BradyLabel-LS2000

Download System

O P E R A T I N G

I N S T R U C T I O N S

INTRODUCTION

The BradyLabel-LS2000 Download System works with files created on a personal computer (PC) using the BradyLabel General Labeling Software®. It enhances the capabilities of the LS2000 by allowing files to be downloaded for printing and runs under DOS on any 100% IBM-compatible personal computer.

The operating instructions that follow have been written with the assumption that the reader is familiar with both MS-DOS® and BradyLabel General Labeling Software. In addition, the reader should be comfortable with operating procedures for the LS2000 Labeling System.

The download package includes a software disk, serial cable, 9 to 25-pin adapter, and complete instructions detailing the transfer procedure. Contact Brady's technical support group at 1-800-643-8766 if you have any additional questions regarding this program.

INSTALLATION

It is recommended that you make a backup copy of the distribution diskette before installing it on your computer's hard drive.

To install your software:

1. Place the copy of the distribution diskette into drive A.

2. Type **a:Install**, then press ENTER.

3. Follow the installation instructions displayed on the screen.

4. Remove the diskette from drive A.

PREPARING BRADYLABEL FILES FOR TRANSFER

In order to optimize memory, reduce transfer time, and enjoy all of the features of the LS2000, consider the following guidelines when first creating your legend lists!

Custom Symbols & Aliases

The LS2000 will print all of the characters displayed on its own keyboard but **will not** *print every character found on the keyboard of your personal computer. The transfer program will automatically substitute the printer's custom character for that character which is located in its place on a standard PC keyboard.*

To further illustrate, compare the keyboard of the LS2000 with that of your personal computer. Notice that the custom characters located throughout the keyboard of the LS2000 do not necessarily match those characters identically located within the keyboard of the PC. For example, if you purchased both your LS2000 and PC in the United States, you will find that the "±" symbol located above the number "4" key on the LS2000, differs from the "$" sign displayed above the number "4" key on the PC's keyboard.

Whenever a custom LS2000 symbol is substituted for a standard PC character, each is referred to as the **alias** of the other. Suppose that your BradyLabel file contains the @ symbol. Since the LS2000 keyboard does not contain this character, it will not print the symbol! Therefore, before the symbol is transferred by the Utility program it is automatically translated to its LS2000 alias, the © symbol. Once in a list, what had been displayed as the @ symbol in your BradyLabel file, is now displayed and printed as the © symbol by the LS2000.

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Each native language version of the LS2000 has a unique "character set" to print custom charac-ters and industrial symbols. There are a total of 10 substitute symbols contained within the USA keyboard of the LS2000.

Immediately following a successful download the Utility program will display an appropriate message if the data file that was transferred contained one or more alias characters.
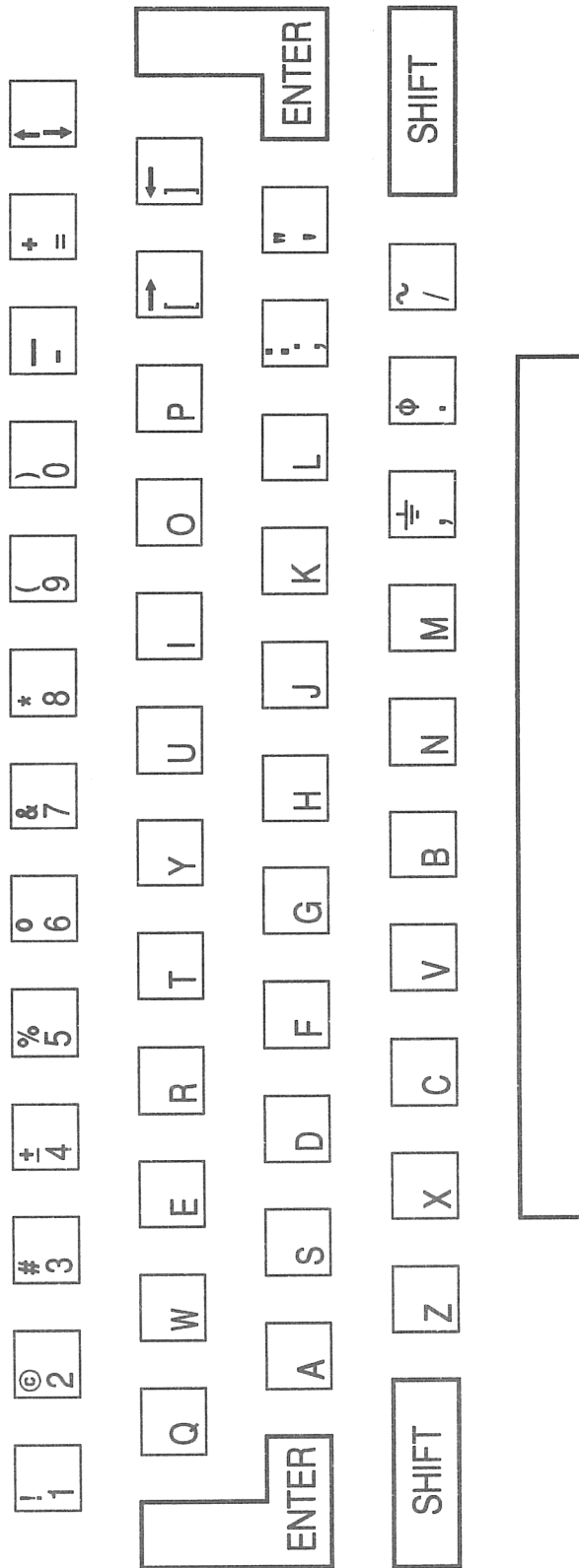
Unprintable Characters

Another important consideration is the unprintable character. Notice that your PC's keyboard has a single key for the following symbols: (') and (~). However, the LS2000 has no corresponding key or alias symbol. Consequently, each becomes an unprintable character to be translated and sent to the LS2000 as a "space."

Immediately following a successful download, the Utility program will display an appropriate message if the data file that was transferred contained one or more unprintable characters.

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LS2000 Labeling System Keyboard (USA Version)

In the absence of an LS2000 Labeling System, the illustration below provides you with a view of the custom characters located on the USA version of the LS2000 keyboard.

Legend Format & Memory Limitations

*The block of data (text) which is printed on a single marker is referred to as a **legend**.*

Memory capacity is optimized by transferring only the characters of a legend to be printed. If your BradyLabel file allocates more width (characters-per-inch) or more length (lines-per-legend) than is necessary for even its largest legend, you are wasting memory! To avoid using more memory than necessary, first view your file before transferring:

If you have already determined that the BradyLabel data file is ready for transfer, simply refer to the instructions in the next section to begin the download procedure.

1. Positioning the legend in the upper left corner of the label makes it easier to determine the size of the legend. Therefore, "edit" the BradyLabel data file using its default settings. Justify the entire file of legends to the top and left of the label, using **Alt + T** and **Alt + L** respectively. Legends will be *printed* in whatever format you set up in the LS2000.

   Scroll through the BradyLabel data file to determine the minimum label area requirement for all legends in the file. This is also a good time to check for any unintentional alias characters!

2. Should you determine that the current character and line settings exceed your legend requirements, use the following procedure to reduce the size of the label:

   • Select a Brady part # from the data base able to meet the required number of characters-per-line and lines-per-label available for printing. Note that the selected label part #, printer, and font together determine these values.

   • "Edit" the file using the new part #, selecting characters-per-line and lines-per-label as required. *Final setup parameters for your legend are determined before printing by the selections you make using the LS2000 so do not be concerned that this step will affect the final format of your printed label!*

   • Justify the file both top and left in order to optimize LS2000 memory and allow for better subsequent formatting operations.

   • To keep the original file, SAVE the modified file to a new name. Otherwise, just SAVE and EXIT the BradyLabel EDITOR. This is the file you will transfer to the LS2000 using the BradyLabel Utility program.

THE DATA TRANSFER PROCEDURE

Prepare the LS2000

Before beginning the transfer of data it is recommended that you review the procedures for *Creating a New List* and *Viewing/Editing a List* using the LS2000 Labeling System. The process of selecting a *List to Import* is identical to that of *Creating a New List*. You must **set up parameters** you want stored in the imported list, i.e., product, size, type & scaling, etc.
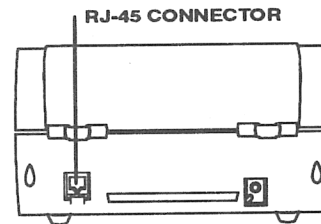
Data Transfer

Once the transfer utility software is installed on the personal computer, BradyLabel files can be transferred in 3 easy steps! The following instructions can be performed in any sequence:

Step #1   Connect the Serial Cable

Locate the serial interface cable included in your packaging:

Attach the 9-pin (DB-9) female connector to an available COM1 or COM2 serial port on your PC. (Use the 25-pin (DB-25) female to 9-pin (DB-9) male adapter if necessary.)

Connect the opposite end of the serial cable to the RJ-45 socket along the back of the LS2000. The connector is properly seated when you hear a "click."

RJ-45 CONNECTOR

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Step #2   Begin BradyLabel Data Transfer Utility

- After a few seconds the main screen will appear. The file selection will be highlighted as the FILE TO TRANSFER.

    Press ENTER to begin the transfer process.

- When the message, ATTEMPTING TO ESTABLISH COMMUNICATION, appears on the PC monitor, proceed to Step #3.

Step #3   Start IMPORT Procedure from the LS2000

You must be in the TEXT EDITOR to begin. The message, ENTER NEW LEGEND, will be displayed.

1. To begin importing, press MENU from the TEXT EDITOR. Press **L** (list) from the main menu, then press **I** (import). The import screen will appear:

```
= = = = = = = =  IMPORT = = = = = = = = =

  DIR: 1        ABCDEFGhijklm
               nopqrstuvwxyz
  [ 1? ]        NAME: "        "
```

The following steps are identical to those used in "Creating a New List."

2. Select the LIST in which you will store the BradyLabel transfer file. The example below shows the LIST(s) [1A] through [1G] are already in use (because they are capitalized), so select an available LIST, i.e., LIST [1H].

    Type **H**, then press, ENTER.

```
= = = = = = = =  IMPORT = = = = = = = = =

               ABCDEFGHijklm
  DIR: 1        nopqrstuvwxyz
  [ 1H ]        NAME: "       "
```

3. The cursor is now positioned to enter a "name" for the list. Type the filename and press, ENTER. In order to assist in any future cross-referencing, it is helpful to use the name of your BradyLabel data file as your filename. (Entering a name is optional; just press ENTER for no name.)

    For this example, type TEST and press, ENTER.

```
= = = = = = = =  IMPORT = = = = = = = = =

               ABCDEFGHijklm
  DIR: 1        nopqrstuvwxyz
  [ 1H ]        NAME: "TEST    "
```

If you have not yet started the transfer from the PC, begin now. After communication between the PC and the LS2000 is established, the PC will display an "importing" screen verifying the *filename* and *# of legends* in the file (Label Count).

The example below indicates that 7 legends have been stored in list, [1H] "TEST", and the transfer is proceeding without error. (See the section, *Process Error Codes*, for a list of possible error codes.)

2nd line of screen,   . . . indicates the selected Import List and its name as entered.

3rd line of screen ,   . . . counts each Legend as it is stored in LIST

4th line of screen,   . . . monitors the status of the transfer.

```
= = = = = = = = IMPORTING = = = = = = = =

    [ 1H ]          "TEST"
    LEGEND #    0007
    CODE:          00
```

While the transfer proceeds, the LS2000 counts each legend it stores while the PC graphically monitors progress. Each block added to the horizontal graph indicates that a 10% portion of the file has successfully transferred.

After the entire file has transferred, an *Import Summary* screen is displayed on the LS2000 while a short beep is heard. Check that the # of legends indicated in the *Import Summary* equals the *Label Count* in your BradyLabel file.

The example below summarizes the successful transfer of a file containing 200 legends:

```
= = = = = IMPORT SUMMARY = = = = = =

    STATUS:      OK
    LEGENDS:    0200
                    TRANSFER COMPLETE
```

Completed Transfer Process

The BradyLabel file is now stored in your LS2000 as a List. This list may now be used for any operation as though it had been originally entered and saved from the the LS2000 keyboard.

Using the LS2000 . . .

   . . . press ENTER to return to the EDITOR, or press EXIT to select another LIST menu function.

Using the PC . . .

   . . . press ESC, then Y to exit the BradyLabel Data Transfer Utility program.

TRANSFER PROBLEMS

1. If the LS2000 displays the screen below while the PC monitor is flashing, "Attempting to Establish Communication," try the following steps:

> Begin transfer
> from PC Using
> BRADYLABEL DATA
> TRANSFER UTILITY

- Check that the serial interface cable is intact and properly connected at each end.

- Press <F10> on the PC keyboard and select the other COM port.

- If the problem still exists, contact Brady's Technical Support Group for assistance.

2. If an error is detected during the transfer process, the LS2000 will display an error code and the PC will stop transmitting. When this happens, the Import List that you selected is automatically de-selected and no legends have been stored! The system does this to prevent the accidental use of an incomplete or corrupted List. A table of these *Process Error Codes* is at the end of this section.

    In the example below, the LS2000 has insufficient memory (code 51) to save the 191st legend in list [1H] "TEXT":

> ========= IMPORT =========
>
> [1H]   "TEXT"
> LEGEND #: 0190
> CODE: 51

Should the transfer terminate for any reason, a beeping "SOS" will accompany the LS2000 *Import Summary* screen.

The *Import Summary* screen shown below is displayed if,

1. The PC user aborts a transfer in progress by pressing the ESC key, or

2. Acknowledges a failed transfer by pressing any key.

> ========= IMPORT =========
>
> STATUS: PC-ABORT
> LEGENDS: 0000
>   TRANSFER FAILED

Similarly, the summary below is displayed if the user terminates the transfer at the LS2000 by pressing the EXIT key:

```
= = = = = =  IMPORT SUMMARY  = = = = = =

     STATUS:    LS - < EXIT >
     LEGENDS:   0000
                TRANSFER FAILED
```

Process Error Codes

These codes monitor the transfer of each packet of data.

00   Data packet received, processed and accepted.

Any non-zero code represents an ERROR falling into one of the following categories:

21-29   **Communication Errors**

31-39   **Invalid Character Errors**

41-49   **Legend Format Errors:**

        41   Legend contains more than 49 printable characters in any one line.

        42   Legend contains more than 45 lines.

        43   Legend contains too many characters.

51-59   **LS2000 Storage Errors:**

        51   Out of memory.

        53   Hardware malfunction (non-recoverable LS2000 error)

61-69   **Transfer Terminated:**

        62   Transfer terminated as a result of the LS2000 operator pressing the EXIT key.

        63   Transfer terminated as a result of the PC operator pressing the ESC key, or by acknowledging a previously detected error (any key).

COMMUNICATION SPECIFICATIONS

Physical: +/- 10V, RS-232 compatible, TXD, RXD, GND, DCD, DTR present

Cable: Length: 8 ft, 5 conductors, shielded
             LS2000 connector: RJ-45, male (8 position modular)
             PC connector: DB-9, female (9 position D-Sub)

Link: Serial Data, 10 BIT frame, 9600 Baud
             3-Wire communications, software handshaking (TXD, RXD, GND)
             (Packet received by LS2000 is verified and acknowledged.)

FCC NOTICE - PART 15

Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

BRADY WARRANTY

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