ShelfNet™ System
User's Guide

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USA Electronic Emission Notice

FCC Radio Frequency Interference Statement

The ERS products discussed in this document control the ERS EasyLabels Shelfnet™ system. The ShelfNet equipment in this system has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection again harmful interference when the equipment is operated in a commercial environment. This equipment uses and generates radio frequency energy. If this equipment is not installed and used in accordance with the instructions in this document, harmful interference to radio communications may result.

User Information

This equipment complies with Part 15 of the FCC rules. Operation is subject to the two following conditions:

1. This equipment does not cause harmful interference.
2. This equipment must accept any interference received, including interference that may cause undesired operation.

User Caution

The Federal Communications Commission warns users that changes or modifications to this equipment not expressly approved by ERS may void the user's authority to operate this equipment.

Canadian Electronic Emission Notice

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe A respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

The Active Cell Antenna (ACA) discussed in this document complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

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Welcome To The ShelfNet System

i. About this Publication

The ERS Shelf Label System, ShelfNet, is an electronic shelf label system consisting of proprietary ERS hardware components and the ShelfServer software application that manages this hardware. It is installed in your retail environment to maintain price information on Electronic Shelf Labels (**ESL**s). It does so by interacting with your store's central computer to obtain current price information and then displaying these prices on ESLs mounted at the shelf edge. This ensures that the price the customer sees in the aisle matches the price charged at the checkout register. The ShelfNet System User's Guide describes the typical, daily procedures that you perform to control your store's operating environment.

This is a *user's* guide. It is intended for the operations, pricing, administration, scan coordinating, and merchandising personnel who most frequently use the ShelfNet System on a daily basis. As one of these persons, you are expected to refer to this guide to answer questions and resolve issues that arise regarding daily ShelfNet procedures.

ii. Organization

This document is designed as a *guide*. It is not intended to replace or redefine current store procedures. Always refer to your store manager for questions concerning store procedures. This guide is broken down into nine major sections:

1. *Chapter 1. Overview of the ERS Shelf Label System* provides a brief overview of the ERS Electronic Shelf Label system. Included is an introduction to ShelfNet and its main hardware components. Also included is an overview of how ShelfNet communicates with existing store systems and ShelfNet's self-monitoring capability.
2. *Chapter 2. ShelfServer Navigation* includes a series of diagrams that provide an overview of the layout of ShelfServer menus, screens and windows. These diagrams are helpful in navigating through the ShelfServer User Interface (SSUI). In addition, procedures you use to log on and off of ShelfServer, and a description of the SSUI, including the *Main Menu* and the options it contains, is provided.
3. *Chapter3. System Monitoring* provides an introduction to system status checks, both manual and automatic, and available reports.
4. *Chapter 4. Product Operations* describes how to accomplish product searches and price changes. Each procedure is described and directions are provided for using ShelfServer to accomplish these store tasks.

5. *Chapter 5. Electronic Shelf Label Activities* describes many of the typical day-to-day tasks you may be asked to perform. These tasks include both the ShelfServer activities you perform at the computer and those activities you perform in the store aisle. Each procedure is described and directions are provided for using ShelfServer to accomplish these routine store tasks.
6. *Chapter 6. Power Applications* describes the types of Power Applications (Power Apps) that may be available and how they are controlled. These applications are configured differently for each store. More detailed information is normally provided during training sessions that pertain to your store's specific configuration.
7. *Chapter 7. Frequently Asked Questions* provides answers to some of the more commonly asked questions regarding the ShelfNet System, and includes possible solutions to problems where appropriate. This section can be used to help eliminate a problem, or even preclude a problem.
8. *Appendix A. Daily In-Store Maintenance of the ShelfNet System* describes the step-by-step procedures to follow on a daily basis, in minimum detail, to help ensure proper operation of the ShelfNet system
9. *Appendix B. Using the Handheld Terminal* provides information on basic handheld terminal functionality, such as logging on and selecting applications.
10. *ShelfNet System Glossary* defines various names and terms used in this guide.

iii. Typographical Conventions

Several type faces and text formats are used throughout this guide. Please refer to the following formatting in the text to help you identify special information.

Format:	Type of Information:
Bold type	Words and characters in **bold** type are used to introduce a new term.
Italic type	Words and characters in *italic* type are used to emphasize particular words. They are also used to indicate *section titles*, *heading titles*, *names of ERS reports*, *file names* and other *ERS manual titles*.
this font	Words and characters in **this font** indicate titles of ShelfServer **menu items**, **screens**, **windows** and any characters and words that may appear in the ShelfServer **user interface**. These words and characters are also used to indicate keyboard commands.
`this font`	Words and characters in `this font` indicate what you type on a command line from your keyboard.

iv. Keyboard Conventions

Before you begin using ShelfServer, it is important to understand some of the navigation keys and how they are used within this user interface. For purposes of this documentation, keys will be represented by a key symbol, for example, the Enter key will appear as 

.

Keys:	Description:
ESC or CTRL + P	This key (or key stroke combination) allows you to backup from a particular screen and return to the previous screen. You may also use this key to get back to the **ShelfServer Main Menu**.
(**Tab** key)	This key allows you to move from field (or grouping of fields) to field in a screen.
↑	This key allows you to move up one item in a grouping of fields and/or menu items.
CTRL + U	This key stroke combination acts like ↑.
↓	This key allows you to move down one item in a grouping of fields and/or menu items.
CTRL + D	This key stroke combination acts like ↓.
PG UP	This key allows you to move to the previous page if you are in a list.
CTRL + R	This key stroke combination acts like PG UP.
PG DN	This key allows you to move to the following page if you are in a list.
CTRL + V	This key stroke combination acts like PG DN.
←	This key acts as backspace and allows you to move back one character in the text entry field.
CTRL + H or <**Backspace**>	This key (or key stroke combination) allows you to delete the current character in the text entry field.
CTRL + A	This key stroke combination allows you to go to the beginning of the text entry field.
CTRL + E	This key stroke combination allows you to go to the end of the text entry field.

The result of pressing the ENTER key depends on the item in the screen that currently has focus. For example:

Screen Item:	Result of pressing ENTER :
text entry field	Commits the value entered and moves to the next field or grouping of fields.
push button (an example of a push button is a button like **OK, Yes** or **No**)	Activates the button.
radio button (a radio button provides a selection for one out of several choices)	Selects the highlighted choice and moves to the next field or grouping of fields.
list of items (e.g. a list of products)	Selects the current item highlighted in the list.

Caution:

Special keyboard keys, when using UNIX, may be mapped to the ASCII codes CTRL + D or CTRL + Z (for example, the DEL key). Hitting one of these keys may cause the SSUI to close and return to a UNIX prompt. If you accidentally hit one of the keys and the user interface does close, simply log back on to ShelfServer; refer to *Logging On* on page 2-1.

Throughout this User's Guide you are directed "From the Main Menu, use the arrow keys to select menu item...". An alternate to using the arrow keys is to depress the number on the keyboard that corresponds to the number of the menu item.

As an example, from the *Reports Menu* you can select menu item number 7, the *Items Added Report,* by depressing the number 7 on the keyboard rather than using the arrow keys. Doing so will cause the cursor to jump to menu item number 7, then simply press ENTER .

Chapter 1. Overview of ERS Shelf Label System

The ERS Shelf Label System, ShelfNet, is an electronic shelf label system consisting of proprietary ERS hardware components and the ShelfServer software application that manages this hardware. It is installed in your retail environment to maintain price information on Electronic Shelf Labels (**ESL**s). It does so by interacting with your store's central computer to obtain current price information and then displaying these prices on ESLs mounted at the shelf edge. This ensures that the price the customer sees in the aisle matches the price charged at the checkout register. ShelfNet also offers services to assist you with your product merchandising, promotion, and stocking operations in the store.

The remainder of this chapter describes:

- How ShelfNet fits into your store environment and in particular how it interfaces to existing store computers.
- The ShelfNet hardware components, their functions, and their relationship to adjacent components.

1.1 System Description

ShelfNet hardware together with ShelfServer software interface with the store's existing **In-Store Processor** (**ISP**) and/or the **Point-of-Sale** (**POS**) system, depending on how the individual store is configured. The ISP is a central computer that receives price changes and marketing data from a remote location, such as the store chain headquarters. The ISP forwards this data to the POS controller, cash registers (POS terminals) and to the ShelfNet system.

The installed ShelfNet system displays price information and other product and promotional data on ESLs at the shelf-edge.

1.1.1 ShelfNet System Topology

Figure 1-1 Typical ShelfNet System Overview shows how a store-wide ShelfNet installation is typically configured to run ShelfServer software to control and maintain ESLs.

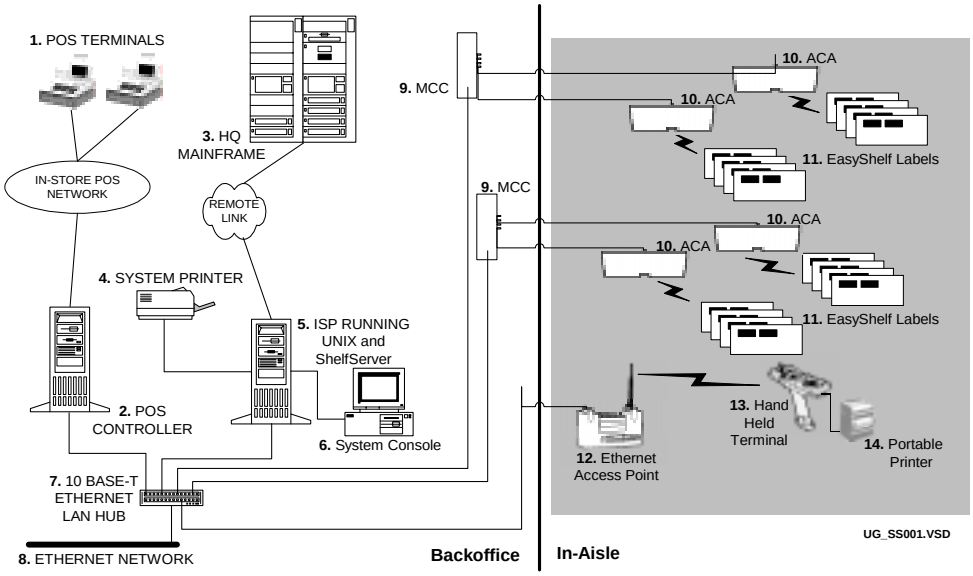


Figure 1-1. Typical ShelfNet System Overview

In *Figure 1-1 Typical ShelfNet System Overview,* two **POS terminals (1)** are shown. For large installations, there are many more POS terminals, in many different configurations. At each store, the POS terminals are connected into a POS network loop with a POS controller running its own operating system (OS). The **POS Controller (2)** is linked with an existing **ISP (5)**, running a ShelfNet compatible operating system and ShelfServer. The store headquarters or chain-wide **Mainframe (3)** is remotely linked with ShelfServer running on the ISP. Also linked to the ISP is a **System Printer (4)**, which is used by store personnel to print ESL overlays and reports.

1.1.2 In Store Processor (ISP)

The ISP is the central computer system that stores product and price information databases, receives and processes product information from a remote location (store headquarters) and controls the cash registers (POS terminals) in the store. The ISP provides a user interface to the product information databases in conjunction with ShelfServer. This user interface is displayed, on demand, on the ISP terminal and provides the means to manage, maintain and update the ShelfNet system and it's databases, 24-hours a day. ShelfServer is designed to be "portable" (able to run on a variety of operating systems) and therefore may reside on its own computer or on the existing store ISP. Each store decides this individually.

1.1.3 Point of Sale System (POS)

The POS system is comprised of the **POS Terminals** (cash registers) and the **POS Controller**. The POS Controller receives product data from the ISP and writes it into a database every time a product or merchandising change is made, (e.g. price change). The POS databases are compatible with ShelfServer, allowing product information to be passed from the POS database to the ShelfServer database routinely.

1.2 ShelfNet Components

The ShelfNet system is made up of several major hardware and software components that interact with the computer system in each store. This section describes each of the major hardware components. The number in parenthesis next to the component name allows you to relate each component to it's position within the system by referring to Figure 1-1.

1.2.1 Multi-Cell Controller (MCC)

The Multi-Cell Controller (MCC) (9) provides a link between ShelfServer software (running on the ISP or separate PC) and the Active-Cell Antennas (ACA), which communicate directly with the ESLs at the shelf-edge. MCCs receive data from ShelfServer and send it out to the ACAs, which communicate that data to the ESLs. MCCs also send data back from the ESLs and ACAs to ShelfServer.

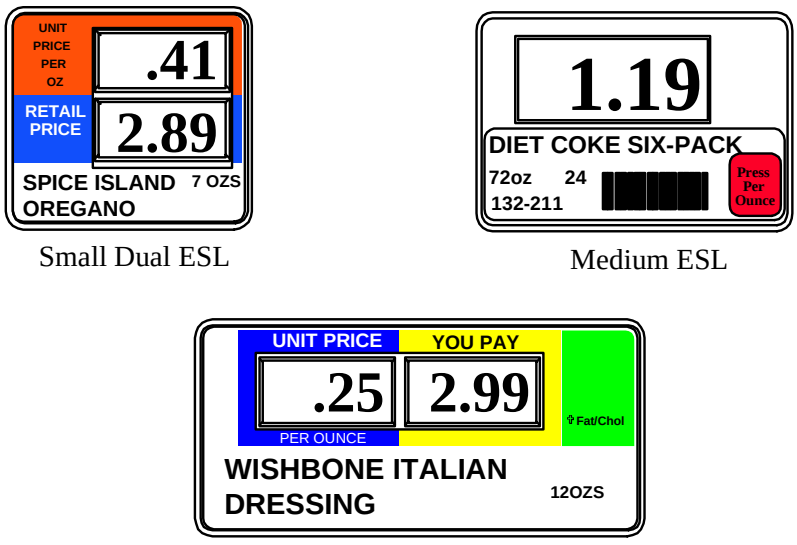
1.2.2 Active-Cell Antenna (ACA)

The Active-Cell Antenna (ACA) (10) is a cellular transceiver (transmitter/ receiver) that communicates directly with the ESLs. In this case, cellular

means that radio signal transmission and reception is confined to a small area called a cell. ESLs are normally arranged in ACA cells so that they can receive radio signals from one particular ACA. ACAs are hung from the ceilings in stores where they are installed and beam radio signals down to ESLs in their cells on the store shelves. Generally, the total number of ESLs in a store are distributed evenly among the ACAs. The ACAs receive data from the MCCs and send it to the ESLs; they also receive data from the ESLs and send it back to the MCCs.

1.2.3 Electronic Shelf Labels (ESLs)

ESLs are plastic housings with Liquid Crystal Displays (LCDs) that provide price information and other retail data about products on the shelves. ESLs come in various sizes, three of which are illustrated below.



Small Dual ESL

Medium ESL

ss_ug_001

Large Dual ESL

Figure 1-2. Electronic Shelf Labels (front view)

ESLs are battery powered and portable; they may be mounted on shelf-edges in a variety of ways, unconstrained by power distribution requirements. Each ESL is separately addressable, and has it's ESL address located on the side of the plastic housing, (e.g. represented with a barcode and a series of numbers, like **x7fffe0ea**).

1.2.3.1 ESL Buttons

There are two buttons located in the bottom corners of each ESL, (in the case of the Small Dual ESLs, in the upper and lower left-hand corners). See *Figure 1-3*. When a shopper or store employee presses one (or in some cases both) of these buttons, the ESL can display additional product information.

Each store can program the buttons on the ESLs to display different information. Check with your store manager for information on what the ESL buttons do in your store.

There may be times when you are instructed to perform a *button push*. This simply means pressing, as instructed, one or both of the buttons located on the ESL. When the ESL is covered with an overlay, the buttons are covered and they leave a raised impression showing through the overlay.

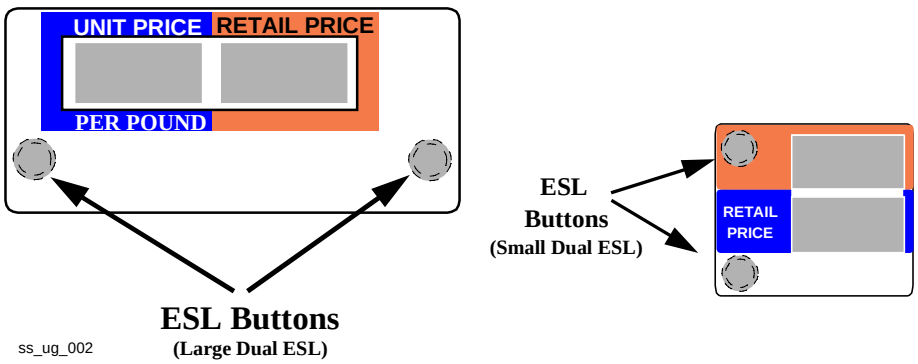
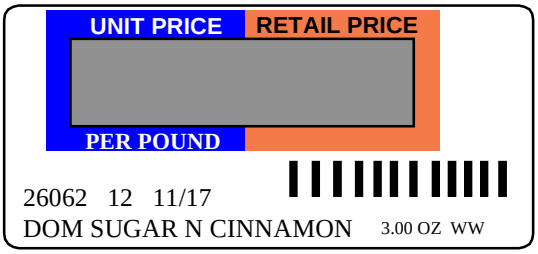


Figure 1-3. ESL Buttons (Large Dual and Small Dual ESLs)

1.2.3.2 Overlays

ESLs are covered with a printed paper sticker called an overlay, which adheres to the ESL. Overlays can contain information such as product description, order number, case and package size and *Universal Product Code* (**UPC**) barcodes for reordering. A UPC is a number on the product that identifies information associated with that product. On the overlay, the UPC is represented in its encrypted barcode form. Because overlays cover the buttons, the overlay may highlight one or both of them, depending on how the store has chosen to use the buttons. The buttons lie beneath the overlay leaving a raised impression.



ss_ug_003 Large Dual Overlay

Figure 1-4. ESL Overlay

1.2.4 Handheld Terminal

The Handheld Terminal (13) is a device used to perform ESL maintenance activities and other applications while in the aisle. It provides a portable user interface that communicates with the ShelfNet system, through the Ethernet Access Point (EAP) (12) to ShelfServer. The handheld terminal enables the user to scan products and ESLs, commission ESLs, delete ESLs, and activate and use power applications directly from the store aisle. The handheld terminal attaches to a Portable Printer (14) which allows for printing overlays from the aisle as well.

1.2.5 10-Base-T Hub

The10-Base-T Hub (7) is a device with a "one-to-many" connection. It links the MCCs to the ISP or stand-alone PC running ShelfServer software. Each hub has 8 ports and the capacity to link 7 MCCs to the ISP or stand-alone PC.

1.2.6 Host System

ShelfNet Software, ShelfServer, is designed to run on either an In-Store Processor (ISP) (5) or stand-alone PC, configured to meet the minimum system specification.

Chapter 2. ShelfServer Navigation

ShelfServer software is used to transmit and display price information and other retail product information on ESLs. ShelfServer may reside on the ISP or on a stand-alone server that is networked with the ISP. Either of these computers may be used in conjunction with the store's POS computer.

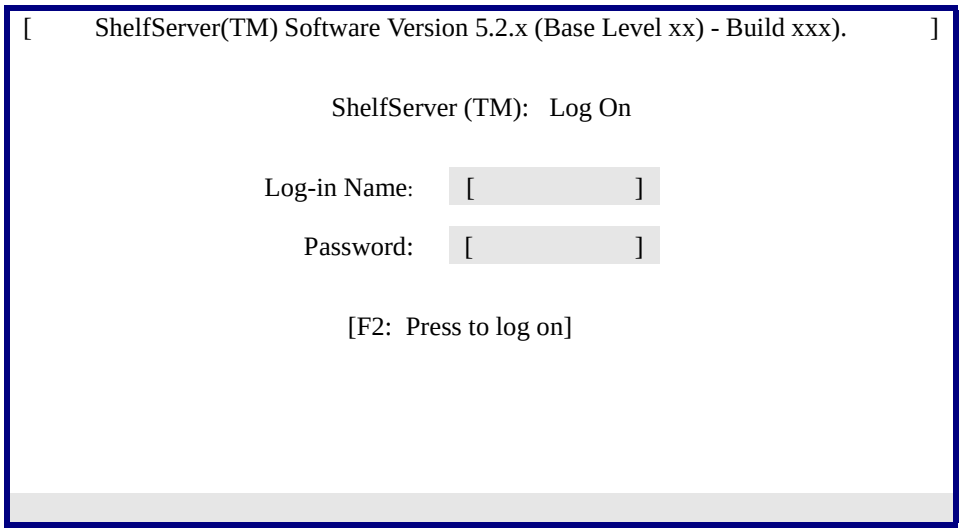
ShelfServer provides an open client/server interface that allows retailers to add their own ESL applications to their ShelfServer system software. Certain store processes may be configured at the time of software installation by your Systems Administrator. These processes may differ slightly from store to store, based on how your store software is configured. If any questions should arise concerning the configuration of ShelfServer in your store, please contact your Systems Administrator or Help Desk.

2.1 ShelfServer User Interface

In order to access the ShelfServer User Interface (SSUI), the basic procedures for logging-on, logging-off and exiting ShelfServer must be understood. These procedures are described in this section.

2.1.1 Logging-On and Logging-Off

The *ShelfServer Log On* screen is normally the initial point of entry into the ShelfServer User Interface. Each user has a predetermined level of access that allows for only those tasks that are required of them. The different levels of access are usually controlled by your Systems Administrator. It is important that a user log on properly in order to have the proper level of access rights available to them, and to log off properly upon completion in order to restrict unauthorized users from having access to the system.



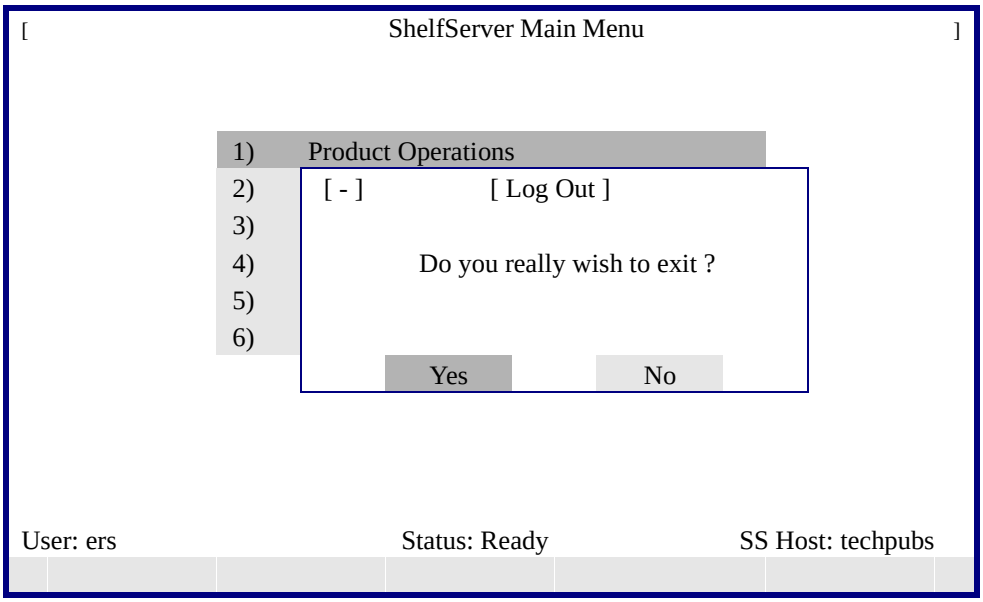
Screen 2-1. ShelfServer Log On

To log on to ShelfServer from the **ShelfServer: Log On** screen:

1. Type your user name in the **Log-in Name:** field. Press ENTER to move to the next field.
2. Type your password in the **Password:** field. Press ENTER to move to the next field.
3. Press ENTER or function key F2 to log on.

To log off ShelfServer from the **ShelfServer Main Menu**:

1. Press ESC or CTRL + P. The **Log Out** window appears confirming whether you would like to log off.



Screen 2-2. ShelfServer Main Menu

2. If you wish to log off ShelfServer, press ENTER for **Yes**. This brings you back to the **ShelfServer: Log On** screen. If you do not wish to log off ShelfServer, press ↹ (**Tab**) to get to the **No** push button and press ENTER.

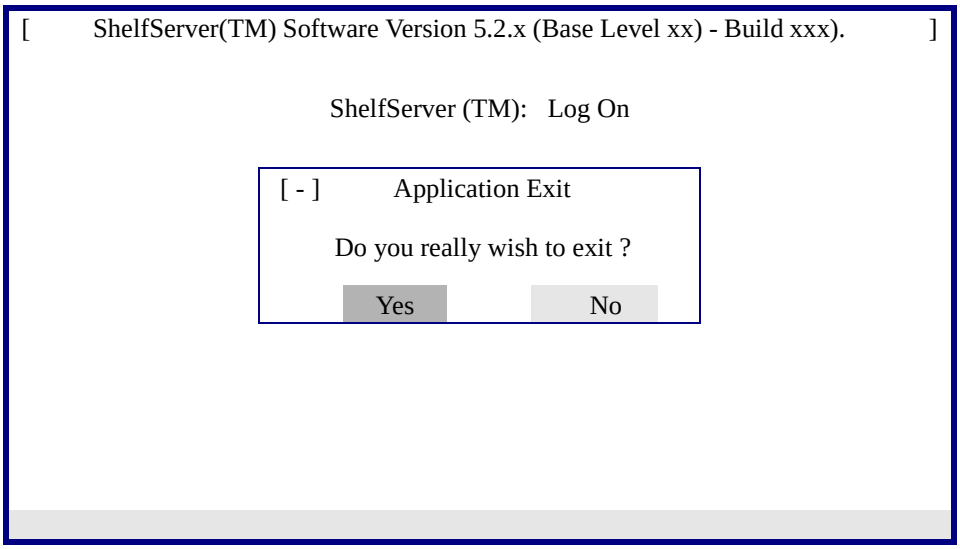
3. Once you are back at the **ShelfServer: Log On** screen, another user may log on to ShelfServer and begin working.

2.1.2 Exiting ShelfServer

Although the situation may seldom occur, there may be a time that your Systems Administrator or Help Desk personnel may ask you to exit ShelfServer in order to correct a problem with the system. If this happens, you may also be asked to restart the ShelfServer User Interface. Because of this possibility, this section will explain the steps necessary to accomplish these procedures.

To exit ShelfServer from the **ShelfServer: Log On** screen:

1. Press ESC or CTRL + P. The **Application Exit** window appears asking if you really would like to exit ShelfServer.



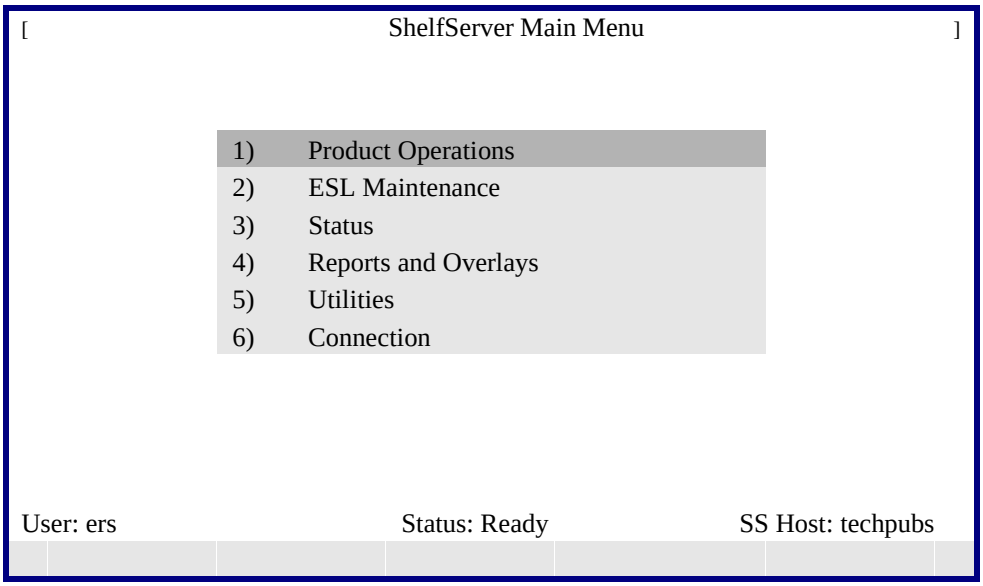
Screen 2-3. Exit ShelfServer

2. If you wish to exit ShelfServer and return to the UNIX command line, press ENTER for **Yes**. If you do not wish to exit ShelfServer, press ↹ (**Tab**) to get to the **No** push button and press ENTER.

3. To access the Shelfserver User Interface from the UNIX command line prompt, type ssui (ShelfServer user interface). The **ShelfServer: Log On** screen appears.

2.2 ShelfServer Main Menu

After you have successfully logged on to ShelfServer, the following **ShelfServer Main Menu** screen appears.



Screen 2-4. ShelfServer Main Menu

The Main Menu contains the following information:

2.2.1 Screen Title

The screen title identifies each screen. It is usually located at the top of the screen and looks like this:

ShelfServer™ Main Menu

2.2.2 Status Indicators

There are three status indicators located at the bottom of the screen. The following defines each in detail.

User:

User: appears on the bottom left of the screen indicating that a user is logged on to the system (refer to *Screen 2-4*). This identifier remains at the bottom of the screen whenever you are logged on.

Status:

Status: appears in the bottom middle of the screen identifying the status of the system (e.g. "ready" or "waiting") or the operation being performed, (e.g. "creating" or "searching") (refer to Screen 2-4). This identifier remains at the bottom of the screen whenever you are logged on.

SS Host:

SS Host: appears in the bottom right of the screen identifying the host (computer) name corresponding to your ShelfServer host connection (Refer to Screen 2-4). This identifier remains at the bottom of the screen whenever you are logged on.

2.2.3 Menu Items

From the ShelfServer Main Menu you can access six principal options that take you to specific function menus. The main menu lists the following six options:

Product Operations

This option allows you to access and edit product information and/or add, edit and delete individual or small numbers of ESLs. From this option, you may search for particular products by UPC, Order Number or description data; you may also conduct a generic product search when exact product information is unknown.

ESL Maintenance

From this option you can create and program a batch of ESLs, as well as create and print a batch of overlays. You can also access **Multiple Label Processing (MLP)**. MLP is a batch method of manipulating ESLs and is most frequently used in the initial setup of a store site, when large numbers of labels need to be manipulated. You can also delete ESLs from this option.

Status

This option features a one-screen summary providing information concerning the status of all the Controllers and ESLs that are installed in the store. From this option you can also take corrective action on *individual* or *all* Controllers and/or ESLs in an error condition. This **Status** option also includes more detailed screens allowing access to more specific information about the Controllers and ESLs.

Reports and Overlays

This option provides a menu of all reports that can be created and printed. From this option you can create, view and print these reports. You can also view and print overlays that have been created.

Utilities

This option provides access to utility functions offered by ShelfServer. From this option you can access and use Power Applications (managers can stop all power applications with a single command); you can edit, restrict or enable user access to the system (multiple access levels); you can define the ESL network system and its components; you can backup the system and choose the destination where you store information when backing up (e.g. directory, floppy, etc.); and you can display server log information (fully configurable from the user interface) - including all active logging activities.

Connection

This option provides the ability to connect to a local or remote host.

2.3 User Interface Navigation Maps

The navigation maps in this section illustrate the flow of the ShelfServer user interface - the main menu and its corresponding menu items, screens and windows. This navigational outline is based on the following four levels:

- ShelfServer Main Menu
- Menu Items
- Screens
- Windows

Menu items are derived directly from the user interface main menu. Screens may be reached from menu items. Screens generally display large portions of information where choices are made to obtain various actions (such as price changes, adding and deleting ESLs, and others). Windows may be reached from the screens and are generally subordinate to the screens. Some areas of ShelfServer contain several layers of menu items and screens, therefore some of the maps will be broken down on more than one page. Following is an example of a navigation map:

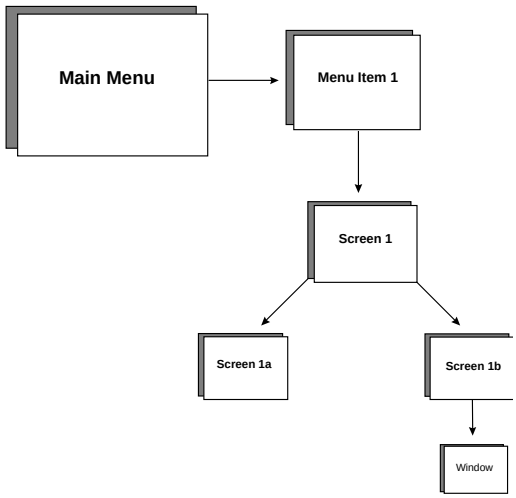


Figure 2-5. User Navigation Map

ShelfServer Main Menu

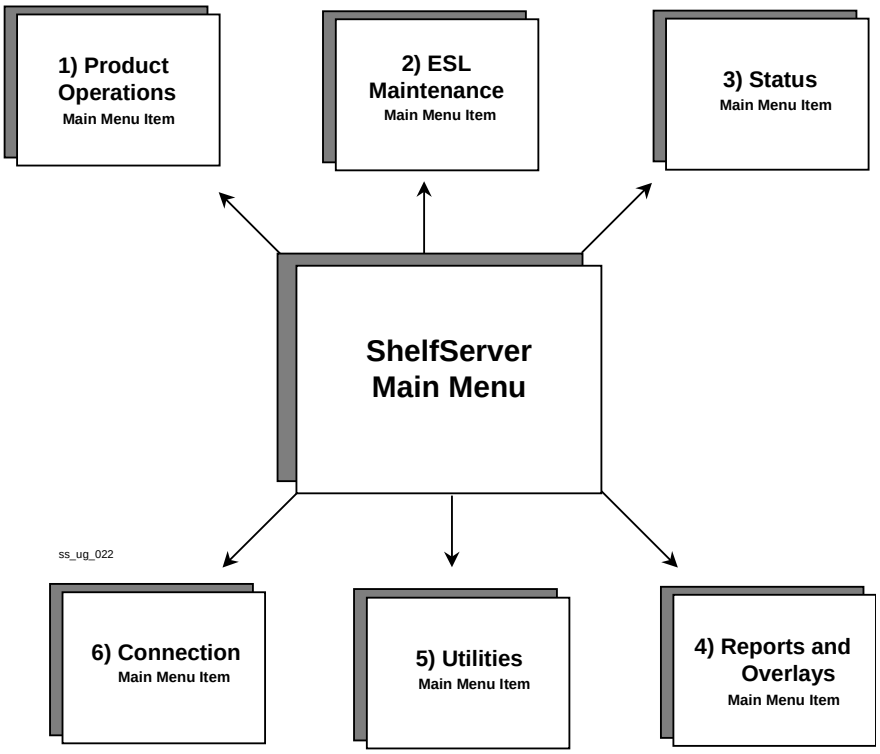


Figure 2-6. ShelfServer Main Menu

Begin at the **ShelfServer Main Menu** to navigate the menu hierarchy. The **ShelfServer Main Menu** contains six items from which to operate. Each of these items leads to a series of screens and/or windows used to run and maintain the ShelfNet system. (Refer to page 2-8 for a functional description of each menu item.)

2.3.1 Main Menu Item 1--Product Operations

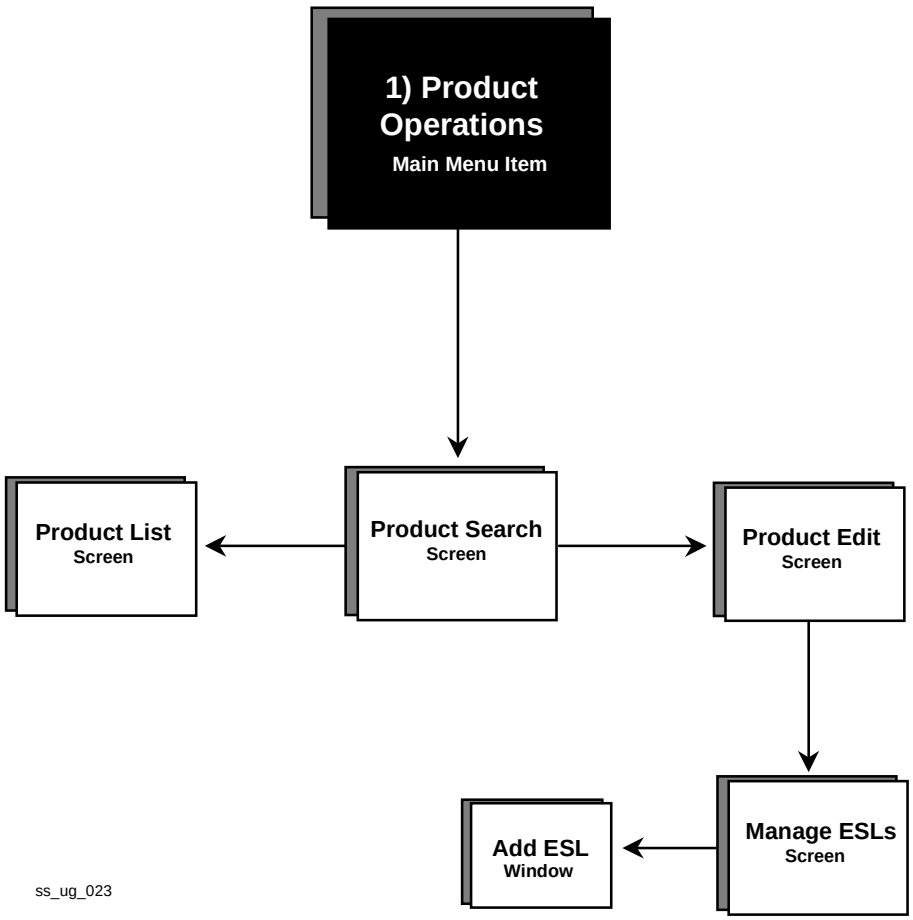


Figure 2-7. Main Menu Item 1--Product Operations

Begin with main menu item **1. Product Operations** to navigate through the **Product Search** screens and windows. From this menu item you can reach screens and windows you use to access and edit product information, as well as manage ESLs, (create, edit and delete individual ESLs).

2.3.2 Main Menu Item 2--ESL Maintenance

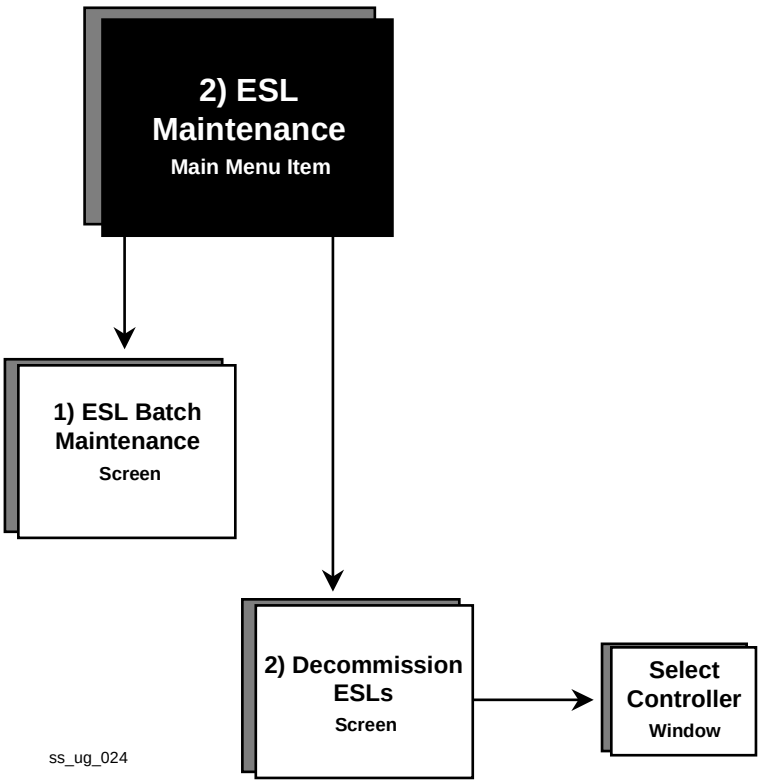


Figure 2-8. Main Menu Item 2--ESL Maintenance

Begin with main menu item **2. ESL Maintenance** to navigate through the **ESL Batch Maintenance** screens and windows. From this menu item you can reach screens and windows to process batches of ESLs. You can also print overlays, print reports and execute Multiple Label Processing (MLP).

Main menu item **2. ESL Maintenance** is broken down into two menu items; **ESL Batch Maintenance** and **Decommission ESLs**. **ESL Batch Maintenance** menu item contains several layers of screens and windows. This menu item is broken down further on the following page. The **Decommission ESLs** menu item is a carry-over from the older systems and is not used with the newer wireless systems.

Main Menu Item 2--ESL Maintenance, continued

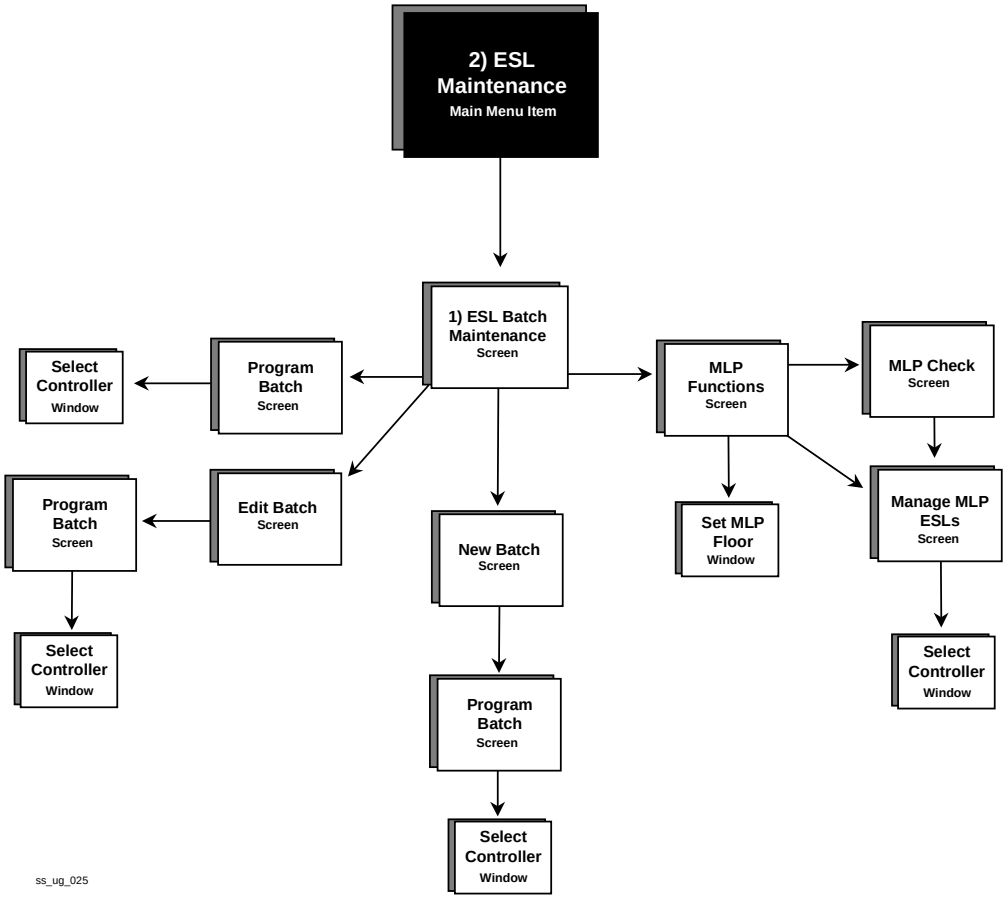


Figure 2-9. ESL Batch Maintenance Menu Item

2.3.3 Main Menu Item 3--Status

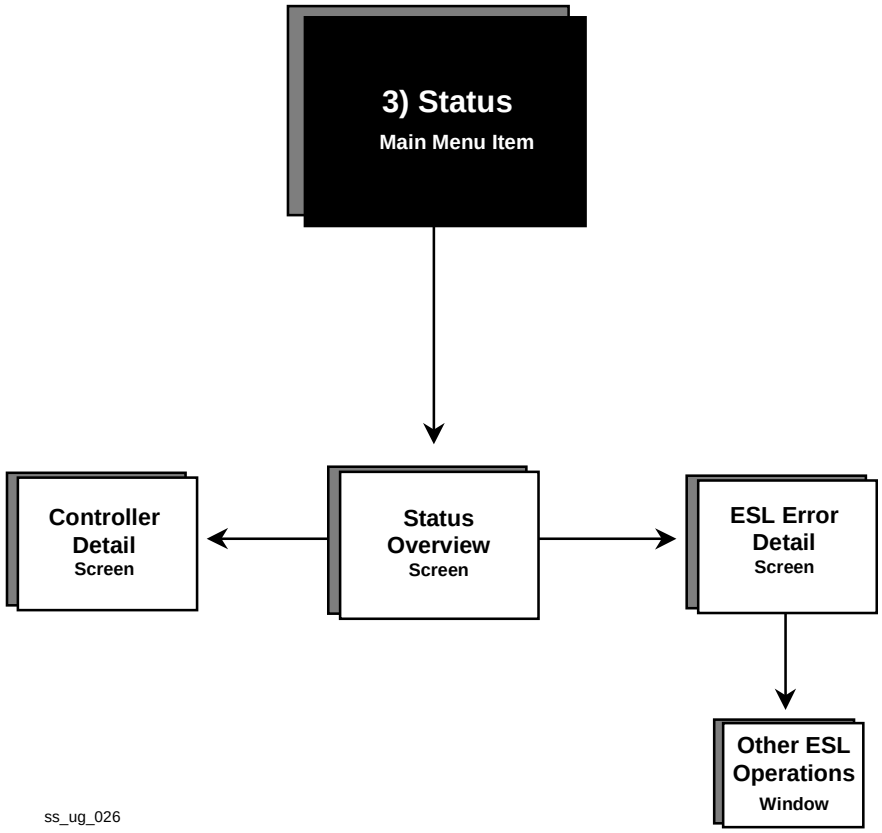


Figure 2-10. Main Menu Item 3--Status

Begin with main menu item **3. Status** to navigate through the **Status Overview** screens and windows. From this menu item you can reach screens and windows that provide information about the status of the Controllers (MCCs) and ESLs installed in your store. You may also take action on specific Controllers or ESLs associated with an error condition.

2.3.4 Main Menu Item 4--Reports and Overlays

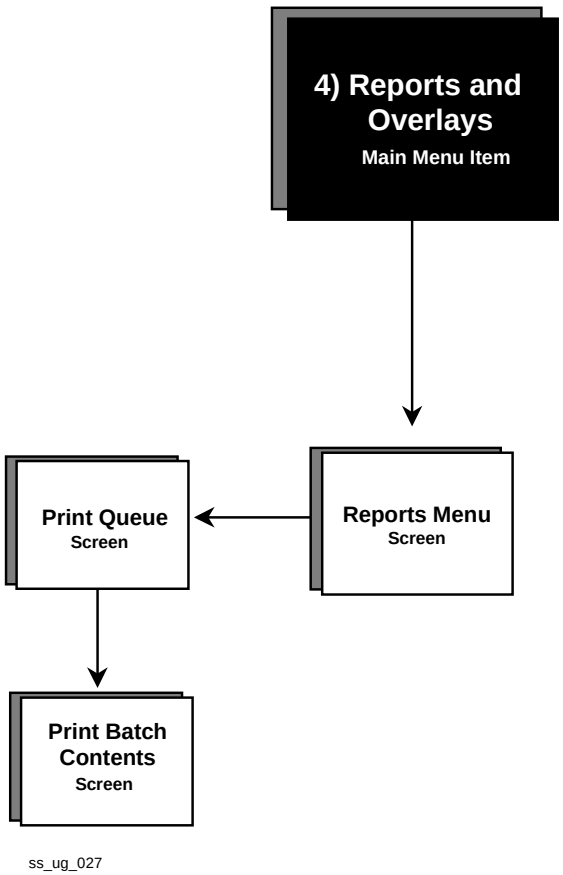


Figure 2-11. Main Menu Item 4--Reports and Overlays

Begin with menu item **4. Reports and Overlays** to navigate through the **Reports Menu** screens and windows. From this menu item you can access a list of the reports that can be generated by ShelfServer. In addition, you can create, view and print these reports from this option.

2.3.5 Main Menu Item 5--Utilities

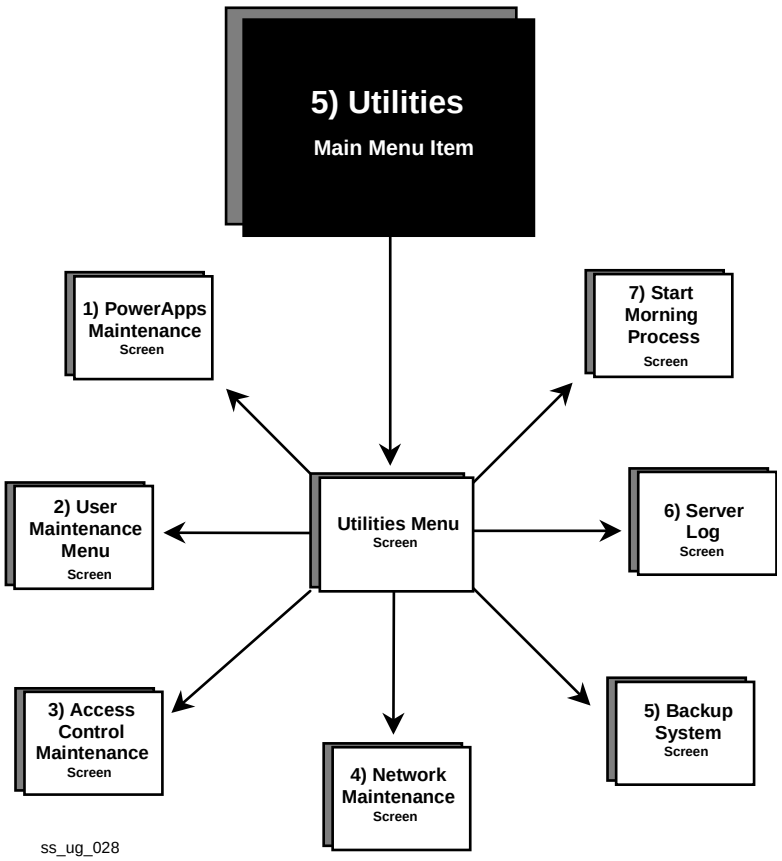


Figure 2-12. Main Menu Item 5--Utilities

Begin with main menu item **5. Utilities** to navigate through the **Utilities Menu** screens and windows. From this menu item you can reach screens and windows used to navigate through the utilities supported by ShelfServer. You can access and use the Power Applications; edit, add and delete system users; define the ESL network and its components; backup the system and choose the destination in which to store information when backing up (such as directory or floppy); and display a server log.

Main menu item **5. Utilities** is broken down into seven menu items. Each menu item contains several layers of screens and windows. Therefore, this navigational map is broken down further on the following pages.

Main Menu Item 5--Utilities, continued

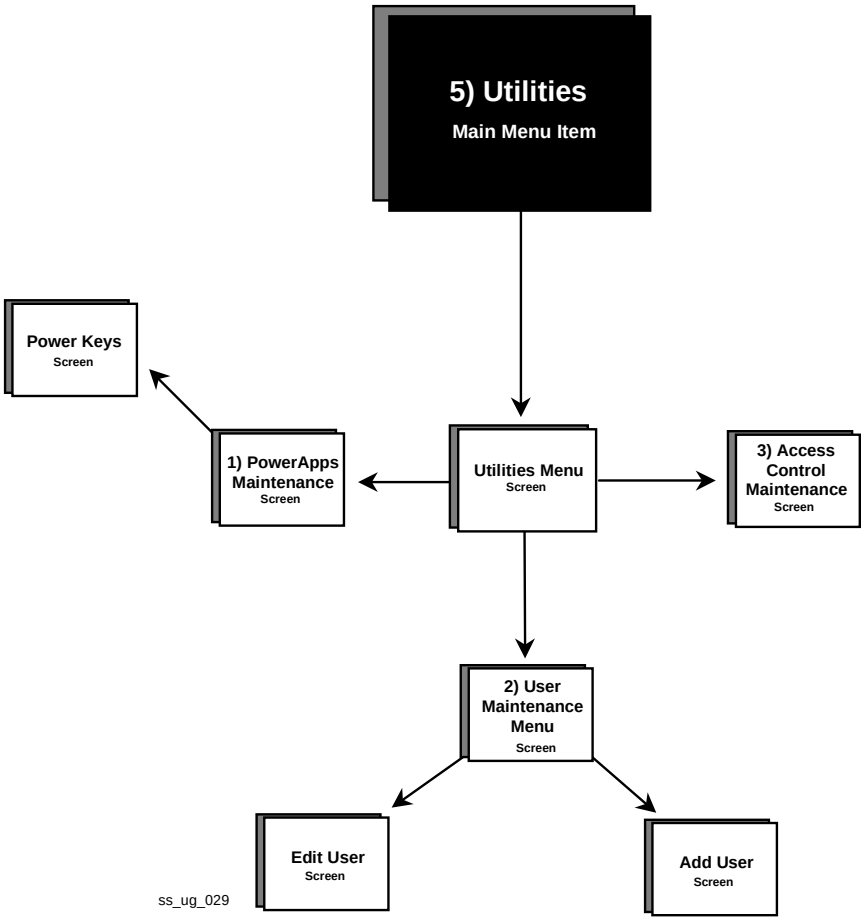


Figure 2-13. Utilities Menu breakdown, continued

Main Menu Item 5--Utilities, continued

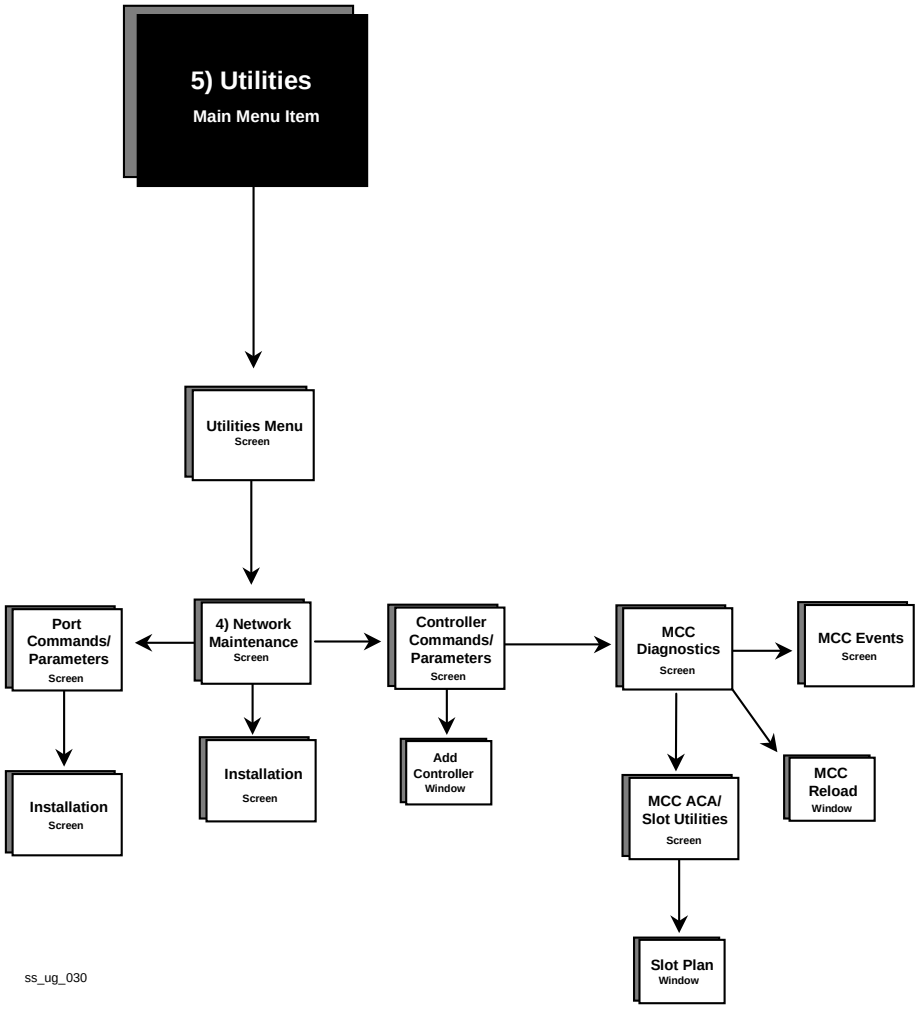


Figure 2-14. Utilities Menu breakdown, continued

Main Menu Item 5--Utilities, continued

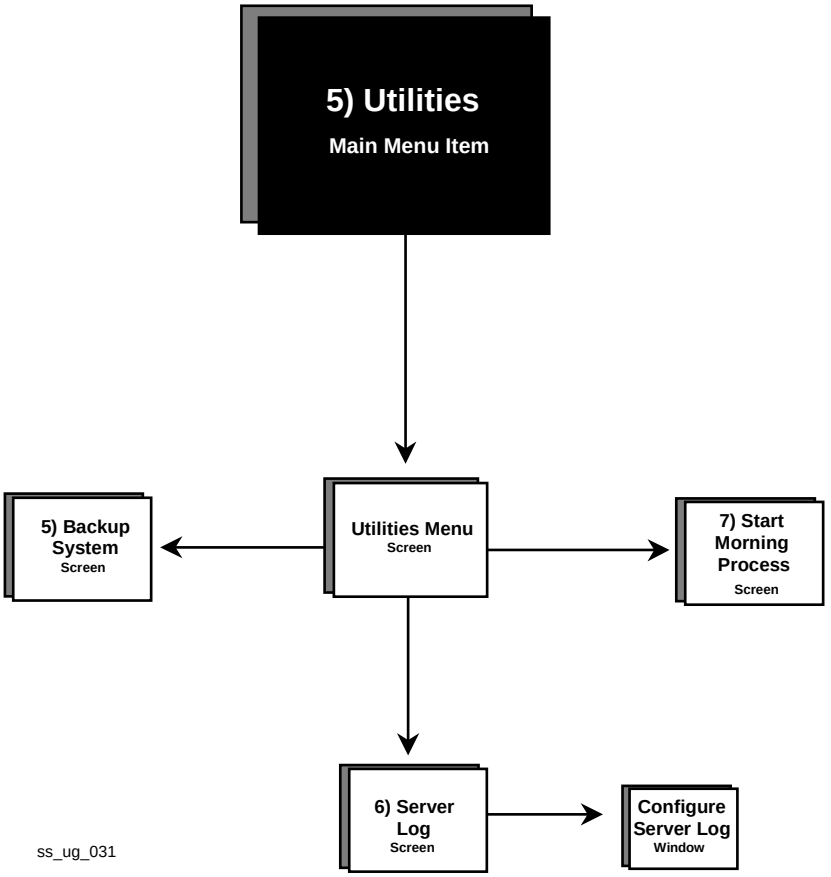


Figure 2-15. Utilities Menu breakdown, continued

2.3.6 Main Menu Item 6--Connection

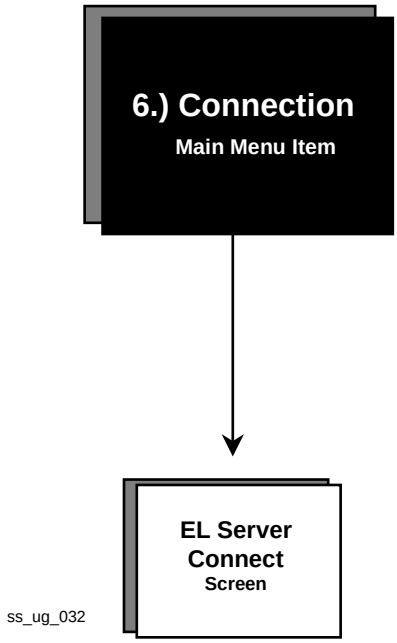


Figure 2-16. Menu Item 6--Connection

Begin with main menu item **6. Connection** to reach the **SS Server Connect** screen. This menu item is used to connect to another ShelfServer Host.

Chapter 3. System Monitoring

Through the user interface, ShelfServer provides a variety of screens that allow you to monitor the activity of certain components of the system. Some of these screens are used to obtain a general overview of system components and some screens are used to obtain a detailed report of specific components. This section includes information on how you may use ShelfServer to access these screens.

3.1 System Status Checks

The main hardware-monitoring activity consists of a process called a **bedcheck**. Bedchecking is an automatic process by which ShelfServer sends a message to each ESL in the network and "listens" for a response. If the ESL does not respond, it is marked as Non-Responding. The system continues to look for each Non-Responding ESL at user-defined intervals until that ESL is found. Similarly, ShelfServer checks the Controllers to make sure they are operable.

3.1.1 ShelfServer Software

The software may reside on a stand-alone server or on the store ISP or POS system. In either case, you can check the status of the software in the same way.

You can check the status of the software by starting ShelfServer and logging on. *(Refer to Logging On* on page 2-2 for instructions on how to log on.) If you are able to log on and run the user interface, check to see if the server is running. To do this, check the **SS Host:** indicator at the bottom right-hand corner of the screen. A host name should be displayed and this should confirm that the ShelfServer software is running. If there is *not* a name displayed in the **SS Host:** indicator, this means there is a problem with the software and you should contact your Systems Administrator or Help Desk before proceeding.

Once you begin checking the status of the hardware components (MCCs and ESLs), and see how they are interacting with the rest of the system, you will be able to confirm the general working status of the ShelfServer software.

There are other ShelfServer components that cannot be checked through the user interface. Contact your Systems Administrator or Help Desk for further details on checking the status of ShelfServer software.

> **Note:**
>
> It is important to note that several background activities are going on, even while users are not actually logged on to ShelfServer. Periodically check the general status of the hardware components to be sure that all software components are running.

3.1.2 Checking Server Queue Status

Communication is constantly occurring between the server and the driver, so the system can carry out certain system activities. The **Status Overview** screen provides information on the status of the messages being sent from the server to the driver. This status information reflects how many messages the system has yet to communicate to the driver. Check the **Server Queue:** area of the **Status Overview** screen for the following status information:

Outstanding

The **Outstanding:** count value indicates requests and commands sent from the server to the driver for which the server has not yet received a response.

Pending Hi

The **Pending Hi:** count value indicates high priority requests and commands in the server queue not yet sent to the driver.

Pending Lo

The **Pending Lo:** count value indicates low priority requests and commands in the server queue not yet sent to the driver.

You may want to check the **Server Queue:** status area when you monitor price changes. As price changes are being sent to the server, you can expect the count values in the **Server Queue:** status area to increase, indicating the information is being processed. As all price changes are successfully accepted by the server, you can expect the count values in the **Server Queue:** status area to stop rising. Next, as price changes are being sent to the driver and then out to the ESLs, you can expect the count values to decrease, indicating that each price change is being received by the system. When the count values return to the original values before price changes were executed, it is a good indication that all price changes have been received by the system. Conversely, if the count values continue to rise, this is an indication that the system is having trouble receiving the price changes and you should call your Systems Administrator or Help Desk.

3.1.3 Checking Controller Status

The controllers are the units that provide data to the ESLs. The status of all controllers comes from monitoring their communications with ShelfServer.

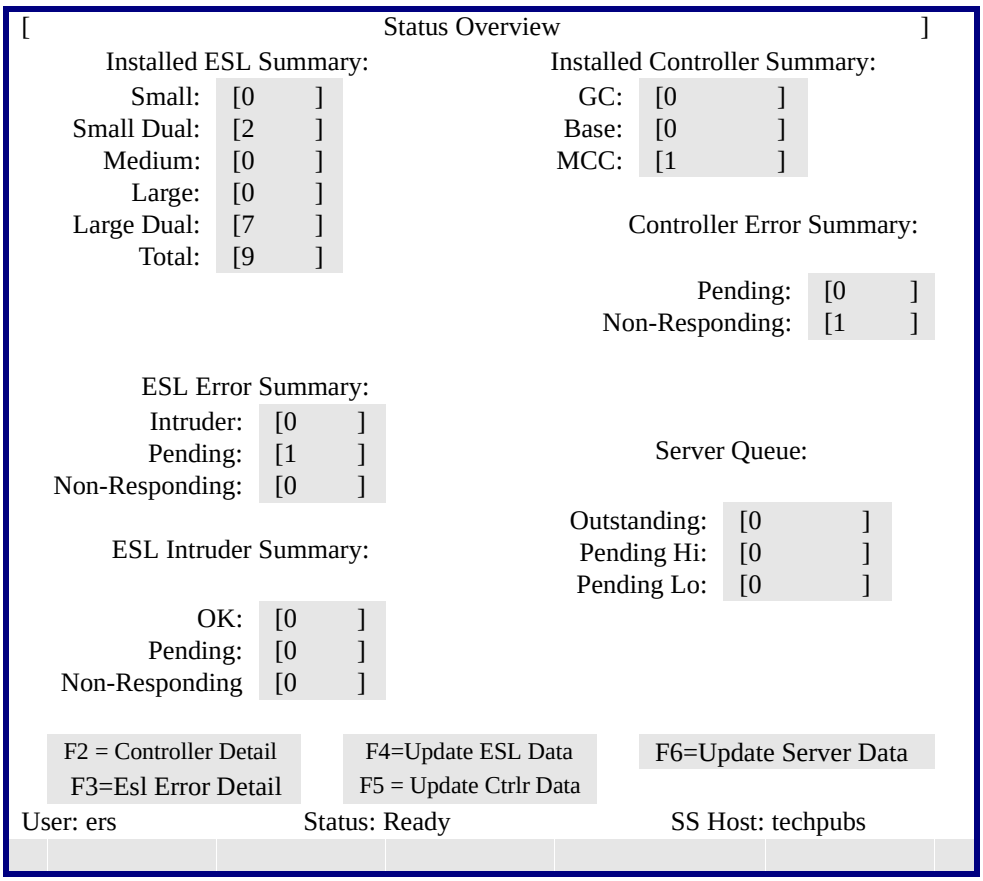
There are two types of communication messages that are sent out to controllers: *updates* (prices, etc.) and *bedchecks* (a message sent out to see if the controllers respond, verifying they are functioning properly).

If a bedcheck is sent out and the controllers do not respond, the status of those controllers is *Non-Responding*. If an update message is sent out and the controllers do not respond, the status of these controllers is *Pending*.

To check the status of all controllers, view the **Status Overview** screen. To get to the **Status Overview** screen perform the following steps:

1. Log on to ShelfServer. This brings you to the **ShelfServer Main Menu**.

2. From the main menu, use the arrow keys to select menu item **3) Status** and press ENTER . This brings you to the **Status Overview** screen.



Screen 3-1. Status Overview

Check the **Controller Error Summary:** area of the **Status Overview** screen for the following information

3.1.3.1 Pending Controller

The **Pending Controllers:** count value indicates that a message was delivered to the controller and no response was received, indicating a problem. Messages to controllers are issued infrequently. If the controller does not answer, that message is pending and the controller has a Pending status.

3.1.3.2 Non-Responding Controller

The **Non-Responding Controllers:** count value indicates that a controller did not respond to its last bedcheck and is not communicating with ShelfServer. This count value is important to note for the following reasons:

- ESLs associated with this controller will not be able to communicate with ShelfServer and may have price changes waiting to be sent.
- You cannot accurately determine the status of the ESLs attached to these controllers because the controller is unable to deliver them messages.

Note:

If the Status Overview screen indicates any Pending or Non-Responding controllers, contact your Systems Administrator or Help Desk.

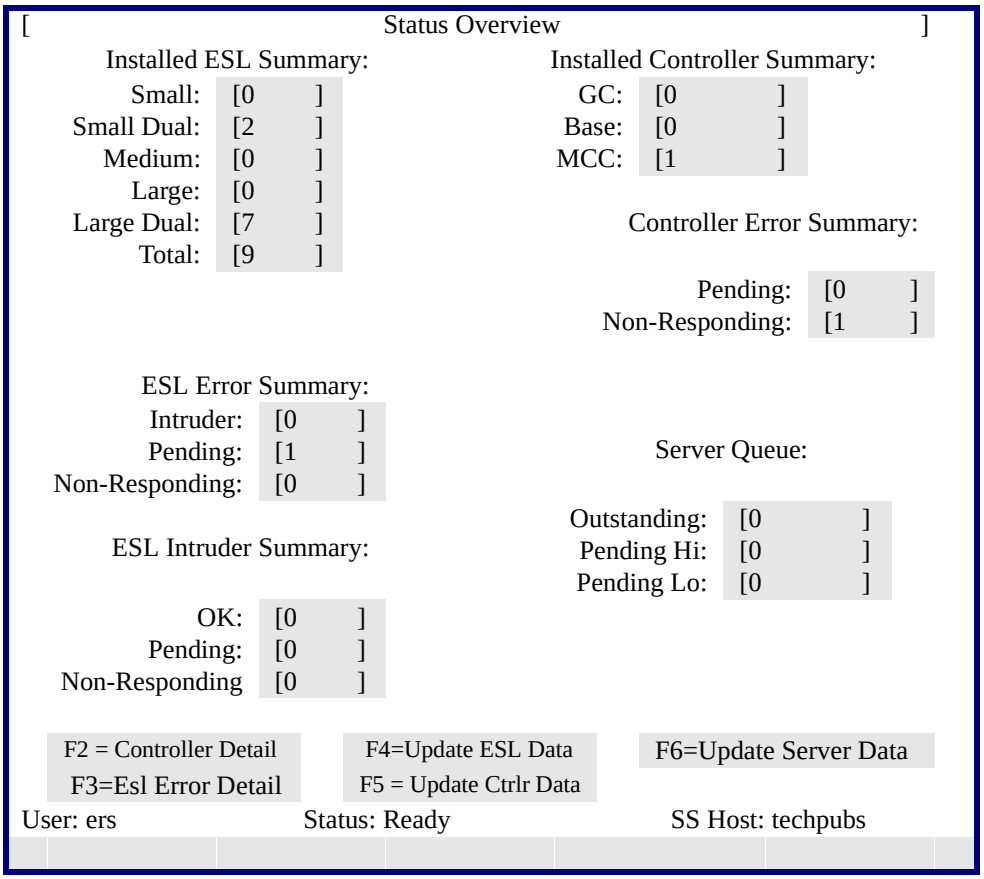
3.1.4 Checking ESL Status

ESLs display price, unit price and other product information at the shelf-edge. The status of all ESLs comes from monitoring their communications with ShelfServer. There are two types of communication messages that are sent out to ESLs: *updates* (prices, etc.) and *bedchecks* (a message sent out to see if the ESLs respond, verifying they are functioning properly).

If a *bedcheck* is sent out and the ESLs do not respond, the status of those ESLs is *Non-Responding*. If an *update* message is sent out and the ESLs do not respond, the status of those ESLs is *Pending*.

To check the status of the ESLs, view the **Status Overview** screen. To get to the **Status Overview** screen perform the following procedure:

1. From the main menu, select menu item **3) Status** and press ENTER . This brings you to the **Status Overview** screen.



Screen 3-2. Status Overview

The **Status Overview** screen provides summary information on the ESLs. Check the **ESL Error Summary:** and **ESL Intruder Summary:** areas of the screen for the following information.

3.1.4.1 Non-Responding ESLs

Non-Responding ESLs: count value indicates ESLs that did not respond to their last bedcheck and are not communicating with ShelfServer. This value includes ESLs that may have been removed from the store floor but have not yet been deleted from the system.

3.1.4.2 Pending ESLs

Pending ESLs: count value indicates ESLs that are non-responding and have a price change not yet communicated to them.

> **Note:**
>
> Pending ESLs are especially important to note because they represent a potential price integrity problem; their status should always be researched and resolved.

3.1.4.3 Intruder ESLs

Intruder ESLs: count value indicates ESLs with no product identification known to ShelfServer. The *Intruder ESL Report* tells you the location of the intruder ESL in the store that needs to be removed. Intruder ESLs are easy to locate in the store aisle because they have a special display (e.g. "OFF" or "INTRUDER"), which is configured individually by each store at the time of installation. (Check with your store manager for the special Intruder ESL display in your store.)

> **Note:**
>
> If the Status Overview screen indicates any Pending or Non-Responding ESLs, refer to *Appendix A. Daily In-Store Maintenance of the ShelfNet System* for corrective action, or contact your Systems Administrator or Help Desk.

3.2 Reports

ShelfServer software provides a variety of reports to help you monitor and maintain the integrity of the ShelfNet network. ShelfServer gives each store the ability to configure and add additional reports based on particular store needs. If you have any questions concerning reports available to you, contact your Systems Administrator or Help Desk. This section includes information on how to use ShelfServer to access, create and print reports.

3.2.1 Standard Reports

Following is a list of standard reports available on ShelfServer, including a brief description of each. Because ShelfServer provides the ability to configure and add reports based on particular store needs, the actual reports available to you may differ from those that follow.

Non-Responding ESLs Report
Report showing ESLs not responding to a system inquiry or bed-check.

Pending ESLs Report
Report showing ESLs not responding to messages or price updates sent out by the system.

Intruder ESLs Report
Report showing a list of ESLs that are not linked to any products contained in the product database.

Items With ESLs Added Report
Report showing products recently assigned an ESL.

Items With ESLs Deleted Report
Report showing products whose ESLs have recently been deleted.

Items With ESLs Replaced Report
Report showing a list of products with failed or damaged ESLs that have been replaced.

Items Added Report
Report showing items recently added to the product database.

Items Marked for Deletion Report
Report showing items scheduled to be deleted from the product database.

Item Price Changes Report
Report showing all products with price updates since a specified date.

Items Out Of Stock Report
Report showing all products in product database that are out of stock.

Items Out Of Stock By Date Report
Report showing all products in product database that are out of stock; sorted by the date item went out of stock.

Full UPC/ESL Report
Report showing all products that have linked ESLs since a specified date.

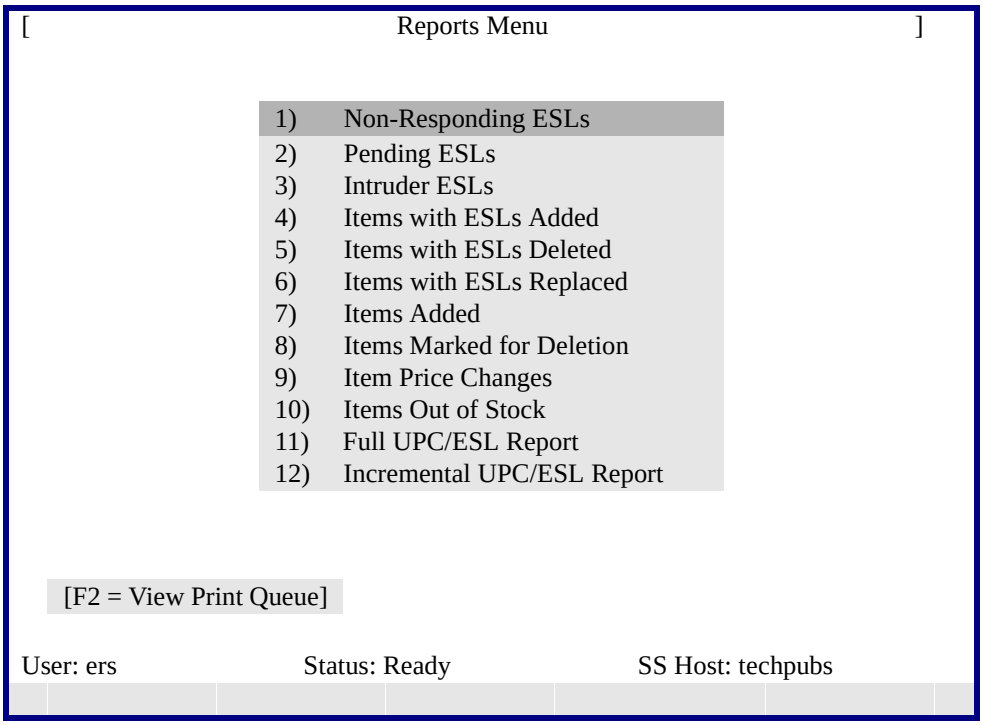
Incremental UPC/ESL Report
Report showing all products that have had ESLs assigned or deleted since the last creation of the *Full* or *Incremental ESL Report*.

3.2.2 Creating Reports

There may be times when you want to create a report but are not ready to print it. It could be that the system printer is not available at the time, or you only need to create the report to view it on the computer monitor, and a printed copy is not necessary.

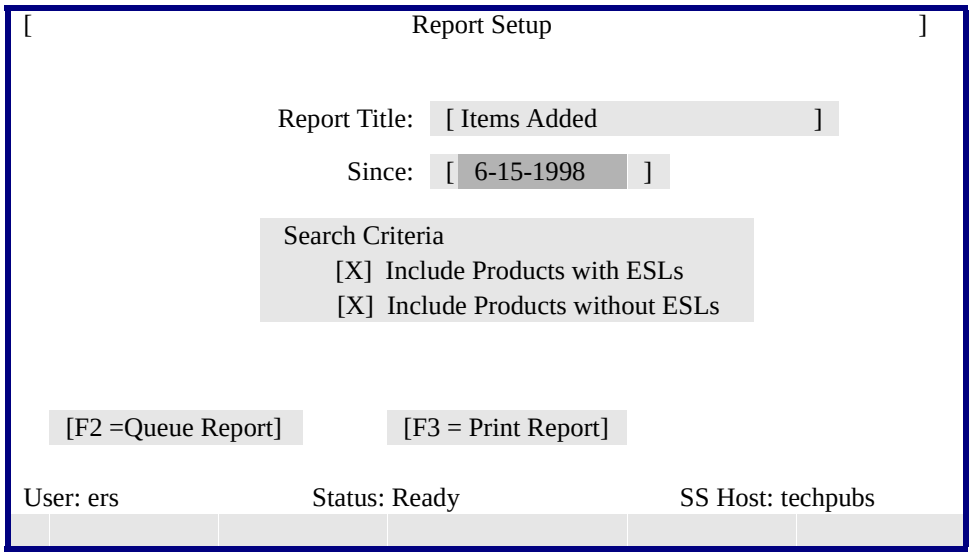
To create reports using ShelfServer, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu** screen.



Screen 3-3. Reports Menu

2. Using the arrow keys, select the report you wish to create, and press ENTER . This brings you to the Report Setup screen.

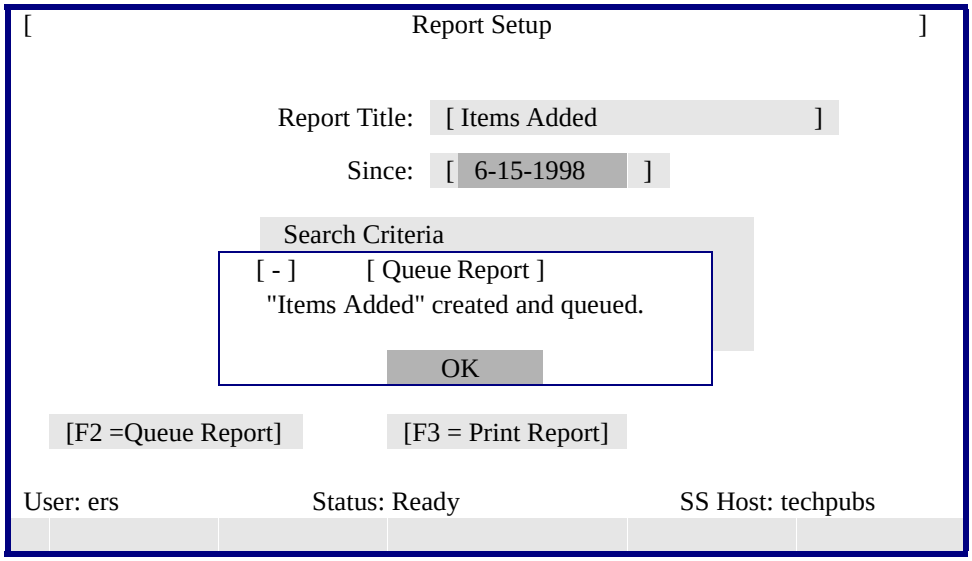


Screen 3-4. Report Setup with Search Criteria

3. Fill in the **Since:** field with the beginning date of the type of search you would like to conduct, (the example in the above screen is the *Items Added Report*). Press (**Tab**) to advance to the next field.

4. Select either **Include Products With ESLs**, **Include Products Without ESLs** or both from the **Search Criteria** field. (This option does not exist for all reports.)

5. To create the selected report press function key F2 . The **Queue Report** window appears confirming the report has been created and queued. Select **OK** by pressing ENTER . Doing so will return you to the **Reports Menu**.



Screen 3-5. Report Setup with Queue Report

6. Once the report has been created and queued, it can be viewed by selecting F2 from the **Reports Menu**. Doing so will cause the **Print Queue** screen to appear.

[Print Queue]

Type	Comments	Records	Created	Printed	
Items with ESLs Added		0	06/02/98 14:25:27	N	#
Large Dual Overlays		1	06/04/98 11:31:00	Y	#
ESL Programming Report	delete.imp	1	06/04/98 11:31:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:40:21	N	#
Controller Detail	delete.imp	0	06/08/98 11:30:98	N	#
Action Report		0	06/11/98 10:43:14	Y	#
Non-Responding ESLs		0	06/11/98 14:54:56	N	#
Action Report		0	06/12/98 03:00:20	Y	*
Items Added		1	06/16/98 15:22:17	N	v

F2=View Contents] [F3=Delete] [F4=Print]

User: ers Status: Ready SS Host: techpubs

Screen 3-6. Print Queue

7. Use the arrow keys to highlight the report you wish to view, then press F2 to view the contents of the desired report.

8. When you finish viewing the report, press ESC until you return to the **ShelfServer Main Menu** screen.

3.2.3 Printing Reports

Printing a report is very similar to creating a report, with one small exception. After completing the report set-up procedure defined in **Creating Reports**, select F3 **Print Report** from the **Report Setup** screen rather than F2 **Queue Report**.

Printing can also be accomplished by selecting F2 **View Print Queue** from the **Reports Menu**, then highlighting the item to be printed and selecting F4 **Print**.

Following is an example of a printed *Items Added Report*:

Items Added
Beechwood Store #1

UPC	Order Number	Description	Qty/Price	Controller	ESL Type	Date Added	Time Added
0076032785732	0000345728	Balloons	1 / 1.19	1A	Large	02/06/97	14:45:24
0007601175862	0000537862	Pudding	1 / 1.49	1A	Small Dual	02/06/97	14:45:42

ss_ug_009

Figure 3-7. Example of printed Items Added Report

3.3 Morning Process

Normally, every morning ShelfServer automatically performs a review of ESL and product information collected over the last 24 hours. This is called the **Morning Process**. Morning Process information includes price change data and **Merchandising Data Information** (**MDI**); MDI is data that indicates changes in product information other than price, information such as unit of measure, package size and product description. The Morning Process reviews the database for changes in merchandising data, (e.g. when an ESL requires a new overlay because the product information has changed), and then initiates an action (e.g. generate the overlay for printing).

These results are presented in the form of a report called the *Action Report*. This report informs the user on system maintenance activities that need to take place on that day, based on overnight activity and data feed changes to the database. The *Action Report* presents a summarized list of all these activities. For example, if the description on a product changes overnight, a new overlay will be created for that product. The *Action Report* will then show that an overlay needs to be replaced and give the location of the product requiring the change.

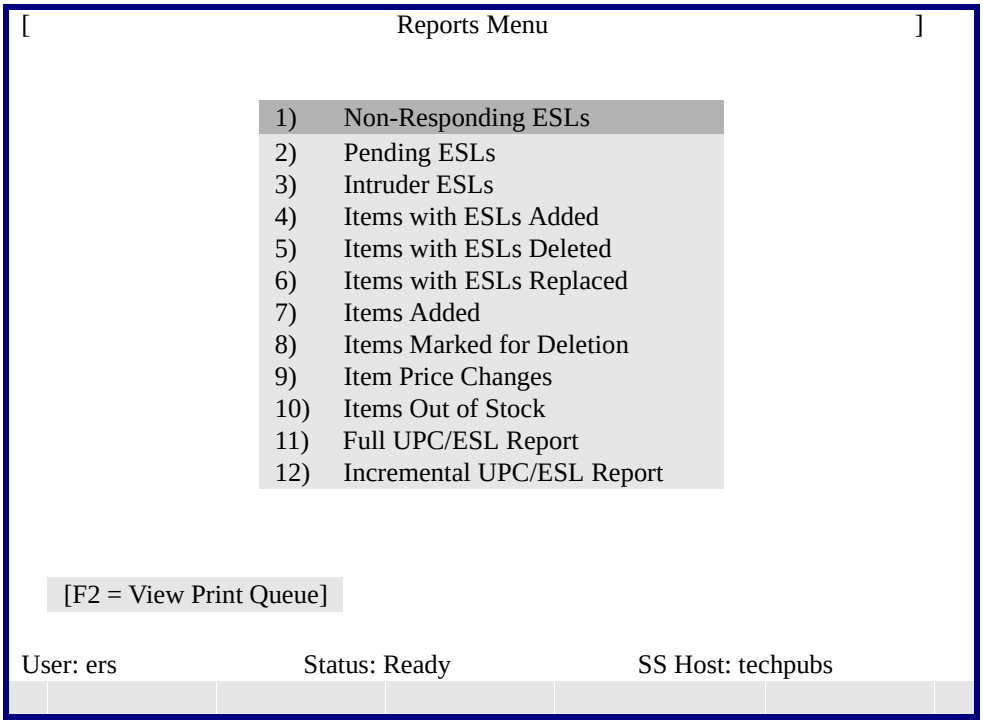
Note:

An *Action Report* is created automatically *after* the Morning Process has been run.

3.3.1 Verification

To verify that the **Morning Process** has been run, perform the following steps:

1. From the ShelfServer main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu** screen.



Screen 3-8. Reports Menu

2. Press function key F2 . This brings you to the **Print Queue** screen.

[Print Queue]

Type	Comments	Records	Created	Printed	
Items with ESLs Added		0	06/02/98 14:25:27	N	#
Large Dual Overlays		1	06/04/98 11:31:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:31:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:40:21	N	#
Controller Detail	delete.imp	0	06/08/98 11:30:98	N	#
Action Report		0	06/11/98 03:30:00	N	#
Non-Responding ESLs		0	06/11/98 14:54:56	N	*
Action Report		0	06/12/98 03:30:00	N	v

F2=View Contents] [F3=Delete] [F4=Print]

User: ers Status: Ready SS Host: techpubs

Screen 3-9. Print Queue

3. View the **Print Queue** screen to see if the Action Report is shown for the correct date. If so, this indicates that the Morning Process has been run and the results in the form of the Action Report are in the queue.The contents of the report can now be viewed by using the arrow keys to highlight the desired report and pressing function key F2, or by pressing function key F4 to print the report.

3.3.2 Report Generation

To print the *Action Report* and the associated overlays created by the Morning Process, perform the following steps:

1. Using the arrow keys, select the *Action Report*, listed in the **Type** column. Press function key F4 to print the report. The **Print** window appears confirming the *Action Report* has been printed. Select **OK** by pressing ENTER.

2. After successfully printing the *Action Report*, review the **Type** column on the **Print Queue** screen to determine which overlays have been created for printing. Using the arrow keys, select those overlays whose **Created** date matches that of the Action Report. An "**N**" (NO) is displayed in the **Printed** column, indicating that the overlay(s) have not been printed.

[Print Queue]

Type	Comments	Records	Created	Printed	
Items with ESLs Added		0	06/02/98 14:25:27	N	#
Large Dual Overlays		1	06/04?98 11:31:00	N	#
Action Report		1	06/04/98 03:30:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:40:21	Y	#
Controller Detail	delete.imp	0	06/08/98 11:30:98	N	#
Action Report	delete.imp	0	06/11/98 03:30:00	N	#
Non-Responding ESLs		0	06/11/98 14:54:56	N	*
Action Report		2	06/12/98 03:30:00	N	v

F2=View Contents] [F3=Delete] [F4=Print]

User: ers Status: Ready SS Host: techpubs

Screen 3-10. Print Queue

3. To print the overlays, insert the appropriate overlay stock into the printer. This is determined by checking the **Type** column, which tells you what size stock (medium, large dual and small dual) needs to be placed in the printer. Press function key F4 to print the overlays.

4. Now use the *Action Report* to identify the location of the ESLs requiring an overlay change. (Following is an example of a printed *Action Report*.)

Action Report
Beechwood Store #1

Message	UPC	Order Number	Description	Qty/Price	Controller	ESL Type
Remove ESL from shelf	0076032785732	0000345728	Balloons	1 / 1.19	1A	Large
Replace Overlay	0007601175862	0000537862	Pudding	1 / 1.49	1A	Small Dual

ss_ug_010

Figure 3-11. Example of printed Action Report

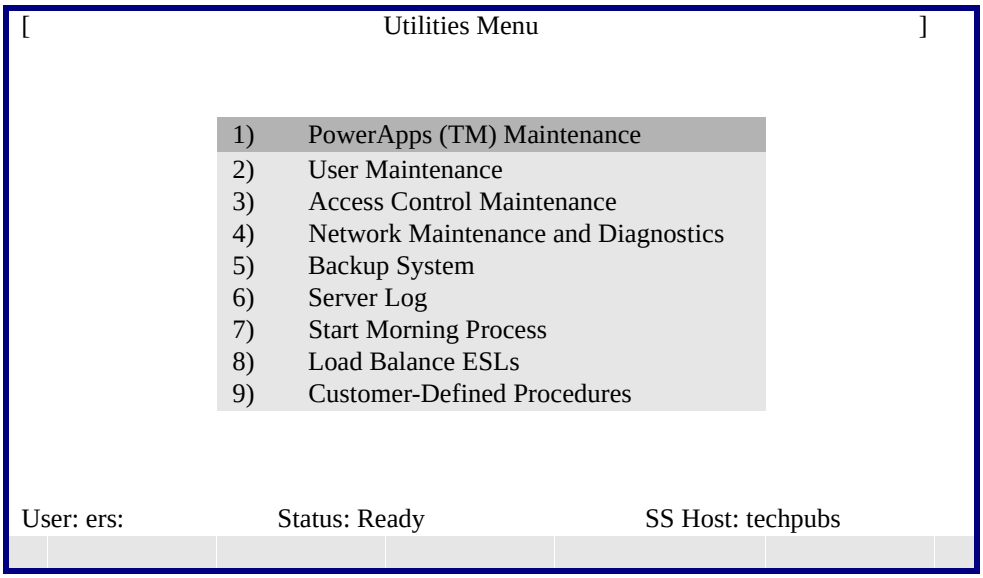
Any ShelfServer report may be generated during the Morning Process depending upon the configuration. The reports generated may differ slightly in each store, based on that store's particular needs. Typically, at installation time, the Morning Process is configured to run automatically, each day at a specific time. If you have any questions about the Morning Process and Reports in your store, contact your Systems Administrator or Help Desk.

In some cases the Morning Process may need to be run *manually*. It is important to note that if the Morning process is manually started, it will overwrite any data backup that was created during the previous Morning Process. Just as important, starting the Morning Process will not supercede other processes and procedures taking place, such as price changes and updates, thereby creating the potential for database errors.

For these reasons, you should never start the Morning Process manually without being directed to do so by your help desk.

To start the Morning Process manually, perform the following steps:

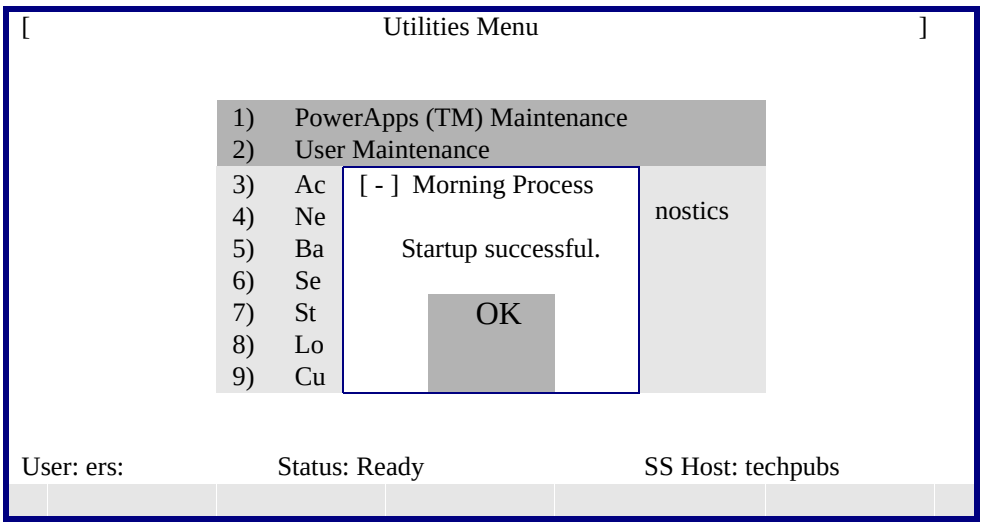
1. From the main menu, use the arrow keys to select menu item **5) Utilities** and press ENTER . This brings you to the **Utilities Menu** screen.



Screen 3-12. Utilities Menu

2. Using the arrow keys, select menu item **7) Start Morning Process** and press ENTER .

3. The **Morning Process** window appears, confirming that the Morning Process has been started. Select **OK** by pressing ENTER .



Screen 3-13. Utilities Menu with Confirmation

As mentioned earlier, each store configures the Morning Process in a slightly different way. Check with your Systems Administrator or Help Desk for details about how the Morning Process is initiated (automatically or manually) in your store, and which reports are available to you.

Chapter 4. Product Operations

The **Product Operations** option from the main menu provides access to the **Product Search** screen. From this menu item you can reach screens and windows you use to access and edit product information, as well as manage ESLs. Generally, editing product information occurs in the store's POS system and that information is *automatically* transferred to the ShelfServer database and updated through ShelfServer datafeeds. Editing product information should be done in very *limited* circumstances and only when instructed by store management. When you change a price through the **Product Edit** screen, the price changes in the ShelfServer database and on the ESLs *only*; the price *does not* change in your store's POS system. This may result in a different price being displayed on the ESL versus the price being charged at the cash register. Edits made through ShelfServer can affect the integrity of the system and should be performed under special circumstances only.

Caution:

Editing product information should be done in very limited circumstances and only when instructed by your Manager, Systems Administrator or Help Desk to avoid compromising data and price integrity.

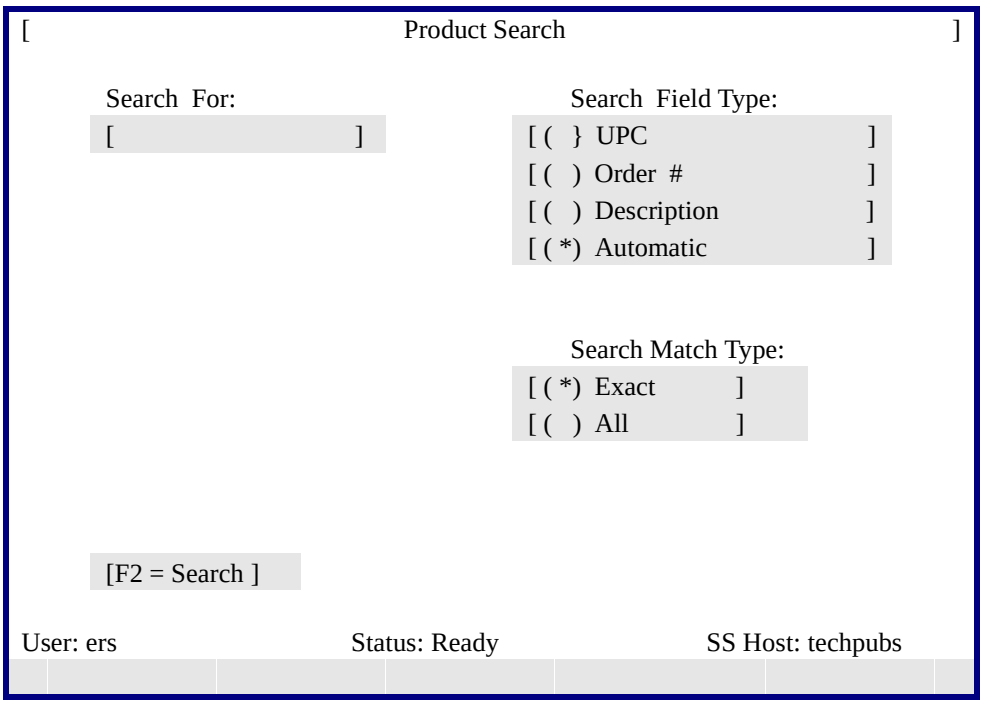
To locate a product for viewing product attributes or editing (see **caution** above), you can conduct either a *specific product search* or a *generic product search*, based on the product information you have.

4.1 Specific Product Search

To conduct a specific product search, perform the following steps:

4.1.1 Procedure

1. From the main menu, use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen.



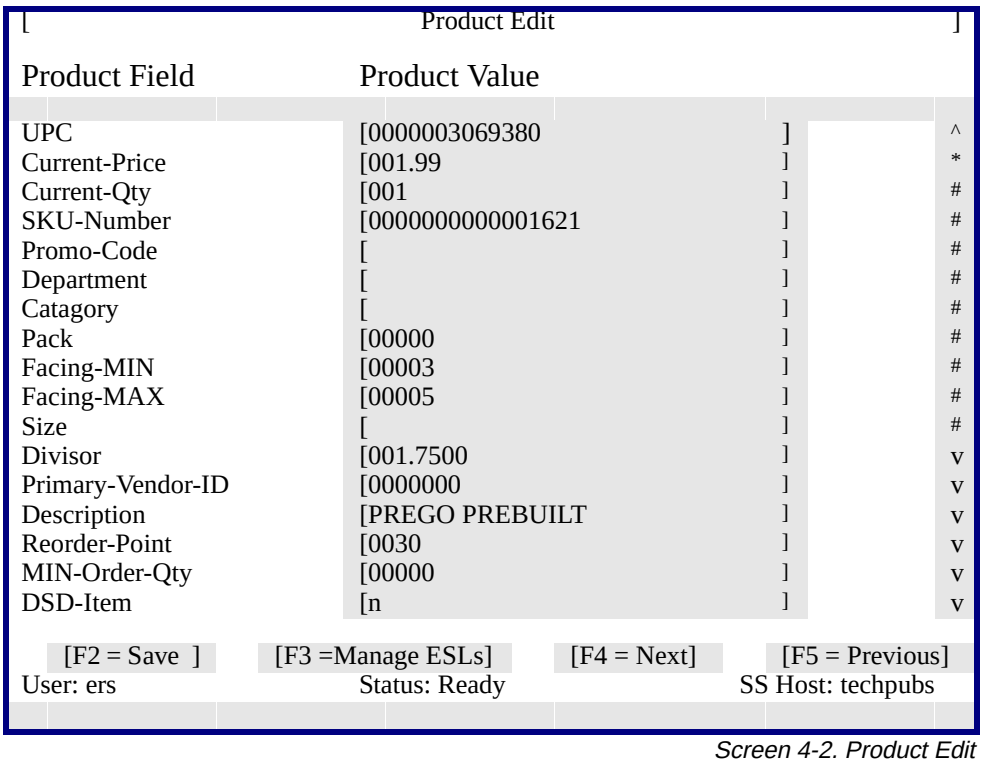
Screen 4-1. Product Search

2. In the **Search For:** field, enter the UPC, Order#, Product Description, or 8-character ESL address hexadecimal code located on the side of the ESL. If the ESL address is used, it must be preceeded by **0x** without any spaces. (The **x** is usually displayed preceeding the 8-character code on the side of the ESL. Therefore, if the ESL address shown is **x7fffca95**, your entry should be **0x7fffca95**.) Press ↹ (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is **Automatic**. The **Automatic** setting will search for products by UPC if the entry is numeric, or by product description if the entry is characters. (The **Automatic** setting can search for products by UPC or Order #, depending on the way ShelfServer is configured.) Do not change the **Automatic** default setting. Press (**Tab**) to move to the next field.

4. In the **Search Match Type:** field the default setting is **Exact**. The **Exact** default setting means that ShelfServer searches only for the exact item you have specified. Do not change the **Exact** default setting.

5. Press function key F2. This brings you to the **Product Edit** screen. This screen displays product information about the product you have selected including, product description, price, unit price, order#, UPC and quantity.



Screen 4-2. Product Edit

6. Using the arrow keys, highlight the field you would like to change, (e.g. price field), and type in the new information.

> **Note:**
>
> Once you have finished adding the new information, press ENTER to activate the change. Use of the up or down arrow key to leave the field will also activate the change.

7. Press function key F2. The **Product Edit** window appears, asking if you want to save the new information to the ShelfServer database.
8. If you wish to save the product edit to the ShelfServer database press ENTER for **Yes**. If you do not wish to save the edit, press ↹ (**Tab**) to get to the **No** push button and press ENTER.
9. Press ESC until you return to the **ShelfServer Main Menu** screen.

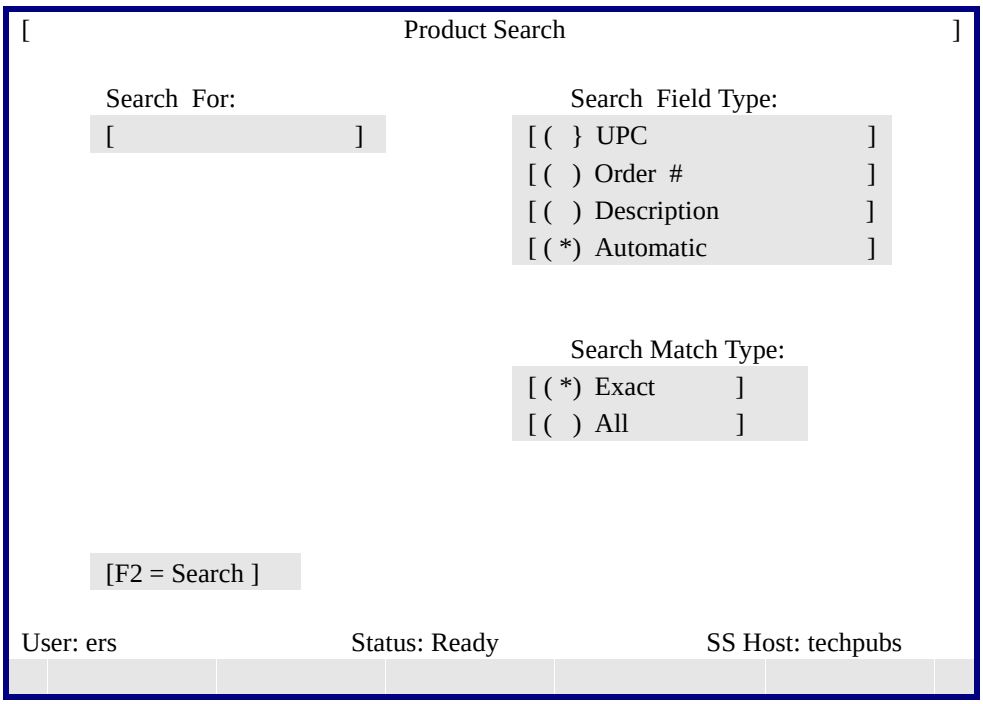
4.2 Generic Product Search

To conduct a generic product search, perform the following steps.

> **Caution:**
>
> The number of products in a standard database will number several thousand, and for the system to search through each item can be very time consuming. Use the generic product search only in rare situations when other methods fail to provide results.

4.2.1 Procedure

1. From the main menu, use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen.



Screen 4-3. Product Search

2. Leave the **Search For:** field blank and press ⇥ (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is **Automatic**. The **Automatic** setting will search for products by UPC if the entry is numeric, or by product description if the entry is characters. (The **Automatic** setting can search for products by UPC or Order #, depending on the way ShelfServer is configured.) Do not change the **Automatic** default setting. Press ⇥ (Tab) to move to the next field.

4. In the **Search Match Type:** field the default setting is **Exact**. Using the arrow keys, arrow down to the **All** setting and press ENTER .

5. Press function key F2 . This brings you to the **Product List** screen. This screen displays a list of all the products contained in the ShelfServer product database.

[Product List]

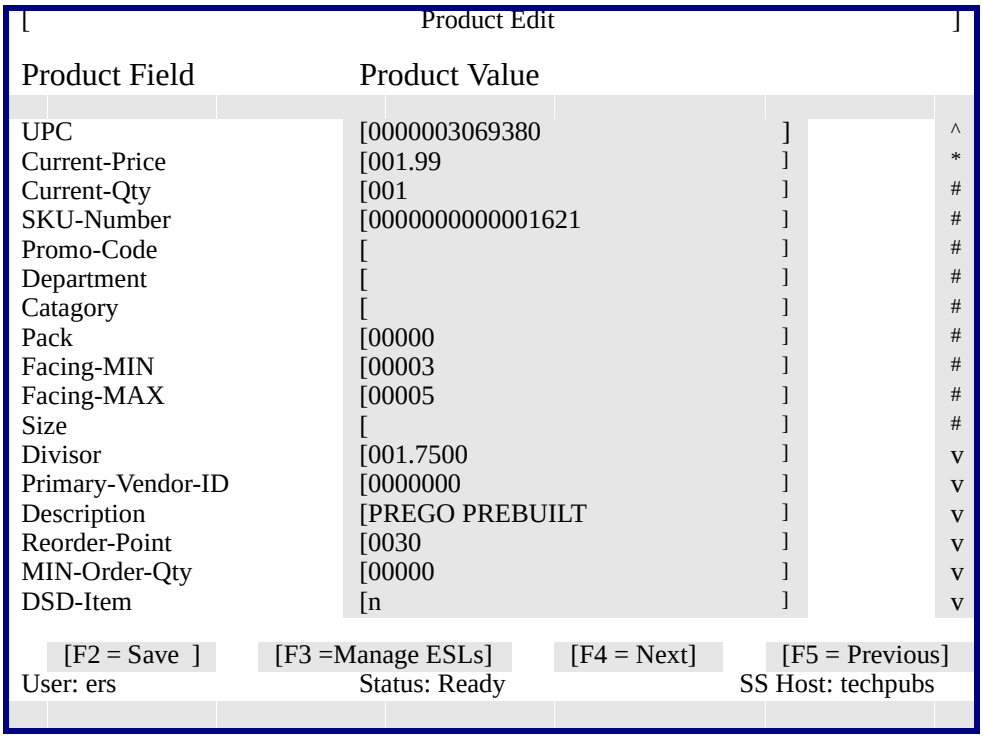
UPC	Order #	Description	Size	# ESLs	
0000000000100	0000034344	PREGO PREBUILT	1		^
0000000000102	0000000187	BANANA BABY	1		*
0000000000103	0000000265	CARAMBA FL 25 CT	1		#
0000000000105	0000078105	1ST BDAY CAKE COUP	0		#
0000000000106	0000078106	KONICA FILM COUP	0		#
0000000000107	00000078107	DELI PLATTER	1		#
0000000000108	00000078108	SEAFOOD PLATTER	1		#
0000000000109	00000078109	BAKERY SPECIALTY	1		#
0000000000112	0000000587	PAPAYA HAWAIIAN	1		#
0000000000114	0000000680	PEAR CACTUS	1		#
0000000000115	0000000780	POMEGRANATE	1		#
0000000000121	0000000588	PAPAYA MARADOL	1		#
0000000000124	0000000850	GREEN BEANS LOCAL	1		#
0000000000126	0000000848	LOOSE POLE BEANS	1		#

[F2 = Edit] [F3 = Manage ESLs]

User: ers Status Ready SS Host: techpubs

Screen 4-4. Product List

6. Using the arrow keys, scroll through the products listed. Highlight the product you would like to edit and press function key F2 . This brings you to the **Product Edit** screen which displays product information about the product you have selected including, product description, price, unit price, order#, UPC and quantity.



Screen 4-5. Product Edit

7. Using the arrow keys, highlight the field you would like to change, (e.g. price field), and type in the new information.

> **Note:**
>
> Once you have finished adding the new information, press ENTER to activate the change. Use of the up or down arrow key to leave the field will also activate the change

8. Press function key F2 to save the new information. The **Product Edit** window appears, asking if you want to save the new information to the ShelfServer database.

9. If you wish to save the product edit to the ShelfServer database press ENTER for **Yes**. If you do not wish to save the edit press Tab (**Tab**) to get to the **No** push button and press ENTER .

10. Press ESC until you return to the **ShelfServer Main Menu** screen.

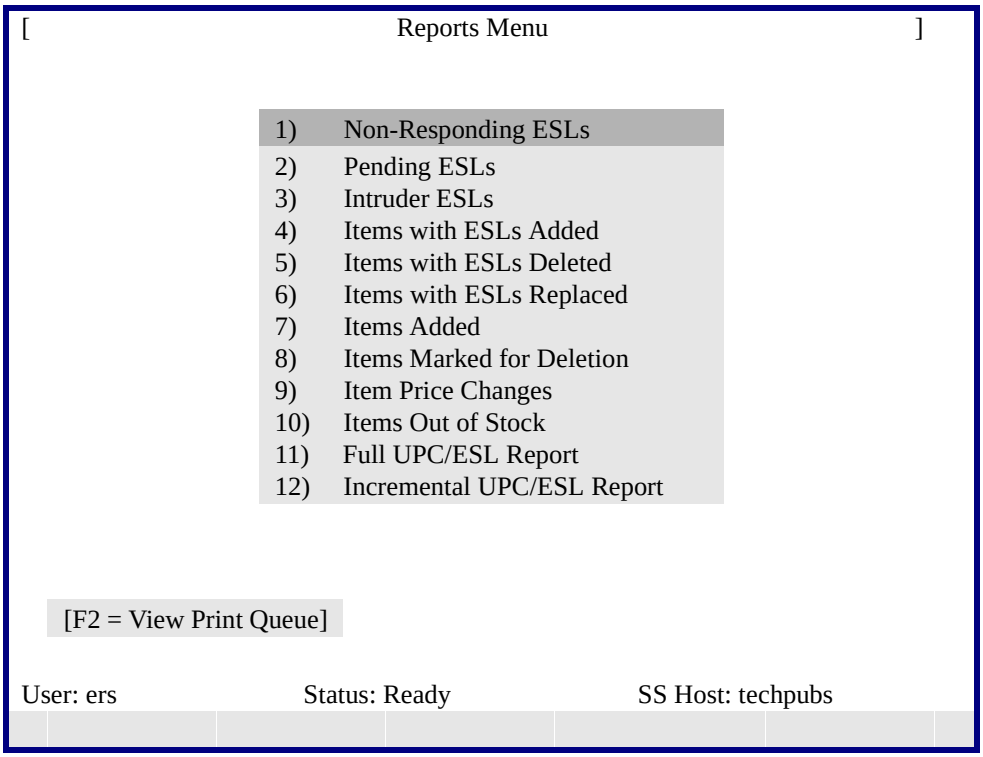
4.3 Printing and Reviewing Item Price Changes Report

After price changes are activated, it takes time for all of the information to reach the ESLs. Therefore, allow time before printing reports to be sure all price change information has been received by all ESLs. (For example, ShelfServer typically updates ESLs at a rate of approximately 167 ESLs per minute. So, if you have 2,000 price changes to be activated, it would take ShelfServer about 12 minutes to communicate those 2,000 price changes.)

4.3.1 Procedure

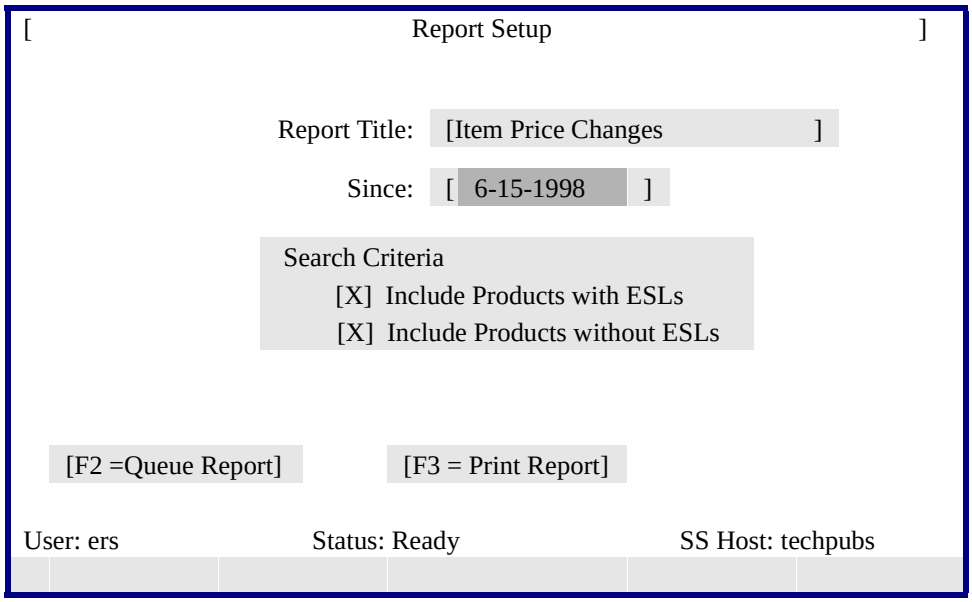
To print and review the *Item Price Changes Report*, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu** screen.



Screen 4-6. Reports Menu

2. Using the arrow keys, select menu item **9) Item Price Changes** and press ENTER . This brings you to the **Report Setup** screen.



Screen 4-7. Report Setup with Search Criteria

3. Fill in the **Since:** field with the beginning date of the price change search. Press ↹ (**Tab**) to advance to the next field.

4. By default, the **Search Criteria** field indicates both **Include Products With ESLs** and **Include Products Without ESLs** checked. This provides a report containing *all* price changes. Leave the **Search Criteria** field on this default setting.

5. To print the *Item Price Changes Report* press function key F3 . The **Print Report** window appears confirming that the *Item Price Changes Report* has been created and printed. Select **OK** by pressing ENTER .

6. Press ESC until you return to the **ShelfServer Main Menu** screen.
7. Compare the *Item Price Changes Report* with your store's *POS Report* to confirm all price changes have been accurately applied to the ShelfServer database.

4.4 Printing and Reviewing the Pending ESLs Report

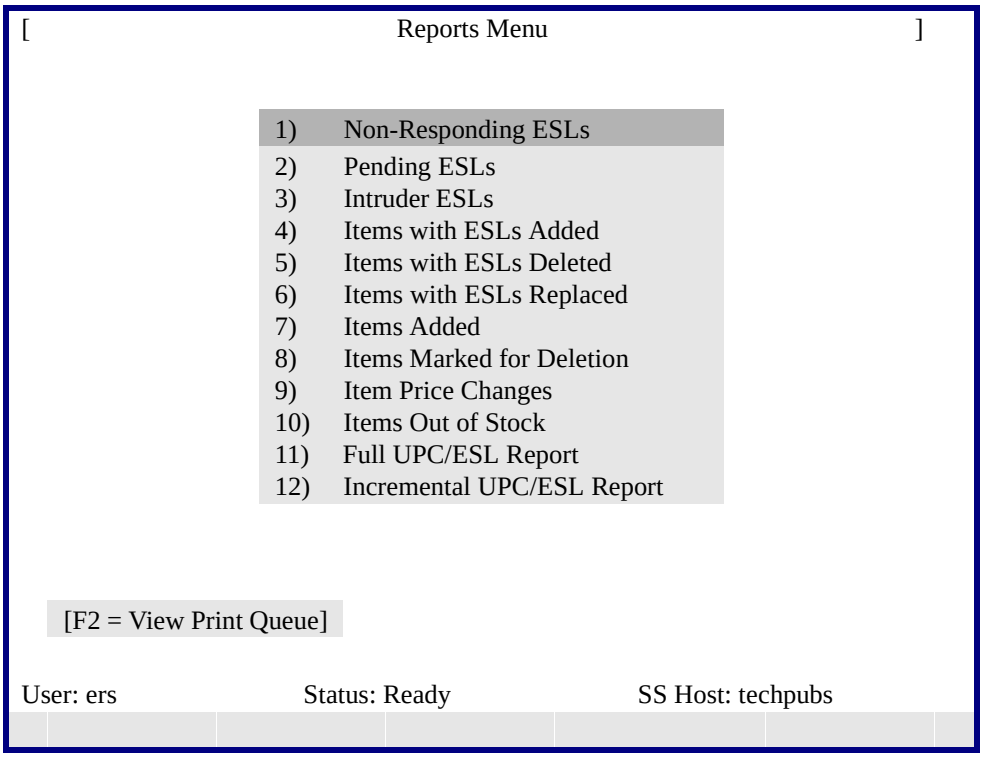
After price changes are activated, it takes time for all of the information to reach the ESLs. Therefore, allow time before printing reports to be sure all price change information has been received by all ESLs.

At times, a price update does not reach an ESL on the first try. ShelfServer continues trying to communicate the price change until it is accepted. Until the price change is accepted, the ESL status is set to pending. It is not unusual for the Pending ESL count to rise during price change activity, and then to decrease when all price changes have reached the ESLs. Once the price change process is complete, print the *Pending ESLs Report*.

4.4.1 Procedure

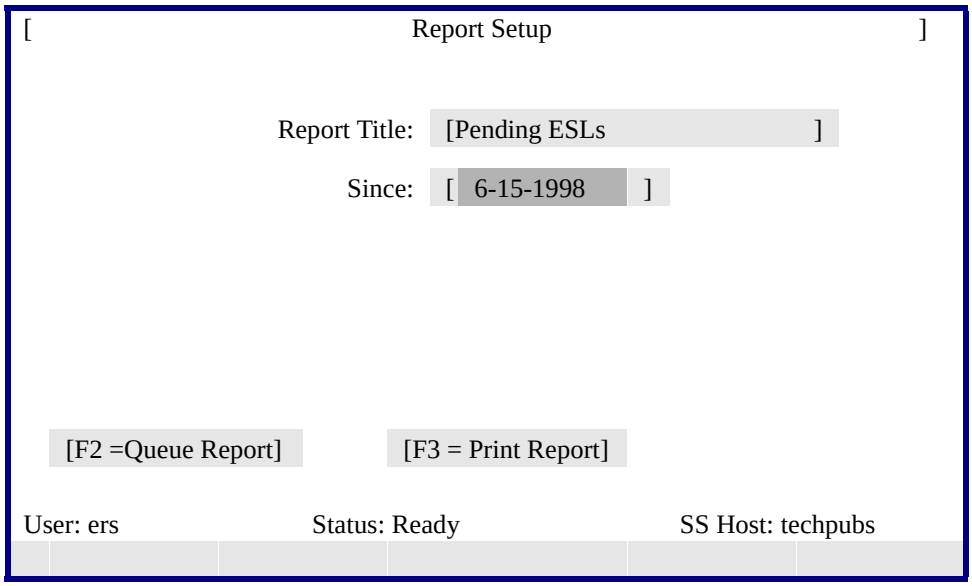
To print and review the *Pending ESLs Report*, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu** screen.



Screen 4-8. Reports Menu

2. Using the arrow keys, select menu item **2) Pending ESLs** and press ENTER . This brings you to the **Report Setup** screen.



Screen 4-9. Report Setup

3. Fill in the **Since:** field with the beginning date of the pending ESLs search and press ENTER .

4. To print the *Pending ESLs Report* press function key F3 . The **Print Report** window appears confirming the **Pending ESL Report** has been created and printed. Select **OK** by pressing ENTER .

5. Press ESC until you return to the **ShelfServer Main Menu** screen.

> **Note:**
>
> If the Pending ESLs Report shows records of Pending ESLs, see *Appendix A. Daily In-Store Maintenance of the ShelfNet System,* or contact your Systems Administrator or Help Desk for corrective action.

Chapter 5. Electronic Shelf Label Activities

There are many activities that take place in the store directly related to Electronic Shelf Labels (ESLs). This would include adding or deleting ESLs, creating, replacing and printing overlays, and creating ESL batches, just to name a few. The various ESL activities are discussed in this chapter.

5.1 Managing the Electronic Shelf Labels

This section describes the procdures in detail that you must know to perform the tasks directly related to the maintenance of the ESLs.

5.1.1 Hanging and Removing ESLs

Hanging ESLs: ESLs are hung in the aisle with the products they represent. Simply fit the front groove running across the top of the ESL into the upper lip of the rail, and snap the bottom of the ESL in place.

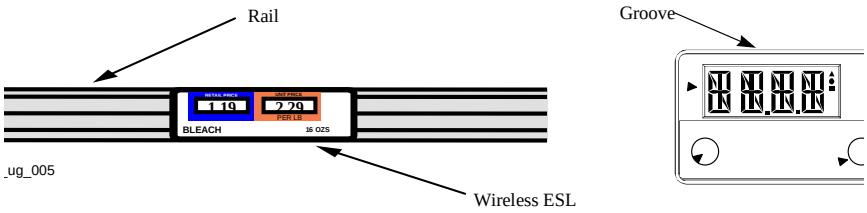
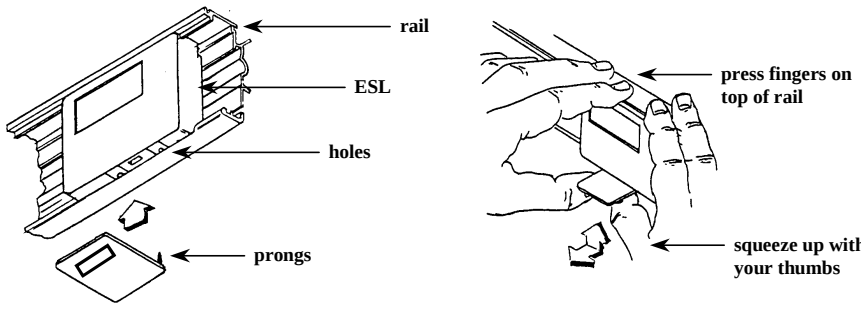


Figure 5-1. Hanging an ESL

Removing ESLs: The ESL key is a device used to remove ESLs from the rail. To remove an ESL from a rail, line up and insert the two ESL key prongs into the ESL holes, located on the bottom of the ESL. Using two hands, press your fingers on top of the rail and squeeze up with your thumbs on the key under the two prongs. The ESL should pop out into your hands. If not, release the ESL by gently pulling the bottom of the ESL outward with your thumbs.



is_ug_006 **ESL key**

Figure 5-2. Removing an ESL

5.1.2 ESL Battery

ESLs are powered by a small, internal battery that fits in the battery compartment located in the back of the ESL. The battery has a life expectancy of approximately five years.

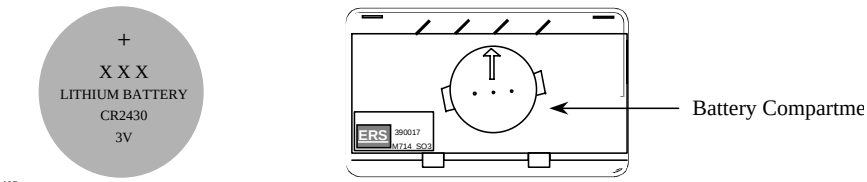


Figure 5-3. ESL Battery and Battery Compartment

5.1.2.1 Changing an ESL Battery

When the life of an ESL battery comes to an end, it must be replaced. To remove and replace the battery, perform the following steps:

1. Fit the prongs located on the ESL Battery Key into the holes on the battery compartment located on the back of the ESL.

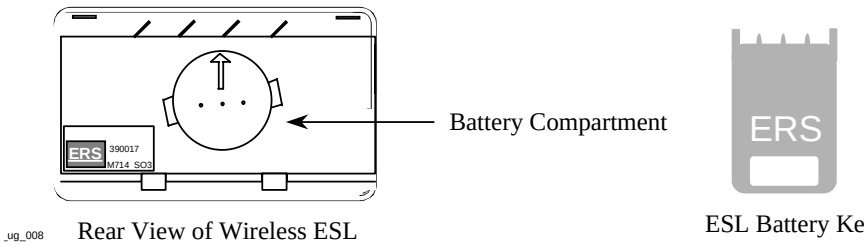


Figure 5-4. ESL Battery Key

2. Push the key down and twist. The battery cover pops off.
3. Remove the old battery from the compartment.

> **Note:**
>
> Batteries are often categorized as hazardous waste, and when no longer needed should be disposed of in accordance with federal, state and local directives. See your store manager for local policy and procedure.

4. Before installing the new battery, it is suggested that the edge of the old battery be used to short between the two battery contacts; (touch the prongs along the perimeter of the battery compartment to the prongs located at the center of the battery compartment). This ensures that any charge remaining from the weak or dead battery is removed from the ESL prior to installing the new battery.

5. Slip the new battery (writing-side facing up) under the two prongs located in the battery compartment.

6. Place the battery cover back over the battery compartment.

7. Fit the prongs located on the ESL Battery Key into the holes on the battery compartment; push the key down and twist to lock the cover in place.

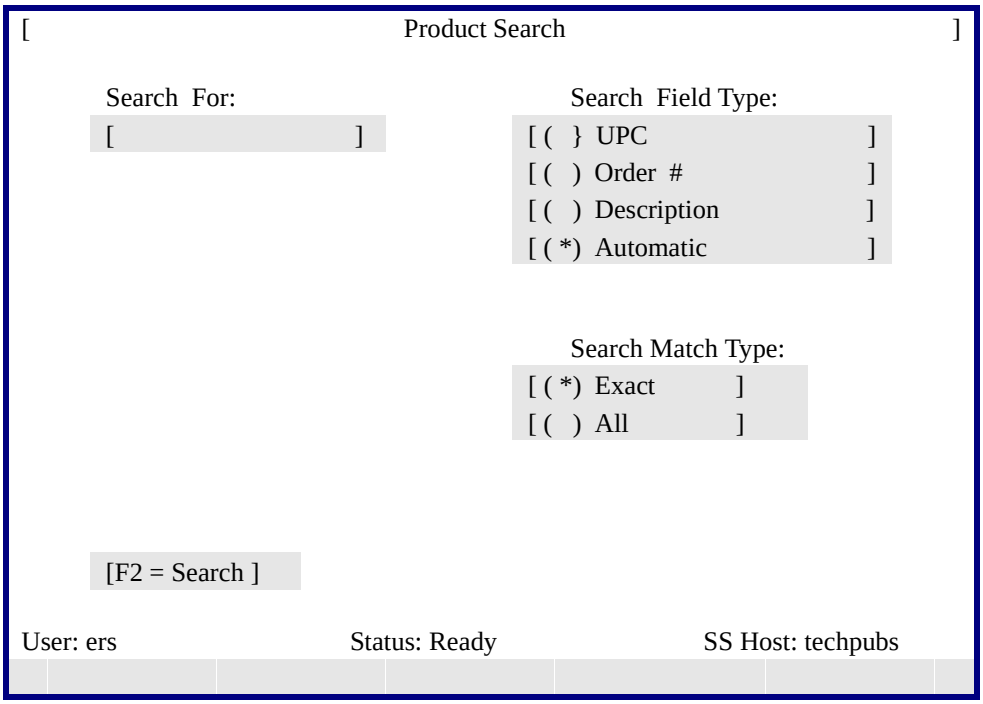
Note:

Once the battery has been replaced, all segments should be displayed on the ESL. If all segments are not displayed, repeat the battery replacement procedure until all segments display.

5.1.3 Refreshing ESLs

To update the ESL display as quickly as possible, you must refresh the ESL. This can be done through the ShelfServer user interface.

1. From the main menu, use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen.



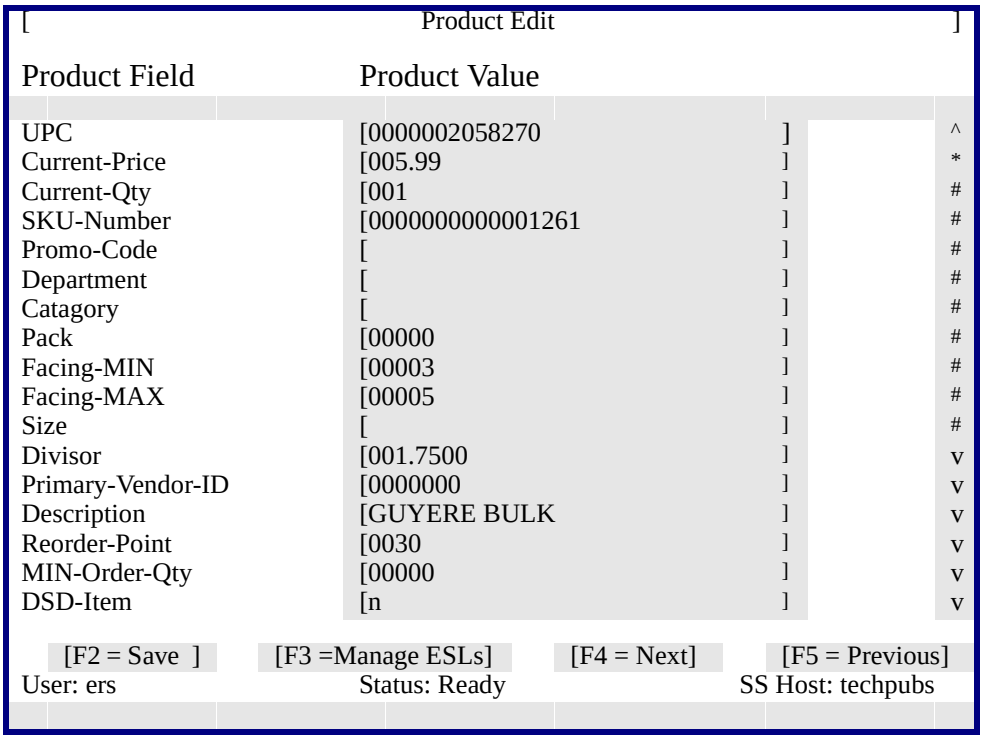
Screen 5-5. Product Search

2. In the **Search For:** field, enter the UPC, Order#, Product Description, or 8-character ESL address hexadecimal code located on the side of the ESL. If the ESL address is used, it must be preceeded by **0x** without any spaces. (The **x** is usually displayed preceeding the 8-character code on the side of the ESL. Therefore, if the ESL address shown is **x7fffca95**, your entry should be **0x7fffca95**.) Press ↹ (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is **Automatic**. The **Automatic** setting will search for products by UPC if the entry is numeric, or by product description if the entry is characters. (The **Automatic** setting can search for products by UPC or Order #, depending on the way ShelfServer is configured.) Do not change the **Automatic** default setting. Press (**Tab**) to move to the next field.

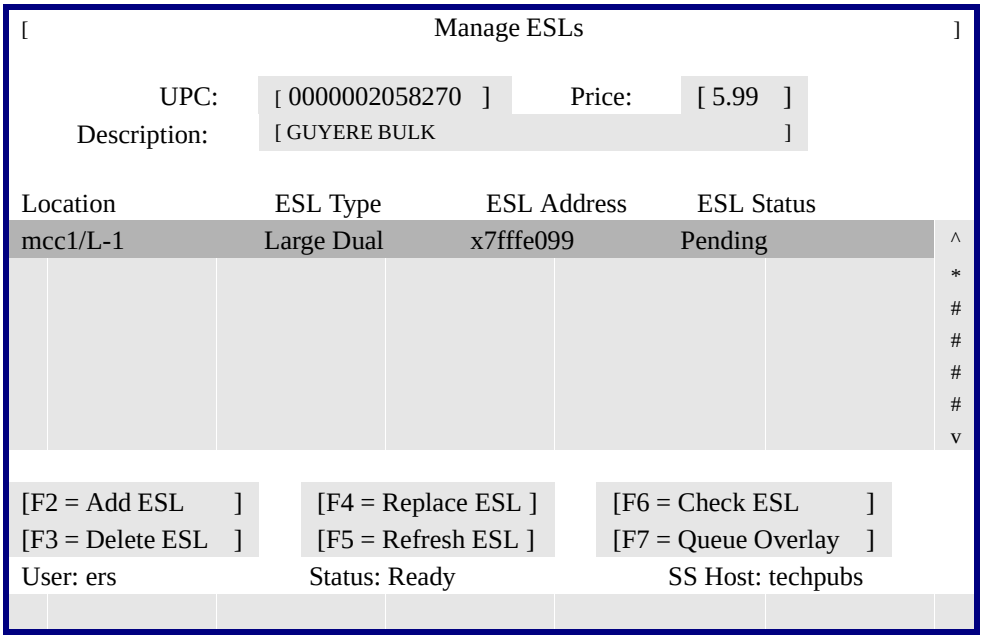
4. In the **Search Match Type:** field the default setting is **Exact**. (The **Exact** default setting means that ShelfServer searches only for the exact item you have specified.) Do not change the **Exact** default setting.

5. Press function key F2. This brings you to the **Product Edit** screen. This screen displays product information about the product you have selected including, product description, price, unit price, order #, UPC and quantity.



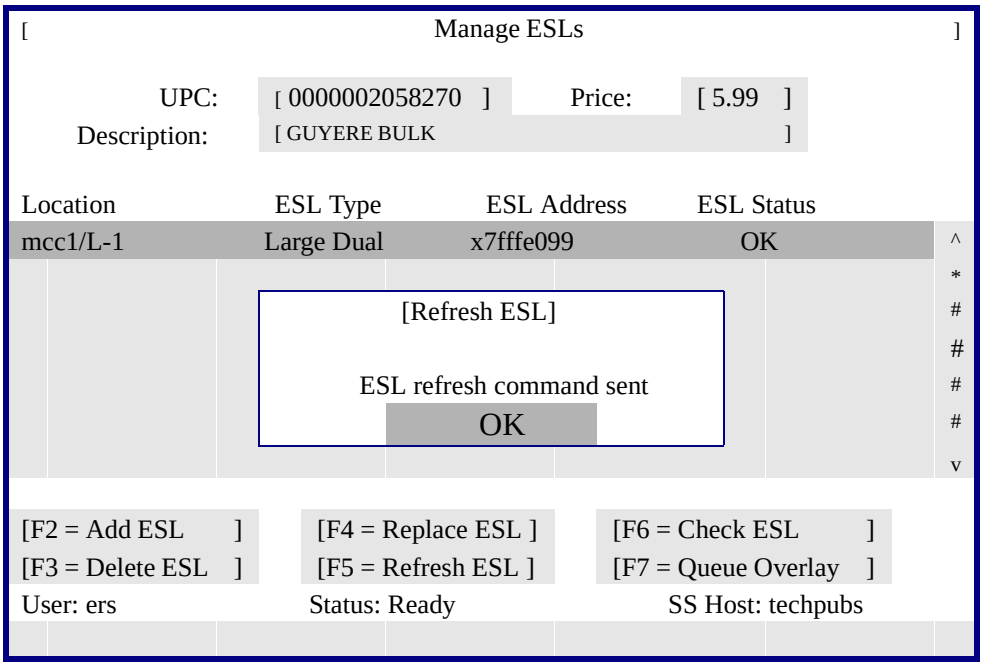
Screen 5-6. Product Edit

6. Press function key F3. This brings you to the **Manage ESLs** screen.



Screen 5-7. Manage ESLs

7. Press function key F5 to refresh the ESL. After a short time, the **Refresh ESL** window appears, confirming that the ESL refresh command has been sent. At this point the ESL should display the correct product information



Screen 5-8. Manage ESLs with Confirmation Window

8. Select **OK** by pressing ENTER . The **ESL Status** column now displays **OK**, confirming that the Refresh ESL command has been sent.

5.1.4 In-Aisle Audit Process

The audit process is an in-aisle activity that you use to validate all ESLs in the network are functioning and are in the right location. Much like you walk through the store presently and check on paper shelf labels, this process helps you verify that the ESL network is in order.

There are several ways to confirm that the ESL network is in working order. As you walk the store aisle you should check for the following:

- Check that each ESL has a readable display.
- Confirm each ESL matches its linked product.

Each store is slightly different in their approach to auditing the aisles. Your store may require that a particular aisle be checked when you are in that aisle performing another task. Your store may establish a schedule in which one aisle per week is audited for ESL accuracy, functionality and quality.

Typically, each ESL is audited on a pre-determined schedule set up by your store manager. This ensures, that over the course of a year, the entire store is audited. For example, your store manager may schedule each aisle for an audit on a particular week. (Again, each store may have a different approach to audit scheduling. Check with your store manager for the auditing schedule in your particular store.)

5.1.4.1 Confirming ESLs Match Their Products

Confirming that ESLs match their linked products is accomplished by verifying that the ESLs, overlays and products all display the same UPC number. In order to ensure that each ESL is properly located with its corresponding product, you can activate the ESL to display the last four digits of the corresponding product UPC. This display is activated on individual ESLs with an ESL button push or on an entire store aisle through the use of a Power Application. (For information on functionality and procedure, see *Chapter 6. Power Applications*.) Check with your store manager for the UPC display procedure (individual ESL or entire store aisle) used in your store.

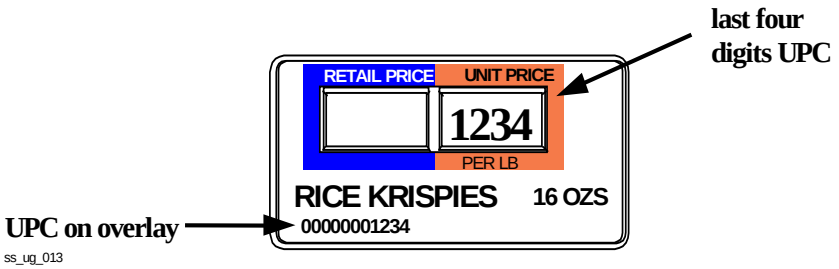


Figure 5-9. ESL Displaying Last Four Digits of UPC

To use an ESL button-push to activate your in-aisle audit process, perform the following steps:

1. Push the ESL button that your store has designated to display the last four digits of the UPC (usually the right button); the ESL displays the last four digits of its corresponding product UPC.

2. Compare the four digits displayed on the ESL to the last four digits of the UPC on the overlay. (See *Figure 5-9, ESL Displaying Last Four Digits of UPC*.) Then compare the four digits displayed on the ESL to the last four digits of the UPC on the product. If all three UPCs match go to step #3. If all three UPCs do not match, go to step #4.

3. When the comparison proves a match, check the next product, ESL and overlay; continue this process until your assigned audit is complete.

4. When the display on the ESL does *not* match the last four digits of the UPC on the product, remove that ESL from the shelf and delete it from the system. (Refer to *Deleting ESLs* .)

5. Assign the product a new ESL. (Refer to *Linking ESLs to Products.*) Return the ESL to the shelf and make sure the UPCs on the ESL, overlay and product all match.

6. When the display on the ESL does not match the last four digits on the overlay, check the UPC on the product. If the ESL and product have the same UPC, print a new overlay for that ESL. (Refer to *Printing Overlays with the System Printer*.)

5.1.5 Resets

Common store activity includes the relocation of products within the store. This activity is referred to as *resetting*. There are several ways to accomplish product resetting.

- Products may be relocated within the same section.
- An entire product section may be replaced by a new product, causing the previous product in that section to be displaced or replaced.
- An entire aisle of products may be moved to a different aisle location.

When products are relocated, their corresponding ESLs must be moved as well. The overlay on each ESL indicates the product to which that ESL has been assigned. As each product is set up at its new location, the corresponding ESL should be moved as well. This means that when you move a product to a new location, you need to move the ESL by taking it off its current rail and mounting it on the rail where the corresponding product is now located. To continue to ensure price integrity, it is extremely important that each product is properly linked to its corresponding ESL.

You can confirm that each ESL is at its proper location by verifying that the product UPC on the overlay matches the one that identifies the products.

5.1.5.1 Reviewing the Non-Responding ESLs Report

After the product reset is complete and the displaced ESL(s) have been deleted from the network, print the *Non-Responding ESLs Report* (Refer to *Printing Reports*.) A blank report confirms no trouble found, indicating that all ESLs known to ShelfServer are communicating with the system. A report containing records indicates a "break" in ESL communication and will report the ESL's last known location. These ESLs require corrective action; refer to *Appendix A. Daily In-Store Maintenance of the ShelfNet System*

5.1.6 Linking ESLs to Products

ESLs may be added to the network for a variety of reasons, which include the addition of new products to store inventory and product display changes.

Once it is decided that products are to be added to the store inventory, the ESL(s) must be *linked* to a product before adding them to the shelf-edge and network. ESL to product linkage is the process of matching up a product's UPC and its corresponding data with an ESL. ESLs use this UPC as a means of identification, to make sure that prices and other

product data are up-to-date.

There are two ways to link ESLs to products:

1. *Individually*, by conducting individual product searches using the handheld terminal.

2. *Batches*, using a batch of products as described in *Creating ESL Batches*.

5.1.6.1 Linking Individual ESLs to Products

In some cases you add individual ESLs to the network. This is done by searching for products and linking their ESLs individually. To link an ESL to a product using the handheld terminal, perform the following steps:

1. Log on to ShelfServer using the handheld terminal. This brings you to the HandyNet menu. (Refer to *Appendix B. Using the Handheld Terminal.*)

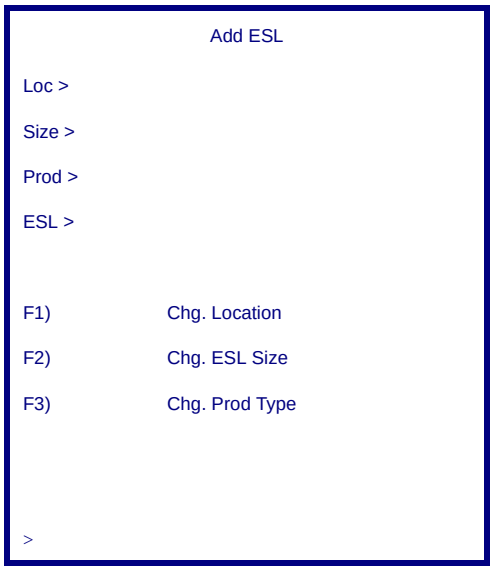
2. Select option **F1) ESL Item Maint**. This brings you to the **ESL Item Maint** screen

.

Screen 5-10. Handheld ESL Item Maint

3. Select option **F1) Add ESL**. This brings you to the **Add ESL** screen

.



Screen 5-11. Handheld Add ESL

4. Using the handheld terminal, scan the location ID sticker of the section you are standing in. A location ID appears in the **Loc>** field. (As long as you are adding ESLs to the same location, you only need to scan this sticker once.)

Note:

If location ID stickers are *not* used in your store, you can enter location information manually. To do this, select **F1) Chg. Location** from the **Add ESL** screen to get to the **Loc** field. Type in the appropriate location code, (e.g. L2) and press ENTER .

5. Once the location is entered, the cursor skips the **Size>** field and jumps right to the **Prod>** field. The default size is **Large Dual**.

> **Note:**
>
> If you need to change the size from Large Dual, proceed to step #6. If not, go to step #8.

6. Select option **F2) Chg. ESL Size**. The **Change ESL Size** screen appears

.

Screen 5-12. Handheld Change ESL Size

7. Press the number that corresponds to the size of the ESL you are linking to a product, (e.g. **1** if it is a **Small** ESL), and press ENTER . This brings you back to the **Add ESL** screen and the **Size>** field is updated with your selection.

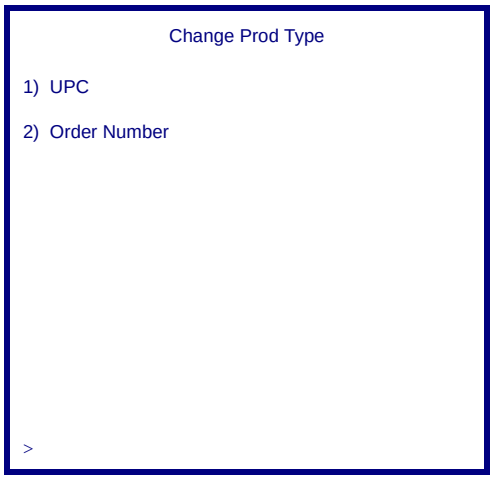
.

> **Note:**
>
> If you are scanning by UPC code, proceed to step #8. If you are scanning by order #, go to step #9.

8. Scan the UPC code on the product. The UPC code appears in the **Prod>** field.

9. The **Prod>** field default is for UPC codes. If you are using order#s instead of UPC codes for your products, you can change the field accordingly. Select option **F3) Chg. Prod Type**. The **Change Prod Type** screen appears

.



Screen 5-13. Handheld Change Prod Type

10. Press the number that corresponds to the product type you are using, (e.g. **2** if it is **Order Number**), and press ENTER . This brings you back to the **Add ESL** screen and the **Prod >** field is updated with your selection.

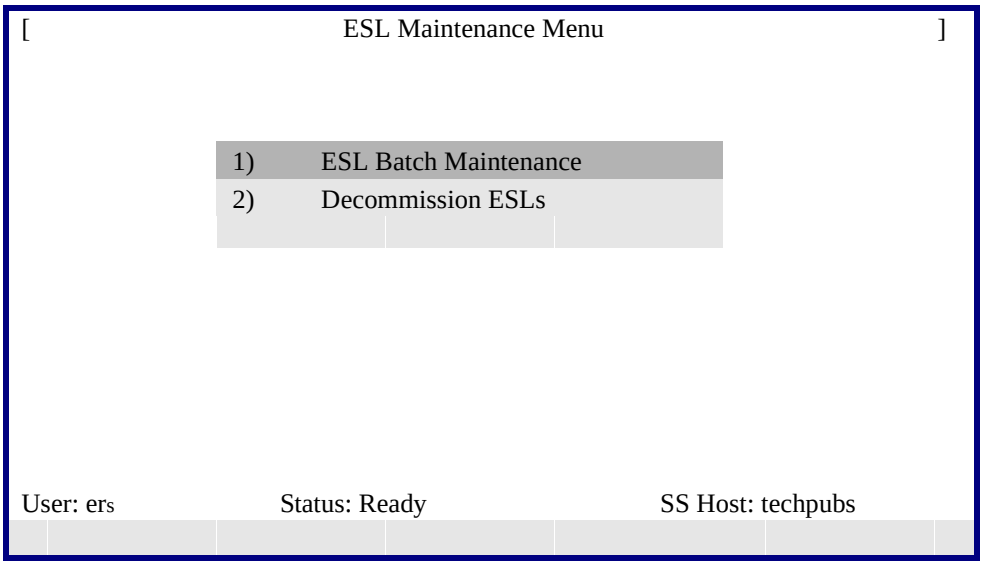
11. Using the handheld terminal, scan the ESL address located on the side of the ESL. ESL information appears in the **ESL>** field.

12. Once you scan the ESL address, an overlay is automatically printed for that ESL. Attach the overlay to the ESL and repeat this process for each product you would like to link to an ESL.

5.1.6.2 Linking ESL Batches to Products

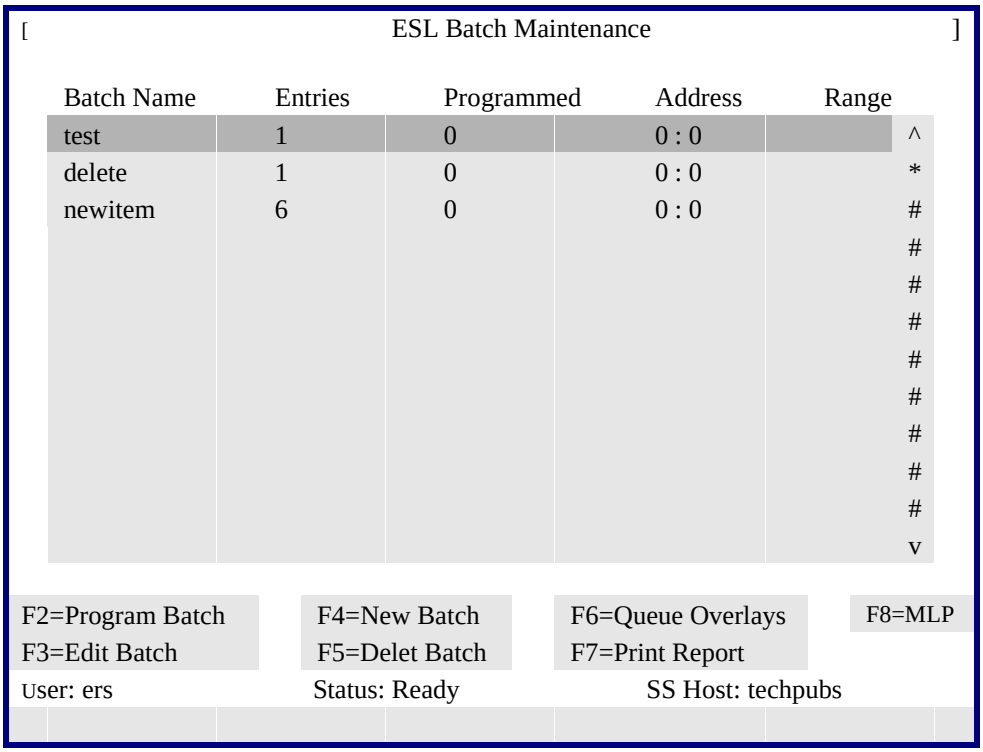
To link a batch of ESLs to products using a list of UPCs, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **2) ESL Maintenance** and press ENTER . This brings you to the **ESL Maintenance Menu**.



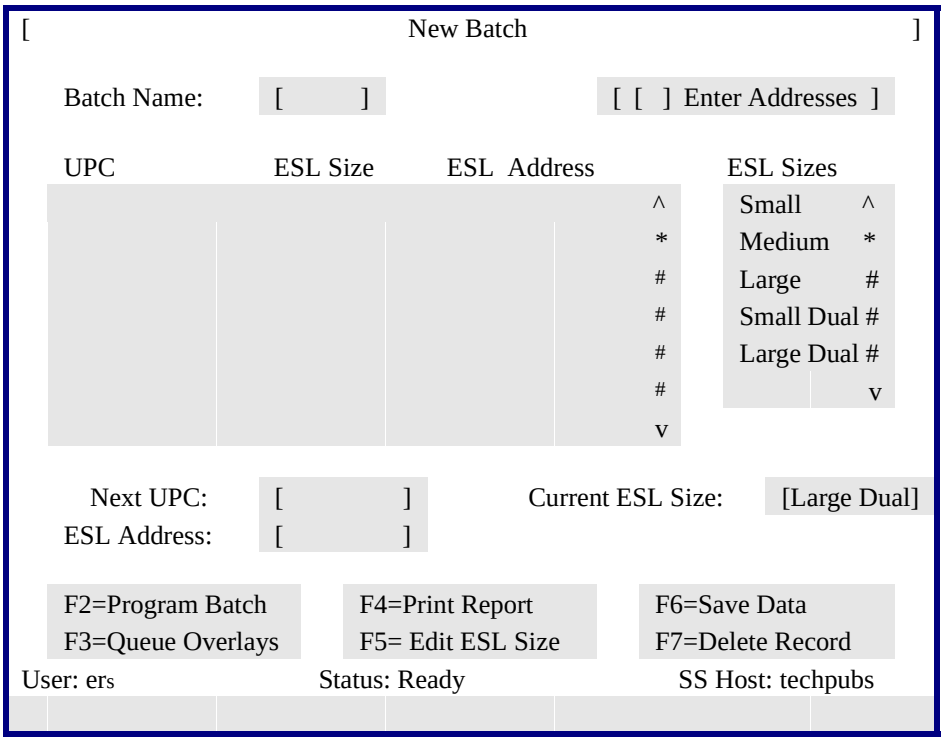
Screen 5-14. ESL Maintenance Menu

2. Using the arrow keys, select menu item **1) ESL Batch Maintenance** and press ENTER . This brings you to the **ESL Batch Maintenance** screen.



Screen 5-15. ESL Batch Maintenance

3. Press function key F4. This brings you to the **New Batch** screen.



Screen 5-16. New Batch

4. Type the name of the batch in the **Batch Name:** field, (the batch name can be up to eight characters long), and press ⇥ (**Tab**) to get to the **Enter addresses:** field.

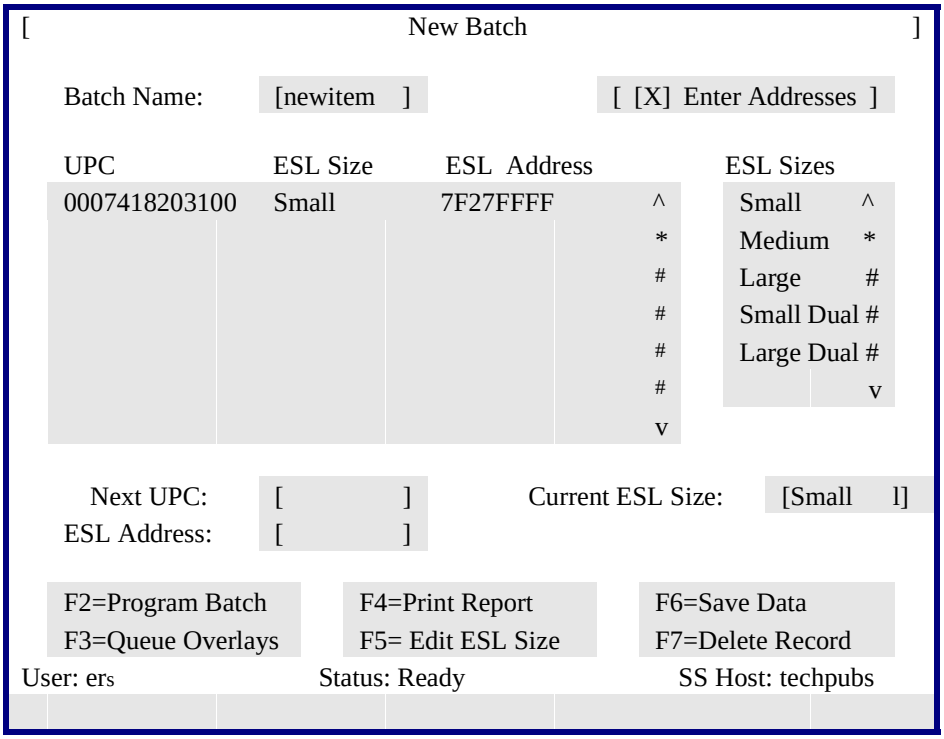
5. While in the **Enter addresses:** field, press ENTER to mark this field.

6. Press function key F5 to edit the ESL size. The cursor moves to the **ESL Sizes** field. Using the arrow keys, select the desired size ESL and press ENTER .

7. The cursor moves to the **Next UPC:** field. Using the list of UPCs, begin adding products whose ESLs you are linking by typing a product UPC number.

8. Press ENTER to get to the **ESL Address:** field. Type in the ESL address located on the ESL.

9. Press ENTER and the UPC, ESL size and ESL address for that product will be added to the list.



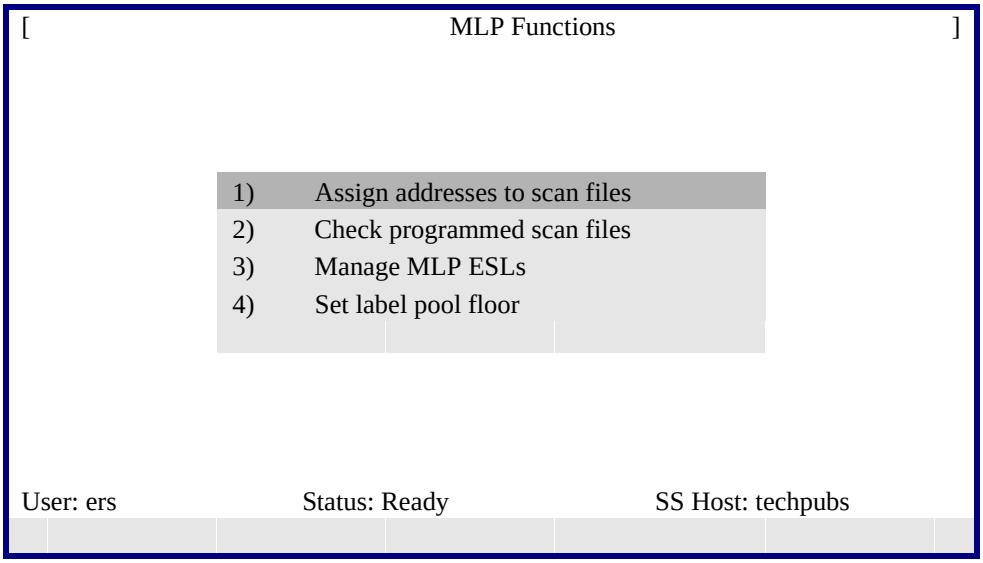
Screen 5-17. New Batch

10. If you accidentally type incorrect information while adding ESLs to the batch, you may delete the record. To do this, using the arrow keys, select the incorrect entry. Press function key F7. The **Delete Entry** window appears asking if you would like to delete the record. Press ENTER for **Yes**. The incorrect entry disappears from the screen.

11. Repeat steps #6-8 until you are finished entering all the UPCs on your list.

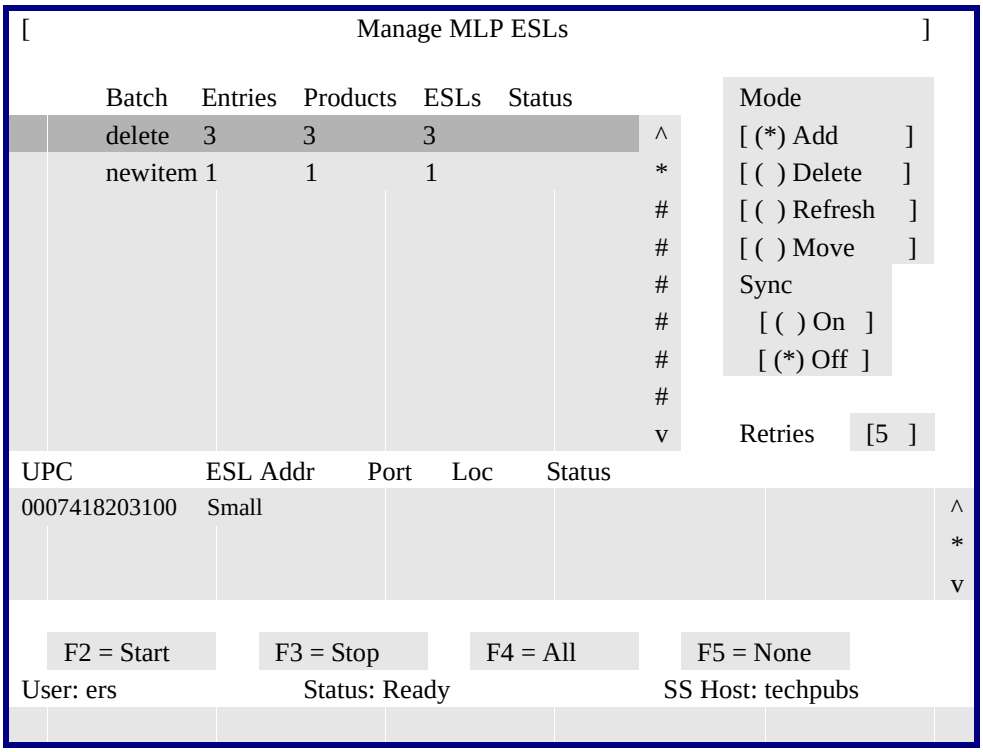
12. To save the batch, press function key F6. The **Save Batch** window appears confirming whether you would like to save the batch. Press ENTER for **Yes** or press Tab (**Tab**) to get to the **No** push button and press ENTER.

13. Press ESC until you return to the **ESL Batch Maintenance** screen. Once you are at this screen, press function key F8. This brings you to the **MLP Functions** screen.



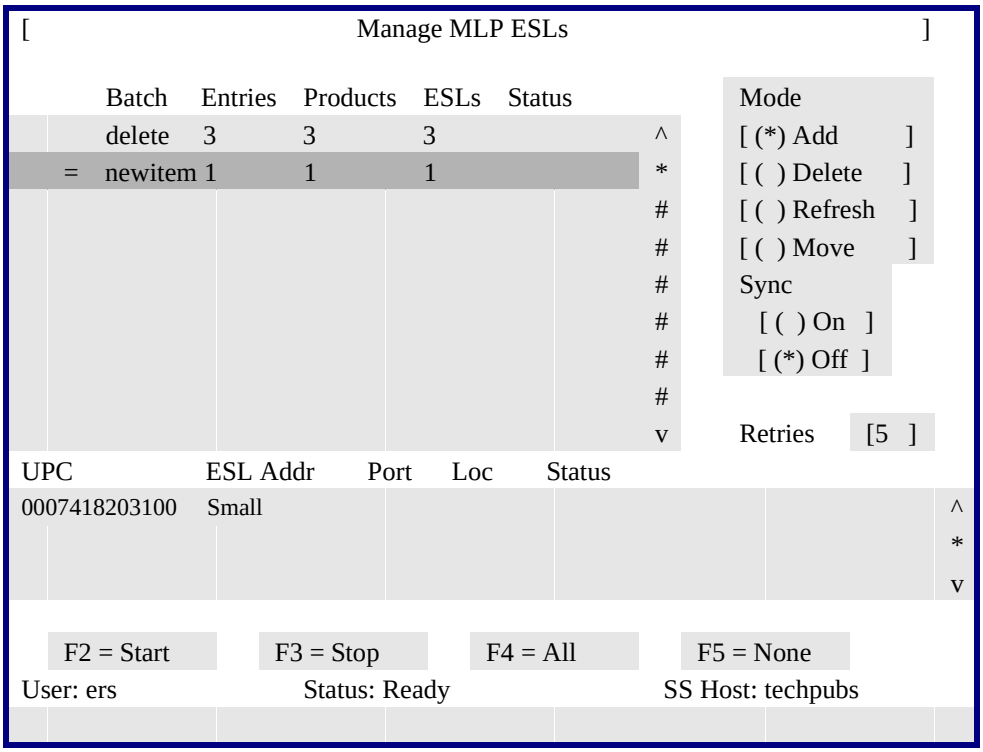
Screen 5-18. MLP Functions

14. Using the arrow keys, select menu item **3) Manage MLP ESLs** and press ENTER. This brings you to the **Manage MLP ESLs** screen.



Screen 5-19. Manage MLP ESLs

15. Using the arrow keys, select the batch you created and press ENTER . You can visually see when the batch is marked, because an "**=**" sign appears to the left of the **Batch** name.



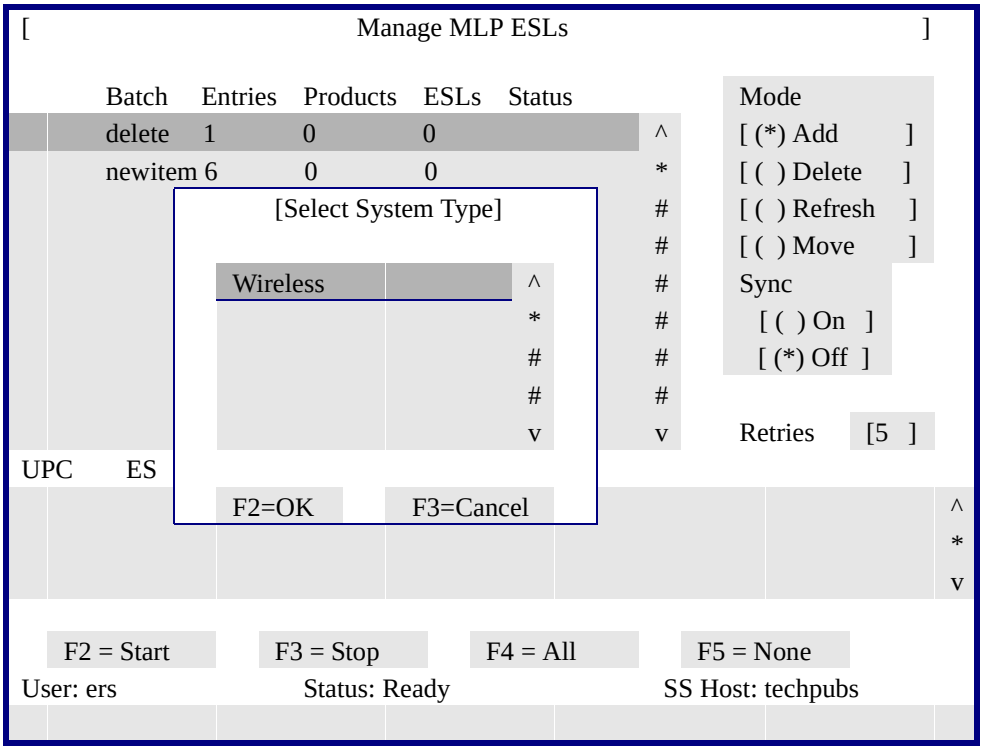
Screen 5-20. Manage MLP ESLs with New Batch entry

16. Press (**Tab**) to move to the **Mode** field. The default setting is **Add**. Do not change the default **Mode** setting.

17. Press (**Tab**) to move to the **Sync** field. The default setting is **Off**. Do not change the default **Sync** setting.

18. Press (**Tab**) to move to the **Retries** field. The default setting is **5**. Do not change the default **Retries** setting.

19. Press function key F2. The **Select System Type** window appears.



Screen 5-21. Manage MLP ESLs with Select System Type window

20. The only selection is **Wireless** which is highlighted. Press ENTER to accept this selection.

21. Press function key F2. The **Create MLP ESLs** window appears with the statement *Finished processing all batches***.** Press ENTER for **OK**.

22. The ESL displays all segments, flashing. Press either of the ESL buttons and **OK** displays. In moments, the ESL displays the correct product information (price/unit price).

5.1.7 Replacing ESLs

When an ESL is damaged or the pricing display is no longer readable, the ESL must be replaced. If ESLs are damaged or failing and need to be replaced, perform the following steps:

1. Delete the ESL from the network. (Refer to *Deleting ESLs* **.**) Because you are deleting an ESL to replace it with a new ESL, it is not necessary to print the *Items Marked for Deletion Report*.

2. Link a new ESL to replace the ESL that was deleted in step #1. (Refer to *Linking Individual ESLs to Products* .)

5.1.8 Adding ESLs

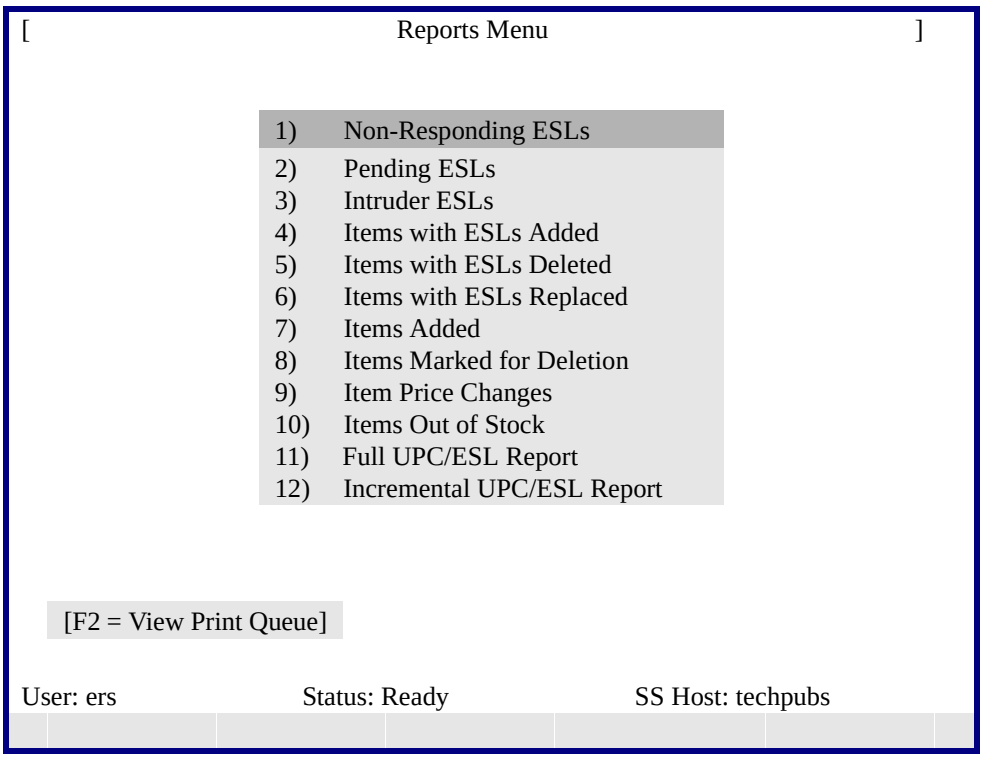
The *Items Added Report* provides a list of all new products that have recently been added to the product database. By creating and reviewing the *Items Added Report* you can verify which newly added products require ESLs.

5.1.8.1 Items Added Report

This report indicates if a product does not yet have an ESL. If you should find that products contained in the report require ESLs, link them according to the provided instructions.

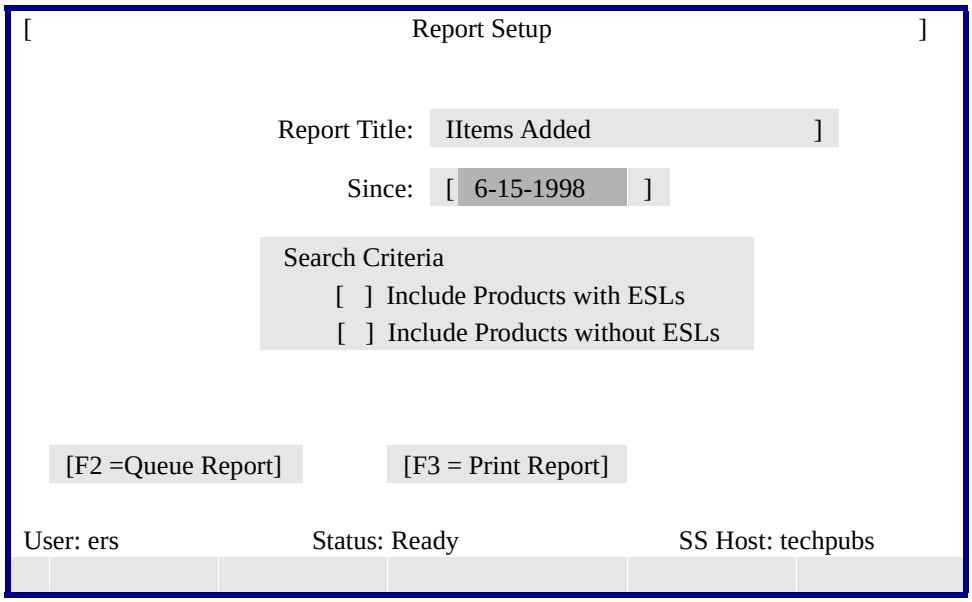
To print the *Items Added Report*, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu**.



Screen 5-22. Reports Menu

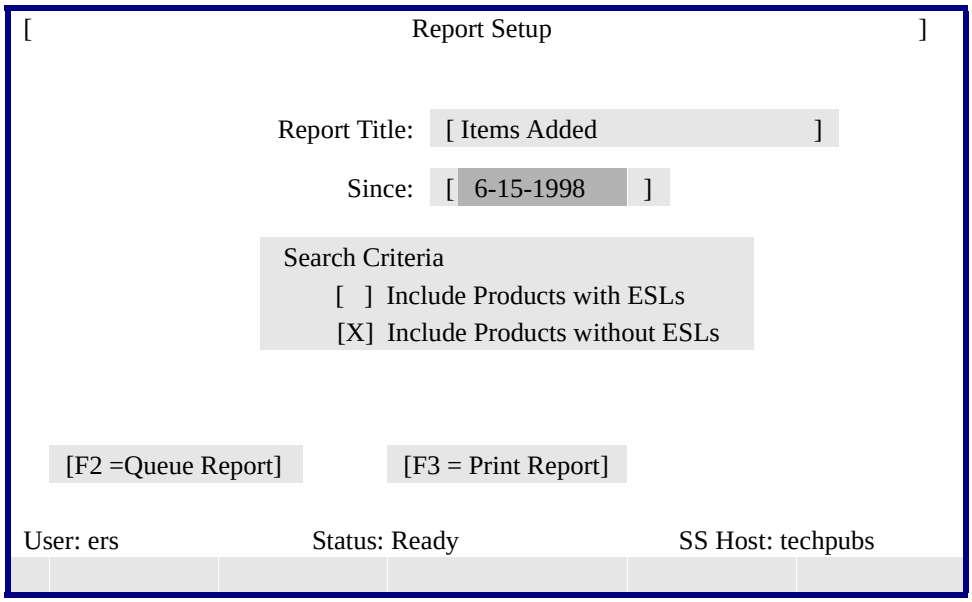
2. Using the arrow keys, select menu item **7) Items Added** and press ENTER . This brings you to the **Report Setup** screen.



Screen 5-23. Report Setup

3. Fill in the **Since:** field with the beginning date of the items added search. Press (**Tab**) to advance to the next field.

4. Using the arrow keys, leave only **Include Products Without ESLs** selected from the **Search Criteria** field.



Screen 5-24. Report Setup with Search Criteria window

5. To print the *Items Added Report* press function key F3. The **Print Report** window appears confirming the *Items Added Report* has been created and printed. Select **OK** by pressing ENTER.

6. Press ESC until you return to the **ShelfServer Main Menu**.

5.1.9 Deleting ESLs

ESLs may be deleted from the network for a variety of reasons, including discontinuation of existing products from store inventory.

ESLs are originally linked to a product. That linkage must be terminated so that ShelfServer no longer attempts to communicate with that ESL. When deleting ESLs from the network, the following things need to be done:

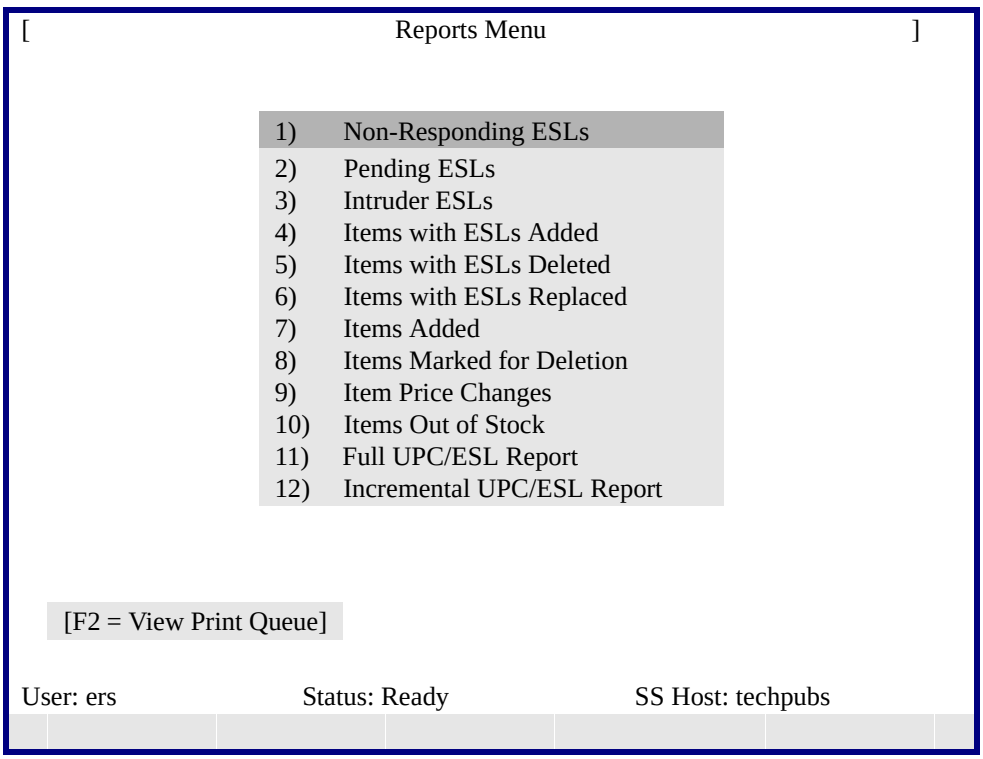
- Print and review the *Items Marked for Deletion Report*.

- Delete the ESL from the network by unlinking each deleted ESL from its product.
- Print and review the *Items With ESLs Deleted Report*.

5.1.9.1 Items Marked for Deletion Report

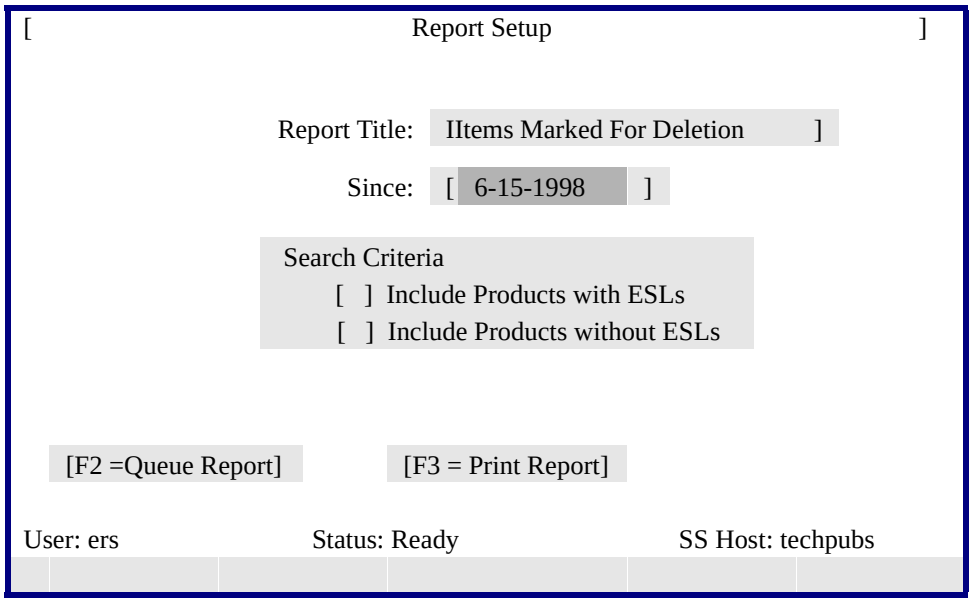
Checking whether items have been deleted from the store's database is the first step to deleting ESLs from the network. To check for deleted items, print the *Items Marked for Deletion Repor*t by performing the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu**.



Screen 5-25. Reports Menu

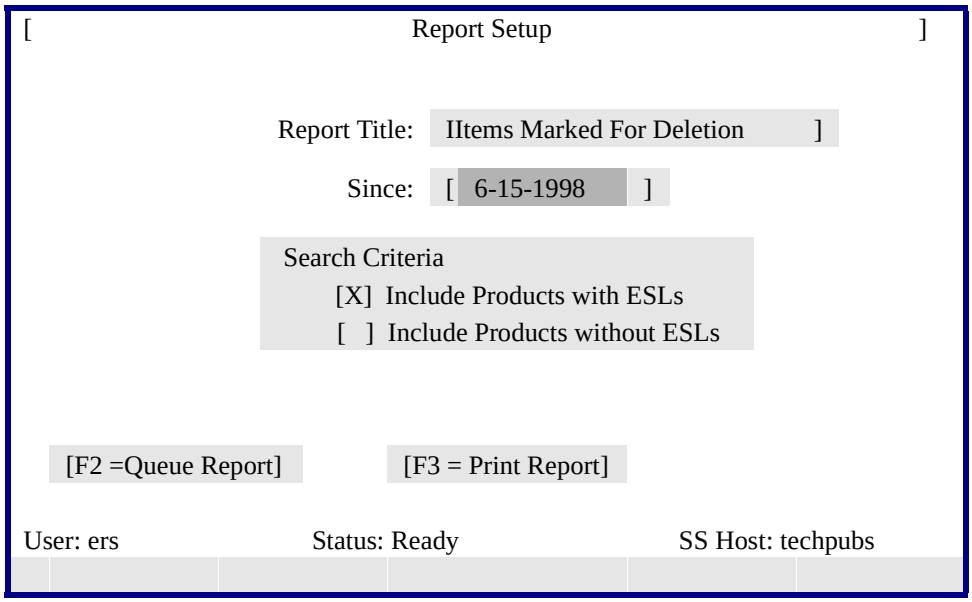
2. Using the arrow keys, select menu item **8) Items Marked for Deletion** and press ENTER . This brings you to the **Report Setup** screen.



Screen 5-26. Report Setup with Search Criteria window

3. Fill in the **Since:** field with the beginning date of the items marked for deletion search. Press (**Tab**) to advance to the next field.

4. Using the arrow keys, leave only **Include Products With ESLs** selected from the **Search Criteria** field. This provides a list of all items with ESLs attached that have been deleted from the store's POS database.



Screen 5-27. Report Setup with Search Criteria selected

5. To print the *Items Marked for Deletion Repor*t press function key F3 . The **Print Report** window appears confirming the *Items Marked for Deletion Report* has been created and printed. Select **OK** by pressing ENTER .

6. Press ESC until you return to the **ShelfServer Main Menu**.

7. Review the *Items Marked For Deletion Report* to determine which ESLs can be removed from the shelf edge.

Typically, ESLs are left on the shelf until all of the product inventory has been sold or removed; this depends on individual store procedures. Once you print the *Items Marked for Deletion Report*, give it to your store manager. Your store manager typically decides when to remove a product and its ESL from the shelf.

Note:

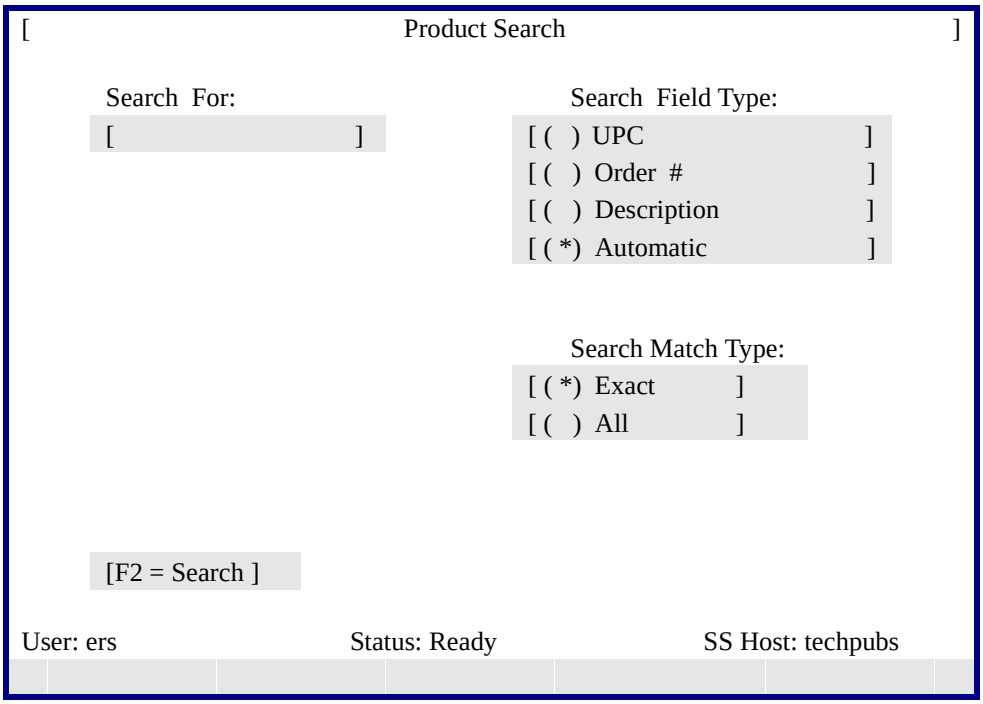
If you remove ESLs from the shelf based on this report, you *must* delete those ESLs from the ShelfServer database prior to physically removing them from the shelf-edge.

5.1.9.2 Deleting ESLs from the ShelfServer Database

You can delete an ESL from the ShelfServer database by performing the following steps:

1. From the main menu, use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen

.



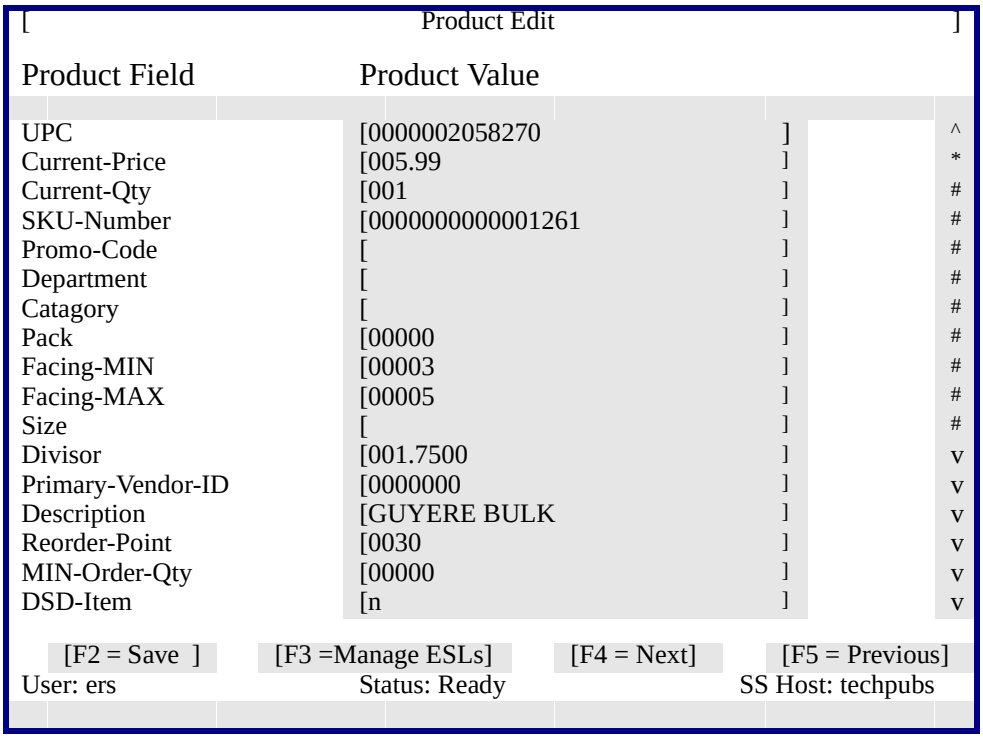
Screen 5-28. Product Search

2. In the **Search For:** field, enter the UPC, Order#, Product Description, or 8-character ESL address hexadecimal code located on the side of the ESL. If the ESL address is used, it must be preceeded by **0x** without any spaces. (The **x** is usually displayed preceeding the 8-character code on the side of the ESL. Therefore, if the ESL address shown is **x7fffca95**, your entry should be **0x7fffca95**.) Press ↹ (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is **Automatic**. The **Automatic** setting will search for products by UPC if the entry is numeric, or by product description if the entry is alphabetic. (The **Automatic** setting can search for products by UPC or Order #, depending on the way ShelfServer is configured.) Do not change the **Automatic** default setting. Press (**Tab**) to move to the next field.

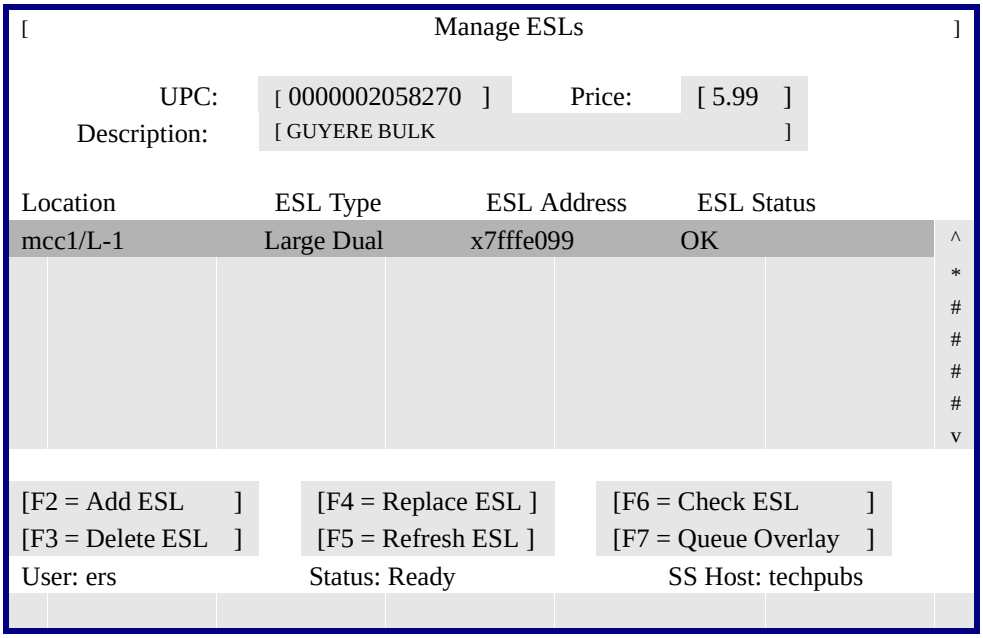
4. In the **Search Match Type:** field the default setting is **Exact**. (The **Exact** default setting means that ShelfServer searches only for the exact item you have specified.) Do not change the **Exact** default setting. Press (**Tab**) to move to the next field.

5. Press function key F2. This brings you to the **Product Edit** screen. This screen displays information about the product you have selected.



Screen 5-29. Product Edit

6. Press function key F3 . The **Manage ESLs** screen appears.

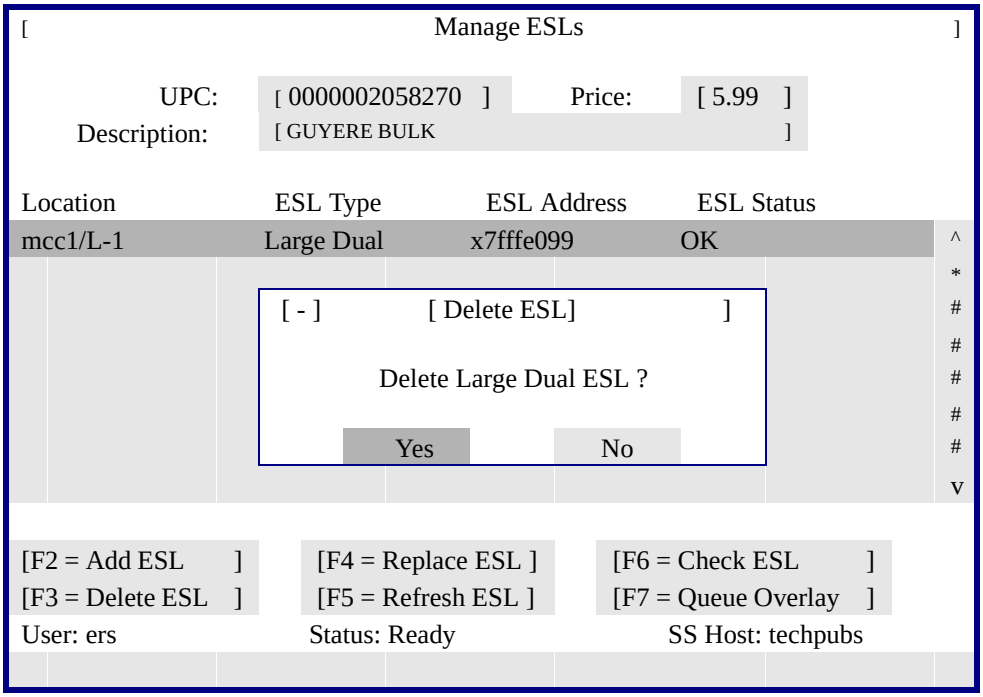


Screen 5-30. Manage ESLs

7. Using the arrow keys, select the ESL you wish to remove from the shelf and press ENTER .

8. Press function key F3 to delete the ESL.

9. The **Delete ESL** window appears asking if you want to delete the ESL from the ShelfServer database. Select **Yes** and press ENTER **.** Wait for the ESL to disappear from the screen; the ESL is now deleted from the ShelfServer database.



Screen 5-31. Manage ESLs with Delete ESL window

10. Upon successfully deleting the ESL, remove the ESL from its shelf location and remove its overlay. At this point, the ESL is prepared to be reused for another product.

5.1.9.3 Deleting ESLs Using the Handheld Terminal

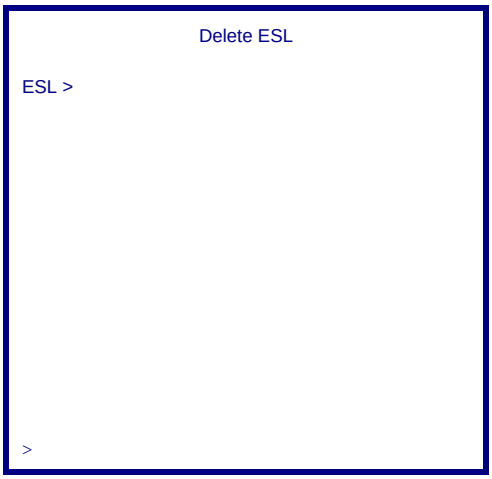
Log on to ShelfServer using the handheld terminal. This brings you to the **HandyNet** menu**.** (Refer to *Appendix B. Using the Handheld Terminal* for instructions on how to log on.)

1. Select option **F1) ESL Item Maint**. This brings you to the **ESL Item Maint** screen

.

Screen 5-32. Handheld ESL Item Maint

2. Select option **F2) Delete ESL**. This brings you to the **Delete ESL** screen.



Screen 5-33. Handheld Delete ESL

3. Using the handheld terminal, scan the ESL address, located on the side of the ESL. ESL information will appear in the **ESL>** field. Once the ESL is successfully deleted from the system, the **ESL>** field will clear for the next scan.

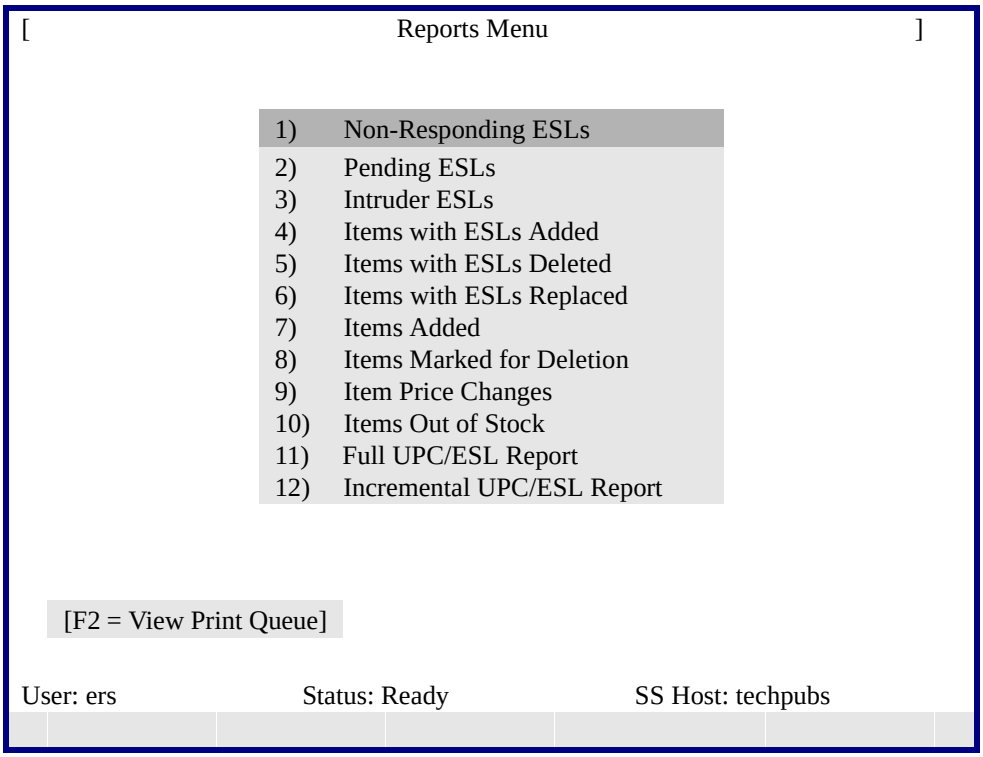
5.1.9.4 Items With ESLs Deleted Report

Once an ESL has been physically removed and deleted from the network, you should print the *Items With ESLs Deleted Report*. This report is used as an audit tool to verify that the desired ESLs have actually been removed from the ShelfServer database.

By comparing the *Items Marked for Deletion Report* with the *Items With ESLs Deleted Report* you can verify compliance with the delete portion of the store merchandising plan.

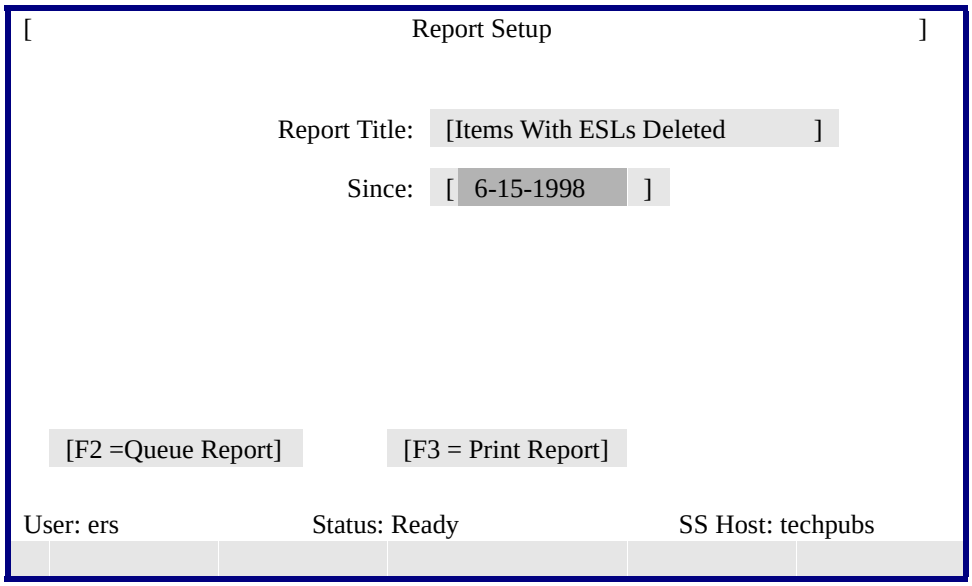
To print the *Items With ESLs Deleted Report*, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu**.



Screen 5-34. Reports Menu

2. Using the arrow keys, select menu item **5) Items With ESLs Deleted** and press ENTER . This brings you to the Report Setup screen.



Screen 5-35. Report Setup

3. Fill in the **Since:** field with the beginning date of the deleted labels search

.

> **Note:**
>
> It is important to specify the same date range as entered for the *Items Marked for Deletion Report* to ensure that you are monitoring the same time period.

4. To print the *Items With ESLs Deleted Report* press F3 . The **Print Report** window appears confirming the *Items With ESLs Deleted Report* has been created and printed. Select **OK** by pressing ENTER .

5. Press ESC until you return to the **ShelfServer Main Menu**.

5.2 Managing Overlays

Overlays are the paper stickers that adhere to ESLs. Overlays contain product information other than price and unit price. When changes other than price changes are made to the product description, new overlays that display this information must be created, printed and attached to the ESL.

Overlays can be created several different ways within ShelfServer; each way is described in detail below.

5.2.1 Overlays Created Through the Morning Process

Every morning the ShelfNet system automatically performs a review of ESL and product information collected over the last 24 hours. This is called the *Morning Process*. Morning Process information includes *Merchandising Data Information* (MDI). MDI is data that indicates changes in product information other than price; information typically contained on overlays such as unit of measure, package size and product description. The Morning Process reviews the database for changes in merchandising data, and then automatically creates new overlays for printing. (Refer to the *Morning Process* on section.) If you would like to print overlays once they have been created through the Morning Process, refer to *Printing Overlays with the System Printer*.

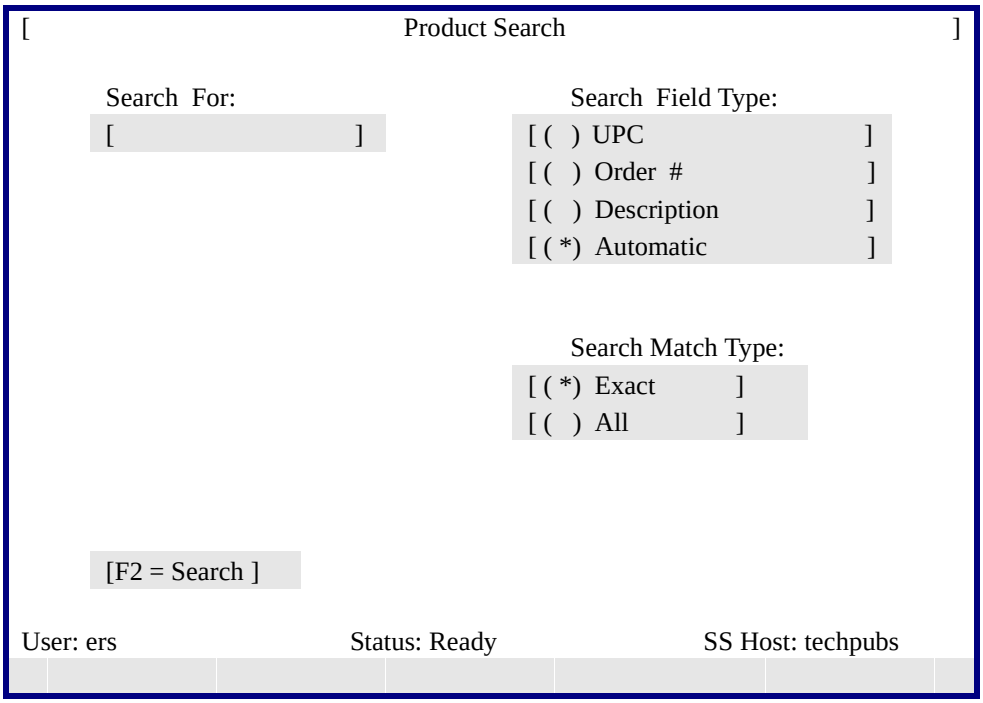
5.2.2 Replacing Overlays

When an overlay is dirty or damaged, the overlay needs to be reprinted and replaced on the ESL. This can be done by creating overlays on-demand through the **Product Operations** option.

If an individual overlay needs to be replaced, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen

.



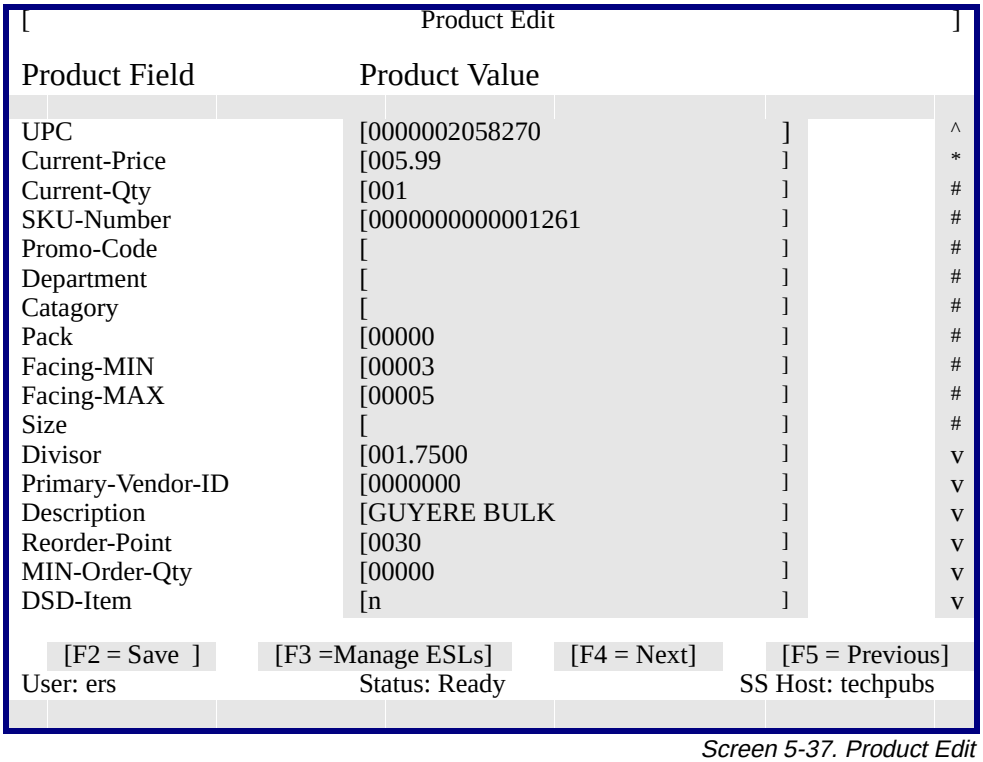
Screen 5-36. Product Search

2. In the **Search For:** field, enter the UPC, Order#, Product Description, or 8-character ESL address hexadecimal code located on the side of the ESL. If the ESL address is used, it must be preceeded by **0x** without any spaces. (The **x** is usually displayed preceeding the 8-character code on the side of the ESL. Therefore, if the ESL address shown is **x7fffca95**, your entry should be **0x7fffca95**.) Press ↹ (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is Automatic. (The **Automatic** setting will search for products by UPC (or Order# depending on the way ShelfServer is configured), if the entry is numeric, or by product description if the entry is alphabetic.) Do not change the **Automatic** default setting. Press ↹ (**Tab**) to move to the next field.

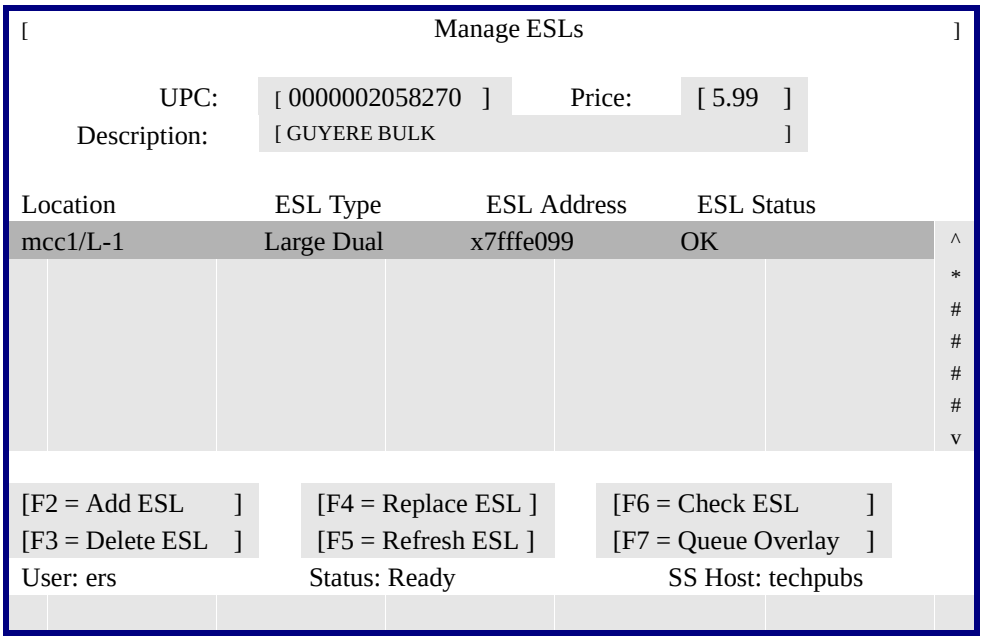
4. In the **Search Match Type:** field the default setting is **Exact**. (The **Exact** default setting means that ShelfServer searches only for the exact item you have specified.) Do not change the **Exact** default setting. Press Tab (**Tab**) to move to the next field.

5. Press function key F2. This brings you to the **Product Edit** screen. This screen displays information about the product you have selected.



Screen 5-37. Product Edit

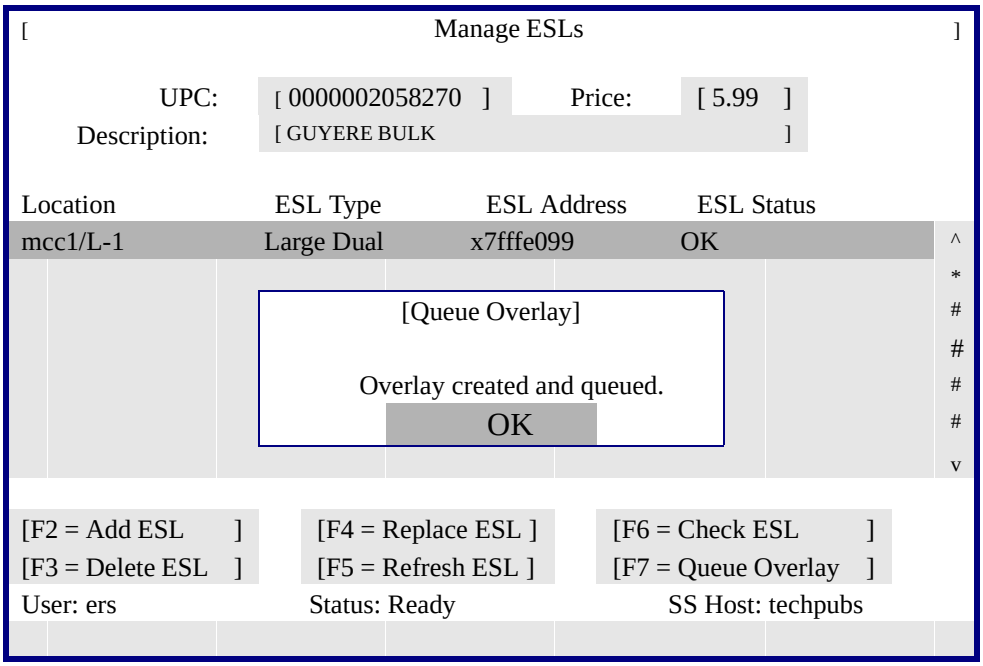
6. Press function key F3 . This brings you to the **Manage ESLs** screen.



Screen 5-38. Manage ESLs

7. Using the arrow keys, select the ESL with the correct overlay size you would like to replace. (Overlay sizes are displayed in the **ESL Type** column.) Press function key F7 to queue the overlay.

The **Queue Overlay** window appears confirming that the overlay selected has been created and queued. Select **OK** by pressing ENTER .



Screen 5-39. Manage ESLs with Queue Overlay window

8. If you need to create additional overlays for other products, repeat steps 1-8.

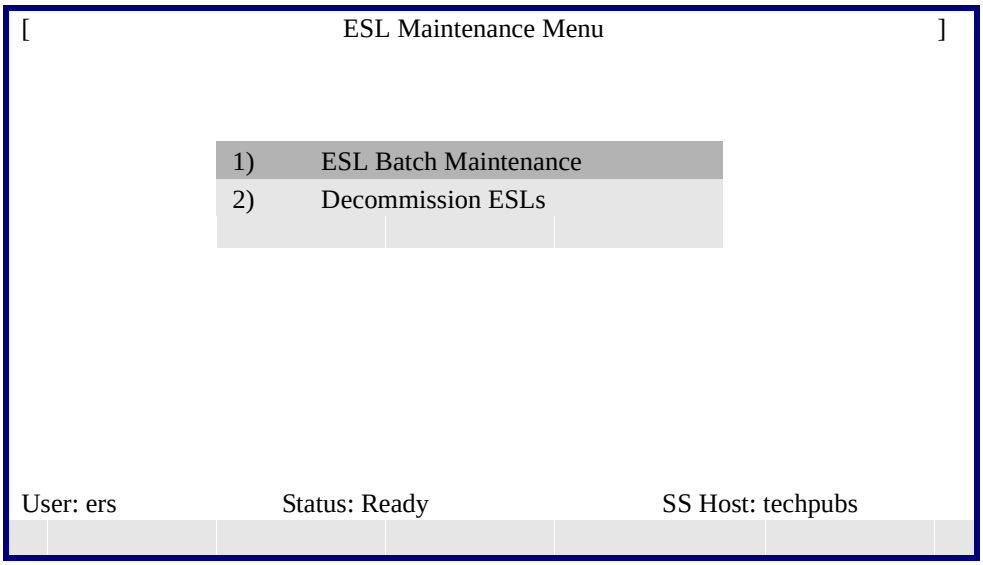
9. To print the overlays you have created, refer to *Printing Overlays with the System Printer*. Press ESC until you return to the **ShelfServer Main Menu**.

5.2.3 Overlays Queued by ESL Batch Maintenance

One of the first steps to linking batches of ESLs to products and adding them to the network is to create and print their corresponding overlay(s). (Refer to *Creating ESL Batches*.)

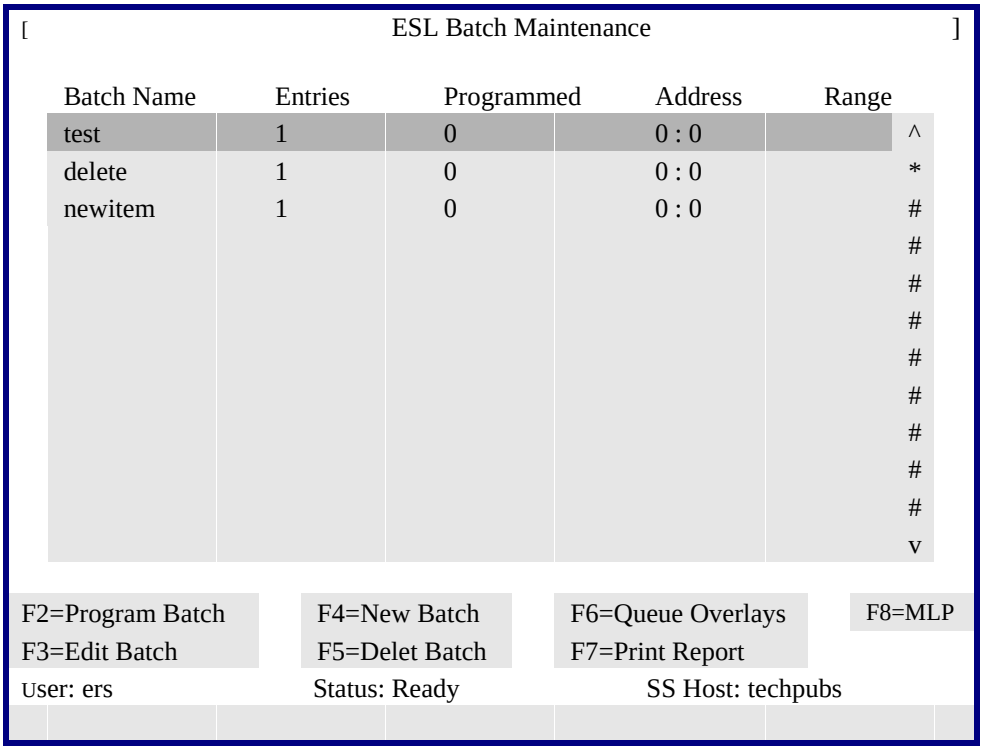
To create and print overlays for existing batches, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **2) ESL Maintenance** and press ENTER . This brings you to the **ESL Maintenance Menu**.



Screen 5-40. ESL Maintenance menu

2. Using the arrow keys, select menu item **1) ESL Batch Maintenance** and press ENTER . This brings you to the **ESL Batch Maintenance** screen.



Screen 5-41. ESL Batch Maintenance

3. Using the arrow keys, select the batch you would like to create overlays for and press function key F6 to queue the overlays. The overlays are now created and ready for printing. (When you go to the **Print Queue** screen you can easily identify these overlays by the batch name displayed in the **Comments** column.)

4. To print the overlays you have created, refer to *Printing Overlays with the System Printer*.

5. Press ESC until you return to the **ShelfServer Main Menu**.

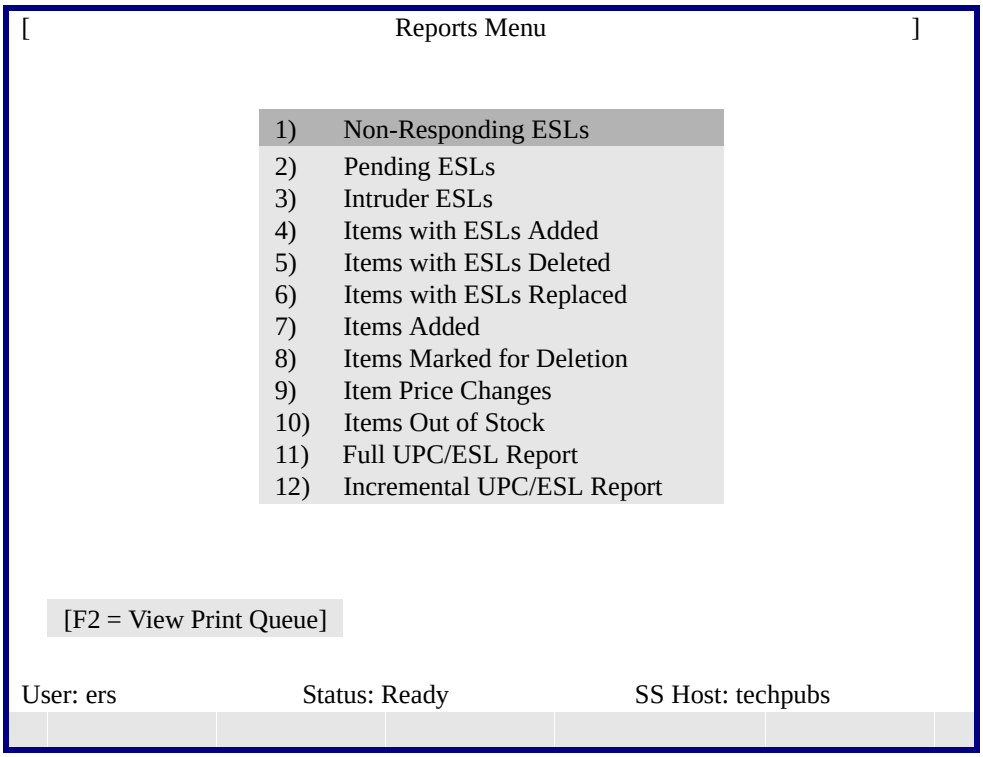
5.2.4 Printing Overlays

Once the overlays have been created and queued, they have to be printed to be available for placement onto the ESL. The overlays can be printed either on the system printer or the portable printer.

5.2.4.1 Printing Overlays with the System Printer

To print the overlays on the system printer, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu**.



Screen 5-42. Reports Menu

2. Press function key F2, this brings you to the **Print Queue** screen. The **Type** column displays a list containing overlays (and reports) created for printing. Look at the **Printed** column. If "**Y**" (YES) is displayed, the overlay has been printed. If "**N**" (NO) is displayed, the overlay has not been printed.

[Print Queue]

Type	Comments	Records	Created	Printed	
Items with ESLs Added		0	06/02/98 14:25:27	N	#
Large Dual Overlays		1	06/04?98 11:31:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:31:00	N	#
ESL Programming Report	delete.imp	1	06/04/98 11:40:21	N	#
Controller Detail	delete.imp	0	06/08/98 11:30:98	N	#
Action Report		0	06/11/98 10:43:14	N	#
Non-Responding ESLs		0	06/11/98 14:54:56	N	*
Action Report		0	06/12/98 03:00:20	N	v

F2=View Contents] [F3=Delete] [F4=Print]

User: ers Status: Ready SS Host: techpubs

Screen 5-43. Print Queue

3. Using the arrow keys, select the overlays in the list that need to be printed.

4. Insert the appropriate overlay stock into the printer. This is determined by checking the **Type** column, which tells you what size stock (large, medium, small, large dual and small dual) needs to be placed in the printer.

5. Press function key F4 to print the overlay(s) selected. The **Print** window appears confirming the overlay(s) have been printed.

6. Press ESC until you return to the **ShelfServer Main Menu**.

5.2.4.2 Printing Overlays with the Portable Printer

The handheld terminal supports a portable printer. This thermal printer can be used to print overlays. (For complete information on the thermal printer, refer to the proper brand and model of the printer user's guide.)

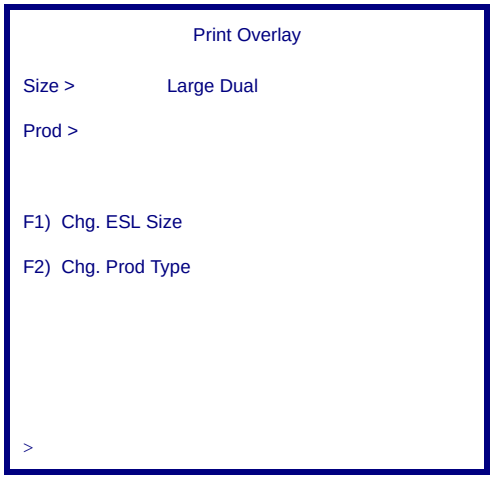
ShelfServer software is designed to send the proper commands to the portable printer based on instructions fed to the printer by the handheld terminal.

To print overlays for ESLs individually linked to products using the handheld terminal, perform the following steps:

1. Link the ESL to the product using the handheld terminal. (Refer to *Linking Individual ESLs to Products*.)

2. From the **ESL Item Maint Menu**, select option **F5) Print Overlay**. This brings you to the **Print Overlay** screen

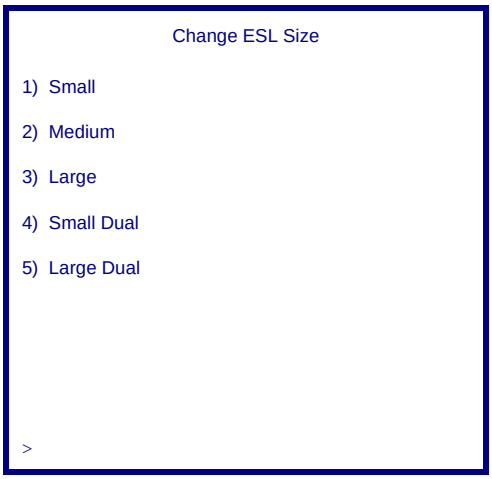
.



Screen 5-44. Handheld Print Overlay

3. The default size displayed in the **Size>** field is Large Dual. If the overlay you would like to print is *not* a Large Dual, select option **F1) Chg. ESL Size**. This brings you to the **Change ESL Size** screen

.



Screen 5-45. Handheld Change ESL Size

4. Press the number that corresponds to the size of the ESL you are programming, (e.g. **1** if it is a **Small** ESL), and press ENTER . This brings you back to the **Print Overlay** screen and the **Size>** field displays your selection.

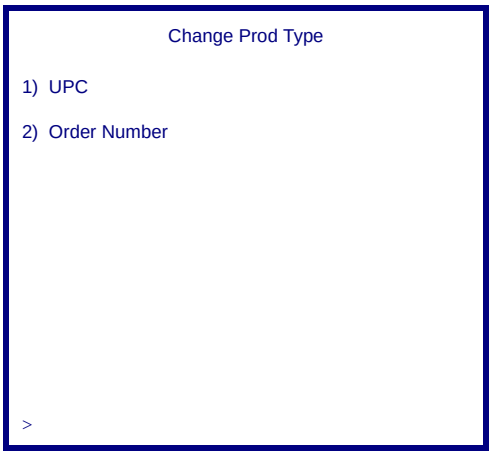
Note:

If you are scanning by UPC code, proceed to step #5. If you are scanning by order #, go to step #6.

5. Scan the UPC code on the product. The UPC code appears in the **Prod>** field and the corresponding overlay automatically prints from the portable printer.

6. The **Prod>** field default is for UPC codes. If you are using order#s instead of UPC codes for your products, you can change the field accordingly. Select option **F2) Chg. Prod Type**. The **Change Prod Type** screen appears

.



Screen 5-46. Handheld Change Prod Type

7. Press the number that corresponds to the product type you are using, (e.g. **2** for **Order Number**), press ENTER . This brings you back to the **Print Overlay** screen and the **Prod >** field displays your selection. The corresponding overlay automatically prints from the portable printer.

5.3 Creating ESL Batches

Creating a **batch** is an efficient way of organizing a group of products for mass linking of ESLs to products. Linking ESLs in batches is faster than linking a group of ESLs individually. A batch is a single file containing multiple product records.

There are three ways to create ESL batches:

1. Using the report options contained in **Reports and Overlays**, ShelfServer *automatically* creates a batch of ESLs to be added to the network.

2. Using a list of UPCs, you can *manually* create a batch of ESLs to be added to the network through the **ESL Batch Maintenance** option.

3. Using the **Product Operations** option, you can *manually* create a batch of ESLs to be added to the network based on individual product entries.

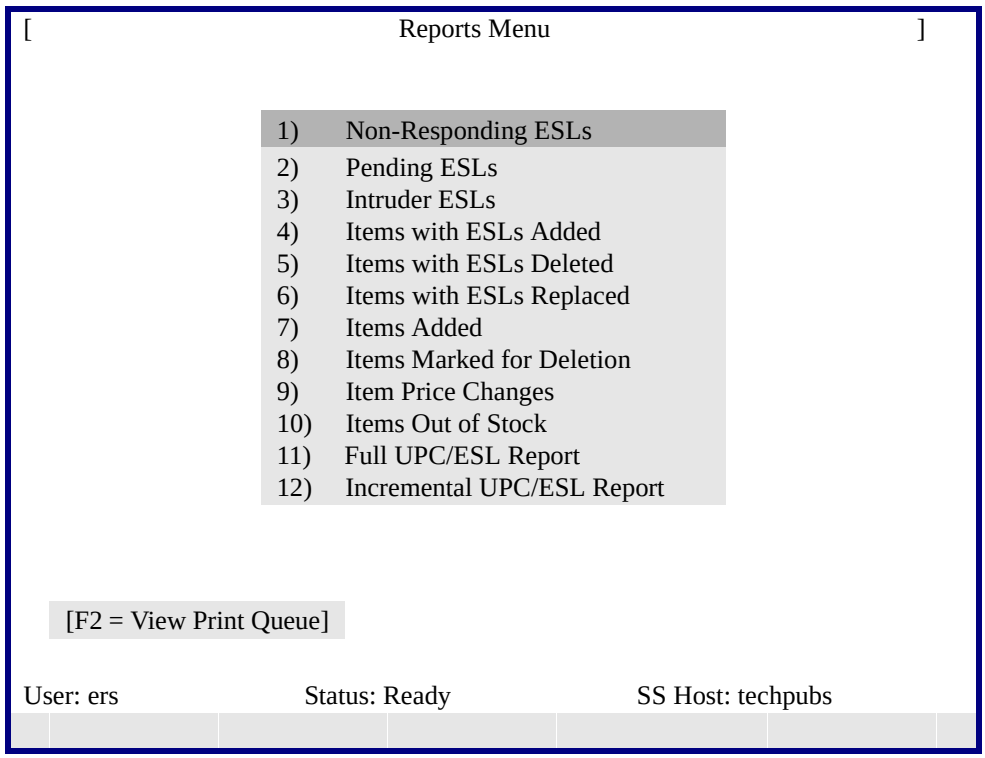
5.3.1 Creating a Batch Using Reports

You can use the reports available under the **Reports and Overlays** menu option to automatically create ESL batches. The most commonly used report for creating batches is the *Items Added Report*. This report contains a list of all newly added products to the store's inventory that are not currently linked to ESLs. This report makes it easy to identify which products require ESLs.

Since the *Items Added Report* is the most common report used in batch creation, we use that as an example to illustrate this process. When the *Items Added Report* is generated, it automatically creates a batch named **r_itm_ad**.

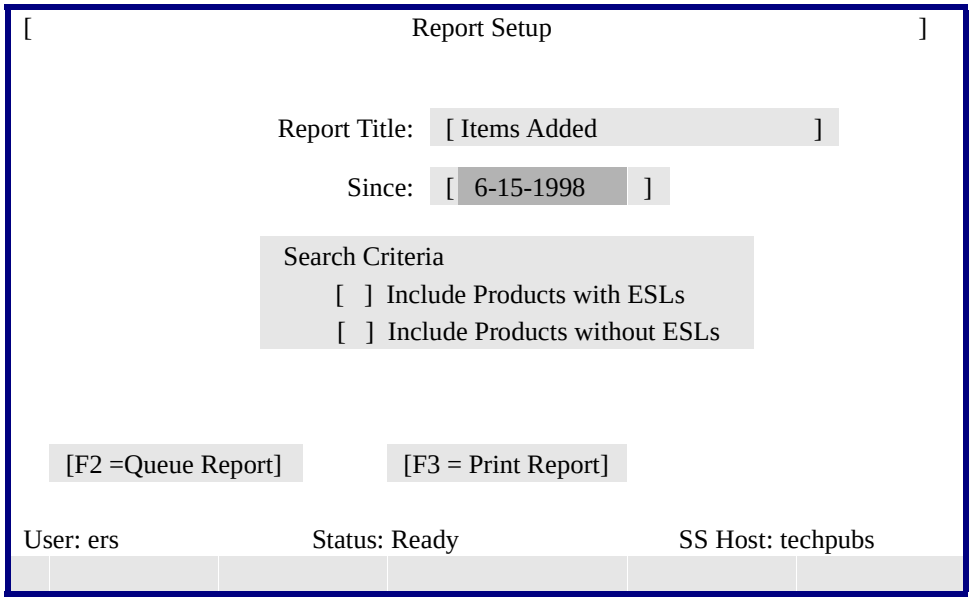
Create the **r_itm_ad** batch by performing the following steps:

1. From the main menu, use the arrow keys to select menu item **4) Reports and Overlays** and press ENTER . This brings you to the **Reports Menu**.



Screen 5-47. Reports Menu

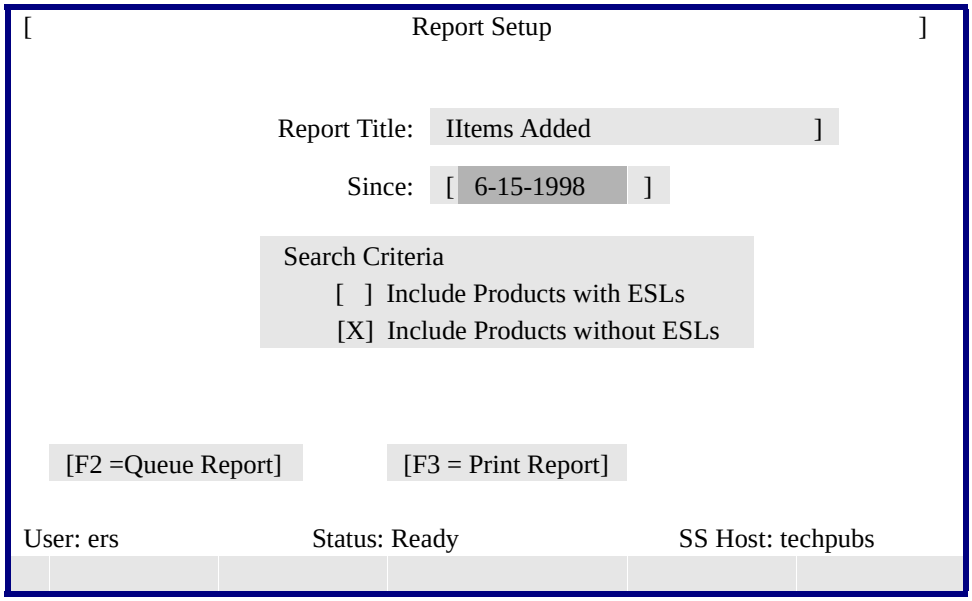
2. Using the arrow keys, select menu item **7) Items Added** and press ENTER . This brings you to the **Report Setup** screen.



Screen 5-48. Report Setup

3. Fill in the **Since:** field with the beginning date of the items added search. Press TAB (**Tab**) to advance to the next field.

4. Leave only **Include Products Without ESLs** selected from the **Search Criteria** field. This provides a list of all the items without ESLs that are scheduled to be added to the store inventory.

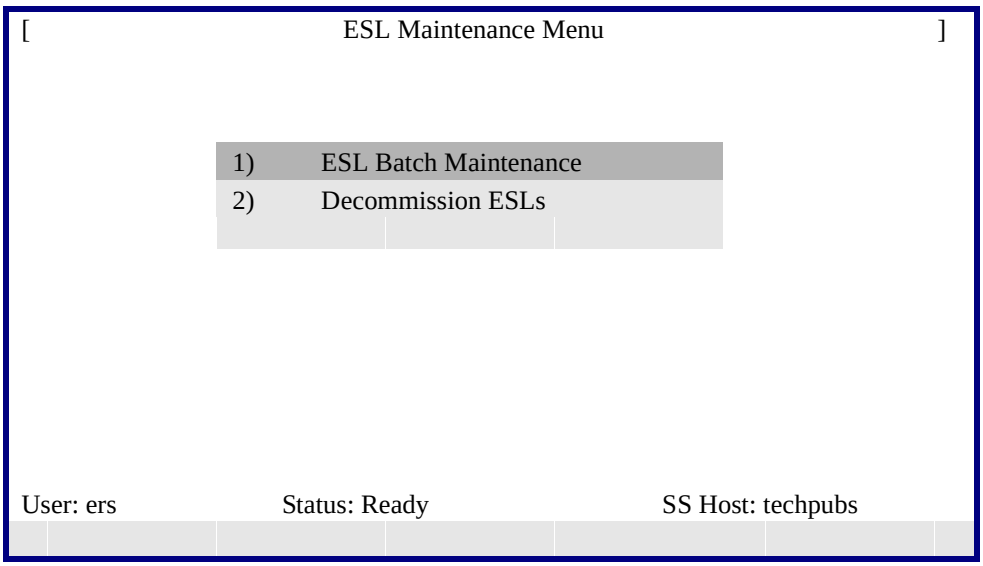


Screen 5-49. Report Setup

5. To create the *Items Added Report* press function key F2 . The **Queue Report** window appears confirming the *Items Added Report* has been created and queued. Select **OK** by pressing ENTER .

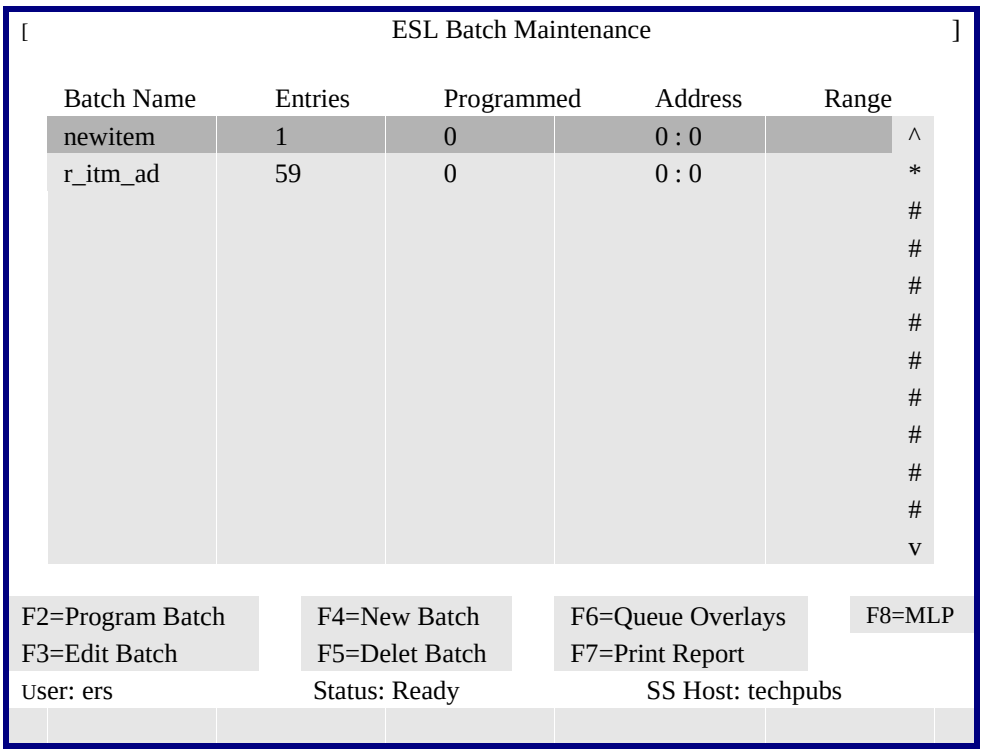
6. Press ESC until you return to the **ShelfServer Main Menu**.

7. Once at **ShelfServer Main Menu**, verify the **r_itm_ad batch** has been created. Using the arrow keys, select menu item **2) ESL Maintenance** and press ENTER . This brings you to the **ESL Maintenance Menu**.



Screen 5-50. ESL Maintenance Menu

8. Using the arrow keys, select menu item **1) ESL Batch Maintenance** and press ENTER . This brings you to the **ESL Batch Maintenance** screen. In the **Batch Name** column you will see the **r_itm_ad** batch.



Screen 5-51. ESL Batch Maintenance

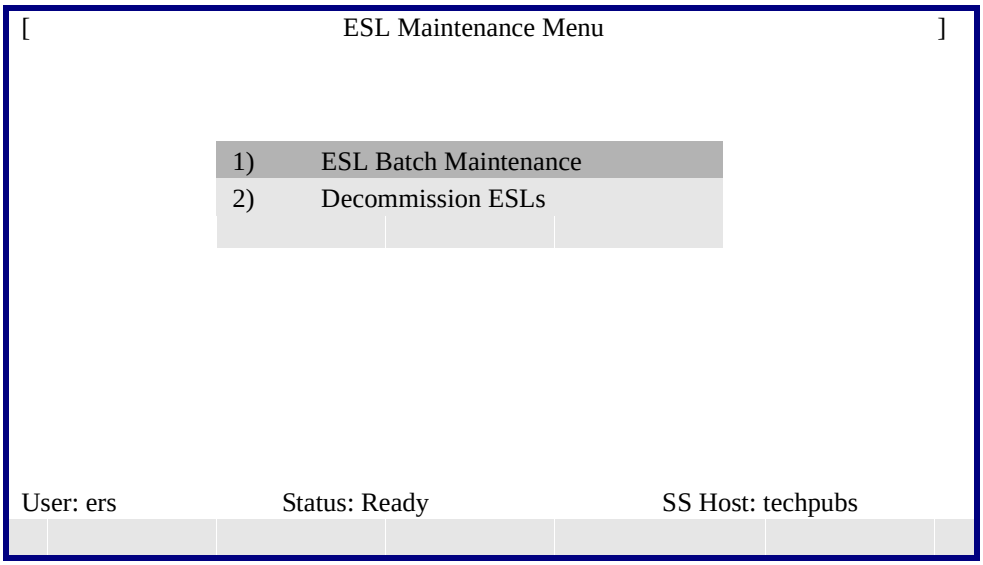
9. If you want to link ESLs to products in the **r_itm_ad** batch, refer to *Linking ESL Batches to Products*.

5.3.2 Creating A Batch Using ESL Maintenance

In some cases you may be handed a list of product UPCs and asked to add ESLs to the network for these products. Working from your list of product UPCs, you can manually create a batch of ESLs to be added to the network through the **ESL Batch Maintenance** option.

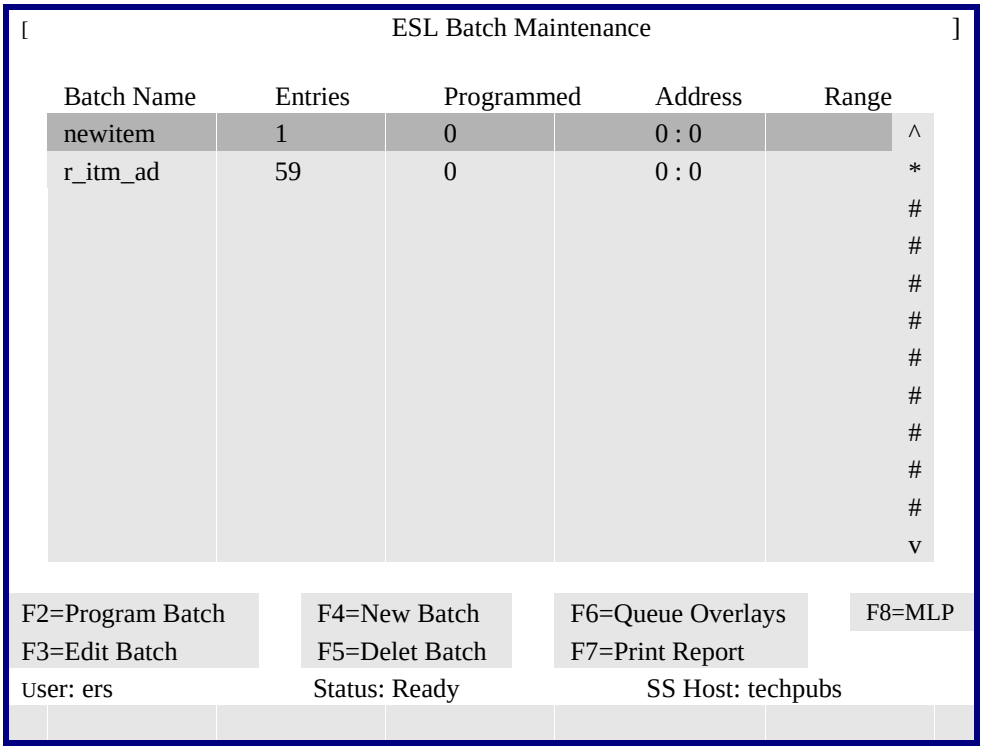
To create a new batch of ESLs, using a list of UPCs, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **2) ESL Maintenance** and press ENTER . This brings you to the **ESL Maintenance Menu**.



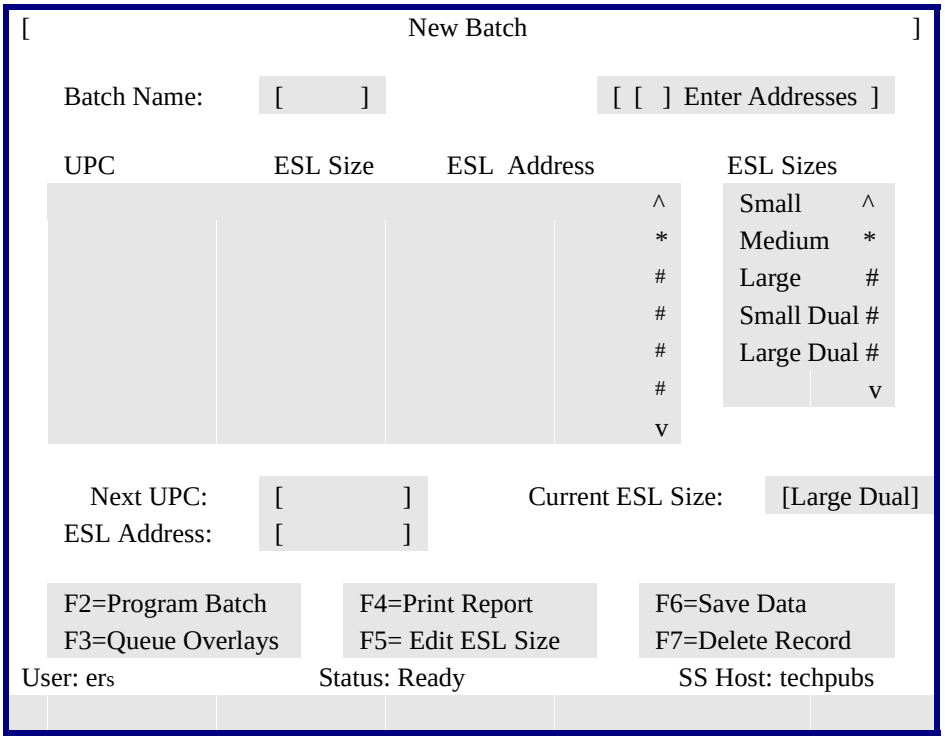
Screen 5-52. ESL Maintenance Menu

2. Using the arrow keys, select menu item **1) ESL Batch Maintenance** and press ENTER . This brings you to the **ESL Batch Maintenance** screen.



Screen 5-53. ESL Batch Maintenance

3. Press function key F4. This brings you to the **New Batch** screen.



Screen 5-54. New Batch

4. Type the name of the batch in the **Batch Name:** field, (the batch name can be up to eight characters long), and press ENTER. Press Tab (**Tab**) to get to the **Enter addresses:** field.

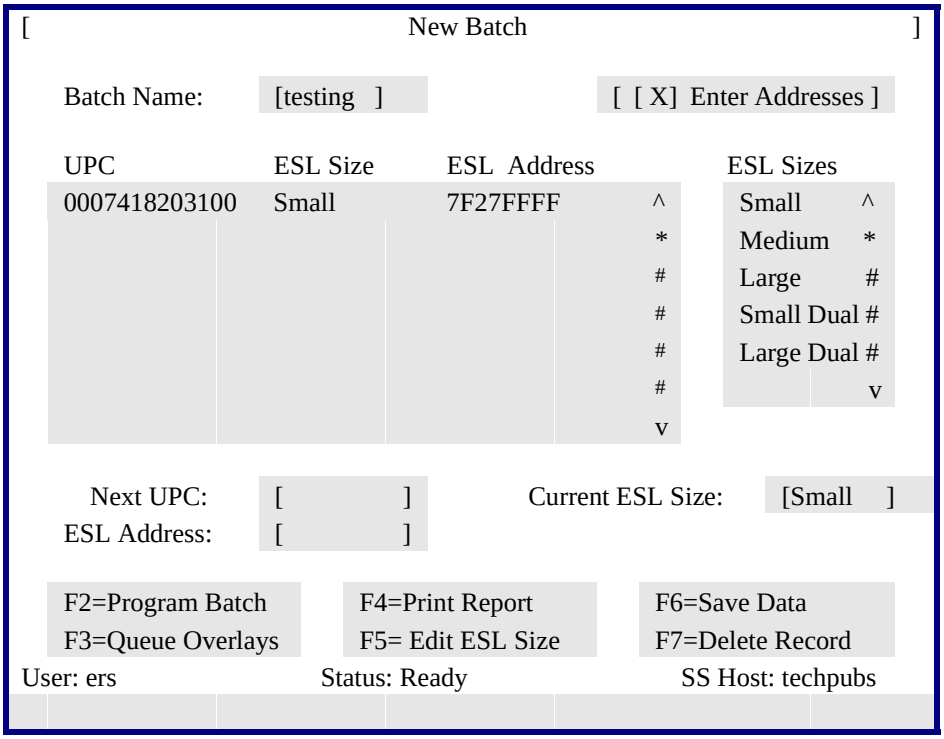
5. While in the **Enter addresses:** field, press ENTER to mark this field, an X will appear.

6. Press function key F5 to edit the ESL size. The cursor moves to the **ESL Sizes** field. Using the arrow keys, select the desired size ESL and press ENTER.

7. The cursor moves to the **Next UPC:** field. Using the list of UPCs, begin adding products to create a batch by typing a product UPC number.

8. Press ENTER to get to the **ESL Address:** field. Type in the ESL address located on the ESL.

9. Press ENTER and the UPC, ESL size and ESL address for that product will be added to the list.



Screen 5-55. New Batch

10. Repeat steps 6-8 until you are finished entering all the UPCs on your list.

If you accidentally type incorrect information while adding ESLs to the batch, you may delete the record. To do this, using the arrow keys, select the incorrect entry. Press function key F7. The **Delete Entry** window appears asking if you would like to delete the record. Press ENTER for **Yes**. The incorrect entry disappears from the screen.

11. To save the batch, press function key F6. The **Save Batch** window appears confirming whether you would like to save the batch. Press ENTER for **Yes** or press Tab (**Tab**) to get to the **No** push button and press ENTER.

12. Press ESC until you return to the **ShelfServer Main Menu** screen.

13. If you want to link ESLs to products in the newly created batch, refer to *Linking ESL Batches to Products*.

5.3.3 Creating a Batch Using Product Operations

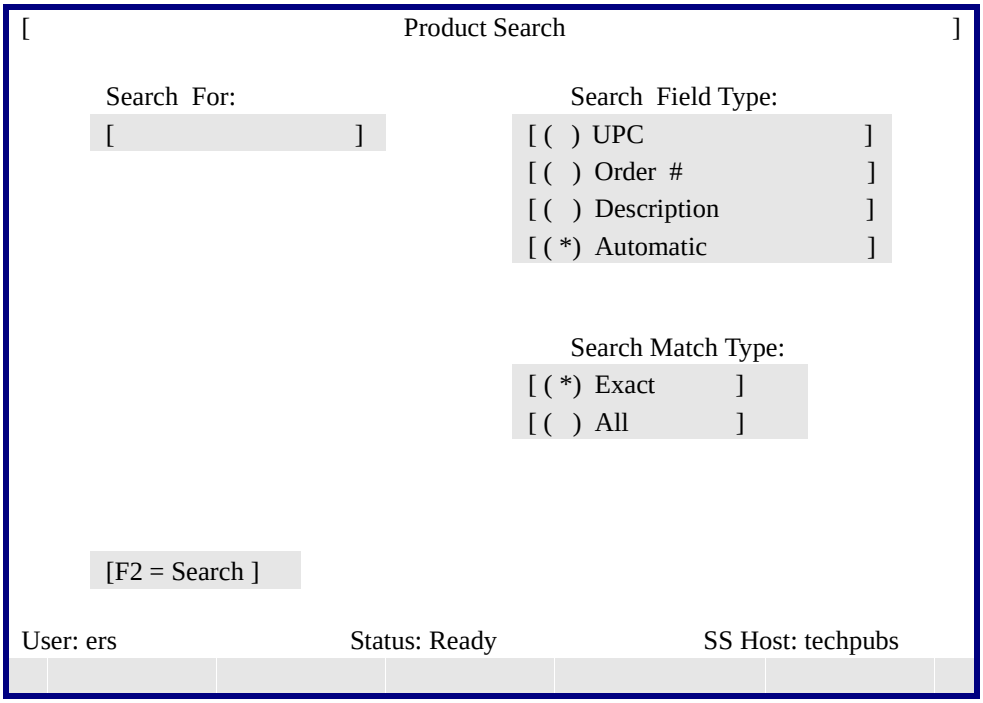
In some cases you may decide to manually build a batch of ESLs to be added to the network, but you require a visual verification that the ESL is being added to the correct product. You can receive this verification by performing individual product searches through the **Product Operations** option. This search provides data about the product including size, price and description.

Another reason you may use the **Product Operations** option may be that you *do not know* the product's UPC or you may only know the product's Order #. Using the **Product Operations** option you may perform individual product searches based on the *known* product data.

When using the **Product Operations** option to manually create a batch, ShelfServer automatically names the batch **newitem**.

To build a **newitem** batch based on individual product data, perform the following steps:

1. From the main menu,use the arrow keys to select menu item **1) Product Operations** and press ENTER . This brings you to the **Product Search** screen.



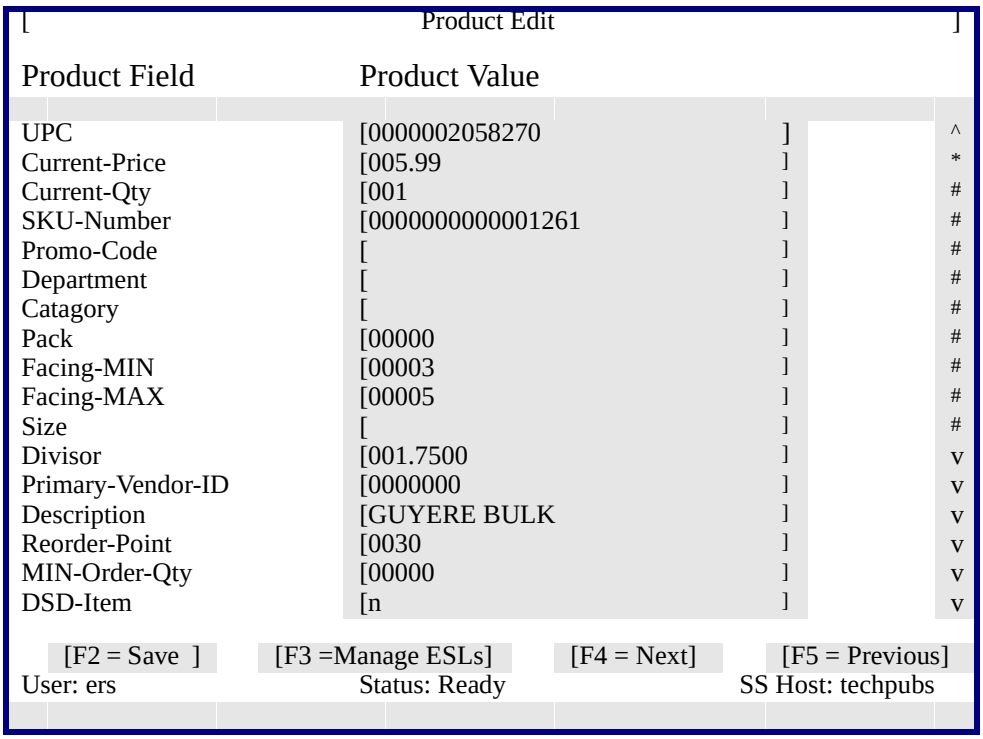
Screen 5-56. Product Search

2. In the **Search For:** field, enter the UPC, Order# or **Product Description**. Press (**Tab**) to move to the next field.

3. In the **Search Field Type:** the default setting is **Automatic**. The **Automatic** setting will search for products by UPC if the entry is numeric, or by product description if the entry is characters. (The **Automatic** setting can search for products by UPC or Order #, depending on the way ShelfServer is configured. Do not change the **Automatic** default setting. Press (**Tab**) to move to the next field.

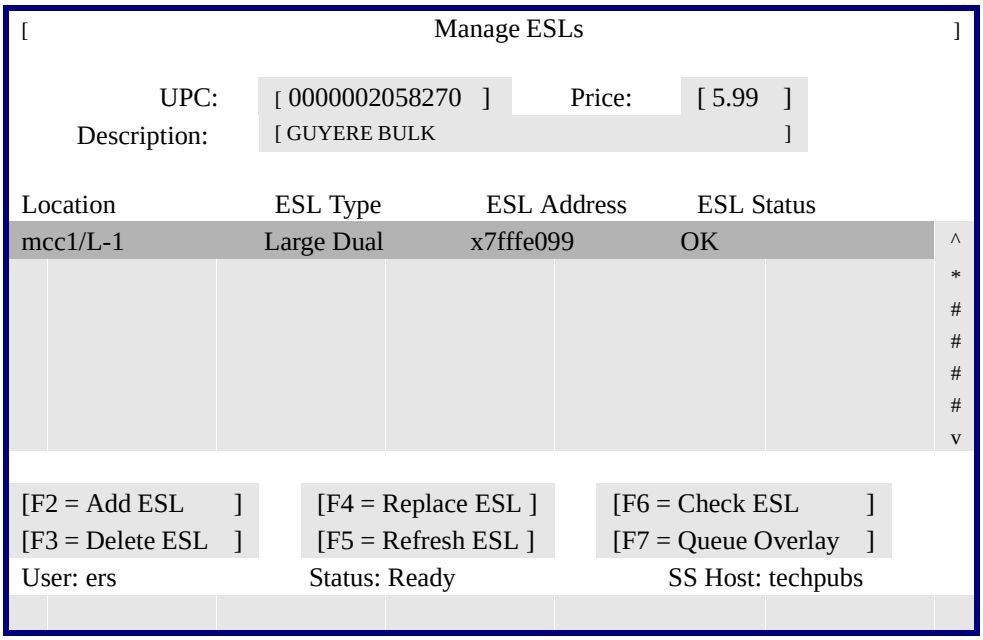
4. In the **Search Match Type:** field the default setting is **Exact**. The **Exact** default setting means that ShelfServer searches only for the exact item you have specified. Do not change the **Exact** default setting.

5. Press function key F2. This brings you to the **Product Edit** screen. This screen displays information about the product you have selected.



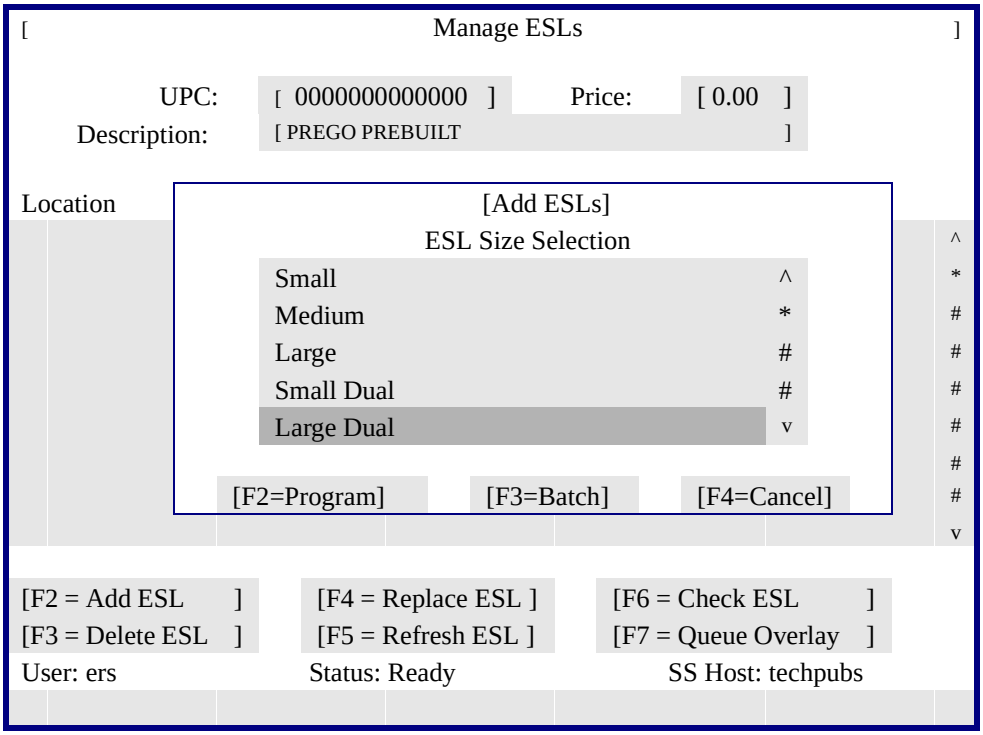
Screen 5-57. Product Edit

6. Press function key F3. This brings you to the **Manage ESLs** screen.



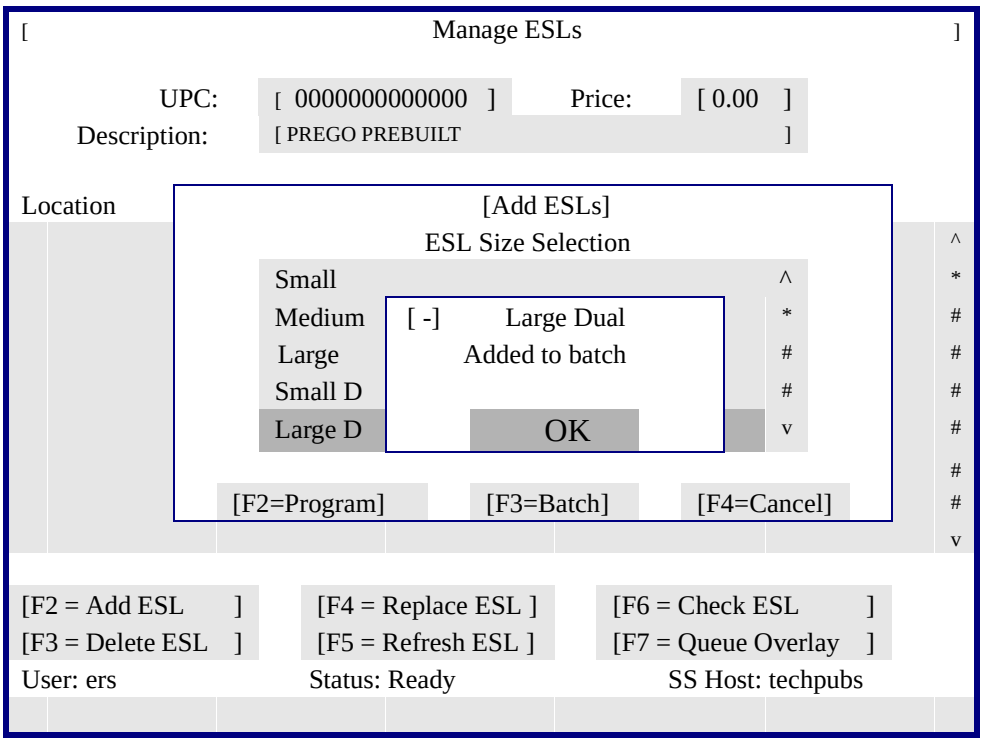
Screen 5-58. Manage ESLs

7. Press function key F2. The **Add ESL** window appears.



Screen 5-59. Manage ESLs with Add ESLs window

8. Using the arrow keys, select the size of the ESL you would like to add and press ENTER . Press function key F3 to add the product and ESL size to the batch file you are creating. A window appears confirming that the information has been added to the batch.



Screen 5-60. Manage ESLs with Added confirmation window

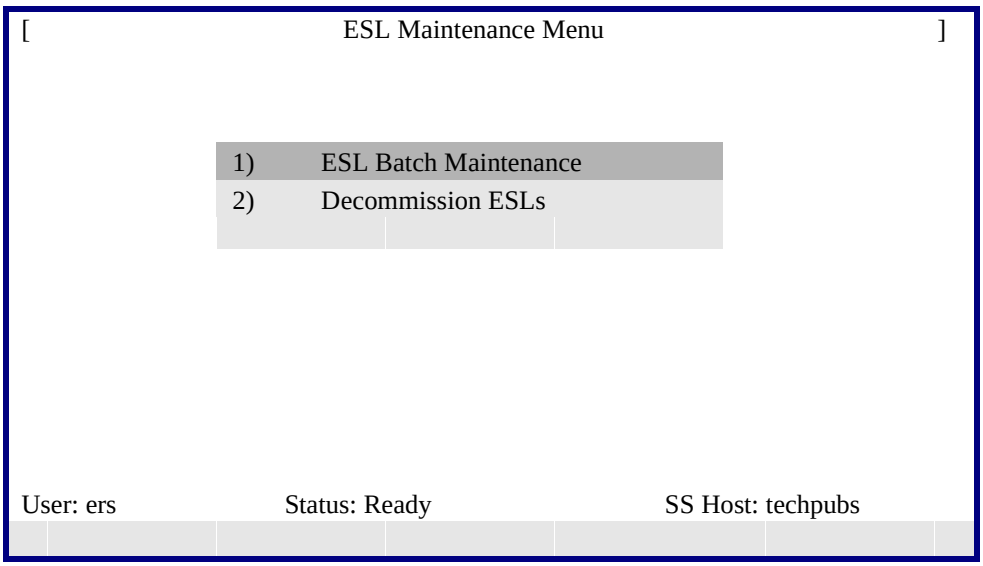
9. Select **OK** by pressing ENTER . This adds the ESL to the batch to be programmed later.

10. Press ESC until you return to the **Product Search** screen.

11. Repeat steps 2 - 11 for each product you would like to add to the batch.

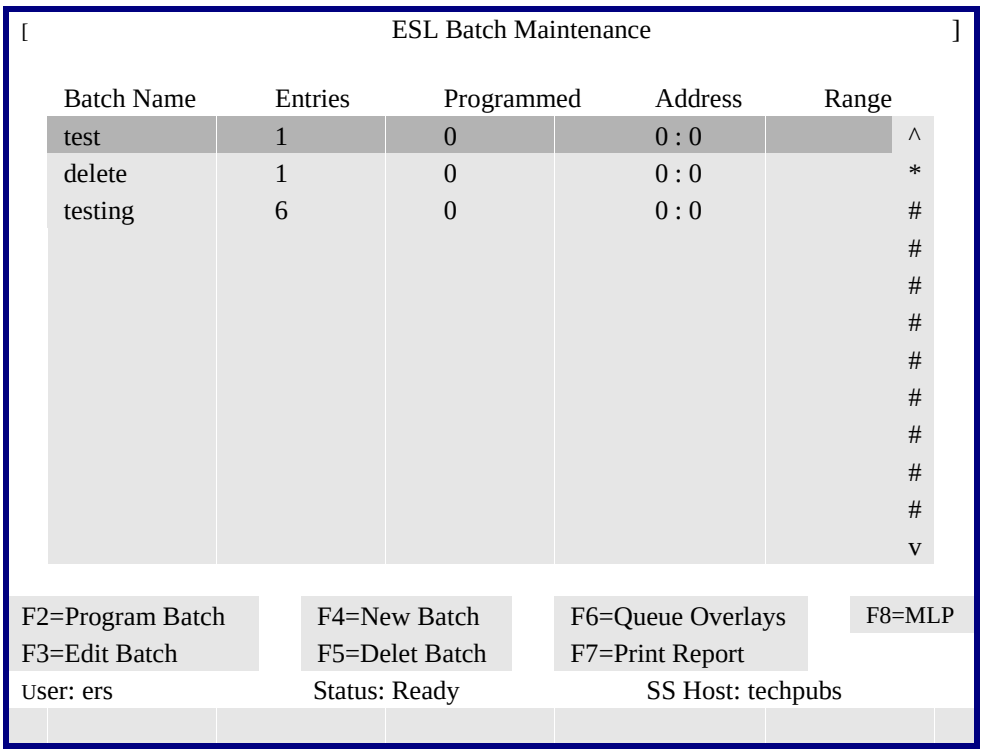
12. Press ESC until you return to the **ShelfServer Main Menu** screen.

13. From the **ShelfServer Main Menu**, verify the **newitem** batch has been created. Using the arrow keys, select menu item **2) ESL Maintenance** and press ENTER . This brings you to the **ESL Maintenance Menu**.



Screen 5-61. ESL Maintenance Menu

14. Using the arrow keys, select menu item **1) ESL Batch Maintenance** and press ENTER . This brings you to the **ESL Batch Maintenance** screen. In the **Batch Name** column you will see the **testing** batch.



Screen 5-62. ESL Batch Maintenance

15. If you want to link ESLs to products in the **testing** batch, refer to *Linking ESL Batches to Products*.

Chapter 6. Power Applications

This chapter provides information about innovative retail applications offered by the ShelfNet system and what they mean to you. ShelfNet offers a variety of applications, referred to as *Power Applications* or *Power Apps*, that help stores run more efficiently and allow you to do your job more effectively.

More than simply communicating price information to the shelf edge, Power Applications allow retailers to relay product information in the areas of merchandising and promotions, replenishment and planogram compliance right in the aisle. They can be customized to each individual store's needs and configured to handle store-specific processes.

What are these applications? How will they help you do your job? How do you use them? These are all questions that will be addressed in the following pages.

6.1 Subgroups

The ShelfNet system has a unique capability to target ESL communication by addressing them in selected combinations. ShelfNet can talk to one ESL at a time, all ESLs in a store at one time or to a *subgroup* of ESLs. A subgroup is a set of ESLs which share common characteristics, making it easier for the system to communicate with them more effectively. An example of an ESL subgroup would be a *location*, (e.g. "2A aisle" is an ESL location subgroup). Other subgroup examples may be a group containing all ESLs attached to products *going on sale*, a group containing all ESLs attached to products that *need to be ordered* or a group containing all ESLs attached to products of the same *commodity*, (i.e. pasta or soups).

Each ESL has the potential to be assigned to four different subgroups, simultaneously. Currently, subgroup choices are *aisle*, *section* and two subgroups that can be defined by your particular store based on individual needs. Subgroups are assigned through the user interface, via the handheld terminal or by data feed.

The ability to communicate with selected groups of ESLs is called subgroup addressing. Subgroup addressing makes it easy for you to use Power Applications while working in the aisle, similar to the way you currently work -- with selected sections of a product at a time. For example, location subgroups are helpful when you would like to turn a Power Application on in a certain area. The ESL location subgroup allows you to identify the area of ESLs you would like to affect.

Check with your store manager or systems administrator to see what type of subgroup addressing you are using in your store.

6.2 Types of Power Applications

The ShelfNet system offers a variety of Power Applications that support the in-aisle procedures you perform today. These applications make your job easier by saving time and giving you a way to do the things you do now more efficiently. Power Applications can help you with ordering, stocking, shelfset maintenance and distribution of promotional materials in the aisle (e.g. hanging and removing promotional signage).

ShelfNet has been designed to provide virtually limitless performance. In addition to the set of Power Applications that ERS has created, ShelfNet's flexibility allows you to create your own applications to best suit your store's particular needs.

Following are descriptions of basic Power Applications currently available for use with ShelfNet. These applications are ***QuickP.O.P.***, ***Order Assist***, ***Auxiliary Display***, *and* ***Stock Monitoring***. Keep in mind that these are just examples of the ways ShelfNet can help make your job easier and more efficient.

Each store uses different Power Applications to meet their individual needs. Check with your store manager to see which Power Applications are used in your store.

6.2.1 QuickP.O.P.

QuickP.O.P. is the merchandising point of purchase application. It is used to provide store personnel assistance when they hang and remove promotional merchandising material. This is done through the use of special ESL displays. When activated, QuickP.O.P. displays a unique phrase (e.g. "**Sale**") on ESLs linked to products needing promotional attention. These phrases indicate the type of promotional material that needs to be attached or removed at the shelf-edge. Highlighting the ESL in this way helps you to locate hard-to-find products and change promotional signage quickly and efficiently, making it easier to maintain your merchandising programs.

In addition, the QuickP.O.P. application makes it easy to perform an in-aisle audit for merchandising compliance. Because all products requiring signage are highlighted with a special ESL display, you can confirm at a glance that all of these products are in fact addressed with signage.

Each store has its own set of promotional phrases. Ask your store manager for a list of these phrases and their meanings specific to your store. This phrase list can then be used as a guide to aid you when you hang or remove printed material associated with a particular product or related ESL.

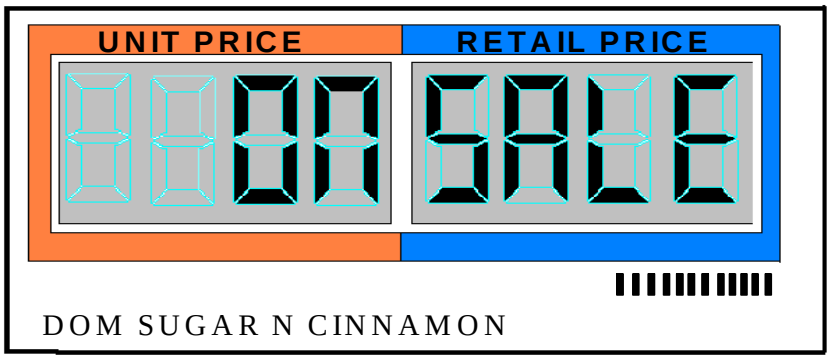


Figure 6-1. QuickP.O.P. mode display

6.2.2 Order Assist

The ***Order Assist*** Power Application is used to communicate and display important order information to store personnel right in the aisle. This is done through the use of special ESL displays. When activated Order Assist displays information that is essential to the stock ordering process. An example of the types of information that may be displayed are:

Re-Order Point data

Re-Order Point data helps store personnel placing a stock order confirm whether or not they need to order more product. For example, when the Re-Order Point data display is "**8**" and there are eight or less items on the shelf, it is time to place an order for that product.

In-Transit data

In-Transit data communicates to store personnel that a product has been ordered and has not yet been received. This order is in-transit (IT). When products are ordered, this information is sent from the store's ordering system to ShelfNet. For example, if a product has been ordered and is on its way to the store, the display might show **IT 2**. This means that two products have already been ordered. By counting the number of items on the shelf, adding the in-transit number and comparing the sum to the re-order point, you can quickly tell if more product needs to be ordered.

Figure 6-2. Order Informtaion display mode

Keep in mind that these are only examples of the type of order data that can be displayed using this application. ShelfNet's flexibility allows stores to display many types of information that meet their particular order process needs. If you have any questions about how OrderAssist is used in your store, check with your store manager.

6.2.3 Auxiliary Display

Auxiliary Display is completely customer configurable, providing stores the opportunity to configure their own applications. Where the other Power Applications are defined within a framework, Auxiliary Display enables retailers to display customized information that meets their specific store requirements.

An example of the way a store might use Auxiliary Display is in the area of planogram compliance. You may choose to display facing and position information to help with shelfset audits or resets to keep planograms accurate at the store level.

Facings data

Facings data displays the number of product facings that should be showing on the shelf. This information is used to monitor compliance with the store's planogram.

Position data

Position data displays the position on the shelf, counting from left to right, where a product should be placed.

Figure 6-3. Shelfset Compliance display mode

6.2.4 Stock Monitoring

The ***Stock Monitoring*** Power Application is used to provide ESL display feedback to shoppers and store personnel concerning a product's out-of-stock status. This is done through the use of special ESL displays. When activated, Stock Monitoring displays a unique phrase (e.g. "**Out of Stock**" or "**Due Tues**") on ESLs linked to products that are out-of-stock. Industry studies show that approximately 20% of shoppers faced with an out-of-stock condition will defer their purchase if they know when the product will be back in stock. They will return to the same store to make their purchase. The ability to communicate this type of information to shoppers right at the shelf edge improves customer satisfaction and customer loyalty.

Keep in mind that these are only examples of the type of out-of-stock messages that can be displayed using this application. ShelfNet's flexibility allows stores to display many types of information to meet their particular needs. If you have any questions about how Stock Monitoring is used in your store, check with your store manager.

Unlike the other Power Applications, Stock Monitoring can only be activated with the use of the handheld terminal.

6.3 Power Application Control

In-aisle procedures and their supporting Power Applications are aided by three important tools that work with the ShelfNet system; these tools are the ***Handheld Terminal***, the ***PowerApps Maintenance Utility*** and the ***ESL Button Push***. The handheld terminal allows you to control the ESLs while in the aisle. The PowerApps Maintenance Utility communicates with ESLs through the ShelfServer user interface. The ESL button push allows you to affect an indiviual ESL by changing from price display mode to other product information display mode with the push of one of the buttons located on the ESL. Each of these tools allows you to control the Power Applications.

6.3.1 PowerApps Maintenance Utility

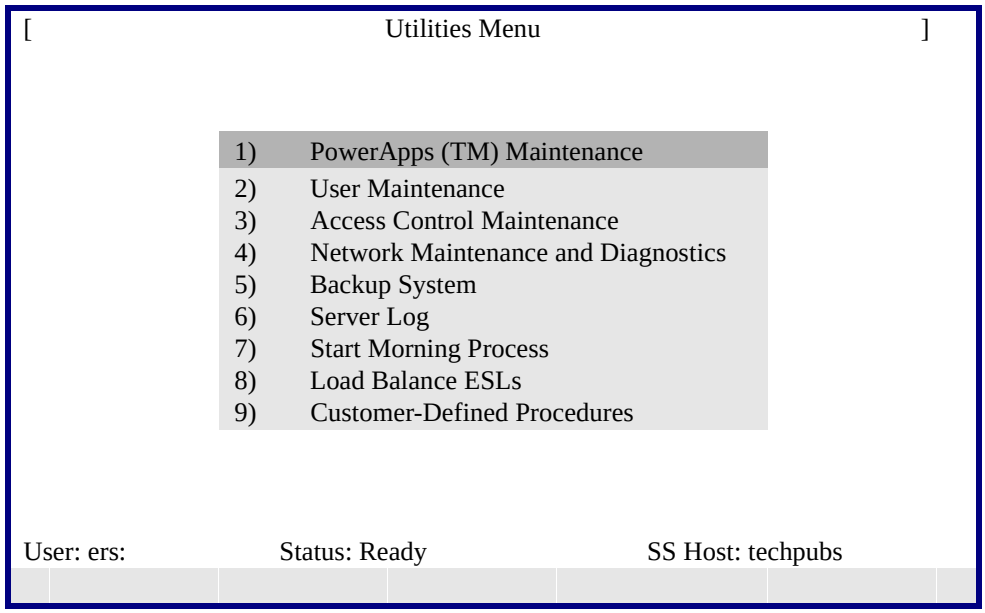
Power Applications generally work on one location subgroup at a time, typically one half of the store aisle, which is configurable depending on your store's needs. You can activate Power Applications through the user interface with the PowerApps Maintenance Utility. This utility causes a Power Application to be activated for either individual aisle locations or all aisles throughout the store (global activation).

To activate Power Applications using the PowerApps Maintenance Utility you must choose an aisle location(s) and *enable* the Power Application you would like to use in that location(s). Once you have done this, you select and activate the Power Application you would like to use.

6.3.1.1 Activating Power Apps from the PowerApp Maintenance Utility

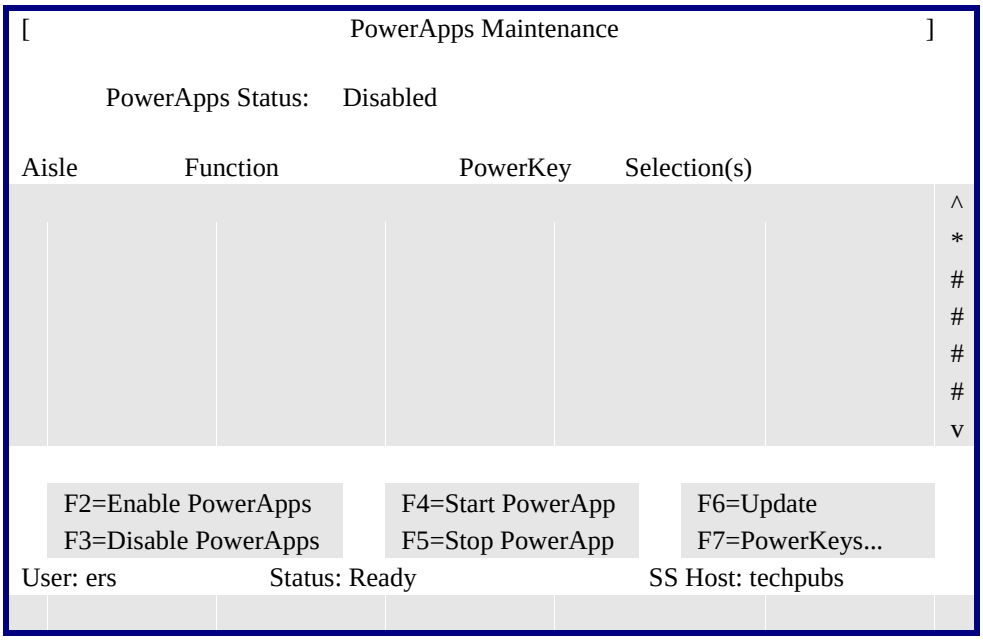
To activate Power Applications from the PowerApps Maintenance Utility, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **5) Utilities** and press ENTER . This brings you to the **Utilities Menu** screen.



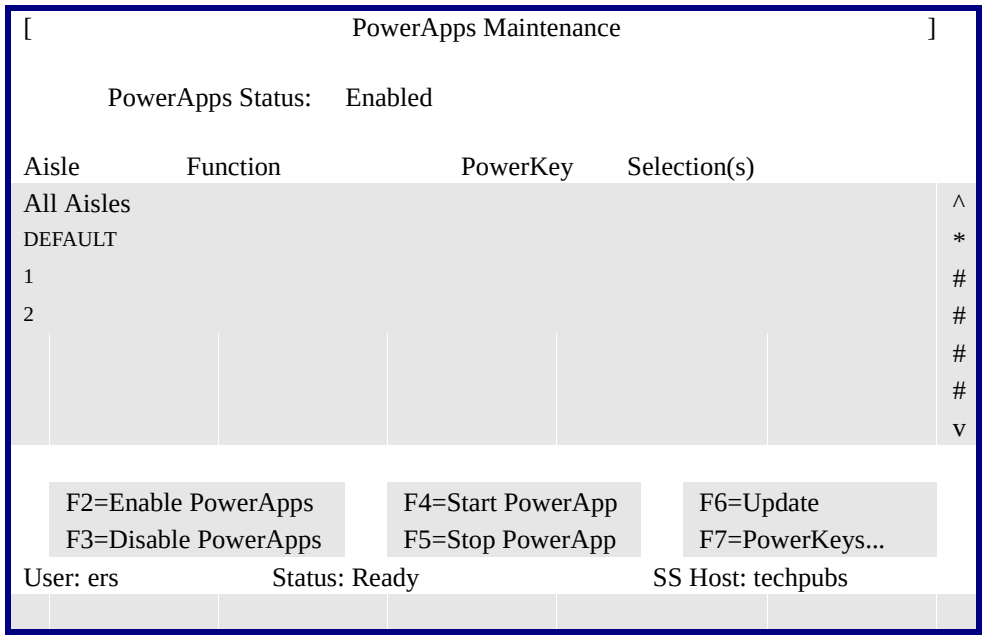
Screen 6-4. Utilities Menu

2. Using the arrow keys, select menu item **1) PowerApps Maintenance** and press ENTER . This brings you to the **PowerApps Maintenance** screen.



Screen 6-5. PowerApps Maintenance

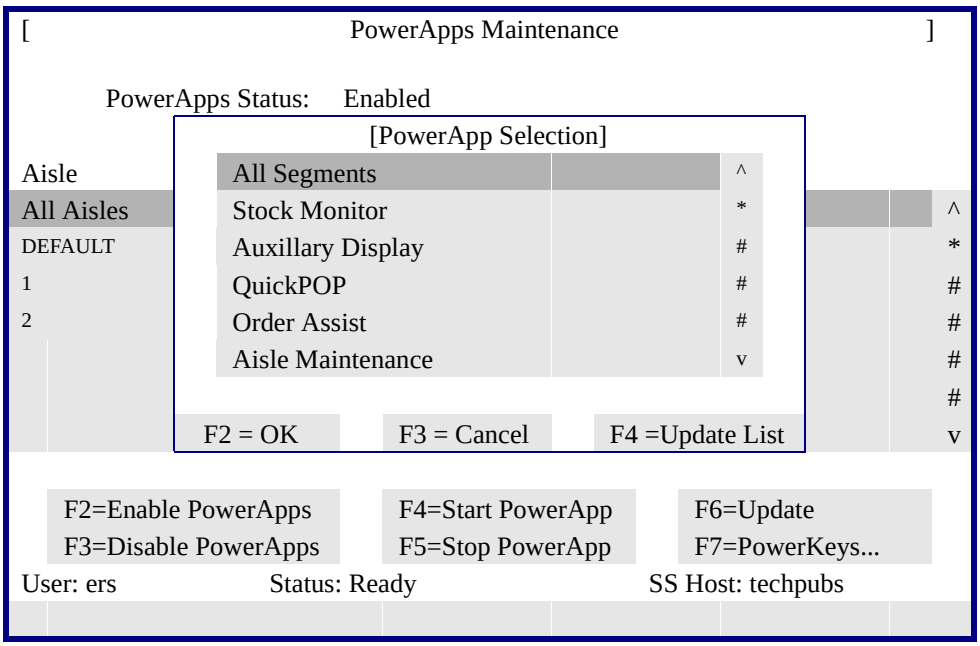
3. Press function key F2 to enable the PowerApps. This will cause the **PowerApps Status** field to change to **Enabled**, and all the aisle locations available for use with Power Applications will be listed in the **Aisle** column.



Screen 6-6. PowerApps Maintenance with data

4. Using the arrow keys, select **All Aisles** or selected aisles where you would like to *enable* the Power Applications available in your store, and press ENTER .

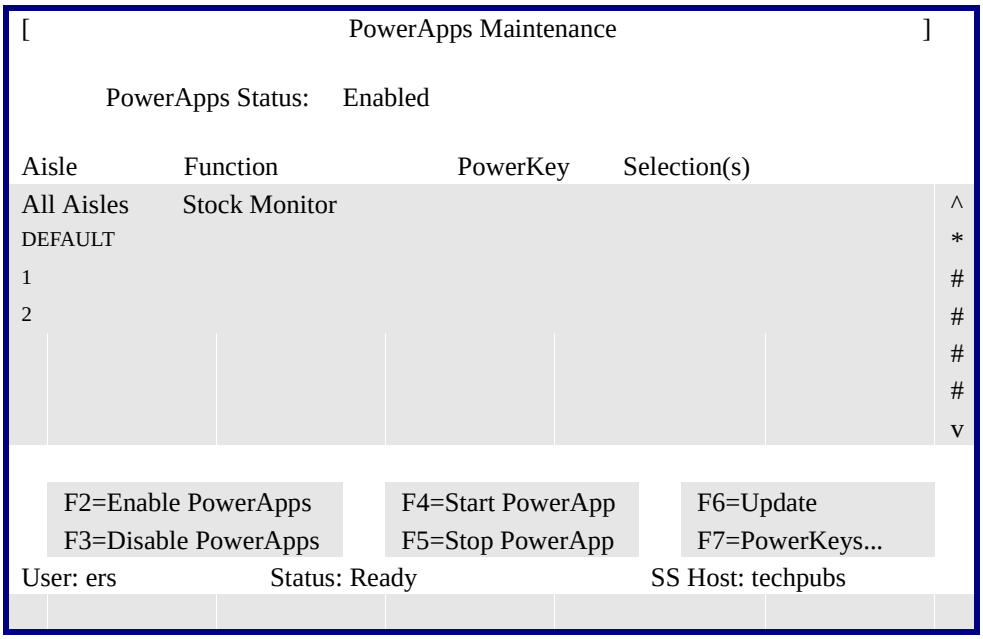
5. Press function key F4 to start the PowerApp(s). This will cause the **PowerApp Selection** window to appear.



Screen 6-7. PowerApps Maintenance with PowerApps Selection window

6. Using the arrow keys, select the Power Application you would like to activate (i.e. QuickP.O.P.) and press ENTER .

7. Press function key F2. This switches all the ESLs associated with the aisle location(s) you selected into the Power Application display mode you selected. The selected and activated Power Applications will now be shown in the **Function** column.

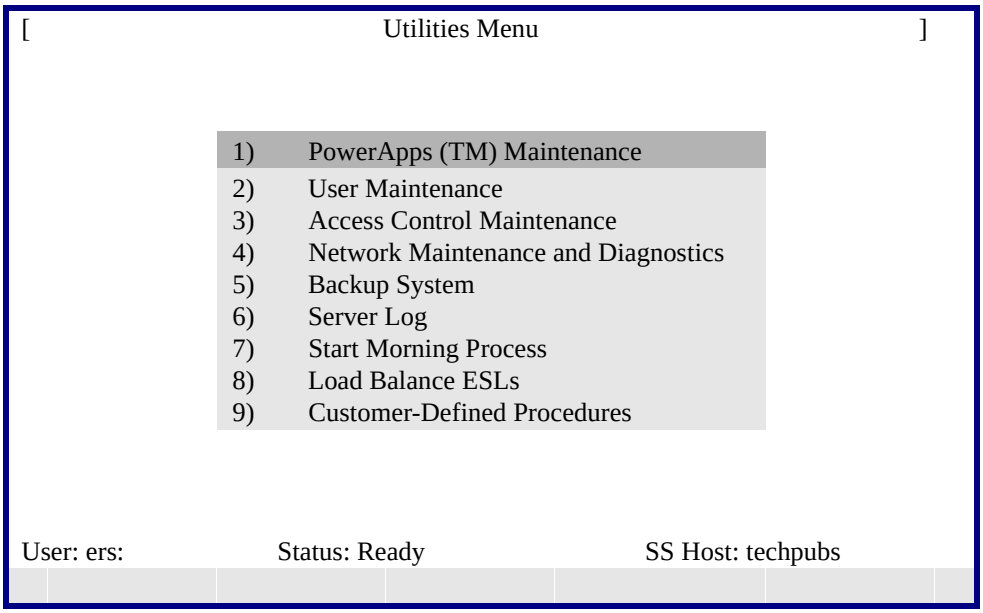


Screen 6-8. PowerApps Maintenance with data

6.3.1.2 Deactivate Power Apps with the PowerApp Maintenance Utility

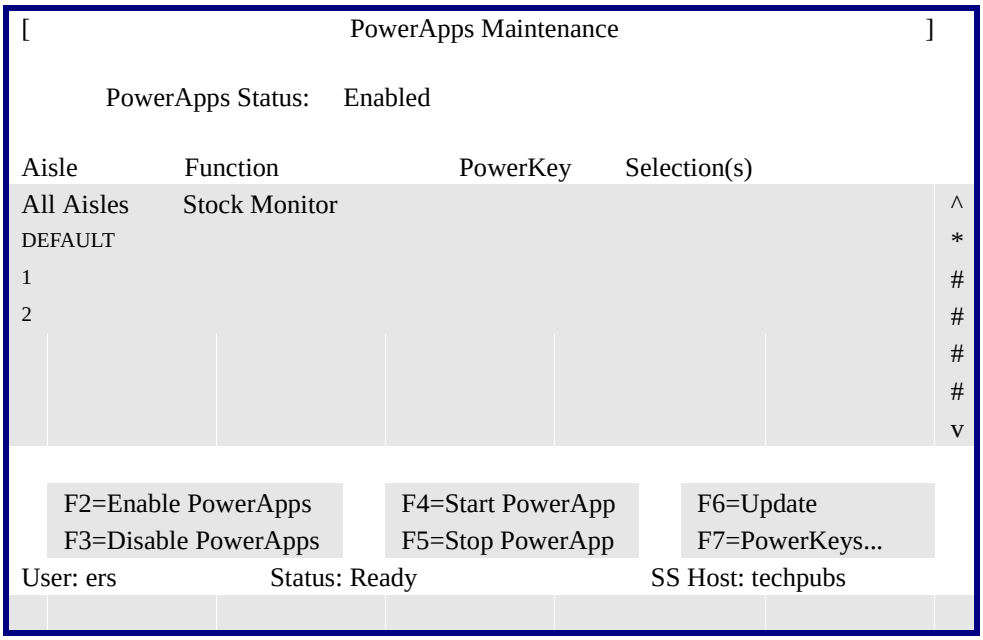
To *deactivate* Power Applications using the PowerApps Maintenance Utility, perform the following steps:

1. From the main menu, use the arrow keys to select menu item **5) Utilities** and press ENTER . This brings you to the **Utilities Menu** screen.



Screen 6-9. Utilities Menu

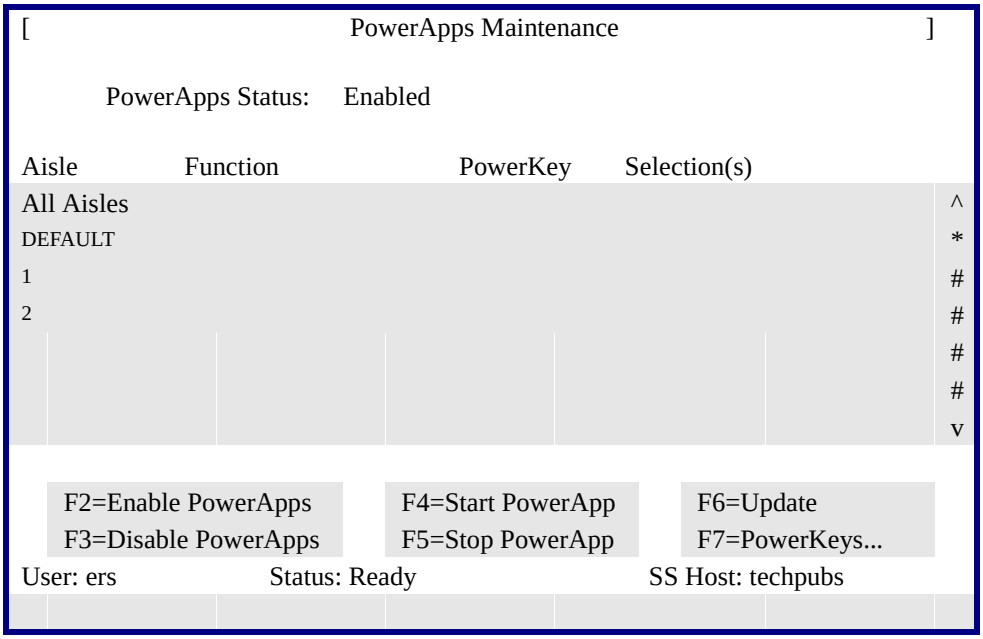
2. Using the arrow keys, select menu item **1) PowerApps Maintenance** and press ENTER . This brings you to the **PowerApps Maintenance** screen.



Screen 6-10. PowerApps Maintenance with data

3. Using the arrow keys, select **All Aisles** or aisle location(s) currently running a selected Power Application and press ENTER .

4. Press function key F5 to stop the PowerApp(s). This deactivates the Power Application and switches all the ESLs associated with the aisle location(s) you selected back to normal display mode. The **Function** column associated with the aisle you selected will no longer display the Power Application.



Screen 6-11. PowerApps Maintenance with data

Function key F6 updates the screen and displays a current list of all aisle locations and what (if any) Power Applications are running. If a Power Application is being run by a handheld terminal out in the aisle, it will also be displayed. You would use this option when you want to check the status of all Power Application activity in the store.

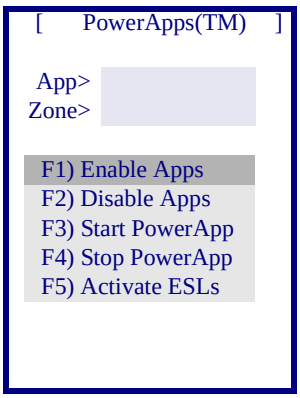
6.3.2 Handheld Terminal

The handheld terminal can activate a Power Application(s) for either individual store aisles or all aisles throughout the store (global activation).

(For handheld terminal functionality and operation, refer to **Appendix B. Using the Handheld terminal**.)

6.3.2.1 Handheld Terminal PowerApps Screen

You activate Power Applications from the **PowerApps** screen. This screen is reached from the handheld **HandyNet** menu by pressing **<func>** and **<2>**.



Screen 6-12. Handheld PowerApps

The **Power Apps** screen contains the following information:

App>
This field identifies the name of the Power Application that is currently active and started by this handheld terminal, (i.e. Stock Monitoring, Auxiliary Display, QuickP.O.P., Order Assist).

Zone>
This field identifies the location where the currently active Power Application (started from this handheld terminal) is running. One of three locations may be displayed:

- All Aisles
- Aisle Name
- Aisle Location

Function Keys

F1 Enable Apps -- allows you to enable all PowerApps.

F2 Disable Apps -- allows you to disable all PowerApps.

F3 Start PowerApp -- allows you to start all PowerApps.

.

F4 Stop PowerApp -- allows you to stop all PowerApps.

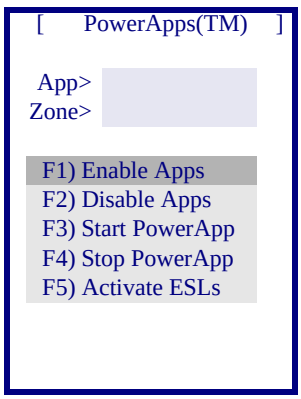
F5 Activate ESLs -- displays the **Activate ESLs** screen.

6.3.2.2 Enabling a Power Application with the Handheld Terminal

To enable a Power Application using the handheld terminal, perform the following steps:

1. Log on to ShelfServer using the handheld terminal. This brings you to the **HandyNet** menu. (Refer to **Appendix B. Using the Handheld Terminal).**

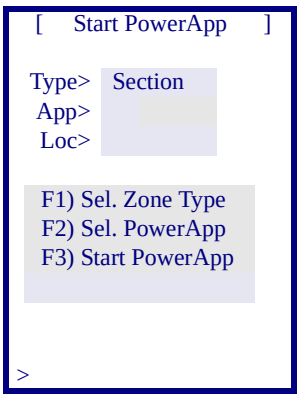
2. From the **Main Menu**, press **<func>** and **<2>**. This causes the **PowerApps** screen to appear.



Screen 6-13. Handheld PowerApps

3. Press **<func>** and **<1>** to select option **F1**) **Enable Apps**.

4. Press **<func>** and **<3>** to select option **F3) Start PowerApp**. This causes the **Start PowerApp** screen to appear.

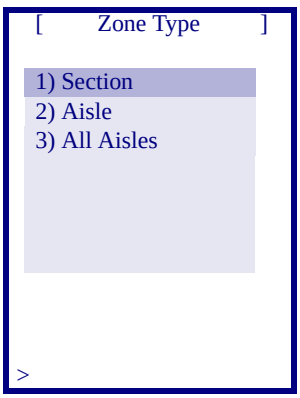


Screen 6-14. Handheld Start PowerApp

The following information explains how to enter data into the fields on the **Start PowerApp** screen.

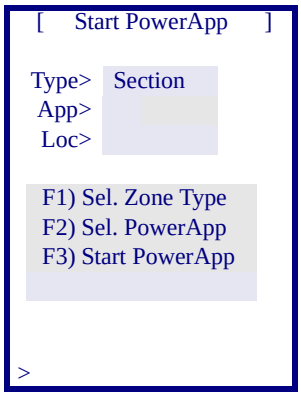
Selecting a Zone Type:

The **Type>** field specifies the zone in the store where the PowerApp should be started. You can select option **F1) Sel. Zone Type** by pressing **<func>** and **<1>**. This causes the **Zone Type** screen to appear.



Screen 6-15. Handheld Zone Type

Select the appropriate *zone type* by pressing the number associated with the zone type you prefer. (For example, if you press **<1>** on the handheld terminal keypad, you will have selected **Section** as the zone type.) Once you make your selection, the **Start PowerApp** screen appears with the selected zone type in the **Type** field.



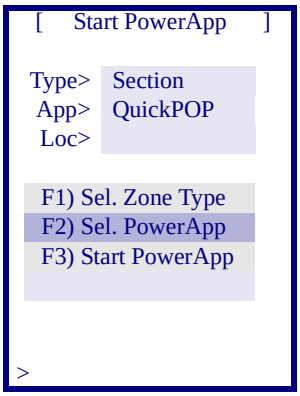
Screen 6-16. Handheld Start PowerApp

Selecting the Power Application:

The **App>** field on the **Start PowerApp** screen displays the Power Application you would like to start. Press **<func>** and **<2>** to select option **F2) Sel. PowerApp**. This causes the **PowerApp List** screen to appear.

Screen 6-17. Handheld PowerApp List

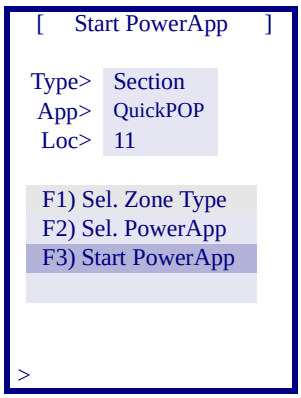
Select the appropriate Power Application by pressing the number associated with the Power Application you would like to run. (For example, if you press **<4>** on the handheld terminal keypad, you will have selected **QuickP.O.P.** as the Power Application.) Once you make your selection, the **Start PowerApp** screen appears with the selected Power Application in the **App>** field.



Screen 6-18. Handheld Start PowerApp

Selecting a Location:

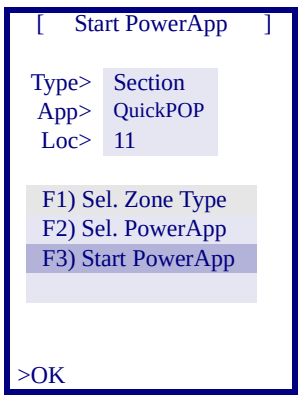
The **Loc>** field on the **Start PowerApp** screen lets you select the location that indicates the aisle or section within the aisle where you would like to start the Power Application. You can either ***scan*** the *Location ID Sticker* located in the aisle, or type it in manually. (This process may differ from store to store; check with your store manager for the procedure in your store.)



Screen 6-19. Handheld Start PowerApp

Starting the Power Application:

Once you have the **Type>**, **App>**, and **Loc>** fields filled in on the **Start PowerApp** screen, you can start the Power Application. Press **<func>** and **<3>** to select option **F3) Start Power App**. The ESLs in the designated section change to display whatever data the chosen Power Application is programmed to display. (**>OK** appears in the bottom left-hand corner of the screen indicating the Power Application has been started.)

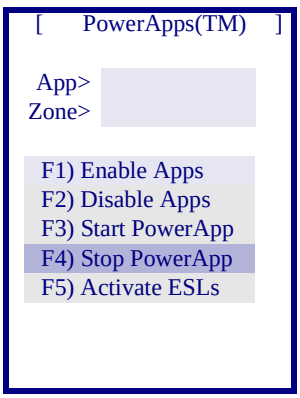


Screen 6-20. Handheld Start PowerApp

6.3.2.3 Stop and Disable a Power Application with the Handheld Terminal

To stop and disable a Power Application using the handheld terminal, perform the following steps:

1. From the **Start PowerApp** screen press **<clr>** on the *symbol* handheld terminal, or **<esc>** on the *telxon* handheld terminal, to get back to the **PowerApp** screen.



Screen 6-21. Handheld PowerApps

2. Press **<func>** and **<4>** to select **F4) Stop PowerApp**. This stops the Power Application running and the ESLs return to price display mode.
3. Press **<func>** and **<2>** to select **F2) Disable Apps**. This disables the Power Application.

6.3.3 ESL Button Push

The ESL button push can be used to change individual ESLs into a pre-configured Power Application display mode.

Each store differs in which ESL buttons they have configured to display particular Power Application data. Check with your store manager or systems administrator for how the ESL buttons are configured in your store.

Chapter 7. Frequently Asked Questions

This section provides answers to some of the more commonly asked questions regarding the ShelfNet System, and includes possible solutions to problems where appropriate. The information in this section may help you resolve an existing problem, or even prevent a potential problem.

7.1 SSUI Activities

Questions and Answers in this section are specific to the ShelfServer User Interface.

7.1.1 Access Denied

Q: I entered my name and password at the SSUI *Log-On* screen and pressed function key F2 as shown. A window appeared stating that my name and password combination were unknown, and I couldn't gain access.What am I doing wrong?

A 1: Your name and password must be registered in the system by your Systems Administrator for you to be granted access rights.

Solution 1: If you're not sure, check with your Systems Administrator to determine if you are authorized access.

A 2: If you have been properly registered and are allowed access to the system, make sure you are entering your name and password exactly as registered by your Systems Administrator.

Solution 2: If you are entering your name and password correctly and still cannot gain access, check your *Caps Lock*. Normally a *Caps Lock* light on the keyboard will be lit when the *Caps Lock* is activated. When activated, this function will reverse your character entries causing upper case to be lower and lower case to be upper. In this manner the system will not recognize your entry as it will be opposite case. If activated, press the *Caps Lock* button to undo.

7.1.2 No Printer Output

Q: I sent a report to the printer and a window appeared confirming that the report was created and printed, but it is not at the printer output. A check shows that the report is in the queue, with a "Y" in the *Printed* column. If this is the case, where is the report?

A: The confirmation window appears as a result of your action to select *Print*. Since the printer is outside of ShelfServer, the printer cannot actually be detected by the system. Either the printer may have been removed from the ShelfNet system, or it may not be connected properly.

Solution: Check for a connected printer, good cable connections and good cables.

7.2 ESLs

Questions and Answers in this section are specific to ESLs.

7.2.1 Battery Change

Q: I changed the battery in an ESL, but it now has a blank display. What can I do?

A 1: The battery may have been inserted improperly. Also, you should short-out the battery terminals and refresh the ESL after the battery replacement.

Solution 1: Follow procedures for battery replacement in *User's Guide* section 5.1.2.

A 2: If the proper battery replacement procedure was used and the ESL is still blank, you may have a bad ESL (not common).

Solution 2: Replace the ESL by following the replacement procedure in *User's Guide* section 5.1.7.

7.2.2 Freezer ESL

Q: I found an ESL in the frozen foods section with a "garbage" readout, meaning a display with partial characters that makes no sense. I checked, and the ESL is properly linked to the product. What's the likely problem?

A: The ESL may be a regular ESL, not a freezer ESL.

Solution: Look at the lower right hand corner on the back of the ESL. There should be a label showing *ERS* topped with what appears to be snow capped mountains. If the label is not there, or if the snow capped mountain symbol is not over *ERS*, it is not a freezer ESL and should not be used in the freezer section.

7.2.3 All Segments Blinking

Q: I placed an ESL on the shelf edge and linked it to a product, but instead of a price the display shows all segments blinking. Did I forget something?

A: It sounds like the product linkage was not activated. At the end of the procedure linking an ESL to a product, a button on the ESL must be pushed to activate the download of information and complete the linkage.

Solution: Press a button on the ESL in question to download data to the ESL and activate the linkage. (It doesn't matter which button is pushed.)

7.2.4 Partial Character Display

Q: I placed a Small Dual ESL on an end-cap display and linked it to the product, but it has a "garbage" display, meaning that it displays partial characters that make no sense. What should I check first?

A: It may be that this Small Dual ESL is identified to the system as a Large Dual ESL. The default ESL size on the Handheld Terminal is Large Dual. If it wasn't manually changed to Small Dual, the result would be the symptom you describe.

Solution: When scanning different sizes of ESLs, you must be alert to size changes and be sure to change the ESL size selection accordingly. Remember, once changed, the selected size will remain in effect until manually changed again.

7.3 ACAs

Questions and Answers in this section are specific to ACAs.

7.3.1 No Lights Lit

Q: While walking through the store, I noticed an ACA with no lights lit. I didn't notice any ESLs not displaying properly, so can I assume that this ACA is still working properly?

A: The red light on the ACA is not currently used and therefore remains off. The green light should be *on* to indicate that power is applied to the ACA. It is possible that the ACA is not powered on, but the ESL's are working properly beacuse they have been automatically reassigned to other ACA's by ShelfServer.

Solution: If the green light is not lit on an ACA, it should be assumed that this ACA is not powered on and you should call your Help Desk to report it.

7.4 Daily In-Store Maintenance Activities

Questions and Answers in this section are specific to daily in-store maintenance activities.

7.4.1 Status Overview Interpretation

Q: When looking at the *Status Overview* screen, how do I interpret what all the numbers mean?

A: There are too many number entries within the *Status Overview* screen to be discussed here. The *Status Overview* screen and it's contents are described in detail in the *User's Guide*.

Solution: You should become familiar with section 3.1, *System Status Checks* and Appendix A, *Daily In-Store Maintenance of the ShelfNet System*. Doing so will enable you to interpret the numbers on the *Status Overview* screen, and therefore better understand the status of the ShelfNet System at any given time.

7.4.2 Non-Responding Controller

Q: The *Status Overview* screen indicates that there is one *Non-Responding* controller. What does this mean, and what should I do?

A: This is an indication that a controller did not respond to the last *bedcheck* and is not communicating with ShelfServer. (See section 3.1, *System Status Checks* and Appendix A, *Daily In-Store Maintenance of the ShelfNet System*.) There should be concern that the price displayed may not be current.

Solution: Check the price displayed to see if it is current, and contact your Help Desk to inform them of the controller status.

7.4.3 ESL Intruder Summary

Q: While looking at the *Status Overview* screen, I noticed that there is a count in the *ESL Intruder Summary*. What does this mean?

A: An *Intruder ESL* indicates an ESL with no product linkage known to ShelfServer. An ESL in this mode will have a special display, usually *Off* or *Intruder* as determined by each store upon installation, and should be removed and deleted from the system.

Solution: The *Intruder ESL Report* will indicate the location of the ESL that needs to be removed and deleted from the system. It may be that an ESL was removed and unlinked from a product but not deleted, and is being picked up by ShelfServer as an *Intruder*. If you can't locate it on a shelf edge, check to see if it is in the "to be deleted" container in the back room.

7.4.4 Non-Responding versus Pending Status

Q: I have been told that I should check for *Non-Responding* and *Pending* ESLs. It seems that both of these are the same, so why not group them under one heading?

A: ShelfServer considers each of these conditions to be distinct, allowing us to distinquish between the causes of each and prioritize our corrective actions. ShelfServer sends a message periodically, called a *bedcheck*, and looks for a response to determine if the targeted components are functioning properly. When the response is not detected, the status is considered *Non-Responding*. This condition may often correct itself after a brief time.

When a data message (such as a price change) is sent by ShelfServer, and a response confirming receipt of this message is not detected, the status is considered *Pending*. A *Pending* ESL is especially important to note because it represents a potential price integrity problem in that an updated price change may not have taken place. This status should always be followed-up and resolved quickly.

Solution: You should become more familiar with *Chapter 3. System Monitoring* in the *User's Guide.* Doing so will enable you to interpret the on-going status of the ShelfNet system and better prepare you to take appropriate corrective action when required.

Appendix A. Daily In-Store Maintenance of the ShelfNet System

This appendix describes, in minimum detail, how to perform the daily procedures and system checks necessary to properly maintain the ShelfNet System in your store. For procedures with expanded detail, please refer to the appropriate chapter within this guide.

A.1 ShelfServer Daily Activities Checklist

Using a copy of the following form, and the procedures that follow, fill in all of the requested information. Where there is a "Yes" or "No" answer simply put a check under the appropriate column. (Do not write in the shaded areas)

.

ShelfServer Daily Activities Checklist Date:
Performed By: Time:

Step	Activity	Count	Yes	No
1	Check Controller Error Summary			
2	Check Server Queue			
3	Check ESL Error Summary			
4	Total ESL Count			
5	Print the Pending Report			
6	Pending Count			
7	Print Non-Responding Report			
8	Non-Responding Count			
9	Delete ESLs in the "To Be Deleted" box			
10	Check all Attachments			
11	Check aisle for ESLs			
	Damaged			
	Bad Display Quality			
12	ESLs Added			
13	ESLs Deleted			

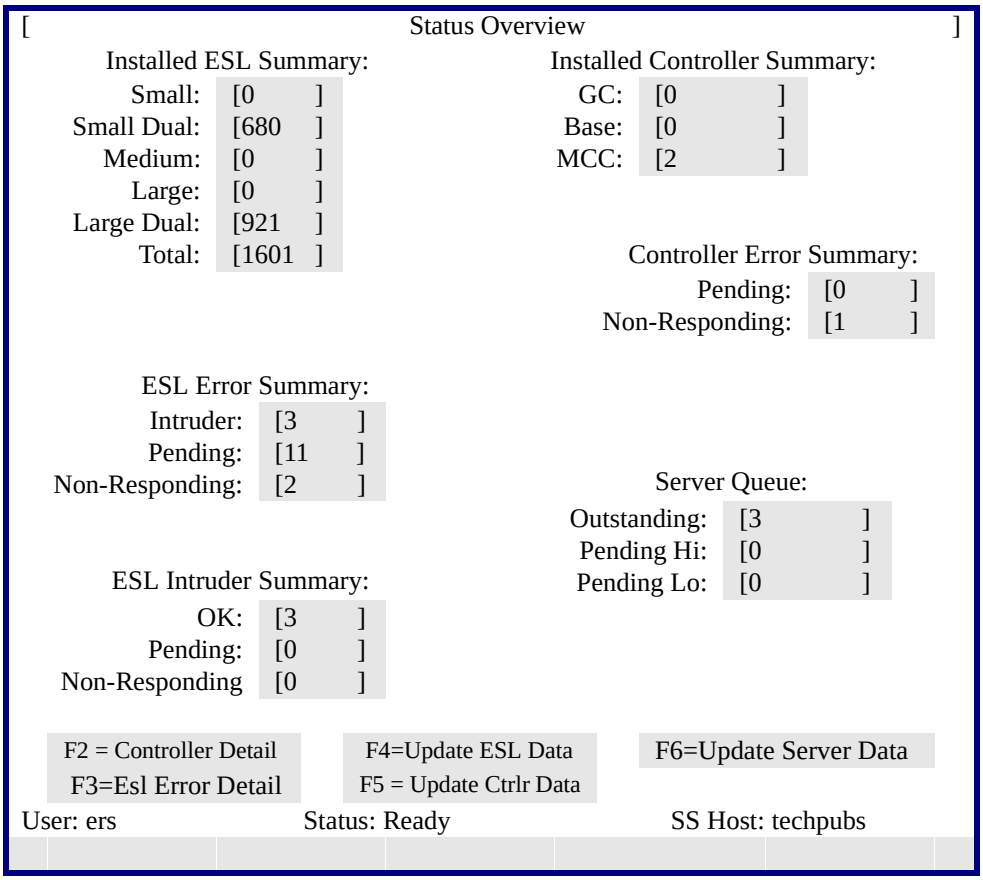
Figure A-1. ShelfServer Daily Activities Checklist

A.2 Procedure

These are the procedures to follow in conjunction with the ShelfServer Daily Activities Checklist. The steps in parenthesis correspond to the steps on the form.

A.2.1 Check Status Overview screen

1. Starting at the ShelfServer *Main Menu*, select menu option **3) Status**.
   - Displays the **Status Overview** screen.



Screen A-1. Status Overview screen

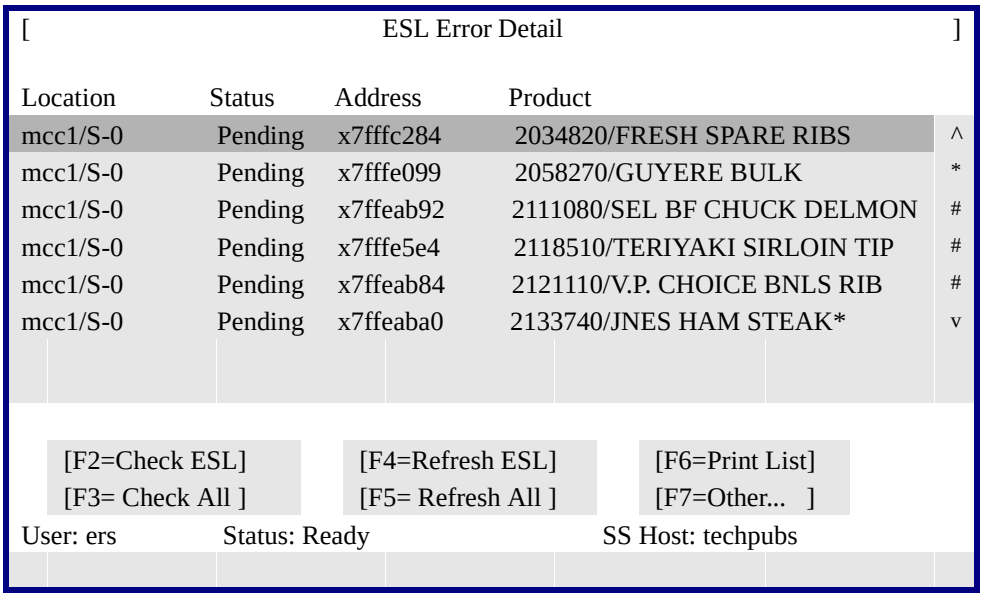
2. Verify that there are no entries in the **Controller Error Summary** (Step 1).
   - If there are any entries in this section call your Help-Desk.
3. Verify that there are no entries in the **Server Queue** section (Step 2).
   - If there are entries in the **Server Queue** section wait until they are cleared.
4. Record the number of ESLs installed in the store (Step 4).
5. If there are any **Pending** ESLs record the number (Step 6).
6. If there are any **Non-Responding** ESLs record the number (Step 8).
7. Delete any ESLs in the "to be deleted" container (Step 9).
8. Record the number of ESLs added during the day (Step 12).
9. Record the number of ESLs deleted during the day. (Step 13)

A.2.2 Reduce Pending / Non Responding ESL's

A *Pending* ESL represents a potential price discrepancy.

If there are both *Pending* and *Non-Responding* ESLs in the **ESL Error Summary**, always resolve the Pending ESL conditions first. Generally if the Non-Responding ESLs are left alone they will eventually resolve themselves.

If there are Pending or Non-Responding ESLs on the **Status** screen, you can find greater detail about the ESL errors by selecting F3 **ESL Error Detail** from the selections at the bottom of the **Status** screen.



Screen A-2. ESL Error Detail screen

When attempting to resolve Pending and Non-Responding ESL conditions, you can select an individual ESL and perform a F2 **Check ESL** or you can perform a F3 **Check All**, but ***do not*** select F4 **Refresh ESL** or F5 **Refresh All**. The *Refresh* activity will generally create a large amount of traffic on the network and reduce the overall performance of the system.

Note:

When using the Handheld Terminal the ***Check*** option is not available, therefore you *must* use the ***Refresh*** option when required.

A.2.2.1 Pending ESLs

1. Starting at the ShelfServer Main Menu, select menu option **4) Reports and Overlays**.
2. If there are any Pending ESLs, create and print a *Pending ESLs Report* (Step 5).
   - Select **2) Pending ESLs** and press ENTER **.**
   - Leave the default date in the **Since** field, it should be todays date.
   - Select F2 to *queue* the report or F3 to *print* the report.
3. Using the *Pending ESL Report*, go to the aisle and verify that the location of the ESL is where it is supposed to be. Verify the linkage of the ESL ID to the product UPC.
   - Press the right button on the ESL, the last four digits of the UPC should be displayed.
4. Using the Handheld Terminal, from the **ESL Item Maintenance** screen, select **F5 Refresh ESL** for each item on the *Pending Report*.
   - If ESL remains on the Pending list, delete the ESL from the product and re-create the linkage between the ESL and the product.
   - If ESL still remains on the Pending list; go to *Replacing ESLs* below.

A.2.2.2 Non-Responding ESLs

1. Starting at the ShelfServer Main Menu, select menu pick **4) Reports and Overlays**.
2. If there are any *Non-Responding* ESLs create and print a *Non-Responding ESLs Report*.
   - Select **1) Non-Responding ESLs** and press ENTER .
   - Leave the default date in the **Since** field, it should be today's date.
   - Select F2 to *queue* the report or F3 to *print* the report.
3. Using the *Non-Responding ESL Report*, go to the aisle and verify that the location of the ESL is where it is supposed to be. Verify the linkage of the ESL ID to the product UPC.
   - Press the right button on the ESL, the last four digits of the UPC should be displayed.

4. Using the Handheld Terminal, from the **ESL Item Maintenance** screen, select **F5 Refresh ESL** for each item on the *Pending Report*.
5. If ESLs become *Pending*, go to *Pending ESLs above*.
6. If ESLs stay *Non-Responding*, go to *Replacing ESLs* below.

A.2.3 Replacing ESLs

1. Using the Handheld Terminal, *delete* the ESL from the database.
   - When the ESL displays *OFF* remove the ESL from the shelf edge.
2. Add a new ESL to the database by linking it to the product UPC code.
3. If the ESL again fails to be properly recognized, call your Help-Desk.

A.2.4 Walk the Aisle

1. Check the aisles for:

   - Attachments that are loose or broken (Step 10).

   Re-mount the attachment to the "C" channel on the shelf edge using a #2 Philips-head screwdriver or a square bit screwdriver.

   - ESLs that are damaged (Step 11).

   Replace the ESL with a new unit following the directions in *Replacing ESLs* above.

   - ESLs that have bad display quality, dim, all segments lit, blinking or blank (Step 11).

   Replace the ESL with a new unit following the directions in *Replacing ESLs* above.

A.2.5 Backup

1. If ShelfServer is running on a stand alone server:

   - There should be a backup tape for each day of the week. The backup should be automatically run each morning at approximately 4 A.M. A complete backup can take many minutes to complete. In order to make sure that the automatic backup is complete before changing tapes, we suggest that tape changing be done at approximately noon each day.

   - Check the label for the tape removed from the drive; it should be for today's day of the week. Select the tape that has the label for tomorrow's day of the week and insert it into the tape drive. Make sure that the tape is firmly seated in the tape drive.

2. If ShelfServer is running on the ISP:

   - The backup for the ISP is an automatic function and does not require any intervention by the person responsible for the ShelfServer system.

A.2.6 Daily Activities Flowchart

The following is a flowchart of the daily in-store maintenance activities.

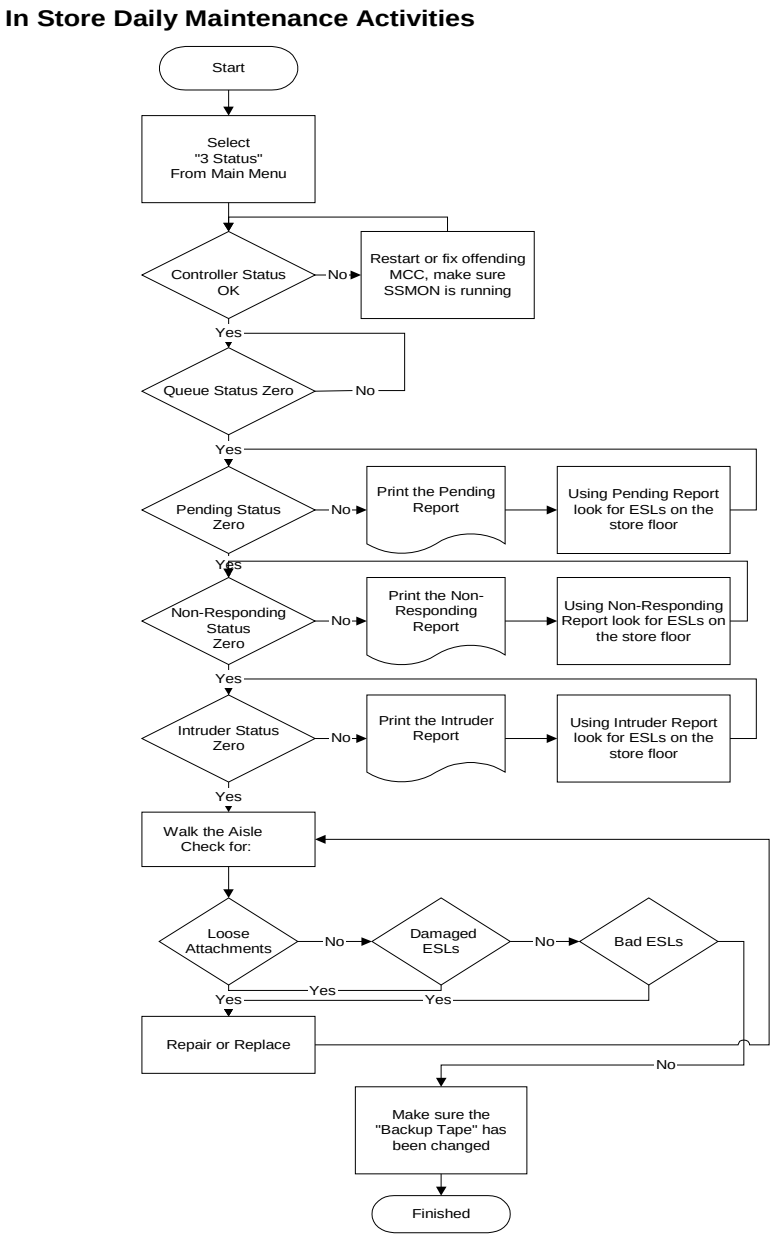


Figure A-2. Daily Activities Flow Chart

Appendix B. Using the Handheld Terminal

The handheld terminal is a portable handheld device, also known as a portable terminal, that gives you the ability to activate and use Power Applications and perform ESL maintenance activities right in the aisle. It provides a portable user interface that communicates directly with the ShelfNet system.

This appendix provides information on basic handheld terminal functionality, (e.g. logging on and selecting applications).

B.1 Keyboard Conventions

Before you begin using the handheld terminal, it is important to understand some of the navigation keys and how they are used within this user interface. For purposes of this appendix, keys will be represented by **< >**, for example, the Enter key will appear as **<Enter>**.

Many times the options **F1**, **F2**, **F3**, **F4** and **F5** will be displayed on the user interface. The handheld terminal keypad does not contain these exact function keys. In order to select one of these keys, you need to press a key combination of the **<func>** key and then the corresponding number key. For example, **F1** is acheived by pressing **<func>** + **<1>**.

B.2 Logging On to the Handheld Terminal

The following explains how to start the handheld terminal (both *Telxon* and *Symbol*) and log on. The information provided here is typical for a basic handheld system, however each store may configure the log on procedure of it's handheld terminals differently to meet the needs of each location. You should check with your manager to determine the proper procedure within your store.

You access the ShelfNet handheld application by logging onto the host operating system, (computer where ShelfServer is running), and activating the handheld application.

The ShelfServer handheld application (**sshand** for *Telxon;* **ssh** for *Symbol*) is an applciation which allows the handheld terminal to talk to ShelfServer.

B.2.1 Logging on to the Telxon Handheld Terminal

Perform the following steps to start the handheld application and log on to ShelfServer:

1. Power on the handheld terminal.This brings you to the handheld terminal **Main Menu**.

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Screen B-1. Handheld Main Menu

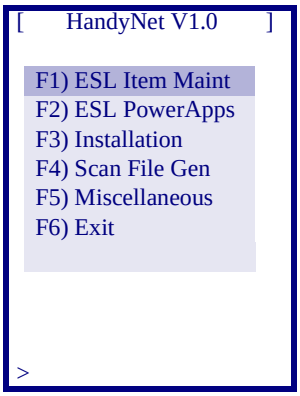
2. To log on to ShelfServer from here, select option **5< Emulation** from the handheld terminal **Main Menu**.
3. Type your user name (same as the host running ShelfServer) at the **login**: prompt and press **<Enter>**.
4. Type your password (same as the host running ShelfServer) at the **password:** prompt and press **<Enter>**.
5. At the end of the screen of text, press **<Enter>**.
6. When the text **`TERM = (xterm)`** appears, press **<Enter>**.
7. At the UNIX prompt (%) type: **sshand** and press **<Enter>**.

Note:

Alternatively: If the system is configured with special Log-On's for the Handheld (***belt*** and ***hand***), then enter whichever is appropriate in step 3 above in lieu of your username. (The appropriate entry would be **belt** if a thermal printer is attached to the device, or **hand** if no thermal printer is attached.)

8. This brings you to the **HandyNet** menu. You are now logged on to ShelfServer

.



Screen B-2. HandyNet Menu

9. From this menu, select the option that corresponds to the function that you would like to perform. See the chart of options that follows for a more detailed explanation of each function. Most typically, you will be using **F1 ESL Item Maintenance** and **F2 ESL PowerApps**.

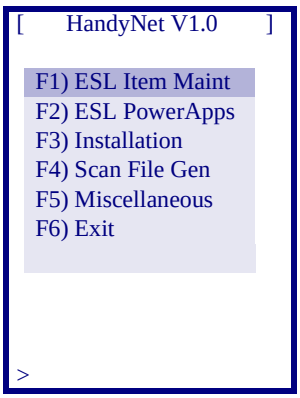
)

Option:	Function:
F1 <func> + <1>	Perform ESL maintenance tasks: adding and deleting ESLs, printing ESL overlays.
F2 <func> + <2>	Provides a means to communicate with ShelfServer in order to start a Power Application(s) in a particular aisle or globally, throughout the store.
F3 <func> + <3>	Perform tasks such as assigning ESL network parameters to location codes (slot assignment), assigning aisle information to location codes for Power Application usage and MLP ESL installation.
F4 <func> + <4>	Perform batch scan file generation.
F5 <func> + <5>	Perform an ESL status check or perform a price change.
F6 <func> + <6>	Exit handheld terminal application.

B.2.2 Logging on to the Symbol Handheld Terminal

Perform the following steps to start the handheld application and log on to ShelfServer:

1. Power on the handheld terminal. At the "**connect to host**" text press **<Enter>**.
2. Type your user name at the **login:** prompt and press **<Enter>**.
3. Type your password at the **password:** prompt and press **<Enter>**.
4. At the UNIX prompt type **ssh** and press **<Enter>** to start the handheld application.
5. This brings you to the **HandyNet** menu. You are now logged on to ShelfServer.



Screen B-3. HandyNet Menu

6. Depending on what type of task(s) you would like to perform, (see the chart of options below), select one of the options. (Most typically, you will be using **F1 ESL Item Maintenance** and **F2 ESL Power Apps**.)

Option:	Function:
F1 <func> + <1>	Perform ESL maintenance tasks: adding and deleting ESLs, printing ESL overlays.
F2 <func> + <2>	Provides a means to communicate with ShelfServer in order to start a Power Application(s) in a particular aisle or globally, throughout the store.
F3 <func> + <3>	Perform tasks such as assigning ESL network parameters to location codes (slot assignment), assigning aisle information to location cods for Power Application usage and MLP ESL installation.
F4 <func> + <4>	Perform batch scan file generation.
F5 <func> + <5>	Perform an ESL status check or perform a price change.
F6 <func> + <6>	Exit handheld terminal application.

B.3 Scanning with the Handheld Terminal

Once the handheld terminal has been turned on and you are logged onto ShelfServer, you can scan ESLs and products.

To scan an ESL or a product, simply point the handheld terminal at the ESL or product barcode and press the trigger on the handle. The handheld terminal will emit a beep to confirm that the scan is complete.

B.4 Scan File Generation

1. Log-on to the handheld terminal. This brings you to the **HandyNet Menu**.
2. Press **FUNC** and then **4**. This brings you to the **Scan File Gen** screen.
3. Type in the file name. For example, if you are scanning in cereals, name the file ***cereals***, and press **Enter**.

4. Press **FUNC** and then **2**. The **Change ESL Size** screen appears.
5. Press the number that corresponds to the size of the ESL you are adding. This brings you back to the **Scan File Gen** screen and the **Size>** field displays your selection. (You may mix ESL sizes in the same file).
6. Scan the UPC Barcode on the product. (Repeat this for as many products as you are scanning of this size.) The UPC# appears in the **Prod>** field.
7. Press **Func** and then **4**. This saves the file. (**OK** appears in the bottom left-hand corner of the screen, confirming the file has been saved.) It is recommended that you do this often during the generation process. If you should experience problems with the handheld terminal during this process, all items scanned since the last save will be lost.
8. For a new batch, press **Func** and then **3** (**New Scan File**).
9. Enter new file name.
10. Scan new UPC's.
11. Press **Func** and then **4** to save this file.
12. At the ShelfServer system monitor displaying the **ShelfServer Main Menu** select **2) ESL Maintenance,** then select **1) ESL Batch Maintenance**.
13. First filename will have the original quantity of products scanned.
14. Second file should have only the second quantity of products scanned.

B.5 Exiting the Handheld Application

When you press **ESC** from the **HandyNet Menu** you will return to the Unix prompt. At this point type **Exit** and press **Return**. This will terminate the session.

Note:

If logged-on via **hand** or **belt**, pressing **ESC** from the HandyNet Menu will immediately terminate the session.

ShelfNet System Glossary

ACA

See Active Cell Antenna

Active Cell Antenna

The Active Cell Antenna is the transceiver that communicates directly to the Electronic Shelf Labels (ESL). ACAs are generally hung from the ceilings in stores where they are installed and transmit radio signals down to ESLs located in the aisle. Also referred to as an ACA.

Aisle Survey

The process of inspecting an aisle to gather specific information for use in designing and planning the ShelfNet System layout.

Attachments

ShelfNet accessory used to adapt existing retail display units to accommodate and hold an ESL in its proper location in front of the product.

Barcode

The symbolic representation of the unique number on a product that identifies information associated with that product.

Batch

Single file containing multiple product records. It is an efficient way of organizing a group of products for mass ESL programming.

Battery Key

A device used to open the battery compartment located on the back of the wireless ESL

Bedchecking

An automatic preconfigured process by which the ShelfNet system sends a message to each ESL in the network and "listens" for a response to verify the ability to communicate.

Booting MCCs

A network operation that transmits a basic operating system to the MCC, enabling the MCC to subsequently interact with ShelfServer.

Cell

The area of radio communication coverage provided by each ACA. For a standard aisle the cell is defined as a 20'x50' rectangle, for a freezer aisle the cell is defined as 15'x28' rectangle.

Cell Plan

A strategy for the placement of ACAs in order to provide RF coverage for each ESL in the store. A cell plan is one of the prerequisites for a slot plan.

Data Feed

File containing information that can be passed either automatically or manually to another system's software.

Downloading MCCs

A ShelfNet operation that results in a reprogramming of the MCC.

ESL

See Electronic Shelf Label

Electronic Shelf Label

A battery powered, separately addressable, portable, radio receiver and transponder in a plastic housing with an LCD, that displays price information and other retail data about products at the shelf edge. Also referred to as an ESL.

ESL Address

A unique identifier assigned and physically affixed to each ESL, represented with a barcode and a series of numbers and letters.

ESL Address Label

A self-adhering paper label attached to the ESL which displays the unique ESL address, normally affixed to the side.

ESL Buttons

Two buttons located on the ESL that, when pressed individually or in combination, display additional product information which is configurable based on each store's requirements.

ESL Commissioning

A store operation that links a product to an ESL.

ESL Key

A ShelfNet accessory that is used to remove an ESL from its shelf attachment.

EAP

See Ethernet Access Point

Ethernet Access Point

A component which acts as the bridge between an Ethernet wireless device and the Ethernet wired network. Also referred to as an EAP.

Firing

A roundtrip sequence between an MCC and an ACA over one port during one slot. This event occurs simultaneously on each MCC in the system.

Flooding

Allows the system to locate a lost ESL by communicating with every antenna simultaneously in the store.

Frame

The set of slots that constitutes the defined firing cycle. In an 8-slot plan the frame is the collection of slots 1through 8 transmission.

Gondola

A retail product display unit commonly found in a grocery store, usually 4 feet long, generally consisting of shelving or backboard to display products offered for sale.

Handheld Terminal

A portable scanning device that provides a user interface to communicate with the ShelfNet system, providing the capability to scan products, ESLs and use Power Applications directly from the store aisle. A portable printer can be attached to allow for printing overlays in the aisle. Also referred to as a Portable Terminal, Portable Data Entry System (PDES), or Scanner.

Hub

An Ethernet network component used to provide a communication link between the multiple network devices, such as the ShelfNet system processor and the Multicell Controllers.

ISP

See In-Store Processor

In-Store Processor

The central computer system that receives, stores and processes product and price information, and controls the cash registers (POS System) in the store. Also referred to as the ISP.

Intruder ESL

An ESL which has no link to any product contained in the product database.

Location Code

A series of numbers and or letters identifying a specific area of the store, (e.g. L2 is location 2)

Location Id

See Location Code.

MAC Address

A unique hardware address assigned during manufacturing to a computer network component that identifies it as a distinct entity.

MCC ID

A unique identifying nickname assigned to each MCC at time of installation, such as MCC1, MCC2, etc.

MCCUT

A software application run to load the controlling program into the MCCs at time of system boot or MCC device reboot request during system operation.

Merchandise Data Information

Data other than price, including unit of measure, package size, and product information. Also referred to in MDI file.

Morning Process

A ShelfNet process that reviews the database for changes in merchandising data collected over the last 24-hour period, such as a product information update causing a new ESL overlay to be required, and presents the results in the form of a report. This process runs at the same time every day, which may be configured differently to meet the requirements of each store.

MCC

See MultiCell Controller

MultiCell Controller

Provides full-duplex control, and the data link between the ShelfNet processor and each connected Active Cell Antenna. Also referred to as an MCC.

Non-Responding ESL

An ESL that failed to respond to the bedcheck communication by the system.

Non-Responding MCC

An MCC that failed to respond to the bedcheck communication by the system.

Overlay

An adhesive paper label that attaches to the face of an ESL, containing product information such as description, order number, unit of measure, package size, UPC code, etc.

P.O.P.

Point of Purchase**;** also used with Power Application name, i.e.QuickP.O.P.

Paper Shelf Label

A printed paper label still used in supermarkets to display price and product information. ESLs are a state-of-the-art replacement.

Price Change Data Information

Product price data; also referred to in PCDI file.

Pending ESL

An ESL that failed to respond to the last message sent by the system; an ESL not responding to a system inquiry or price change.

Pending MCC

An MCC that failed to respond to the last message sent by the system; an MCC not responding to a system inquiry or price change.

Point of Sale System

The combination of cash registers (POS Terminals), controllers and software that manage sales transactions.

Port

The connection on the MCC allowing for the attachment of an individual ACA. Each MCC has 8, 16, or 24 ports, depending on model.

Portable Terminal

See Handheld Terminal.

Power Applications

Applications that allow retailers to relay product information other than price to the shelf edge. Completely customer configurable, these applications cover areas of merchandising, replenishment, planogram compliance and strategic pricing.

Rail

An attachment that fits into the c-channel on the store shelf and holds the ESLs in place for easy viewing.

Scanner

See Handheld Terminal

Scan file

A batch file created by use of a handheld terminal (scanner) to link numbers of products to ESLs.

ShelfServer

The software component of the ShelfNet System. ShelfServer consists of a set of software processes and tools that control all the functions necessary to manage and utilize the ShelfNet system.

Site Plan

A drawing of the existing facility and services, used during pre-installation planning to create the Cell Plan and the Slot Plan.

Site Survey

The process of collecting the necessary data to determine the number and placement of ShelfNet components required for an installation.

Site Survey Form

The ERS form used to record the data collected during the site survey.

Site Survey Kit

Set of tools and materials recommended to conduct a site survey.

Slot

A 1/8 second (125m/sec) interval during which an ACA firing (transmission) occurs.

Slot Plan

The final drawing created from the site plan depicting antenna locations, MCC assignments, port assignments and slot assignments for the complete installation.

Slot Plan Activation

A ShelfNet operation in which the slot plan is input to ShelfServer, a store.map file is generated, and this information is downloaded to the MCCs in order to begin active interaction with ESLs.

SSUI

See ShelfServer User Interface.

ShelfServer User Interface

The software module which allows the ShelfNet system user to communicate and interact with the ShelfNet System. It runs as a foreground task. Also referred to as the SSUI.

Store.Map File

The ShelfServer table that specifies the slot plan, and associates shelf locations with ACAs.

Transceiver

A radio transmitter/receiver combined in one device.

UPC

See Universal Product Code

Universal Product Code

A barcode, usually on a product, that contains product identification which can be electronically scanned to retrieve additional information.

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ShelfNet System User's Guide
Part Number 957002
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