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Introduction

The Brady LS2000 is a revolutionary portable labeling system designed for "on-demand" printing in electrical, electronic and industrial applications. The LS2000 offers incredible versatility, including a variety of scalable fonts, to meet a wide range of labeling requirements. The optic registration system ensures precise print registration on all labels and the shuttlehead printer leads to superior print permanency and print resolution.

The objective of this manual is to introduce you to the features of the Brady LS2000 Labeling System and to provide easy-to-follow instructions for producing high-quality labels. The manual is divided into the following sections addressing all operational guidelines you may encounter for any application.

SECTION I QUICK START GUIDE

This section offers step-by-step instructions on setting up the LS2000. Everything you need to get started is included in your original order. After this brief introduction to the LS2000, you will be ready to print!

SECTION II FEATURE HIGHLIGHTS

This section goes beyond a brief introduction to the LS2000 and describes the hardware and software features of your labeling system. After reading these chapters you should be comfortable working with the screens and menus you will encounter when designing your labels.

SECTION III CREATING LEGENDS

Once you become familiar with general operating instructions, this section will help you create a wide variety of labels to fit your individual application. Easy-to-follow directions show you how to easily compose and edit labels using the advanced software in the LS2000.

SECTION IV PRINTING MARKERS

This section pulls together all the information presented in previous sections and guides you through printing procedures. After completing this section, you will have all the information you need to begin processing your labels!

SECTION V ADVANCED PRINTER USE

For the advanced user, refer to this section for information on creating legend lists (files), creating terminal blocks, serializing labels, and for data importing capabilities.

SECTION VI APPENDICES

This section contains maintenance and service information, a troubleshooting and error message guide, and a tutorial for constructing labels.

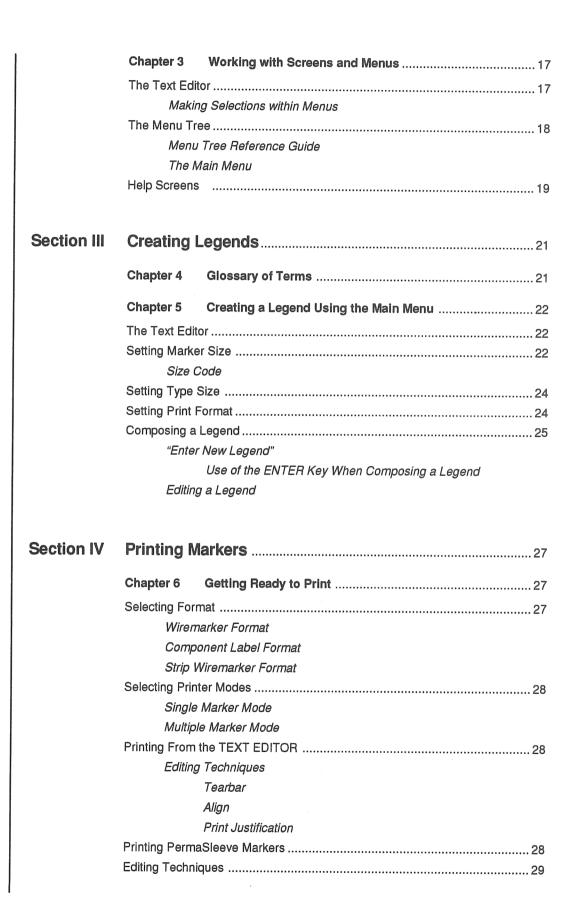
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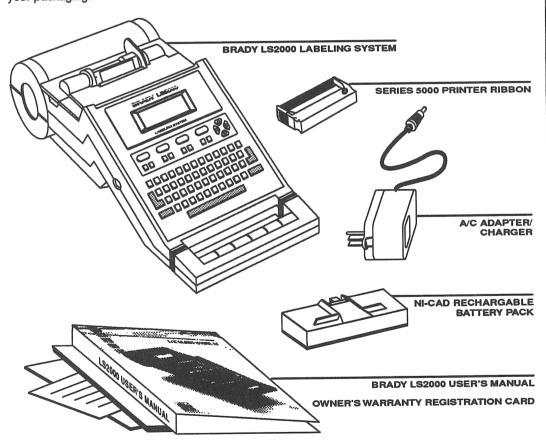
Everything you need to begin printing labels with your LS2000 is included in your original order. Interactive display menus are preinstalled in the printer in order to assist you in creating a variety of labels to fit individual applications.

CHAPTER 1 Installation

This chapter assists you in unpacking and setting up your labeling system. After reading this chapter, you will be familiar enough with the LS2000 to begin printing labels!

▶ UNPACKING YOUR LS2000

Before you begin setting up the printer, check that you have received the following items in your packaging.





PACKAGING TO SAVE

The packaging surrounding your LS2000 should be saved in the event of any future shipments of the printer and accessories.

Future Shipment of the Battery Pack

WARNING:

Never ship the LS2000 Labeling System without first removing the rechargeable battery pack from the printer's battery compartment. If shipping both the printer and battery pack, remove the battery pack from its compartment and separately place the items in the original shipping material before transporting.

Disposal of the Battery Pack

The NiCad battery pack contains cadmium, a toxic element. The battery pack is considered hazardous, toxic waste, and must not be thrown away in the home or office garbage. Once the useful life of the battery is ended (1-3 years), contact your local authorities for information regarding its proper disposal or recycling options. (In Minnesota, call 1-800-225-PRBA if further disposal information is required.)



SUMMARY OF STEPS 1-10

The setup procedure presented in the following pages has been designed to accomplish 2 goals:

- 1. To introduce the LS2000 so as to become familiar with its basic hardware features and functionality.
- 2 To initialize the printer. Initialization of the printer simply means to electronically prepare the printer for any future use and it only needs to occur one time. It occurs in the "background" during the first power ON session of the printer! What this means to you is that a few of the screens in this setup procedure appear automatically, and in the sequence that they do, only during the printer's initial setup. During any future use of the printer, the user can freely maneuver among these menus to accommodate individual editing requirements.

The guide below summarizes which instructions will remain standard throughout the use of the printer and which screens will not appear automatically but can be accessed by the user when required. Once the setup procedure has been completed, refer to the remaining sections of the manual for complete instructions on getting to know your LS2000!



Summary of Setup Procedure

Step #	Purpose of Step	Standard Procedure	Changes in Procedure After Initial Setup Procedure Is Completed
1	To install the battery.	Standard	none
2	To connect the A/C adapter/charger.	Standard	none
3	To turn the power ON.	Standard	TEXT EDITOR screen will be displayed upon any future power-ups.
4	To select the Brady product.		User will access when switching between a standard Brady product, a PermaSleeve marker, or Terminal Block marker.
5	To enter marker size code.		User will access when changing the size of marker.
6	To select Type Style, Font Scaling, and Format.		User will access when new marker requires new variables.
7	To enter text of label (create legends	s.)	This EDITOR screen initially appears upon any future power- ups. 1 of 3 messages appear in order to direct the user. Makes it convenient to start a new legend immediately!
8	To install printer ribbon.	Standard	none
9	To install roll of markers.	Standard	If marker liner has previously been installed, printing can begin immediately after entering text for the label.
10	To print.	Standard	none

Quick Start Guide



SETTING UP YOUR PRINTER

With the power OFF, follow these easy steps to set up your LS2000.

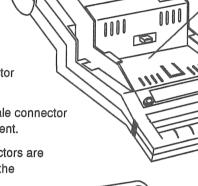
STEP 1 Install the Battery

Working on a stable surface place the printer upside down, with the handle toward you, to expose the battery compartment.

Locate the NiCad rechargeable battery
pack included in your packaging. Place the
battery pack at the top of the battery
compartment with the flat surface of the
battery facing down and the female connector
facing away from you.

 Gently slide the battery pack toward the male connector located at the rear of the battery compartment.

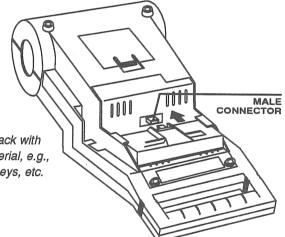
The battery pack is secure once the connectors are properly seated and you hear the "click" of the tab holding the battery in place.



BATTERY

WARNING:

To prevent a hazard and destruction of the battery, the battery pack should be stored inside the battery compartment at all times. Avoid bridging the female connector on the battery pack with electrically conductive material, e.g., metal pens, money clips, keys, etc.



STEP 2 Connect the A/C Adapter/Charger

Locate the A/C adapter/charger included in your packaging.

- Insert the adapter/charger's barrel plug connector into the port located at the rear of the printer.
- Connect the "box" of the A/C adapter/charger to a live outlet.

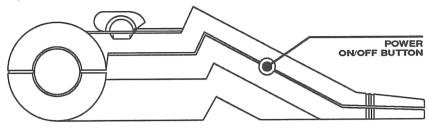
NOTE:

Operating the printer with the A/C adapter/charger connected simultaneously charges the battery pack. The battery pack should be charged for a minimum of 16 hours before attempting to operate the LS2000 exclusively on battery power. See Section II for more information regarding battery power.



STEP 3 Turn the Power ON

Locate the power ON/OFF button found along the left side of the printer.



 To turn the power ON, gently push the power button IN until you hear 2 "clicks". After a few seconds, the Brady Product screen will appear.

NOTE:

Pushing the power button only partially IN will not turn the printer ON and the display will remain blank. Try again to turn the power ON.

The LS2000 will now display a series of interactive screens pertaining to the label(s) you have chosen to create.

STEP 4 Select Your Brady Product

- Depending on the marker you have chosen, select a product from within the *Brady Product* screen as either a 1) **Standard Part**, 2) **Permasleeve**, or 3) **Terminal Block**. (See instructions below for moving the cursor to select items.)
- · Press ENTER.

If you are unsure of the product category for your selected marker, consult your current product catalog or customer support representative.

Moving the Cursor

There are 2 methods used to select items within the display screens:

Method #1

 To make selections within the display screen using method #1, simply press the first letter of your selection. Pressing the first letter of your selection will automatically activate your choice.

Method #2

 To make selections within the display screen using method #2, move the cursor by pressing the cursor control keys. The cursor will move in the same direction as designated by the arrows on the keys.



- Selections you make within any screen will appear in uppercase lettering and are accompanied by a flashing block cursor.
- · Press ENTER to activate your selection.





STEP 5 Enter Your Marker Size Code

Each roll of Brady markers is identified by a stock number which includes the marker size code. Locate a package of standard part markers. (For the purpose of this example, *do not* use terminal block or permasleeve material.)

The marker size code can be found on *both* the package of markers, and on the inside of the marker's roll core. To determine the size code from the stock number, locate the first *set of numbers* contained within the stock number:

#CL-1429-969-BK

MARKER SIZE CODE

The size code is not contained within the catalog number of Terminal Block markers. Refer to the size code printed on the package and the roll core, or refer to your product catalog for size clarification.

In the Size Code screen, enter the size code of your selected marker. Press ENTER.

STEP 6 Select Type Style, Font Scaling, and Format

- In the Type Style screen, the NORMAL setting is highlighted. For this setup procedure, press ENTER to select the NORMAL type style.
- In the Normal Scaling screen, the height of the characters, the line spacing (space between lines), and the width of the characters are determined by the user. The number of lines you can enter and the number of characters per each line allowed for your marker size are shown on the 3rd line of this screen.

For this setup procedure, press ENTER to select the predetermined font scaling variables.

 In the Format screen, COMPONENT LABEL is highlighted. For this setup procedure, you should be using a component label product. Press ENTER to select the COMPONENT LABEL format.

STEP 7 Enter the Text of Label (Creating Legends)

You are now in the EDITOR screen and the message, *Enter New Legend*, is displayed. Follow the instructions below to enter the text you want printed on your markers!

Many of the keys may be familiar to you while others are unique to the LS2000. The keys you may need during this setup procedure are described below:

System defaults to uppercase; press the **SHIFT** key in combination with any character you want to appear in lowercase. Press both the **SHIFT** and **ENTER** keys to lock-in the lowercase type style.

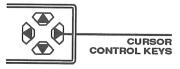
To activate any of the characters appearing in blue, press in combination with the SHIFT key.

To delete any character, 1) press **SHIFT** + **DELETE**; characters to the left of the cursor will be erased, or 2) move the cursor under any character and press **DELETE**.

Press ENTER to advance to the next line in your legend.

To move within text of the legend, utilize the cursor control keys to advance the cursor UP, DOWN, LEFT, or RIGHT.

For a complete guide to all keyboard functions, see the *Hardware Reference* section of this manual.





Entering Text

Begin entering your text in the *New Legend* screen. If you attempt to enter too many characters, a Help screen will appear reminding you how many characters are allowed for this marker.

NOTE:

Holding down any **character** in the standard keys section of the keyboard will detain the Help screen long enough for you to read the information provided.

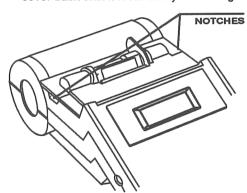
Once you have entered the text for your label, you must first *install your printer ribbon and roll of markers* before continuing to the print procedure. Do not enter any more commands before completing steps 8 & 9.

STEP 8 Install Your Printer Ribbon

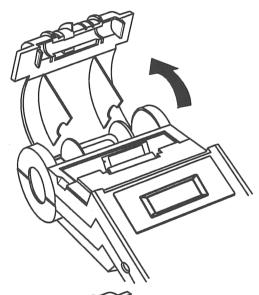
Locate the 5000 series printer ribbon included with your original order.

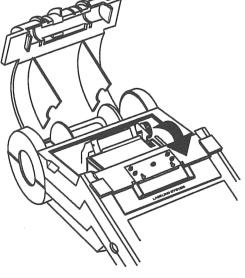
Opening the Printer Covers

 Release the cover of the printer by placing your fingers in the notches under the cover located on both sides of the unit, and pull UP. Lay the cover back until it rests easily on its hinges.



 Expose the ribbon compartment by lifting the cover that houses the tear bar. Place a finger to either side of the tear bar and tilt the cover back toward the front of the printer. The cover will rest easily on the surface of the printer.

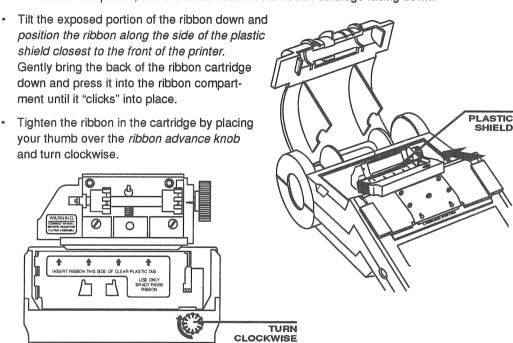






Installing the Ribbon Cartridge

 Hold the ribbon cartridge over the ribbon compartment with the exposed ribbon facing toward the back of the printer, and the small notch in the ribbon cartridge facing down.





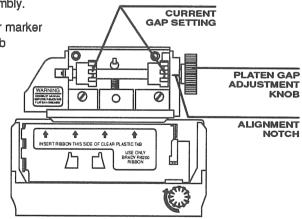
Adjusting the Platen Gap Setting

The LS2000 allows you to set the appropriate gap setting for the type of marker you are using. This is an important step as it ensures proper print resolution on each label you print.

• Locate the platen gap adjustment assembly.

 Determine the setting for your particular marker and turn the platen gap adjustment knob until the value appears alongside the alignment notch.

Refer to the table below for recommended gap settings. The material code is often found within the item's stock number. For example, stock #WML-711-292 uses gap setting (2 or 3) for B-292 Self-laminating vinyl, which is indicated in the material guide.



(This table can also be found on the label located under the printer cover of the LS2000.)

Quick Start

Guide

Material Guide for Platen Gap Setting

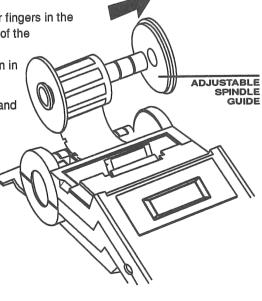
Stock Code	Material	Gap Setting
B-122	Permanent Paper	1
B-292	Self-Laminating Vinyl	2 or 3
B-319	Non-Shrink Bradysleeve	3 or 4
B-321	Heat Shrink Bradysleeve	3 or 4
B-322	Self-Extinguishing Bradysleeve	3 or 4
B-341	Heat-Shrink PermaSleeve	5 or 6
B-502	Vinyl Cloth	2 or 3
B-607	Tamper Evident Vinyl	1
B-619	Polyester	2
B-621	Translucent Polyester	2
B-632	Tedlar	1
B-637	Tedlar Film	2
B-652	Polyimide Film	2 or 3
B-969	Metalized Polyester	2

STEP 9 Install Your Roll of Markers

Locate the roll of markers from which you previously entered the size code.

Placing the Roll of Markers on the Spindle

- Release the cover of the printer by placing your fingers in the notches located under the cover on both sides of the unit, and pull the cover UP. Lay the cover back until it rests easily on its hinges. (See illustration in Opening the Printer Covers in Step 8.)
- Remove the *roll spindle* from the printer's crib and slide off the blue *adjustable spindle guide*.
- Holding the roll of markers with its notches to the left, slide the roll of markers all the way to the left side of the roll spindle. With the flat side of the adjustable spindle guide facing the roll of markers, return the guide onto the spindle.





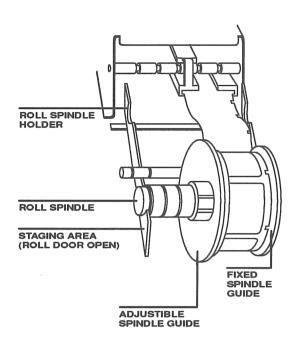
Position the blue guide in one of the slots on the spindle closest to the roll of markers.

 Place the spindle in the stage area of the printer with the blue adjustable spindle guide facing to the right.

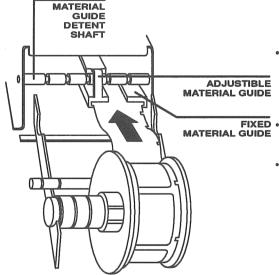
Feeding the Markers Into the Printer

Locate the *fixed* and a*djustable material guides* found just beyond the spindle holder. Push the *adjustable material guide* UP in order to slide it from one slot to another along the *material guide detent shaft*.

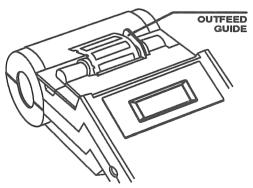
Slide the adjustable material guide to a
position along the shaft that fits the
marker liner most comfortably. Be sure
the guide is positioned in one of the
grooves along the shaft.



- Feed the start of the roll into the slots of the material guides until the markers will not advance any further into the printer.
- Press the FEED button located on the function control panel of the keyboard. The markers will advance to a position ready for printing!
- Move the roll spindle from the stage area to the spindle holder.
- Return the ribbon compartment cover to its original position, then close the cover of the printer until it "clicks" into place.



 Adjust the blue outfeed guide to keep the marker liner properly aligned as it advances out of the printer. If necessary, readjust the outfeed guide once the markers have advanced during a printing session.





STEP 10 Printing Labels!

After following this last step in the setup procedure you will be printing labels!

In Step 7 you entered the text to appear on your labels, and then you proceeded to load your printer ribbon and roll of markers. At this point, the text for your label should still be displayed on the screen.

- · Press PRINT located within the function control panel.
- In this screen, Copy Quantity, enter the number of duplicate copies you want printed.
- Press PRINT or ENTER. The marker roll will advance and begin printing your labels!

NOTE:

To terminate printing in progress, press EXIT.

• To tear off the strip of printed labels, pull the liner down toward the tearbar and *quickly* rip the liner to the left or right. *Pulling the liner slowly results in an uneven cut in the marker liner.*

Once your printing session has ended, you can enter a new legend. Press **CLEAR** to begin a new legend.

Starting Again!

After finishing the setup procedure, you can turn the power OFF. Note, however, that upon future power UPs the first screen displayed will not be the *Brady Product* screen as described in Step 4 of this initial setup procedure. Rather, the TEXT EDITOR will appear displaying 1 of 3 messages: 1) ENTER NEW LEGEND, 2) <CLEAR> TO ERASE, or 3) LEGEND HAS BEEN TRUNCATED. Refer to *Chapter 3, Working with Screens and Menus*, for information regarding the TEXT EDITOR.

SUMMARY OF SETUP PROCEDURE

The setup procedure previously described is designed to get you started printing right away. However, there are many features that come along with your LS2000 that were not discussed in this section. In order to successfully maneuver between menus, change scaling, or perform a variety of editing techniques, refer to the remaining sections of the manual for complete instructions on getting to know your LS2000!

Quick Start Guide



Feature Highlights

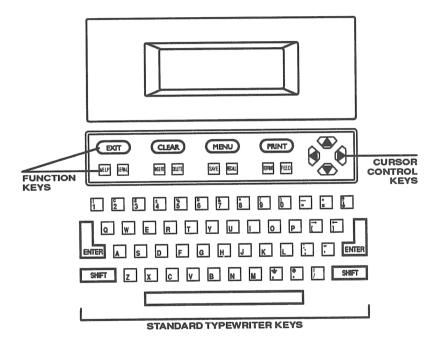
The Quick Start Guide in this manual provided a quick overview of the LS2000 in order to get you started right away. In this section, you will find further information regarding the printer's hardware and instructions on working with screens and menus.

CHAPTER 2

Hardware Reference

THE KEYBOARD

The keyboard of the LS2000 is divided into 3 groups, categorized by key functionality.



Standard Typewriter Keys

Similar to standard typewriters, this section of keys consist of upper and lower-case letters, numbers, punctuation marks, and special symbols. To activate any of the symbols appearing in blue, press **SHIFT** + the key containing the desired **symbol**.



Cursor And Editing Keys

This group of keys is used to control the movement of the cursor and enables text editing. The function of each key is described in the chart below:

	described in the chart below.
ENTER	Activates a screen selection or, when used while composing a legend, inserts a non-visible end of line character and moves the cursor down to the next line.
	In general, pressing the ENTER key instructs the printer to accept a screen as displayed.
SHIFT + ENTER	Toggles between upper and lower-case characters. Upon pressing keys, unit beeps one time to indicate lowercase mode, and beeps twice to indicate being in uppercase mode.
Cursor Control Panel	Moves the cursor one space to the left, right, up, or down. Cursor moves in the direction of the arrow as indicated on the key.
SHIFT + ◀	Moves cursor to beginning of current line.
SHIFT +	Moves cursor to end of current line.
SHIFT +	Moves cursor to beginning of the first line.
SHIFT +▼	Moves cursor to end of the last line.
DELETE	Deletes the character at the cursor position.
SHIFT + DELETE	Backspaces as it deletes characters.
INSERT	Toggles between the text entry modes of <i>insert</i> and <i>overwrite</i> . A <i>flashing block cursor</i> indicates that the printer is in the <i>insert</i> mode. A <i>single</i> line cursor indicates that the printer is in the <i>overwrite</i> mode.
SPACE BAR	Moves the cursor 1 position to the right. Will erase the character at the current cursor position if in <i>overwrite</i> mode, or add a space if in <i>insert</i> mode.



Function Keys

The use of each function key while in the TEXT EDITOR is described in the chart below:

EXIT	 Backs you out one level in the menu tree.
	 Press this key to terminate or pause the printing of markers.
	 Press this key to move from a submenu back to the main menu or from
	the main menu to the TEXT EDITOR screen.
	 This key will also take you from any message screen back to the TEXT
	EDITOR screen. Press and hold this key when the message, Enter New
	Legend, is displayed in order to display the Editor Status (summary of
	defined parameters).

CLEAR	Clears all characters from the TEXT EDITOR screen.
MENU	Moves from the TEXT EDITOR screen to the main menu. While in the main menu, press and hold this key to display your current setup status.
PRINT	Activates the printing function.
HELP	Press and hold the key down for help instructions appropriate to your current activity.
SERIAL	Toggles the serialization status (on/off) of a character at the cursor.
SAVE	Stores the current legend to a previously selected list.
RECALL	Enables viewing of legends in a previously created list.
REPRINT	Prints a duplicate of the last marker printed.
FEED	Advances marker roll to the next marker. (You must be in the TEXT EDITOR.)
SHIFT + FEED	Backfeeds the marker roll through the printer. (You must be in the TEXT EDITOR.)

Highlights

Feature

THE SERIAL PORT

Located at the rear of the LS2000 is a standard RS232 serial port providing download capabilities from a personal computer (PC). Refer to *Section V, Advanced Printer* Use, for further information regarding use of the serial port.

BATTERY POWER

Operating the LS2000 with the A/C adapter/charger connected to the unit, simultaneously charges the rechargeable battery pack. Whether the power switch is ON or OFF, the battery pack will continue to be charged by the adapter/charger.

It is recommended to charge the battery for a minimum of 16 hours before operating the printer solely on battery power. Furthermore, to maintain a full charge, and to extend battery life, it is good practice to use the A/C adapter/charger whenever possible.

If A/C power fails, or the A/C voltage is too low while using the printer, the printer automatically switches from A/C power to battery power - without interruption. When A/C power is restored, it automatically switches back to the A/C power mode.

Battery Life

When the battery has reached a minimum level of power, the printer will emit short continuous "beeps" until the A/C adapter/charger is connected. To extend the life of the battery, restore the battery to full power (recharge for at least 16 hours) before operating again on battery power.



Feature Highlights

LITHIUM CELL

The lithium cell contained within the LS2000 is considered hazardous, toxic waste, and **must not** be incinerated or thrown away in the home or office garbage; contact the technical support group at Brady USA, Inc. for information regarding its proper disposal.

Warning! Replace only with the same or equivalent type recommended by Brady USA, Inc. Danger of explosion if battery is incorrectly replaced!

STANDARD FEATURES

The following list summarizes the standard features found in the Brady LS2000 Labeling System:

LS2000 Specifications

- · Shuttle Head Impact Printer for High Resolution Print
- Optical Registration System for Precise Print Registration
- QWERTY Keyboard
- 4-Line by 20-Character Supertwist Liquid Crystal Display (LCD)
- 32K RAM
- · RS-232 Serial Communications Port

Physical and Environmental Characteristics

- Weight: 7 lbs.
- Operating Temperature Range: 40°F to 100°F
- Storage Temperature Range: -5°F to 140°F (Exposing the LS2000 to direct sunlight is not recommended.)

Certification

- FCC Class A Approved
- UL-listed A/C Adapter

Accessories (included)

- NiCad Rechargeable Battery Pack
- 120V A/C Adapter/Charger
- Series 5000 Printer Ribbon

Accessories (optional)

- Soft Pack Carrying Case
- · Hard Pack Carrying Case
- Additional Battery Pack
- BradyLabel™ General Labeling Software for Importing Capability
- Battery Recharger



C H A P T E R 3 Working with Screens and Menus

Feature Highlights

The software pre-installed in the Brady LS2000 requires minimal key strokes in order to easily create a variety of labels to meet individual application requirements. This chapter helps you to understand the information contained in some of the screens you will encounter and the techniques needed to advance through the menus.

THE TEXT EDITOR

After the printer has been initialized (see Chapter 1, Summary of Steps 1-10), the TEXT EDITOR screen will appear each time the printer is turned ON. Learn to recognize the TEXT EDITOR screen from 1 of 3 prompts that will be flashing:

1. ENTER NEW LEGEND

When this prompt is flashing, you can enter text for a new label, adopting previously defined parameters.

2. <CLEAR> TO ERASE

When this prompt is flashing you can clear or edit previously entered text (data).

3. LEGEND HAS BEEN TRUNCATED

Indicates that the characters/lines (data) of a current legend have exceeded the setup parameters designated in the EDITOR status.

The TEXT EDITOR screen is the "home base" of any processing you will do in the LS2000. To amend any parameters previously defined, you must access the software features of the printer by calling up the MAIN MENU from the TEXT EDITOR screen.

 To call up the MAIN MENU, press the MENU button located along the top of the keyboard panel.

Making Selections within Menus

You can make selections from any menu or submenu by either:

- 1. Pressing the first letter of your selection, or
- 2. Using the cursor control keys to highlight your selection, then press ENTER.

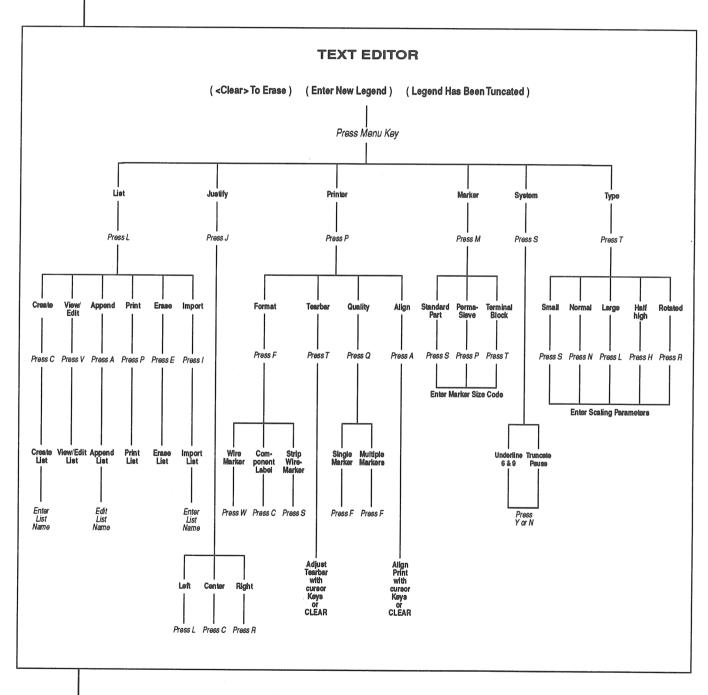


Feature Highlights

THE MENU TREE

The general structure of the software is displayed in the *menu tree* below. When you reach the options level of menu operations, the printer indicates that it accepts your input or selection with a brief 3-beep tone and will return to the TEXT EDITOR.

Menu Tree Reference Guide





The Main Menu

The first submenu in the main menu contains 6 options from which to choose in order to define the parameters for your label. These options portray the incredible versatility allowed while creating your labels!

List

See Section V, Advanced Printer Use, for instructions on creating lists.

Justify

Instructs the printer to align the characters along a left margin, a right margin, or within the center of the label.

Printer

Instructs the printer on label format, tearbar placement, and quantity to print. Also allows you to micro-align the legend on a marker in increments of .00625".

Marker

Identifies the Brady product being used.

System

Controls the use of 2 convenient functions in the LS2000: 1) Allows you to underline numbers 6 & 9 or, 2) sets the truncation function ON/OFF.

Type

Used to set the type among 5 type styles: small, normal, large, halfhigh, or rotated.

The options introduced above are presented in more detail in Section III, Creating Legends.

HELP SCREENS

Help screens are behind every screen selection you encounter. When a help-screen is accessed, the display will direct you to the appropriate area in this manual for further operating instructions.

To access a help screen, press the HELP key located along the keyboard panel.

Feature Highlights



Creating Legends

Information contained in this section assumes you have become familiar with the printer's setup procedure and general operating instructions (see Sections I & II). In this section you will find easy-to-follow directions that guide you through menu options and explain how to edit legends.

Creating Legends

CHAPTER 4 Glossary of Terms

To communicate successfully in the upcoming sections, it may be helpful to review some of the following terms commonly referred to in this manual.

marker roll

A marker roll contains both the marker and the notched liner, which is fed through the printer.

markei

A blank label. Until a label is actually printed, the material is referred to as a marker. Markers are available in a variety of sizes.

laha

Once a marker contains printed text, it is referred to as a label.

legend

The actual text to be printed.



Creating Legends

C H A P T E R 5 Creating a Legend Using the Main Menu

Previous chapters in this manual briefly introduced you to menu selections used in creating legends. This section describes menu options in more detail to allow you more flexibility in creating a variety of legends.

THE TEXT EDITOR

After the printer has been initialized (see Chapter 1, Summary of Steps 1-10), the TEXT EDITOR screen will appear each time the printer is turned ON. Learn to recognize the TEXT EDITOR screen from 1 of 3 prompts that will be flashing:

1. ENTER NEW LEGEND

When this prompt is flashing, you can enter text for a new label, adopting previously defined parameters.

2. <CLEAR> TO ERASE

When this prompt is flashing, you are able to clear or edit previously entered text.

3. LEGEND HAS BEEN TRUNCATED

Indicates that the characters/lines (data) of a current legend have exceeded the setup parameters designated in the EDITOR status.

The TEXT EDITOR screen is the "home base" of any processing you will do in the LS2000. To amend any parameters previously defined, you must access the software features of the printer by calling up the MAIN MENU from the TEXT EDITOR screen.

To call up the MAIN MENU, press the MENU button located along the top of the keyboard panel.



SETTING MARKER SIZE

The Brady LS2000 can print on a wide variety of marker sizes. The parameters allowed for your legend are determined by the printable area on the marker you select (as indicated in the size code) so you must identify the marker size you are using.

- To set or change your marker size code, select the MARKER option from the main menu and choose the type of Brady marker you will be using (Standard Part, PermaSleeve, or Terminal Block).
- To enter the size code, key in the new size in the SIZE CODE display screen. Press ENTER.

Size Code

Each roll of Brady markers is identified by a stock number which includes the *marker size code*. The marker size code can be found on *both* the package of markers, and on the inside of the marker's roll core. (The size code is not contained within the stock number of Terminal Block markers. Refer to the size code printed on the package and the roll core, or refer to your product catalog for size clarification.)

To determine the size code from the stock number, locate the first set of numbers contained within the stock number:

#CI -1429-969-BK

The marker size code defines both the maximum number of print lines on each marker and the maximum number of characters on each line. . .

- 1. Maximum number of lines and characters assumes the character width, character height, and line spacing are scaled at their baseline size of 1.
- 2. The number of lines is based on a HALFHIGH type size.

 The number of characters is based on a SMALL type size.

LS2000 labels:

Size code has 4 digits, and is based on HALFHIGH type size.

Bradymarker™ labels and Bradymarker XC Plus Printer labels*:

Size code has 3 digits, and is based on NORMAL type size.

For example. . .

- ... An **LS2000 label** size code of 2411 indicates that the marker can contain up to *24 lines of halfhigh* print (or 12 lines of small, normal, and large print), and each line can contain up to 11 *small type size* characters.
- ... A **Bradymarker label** size code of 905 indicates that the marker can contain up to 9 lines of normal print, and each line can contain up to 5 normal type size characters.

Creating Legends



^{*}Bradymarker XC Plus Printer markers can also be printed in the LS2000 printer. When entering size codes for both Bradymarker and Bradymarker XC labels, make sure that only 3 digits are displayed! When highlighted on the first character position on the SIZE CODE screen, enter the 3-digit code. DO NOT enter a zero as a prefix or the unit will assume that an LS2000 marker has been entered and the unit will not feed or print correctly.

Creating Legends

SETTING TYPE SIZE

The LS2000 will print in 5 different type styles:

Small 16 characters per inch (CPI)
Normal 12 characters per inch
Large 8 characters per inch
Halfhigh 20 characters per inch
Rotated 16 characters per inch

These sizes represent the initial or baseline size of each type style. Each type style can be scaled by up to 5 times its original size in both height and width dimensions.

Baseline size = 1

Largest size = 5

- · To set or change your type style and size, select the TYPE option from the main menu.
- · Use the cursor control keys located on the keyboard to change the style and size parameters.

To move *between* categories, press the left and right arrows, or simply press the first letter of your selection.

To increase/decrease the values within each category, press the up and down arrows.

The number of lines/characters will automatically change as a result of increasing or decreasing the scaling parameters. The type size combined with the marker size will determine the maximum number of characters that can be printed on each line of print.

BRADY

HEIGHT SCALING

The 1st position on the scaling screen is for height scaling. This function allows you to scale the height of the character from its baseline of 1, up to 5.

LINE SPACING

The 2nd position on the scaling screen is for setting line spacing. This function allows you to vary the spacing between lines of text. The default value is 1, but this parameter can be set from a minimum of 0 up to a maximum of 9.

For every increase of 1, the distance between lines of text increases by 1/2 of a print dot (.00625"). This feature becomes very useful when printing characters containing ascenders and descenders!

WIDTH SPACING

The 3rd position on the scaling screen is for setting width scaling. This function allows you to scale the width of the character from its baseline size of 1, up to 5.



SETTING PRINT FORMAT

The LS2000 can print markers in one of the following formats: Wiremarker, Component Label, and Strip Wiremarker. It is not necessary to select a format while composing your legend. Refer to *Section IV, Printing Markers*, for information pertaining to selecting a printing format.

COMPOSING A LEGEND

After setting the label parameters, as presented above, you can begin entering the text of your legend.

"Enter New Legend"

Begin entering text when the prompt "Enter New Legend" appears in the TEXT EDITOR.

The LCD displays a maximum of 17 characters on any one line of the screen at any one time. If lines consist of more than 17 characters, the LCD will automatically shift to the right to allow you to enter and view the additional characters.

Only four lines of the LCD can be viewed on the screen at any one time, but the screen will scroll as required. This scrolling has no effect on printing or saving legends. As long as you remain within the given parameters, the entire legend will be printed or saved, regardless of what is currently displayed on the user screen.

NOTE:

If you attempt to enter too many characters, a Help screen will appear reminding you how many characters are allowed for this marker. Holding down any character in the standard keys section of the keyboard will detain the Help screen long enough for you to read the information provided.

Legends are automatically centered, left justified or right justified, depending on the justification option selected in the MAIN MENU.

Use of the ENTER Key When Composing a Legend

It is not necessary to press the ENTER key after entering the last line of text in your legend. Pressing the ENTER key instructs the printer to reserve space for a new line of text (notice the cursor advances to the next line). Even if characters are not entered on this new line, the printer assumes that the blank line is valid. As a result, markers will be printed with the blank line, which leads to uncentered legends, etc.

When the ENTER key is pressed at the end of a line, an end-of-line character (represented as a blank space) is inserted at the cursor. Characters entered after the cursor will fall to the next line. This end-of-line character can be deleted by positioning the cursor over this blank space and pressing the DELETE key. This will delete the carriage return, move up the text located on the second line, and append the text on the first line. Any characters from the second line that do not fit on the first line will be truncated. Any remaining lines of text will also move up one line.

Editing a Legend

Any lines of text in a legend currently displayed on the screen can be edited. Refer to *Chapter 2, Hardware Reference*, in this manual for a complete guide to all keyboard functions and text editing techniques.

Creating Legends



Printing Markers

After setting text parameters, having loaded your markers in the printer and set the appropriate printer mode, you will be ready to print!

CHAPTER 6 Getting Ready to Print

This chapter guides you through the selection of print modes and formats. Also, to ensure print accuracy this chapter helps you perform post-processing editing techniques.

SELECTING FORMAT

The LS2000 can print markers in one of the following formats: Wiremarker, Component Label, and Strip Wiremarker.

- · To select a format, press the PRINTER option from the main menu.
- When the PRINTER screen appears, select FORMAT. Then choose one of the print formats displayed on the screen.

NOTE

If the Strip Wiremarker format is selected, you will be prompted to indicate the number of strips across that will be printed. The marker size code for strip markers refers to the size of each strip, not the total print area across all of the strips (butt cut set).

Wiremarker Format

The wiremarker format is designed to automatically repeat the text of a legend down the length of a marker as many times as possible, considering the number of lines available in the marker. For example, marker size code 0531 allows a maximum of 5 lines per marker. When printing a 2-line legend, the legend will be repeated 2 times, for a total of 4 lines. The 5th line will be blank.

NOTE

Any blank lines in this format will be placed automatically at the top of the marker, i.e., print is bottom-justified.

Component Label Format

The component label format is designed to print all of the lines of a legend one time before advancing to the next marker. This format will automatically vertically-center the legend within the marker.

Strip Wiremarker Format

The strip wiremarker format is designed to be used with the *strip series* of Bradymarker labels or *slit* PermaSleeve labels. The strip wiremarker is similar to the wiremarker format except that it is designed to print duplicate markers on a *multiple across* label (also referred to as the butt cutt set). The legend composed in this format will be duplicated in each strip of the butt cutt set. Note that the set is considered a single marker for serializing or printing.



Printing Markers

SELECTING PRINTER MODES

The LS2000 will print in 1 of 2 modes: single marker mode or multiple marker mode.

- To set the printing mode, select PRINTER from the main menu, followed by Q to select the QUANTITY.
- Select SINGLE or MULTIPLE marker mode. The printer will remain in the mode selected until otherwise modified.

Single Marker Mode

Instructs the LS2000 to print 1 marker for each print command. It allows you time to proof your marker for accuracy or edit the legend if necessary. You must switch to multiple marker mode if you want to increase the quantity to print, per print command.

Multiple Marker Mode

Instructs the LS2000 to print multiple markers, without interruption. Enter any number from 1 - 999.

Notice that if the printer has been set in *multiple marker mode*, the screen will always prompt you to enter the number of duplicate copies you require *per each print command*.

After entering your legend, simply press PRINT. Enter the number of identical markers to be printed and press ENTER to activate the command. (Press EXIT to terminate a print session in progress.)

BRADY



PRINTING FROM THE TEXT EDITOR

You will find that the easiest way to print markers is directly from within the TEXT EDITOR. If you have not loaded the markers into the LS2000, refer to Steps 8 & 9, in Chapter 1 for instructions.

To print a single marker of the legend currently displayed in the TEXT EDITOR, press PRINT.

- . . . if you are in the multiple marker mode, you will be prompted to enter the quantity to print.
- ... if you are in the single marker mode, the printer will immediately print just 1 marker.

To print a duplicate of a marker just printed, press REPRINT. (The reprint command will print a duplicate of a serialized marker without incrementing any serialized characters.)

PRINTING PERMASLEEVE MARKERS

When creating a legend for a PermaSleeve marker, make sure that you choose *PermaSleeve* as the Brady Product from the MARKER submenu. This is important because the PermaSleeve Product has a larger left margin than other Brady products and the unit will not print in the proper location on the sleeve if another product type is chosen.

When printing PermaSleeve markers it is recommended to run the unit with the A/C adapter/charger connected to ensure proper feeding of markers. Also, make sure that the printhead gap is set to 6.

Warning! Never backfeed PermaSleeve material through the printer with sleeves removed from the carrier. The exposed adhesive will cause damage to the printer mechanism.

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EDITING TECHNIQUES

After printing your legend, certain adjustments can be made to improve the position of your legend on the marker or the placement of the marker as it advances through the printer. In addition to the information below, refer to the troubleshooting guide in Section VI for solutions to printing problems you may encounter.

Tearbar

The printer can be adjusted to change the location of the marker, relative to the tearbar.

To set the tearbar position, select PRINTER from the main menu, followed by pressing T to select the TEARBAR. Press the UP and DOWN cursor control keys to adjust the marker vertically by 1/2 dot intervals of .00625".

Press CLEAR to set the tearbar position back to its original factory setting. Press ENTER to accept the new setting and return to the TEXT EDITOR.

Align

The advanced software installed in the LS2000 allows you to micro-align the position of a legend on its marker. This feature is useful for making minor adjustments instead of having to change the parameters of your legend.

To adjust the alignment of the legend, select PRINTER from the main menu, followed by pressing A to select ALIGN. Press the UP, DOWN, LEFT, and RIGHT cursor control keys to move the alignment by 1/2 dot intervals of .00625".

Press CLEAR to set the alignment back to its factory setting. Press ENTER to accept the new setting and return to the TEXT EDITOR.

Print Justification

The text of your legend can be *centered*, *left justified*, or *right justified* on a marker. All text on a single marker must be printed using the same justification selection.

To set the print justification, select JUSTIFY from the main menu.

Press . . .

L for left justification.

C for center justification.

R for right justification.

Printing Markers



Advanced Printer Use

The user-friendly software of the LS2000 is powerful enough to give you all the labeling versatility you need. Refer to this section for information on creating legend lists (files), creating terminal blocks, serializing labels, and for data importing capabilities. Just apply the operating guidelines that were presented earlier in the manual in order to advance your labeling skills!

CHAPTER 7 Serialization

Legends you create with the LS2000 can be serialized both *numerically* and *alphabetically*. Serializing characters in a legend will result in a series of markers that increment either by 1 number and/or 1 letter.

TO SERIALIZE YOUR LEGEND . . .

- From the TEXT EDITOR, position the cursor in your legend under the character(s) that you
 want to serialize.
- Press the SERIAL key located along the function control panel of the keyboard. You will hear 2
 beeps and then the serialized character will be identified by a rapidly flashing block cursor
 positioned over the character.

To turn OFF the serialization function on a character, reposition the cursor over that character and press the SERIAL key again, i.e., the SERIAL key simply toggles between ON/OFF.

TO PRINT SERIALIZED LEGENDS . . .

- When you have completed the serialized legend and are ready to print, press PRINT. The following prompt will appear:
 - = COPY QUANTITY = Enter the number of identical markers to be printed:
- Enter the number of identical markers you want printed, then press ENTER.
 - For example, if you are serializing the legend, 1234, a total of 5 increments, you can select to have each legend printed identically X number of times, before it serializes to the next increment, 1235.
- After entering the number of identical markers to be printed and pressing ENTER, the following prompt will appear:
 - = SERIAL NUMBERS = Enter the number of times to increment each serial #:
- Enter the number of times to increment the serial number, and press ENTER.



Advanced Printer Use

General Guidelines for Serializing

Lowercase characters will not serialize.

The printer will first serialize the right-most character on a line. . .

When the right-most *serialized* character reaches 9 or Z, the next serialized character to the left is incremented, and the right-most character becomes 0 or A.

You can *serialize a space* preceding a number or letter. The space will increment to 1 or A, based on the serialized character to the right of the space. The serialization feature even allows you to skip a character when serializing.

Each line of the legend may be independently serialized.

SERIALIZATION OF LISTS

Refer to *Chapter 8* for information pertaining to the serialization function when working with lists of legends.



CHAPTER 8

Legend Lists

The storage capabilities of the LS2000 can make your work easier by allowing you to create and save legends in *lists* and then easily recall them with only a few keystrokes.

WHAT IS A LEGEND LIST?

There are 4 *directory* locations (1,2,3, and 4), and 26 available *lists* (A to Z) per each directory. Legends are stored in lists (1A through 4Z) in a structure designed by the user. For example, lists may represent different project categories, each containing legends associated with those projects. When a legend or set of legends needs to be recalled, you simply call up the appropriate list!

Memory Limitations

The legend storage capacity in the LS2000 is sufficient for most applications. Although there are 104 possible locations (4 directories X 26 lists each) the actual storage capacity depends on the memory used in each list. For instance, all the printer's memory could be used with the creation of just one very large list.

When an attempt is made to save or create a list when the memory is full, the following message is displayed:

INSUFFICIENT MEMORY to execute command. Please press <HELP> or <EXIT>.

If the current list is your only list, or you do not wish to erase a list to allocate space, then you have reached memory capacity. In any case, the available memory is always checked prior to the printer accepting the SAVE command, to prevent saving just a portion of a legend. Therefore, the list will remain as it was before the failed attempt was made to save the list.

CREATING A NEW LIST

To create a new list, first define the list under which you will store the legends (1A through 4Z) . . .

- 1. From the main menu, select LIST. From the LIST menu, select CREATE.
 - The screen that follows will display both the *current directory* and the *26 possible letters* (a-z) associated with the current directory. To scroll through the letters (a-z), press the lettered-key on the keypad or press the cursor control keys until the flashing block cursor is positioned over a chosen letter. To change the directory (1-4), press 1,2,3, or 4 on the keyboard.
- Enter the number of the directory in which you will store the list, then press an accompanying letter. To change the directory number, press the SPACEBAR to go back to the directory location and your letter choice will be de-selected, or simply press the number of the directory you want.

NOTE:

Letters of lists (A-Z) that already contain legends will appear in flashing capital letters. Letters that already contain legends cannot be selected when creating a new list.

3. Press ENTER after making the directory and letter selections.

When a directory and letter have been chosen, the list is displayed in brackets, [xx], in the lower left corner of the screen.

Advanced Printer Use



Advanced Printer Use

4. Your cursor is now in the proper position for you to enter a name for your list of up to 8 characters in length. After entering the name, press ENTER. (Do not use non-standard ASCII characters within the text of the name, i.e., the custom industrial identification characters found on your keyboard.)

SAVING LEGENDS TO A LIST

An unlimited number of legends can be saved under any list name. The only restriction is the total printer memory. You can also save different length legends in the same list; alpha, numeric, and alphanumeric legends in the same list; and serialized/nonserialized legends in the same list.

Once you have specified your list name, begin creating your legend list.

 Create your legends as described in Section III, Creating Legends. When each legend(s) is completed, press the SAVE key located along the function control panel of the keyboard. Each time the SAVE key is pressed, the current legend displayed in the TEXT EDITOR will be saved to the active list.

The printer will confirm that your legend has been saved by emitting a brief three-beep tone and by *briefly* flashing the following message on the screen:

SAVING LEGEND in LIST: [XX] "filename"

If the legend you are saving will not fit into the list you have selected, because of marker size or type size, a message will be displayed to let you know the maximum number of lines or characters that can be entered.

- After a legend has been saved to a list, the legend will remain on display until you press CLEAR. You may edit the legend, if necessary, and press SAVE to accept the edited version of the legend.
- 3. Follow either procedure listed below to create consecutive lists:
 - Press CLEAR after saving each legend in your list. This completely clears the screen and prepares the screen for accepting additional legends.
 - EDIT the current legend. DO NOT press CLEAR to erase the legend. Simply edit your displayed legend and press SAVE to accept the edited version of the legend.

Continue this process of creating and saving until all legends are entered into your list.

- 4. You will remain in the CREATE menu for the *active* list until one of the following actions have been taken.
 - · Add legends to a different list by activating another list.
 - · Create a new list.
 - To de-select the active "save to" list, press the MENU key to access the main menu. Select LIST, then APPEND. Once in the append menu, press the SPACEBAR to de-select the list. Press ENTER.

Note:

Turning the power OFF de-selects the active list. (It is recommended to turn the power OFF only while in the TEXT EDITOR.)



EDITING/VIEWING LISTS

You can sequentially view each legend from any previously created list, edit any legend, or add a legend to the middle of any list.

Setup Parameters of Lists

The following setup parameters are stored with each saved list:

Product Type

Marker Size Code

Type Style

Line Spacing

Width Scaling

Height Scaling

Format

Justification

Terminal Centers

Strips Per Label

There are a few important reasons why it would be useful to view the setup status of the printer before creating a new list, or viewing/editing an established list:

- Checking the setup status before creating a new list allows you to adjust the parameters before
 you begin entering text of legends. This may save you time, especially if you ultimately decide
 that a change in marker size is required for your application.
- 2. If you attempt to view/edit a list or print a list wherein the legends are too large to fit into the active setup parameters, the characters in the legend will be truncated upon reading them into these modes!

To check the active setup status of the printer from the MAIN MENU . . .

- Press EXIT. The TEXT EDITOR will display the prompt, Enter New Legend. Press and hold the EXIT key in order to view the EDITOR status.
- Press MENU to return to the main menu, and make any necessary changes to the marker or type sizes.

Viewing a List

To view the legends within a list . . .

- 1. Select LIST from the main menu, then select VIEW/EDIT from the submenu.
 - The screen that follows will display both the current directory and the 26 possible letters (a-z) associated with the current directory.
- Enter the directory number and letter of the list you want to view and press ENTER. The following prompt will be displayed:
 - = SYSTEM SETUP = Keep Current Setup or Reset to Setup in: [xx] "filename"
- 3. Press K to view or edit the list based on the printer's current setup parameters, or

Press R to reset the setup parameters to those of the originally saved list.

If you keep your current setup parameters but the marker size code and type style that are currently set allow for less characters or lines than those originally saved with the list, you will see the following warning:

! WARNING ! LEGEND HAS BEEN TRUNCATED! (Press Any Key)

Advanced Printer Use



Advanced Printer Use

As a result, the characters of the legends will be truncated so as to fit within the setup parameters.

NOTE:

This warning appears only if the Truncate Pause option is set. See System Defaults/Truncate Pause later in this section for further details.

4. Press RECALL to view each legend stored in the list. You can quit the viewing process at any time by either clearing the display or by pressing the MENU key to begin another function.

Legends recalled in the VIEW/EDIT mode are actually being recalled into the printer's TEXT EDITOR. Therefore, a marker or series of markers can selectively be printed (and edited before printing) using the legends saved in a list! Note, however, that any editing done to the legend in this mode will not change the legend that was originally saved in the list. See Editing a List later in this chapter to learn how to edit the saved legends.

Editing a List

Editing a list requires that you individually recall and save each legend from one list into another list, making your character changes, legend deletions or legend additions as you recall the legends. Your original list will remain unchanged and stored in the printer's memory until you erase it. See *Erasing a List* later in this chapter. Editing a list involves any of the following actions:

- 1. Changing characters in a legend already saved in the list.
- 2. Deleting legends from a list.
- 3. Adding legends within a list.

The list editing function utilizes a combination of LIST submenus: CREATE or APPEND, and VIEW/EDIT.

To edit a list . . .

- Determine the list name that will store your edited legends. This list will be referred to as the "Save To" list. (Issue the new list name by following the procedures described in *Creating a List.*)
- 2. Select the list to be edited. This list will be referred to as the "View" list. (Select this list by following the procedures described in *Viewing a List.*)

NOTE

To add recalled legends to the end of a previously saved legend list, refer to Appending a List later in this chapter.

Once you have identified the two lists, verify and keep track of the "View" and "Save To" lists by accessing the SETUP STATUS. To do this, press MENU to access the main menu. With the submenu, LIST, highlighted (not selected!), hold down the MENU key to display the SETUP STATUS.

The "View" and "Save To" lists are listed within two brackets, [xx] [xx], found in the SETUP STATUS display. The 1st bracket identifies the "Save To" list, and the 2nd bracket identifies the "View" list.



- 3. Display the first legend in the "View" list by following the procedures described in Viewing Legends. You have 4 editing options from which to choose:
 - Press SAVE to save the legend to the "Save To" list as it appears.
 - · Edit the legend, then press SAVE to save the legend to the "Save To" list.
 - Elect not to save the recalled legend and go on to the next legend by pressing the RECALL key.
 - · Add a new legend to the "Save To" list:
 - a. Press SAVE to save the displayed legend (if you want it saved!), then press CLEAR.
 - b. Enter the new legend and press SAVE. The new legend will be added in proper sequence to the "Save To" list.
 - c. Press RECALL to view the next legend in the "View" list.
- 4. Continue recalling the legends in the "View" list and save, edit, or skip legends where applicable.

Editing a Name

Refer to Appending a List in this section for instructions on editing the name of a list.

▶ APPENDING A LIST

To append a list means to add legends to the end of a previously saved list. If you want to place new legends within an already saved list, refer to Editing Lists found earlier in this chapter.

To begin, select LIST from the main menu, then select APPEND.

The screen will display one of four directories with 26 list names. The possible selections are all of the list names that have been created previously, which are highlighted as flashing capital letters on the screen.

Enter the number of the directory and the letter of the list you want to append [xx] and press ENTER. If your selection is valid, the printer will emit a brief three-beep tone and will return to the TEXT EDITOR. However, If the setup status for the selected list provides for less lines and characters than does the current settings, the following message will be displayed:

Legend may be larger than [xx] legends. SAVE it anyway? <Y> or <N>

Press Y to add legends to your selected list, or press N to exit the list mode and return to the TEXT EDITOR.

If you attempt to save any legends with parameters larger than those allocated in the current setup status, a message will be displayed to let you know the maximum number of lines or characters that can actually be entered in the legend. Once a valid APPEND list name is entered, each time the SAVE key is pressed, the legend displayed in the TEXT EDITOR will be saved at the end of that list.

After all the legends have been added to the appended list, prevent accidental additions to the list by doing one of the following:

- Exit the CREATE menu by pressing the MENU key followed by selecting LIST and then APPEND. Once on the append screen, press the SPACEBAR to de-select the list and press ENTER.
- 2. Select another name under the CREATE or APPEND selections.
- 3. While in the TEXT EDITOR, turn the printer OFF.

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Editing/Changing a List Name

The name of a list can easily be edited by following the instructions below.

- · From the main menu, select LIST, then APPEND.
- From the APPEND menu, select the list, [xx], of which you will change the name.
- Once the list has been selected, the name will be displayed on the screen. Make the necessary changes to the list name and press ENTER to accept the new name.

ERASING A LIST

Any list stored in the printer's memory can be erased.

To erase a list, select LIST from the main menu, then select ERASE.

The screen will display one of four directories with 26 list names. The possible selections are all of the list names that have been created previously, which are highlighted as flashing capital letters on the screen.

Enter the directory number and letter of the list you wish to erase . . . press ENTER. The following message will appear:

Permanently Erase List: [xx] "filename"? Press <Y> or <N>

Press N to return to the previous screen, or press Y to erase the list and return to the TEXT EDITOR.



SERIALIZATION AND LISTS

Both serialized and nonserialized legends can be saved in the same list.

NOTE:

Although you can save more than one serialized legend in the same list, the number of times to increment each serial number must be the same for all legends in the list. For example, assume you entered the following two serialized legends in a list: A100 and B100 (serialized characters are underlined).

When the list is printed, you specify to increment each serial number twice. The markers would print: A100, A101, A102, B100, B101, B102. However, if you want the markers to print in different increments: A100, A101, A102, A103, A104, B100, B101, B102 - you must separately save legends A103 and A104 in your list.



PRINTING LISTS

Markers can be printed using a previously saved legend list. Follow the instructions below for printing legend lists:

1. Select LIST from the main menu, then select PRINT.

The screen will display one of four directories with 26 list names. The possible selections are all of the list names that have been created previously, which are highlighted as flashing capital letters on the screen.

- 2. Enter the directory number and the letter of the list to print . . . press ENTER. The following message will be displayed:
 - = SYSTEM SETUP = Keep Current Setup or Reset To Setup In: [XX] "filename"



Press K to print the list based on the unit's current setup parameters, or press R to reset the setup parameters to those of the saved list. While the legends are printing, the current setup parameters for your marker will be displayed.

Single Marker Mode

When in the single marker mode, the printing process will stop after each marker is printed. Press PRINT to print the next legend in the list.

Multiple Marker Mode

When in the multiple marker mode, all of the legends in the list will be printed with a single PRINT command. The list can be printed more than once by selecting a number from 2 through 999 when the following prompt appears:

"Enter the Number of Times to Print the Entire LIST:"

If the current parameters allow for less characters or lines of print than those of the originally saved list, the following message will appear and the legend will be truncated when printed:

! WARNING! LEGEND HAS BEEN TRUNCATED! (Press Any Key)

This message will only appear if the *Truncate Pause* option is set. See *System Defaults/Truncate Pause* later in this section for further details regarding this warning.

Reloading Markers

If the marker roll runs out of markers while printing a list, the LS2000 will temporarily stop printing and the following message will appear:

Out of Labels! Please pull the end of the liner out the top of the printer.

When a new marker roll is loaded into the printer, the LS2000 will resume printing, beginning with the first legend not previously printed.

After printing all the legends in a list, the following message will appear:

End of LIST: [XX] "filename" Press <EXIT> to return to EDITOR.

Press EXIT to return to the EDITOR.

IMPORTING A LIST

The LS2000 Labeling System is equipped with a standard RS232 serial port which allows you to use the advanced importing utility feature of your printer!

This downloading utility package works with files created on a personal computer using the BradyLabel General Labeling Software. It enhances the capabilities of the LS2000 by allowing files to be downloaded for printing. The software runs under DOS on any 100% IBM-compatible personal computer.

The LS2000 download package includes a serial cable and a software utility program. For more information or to purchase this advanced software utility package, contact the technical support group at Brady USA, Inc.

Advanced Printer Use



Advanced Printer Use

C H A P T E R 9 Terminal Blocks

Terminal block markers can be created and printed using the LS2000 Labeling System. Simply choose the appropriate center-to-center spacing repeat (pitch) for the block, enter your text, and print as needed!

SELECTING CENTER-TO-CENTER PITCH

Follow the instructions below for setting the terminal block marker pitch:

- 1. Set the LS2000 to the terminal block marker mode by selecting MARKER from the main menu, then press T for TERMINAL BLOCK.
- 2. Enter the 4-digit marker size code and press ENTER. The Terminal Pitch screen will appear.
- 3. The Terminal Pitch interactive display allows you to adjust the range of the marker pitch. Use the cursor control keys to set the terminal center-to-center spacing between terminations (see instructions below). Press ENTER after the proper range has been indicated. (The metric equivalent of any terminal pitch entered will always be displayed on the left side of the Terminal Pitch screen.)
- 4. Load your roll of terminal block labels into the printer. The marker roll will advance to a ready position for printing and the TEXT EDITOR prompt, *Enter New Legend*, will be displayed.
- 5. Enter the text of your legend and press PRINT. Then enter the number of identical markers to be printed. Press ENTER to begin the printing process.

Setting the Center-To-Center Spacing

The terminal pitch spacing can be entered in two ways:

- 1. To move in increments of 1/2 dot $\pm .00625$ "), use the UP and DOWN cursor control keys.
- 2. To move in increments of ±.0625", use the LEFT and RIGHT cursor control keys.

NOTE

Holding down a cursor key will allow you to scroll through the increment values rapidly.

Pressing SHIFT + will increase the spacing distance to its maximum of 1.05". Conversely, pressing SHIFT + will set the spacing to its minimum of 0.05".



CHANGING LINES PER TERMINATION

The first two digits of the marker size code can be changed depending on the number of lines you need on your marker at each termination point.

For example, if you entered size code 0203, you will get two lines of halfhigh type at each termination, or 1 line of normal height print (scaled at a baseline height of 1). However, if you need to get 4 halfhigh lines at each termination, you can enter size code 0403. This will give you 4 lines of halfhigh type or 2 lines of normal height print (scaled at a baseline height of 1).

When setting center-to-center spacing for your terminal block strip, make sure that the "pitch" entered is greater than the sum of the character height(s) of the legend line(s) plus the line spacing between lines.

Pitch > [(Character Height x No. of Lines) + (Sum of Distances Between Lines)]

Type Style*	Character Height
Small, Normal, Large	.11875"
Halfhigh	.05625"
Rotated	.04375"
Line Spacing	.00625"

If the vertical space that the legend occupies is greater than the pitch distance entered, the unit will skip the termination point where the text would overlap, and print at the next available center point location (i.e., new legends will print only on a terminal center referenced to the first legend printed).

CREATING ROTATED TERMINAL BLOCKS

The rotated type style allows you to create and print horizontally mounted terminal block markers. When using the rotated type style, the legend will print on the marker as shown in the chart below. This produces a strip of legends that, when turned to a horizontal position, allow the marker to be read from left to right on a horizontally mounted terminal block.

A101		-0->
A102		NO->
A103		ωο⊸≽
A104		A-04
A105		50-1≥
A106	NORMAL FONT	oo->

	101	121	0	0	0
0-2	A	A	A	A	A
	1	1	1	0	0
	ĭ	2	š	4	5
0-A	0	0	0	0	0
0->	STRIP	ONTI	ERMIN	AL BI	LOCK
0->					

USING THE TEARBAR WITH TERMINAL BLOCK MARKERS

The tearbar of the LS2000 can be used to cut your terminal marker strip from the printer. Because the label material is continuous, you will have to tear through the marker material, which may result in an uneven cut. It is recommended to press the FEED key to advance the marker roll and cut the strip with a pair of scissors in order to obtain a straight cut.

ROTATED

Advanced Printer Use



^{*}Heights shown above assume the characters are scaled at a baseline size of 1.

Advanced Printer Use

C H A P T E R 10 System Defaults

The system defaults submenu allows you to choose the status of two default parameters, *Underline 6 & 9*, and *Truncate Pause*.

To access the system defaults, select SYSTEM from the main menu. When the System Default screen appears, the options will be displayed.

UNDERLINE 6 & 9

This default setting allows you to print underlined figures <u>6</u> and <u>9</u> using any of the five type style choices (small, normal, large, halfhigh, and rotated).

To set this option, press Y for yes, or press N for no.

Press ENTER to accept your selection.

TRUNCATE PAUSE

The setting of this default option determines the type of warning message displayed when a legend is truncated. The objective of this message is to notify you that a legend or list of legends has been truncated upon reading them into the text buffer.

Setting Yes vs. No!

The truncate pause default setting will always allow for the truncation of text when necessary. The only difference between the Y and N choices is that choosing yes forces you to acknowledge when a legend has been truncated by prompting a keystroke. If the default setting is set to no, legends will still be truncated and the warning message will appear in the TEXT EDITOR.

The following message will be displayed when the option has been activated (selecting Yes):

! WARNING ! Legend Has Been Truncated! (Press Any Key)

If this message appears when printing a legend, it will continue to appear for each truncated legend when working with a list. Press any key on the alphanumeric section of the keyboard to continue, or press EXIT to pause the printing of the list.

If this message appears while editing a list, it will continue to appear for each truncated legend in the list. Press any key on the alphanumeric section of the keyboard to continue.

The following message will be displayed when the option has been decactivated (selecting No):

! Legend Truncated!

To set this option . . . press Y for yes, or press N for no.

To exit the screen after setting the options ... press ENTER to return to the TEXT EDITOR.



This section contains a tutorial for creating sample labels, a troubleshooting and error message guide, and important information pertaining to the maintenance and cleaning of the LS2000.

APPENDIX A

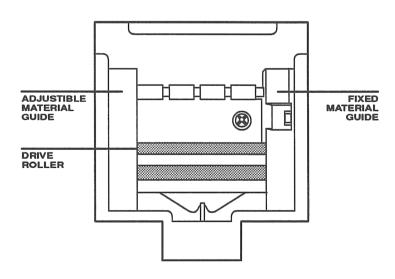
Maintenance and Cleaning of the LS2000

The LS2000 Labeling System has a rugged printer assembly. To keep it in top operating condition, it should be cleaned once a month! Read the following guidelines for maintaining the five major areas of the printer:

Drive Roller

Lint and dust may build up on the drive roller resulting in the slipping of material when feeding it through the printer. The drive roller is accessed by removing the bottom door of the printer. With the power OFF . . .

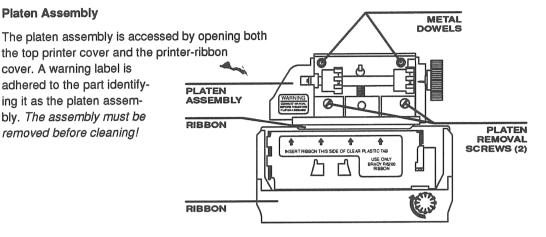
- Remove the bottom door located on the underside of the printer. To remove the bottom door
 locate the tabbed-indentation in the plastic found directly in front of the door. Exert pressure
 against the tab of the door and toward the rear of the printer. Lift the door UP and set it free
 from the printer.
- The drive roller is a rubberized roller that is located directly under the fixed and adjustable
 material guides. Push down on the adjustable material guide and slide it left/right in order to
 access the entire roller.
- · Clean the roller using isopropyl alcohol and a clean rag. Replace the bottom door when finished!





Platen Assembly

the top printer cover and the printer-ribbon cover. A warning label is adhered to the part identifying it as the platen assembly. The assembly must be removed before cleaning!



Removing the Platen Assembly

WARNING:

Excessive force on the optic eye bracket will cause misalignment of the optic eye and the printer will have to be sent to Brady USA, Inc. for recalibration.

- 1. Remove the ribbon.
- 2. Loosen the two platen removal screws in the platen assembly until they pop loose from the printer frame.
- 3. Gently lift the platen assembly UP until the platen assembly frame clears the metal dowels. Remove the platen from the machine making sure not to disturb the optic eye.
 - Once the platen assembly has been removed, clean off any lint, ink, or adhesive build-up on the face using isopropyl alcohol and a clean rag.
- 4. Before replacing the assembly, clean the printhead mask and material clamp as instructed below.

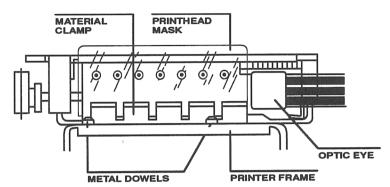


Printhead Mask

The printhead mask is a clear, thin, plastic shield with seven holes punched in it. It is located between the platen assembly and the printer assembly. The mask may build up with ink and

adhesive, causing smearing or labeljamming problems.

With the platen assembly removed, clean off the outside surface of the printhead mask using isopropyl alcohol and a cotton swab. Also, remove any black lint that is around the printer.



Material Clamp

The material clamp is a thin metal foil that forces the label material against the platen assembly during operation. It is located between the printhead mask and the platen assembly. Like the printhead mask, the material clamp may build up with ink and adhesive causing label jamming problems.

With the platen assembly removed, clean the tabs of the material clamp using isopropyl alcohol and a cotton swab. Be careful not to excessively flex the material clamp fingers.

Replacing the Platen Assembly

- 1. Gently place the platen assembly back onto the printer frame by aligning the holes of the platen assembly frame over the metal dowels on the printer frame. Be sure not to bend the material clamp DOWN or bend the optic eye bracket.
- 2. Tighten the platen removal screws into the frame.
- 3. Reinstall the printer ribbon.

Tear-Off Blade Cover Bar

The cover bar shields the label material from the tearbar during the printing process. It is located along the ribbon cover door on the top side of the printer. Adhesive and ink may build up on the cover bar, causing the smearing of labels. Clean the cover bar using isopropyl alcohol and a clean rag.

Appendices



A P P E N D I X B Troubleshooting and Error Message Guide

Symptom	Possible Cause	Corrective Action		
Labels Not Advancing	Label is stuck in material path.	Remove label from path by removing the platen assembly as described in <i>Appendix A</i> .		
	Labels are not inserted into material guides correctly.	Reinsert material if necessary. See Step 9 of the Quick Start Guide.		
	Dirty drive roller, platen, mask, or material clamp.	Clean printer as described in Appendix A.		
	Adjustable material guide is not in grooved slot.	Move the guide into one of the slots and try feeding. Make sure guide is centered in slot. See Step 9 of the Quick Start Guide.		
	Bent material clamp.	Check platen assembly. Remove the assembly per instructions in <i>Appendix A</i> . Inspect the material clamp fingers for damage. If bent down, call BRADY's technical support group.		
Printing is faint and hard to read.	Ribbon is worn.	Change ribbon. (Ribbon should last for approximately 250,000 characters, or 3-6 months, depending on environment.) See Step 8 of the Quick Start Guide.		
	Batteries are low.	Connect A/C adapter/charge to printer. Try to print again while still plugged in. If OK, charge for at least 16 hours. See <i>Chapter 2</i> for information regarding battery power/life.		
	Wrong printhead gap setting.	Adjust printhead setting as described in Step 8 of the Quick Start Guide.		
	Ribbon is installed incorrectly.	Remove ribbon and reinstall the ribbon. See Step 8 of the Quick Start Guide.		
	Ribbon is not advancing due to broken printer gear.	Contact BRADY's technical support group.		
Printing runs off the label.	Incorrect material size code entered.	Check the material size code on inside of the roll core or marker packaging and enter the correct size code. Be sure not to enter a zero in the size code if not specified. Use the spacebar to remove the unwanted character. Refer to Chapter 5, Setting Marker Size Codes.		
	Printing not aligned properly.	Align the print on the label as described in Section IV Printing Markers.		



	Optic eye failure.	Contact BRADY's technical support group.
Label is missing characters.	Printing over ribbon weld.	Printer will periodically strike the ribbon at the weld. Turn the manual ribbon advance knob on the ribbon clockwise to advance the ribbon past the weld. See Step 8 in the Quick Start Guide.
	Broken printhead pin or blown solenoid. Markers will consistently have missing areas of print.	Contact BRADY's technical support group.
Printer is smearing labels.	Printhead gap is too small.	Adjust printhead setting as described in Step 8 of the Quick Start Guide.
	Platen, mask, material clamp, or tearbar cover is dirty.	Clean printer as described in Appendix A.
	Ribbon is not installed properly.	Remove the ribbon and reinstall as described in Step 8 of the Quick Start Guide.
	Ribbon has been contaminated by finger oils, alcohol, or other chemicals.	Replace ribbon cartridge. See Step 8 of the Quick Start Guide.
Printer will not run on batteries.	Batteries are not charged.	Connect the A/C adapter/charger to the printer. Charge the battery for at least 16 hours before operating solely on battery power. Refer to <i>Chapter 2</i> for more information regarding battery power.
	Batteries are worn out.	Battery life is approximately 2-3 years, depending on use and care of the battery. Refer to <i>Chapter 2</i> for more information regarding battery life.
	Blown fuse.	Contact BRADY's technical support group.
Scanning error or feed malfunction message.	Wrong product selection.	Change product selection. Refer to Step 4 in the Quick Start Guide.
	Label is stuck inside printer.	Remove the bottom cover and check for a stuck label. If not found in this compartment, remove the label from the printer by removing the platen assembly. See <i>Appendix A</i> .
	Optic eye failure.	Contact BRADY's technical support group.
Errors: Markers Skewed Right or Markers Skewed Left	Material is wandering right or left.	Verify that the adjustable material guide is in the correct position and resting in a groove along the guide shaft. Check that the printer cover is closed and the outfeed guide is properly adjusted. See Step 9 in the Quick Start Guide.
	Optic eye bracket has been bent.	Recalibration is required. Contact BRADY's technical support group.



Appendices

Printer is emitting a beeping tone.	Battery power is low.	Connect A/C adapter/charger to printer. Operate printer with A/C adapter/charger connected for a minimum of 16 hours before operating solely on battery power. Refer to Chapter 2 for more information on battery power/life.
Continuous tone coming from unit and printer has locked-up.	Label is stuck in printer.	Check for proper gap setting. Adjust the setting and then turn the printer OFF, then ON. If this does not solve the problem, check if a label is stuck inside the printer. Remove the label from inside the printer by removing the bottom cover, or by removing the platen assembly as described in <i>Appendix A</i> .
	Ribbon cartridge has locked-up.	Remove ribbon cartridge from printer and try to free it by pulling on the ribbon and advancing the ribbon gear, or change the ribbon. See Step 8 in the Quick Start Guide.
	Platen assembly has been installed incorrectly.	Check the platen assembly; refer to Appendix A for maintenance instructions. Inspect the material clamp fingers for damage. If bent down, contact BRADY's technical support group.
"RAM Storage" Error Message		Refer to Appendix F, Error Message Guide.



APPENDIX C Service and Accessory Parts List

Appendices

Service Parts Lists

Description	Part No.
User Manual	55876
Wall Transformer (A/C adapter/charger)	29550
Spindle Assembly	55877
Bottom Door	55878
Display Cover	55879
LCD Assembly	55880
Outfeed Guide	55881
Tear-Off Assembly	55882
Ribbon Cover	55883
Battery Pan Cable Assembly	55884
Rubber Feet (4)	55885
Lithium Battery	55886
Keypad PCB Assembly	55887
Rubber Keypad	55888
Dust Cover	55856
Main PCB Assembly	55889
Printer Mechanism Assembly	55920

Accessory Parts List

•	
Description	Part No.
Battery Pack	55851
Softpack Printer Carrying Case	55852
Hardpack Printer Carrying Case	55857
Download Utility Package	55854
Battery Charger	55855
R5200 Printer Ribbon	55853
R2200 Printer Ribbon	55869



APPENDIX D Tutorial Guide

The following pages will provide step-by-step instructions for making a variety of commonly used marker styles:

SETTING MARKER SIZE, PRINT FORMAT, AND QUANTITY/CYCLE

Refer to the *Quick Start Guide* or *Chapter 5, Creating a Legend Using the Main Menu* for instructions on defining/changing the LS2000 setup status.

STEP-BY-STEP TUTORIAL

Select one of the following guides to print a . . .

A. Single, One-Line Legend, Component Marker

Legend to be printed: 100A

Setup Status:

Print Format: Component Quantity Per Cycle: Single

- 1. Press < CLEAR > TO ERASE
- 2. Enter, 100A
- 3. Press, PRINT

B. Single, Two-Line Legend, Wiremarker

Legend to be printed: AB CO

12345

Setup Status:

Print Format: Wiremarker
Quantity Per Cycle: Single

- 1. Press < CLEAR > TO ERASE
- 2. Enter, AB CO
- 3. Press, ENTER
- 4. Enter, 12345
- 5. Press, PRINT

Note that the legend will repeat down the marker as many times as both lines of the legend will fit. For example, a legend will repeat 3 times on a 7-line marker with a blank line inserted at the top of the marker.

C. Group of Serialized Wire Markers

Legends to be printed:

AB CO AB CO AB CO AB CO A100 A101 A102 A103

Setup Status:

Print Format: Wiremarker Quantity Per Cycle: Multiple

- 1. Press, < CLEAR > TO ERASE
- 2. Enter, AB CO
- 3. Press, ENTER
- 4. Enter, A100
- 5. Press,
- 6. Press, SERIAL
- 7. Press, PRINT
- 8. Press, ENTER
- Enter, 3 (to set the number of serial increments)
- 10. Press, ENTER

The printer will begin to print the four markers listed above.



D. Group of Serialized Pairs of Wiremarkers

200C

Legends to be printed:

200A

200B

200D

Setup Status:

Print Format:

Wiremarker

Quantity Per Cycle:

Multiple

- 1. Press < CLEAR > TO ERASE
- 2. Enter, 200A
- 3. Press,
- 4. Press, SERIAL
- 5. Press, PRINT
- 6. Enter, 2 (to print pairs of markers)
- 7. Press, ENTER
- 8. Enter, 3 (to set the number of serial increments)
- 9. Press, ENTER

The printer will begin printing two each of the four markers listed above.

E. Save a List of Random Legends

Legends to be printed:

6250

7115

A514

1214

SER-A

List 1A

Setup Status:

Print Format:

Wiremarker

Quantity Per Cycle:

Multiple

- 1. Press, < CLEAR > TO ERASE
- 2. Press, MENU
- 3. Press. L
- 4. Press, C
- Press, A (to select list 1A; if list 1A already contains saved legends, select a different list. Use the new list name in place of 1A through the remainder of this tutorial.)
- Press, ENTER
 Enter an 8-digit (or less) list name.
 Press, ENTER
- 7. Enter, 6250
- 8. Press, SAVE
- 9. Press, < CLEAR > TO ERASE
- 10. Enter, 7115
- 11. Press, SAVE
- 12. Press, < CLEAR > TO ERASE
- 13. Enter, A514
- 14. Press, SAVE
- 15. Press, < CLEAR > TO ERASE
- 16. Enter, 1214
- 17. Press, ENTER
- 18. Enter, SER-A
- 19. Press, SAVE

The four legends above should now be saved in List 1A. To view List 1A, see the following example.



Appendices



F. Edit a List of Random Legends

Begin with List 1A, which was created in the previous example.

Legends in List 1A:

6250

7115

A514 1214

SER-A

You will edit List 1A as follows:

Change 6250 to 6280

Delete 7115

Save A514 as is

Insert a new legend, G10

Save 1214 SER-A as is

Save edited list under List 1B

Setup status: Not Applicable

NOTE:

Printer should be in Insert mode. This is indicated by a flashing block cursor. If you have only a single line cursor, press the INSERT key once.

- 1. Press, < CLEAR > TO ERASE
- 2. Press, MENU
- 3. Press, L (list)
- 4. Press, C (create)
- 5. Press, B (selects list 1B)
- Press, ENTER
 Enter, an 8-digit (or less) list name.
 Press, ENTER
- 7. Press, MENU
- 8. Press, L (list)
- 9. Press, V (view/edit)
- 10. Press, A (selects list 1A)
- 11. Press, ENTER
- 12. Press, K
- 13. Press, ,
- 14. Enter, 8
- 15. Press, DELETE
- 16. Press, SAVE
- 17. Press, RECALL
- 18. Press, RECALL (to skip legend, 7115)

- 19. Press, SAVE
- 20. Press, < CLEAR > TO ERASE
- 21. Enter, G10 (enters a new legend into List 1B)
- 22. Press, SAVE
- 23. Press. RECALL
- 24. Press, SAVE
- 25. Press, RECALL
- 26. Press, CLEAR

The edited list is now saved under List 1B

The original list is still saved under List 1A

G. Print a List of Random Legends

Name of list to be printed: 1B

Setup Status:

Print Format:

Wiremarker

Quantity Per Cycle:

Multiple

- 1. Press < CLEAR > TO ERASE
- 2. Press, MENU
- 3. Press, L (list)
- 4. Press, P (to print)
- 5. Press, B (selects list)
- 6. Press, ENTER
- 7. Press, K
- 8. Enter, 1
- 9. Press, ENTER
- 10. Enter, 1
- 11. Press. ENTER

The printer will print the four markers saved under list 1B.

12. Press, EXIT



H. Save and Print a List of Programmable Controller (Octal Sequence) Legends

Note:

You will be saving serialized legends. You will key in one legend. All other saved legends will be edited from the first legend.

Legends to be saved:

	Rack	1 Input	Rack 1 (Dutput
	Termination	Termination	Termination	Termination
	0 - 7	10 - 17	0 - 7	10 - 17
Module 0	1100 <u>0</u>	1101 <u>0</u>	0100 <u>0</u>	0101 <u>0</u>
Module 1	1110 <u>0</u>	1111 <u>0</u>	0110 <u>0</u>	0111 <u>0</u>
Module 2	1120 <u>0</u>	1121 <u>0</u>	0120 <u>0</u>	0121 <u>0</u>
Module 3	1130 <u>0</u>	1131 <u>0</u>	0130 <u>0</u>	0131 <u>0</u>
Module 4	1140 <u>0</u>	1141 <u>0</u>	0140 <u>0</u>	0141 <u>0</u>
Module 5	1150 <u>0</u>	1151 <u>0</u>	0150 <u>0</u>	0151 <u>0</u>
Module 6	1160 <u>0</u>	1161 <u>0</u>	0160 <u>0</u>	0161 <u>0</u>
Module 7	1170 <u>0</u>	1171 <u>0</u>	0170 <u>0</u>	0171 <u>0</u>

Serialized characters are underlined.

The legends above represent all of the legends required for printing the markers for Rack Number 1 for octally sequenced programmable controllers. Rack Number 2 - 7 can be similarly entered by changing the second character in the legend to the desired Rack Number. For this tutorial, you will only save the Module 0 row of legends.

Appendices



List 1C

Setup Status:

Print Format: Wiremarker Quantity per Cycle: Multiple

Check to verify that the printer is in the Overwrite mode. This is indicated by a single underline cursor. If you have only a flashing block cursor, press INSERT.

- 1. Press, MENU
- 2. Press, L (list)
- 3. Press, C (create)
- 4. Press, 1C (to select list 1C)
- 5. Press, ENTER
- 6. Enter an 8-digit (or less) list name
- 7. Press, ENTER
- 8. Enter, 11000
- 9. Press,
- 10. Press, SERIAL
- 11. Press, SAVE
- 12. Press, <
- 13. Enter, 1
- 14. Press, SAVE
- 15. Press, **◀** ,**◀** ,**◀**
- 16. Enter, 0
- 17. Press, ,
- 18. Enter, 0
- 19. Press, SAVE
- 20. Press, <
- 21. Enter, 1
- 22. Press, SAVE

You will now print the above markers.

- 23. Press, MENU
- 24. Press, L
- 25. Press, P
- 26. Press, 1C (to select list 1C)
- 27. Press, ENTER
- 28. Press, K
- 29. Enter, 2
- 30. Press, ENTER
- 31. Enter, 7
- 32. Press, ENTER
- 33. Enter, 1
- 34. Press, ENTER

I. Print Terminal Blocks

You will need to install a different marker roll and change the size code for this example; select a terminal block product.

Legend to be printed:

Serialize 100 through 105

Setup Status:

Print Format: Terminal Block

- 1. Press, CLEAR
- 2. Press, MENU
- 3. Press, M (marker)
- 4. Press, T (terminal block)
- 5. Select marker size code.
- 6. Press, ENTER
- 7. Select center-to-center spacing (pitch)
- 8. Press, ENTER
- 9. Enter, 100
- 10. Press, <
- 11. Press, SERIAL
- 12. Press, PRINT
- Enter, 1 (# of identical markers to be printed)
- 14. Press, ENTER
- Enter, 5 (# of times to increment each serial #)
- 16. Press, ENTER

The legend should print 6 times along the terminal block marker.



A P P E N D I X E Samples of Type Appendices

Sizes/Fonts

LS2000 Printer Fonts

]	SIZE	1x 1	2x2	3x3	4x4	5x5
	ROTATED	ロゴエドズム H I I O 7 E C C C C C C C C C C C C C C C C C C	GBCCMFQ 40000 40000	MDC881 54321	C3	CB1 C32
ا	HALF-HEIGHT	ABCDEFAHIJKLHNOPARS 1234567890123458789	ABCDEFGHI 123456789	ABCDEF 123456	ABCD 1234	ABC 123
-	SMALL	ABCDEFGHIJKLMNO 123456789012345	ABCDEFG 1234567	12345	123	123
-	NORMAL	ABCDEFGHIJK 12345678901	ABCDE 12345	123	12	12
•	LARGE	ABCDEFG 1234567	ABC 123	12	1	1



APPENDIX F Error Message Guide

Error Message:

!RAM TEST FAILURE!

Action:

Unit must be returned for repair.

This screen is displayed only if an error is found during the Memory Clear and Test function. It indicates that a special test pattern has either failed to be stored to or cannot be recalled from some portion of RAM memory. If this screen is displayed, the printer will not run and MUST be returned for repair.

Error Message:

!MEMORY ERROR!

Action:

See instructions below.

This error screen might be displayed immediately after the power switch is turned ON. It indicates that some data, stored in the battery-backed RAM, was not accurately retained when the power switch was OFF. The primary cause of this malfunction is when both the NiCad battery pack and lithium cell are discharged. Sometimes, however, it is possible that a power surge, or static discharge to the printer has caused a data error in the RAM. In any event, all information that was stored (size codes, lists, options, etc.) is considered invalid and the printer is unusable until the RAM is cleared and tested (see the Clear and Test RAM procedure below).

Error Message:

"Failure to Pass System Test"

Action:

Unit must be returned for repair.

This error screen might be displayed immediately after the power switch is turned ON. It indicates that some part of the program that is stored in memory is either unreadable or contains error(s). If this screen is displayed, the printer is unusable and MUST be returned for repair. The two characters following the "#" symbol are for use by the repair technician as a diagnostic aid.

Clear-and-Test-RAM Procedure

CAUTION! The following procedure will result in the loss of all data previously stored in the LS2000 Labeling System.

- 1. Make sure the battery pack is fully charged.
- 2. Disconnect the A/C adapter/charger.
- 3. Turn the power OFF.
- 4. Press, and HOLD down the "C" character key.
- 5. While simultaneously holding down the "C" key, turn the power ON.
- 6. The following message will appear:

Pressing the "Y" key will ERASE ALL MEMORY!

7. Press and then release the "Y" character key.



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BRADY

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