

43 5-LEVEL PAPER TAPE UNIT
INSTALLATION AND REMOVAL

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1. GENERAL	

1.01 This section provides installation and removal information for the Paper Tape Unit (Fig. 1), hereafter known as the PTU.

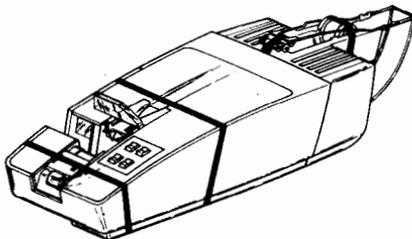


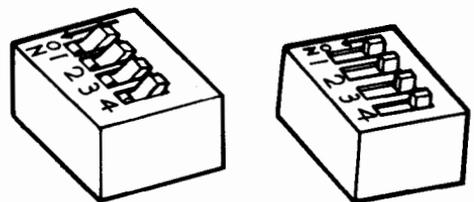
Fig. 1

1.02 Whenever this section is reissued the reason will be listed in this paragraph.

- 1.03 The PTU may be located on a table top or shelf and attached to an associated 43 Five-Level Buffered Teleprinter or it may be separately located up to 50 cable feet from the teleprinter.
- 1.04 Installation should be performed under the direction of a service order indicating terminal code, options, date, materials required and location.
- 1.05 For additional information on testing refer to Section 574-504-300.
- 1.06 Before starting the installation procedure, verify that paper tape and the customer provided communications device is present at the installation location.
- 1.07 References in the procedures to left or right, up or down and top or bottom, etc, refer to the PTU in its normal operative position.
- 1.08 All ordering numbers shown in this manual are Teletype Corporation part numbers.

OPTION SWITCHES

1.09 Different styles of option switches may be present on the logic card. On toggle or slide type switches, options are activated by positioning the toggle or slide toward the positions indicated in Fig. 2.

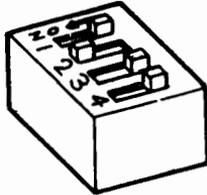


Toggle Type

Slide Type

Fig. 2

1.10 The options switches are factory optioned and should not be changed unless the local engineering requirements specify incorporating a nonstandard feature (Fig. 3).



Standard Switch Positions

Fig. 3

1.11 The procedure in Engineering Option Checkout verifies proper operations of variable features only. The features as furnished from the factory are checked in Section 574-504-500. The procedures in Engineering Option Checkout may be checked either on-line or off-line as indicated.

1.12 Independent off-line test procedures are provided to simulate on-line tests. Off-line checkout of Option 453 will require placing the PTU into the loopback mode (see Fig. 4). To perform these tests, the connector terminals, as shown in Fig. 4, should be strapped before proceeding with the tests. The remaining terminals, should be connected or measured as specified during the test steps.

1.13 When ordering replaceable parts, unless otherwise specified prefix each part number with the letters "TP" (ie, TP430047).

2. TOOLS REQUIRED

2.01 The following tools will be required to enable the option switches and/or straps. These items should normally be present in standard maintenance tool kits.

- Wrench, Open End — 129534
- 3/16 Inch x 1/4 Inch Screwdriver —
- 1/4 Inch x 6 Inch Blade 100982
- Pliers, Cutting — 408071
- Soldering Iron (Low Wattage)

3. INSTALLATION PROCEDURE

A. Unpacking

- 3.01 Select an area to unpack the carton so that damage to the unit will not occur.
- 3.02 When unpacking, be sure to wear approved safety glasses.

Caution: To avoid condensation on the electrical components, the unit should be allowed to assume room temperature before unpacking; for example, when brought into a warm humid room from outside subzero temperatures.

- 3.03 The 43 Five-Level PTU is furnished fully assembled in a single carton.
- 3.04 Unpack the unit referring to instructions on the carton.

Note: Observe all "Caution" notes printed on the carton.

- 3.05 Carefully remove tape securing the reader cover, chad container, spindle and tape tensioning arm (Fig. 5).

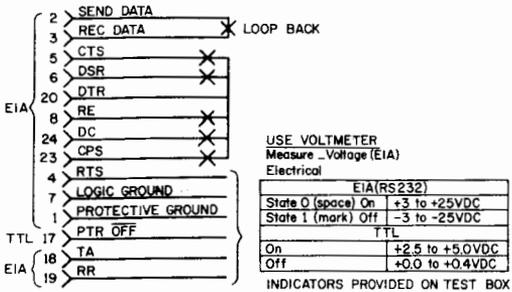


Fig. 4

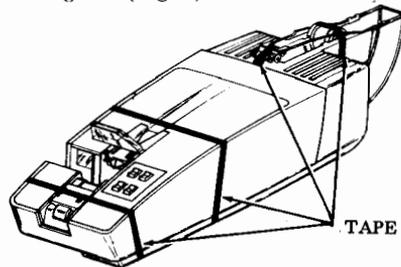


Fig. 5

3.06 Verify that the following items are present at the customer site:

- 1 - PTU (4250AAA)
- 1 - Practice, Installation (574-504-200)
- 1 - Roll KS-8483, L1 Yellow Paper Tape
- 1 - 430757 Cable

3.07 The container and other packing details should be retained by field location to facilitate movement of equipment.

Note: Paper tape must be obtained locally or ordered separately. The first roll comes with the PTU.

B. Assembly

3.08 The connecting cable (430757) between the PTU and associated equipment is furnished with the PTU. The following extension cables are available from Teletype Corporation. See Fig. 6 for definition of interface leads.

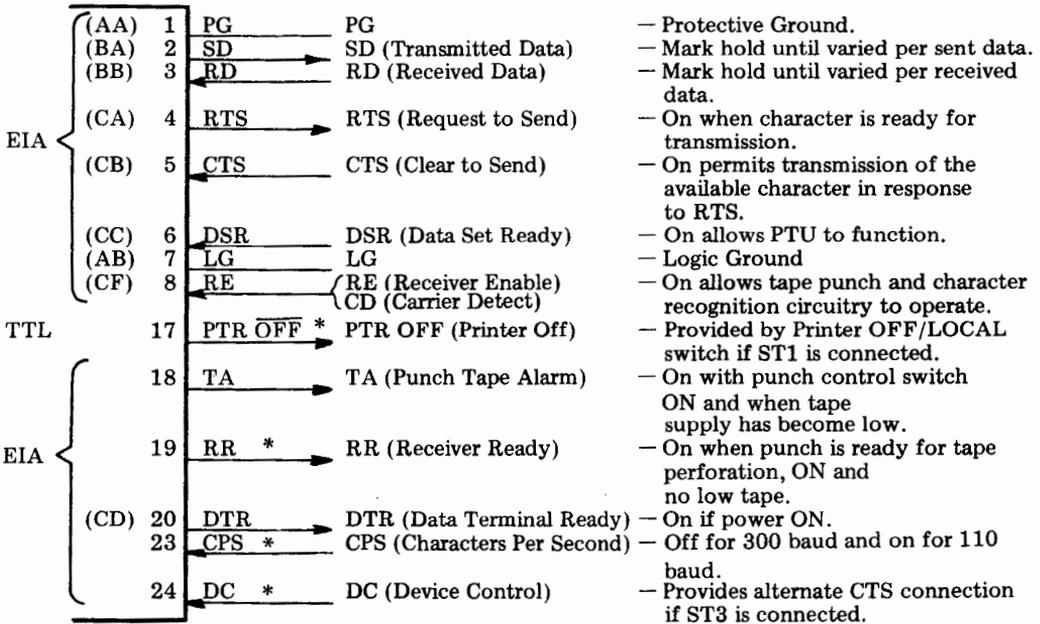
3 foot length	430757 (included with PTU)
7 foot length	413600
12 foot length	413601
25 foot length	413602
50 foot length	413603

INTERFACE LEADS

The PTU Interface terminates at a 25 EIA receptacle with male pins located at the right rear of the unit. The pin assignments are given below. (See Note.)

Pin Assignments

Descriptions



Electrical

EIA (RS232)	
State 0 (space) On	+3 to +25 VDC
State 1 (mark) Off	-3 to -25 VDC
TTL	
On	+2.5 to +5.0 VDC
Off	+0.0 to +0.4 VDC

Note: In the local operation mode of the "copy" switch (see Option 453c) with switch in PTR OFF/LOC position, DTR, RTS, RR and TA will be off and SD will be mark hold. The RD, CTS, DSR, RE and DC inputs will be ignored.

The "copy" switch is located above the CPS switch at the rear of the set.

*Not wired in recommended EIA cable.

Fig. 6

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3.09 Position the PTU in the location specified by the customer. Normally, the PTU will be placed on the left side of an associated teleprinter. No space is required behind the PTU itself. For additional space requirements, refer to manuals furnished with associated communications devices. The ac power cord for the PTU extends ten feet to the rear.

3.10 Certain user programmable options (see 5. ACTIVATING ENGINEERING OPTIONS) listed in this section should be reviewed to properly interface the PTU with the associated buffered teleprinter. Refer to the How to Operate Manual 999-300-136.

3.11 If any of the user options are changed from the state furnished condition, mark the How to Operate Manual 999-300-136 to indicate changes.

C. Tape Installation

3.12 Install the paper tape. Refer to How to Operate Manual 999-300-136.

D. Checkout Procedure

3.13 Connect the interface cable from the PTU to the associated teleprinter using the two captive screws on each plug.

3.14 With the ac power turned off, plug the PTU into a properly grounded and polarized 3-wire, 115 V ac ± 10 percent, 50-60 hertz electrical power source (refer to Option 455). Fuse protection should be delayed and provide for a running current of 1.0 amp for the PTU.

3.15 Perform the PTU installation checkout procedure found in Section 574-504-500.

3.16 Clean up the unpacking area, wipe off any finger prints on the cover and turn PTU over to the customer.

E. Initiate Service

3.17 Record the installed location of the PTU (floor, area and phone, if any) and the number to be called in case of trouble on a label and/or in the How to Operate Manual 999-300-136.

3.18 Provide the customer with the How to Operate Manual 999-300-136.

3.19 Advise the customer of the "trouble number" locations on a label or in the How to Operate Manual.

4. REMOVAL

4.01 To remove the PTU from service, reverse the procedures in 3. INSTALLATION PROCEDURE.

4.02 Before repacking the PTU, remove chad from punch block, chad chute and empty the chad container.

4.03 Place PTU on bench. Tape set as shown in Fig. 5. Place one band of tape around set so that it secures the chad box. Place another band of tape around set so that it secures the reader lid.

4.04 Secure the tape tension arm approximately two inches above the housing with a strip of tape (see Fig. 5).

4.05 Secure the spindle in its slot with a strip of tape (see Fig. 5).

4.06 Coil the power cord and band it with a strip of tape. Position power cord in package as shown in Fig. 7.

4.07 Obtain the carton and packing details retained in 3.07.

4.08 Position a Detail "A" and a Detail "B" on the PTU as shown in Fig. 7.

4.09 Tape the Details (A and B) in position with three strips of tape. Start at center of details and go all around the details. See Fig. 7.

4.10 Position the corrugated detail in carton as shown in Fig. 7.

- 4.11 Position the corrugated detail in the carton as shown in Fig. 7.
- 4.12 Close top flaps of carton and seal with tape.
- 4.13 Mark the outside of the carton with the PTU code (4250AAA).
- 4.14 If the PTU is a candidate for the working station plan, prepare the necessary paper work.

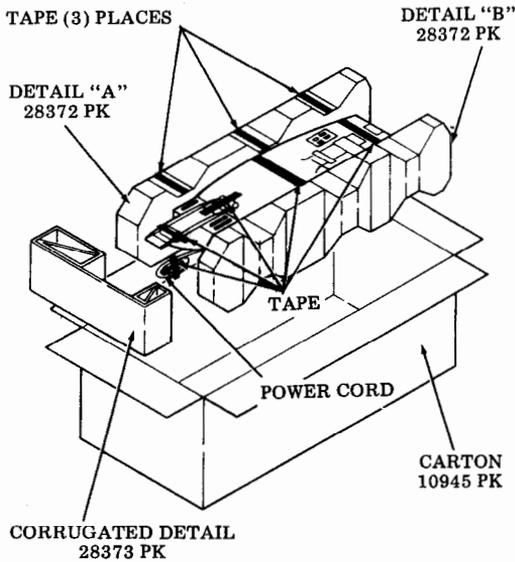


Fig. 7

5. ACTIVATING ENGINEERING OPTIONS

- 5.01 Turn off ac power to the PTU.
- 5.02 Remove 410711 logic cord (see Section 574-504-720).

- 5.03 Locate the option switch pack SPA1 and straps (ST1, ST2, ST3) (see Fig. 8 for location). Activate the variable features as required (see Fig. 9). Straps can be removed by cutting or unsoldering.

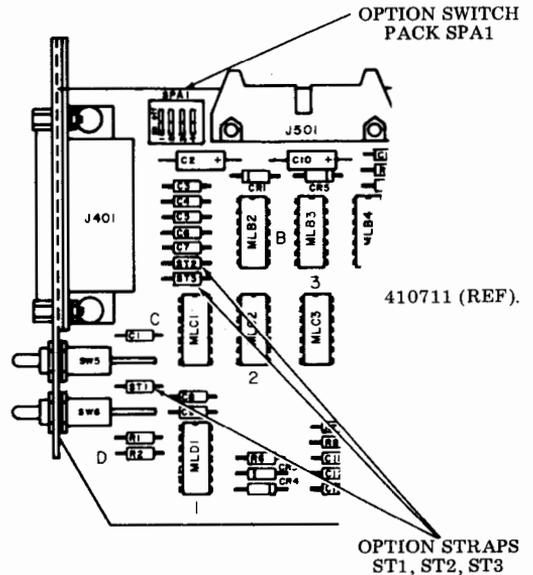


Fig. 8

- 5.04 Reinstall the logic card, bustle and covers.
- 5.05 Record any nonstandard option incorporated in the PTU in the How to Operate Manual 999-300-136.
- 5.06 Perform the option checkout procedure to verify proper operation of any nonstandard feature installed. Refer to 6. ENGINEERING OPTION CHECKOUT for checkout procedure.

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5.07 The checkout procedure in 6. ENGINEERING OPTION CHECKOUT provides information for checking nonstandard options only. Refer to Section 574-504-500 for PT Testing procedures.

OPTION NO. OPTION SUFFIX AND CONDITIONS	OPTION DEFINITION	SWITCH NUMBERS				LOCATION OF SWITCH OR STRAP ON CIRCUIT CARD
		SPA1				
XXX		1	2	3	4	
a.		—	—	—	—	
b.		—	—	—	—	

453.	Function of "Copy" Switch in PTR OFF/LOC Position.	SPA1				ST1
		1	2	3	4	
a.	Normal	—	—	—	○	Strap In *
b.	NA for 5-Level	—	—	—	●	Strap Out
c.	Local Operation	—	—	—	●	Strap In
d.	NA for 5-Level	—	—	—	○	Strap Out

454.	Clear to Send Select	ST2	ST3
		a.	Clear to Send Controls.
b.	Device Control Controls	Strap Removed	Strap In
c.	Device Control and Clear to Send Controls.	Strap In	Strap In †

455.	50/60 Hz Operation	Motor Pulley **	
		Small Side	Large Side
455a.	60 Hz Operation	Outside	Inside *
455b.	50 Hz Operation	Inside	Outside

The following feature is not a customer option and is preset at the factory.

5- or 8-Level Operation	SPA1			
	1	2	3	4
a. 8-Level	—	○	—	—
b. 5-Level	—	●	—	— †

● Indicates toggle or slide position to ON.

○ Indicates toggle or slide position to OFF.

— Position of switch does not affect feature.

* Factory furnished state of feature.

† Factory furnished state of feature — required for application.

‡ On 5-level units, SPA1-2 must be positioned to ON.

** Verify motor pulley is aligned with reader pulley and there is some clearance between the motor pulley and the ac power connector bracket.

Fig. 9

The following features are for craft personnel during troubleshooting.

Punch and Reader Adjust		SPA1				
		1	2	3	4	
a.	Disabled	○	—	—	—	*
b.	Enabled	●	—	—	—	

Self Test Message		SPA1				
		1	2	3	4	
a.	Disabled	—	—	○	—	*
b.	Enabled	—	—	●	—	

- Indicates toggle or slide position to ON.
- Indicates toggle or slide position to OFF.
- Position of switch does not affect feature.
- * Factory furnished state of feature.
- § LTRS/BLANK/R/Y is perforated (5-level).

Fig. 9 (Contd)

6. ENGINEERING OPTION CHECKOUT

- 6.01 Turn off power to the PTU and connect the test arrangement shown in Fig. 4 to the EIA connector at rear of PTU.
- 6.02 Place tape roll in PTU and thread tape through punch block.
 Operate POWER switch Off.
 Operate PUNCH and READER switches Off.
 Place CPS switch in 30 CPS position.
 Place message tape in reader.
 Close all switches on test arrangement.

ENGINEERING OPTION CHECKOUT (453a)

PROCEDURE	RESPONSE	VARIABLE OPTION
Place "copy" switch in PTR OFF/LOCAL position.	+5V will be present on interface pin 17.	
Place "copy" switch in NORM position.	+5V will be present on interface pin 17.	

ENGINEERING OPTION CHECKOUT (453c)

PROCEDURE	RESPONSE	VARIABLE OPTION
"Copy" switch in LOCAL position. Turn on POWER switch.	Motor starts. POWER indicator lamp lights.	453c permits LOCAL tape duplication.
Move PUNCH switch to On.	PUNCH lamp lights.	
Move READER switch to On.	READER lamp lights. Reader starts transmitting. Punch starts receiving from reader and perforating tape.	
With reader sending to punch, open and close the test arrangement switches (loopback 5, 6 and 8) one at a time.	Switches have no effect — reader continues sending to punch. 0V will be present on interface pin 17.	