

## 11A AND 11B RINGING RANGE EXTENDERS

### 1. GENERAL

**1.01** This section provides identification, installation, and connection information on the 11A and 11B extenders used to extend the range of selective (superimposed) ringing, and to provide ringer isolation on all lines using grounded ringers.

**1.02** This section is reissued to:

- Add 11B extender
- Revise Tables A through K
- Revise Fig. 2, 3, and 4
- Add connection information for the D-180489 Kit of Parts
- Add testing information.

**1.03** The 11A and 11B are weatherproof and mount in a centralized location on the premises of the subscriber, normally next to the protector block. One extender is required per main station instead of one per phone.

**1.04** The 11A/B can be used in place of the 425A and 426A gas tubes, 426N diode, and the 10A extender to provide additional ringing range and ringer isolation on 4-party full selective and 8-party semiselective ringing. In addition, they can be used in place of the D-180036 ringer isolator to provide ringer isolation and additional ringing range on one and two party lines as well as on multiparty divided code lines. (Single party lines must be wired to ground through the extender.)

**1.05** The 11B extender should be used with dial long line circuits that apply a 20 Hz ringing voltage of up to 101 VRMS. For all other applications, without the increased ringing voltage, the 11A extender should be used.

### 2. IDENTIFICATION

**2.01** The extender is a solid-state, polarity sensitive, voltage controlled electronic switch which connects the ringer(s) in the subscriber's station set(s) into the circuit when the proper polarity and level of ringing voltage is applied. Approximately 100-volt peak is required between tip and ring to trigger the extender.

**2.02** The extender consists of a printed circuit board incased in a weatherproof housing. The 11A extender is housed in a gray enclosure and the 11B extender is housed in a beige enclosure. The unit is normally mounted next to the protector block as shown in Fig. 1. A six screw terminal strip is provided on the back of the unit (Fig. 2, 3, and 4) to make connections. Station wire can be used to connect the extender to the protector.

### 3. DESIGN FEATURE

**3.01** These extenders provide isolation for all grounded ringers. They can be used effectively on lines having inductive noise.

**3.02** They may be used on all grounded ringers including those used in 4-party full selective and 8-party semiselective ringing service. When the extender is used on single party service for ringing range extension or ringer isolation, the ringers are wired to ground through the extender like a ring party.

**3.03** Ringing range is increased on 4-party full selective and 8-party semiselective service by eliminating the large voltage drop across the gas tube which is normally used for this type of ringing. With the isolation provided by the 11A/B extender, the weak bias spring notch setting on the ringer can be used. Ringing range is also increased for all other classes of service since this weak bias spring setting can be used without causing cross-ringing. Cross-ring is prevented because of the polarity sensitivity and high triggering threshold of the 11A/B.

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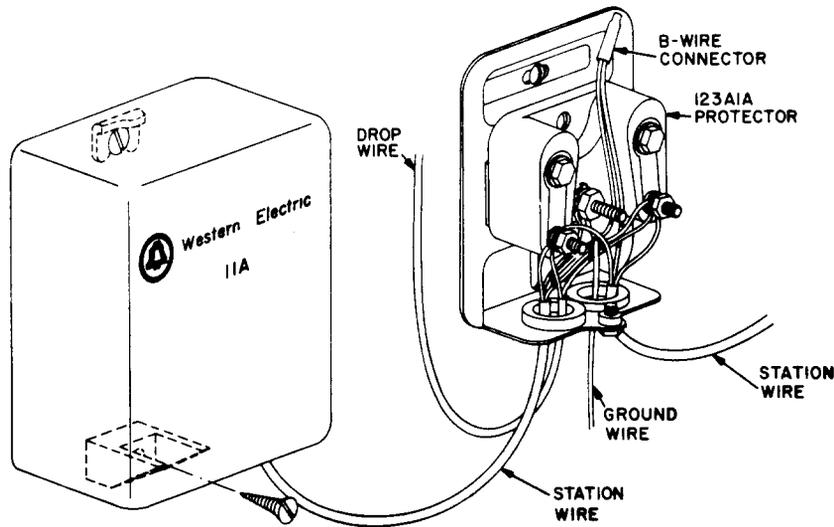


Fig. 1—11A/B Extender, Typical Installation

**3.04** One extender is used per party instead of one per phone as with other ringing devices.



*The maximum number of ringers that can be connected to one extender is five (one main station plus four extensions), range permitting. Extension stations may be wired to the connecting block or to the protector. For additional information on ringing limitations, refer to Section 500-114-100.*

**3.05** If one subscriber on a party line is equipped with a 11A or 11B extender, all other parties of the same polarity on the same side of the line should also be equipped with extenders.

**3.06** The ringer is always used in a series connection even for 4-party full selective and 8-party semiselective service.

**3.07** The extender draws negligible DC current even when used with superimposed ringing and therefore does not have the pretrip problems sometimes associated with gas tubes or the 10A extender.

**3.08** An extender normally isolates the ringer and the absence of ringer capacity makes the line appear open to the local test desk.

**Note:** There is a modification available, in the form of a wiring option, that will enable

the local No. 14 or No. 16 test desk to test through an extender.



*The 11A/B Extender will not work with some revertive call selectors in a 355A SXS office without modification to the selector. These selectors, SD-31831-01 (4-party, semiselective) and SD-31762-01 (10-party, divided code) apply the same ringing voltage to the tip and ring simultaneously and therefore do not provide a voltage difference between tip and ring to trigger the extender.*

#### 4. INSTALLATION AND CONNECTIONS

**4.01** The extender is usually mounted next to the protector block at the subscriber premises. Connections are made between the terminal strip on the back and the protector block, using station wire (Fig. 1).

**4.02** The terminal strip on the extender has two shorting bars that must be positioned as shown by Fig. 2, 3, and 4.

**4.03** Tables in the earlier issue of this section showed three conductor inside wire and a different strapping arrangement for negative superimposed ringing. It was found that this application could cause interference with radio and television reception. Four conductor inside wire

is now required with new strapping arrangements. Only Fig. 4B is likely to cause interference.◆



**Proper polarity must be observed at the extender as well as at the telephone set.**

**4.04** ◆The extender is turned on by the application of negative (–) or positive (+) voltage. It is imperative that the installer know what the polarity of the line is, even with one- or two-party service in order to use the appropriate column of the connection tables.◆

**4.05** Fig. 2 and 3 show wiring arrangements for ◆11A/B◆ Extender, ring and tip parties using negative or positive superimposed ringing.

**4.06** ◆Fig. 4 shows wiring arrangements for all 11A/B Extender when an ANI ground is required with positive (+) superimposed ringing.◆

**4.07** Tables A through J show telephone set connections when using 11A/B extender.

**4.08** ◆Table K shows connections for the D-180489 ANI Kit of Parts which is used to maintain a better balance when ANI ground is required. Some sets use both the 1742-type inductor and the 840398168 PWB. Other sets use only the PWB portion of the kit.

**Note:** There is a distinctive difference in the way the extender is wired. If a kit of parts is used, all sets must be wired as shown in Table K.

**4.09** ◆Make extender connections as follows:

- (1) Check the service order to work order or verify the party and polarity of the station.
- (2) Pick the diagram from Fig. 2, 3, or 4 that fits the application.
- (2) Place shorting bars on extender and make connections to protector and inside wire as shown by diagram.

**Note:** Negative (–) ringing polarity shall always connect to terminal 6 of extender and

positive (+) ringing polarity shall always connect to terminal 1 of extender.

- (4) Refer to proper tables (A through J) for telephone set(s) being used and connect according to appropriate column.

**Caution:** *It should be noted that, if an ANI kit of parts is necessary with positive superimposed ringing, certain types of sets are not compatible (Fig. 4).◆*

**4.10** ◆For best noise performance with connections shown by Fig. 3 and 4A, do not use more than 1000 feet of station wire containing a grounded conductor or 75 feet of buried service wire beyond the extender. An extender may be needed at each building served.◆

## 5. ◆TESTING

**5.01** Operation can be checked by reverting calls, automatic call back, or test desk call back. Ringing should occur on the proper number. There should be no cross-ringing or bell tap when other parties on the line receive calls.

**5.02** If the telephone set does not ring, short extender terminals 3 and 4. If set rings with terminals shorted, the trouble is in the extender or extender wire. If set does not ring (use hand test set to verify that ringing voltage actually reaches the protector) the problem is with the inside wire or telephone set.

**5.03** If the telephone set rings on the wrong party number, the polarity (±) or line (tip and ring) or both should be reversed at the protector.

- (1) Polarity—reverse extender wire (R) and (G).
- (2) Line Reversal—reverse inside wire (R) and (G).
- (3) Both—reverse drop wire leads.

Repeat the ringing test.◆

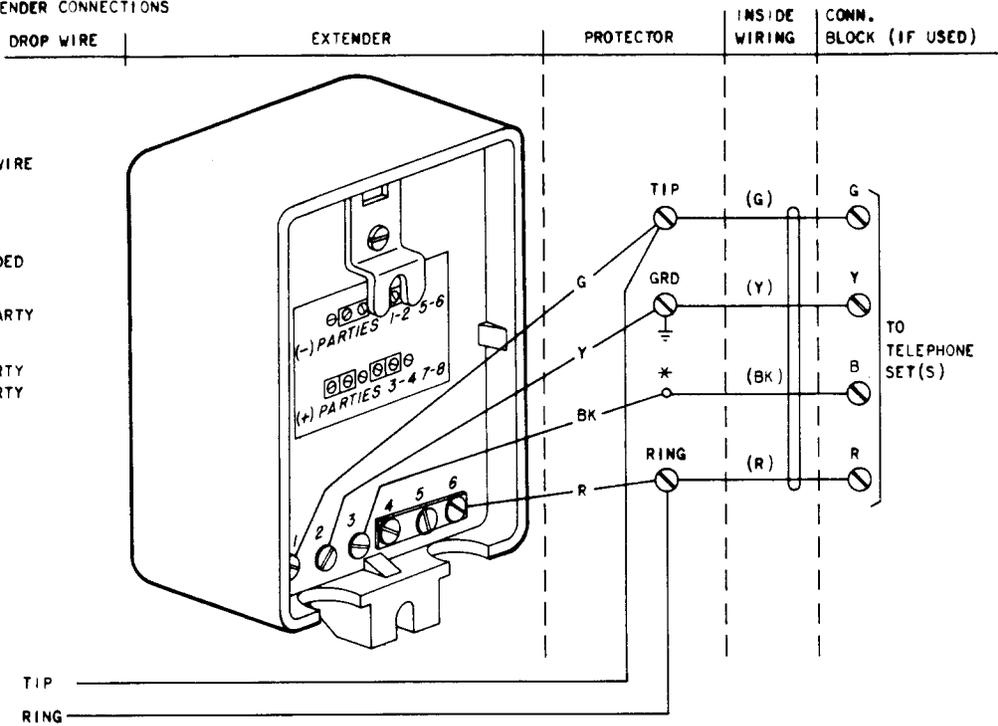
**SECTION 501-322-101**

**A. NEGATIVE (-) RING PARTY EXTENDER CONNECTIONS**

\* SPLICE TOGETHER USING B-WIRE CONNECTOR OR EQUIVALENT

THIS CONNECTION APPLIES TO:

- SINGLE PARTY WITH GROUNDED RINGER
- RING PARTY (-) ON TWO PARTY LINES
- PARTIES 1 AND 5 OF 4 PARTY FULL SELECTIVE AND 8 PARTY SEMISELECTIVE LINES
- RING PARTIES ON DIVIDED CODE LINES

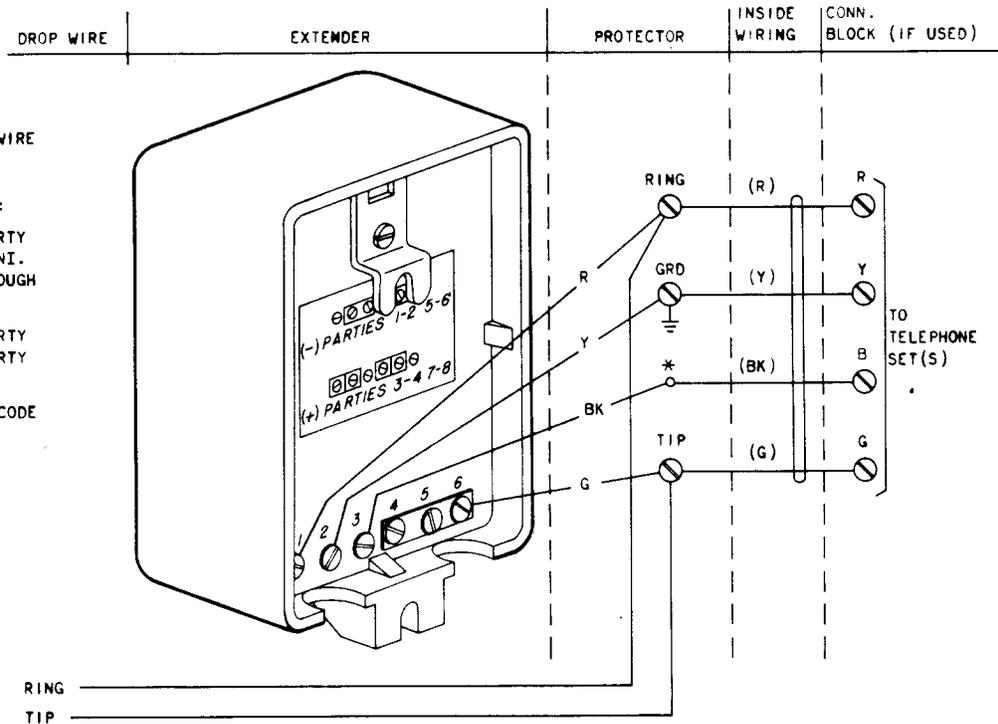


**B. NEGATIVE (-) TIP PARTY EXTENDER CONNECTIONS**

\* SPLICE TOGETHER USING B-WIRE CONNECTOR OR EQUIVALENT

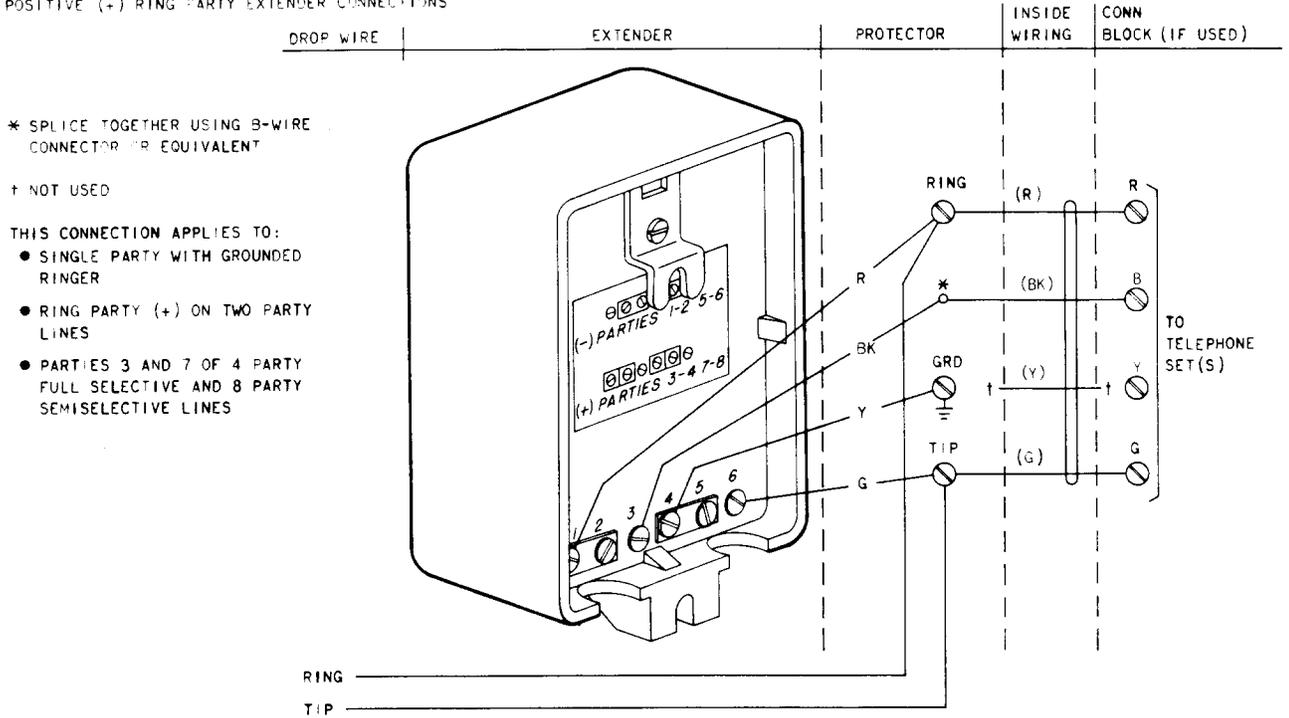
THIS CONNECTION APPLIES TO:

- TIP PARTY (-) ON TWO PARTY LINES WITH OR WITHOUT ANI. IF USED, ANI MAY BE THROUGH RINGER OR ANI KIT
- PARTIES 2 AND 6 OF 4 PARTY FULL SELECTIVE AND 8 PARTY SEMISELECTIVE LINES
- TIP PARTIES ON DIVIDED CODE LINES



**Fig. 2—11A/B Extender Connections with Negative (-) Superimposed Ringing**

A. POSITIVE (+) RING PARTY EXTENDER CONNECTIONS



B. POSITIVE (+) TIP PARTY EXTENDER CONNECTIONS

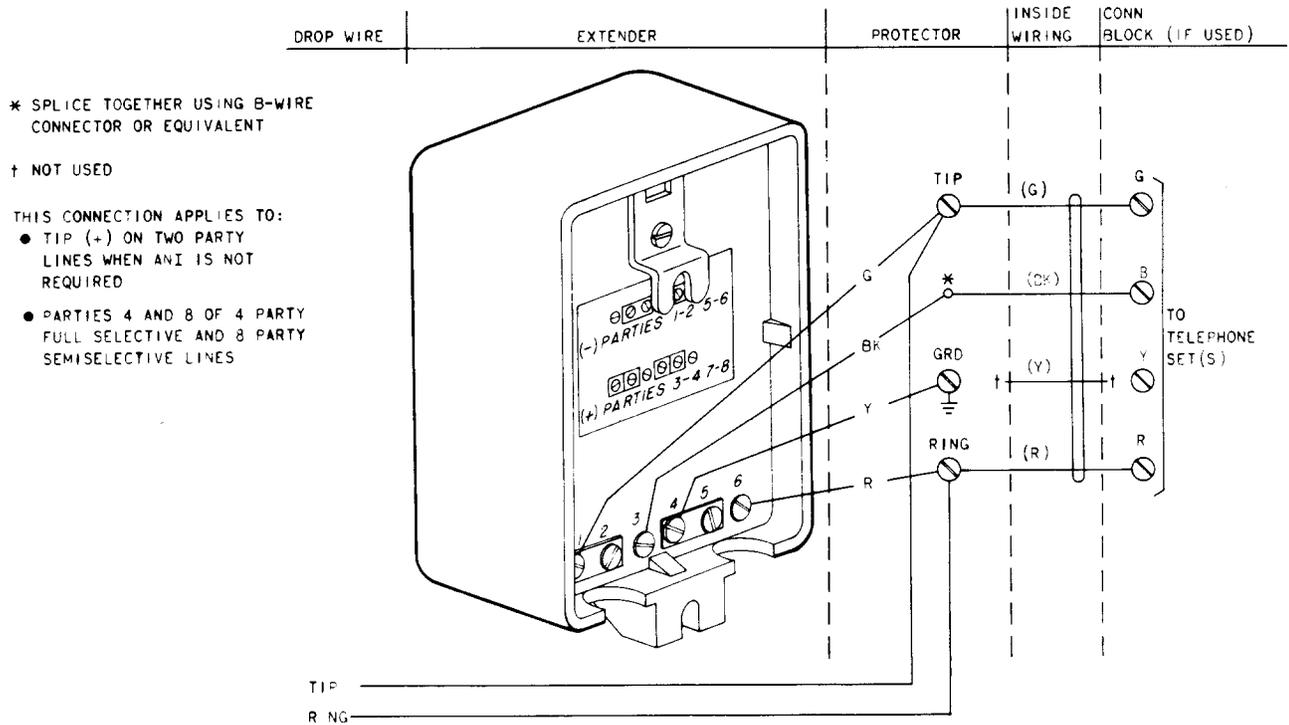


Fig. 3—11A/B Extender Connections with Positive (+) Superimposed Ringing

**SECTION 501-322-101**

**A. POSITIVE (+) TIP PARTY WITH ANI GROUND USING D-180489 KIT OF PARTS**

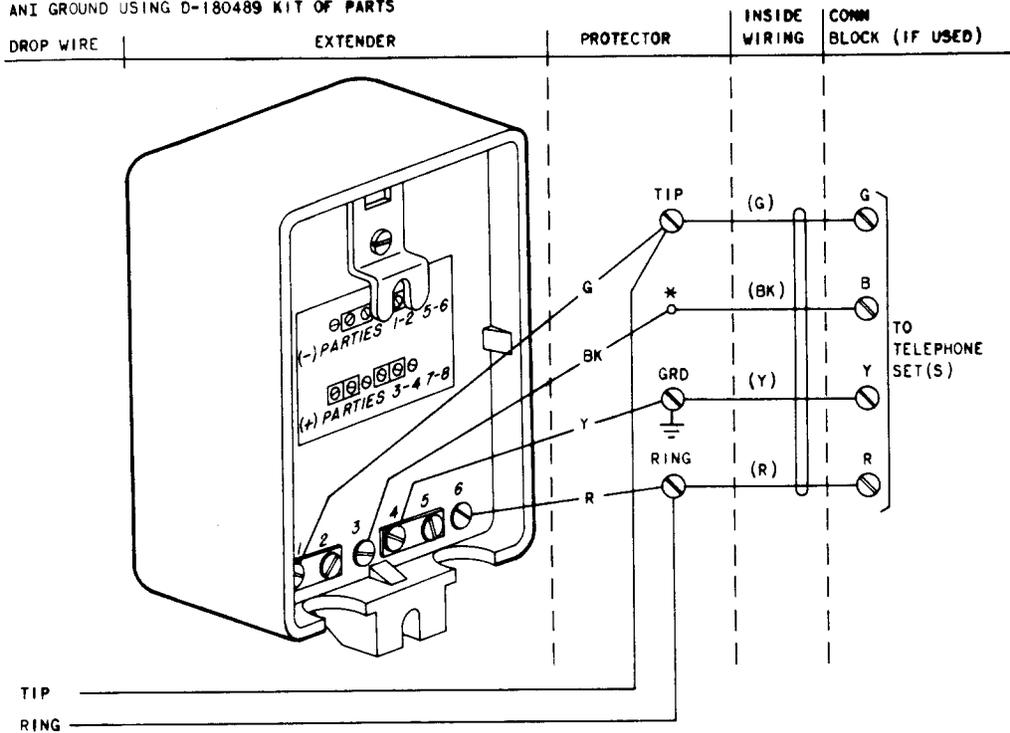
\* SPLICE TOGETHER USING B-WIRE CONNECTOR OR EQUIVALENT.

THIS CONNECTION APPLIES TO:

- TIP (+) ON TWO PARTY LINES WHEN D-180489 KIT OF PARTS IS USED FOR ANI GROUND. SEE TABLE K.

**NOTE:**

ALL SETS MUST BE CAPABLE OF USING BOTH THE 1728-TYPE INDUCTOR AND THE 840398168 PWB OF THE KIT OF PARTS, I.E., 500-, 2500-, 554-2554-, 750-, AND 2750-TYPE SETS



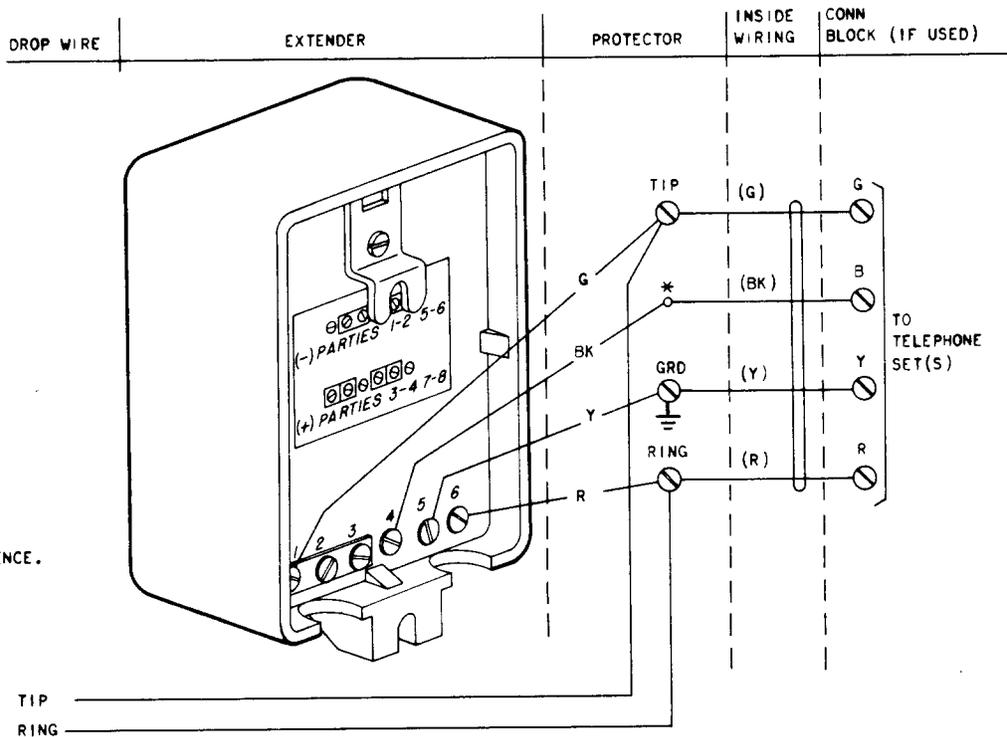
**B. POSITIVE (+) TIP PARTY WITH ANI GROUND USING RINGER OR PWB ONLY OF D-180489 KIT OF PARTS**

\* SPLICE TOGETHER USING B-WIRE CONNECTOR OR EQUIVALENT.

THIS CONNECTION APPLIES TO:

- TIP (+) ON TWO PARTY LINES FOR ALL TELEPHONE SETS WHEN RINGER IS USED FOR ANI GROUND
- TIP (+) ON TWO PARTY LINES WITH AT LEAST ONE SET THAT USES ONLY THE 840398168 PWB OF THE D-180489 KIT OF PARTS FOR ANI GROUND, I.E., 702- OR 2702-TYPE; OR SETS THAT USE NO ANI KIT, I.E., ACI AND ADI BASES, 960 AOIM, OR 2960 AOIM.

THIS APPLICATION MAY CAUSE RADIO OR TELEVISION INTERFERENCE.



**Fig. 4—11A/B Extender Connections for ANI Ground With Positive (+) Superimposed Ringing**

◆TABLE A◆

500- AND 2500-TYPE TELEPHONE SETS†  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEAD AT CONN BLK AND TEL SET	COLOR	ASSOCIATED WITH FIGURE					
		2A	2B	3A	3B	4A	2B OR 4B (-) (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	(+) TIP PTY	TIP PARTY
			NO ANI OR ANI WITH KIT‡		NO ANI	ANI WITH KIT‡	ANI GRD THRU RINGER§
						1000 Ω	2650 Ω
Mtg Cord or Jack Leads at Conn Blk	R G Y BK	R G Y B	R G — B	R G — B	R G Y B	R G Y B	R G Y B
Mtg Cord or Jack Leads in Set	R G Y BK	L1 L2 G *	L2 L1 — G	L1 L2 — G	L1 L2 G *	L1 L2 G A	L1 L2 G A
Line Switch Leads	W S BR	F (C) L2 C (F)	F L2 C	F (C) L2 C (F)	F (C) L2 C (F)	F (C) L2 C (F)	F (C) L2 C (F)
Ringer Leads	R BK S S-R	* G K A	L2 G K A	L2 G K A	L2 * K A	K G B B	B B K G

\* Connect these leads together using D-161488 connectors.

† Requires D4BT mounting cord or D4BU modular mounting cord with 623D4 jack for modular installations.

‡ For connection of D-180489 Kit of Parts, see Table K.

§ If bell taps when connected to Long Line equipment, reverse (R) – (S-R) and (BK) – (S) ringer leads.

○ Indicates connections for 2500-Type sets only.

◆TABLE B◆

554-TYPE TELEPHONE SET  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS IN TEL SET	COLOR	ASSOCIATED WITH FIGURE					2B OR 4B (-) OR (+)	
		2A	2B	3A	3B	4A	TIP PARTY	
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	(+) TIP PTY		
			NO ANI OR ANI WITH KIT†		NO ANI	ANI WITH KIT†	ANI GRD THRU RINGER‡	
						1000 Ω	2650 Ω	
Inside Wire or Plug Leads in Set	R	L1		L2	L1	L1	L1	
	G	L2		L1	L2	L2	L2	
	Y	G		—	—	G	G	
	BK	*		G	G	*	A	
Line Switch Lead	S	L2		L2	L2	L2	L2	
C4A Ringer Leads	R	*		L2	L2	L2	K	B
	BK	G		G	G	*	G	B
	S	K		K	K	K	B	K
	S-R	A		A	A	A	B	G

\* Connect these leads together using D-161488 connectors.

† For connection of D-180489 Kit of Parts, see Table K.

‡ If bell taps when connected to Long Line equipment, reverse (R) – (S-R) and (BK) – (S) ringer leads.

◆TABLE C◆

2554B-TYPE TELEPHONE SET USING 4010D NETWORK  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS IN TEL SET	COLOR	ASSOCIATED WITH FIGURE					
		2A	2B	3A	3B	4A	2B (-) OR 4B (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	(+) TIP PTY	TIP PARTY
			NO ANI OR ANI WITH KIT ‡		NO ANI	ANI WITH KIT ‡	ANI GRD THRU RINGER
					1000 Ω	2650 Ω	
Inside Wire or Plug Leads in Set	R		2	2	1	1	2
	G		1	1	2	2	1
	Y		3	—	—	3	3
	BK		A	3	3	†	A
Line Switch Leads	W		F	F	C	C	F
	S		L2	A	A	A	L2
	BR		C	C	F	F	C
P1A Ringer Leads §	R		K	K	K	K	K
	BK		3	3	3	†	3
	S		*	*	*	*	B
	S-R		*	*	*	*	B
Strap	BK		*	2-A	2-A	2-A	*

\* Insulate and store.

† Connect these leads together using D-161488 connector.

‡ For connection of D-180489 Kit of Parts, see Table K.

§ Early production models also had a (BL) ringer lead which should be insulated and stored for all applications.

◆TABLE D◆

2554B-TYPE TELEPHONE SET USING 4228K NETWORK  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS IN TEL SET	COLOR	ASSOCIATED WITH FIGURE					
		2A	2B	3A	3B	4A	2B (-) OR 4B (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	(+) TIP PTY	TIP PARTY
			NO ANI OR ANI WITH KIT‡		NO ANI	ANI WITH KIT‡	ANI GRD THRU RINGER
						1000 Ω	2650 Ω
Inside Wire or Plug Leads in Set	R		L2	L2	L1	L1	L2
	G		L1	L1	L2	L2	L1
	Y		G	—	—	G	G
	BK		A	G	G	†	A
Line Switch Leads	W		F	F	C	C	F
	S		L2	A	A	A	L2
	BR		C	C	F	F	C
P1 A Ringer Leads	R		K	K	K	K	K
	BK		G	G	G	†	G
	S		*	*	*	*	B
	S-R		*	*	*	*	*
Strap	BK		*	L2-A	L2-A	L2-A	*

\* Insulate and store.

† Connect these leads together using D-161488 connector.

‡ For connection of D-180489 Kit of Parts, see Table K.

◆ TABLE E ◆

750- AND 2750-TYPE TELEPHONE SETS (CURRENT MODELS)  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS AT CONN BLK AND TEL SET†		COLOR	ASSOCIATED WITH FIGURE					
			2A	2B	3A	3B	4A	2B (-) OR 4B (+)
			(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	(+) TIP PTY	TIP PARTY
				NO ANI OR ANI WITH KIT §		NO ANI	ANI WITH KIT §	ANI GRD THRU RINGER ‡
						1000 Ω	2650 Ω	
71B CONN	Inside Wire	R	1	2	1	1	1	
		G	2	1	2	2	2	
		Y	3	—	—	3	3	
		BK	4	3	3	4	4	
BLOC K	Cord and Plug Assy	R	2	2	2	2	2	
		G	1	1	1	1	1	
		Y	3	3	3	3	3	
		BK	4	4	4	4	4	
Line Switch Leads	W S BR	F (C) * C (F)	F L1 C	F (C) L1 C (F)	F (C) L1 C (F)	F (C) * C (F)		
Straps	Y BK	* L1	* *	* *	* *	* *	* A	
D1E Ringer Leads	R BK S S-R	L1 Y K A	L1 Y K A	L1 Y K A	L1 BK K A	K Y B B	B B K Y	

\* Insulate and store.

† Terminates R, Y are on 814313946 (P-43A394) mounting block inside set, all other terminals are on network.

‡ If bell taps when connected to Long Line equipment, reverse (R) – (S-R) and (BK) – (S) ringer leads.

§ To mount inductor of ANI kit, loosen two right most screws from switchhook bracket, slide inductor bracket under switchhook bracket and retighten screws. For connection of kit, see Table K.

○ Indicates connections for 2750-Type sets only.

◆TABLE F◆

702B- AND 2702B-TYPE TELEPHONE SETS  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS AT CONN BLK AND TEL SET §	COLOR	ASSOCIATED WITH FIGURE					
		2A	2B	3A	3B	2B (-) OR 4B (+)	
		(-) RING PTY††	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	TWO PTY TIP WITH ANI ‡	
			NO ANI		NO ANI	USING RINGER	
				1000 Ω	2650 Ω		
TRNSF Leads at Conn Blk	Y BK	Y †		† Y	† Y	Y †	Y †
Mtg Cord at Conn Blk **	R G Y BK W	R G B † Y	R G B Y †	R G B Y †	R G B † Y	R G B † Y	
Mtg Cord in Set**	R G Y BK W	L2 L1 A 4 3	L2 L1 G 4 3	L1 L2 G 4 3	L1 L2 A 4 3	L1 L2 A 4 3	
Line Switch Lead	W S BR	F * C	F A C	F (C) A C (F)	F (C) * C (F)	F (C) * C (F)	
M1A Ringer Leads	R BK S S-R	K 3 * *	K G * *	K G * *	K 3 B *	K 3 * B	K 3 ¶ *

- \* Insulate and store.
- † Connect wire to mounting cord lead using D-161488 connector.
- ‡ For tip party service with ANI, remove (BK) strap between network terminals A and H, insulate and store.
- § Terminals 3 and 4 in telephone set are on lamp terminal block.
- ¶ See Table K for connection of D-180489 Kit of Parts.
- \*\* 5-conductor mounting cord required for use with 11-type extender.
- †† Remove (BK) strap between L2 and A.
- Indicates connections for 2702-Type sets only.

◆ TABLE G ◆

DESIGN LINE SERIES TELEPHONE SETS  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS AT CONN BLK AND TEL SET	COLOR	ASSOCIATED WITH FIGURE					
		2A	2B	3A	3B	2B (-) OR 4B (+)	
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	TWO PTY TIP WITH ANI	
			NO ANI		NO ANI	USING RINGER	
				1000 Ω	2650 Ω		
Mtg Cord Jack Leads †	R G Y BK	L2† L1 G A	A L1 L2† G	L1 A L2† G	F (C) L2† G A		F (C) L2† G A
Line Switch Leads †	Y W BR S	L2† F C L2†	A F C A	A C F A	L2† B C (F) L2†		L2† § C (F) L2†
P1A Ringer Leads †	R BK S S-R	K G * *	K G * *	K G * *	K G L1 *	K G * L1	K G L1 *

\* Insulate and store.

† Terminal S in 2930A telephone set.

‡ For 921A and 2921A telephone sets, terminals A, L1, G, and L2 are replaced by 1, 2, 3, and 4, respectively.

§ See Table K for connection of 840398168 PWB.

○ Indicates connections for TOUCH-TONE equipped sets.

◆TABLE H◆

AD1 BASE WITH 220A OR 220B HAND TELEPHONE SET  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS AT CONN BLK AND TEL SET¶	COLOR	ASSOCIATED WITH FIGURE				
		2A	2B	3A	3B	2B (-) OR 4B (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	TWO PTY TIP WITH ANI GRD APP 2000Ω
Mtg Cord at Conn BLK**	R G Y BK W	R G Y ‡ B	R G ‡ Y B	R G ‡ Y B	R G Y ‡ B	
Mtg Cord Jack Leads in Set	R G Y BK W	L2 L1 3 1 G	L2 L1 3 1 G	L1 L2 3 1 G	L1 L2 3 1 G	
Dial LT TRNSF	Y BK	Y ‡	‡ Y	‡ Y	Y ‡	
Handset Cord Jack	R G	C F	C F	F† C	F† C	
Strap From A	BK	G	L2	L2	G	
Line Switch	S	*	A	A	*	
P1 A Ringer Leads	R BK S S-R	K 3 B§ *	K G B§ *	K G B§ *	K 3 B *	

\* Insulate and store.

† Reverse jack leads for 2220B only.

‡ Connect wire to mounting cord lead using D-161488 connector.

§ If H5AA handset cord is used and ANI ground is not provided; insulate and store (S) lead.

¶ All bases manufactured prior to 10-1-72 or any base which has been opened should be wired per Section 502-322-400, Table A before installing.

\*\* Only the AD1 base with a five conductor mounting cord can be used with the 11A/B Extender.

♦TABLE I♦

AC1 BASE WITH 220A OR 2220B HAND TELEPHONE SET  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

WIRE OR LEADS IN TEL SET §	COLOR	ASSOCIATED WITH FIGURE				
		2A	2B	3A	3B	2B (-) OR 4B (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	TWO PTY TIP WITH ANI GRD APP 2000Ω
Inside Wire	R		L2	L2	L1	L1
	G		L1	L1	L2	L2
	Y		3	—	—	3
	BK		G	G	G	G
Dial LT TRNSF	Y		3	3	3	3
	BK		1	1	1	1
Strap From A	BK		G	L2	L2	G
Line Switch	S		*	A	A	*
Handset Cord Jack	R		C	C	F <sup>†</sup>	F <sup>†</sup>
	G		F	F	C <sup>†</sup>	C <sup>†</sup>
P1 A Ringer Leads	R		K	K	K	K
	BK		3	G	G	3
	S		B <sup>‡</sup>	B <sup>‡</sup>	B <sup>‡</sup>	B
	S-R		*	*	*	*

\* Insulate and store.

† Reverse jack leads for 2220B only.

‡ If H5AA handset cord is used and ANI ground is not provided; insulate and store (S) lead.

§ All bases manufactured prior to 10-1-72 or any base which has been opened should be wired per Section 502-322-400, Table A before installing.

♦TABLE J♦

960A01M OR 2960A01M TELEPHONE SETS  
11A/B EXTENDER – LINE AND RINGER CONNECTIONS

LEADS IN TEL SET†	COLOR	ASSOCIATED WITH FIGURE				
		2A	2B	3A	3B	2B (-) OR 4B (+)
		(-) RING PTY	(-) TIP PTY	(+) RING PTY	(+) TIP PTY	TWO PTY TIP WITH ANI GRD 2600Ω
Mtg Cord	R	6		5	7	6
Jack	G	7		7	5	7
Leads	Y	1		*	*	1
(Phone)	BK	19		1	1	19
Pigtail	BL	19		10		19
Strap	BK	11		9		11
Leads‡	G	*		*		9
P1 A	R	4		4		4
Ringer	BK	1		1		1
Leads	S	*		*		5
	S-R	*		*		*

\* Insulate and store.

† Terminals are on Power Supply Board (PSB).

‡ Pigtail strap leads have a spade tip on one end and are connected to the printed wiring board by a BERG terminal on the other end.

◆TABLE K◆

CONNECTIONS FOR D-180489 KIT OF PARTS (ANI)  
(SEE NOTE)

SETS USING BOTH 1728-TYPE INDUCTOR AND 840398168 PWB						
TYPE TEL SET	(R) HANDSET JACK OR HANDSET LEAD		INDUCTOR		PWB	
	REMOVE FROM	CONNECT TO	COLOR	CONNECT TO	COLOR	CONNECT TO
500- and 554-	R of Net.	R on PWB	S BK	S of PWB G of Net.	Y G	R of Net. B of Net.
2500- and 2554- E/W 4228 Network	T of Net.	R on PWB	S BK	S of PWB G of Net.	Y G	T of Net. B of Net.
2554- E/W 4010D Network	11 of Term. Strip	R on PWB	S BK	S of PWB 3 of Term. Strip	Y G	11 of Term. Strip B of Net.
750- and 2750-	R of Net.	R of PWB	S BK	S of PWB Y†	Y G	R (Rotary) G (TOUCH-TONE) B of Net.
SETS WHICH USE 840398168 PWB ONLY						
TYPE TEL SET	(R) HANDSET JACK OR HANDSET LEAD		RINGER LEAD		PWB	
	REMOVE FROM	CONNECT TO	COLOR	CONNECT TO	COLOR	CONNECT TO
702-	R of Net.	R of PWB	S	S of PWB	Y G	R of Net. B of Net.
2702-	6 of Term. Strip	R of PWB	S	S of PWB	Y G	6 of Term. Strip B of Net.
DESIGN LINE* Series	R of Net. (Rotary) T of Net. (TOUCH-TONE)	R of PWB	W ‡	S of PWB	Y G	R (Rotary) T (TOUCH-TONE) B of Net.

\* Trademark AT&TCo.

† This terminal is found on the 814313946 (P-43A394) mounting block inside set.

‡ Line switch lead on DESIGN LINE sets.

Note: See Section 501-376-100 for mounting instructions.