

## REFERENCE

### 525- AND 526-TYPE TELEPHONE SETS

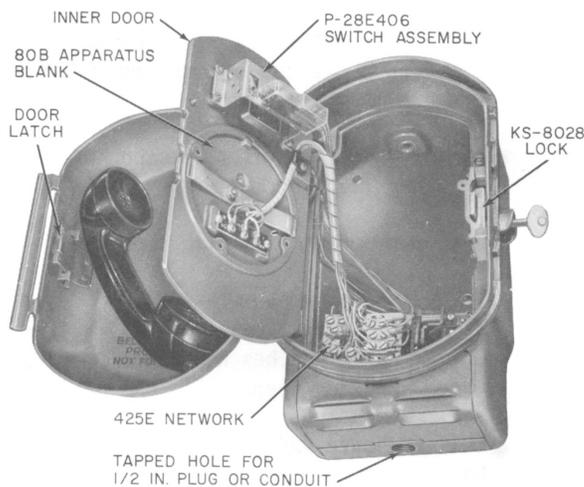
#### 1. GENERAL

**1.01** This section provides identification, installation, maintenance, and connection information for the 525 (MD)- and 526-type telephone sets.

**1.02** Information for the 525 (MD)-type telephone set was previously contained in Section 502-560-100 which is hereby canceled.

#### 2. IDENTIFICATION

**2.01** 525 (MD)- and 526-type telephone sets equipped with weatherproof housings are intended for outdoor use as central office or PBX stations.



**Fig. 1—525A (MD) Telephone Set Manual, Inner Door Open**

#### Ordering Guide



*A 525 (MD)-type telephone set is supplied as a complete telephone set while the complete 526-type telephone set consists of a housing, the required telephone set base, and its associated*

*faceplate all of which must be ordered separately.*

#### 2.02 Basic Telephone Set and Components:

- Set, Telephone, 525A (MD)—Manual
- Set, Telephone, 525B (MD)—Rotary Dial
- Base, Set, Telephone, 526A—Manual
- Base, Set, Telephone, 526B—Rotary Dial
- Faceplate (Refer to Table A for code number)
- Housing, 526A

#### 2.03 Replaceable Components 525 (MD)-Type Telephone Set:

- Adapter, Dial, 56B and 58A [525B (MD)]
- Blank, Apparatus, 80B [525A (MD)]
- Cord, Handset, H4CS-3 (14 inches)
- Dial, 6S-3 [525B (MD)]
- Lock, KS-8028 (includes key)
- P-13E458 Case (housing)
- P-13E459 Door (inner)
- P-14E223 Door Assembly (outer)
- P-241765 Cover Assembly (lower)
- Ringer, J1A
- Set, Hand, G3AA-3

#### 2.04 Replaceable Components 526-Type Telephone Set:

- P-26E488 Hook and Plunger Assembly

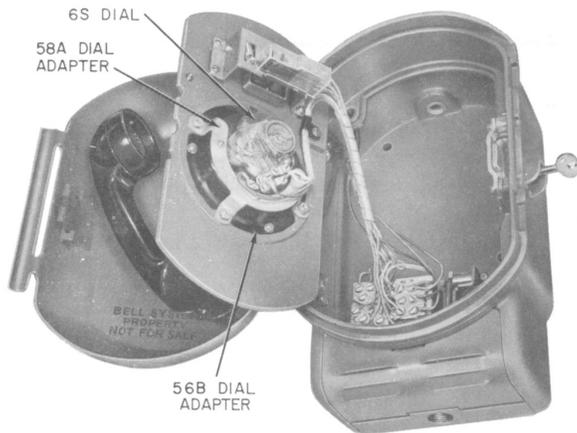
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- Cord, Handset, H4CJ-3
- Dial, 8F (526B)
- Handset, G3AR-3
- Network, 425E
- Ringer, J1A

**2.05 Associated Apparatus or Equipment for Use With 525 (MD)- and 526-Type Telephone Sets (Order Separately):**

- Bracket, 29D
- Protector, 123A1A

**2.06** Optional components for the 526-type telephone are supplied in kit form. Refer to Table B for ordering information.

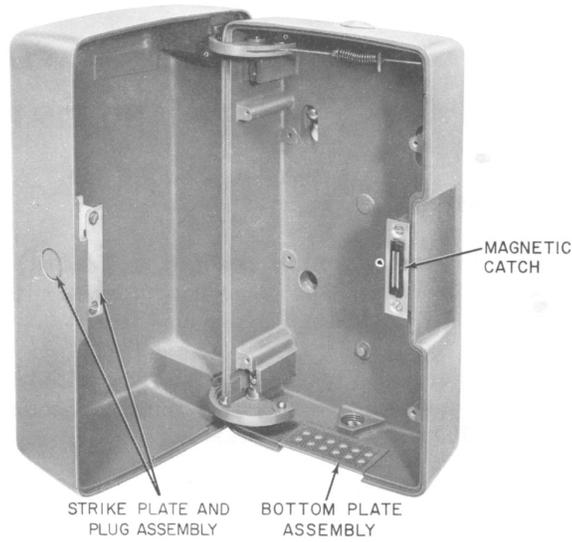


**Fig. 2—525B (MD) Telephone Set (Dial), Inner Door Open**

**Design Features**

**2.07 525 (MD)-Type Telephone Sets:**

- Transmission characteristics equivalent to other 500-type sets.
- Arranged for outdoor mounting on buildings, fences, poles, etc. using a 29D bracket.



**Fig. 3—526A Housing Assembly**

- Self-closing and self-locking outer door (Fig. 1 and 2). Lock can be removed if locking feature is not desired.
- Inner door to seal off set components from customer (Fig. 1 and 2).
- No external control for ringer volume.

**2.08 526A Housing Assembly (Fig. 3)**

- Overall size: 7 inches wide, 13 inches high, and 6-1/2 inches deep.
- Used to house 526A or 526B telephone set bases.
- Die cast door and housing (gray finish)
- Detent in hinges to hold door in full open position.
- Door self-closing once released from hinge detent.
- Basic housing equipped with permanent magnetic catch and strike plate.
- Hole provided in door for installation of mechanical lock (D-180382 Kit of Parts) which replaces the magnetic catch.

- Holes provided for mounting housing to 29D bracket or directly to suitable mounting surface.
- Housing supplied with 1/2-inch pipe plugs inserted in top and bottom tapped holes for conduit installation.
- Hole with grommet insert provided in back of housing as alternate entrance point for line and ground wire.
- Removable bottom plate has screen covered holes to increase ringer audibility.

**2.09 526A Telephone Set Base (Fig. 4):**

- Common battery manual type telephone set.
- Can be modified for use as rotary or TOUCH-TONE® dial telephone set.
- Transmission characteristics equivalent to other 500-type telephone sets.
- No provision for ringer volume control by the customer.
- Wired for single line service, can be modified to provide: two line service, exclusion feature, lock to control electrical circuit, and microswitch for using telephone set at TD2 radio towers.

- All components mounted on mounting plate for installation in 526A housing.
- Replaceable network.
- Mounting holes provided for mounting 123-type protector directly below line switch assembly.
- Terminal board equipped with 12 screw terminating points mounted between dial mounting brackets.
- Holes provided in right dial mounting bracket for installation of circuit lock or microswitch kits.

**2.10 526B Telephone Set Base (Fig. 5):**

- Electrically and physically the same as the 526A telephone set base except that it is supplied equipped with a rotary type dial.
- Can be modified for use as a manual or TOUCH-TONE dial telephone set.

**3. INSTALLATION**

- 3.01** Consider the following when selecting a location for the outdoor type instruments:
- Safety for yourself, customer, and maintenance personnel.
  - Convenience to the user.

**TABLE A**  
**FACEPLATES FOR 526-TYPE TELEPHONE SETS**

FACEPLATE CODE NUMBER	INTENDED USE	
	TELEPHONE SET	OPTIONAL (KIT TYPE) FEATURES
253A1	526A (Manual)	None
253A2		Microswitch
253B1	526B (Rotary Dial)	Single Line Service with or without Exclusion
253B2		Two Line Pick-Up Switch
253B3		Circuit Lock
253B4		Circuit Lock and Two Line Pick-Up Switch

TABLE B

## OPTIONAL FEATURE KITS FOR 526-TYPE TELEPHONE SETS

KIT OF PARTS NUMBER	KIT COMPONENTS	INTENDED USE
D-180382	P-48V456 Lock Assembly (Includes Key) P-48V420 Strike Plate	Mechanical Lock for 526A Housing Door
D-180383	P-27E053 Exclusion Switch Arm P-180950 Screws (two) P-27E057 Hook and Plunger Assembly	Provide Exclusion Feature
D-180384	P-48V457 Switch and Arm Bracket P-44E421 Screws (two)	Provide Two Line Pick-Up Feature
D-180385	P-48V458 Circuit Lock Assembly P-43A376 Screws (two)	Disables Dial on 526B Telephone Set
D-180386	P-48V459 Microswitch Assembly P-92N033 Terminal Assembly P-43A376 Screws (four)	TD2 Radio Towers

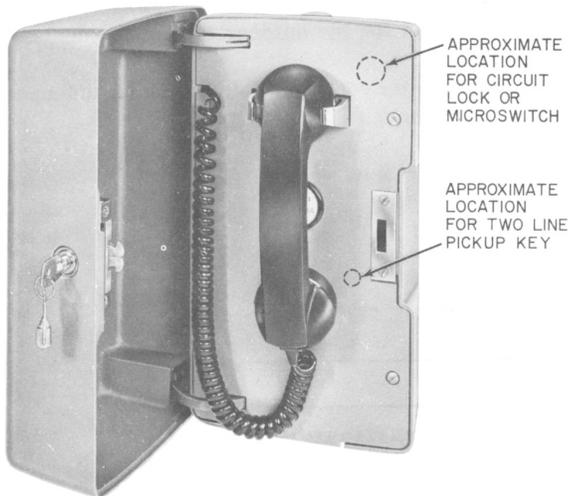


Fig. 4—526A Telephone Set Installed in 526A Housing

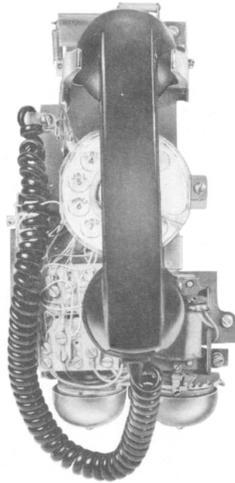
- Obstruction to pedestrian and vehicular traffic.
- Space requirements (allowing for door to open properly).

- General appearance of instrument and exposed wire and cable.

**3.02** The 525- and 526-type telephone sets can be attached directly to a mounting surface or on a 29D bracket.

**3.03** Mount telephone set when using a 29D bracket as follows:

- (1) Fasten bracket to flat surface using one fastener (supplied locally) in each bracket arm as far from center as possible (Fig. 6).
- (2) Fasten bracket to narrow or round surface using the 3/8-inch holes centered at top and bottom of bracket.
- (3) Bolts and washers for mounting the telephone set are furnished with 29D bracket.
- (4) With the outer and inner doors open, mount the 525-type telephone set on the 29D bracket.
- (5) Mount the 526A housing on the 29D bracket before the telephone set base is installed in the housing.



**Fig. 5—526B Telephone Base Assembly**

**3.04** Protect the ground and line wires with 1/2-inch rigid conduit. Threaded entrance holes are provided at top and bottom of housings for conduit installation.

**3.05** The 526-type telephone base is fastened to a 526A housing with three screws which are furnished with the base.

**3.06** Provisions are made to install a 123-type protector on the mounting plate of the 526-type telephone set base. The protector is mounted between the line switch assembly and the dial brackets.

**3.07** Make the necessary circuit tests and adjust the ringer volume while the inner door is open and the cover assembly (Fig. 7) is removed on the 525-type telephone set or before the faceplate is installed on the 526-type telephone set.

**3.08** Should the retractable handset cord used with 526-type telephone sets extend beyond the bottom of the housing and be susceptible to damage, use the slot in the faceplate to restrict the useable cord length.

**THINK** *Exercise caution so that any excess cord stored behind the faceplate will not interfere with the operation of the telephone set.*

**3.09** Faceplate of 526-type telephone set is fastened to housing with four captive screws.

**3.10** When the self-locking feature of the outer door of the 525-type telephone set is not desired, remove the KS-8028 lock by removing the two 8/32- by 7/16-inch round head machine screws and lock washer. Be guided by local instructions in disposing of lock and covering opening where lock was removed.

**3.11** Install the mechanical door lock (D-180382 Kit of Parts, Fig. 8) in the 526-type telephone sets as follows:

(1) Remove magnetic catch and replace with strike plate from kit of parts. Reuse screws from magnetic catch to secure strike plate.

(2) Remove strike plate and plug assembly from door.

(3) Position lock and bracket assembly in door and secure with same screws that held the strike plate.

(4) The door lock is designed to be self-locking and should be tested for proper operation. The customer should be informed of this feature

**3.12** Install the exclusion feature (D-180383 Kit of Parts, Fig. 9) in the 526B telephone set as follows:

(1) Remove standard line switch and replace with line switch and plunger assembly from kit of parts.

(2) Mount exclusion switch above left dial bracket using screws furnished with the kit of parts.

(3) Refer to Fig. 15 for connection information.

(4) Install proper faceplate (refer to Table A).

(5) Test exclusion switch for proper mechanical operation by pulling out on the line switch plunger.

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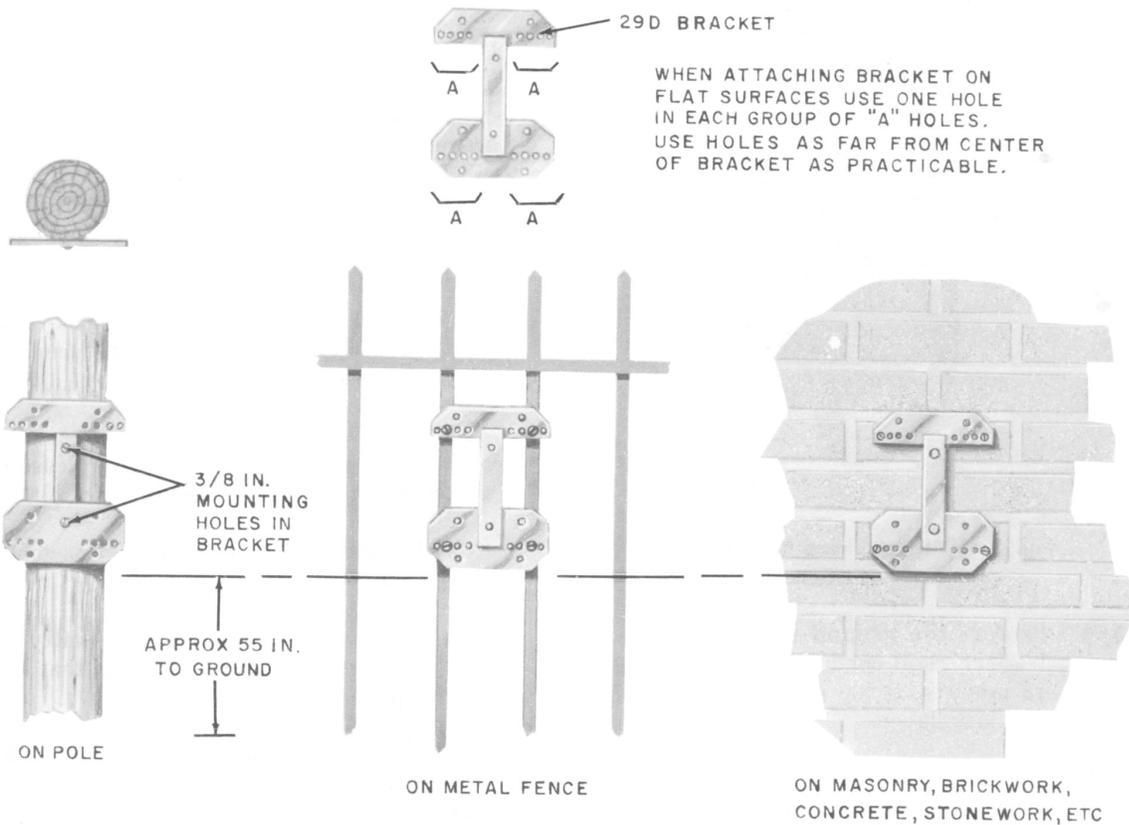
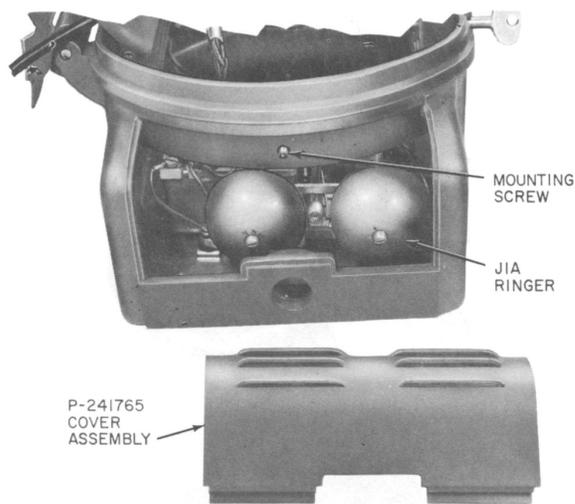


Fig. 6—29D Bracket Mounted on Various Surfaces

TABLE C  
FASTENERS FOR 29D BRACKET

SURFACE	QUAN	FASTENERS
Wood	4	1-1/2 in. No. 14 RH galvanized wood screws
Wood poles	4	2-1/2 in. or longer No. 14 RH galvanized wood screws
Wood poles (where diameter of pole is 8 inches or less)	2	5/16 x 3 in. coach screws or 2-1/2 in. or longer No. 14 RH galvanized wood screws
Finished masonry, brickwork, concrete, etc	4	5/16 x 2-1/4 in. hammer drive anchors, or approved equivalent
Solid metal — metal fences, columns, etc*	4	1 x 5/16 in. No. 18 RH brass machine screws. Drill and tap holes using 17/24 in. drill and 5/16 in. No. 18 tap
Hollow tile, corrugated metal, plaster board, etc	4	1/4 x 4 in. RH toggle bolts

\* Iron straps, bolts, etc may be used where local instructions permit. Attach telephone set securely.



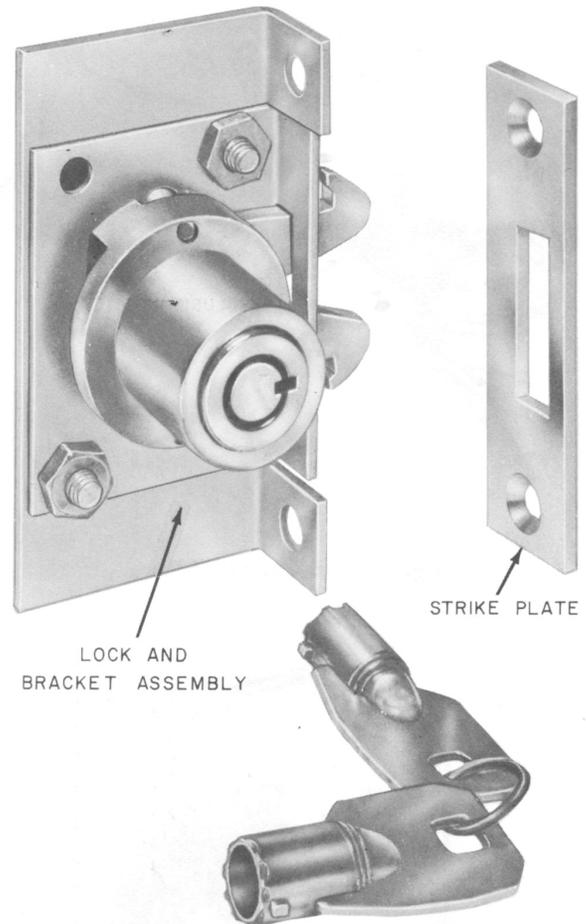
**Fig. 7—525 (MD)-Type Telephone Set, Cover Assembly Removed**

**3.13** Install the two-line service feature (D-180384 Kit of Parts, Fig. 10) in the 526B telephone set as follows:

- (1) Mount the switch bracket to the mounting plate of the telephone set base directly below the dial bracket using two screws provided.
- (2) Refer to Fig. 15 for connection information.
- (3) Install faceplate with hole provided for the two line switch (refer to Table A for proper faceplate code).

**3.14** Install the circuit lock (D-180385 Kit of Parts, Fig. 11) in the 526B telephone set as follows:

- (1) Remove dial from dial mounting brackets.
- (2) Mount bracket for circuit lock to outside of right dial mounting bracket.
- (3) Refer to Fig. 15 for connection information.
- (4) Reinstall dial on mounting bracket.
- (5) Install faceplate with hole provided for circuit lock (refer to Table A for proper faceplate code).



**Fig. 8—D-180382 Kit of Parts**

**3.15** Install the microswitch (D-180386 Kit of Parts, Fig. 12) in the 526A telephone set as follows:

- (1) Installation of the microswitch is the same as the circuit lock covered in 3.14.
- (2) The microswitch is intended for use with manual type telephone sets (see Table A for faceplate code).
- (3) Refer to Fig. 15 for microswitch connections and Table D for telephone set modifications for use with TD2 radio.

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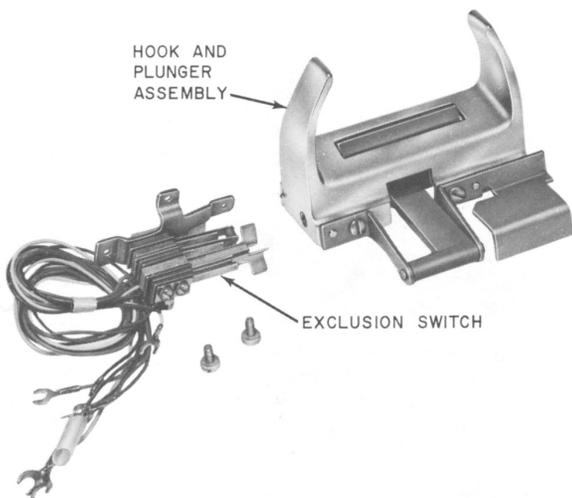


Fig. 9—D-180383 Kit of Parts

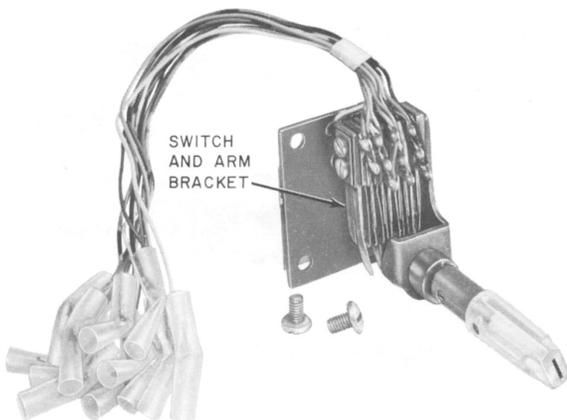


Fig. 10—D-180384 Kit of Parts

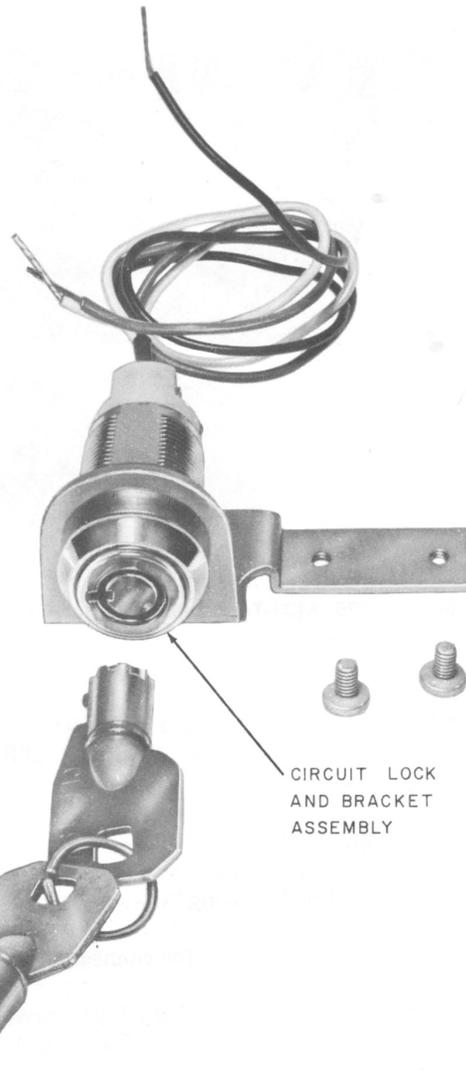


Fig. 11—D-180385 Kit of Parts

4. MAINTENANCE

4.01 Repair of the 525- and 526-type telephone sets consist of replacing defective components and checking for loose or broken connections (Refer to Ordering Guide for replaceable components).

4.02 The inner door has to be opened to perform any circuit testing or maintenance work on the 525-type telephone sets.

4.03 Remove the faceplate to perform any circuit testing, ringer adjusting, or maintenance work on 526-type telephone sets.

4.04 If condensation is experienced in the conduit protecting the line wire, plastic duct seal should be placed in the conduit entrance hole inside the set. This prevents moisture from dripping onto apparatus.

4.05 If housing door binds at hinges, lubricate hinges with KS-14681 anti-rust compound. Apply sparingly and wipe off any excess compound.

4.06 To gain access to the ringer on the 525-type telephone set, remove lower cover mounting screw located on bottom of set housing (Fig. 7).

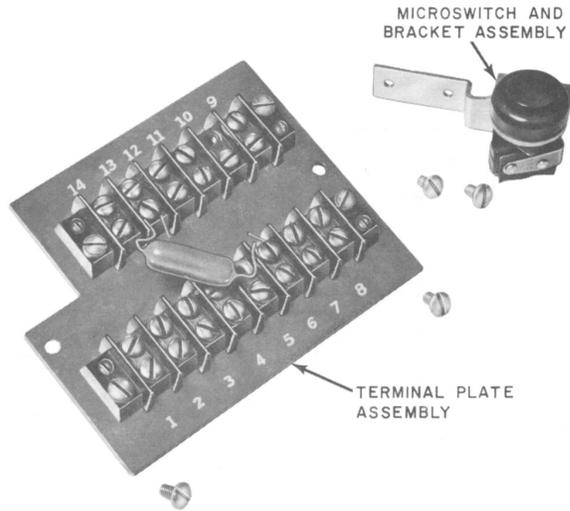


Fig. 12—D-180386 Kit of Parts

TABLE D

526-TYPE TELEPHONE SET CONNECTION MODIFICATIONS FOR USE WITH TD2 RADIO

COMPONENT OR LEAD	LEAD OR WIRE	TELEPHONE SET	
		526A OR B (NOTE 2)	
		REMOVE FROM	CONN. TO
	COLOR	NETWORK	TERM. STRIP
Receive Ckt	W* BL*		L1† 11
Transmit Ckt	W* O*		12 6
Receiver	W W	R GN	11 10
Trmtr	R BK	R B	14 13
Line Switch	W Y BR S	F L2 C L2	10 12 14 ‡
Signal Ckt (See Fig. 11)	W* G*		9 8
Microswitch	R G		9 8

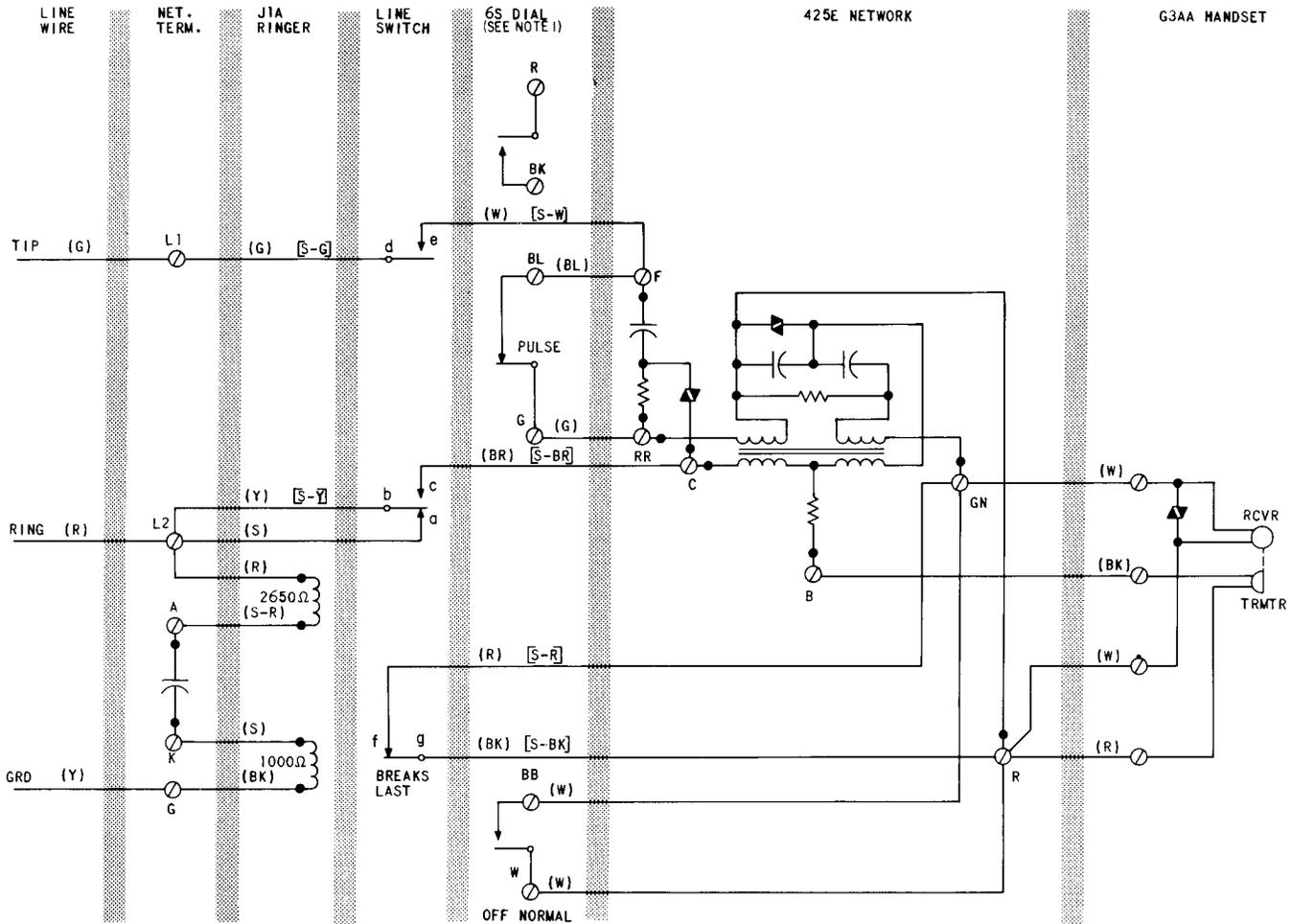
Note:

1. Disconnect from terminal board in telephone set and connect to proper terminal on replacement terminal strip which is part of the D-180386 Kit of Parts.
2. The dial should be removed on 526B telephone sets (use 253A2 faceplate).

\* 6 pair inside wiring cable.

† Terminal on network.

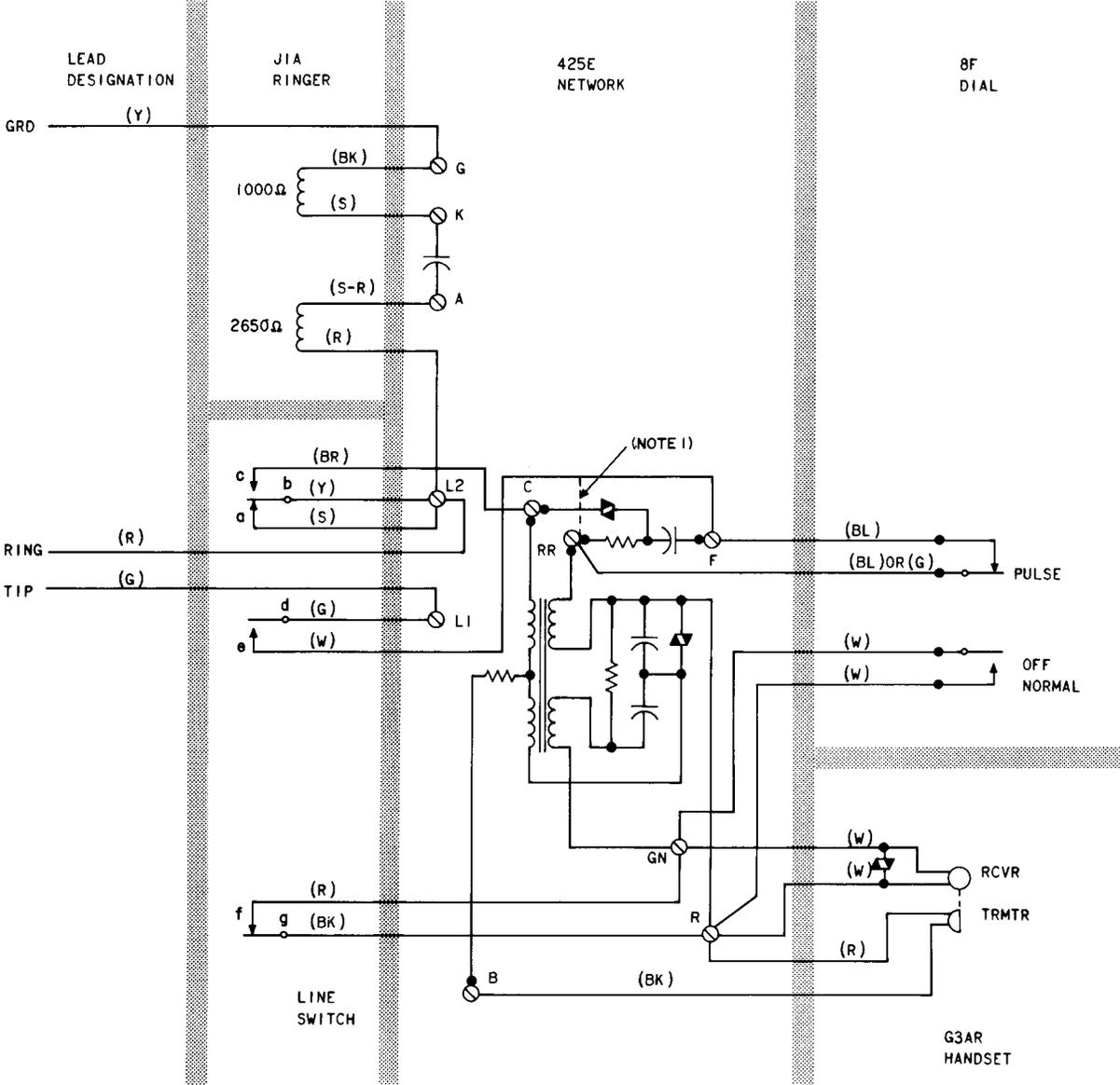
‡ Insulate and store.



NOTES:

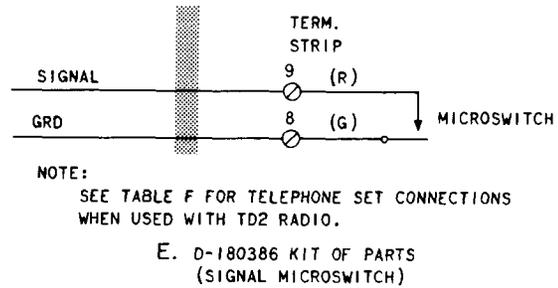
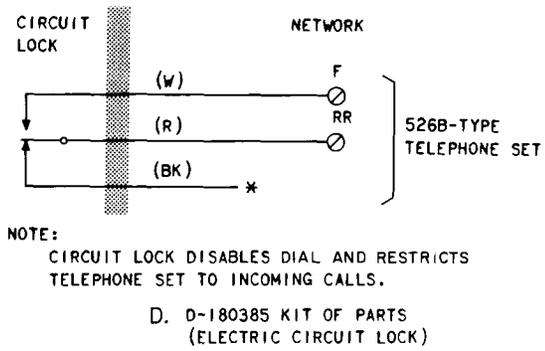
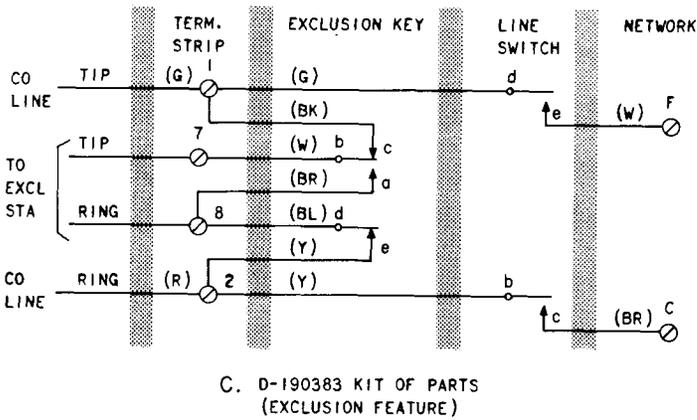
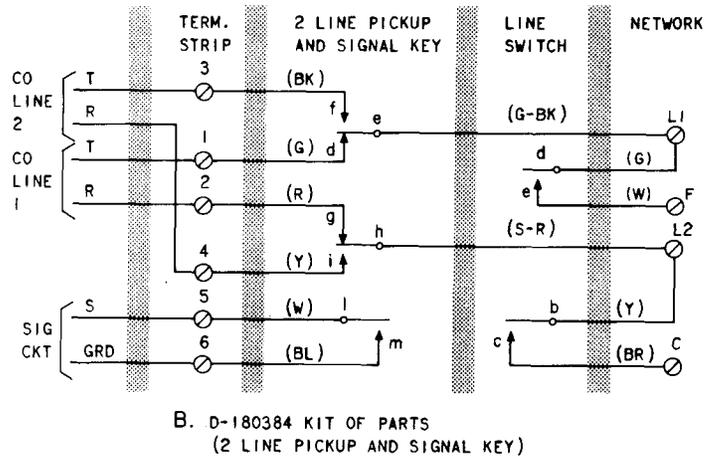
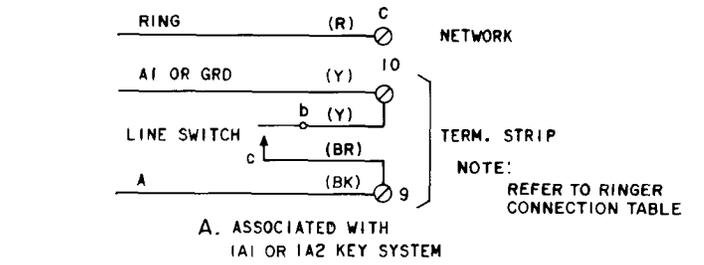
1. FOR MANUAL SERVICE, REPLACE DIAL AND DIAL ADAPTERS WITH 80B APPARATUS BLANK. CONNECT (BL) AND (G) LEADS FROM NETWORK TO 80B APPARATUS BLANK TERMINAL W-BB. CONNECT (W) LEADS FROM NETWORK TO 80B APPARATUS BLANK TERMINALS SR AND Y-BK
  2. SET WIRED FOR RING PARTY SERVICE FOR OTHER PARTY SERVICE REFER TO RINGER CONNECTION TABLE.
- ( ) CURRENT COLOR CODE  
 [ ] MD COLOR CODE

Fig. 13—525 (MD)-Type Telephone Set, Connections



- NOTES:
- 1. DASH LINE INDICATES CONNECTION FOR (W) LINE SWITCH LEAD ON MANUAL 526A, OR 526B TELEPHONE SET WHEN DIAL IS DISCONNECTED.
  - 2. SET WIRED FOR RING PARTY SERVICE FOR OTHER PARTY SERVICE REFER TO RINGER CONNECTION TABLE.

Fig. 14—526A and 526B Telephone Set, Connections



\* INSULATE AND STORE

Fig. 15—Optional Feature Connections for 526-Type Telephone Sets

TABLE E

525-TYPE TELEPHONE SET, LINE AND RINGER CONNECTIONS

WIRE OR LEAD		INDIV OR BRIDGED	TIP PARTY NO IDENT. GROUND	TIP PARTY IDENT. GROUND		
				1000Ω	2650Ω	
Ringer Leads	R	L2	L2	K	B	
	BK	L1	G	G	B	
	S	K	K	B	K	
	S-R	A	A	B	G	
Line Switch		S	L2	L2	A	A
Line Wire at Net.	Tip	G	L1	L2	L2	L2
	Ring	R	L2	L1	L1	L1
	Grd	Y	G	G	G	G

*Note:* To silence ringer for all classes of service disconnect (R) and (BK) ringer leads, insulate and store.

TABLE F

526-TYPE TELEPHONE SET, LINE AND RINGER CONNECTIONS

WIRE OR LEAD		INDIV OR BRIDGED	TIP PARTY			
			NO IDENT. GROUND	IDENT. GROUND		
				1000Ω	2650Ω	
Ringer Leads	R	L2*	L1	K	G	
	BK	L1	G	G	K	
	S	K	K	B	B	
	S-R	A	A	B	B	
Line Switch		S	L2	L2	A	A

\* Terminate (R) ringer lead on C of network when associated with 1A1 or 1A2 key system.