

Manual 391, Part 11  
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**BASIC RO**

# the **43** teleprinter

HOW TO OPERATE



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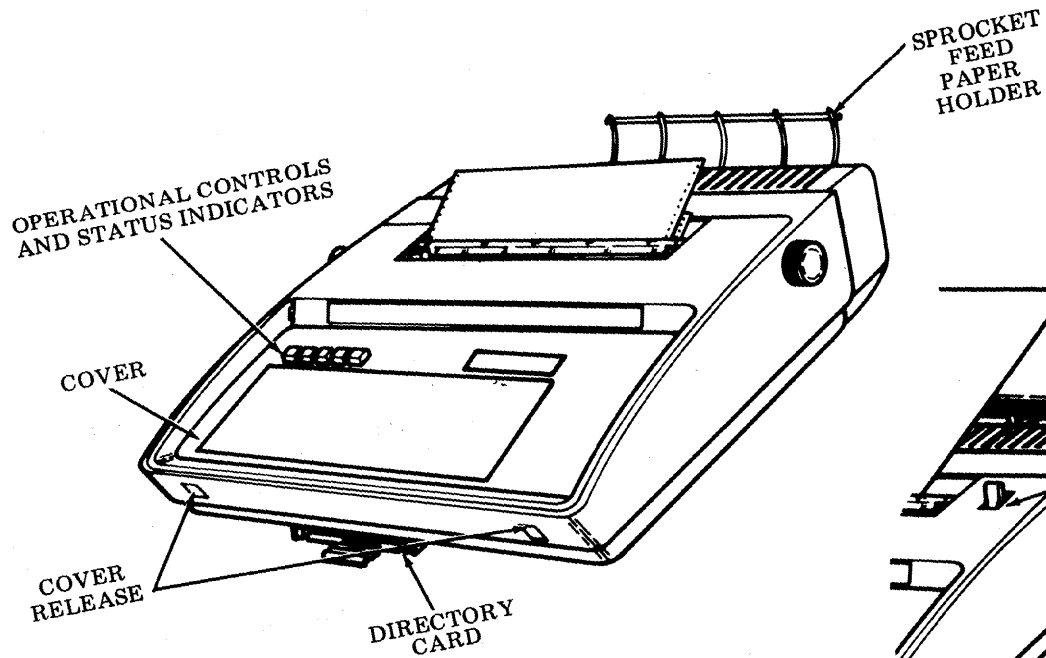
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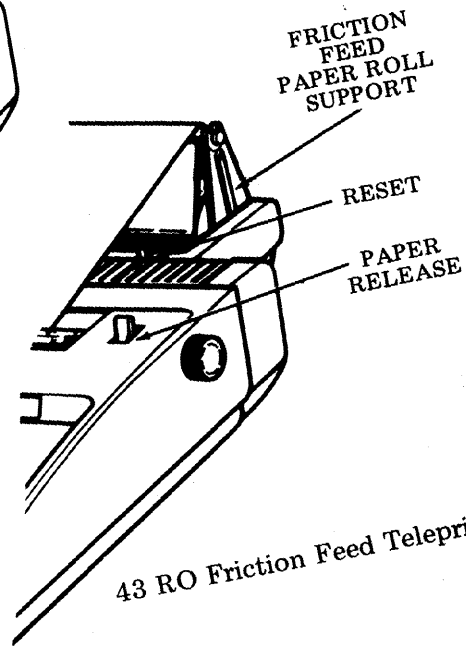
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43 RO Sprocket Feed Teleprinter



43 RO Friction Feed Teleprinter

HOW TO OPERATE INSTRUCTIONS  
(Pages 1 Through 9)

INTRODUCTION

The 43 Basic RO Teleprinter provides character-at-a-time receive-only printer operation. Data reception is normally provided at 30 characters per second (cps) (300 wpm). \*

The 43 RO Teleprinter may be connected to an external communications device or contain an internal data set and may be associated with a telephone. A permanent connection via private line may also be used in the arrangements with an external device. Calls may be answered and disconnected automatically over the telephone line.

In some arrangements the 43 RO Teleprinter may be connected directly to a computer or remote terminal which will control Data mode transfer.

\*See reverse side of directory card for a record of an option exception that provides data reception at 10 characters per second (cps) (100 wpm) or any other exceptions to standard operating features.

Messages are printed with up to 132 characters per line on printers equipped for 12 inch wide sprocket feed paper. Sprocket feed 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 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.

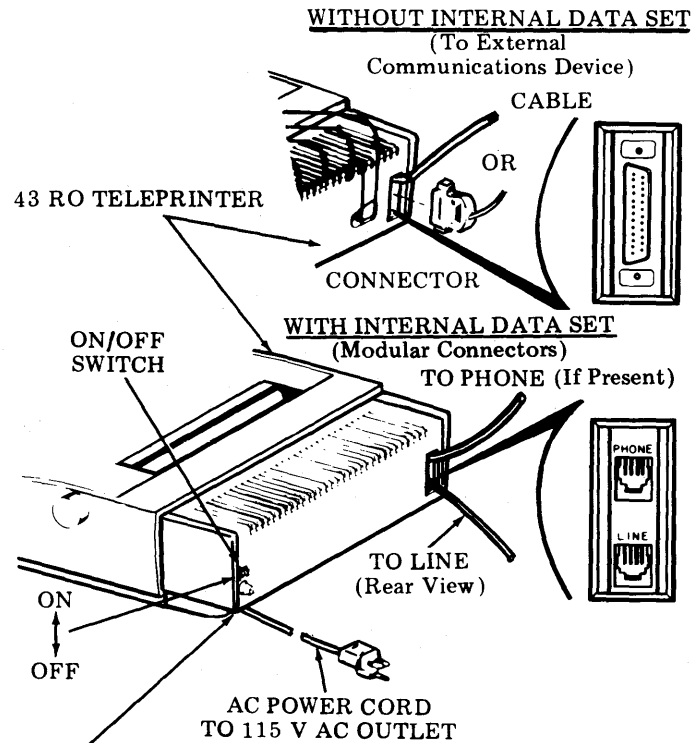
The ribbon is part of a cartridge that can be readily replaced with the cover open. Replacement ribbon cartridges can be obtained from Teletype Corporation (see Page 6). An order form is included with each new ribbon.

A pullout directory card holder under the front of the teleprinter may be used to write in frequently used telephone numbers and note any extensions (see Page 9).

*Note:* The paper used with the sprocket feed teleprinter is a new 12 inch wide sprocket feed. See Page 6 for ordering information.

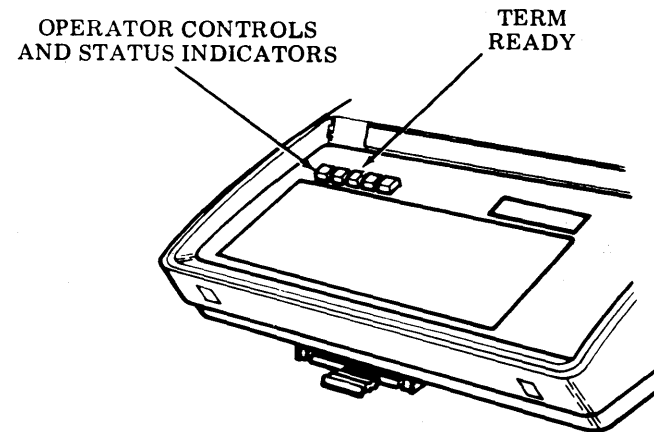
## CONNECTIONS AND POWER TURN ON

- Make sure ac power cord and modular cords or cord to any external communications device are connected as shown before turning on power.



- Turn on power to teleprinter by depressing upper half of ON/OFF switch.

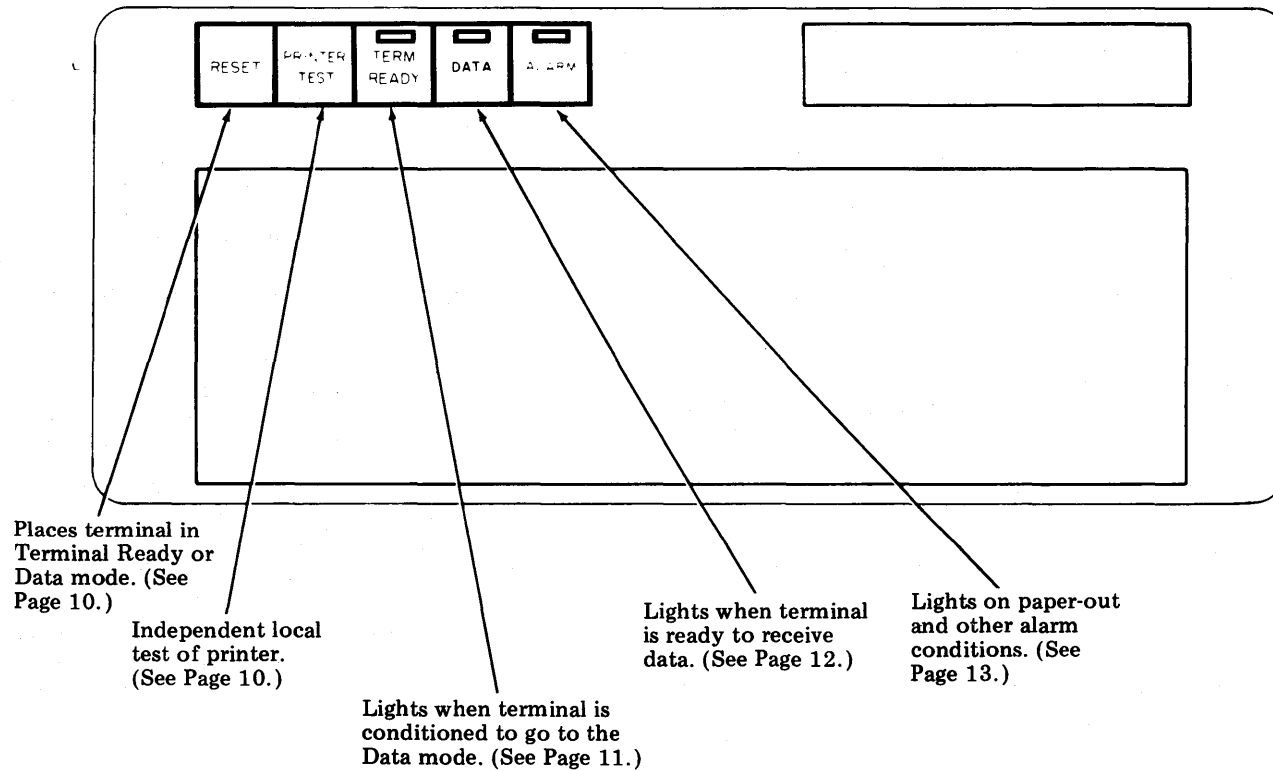
- When power is turned on, the print head will move fully left, the printer will perform one line feed and the TERM READY key on the operator console will light, provided no alarm conditions exist.



- Power should normally be left on to automatically transfer to the Data mode. However, when not in use, the power to the teleprinter may be turned off.

## OPERATIONAL CONTROLS AND STATUS INDICATORS

- Use and function of the operational control and status indicators should be reviewed before the 43 RO Teleprinter is operated.



## COMMUNICATIONS WITH DISTANT TERMINALS

- Establishing connection and transferring to the Data mode automatically is basically under the control of the communications device (modem) over the switched-network or over private lines. In some arrangements terminals are directly connected to the distant terminal or computer. Use of external devices should be specified locally since many variations are possible, ie, pushbuttons on modem or on phone, if present, exclusion, auto answer keys, etc.

- The procedures as shown below, that normally apply to operation of the controls of the terminal, should be followed:

■ To Condition Terminal to Transfer to Data Mode:

ie, Place terminal in Terminal Ready mode:

1. Turn on ac power (see Page 2).
2. Clear any alarm condition (paper-out, cover open).
3. Depress RESET key.

■ Transfer from Terminal Ready to Data Mode.

The DATA key lights under control of the external device, if present, or distant station.

*Note:* Data can be received on-line only when the DATA key is lit.

■ Transfer from Data mode to Terminal Ready Mode.

1. The RESET key is depressed.
2. Eight line feeds are received after a paper-out condition (sprocket feed only).
3. Printer test is initiated.
4. Telephone call is disconnected for any reason such as received EOT. See the back-side of the directory card for any exception of the feature, Option 433.b.



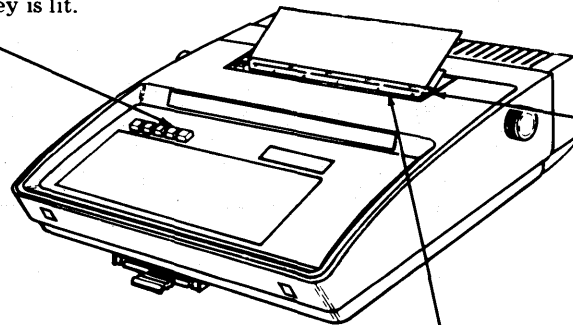
## PRINTER OPERATION

- Printer

The printer copies all received printable data messages when the DATA key is lit.

- Signal Bell

The signal bell sounds when characters are printed seven characters before and at the right margin, ie, margin at 80, bell at 73 and 80. Also sounds at left margin when backspaces are received, when a bell character is received or when a paper-out condition is detected. It may also ring when a call is disconnected.

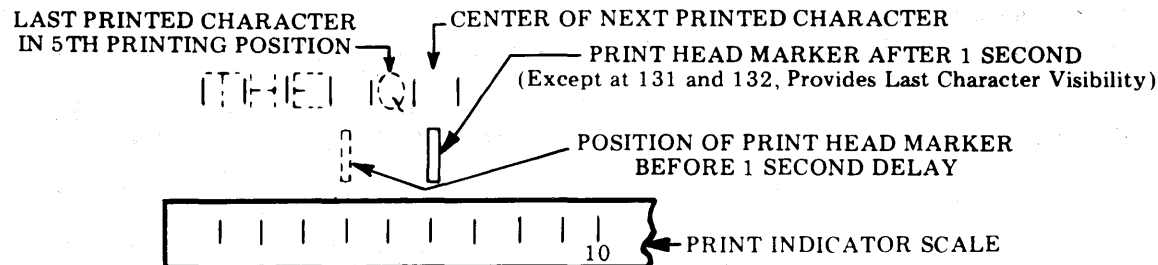


- Margin Setting

When power is turned on, the left and right printing margins are reset to 1 and 132 on sprocket feed or 1 and 80 on friction feed. They may be set or cleared on-line by receiving escape sequences. (See Page 15.) To change either margin outward, both must be reset.

- Indicator Scale

The next printing location of the print head is indicated by the print head marker at the print indicator scale after a 1 second delay. The print head moves back when printing resumes or when nonprintable characters are received.



## TELEPRINTER SUPPLIES MAINTENANCE

It is your responsibility to keep the teleprinter equipped with sufficient paper and ribbon. In addition, an adequate supply of these items should be ordered and kept in storage.

### Ribbon

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

The cartridge with ribbon can be ordered from Teletype Corporation, 5555 Touhy Avenue, Skokie, IL 60076. An order form included with each new cartridge may be used for this purpose or established ordering procedures may be followed for large orders.

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

### Paper

Paper for the 43 Sprocket Feed Teleprinter must be 12 inch wide sprocket feed. The original and up to two-copy multi-ply forms may be used. Paper frequently used with the teleprinter is single-ply and has 8-1/2 inch folds to provide 11 inch x 8-1/2 inch copy when the serrations are removed. This single-ply 15 pound basic paper may be obtained from the suppliers listed below or other suppliers.

Wallace Business Forms Inc.  
444 W. Grand Ave.  
Chicago, IL 60610  
Cat. No. E-6879

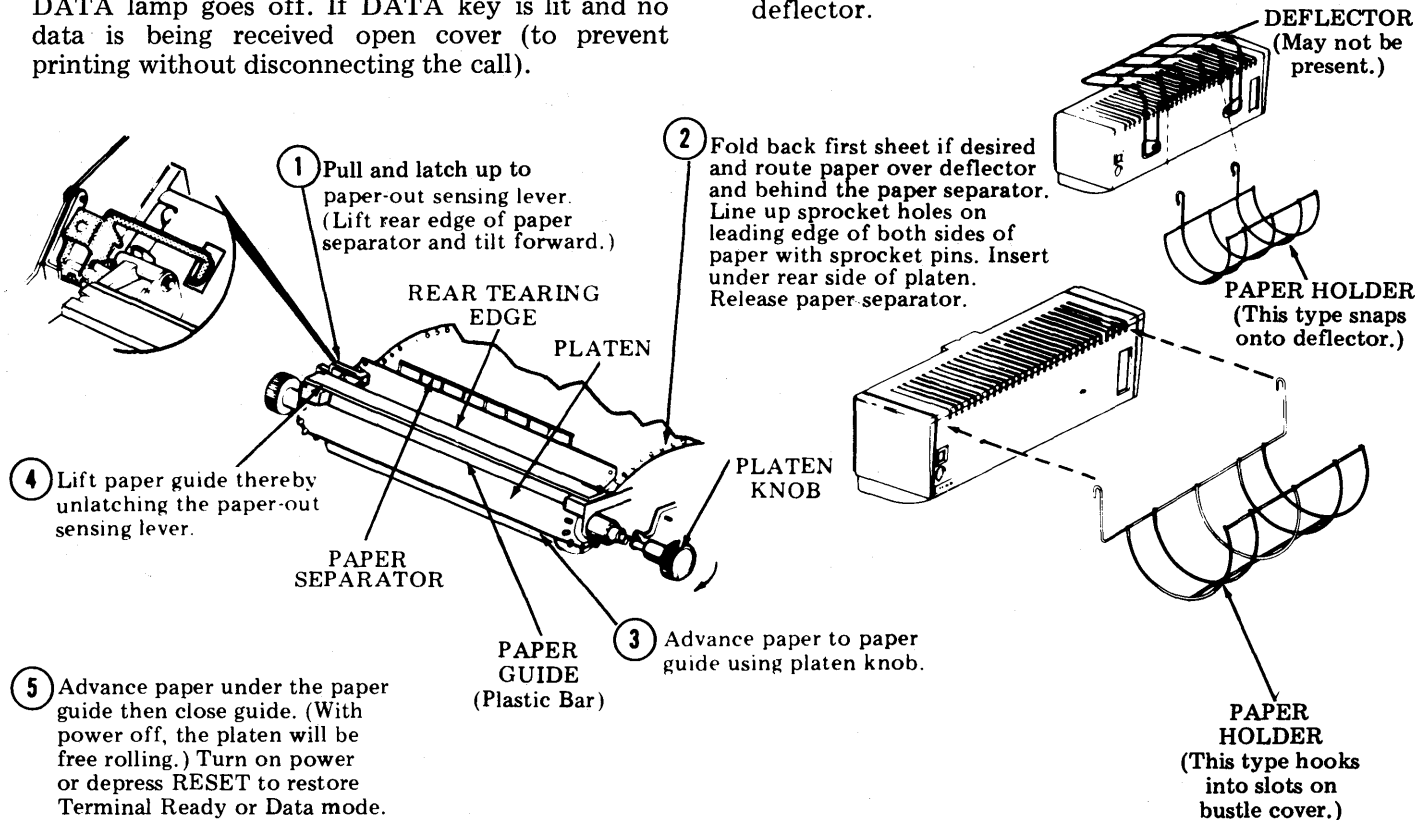
Duplex Products Co.  
228 W. Page  
Sycamore, IL 60178  
Cat. No. 1-1280-15P

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

## INSTALLING PAPER (Sprocket Feed)

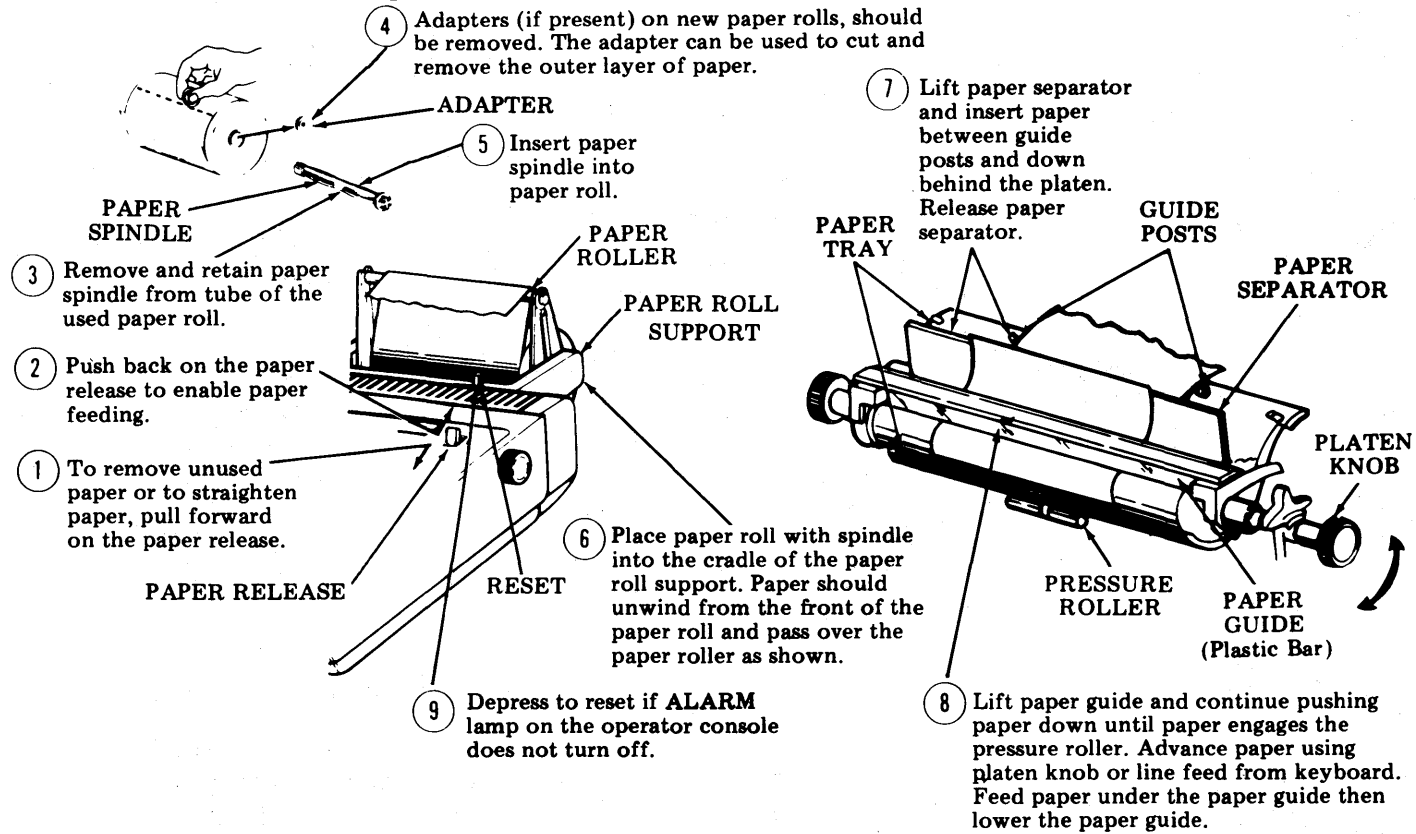
- Install paper as shown with the unused paper removed. If a paper-out condition occurs (ALARM key lights) while data is being received, wait until DATA lamp goes off. If DATA key is lit and no data is being received open cover (to prevent printing without disconnecting the call).

*Note:* Paper may be fed directly from the supply box or if the paper holder is used, a limited stack of forms may be placed in the holder and fed over the deflector.



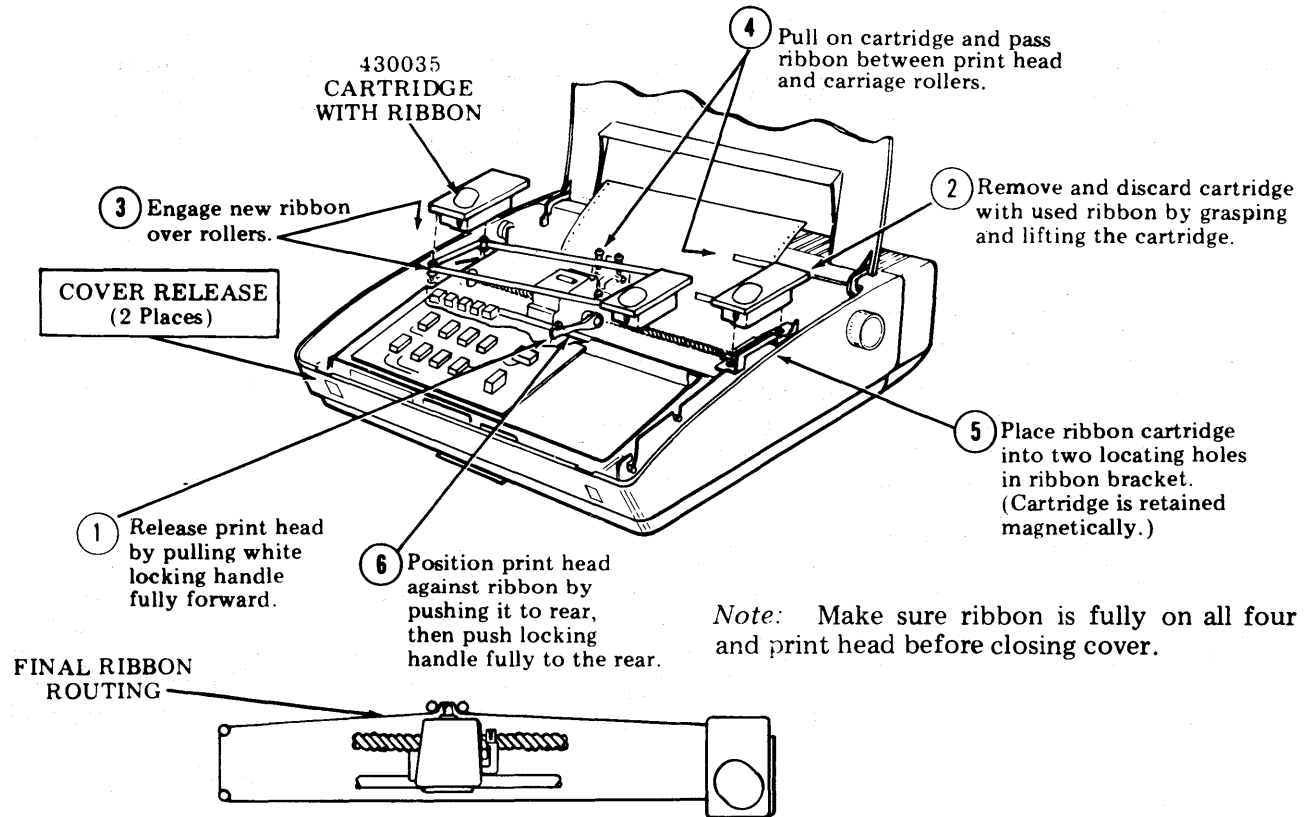
## INSTALLING PAPER (Friction Feed)

- 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 but to avoid loss of data, paper should be replaced after the remote terminal stops sending.



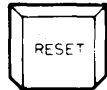
## INSTALLING RIBBON

- Install ribbon as shown after opening the cover and manually centering the print head with the power turned off.

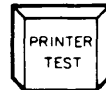


SUPPLEMENTARY OPERATIONAL INFORMATION  
(Pages 10 Through 18)

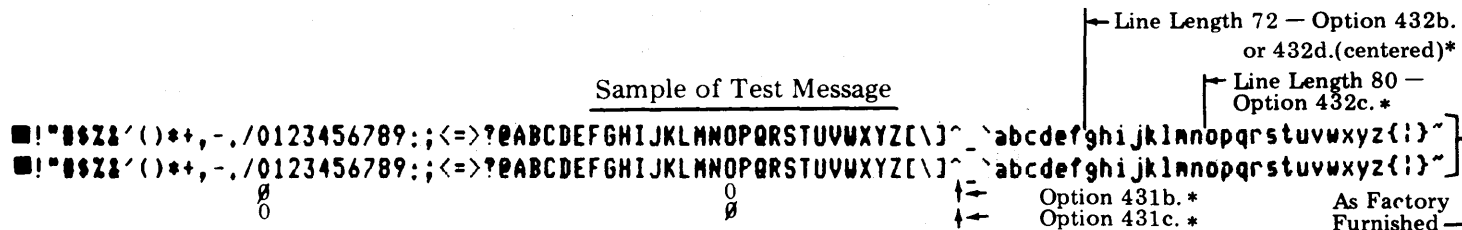
**PRINTER TEST AND RESET KEYS**



Depressing the **RESET** key causes the printer to carriage return (CR) and line feed (LF) and conditions the terminal to enter the Terminal Ready mode (Page 11). Alarm condition following paper replacement or closing cover will also be cleared.



An independent test of the printer is provided for use by the attendant or field service personnel. The test consists of continuous printing of the 94 character printed set as shown below. During the test, the bell rings and automatic return of the carriage and line feed is performed within margin restraints.† The test should not be performed in the Data mode since the Data mode will be terminated and on sets with an internal modem, the call will be disconnected. Depression of the **PRINTER TEST** key initiates the test and turns on the **ALARM** lamp. When this key is released the test is terminated and the printer will carriage return and line feed. The **ALARM** lamp will be extinguished and the terminal will be conditioned to go to the Data mode (Page 12).



\*See backside of directory card for record of any option exceptions that may have been enabled.  
†If margins are set for less than 96 characters, a character will be skipped (not printed) each time a new line starts, except for the new line that starts a new printing cycle.

## TERM READY KEY



Key lights in Terminal Ready mode.

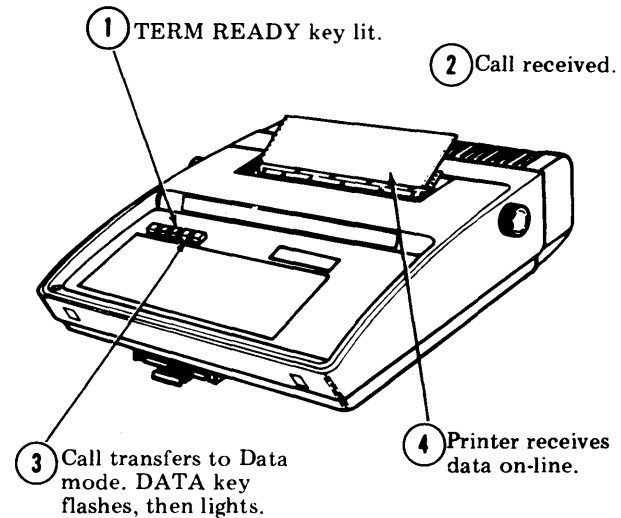
- In the Terminal Ready mode, the teleprinter will be conditioned to transfer to the Data mode (Page 12).
- The Terminal Ready mode is normally entered when power is turned on or the RESET key is depressed following paper replacement.

*Note:* On private line systems the TERM READY lamp lights only when the terminal is ready but the data set or remote terminal is not ready.

- With DATA or ALARM keys lit the TERM READY key cannot be lit.

- The Terminal Ready mode can also be entered:

- Automatically — following calls in the Data mode. (See Page 12 for Data Mode.)
- Automatically — following a flashing DATA lamp when a call is not completed (DATA lamp off).
- Manually — depressing the RESET key momentarily. If depressed during the Data mode the call may disconnect or DATA lamp may extinguish.
- Manually -- depressing and releasing the PRINTER TEST key.



- The Terminal Ready mode can be interrupted by:

- Opening the cover.
- Operating local printer test.
- Removing paper.
- Turning off power.
- Going to Data mode, ie, answering a call or automatically.

## DATA KEY



Key lights in Data mode.

- Data can be received on-line in the Data mode only.
- On some arrangements (without an internal data set) the DATA key will light automatically following the Terminal Ready mode.
- On other arrangements the Data mode is entered automatically from the Terminal Ready mode:
  - Following a received telephone call (internal data set).
  - Under control of some external communications devices or when directly connected to a distant terminal (may have an associated telephone). DATA key may light without TERM READY key being lit first.
- The Data mode may be terminated when:
  - Eight line feeds are received after paper-out alarm.
  - RESET key is operated (Page 10).
  - The character EOT (CTRL D) is received.\*
  - Data signals from the remote station are lost.
  - The local PRINTER TEST key is operated (Page 10).
  - A telephone call is disconnected for any reason.
  - Power is turned off.
- Variations in operation of Data mode:
  - The DATA key may blink indicating a short interruption in data signals (short flash).
  - On sets with an internal data set and a telephone, transfer to the Data mode cannot be completed if the power is turned on after the call was answered.
  - On sets with an internal data set and a telephone, the phone normally rings once, followed by a transfer to the Data mode. If the transfer is not completed (data signals not received), the station will then appear busy to subsequent calls for 15 seconds.

\*Unless Option 433b. is enabled.



## ALARM KEY



Key lights when Alarm condition exists or may flash.

- Alarm conditions are:

- Paper-out. ALARM key lights when paper-out condition is sensed. This is an advance warning that eight received line feeds later, the DATA mode will be terminated and after thirteen line feeds, paper will be out at the print head. If Data mode was terminated, ALARM lamp will remain on after paper is replaced.
- Cover open (printing is disabled).
- Printer test (Page 10).

*Note:* Alarm overrides key flashing condition.

- Alarm key flashes when:

- Teleprinter is placed in a Loopback mode by special character sequences received for testing (Page 15).

*Note 1:* In some systems the ALARM key may be flashing during normal operation accompanied by printing.

*Note 2:* Flashing ALARM key should be cleared after extended periods unless otherwise instructed.

- Alarm can be cleared by:

- Replacing paper. Depress RESET to restore Terminal Ready or Data mode if terminated by paper-out.
- Closing cover with DATA key lit or releasing PRINTER TEST key.
- Depressing RESET key.

- Flashing ALARM key can be cleared by:

- Receiving special character sequence (Page 15).
- Depressing RESET key or turning off power.

## TELEPHONE CALLS



Some teleprinters may be connected to the line by a received telephone call. A telephone may be present.

- If a telephone is directly connected to a teleprinter with an internal modem it will ring once when a call is received. The telephone may be used to originate and answer calls in the Talk mode only:
  - With power off.
  - When ALARM lamp is lit.
- Calls normally will be disconnected when:
  - The Data mode is terminated (Page 12) and a directly connected telephone is on-hook.
  - The handset is placed on-hook in the Talk mode.
- Extension phones when off-hook may interfere with proper data operation or call disconnect.

## SPECIAL CHARACTERS

- The special escape sequences listed below are functional in the 43 Teleprinter by receiving the character immediately following the escape character. (Characters following ESC will not print.)

ESC l — (ESC lower case L) set left margin.  
ESC r — Set right margin.  
ESC x — Clear left and right margin.  
ESC m — Release left and right margin.  
ESC w — Return carriage to left margin with line feed.  
ESC < — Digital Loopback\*  
ESC = — Clear Loopback

\*Used for testing or (in some systems) for circuit assurance purposes. (See Page 13.)

The substitute character ■ is printed in either of 2 ways:

1. A control Z character is received.
2. A character with an odd number of bits in its code is received as a "parity error".\*\*

\*\*See backside of directory card for a record of an option to disable pointing of the substitute character ■ on a parity error, Option 437b.

## WHEN TROUBLE OCCURS

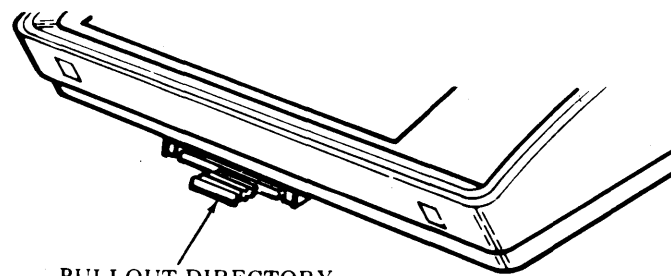
Trouble that is encountered with the terminal should be reported as locally specified. A number to be called in case of trouble may be entered on the directory card pullout by the installer.

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.

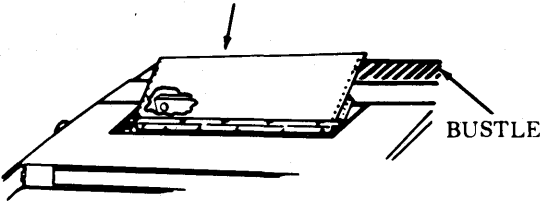
The following table of analysis questions is arranged to aid in the isolation of a trouble for:

- 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.



PULLOUT DIRECTORY  
CARD FOR TROUBLE NUMBER

ANALYSIS QUESTION	YES	NO
1. Are one of the three status indicator keys lit? (TERM READY, DATA, ALARM) (Power switch on.)	Go to 2.	1. Check that power cord is connected. 2. Check source of power. (Wall switch, other equipment OK, circuit breaker, etc). 3. Report as local trouble in equipment.
2. Does test message print properly while the PRINTER TEST key is depressed?	Go to 4.	Go to 3.
3. Is red lamp on power supply lit? (Visible through slot in bustle 6th slot from the left). 	Report as local trouble in printer.	Report as local trouble in power supply.

ANALYSIS QUESTION	YES	NO
<p>4. Does DATA key light following received call in Terminal Ready mode?</p>	<p>Go to 5.</p>	<ol style="list-style-type: none"> <li>1. Remote station must also go to Data mode.</li> <li>2. Check that modular cord is connected to line jack.</li> <li>3. If key does not flash or light, report as trouble in teleprinter.</li> </ol>
<p>5. Are data messages properly received in the Data mode?</p>	<p>Go to 6.</p>	<ol style="list-style-type: none"> <li>1. Check for proper operating speed for other station.</li> <li>2. Report as on-line trouble in teleprinter unless trouble occurs with only one other station.</li> </ol>
<p>6. Is trouble present but not isolated by Questions 1 through 5?</p>	<p>Report other troubles as specified in local instructions.</p>	

NOTES: \_\_\_\_\_

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