What You Get Out Of Your IBM Typewriter Depends On What You Put Into It.

Lexmark manufactured the ribbon that came with your IBM Wheelwriter Typewriter when it was new. Lexmark designs IBM ribbons in tandem with the machines that use them. The result is high-yield printing of the highest quality. Remember when it's time to replace your ribbon, buy IBM supplies by Lexmark.

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IBM
WHEELWRITER 2500
BY LEXMARK

User's Guide

LEXM▲RK

REFERENCE	
Dealer Name	
Dealer Phone Number	

PRODUCT INFORMATION	
Typewriter Name	IBM Wheelwriter 2500
Machine Type *	
Serial Number (S/N) *	

HELP / ASSISTANCE	
Technical Problems	Contact your local dealer
Lexmark Technical Support (US)	606-232-3000
Lexmark Dealer Referral (US)	800-358-5835
Comments?	Return card at back of manual or write to us at the address below

* Machine Type and Serial number can be found inside the
typewriter as shown under "Serial Number" on page 7-15.

Note: Intentionally removing, destroying or altering the Lexmark
serial number may be a violation of consumer laws. Further, Lexmark
will not honor warranty claims for machines without the original,
factory affixed serial numbers. If your typewriter does not have a
factory affixed serial number, you should contact the dealer that sold
you the machine immediately.

Lexmark International, Inc.
Typewriter Customer Satisfaction, Dept. J30/005
740 New Circle Road NW
Lexington, KY 40511 USA

Congratulations!

You have just purchased one of the best typewriters ever made! The
IBM Wheelwriter Typewriter by Lexmark is designed to be easy to
use and to provide you with many years of dependable service. We
are sure you will be pleased with its quality, from the easy to use
functions to its outstanding print quality. For your continued satisfac-
tion with print quality, you should always use genuine IBM ribbons
and printwheels by Lexmark for your typewriter.

Please fill out the Reference and Product Information on the opposite
page for future use (should you ever need service or help with any of
the typewriter's operations).

Please help us learn more about your typing needs by completing the
customer response card (U.S. only) that was included with your type-
writer. For customers outside the U.S., please write to us at the
address shown on the opposite page. Your input helps us contin-
uously improve our products for future customers. If you have any
comments later, please write to us at the address inside the front
cover.

IBM typewriters have led the industry with outstanding features,
quality and reliability for over half a century. Lexmark International,
Inc. was created in 1991 from a division of IBM and is an independent
company that develops, manufactures and markets IBM typewriters,
IBM personal and network printers, information processing supplies,
notebook computers and keyboards.

Thank you for being our customer and enjoy your new typewriter!

The Lexmark Typewriter Team

About Your Typewriter

You are about to experience typing with your new IBM®
Wheelwriter® 2500 Typewriter.

Designed with you in mind, this typewriter includes many useful func-
tions such as Word Underline, Word Erase, Justification, Bold Print,
Tab/Column Adjust, Find, Change, Mark (forms), and Spell Check II
with Spell Assist. These functions give you excellent typing quality
and make your work more enjoyable.

The typewriter has a one-line display with adjustable contrast that
you can tilt to a comfortabe viewing angle. Paper, carrier and cursor
movement keys, located to the right of the keyboard, allow you to
move quickly and easily—up, down, left, or right to any location on the
paper or the display.

The storage function allows you to store jobs for later use. The type-
writer has a storage capacity of approximately 46,000 bytes (about 15
to 23 pages). After you store a job, you can play it back and revise it
without retyping the entire job. You no longer have to retype fre-
quently used jobs, such as form letters, repetitive paragraphs, and
statistical reports.

Your typewriter has a PowerWise™ mode which conserves energy
when the typewriter is ON but not in use. The typewriter reduces
power consumption when inactive for more than a 10-minute time
interval.

You can enhance your IBM Wheelwriter 2500 Typewriter by adding
the following options:

- Diskette Option or Printer Option
- Dust Cover
- Sound Hood

Contents

Basic Operations

Parts of the Typewriter

Page End Indicator Printwheel Paper Scale Platen Paper Release Lever On/Off Switch Paper Bail Load Lever

Margin/Pitch Scale Code Key Spacebar Correction Key Display

Keyboard Layout - U.S.

Keyboard Layout - United Kingdom

On/Off Switch
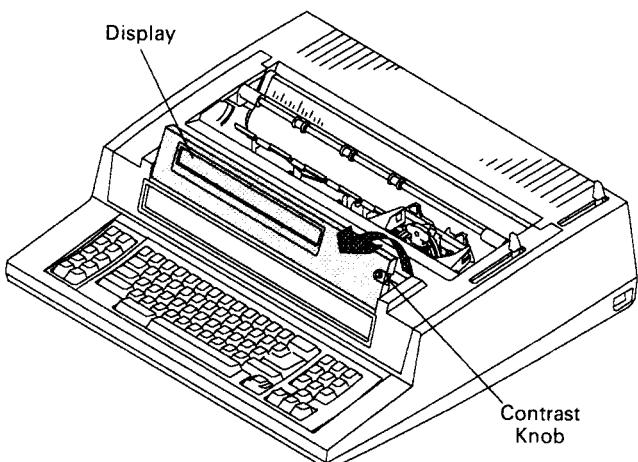
To turn the typewriter on or off, press the switch located on the right side of the typewriter. Pushing the switch toward the | turns the typewriter on while pushing the switch towards the O turns the typewriter off.

Helpful Hints

- Install a printwheel before you type. If you do not, the WHEEL indicator comes on. See "Changing the Printwheel" on page 7-9.
- Do not turn the typewriter off when the BUSY indicator is on.
- Wait five seconds after turning the typewriter off before you turn it back on. This allows the typewriter to reset.
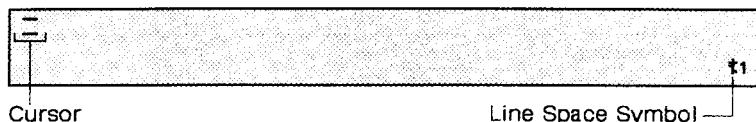
Display

As you type, occasionally look at the display for messages or indicators, or to check your typing.

Display

Contrast Knob

1. Pull the display forward to raise it.
2. Tilt the display to a comfortable viewing angle to reduce glare.
3. Rotate the contrast knob on the right side of the display to adjust the contrast until the characters are clearly readable. The display temperature and room light can affect how characters appear on the display.

The display shows 71 characters. If you type more than 71 characters on a line, the text line clears and shows the last five characters you typed, then shows each additional character as you type it.

Cursor   Line Space Symbol
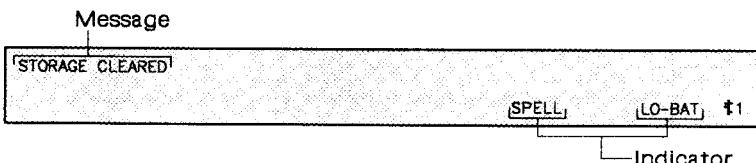
The *cursor* is the pair of horizontal blinking lines on the display. The cursor rests on the current typing position. The **Line Space** symbol and number on the right end of the display indicate the current line space setting (1 for single spacing, for example).

The display shows *messages* to help you use typewriter functions and inform you of typewriter conditions. For example, the STORAGE CLEARED message comes on if typewriter storage is empty.

An *indicator* is a word or abbreviation that shows you which typewriter function is active. For example, SPELL indicates that Spell Check II is on.

Each time you turn the typewriter on, wait for the typewriter to beep and the line space symbol to be displayed before you begin typing.

If the LO-BAT indicator comes on when you turn the typewriter on, see "Checking the Batteries" on page 7-12.

Message

STORAGE CLEARED   SPELL   LO-BAT   ↑1

Indicator

Display Symbols

The following symbols may appear during normal operation of the typewriter.

Symbol	Meaning
▬	Bold. This symbol is displayed above each character typed using Bold.
▐▌	Centering. This symbol is displayed at the beginning and end of centered text.
▟	Decimal Tab (Begin). This symbol shows where the decimal tab text begins.
▐▌	Decimal Tab (End). This symbol shows where the decimal tab text ends.
▟	Indent Clear. This symbol is displayed when you hold down **Code** while you press **CRtn** to end indenting. The symbol is displayed *only* when revising a stored job.
▐▌	Indent Left. This symbol is displayed when you hold down **Code** while you press **Tab** to set a temporary left margin.
▟	Indent Right. This symbol is displayed when you hold down **Code** while you press **RMar** to set a temporary right margin.
▟	Line Space. This symbol is displayed next to the current line space setting (1, 1½, 2, or 3).
▟▟▟	Mark. These symbols are displayed when you hold down both **Code** and **Shift** while you press **M** to mark a form layout. These symbols are displayed *only* when revising a stored job.
▟	Pitch Change. This symbol is displayed when you resume typing after changing pitch.
▟	Required Carrier Return. This symbol shows a carrier return that always plays back. For example, if you press **CRtn** before the right margin, the carrier return is required. The typewriter always plays back that carrier return at that point in the job. If several symbols are displayed together and/or a symbol is displayed at the beginning of a line, one blank line will play back for each symbol.
▟	Required Page End. This symbol is displayed when you hold down **Code** while you press **E** to end a page of a multipage job. This symbol is displayed *only* when revising a stored job.
▟	Right Flush. This symbol shows you where right flush text begins and ends.

Symbol	Meaning
▟	Subscript. This symbol is displayed when you hold down **Code** while you press **H** to type a subscript.
▟	Superscript. This symbol is displayed when you hold down **Code** while you press **Y** to type a superscript.
▟	Stop Code. This symbol is displayed before and after a stop code comment. If you did not type a stop code comment, two symbols appear to show the position of the stop code.
--> <--	Stop Code. During playback, these symbols are displayed when playback stops for a stop code and you have not typed a stop code comment. If you typed a stop code comment, it is displayed *between* the symbols.
▟	Tab. This symbol is displayed when you press **Tab**.
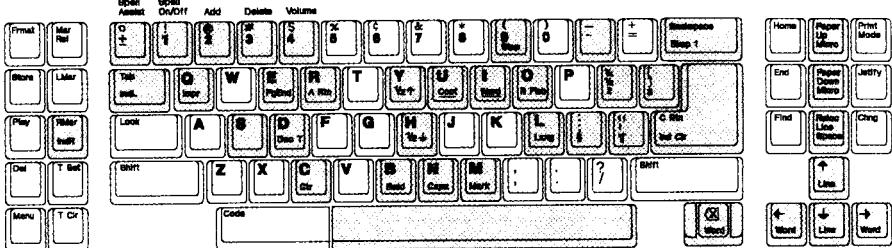
Display Indicators

Display	Description	Page
APAGE	Auto Page End on	4-8
ARTN	Automatic Carrier Return on	2-1
BOLD	Bold Print on	2-8
BUSY	Typewriter Busy	1-4, 8-7
CAPS	Caps on	1-17
CENTER	Centering on	2-5
CONT	Continuous Underline on	2-4
DEC T	Decimal Tab on	2-11
DL PRT	Delay Print Mode on	2-13
HYPHEN	Hyphenation on	2-1, 5-2
IMPR n	Impression Level (1, 2, or 3)	1-16
JSTIFY	Justification on	2-14
KYBD nnn	Keyboard (number)	2-17
1, 1½, 2, 3	Line Spacing	1-9
LO-BAT	Low Battery	8-6, 7-12
NO PRT	No Print Mode on	2-13
PLAY	Play	3-4
RFLUSH	Right Flush on	2-6
SHIFT	Shift	1-17
SPELL	Spell Check II on	6-2
STORE	Storage open	3-1
SUSPND	Suspended Playback	5-12
T ADJ	Tab/Column Adjust on	4-10
WHEEL nn	Install Wheel (pitch number)	2-15, 3-5
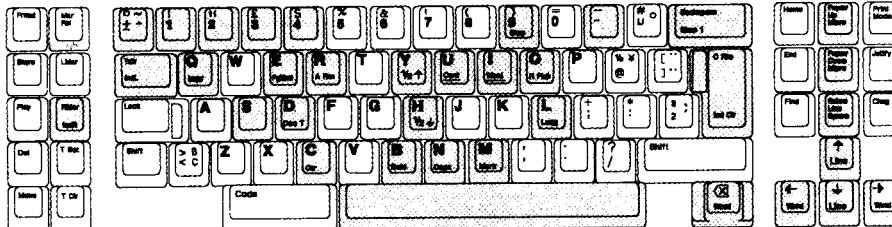
Code Key

The keys with green lettering (shaded in the chart below) are used in combination with the **Code** key to print special characters and turn special functions on and off. You can also use the **Spacebar**, **Paper Bail Load Lever**, **Hyphen** (-) key, and **S** key with the **Code** key.

U.S. Keyboard

United Kingdom Keyboard

To use these key combinations, press and hold down **Code** while you press the function key.

Important: If you accidentally enter a function, repeat the action to turn the function off. If you do not know which keys you pressed:

1. Check the display for an indicator.
2. Find the indicator on page 1-7.
3. Turn to the page listed and follow the instructions for turning the function off.

Press the **Correction** key to clear other messages and menus.

Line Space Key

When you turn the typewriter on, the line space symbol and a number appear on the right side of the display. You can set the line spacing to 1, 1½, 2, or 3.

Line Space Symbol
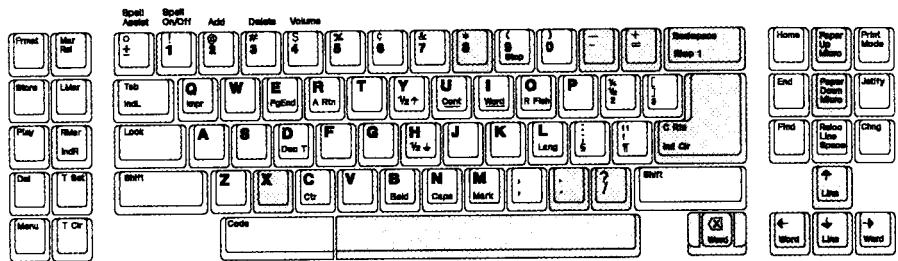
Hold down **Code** while you press **Reloc** (**Line Space**) until you select the desired line spacing.

- The number displayed next to the line space symbol changes to indicate the spacing selected.
- The line space setting is saved when you turn the typewriter off.
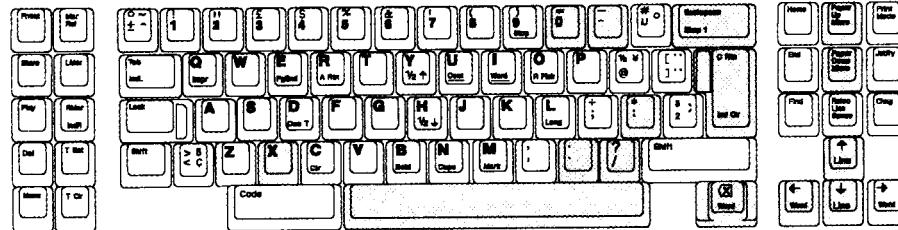
Typematic (Repeat) Keys

Typematic keys have both a single and *repeat* action. Press the desired typematic key once for a single action or hold the key down for repeat action. Typematic keys are shaded in the illustration below.
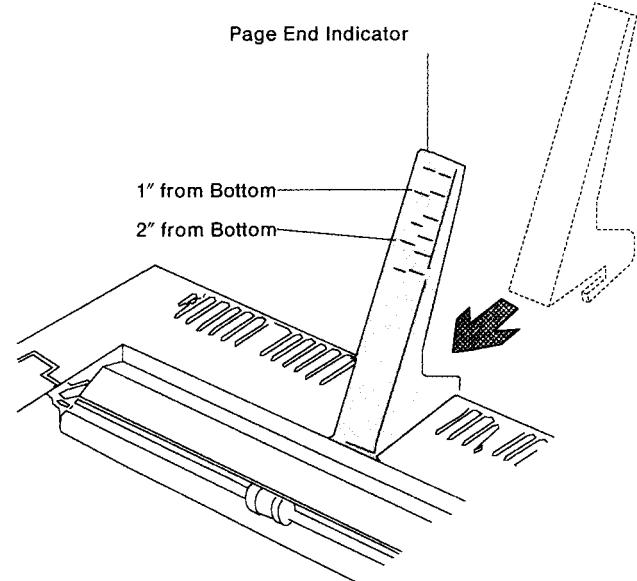
U.S. Keyboard

United Kingdom Keyboard

Page End Indicator and Scale

Insert the page end indicator by sliding the indicator into the air vents on top of the typewriter. Make sure you slide the indicator all the way forward.
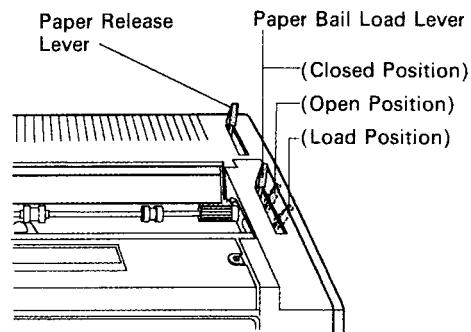
* As you type, the top of the paper comes out of the typewriter and moves up to the indicator.

* The lines on the indicator tell you approximately how much space remains to the bottom of the paper.

* The left side of the scale is marked in inches. It tells you approximately how much space remains to the bottom of 11 inch (279) paper.

* The right side of the scale is marked in centimeters. It tells you approximately how much space remains to the bottom of A4 paper (297 mm 11.7 inch)).

Keyboard Clicker

Turn the keyboard clicker on for more keyboard "feedback" while typing. You will hear the *click* each time you press a key.

Hold down **Code** while you press **S** to turn the clicker on or off.

Inserting and Removing Paper

Paper Release Lever   Paper Bail Load Lever
—(Closed Position)
—(Open Position)
—(Load Position)

Inserting Paper

Use the **Paper Bail Load Lever** to load paper semiautomatically. The lever has three positions: closed, open, and load.

1. Turn the typewriter on.
2. Push the *Paper Release Lever* all the way back.
3. Align the paper in the typewriter using the indicator marks on the paper table.
4. Pull the **Paper Bail Load Lever** to the load position. When the paper begins to feed, release the **Paper Bail Load Lever**. The paper feeds to the top margin position.
5. Push the **Paper Bail Load Lever** back until it holds the paper against the platen.
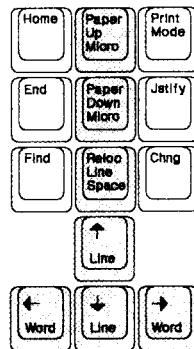
You can also use the **Paper Bail Load Lever** to change the top margin setting. See "Changing the Top Margin" on page 2-2.

Removing Paper

1. Pull the **Paper Bail Load Lever** to the open position.
2. Pull the *Paper Release Lever* toward you, then lift the paper out of the typewriter.
3. Push the *Paper Release Lever* and **Paper Bail Load Lever** back to the closed position.

Paper, Carrier and Cursor Movement Keys

The paper, carrier and cursor movement keys allow you to move rapidly from one point to another. You now have the advantage of express movement both right and left as well as up and down on a page.

To move the paper:

- Press **Paper Up** or **Paper Down** to move paper one-half line. Hold down **Paper Up** or **Paper Down** to move quickly up or down the page.
- Hold down **Code** while you press **Paper Up (Micro)** or **Paper Down (Micro)** to move paper one micro-index (1/48 in) for precise alignment.
- Press ↑ or ↓ to move paper the number of lines determined by the line space setting. Hold down ↑ or ↓ to move quickly from line to line on a page.
- Hold down **Code** while you press ↑ (**Line**) or ↓ (**Line**) to move from the current line, across blank space on the page, to the next line of existing text.

To move the carrier and cursor:

- Press ← or → to move across the current line. Hold down ← or → to move quickly across a line.
- Hold down **Code** while you press → (**Word**) to move to the next word.
- Hold down **Code** while you press ← (**Word**) to move to the previous word.
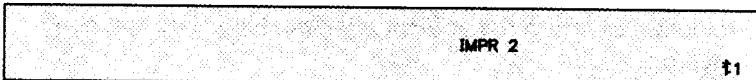
Relocating Last Position

If you have moved the carrier or cursor to previously typed text, press **Reloc** (Relocate) to return to the last typing position. You can now continue typing.

Impression Control

You can set the impression control to one of three settings to suit your typing needs: light (1), normal (2), and heavy (3). For example, type with the setting at 1 to achieve the highest quality corrections, or change the impression to 3 to type carbon copies. When you turn the typewriter on, the impression control automatically sets to 2 (normal).

To set the impression control, hold down Code while you press Q (Impr) repeatedly. The IMPR indicator and the impression control setting are displayed while you hold down Code.

```
                         IMPR 2
                                              ↑1
```
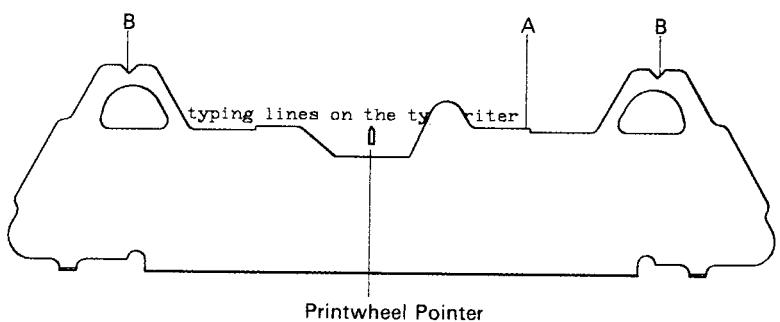
Cardholder

The cardholder holds paper, cards, and envelopes against the platen.

The printwheel pointer shows where the next character will print.

The portion (A) at the top of the cardholder indicates the base of the typing line. As the typewriter prints, the bottom of each character rests just above the line.

Printwheel Pointer

Use the notches (B) to draw vertical lines. Move to the point where you want to draw a line, then hold a pencil against one of the notches while pressing Paper Up, Paper Down, ↑, or ↓ to move the paper.
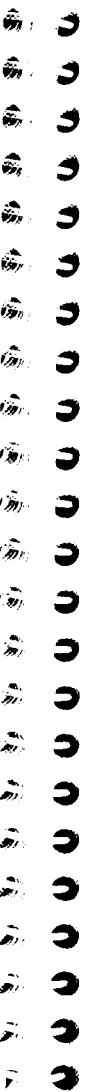
Shift and Lock Keys

Use the Shift or Lock key to type all characters in uppercase. Lock allows you to type continuously in uppercase without pressing Shift for each capital letter.

1. Press Lock to type in uppercase. The SHIFT indicator comes on.
2. Press either Shift key to return to normal typing. The SHIFT indicator goes off.

Note: Turning on the Caps function cancels Lock and turns the CAPS indicator on.

Caps Key

When Caps is on, *only* alphabetic characters (*a* through *z*) are capitalized. All other characters print in lowercase.
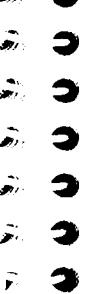
Hold down Code while you press N (Caps) to turn Caps on or off. The CAPS indicator comes on when Caps is on.

Automatic Pitch Selection

The typewriter automatically selects the correct pitch when you install a printwheel. Pitch determines the number of characters typed per horizontal inch.
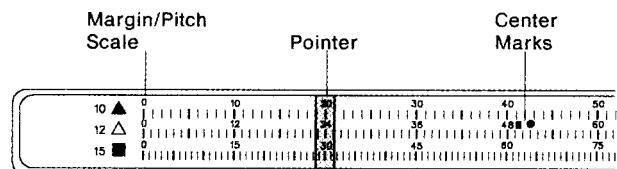
Pitch (Type Size)	Characters Per Inch	Pitch Symbol	Print Example
10P (Pica)	10	▲	This is a sample.
12P (Elite)	12	△	This is a sample.
PS (Proportional Spacing)	Varies in Width	●	This is a sample.
15P (Micro Elite)	15	■	This is a sample.

A 10-, 12-, or PS-pitch printwheel prints six lines per vertical inch. A 15-pitch printwheel prints eight lines per vertical inch.

Margin/Pitch Scale

The typewriter has three margin scales: 10 ▲, 12 △, and 15 ■. Use the scale line that matches the pitch symbol on your printwheel. When using a PS ● printwheel, use the margin scale for 12 △ pitch.

An orange pointer moves along the margin/pitch scale to show where the next character will print. The margin/pitch scale also contains centering marks. When the left paper edge lines up with zero on the margin/pitch scale:

• marks the approximate center of paper 215.90 mm (8.50 in) wide.

■ marks the approximate center of paper 210 mm (8.27 in) wide.

Margins

To set the left margin, move the carrier to the desired left margin position, then press **LMar**.

To set the right margin, move the carrier to the desired right margin position, then press **RMar**.

To release the left margin so you can move to the *left* of the margin, return the carrier to the left margin, then press **MarRel**.

Margins are saved when your typewriter is turned off.

Note: If the ARTN indicator is *not* on, or both the ARTN indicator *and* the HYPHEN indicator are on, the typewriter beeps approximately five spaces before the carrier reaches the right margin. See page 2-1.

Tabs

To set a tab, move the carrier to the desired tab position, then press **TSet**. You can set up to 26 tab positions. The display shows up to 15 tab positions at one time. Tabs are saved when your typewriter is turned off. Permanent tabs exist at the left and right margins. You cannot clear these tabs.

To clear a tab, press **Tab** to move to the tab stop you want to clear, then press **TClr**.

To clear *all* tabs, hold down **TClr** while you press **CRtn**, then release the keys.

Margin and Tab Formats

The term *format* means a set of margins and tabs. (For example: left margin 20; right margin 80; tabs 30 and 40.) The Format function allows you to save margin and tab formats for different kinds of jobs in nine different format areas. Use these formats for jobs you type frequently, such as memos, reports, envelopes, and statistical charts.

Displaying Formats

Hold down the **Frmat** key. The current carrier position, margins, tabs, and format area are displayed as long as you hold down **Frmat**.

• The current carrier position represents the carrier position on the margin/pitch scale.
• If you set no margins, the typewriter automatically sets a left and right margin at the carrier limits (for 12 pitch, **LMar** 0 **RMar** 132).

Selecting Format Settings

1. Hold down **Frmat** while you type the number (**1** through **9**) of the desired format area. If you type an incorrect number, press **Frmat** again, then type the correct number.
2. Release the keys, then set the desired margins and tabs. The margins and tabs you set are automatically saved in the format area that you selected in step 1.

Selecting a Format Area

1. Hold down **Frmat** while you type the number of the desired format area.
2. Release the keys.

Practice

Store the following formats as explained above. You will use these formats in practices later in this manual.

Format Area **1**: **LMar** 12 **RMar** 62 **Tab** 15
Format Area **2**: **LMar** 12 **RMar** 55 **No Tabs**
Format Area **3**: **LMar** 12 **RMar** 44 **No Tabs**
Format Area **4**: **LMar** 24 **RMar** 65 **Tab** 51

Erasing Automatically in 10, 12, and 15 Pitch
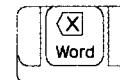
The typewriter has a correction memory that remembers approximately the last 4,000 characters (about one page). Correction memory allows you to easily and automatically erase and correct characters before you remove the paper.

After typing, proofread the page *before* you remove it from the typewriter. The correction memory is cleared if you:
- Turn the typewriter off.
- Use the **Paper Bail Load Lever**.
- Open storage.
- Use the Mark function.

Note: If you remove the paper from the typewriter, use the **Paper Bail Load Lever** to reinsert the paper for corrections. Do not attempt to align the text on the paper with the display. You must use manual erase as explained on page 1-22.

Erasing a Character
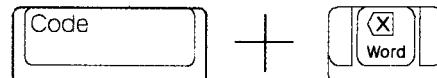
Correction Key

- Press the **Correction** key once to erase one character.
- Hold down the **Correction** key to erase several characters.

If the typewriter does not automatically erase a character when you press the **Correction** key, you may be out of the correction memory. See "Erasing Manually in 10, 12, and 15 Pitch" on page 1-22.

Erasing a Word

After positioning the printwheel pointer at any character in the word or the space following the word, hold down **Code** while you press the **Correction (Word)** key to erase the entire word.

Erasing Manually in 10, 12, and 15 Pitch

To erase characters outside the correction memory:

1. Position the printwheel pointer at the last incorrect character in the word. Align the carrier on the line of type and not between the lines. Use **Code + Paper Up (Micro)** or **Code + Paper Down (Micro)** for precise vertical alignment. Use **Code + Backspace (Bksp1)** for precise horizontal alignment.

```
You may need to eraes one or several characters.
                     |
        Position Printwheel Pointer Here
```

2. Press the **Correction** key and the printwheel spins.
3. Type the incorrect character. The character is erased, and the carrier moves one space to the left.
4. Repeat steps 2 and 3 to erase each incorrect character. Do not press **Backspace** when erasing.
5. Type the correct characters.

Helpful Hints

- If you are using a proportional spacing printwheel, see page 1-23.
- Turn Bold Print on to manually erase bold text.
- Turn Continuous Underline on to manually erase underlined text.
- When manually erasing a word, always erase from right to left.

Inserting an Extra Character

1. Move the carrier to the incorrect word and erase it entirely.
2. Hold down **Code** while you press **Backspace (Bksp1)** two or three times to move the carrier back two or three micro units of space.
3. Type the correct word.

Practice

Type the first line of the example exactly as printed below. Follow the steps above to insert the *l* in the word *should*.

```
The letters shoud be
The letters       be
The letters should be
```

Erasing in Proportional Spacing (PS)

Read this section *only* if you are typing with a proportional spacing (PS) printwheel.
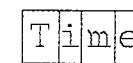
In 10, 12, or 15 pitch, all characters take up the same space; for example, an *i* takes up the same space as an *m*. In *proportional spacing*, the space allotted to each character depends on its width in units. For example, a lowercase *m* is seven units wide and a lowercase *i* is three units wide.

In proportional spacing, it is usually easier to erase the entire word containing an incorrect character, and then retype the word correctly. Use Word Erase (page 1-21) to erase an entire word quickly.

Erasing Manually in Proportional Spacing

1. Position the printwheel pointer at the left edge of the *last character* in the incorrect word. See the printwheel pointer on page 7-1.

   Example

   Position the printwheel pointer here to erase the e.

2. Press the **Correction** key and the printwheel spins.
3. Type the character exactly as you typed it the first time. If the character does not erase completely, hold down **Code** while you press **Backspace (Bksp1)** to reposition the printwheel pointer at the left edge of the *last* character in the word. Repeat steps 2 and 3.
4. Press the **Correction** key, then type the previous character in the word. The carrier backs up and erases the character.
5. Repeat step 4 for each character in the word, then type the correct characters.

Notes:

- When using proportional spacing, do not type a lowercase letter *L* for the number *1*. Always use the number *1*.
- When manually erasing a word, always erase from right to left.

PowerWise Mode (U.S. Only)

Energy Conservation System

POWERWISE
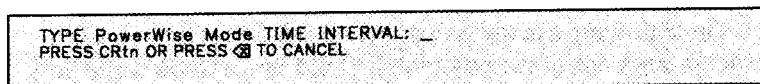
Your typewriter conserves energy when the typewriter is ON but not in use. The typewriter reduces power consumption when inactive for more than a 10-minute time interval.

After the time interval, the typewriter displays the following message to show it is saving energy.

```
                                              POWERWISE
                                                  ▼
```

To change the time interval:

1. Hold down **Code** while you press **X**. The following is displayed.

```
TYPE PowerWise Mode TIME INTERVAL: _
PRESS CRtn OR PRESS ⊗ TO CANCEL
```

2. Type a number from **1** to **90**. The number you type is the number of minutes of inactivity the typewriter waits before entering the PowerWise Mode. A value of **0** (zero) disables the the mode.
3. Press **CRtn** to accept the change or **Correction** key to cancel.

Helpful Hints
- The typewriter beeps if you enter a time interval greater than 90 minutes. The time interval will not change.

Note: The PowerWise Mode is available on typewriters with the U.S. Keyboard Layout (ID 001) shown on page 1-2.

Advanced Operations

Automatic Carrier Return

With Automatic Carrier Return on, the carrier automatically returns when you type a space followed by a character near the right margin. You do not have to press the **CRtn** (Carrier Return) key at the right margin.

Turn Automatic Carrier Return off when typing tables, columns, or forms.

If you use Automatic Carrier Return and want the typewriter to beep near the right margin, turn the HYPHEN indicator on. When the typewriter beeps, decide if you want to hyphenate the word you are typing.

Turning Automatic Carrier Return/Hyphen On and Off

1. Hold down **Code** while you press **R (ARtn)** to turn Automatic Carrier Return on. The ARTN indicator comes on.
2. Hold down **Code** while you press **R (ARtn)** again to turn hyphenation on. The HYPHEN indicator comes on.
3. Hold down **Code** while you press **R (ARtn)** to turn Automatic Carrier Return and hyphenation off. The ARTN and HYPHEN indicators go off.

Practice

Insert a 12-pitch printwheel, then choose format area 4 as saved on page 1-20 (**LMar** 24 **RMar** 65). Type the paragraph below with Automatic Carrier Return on.

Just keep typing and you will see when
your new typewriter automatically returns
the carrier for you.

Helpful Hints

- The carrier does not return automatically if you type only spaces with the **Spacebar**, or if you type characters without spacing.
- Press **CRtn** to end a line *before* the right margin.
- The carrier does not return automatically if text already exists on the following line, even though the ARTN indicator stays on.
- If you plan to revise later, turn Automatic Carrier Return on for all text *except* columns and tables. If Automatic Carrier Return is off when typing into storage, revised text will play back incorrectly.

Changing the Top Margin

When you insert paper, it feeds to the top margin position (first writing line). You can change the position of this top margin.

1. Use the **Paper Bail Load Lever** to insert a sheet of paper. An incorrect top margin position will result if you do not use the **Paper Bail Load Lever**.
2. Position the paper at the desired new first writing line.
3. Hold down **Code** while you pull the **Paper Bail Load Lever** forward. The printwheel spins as the top margin is set.
4. Push the **Paper Bail Load Lever** all the way back and release **Code**. The new top margin is saved when you turn the typewriter off.

Note: To reset the top margin to **1** inch, hold down **Code** and **Shift** while you pull the **Paper Bail Load Lever** forward.

Required Space and Required Hyphen

Use required spaces or required hyphens near the right margin if you do not want Automatic Carrier Return to break the text you are typing. For example, use required spaces or hyphens when typing names, dates, or certain numbers that must stay on the same line.

- Hold down **Code** while you press **Spacebar** to type a required space.
- Hold down **Code** while you press - **(Hyphen)** to type a required hyphen.

Practice

Insert a 12-pitch printwheel, then choose format area 3 as saved on page 1-20 (**LMar** 12 **RMar** 44). Type the examples below with Automatic Carrier Return on.

Words typed *without* required spaces:

```
Victoria's birthday is January
22, 1988.
```

Words typed *with* required spaces:

```
                    Code + Spacebar    Code + Spacebar
                              |    |
        Victoria's birthday is January 22, 1988.
                                        |
                                  Right Margin
```

Words typed *without* required hyphens:

```
Bob's employee number is 123-
456-789.
```

Words typed *with* required hyphens:

```
            Code + - (Hyphen)    Code + - (Hyphen)
                          |    |
Bob's employee number is 123-456-789.
                              |
                        Right Margin
```

Underlining

Continuous Underline

1. Hold down **Code** while you press **U** (**Cont**) to begin underlining. The CONT indicator comes on.
2. Type the text you want underlined. All words and spaces are underlined as you type.
3. Hold down **Code** while you press **U** (**Cont**) to end underlining. The CONT indicator goes off.

Word Underline

1. Type the word you want underlined. Do not type the space following the word.
2. Hold down **Code** while you press **I** (**Word**). Word Underline goes off after underlining the word.
3. Type the space following the word and repeat the steps for each word you want underlined.

Note: To underline previously typed words that are still in the correction memory, use **Backspace**, ← or ↑ to return to the words, then hold down **Code** while you press **I** (**Word**) to underline the words.

Centering

Centering Between Margins

1. Set left and right margins, then press **Frmat** to check the margins. If you do not set a right margin, text centers between the left margin and the right carrier limit.
2. Press **CRtn** to move the carrier to the left margin.
3. Hold down **Code** while you press **C** (**Ctr**). The carrier centers between the margins and the CENTER indicator comes on.
4. Type the text. The carrier backs up but does not print.
5. Hold down **Code** while you press **C** (**Ctr**) to center and print the text. Symbols are shown on each side of centered text on the display.

   |·|Centered Text|·|

Centering on Any Point on a Line

1. Move the carrier to the desired center point.
2. Hold down **Code** while you press **C** (**Ctr**).
3. Type the text.
4. Hold down **Code** while you press **C** (**Ctr**).

Helpful Hints

- Pressing **CRtn**, **Tab**, or **DecT** also causes text to print.
- Press the **Correction** key until the CENTER indicator goes off to cancel centering before the text prints.
- Use the Center and Underline functions together to center and underline text at the same time.
- The typewriter prevents you from typing over previously typed text, and beeps each time you press a keybutton.
- The **Paper Up**, **Paper Down**, ↑, ↓, and **Backspace** keys do not work while Centering is on.
- To erase centered text, you must erase all characters before erasing the centering symbols from the display.

Right Flush

Use Right Flush to type text with an even (flush) right margin.
Example

```
        XYZ Corporation
        740 Anytown Road
        Anytown, KY 00110
```

Typing Text Flush to the Right Margin
1. Set left and right margins, then move the carrier to the left margin.
2. Hold down **Code** while you press **O** (**RFlsh**).
3. Type the text. The carrier backs up but does not print.
4. Hold down **Code** while you press **O** (**RFlsh**). The text aligns and prints to the right margin.

Typing Text Flush Right to Any Point on a Line
1. Move the carrier to the point where you want to align the text.
2. Hold down **Code** while you press **O** (**RFlsh**).
3. Type the text.
4. Hold down **Code** while you press **O** (**RFlsh**). The text aligns and prints to the selected point.

Helpful Hints
- The rightmost character prints *one space to the left* of the right margin or right flush point.
- Text does not appear right aligned if you type a space after the last character.
- Press the **Correction** key until the RFLUSH indicator goes off to cancel Right Flush before the characters print.
- Use the Right Flush and Underline functions together to type text aligned right flush and underlined at the same time.
- The typewriter prevents you from typing over previously typed text, and beeps each time you press a keybutton.
- The **Paper Up (Micro)**, **Paper Down (Micro)**, ↑, ↓, and **Backspace** keys do not work while Right Flush is on.

Subscripts and Superscripts

Subscripts print *below* the typing line (for example, $CuSO_4$). Superscripts print *above* the typing line (for example, Happy Living[5]).

Typing Subscripts
1. Hold down **Code** while you press **H** (½ ↓). An overstrike symbol is displayed where the subscript will print.

Subscript Symbol	Symbol with Overstrike
CuSO ↓	CuSO ↓

2. Type the subscript character.

Typing Superscripts
1. Hold down **Code** while you press **Y** (½ ↑). A symbol is displayed where the superscript will print.

Superscript Symbol	Symbol with Overstrike
Happy Living ↑	Happy Living ↑
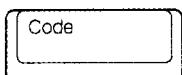
2. Type the superscript character.
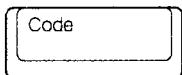
Helpful Hints
- Do not use the paper movement keys to type subscripts or superscripts. If you do, Automatic Carrier Return does not work on lines where the **Paper Up (Micro)** and **Paper Down (Micro)** keys are used.
- You cannot underline subscripts and superscripts automatically. You can underline them manually in Character or Delay Print using the **Underline/Hyphen** key.

Special Characters(U.S. Keyboard only)
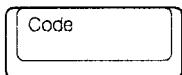
Using **Code** key combinations, you can type four special characters without changing the printwheel.
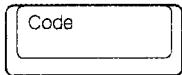
| Code | + | [§] | A section symbol (§) prints. |

| Code | + | [¶] | A paragraph symbol (¶) prints. |

| Code | + | [¼½2] | An exponent (²) prints. |

| Code | + | [3] | An exponent (³) prints. |

Bold Print

Hold down **Code** while you press **B** (**Bold**) to turn Bold Print on or off. The BOLD indicator comes on. A symbol is displayed above each character typed in bold.

```
bold type
BOLD                              ↑1
```
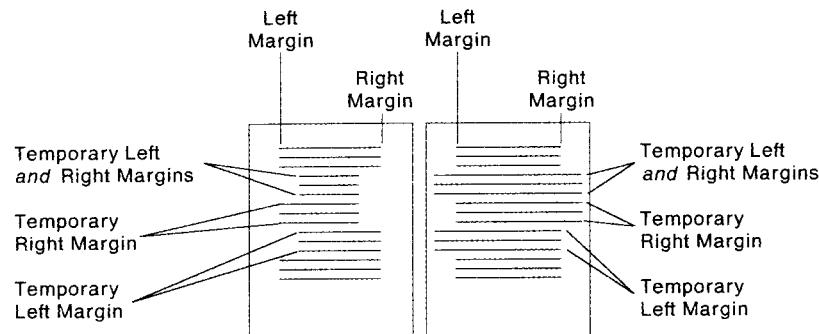
Text prints in bold as you type.

Note: You can use Bold Print in centered, decimal tab, and right flush text. For recommended readability in Bold Print, see "Printwheel Application Recommendations" on page 7-7.

Indenting

The Indent function allows you to set temporary left or right margins, either inside or outside the current margins. The temporary margins remain active until you clear the Indent function.

1. Type until you reach the *first* line you want indented.
2. To set a temporary left margin:
   a. Move the carrier to the desired position.
   b. Hold down **Code** while you press **Tab** (**IndL**). A symbol is displayed to indicate that a temporary left margin exists.

   ```
   ⊦For example, you can set
   ```

3. To set a temporary right margin:
   a. Use the **Spacebar** to move to the desired position.
   b. Hold down **Code** while you press **RMar** (**IndR**). A symbol is displayed at the left margin to indicate that a temporary right margin exists.

   ```
   ⊦              ⊦For example, you can set
   ```

4. Hold down ← to move to the left margin.
5. Type the indented lines.
6. When you finish typing the indented lines, hold down **Code** while you press **CRtn** (**IndClr**) to clear the temporary margins.

Practice

Turn Automatic Carrier Return on and insert a 12-pitch printwheel,
then choose format area 2 as saved on page 1-20 (**LMar** 12 **RMar** 55).
Follow the steps on the previous page to type the practice below.

```
Your new typewriter is designed to make
typing easier and much more enjoyable.

Temporary                    Temporary
Left Margin                  Right Margin
    |                            |
     For example, you can set
     temporary left and right
     margins within a job
     when you want to indent
     lines of text.
                  |
              Code + CRtn


Try using temporary left and right margins
to indent text in your jobs.
                  |
              CRtn
```

Helpful Hints

- To cancel a temporary margin press the **Correction** key until the indent symbol is removed from the display.
- After correcting errors in indented text, press **Reloc** to return to the last typing position. The carrier must be at the last typing position in order to clear the temporary left and right margins.
- When revising a stored job (see Chapter 3), a symbol is displayed to show where indented text ends.
  ```
  lines of text.↲
  ```

Decimal Tabulation

Use the Decimal Tab function to type numbers in vertical columns, aligning the numbers on decimal points or at the column's right edge.

```
Set Tab Here  Set Tab Here  Set Tab Here  Set Tab Here
     |             |             |             |
   234.56        456.79         1.32          1.50
     2.87         20.13          .5          45.67
 26,745        87,453          873           5%
    387         3,498           34          234-
```

Typing Numbers with Decimals

1. Turn Automatic Carrier Return off.
2. Set a tab for each column, then move to the left margin.
3. Hold down **Code** while you press **D** (**DecT**) to move to the first tab stop.
4. Type the numbers *up to* the decimal point. The carrier moves backward but does not print.
5. Type the decimal point. The numbers and the decimal point print, and the DEC T indicator goes off.
6. Type any numbers or characters that follow the decimal point.
7. Hold down **Code** while you press **D** (**DecT**) to move to the next column.
8. Repeat steps 4 through 7 for each column. Press **CRtn** after the last column at the end of each line.

Typing Numbers without Decimals

1. Repeat steps 1 through 3 above.
2. Type the number and any characters which follow it. The carrier moves backward but does not print.
3. Hold down **Code** while you press **D** (**DecT**). The text prints and the carrier moves to the next decimal tab position.

   Pressing **CRtn** or **Tab** also causes text to print. If you press **CRtn**, the text prints and the carrier returns to the left margin. If you press **Tab**, the text prints and the carrier moves to the next tab position. Hold down **Code** while you press **D** (**DecT**) to move the carrier to the *next* tab position for decimal tabulation.
4. Repeat steps 2 and 3 for each column. Press **CRtn** after the last column at the end of each line.

Helpful Hints

- The **Paper Up (Micro)**, **Paper Down (Micro)**, ↑, ↓, and **Backspace** keys do not work while Decimal Tab is on. The typewriter beeps when you press one of these keys.
- Use Character Print (see page 2-13) to type text in columns and tables.
- Use tabs instead of spaces to separate columns in a job. This enables you to move columns to the right or left easily with the *Tab/Column Adjust* function. See page 4-9.

Underlining Numbers in a Column

1. Before typing the *last line* of the columns, hold down **Code** while you press **U** (**Cont**) to turn Continuous Underlining on.
2. Hold down **Code** while you press **D** (**DecT**) to move to the first tab stop.
3. Press **Spacebar** to type any underlined spaces in front of the number.
4. Type the number.
5. Hold down **Code** while you press **D** (**DecT**) to move to the next column.
6. Repeat steps 3 through 5 for each column.
7. Hold down **Code** while you press **U** (**Cont**) to turn Continuous Underlining off.

Double Underlining Numbers in a Column

1. Repeat steps 1 through 7 above for the first underline.
2. Press **CRtn** after the last number.
3. To position the paper, press ↑ *once*, then hold down **Code** while you press **Paper Up** (**Micro**) *twice*.
4. Move the carrier to the position where Underlining begins, then hold down **Shift** while you press **-** (**Underscore**) repeatedly to underline the numbers.
5. Repeat step 4 for each column.
6. Hold down **Code** while you press ↑ (**Line**) to realign to the previous typing line.
7. Press **CRtn**.

Double Underlining Using Keyboard 117

Install the Accounting printwheel for Keyboard 117.

1. Hold down **Code** while you press **L** (**Lang**), release **L**(**Lang**), and continue to hold down **Code** while you type *117*. The KYBD 117 indicator comes on.
2. Type the text to be double underlined.
3. Move the carrier to the position where Underlining begins.
4. Hold down **Code** while you press **]** (right bracket) once for each character or space to be underlined. The double underscore symbol (₌) is displayed when you double underline a space.
5. Repeat steps 3 and 4 each time double underline is needed.
6. Hold down **Code** while you press **L** (**Lang**) to return to your primary keyboard.

Choosing a Print Mode

Your typewriter has three print modes: Character Print, Delay Print, and No Print. You have used Character Print so far.

In *Character Print*, the typewriter prints each character as you type it.

Note: Use Character Print to type text in columns and tables.

In *Delay Print*, the typewriter delays printing until you reach the end of a typing line, allowing you to type and make corrections *before* the text prints. If text or display symbols (such as stop codes) already exist to the right of your current typing position, Delay Print is temporarily interrupted, even though the DL PRT indicator stays on.

You can only use *No Print* when you are working in storage. Chapter 3 explains No Print and working in storage.

Each time you press the **Print Mode** key, the DL PRT (Delay Print) indicator or a blank (Character Print) comes on. In storage, the NO PRT (No Print) indicator also comes on (see Chapter 3). Keep pressing **Print Mode** until you enter the desired mode.

DL PRT	↑1

Justification

Your typewriter can justify lines of text *evenly* at the right margin as you type.

1. Set left and right margins.
2. Press the **Jstify** key to turn justification on.
3. Type the text.
   - The text prints when you reach the right margin.
   - You can continue to type while the text prints.
   - When justification is on, the carrier automatically returns at the right margin. If you press **CRtn** on a line before the right margin beep sounds, that line will not be justified. Press **CRtn** at the end of the last line of a paragraph.
4. Press the **Jstify** key to turn justification off and return to the print mode you had chosen before you turned justification on.

The sample below was typed using format area 1 as saved on page 1-20 (**LMar** 12 **RMar** 62).

Justified copy gives the appearance of a printed
manuscript. Extra space is added automatically
between words so that the right margin is even.
Do not press the carrier return key while typing
lines to be justified. If the last line of the
job is a short line and should not be justified,
press carrier return to end that line.

Helpful Hints

- Installing a printwheel to change the pitch or typestyle during justification can result in slightly uneven left and right margins.
- The current line will not justify if text already exists on the next line.
- To correct justified text, erase the incorrect text and then type the new text, adding spaces before and after words so that they appear justified.

Changing Printwheels While Typing

You can use different printwheels while typing a job. The steps below explain how to change printwheels when you are using *Delay Print, Centering, Right Flush, or Decimal Tab*.

Using the Same Pitch with a Different Typestyle
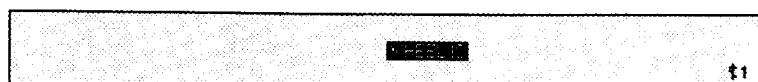
Example (Changing Printwheels in Centered Text)

```
         Code + 9              Code + 9           Code + C
Code + C     |Code + 9              |Code + 9          |
         |   ||                     ||                 |
       IBM  "Wheelwriter"  Typewriter
```

1. Hold down **Code** while you press **C (Ctr)** to begin centering.
2. Type *IBM* and one space.
3. Hold down **Code** while you press **9 (Stop)** to begin a stop code. Ignore the TYPE STOP CODE COMMENT message displayed. The message is further explained in Chapter 3.
4. Hold down **Code** while you press **9 (Stop)** to complete the stop code, then change the printwheel.
5. Type *"Wheelwriter"* and one space.
6. Hold down **Code** while you press **9 (Stop)** twice. Change the printwheel.
7. Type *Typewriter*, then hold down **Code** while you press **C (Ctr)** to end centering.
8. When the typewriter prints it will stop at the stop code and display the following symbols. Insert the correct printwheel.

   --> <--

9. Press **End** to print to the next stop code, then repeat step 8.
10. Press **End** to print the rest of the text.

Using a Different Printwheel Pitch

Stop codes are automatically supplied when you change to a printwheel in a different pitch. When text prints, the typewriter stops for a pitch change and the WHEEL indicator and new pitch is displayed. Insert the correct pitch printwheel and press **End** to continue printing.

Alternate Keyboards
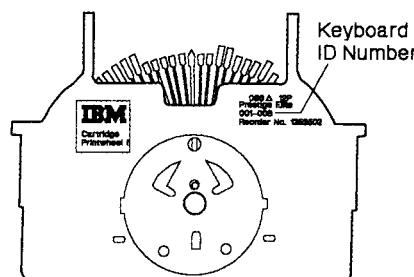
Read this section *only* if you have a printwheel for other languages, ASCII (PC) or Latin Supplemental ISO.

Your typewriter has primary and alternate keyboards. You have already been using your primary keyboard. The primary keyboard allows you to type in your own language. The typewriter automatically sets your primary keyboard to match the keybuttons on your typewriter.

With alternate keyboards and the appropriate printwheels, you can type in other languages or use special application keyboards such as ASCII (PC) and Latin Supplemental ISO.

Matching Printwheels and Keyboards

Printwheels for alternate keyboards contain characters not printed on the typewriter keybuttons. A keyboard ID is printed on each printwheel; for example, the keyboard ID for the United States is 001 and for the United Kingdom is 067. When more than one set of numbers is shown, use the number with the keyboard in "Keyboard Charts" on page 2-18.

Keyboard
ID Number

Using Alternate Keyboards

1. Select a keyboard for a country or special application from the charts on pages 2-18 through 2-24.
2. Insert the country or special application printwheel. Match the keyboard ID number from the chart to the number on the printwheel.
3. Hold down **Code** while you press **L** (**Lang**),release **L** (**Lang**) and continue to hold down **Code** while you type the keyboard ID number. The KYBD indicator comes on and the alternate keyboard is selected.
4. Use the keyboard chart that matches your keyboard ID to locate the characters you want to type.
5. Type the job. When you finish typing in the alternate keyboard, hold down **Code** while you press **L** (**Lang**). The KYBD indicator goes off and the primary keyboard is selected.
6. Remove the country or special application printwheel and install your primary printwheel.

Note: If you hold down **Code** while you press **L** (**Lang**) and do not type a keyboard ID number, Latin Supplemental ISO is selected for the U.S.. Japan (English) (Keyboard ID 069) is selected for United Kingdom.

Helpful Hints

• The alternate keyboard charts show some keybuttons with special characters. See "Special Characters(U.S. Keyboard only)" on page 2-8.
• The typewriter stops automatically for keyboard changes during playback.
• Many alternate keyboards contain accent marks (dead keys) that print without advancing the carrier to the next space. To type accent marks over alphabetic characters:
  1. Type the accent mark. The carrier does not move.
 2. Type the alphabetic character.

Keyboard Charts
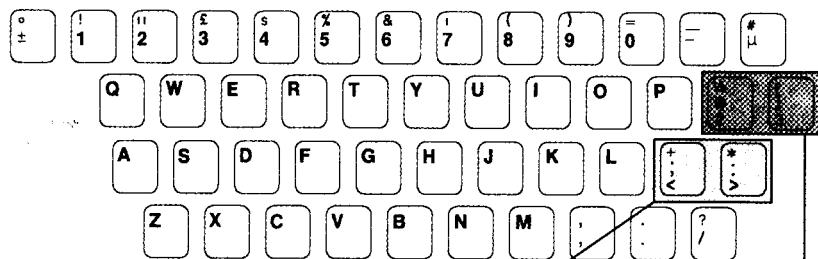
The keyboard charts show the keyboard ID numbers and character locations for each alternate keyboard. The charts are arranged numerically.

## Keyboard Charts for Typewriters Without the U.S. Keyboard
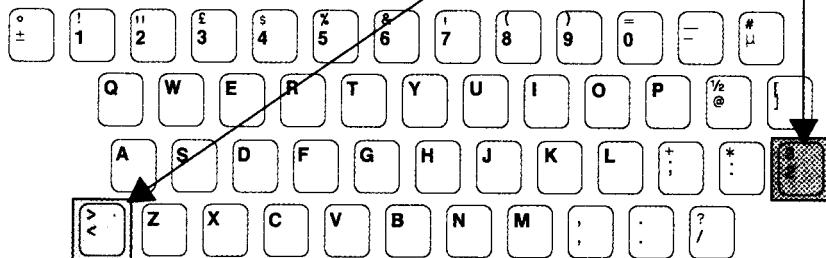
The keyboard charts beginning on the following page show the keyboard layout for the U.S. keyboard shown on page 1-2. This keyboard has 46 keybuttons. All other keyboards have 48 keybuttons.

If you have a 48 keybutton keyboard, use the following diagram as a guide to determine which characters appear on the two (2) additional keybuttons.
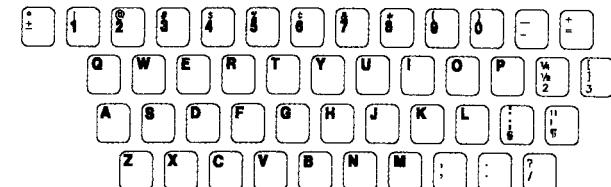
46 Keybutton Layout
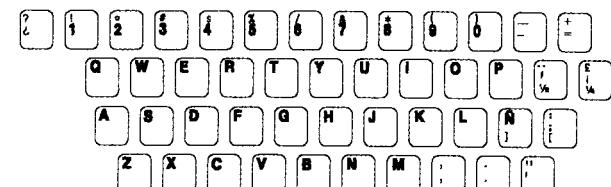
48 Keybutton Layout
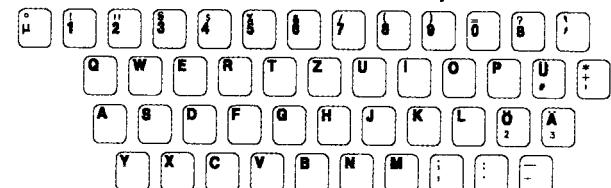
*Keyboard ID 001 — Australia, New Zealand, United States*
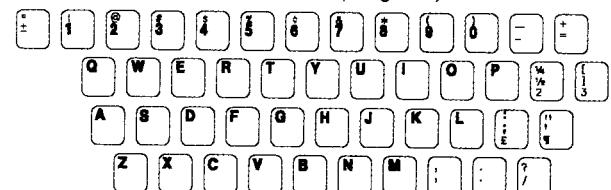
Keyboard ID 025 — Latin America
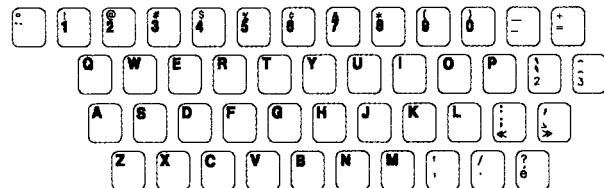
*Keyboard ID 029 — Austria, Germany*
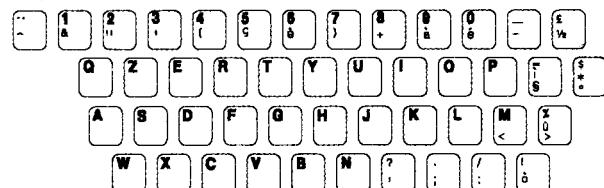
Keyboard ID 037 — Canada (English)
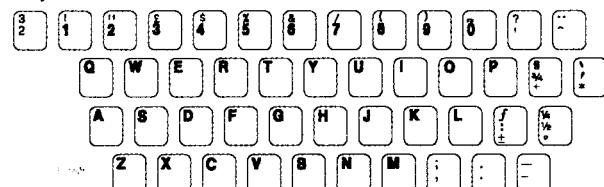
Keyboard ID 039 — Canada (Bilingual)
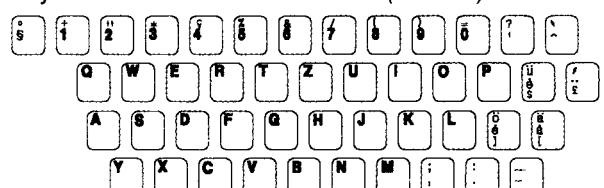
Keyboard ID 041 — Italy
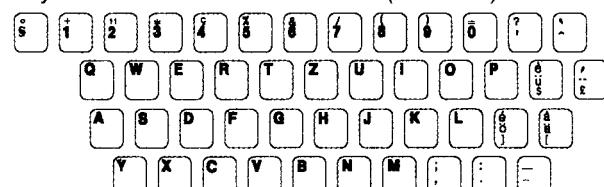
Keyboard ID 043 — Netherlands
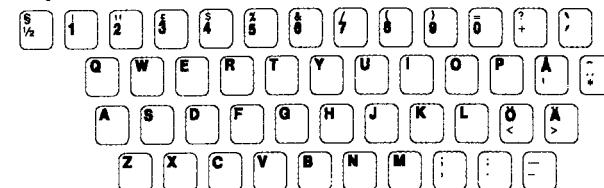
Keyboard ID 049 — Switzerland (French)
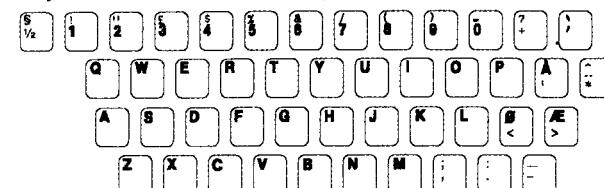
Keyboard ID 051 — Switzerland (German)
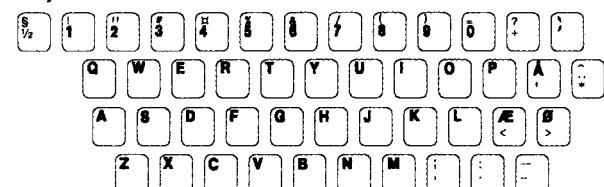
Keyboard ID 053 — Finland, Sweden
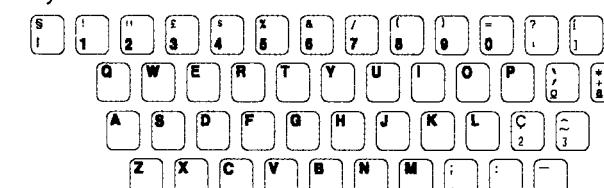
Keyboard ID 055 — Norway
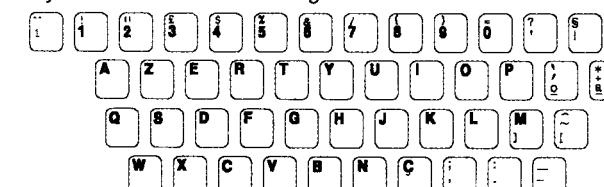
Keyboard ID 059 — Denmark
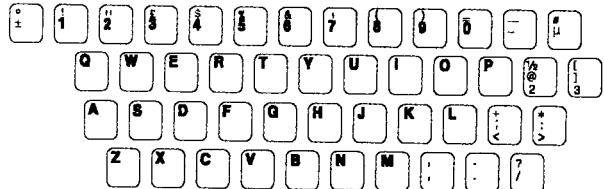
Keyboard ID 061 — Brazil
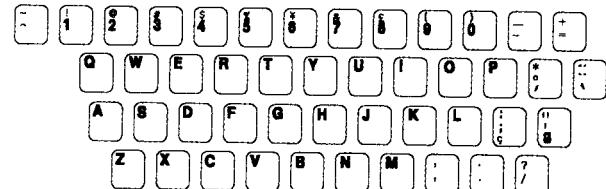
Keyboard ID 063 — Portugal
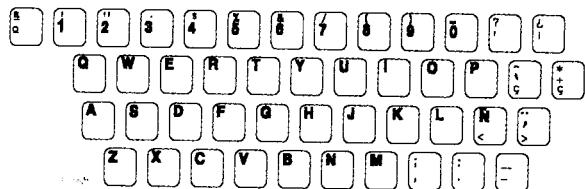
Keyboard ID 067 — United Kingdom
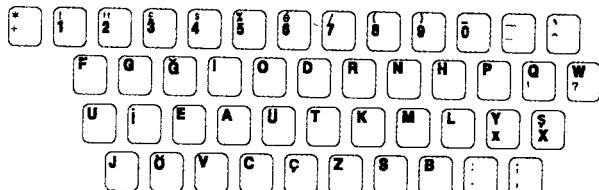
Keyboard ID 069 — Japan (English)
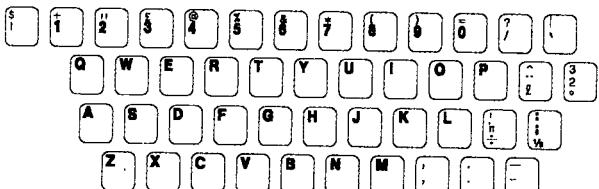
Keyboard ID 070 — Spain
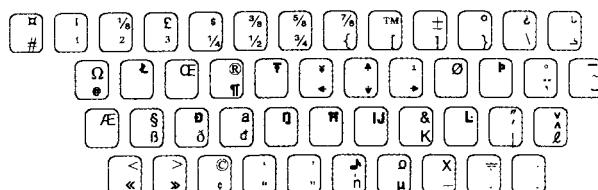
Keyboard ID 079 — Turkey
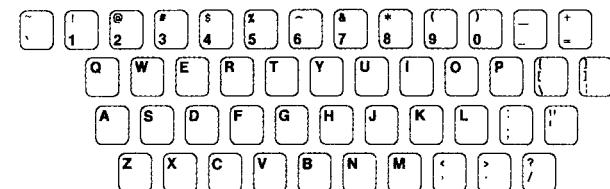
Keyboard ID 081 — South Africa
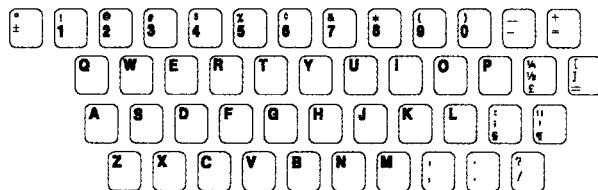
Keyboard ID 099 — Latin Supplemental ISO
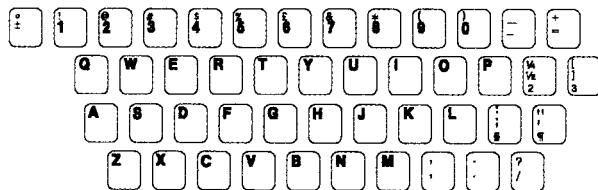
Keyboard ID 103 — U.S. ASCII (PC)
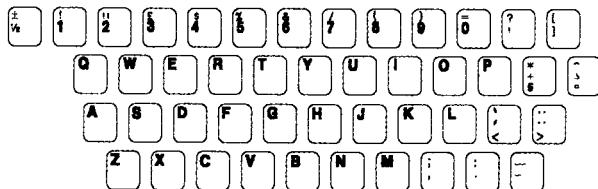
Keyboard ID 117 — U.S. Accounting
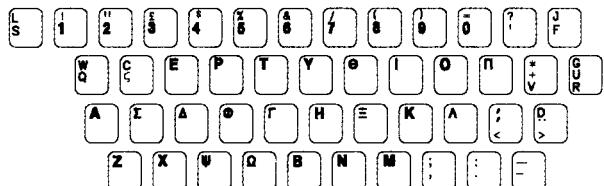
Keyboard ID 119 — Hong Kong
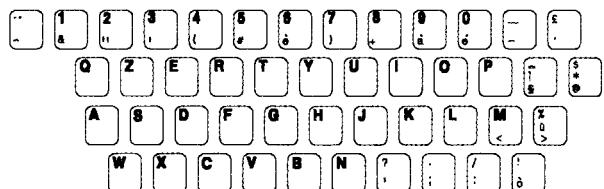
Keyboard ID 207 — Greece (Latin)
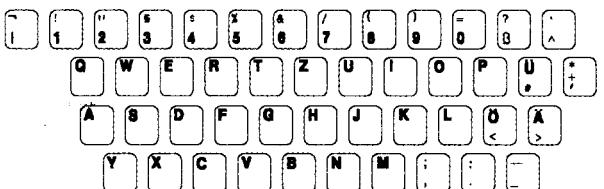
Keyboard ID 219 — Greece (Greek)
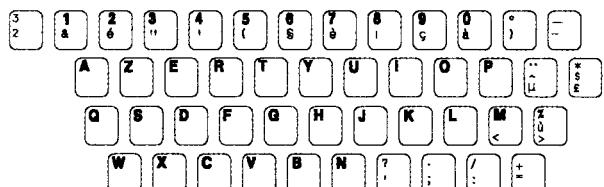
Keyboard ID 247 — Italy (PC)
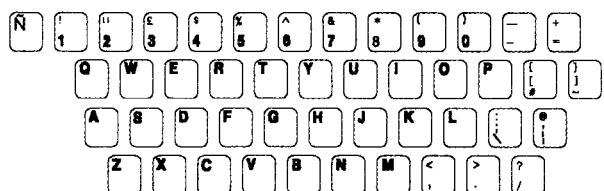
Keyboard ID 249 — Germany (PC)

Keyboard ID 251 — Belgium, France

Keyboard ID 252 — United Kingdom (PC)

Basic Storage

You can store approximately 48,000 bytes (about 15 to 25 pages) in typewriter storage. The Diskette option adds virtually unlimited storage to the typewriter. Contact an authorized dealer for details.

Note: Some character storage is used for other typewriter actions such as spacing, carrier returns, and document control functions.

Storage allows you to add, delete, or revise text later without retyping the entire job. When you open storage, the STORE indicator comes on and anything you type is stored. When you close storage, the STORE indicator goes off.

Storing a Job

1. Always prepare the typewriter *before* you open storage: install the desired printwheel; insert paper; select the desired format (or set margins and tabs); and select line spacing.
2. Hold down **Store** while you type a number (**1** through **99**) to open a storage area. The number you type identifies the storage area you opened.
   - The STORE and ARTN indicators come on.
   - If the PLAY indicator comes on, the storage area already contains text.
3. Type the job.
   - Leave Automatic Carrier Return on unless you are working with columns or tables. Use stop codes (see page 3-20) to remind you when to turn ARTN off or on within a job.
   - For jobs requiring margin changes, see "Margin and Tab Formats in Stored Jobs" on page 3-6.
   - Use the **Correction** key to correct errors you notice immediately, then press **Reloc** to return to the last typing position.
4. Press **Store** to close storage. Tabs, margins, and temporary margins are automatically stored with the job.

Note: If you use Automatic Carrier Return when storing and playing back a job, the line endings are adjusted when you make revisions. Use required hyphens and required spaces to keep phrases together on one line regardless of their position in the job; for example, *brother-in-law* and *January 22.*

Practice

1. Insert a 12-pitch printwheel, then choose format area 2 as saved on page 1-20 (**LMar 12 RMar 55**).
2. Store the paragraph below in an unused storage area. Press **CRtn** only at the end of the last line.

>   In the late nineteenth century, a period
>   in history marked by the beginnings of the
>   industrial revolution and the development
>   of new technologies, typing contests drew
>   enthusiastic spectators and provided free
>   advertising for a struggling typewriter
>   industry. In those days, typing speeds of
>   40 to 45 words per minute were considered
>   astonishing.

3. Press **Store** to close storage at the end of the paragraph.
4. Hold down **Play** while you type the number of the storage area to play back the job.

Helpful Hints

* When you close storage, the carrier moves to the left margin. If you did not press **CRtn** at the end of your job, the paper moves up one line when you press **Store**. This carrier return is not stored with the job.
* When you open storage, the typewriter uses the currently active print mode.
* Line space changes are not stored with the job.
* You can store multipage jobs in a single storage area. Use the Auto Page End function to separate pages of a job during play-back. See "Auto Page End" on page 4-8.
* Use the **Paper Bail Load Lever** and the *Paper Release Lever* instead of ↑ and ↓ to insert and remove paper. This will prevent you from inserting unwanted blank lines in your stored job.
* In No Print, use the cursor movement keys to move through storage. Do not use the **CRtn** or **Spacebar** keys unless you want to insert blank lines or spaces in your job.
* Use Character Print to type text in columns and tables.

Playback

With the **Play** key, you can print, revise, copy, or combine stored jobs. You can use playback with storage open or closed. When you play back a job with storage closed, the job prints bidirectionally (the first line prints left to right, the second line prints right to left, and so forth). You can stop playback and then type, make corrections, resume playback, cancel playback, or play back another job. Corrections made with storage closed are not stored with the job.

When playing back multipage jobs, set the page length so playback stops automatically at a preset point. See "Page-Layout" on page 4-5 and "Auto Page End" on page 4-8.

You can also move tab settings (columns) during playback. See "Tab/Column Adjust" on page 4-9.

When storage is *open* during playback, the margins and tabs stored with the job are used. See "Revising a Stored Job Using Character or Delay Print" on page 3-11 for information on playing back with storage open.

When storage is *closed* and ARTN is on during playback, the current margin settings are used. To use the margins stored with the job, reset the margins. Playing back a job with storage closed is explained below.

Beginning Playback

1. Install the correct printwheel.
   - Jobs play back from storage using the *current margin settings*.
   - To set the original margins for playback, use the Directory function (see page 4-2) to view the margin settings stored with the job, then set the margins.
2. Move the carrier to the point where you want playback to begin.
3. Set Automatic Carrier Return on or off.
   - When Automatic Carrier Return is *on* during playback, lines end according to the current margin settings.
   - When Automatic Carrier Return is *off* during playback, the job plays back line for line as you stored it.
4. Set line spacing.
5. Hold down **Play** while you type the number where you stored the job.
6. Release the keys. Playback begins immediately.

Stopping Playback

Press *any key* to stop playback.
- If the job is printing *left to right*, the typewriter stops immediately. The current line of text is displayed. The cursor rests on the *next character to print*.
- If the job is printing *right to left*, the typewriter finishes printing the current line and performs a carrier return. The next line of text is displayed.

Continuing Playback

Press one of the following keys to continue playback:
- Press → to play back the next character.
- Hold down **Code** while you press → (**Word**) to play back the next word.
- Press ↓ to play to the end of the current line.
- Press **End** to play to the end of the job.

If the carrier is at the right carrier limit, press **CRtn**, then press **End** to continue playback.

Canceling Playback

Press any key to stop playback, then press **Play** to cancel playback and turn the PLAY indicator off.

If you accidentally cancel playback, press **Play**. The PLAY indicator comes on, and the current line of text is displayed. The cursor rests on the next character to print and you may continue playback.

Practice

Install the same pitch printwheel and set the same line space you used to store the job on page 3-2, then play back the job. Practice starting, stopping, canceling, and playing back by line, word, and character. Play back the job as many times as you want.

Helpful Hints

- If you press **CRtn** while storing a job, the carrier returns at that point during playback.
- Text is not displayed during playback.
- If the WHEEL indicator comes on during playback, the number indicates the pitch used to store the job. For example, if WHEEL 12 comes on when you are using a 10-pitch printwheel, you have three choices:
  - Install a 12-pitch printwheel to play back the job exactly as you stored it.
  - Use the 10-pitch printwheel and play back the job with storage *closed*. The job remains stored as a 12-pitch job.
  - Use the 10-pitch printwheel and play back the job with storage *open*. The job is stored as a 10-pitch job.
- Jobs stored in proportional spacing and then played back in 10, 12, or 15 pitch may not play back exactly as you typed them.
- When you play back a job using an *alternate keyboard*, printing stops at the keyboard change and the KYBD indicator comes on. The WHEEL indicator comes on to prompt you to install the correct printwheel for the alternate keyboard. Install the printwheel, then press **End** to continue printing. The typewriter automatically selects the new keyboard. See page 2-17.
- You can play back a draft copy of a job with double spacing and the final copy with single spacing because the line space setting is not stored with the job.

Margin and Tab Formats in Stored Jobs

Use the Format function (see pages 1-19 and 1-20) to set margins and tabs for your jobs. The following guidelines will help you use format areas within stored jobs.

Before Opening Storage — Select a format area *before* opening an empty storage area. You cannot select another format area while in storage. Changing margins and tabs in storage does not affect the format area you select.

After Opening Storage — When you open an empty storage area, the format you selected is automatically copied to format area 0. When you press **Frmat** in storage, format area 0 is displayed with the current margin and tab settings. If you change the margin and tab settings while in storage, the new settings are displayed when you press **Frmat**. The job is stored with the *new* margins and tabs, but the *format area* you selected is not changed. Format area 0 acts as a *working* format area to keep you from accidentally altering a *saved* format area. One left margin and one right margin is stored with the job. All tab settings and temporary margins are stored with the job.

When you open a storage area that already contains text, press the **Frmat** key to display the stored margins and tabs.

Changing Margins and Tabs After Opening Storage

1. Press **Play** to turn the PLAY indicator off. Unprinted text is temporarily removed from the display.
2. Set margins and tabs.
   - If you press **LMar** in storage, the following message is displayed:

   ```
   USE IndL OR PRESS LMar AGAIN TO RESET DOCUMENT MARGIN OR ⊠ TO CANCEL
   ```

   - Use **IndL** to set a temporary left margin.
   - Use **LMar** to change the left margin for the *entire* job. That is, the left margin for the text already typed will also change to the new left margin.
   - Press the **Correction** key if you do not want to set new margins. Indented text remains indented.

   - If you press **RMar** in storage, the following message is displayed:

   ```
   USE IndR OR PRESS RMar AGAIN TO RESET DOCUMENT MARGIN OR ⊠ TO CANCEL
   ```

   - Use **IndR** to set a temporary right margin.
   - Use **RMar** to change the right margin for the *entire* job. That is, the right margin for the text already typed will also change to the new right margin.
   - Press the **Correction** key if you do not want to set new margins. Indented text remains indented.
3. Hold down ← to return to the left margin.
4. Press **Play** to turn the PLAY indicator back on. The current line of text is displayed.

Practice

Store the following example, setting margins and temporary margins as indicated.

```
LMar 12                                                    RMar 62
  |                                                          |
  The Indenting function allows you to change your
  margins within a job. Margins may be moved outside
  or inside their original settings.
          IndL 22                        IndR 52
            |                              |
            "If you wish to change either
            the left or right or both margins
            after you have started a job,
            always use the Indent function
            to make the change."
                                |
          IndL 16               Code + CRtn
            |
       1.  Always use the Indent function to make margin
           changes to your job.
                               |
IndL 7                         Code + CRtn                IndR 67
  |                                                          |
Changing the margins with the STORE indicator off will not
change the stored job. Changing the margins with the STORE
indicator on will change the margins for the entire job.
                                                  |
                                            Code + CRtn
```

Typing Hyphens in a Stored Job

Syllable Hyphens
If you are storing a job and want to hyphenate a long word at the right margin, insert a *syllable hyphen* as in this example:

```
Our department has considered your applica-
tion for review.                          | |
                                          | |
                  Type - (Hyphen)  |
                                    Press CRtn
```

You *must* press **CRtn** after typing the syllable hyphen.

If you play the sentence back with different margins and ARTN on, unnecessary hyphens are automatically dropped.

Note: If you continue typing the word after typing the hyphen and let the carrier return automatically, the hyphen is *not* dropped if the word occurs in the middle of a line during playback.

Practice
1. Insert a 12-pitch printwheel, then choose format area 2 as saved on page 1-20 (**LMar** 12 **RMar** 55).
2. Open an empty storage area.
3. Type the sentence in the example above up to the hyphen after applica.
4. Type the hyphen (-), then press **CRtn**.
5. Type the rest of the example, then close storage.
6. Turn ARTN on and play back the job. Your copy should resemble the example above.
7. Choose format area 3 as saved on page 1-20 (**LMar** 12 **RMar** 44).
8. Play back the job. Your copy should resemble the following:

```
Our department has considered
your application for review.
```

Required and Permanent Hyphens
There are two ways to type hyphens so they will always play back with the text.

Keeping a Hyphenated Word on One Line
Keeping a hyphenated word on one line is called a *required hyphen*. Hold down **Code** while you type a hyphen in text you always want kept together on one line.

```
              Code + - (hyphen)
               |   |   |
```

The number to call for assistance is 1-800-555-1212.

Allowing Hyphenated Words to Separate at a Line Ending
Permanent hyphens allow words to separate at a line ending regardless of line breaks. Turn ARTN on. Type a hyphenated word without pressing **CRtn** or **Code**. The following example contains hyphens that may break automatically at the right margin.

```
A special visitor to our country is our mother-
in-law.
```

Practice
1. Insert a 12-pitch printwheel, then choose format area 1 as saved on page 1-20 (**LMar** 12 **RMar** 62).
2. Open an empty storage area and type the examples above.
3. Close storage.
4. Turn ARTN on and play back the job. Your copy should resemble the examples above.
5. Choose format area 3 as saved on page 1-20 (**LMar** 12 **RMar** 44).
6. Play back the job. Your copy should resemble the following:

```
The number to call for assistance
is 1-800-555-1212.


A special visitor to our country
is our mother-in-law.
```

Revising a Stored Job

Revisions are made to jobs with storage open. You can revise on paper using Character Print or Delay Print, or on the display using No Print.

When revising in Character Print or Delay Print, print the job up to the revision point; then add, delete, or make corrections to the text and resume playback. Revisions are stored just as they appear on the paper. Use Character Print to revise tables and columns.

In No Print, you can move quickly to a revision point without printing the job. The text and symbols that indicate typewriter functions are displayed. In No Print, you can insert or delete text anywhere in the job without printing it. The **Del** key works in combination with the paper, carrier and cursor movement keys to delete text.

If you type or print text in Character or Delay Print and then change to No Print, the carrier moves to the left margin. This indicates that the display no longer matches the text on paper. If you return to Character Print to revise the text on the paper, replay the text before revising.

Copying a Job into Another Storage Area

All revisions are stored with your job. Make a copy of your job before beginning revisions if you need the original job for later use. To copy a job quickly:

1. Hold down **Store** while you type the number of an *empty* storage area.
2. Select No Print.
3. Hold down **Play** while you type the number of the job to copy.
4. Press **Store** to close the storage area.

Revising a Stored Job Using Character or Delay Print

Playing to the Revision Point

1. Before revising, copy the job as explained in "Copying a Job into Another Storage Area" on page 3-10.
2. Install the same pitch printwheel and set the same line space used to store the job.
3. Hold down **Store** while you type the number of the job to revise. The ARTN, STORE, and PLAY indicators come on.
4. Turn Character Print or Delay Print on.
5. Press **End** to begin playback.
6. Press *any key* to stop playback before the revision point.

Adding Text to the Job in Character or Delay Print

As you add text to a stored job, the words on the display automatically move to the right.

Note: Turn ARTN off just before revising tables or columns. Turn ARTN on again after revising the table or columns. See page 3-20.

1. Play to the revision point.

2. Make sure the PLAY and STORE indicators are on. Press →, **Code** + → (**Word**), or ↓ to continue playback up to where you want to add text.

   - If you play past the point where you want to add text, use the **Correction** key to erase back to the correction point.
   - If you turn the PLAY indicator off, the → and ↓ keys no longer cause text to print. The → and ↓ keys provide express movement to add spaces and lines to your job. Turn the PLAY indicator on again to resume playback with the → and ↓ keys.

3. Type the text you want to add. If you add a word, type a space after it.

4. Type any text you erased.

5. Use →, **Code** + → (**Word**), ↓, or **End** to continue playback.

Deleting Text from the Job in Character or Delay Print

When you delete information, the typewriter automatically closes up the space. You can delete a character, a word, a line, or from some point to the end of the job. Use the **Del** key in combination with a function key to delete text.

Note: Turn ARTN off just before revising tables or columns. Turn ARTN on again after revising the table or columns. See page 3-20.

1. Stop playback before the correction point. Play back one word at a time up to the text you want to delete.

2. Use one of the following combinations of keys to delete text before it prints:

   - Hold down **Del** while you press → to delete the character at the cursor. The cursor moves to the next character.
   - Hold down both **Del** and **Code** while you press → (**Word**) to delete to the end of the word, including any punctuation and spaces that follow the word. The cursor moves to the next word.
   - Hold down **Del** while you press ↓ to delete to the end of the line, including the carrier return. Since the display does not always show a full line of text, make sure you are not deleting too much before you press **Del** + ↓. The cursor moves to the next line.
   - Hold down **Del** while you press **End** to delete to the end of the job. The following message is displayed:

   ```
   PRESS Del AGAIN TO DELETE OR PRESS ⊗TO CANCEL
                                                        ↑1
   ```

   - Press **Del** to delete the text.
   - Press the **Correction** key to cancel Delete and return to the text display.

3. Use Character or Word Erase (see page 1-21) to delete text from the paper and the display.

4. Use →, **Code** + → (**Word**), ↓, or **End** to continue playback.

Practice

1. Before revising, copy the job as explained on page 3-10.
2. Install the same pitch printwheel and set the same line space you used to store the job on page 3-2.
3. Hold down **Store** while you type the number of the job you stored on page 3-2.
4. Select Character or Delay Print.
5. Play back one line at a time until three lines have printed. Do not play back the fourth line yet.
6. Hold down **Code** while you press → (**Word**) to play back one word at a time up to the word *contests*.
7. Type the word *speed*, followed by a space.
8. Continue playback until the seventh line has printed. Do not play back the eighth line yet.
9. Hold down **Code** while you press → (**Word**) to play back one word at a time up to the word *to*.
10. Hold down both **Del** and **Code** while you press → (**Word**) twice to delete the number 45 and the word *to* from the job and the display.
11. Play back to the end of the job, then close storage. Your paper should resemble the following:

```
In the late nineteenth century, a period
in history marked by the beginnings of the
industrial revolution and the development
of new technologies, typing speed contests
drew enthusiastic spectators and provided
free advertising for a struggling typewriter
industry. In those days, typing speeds of
40 words per minute were considered astonishing.
```

Helpful Hints

- Use the cursor movement keys to move through storage. Do not use **CRtn** or **Spacebar** unless you want to insert blank lines or spaces in your job.
- Use stop codes to give titles to your jobs and to indicate where changes such as justification, Automatic Carrier Return, line spacing, and typestyle or ribbon changes occur.
- Play back the job with storage open to adjust the line endings after revising.
- Use Character Print to revise columns and tables.

Correcting Errors with Storage Closed

Corrections made during playback with storage closed are not stored with the job. Correct errors with storage closed in the same way you revised a stored job using Character or Delay Print (see page 3-11).

Beginning Playback

1. Hold down **Play** while you type the number where you stored the job. The job plays back bidirectionally.

2. Press *any key* to stop playback before the correction point.

Adding Text to the Job

1. Play up to the point where you want to add text.

2. Type the text.

3. Continue playback.

Deleting Text from the Job

1. Play up to the text you want to delete.

2. Use the **Del** key in combination with the →, ↓, or **End** keys to delete the text from the display.

3. Use the **Correction** key or **Code** + the **Correction (Word)** key to erase text from the paper and the display.

4. Continue playback.

Revising a Stored Job Using No Print

In No Print, you can revise a job on the display and in storage without printing it, then play back a final copy. No Print allows you to move to the revision point quickly.

Opening Storage

1. Hold down **Store** while you type the number where you stored the job. The ARTN, STORE, and PLAY indicators come on.

2. Press **Print Mode** until the NO PRT indicator comes on. The PLAY indicator goes off.

Moving through Storage

Do not use **CRtn** or **Spacebar** to move through storage unless you want to insert blank lines and spaces. Use any of the following keys to move the *cursor* through storage:

- → moves one character to the right.
- ← moves one character to the left.

- **Code** + → **(Word)** moves one word to the right.
- **Code** + ← **(Word)** moves one word to the left.

- ↓ moves to the beginning of the next line.
- ↑ moves to the beginning of the previous line.

- **Code** + ↓ **(Line)** moves to the next line with text.
- **Code** + ↑ **(Line)** moves to the previous line with text.

- **End** moves to the *end* of the job.
- **Home** moves to the *beginning* of the job.