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2200

**BASIC-2 Multiuser Operating System
Software Bulletin**

Release 2.7

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**BASIC-2
Multiuser Operating System
Software Bulletin**

Release 2.7

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PREFACE

This bulletin describes the changes and features of the 2200 BASIC-2 Multiuser Operating System (Release 2.7). The purpose of this Software Bulletin is to provide up-to-date documentation for software enhancements.

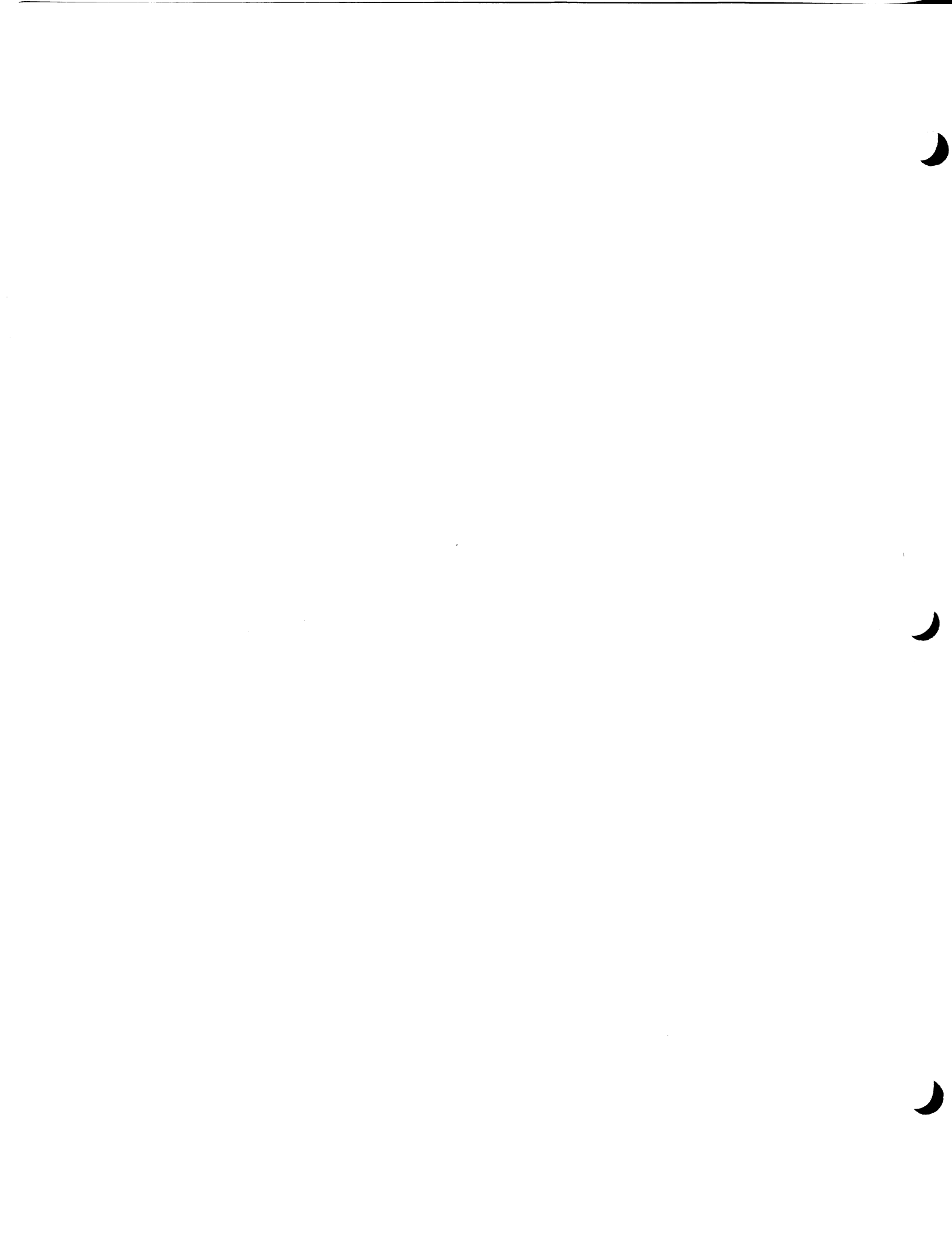
This document is intended to be used in conjunction with the following manuals:

2200 BASIC-2 Utilities Reference Manual (700-6855)

2200 BASIC-2 Language Reference Manual (700-4080D)

2200 BASIC-2 Disk Reference Manual (700-4081G)

*2200 BASIC-2 Multiuser Operating System Software Bulletin
Release 2.5 (700-8079)*



INTRODUCTION

Release 2.7 of the BASIC-2 Multiuser Operating System is issued as a general release to correct problems with the operating system and the generalized printer driver.

This release is enhanced to support 16 workstations. Previous releases supported only 13 workstations. In addition, the Software Formattable Disk Platter Format Utility (@FORMAT) is enhanced to provide a "user friendly" format.

RELEASE INFORMATION

Release 2.7 of the BASIC-2 Multiuser Operating System is available on the following media:

<u>Part Number</u>	<u>Type</u>	<u>Comment</u>
701-2294V	SSSD	2200 MVP, MVPC, LVP, LVPC, (2270A Diskette Drive)
731-0058E	DSDD	2200 LVP, LVPC, SVP, (8-Inch DSDD Diskette Drive)
731-8009B	DSDD	2200 MVP, MVPC, LVP, LVPC (2275 Diskette Drive)

HARDWARE REQUIREMENTS

Release 2.7 requires at least 28K of control memory.

CHANGES TO THE SYSTEM PLATTERS

The system platters include the MVP operating system and the BASIC-2 language processor, the system diagnostics, and the system utilities. With Release 2.7, the following system files are revised or deleted:

@MVP	-	MVP Operating System and BASIC-2 Language Processor
@MXEO	-	MXE Terminal Multiplexer Firmware
@MOVEFIL	-	Move File Utility
@GENPART	-	Partition Generation Utility
@FORMAT	-	Software Formattable Disk Platter Format Utility

- The MVP Operating System and BASIC-2 Language Processor file (@MVP) is updated to correct reported problems.
- The MXE Terminal Multiplexer Firmware file (@MXE0) is updated to correct reported problems.
- The Move File utility (@MOVEFIL) is updated to correct reported problems.
- The Partition Generation utility (@GENPART) is updated to correct reported problems.

ANOMALIES

The following anomalies are corrected:

- Restricting disks to a single partition is corrected.
- An incorrect response made to an INPUT statement request caused an internal stack management problem. This problem resulted in the stack continuously growing which reduced available user memory. This anomaly is corrected.
- Configuring the system with six printer driver table entries caused an error generated by the processing of the \$INIT statement. This anomaly is corrected.
- The statement \$RELEASE TERMINAL TO #, STOP did not halt execution at the destination partition. This anomaly is corrected.
- LIST DC T "Mask" did not properly handle some wild card character combinations. For further information, refer to the section entitled, "LIST DC T "Mask" Enhancements."
- The P48 error with TC \$GIO is corrected.
- The lines-per-inch calculation used by the Generalized Printer Driver did not properly round the result. This anomaly is corrected.
- Multiple Generalized Printer Driver table loads caused D82s in the \$INIT statement processing. This anomaly is corrected.
- The Generalized Printer Driver associated a terminal printer with a partition and not with the terminal. After releasing the terminal to another partition, the printer driver could not be used. Release 2.7 is modified so that a printer driver associated with a terminal printer moves with the terminal to which it is attached.
- The LIST ' statement did not find all of the special functions within a program. This anomaly is corrected.

- Sending the LIST DC T statement from partition 16 to a terminal printer caused only every 16th catalog entry to be printed. This anomaly is corrected.
- Operations involving matrix variables, defined to be global within a bank, caused unexpected errors and system hangs under certain conditions. This anomaly is corrected.
- The problem with \$BREAK! reported in a previous release of the MXE Terminal Multiplexer firmware is corrected.
- The Move File utility (@MOVEFIL) incorrectly spanned files and incorrectly accessed 3270 diskettes. Spanning is activated whenever a file which is to be moved will not fit within the space available on the current diskette. The file is then segmented among two or more diskettes. This problem is corrected.
- The Partition Generation utility (@GENPART) did not properly handle the removal of the 15th printer driver table entry. This anomaly is corrected.

The following known anomaly with the new @MXE file is acknowledged:

- Halt/Stop of a LINPUT statement does not properly "clean up" the display after pressing the RETURN key.

LIST DC T "MASK" ENHANCEMENTS

In Release 2.7, the LIST DC T command is modified. The * and ? wild card characters maintain their original meanings, but the way in which they are used is changed. The following restrictions apply when using these wild cards characters:

- Only one * may be used in a mask.
- An * may not be immediately followed by a ?.

Masks that violate these rules cause the LIST DC T command to act as if no files that matched the mask were found. Table 1 lists examples of the LIST DC T command.

Table 1. Examples of the LIST DC T Command

Example	Result
LISTDCT "D?"	Finds all filenames two characters long with D as the first letter.
LISTDCT "???DB???"	Finds all filenames eight characters long that have "DB" as the middle two letters.
LISTDCT "GS*"	Finds all filenames at least two characters long that start with the letters GS.
LISTDCT "*G?"	Finds all files at least two characters long with G as the next last character.
LISTDCT "*DB*"	Illegal; too many *; no matches found.
LISTDCT "DB*?"	Illegal; ? immediately follows *; no matches found.
LISTDCT "D*S?"	Finds all files at least three characters long that begins with D and has S as the second to last character.

SOFTWARE FORMATTABLE DISK PLATTER FORMAT UTILITY

The Software Formattable Disk Platter Format Utility allows you to format and index a disk. This utility replaces the Disk Format utility provided with previous releases.

To access the Format Disk Platter utility:

1. From the System Utilities menu, select Format Disk Platter and press EXEC. The system displays the Disk Address Screen (refer to Figure 1). This screen lists the currently connected and powered-on drives that may be formatted.

NOTE

A SVP/LVP 8-inch diskette is listed on the Disk Address Screen only if it currently contains a diskette.

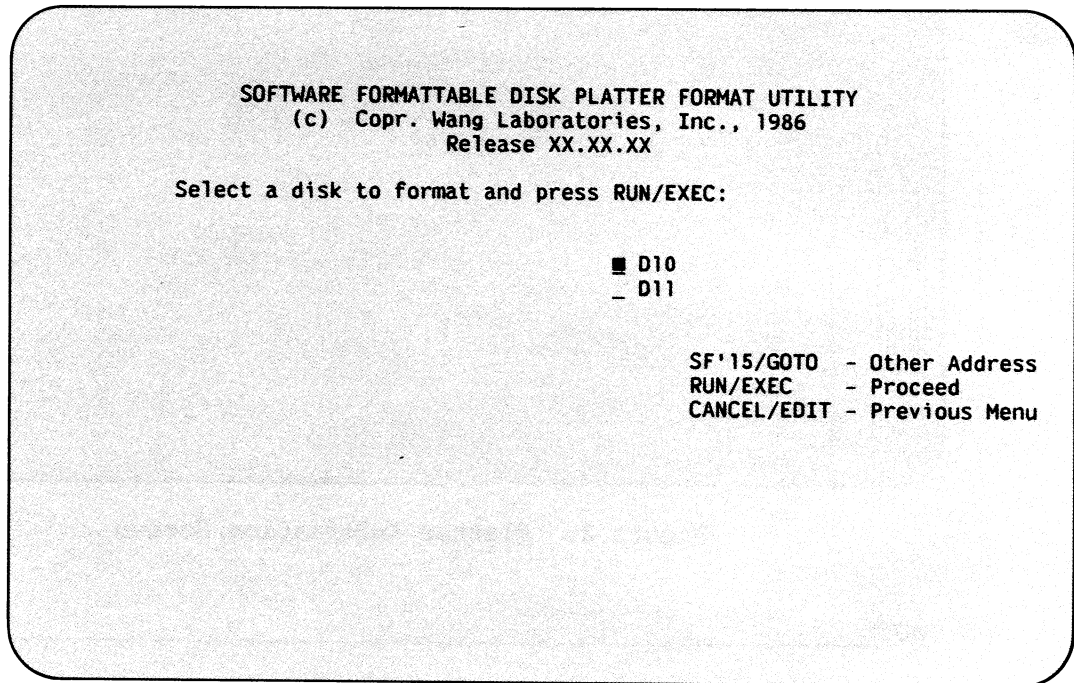


Figure 1. Disk Address Screen

To select a disk:

1. Press the space bar or the BACKSPACE key to move the acceptance block (■) next to the disk you want to format and press RUN/EXEC.
2. If you want to format a disk at an address that is not listed, press special function key 15 (SF'15/GOTO). Enter the appropriate address in the Address field and press RUN/EXEC. The system displays the Platter Information Screen (refer to Figure 2).

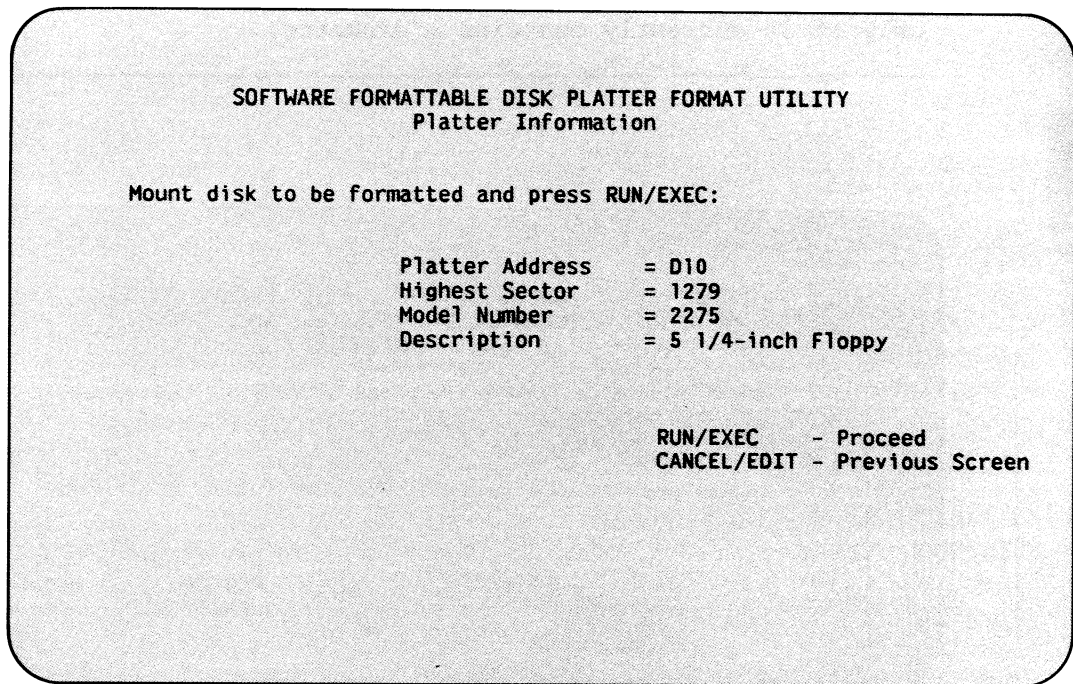


Figure 2. Platter Information Screen

NOTE

If a disk address is entered using SF'15/GOTO, only the disk address of the platter is displayed.

To format a disk:

1. Mount the disk to be formatted and press RUN/EXEC. The system examines the disk. If the disk has not been formatted or no index is present, the disk format begins. If an index is present, the following information is displayed:
 - The number of sectors the index occupies
 - The highest sector (from 0) allocated to the index
 - The highest sector (from 0) in use within the indexed area
2. Press Y to format the disk, or press N to return to the Platter Information screen (refer to Figure 2).

To define an index:

1. When the disk format is complete, the system displays the Index Information Screen (refer to Figure 3). If the disk did not have an index prior to the disk format, the parameter fields are initialized to Index Sectors = 24 and End Catalog Area = Highest Sector Value. Conversely, if an index did exist before the disk was formatted, the parameters default to values associated with the previous index.

```
SOFTWARE FORMATTABLE DISK PLATTER FORMAT UTILITY
Platter Information

Enter new index information and press RUN/EXEC:

Platter Address   = D10
Highest Sector   = 1279
Model Number     = 2275
Description      = 5 1/4-inch Floppy

      New Index Information
Index Sectors = 50
End Cat. Area = 1279
Structure     = OLD (OLD or NEW)

RETURN          - Next Field
FN/TAB         - Previous Field
RUN/EXEC       - Proceed
CANCEL/EDIT    - Previous Screen

Format Completed
```

Figure 3. Index Information Screen

2. To create the index complete the following fields:
 - a. Index Sectors -- Enter the number of sectors from 1 to 255 that the index should occupy.
 - b. End Catalog Area -- Enter the highest sector (from 0) to be allocated to the cataloged area. This value must be less than or equal to the Highest Sector and greater than or equal to the number of Index Sectors.
 - c. Structure -- Enter the type of index structure either old or new (hashing algorithm). For information on the new index structure, refer to 2200 BASIC-2 Multiuser Operating System Software Bulletin Release 2.5.
3. Press RUN/EXEC to create the index or press CANCEL to return to the Disk Address screen (refer to Figure 1).

RECOMMENDED PRINTER DEVICE TYPES

The BASIC-2 Multiuser Operating System has three printer/plotter device types: 0, 2, and 7. These device types differ in their treatment of carriage returns. A carriage return is considered to be any occurrence of hex code OD (ODH). If a printer is selected using device type 0 (e.g., SELECT PRINT 015), a line feed (AH) is automatically appended to every carriage return sent to the printer. Selecting a printer with device type 2 causes BASIC-2 to append a null hex code (00H) to every carriage return. When device type 7 is selected, a carriage return is sent to the printer without a hex code appended.

Printing a variable that is defined to be a string of hex codes (e.g., A\$ = HEX (41 42 43 OD 44 45 46)) causes the appropriate hex code to be appended to any carriage return in the string. If A\$, in the previous example, is printed and the printer is selected as device type 015, then the following string would be sent to the printer: 41 42 43 OD OA 44 45 46. Carriage returns printed as hex literals (e.g., PRINT HEX (OD)) do not have a hex code appended, regardless of the device type used when selecting the printer.

The automatic appending of hex codes to carriage returns may cause unexpected results when sending escape sequences to the 2200 BASIC-2 Generalized Printer Driver (GPD) or when using one of the two modes of transparency to directly control a printer. It is recommended that both the printer and the GDP, if used, be selected using device type 7 (e.g., SELECT PRINT 715, DRIVER 715) or that all escape sequences and control codes be printed in hex literals.

CHARACTER SET CORRECTIONS

Hex code FA is now a lowercase, underscored z (z). Any unsupported characters are printed as underscored spaces (as opposed to a space).

GENERALIZED PRINTER DRIVER FUNCTIONS (NOT SUPPORTED)

This section lists the functions of the 2200 Generalized Printer Driver (GPD) that are not supported by various printers.

The following functions are not supported by the PM-010 Printer:

- Proportional Spacing
- 5 Pitch
- Select Font
- Select Paper Tray
- Set Left Margin
- Execute Built-in Diagnostics
- Clear Platen
- Clear Buffer
- Deselect Printer
- 1/4, 1/2, and 3/4 Line Feed

The Vertical Tab function is supported, but it generates a carriage return during processing.

NOTE

For the PM-010 Printer, 12, 15, and 16.5 pitch all produce condensed output (approximately 15.5 pitch).

The following functions are not supported by the PM-016 Printer:

- 5 Pitch
- Select Font #2
- Select Paper Tray
- Execute Built-in Diagnostics
- Clear Platen
- Clear Buffer
- 1/4, 1/2, and 3/4 Line Feed
- Deselect Printer

The Vertical Tab function is supported, but it generates a carriage return during processing.

NOTE

For the PM-016 Printer, 12, 15, and 16.5 pitch all produce condensed output (approximately 15.5 pitch).

The following functions are not supported by the PM-017 Printer:

- 5 Pitch
- Select Paper Tray
- Clear Platen
- Deselect Printer
- 1/4, 1/2, and 3/4 Line Feed

NOTE

For the PM-017 Printer, 15 and 16.5 pitch both produce 16 pitch output.

The following functions are not supported by the PM-018 Printer:

- Select Font
- Clear Buffer
- 1/4 and 3/4 Line Feed

The Emphasized Print function is deactivated when the printer receives a carriage return. This is in addition to the normal command to disable it. Also, the greater than (>), less than (<), and backslash (\) characters are printed as an underscored space.



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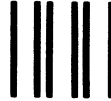
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