35 CONTROLMATIC TELETYPEWRITER DATA STATION ARRANGED FOR TWX INSTALLATION

1. GENERAL

1.01 This section describes the procedures to be followed for the installation of Model 35 CONTROLMATIC Teletypewriter (TTY) data station arranged for TWX service.

1.02 The CONTROLMATIC is a self-contained station which is normally furnished completely assembled by the distributing house. See Fig. 1.

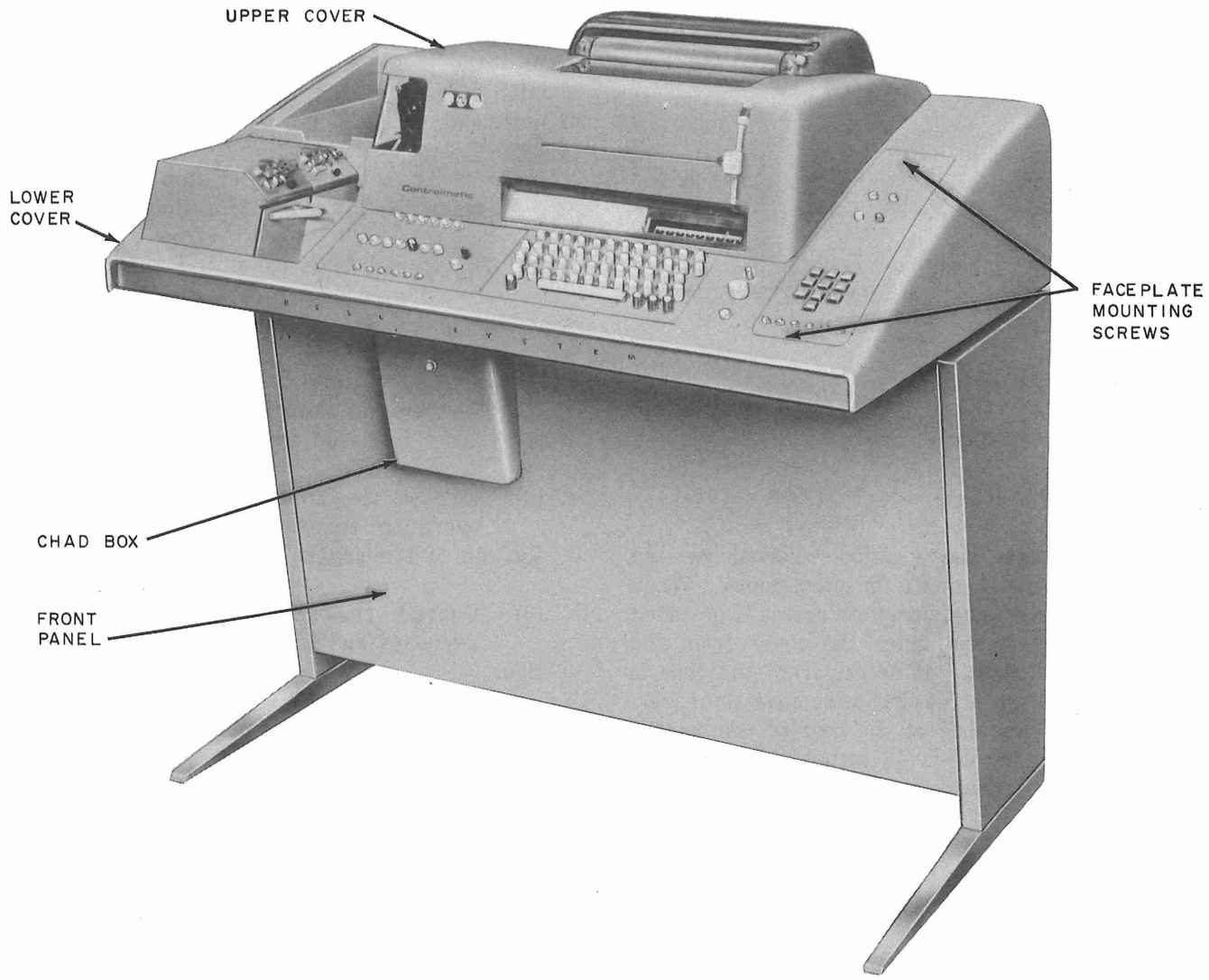


Fig. 1—CONTROLMATIC Data Station Arranged for TWX Service

1.03 The customer must furnish a standard three-wire, grounding-type, 103- to 127-volt, 59.5 to 60.5 Hz power receptacle (to accept a plug equipped with two parallel blades and a round grounding pin).

The receptacle shall not be under control of a switch.

1.04 Verify with the TWX central office that the overall facilities meet transmission requirements for 100-word per minute TWX requirements.

1.05 Reference directions (left, right, front, or rear) are in respect to facing the keyboard which is located at the front of the TTY.

2. INSTALLATION

2.01 The external dimensions of the CONTROLMATIC data station are as follows:

Width—40 inches

Height—35 inches

Depth—24 inches

2.02 Verify that the location selected by the customer is adequate for maintenance. When the lower cover is open, complete access is provided for equipment located under the cover from the top, front, and sides. If access from the rear is required, it will be necessary to remove the cover. The minimum clearance at the rear of the cabinet for opening the cover is 13 inches; for removing the cover is 36 inches.

2.03 Verify that the customer-provided ac power receptacle is within seven feet of the selected location.

Do not connect ac power to the CONTROLMATIC data station until all required options are installed.

2.04 To gain access to TTY components, mounted beneath the lower cover, proceed as follows:

(1) Operate the two cover latches on each side of the upper cover and raise the upper cover to a partially open-latched position.

(2) Remove the two screws that secure the call control unit faceplate to the lower cover and remove the faceplate by lifting vertically.

(3) Grasp the handgrips located in front of the lower cover, operate the lower cover latch located at the right front of the typing unit, and raise the lower cover.

(4) Verify that the left rear stop arm is latched when the lower cover is fully open.

2.05 The format logic panel and 101C Data Set are mounted on a framework located behind the front panel. Access to these components is accomplished as follows:

(1) Remove the chad box by lifting it up and away from the front panel.

(2) Release the front panel by momentarily operating the two pushbutton latches at the top of the panel.

(3) Depress the safety clip underneath the keyboard and lower the front panel to the floor.

(4) Remove the front panel by lifting the rear to separate the hinges.

2.06 Insure that all plug-in station components are securely fastened and connected with the proper mating receptacles. Connector and terminal field locations are shown in Fig. 2.

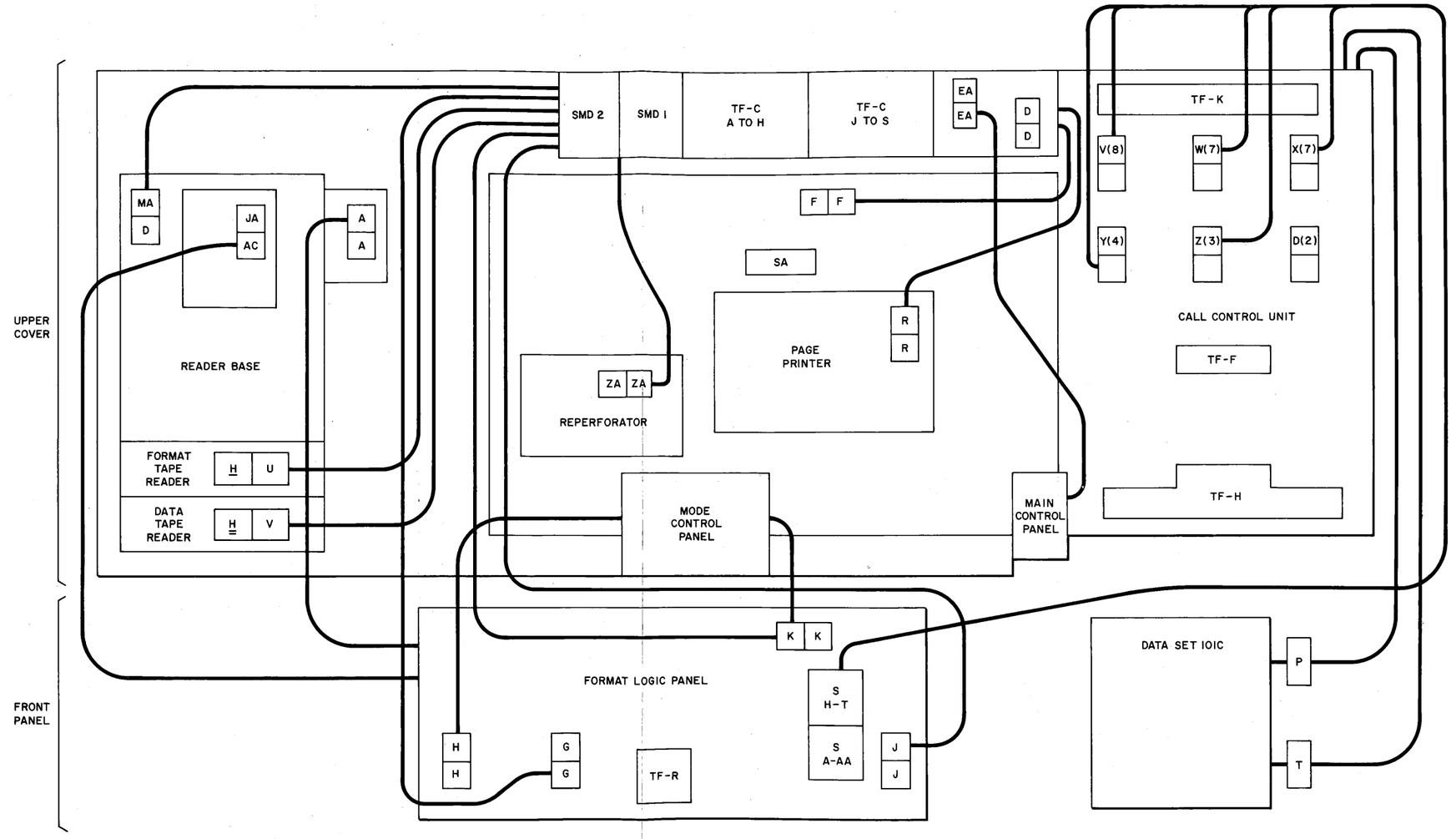


Fig. 2—Data Station Connector and Terminal Field Locations

3. OPTIONS

3.01 Options to provide specific customer requirements may be installer-provided at time of installation. Table A lists lettered options and their respective functions. These options are provided by installing or removing leads or straps within the TTY portion of the data station. Table B lists connections for options provided by this method. Options requiring additional equipment changes are shown in Fig. 3 through 9 and are also listed in Table B. The required options for each installation should be specified on the service order or work sheet.

TABLE A—OPTION INDEX

A	Typing Reperforator
C	Auxiliary ROTR
D	No Auxiliary ROTR Set
J	Friction Feed Page Printer
L	Horizontal, Vertical Tab, and Form Feed—Sprocket Feed Page Printer
M	TOUCH-TONE® and Card Dialer
N	Auxiliary Receiver—Not Used
O	Normal Control Code Options (Response to Normal ASCII Codes)
P	Additional Control Code Options (Response to ASCII Codes Not Normally Used)
S	Optional Stepping Switch Input
T	Optional Rotary Dial
U	Pulsing Card Dial
T & U	Rotary and Pulsing Card Dial
V	Stepping Switch Input Release
W	Auxiliary Input Release

TABLE B — METHOD OF APPLYING OPTIONS

OPTION DESIGN	CONNECT		NOTES
	FROM	TO	
A *			
C			See Fig. 5
D	Connector D(2)-2 Connector D(2)-9	Connector D(2)-12 Connector D(2)-15	Remove N
J †			
L **			
M	Term. Field H-15	Term. Field H-16	See Fig. 3
N ††	Term. Field R-35	Term. Field R-1P	Remove D
O ††	Connector PA-23 Connector PA-25	Normally Open Contact 4 of M1 Relay Normally Open Contact 7 of M1 Relay	Remove P
P	Connector PA-32 Connector PA-36	Normally Open Contact 4 of M1 Relay Normally Open Contact 7 of M1 Relay	Remove O
S ††	Term. Field R-3M	Term. Field R-1J	See Fig. 8
T			See Fig. 4
T & U			See Fig. 4
V	Term. Field R-4H	Term. Field R-5H	See Fig. 8
W	Term. Field R-3H	Term. Field R-3J	See Fig. 7 & 9

* Option established by installing typing reperforator.

† Option established by installing friction feed page printer.

** Option established by installing sprocket feed page printer.

†† Normally furnished wiring.

3.02 A 25F1 TOUCH-TONE dial is furnished as standard equipment for the CONTROLMATIC. When a TOUCH-TONE card dialer is required, the 25F1 dial must be removed and replaced with a 26C card dialer (option M) which combines both manual and card TOUCH-TONE dials. Option M connections are shown in Fig. 3.

3.03 A TP-181903 faceplate is used with the 25F1 dial. A TP-181901 faceplate is used with the 26C dial.

3.04 When rotary dialing is required, option T must be provided. Option U provides a 41A card dialer in addition to the 8C rotary dial provided by option T.

3.05 A TP-181902 faceplate is used with the rotary dial. Addition of the pulsing card dialer requires a TP-181904 faceplate.

3.06 Options T and U are shown in Fig. 4.

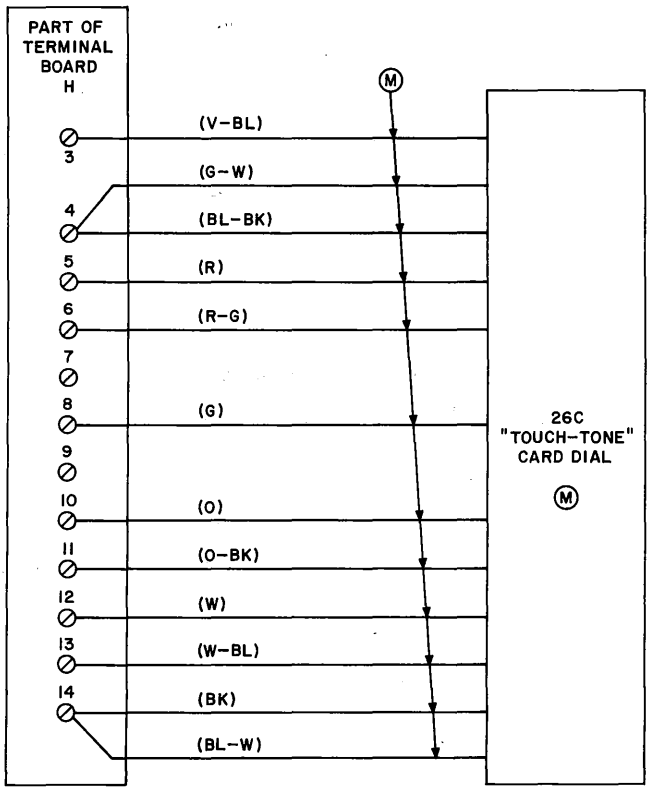


Fig. 3—Connections for TOUCH-TONE Card Dialer

3.07 The CONTROLMATIC will accept a 35 receiving only typing reperforator (ROTR) and/or an edge punched card punch as optional on-line output devices. Installer connections to be made for those devices are shown in Fig. 5 and 6.

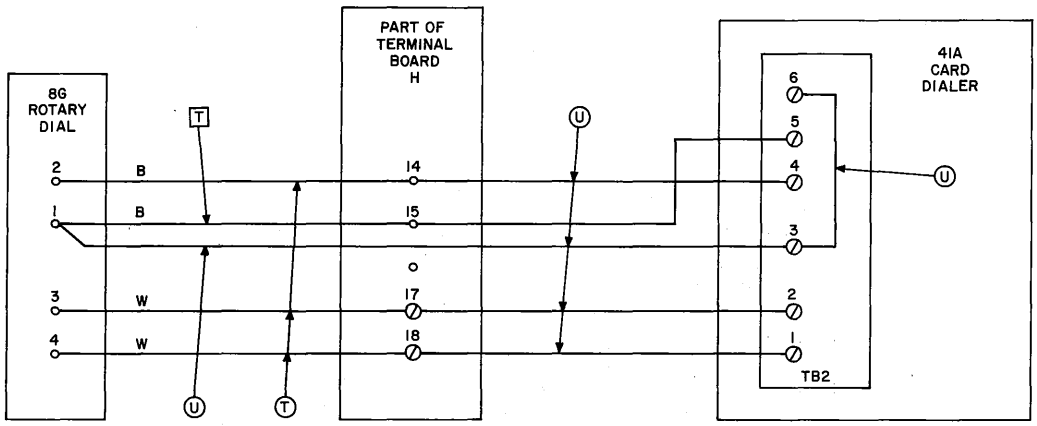
3.08 The CONTROLMATIC will accept any two of three available optional input devices as follows:

- Edge Punched Card Reader
- Stepping Switch
- Push Button Data Generator.

Refer to Fig. 7, 8, and 9 for installer connections to be made for these optional input devices.

4. DATA SET 101C-TYPE

4.01 Controlmatic data stations require a 101C L3, LC Data Set for establishing connections and transmitting and receiving data. Refer to the section entitled Data Set 101C—Tests and Installation Methods (591-013-200) for procedures to be used at time of installation.



NOTE:

Ⓣ WIRING IS OPTIONAL WHEN DATA STATION IS EQUIPPED WITH ROTARY DIAL. WIRE INDICATED [T] MUST BE REMOVED WHEN ADDING Ⓤ OPTION.

Fig. 4—Connections for Rotary Dials

5. REFERENCES

5.01 For information regarding optional input and output devices refer to the following sections:

574-203-222 Receiving Only Typing Reperforator Set (ROTR)

591-807-202 35 Teletypewriter Edge Punched Card Station Arranged for TWX

5.02 Perform installation tests in accordance with Section 591-806-502.

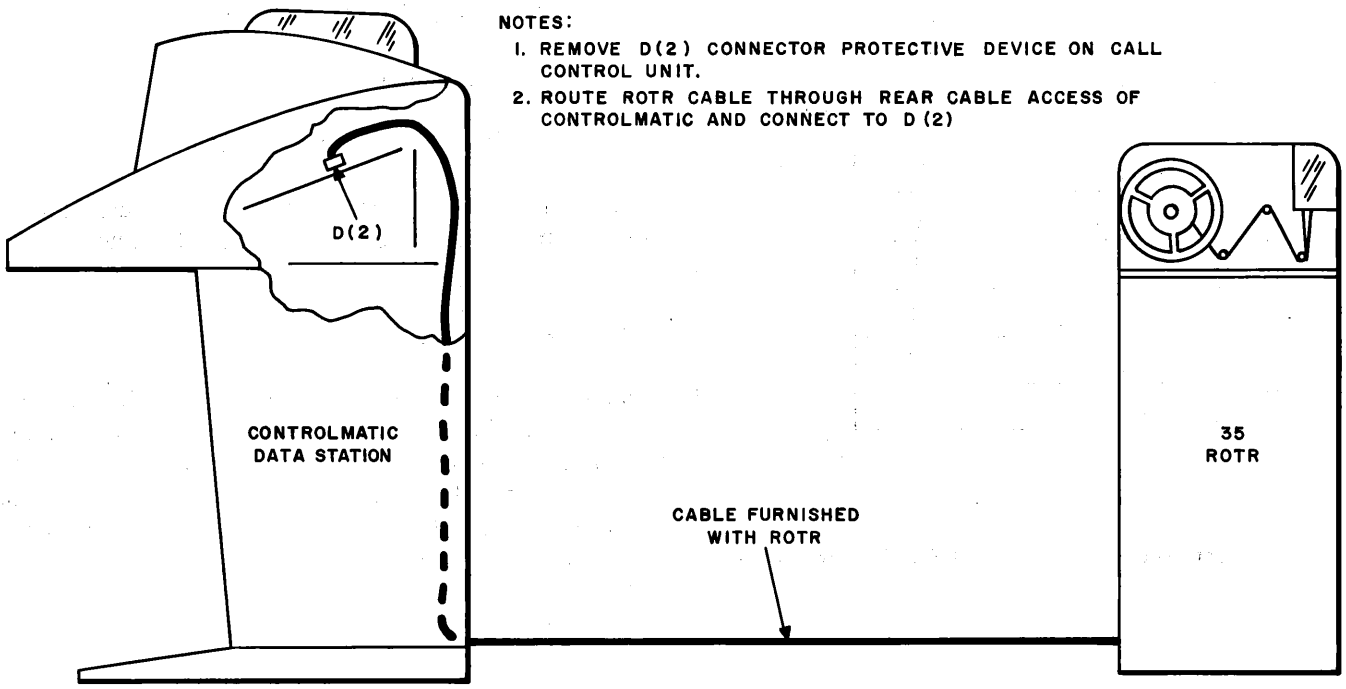
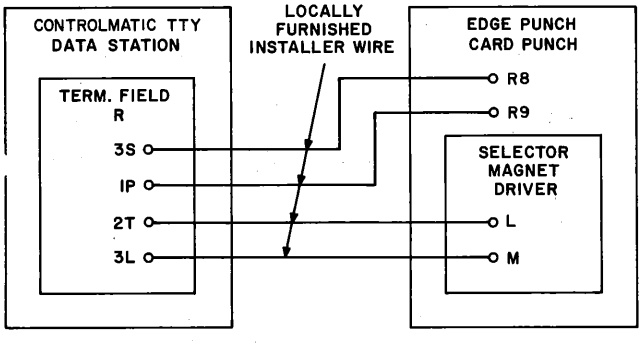
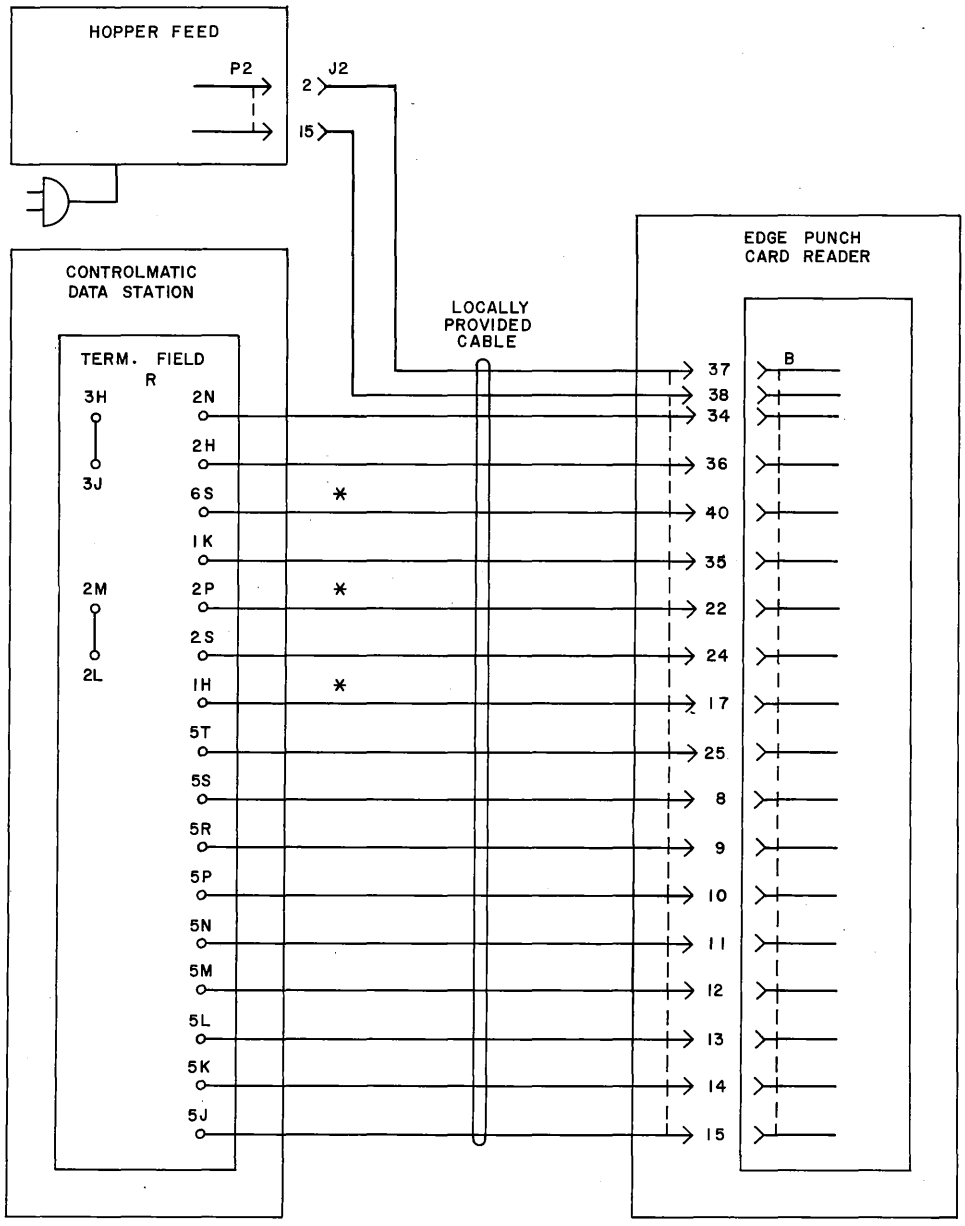


Fig. 5—Connections for 35 ROTR



NOTE: ADD STRAP BETWEEN TERMINALS 7 AND 14 ON SELECTOR MAGNET IF NOT PRESENT.

Fig. 6—Connections for Edge Punch Card Punch

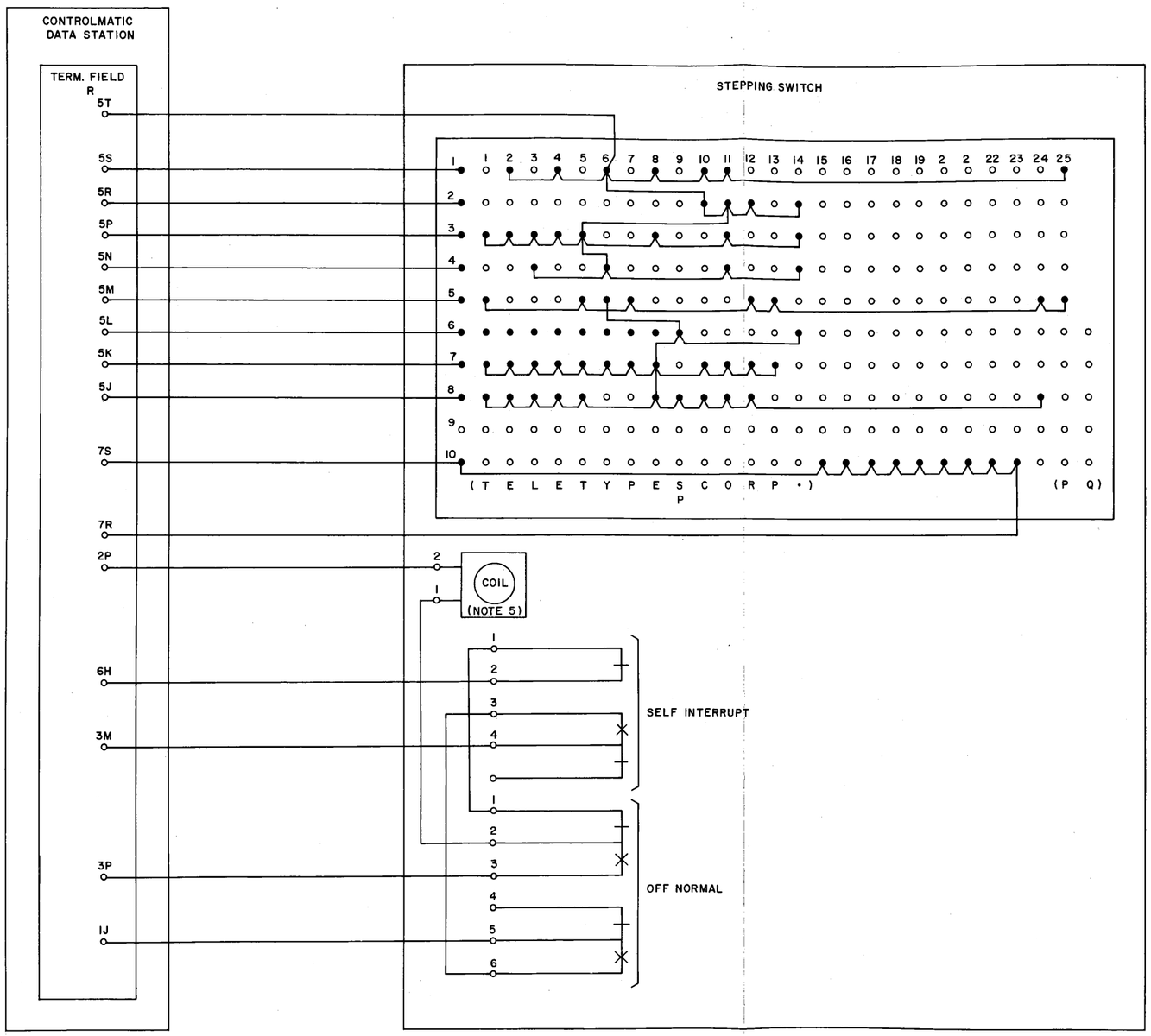


NOTES:

1. REMOVE STRAPS Z11-Z23 AND Z13-Z25 IN EDGE PUNCH CARD READER.
2. PLACE STRAPS 3H-3J, AND 2M-2L AND REMOVE STRAPS B-17, B-49 IN CONTROLMATIC DATA STATION

* INDICATES 18 GA WIRE.

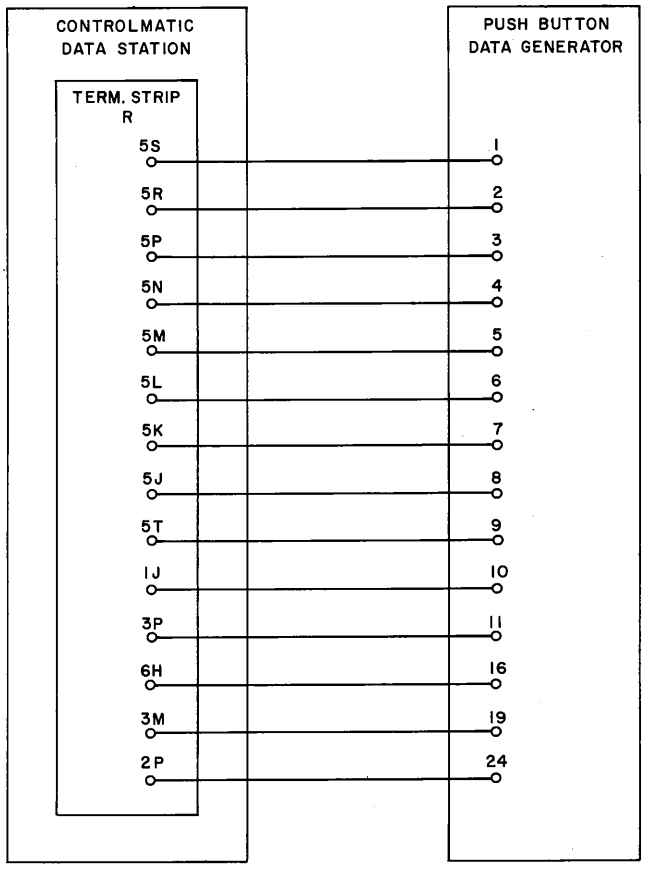
Fig. 7—Connections for Edge Punch Card Reader



NOTES:

1. STEPPING SWITCH VIEWED FROM WIRING SIDE.
2. WIRING IN 10 TH LEVEL IS REQUIRED TO HOME SWITCH. IT STARTS IN POSITION NEXT TO LAST CHARACTER OF TEXT AND ENDS ONE POSITION BEFORE CONTROL P.
3. STEPPING SWITCH MUST ALWAYS BE CODED WITH CONTROL P AND CONTROL Q AS THE LAST CHARACTER.
4. LETTERS SHOWN IN PARENTHESIS ARE SHOWN AS TYPICAL ENCODING OF SWITCH.
5. 48 VOLT DC OPERATION.

Fig. 8—Connections for Stepping Switch Input



NOTES:

1. BECAUSE THIS UNIT BASICALLY IS A STEPPING SWITCH, A CONTACT IS NEEDED TO PROVIDE PROPER STEPPING WITH CORRECT TIMING. THIS WILL BE THE DISTRIBUTOR AUXILIARY CONTACT. ALSO THIS UNIT MUST BE ABLE TO CONTROL THE DISTRIBUTOR MAGNET IN ORDER TO HAVE THE CORRECT TIMING.
2. IF A SINGLE UNIT IS USED, THE OPTION W MUST BE WIRED AS SHOWN ON 7504 WD. ALSO IF A TIME AND DATE GENERATOR IS TO BE USED THE G.C. OPTION MUST BE WIRED. WHEN A CLOCK IS USED THE UNIT OPERATES THROUGH THE P.B.D.G. AND SO NO ADDITIONAL INTERFACING TO THE CONTROLMATIC TTY IS NEEDED.

Fig. 9—Connections for Pushbutton Data Generator