

VOICE CONNECTING ARRANGEMENTS QKT AND QKTBT

30-TYPE VOICE COUPLER

1. GENERAL

1.01 This section provides identification, installation, operation, maintenance and connection information for the 30-type voice coupler when used to provide Voice Connecting Arrangements (VCA) QKT and QKTBT. Voice Connecting Arrangement QKT may use either the 30A (MD) or 30B coupler to permit voice transmission only from the customer-provided (CP) equipment. Voice Connecting Arrangement QKTBT uses the 30B voice coupler to permit voice transmission and tone address signaling from the CP equipment.

1.02 This section is reissued to:

- Include information on the use of exclusion switch contacts to disable the transmitter and receiver.

1.03 This section provides information on modification and connections to be made to telephone sets to permit their use with voice couplers.

1.04 If the customer wants a copy of the Technical Reference which covers this interface specification, the customer should contact the local Telephone Company Business Office or the Marketing Representative.

2. IDENTIFICATION

2.01 Purpose: To provide 2-wire connection of CP voice transmitting and/or receiving equipment to Bell System lines. These couplers must be associated with a Bell System set equipped with an exclusion key. The coupler provides dc isolation and limits excessive signals.

2.02 Ordering Guide (Fig. 1 and 2):

- Coupler, Voice, 30A*
- Coupler, Voice, 30A*, modified for R.F.I. (4.02)
- Coupler, Voice, 30B*

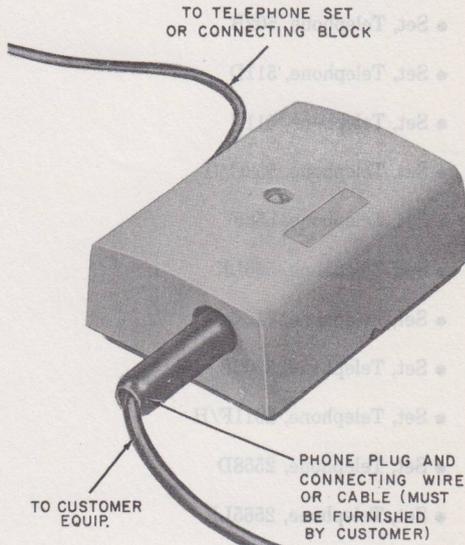


Fig. 1—30-Type Voice Coupler

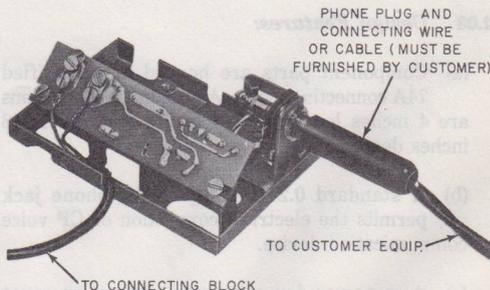


Fig. 2—30-Type Voice Coupler, Cover Removed

- Coupler, Voice, 30B*, modified for R.F.I.

* -49 (Light olive gray).

Associated Apparatus (Order Separately, 3.02)

- Set, Telephone, 502B
- Set, Telephone, 511D
- Set, Telephone, 511F
- Set, Telephone, 558C/D
- Set, Telephone, 558F
- Set, Telephone, 565LK
- Set, Telephone, 712B
- Set, Telephone, 2502B
- Set, Telephone, 2511F/H
- Set, Telephone, 2558D
- Set, Telephone, 2565LK
- Set, Telephone, 2712B
- Parts, Kit of D-179935 (exclusion switch for 565- or 2565LK telephone set).

2.03 Design Features:

- Component parts are housed in a modified 74A connecting block. Approximate dimensions are 4 inches long by 2-3/4 inches wide by 1-5/8 inches deep.
- A standard 0.25-inch tip-sleeve phone jack permits the electrical connection of CP voice communication device.
- Any power for customer equipment must be supplied by the customer. DC power is not available at the coupler and must not be applied to the coupler.
- 30A and 30B couplers are electrically and mechanically the same except for the higher peak signal clipping level of the 30B to permit customer tone address signaling from CP equipment.

3. INSTALLATION

3.01 Insofar as possible be guided by the customer's wishes in placing the apparatus. The coupler will mount to any flat surface. A backboard is not required unless mounting to a damp surface or when a backboard will facilitate mounting.

3.02 Where the customer needs only a single bridge, a 502B or 2502B telephone set is recommended. If the customer requires the transmitter and/or receiver of the telephone set to be disabled, a 511- or 2511-type telephone set (or equivalent) is recommended. The 565LK or 2565LK telephone set allows the customer to bridge the coupler to any line picked up in the set and use the turnkey to disable the transmitter and/or receiver of the set. If tip party identification is required, the 511D or 511F telephone set is recommended.

3.03 Other type telephone sets may be used provided the set is equipped with an exclusion key to connect the voice coupler to the central office (CO) line. Where no exclusion key is available, as with CALL DIRECTOR[®] sets, see Voice Connecting Arrangement CEBAW.

3.04 If the exclusion switch has spare contacts available, they may be used to automatically disable the transmitter and/or receiver.

3.05 The F-57948 (MD) voice coupler is equipped with a terminal strip for line and associated telephone set connections; the 30-type voice coupler requires these connections be made at an external connecting block.

4. OPERATION (Fig. 3)

4.01 Incoming Call: An incoming call is received in the usual way, and the coupler is connected to the line by lifting the associated telephone set exclusion key.

4.02 Outgoing Call: An outgoing call is placed in the usual way, and the coupler is connected to the line by lifting the associated telephone set exclusion key. The coupler should be disconnected (exclusion key down) when dialing to prevent possible dial pulse distortion and transmission of dial pulses through the coupler to the CP equipment.

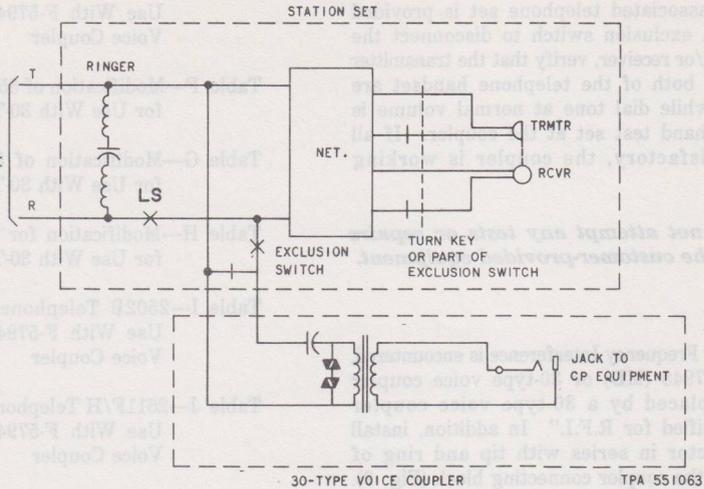


Fig. 3—Schematic—Voice Connecting Arrangements QKT and QKTB

4.03 Disconnect: The voice coupler will be disconnected when the associated telephone set goes on-hook to terminate the call or when the exclusion key is pushed down to normal position.

4.04 The telephone set remains connected to the line and is functional on both incoming and outgoing calls.

4.05 As a customer option, the transmitter and/or receiver of the associated telephone set may be disconnected when the CP equipment is in operation. The associated telephone set may be equipped with a cutoff turnkey or exclusion key for this purpose.

4.06 When the turnkey is used to disconnect the transmitter and/or receiver, the turnkey must be in the "on" position to receive or make a call and turned "off" to disconnect the transmitter or receiver or both when the coupler is used. The cutoff key must be manually restored when the call is terminated. When the exclusion switch contacts are used to disconnect the transmitter and/or receiver, lifting the exclusion switch will automatically disconnect the transmitter or receiver or both. Where the call is terminated, the transmitter and/or receiver will be automatically restored.

5. MAINTENANCE

5.01 Maintenance is limited to checking connections and determining if the coupler is working properly by monitoring reception at the tip and sleeve of the jack on the coupler with customer equipment disconnected.

5.02 Go off-hook on the associated telephone set and verify normal dial tone in associated telephone set. Connect a 1013A (or equivalent) hand test set with MON-TALK switch in MON position to the tip and sleeve of the jack on the coupler; no dial tone should be heard. Dial digit "0" using the dial of the telephone set; no dial clicks or tones should be heard in the hand test set. Go on-hook and off-hook and lift exclusion key; dial tone should be heard in the hand test set at about the same volume as heard in the associated telephone set receiver prior to lifting the exclusion key.

5.03 If the associated telephone set is equipped with a cutoff turnkey, operate to "off" position and verify that the transmitter or receiver or both of the telephone handset are disconnected while dial tone at normal volume is heard on hand test set at coupler.

5.04 If the associated telephone set is provided with an exclusion switch to disconnect the transmitter and/or receiver, verify that the transmitter or receiver or both of the telephone handset are disconnected while dial tone at normal volume is heard on the hand test set at the coupler. If all tests are satisfactory, the coupler is working properly.



Do not attempt any tests or repairs to the customer-provided equipment.

5.05 If Radio Frequency Interference is encountered, the F-57948 (MD) or 30-type voice coupler should be replaced by a 30-type voice coupler stamped "Modified for R.F.I." In addition, install a 1542A inductor in series with tip and ring of the coupler at the coupler connecting block (Fig. 9). Refer to Division 500, section entitled "Radio Signal Suppression for Telephone Sets" for complete modifications necessary when R.F.I. is encountered and for schematic of 30-type voice coupler modified for R.F.I.

5.06 When in the repairman's judgment the trouble is located in the CP equipment, the Repair Service Bureau should be notified so that proper Maintenance of Service Charge billing can be initiated as outlined in BSP 660-101-312 entitled Maintenance of Service Charge on Services With Customer-Provided Equipment (CPE).

6. CONNECTION INDEX

Table A—Typical Telephone Set Modified for Use With 30-Type Voice Coupler

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Table L—2565LK Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

Table M—Modification of 2712B Telephone Set for Use With 30-Type Voice Coupler

Table N—1542A Inductor Connections to Telephone Sets

Fig. 4—Typical Telephone Set Modified for Use With 30-Type Voice Coupler

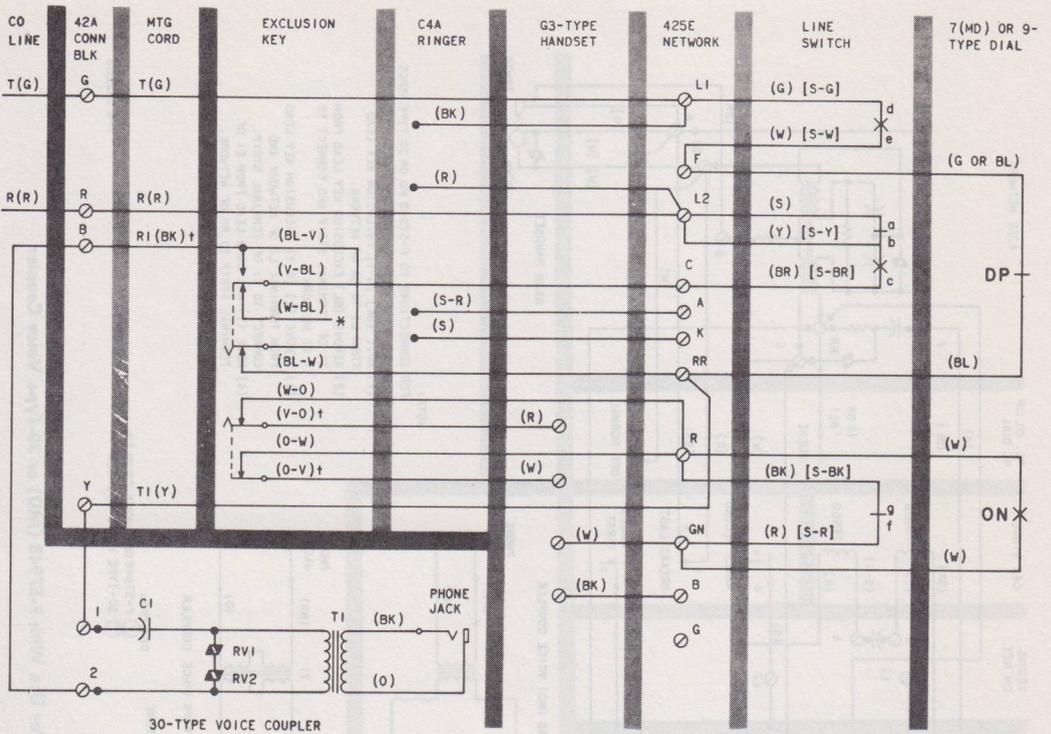
Fig. 5—502B Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

Fig. 6—511D Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

Fig. 7—511F Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

Fig. 8—565LK Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

Fig. 9—1542A Inductor Used With 30-Type Voice Coupler



NOTE:
 MODIFY SET WIRING PER
 TABLE N.

() CURRENT COLOR CODE

[] MD COLOR CODE

* INSULATE AND STORE

† SPLICE USE D161488 CONNECTOR

TPA 568508

Fig. 4—Typical Telephone Set—Modified for Use With 30-Type Voice Coupler

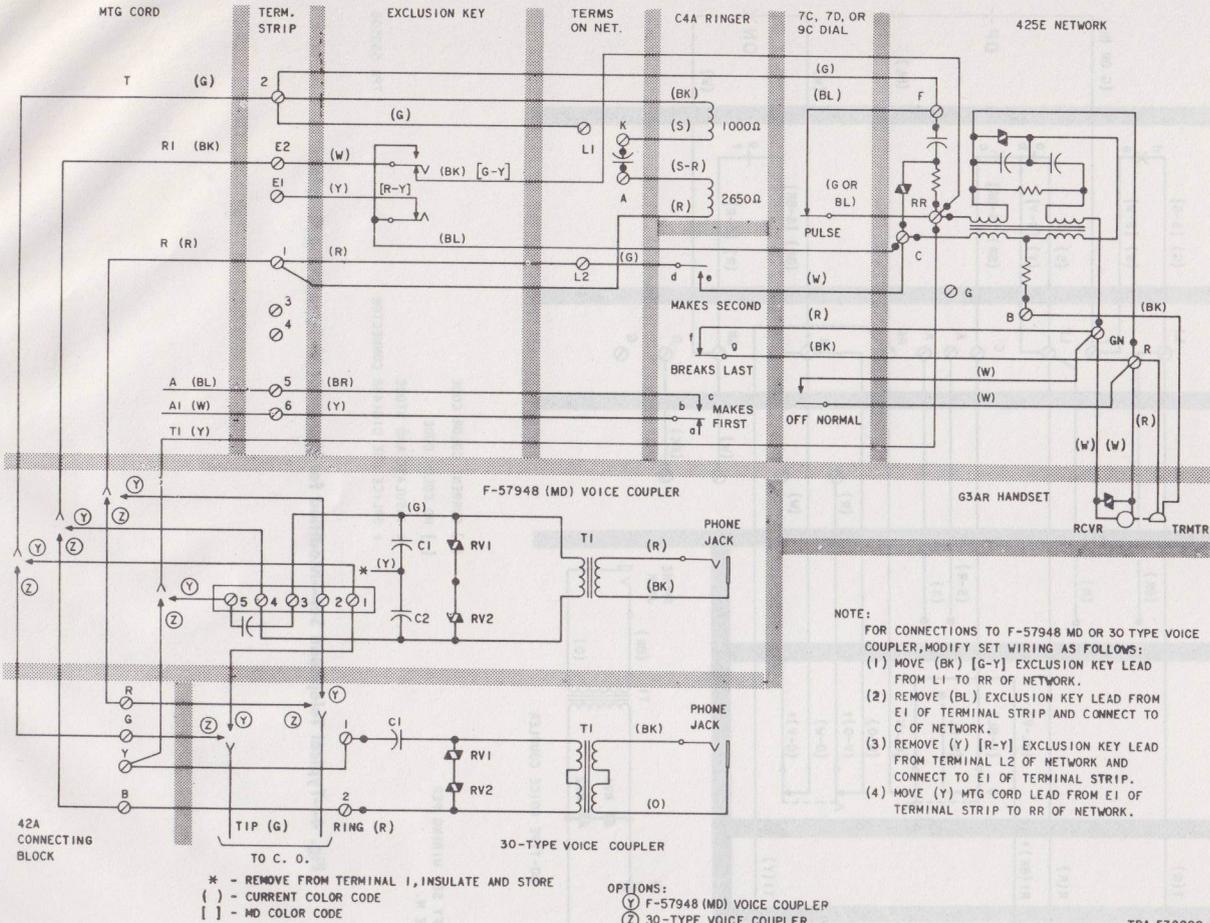


Fig. 5—502B Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

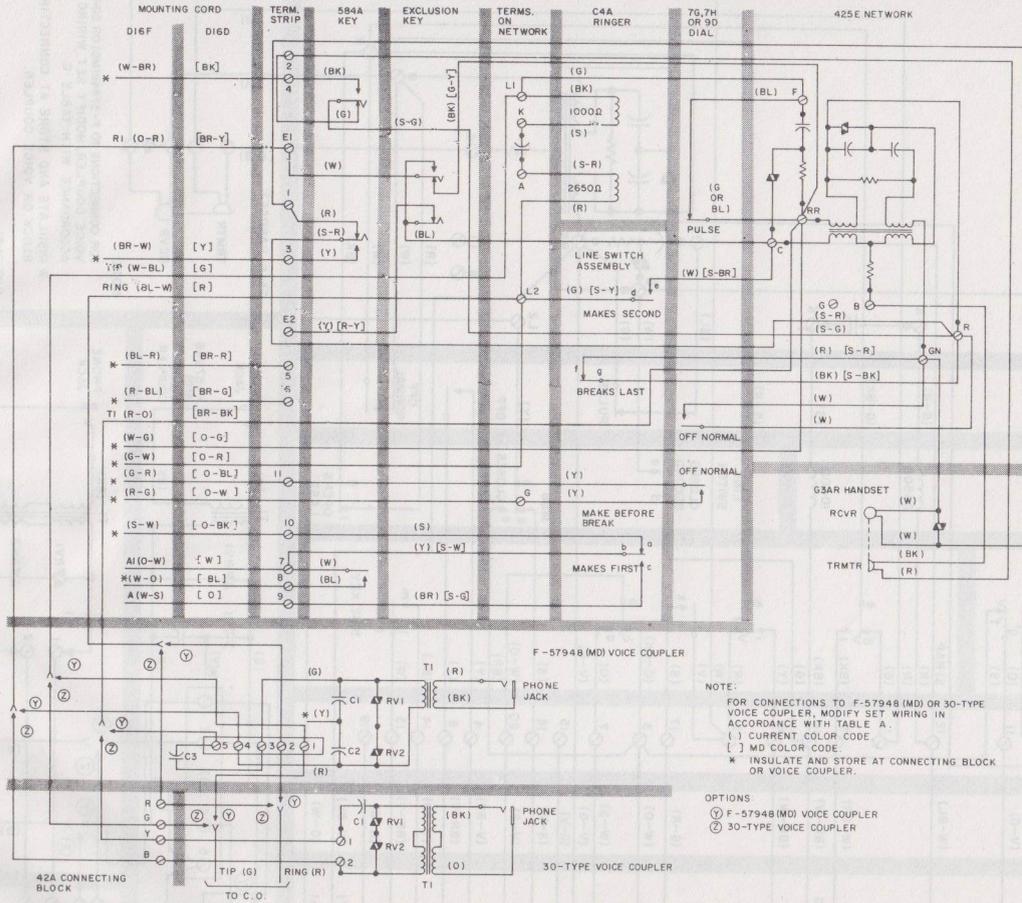


Fig. 6—511D Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

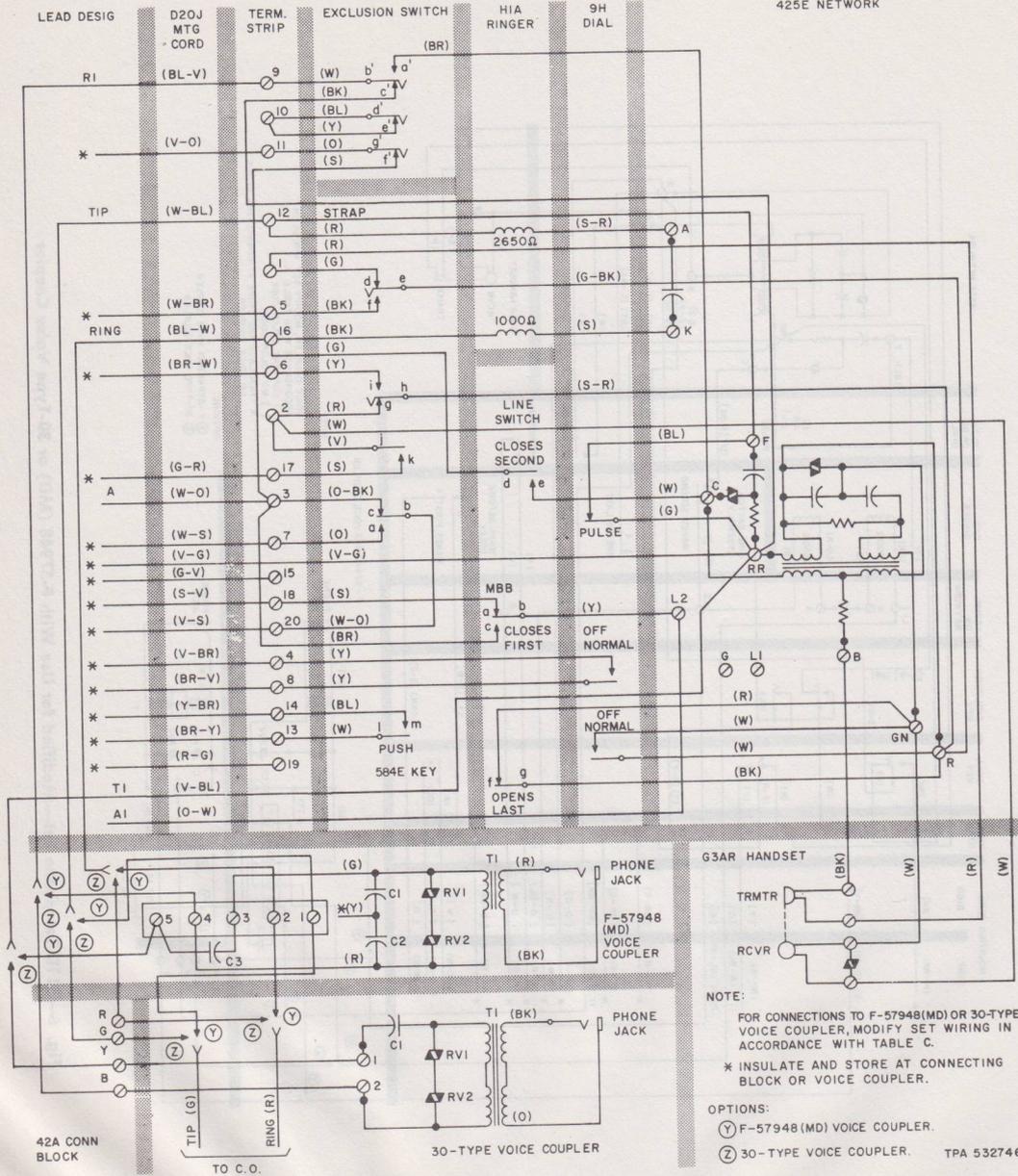


Fig. 7—511F Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

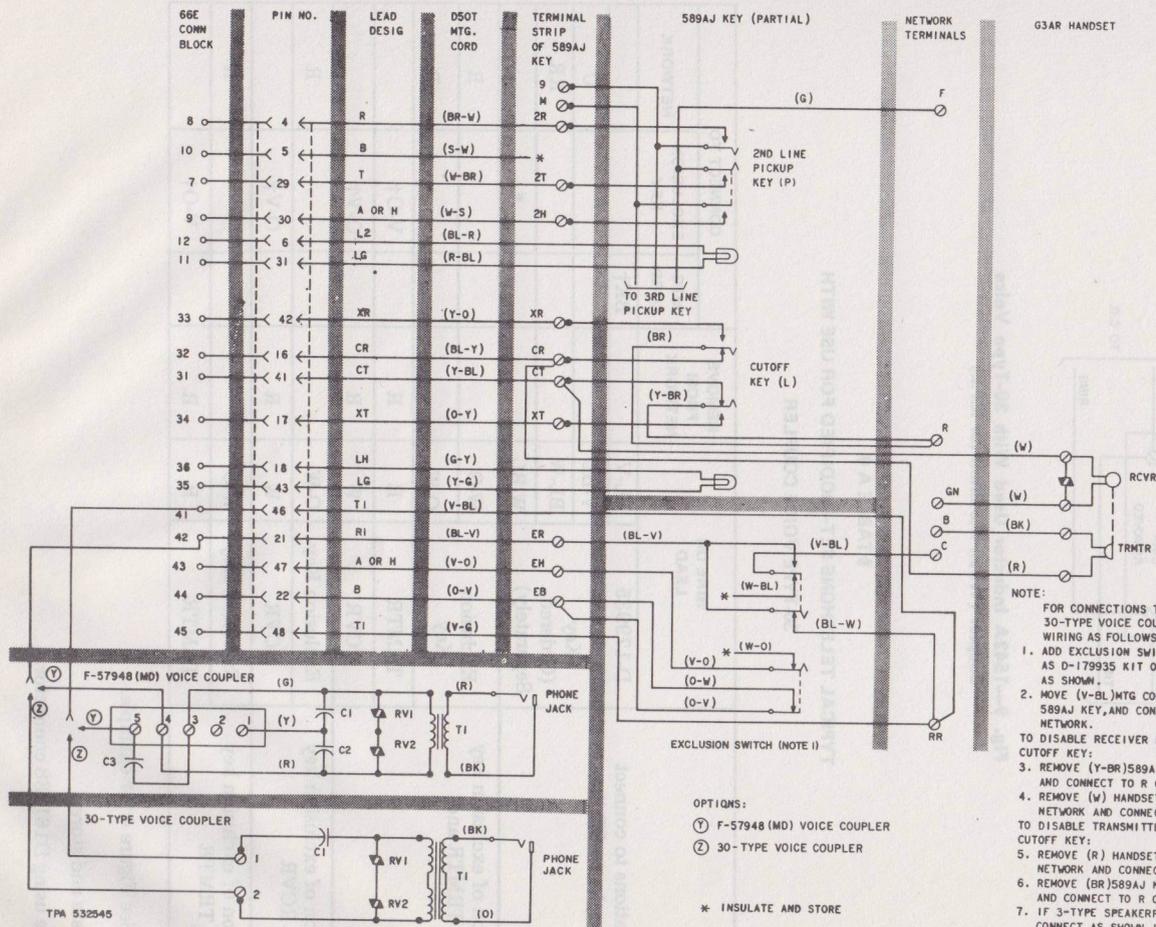


Fig. 8—565LK Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

NOTE:
 FOR CONNECTIONS TO F-57948 (MD) OR 30-TYPE VOICE COUPLER, MODIFY SET WIRING AS FOLLOWS:
 1. ADD EXCLUSION SWITCH, ORDER SEPARATELY AS D-179935 KIT OF PARTS AND CONNECT AS SHOWN.
 2. MOVE (V-BL) MTG CORD LEAD FROM ET OF 589AJ KEY, AND CONNECT TO RR OF NETWORK.
 TO DISABLE RECEIVER BY OPERATION OF CUTOFF KEY:
 3. REMOVE (Y-BR) 589AJ KEY LEAD FROM 2T AND CONNECT TO R OF NETWORK.
 4. REMOVE (W) HANDSET LEAD FROM R OF NETWORK AND CONNECT TO TERMINAL CT. TO DISABLE TRANSMITTER BY OPERATION OF CUTOFF KEY:
 5. REMOVE (R) HANDSET LEAD FROM R OF NETWORK AND CONNECT TO TERMINAL CR.
 6. REMOVE (BR) 589AJ KEY LEAD FROM 2R AND CONNECT TO R OF NETWORK.
 7. IF 3-TYPE SPEAKERPHONE IS REQUIRED, CONNECT AS SHOWN IN APPROPRIATE SECTION IN DIVISION 512.

OPTIONS:
 ① F-57948 (MD) VOICE COUPLER
 ② 30-TYPE VOICE COUPLER

* INSULATE AND STORE

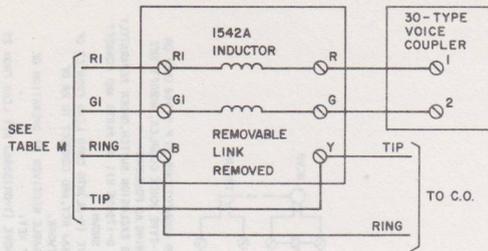


Fig. 9—1542A Inductor Used With 30-Type Voice Coupler (When Modified for R.F.I.)

TABLE A
TYPICAL TELEPHONE SET—MODIFIED FOR USE WITH
30-TYPE VOICE COUPLER

	WIRE OR LEAD	REMOVE FROM NETWORK	CONNECT TO		
			MTG CORD	EXCLUSION KEY	NETWORK
Modifications to connect voice coupler to CO line	D-179935 Exclusion Key (Ordered Separately)	BL-V	BK†		
		V-BL			C
		BL-W			RR
		W-BL		*	
Operation of exclusion key disables TRMTR and RCVR	Exclusion Key	W-O			R
		O-W			R
	TRMTR	R	R	V-O†	
	RCVR	W	R	O-V†	
Operation of exclusion key disables RCVR	Exclusion Key	O-W			R
	RCVR	W	R	O-V†	
Operation of exclusion key disables TRMTR	Exclusion Key	W-O			R
	TRMTR	R	R	V-O†	

Note: See Figure 4 for example.

* Insulate and store.

† Splice using D161488 connector.

TABLE B
MODIFICATION OF 511D TELEPHONE SET FOR USE
WITH F-57948(MD) OR 30-TYPE VOICE COUPLER (SEE NOTE)

	WIRE OR LEAD		REMOVE FROM		CONNECT TO	
			TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
Modification to connect voice coupler to line and telephone set	Mtg* Cord	W-BL	2			L1
		BL-W	1			L2
		R-O	E2			RR
	Ringer	BK	6			L1
		R	5			L2
	Exclusion Key	BL	E1			C
		BK	2			RR
		Y	1		E2	
		W	E2		E1	
	Operation of 584A Key disables TRMTR and RCVR	584A Key	S-G		L1	
S-R				L2		R
TRMTR		R		R	2	
RCVR		W		R	1	
Operation of 584A Key disables TRMTR	584A Key	S-G		L1		R
	TRMTR	R		R	2	
Operation of 584A Key disables RCVR	584A Key	S-R		L2		R
	RCVR	W		R	1	

Note: Refer to Fig. 5 for CO, mounting cord, and interconnections to F-57948(MD) or 30-type voice coupler. If needed, MD lead colors are shown in Fig. 5. If A lead control is required, use (W-S) and (O-W) mounting leads to extend A and A1 to line circuit. If 3-type speakerphone is required refer to appropriate connection section in Division 512.

* Insulate and store unused mounting cord leads and (Y) lead of F-57948 (MD) voice coupler.

TABLE C

**511D TELEPHONE SET—MODIFIED FOR
TIP PARTY IDENTIFYING GROUND AND USE WITH
F-57948 (MD) OR 30-TYPE VOICE COUPLER (NOTE 1)**

	WIRE OR LEAD	CONNECTIONS			SET MODIFICATIONS			
		42A CONN. BLK.	30-TYPE VOICE COUPLER	F-57948 (MD) TERM. STRIP	REMOVE FROM		CONNECT TO	
					TERM. STRIP	NET-WORK	TERM. STRIP	NET-WORK
Inside wire at conn blk or F-57948 (MD) term.	Gnd	Y		1				
	Tip	G		5				
	Ring	R		2				
Mtg cord at conn blk or F-57948 (MD) term. strip (Note 2)	O-W	Y		1				
	W-BL	G		5				
	BL-W	R		2				
	R-O	B		4				
	All Other	*	*	*				
Inside wire from conn blk to 30A-type V/C	G		1					
	B		2					
Modifications to connect telephone set and voice coupler to line	Mtg Cord	W-BL			2			L1
		BL-W			1			L2
	Ringer Leads	R			5			K
		BK			6		7	
		S					K	B
	Exclusion Key	S-R					A	B
		Y			1		E1	
		BL			E1			RR
	Line Switch	BK			2		E2	
		S			10			A
		BR			9			C
		Y			7			L1
	Strap	W					C	F
G						F	5	
Operation of 584A (line) key disables TRMTR and RCVR	Line Key	S-G				L1		R
		S-R				L2		R
	TRMTR	R				R	1	
	RCVR	W				R	2	
Operation of line key disables TRMTR	Key	S-R				L2		R
	TRMTR	R				R	1	
Operation of line key disables RCVR	Key	S-G				L1		R
	RCVR	W				R	2	

Notes:

- Connections shown are for tip party with 1000Ω to ground. For 2650Ω, connect ringer leads as follows: (R) and (BK) to network term. B, (S) to network term. K and (S-R) to term. strip 7.
 - Disconnect, insulate and store (Y) lead of F-57948 (MD) Voice Coupler.
- * Insulate and store.

TABLE D
**MODIFICATION OF 511F TELEPHONE SET FOR USE
 WITH F-57948 (MD) OR 30-TYPE VOICE COUPLER
 (SEE NOTE)**

	WIRE OR LEAD	REMOVE FROM		CONNECT TO		
		TERM. STRIP	NETWORK	TERM. STRIP	NETWORK	
Modification to connect voice coupler to line and telephone set	Mtg* Cord	W-BL	1		12	
		V-BL	9		RR	
		BL-W	2		16	
		BL-V	10		9	
	Ringer	R	1		12	
		BK	2		16	
	Exclusion Key	BK	1			RR
		Y	2		10	
		BR	10			C
	Line Switch	G	15		16	
		BR	20		3	
	Add Strap				12	F
	Operation of 584E key disables TRMTR and RCVR	584E Key	G-BK		F	R
S-R			15		R	
TRMTR		R		R	1	
	RCVR	W		R	2	
Operation of 584E key disables TRMTR	584E Key	G-BK		F	R	
	TRMTR	R		R	1	
Operation of 584E key disables RCVR	584E Key	S-R	15		R	
	RCVR	W		R	2	

Note: Refer to Fig. 6 for CO, mounting cord, and interconnections to F-57948 (MD) or 30-type voice couplers. If A lead control is required, use (W-O) and (O-W) mounting cord leads to extend A and A1 to line circuit. If 3-type speakerphone is required move (G-V) mounting cord lead to terminal strip 16 and (V-S) to 3; then connect per appropriate connection section in Division 512.

* Insulate and store unused mounting cord leads and (Y) lead of F-57948 (MD) voice coupler.

TABLE E

**511F TELEPHONE SET—MODIFIED FOR TIP PARTY
IDENTIFYING GROUND AND USE WITH F-57948 (MD) OR 30-TYPE
VOICE COUPLER (NOTE 1)**

	WIRE OR LEAD	CONNECTIONS			SET MODIFICATIONS			
		42A CONN. BLK.	30-TYPE VOICE COUPLER	F-57948(MD) TERM. STRIP	REMOVE FROM		CONNECT TO	
					TERM. STRIP	NET- WORK	TERM. STRIP	NET- WORK
Inside wire at conn blk or F-57948(MD) term. strip	Gnd	Y		1				
	Tip	G		5				
	Ring	R		2				
Mtg cord at conn blk or F-57948(MD) term. strip (Note 2)	O-W	Y		1				
	W-BL	G		5				
	BL-W	R		2				
	BL-V	B		4				
	All Other	*	*	*				
Inside wire from conn blk to 30-type V/C		G		1				
		B		2				
Modifications to connect telephone set and voice coupler to line	Mtg Cord	W-BL			1		12	
		BL-W			2		16	
	Ringer Leads	R			1			K
		BK			2			L2
		S				K		B
	Exclusion Key	S-R				A		B
		W			9			RR
	Line Switch	BK			1			RR
		G			15		16	
		W				C		F
		Y				L2	12	
BR				20			C	
	S			18			A	
Operation of 584E (line) key disables TRMTR and RCVR	Line Key	G-BK				F		R
		W-O			20			R
	TRMTR	R				R	1	
	RCVR	W				R	3	
Operation of line key disables TRMTR	Key	G-BK				F		R
	TRMTR	R				R	1	
Operation of line key disables RCVR	Key	W-O			20			R
	RCVR	W				R	3	

Notes:

- Connections shown are for tip party with 1000 Ω to ground. For 2650 Ω , connect ringer leads as follows: (R) and (BK) to network term. B, (S) to K, and (S-R) to L2.
- Disconnect, insulate and store (Y) lead of F-57948 (MD) voice coupler

* Insulate and store.

♦TABLE F♦

**MODIFICATION OF 558C/D TELEPHONE SET FOR USE
WITH 30-TYPE VOICE COUPLER (SEE NOTE)**

	WIRE OR LEAD	CONNECTIONS				SET MODIFICATIONS			
		TELESET		42A CONN BLK	30- TYPE COUPLER	REMOVE FROM		CONNECT TO	
		TERM STRIP	NET- WORK			TERM STRIP	NET- WORK	TERM STRIP	NET- WORK
Inside wire at conn blk	T			G					
	R			R					
	T1			B					
	R1			Y					
Inside wire at telephone set	T	2							
	R	1							
	T1		RR						
	R1	6							
Inside wire conn blk to voice coupler				B	1				
				Y	2				
Basic modifications to connect voice coupler to telephone set and line	584B/F Key	S-R					L2	E1	
		R				1		E1	
		G				2		E2	
	EXCN Key	Y				6			RR
		W				5			C
	Line Switch	G					L2	1	
Add Strap							2	F	
Operation of 584B/F Key disables TRMTR and RCVR	584B/F Key	G				E2			R
		G-BK					L1		L2
		R				E1			R
		S-R				E1			G
	TRMTR	R					R		G
RCVR	W					R		L2	
Disable TRMTR	584B/F Key	R				E1			R
		S-R				E1			G
	TRMTR	R					R		G
Disable RCVR	584B/F Key	G				E2			R
		G-BK					L1		L2
	RCVR	W					R		L2

Note: If A lead control is required, connect A1 to terminal 12 and A to terminal 9 on terminal strip in telephone set.

TABLE G

 MODIFICATION OF 558F TELEPHONE SET FOR USE
 WITH 30-TYPE VOICE COUPLER (SEE NOTE)

	WIRE OR LEAD	CONNECTIONS				SET MODIFICATIONS			
		TELSET		42A CONN BLK	30- TYPE COUPLER	REMOVE FROM		CONNECT TO	
		TERM STRIP	NET- WORK			TERM STRIP	NET- WORK	TERM STRIP	NET- WORK
Inside wire at conn blk	T			G					
	R			R					
	T1			B					
	R1			Y					
Inside wire at telephone set	T	1							
	R	2							
	T1		RR						
	R1	9							
Inside wire conn blk to voice coupler				B	1				
				Y	2				
Basic modifications to connect voice coupler to telephone set and line	584B/F Key	V				2		17	
		O-BK				3		7	
		R					2		15
		G					1		5
	EXCN Key	BK					1		RR
		BR					10		C
	Line Switch	BR					20		3
G						15		2	
Add Strap							1	F	
Operation of 584B/F Key disables TRMTR and RCVR	584B/F Key	G				5			R
		G-BK						F	L2
		R					15		G
		S-R					15		R
	TRMTR	R						R	G
RCVR	W						R	L2	
Disable TRMTR	584B/F Key	R				15			G
		S-R				15			R
	TRMTR	R						R	G
Disable RCVR	584B/F Key	G				5			R
		G-BK						F	L2
	RCVR	W						R	L2

Note: If A lead control is required, connect A1 to terminal 4 and A to terminal 3 on terminal strip in telephone set.

TABLE H

MODIFICATION OF 712B TELEPHONE SET FOR USE
WITH 30-TYPE VOICE COUPLER (SEE NOTE)

	WIRE OR LEAD		CONNECTIONS		SET MODIFICATIONS			
			42A CONN BLK	30-TYPE COUPLER	REMOVE FROM		CONNECT TO	
					TERM STRIP	NET-WORK	TERM STRIP	NET-WORK
Mounting cord * at connecting block	W-BL		G					
	BL-W		R					
	V-G		B					
	G-V		Y					
Inside wire from conn blk to 30- type voice coupler			B	1				
			Y	2				
Basic modifications to connect telephone set and voice coupler to line	638A Key	S-R			L2		1	
		V			1		8	
	EXCN Key	BR			1			C
		W			3		L2	
	Line Switch	BK			3			RR
		BR				E1		8
	Add Strap	G				L2		1
							3	F
Operation of 638A Key disables TRMTR and RCVR	638A Key	G-BK					F	L2
		G			3			R
		S-R			1			A
		R			1			R
	TRMTR	R				R		A
	RCVR	W				R		L2
Disable TRMTR	638A Key	S-R			1			A
		R			1			R
	TRMTR	R				R		A
Disable RCVR	638A Key	G-BK				F		L2
		G			3			R
	RCVR	W				R		L2

Note: If A lead control is required, connect A1 to terminal E1 and A to terminal 8 on terminal strip in telephone set.

*Insulate and store unused leads.

TABLE I

2502B TELEPHONE SET—MODIFIED FOR USE WITH
F-57948 (MD) OR 30-TYPE VOICE COUPLER (SEE NOTE)

	WIRE OR LEAD		REMOVE FROM		CONNECT TO	
			TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
Modification to connect voice coupler to line and telephone set	Mtg Cord*	Y	E1			RR
		Exclusion Key	BL	E1		
	BK			L1		RR
	Y		L2	E1		

Note: Refer to Fig. 4 for connections to F-57948 (MD) or 30-type voice couplers.

* Insulate and store (BL) and (W) mounting cord leads if not required for A lead control. Disconnect, insulate, and store (Y) lead of F-57948 (MD) voice coupler.

TABLE J
2511F/H TELEPHONE SET—MODIFIED FOR USE WITH
F-57948 (MD) OR 30-TYPE VOICE COUPLER (SEE NOTE)

	WIRE OR LEAD	REMOVE FROM		CONNECT TO	
		TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
Modification to connect voice coupler to line and telephone set	Mtg Cord*	W-BL	1	12	
		BL-W	2	16	
		V-BL	9		RR
		BL-V	10	9	
	Ringer	R	1	12	
		BK	2	16	
	Exclusion Key	BK	1		RR
		Y	2	10	
		BR	10		C
	Line Switch	G	15	16	
BR		20	3		
Dial			F	12	
Operation of 631B (line) key disables TRMTR and RCVR	631B Key	G-BK		F	R
		S-R	15		R
	TRMTR	R	R	1	
	RCVR	W	R	2	
Operation of 631B (line) key disables TRMTR	631B Key	G-BK		F	R
	TRMTR	R	R	1	
Operation of 631B (line) key disables RCVR	631B Key	S-R	15		R
	RCVR	W	R	2	

Note:

Refer to Fig. 6 for connections to F-57948 (MD) or 30-type voice coupler and 42A conn blk and to CO line. If **A** lead control is required, use (O-W) and (W-O) mounting cord leads to extend A1 and **A** to line circuit. If 3-type speakerphone is required, move (G-V) mounting cord lead to terminal strip 16 and (V-S) to 3; move (V-G) mounting cord lead and (O) dial lead to an unused terminal; then connect per appropriate connection section in Division 512.

*Insulate and store unused mounting cords leads. Disconnect, insulate and store (Y) lead of F-57948 (MD) voice coupler.

♦ TABLE K ♦

 MODIFICATION OF 2558D TELEPHONE SET FOR USE
 WITH 30-TYPE COUPLER

	WIRE OR LEAD	CONNECTIONS				SET MODIFICATIONS				
		TELSET		42A CONN BLK	30- TYPE COUPLER	REMOVE FROM		CONNECT TO		
		TERM STRIP	NET- WORK			TERM STRIP	NFT- WORK	TERM STRIP	NET- WORK	
Inside wire at conn blk	T			G						
	R			R						
	T1			B						
	R1			Y						
Inside wire at telephone set	T	2								
	R	1								
	T1		RR							
	R1	3								
Inside wire conn blk to voice coupler				B	1					
				Y	2					
Basic modifications to connect voice coupler to telephone set and line	584H Key	R				1		12		
		Y				3		12		
	EXCN Key	BR					E1		C	
		W					E2	3		
		BK							RR	
	Line Switch	G					12		1	
Strap								2	F	
Operation of 584H Key disables TRMTR and RCVR	584H Key	S-R				12		11		
		R				12			L2	
		G-BK						F		L1
		G				2				R
	TRMTR	R					F		L1	
RCVR	W					R		L1		
Disable TRMTR	584H Key	S-R				12		11		
		R				12			L2	
	TRMTR	R				11			L2	
Disable RCVR	584H Key	G-BK					F		L1	
		G				2			R	
	RCVR	W					R		L1	

♦ TABLE L ♦

**2565LK TELEPHONE SET—MODIFIED FOR USE WITH
F-57948 (MD) OR 30-TYPE VOICE COUPLER (SEE NOTE)**

	WIRE OR LEAD	REMOVE FROM		CONNECT TO		
		589AJ KEY TERM. STRIP	NETWORK	589AJ KEY TERM. STRIP	NETWORK	
Modifications to connect voice coupler to any line picked up in telephone set	D-179935 Exclusion Key (Ordered Separately)	BL-V		ER		
		V-BL			C	
		BL-W			RR	
		W-BL		*		
		O-W		EB		
		W-O		*		
		O-V		EB		
	V-O		EH			
Mtg Cord	V-BL				RR	
Operation of cut-off key disables TRMTR and RCVR	589AJ Key	BR	2R		T	
		Y-BR	2T		R	
	TRMTR	R		T	CR	
	RCVR	W		R	CT	
Operation of cut-off key disables RCVR	589AJ Key	Y-BR	2T			R
	RCVR	W		R	CT	
Operation of cut-off key disables TRMTR	589AJ Key	BR	2R			T
	TRMTR	R		T	CR	

Note: Refer to Fig. 7 for connections to F-57948 (MD) or 30-type voice coupler. If a 3-type speakerphone is required, connect as shown in appropriate section in Division 512.

* Insulate and store.

TABLE M

MODIFICATION OF 2712B TELEPHONE SET FOR USE WITH 30-TYPE VOICE COUPLER

	WIRE OR LEAD	CONNECTIONS		SET MODIFICATIONS				
		42A CONN BLK	30-TYPE COUPLER	REMOVE FROM		CONNECT TO		
				TERM STRIP	NET-WORK	TERM STRIP	NET-WORK	
Mounting cord at connecting block *	W-BL	G						
	BL-W	R						
	V-G	B						
	G-V	Y						
Inside wire conn blk to voice coupler		B	1					
		Y	2					
Basic modifications to connect voice coupler to telephone set and line	638B Key	S-R		L2		1		
		V		1		8		
	EXCN Key	BR			1			C
		W			3		L2	
		BK			3			RR
	Line Switch	BR			E1		8	
		G			L2		1	
	Add Strap					3	F	
Operation of 638B Key disables TRMTR and RCVR	638B Key	G		3			R	
		G-BK			F		L2	
	TRMTR	S-R			1			A
		R			1			6
	RCVR	R			6			A
		W				R		L2
Disable TRMTR	638B Key	S-R		1			A	
		R		1			6	
	TRMTR	R		6			A	
Disable RCVR	638B Key	G		3			R	
		G-BK			F		L2	
	RCVR	W			R		L2	

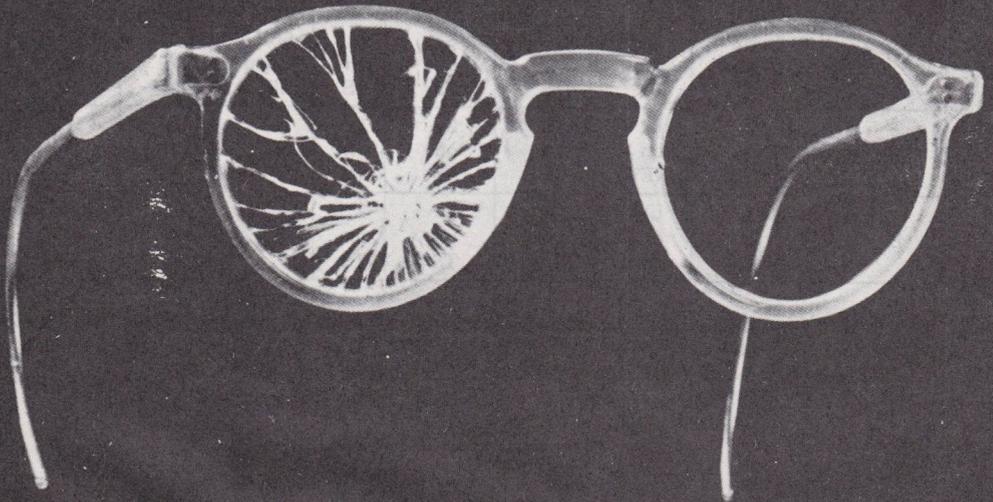
*Insulate and store unused leads.

TABLE N
1542A INDUCTOR CONNECTIONS TO TELEPHONE SETS

1542A INDUCTOR TERMINALS •	TELEPHONE SETS								
	502B 2502B	511D	511F	558C/D	558F	565LK 2565LK	712B 2712B	2511F/H	2558D
R1	RR on NET	RR on NET	RR on NET	RR on NET	RR on NET	Clip 41 66E Conn Blk	RR on NET	RR on NET	RR on NET
G1	E2 on TS	E1 on TS	9 on TS	6 on TS	9 on TS	Clip 42 66E Conn Blk	L2 on TS	9 on TS	3 on TS
Y	2 on TS	L1 on NET	12 on TS	2 on TS	1 on TS		3 on TS	12 on TS	2 on TS
B	1 on TS	L2 on NET	16 on TS	1 on TS	2 on TS		1 on TS	16 on TS	1 on TS

*Connect to appropriate mounting cord leads or terminals on 66E connecting block. See Fig. 8 and appropriate telephone set figure or table. Terminals R and G of 1542A inductor are connected to 1 and 2 of 30-type voice coupler, or 4 and 5 of F-57948(MD) voice coupler.

Safety **PAYS OFF**



**THESE SAFETY GLASSES SAVED A MAN'S EYE.
YOURS (REGARDLESS OF TYPE) CAN DO THE SAME FOR YOU -
IF YOU WEAR THEM.**