How to operate...

Model 40

PRINTER

TELETYPE™

The following is a brief breakdown of present Model 40 terminal families. You will note that a numerical suffix has been added to Model 40 to designate each family.

Model 40/1	Asynchronous Data Terminals for Switched-Network Applications (How to Operate Manual 346)
Model 40/2	Asynchronous Data Terminals for Switched-Network Teletypewriter Compatible Applications (How to Operate Manual 346)
Model 40/3	Asynchronous Data Terminals for Multipoint Private Line Applications Using 9140 Station Controller (How to Operate Manual 346)
Model 40/4	Synchronous Data Terminals for Multipoint Private Line Applications* (How to Operate Manual 350)

*Major distinguishing characteristics are synchronous transmission, clustering and compatibility with other stations via a central processing unit (computer using bisynchronous line control procedures).

TABLE OF CONTENTS

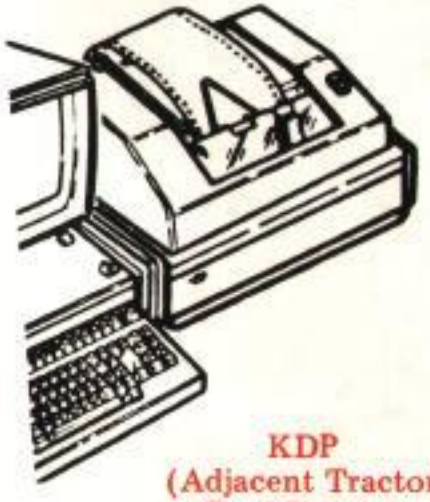
1. INTRODUCTION

General

The 40-type printer provides hard copy of messages originated locally and messages transmitted or received on-line. They are available in either 80-column friction feed, 80-column tractor feed or 132-column tractor feed versions.

The configurations that these printers may be used in are: ROP (Receive-Only Printer), a KDP (Keyboard-Display Printer) located adjacent or under the monitor of a keyboard display and P (Printer) used in 40/4 systems.

All printers can be placed on various standard pedestals or customer-provided tables. Tractor feed printers may be equipped with optional paper rack and friction feed printers with optional paper winders.



KDP
(Adjacent Tractor
Feed Printer)

KDP
(Friction Feed
Printer Under
Monitor)

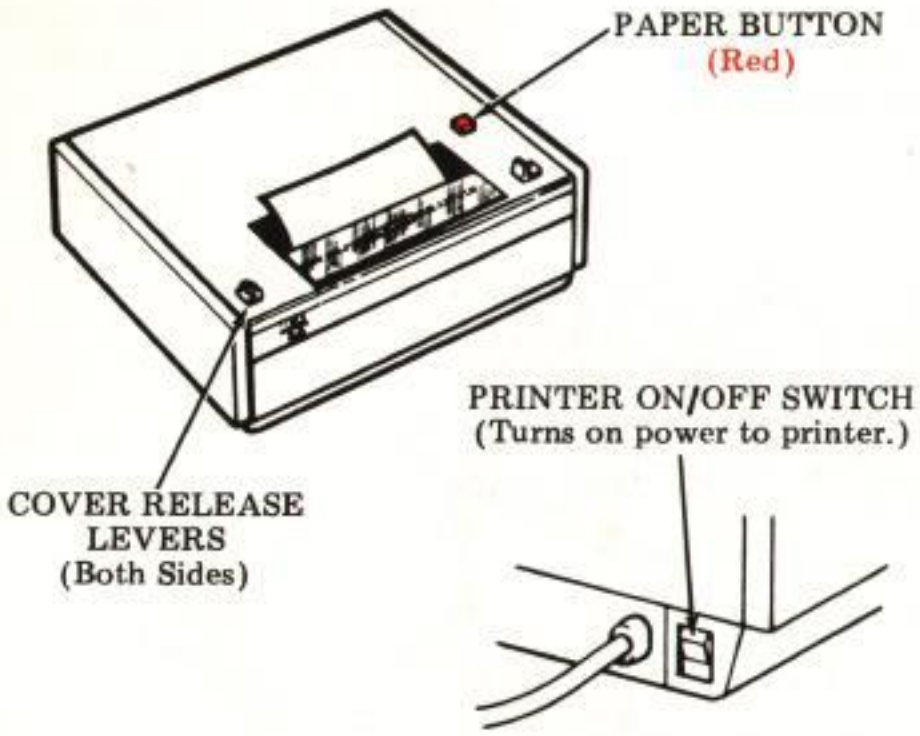
In 40/4 systems, printers may be located nearby or at a considerable distance from a KD (Keyboard-Display).

Both friction and tractor feed printers print up to 64, or optional 96 character ASCII (American National Standard Code for Information Interchange) or EBCDIC (Extended Binary Coded Decimal Information Interchange Code) character sets.

ROP
(Receive-Only
Tractor Feed
Printer)

Friction Feed Printer

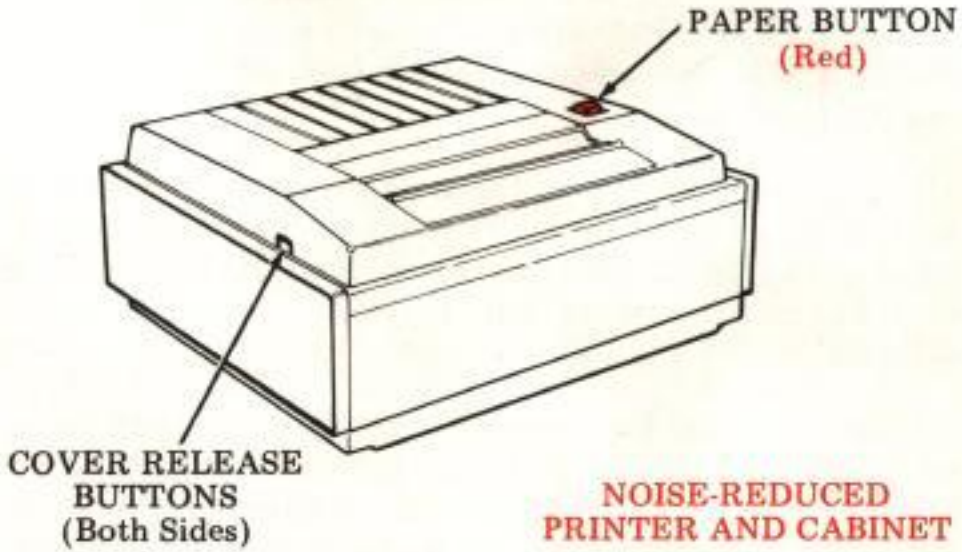
The two types of friction feed printers shown print on standard rolled single-ply paper up to 8-1/2 inches wide. The non noise-reduced printer and cabinet shown below may be modified to accommodate up to 3 ply rolls of paper for multiple copy applications.



(Left Rear of Printer)

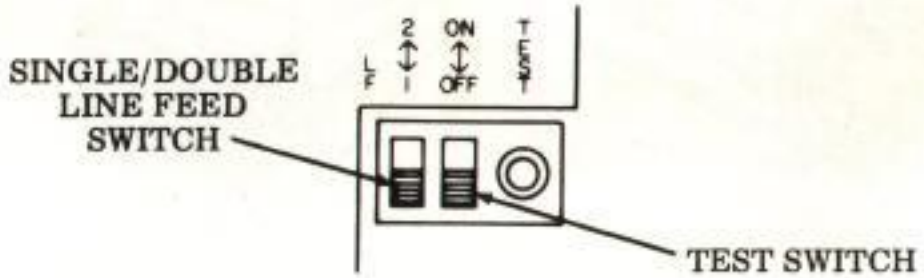
Red button located on top of printer. When depressed, paper in page printer advances. Paper feed out will be continuous until button is released. PAPER button lights when a low or out-of-paper condition exists. Extinguishes when paper supply is replenished.

Note: PAPER button permits manual paper feed. Paper may automatically feed out when power is turned on or at end-of-message.



NOISE-REDUCED
PRINTER AND CABINET

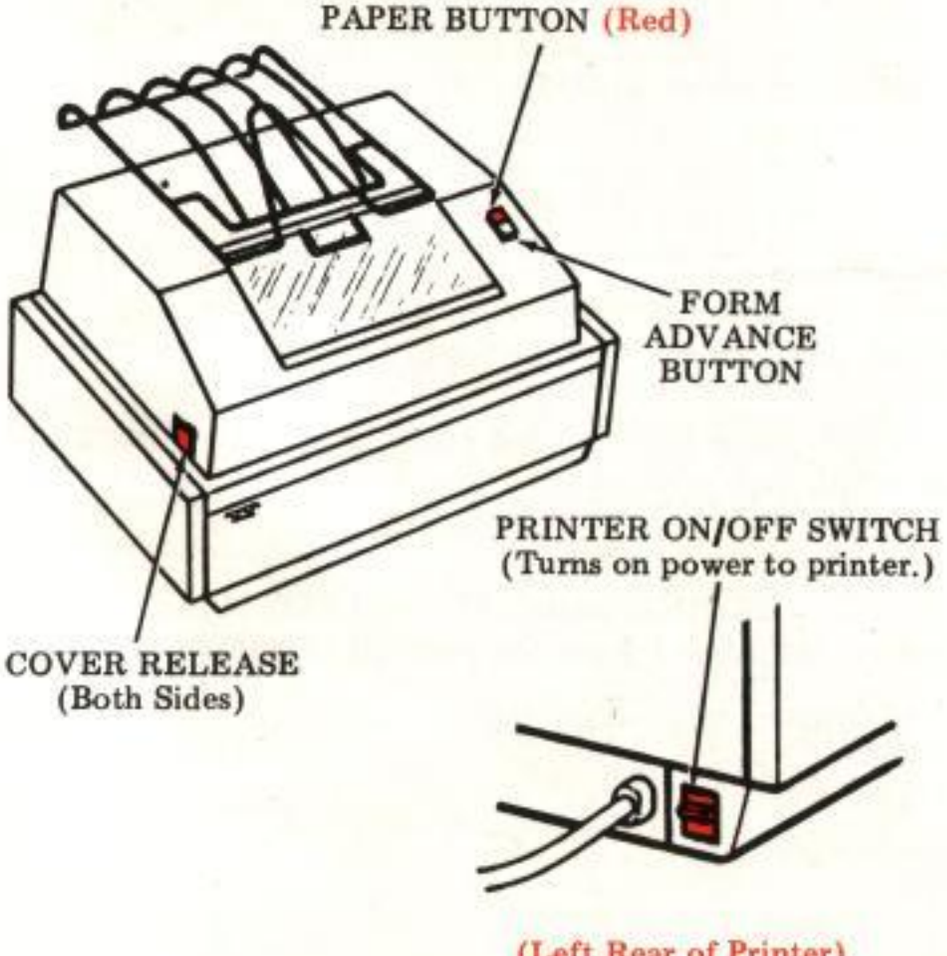
The printer normally prints six lines to the inch but can be selected to print three lines to the inch by moving the single/double line feed lever (located under the printer cover) from 1 to 2.



SWITCH PANEL — COVER OPEN (Right Side)

Tractor Feed Printer

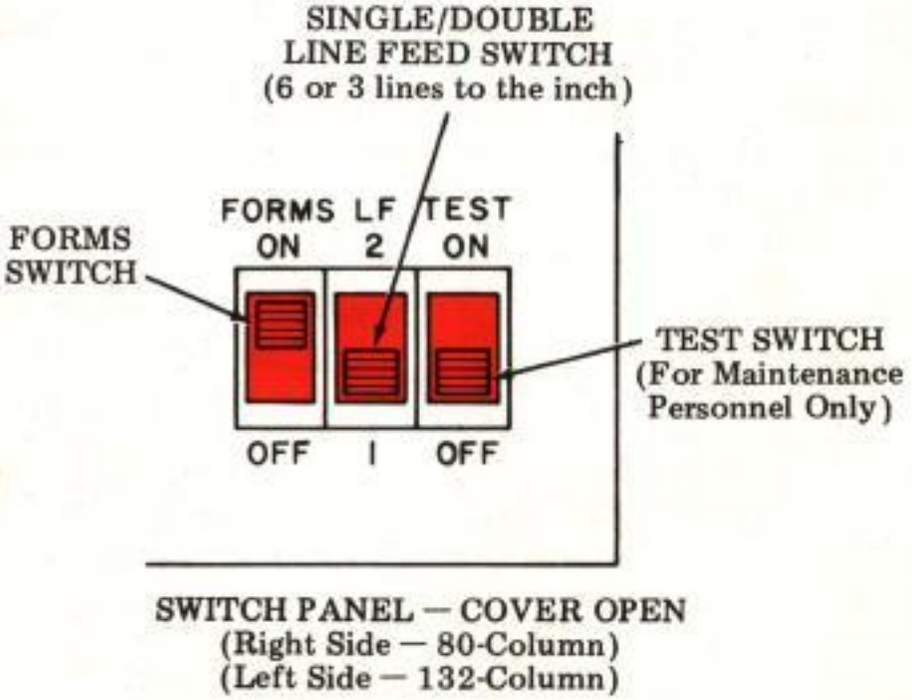
The tractor feed printer uses standard fanfold paper. Multicopy allows up to five copies plus the original. Width of paper between feed holes can be between 3-5/8 inches to 9 inches (paper width 4-1/4 inches to 9-1/2 inches) for 80-column printers; up to 14-1/2 inches (paper width up to 15 inches) for 132-column printers.



PAPER — When depressed, paper feed out will be continuous until button is released. Button lights when an out-of-paper condition exists. Replenish paper supply to extinguish lamp.

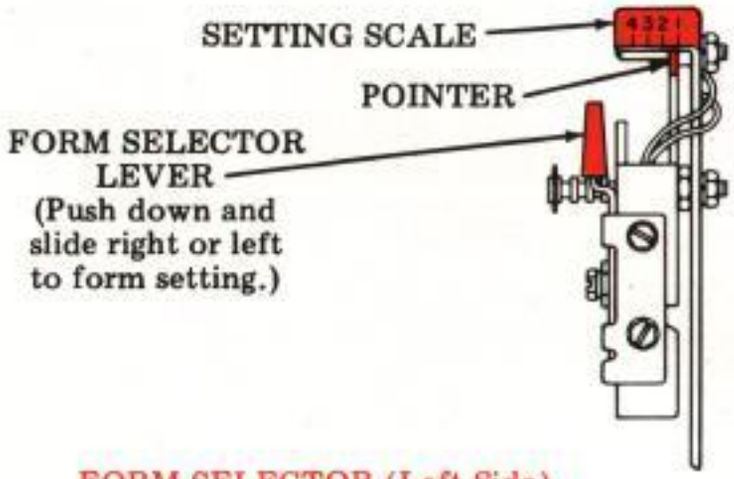
FORM ADVANCE — When depressed momentarily, forms will advance until next initialized form position is reached. (See Form Lengths on Page 4.)

The printer normally prints six lines to the inch but can be selected to print three lines to the inch by moving the single/double line feed lever (located under the printer cover) from 1 to 2.



- FORMS switch ON — Enables the printer to form feed on receipt of FF and stop at the start of the next form. Characters will not print during the on-line form feed operation.
- FORMS switch ON and FORM ADVANCE button depressed, in the on-line mode, does not prevent printing; also, the printer feeds out paper to the start of the next form after the FORM ADVANCE button is released.
- FORMS switch OFF — Causes FF character to be converted to the new line function. When depressed, the FORM ADVANCE function causes continuous paper feed out until button is released.

Form Selector — Located under the cover on the left side of the printer. Depressing the selector lever and sliding the pointer causes different form lengths per belt color. Refer to the table on the right. The blue belt is standard.



FORM SELECTOR (Left Side)

BELT AND FORM LENGTH TABLE

Form Selector Setting				Belt Color
4	3	2	1	
Form Lengths (Inches)				
3-1/3†	2-1/2	5	10	Amber
3-2/3†	2-3/4*	5-1/2	11	Dk Blue
4	3	6	12	Yellow
4-1/3†	3-1/4*	6-1/2	13	Brown
4-2/3†	3-1/2	7	14	Red
5	3-3/4*	7-1/2	15	Pink
5-1/3†	4	8	16	Dk Green
5-2/3†	4-1/4*	8-1/2	17	Green
6	4-1/2	9	18	Lt Blue
7-1/3	5-1/2	11	22	White

*Not operable on 6 to the inch line spacing.
†Not operable on 8 to the inch line spacing printers.

Note 1: See Page 13 for form belt replacement and ordering instructions.

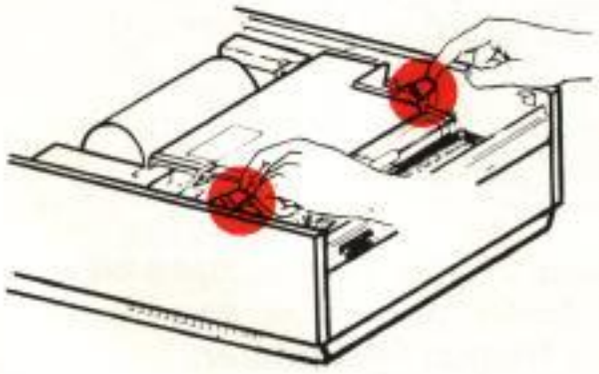
Note 2: FORMS switch ON and FORM ADVANCE button depressed does not prevent printing.

2. PRINTER ACCESS

To replace the paper, ribbon or form belt, you must first have access to the printer area. Access to the printer under the display is different than adjacent or separate printers. Refer to the following appropriate instructions.

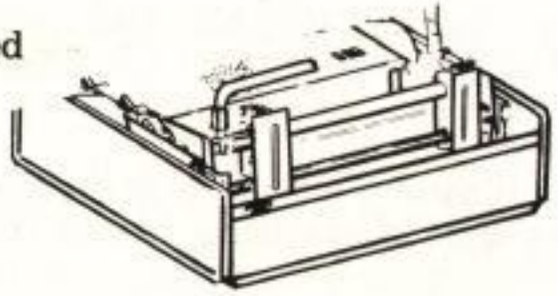
Separate Printer (Friction and Tractor Feed)

- Turn off printer power switch.
- Open printer cover and raise printer as shown.



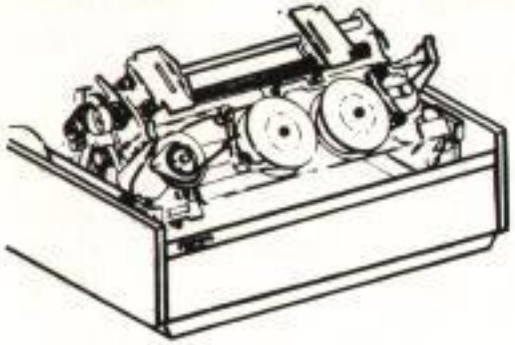
Depress both printer release levers simultaneously. Printer will rise slightly.

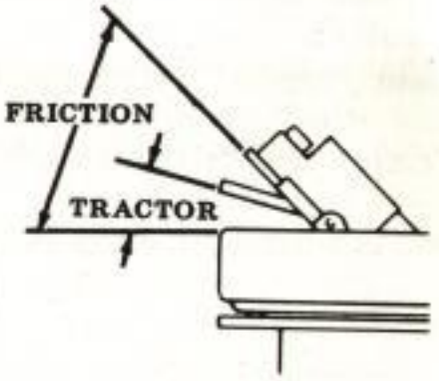
Friction Feed



Tractor Feed

- Lift printer until release mechanism "clicks" into its locked position.

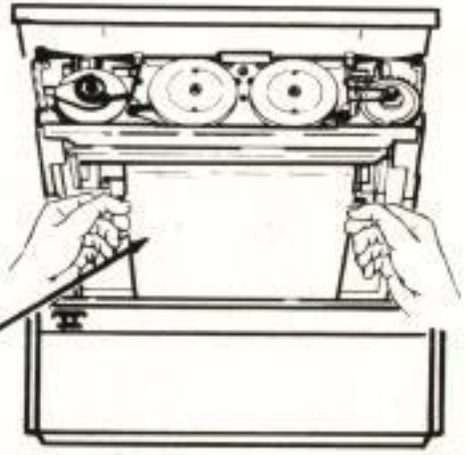




Note 1: If paper path is obstructed on friction feed printer for any reason, it may be necessary to raise printer and open paper access chute.

- To open paper access chute:

Grasp knobs and snap chute down while printer is in raised position.



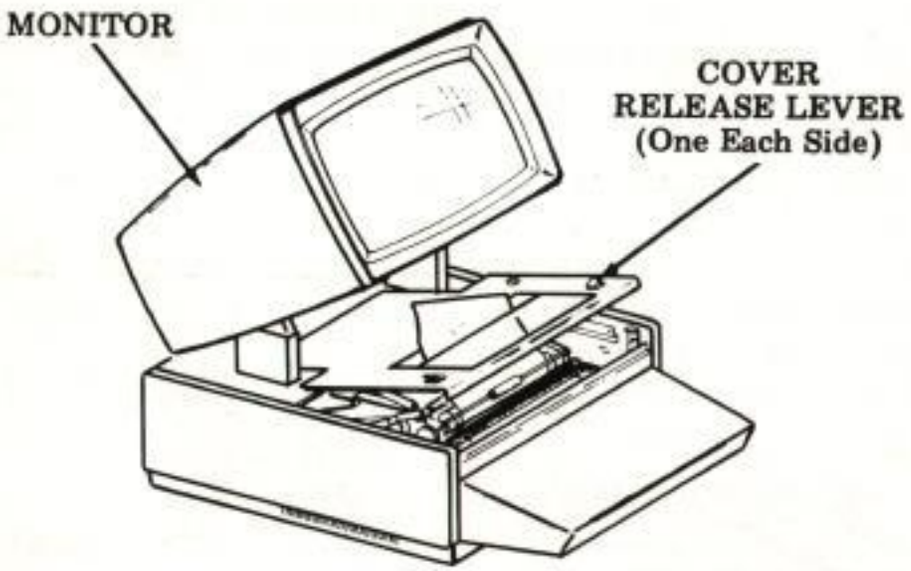
PAPER ACCESS CHUTE

2. PRINTER ACCESS (Cont)

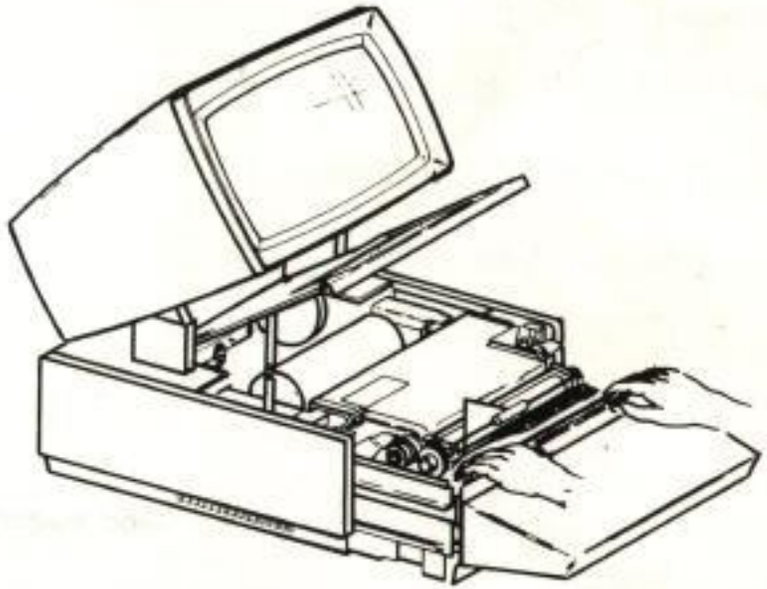
Note 2: To lower printer, depress both printer release levers simultaneously (printer will drop slightly). Push down on printer until release mechanism "clicks" into its normal operating position.

Printer Under Display (Friction Feed Only)

- Turn off printer power switch.
- Tilt back the monitor until it reaches its stop position and open printer cover.

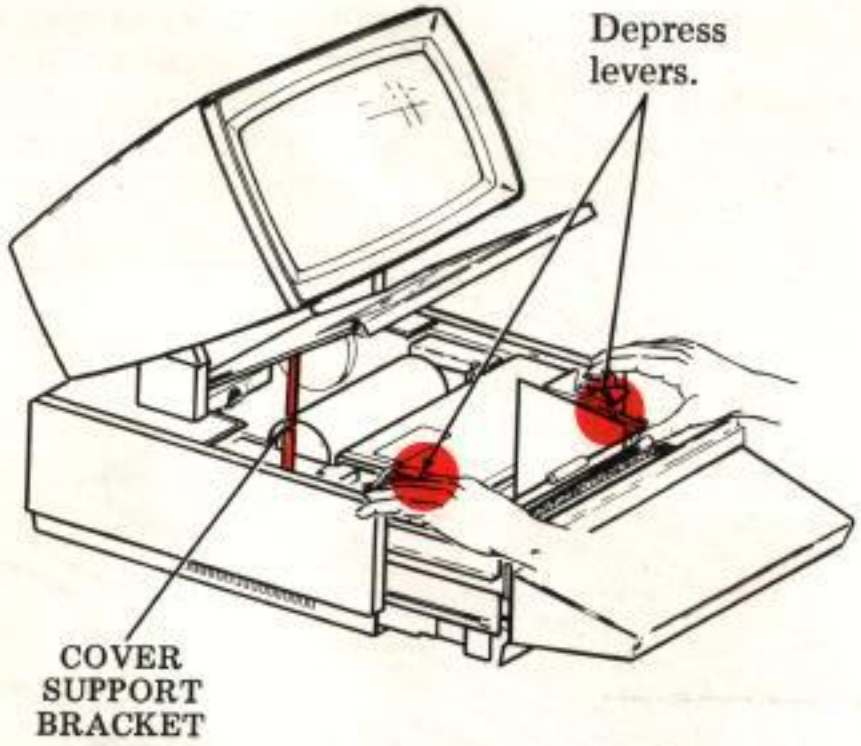


- Grasp front of printer housing and slide out until it "clicks" and locks in the out position. (Do not pull keyboard to slide printer out.)



- Follow the procedures to raise printer, open paper access chute, and lower printer as you would normally for separate friction feed printer.

- Depress lever on each side of cabinet and slide printer back into cabinet.



- Lower cover (lift slightly and pull forward cover support bracket) until full end of paper can be fed through slot in cover. Close cover.

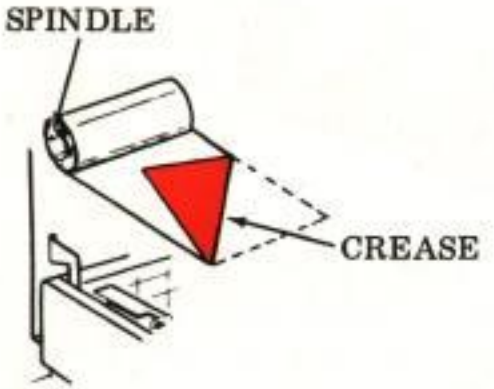
Note: When cover locks in place the printer is also locked in place and cannot accidentally slide out.

3. PAPER REPLACEMENT

Friction Feed Printer

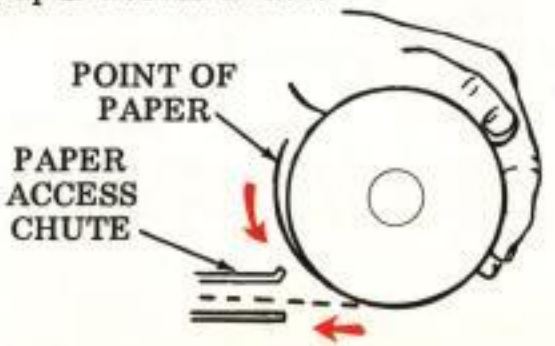
- Open printer cover and remove empty paper roll from printer enclosure.

- Pull pressure roller release lever up and to the front.



- Insert spindle in new roll; crease end of paper as shown and install paper roll into printer enclosure (do not bend or kink point of paper).

- Back up roll until point of paper drops behind lip of paper access chute.



3. PAPER REPLACEMENT (Cont)

- Rotate paper roll as shown to feed paper through printer.

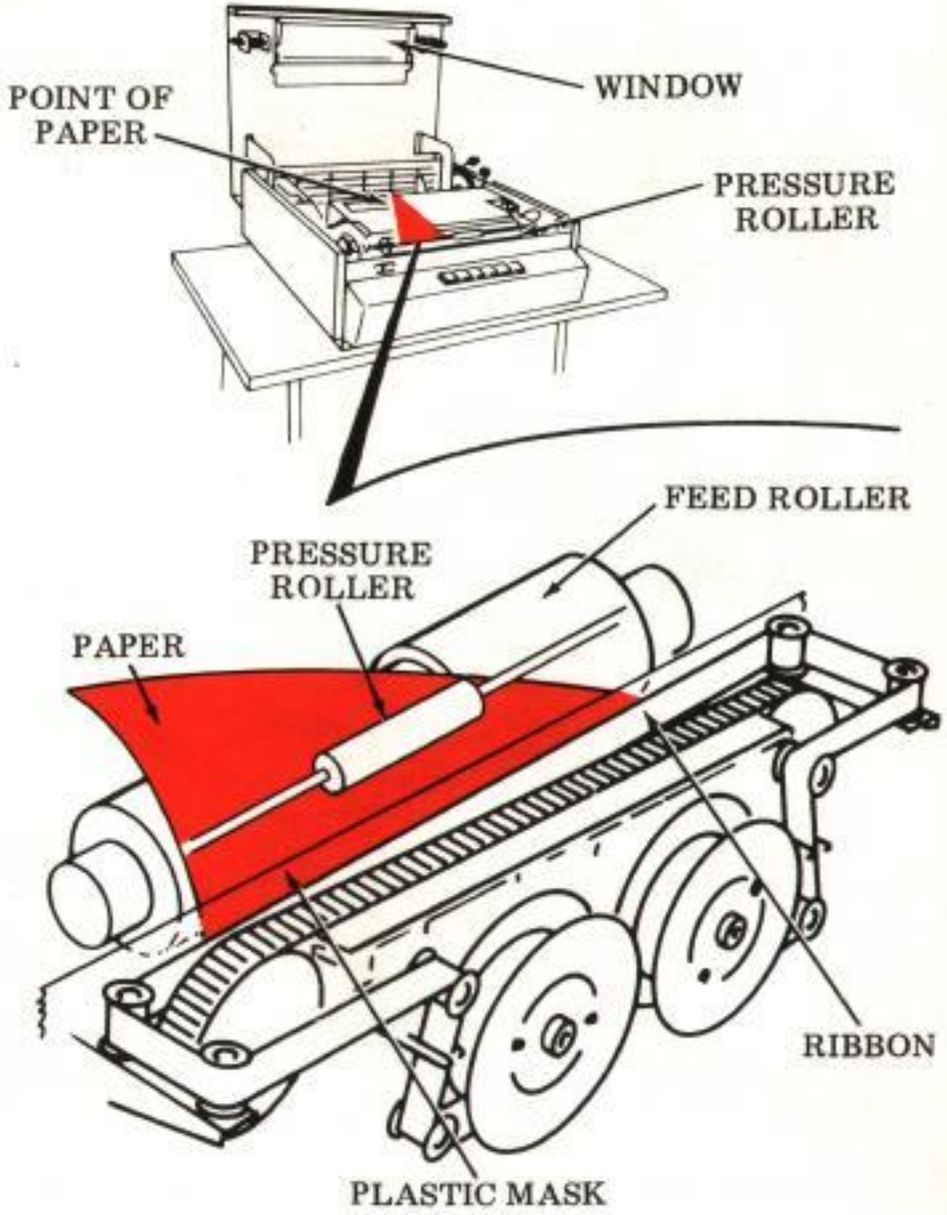
Note 1: It will be necessary to push and pull paper roll slightly. Use both hands on paper roll for even pressure on paper.

Note 2: If paper path is obstructed for any reason, or if your printer is equipped with acoustical noise reduction parts, it will be necessary to raise printer and open paper access chute.

■ If your printer is equipped with acoustical noise reduction parts, proceed as follows:

- With printer raised and paper access chute opened, feed paper by hand up behind the mask and between the feed roller and pressure roller.

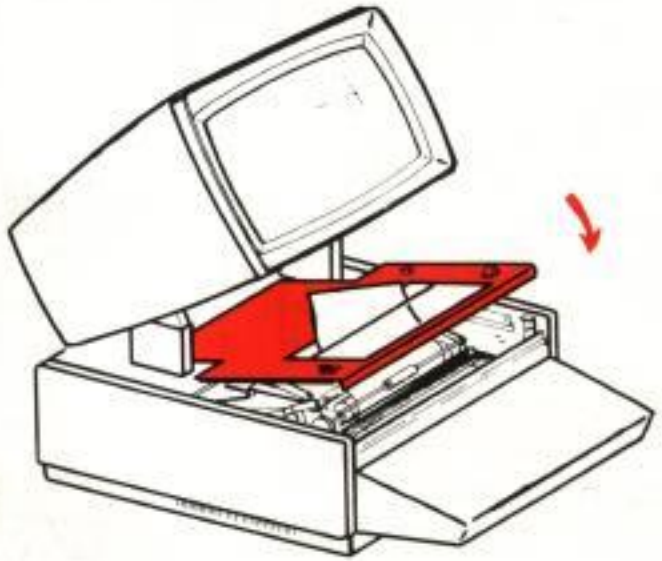
Note 3: The mask is a plastic piece mounted between the ribbon and feed roller. An opening in the mask allows for the ribbon to contact the paper during printing.



■ The remaining procedures are for all friction feed printers. Proceed as follows:

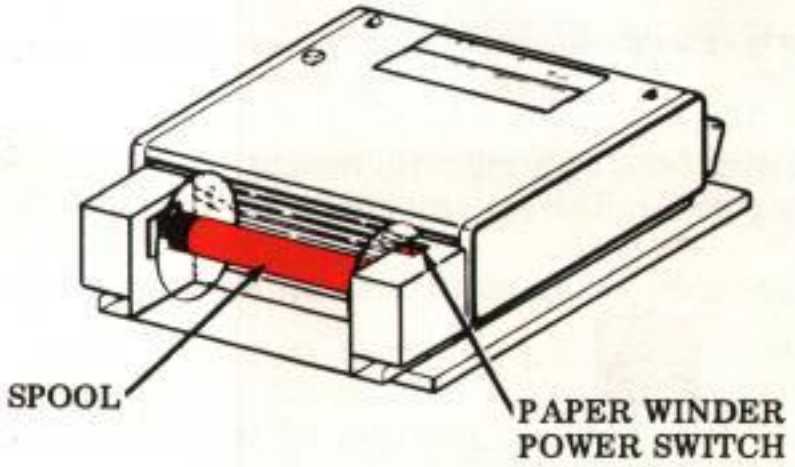
- Pull creased portion of paper through gap, center paper, and return pressure roller release lever to engaged position. If opened, close paper access chute and lower printer.

- With paper extending out, thread paper through slot in window, close cover and return monitor (if present) to its normal viewing position.



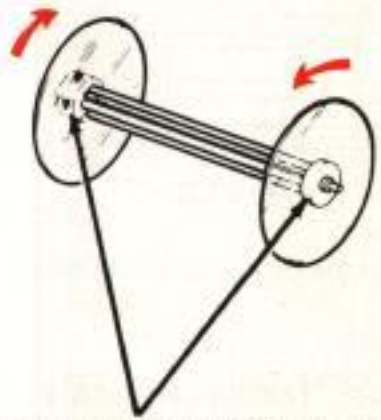
- If equipped with a paper winder, allow approximately 8 inches of paper between the printer and winder.

- With motor off, thread paper through spindle and rotate spindle to the rear to take up paper slack. Turn paper winder power switch to ON.



- To remove paper from spindle, tear off paper at window and lift out reel.

- Separate by grasping both discs and twist counter-clockwise, then pull apart.



- To reassemble, line up pins in holes (both ends), press together and twist clockwise to secure.

The purpose of this manual is to provide the attendant information on printer operation, instructions for paper and ribbon replacement, form adjustment, and accessories. Refer to your Keyboard-Display How To Operate manual for KD operation.

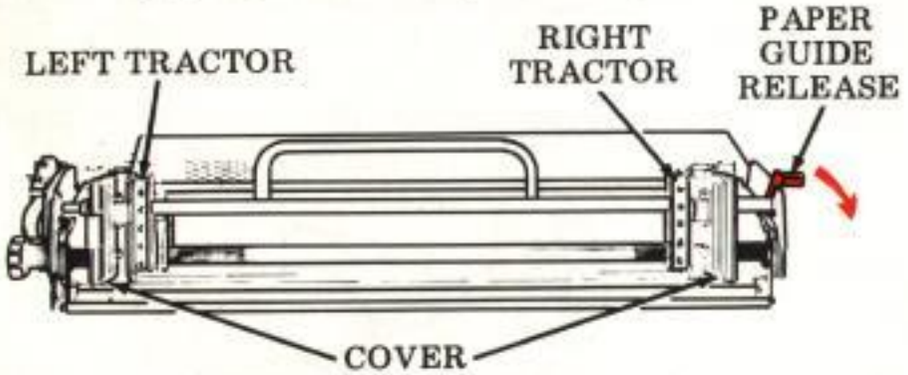
3. PAPER REPLACEMENT (Cont)

Tractor Feed Printer

Note: When forms are being used and if the last message received did not end in new line RETURN or FF, the next character received will not print in the first column. As an alternative, turn printer power off when replacing paper. This will assure printing in first character position of first line.

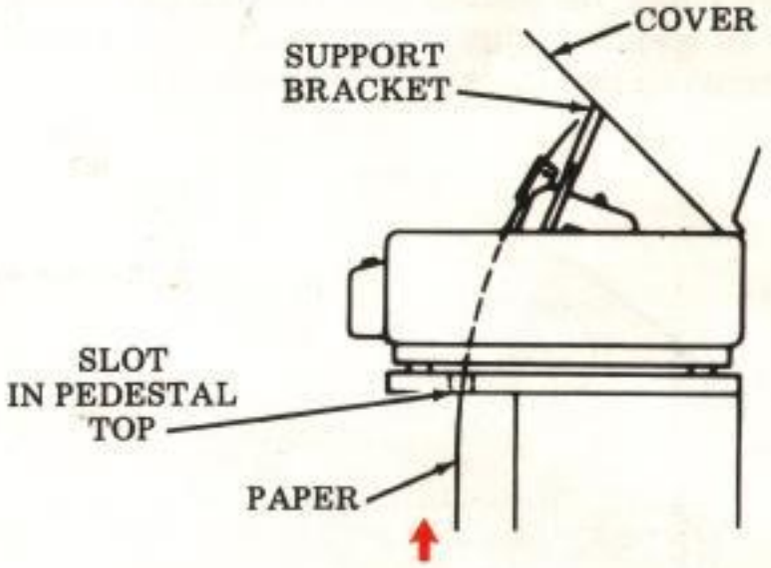
☐ If forms are being used, turn on printer power and depress FORM ADVANCE button momentarily. This will assure the first line position of the form advance mechanism.

- With printer power switch turned OFF, open cover.
- Release paper guides and open tractor covers.

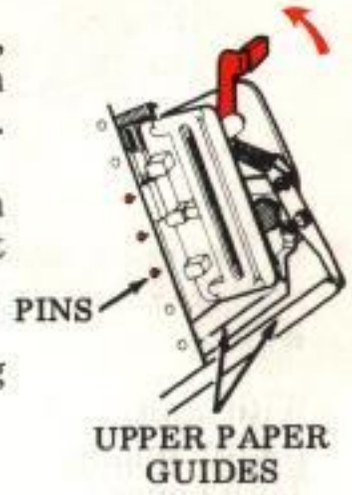


- Insert sprocket paper in slot under the table in front of set.

Note: If multiple forms separate, fold one form down and insert paper. See Page 12 if paper width does not match setting of tractors.

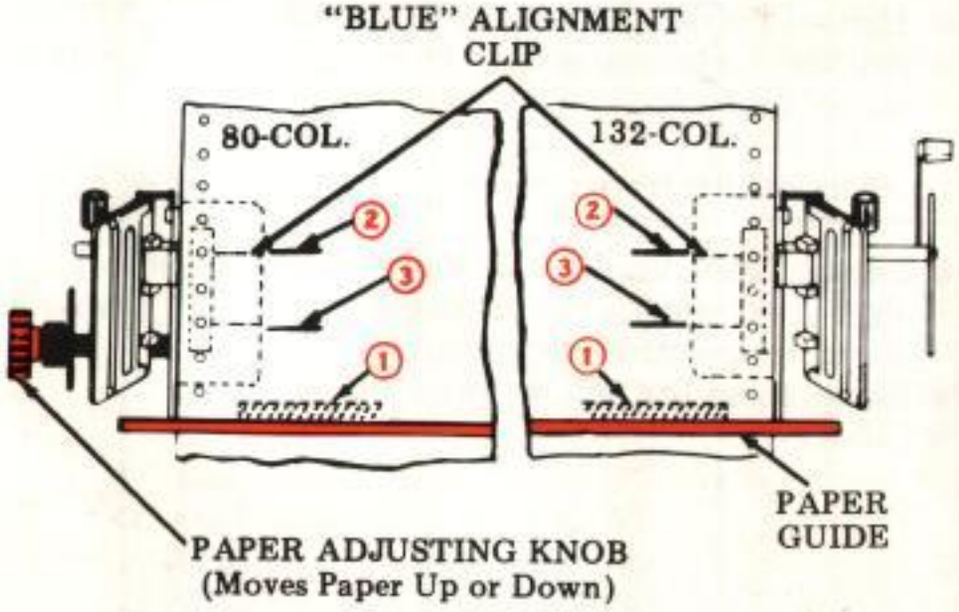


- Feed paper up through printer, guide paper in back of ribbon and between upper paper guides.
- Pull paper up and align holes on the paper with pins on the right and left tractors.
- Close tractor covers and swing paper release back.



- Pull out paper adjusting knob (blue) and turn to align form for first line of printing as follows:

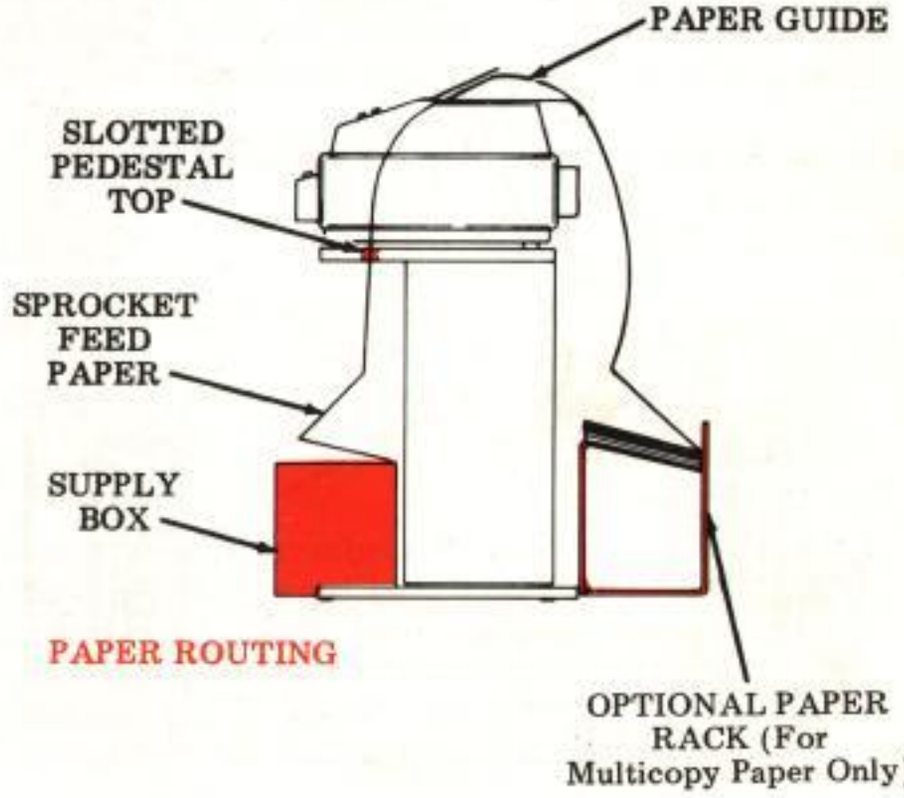
① Position paper so first line is just above paper guide.
② Position top of alignment clip to any reference mark on paper (or mark with pencil).
③ Move paper down so reference mark aligns with bottom of clip.



- Route form through opening in printer cover. If form is below window, close cover and depress PAPER button momentarily. This will provide adequate paper to route through cover opening.

- Close cover, then depress FORM ADVANCE button if desired for first line printing.

Note: Lift cover up slightly and push in on support bracket to close cover.



PAPER ROUTING

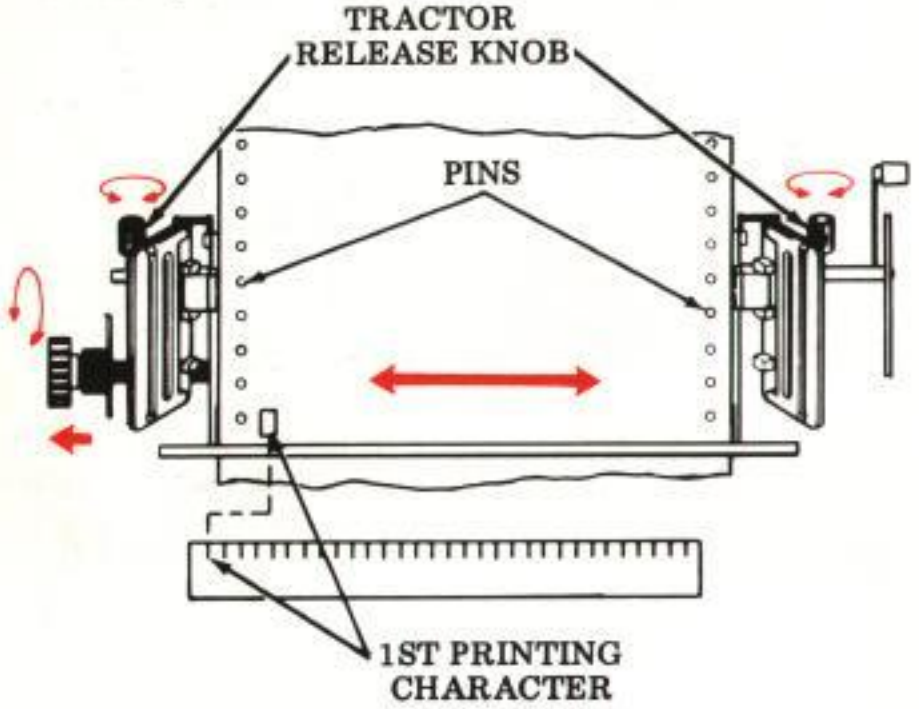
Horizontal Form Alignment

Note: Changing the margins or changing to a different form width will require a realignment of the left or right tractors.

To align the printer for a new form width:

☐ If forms are being used, operate **FORM ADVANCE** button momentarily before opening cover to assume first line position of mechanism.

- Loosen right tractor release knob and have tractor covers open.



- Route paper up through bottom in usual way.
- Place paper in left-hand tractor and close tractor cover.
- Move right-hand tractor to align pins with holes in paper. Close tractor cover.

Note: Be sure paper is not under stress or wrinkled when placed between tractors.

- Tighten right-hand tractor release knob.
- Pull out paper adjusting knob and adjust to first line of form.

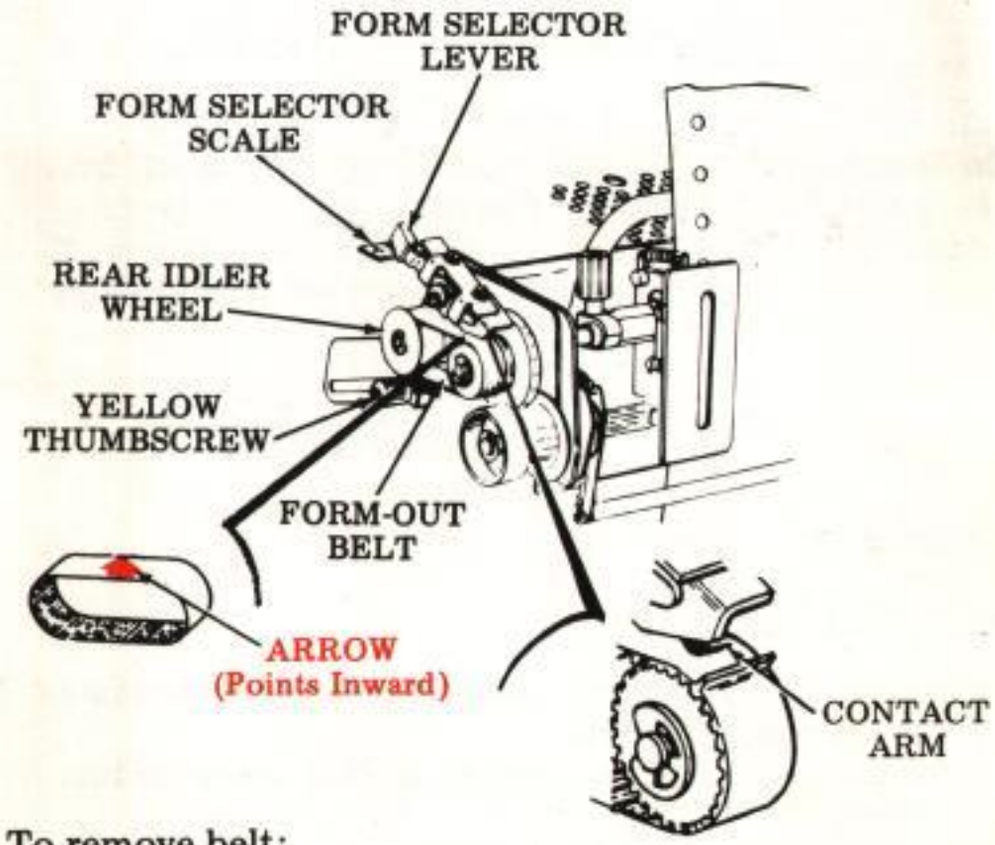
To align left-hand margin:

- Loosen left knob and slide tractor assembly to align first position on paper with first printing character position on scale.
- Route form through opening in cover.
- Close cover.

4. FORM BELT REPLACEMENT

Belt replacement is required when form lengths on the standard belt do not conform to the paper used. The table below shows the color of belt, form length and Teletype Corporation part number at each of the form selector settings. The complete set of belts can be ordered from Teletype Corporation by part number 402586 or frequently used (*) belts by part number 402587.

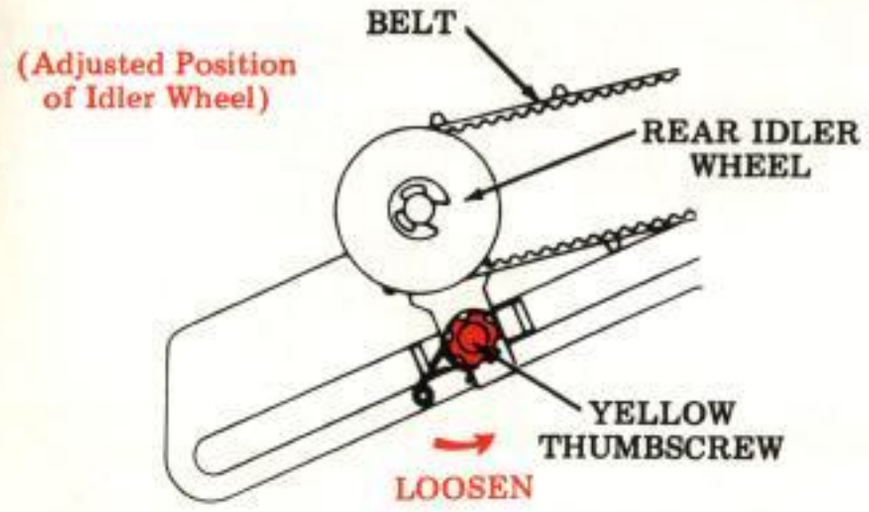
Color of Belt	Teletype Part Number
Amber	*402571
Dk Blue	*402572
Yellow	*402573
Brown	402574
Red	*402575
Pink	402576
Lt Green	*402577
Dk Green	402578
Lt Blue	402579
White	402580



To remove belt:

- Loosen yellow thumbscrew (counterclockwise) and slide bracket forward to remove tension.
- Depress and hold form selector lever so that contact arm clears.
- Move rear (idler) wheel forward.
- Remove belt by sliding it to the left.

4. FORM BELT REPLACEMENT (Cont)



To replace belt:

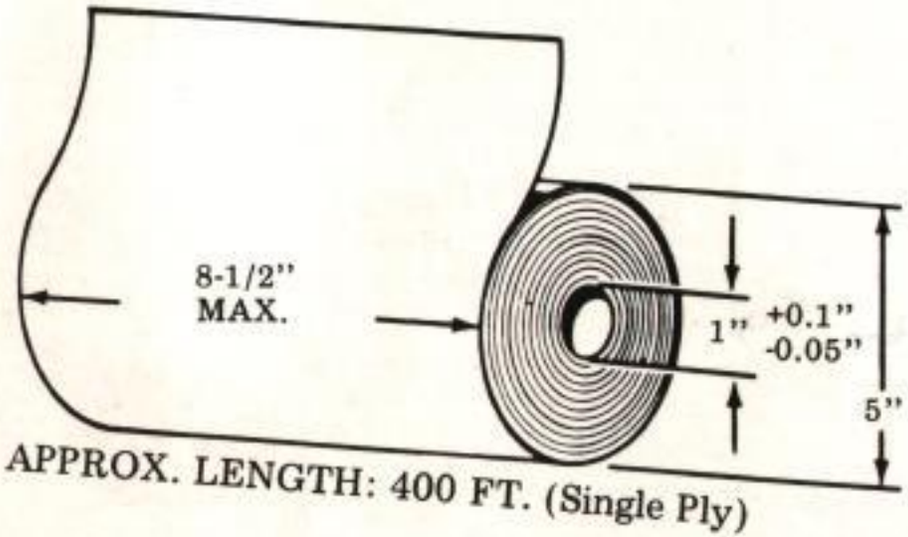
- Depress and hold form selector lever while holding rear idler wheel forward.
- Position new belt on wheels so that arrow points inward.
- Position rear wheel back and remove slack in belt.
- Have bracket at right angles to slot as shown above.
- Tighten thumbscrew clockwise.
- Depress FORM ADVANCE and check the stop positions.

Note: If form stop positions do not correspond to the form lengths, the belt may be reversed or the incorrect belt used. Check Belt and Form Length Table Page 4.

Friction Feed Printer

The printer will accommodate single copy friction feed paper, 8-1/2 inches wide and five-inch teletype-writer paper roll with a one-inch core diameter.

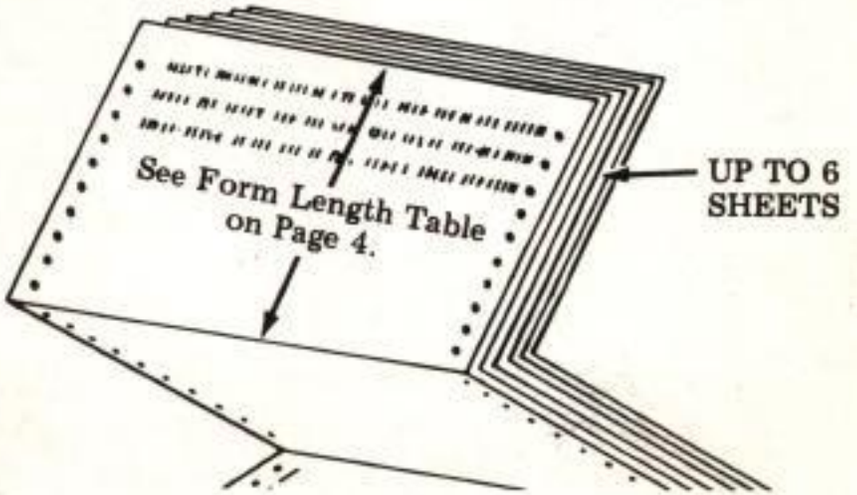
Rolled Paper



APPROX. LENGTH: 400 FT. (Single Ply)

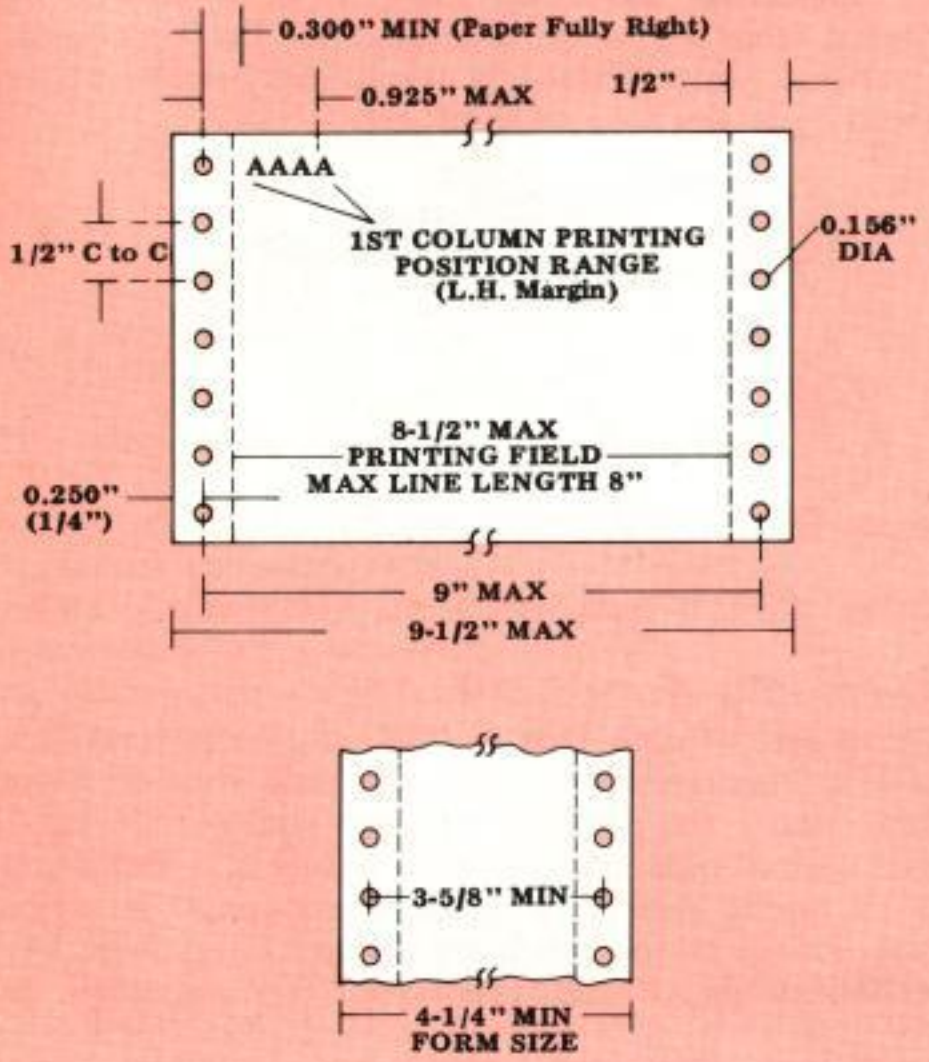
Tractor Feed Printer

The printer will accommodate various form widths and lengths as listed on Page 4. It is capable of printing from one original to original plus five copies, if various paper weight is used, the heavier paper should be to the back of the form.

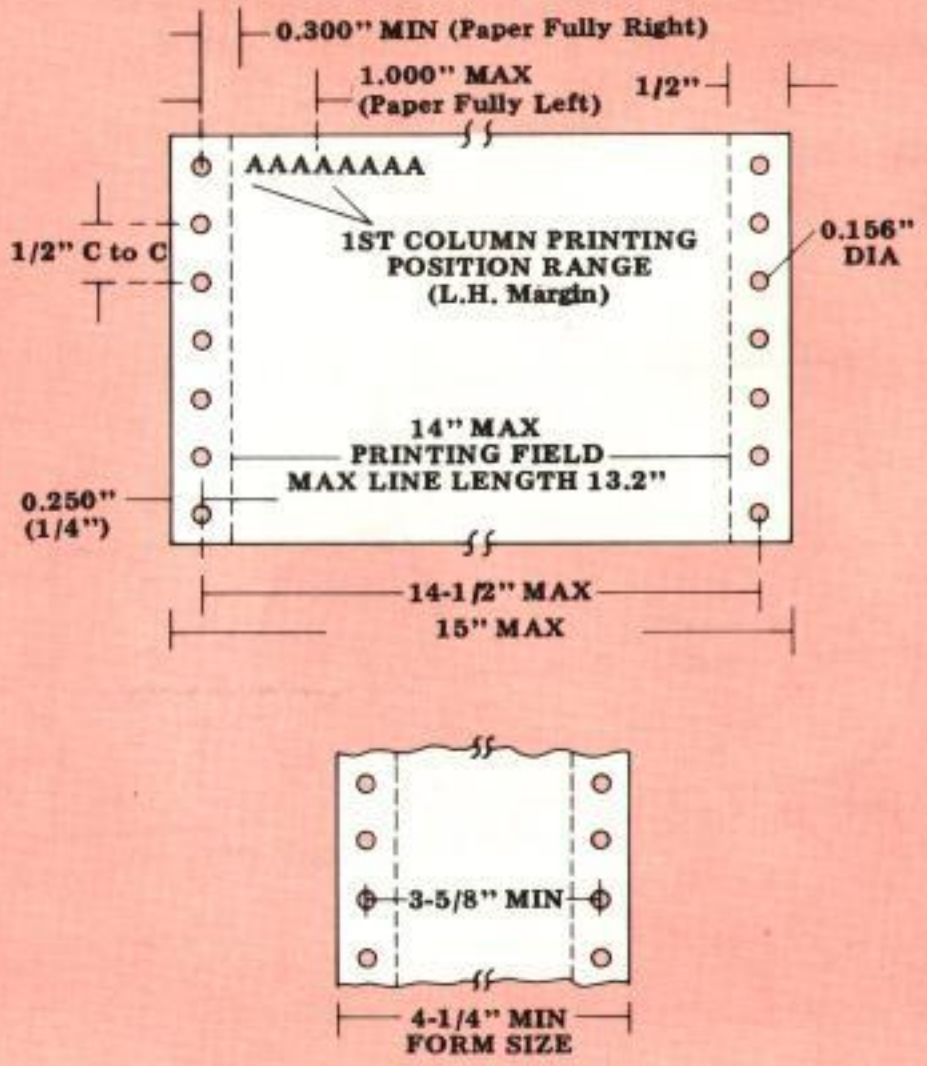


It is recommended that if single-ply basic forms are used, a maximum of 15 pound basic weight, white bond paper (continuous without slplices) be used. For original plus up to five copy forms, a maximum of 12 pound weight per page is recommended to be used with 8 pound tab black carbon interleaves. Use of heavier paper than this is not recommended. In any case when it is desired to vary from the above, the variation must be tried for feasibility in such areas as copy legibility and paper handling.

80-Column Tractor Feed Printer

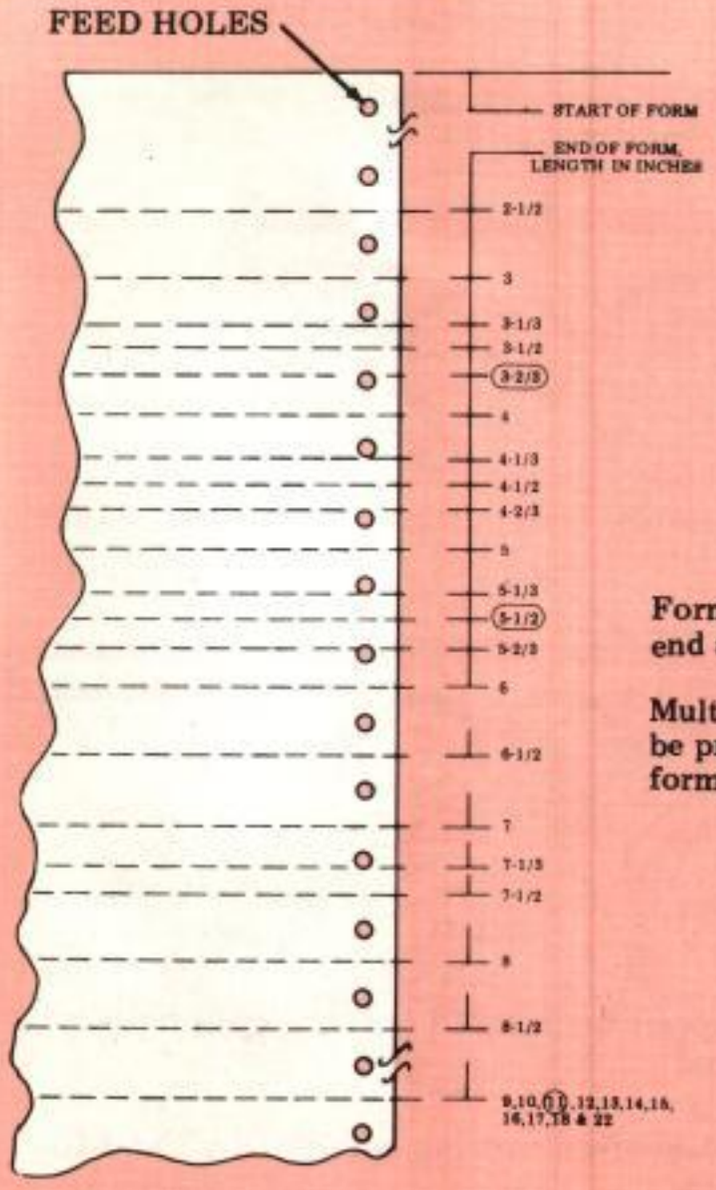


132-Column Tractor Feed Printer



5. PAPER AND FORMAT DATA (Cont)

All Tractor Feed Printers



Form may start or end at feed hole.

Multiple folds may be present on each form.

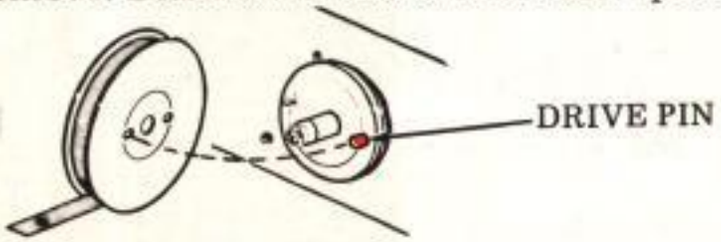
Enclosed form lengths are standard (blue belt).

6. RIBBON REPLACEMENT (FRICTION OR TRACTOR FEED)

Warning: Teletype Corporation will not be responsible for printer damage caused by the use of improper teletypewriter ribbon. Only ribbons designated for use with 40-type printer should be used.

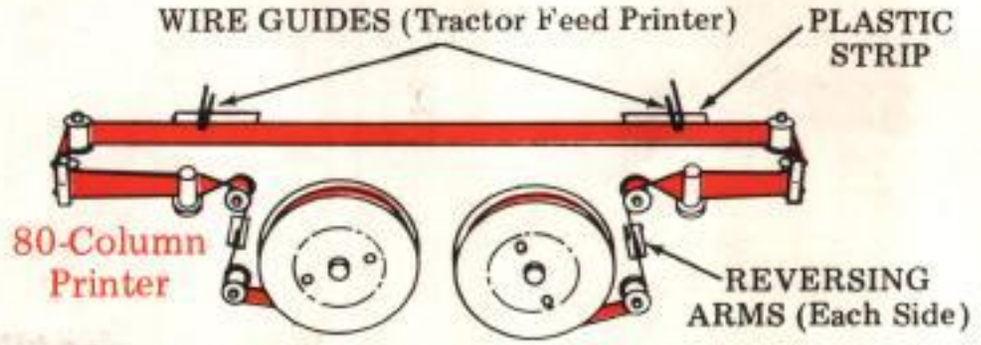
- Open printer cover and raise printer to the locked position.

- The spools rest on nylon drive pins. Pull spools to remove. Discard old ribbon and both spools.

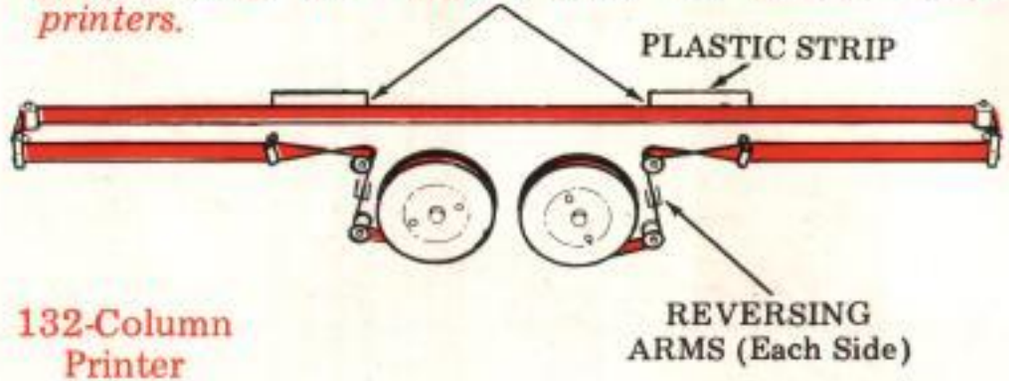


- Rotate spindles by hand to determine which one is fixed and which turns freely. Place full spool on free-turning spindle so that ribbon feeds off bottom of spool.

- Hold empty spool (ribbon attached) in one hand and thread ribbon as shown being sure that:
  - Full spool is on spindle so that retaining pin and drive pin of spindle fits into small holes of spool.
  - Ribbon feeds from bottom of spool (and into bottom of other spool).
  - Eyelet is wound on empty spool and ribbon passes through reversing arms.
  - Ribbon is centered on all rollers and not caught on type pallets or wire guides.



Warning: Ribbon must pass between the clear plastic strip and type carrier on tractor feed printers.



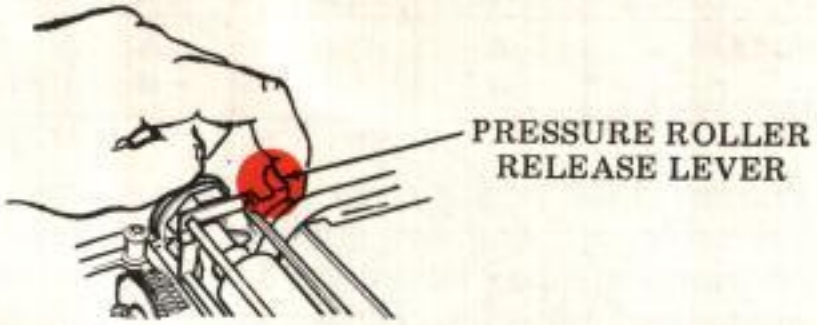
- Place empty spool on spindle (ribbon feeding into bottom of spool).

- Rotate full spool (free-turning spindle) by hand to take up all slack.

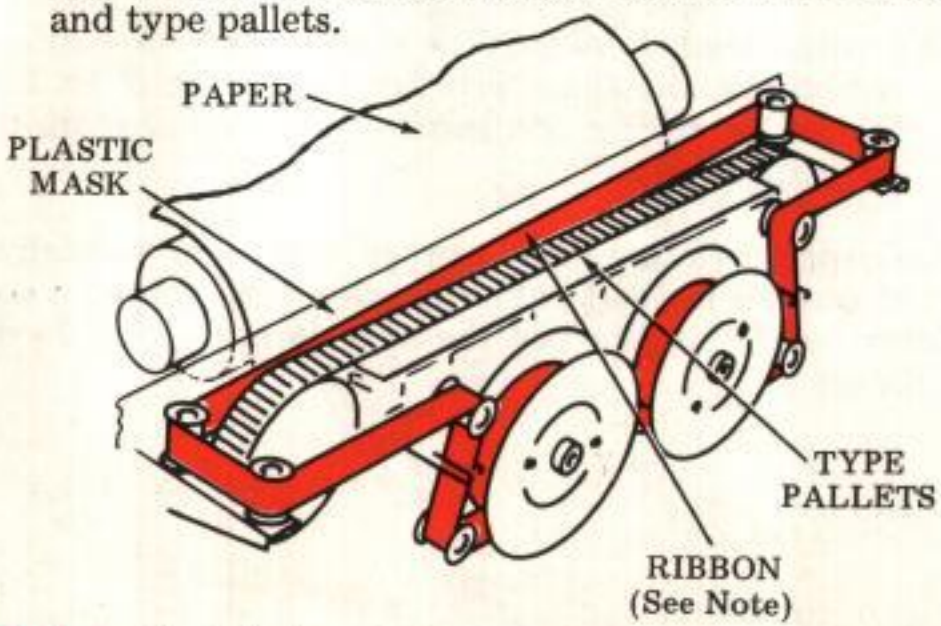
6. RIBBON REPLACEMENT (FRICTION OR TRACTOR FEED) (Cont)

■ If your printer is equipped with acoustical noise reduction parts be sure that:

When loading ribbon place the pressure roller release lever in the released position.



The ribbon must be located between the mask and type pallets.



Note: On friction feed printers the ribbon is routed diagonally across the front of the type carrier to use the maximum ribbon area.

7. PRINTER OPERATION (FRICTION AND TRACTOR FEED)

The printer provides page copy of messages originated locally and messages transmitted or received on-line. Use of the printer should be as directed by local instructions, however, it generally operates in the following manner.

In a KDP arrangement the printer will copy messages prepared locally by depressing the PRINT LOCAL key on the operator console. Messages received or transmitted will be copied when PRINT ON LINE key is depressed. Also, printers associated with KDs sharing the same controller will copy data when the PRINT LOCAL key is depressed.

Data exceeding the printer line length will be printed on next line.

In the event a NEW LINE is not received as the last character of a line, a new line function will be executed by the page printer. If the next character is a NEW LINE (character following an internally executed NEW LINE is a NEW LINE) the received NEW LINE will not be performed.

If short lines are received in succession, and terminal is not equipped with optional character buffer, NEW LINES may not be executed and the data will appear on the same line. This is known as data stacking.

RECEIVED

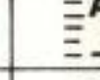
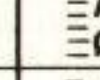
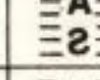
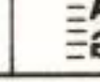
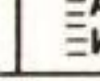
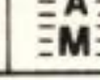
NOW IS THE TIME
FOR ALL GOOD MEN
TO COME TO THE AID
OF THEIR COUNTRY.

PRINTED

NOW IS THE TIMEFOR ALL GOOD
MENTO COME TO THE AIDOF THE
IR COUNTRY.

The printer prints or performs all characters generated by a corresponding operator console except as follows:

- Control characters and any nondisplayed characters will result in spaces on printed copy.
- On printers with monocase type carriers, the lower case alpha characters and the following symbols or codes do not print: { }, ¦, ~, `. They may print as upper case alpha characters and [,] , \ , ∧ , @ for ASCII; ¬ , | , ¢ in place of [,] , ∧ , respectively, for EBCDIC character sets or type carrier symbol (see type carrier symbol chart).

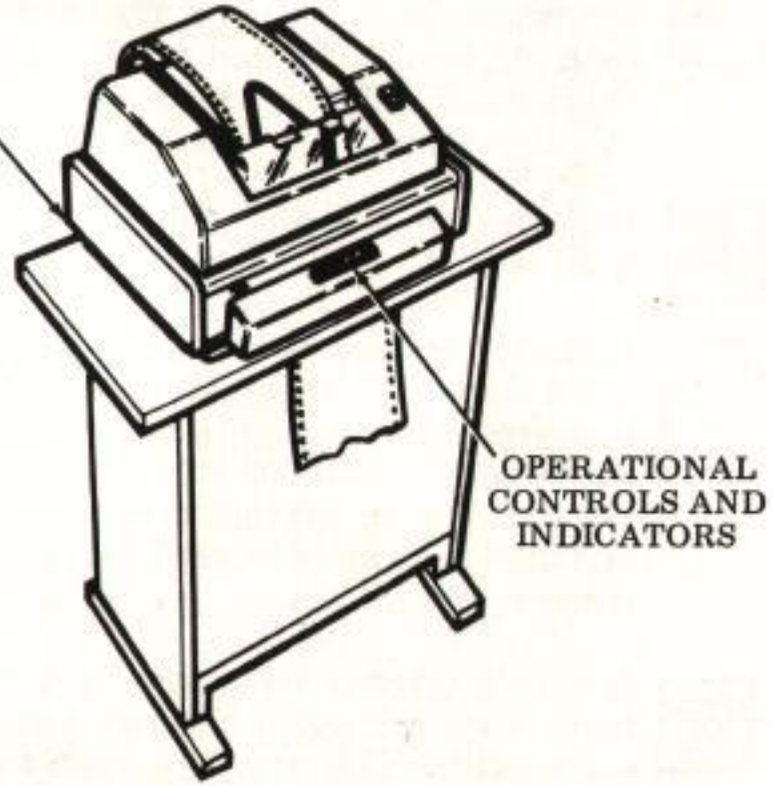
	TYPE CARRIER SYMBOL			
	ASCII		EBCDIC	
	80-Col	132-Col	80-Col	132-Col
MONOCASE Type Carrier				
UP-LOW Type Carrier				

- Printers that print upper and lower case alpha characters and the five graphics that do not print on monocase may be optioned to print the same as monocase; however, carrier symbol will not be substituted as indicated above.
- Errored characters may be printed as type carrier symbol or on some printers be optioned to be printed as ∧ or ~ on monocase or up-low printers, respectively.

Following printing, the printer may automatically feed out 16 lines of paper (friction feed printer) or form out to the start of the next form (tractor feed printer).

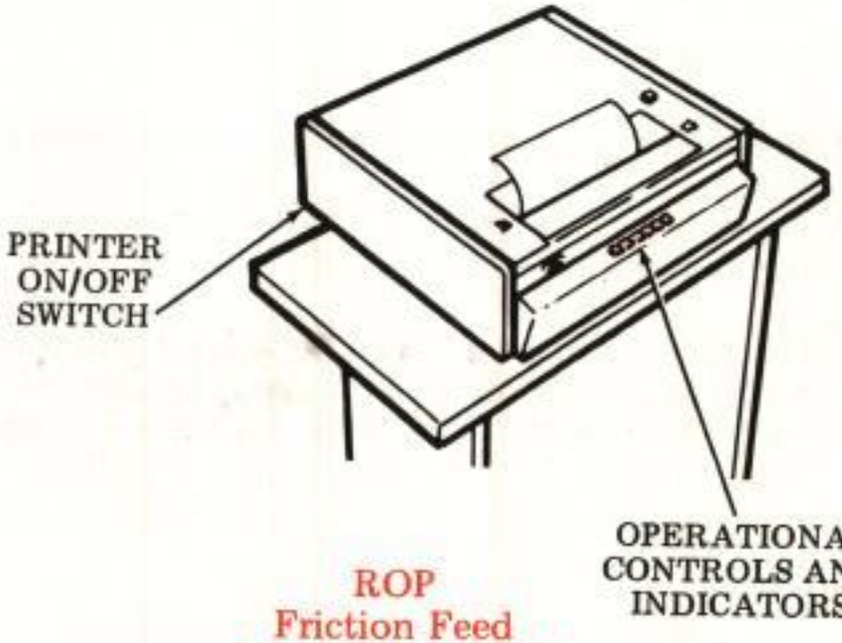
8. ROP SET OPERATION

The receive-only printer (ROP) set is provided with either a friction feed or tractor feed printer and provides hard copy of messages received on-line. The ROP set has its own set of operational controls for asynchronous and synchronous communications.



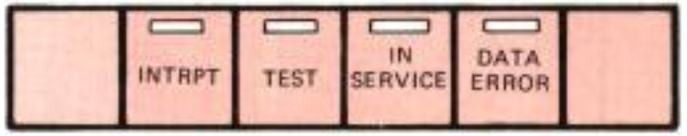
ROP
Tractor Feed
Pedestal Mounted

ROP
Noise-Reduced
Friction Feed
Table Mounted



ROP
Friction Feed
Pedestal Mounted

For Asynchronous Operation



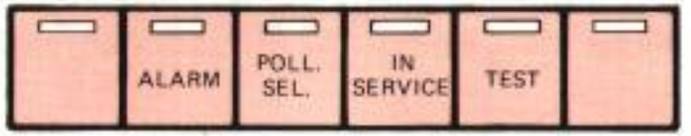
Indicator (red) lights when key is depressed and interrupts remote sending station. Depress again to resume reception.

Indicator (green) lights when key is depressed and causes printer to generate test data when set is off-line. Depress again to stop test. On some printers a TRANS START key may be present in this position however, operation remains the same.

Indicator (green) is lit during normal operation of station. Indicator extinguishes when key is depressed, low paper supply, cover is opened, or power is turned off.

If used, indicator (red) lights to alert you that a garbled character was received. Depress key to extinguish and scan copy for errored character symbol.

For Synchronous Operation



Indicator (red) lights when various trouble conditions are detected. The indicator may flash or remain lighted accompanied by an audible alarm. The audible alarm may be halted by depressing the lighted ALARM key.

Indicator (green) only, lights when station has been selected and/or entry into the Text mode.

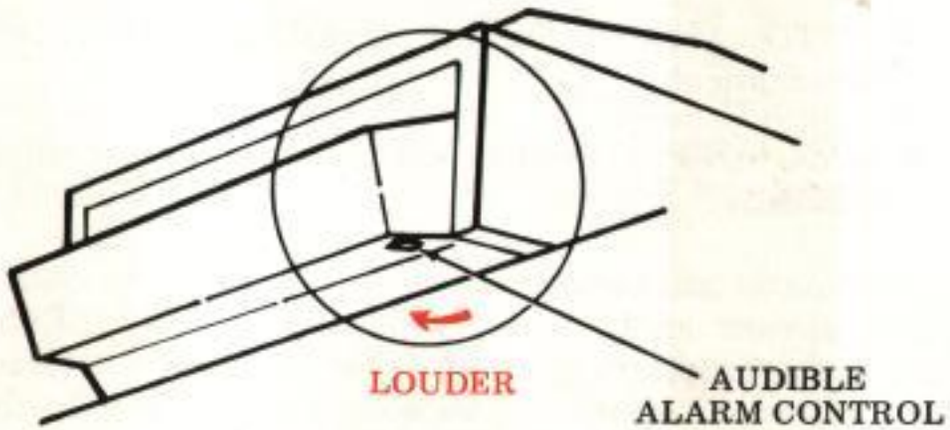
Indicator (green) is lit during normal station operation. Indicator extinguishes when key is depressed when not in a selected condition, paper supply problem or an alarm condition. Depress key to prevent reception of calls or selection sequences to perform local functions (ribbon, paper, etc).

Indicator (green) lights when key is depressed and causes printer to generate test data when set is off-line. Depress key again to stop test.

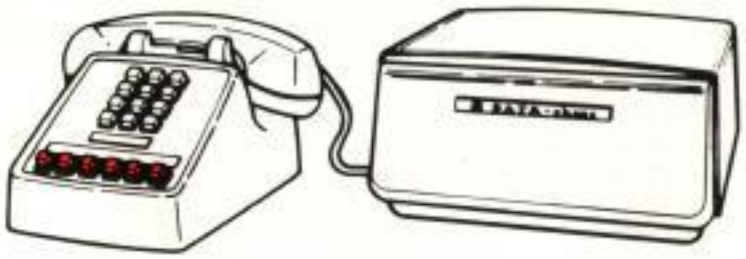
Audible Alarm

In addition to the operational controls and indicators, your set may be equipped with an audible alarm. The alarm is sounded on received Bell characters or terminal alarm conditions.

If your terminal is equipped with an audible alarm control, the alarm loudness can be adjusted by moving the control forward or backward to desired level.



9. TYPICAL LOW SPEED (UP TO 300 BAUDS) DATA SET AND ATTENDANT SET



BUTTONS

(RED)	MAN ANS	AUTO ANS	TEST	CLEAR TALK	DATA

This set is used for placing and answering calls and has an automatic answer feature. The buttons are described as follows:

- DATA — The nonlocking button on the right. Places set in Data mode for sending or receiving data.
- CLEAR/TALK — Nonlocking-nonreleasing key. Places set in Talk mode when receive is off-hook. Clears the set after Data mode.
- TEST — Used only as instructed.
- AUTO ANS — Conditions set to answer calls automatically.
- MAN ANS — Inhibits set from answering automatically.

Automatic answering allows the data set to detect and answer an incoming call automatically. Refer to the appropriate operating procedure for unattended automatic answering of a data call. Refer to the data set How to Operate manual for use of the status lamps and test buttons.

The basic operating routines that follow are:

- To Originate a Call
- To Receive a Call
- Unattended Automatic Answer.

Caution: Calls may be disconnected by any of the following:

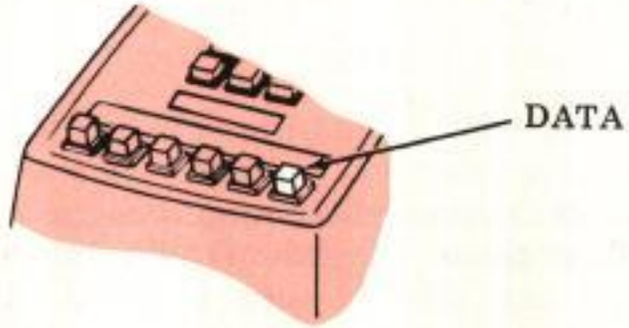
- *Receiving DLE EOT or EOT, as optioned.*
- *No message received after 20 seconds, as optioned.*
- *Paper out.*
- *Depressing IN SERVICE off when in Data mode.*
- *Depressing CLEAR/TALK with handset on-hook.*

TO ORIGINATE A CALL

To An Attended Sending Station

- Depress IN SERVICE key if lamp is not on.
- Depress CLEAR/TALK button and lift handset.

- Listen for dial tone, then place call in the usual way.
- Talk (request Data mode) — discuss length of transmission with distant attendant and whether or not to return to Talk mode after message is received.
- When tone is heard, depress DATA button (lights) and replace handset.



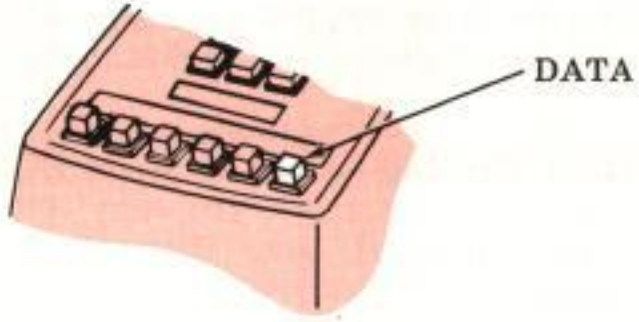
- Printer turns on; message is received (answer-back may be printed at the beginning).
- If at the end of the message EOT or DLE EOT code is not received, you may return to TALK by lifting handset and depressing CLEAR/TALK button.

TO RECEIVE A CALL

Attended Answer

- Depress IN SERVICE key if lamp is not on.
- When phone rings depress CLEAR/TALK button (lights) and answer call in the usual way.

- When requested by originating station, go into the Data mode. Depress DATA button (lights) after the high-pitched tone is heard. Replace handset.



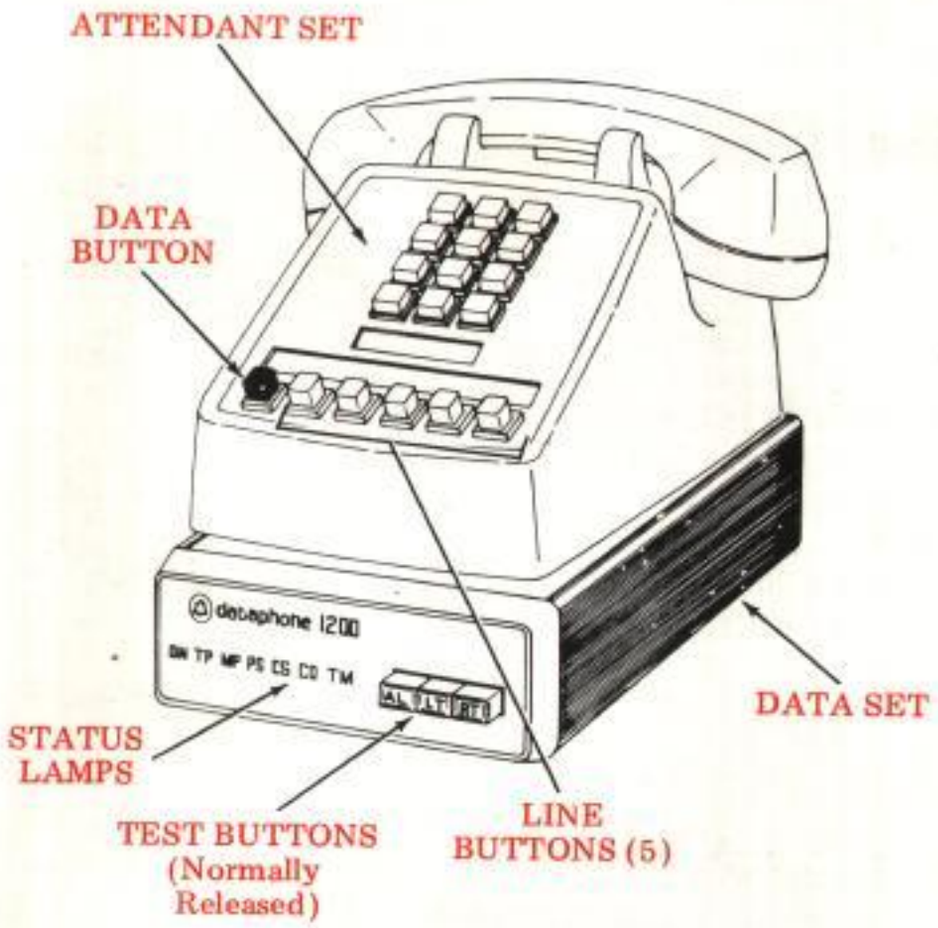
- Printer turns on; message is received (answer-back may be printed at the beginning).
- If EOT or DLE EOT code is not received, depress CLEAR/TALK to disconnect.

Unattended Automatic Answer

- Depress IN SERVICE key if lamp is not on.
- Depress AUTO ANS key.

- When phone rings, AUTO ANS and DATA buttons light, printer turns on and message is received (answer-back may be printed at beginning).
- The call will disconnect upon receipt of EOT or DLE EOT message-ending code. If no message-ending code is received, call will disconnect if no other message is received after 20 seconds.

10. TYPICAL HIGH SPEED (UP TO 1200 BAUDS) DATA SET AND ATTENDANT SET



This data set along with the attendant set provides data communications capable of transmitting and receiving high-speed, half-duplex data over the switched telephone network.

The attendant set is used for placing and answering calls and may serve up to five telephone lines.

The red nonlocking button to the extreme left is the DATA button and the locking LINE buttons (5) are on the right side.

The LINE button is used for the Talk mode. The DATA button releases the LINE button and transfers the data set to the Data mode.

For information on analysis and testing (use of status lamps and test buttons), refer to the "How to Operate" manual for the data set and attendant set.

Note: Normal operation requires the three test buttons be out — released position and the ON lamp lighted.

The optional automatic answering allows the data set to detect and answer an incoming call automatically. Refer to the appropriate operating procedure for unattended automatic answering of a data call.

The basic operating routines that follow are:

- To Originate a Call
- To Receive a Call
- Unattended Automatic Answer.

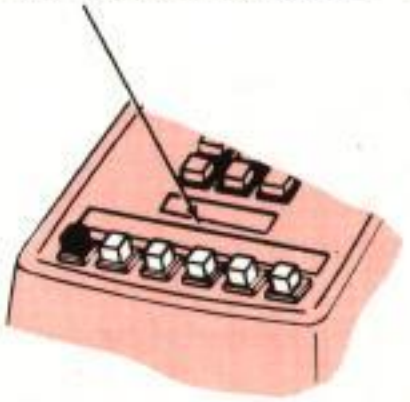
Caution: Calls may be disconnected by any of the following:

- *Receiving DLE EOT or EOT as optioned.*
- *No message received after 20 seconds, as optioned.*
- *Paper out.*
- *Depressing IN SERVICE off when in Data mode.*
- *Depressing TALK with handset on-hook.*

TO ORIGINATE A CALL

To An Attended Sending Station

- Depress IN SERVICE key if lamp is not on.
- Check to see that all test buttons are in the out position and ON lamp is lighted on data set.
- Depress the appropriate line button to select a desired telephone line.



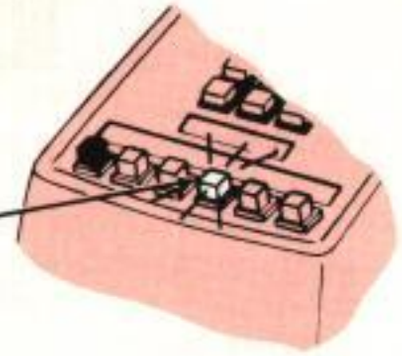
- Lift handset and place call in the usual way.
- Talk (request Data mode). Discuss length of transmission with distant attendant and whether or not to return to Talk mode after message is received.
- Depress DATA button at the same time that the called terminal depresses DATA button (LINE button lights).

- Replace handset.
- Printer turns on; message is received (answer-back may be printed at the beginning).
- If at the end of the message EOT or DLE EOT code is not received, you may return to Talk mode by lifting handset and depressing the illuminated LINE button.

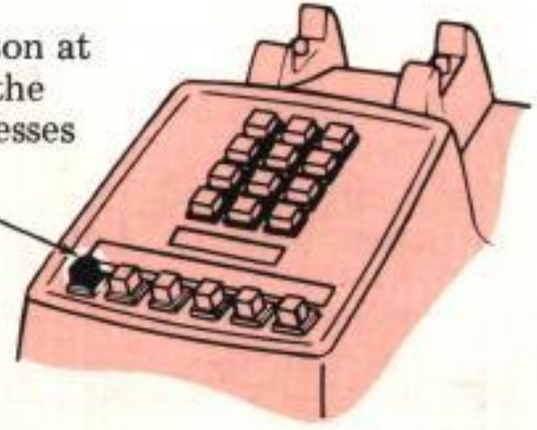
TO RECEIVE A CALL

Attended Answer

- Depress IN SERVICE key if lamp is not on.
- All test buttons in the out position and ON lamp lighted on data set.
- Depress the LINE button that flashes during ringing and answer call in the usual way.



- When requested by originating station, go into Data mode.
- Depress DATA button at the same time that the distant station depresses DATA button.



Printer turns on; message is received. (Answer-back may be printed at beginning.)

- If EOT or DLE EOT code is not received, depress LINE button and replace handset to disconnect.

Unattended Automatic Answer (Optional)

- Depress IN SERVICE key if lamp is not on.
- All test buttons in the out position and ON lamp lighted on data set.
- Depress appropriate LINE button.
- When station is called, printer turns on and message is received. (Answer-back may be printed at beginning.)
- The call will disconnect upon receipt of EOT or DLE EOT message-ending code. If no message-ending code is received, call will disconnect if no message is received after 20 seconds.

Supplies

Do not be cut short, order well in advance. In addition, an adequate supply of paper and ribbon should be kept in storage. Refer to Part 5, Paper and Format Data, Page 14.

Note: Before ordering multicopy form paper, samples should be tried in the printer which has been properly adjusted for print density. Legibility and density of all graphics should be checked. Also, staples or other means of fastening multicopy forms should not be used until determined that they do not interfere with ribbon, print hammer, or type pallets.

The ribbon should be replaced after every 25 hours of printing operation or sooner if ribbon is worn.

Warning: Teletype Corporation will not be responsible for printer damage caused by the use of improper teletypewriter ribbon. Only ribbons designated for use with Model 40 printers should be used. Refer to Authorized Ribbon Suppliers below.

Ribbons received from authorized suppliers are in sealed containers with date of manufacture. Always store ribbons in a cool dry place and do not use ribbons exceeding 24 months of storage.

AUTHORIZED RIBBON SUPPLIERS

Teletype Corporation (312-982-2000)
Specify part number: TP402444

Addressograph-Multigraph Corp. (312-527-2025)
433 N. Wabash
Chicago, Illinois 60611
OFFICE SUPPLIES DIVISION
Specify part number: 120-2230-123R

Roytype (312-266-5835)
100 W. Erie
Chicago, Illinois 60610
Specify part number: Formula 43

Aetna Products Co. Inc.
11 Commercial St.
Hicksville, New York 11851
(516-931-3120)
(212-886-0415)
Specify part number: TR135

Maintenance

Periodic service or maintenance can be provided by the nearest Teletype Corporation Product Service Center. Factory-trained servicemen provide nationwide service on Teletype Corporation Equipment. For service, contact one of the following.

NORTHEASTERN REGION: CT, ME, MA, NH, UPSTATE NY, RI, VT

▲ BOSTON/HARTFORD	*7 WALKUP DR., P.O. BOX 566, WESTBORO, MA 01581*	(617) 366-8881
ROCHESTER	*115 METRO PARKWAY, ROCHESTER, NY 14623*	(716) 442-8480
SYRACUSE	*5858 E. MOLLOY RD., ROOM 153, SYRACUSE, NY 13211*	(315) 454-4916

EASTERN REGION: DE, NJ, DOWNSTATE NY, PA

LONG ISLAND	*195 PARK AVENUE, BETHPAGE, NY 11714*	(516) 822-3533
▲ NEW YORK CITY	*90 CLINTON RD., FAIRFIELD, NJ 07006*	(201) 575-8240
PHILADELPHIA	*103 ROCK RD., HORSHAM, PA 19044*	(215) 674-2181

SOUTHEASTERN REGION: FL, GA, MD, NC, SC, VA, WASH D.C., WV

BALTIMORE	*6655 AMBERTON DR., 100 INDUSTRIAL PARK, UNIT A BALTIMORE, MD 21227*	(301) 796-1166
CHARLOTTE	*8920 YORK RD., CHARLOTTE, NC 28210*	(704) 588-3297
FT. LAUDERDALE	*6858 N.W. 20th AVE., FT. LAUDERDALE, FL 33309*	(305) 974-4660
ORLANDO	*102 LIVE OAKS BLVD., CASSELBERRY, FL 32707*	(305) 834-3818
▲ WASHINGTON D.C.	*NORTHERN VA INDUSTRIAL PARK, 9022 TELEGRAPH RD., LORTON, VA 22079*	(703) 550-7507

SOUTHWESTERN REGION: AR, CO, KS, LA, NM, OK, TX

▲ DALLAS	*222 N. STORY RD., SUITE 126, IRVING, TX 75061*	(214) 254-4180
DENVER	*7100 BROADWAY, BUILDING 3-J, DENVER, CO 80221*	(303) 429-9555
HOUSTON	*4400 S. WAYSIDE, SUITE 105, HOUSTON, TX 77087*	(713) 641-3295
NEW ORLEANS	*5636 JEFFERSON HWY., NEW ORLEANS, LA 70123*	(504) 733-4823
OKLAHOMA CITY	*1000 CORNELL PKWY., SUITE 700, OKLAHOMA CITY, OK 73108*	(405) 947-0969

SOUTH CENTRAL REGION: AL, IL(SOUTH), IN, KY, MS, MO, OH, TN

▲ CHICAGO	*9930 DERBY LANE, WESTCHESTER, IL 60153*	(312) 345-7920
CLEVELAND	*5325 NAIMAN PKWY. - SUITE F, SOLON, OH 44139*	(216) 248-0288
COLUMBUS	*6969 WORTHINGTON-GALENA RD., WORTHINGTON, OH 43085*	(614) 436-2065
INDIANAPOLIS	*6240 LAS PAS TRAIL, INDIANAPOLIS, IN 46268*	(317) 297-4149
TOLEDO	*1000 S. REYNOLDS RD., SUITE 1, TOLEDO, OH 43615*	(419) 381-9900

NORTH CENTRAL REGION: IL(NORTH), IA, MI, MN, NB, ND, SD, WI

▲ CHICAGO	*655 TOUHY, ELK GROVE VILLAGE, IL 60007*	(312) 437-8180
DES MOINES	*2318 HARDING RD., SUITE 15B, DES MOINES, IA 50314*	(515) 274-3801
DETROIT	*12916 FARMINGTON RD., LIVONIA, MI 48154*	(313) 525-5356
LANSING	*3202 SO. PENNSYLVANIA AVE., LANSING, MI 48910*	(517) 882-5761
MADISON	*2317 SO. STOUGHTON RD., MADISON, WI 53716*	(608) 222-1662
MILWAUKEE	*6725 BOTTSFORD AVE., GREENFIELD, WI 53220*	(414) 543-2200
MINNEAPOLIS	*8824 SEVENTH AVE. NO., GOLDEN VALLEY, MN 55427*	(612) 546-0808
KALAMAZOO	*126 E. KILGORE RD., KALAMAZOO, MI 49001*	(616) 343-0573

WESTERN REGION: AZ, CA, ID, MT, NV, OR, UT, WA, WY

▲ LOS ANGELES	*5445 SHEILA, CITY OF COMMERCE, CA 90040*	(213) 724-5051
TUCSON/PHOENIX	*958 W. GRANT RD., TUCSON, AZ 85711*	(602) 623-6419
SAN FRANCISCO	*521 MARINE VIEW, SUITE G, BELMONT, CA 94002*	(415) 591-7412
SEATTLE	*635 STRANDER BLVD., KOLL COMMERCE CENTER, SEATTLE, WA 98188*	(206) 575-4515

CANADA:

TORONTO	*31 KLONDIKE DR., WESTON, ONTARIO, CANADA M9L 1S1*	(416) 745-9474

▲ REGION HEADQUARTERS

Maintenance training is available from our
Technical Training Center located at 5555 Touhy Ave.,
Skokie, Illinois 60076.
Phone: (312) 982-3940

12. PRINTER TROUBLES

Some printer troubles may be cleared by using the following troubleshooting guide. If you are unable to clear the trouble, notify your local maintenance personnel or contact the nearest Teletype Corporation Product Service Center.

Troubleshooting Guide

If This Happens . . .	Do This . . .
Printer does not respond. No lamps lit, motor does not run and paper does not advance when the PAPER button is depressed.	● Make certain that plug on power cord is properly seated in power outlet. ● Make certain that all power switches are turned on. ● Be sure that the printer cover is closed. Protective interlock inhibits operation of printer when cover is open. ● Report trouble if unable to clear.
PAPER button lighted.	● Turn power off, replenish paper supply and turn power on again.
Power is on but IN SERVICE lamp not lit.	● Depress IN SERVICE key to light. ● Turn power off, check paper supply, and turn power on again.

If This Happens . . .	Do This . . .
Operational control lamps flash.	● On some ROP sets when trouble occurs, a particular combination of operational control lamps will flash to indicate the specific condition that arose. Some troubles may clear themselves; if this happens, the lights will extinguish after three or four flashes and normal operation will be restored. No action is required on your part if this should happen unless the same condition occurs repeatedly. ● Be sure to record which lamps are flashing so that you can supply this information when reporting the trouble.
Paper not feeding properly.	● Check to see that paper on paper supply roll is tightly wound. ● Check for obstruction in paper access chute. ● Make certain the paper has been inserted in the printer correctly. ● Be sure paper release lever is in the correct position.
Paper builds up under printer cabinet cover (friction feed).	● Make certain the paper has been torn off evenly so that it is feeding out properly. ● After raising and lowering printer cover, be sure that the paper has been fed through slot of cover.
Paper jamming inside of printer cabinet cover (tractor feed).	● Check horizontal form alignment.

If This Happens . . .	Do This . . .
Continuous form out (tractor feed).	● Be sure that form selector lever is detented in desired form setting position.
Ribbon is not feeding.	● Be sure a Teletype authorized ribbon is being used. Make certain it has been installed in the printer according to instructions.
Ribbon fails to reverse.	● Make sure the reversing eyelet on each side is correctly located between the spool and the reverse lever.
Ribbon is feeding properly, but the print is faint.	● Replace ribbon.
Light printing on last copy.	● Be sure paper stock is not too heavy (refer to Part 5, Paper and Format Data, Page 14).
Ribbon marking — approximately 1-1/2 inches wide down the center of the paper (friction feed).	● Clean paper pressure roller.

13. SPECIAL FEATURES

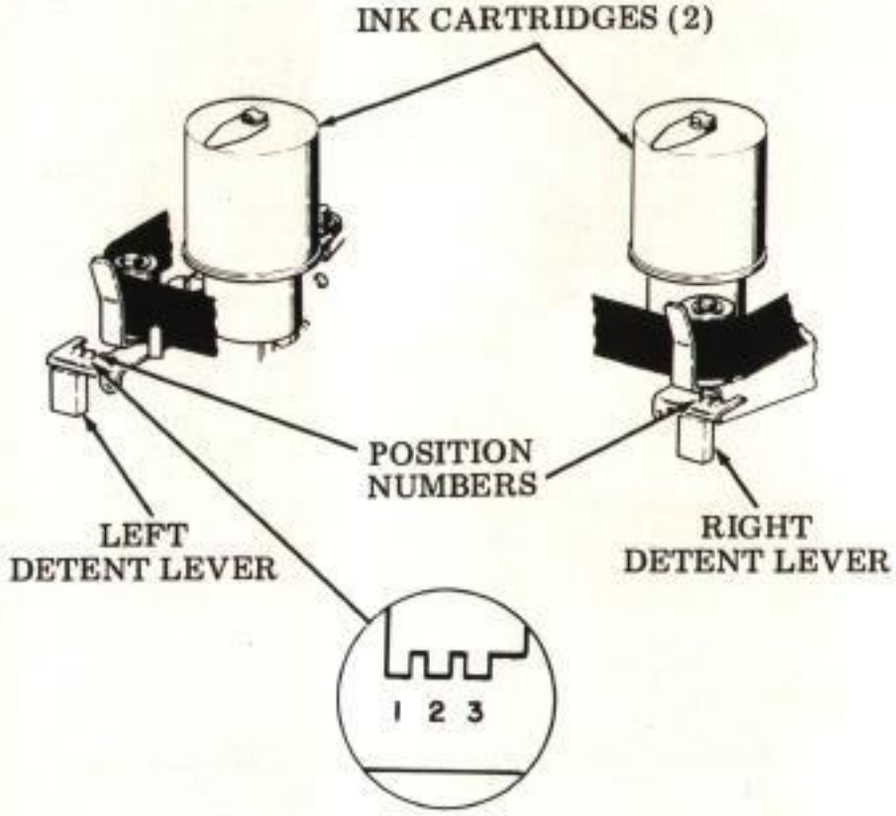
Ribbon Reinker for Tractor Feed Printers Only

The reinker feature more than doubles the density life of the ribbon. This is subject to normal operating conditions and customer preference as to density of copy.

There are three positions for a left and right detent lever to increase the flow of ink as the ribbon is being used. Position 1 allows the ink in the ribbon to be used.

Reinker Settings:

- Printed copy starts to lighten — move right detent lever to position 2.
- As copy starts to lighten again — move left detent lever to position 2.
- As copy begins to lighten once more — move left and right detent levers to position 3.
- If at any time copy becomes too dark (over-inked), move detent levers down one position.
- When copy is no longer considered acceptable — replace ribbon and ink cartridges. A ribbon, two ink cartridges and a disposable glove can be ordered from Teletype Corporation by part number 407777.



Warning: If at any time the ribbon is frayed or torn, it should immediately be replaced. If curling of the ribbon occurs, notify your maintenance representative.

Paper Jam Alarm for Tractor Feed Printers Only

Printers equipped with a paper jam alarm will detect the following paper jam conditions and cause the PAPER button to light.

1. Paper buckle between the top of the printer and paper exit.

2. Paper mis-alignment, due to feed hole elongation or improperly inserted forms in either tractor assembly.

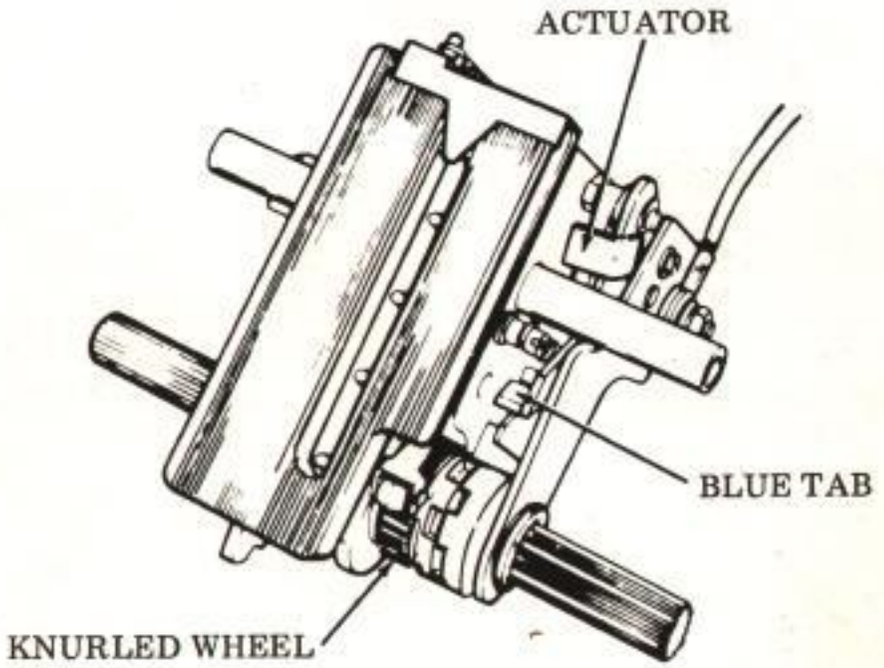
3. Poor hole alignment of multi-ply forms.

4. A tear along the horizontal perforations causing paper mis-alignment in either tractor assembly.

5. Form supply box not aligned properly in relation to the printer. This could cause a jam due to the form not aligned properly in the tractor.

Note: Depending on the type of jam, up to approximately 7-lines of copy can be lost prior to a paper jam alarm.

The paper jam alarm is a manual reset device that requires two steps to rest and turn off the paper button lamp. It will be necessary to reset the jam alarm mechanism if the form is manually reversed, or after clearing a paper jam.



LEFT TRACTOR

To reset paper jam alarm mechanism:

1. The attendant will be required to manually rotate the knurled wheel toward the rear until it stops.

2. Push on blue painted tab of the actuator until it detents into reset condition.

Note: Excessive humidity changes may necessitate a tractor readjustment to accommodate paper dimensional changes. Normally the tractor drive pins should be centered in the paper sprocket holes.

NOTES:

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HOW TO OPERATE MANUAL 364
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