information, the picker must Tap “Hide” to continue.

If the picker does not want to pick from this location/slot at this time (For example if physical access to the slot is blocked by a fork lift), he/she can tap “Skip”. The next pick will be shown. Note that the scanner will return to the skipped pick after other picking has been done.

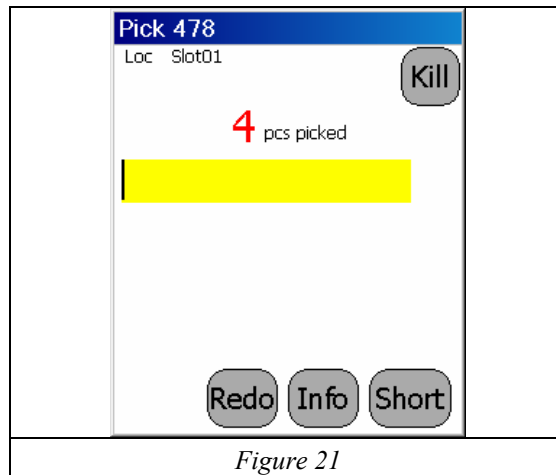
If the user wants to remove an order from the pick list, he/she can tap “Kill”. That procedure is detailed later in this document.

The behavior of the scanner after the slot is scanned depends on the quantity of items to be picked from the slot. If the quantity is less than a threshold number, the picker must scan each item as it is removed from the slot bin. If the quantity is greater than the threshold, the picker will be prompted to enter the quantity. The System Administrator can set the threshold value, but typically is will be between 5 and 10. It is tedious to scan an item more than 5 or ten times, but for lower values it is more accurate to scan each item.

If the quantity is below the threshold value, a screen similar to Figure 19 will be shown. The picker is expected to scan/enter the Item Number. If the item is not bar coded, the picker can scan/enter the Slot Number. The scanner will interpret the Slot ID as the Item Number. Screen 20 shows the screen after one item has been scanned/entered.



As each item is scanned, the screen is updated as shown in Figure 21 where 4 of the 5 items have been scanned. Note also in Figure 21 that the picker can tap the “Info” button to see the item information or the “Kill” button if he/she wants to Kill the Order or Pick List (see below).

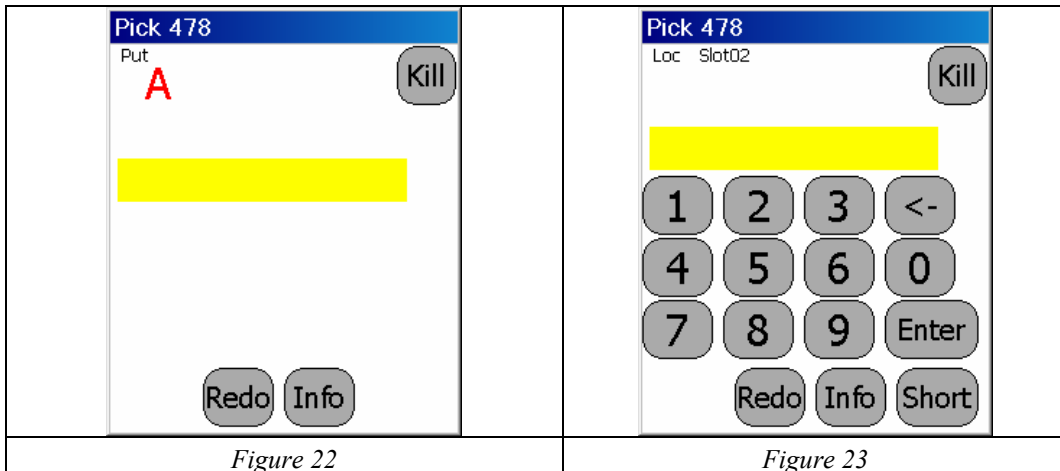


If there are not enough items to fill the order, the picker can tap the “Short” button to complete the current pick.

If the System Administrator has set up alternate Item Numbers for an item, the user can scan that Alternate Item Number in place of the specified Item Number. This allows for situations where identical products have different part numbers and are kept in the same slot. (This is different than Substitute Items which are described below).

The system verifies each scan during this procedure and will not accept anything other than the correct Item Number, Alternate Item Number (or the slot as a substitute for the item).

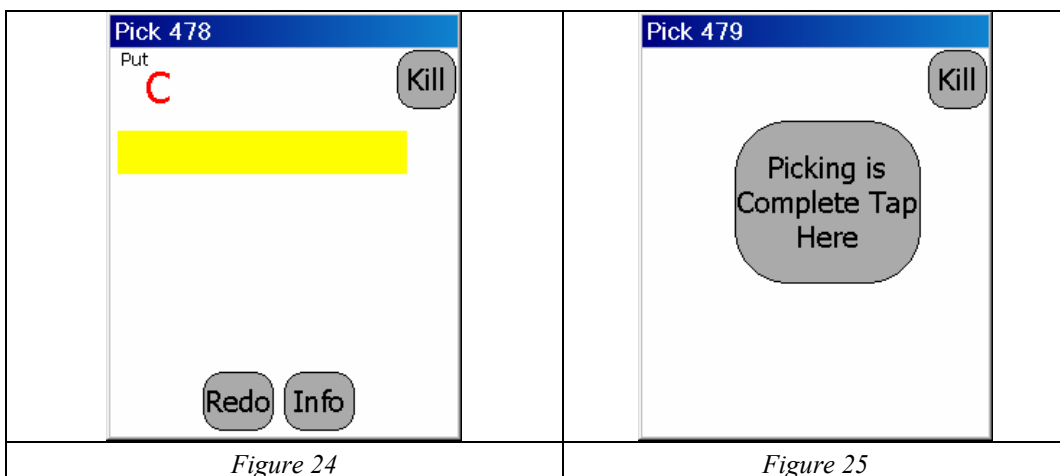
After the correct number of items is scanned, the picker is prompted to scan the Container ID as shown in Figure 22.



If the quantity is above the threshold value, a screen similar to Figure 23 will be shown. The picker is to enter the quantity that he/she picks from the slot. The numeric buttons have been made large enough to be tapped with fingers, eliminating the inconvenience of picking up a stylus.

If there are not enough items, the user enters the amount that is picked and taps "Short". If there are enough, the user enters the correct amount and taps "Enter". If the user taps "Enter" the system will verify that the amount matches the required amount. If the user taps "Short" the system will verify the amount is less than the required amount. Note that the user can tap the Info or Kill buttons if required.

The "Redo" button allows the user to restart the current pick if he/she becomes confused or needs to start over for some reason. After the user taps the "Enter" or "Short" button, the screen shown in Figure 24 appears. This is identical to Figure 22.



When the screen shown in Figure 24 appears, the picker is to scan the Container ID to verify he/she is putting the items in the correct container. After entering the Container ID, the next pick is displayed.

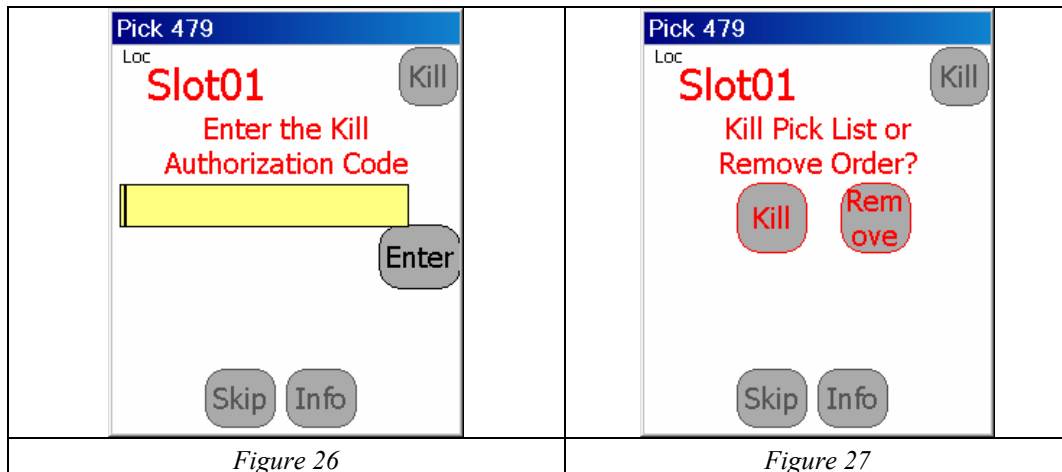
After all items, including “Skips”, are completed, the screen shown in Figure 25 will appear. Normally the user would tap the big button labeled “Picking is Complete; Tap Here”. The user also has the option to Kill an Order or the Pick List. The database is not updated until the picker taps “Picking is Complete; Tap Here”.

The System returns to the Build Pick List Screen.

## REMOVE AN ORDER OR KILL PICK LIST

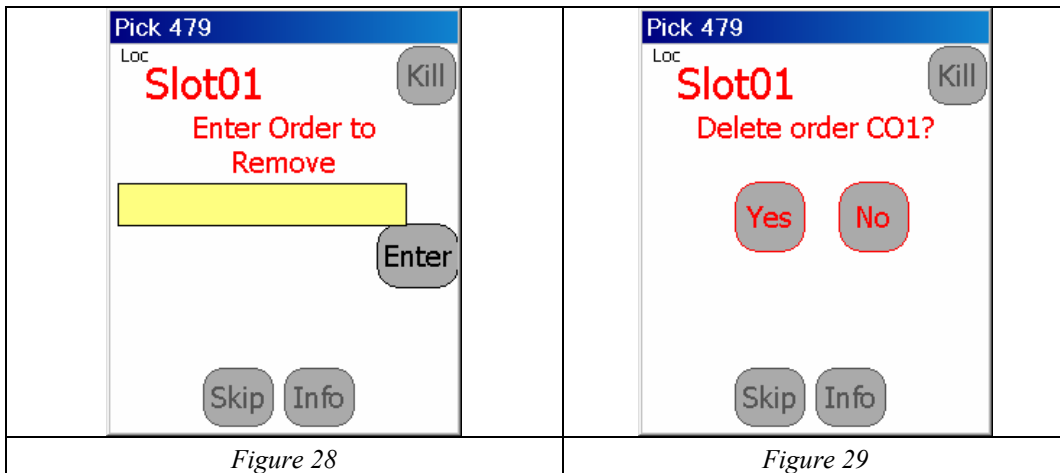
It may happen during a pick session that it is necessary to remove an order from a pick list or abort picking the pick list altogether.

To do this, the picker taps the “Kill” button. The screen shown in Figure 26 appears. The user enters the Kill Code which will be provided by the System Administrator and then taps Enter. Management may decide not to give the Kill code to pickers to force supervisor approval of any Kill. The screen shown in Figure 27 appears for the picker to choose either “Remove an Order” or “Kill a Pick List”. Tap the appropriate Button.



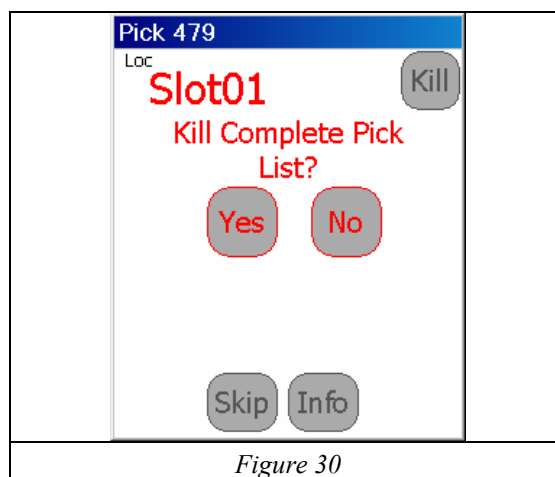
## REMOVE AN ORDER

If the user has elected to “Remove” an order from the pick list, the screen in Figure 28 will appear. After entering an Order Number and tapping “Enter” the screen in Figure 29 will appear to allow the picker to confirm or cancel the action. Only orders that are on the pick list can be “Removed” from it.



## KILL A PICK LIST

If the picker has elected to “Kill” a pick list, the screen in Figure 30 will appear, allowing the picker to either confirm the action or cancel it.



## REPLENISHMENT OPTION

It may be part of the picker’s responsibility to inform a supervisor or management when slots are low on inventory. The Replenishment Option supports this task. If the Replenishment Option is installed, the Picking screen will have a “Rep” button left of the “Kill” button as shown in Figure 31. By tapping the “Rep” button, the scanner will log to the database a record with the slot and item that are low. The picker can only tap the “Rep” button once per pick; after it is tapped, it will become invisible. It will be made visible as the user moves to the next pick.

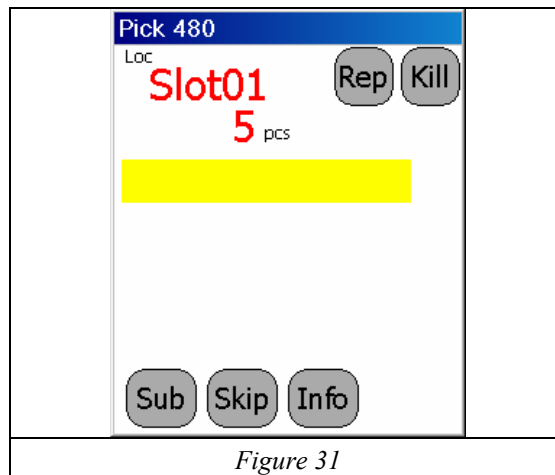
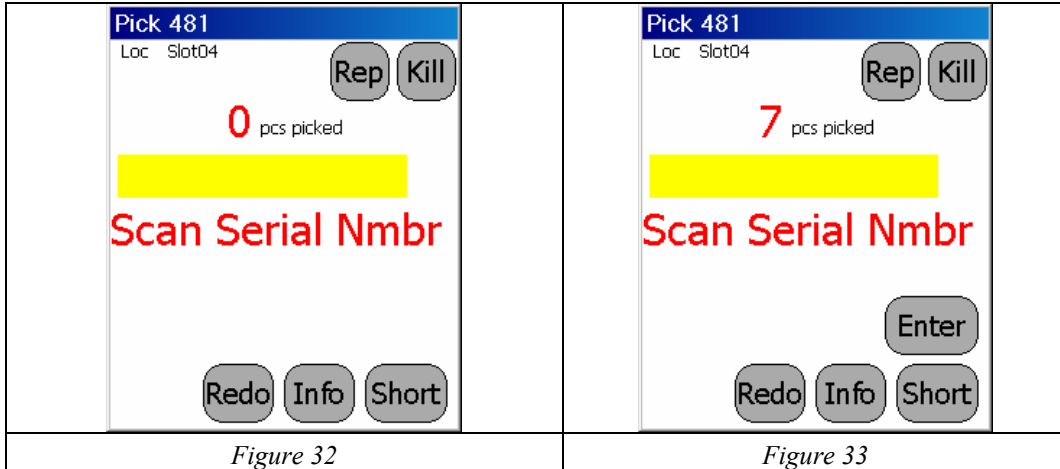


Figure 31

## SERIAL NUMBER OPTION

For some items it may be necessary to capture the Serial Number of the item being picked and shipped. The Serial Number Option provides that capability.

If the Serial Number Option has been purchased, then items which require the capture of a Serial Number will behave differently than other items. Regardless of the quantity of an item required, whether it is over or under the “threshold value”, the picker will be prompted to scan/enter a Serial Number for each item picked. The user will scan Serial Numbers rather than scanning Item Numbers or entering a quantity. Figure 32 shows the picker being prompted for a Serial Number. The scanner will verify that each Serial Number is different. Figure 33 shows the count of Serialized items picked; in this case 7 Serial Numbers have been entered.



The scanner will not accept either the part number or the Slot ID as a Serial Number to eliminate the possibility of the picker scanning the wrong bar code. An item will not require both a Serial Number and a Lot ID.

## LOT ID OPTION

For some products it is important to pick a specific Lot ID and/or to capture the Lot ID of the items being picked. The Lot ID Option provides that capability.

Sometimes it may only be necessary to capture the Lot ID of the item being picked. In other cases it may be necessary to pick items with matching Lot IDs. And, in other cases it may be necessary to pick items with a specific order specified Lot ID. The Lot ID Option supports all three requirements.

If the Lot ID Option has been purchased, then items which require the capture of a lot ID will behave differently than other items. Regardless of the quantity of an item required, whether it is over or under the “Threshold value”, the picker will be prompted to scan/Enter a Lot ID for each item picked.

If it is only necessary to capture the Lot ID, the user will be prompted to scan/enter the Lot ID as shown in Figure 34. For each item the user can scan the Lot ID of the item.

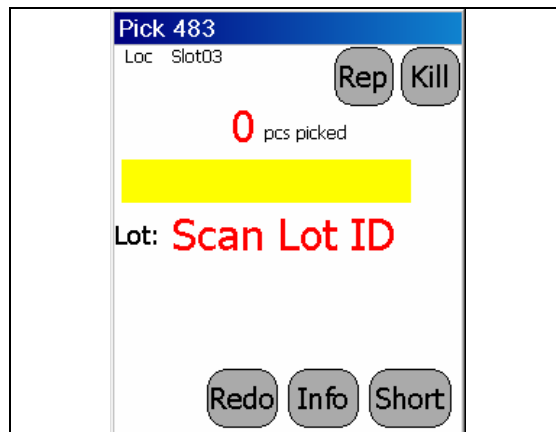
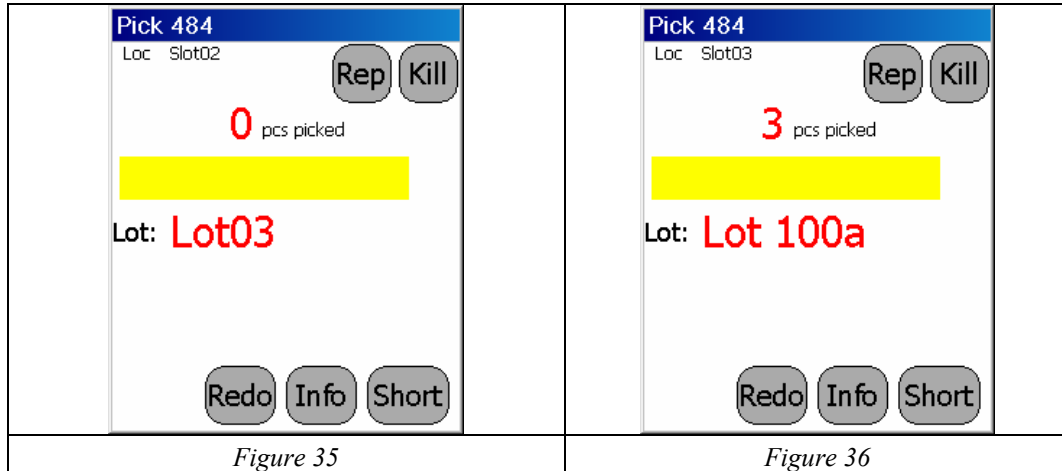


Figure 34

If it is required to pick items with matching lots, the user will be prompted to scan/enter the Lot ID as shown in Figure 34. However, after the first Lot ID is scanned, the picker must scan the same Lot ID for each item to verify he/she is picking matching lots. Figure 36 shows a pick after 3 items with Lot ID Lot 100a have been picked.

If it is required to pick a specific Lot ID, then the user will be prompted to scan/enter the Specific Lot ID as shown in Figure 35.



The scanner will not accept either the part number or the Slot ID as a Lot ID to eliminate the possibility of the picker scanning the wrong bar code.

An item will not require both a Serial Number and a Lot ID.

## SUBSTITUTE ITEMS OPTION

Some enterprises may want to allow substitute items for an item on an order. The Substitute Items Option provides for this.

If the Substitute Item Option is enabled, and if a line item allows a substitute to be picked, the “Sub” button will be visible on the Pick Screen as shown in Figure 37. Figure 38 shows the screen after the “Sub” button was tapped in Figure 37. The substitute item is in Slot04.

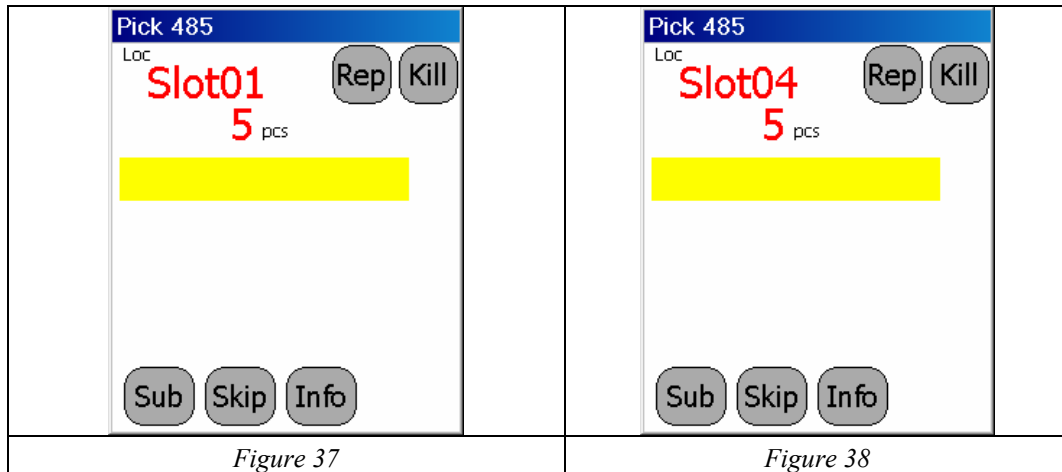
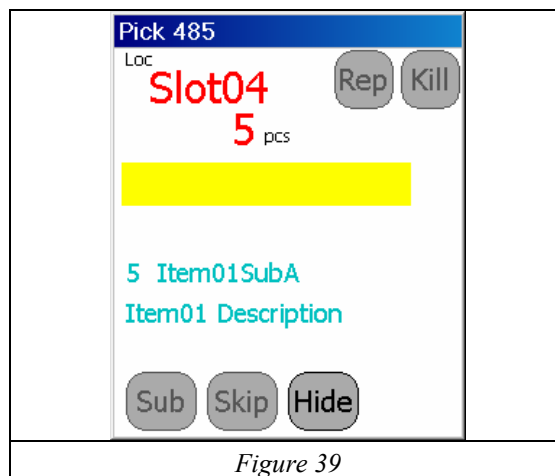


Figure 39 shows the substitute item as displayed when the “Info” button is tapped. The substitute item is not only in a different slot, but has a different Item Number. This is different than an alternate item; an alternate item is just an alternate part number for the same item; a substitute item is a different item that the order allows to be picked and shipped.

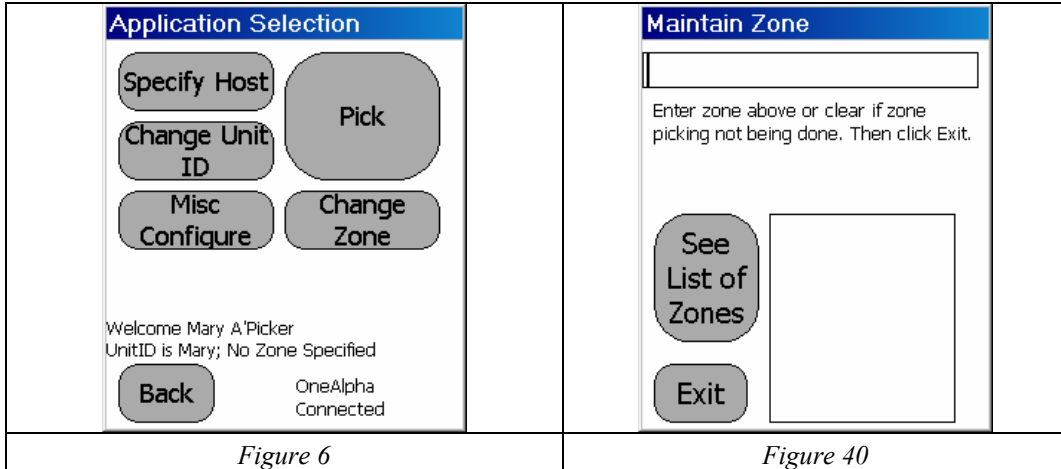


Substitute items are picked just like normal items.

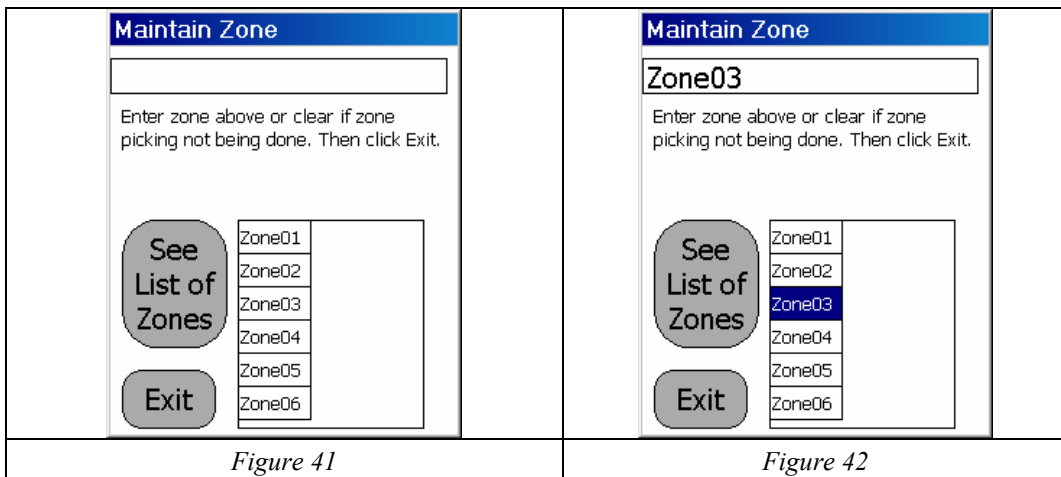
## ZONE PICKING OPTION

Some warehouses are so large that one picker can not cover the whole warehouse. The warehouse is divided into Zones and each slot is assigned to one Zone. To support this, the Zone Picking Option is available.

If Zone picking is to be done, each scanner must be configured to indicate which Zone it is being used in. This configuration is done by selecting “Change Zone” from the Application Selection Screen in Figure 6. If “Change Zone” is selected by tapping it, the screen in Figure 40 appears.



The user can enter the Zone for where the scanner is being used. The easiest way to do this is to tap “See List of Zones” and the list of warehouse zones will be shown as can be seen in Figure 41. Select a Zone from the list; Figure 42 shows the user selected Zone03. After specifying the Zone, tap “Exit”.



Now when a pick list is built on a scanner, only picks from locations in that zone will be shown. If an order requires picks from multiple zones, multiple scanners will need to be used. A scanner can not be set up to pick from multiple zones. However, multiple scanners can be used in the same zone but can not pick the same orders at the same time.