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.
- 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*

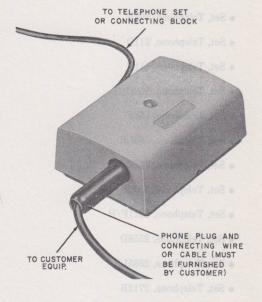


Fig. 1—30-Type Voice Coupler



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

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- 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:

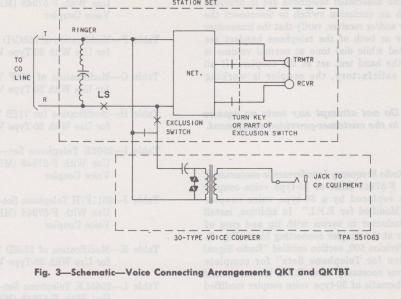
- (a) Component parts are housed in a modified 74A connecting block. Approximate dimensions are 4 inches long by 2-3/4 inches wide by 1-5/8 inches deep.
- (b) A standard 0.25-inch tip-sleeve phone jack permits the electrical connection of CP voice communication device.
- (c) Any power for customer equipment must be supplied by the customer. DC power is not available at the coupler and must not be applied to the coupler.
- (d) 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.



- **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 "O" 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.

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
- Table B—Modification of 511D Telephone Set for Use With F-57948 (MD) or 30-Type Voice Coupler
- Table C—511D Telephone Set—Modified for Tip Party Identifying Ground and Use With F-57948 (MD) or 30-Type Voice Coupler
- Table D—Modification of 511F Telephone Set for Use With F-57948 (MD) or 30-Type Voice Coupler
- Table E-511F Telephone Set-Modified for Tip Party Identifying Ground and

- Use With F-57948 (MD) or 30-Type Voice Coupler
- Table F—Modification of 558C/D Telephone Set for Use With 30-Type Voice Coupler
- Table G—Modification of 558F Telephone Set for Use With 30-Type Voice Coupler
- Table H—Modification for 712B Telephone Set for Use With 30-Type Voice Coupler
- Table I—2502B Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler
- Table J—2511F/H Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler
- Table K—Modification of 2558D Telephone Set for Use With 30-Type Voice Coupler
- 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

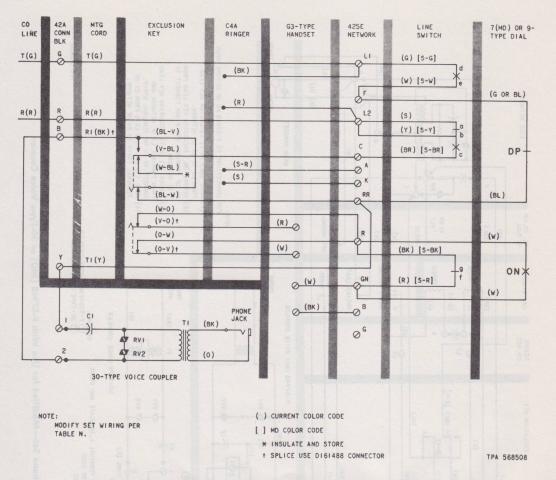


Fig. 4—Typical Telephone Set—Modified for Use With 30-Type Voice Coupler

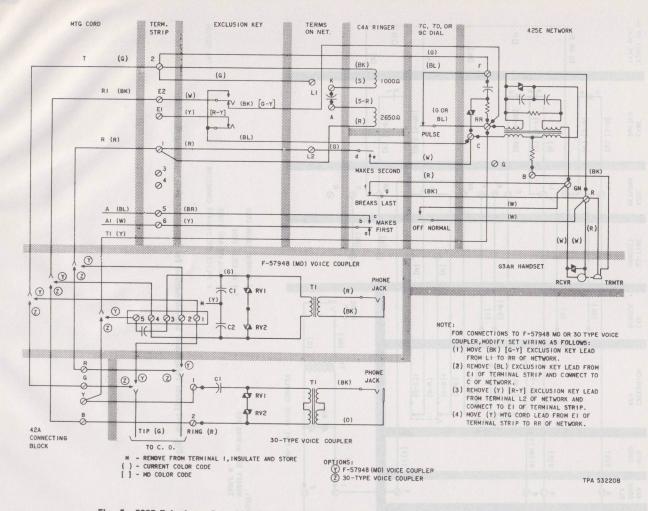
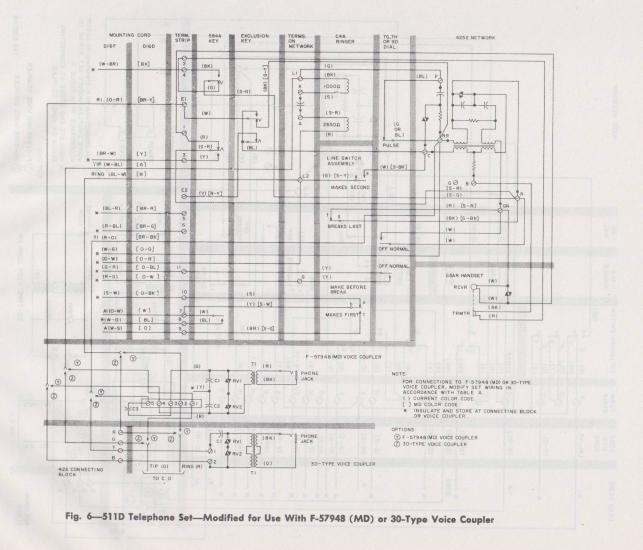


Fig. 5-502B Telephone Set-Modified for Use With F-57948 (MD) or 30-Type Voice Coupler



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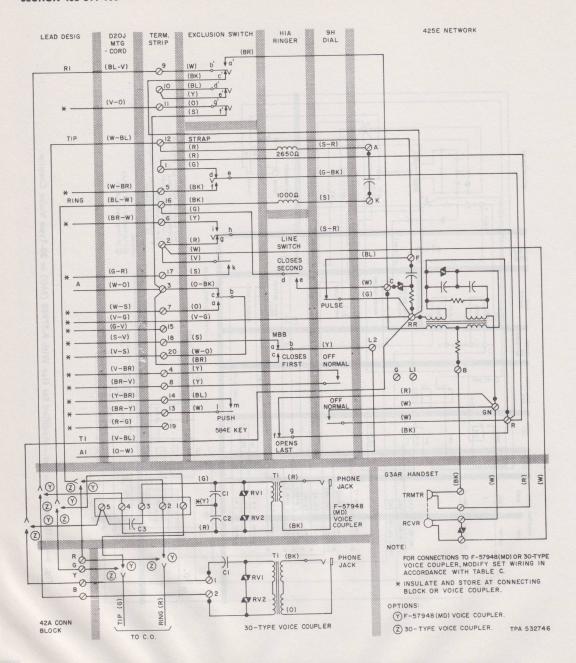


Fig. 7—511F Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler

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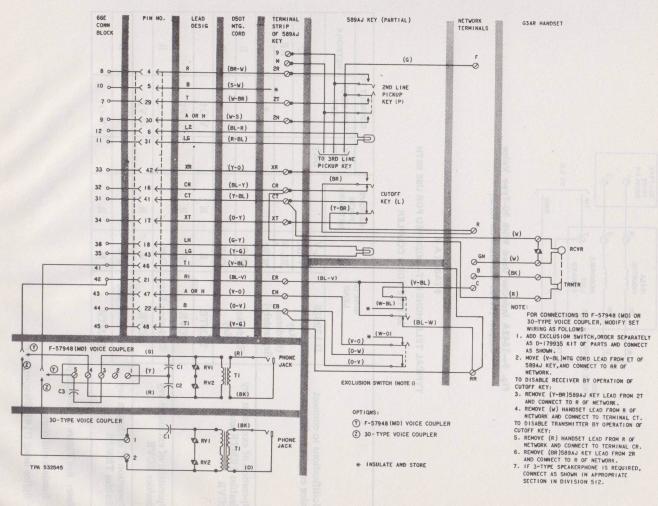


Fig. 8—565LK Telephone Set—Modified for Use With F-57948 (MD) or 30-Type Voice Coupler



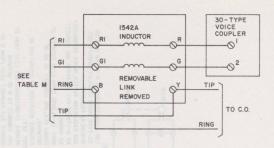


Fig. 9—1542A Inductor Used With 30-Type Voice Coupler (When Modified for R.F.I.)

TABLE A

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

	WIRE OR		REMOVE		CONNECT TO)
	LEAD		FROM NETWORK	MTG CORD	EXCLUSION	NETWORK
Modifications to connect		BL-V		BK†		
voice coupler to CO line		V-BL				C
		BL-W	1 P.	2	199	RR
	Separately)	W-BL			*	
Operation of exclusion key disables TRMTR and	Exclusion	W-O	la 1817		9 6 6	R
RCVR	Key	O-W	P III		12 12 14	R
	TRMTR	R	R		V-O†	
	RCVR	W	R		O-V†	1
Operation of exclusion key	Exclusion Key	O-W				R
disables RCVR	RCVR	W	R	7 3	O-V†	Y.
Operation of exclusion key	Exclusion Key	W-O				R
disables TRMTR	TRMTR	R	R	9	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)

SEE MODIFICATIONS			REM	OVE FROM	CON	NECT TO
REMOVE FROM COMMISCS TO	WIRE OR L		TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
Modification to connect	Signs Signs	W-BL	2			L1
voice coupler to line and telephone set	Mtg* Cord	BL-W	1	Gni	at coan	L2
telephone set	0014	R-O	E2	III.	(416) 834	RR
	D!	BK	6	17-0	conn	L1
	Ringer	R	5	BW	(GM) 8M	L2
	8	BL	E1	y Lia	(2. 800 M	C
	Exclusion	BK	2	2-82 480 UA		RR
	Key	Y	1		E2	niw obis
		W	E2		E1	A00 et a
Operation of 584A Key	584A	S-G	M-Bn	L1	an Late	R
disables TRMTR and RCVR	Key	S-R	9	L2	be	R
9 9	TRMTR	R	BK	R	2	arestoa Sala amil
8 8	RCVR	W	8	R	1	
Operation of 584A Key	584A Key	S-G	A-G	L1		R
disables TRMTR	TRMTR	R	TIB.	R	2	
Operation of 584A Key	584A Key	S-R	BK	L2		R
disables RCVR	RCVR	W	8	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)

				CONNECTION	NS.		SET MOD	IFICATIONS	
STRIP NETWORK	WIR		42A	30-TYPE	F-57948	REMO	/E FROM	CONN	ECT TO
	LEAD	. 2	BLK.	COUPLER	(MD) TERM. STRIP	TERM. STRIP	NET- WORK	TERM. STRIP	NET- WORK
Inside wire at conn	Gnd	1 1	Y		1		ons entir	Soupler (0	5010V
blk or F-57948 (MD)	Tip	6.0	G		5			202 000	LIGHAL
term.	Ring	g	R		2				
Mtg cord at conn	O-W	7.	Y		1	,			-
blk or F-57948 (MD)	W-B	L	G		5				
term. strip (Note 2)	BL-V	V	R		2				
	R-O		В		4			,	
	All Otl	her	*	*	*				
Inside wire from conn		1	G	1	5000				
blk to 30A-type V/C		EZ	В	2					
Modifications	Mtg	W-BL	n s			2	mall Add	ex to eat	L1
to connect tele-	Cord	BL-W			- Y	1	5ma S	TMHTES	L2
phone set and	Ringer	R	- 1			5			K
voice coupler to line	Leads	BK)A	3	TMAT	6		7	
to line		S	W		RCVE		K		В
		S-R	200		7 23.03		A		В
	Exclusion	Y			4.0.00	1	ton Key	E1	starf.O
2	Key	BL	73	9	LEGIL	E1		10000	RR
H		BK	R-8	73	ESAA K	2	veli Ali	E2	Charge
	Line	S	337		RVDR	10		RYOH as	A
	Switch	BR				9			C
MINor 30-type voice com		Y	ntereon	nes ,bro	incing c	7	01.6.2	t or dates	L1
quired, use (W-S) and		W	11 10 4	FT 113 517	utia y us	ranios is	C	Deboun 1	F
eakerphone is require	Strap	G	Constalar	Clair ani	sas malt	engas et	F	5	
Operation of 584A	Line	S-G					L1		R
(line) key disables	Key	S-R	V) bee	heel been	anilmine	bangair	L2	Special	R
TRMTR and RCVR	TRMTR	R					R	1	
	RCVR	W					R	2	
Operation of line	Key	S-R					L2		R
key disables TRMTR	TRMTR	R					R	1	
Operation of line	Key	S-G					L1		R
key disables RCVR	RCVR	W					R	2	

Notes:

- 1. 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.
- 2. Disconnect, insulate and store (Y) lead of F-57948 (MD) Voice Coupler.

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^{*} Insulate and store.

TABLE D

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

		PHOIT28		REM	OVE FROM	CON	NECT TO
		WIRE OR	LEAD ASS	TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
			W-BL	1		12	with with
		Mtg*	V-BL	9	(A)	(C(A) 8A8	RR
		Cord	BL-W	2	19	16	Section Soften
			BL-V	10	-0	9	bios gain
		D:	R	1	19	12	erm, ekrip
Modification to conne		Ringer	BK	2	18	16	(# mex)
voice coupler to line a			BK	1 100	O IIA		RR
telephone set		Exclusion Key	Y	2		10	It's as all
			BR	10	Mtg		C
	8	Line	G	15	Cord	16	
		Switch	BR	20	Ringer	3	
		Add Strap		8 1		12	F
as I - I -	6	584E	G-BK	- W	F	ine	R
Operation of 584E ke disables TRMTR and	У	Key	S-R	15	Key		R
RCVR	āi	TRMTR	R	9	R	1	
		RCVR	W		R	2	
Operation of 584E ke	y	584E Key	G-BK	96	F		R
disables TRMTR	81	TRMTR	R	8	R	1	
Operation of 584E ke	y	584E Key	S-R	15	Bau Eau	READO N	R
disables RCVR	- 12	RCVR	W		R	2	REMER

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)

	NICIES ENO			CONNECTIO	ONS		SET MODI	FICATIONS	
	WIRE		42A	30-TYPE	F-57948(MD)	REMO	VE FROM	CONN	ECT TO
	LEAD	STATE	CONN. BLK.	VOICE	TERM. STRIP	TERM. STRIP	NET- WORK	TERM. STRIP	NET- WORK
Inside wire at conn blk or F-57948 (MD)	Gno	ì	Y		1				
term. strip	Tip		G		5				
cerm. strip	Ring	g	R		2				
Mtg cord at conn	O-W	7	Y		1				
blk or F-57948 (MD)	W-B	L	G		5				
term. strip	BL-V	V	R		2				
(Note 2)	BL-V	V	В		4				
22	All Ot	her	*	*	*			E HORREN	BOR
Inside wire from conn			G	1	Hentoria			jea onor	malat
blk to 30-type V/C			В	2	Key				
	Mtg	W-BL	- 9.0			1		12	
16	Cord	BL-W	0		peri I	2		16	
8	Ringer	R	99		Switch	1			K
Modifications to	Leads	BK				2			L2
connect telephone		S			mast9		K		В
set and voice		S-R					A		В
coupler to line	Exclusion	W	22.0		MASG	9			RR
	Key	BK	31.6		VEA.	1	COA STATE	TO HOLD	RR
	Line	G	R		TRMIT	15		16	TOWN
	Switch	W	107		gung		C		F
		Y					L2	12	
2		BR	Att		-M - C # 100	20	You Hill	a to noth	C
		S	1		THE	18	A	MUNITED STREET	A
Operation of 584E	Line	G-BK	9.0		X SENSE		F	William Committee	R
(line) key disables	Key	W-O			arrosa -	20			R
TRMTR and RCVR	TRMTR	R					R	1	
500 M 10 10 10 10 10	RCVR	W	Street of the	No Lo	S. Maridanna a	02	R	3	- 1000
Operation of line	Key	G-BK	ma 10.18	Lean He	signed of the	trano f	F	analusm:	R
key disables TRMTR	TRMTR	R	aniu gan	a snone	ne spesicer	(1 B t)	R	1	
Operation of line	Key	W-O	nos sumo	geriqqs 1	q Dennes r	20	et EL-VI be	a of give	R
key disables RCVR	RCVR	W					R	3	

Notes:

- 1. Connections shown are for tip party with 10000 to ground. For 26500, connect ringer leads as follows: (R) and (BK) to network term. B, (S) to K, and (S-R) to L2.
- 2. Disconnect, insulate and store (Y) lead of F-57948 (MD) voice coupler
- * Insulate and store.

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PTABLE F#

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

EDHNECT TO	1 second 192		CONNE	CTIONS	20 E-SOURPHAN	s	ET MODIFI	CATIONS	
Tan I wast	WIRE	TEL	ESET	42A	30-	REMOV	E FROM	CONNE	ст то
STRIFE MORK	OR LEAD T R T1 R1 T R T1 R1 T R T1 R1 Line Switch Add	TERM STRIP	NET- WORK	CONN	TYPE COUPLER	TERM STRIP	NET- WORK	TERM	NET- WORK
	T			G					
Inside wire	R			R					312W 0
at conn blk	T1			В			7.55		
	R1			Y			-		
	T	2							
Inside wire	R	1		-		-		-	SER S
at telephone set	T1		RR		304				
	R1	6		-					
Inside wire conn blk to voice				В	1				od slid
coupler				Y	2				a juug
	FOADAD	S-R					L2	E1	
		R				1	Key	E1	
Basic modifications		G				2		E2	
modifications to connect	EXCN	Y				6		-	RR
voice coupler	Key	W				5	PERSONAL STREET		C
to telephone set and line		G				HB	L2	1	sni
2	Add Strap	41				9	BhA	2	F
		G				E2	gautë		R
Operation	584B/F	G-BK				D	L1		L2
of 584B/F Key	Key	R			1 2	E1	Tidle:		R
disables TRMTR and		S-R				E1			G
RCVR	TRMTR	R				1.8	R		G
0	RCVR	W				R	R		L2
1.2	584B/F	R				E1	AVOS		R
Disable TRMTR	Key	S-R				E1	18488		G
я	TRMTR	R				HE J	R		G
0	584B/F	G				E2	TMRT		R
Disable RCVR	Key	G-BK				9	L1		L2
8.1	RCVR	W			7 3		R		L2

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

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

	SET MODIFICA		CONNE	CTIONS		S	ET MODIFI	CATIONS	
	MAMBE	TEL	SET	42A	30-	REMOV	E FROM	CONNE	ст то
TEM MAST	OR LEAD	TERM	NET- WORK	CONN	TYPE COUPLER	TERM	NET- WORK	TERM STRIP	NET- WORK
	T		023.01	G	A NINGE			-	
Inside wire	R			R					
at conn blk	T1			В					ouw sba
	R1			Y					ata tatou
	T	1					-		
Inside wire	R	2							
at telephone set	T1 .	-	RR						side wire
	R1	9							and apples
Inside wire				В	1				
conn blk to voice coupler				Y	2			1000	solov of a
		V				2		17	
	584B/F	O-BK				3	1848/0	7	
Basic modifications to connect voice coupler	Key	R				2	500	15	
		G				1		5	odificatio
	EXCN	BK	-			1	V5.0.6.0		RR
to telephone set	Key	BR	-			10			C
and line	Line	BR				20	fotiwi	3	enil bas s
	Switch	G				15	bbA	2	
	Add Strap	13				a	QSGI	1	F
Sul	MA	G			1 2	5	TARLES.		R
Operation of	584B/F	G-BK				25	F	892	L2
584B/F Key	Key	R				15			G
disables TRMTR and		S-R				15	RMTR		R
RCVR	TRMTR	R				W	R		G
я	RCVR	W				8	R		L2
Disable	584B/F	R				15	79.		G
TRMTR	Key	S-R				15	REMER		R
9	TRMTR	R				9	R		G
Disable	584B/F	G			24	5	199		R
RCVR	Key	G-BK				W	F		L2
	RCVR	W					R		L2

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

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TABLE H

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

	HOTE)		CON	NECTION	OR 30-TYS	(IAA) S	ET MODIFI	CATIONS	
	WIRE		42A	30-		REMOV	E FROM	CONNE	ст то
COMMECT TO TERM			CONN	TYPE	R	TERM STRIP	NET- WORK	TERM STRIP	NET- WORK
418Y2	W-BL	91.51	G						
Mounting cord *	BL-W	197	R	V	Mtg		. Joe	too et i	dificatio
at connecting block	V-G		В		, p.100			HIL OJ 1	odenież i
0	G-V		Y	TS					
Inside wire from conn blk to 30-	I.I		В	XII1	Key				
type voice coupler	1.2		Y	2					
	638A	S-R	30-139	to (CIM)	to F-57948	L2	for con	.R11 o	Refer
r A lead control.	Key	V	neel b	ding co	geom (W)	1	store (P	8	uenl *
Basic modifications	EXCN	BR	G M) 8	F-5794	(Y) lead of	e1oda	late, and	sot, inst	C
to connect	Key	W				3		L2	
telephone set and voice coupler		BK				3			RR
to line	Line	BR				E1		8	
	Switch	G				L2		1	
	Add Strap							3	F
		G-BK						F	L2
Operation of	638A	G				3			R
638A Key	Key	S-R				1			A
disables TRMTR and		R				1			R
RCVR	TRMTR	R					R		A
	RCVR	W					R		L2
	638A	S-R				1			A
Disable TRMTR	Key	R				1			R
	TRMTR	R					R		A
DiN-	638A	G-BK					F		L2
Disable RCVR	Key	G				3			R
	RCVR	w					R		L2

Note: If \underline{A} lead control is required, connect A1 to terminal E1 and \underline{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)

	WIDE O	3977 8	REMO	OVE FROM	CONNECT TO	
	WIRE C LEAD	COUPLIST	TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
Modification to connect voice coupler to line	Mtg Cord*	Y	E1	0-V	cord *	RR
and telephone set		BL	E1	V-D		C
	Exclusion Key	BK	8	L1	re from	RR
		Y	γ	L2	E1	ting sout

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)

	1 3 YOMAR OF		REMO	VE FROM	CONN	NECT TO
	IEAD		TERM. STRIP	NETWORK	TERM. STRIP	NETWORK
		W-BL	1	- 1	12	
	Mtg	BL-W	2	13	16	anoo is
	Cord*	V-BL	9	12		RR
		BL-V	10	T	9	
M-3:C-1:	Ringer	R	1	- 8	12	Inside w
Modification to connect voice coupler to line	Kinger	BK	2	13	16	ot telepo
and telephone set		BK	1 8	1.8		RR
	Exclusion Key	Y	2		10	w sbiani
		BR	10		of	C
	Line	G	15		16	
	Switch	BR	20	HERE	3	
12	Dial		y y	F	12	Restr
0	631B	G-BK	28	F	tions	R
Operation of 631B (line) key disables TRMTR	Key	S-R	15	Кеу	upier upier	R
and RCVR	TRMTR	R	BK	R	1a smo	gelet of
	RCVR	W	9	R	2	-
Operation of 631B (line)	631B Key	G-BK		F		R
key disables TRMTR	TRMTR	R	go	R	1	
Operation of 631B (line)	631B Key	S-R	15	Nice I		R
key disables RCVR	RCVR	W	VIII V	R	2	Operado

Note:

Refer to Fig. 6 for connecctions 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.

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

			CONNE	CTIONS		S	ET MODIFI	CATIONS	
OT TORKHOO	WIRE	TEL	SET	42A	30-	REMOV	E FROM	CONNE	ст то
inside wire at telephone set at telephone set at telephone set and	OR LEAD	TERM STRIP	NET- WORK	CONN	TYPE COUPLER	TERM	NFT. WORK	TERM STRIP	NET- WORK
er.	T			G					
Inside wire	R			R					
at conn blk	T1			В	93				
NA .	R1			Y					
	T	2		A-TIE					
Inside wire	R	1		Я	-	g			
at telephone set	T1		RR	BK				saif of	relgue
RR	R1	3		BK.				Bet	ephone
Inside wire				В	1				
conn blk to		1	H	BR					
voice coupler			11	Y	2	il			
8	584H	R	26	318	teh	1		12	
Pagia	Key	Y			is	3		12	
modifications to connect	EVON	BR		G-BK	gi	E1			C
	EXCN Key	W	ar T	S-R	Ys	E2	(ar	3	to not
to telephone set	7	BK		Я	STE	AT.		71 1 1 1 0 7 1	RR
and line	Line Switch	G		W	NA NA	12		1	
н	Strap						(9)	2	F
	1	S-R		22		12		11	
Operation	584H	R		ATTE	CO A	12	(9)	all all	L2
of 584H	Key	G-BK					F		L1
Key disables TRMTR and		G				2			R
RCVR	TRMTR	R	May Y	V 100 T	User See	00 T T	F	Inter-	L1
	RCVR	W	enting	om (95)	ed move (f	mper s	R	ineria i	L1
Digital da disposi	584H	S-R	Seasons .	10 00 10	stasib (Gy.)	12	Li mala	11	
Disable	Key	R				12			L2
FRMTR	TRMTR	R	CHE NO	ALIEU CAN	the same of the	11			L2
	584H	G-BK		•			F		L1
Disable	Key	G				2	-		R
RCVR	DCVD		-			4	D		
	RCVR	W					R		L1

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♦ TABLE L ♦

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

			REMO	E FROM	CONN	ECT TO
	LEAD		S89AJ KEY TERM. STRIP	NETWORK	S89AJ KEY TERM. STRIP	NETWORK
Modifications to connect	D-179935	BL-V			ER	
voice coupler to any line picked up in telephone	Exclusion	V-BL	38-Y	bic pr	Mounting in	C
set	(Ordered	BL-W	19-110		block	RR
	Separately)	W-BL			*	
		O-W			EB	
		W-O			* 4	
	8.1	O-V	- 4		EB	
	2.1	V-O		8888	EH	
	Mtg Cord	V-BL	80		to connect	RR
Operation of cut-off key	589AJ	BR	2R	EXCI	telephone p	Т
disables TRMTR and RCVR	Key	Y-BR	2T	Rek	and line	R
	TRMTR	R	ggi	T	CR	
	RCVR	W		R	CT	
Operation of cut-off key	589AJ Key	Y-BR	2T	56A		R
disables RCVR	RCVR	W		R	CT	
Operation of cut-off key	589AJ Key	BR	2R	3	neilisisqO	Т
disables TRMTR	TRMTR	R	X8-0	Т	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

			CONN	ECTIONS	SET MODIFICATIONS			
	WIRE		42A	30-	REMOVE FROM		CONNECT TO	
3/43/5 ×10	LEA		BLK	COUPLER	TERM STRIP	NET- WORK	TERM STRIP	NET- WORK
Mounting cord at connecting block *	W-BL		G	aoi	Exclus		ny line	s of as
	BL-W		R				enone	paint a
	V-G		В	ely)	araqas			
	G-V		Y					
Inside wire conn blk to voice coupler			В	1				
			Y	2				
Basic modifications to connect voice coupler to telephone set and line	638B Key	S-R	A 10		L2		1	
		V			1		8	
	EXCN Key	BR	- 120	- 010	1			C
		W	72 (3		3		L2	ATES
		BK	VALUE		3			RR
	Line Switch	BR			E1		8	
		G			L2		1	
	Add Strap		77	R	VOR		3	F
Operation of 638B Key disables TRMTR and RCVR	638B Key	G	BB	Rey	3		yes! Bo	R
		G-BK	11	399	MAT	F		L2
		S-R			1			A
		R	PERSON	ns of nwo	1	ennos i	9110091	6
	TRMTR	R			6		note bu	A
	RCVR	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.

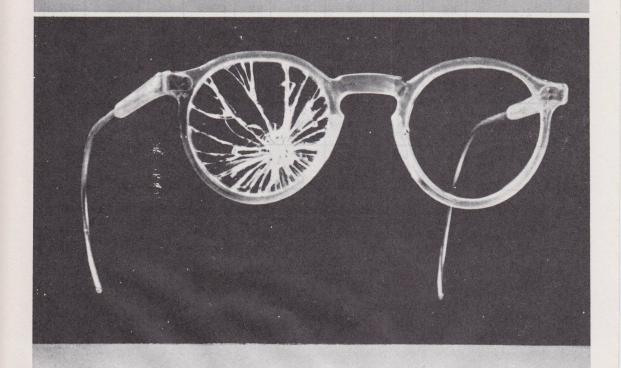
TABLE N

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	
В	1 on TS	L2 on NET	16 on TS	1 on TS	2 on TS		1 on TS	16 on TS	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.

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