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Introduction

Overview

XpertCount™ is a program designed to run on the Symbol 3100 Portable Data Terminal (PDT) to make it easier to count barcodes and transmit data from the PDT to the PC running XpertMart™. XpertCount™ allows you to create multiple files to store inventory counts. You can also lookup the total count of a particular barcode or of the entire file.

XpertCount™ comes pre-loaded on the Symbol 3100. If XpertCount™ does not appear when you turn the PDT on, contact your XpertMart™ distributor for help.

This manual is divided into two parts, one for each types of user. The User Guide is for restricted users who can perform all operations except configure the PDT or create and modify count files. Restricted Users can only use one count file but otherwise use the XpertCount™ program as it appears.

The System Administrator Guide explains how to create new count files, change or delete count files as well as how to access the Control Panel with configuration options. You might want to use multiple count files for different parts of the store; for example, using count file A for one stand, count file B for a different shelf in the store and count file C for the warehouse in the back. This allows you to manage smaller files which are therefore less likely to be error-prone without having to constantly return to a PC to transmit your data.

To switch from being a Restricted User to the System Administrator, go to the Change User option in the Main Menu and enter the System Administrator's password.

The final part of this Manual explains how to use a single PDT in a multi-user environment using the XpertCount™ program.

User Guide

Scanner Orientation

There are four buttons on the Symbol 3100 that are particularly useful when using the XpertCount™ program and you should take the time to familiarize yourself with them before using the PDT.



- 1) **ALPHA key:** activates the numeric keypad if you hold the Down Arrow key (v) and press the ALPHA key. If you hold down the Up Arrow key (^) and the ALPHA key you will activate the text keypad. You can tell which mode you are in by the cursor on the screen. If the cursor points down you are in numeric mode; if it points up you are in text mode.

NOTE: The arrow keys use the numeric keypad.

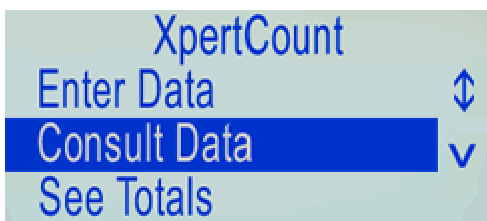
- 2) **Left Trigger:** activates the laser scanner used to read bar codes.

- 3) **Function (FUNC) key:** activate the chosen function whenever you press <FUNC> + <X = number of function>. For example, pressing <F1> or <FUNC> + <1> opens the Help menu.
- 4) **Right Trigger:** changes the keypad from numeric to text and vice-versa. Use this key to toggle between the two modes.

Refer to the Symbol 3100 manuals for more information on operating the terminal, including the functionality of the other keys not covered in this manual.

Main Menu

The Main menu has six options, or operations you can perform:



- 1) **Enter Data:** used when you want to scan in new barcodes;
- 2) **Consult Data:** used when you want to lookup how many counts you have for a certain barcode;
- 3) **See Totals:** used when you want to lookup the total counts you've made (of all barcodes) in a count file;
- 4) **Send Data:** used when you are ready to transmit the count file to a PC;
- 5) **Files:** used to create, delete or switch count files;
- 6) **Change User:** used to switch from one user to a different user.

Use the Up Arrow key (^) and the Down Arrow key (V) to move along the menu options. When you've found the option you want to use, press the <ENTER> key. The Left Arrow key (<) will take you to the first option of any menu and the Right Arrow key (>) will take you to the last option of the menu.

You will notice a checkmark appears to the right of the menu option you are currently selecting. Press <ENTER> to begin the selected operation.

Enter Data

Use the Enter Data operation when you are ready to scan the barcodes you want to count. The Enter Data screen looks like this when you first enter it from the Main Menu:



The title in the upper left hand corner is the operation you are currently using, in this case Enter Data. To return to the main menu, press F9.

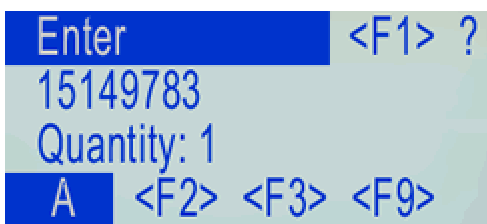
The (F1) in the upper right corner indicates that there is a help menu available by pressing F1.

The letter in the bottom left-hand corner shows the count file that you are currently using. Go to the Files operation to change to a different file.

The rest of the bottom line of the screen is used to display the relevant functions that are available to the user in this screen. These are discussed below.

There are two ways to enter a barcode once you are in the Enter Data operation screen: by scanning the barcode or by entering the barcode number using the keypad. To scan the barcode, press the Left Trigger to activate the laser reader. You can also press the <SPACE> key for a continuous scan; the laser reader will be active for a set time or until it reads a barcode. Use the keypad to enter the barcode number whenever the scanner cannot read the barcode.

When you've entered a barcode into the system you will see two lines appear in the middle of the screen:



The first line shows the barcode you've just entered (15149783). You can check the number if you have any doubts about which barcode you just scanned. The second line shows the total number of times the barcode has been entered (1).

If you are having trouble reading barcodes with the scanner, make sure you are standing a foot away from the barcodes. Getting too close to the labels makes it difficult for the scanner to pick them up. It also helps scan them at an angle rather than being directly perpendicular to them.

You should also check the lighting of the room. Dim lighting or quartz light bulbs can interfere with the laser reader. Make sure the labels you are trying to read are not faded and that there is enough white space around the edge of the barcode. And of course, make sure that the PDT has been configured to read the barcode formats you are trying to scan (see below).

Functions

The following is a list of functions that can be activated using the <FUNC> key. Not all functions are available in every screen. You can see which functions are available at the bottom of every screen. Use the Right Arrow (>) and Left Arrow (<) keys to scroll through the options.

<F1> Help: Opens the help screen. The help screen is context-sensitive and is relevant to the operation being used. Once the help screen is open, you can scroll through it by using the Right Arrow (>) and Left Arrow (<) keys.

<F2> Modify: Lets you modify the quantity of barcode you've just scanned or entered. When you press <F2> you can then enter the new quantity. Pressing <ENTER> commits the new quantity and erases the previous quantity.

<F3> Delete: Lets you delete the previous record. In other words, you are deleting the last barcode you scanned and all of the quantities entered. Pressing <ENTER> deletes the record; press <CLEAR> to cancel and the record will not be deleted.

<F9> Return: Exits the operation being used and returns you to the Main Menu.

Consult Data

Use the Consult Data operation to lookup how many quantities of a certain barcode you've counted. You can also modify quantities or delete barcodes from this screen.

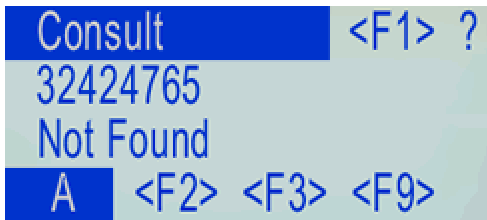
Once in the Consult Data screen, enter the barcode you wish to lookup, either by scanning it or entering the number using the keypad. When you enter a barcode you will see the following:



The screenshot shows a terminal-style interface with four lines of text. The first line is 'Consult' followed by '<F1> ?'. The second line is the barcode '96982042'. The third line is 'Quantity: 8'. The fourth line is 'A' followed by '<F2> <F3> <F9>'. The background is light blue, and the text is dark blue.

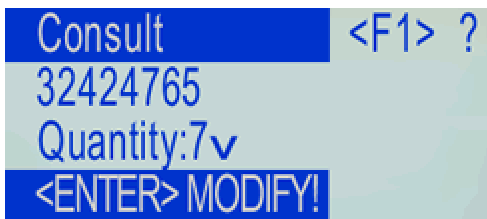
The second line shows the barcode you've entered (96982042) and the third line shows the quantity that has been counted (8).

If you see a "Not found" message on the screen then the barcode has not yet been scanned into the system.

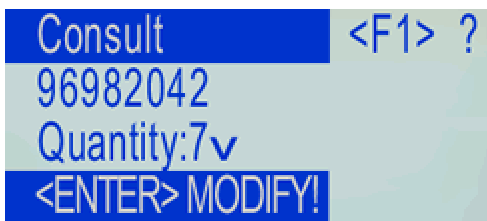


To lookup a second barcode, simply scan it in and the screen will refresh.

You can modify the quantity by pressing <F2>. For example, you might be counting a stack of boxes and accidentally forget where you left off. When you enter the barcode you've been counting you see that it shows a quantity of 8. When you double-check this with the physical boxes you realize you've counted one too many. You press <F2> and enter the new quantity of 7.



You can also erase the record of the barcode you are looking up by pressing <F3>. Use <F3> if you discover you've accidentally been counting the wrong items or have lost your count and wish to begin again.



See Totals

Use the See Totals operation to view the total number of barcodes and the total number items you've scanned so far in one count file.

The See Totals screen looks like this:

```
Total <F1> ?
Num. Records: 7932
Num. Items: 34589
A <R-ARR> Change
```

The second line shows the total number of records, or barcodes that you've scanned. The third line shows the total number of items that have been counted.

If you have 5 boxes of the same merchandise you would have 1 unique record and 5 items counted. Note that the number of items is almost always larger than the number of records since you usually have more than one of a kind in inventory. In the example above, the user has counted 7,932 unique barcodes and a total of 34,589 items.

Note that the bottom left-hand corner indicates the count file being used; in this case, file A. The totals being shown are only for that file. You can switch count files by using the Right Arrow key (>). You will see this screen:

```
Total <F1> ?
Num. Records: 48
Num. Items: 126
B Change File: C
```

Enter the count file you wish to use. In the example above, the user is changing from count file B to C.

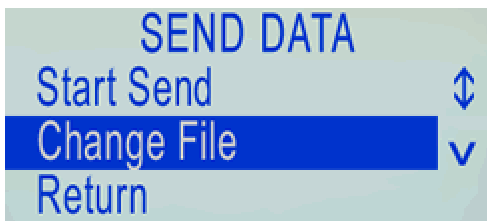
Use the See Totals operation to check on your count before sending the data to a PC. You might, for example, be counting the boxes you received from a vendor. If the Packing Slip in front of you shows 55 items but you've only counted a total of 53, you might want to redo the count to be sure before sending the data to the computer.

You can also use the See Totals operations midway through your count as a way of getting a "running subtotal."

Send Data

Use the Send Data operation when you are ready to transmit your count data to the PC. Before you begin, it is a good idea to make sure you are confident in the data you are about to transmit. Use the See Totals and Consult Data operations to double-check your count.

The Send Data screen has a menu with three options, shown below. Use the Return option to return to the Main Menu.



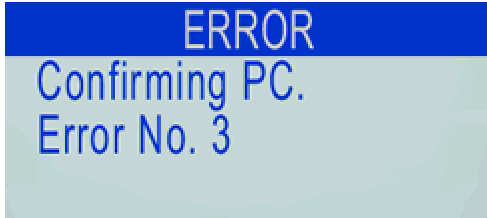
You can only send one count file at a time. Use the second option, Change File, to switch count files. When you enter the Change File screen you will see which file you are currently using in the bottom left-hand corner. To change files, simply type the count file you want to use and press <ENTER>.

Next, make sure the PDT is in the communications cradle and the modem cable is plugged into the computer (usually the serial port). Once you have selected the count file you want to transmit and you've made sure the communications cradle and cable are set, return to the Send Data menu and press Start Send. If you are using XpertMart™ to receive the count data, press F11 in the Transaction screen you are using.



You will see the words “Connecting...” and then “Verifying...”. You will also see the red COMM light in the cradle blink. If everything is ok you will see the data appear on your PC screen, for example, populating the XpertMart™ Count Sheet you've opened.

If you get an error message, check to make sure the cradle is properly connected to the PC. Check that the PDT communications configuration settings (see Control Panel below) match those of the software on the PC receiving the transmission.



If you are using XpertMart, go to the Configure>Station Configure>PDT Configuration menu. Select “Symbol 3100 PDT” from the list of available PDTs and choose the port where you connected the modem cable, usually COM1. Set the baud rate to 19200.

If you are still having problems sending data, check to make sure that the Java communications drivers are installed. These two drivers can be found in the XpertMart Installation CD and should be copied into these directories:

C:\Java\lib\javax.comm.properties
C:\Java\lib\ext\comm.jar

System Administrator Guide

Overview

The System Administrator has access to two menus that the restricted user cannot use: the Files submenu in the Main Menu and the Control Panel. To switch from being a restricted user to the System Administrator, select the Change User option in the Main Menu and enter the System Administrator's password.

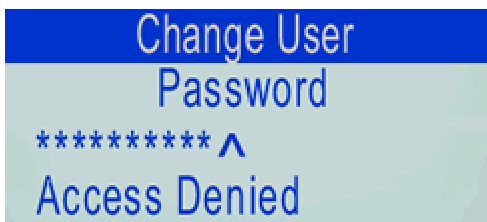
Change User

When you select the Change User option in the Main Menu and press <ENTER> you will see a screen that asks you for the System Administrator's password:



The default System Administrator password is: **+ROOT.32.ADMIN.64***;
However, the password can be changed in the Control Panel. Note that when entering a password you will have to use the <ALPHA> key to switch from the numeric mode to the text mode and back. Since the password you type in is masked, pay attention to the cursor to know which mode you are in. A down arrow (v) cursor means you are in numeric mode while an up arrow cursor (^) means you are in text mode.

If you enter the wrong password you will see this screen and will not be able to enter the Files menu or Control Panel:



If you enter the correct password you will have full access to the system:



Files

The Files submenu has four options:



- 1) **Create File:** used to create a new count file;
- 2) **Erase File:** used to erase a particular count file;
- 3) **Erase All Files:** used to erase all count files;
- 4) **Return:** used to return to the Main Menu.

Create File

Theoretically you can create up to 26 different count files, one for each letter of the alphabet, although in practical terms you may run out of memory depending on the size of each file. Realistically you can manage 6-12 large count files with no problem using the XpertCount™ program on a Symbol 3100 PDT.

When you want to create a new count file you will see this screen:



Enter the name of the count file you want to create. The name can only be one character long and must be a letter of the alphabet (you cannot use numbers). The default count file is A. In the example above, the user is currently using file B and is about to create file D.

When you've entered the name of count file you want to create and press <ENTER> you will see a screen indicating the file has been created:



If a count file with the same name already exists you will be asked to try again.

When you have created more than one count file remember that you can only scan barcodes or enter data into one count file at a time. Similarly, you can only send the data to a PC of one count file at a time.

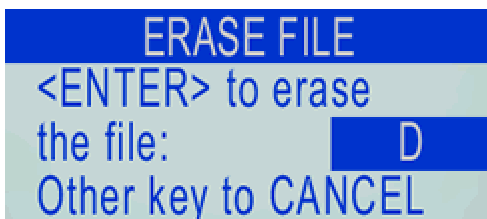
You can always see which count file you are currently using in the bottom left-hand corner of most screens. There are two places where you can switch count files. The first is in the Totals screen using the Right Arrow (>) key. The second is in the Send Data screen by selecting the Change File option.

The count file that was last used by the System Administrator is the one that is available for use to the restricted user.

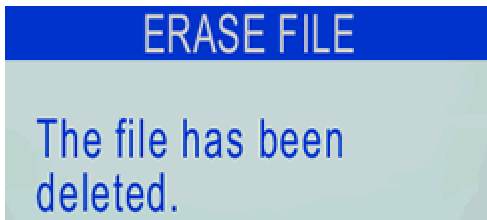
Erase File

Select this option to delete the count file you are currently using. If you want to delete a different count file you must first change count files one of the two ways discussed above.

The system will warn you and will display the file you are about to erase:



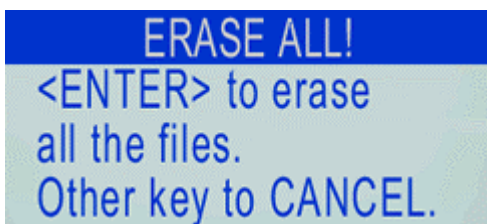
If you are sure you want to proceed press <ENTER>. Otherwise press a different key to cancel. If you press <ENTER> you will see this screen and all of the data in that file will have been deleted:



Erase All Files

Select this option if you want to delete all count files. Be very careful when using this option since once you've deleted a file you cannot retrieve it: all data will be lost.

The system will warn you before deleting the files:



If you press <ENTER> all files will be created. A new count file A will automatically be created but it will be empty.

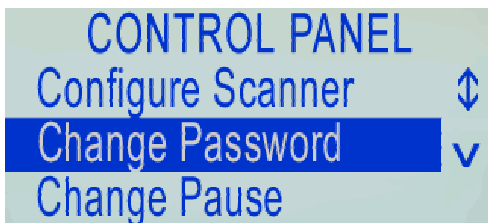


It is a good idea to purge the PDT of old count files before beginning any major physical inventory count so you do not run into any memory limitations.

Control Panel

The Control Panel has several options the System Administrator can use to configure the PDT. If you have not entered the right password as System Administrator you will be denied access to the Control Panel.

To enter the Control Panel press <FUNC> + <3>, then <CTRL> + <C>, then <ENTER>. The Control Panel menu will appear:



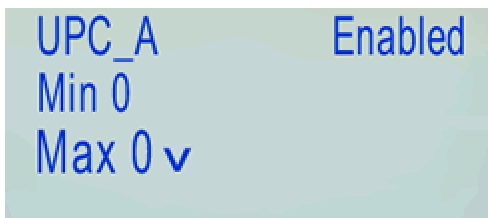
The Control Panel has five options:

- 1) **Configure Scanner:** used to set which barcode formats the PDT will read;
- 2) **Change Password:** used to change the System Administrator's password;
- 3) **Change Pause:** used to change the interval at which the laser reader projects when you press the <SPACE> key;
- 4) **Choose Scanner:** used to set the scanner type used with the PDT;
- 5) **DR-DOS:** used to enter the PDT's underlying operating system;
- 6) **Return:** used to return to the Main Menu.

Configure Scanner

Select this option to configure which barcode formats the PDT can read. If the PDT reads some barcodes but not others, this is where you to enable the barcode formats that are disabled.

When you select Configure Scanner from the Control Panel menu and press <ENTER> you will see a screen that looks like this for each of the eleven major barcode formats:



The top line shows the name of the barcode format on the left, and whether it is Enabled or Disabled on the right. To enable or disable a format press <ENTER>. In the example above, the UPC_A barcode format is Enabled.

The second line shows the Minimum character length of the barcode. This parameter tells the scanner the minimum number of characters to expect in a barcode of this format. If the Min is set to 6 and the scanner reads a barcode only five characters long it will ignore the barcode.

To change the Minimum parameter, move the cursor the Min line on the screen. You move the cursor by pressing the <SPACE> key. Increase the parameter by pressing the Right Arrow (>) key and decrease the parameter by pressing the Left Arrow (<) key.

The third line shows the Maximum character length of the barcode. This parameter tells the scanner the maximum number of character to expect in a barcode of this format. Any barcode with more characters than the Max will be ignored by the scanner.

To advance to the next barcode format screen, press the Down Arrow (v) key. The format XpertMart™ uses when it prints barcodes is Interleaved 2 of 5 (shown in this menu as CODE_125). Make sure this format is Enabled and that the Min and Max are set to 0.

Take care when setting these barcode parameters. If you know exactly the barcode format you are using all of your labels conform to set Min and Max parameters then these configuration settings will help you have a more precise count.

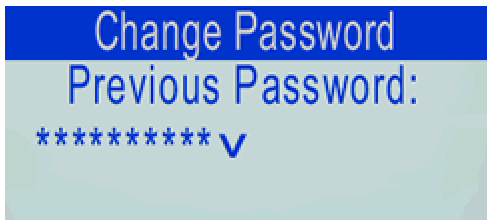
However, if you are not sure of the barcode formats you are using and the character length fluctuates then these setting can work against you: if you have not configured the formats properly your scanner may not be picking up some of the barcodes you are trying to read.

If you are having trouble reading some barcodes and want the greatest openness possible in the scanner make sure every format is Enabled and set all Min and Max parameters to 0.

Note that advanced users can use these configuration options to conduct precise counts by restricting certain barcode formats. For example, suppose you have a certain line of merchandise you know is only tagged in the CODE_128 format. You could temporarily disable all other barcode formats so that the reader only picks up the CODE_128 barcodes. This way as you move through the store doing a physical inventory you will be guaranteed to only count items belonging to the merchandise line you are interested in as all other barcodes will be ignored by the scanner.

Change Password

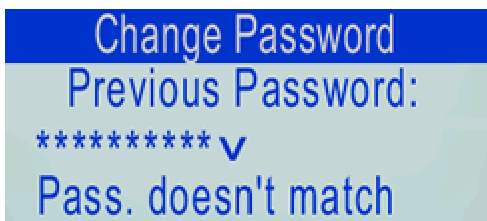
Select this option if you want to change the System Administrator's password. You will first be asked to enter the Previous Password, or the one currently being used.



The default System Administrator password is: **+ROOT.32.ADMIN.64***;
Note that when entering this password you will have to use the <ALPHA> key to switch from the numeric mode to the text mode and back. Since the password you type in is masked, pay attention to the cursor to know which mode you are in.

Once you've entered the previous password you will be asked to enter the new password. When you are finished you will see "Key Modified" on the screen, meaning the password has been changed.

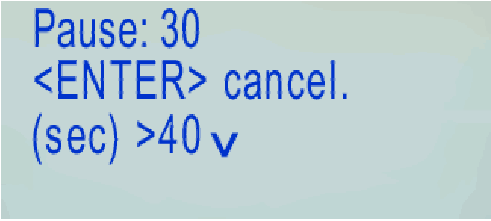
If you do not enter the Previous Password correctly you will not be allowed to change the password and you will see the following message on the screen:



Be very careful when setting the new password as there is no way to retrieve lost passwords. So be sure to write it down somewhere safe!

Change Pause

Select this option if you want to change the interval at which the laser reader projects when you press the <SPACE> key, unless it reads a barcode first. When you select Change Pause in the Main Menu and press <ENTER> you will see this screen:



```
Pause: 30
<ENTER> cancel.
(sec) >40 v
```

The top line shows the duration, in seconds, the laser reader is projected. The default value is 30 seconds. If you want to change the duration, enter a new value and press <ENTER>. In the example above the user is changing the interval from 30 to 40 seconds.

Choose Scanner

Selecting this option takes you to a menu where you can choose the type of scanner your PDT is using. Since the Symbol 3100 has a built-in laser scanner on a swivel head at the top of the terminal, you would chose the first option, “Only Laser”. However, you would only need to configure this setting if you experience any trouble with the laser scanner.



```
SCANNER MENU
Only Laser v
Contact with Pulse
Contact no Pulse
```

Other PDT types use different scanner types. You may also want to attach an external wand or scanner to the PDT. In either case, consult the manufacturer’s manual for the correct setting to choose.

DR-DOS

Selecting this option takes you to the PDT's underlying operating system, DR-DOS. This is akin to opening a DOS window when you are using Microsoft Windows (or opening the Command Prompt in Windows XP).

Only advanced users should enter the DR-DOS screen. Any operation you perform directly in the PDT's operating system could adversely affect the performance of the XpertCount™ program.

When you select DR-DOS from the Control Panel menu and press <ENTER> the screen will clear and you will see the prompt "D: ^".

To return to XpertCount™, type "COLLECT" and press enter. When you re-enter the XpertCount™ program you will need to type-in the System Administrator password.

Using the PDT in a Multi-User Environment

Overview

Given the limitations of the PDT platform, XpertCount™ is designed as a dual-user program. There are only two recognized users: the user who enters the correct System Administrator password and has full access to the system, and the user who does not enter the correct password and has restricted access.

However, with a little organization and creativity it is possible to have multiple users use the same PDT running the XpertCount™ program. Suppose you have four people who want to use the PDT to do inventory counts. Perhaps each of these is the manager of an independent store or each is responsible for counting the merchandise of a different section within a store.

The System Administrator (SysAdmin) should first create three additional count files so there is one count file per user. Recall that the count file that was last used by the System Administrator is the one that is available for use to the restricted user. So after setting up the count files the SysAdmin would change files to file A and “logout” of the system by going to the Change User screen and entering an incorrect password. This would set the PDT to restricted user mode.

The first user would then use the PDT to count their merchandise and all data would be stored in file A. When they were done counting, the first user would hand the PDT back to the SysAdmin who would then “login” by going to the Change User screen and entering the correct password. The SysAdmin would then switch to count file B and once again logout.

The second user would then use the PDT to count their merchandise, handing the terminal to the SysAdmin when they were done. The SysAdmin would setup count file C for the third user, and so on.

The advantage of this method is that each of the restricted users does not have access to the other count files. This is particularly useful if you want to have two people count the same merchandise without knowing each other’s results. The SysAdmin can compare the two totals to make sure they match before transmitting one of the count files to the PC. The deliberate redundancy will ensure greater accuracy in the counting.