 1 ON-OFF LINE. (Changes the on/off-line status).
 2 SHIFT. (Access to secondary switch functions).
 3 FONT SELECT. (Press once to view current font, cycle for other fonts).
   The four resident fonts are:

No.	Font	Character spacing
1	Letter Gothic 12	10 CPI or 12 CPI
2	Letter Gothic 16.7	16.7 CPI
3	Prestige Elite 12	10 CPI, 12 CPI, or proportional
4	Courier 10	10 CPI or proportional

 (NOTE: This switch cannot be used to select a font that has been
        rotated or downloaded from a computer).
 4 MODE. (Use Shift key to change mode of LP1000 [see setup card]).
 5 FORM FEED. (Ejects paper and dumps print buffer).
 6 PORT/LAND. (Press once for current page format info [indicator 2]...
   Press repeatedly for other page formats)

   The four modes are: Indicator 2 displays:
   1. Normal (WP) mode, portrait (vertical)   "nP"
   2. Normal (WP) mode, landscape (horizontal)   "nL"
   3. Line printer (DP) mode, portrait   "dP"
   4. Line printer (DP) mode, landscape   "dL"

 (NOTE: When set to DP landscape mode, the left margin changes, although
        tab settings remain the same. Thus it may be necessary to change
        tab settings. The following chart shows the default settings for
        each mode:

	WP MODE (both)	DP MODE (portrait)	DP MODE (landscape)
Form Length	MAX	66 lines	66 lines
Top Margin	Top Limit	Top Limit	Top Limit
Bottom Margin	Bot. Limit	Bot. Limit	Bot. Limit
Left Margin	Left Limit	Left Limit	15 x HMI
Right Margin	Right Limit	132 x HMI	151 x HMI
HMI	Default	16.7 CPI	15 CPI
VMI	Default	6.25 LPI	8.3 LPI
FONT	Default	16.7/15 CPI	16.7/15 CPI

 7 HEX. PRINT. (Pressed together with SHIFT for hex dump mode. To cancel hex
   dump mode, switch LP 1000 back off-line, then press Hex. Press together
   with SHIFT again. Any data left in buffer prints out at this time).
 8 TEST. (Press when Off-line will print a "Summary Sheet").
 9 RESET. (Press together with SHIFT restores default power-on settings).
10 PAPER SIZE SELECTOR SWITCH. (A4, A5, B5, legal, letter and half-letter.
   (NOTE: When using paper between standard sizes, set to the * position.)
11 READY INDICATOR. (Flashes for warm-up, steady is ready, out for error).
12 POWER INDICATOR. (Lit when power is properly connected and ON)
13 CONTROLLER STATUS INDICATOR. (Flashes controller errors...Appendix A).
14 SERVICE CALL INDICATOR. (Lit when problem requires a technician).
15 PAPER JAM INDICATOR. (Flashes when paper is jammed...Appendix A).
16 CHANGE OPC MAGAZINE. (OPC magazine needs replacement...See Chapter 3)
17 ADD TONER INDICATOR. (Flashes when the level of toner gets low).
18 ADD PAPER INDICATOR. (Flashes when no paper in tray/paper lever is up).
19 ON-LINE INDICATOR. (ON when printer is on-line, OFF when it is not).
20 INDICATOR 1. (Used when setting the printer mode, also flashes errors).

21 INDICATOR 2. (Used when setting printer modes, also displays parameters
   during mode setting).
22 BUFFER INDICATOR. (Lights when any data is in the LP 1000 buffer).

                      PRINTER MODE SETTINGS
You can change the default mode settings at power on, in addition to making
temporary changes during the printing process.
Twelve menus can be changed. Each menu has several items to choose from.
First designate the menu to change, and then select the item for that menu.
For details on the menu and item numbers, see the Mode Setting Table in
this chapter.

1. Turn on the LP 1000's power.
2. Set the LP 1000 off-line.
3. Press the SHIFT and Mode switches together to place the LP 1000 in the
   mode setting state. Indicator 1 displays an S, and Indicator 2 displays
   a P, for "SETTING PRINTER."
4. Press the SHIFT and RESET switches simultaneously for default change
   For temporary change, press the FF switch. The display on Indicator 2
   changes to 1 for menu 1, and the display on Indicator 1 changes to the
   item number currently selected. If no change is needed, press the
   feed switch to advance to the next menu.
5. Press the Port/Land switch to advance the item number. Press the switch
   repeatedly until the number of the desired item appears.
6. When the indicators show the desired mode setting, press the FF switch
   to set that mode. The menu number advances to the next menu, and the
   item number changes to the currently selected number.
7. Repeat steps 5 and 6 to make all desired changes to the mode settings.
8. When you finish changing the mode settings, press the Mode switch
   together with SHIFT. This places the LP 1000 in the newly established
   mode.

                       MODE SETTING TABLE
MENU 1:   EMULATION   [1]
        ITEM 1: * TANDY DP
             2:   TANDY WP
             3:   IBM PROPRINTER
             4:   IBM WHEELPRINTER
             5:   HP LASERJET+

MENU 2:   PRINT ORIENTATION   [2]
        ITEM 1: * PORTRAIT, NORMAL (WP) MODE
             2:   LANDSCAPE, NORMAL (WP) MODE
             3:   PORTRAIT, LINE PRINTER (DP) MODE [3]
             4:   LANDSCAPE, LINE PRINTER (DP) MODE [3]

MENU 3:   LINE TERMINATION   [2] [4]
        ITEM 1: * CR=CR,   LF=LF,   FF=FF(+CR)
             2:   CR=CR+LF, LF=LF,   FF=FF(+CR)
             3:   CR=CR,   LF=LF+CR, FF=FF+CR
             4:   CR=CR+LF, LF=LF+CR, FF=FF+CR

MENU 4:   AUTO WRAP   [2]
        ITEM 1: * AUTO WRAP DISABLE
             2:   AUTO WRAP ENABLE

```
MENU 5:      CHARACTER SET       [2] [3] [5]
      ITEM 1: * TANDY
            2:   ASCII
            3:   IBM SET 1
            4:   IBM SET 2

MENU 6:      LINE PITCH          [2] [3]
      ITEM 1: * 6 LPI
            2:   3 LPI
            3:   8 LPI
            4:   depends on selected FONT

MENU 7:      CHARACTER PITCH (1) [2] [3]
      ITEM 1: * LETTER GOTHIC-10
            2:   LETTER GOTHIC-12
            3:   LETTER G0THIC-16.7
            4:   PRESTIGE ELITE-10
            5:   COURIER-10
            6:   PRESTIGE ELITE-12

MENU 7:      FONT                [2] (Laserjet+ mode only)
      ITEM 1:   COURIER-10
            2:   PRESTIGE ELITE-12
            3:   LETTER G0THIC-16.7
            4:   CENTURY-PS

MENU 8:      CHARACTER PITCH (2) [2] [3]
      ITEM 1:    PRESTIGE ELITE-PS
            2:    COURIER-PS

MENU 9:      NATIONALITY (1)     [2] [3]
      ITEM 1: * U.S.A.
            2:   GERMANY
            3:   FRANCE
            4:   NORWAY
            5:   SWEDEN
            6:   DENMARK

MENU A:      NATIONALITY (2)     [2] [3]
      ITEM 1:   FINLAND
            2:   ITALY
            3:   SPAIN
            4:   U.K.
            5:   BELGIUM
            6:   HOLLAND

MENU B:      ADDRESSABLE AREA    [2] [3]
      ITEM 1: * PRINTABLE AREA
            2:   WHOLE PAPER

MENU C:      BITMAP MODE         [1]
      ITEM 1: * PARTIAL BITMAP
            2:   FULL BITMAP

Remarks:     [1] -Set when power is turned on or Reset switch
                  pressed.
             [2] -Set when power is turned on, Reset switch
```

pressed or when LP 1000 receives the reset command. * *
                       **IBM Wheelprinter mode: 27 ``J'' ``K''
                       LaserJet+ mode: 27 ``E''
            [3] -No function in the LaserJet+ mode.
            [4] -In IBM Proprinter and IBM Wheelprinter modes,
                carriage return is always added to FF.
                    * -Factory mode setting.
            [5] -In both IBM modes only the IBM character sets
                1 and 2 are available although the indicator
                shows 1 (for TANDY) or 2 (ASCII). If you select
                1 or 2 at menu 5, IBM set 1 is selected.

    MENU 1:   EMULATION
            This mode setting determines the emulation mode in which the
            LP 1000 operates. Select Item I for Tandy DP mode, Item 2
            for Tandy WP mode, Item 3 for IBM Proprinter mode, Item
            4 for IBM Wheelprinter mode, or Item 5 for HP LaserJet+
            mode.

    MENU 2:   PRINT ORIENTATION
            This setting determines the default page orientation, either
            portrait or landscape. It also determines whether the LP 1000
            operates in the WP (word processing) mode or the DP (data
            processing) mode. Select Item I for the WP portrait mode, Item
            2 for the WP landscape mode, Item 3 for the DP portrait mode
            or Item 4 for the DP landscape mode.

            In the WP mode, line and page length, character spacing, and
            line pitch vary according to margin settings, HMI, and VMI.
            Orientation of the default font (the font selected by Item 7)
            is automatically rotated to match the page orientation.

            In the DP mode, the line spacing and character pitch are auto-
            matically adjusted to provide a line length of 132 characters/
            line (136 characters/line with landscape) and a constant 66
            print lines per page (both portrait and landscape). Data prints
            in the font with the pitch closest to 16.7 cpi (Letter Gothic
            16.7, if no closer font is available), and character orienta-
            tion is automatically rotated to match the page orientation.

            The page formats provided by the DP mode are suitable for use
            with many database programs.

Note: When set to the DP landscape mode, the left margin also changes,
although tab settings remain as is. Thus you may find it necessary to
change tab settings. The following chart shows the default settings when
you enter each mode.

	WP MODE (both)	DP MODE (portrait)	DP MODE (landscape)
Form Length	MAX	66 lines	66 lines
Top Margin	Top Limit	Top Limit	Top Limit
Bottom Margin	Bot. Limit	Bot. Limit	Bot. Limit
Left Margin	Left Limit	Left Limit	15 x HMI
Right Margin	Right Limit	132 x HMI	151 x HMI

```
| HMI            | Default      | 16.7 CPI     | 15 CPI       |
| VMI            | Default      | 6.25 LPI     | 8.3 LPI      |
| FONT           | Default      | 16.7/15 CPI  | 16.7/15 CPI  |
|_____|_____|_____|_____|
```

MENU 3:   LINE TERMINATION
          This setting determines how the LP 1000 responds to carriage
          returns, line feeds, and form feeds. Depending on the Item
          selected, the LP 1000 automatically adds a line feed or
          carriage return to carriage return, line feed, or form feed
          codes received.

          Item 1: Carriage return, line feed, and form feed codes all
                   operate in the normal manner.
          Item 2: A line feed is added to each carriage return code
                   received. Line feed, and form feed codes operate in
                   normal manner.
          Item 3: A carriage return is added to each line feed and form
                   feed code received. The carriage return code operates
                   in the normal manner.
          Item 4: A line feed is added to each carriage return code
                   received. A carriage return is added to each line feed
                   and form feed code received.
Note: In IBM Proprinter and IBM Wheelprinter modes, carriage return is
always added to FF.

MENU 4:   AUTO WRAP
          This setting determines whether printing automatically wraps
          around when the active position (AP) moves beyond the right
          page edge. Select Item I to disable auto wrap or Item 2 to
          enable it.

MENU 5:   CHARACTER SET
          This setting selects the character set. Select from among the
          following settings:
          Item 1 - Tandy
          Item 2 - ASCII
          Item 3 - IBM Character Set I
          Item 4 - IBM Character Set 2
Note: In both IBM modes only the IBM character sets 1 and 2 are available
although the indicator shows 1 (for TANDY) or 2 (ASCII). If you select 1
or 2 at menu 5, IBM set 1 is selected.

MENU 6:   LINE PITCH
          This setting determines the pitch of a line feed, or the line
          spacing. Select from among the following settings:
          Item 1 - 6 lines per inch
          Item 2 - 3 lines per inch
          Item 3 - 8 lines per inch
          Item 4 - Line spacing defined in the current font

MENU 7-8: CHARACTER PITCH
          This setting determines the font and the HMI. Select from
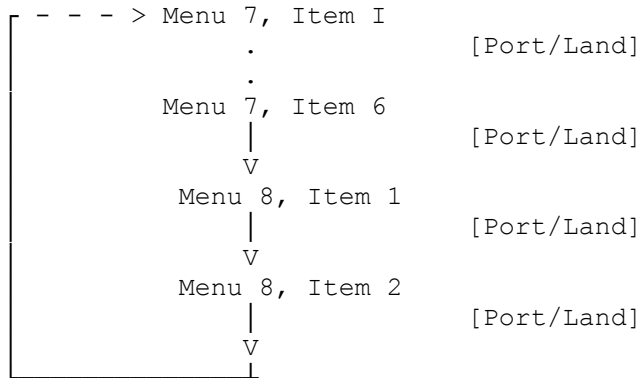   among the following settings:
          Menu 7   Item 1 - Letter Gothic, 10 cpi
           " "   Item 2 - Letter Gothic, 12 cpi

```
         " "         Item 3 - Letter Gothic, 16.7 cpi
         " "         Item 4 - Prestige Elite, 10 cpi
         " "         Item 5 - Courier, 10 cpi
         " "         Item 6 - Prestige Elite, 12 cpi
        Menu 8      Item 1 - Prestige Elite, proportional
         " "         Item 2 - Courier, proportional
Note: "Character pitch" is actually one menu that is divided into two
parts for technical reasons. Only one item can be selected from the above
list. Use the Port/Land switch to move between the two menus, not the
Form Feed switch.


        ┌ - - - > Menu 7, Item I
        │             .              [Port/Land]
        │             .
        │          Menu 7, Item 6
        │             │              [Port/Land]
        │             V
        │         Menu 8,  Item 1
        │             │              [Port/Land]
        │             V
        │         Menu 8,  Item 2
        │             │              [Port/Land]
        │             V
        └──────────────┘


    MENU 7:   FONT (Laserjet + mode only)
          This setting determines the font and HMI. Select from among
          the following settings:
          Item 1 - Courier, 10 cpi
          Item 2 - Prestige Elite, 12 cpi
          Item 3 - Letter Gothic, 16.7 cpi
          Item 4 - Century, proportional

    MENU 9-A: NATIONALITY
          This setting determines which of the 12 country code sets is
          used. Code sets selected for each combination of menu and
          item are:
          Menu 9      Item 1 - U.S.A.
           " "         Item 2 - Germany
           " "         Item 3 - France
           " "         Item 4 - Norway
           " "         Item 5 - Sweden
           " "         Item 6 - Denmark
          Menu A      Item 1 - Finland
           " "         Item 2 - Italy
           " "         Item 3 - Spain
           " "         Item 4 - United Kingdom
           " "         Item 5 - Belgium
           " "         Item 6 - Holland
Note: "Nationality" is actually one menu that is divided into two parts
for technical reasons. Only one item can be selected from the above
list. Use the Port/Land switch to move between the two menus, not the
Form Feed switch.


        ┌ - - - > Menu 9, Item 1
        │             .              [Port/Land]
        │          Menu 9, Item 6
        │
```
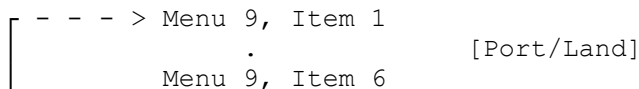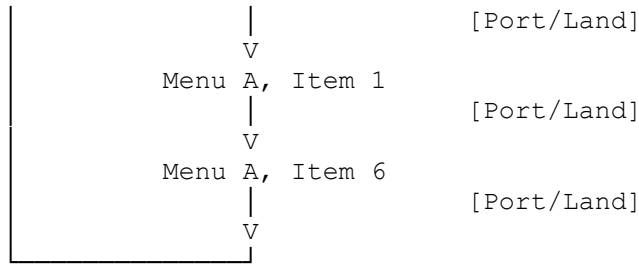
```
│                          │                    [Port/Land]
│                          V
│                  Menu  A,  Item  1
│                          │                    [Port/Land]
│                          V
│                  Menu  A,  Item  6
│                          │                    [Port/Land]
│                          V
└──────────────────────────┘
```
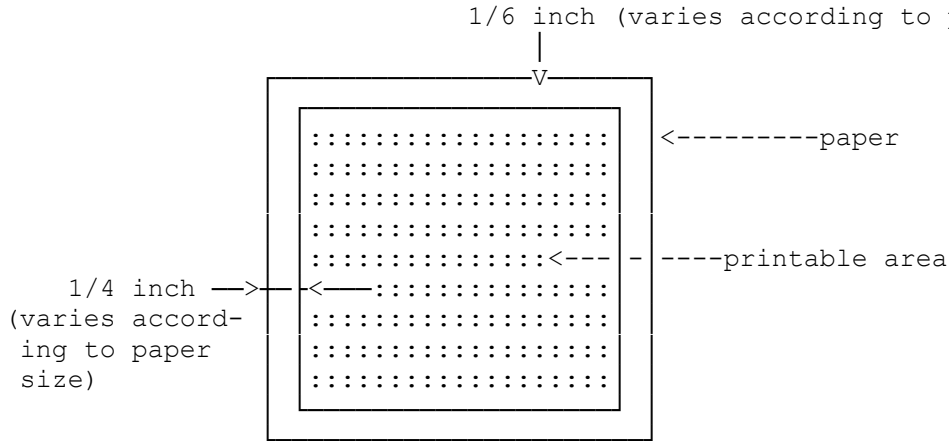
MENU B: ADDRESSABLE AREA
           This setting determines the range of points on the paper that
           can be addressed by the AP movement commands. When Item 1 is
           selected, the addressable area and printable area are the same.
           When Item 2 is selected, the addressable area covers the entire
           area of the paper.
Note: With Item 1, the default page length of letter-size paper is 63
lines. With Item 2 it is 66 lines. Item 2 is more suitable when using the
LP 1000 with database programs designed for 66-1ine paper.

           The grey area in the figure below shows the printable area. The
           LP 1000 cannot print in the edge area. However, when the whole
           paper is selected as the addressable area, the LP 1000 ignores
           the limits of the printable area in calculating AP movements.
           This makes it possible to use the LP 1000 with application
           software that is designed for a particular size of paper.

```
                      1/6 inch (varies according to paper size)
                               │
     ┌─────────────────────────V─────────────┐
     │  ┌─────────────────────────────────┐  │
     │  │:::::::::::::::::::::::::         │  │ <---------paper
     │  │:::::::::::::::::::::::::         │
     │  │:::::::::::::::::::::::::         │
     │  │:::::::::::::::::::::::::         │
     │  │:::::::::::::::::<--- │ -│----printable area
1/4 inch ──>│ <──:::::::::::::::::
(varies accord-│:::::::::::::::::::::::::
  ing to paper │:::::::::::::::::::::::::
  size)        │:::::::::::::::::::::::::
     │  └─────────────────────────────────┘  │
     └───────────────────────────────────────┘
```

           This setting does not affect the size of the printable area.
           If Item 2 is selected and an attempt is made to print characters
           in the non-printable area, the characters will be printed on the
           edge of the printable area. As a result, characters may be over-
           printed. When in graphics printing mode, print data that would
           cause printing outside the printable area is ignored and lost.

MENU C: BITMAP MODE
           This determines which bitmap mode the LP 1000 operates in. Select
           item 1 for the partial bitmap mode or item 2 for full bitmap mode.
           The factory setting is the partial bitmap mode.

           Occasionally, error 15 or 16 (band too complex to print or page
           exceeds page buffer memory) is displayed when you execute partial

bitmap mode, graphics mode or bit image mode. If this happens, change the bitmap mode to the full bitmap mode.

Note: When executing the full bitmap mode, bear the following points in mind:
- Printing speed is reduced (about 4 ppm).
- If there is only between 200k and 300k bytes left in the user's memory, the printer cannot execute commands to print in landscape, to use italic font, or to download fonts. These commands are ignored and the following errors are displayed:
    Error 21 Not enough memory to rotate font
    Error 23 Not enough memory to download font
    Error 25 Not enough memory for italic font
These errors are printed on the summary sheet. The error indicator turns off after the summary sheet is printed.
- If there is still data in the buffer when bitmap mode is changed, the data prints before the mode change takes place.
- When the bitmap mode is changed the downloaded fonts are deleted, and the font, page orientation, and emulation return to the default settings.

(dkh-07/27/93)