

TELERAPID AUTOMATIC DIALERS

TR350 AND 125 TYPES

1.00 INTRODUCTION

This section covers the description, installation, maintenance, and connections of TR350 and 125 telerapid automatic dialers.

2.00 DESCRIPTION

2.01 The telerapid automatic dialers are mechanical devices which will dial any one

of 50 predetermined telephone numbers (see Fig. 1 and 2). The TR350 and 125 types are similar in appearance and differ only as described in this section.

2.02 They may be used at any common battery dial telephone station.



Fig. 1 — Telerapid Dialer 125

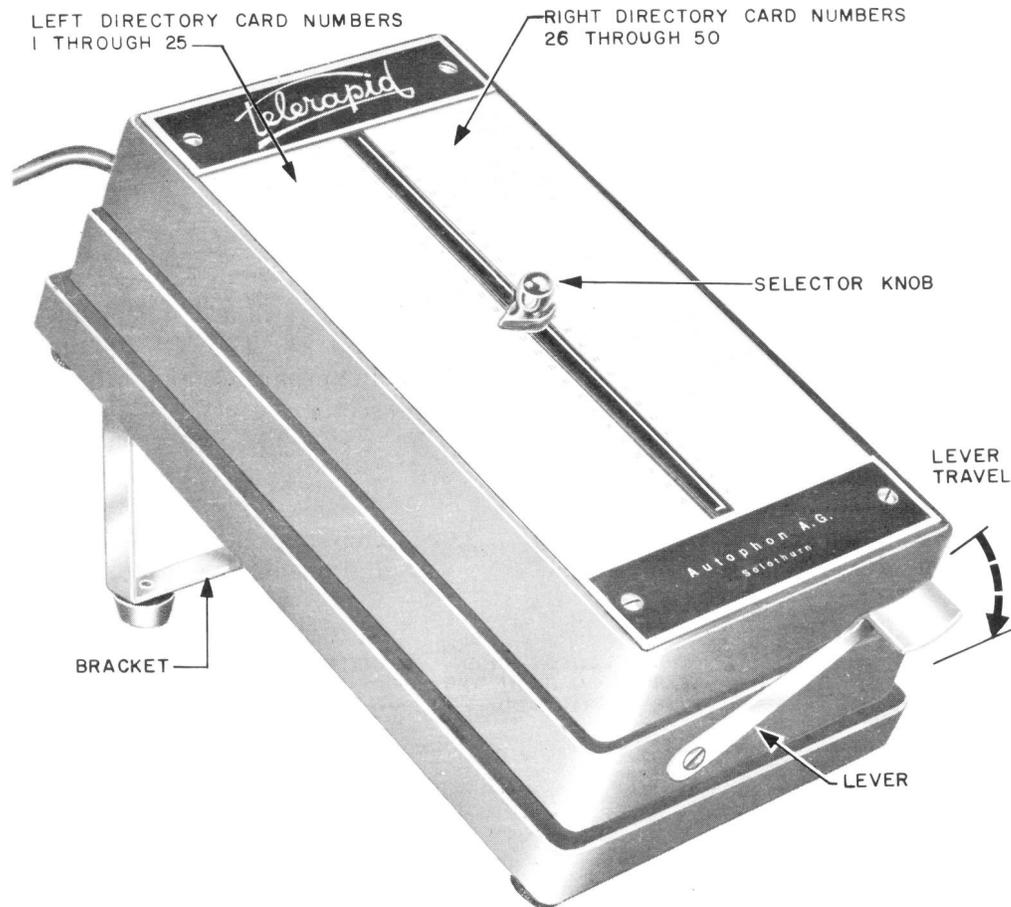


Fig. 2 — Telerapid Dialer TR350

2.03 The dialing procedure is as follows:

1. Slide the selector knob to the name of the party to be dialed.
2. Lift the receiver. When dial tone is heard, operate the lever as shown in Fig. 2. The dialer automatically pulses the telephone number selected.
3. Conversation can begin when the called party answers even though the dialer may not have completed its operating cycle.

2.04 When the dialer is associated with an extension of dial PBXs, first dial the code manually to select a central office trunk. Then operate the dialer lever after hearing the central office dial tone.

3.00 INSTALLATION

3.01 Install dialers in a level position on a table or desk, or with a bracket as shown in Fig. 1 and 2.

Discs

3.02 For access to discs, remove the baseplate by releasing the spring catch (see Fig. 3).

3.03 To remove disc from the shaft:

- Slide the selector knob to desired directory card space.
- The metal pointer indicates disc to be removed (see Fig. 4).

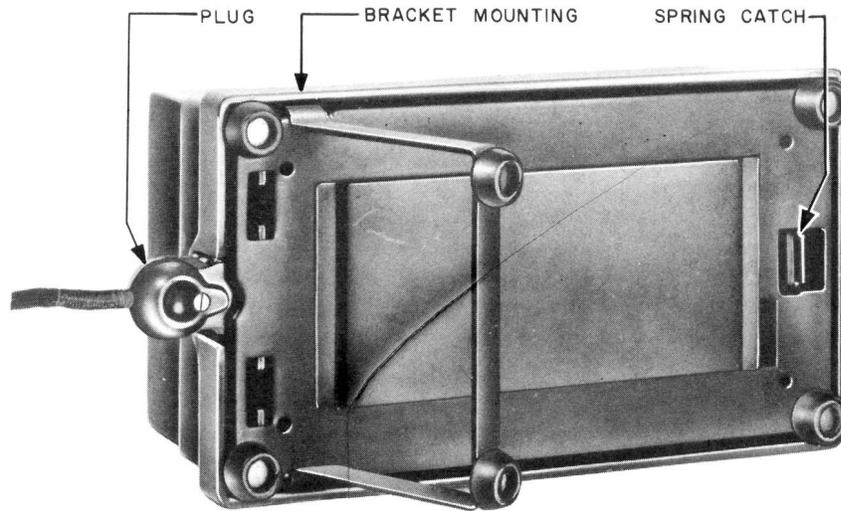


Fig. 3 - Baseplate

- Carefully disengage disc from shaft with a slight outward pull using the TR352 tool or long-nose pliers.

3.04 To place disc on the shaft:

- Slide disc on the shaft with the spring side toward the lever.
- Do not force disc. Only moderate pressure is necessary when it is properly positioned toward the shaft.
- All discs must be on shaft before operating the dialer.

3.05 Discs for telerapid dialers TR350 and 125 are not interchangeable.

3.06 The discs may be cut before delivery or by the installer. Table A gives a description of the discs and cutting tools to be used.

3.07 To cut disc, slide it on the cutting tool as shown in Fig. 5.

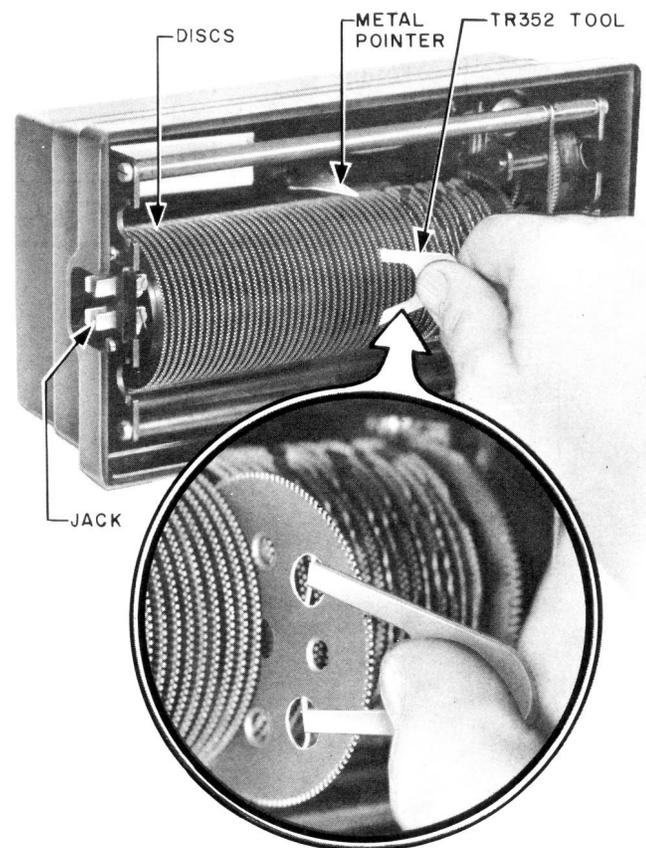


Fig. 4 - Removing Disc

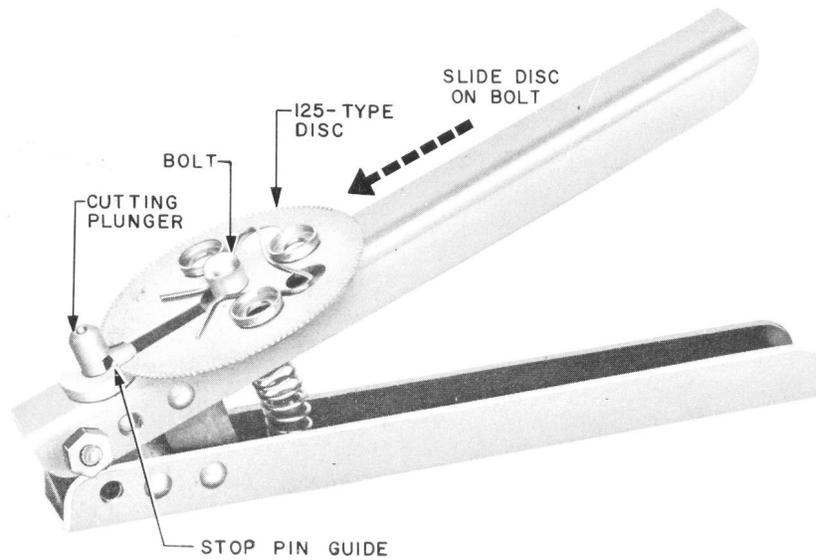
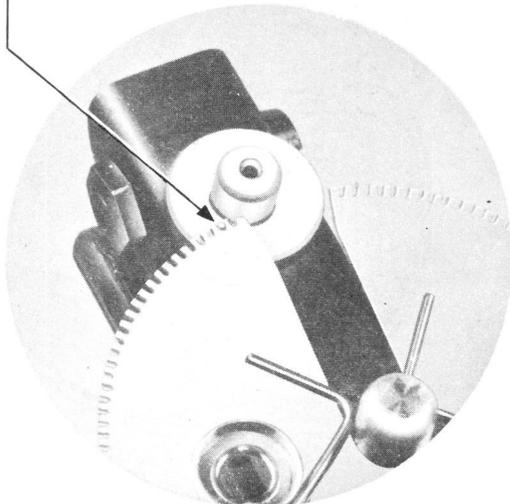


Fig. 5 – 125-Z Cutting Tool

TABLE A
DISCS

Telerapid Dialer	Disc	Stamping on Disc	Number of Teeth	Tool to Be Used for Cutting
125	125	125	125	125Z
TR350	TR353	102	102	TR351

THE STOP PIN GUIDE IS BETWEEN THE 2ND AND 3RD TOOTH



3.08 Fig. 6 through 11 show steps for cutting discs.

◀ Fig. 6 – First Cut

- Make first cut with stop pin guide between second and third teeth.
- This cut will remove the corner of the first tooth to permit smooth operation of the rider (see Fig. 12).



Always have the stop pin guide between teeth of disc, and exert counterclockwise pressure on disc before operating cutting tool.

Fig. 7 – Second Cut ▶

- This operation cuts part of the teeth between the first and second digit.
- Each tooth, including the partially cut tooth, represents one pulse.

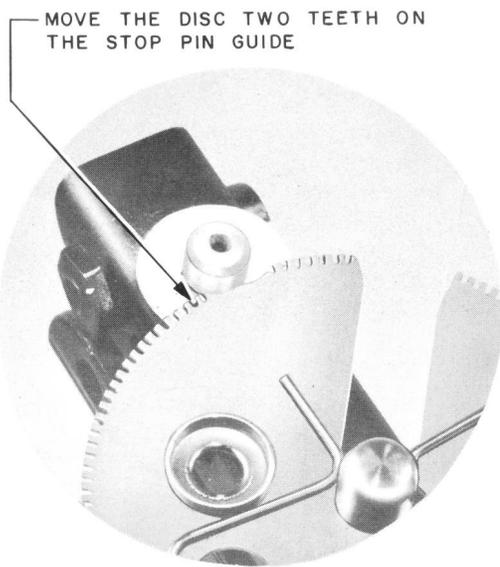
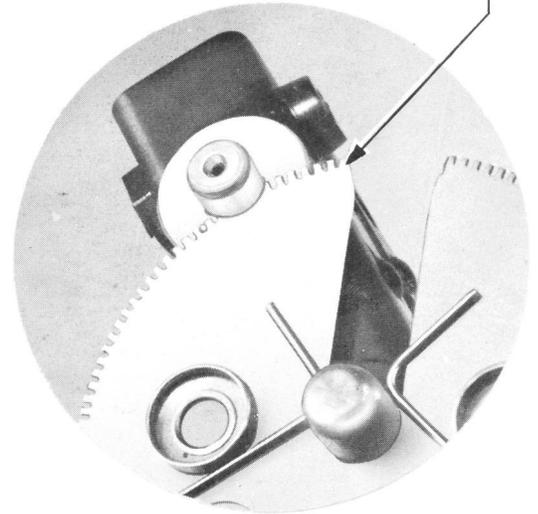


Fig. 9 – Intermediate Cuts ▶

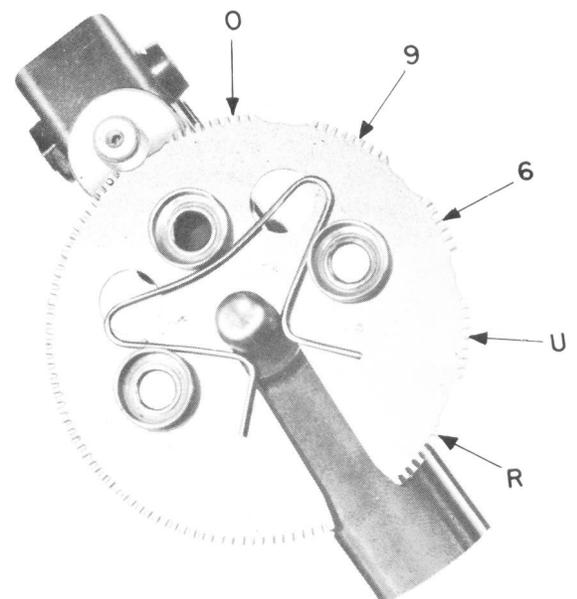
- Repeat the procedure for the remaining digits.

COUNT THE TEETH TO THE RIGHT OF THE CUTTING PLUNGER FOR EACH DIGIT



◀ Fig. 8 – Third Cut

- This operation completes the cutting of five teeth between the first and second digit.
- Removing the five teeth allows the necessary time for the central office equipment to function between pulses.



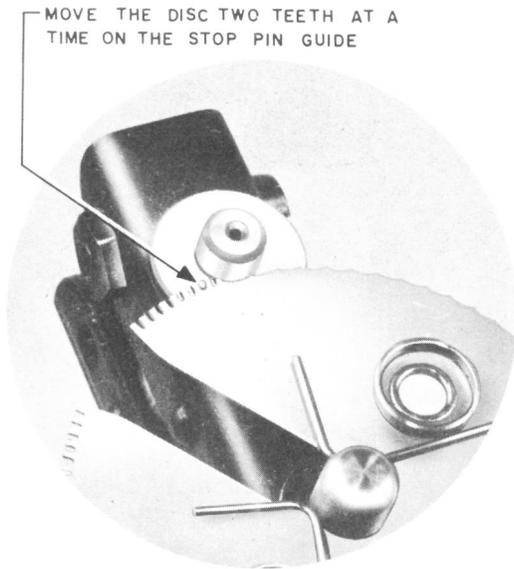


Fig. 11 - Summary ▶

- The completed disc is for RU 6-9000.

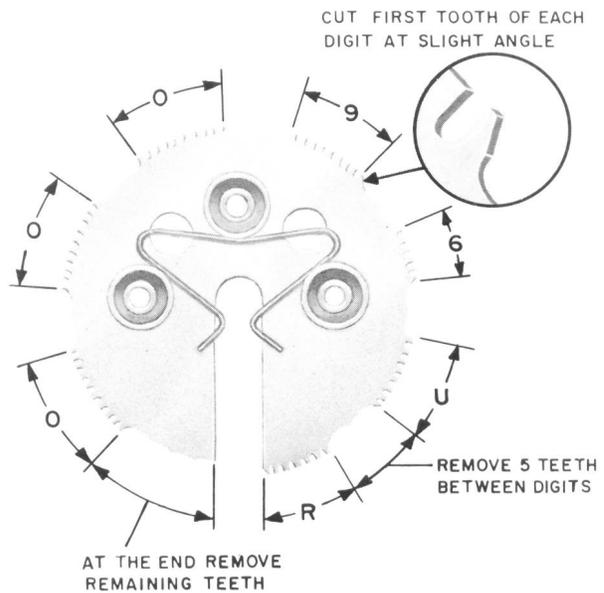
3.09 On direct loops to crossbar and panel offices, three teeth instead of five can be removed between digits. Do this *only* when the telephone number exceeds seven digits and the total number of pulses and spaces exceed the number of teeth on the disc. When the dialer is associated with step-by-step offices, the space between digits should never be less than five teeth.

4.00 MAINTENANCE

4.01 The plug of the dialer cord has a spring switch that closes when the plug is removed from the jack. This completes the circuit for normal service on the telephone with the dialer removed.

◀ Fig. 10 - Last Cuts

- Remove the remaining teeth in 2-tooth cuts.



4.02 If necessary, make the following repairs:

- Burnish or clean contacts (see Fig. 12).
- Replace defective cords.
- Replace worn directory cards.

4.03 Replace the dialer if any mechanical defects develop. Transfer discs and directory card to the new dialer.

4.04 Do not lubricate any part of the dialer.

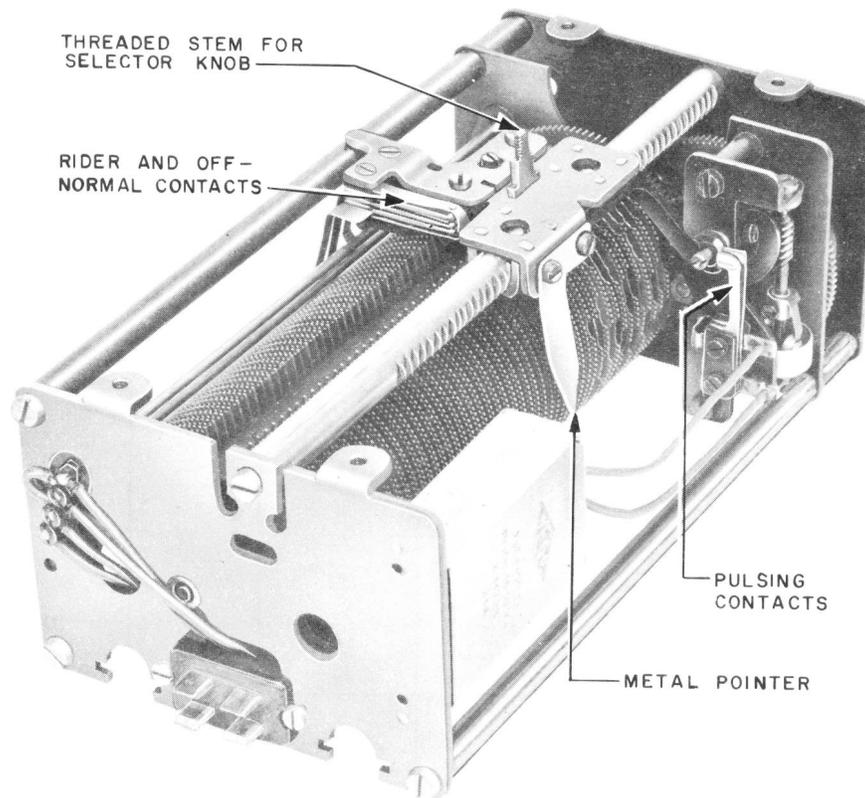


Fig. 12 – Interior View

5.00 CONNECTIONS



During operation of the dialer a short circuit is placed across the telephone set when each digit is dialed. This eliminates dial pulsing clicks in the receiver. Telephone sets with U1 or U2 receiver units are equipped with varistors to reduce the clicks as the short circuit is applied and removed. On all other telephone sets install a 37B varistor, or equivalent, across the receiver circuit.

Fig. 13 and 14 show typical connections. Tables B and C give dialer and common telephone set connections.

- TR350 and 125 dialer cords are interchangeable.

TABLE B

TELEPHONE SET AND TELERAPID DIALER CONNECTIONS,
INDIVIDUAL OR BRIDGED SERVICE

Telephone Set	Connections to Connecting Block														Mounting Cord Lead Connections in Set					Additional Wiring
	Line Wire		Telerapid Dialer Cord Leads						Mounting Cord Leads											
			TR350 Type			125 Type			R	GN	Y	BL	BR-R	R	GN	Y	BL	BR-R		
R	GN	Y	W	BL	GN-W	Y-W	W with Purple Band													
201, 202, 203, 211, 213, and 215	R	G	R	Y	B	R	Y	B	Y*	G*	B*				L1*	L2Y*	BK*			*Connect 3-conductor inside wire from connecting block to subscriber set.
302G and 5302G	R	G	R	Y	B	R	Y	B	Y	G	B				L1	L2Y	Y†			†Terminal located on dial.
500B, D, and K	R	G	R	Y	B	R	Y	B	Y	G	B				L2	L1	G			Connect BK ringer lead to L1 terminal and strap G terminal to F terminal on network.
500M	1	2	2	9	10	2	9	10	1	9			10		L2	F		See Note		Replace existing mounting cord with D6T mounting cord.
502B	1	2	2	9	10	2	9	10	1	9			10		1	2			See Note	Replace existing mounting cord with D10K mounting cord.
510F with 1-line Pick-up Features without Signaling	1	2	1	9	10	1	9	10	9	2			10		L2	L1		E1		Strap E1 terminal to F terminal in set.

Note: Connect designated mounting cord lead to SL-BR switch lead with D-161488 connector. Place sleeving, or equivalent, over connector and dress all leads to a convenient, trouble-free position.

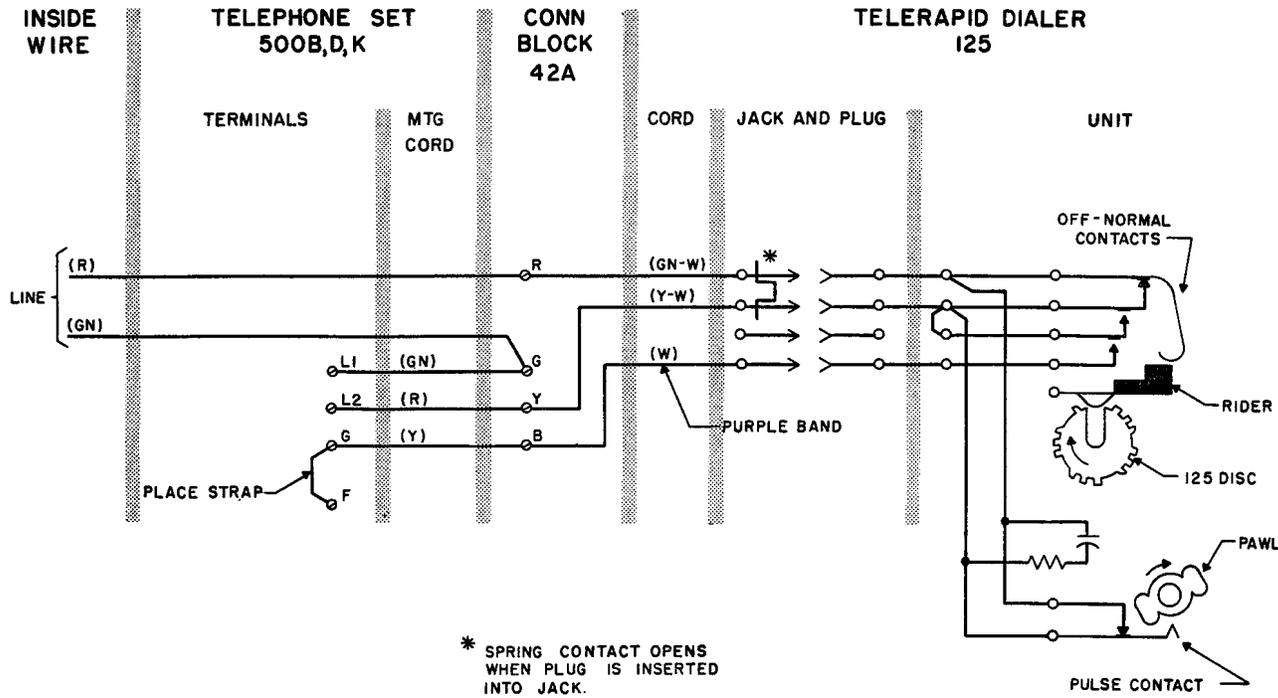


Fig. 13 — 500B, D, K Telephone Sets and Telerapid Dialer 125 Connections

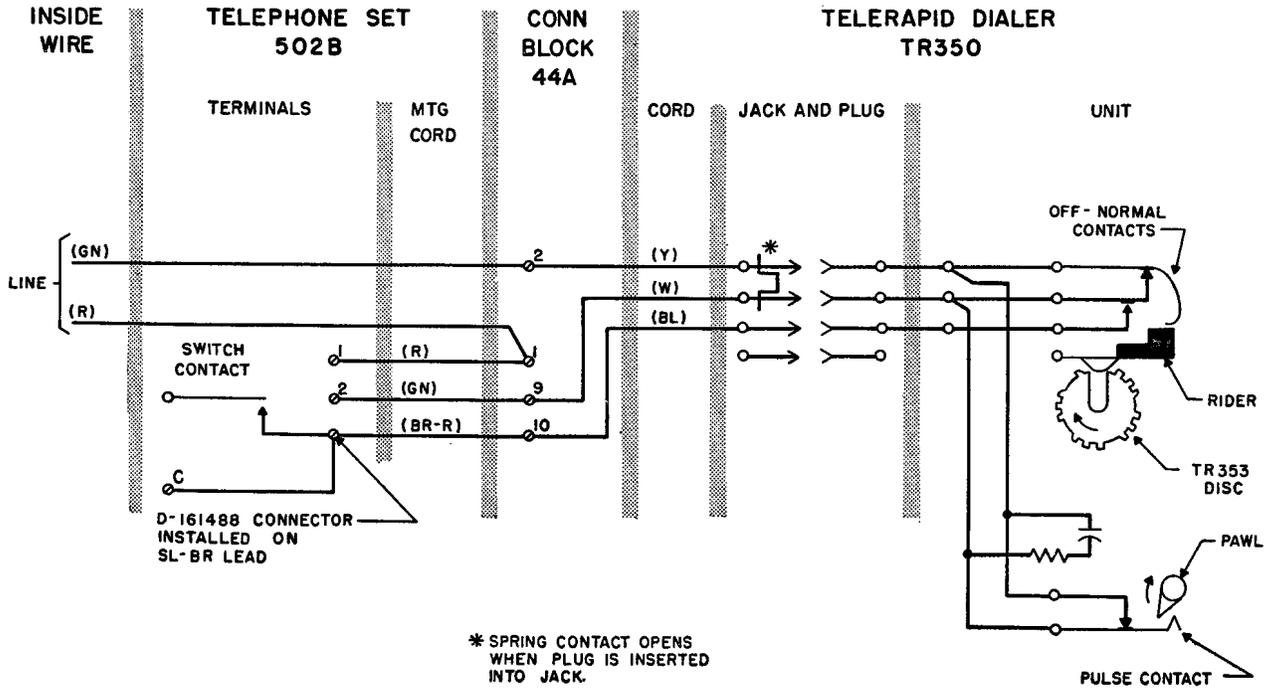


Fig. 14 — 502B Telephone Set and Telerapid Dialer 350 Connections

TABLE C

4- AND 6-BUTTON KEY TELEPHONE SET AND TELERAPID DIALER CONNECTIONS

Telerapid Dialer Cord Leads (See Note)	TR350	Y	W	BL
	125	GN-W	Y-W	W with Purple Band
440- and 460-type Key Telephone Sets Except 462AC and 466AC		Remove red key lead from L1 terminal on induction coil and connect to dialer cord lead with D-161488 connector.	Connect to L1 terminal on induction coil.	Connect M1W cord to Y terminal on dial. Dress M1W cord to dialer lead and connect with D-161488 connector.
540- and 560-type Key Telephone Sets Except 566FB and 566MB		Remove green key lead from F terminal on network and connect to dialer lead with D-161488 connector.	Connect to F terminal on network.	Connect to SL-BR switch lead with D-161488 connector.

Note: Install dialer cord in set using same path as mounting cord. Dress all leads to a convenient and trouble-free position and place sleeving or equivalent over each D-161488 connector.