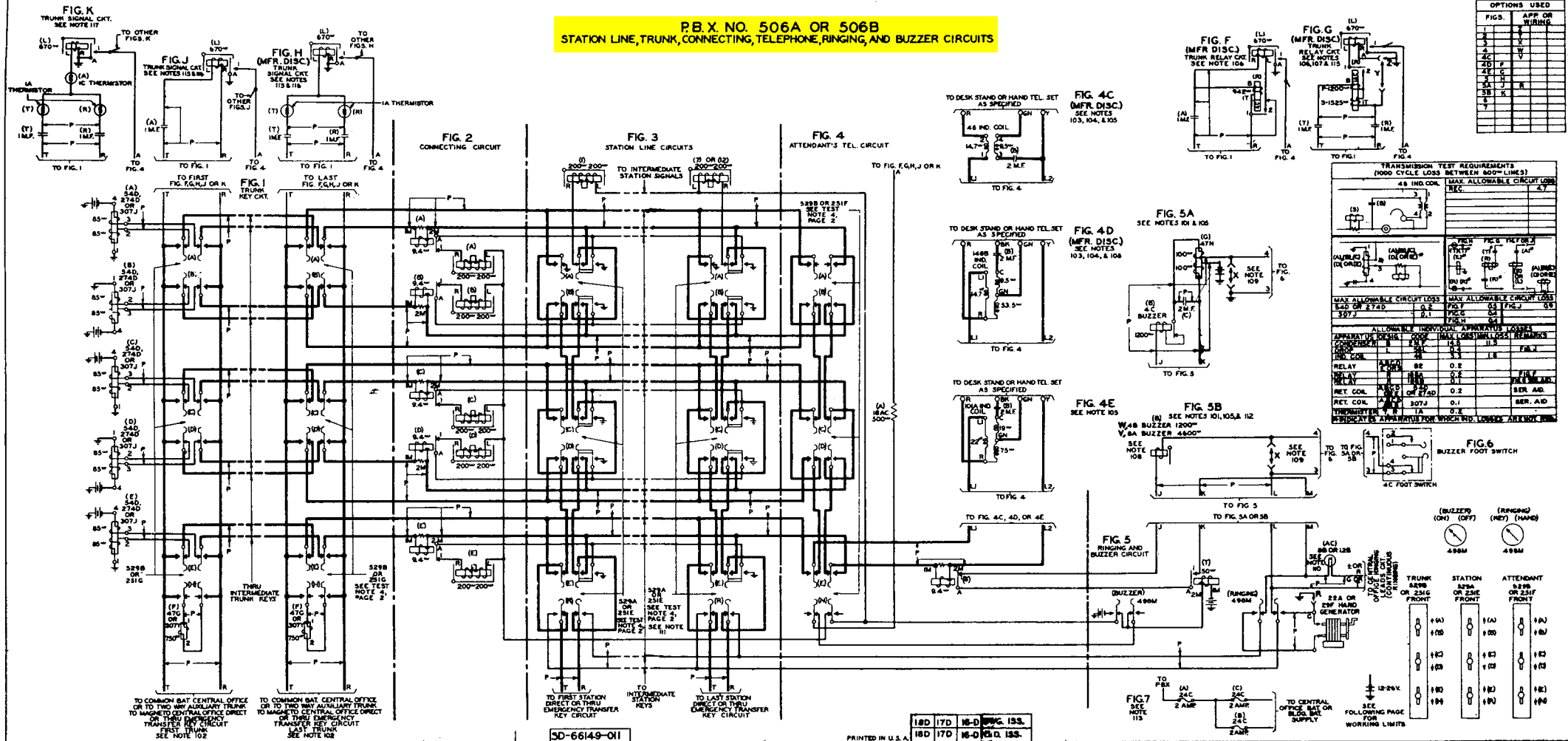


P.B.X. NO. 506A OR 506B
STATION LINE, TRUNK, CONNECTING, TELEPHONE, RINGING, AND BUZZER CIRCUITS



CIRCUIT NOTES:
101. PROVIDE FIG. 5A WHEN RINGING CURRENT IS NOT SUPPLIED FROM THE CENTRAL OFFICE; OTHERWISE PROVIDE FIG. 5B.

- 102 WHEN FIG. F OF THIS CIRCUIT IS CONNECTED TO A STEP BY STEP OFFICE SUBSCRIBER'S LINE CIRCUIT WHICH HAS THE CONNECTIONS TO THE LINE FINDER OR LINE SWITCH REVERSED AT THE I.D.F. FOR MAINTENANCE PURPOSES, REVERSE THE TIP AND RING OF FIG. I AT

103. FIG. 4C IS ARRANGED FOR SIDE TONE.
FIG. 4D IS ARRANGED FOR ANTI-SIDE TONE

- 104 PRIOR TO ISSUE 3-D FIGS. 4A AND 4B COVERING THE
SIDE TONE TELEPHONES WERE SHOWN. FIG. 4C WAS
PART OF FIG. 4 AND FIG. 4D AND CIRCUIT NOTE 103
WERE NOT SHOWN.

- 105 THE USE OF FIGS. 4C AND 4D IS RATED "MFR DISC" AND REPLACED BY FIG. 4E ON ISSUE 4-D. PRIOR TO ISSUE 4-D FIG. 4-E WAS NOT SHOWN AND "L" AND "M" LEADS IN FIG 5B AND BATTERY AND GROUND IN FIG. 5A WERE TRANSPOSED.

- SUPERSEDED BY FIG. G ON ISSUE 6-D. PRIOR TO IS-
SUE 6-D FIG. G WAS NOT SHOWN AND FIG. F WAS PART
OF FIG. I.

107. PROVIDE "Y" WIRING FIG. G WHEN A MAIN LONG LINE
15C) CKT. IS CONNECTED BETWEEN THE P.B.X. AND
THE CENT. OFF. OTHERWISE PROVIDE "Z" WIRING.
16 PRIOR TO ISS. 7-D "Y" WIRING WAS NOT SHOWN &

- NOTE 112 *Z-WIRING WAS NOT DESIGNATED.
108. THE USE OF "W" APP IS RATED "MFR. DISC." SUPER
(MFR. DISC.) SEDED BY "V" APP. ON ISS. 7-D PRIOR TO ISS. 7-
SEE "V" APP. WAS NOT SHOWN & "W" APP. WAS NOT
NOTE 112 DESIGNATED.

109. PROVIDE FIG 6 WHEN FOOT SW. IS REQ. OTHER-
WISE PROVIDE "X" WIRING FIG. 5A OR 5B.

110. THE USE OF THE 8B RES. LMP IN THIS CKT. IS RATED "MFR DISC" SUPERSEDED BY THE 12B RES. LMP. ON ISS 7-D. PRIOR TO ISS 7-D THE 12B RES. LMP WAS NOT SHOWN.

TRUNK SIGNALING 20~

	60V	72V	84V	95V
MIN. CENT. OFF. VOLTAGE	400 ^m	520 ^m	550 ^m	635 ^m
MAX. CONDUCTOR LOOP RESISTANCE	FIG. F	1000 ^m	1200 ^m	
	FIG. G			
	FIG. H	1200 ^m		
	FIG. J	1200 ^m		
	FIG. K	1000 ^m		

STATION SIGNALING AND SUPERVISION ON LOCAL CONNECTIONS

MIN VOLTAGE AT P.B.X.	12V.	15V.	18V.
MAX EXTERNAL CKT LOOP	120"	250"	400"

STATION SUPERVISION ON TRUNK CONNECTIONS
-SEE RANGE CHART-

MIN INSULATION RESISTANCE

MIN INSULATION RESISTANCE	
CENTRAL OFFICE TRUNK OR INDIVIDUAL STATION	
MANUAL, PANEL OR CROSSBAR AREA	20
STEP BY STEP AREA	30
ALL STATIONS COMBINED	26V.

BATTERY SUPPLY FEEDER CONDUCTOR LOOP RESISTANCE

MIN. CENTRAL OFFICE OR BUILDING DEDICATED VOLTAGE *	MIN. PH. VOLTAGE 4 OR MORE STATIONS			MIN. PBX VOLTAGE LESS THAN 4 STATIONS		
	12V	15V	18V	12V	15V	18V
18V	25	14	10	20	8	6
20V	23	13	9	18	6	4
21V	55	23	11	105	56	23
22V	50	20	11	120	66	30
23V	45	18	10	130	70	32
24V	35	14	8	147	90	51
25V	31	12	7	150	90	51
26V	27	10	6	220	118	59
28V	40	16	8	243	220	160
30V	18	9	5	250	280	190
40V	10	5	3	270	300	210
45V	7	4	2	280	315	220

* WHEN MAXIMUM CENTRAL OFFICE DEDICATED VOLTAGE EXCEEDS 28 VOLTS FEEDER SHALL BE EQUIPPED WITH 1/4" RES. LAMP OR EQUIVALENT IN BATTERY

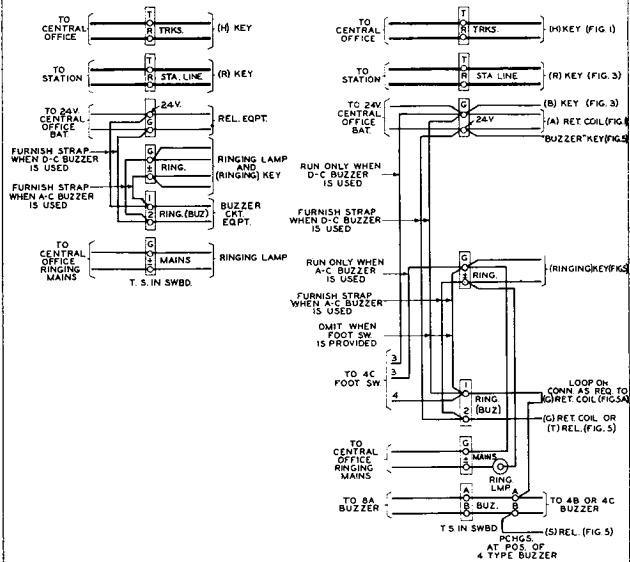
WHEN MAXIMUM CENTRAL OFFICE VOLTAGE EXCEEDS 28 VOLTS FEEDER SHALL BE EQUIPPED WITH 11C RES LAMP OR EQUIVALENT IN BATTERY SIDE AT CENTRAL OFFICE.

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18D	17D	16-D	DWG. 135
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18D	17D	16-D	C.D. ISS.
-----	-----	------	-----------

FIGS. 1L, 2L, 3L, 4L, & 5L



EQUIPMENT NOTES:

201. FIGS. 1K, 2K, 3K, 4K, AND 5K HAVE BEEN RATED "MFR. DISC" AND SUPERSEDED BY FIGS. 1L, 2L, 3L, 4L, AND 5L ON ISSUE 5-D. PRIOR TO ISSUE 5-D, FIGS. 1L, 2L, 3L, 4L, AND 5L WERE NOT SHOWN.

18D	17D	16-D	DWG. ISS
-----	-----	------	----------

18D	17D	16-D	C.D. ISS.
-----	-----	------	-----------

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CIRCUIT REQUIREMENTS

P. B. X. NO. 506A OR 506B (STA. LINE, TRKS, TEL, BUZ, RING)

OWG
ISS.

APPARATUS		MECH. REQ.		CIRCUIT PREPARATION				TEST SET	SEE TEST	DIRECT CURRENT FLOW REQ.				REMARKS	
DESIG.	CODE	BSP FIG.	CONT. PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA	SET NOTE	TEST NO.	TEST WDG.	TEST FOR	AFTER SOAK	TEST	READJ.		
						CONN. BAT. CONNGRD.					MA	MA	MA		
RELAYS															11
FIG. F															12
L	56L DROP					L (L) R (L)	B/G	1/4		O -21			6.5	13	
						L (L) R (L)	B/G	1		R 21			O.C.	14	
								1		O		A-C		15	
R	186A					IT (R) B (R)	B/G	2		O		A-C	7.5	16	
						IT (R) B (R)	B/G	2		NO			4	17	
FIG. G															18
L	56L DROP					L (L) R (L)	NGB	1/4/3		O -21			6.5		
						L (L) R (L)	NGB	1		R 21			O.C.	"Z" OPTION	
								1		O		A-C			
						L (L) R (L)	B/G	1/4		O -21			6.5		
						L (L) R (L)	B/G	1		R 21			O.C.	"Y" OPTION	
								1		O		A-C			
R	186B				1/2(R)	IT (R) B (R)	B/G		P/S	O		4.2	3.8	OPEN T & R OF TRUNK	
					1/2(R)	IT (R) B (R)	B/G		P/S	NO		1.7	1.9		
FIG. H															
L	56L DROP					L (L) R (L)	NGB	5		O -21			6.5	OPEN T & R OF TRUNK	
						L (L) R (L)	NGB	5		R 21			O.C.		
								6		O		A-C			

TEST NOTES:

1. (A) WHEN READJUSTING OPEN RING OF TRUNK. TEST ON RINGING CURRENT FROM CENTRAL OFFICE.

OR (B) WHEN TESTING AND READJUSTING OPEN RING OF TRUNK. TEST FOR OPERATION ON A-C BY CONNECTING 105V. 1100-1200 R. P.M. RINGING CURRENT THRU 11,000^Ω NON-INDUCTIVE RESISTANCE TO OUTER WINDING (R) REL. AND RINGING GROUND TO TIP OF TRUNK TOWARDS CENTRAL OFFICE. THE ABOVE REQUIREMENTS ARE BASED UPON THE USE OF ONE 13C OR EQUIVALENT RESISTANCE LAMP IN SERIES WITH RING SUPPLY.

2. (A) WHEN READJUSTING INSULATE CONTACTS 1 & 2 OF (R) REL. AND OPEN RING OF TRUNK. TEST ON RINGING CURRENT FROM CENTRAL OFFICE.

OR (B) WHEN READJUSTING INSULATE CONTACTS 1 & 2 OF (R) REL. AND OPEN RING OF TRUNK. WHEN TESTING OPEN RING OF TRUNK. TEST FOR OPERATION ON A-C BY CONNECTING 105 V. 1100-1200 R. P.M. RINGING CURRENT THRU 11,000^Ω NON-INDUCTIVE RESISTANCE TO OUTER WINDING OF (R) REL. AND RINGING GROUND

TO THE TIP OF THE TRUNK TOWARDS CENTRAL OFFICE. THE ABOVE REQUIREMENTS ARE BASED UPON THE USE OF ONE 13C OR EQUIVALENT RESISTANCE LAMP IN SERIES WITH RING SUPPLY.

3. PRIOR TO ISSUE 2-D, THE READJUST OPERATE CURRENT FOR THE 56L DROP WAS 5.5.
4. IF NGB IS NOT AVAILABLE, DISCONNECT SWBD. GRD. AND APPLY TEST SET PREP. B/G.
5. (A) TEST ON RING. CURRENT FROM CENT. OFF. OR (B) OPEN TIP & RING OF TRK. TEST FOR OPERATION ON A-C BY CONNECTING 105V. 1100-1200 R.P.M. RING. CURRENT THRU 11,000^Ω NON-INDUCTIVE RESISTANCE TO FIRST RING TERMINAL OF TRK. AND THEN TO TIP TERMINAL OF TRK. THE ABOVE REQUIREMENTS ARE BASED ON THE USE OF ONE 13C OR EQUIVALENT RESISTANCE LAMP IN SERIES WITH RING SUPPLY.

APPARATUS		MECH. REQ.		CIRCUIT PREPARATION				TEST SET	SEE	DIRECT CURRENT FLOW REQ.				REMARKS	DWG. ISS.	
DESIG.	CODE	BSP FIG.	CONT. PRES.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP.	TEST NOTE NO.	TEST WDG.	TEST FOR	AFTER SOAK	TEST			READ.
						CONN.	BAT. CONN.	GRD.				MA	MA			MA
FIG. J																
L	56L DROP					L(L)	R(L)	B/G			O	-21		6.5	OPEN T & R OF TRUNK	
						L(L)	R(L)	B/G			R	21		O.C.		
									4/5		O		A-C			
FIG. K																
L	56L DROP					L(L)	R(L)	NGB	1		O	-21		6.5	OPEN T & R OF TRUNK	
						L(L)	R(L)	NGB	1		R	21		O.C.		
									2/5		O		A-C			
FIG. 2																
A TO E	4J OR 4K SIG.						R	SIG.	GRD		O		19	17		
							R	TST.	GRD		R		1.3	1.5		
A TO E	B2	2		30			2M	REL.	GRD		O	150	16	15		
							2M	TST.	GRD		R	150	4.7	5		
FIG. 3																
1 TO 12	4K SIG						R	SIG.	GRD	3	O		19	17		
							R	TST.	GRD	3	R		1.3	1.5		
FIG. 4																
S	B2	2		30		1M(S)	2M(S)	B/G			O	150	16	15		
						1M(S)	2M(S)	B/G			R	150	4.7	5		
TEST NOTES:																
1. IF NGB IS NOT AVAILABLE DISCONNECT SWBD. GRD AND APPLY B/G TEST SET PREP.																
2. TEST ON RINGING CURRENT FROM CENTRAL OFFICE OR TEST FOR OPERATION ON A-C BY CONNECTING 105V. 1100-1200 R.P.M. RINGING CURRENT THRU 6500 ^Ω NON-INDUCTIVE RESISTANCE FIRST TO RING TERMINAL OF TRUNK & THEN TO TIP TERMINAL OF TRUNK.																
3. OPERATE STATION KEY (A) WHEN TESTING OR READJUSTING.																
4. TEST ON RINGING CURRENT FROM CENTRAL OFFICE OR TEST FOR OPERATION ON A-C BY CONNECTING 105V. 1100-1200 R.P.M. RINGING CURRENT THRU 12000 ^Ω NON-INDUCTIVE RESISTANCE TO RING TERMINAL OF TRUNK AND RINGING GROUND TO TIP TERMINAL OF TRUNK.																
5. THESE REQUIREMENTS ARE BASED ON THE USE OF A 13C OR EQUIVALENT RESISTANCE LAMP IN THE RINGING SUPPLY.																

SD-66149-01 (3 PAGES) PAGE 2

APPARATUS		MECH. REQ.		CIRCUIT PREPARATION				SEE		DIRECT CURRENT FLOW REQ.					REMARKS	DWG ISS
DESIG	CODE	BSP FIG.	CONT. PRESS	ARM. STRVL	BLOCK OR INSULATE	TEST CLIP DATA	TEST SET PREP	TEST NOTE NO.	TEST WOG.	TEST FOR	AFTER SOAK MA	TEST MA	READU MA			
FIG. 5																15
T	B21	1		30		2M (T)	GRD	2		0	225	52	4.9		16	
						2M (T)	GRD	2		R	225	17	1.8		17	
MAGNETS																18
FIG 5A																
B	4C							1								
BUZZER																
FIG 5B																
B	4B							1								
BUZZER																
MISC.																
FIGS. 1, 2 & 4																
529A&B KEYS																3
TEST NOTES:																
1. THE 4B AND 4C BUZZERS SHALL BE TESTED AND READJUSTED TO OPERATE SATISFACTORILY IN THE CIRCUIT WHEN THE (T) REL. IS BLOCKED OPERATED.																
2. OPERATE (BUZZER) KEY WHEN TESTING OR READJUSTING.																
3. WHEN LEVER IS RELEASED FROM OPERATED POSITION TO NORMAL, NO MAKE CONTACT SHALL MAKE, OR BREAK CONTACT BREAK, ON THE OPPOSITE SPRING COMBINATION FOR KEY UNITS OF 529 B KEYS AND RING TALK UNIT OF 529 A KEYS.																