How to operate...

the 43 teleprinter

8 LEVEL BUFFERED SELECTIVE CALLING STATION
"Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference."
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INTRODUCTION

Your 43 Teleprinter provides for message preparation and sending from a send buffer. Received messages may print as they are received or they may be stored in a receive buffer and may be printed later.

Your 43 Teleprinter may have an auxiliary printer attached to it by a cable located at the rear right corner. If an auxiliary printer is attached, either printer may print a message depending on which one was remotely selected.

If your teleprinter is optioned as a receive-only terminal or as an auxiliary terminal (see OPERATOR AFFECTING OPTIONS, No. 2 and 3, Page 38) it can receive messages but cannot send messages.

The following selected operator procedures are provided in the BASIC OPERATING INSTRUCTIONS section of this manual to assist you in the basic operation of your terminal. Detailed descriptions, as required, are provided in the SUPPLEMENTARY OPERATING INSTRUCTIONS section of this manual.

Always be certain that the power switch is on, paper is installed and the alarm is not on before attempting to operate your terminal. The power to the terminal may remain ON continuously.

To Receive a Message

- Depress key if not lit.

- A message will print when the terminal is selected to receive and receives a message.

Note 1: If a message was received while the lamp was off, the will be on. To print all the messages received, depress the key.

Note 2: If your terminal has an auxiliary printer, the auxiliary printer will print messages addressed to it provided it is conditioned to receive. Refer to the How to Operate Manual associated with the Auxiliary Printer.

Note 3: If this terminal is optioned as an auxiliary printer (see OPERATOR AFFECTING OPTIONS No. 3 Page 38) it will print received messages addressed to it provided the and keys are lit and the lamp is off. This terminal cannot send messages.
To Prepare and Send a Message (No Contention)  
(See OPERATOR AFFECTING OPTIONS No. 8 Page 38.)

- Depress \[\text{TERM ONLINE}\] key if not lit.
- Depress \[\text{BUFFER ENTER}\] key if not lit.
- Type a message in the edit buffer. If a typing error is made, see Simplified Message Edit.
- Depress \[\text{STORE}\] key. \[\text{SN R DY}\] key lights.

The message will be sent automatically when the terminal is polled. \[\text{SN R DY}\] key flashes while sending and may go out after message is sent.

To Prepare and Send a Message (Contention)  
(See OPERATOR AFFECTING OPTIONS No. 8 Page 38.)

- Depress \[\text{TERM ONLINE}\] key if not lit.
- Depress \[\text{BUFFER ENTER}\] key if not lit.
- Type a message in the edit buffer. If a typing error is made, see Simplified Message Edit.
- Depress \[\text{LINE ACTIVE}\] key. \[\text{SN R DY}\] key flashes while sending and may go out after message is sent.

Simplified Message Edit

To Overwrite an Error While on the Same Line

Example: THE QUICK BROWN FOZ

The “Z” must be changed to an “X”. Since you are on the same line, depress \[\text{STORE}\] key until, after a one second delay, the silver print head pointer is pointing to “Z” in the word “FOZ”.

Depress \[\text{X}\] key. “X” overtypes “Z”.
Depress \[\text{CAN}\] \[\text{5 HOME}\] keys. The corrected message prints out “THE QUICK BROWN FOX”.

To Delete an Error While on the Same Line

Example: THE QUICK BROWN FOOX
One of the “O”s must be deleted. Since you are on the same line, depress key until, after a one second delay, the silver print head pointer is pointing to one of the “O”s in the word “FOOX”.

Depress key. The “■” symbol prints over the “O”.

Depress keys. The corrected message prints out “THE QUICK BROWN FOX”.

To Insert a Character While on the Same Line

Example: THE QUICK BROWN FX

An “O” must be inserted in the word “FX”. Since you are on the same line, depress key until, after a one second delay, the silver print head pointer is pointing to the “X” in the word “FX”.

Depress the key. Lamp lights.

Depress the key. “●” overtypes “X”.

Depress the key. Lamp turns off.

Depress keys. The corrected message prints out “THE QUICK BROWN FOX”.

To Search for a Location Within a Message

Example: THE QUICK (return-line feed) BROWN FOZ (return-line feed) JUMPED OVER

The “Z” in “FOZ” must be changed to an “X”.

Depress key.

Depress key. Lamp lights.

Type “N FO”.

Depress key. “BROWN FO” prints out.

The print head is now in the position to change the “Z”.

Depress key. “X” prints.

Depress keys. The corrected message prints out: THE QUICK BROWN FOX JUMPED OVER
SUPPLEMENTARY
OPERATING
INSTRUCTIONS
INTRODUCTION

The 43 Teleprinter provides for message preparation, transmission, and reception of data in an asynchronous or isochronous multipoint private line system utilizing ASCII code. An auxiliary port located at the right rear of the terminal may have an auxiliary printer attached for receiving messages only (cannot send from auxiliary port).

The 43 Teleprinter may also be optioned to perform as a receive-only terminal (data cannot be sent on-line) for operation in a multipoint private line system. See OPERATOR AFFECTING OPTIONS No. 2 Page 38 and RECEIVE-ONLY OPERATION Page 20.

The 43 Teleprinter may also be optioned to perform as an auxiliary printer and be connected to the auxiliary port of another 43 Teleprinter. See OPERATOR AFFECTING OPTIONS No. 3, Page 38 and AUXILIARY TERMINAL OPERATION Page 20.

Operating speeds at the line port, located at the left rear of the terminal, are 110, 300, 600, 1200 or 1800 baud asynchronous or up to 2400 baud isochronous. 2400 baud asynchronous is available only if the terminal is optioned to operate as an auxiliary printer. Auxiliary port line speeds are 110, 300, 1200 or 2400 baud asynchronous only.

On tractor feed printers, messages with up to 100 characters per line are printed on from 3 inch to 12 inch wide sprocket feed paper. The paper may be fed from a supply box or limited amounts can be placed in a paper holder that clips on the rear of the tractor feed teleprinter.

On friction feed printers, messages up to 80 characters per line are printed on 8-1/2 inch wide roll type paper. The roll is held in a support attached to the rear of the teleprinter.

Keyboard data (or message) is stored in the send buffer and automatically, or manually in some cases, sent on-line. If necessary the data can be recalled for editing.
INTRODUCTION (Contd).

If the Keyboard-Printer (KP) is not available (performing local functions) when messages are received, the messages are stored in the receive buffer, or auxiliary receive buffer if the optional auxiliary printer is not available, until the printer becomes available.

Messages received in the receive buffer can be copied into the edit buffer for editing and/or resending.

A table of options which affect operation of this terminal is located in the operator affecting options section of this manual. See Page 33. Become familiar with the options of this terminal because the operating procedures in this manual are affected by the terminal options.

Refer to the Teleprinter Supplies and Maintenance section of this manual for paper and ribbon replacement information. See Page 34.

A pull-out "Directory" card, is located under the front bottom edge of the keyboard. One side of the card provides installation and maintenance information and the other side provides a directory for frequently used telephone numbers and extensions.
POWER TURN ON

The power switch is located at the right rear of the teleprinter.

Terminal Power

With the power cord plugged in, depress the upper half of the ON-OFF rocker power switch to turn on power to the terminal.

• The TERM ON LINE and PRINT REC MSG lamps normally light when power to your terminal is first turned on. If the terminal prints the message below, see the station manager or supervisor.

****
DEFAULT OPTIONS LOADED ****

Memory Power

Power to the memory is on when power to the terminal is on.

• Volatile Memory (Data) — Data stored in the memory will be retained indefinitely unless the power cord is unplugged, the switch is turned off, or until it is intentionally cleared.

• Immediately after the terminal is installed, power should be turned on and remain on for at least 10 hours. This will fully charge the internal battery used to retain the installer programmable options for at least 17 days when power is turned off. This need be done only one time unless power to the terminal remains off for many days.
KEYTOP ARRANGEMENT

The keytop arrangement is divided into three groups according to their purpose or function as shown below. Each group of keys is discussed in the following sections. Reference to this keytop arrangement should be made as required.

The information shown below in the area between the top row of keys and the keyboard is located on the cover and may be used when setting tabs, margins, etc. The designated keys are used in conjunction with the CTRL key.
This section describes the purpose and operation of most controls and indicators on the 43 Teleprinter. Nearly all the operating controls are across the top of the keyboard. Those on the keyboard are described in the keyboard section.

- **TERM LOCAL** May be disabled. See OPERATOR AFFECTING OPTIONS No. 1 Page 38. Depression of the key causes the terminal to go off line. Terminal cannot receive or send messages. Key must be lit to load options.

- **TERM ON LINE** Depression of key causes lamp to light. Terminal can now send and receive messages. If lamp flashes a trouble is present and messages cannot be sent or received.

- **LINE ACTIVE** When lit indicates characters have been sent or received within the last 10 seconds. If the terminal is optioned for contention operation, depressing the key puts in a bid to send a message if the SND key is lit. See OPERATOR AFFECTING OPTIONS No. 8 Page 38.

- **COPY SEND DATA** When lamp is lit, all sent messages are copied into the receive buffer. Depressing key turns the lamp on or off unless optioned for copy sent data. See OPERATOR AFFECTING OPTIONS No. 4 Page 38.

- **ALARM** Lamp lights due to an alarm condition (ie, low paper, paper-out, cover open). If lamp does not go out with correction of the alarmed condition, depress the key.

- **PRINT REC MSG** When lamp is on, all the messages in the receive buffer will print. If lamp is flashing, only one message in the receive buffer prints (see REC MSG WTG key). If lamp is off keyboard can type locally to the printer or into the edit buffer if key is lit. Depressing changes the state of the key.

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CONTROLS AND INDICATORS (Contd)

Lamp turns on when receive buffer contains messages waiting to be printed. Depressing key causes one message in the receive buffer to print, key to flash and terminal to go to the edit mode. When all messages have been printed, lamp turns off.

When depressed, a short summary of every message in the send and receive buffers (edit, receive, send and was sent buffers in that order) are printed. A second depression will cause printing to stop. Active only if key is off. See OPERATOR AFFECTING OPTIONS No. 12 Page 38 for the number of characters that print for the summary.

Depression causes the keyboard printer (KP) to go to the edit mode, even though the terminal may be on-line. In the edit mode, messages can be entered in the edit buffer, corrected as necessary and then stored for transmission (see EDIT MODE Page 30). Lamp flashes when edit buffer is nearly full. See OPERATOR AFFECTING OPTIONS No. 13 Page 38.

Active only in the Edit mode. Depressing key turns lamp on. When lamp is on, keyboarded characters are inserted in the edit buffer at the current buffer location. Any data following the inserted data will be shifted toward the end of the edit buffer as characters are inserted until the edit buffer is full. Depress key to end insertion mode.

Active only in the Edit mode. Depressing key clears any previously entered string and causes the terminal to accept a new string of characters. The string is used for comparison in the search, retrieve or retrieve receive mode. The bell rings indicating no more characters can be entered into the string. Depress key to turn off lamp and exit mode. Mode is also exited when the search, retrieve or retrieve receive function is executed. See OPERATOR AFFECTING OPTIONS No. 12 Page 38 for the maximum number of characters that can be used in the string enter mode.

Lamp is lit if a message is waiting to be sent. Lamp flashes while sending. See To Store One or More Messages for Sending Page 33.
When lamp is turned on by depressing the key, the 14-key cluster at the right side of the keyboard functions primarily as a numeric pad. The return key in the numeric pad performs the same function as the large return key on the keyboard. 

For the function(s) of this key. With the lamp off, the lower designations (edit functions) are active.

With the NUM PAD lamp on, edit functions can be performed by use with the CTRL or SHIFT keys.

Remainder of the keyboard is unaffected by NUM PAD mode.

Active only in Edit mode. Depression causes the contents of the edit buffer to be cleared from the current location in the buffer through the next message-ending character or the end of the edit buffer if no message-ending character is encountered.

In Num Pad mode, RETURN functions the same as the large RETURN key on the keyboard. (See OPERATOR AFFECTING OPTIONS No. 15 Page 38 for the function(s) of this key.)
KEYBOARD

The keyboard is active whenever the key is not lit. If the key is lit, characters will be entered into the edit buffer.

1. **ESC** — Depress key momentarily, then the desired key to perform escape sequence functions or write it into the edit buffer. See **SENDING AND RECEIVING ESCAPE (ESC) SEQUENCES Page 37**.

2. **BACK SPACE** Causes the printing position to move one printing space backward on the same printing line. Writes a backspace character into the edit buffer.

3. **TAB** — Writes the character into the edit buffer. If the horizontal tab option is activated, the printer carriage will move to the next tab stop. If no tab stops are set, carriage will move to the right boundary of the printer and perform a carriage return-line feed function. See **Horizontal Tabulation Page 18**.

4. **DC1—DC1** and other special control character keys (keys with abbreviations at top or right side of key) when depressed together with the CTRL key print, perform special functions or write the character in the edit buffer. See **SPECIAL CONTROL CHARACTERS Page 19**.
5. **RETURN** - Returns printer carriage to the left margin of the current line unless otherwise optioned. See **OPERATOR AFFECTING OPTIONS** No. 15 Page 38 for the function(s) performed by depressing this key. When the CTRL and RETURN keys are operated together, the carriage is returned and the paper advances one line regardless of how key is optioned and no character is written into the edit buffer.

6. **CAPS LOCK** - Keyboard produces capital alpha characters when key is locked down. Produces lower case alpha characters when key is released up (affects alpha characters only).

7. **SHIFT** - Performs normal shift function (does not release CAPS LOCK mode).

8. **CTRL** - Depress and hold while selected key is depressed to perform special control functions. This key is also used during local operations for setting margins, tabs (see **KEYBOARD-PRINTER (KP) OPERATION** Page 17).

9. **REPT** - This key provides the attendant the ability to cause any key on the keyboard, keyboard edit cluster and numeric pad to repeat by holding the REPT key and the desired key depressed at the same time.

10. **DEL NUL** - Depression of this key alone generates the ASCII DELETE code sometimes used as a time-fill character. Depression of this key together with the CTRL key generates the ASCII NULL character that may also serve as a time or media-fill character.

11. **LINE FEED** - Advances the paper one line for each depression if so optioned. See **OPERATOR AFFECTING OPTIONS** No. 16 Page 38 for the function of this key.
These keys along with INSERT, STRING-ENTER and MSG CLEAR function as edit controls when the lamp is on and the lamp is off. If the lamp is on, the CTRL or SHIFT key must be depressed and held down while the desired edit control key is selected. The edit key functions are as follows:

1. **PRINT EDBUF** — Causes the contents of the edit buffer to be printed, or functions to be performed one message at a time from the current buffer location. Depress key again to stop printing message or to print next message.

2. **↑** — The first depression of this key causes a return to the beginning of the current line in the buffer and the printer to carriage return. When operated at the beginning of the line, the current buffer location moves to the beginning of the previous line in the buffer and printer will line feed.

3. **PRT/W CTRLS** — Same as Print EDBUF except that special symbols are printed instead of the associated function being performed. (See SPECIAL CONTROL CHARACTERS Page 19.)

4. **←** — The printer carriage and the current buffer location move one character position to the left on the same line. The printer carriage will not move on control characters but location in buffer will be moved back. Movement is limited by all format effectors.

5. **↓** — The current location is moved to the beginning of the next line (ie, character following the next line feed). The printer will perform a carriage return-line feed.
6. RETRY - This key executes a search for a group of characters (string) in the was sent buffer. If the string is found the message is copied into the edit buffer. See To Retrieve a Message for Editing (Was Sent Buffer).

7. RETRY REC - This key executes a search for a group of characters (string) in the receive buffer. If the string is found the message is copied into the edit buffer. See To Retrieve a Message for Editing (Receive Buffer).

8. CHAR DELETE - Causes the character at the current buffer location to be erased. The remaining contents of the edit buffer will move forward one position to fill the void created. The printer will overprint the existing character with a block (■) and move one character to the right, unless the character is a control character. (See SPECIAL CONTROL CHARACTERS Page 19.)

9. RECALL - Transfers all unsent or sent but unacknowledged messages from the send buffer to the edit buffer. See To Recall a Message for Editing (Send Buffer) Page 34.

Note: Returning messages to the send buffer is accomplished one message at a time by use of the STORE key.

10. HOME - Returns the current edit buffer location to the beginning of the edit buffer (edit home). The printer performs a carriage return-line feed.

11. → - Causes the buffer location to move within a message one character to the right, printing the character or performing the function at the current buffer location.

12. SRCH - Executes a search in the edit buffer for a string of characters from the current buffer location to the end of the edit buffer. See To Search for a Message for Editing (Edit Buffer).

13. LINE DLE - Causes the current line in the buffer to be deleted from (line feed to line feed). The remaining contents of the edit buffer will move forward to fill the void created.

14. STORE - Transfers the contents of the edit buffer to the send buffer one message at a time. The message stored is the message at the current buffer location. See To Store One or More Messages for Sending.

Note: If a key is depressed and the function cannot be performed, an alarm bell will ring.
To operate your KP locally the **PRINT** and **BUFFER** must be off. At this time messages can be typed, margins changed, tabs set or paper loaded even though the terminal buffers may be on-line. You can now type messages on your keyboard as you would on an ordinary typewriter.

**Print Head Marker**

The next printing location of the print head and the position for setting tabs and margins is indicated after a 1-second delay by the silver print head marker. The print head moves back when printer resumes. The print head marker is also used to indicate the current location in the edit buffer.

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**Left- and Right-Hand Margins**

When power is turned on, the left- and right-hand margins are reset to the left and right boundary values. See **OPERATOR AFFECTING OPTIONS No. 10 and 11 Page 38**. Different values can be temporarily set by moving print head (use space-bar) to desired position and depressing the **CTRL** key together with the indicated key. See **SENDING AND RECEIVING ESCAPE (ESC) SEQUENCES Page 37**.

- **CTRL 7** — Sets left margin.
- **CTRL 8** — Sets right margin.
- **CTRL 9** — Clears left and right margins.
- **CTRL 0** — Releases right margin.

**Note:** The bell sounds when a character is printed 8 columns before and at the right margin. Characters from the keyboard are suppressed at the right margin.
Horizontal Tabulation*

To utilize horizontal tabulation, tab stops must be set. Tab stops can be set at any desired location between the left and right margins. It may be necessary to first clear existing tabs if they are unwanted, then position the print head (use spacebar) to desired position and enter the horizontal tab. This can be accomplished by depressing the CTRL key together with the indicated key. See SENDING AND RECEIVING ESCAPE (ESC) SEQUENCES Page 37.

- CTRL 1 — Sets a tab stop.
- CTRL 2 — Clears all tab stops.
- CTRL 3 — Restores preset tab stops (see Note).

Note: Preset tab stops may be stored in the terminal. See OPERATOR AFFECTING OPTIONS No. 18 and 19 Page 38. Depressing CTRL 3 restores tab stops to preset values.

Vertical Tabulation and Form Feed*

Vertical tabs can be set to any line position from the top of the form to the currently set form length.

To Set Vertical Tabs

- Depress CTRL 6 to clear all existing vertical tabs (if desired).
- Depress CTRL L (form feed).
- Manually (use platen knob) position top of form to print position.
- Use to advance form to the first vertical tab position desired.
- Depress CTRL 5 to set tab.
- Continue using to advance form and CTRL 5 to set tabs until all vertical tabs are set.

Note 1: A vertical tab will be executed by depressing CTRL K (vertical tab).

Note 2: If there is no vertical tab between the current line position and the end of the form, the printer will advance the paper to the beginning of the next form and perform a carriage return.

*Response to horizontal and vertical tabs may be disabled in your terminal. See OPERATOR AFFECTING OPTIONS No. 5, 6 and 14 Page 38. If form length is zero your terminal will not tab vertically even if vertical tab equals yes.
The bell sounds when characters are entered seven characters before and at the right margin, ie, margin at 80, bell at 73 and 80. Also sounds at left margin when attempting to backspace. Bell sounds when functions cannot be performed, ie, depressing Edit Control keys when not in Buffer Enter mode, depressing ☰ ☰ with no characters to delete, etc. (See Audible Alarm Page 29.)

SPECIAL CONTROL CHARACTERS

Control characters are generated from the buffered 43 keyboard to the edit buffer by use of the CTRL key, and at the same time, a control character key. Although some of these characters are functional in the buffered 43, others are used only in other systems.

Graphics such as return (←), line feed (≡), delete (🗑️) and the characters shown as printed characters in the chart, are the characters printed when in buffer enter mode and PRT/W CTRLS key is depressed.

Note: The symbol ☰ is always printed when the substitute character is received on-line or when entered into the edit buffer from the keyboard. It is also printed when deleting characters in the edit buffer. The ASCII control character SB is printed when the edit buffer is printed with controls.
RECEIVE-ONLY OPERATION

If the 43 Teleprinter is optioned as a receive-only terminal (see OPERATOR AFFECTING OPTIONS No. 2 Page 38), messages cannot be sent on-line.

Messages can be typed off line, margins changed and tabs set (see KEYBOARD-PRINTER (KP) OPERATION Page 17).

Messages can be entered into the edit buffer, edited and reprinted. All edit mode functions can be performed except RECALL, RETRIEVE and STORE. See EDIT MODE Page 30.

All controls and indicators function as explained (see CONTROLS AND INDICATORS Page 9) with the exception of the key which has no function.

Communication on-line is limited to receiving messages only. See To Receive a Message.

AUXILIARY TERMINAL OPERATION

If the 43 Teleprinter is optioned as an auxiliary terminal (see OPERATOR AFFECTING OPTIONS No. 3 Page 38), messages cannot be sent on-line.

Messages can be typed off line, margins changed and tabs set (see KEYBOARD-PRINTER (KP) OPERATION Page 17).

Messages can be entered into the edit buffer, edited and reprinted. All edit mode functions can be performed except RECALL, RETRIEVE and STORE. See EDIT MODE Page 30.

All controls and indicators function as explained (see CONTROLS AND INDICATORS Page 9) with the exception of the key which has no function.

Communication on-line is limited to receiving messages only, under control of the primary teleprinter.
Ribbon

Only cartridges with ribbon designated for use with 43 Teleprinters should be used. The Teletype Corporation part number is 430035.

The cartridge with ribbon can be ordered from Teletype Corporation, 5555 Touhy Avenue, Skokie, IL 60077.

The ribbon should be replaced whenever it becomes frayed or print density becomes light. After the first few ribbons, replacement ribbons should produce 5 million or more legible characters of printing.

Sprocket Feed Paper For Tractor Feed Teleprinters

Paper may be from 3 inch to 12 inch wide sprocket feed. The teleprinter requires paper with folds or horizontal perforations located midway between sprocket holes and standard sprocket hole size and spacing. This paper may be single-ply with 8-1/2 inch folds to provide 11 inch by 8-1/2 inch copy when the 1/2 inch wide sprocket hole strip is removed at the edge serrations. (Characters are printed to within 7/8 inch of the left and right paper edge before the strips are removed.)

Similar replacement paper may be obtained from the supplier listed on the original paper box or from other suppliers listed in the telephone book yellow pages.

Other types of sprocket feed paper with different form lengths, lighter weight, no edge serrations or additional copies, etc, may also be used. Multicopy forms consisting of the original and 2 copies of 12 pound basic paper (using 8 pound basic carbon paper) produce clear copy. Acceptable copy may also be obtained on variations of multicopy forms using different weight paper or carbonless paper, however all paper or forms should be tried before ordering large quantities. Crimped multiple part forms are not recommended and stapled forms are not allowed. Consult your paper supplier for specific needs to assure complete satisfaction.

Friction Feed Paper

Paper for the 43 Friction Feed Teleprinter should be standard 8-1/2 inches wide, single-ply, furnished in 5 inch maximum diameter rolls with a 1 inch diameter spindle hole.
Installing Paper (Friction Feed)

Install paper as shown after removing the unused paper from the printer. It is not necessary to turn off power or open the cover when replacing the paper.

1. To remove unused paper or to straighten paper, pull forward on the paper release.
2. Push back on the paper release to enable paper feeding.
3. Remove and retain paper spindle from tube of the used paper roll.
4. Insert paper spindle into paper roll.
5. Place paper roll with spindle into the cradle of the paper roll support. Paper should unwind from the front of the paper roll and pass over the paper roller as shown.
6. Depress to reset if ALARM lamp on the operator console does not turn off when depressed.
7. Lift paper separator and insert paper between paper guides and down behind the platen. Release paper separator.
8. Lift paper guide and continue pushing paper down until paper engages the pressure roller. Advance paper using platen knob or line feed from keyboard. Feed paper under the paper guide then lower the paper guide.
9. Depress to reset if ALARM lamp on the operator console does not turn off when depressed.
To install paper, it is not necessary to open the cover or turn off power.

1. Lift lids here to open and remove unused paper.

2. Push paper release lever down (if not down) to release pressure roller.

3. Lift paper drag bail until locked in “up” position.

4. Depress paper-out switch lever and hold down.

5. Squeeze the right tractor release with your thumb and forefinger and position the tractor to engage the paper feed holes, if necessary. (The left tractor should normally be fully left to assure paper-out sensing.)

6. Push paper release lever to the rear or engage pressure roller and rotate platen knob to advance form until it extends approximately 4 inches beyond tractor, then push the paper release lever down to its released position. (This step may be omitted if paper may be installed without the aid of the pressure rollers.)

See next page for 5
Adjust tractor mechanism vernier wheel to provide up to 2 horizontal character positions. If greater adjustment is required, reposition both tractors.

Fold back first sheet if desired, route paper under paper-out switch lever and under the platen just past the pressure roller. (Narrower than 12 inch forms should be centered to the platen to engage pressure rollers when inserting.) Release paper-out switch lever.

Place the paper feed holes over the tractor pins keeping paper straight in tractor mechanism and close lids. This should cause the paper drag bail to fall into its operating position. Tractor may require side to side adjustment to hold form flat against the platen.

Adjust the paper bail plastic roller to center of paper. Adjust metal roller to one inch (less for narrow paper) from right edge of paper.

To reposition a line vertically, use soft roll feature. Depress soft roll button on platen knob and rotate platen to desired position. Release soft roll button.

Set right margin (and left margin), if necessary.
To Install Ribbon

1. Space print head to center of platen and open cover. Alarm lamp lights.

2. Remove and discard cartridge with used ribbon by grasping and lifting the cartridge. This applies only when changing a ribbon.

3. Pull print head locking lever back (towards keyboard) as far as it will go.

4. Place new ribbon around the outside of rollers.

5. Pull on cartridge to the right and pass ribbon between print head and rollers (see Routing Diagram below).

6. Place ribbon cartridge on the right-hand bracket and allow magnet to pull cartridge down into place. Make sure it is down.

7. Position print head against ribbon. With thumb on top of the print head, push the print head toward the platen, then move locking handle fully to the rear.

8. Using thumb, push locking lever toward platen until it snaps into place.


Note: Make sure ribbon is fully on all four rollers before closing cover.
There are two kinds of storage in the 43 Teleprinter buffer, nonvolatile (permanent) and volatile (temporary) memory.

Nonvolatile memory is where installer programmable options are stored. These options when selected and stored, provide many of the operational characteristics of your terminal.

The volatile memory is divided into a Send, a Receive and an Auxiliary Receive buffer.

Send Buffer

The send buffer is divided into three sections; Edit, Send and Was Sent*.

*Data is not treated as Was Sent until the message is automatically acknowledged by the terminal or by the remote end.

The send buffer is organized in a circular manner as shown below.

The edit section accepts data from the keyboard or data transferred from the receive buffer. All editing functions are performed in this section. The edited data when stored in the Send section is the source of the send data. After having been sent and acknowledged, messages are transferred to the Was Sent Section and remain there until the space is needed for composing new messages.
Receive Buffer

The receive buffer accepts all received data addressed to it from the line and holds it until the printer is available. After printing, the data remains in the buffer until the space is needed for newly received data. The old data (data already printed) may be retrieved as long as it is in the receive buffer. (See to Retrieve a Message for Editing (ReceiveBuffer) Page 35.

The receive buffer is also organized in a circular manner divided into two sections, Data Not Yet Printed and Data Already Printed.

Auxiliary Receive Buffer

The auxiliary receive buffer accepts all received data addressed to it from the line and holds it until the auxiliary printer is available. After printing, the data remains in the buffer until the space is needed for newly received data.

The auxiliary receive buffer is also organized in a circular manner divided into two sections, Data Not Yet Printed and Data Already Printed.
COMMUNICATION ON-LINE

Your 43 Teleprinter is always on-line unless it is in the local mode (TERM LOCAL key lit) or power is turned off. Terminal local mode may be disabled. See OPERATOR AFFECTING OPTIONS No. 1 Page 38.

To Receive a Message

- Depress key if not lit.
- Depress key if not lit.
- A message will print when the terminal is selected to receive and receives a message.

Note 1: If a message was received while the lamp was off, the will be on. To print all the messages received, depress the key. To print the messages one at a time, depress the key. After one message prints, if the key is still lit, depress again for the second message.

Note 2: If your 43 Teleprinter has an auxiliary printer, the auxiliary printer will print messages addressed to it provided it is conditioned to receive. Refer to the How to Operate Manual associated with the Auxiliary Printer.

Note 3: If this 43 Teleprinter is optioned as an auxiliary printer (see OPERATOR AFFECTING OPTIONS No. 3 Page 38) it will print received messages addressed to it provided the and keys are lit and the lamp is off.

Note 4: If the bell rings for approximately one second, See Audible Alarm below.

Audible Alarm
(See OPERATOR AFFECTING OPTIONS No. 9 Page 38.)

If optioned for audible alarm the bell will ring for one second indicating the terminal or auxiliary terminal (if present) is being selected and there is not enough space in the buffer to receive a message. To make space available, depress key if key is lit or place the auxiliary printer in a receive mode to print data in the buffer.
COMMUNICATION ON-LINE (Contd)

To Prepare and Send a Message (No Contention)
(See OPERATOR AFFECTING OPTIONS No. 8 Page 38.)

- Depress \( \text{TERM ON LINE} \) key if not lit.

- Depress \( \text{BUFFER ENTER} \) key if not lit.

- Type a message in the edit buffer. If a typing error is made, see Message Edit.

- Depress \( \text{STORE} \) key. \( \text{SND ROY} \) key lights. The message will be sent automatically when the terminal is polled. \( \text{SND ROY} \) key flashes while sending and may go out after message is sent.

To Prepare and Send a Message (Contention)
(See OPERATOR AFFECTING OPTIONS No. 8 Page 38.)

- Depress \( \text{TERM ON LINE} \) key if not lit.

- Depress \( \text{BUFFER ENTER} \) key if not lit.

- Type a message in the edit buffer. If a typing error is made, see Message Edit.

- Depress \( \text{STORE} \) key. \( \text{SND ROY} \) key lights. The message will be sent automatically when the terminal is polled. \( \text{SND ROY} \) key flashes while sending and may go out after message is sent.

EDIT MODE

Your 43 Teleprinter is placed in the edit mode by depressing the \( \text{BUFFER ENTER} \) key if not lit. If the key is lit it will turn off.

While in the edit mode, sending and receiving can take place without interrupting the message preparation.

Before proceeding, become acquainted with the Edit Control keys (INSERT, STRING ENTER, MSG CLEAR and KEYBOARD EDIT CLUSTER) and keyboard operation.

Message Edit

☐ To Overwrite an Errored Character

- Depress \( \text{HOME} \) key.

- Depress \( \text{PRINT EDBUF} \) key. Message prints out.
Example:

THE QUICK BROWN FAX

Errored Character

* Position print head marker (ie, use edit controls ↑, ←, ↓, →, etc) at character “A”.

* Type character “O”. The “O” character overwrites the character “A”.

* Depress "HOME" then "PRINT EDBUF" key.

THE QUICK BROWN FOX ............ prints out.

To Delete One or More Characters

* Depress "HOME" key.

* Depress "PRINT EDBUF" key. Message prints out.

Example:

THE QUICK BROWN FOOX

Character to be deleted

* Position print head marker (ie, use edit controls ↑, ←, ↓, →, etc) at character “O”.

* Depress "DELETE" key.

* Depress "HOME" then "PRINT EDBUF" key.

THE QUICK BROWN FOX ............ prints out.

Note: The "DELETE" key can be depressed simultaneously with the "REPT" key to delete a string of characters.

To Delete One or More Lines

* Depress "HOME" key.

* Depress "PRINT EDBUF" key. Message prints out.

* Position print head marker (ie, use edit controls ↑, ←, ↓, →, etc) anywhere within the line to be deleted.

* Depress "LINE DELETE" key.

* Depress "HOME" key.

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EDIT MODE (Contd)

- Depress [DELETE] key. Message prints out with desired line deleted.

Note: The [DELETE] key can be depressed simultaneously with the [REPT] key to delete multiple lines.

□ To Insert One or More Characters

- Depress [HOME] key.

Example:

THE QUICK BROWN FX

Character to be inserted

- Position print head marker (ie, use edit controls \uparrow, \leftarrow, \downarrow, \rightarrow, etc) at the character “X”.
- Depress [INSERT] key. Key lights.
- Type the character “O”.
- Depress [INSERT] key. Lamp goes out.

★ Depress [HOME] then [PRINT] key.

THE QUICK BROWN FOX .......... prints out.

□ To Clear All or Part of a Message

- Depress [HOME] key.

Example:

THE QUICK BROWN FOX

Everything from FOX to the end of message to be cleared.

- Position print head marker (ie, use edit controls \uparrow, \leftarrow, \downarrow, \rightarrow, etc) at the character “F”.
- Depress [MSG CLEAR] key.
- Depress [HOME] then [PRINT] key.

THE QUICK BROWN .............. prints out.
To Print Edit Buffer Without Special Symbols for Control Characters

- Depress \[5\] HOME key.
- Depress \[7\] PRINT EDBUF key. Message prints out.

A depression of the \[7\] PRINT EDBUF key while the message is printing causes the message to stop printing. A depression of the \[7\] PRINT EDBUF key after the message prints causes the second message (if present) to print.

To Print Edit Buffer with Special Symbols for Control Characters.

- Depress \[5\] HOME key.
- Depress \[9\] PRT/W CTRLS key. Message prints out with special symbols for control characters (See SPECIAL CONTROL CHARACTERS Page 19). Control functions are not performed.

A depression of the \[9\] PRT/W CTRLS key while the message is printing causes the message to stop printing. A depression of the \[9\] PRT/W CTRLS key after the message prints causes the second message (if present) to print.

To Store One or More Messages for Sending

- Prepare one or more messages for sending. If more than one message was prepared, the message at the current buffer location will be stored first and sent first.

- Place the print head marker, using edit controls, anywhere in the message to be stored first.

- Depress the \[STORE\] key. \[SEND\] key lights.

- Place the print head marker anywhere in the second message to be stored and depress the \[STORE\] key.

- Repeat this procedure until all messages desired are stored.

Note: If fewer than two unoccupied positions remain in the edit buffer or if the \[ALARM\] lamp is lit. The store operation may not take place.
To Determine the Contents of the Various Buffers

- Depress key if lit. Key goes out.

- Depress key. A summarized list of the contents of the edit buffer, receive buffer, send buffer and was sent buffer prints.

To Recall a Message for Editing (Send Buffer)

To recall a message for editing it must be listed in the send buffer summary. See To Determine the Contents of the Various Buffers.

- Depress key. Key lights and printer performs a carriage return-line feed.

- Depress key. Lamp lights.

- Type a string of characters unique to the message being retrieved.

Note: The message retrieved starts with the first character in the string and ends with the first message ending character.

Example:

THE QUICK BROWN

Message to be retrieved listed in was sent summary.

- Type the “THE QUICK”

- Depress key. The lamp turns off.

To Retrieve a Message for Editing (Was Sent Buffer)

To retrieve a message for editing it must be listed in the was sent buffer summary. See To Determine the Contents of the Various Buffers.
When the string is found, the following occurs:

1. Printer carriage return-line feeds.

2. The message containing the string is appended to the edit buffer by copying the message starting with the first character in the string and ending with the first message ending character.

3. The current buffer location is positioned on the first character of the string.

The message can now be re-edited and stored for transmission.

Note: It is possible the retrieved message will not fit in the edit buffer. In this case the maximum amount of characters that will fit are retrieved and "MAY BE INCOMPLETE" prints.

If the string is not found, the printer carriage return-line feeds, "CANNOT FIND" is printed and the edit buffer remains at its former position.

To Retrieve a Message for Editing (Receive Buffer)

To retrieve a message for editing from the receive buffer it must be listed in the receive buffer summary. See To Determine the Contents of the Various Buffers.

• Depress key. Key lights and printer performs a carriage return-line feed.

• Depress key. Lamp lights.

• Type a string of characters unique to the message being retrieved.

Note: The message retrieved starts with the first character in the string and ends with the first message ending character.

Example:

THE QUICK BROWN

Message to be retrieved listed in the receive buffer summary.

• Type "THE QUICK"

• Depress key. The lamp turns off.

When the string is found, the following occurs:

1. Printer carriage return-line feeds.

2. The message containing the string is appended to the edit buffer by copying the message starting with the first character in the string and ending with the first message ending character.
3. The current buffer location is positioned on the first character of the string.

The message can now be re-edited and stored for transmission.

*Note:* It is possible the retrieved message will not fit in the edit buffer. In this case the maximum amount of characters that will fit are retrieved and "MAY BE INCOMPLETE" prints.

If the string is not found, the printer carriage return-line feeds, “CANNOT FIND” is printed and the edit buffer remains at it former position.

To Search for a Message for Editing (Edit Buffer)

To search for a message for editing the message must be listed in the edit buffer summary. See To Determine the Contents of the Various Buffers.

- Depress [HOME] key if not lit. Key lights and printer performs a carriage return-line feed.
- Depress [STRING] key. Lamp lights.
- Type a string of characters unique to the message or location within the message being searched.
- Depress the [SRCH] key.

When the string is found, the following occurs:

1. Printer carriage return-line feeds.
2. The line containing the string is printed up to and including the last character of the string.
3. The current buffer location is at the character following the last character of the string.

If the string is not found, the printer carriage return-line feeds, “CANNOT FIND” is printed and the current edit buffer location is the first position following the last character in the edit buffer.
SENDING AND RECEIVING ESCAPE (ESC) SEQUENCES

Only the following ESC characters are functional in the 43 Teleprinter. They are performed when sending or receiving the character immediately following the escape character (ESC key).

Use of these or other escape sequences on-line may be system dependent.

ESC 1 (CTRL 1) — Sets horizontal tab stop at current printer column position.
ESC 2 (CTRL 2) — Clears all horizontal tab stops stored in the volatile memory.
ESC 5 (CTRL 5) — Sets vertical tab stop at current line position.
ESC 6 (CTRL 6) — Clears all vertical tab stops stored in the volatile memory.
ESC H — Prepares terminal to resend last message.
ESC 1 (lower case L) (CTRL 7) — Sets left margin.
ESC x (CTRL 9) — Clears left margin. CTRL 9 also clears right margin.
ESC y (CTRL 3) — Restores terminal to the preset horizontal and vertical tab values.
ESC 8 (CTRL 8) — Sets right margin, local function only.
ESC 0 (CTRL 0) — Releases right margin for current line, local function only.

Note. The escape sequence will be entered in the edit buffer if the key is lit when the control character (if shown in parentheses) is operated locally. Right margin set (CTRL 8) and right margin release (CTRL 0) are local functions only and are not entered in the edit buffer.

MESSAGE GENERATOR

The message generator generates a message of up to 15 characters. It is used for entering repetitive message information into the edit buffer. See OPERATOR AFFECTING OPTIONS No. 17 Page 38 for the message generator character string, if any.

- Depress key. Lamp lights.
- Hold the key depressed and depress the key. The message is printed and entered into the edit buffer.
The following options affect operator operation of the 43 Teleprinter. The value of these options should be filled in by the installer or station manager since these options are referred to in this manual and affect the operation of the 43 Teleprinter.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Terminal Local Mode</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Enabled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Receive Only Teleprinter</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(3) Auxiliary Teleprinter</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(4) Copy Sent Data</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(5) Horizontal Tab</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(6) Vertical Tab</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(7) Double Line Feed</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(8) Contention</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(9) Audible Alarm</td>
<td>Yes, No</td>
<td>Yes, No</td>
<td>Yes, No</td>
</tr>
<tr>
<td>(10) Left Boundary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11) Right Boundary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12) Sum Length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(13) Edit Buffer Low Warning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(14) Form Length in Line Feeds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(15) Large Key (Return)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16) Small Key (Line Feed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(17) Message Generator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(18) Preset Horizontal Tabs (Column Numbers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(19) Preset Veritical Tabs (Line Feed Count From Top of Form)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The following are commonly used symbols which may appear in options 15, 16 or 17.

- Carriage Return
- Line Feed
- Horizontal Tab
- Delete
IF TROUBLE OCCURS

Trouble that is encountered with the 43 Teleprinter should be reported as locally specified. A number to be called in case of trouble may be entered on the directory card pullout by the installer.

If it can be determined that the trouble is in the remote equipment, the attendant at the location in trouble should follow local procedures for that area.

The following table of analysis questions is arranged to aid in the isolation of a trouble for:

• Local correction.
• Correction at the remote location.
• Advising service personnel in advance of trouble visit of Analysis Question results.

Before reporting a trouble, follow the Analysis Questions in the table always starting with Question no. 1 and then proceed according to the “Yes” or “No” directive on the following pages.
<table>
<thead>
<tr>
<th>Analysis Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is key lit or flashing?</td>
<td>Go to 2.</td>
<td>Go to 1a.</td>
</tr>
<tr>
<td>1a. Is red power supply lamp on?</td>
<td>Go to 1b.</td>
<td></td>
</tr>
<tr>
<td>The red lamp can be seen through the air vent slot (6th slot from left) of the bustle.</td>
<td></td>
<td>1. Check that power switch is ON.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Check that power cord is connected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Check source of power. (Wall switch, other equipment ok, circuit breaker, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Report as local trouble in terminal.</td>
</tr>
<tr>
<td>1b. Is red lamp on the controller lit?</td>
<td>Go to 1c.</td>
<td>Report as trouble in controller or as trouble in power supply output cable to controller.</td>
</tr>
<tr>
<td>Can be seen through the air vent slot (13th slot from left) of the bustle.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis Question</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Is [TERM ON LINE] key lit steadily? (Data set power on.)</td>
<td>Go to 3.</td>
<td>Report as probable trouble in data set or data set cable.</td>
</tr>
<tr>
<td>3. Can any characters be locally generated from the keyboard to the printer?</td>
<td>Go to 4.</td>
<td>Report as local trouble in the 43 Teleprinter.</td>
</tr>
<tr>
<td>5. Can data be stored and sent (Data received by remote location)? (43 Teleprinters not optioned as receive only or auxiliary terminals.)</td>
<td>Go to 6.</td>
<td>Report as on-line trouble. The Telephone Company may direct you to perform some specific tests.</td>
</tr>
<tr>
<td>6. Can data be received and printed?</td>
<td>Go to 7.</td>
<td>Report as on-line trouble. The Telephone Company may direct you to perform some specific tests.</td>
</tr>
</tbody>
</table>
Keyboard Test

Local analysis of the keyboard can be performed easily by depressing certain keys causing certain lamps on the keyboard to light and extinguish. By doing so the attendant can provide information so that the keyboard electronics can be analyzed, thus assisting in trouble analysis.

With keyboard in the CAPS LOCK mode, proceed as follows:

- Depress LINE FEED and QUOTES keys simultaneously with more force than is required in normal operation.

The TST indicator will light and remain lit indicating Test mode.

Note: If any lamps flash when Test mode is entered, simply depress the LINE FEED and P keys simultaneously to extinguish lamps. Re-enter Test mode by depressing LINE FEED and QUOTES keys.

- Depress the following keys while observing lamps for proper indication.
### Key Condition Table

<table>
<thead>
<tr>
<th>Depress key (or keys):</th>
<th>Indicator Key</th>
<th>Lamp Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A CTRL &amp; A SHIFT NUM PAD 7 CTRL &amp; 1</td>
<td>TERM LOCAL TERM LOCAL TERM LOCAL TERM LOCAL</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>C CTRL &amp; C SHIFT NUM PAD 9 CTRL &amp; 3</td>
<td>TERM ON LINE TERM ON LINE TERM ON LINE TERM ON LINE</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>D CTRL &amp; D SHIFT NUM PAD 4 CTRL &amp; 3</td>
<td>LINE ACTIVE LINE ACTIVE LINE ACTIVE LINE ACTIVE</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>G CTRL &amp; G CTRL &amp; RETURN CTRL &amp; 7</td>
<td>COPY SEND DATA COPY SEND DATA COPY SEND DATA COPY SEND DATA</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>F CTRL &amp; F SHIFT NUM PAD 6 CTRL &amp; 6</td>
<td>ALARM ALARM ALARM ALARM</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>E CTRL &amp; E SHIFT NUM PAD 5 CTRL &amp; 5</td>
<td>PRINT REC MSG PRINT REC MSG PRINT REC MSG PRINT REC MSG</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>B CTRL &amp; B SHIFT NUM PAD 8 CTRL &amp; 2</td>
<td>REC MSG WTG REC MSG WTG REC MSG WTG REC MSG WTG</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>L CTRL &amp; L SHIFT NUM PAD, CTRL &amp; -</td>
<td>MSG SUMRY MSG SUMRY MSG SUMRY MSG SUMRY</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>K CTRL &amp; K SHIFT NUM PAD 3 CTRL &amp; 3</td>
<td>BUFFER ENTER BUFFER ENTER BUFFER ENTER BUFFER ENTER</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>I CTRL &amp; I SHIFT NUM PAD 2 CTRL &amp; 9</td>
<td>INSERT INSERT INSERT INSERT</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>H CTRL &amp; H SHIFT NUM PAD 1 CTRL &amp; 8</td>
<td>STRING ENTER STRING ENTER STRING ENTER STRING ENTER</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
<tr>
<td>O (ALPHA) CTRL &amp; O SHIFT NUM PAD RETURN CTRL &amp; 0</td>
<td>NUM PAD NUM PAD NUM PAD NUM PAD</td>
<td>ON OFF FLASH ON FLASH OFF</td>
</tr>
</tbody>
</table>

### Note 1
If lamp responded correctly in Test mode, the trouble is probably not in the keyboard.

### Note 2
If any lamp failed to respond correctly, report failure when making a trouble call.

- Depress LINE FEED and P keys simultaneously with additional force to clear Test mode.

TST indicator will extinguish and bell rings indicating Test mode has cleared.

(Test Ended)
Cut along dotted line for pocket reference.

To Receive a Message
- Depress \text{term on line} key if not lit.
- Depress \text{print rec} key if not lit.
- A message will print when the 43 Teleprinter is selected to receive and receives a message.

To Prepare And Send A Message
- Depress \text{term on line} key if not lit.
- Depress \text{buffer enter} key if not lit.
- Type a message in the edit buffer.
- Depress \text{store} key. \text{line active} key lights.
- If optioned for contention, depress the \text{line active} key, otherwise the message will be sent automatically when the 43 Teleprinter is polled.