

THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY

Washington, D. C., June 21, 1972

HOLDERS OF SSD BINDERS:

The enclosed SSI and SSD pages are additions for your Special Services Drawing Books. Our records show your District has _____ binders.

Original Signed By:

A. A. Child

District Plant Manager - SSMB

Enclosure:

Reference: A.R. Putnam
392-3121

FOREWORD

THE SPECIAL SERVICE MANAGEMENT BUREAU, WITH THE COOPERATION OF THE FACILITIES ENGINEERING GROUP, HAS PREPARED A BOOK OF STATION EQUIPMENT DRAWINGS AND COMPOSITES OF DRAWINGS TO ASSIST THE FIELD IN THE INSTALLATION OF SPECIAL SERVICES.

THIS BOOK WILL BE KNOWN AS SPECIAL SERVICES DRAWINGS (SSD's). INCLUDED WILL BE SPECIAL SERVICE DRAWINGS (SSD's), SPECIAL SERVICE INFORMATION (SSI's), TESTING INFORMATION AND OTHER DATA WHICH MAY BE HELPFUL IN THE SPECIAL SERVICES JOB. ADDITIONS AND CHANGES WILL BE MADE AS REQUIRED.

ADDRESS ALL INQUIRIES AND/OR SUGGESTIONS ABOUT THIS BOOK TO:

SSMB
FOREMAN SUPERVISOR-INSTALLATION
608 13TH ST. N.W. 4TH FLOOR

District Plant Manager	H. C. Parker	2225
Administrative Assistant	Mrs. T. A. Richardson	2744

RESULTS
P.R.#

OFF.
EXT.

SECTION D

15-0	H. B. McLaughlin	2484	1714 2nd St. S.W. 2nd Flr.
019	J. D. Hudnall	3466	1714 2nd St. S.W. 2nd Flr.
029	S. - Gregory	8391	1714 2nd St. S.W. 2nd Flr.
039	R. L. Pickeral	2168	1714 2nd St. S.W. 2nd Flr.
049	H. W. Leidecker	3695	Nassif Bldg. 400 - 7th St. S.W.
059	W. B. Madden (M)	2891	1714 2nd St. S.W. 2nd Flr.
069	R. T. Russell	2197	1714 2nd St. S.W. 2nd Flr.
	J. M. Freeze (Control)	2629	30 E St. S.W.

SECTION E

34515-2	J. F. Dunlop	3362	730 11th St., N.W., Rm. 502
219	R. J. McNally	8974	H.U.D. Bldg. 451 - 7th St. S.W. Rm. B168
229	J. T. Smith	3740	R.O.B. Bldg. 7th & D St. S.W. Rm. 1636
239	L. C. Warfield	2485	F.O.B. #6 - 400 Md. Ave. S.W. Rm. B-0015
249	L. E. Burke	3775	H.E.W. 300 Indep. Ave. S.W. Rm. 4166
259	R. W. Hertel (M)	8300	R.O.B. Bldg. 7th & D St. S.W. Rm. 1636
269	W. L. Foust (M)	8349	H.U.D. Bldg. 451 - 7th St. S.W. Rm. B168
289	R. W. Hertel (M)	8300	R.O.B. Bldg. 7th & D St. S.W. Rm. 1636

SECTION F

4515-4	C. F. Hayden	2929	730 11th St., N.W., Rm. 502
419	B. J. Ward	3753	F.O.B. #9 - 1900 E St N.W. Rm. GH45B
429	J. W. Souder	2952	G.S.A. 18th & F N.W. Rm. G-21-23
439	C. M. Derr	3664	Commerce - 14th & Const. N.W. Rm. 6043-45
449	B. J. Ward	3753	R.O.B. #9 - 1900 E St. N.W. Rm. GH 45B
459			
469	S. A. Hollar (M)	2830	G.S.A. 18th & F St. N.W. Rm-21-23
	A. J. Martin (Control)		30 E St. S.W.

SECTION G

34515-6	A. D. Davis	5660	730 11th St., N.W., Rm. 502
619	L. P. Sullivan	2162	Justice - 9th & Const. Rm. B-142
629	H. L. Somers	2945	Agric. So. Bldg. 14th & Ind. S.W. Rm. 0439
639	H. G. Bowman	5472	Forrestal Bldg. Rm. GA-101
649	T. E. Corbett	2223	N. Post Ofc. 12th & Pa. N.W. Rm. 1433
659	W. D. Ruble (M)	2638	Agric. Sp. Bldg. 14th & Ind. S.W. Rm. 0439
669	J. F. Pilkins (M)	2163	Commerce - 14th & Const. N.W. Rm. 6034-45

SECTION H

34515-8	E. W. Rodney	2849	30 E St. S.W.
819	P. J. Gallagher	2007	722 12th St. N.W. 4th Flr.
829	R. L. Miller	3171	30 E St. S.W.
839	J. P. Pendergraph	8311	722 12th St. N.W. 4th Flr.
849	R. L. Miller	3171	30 E St. S.W.
859	A. M. Nichols	3166	30 E St. S.W.
869	M. L. Kinhead	3756	30 E St. S.W.
879	B. L. Brown	8216	30 E St. S.W.
889	J. P. Pendergraph	8311	722 12th St. N.W. 4th Flr.
899	P. M. Harker	5467	722 12th St. N.W. 4th Flr.
909	J. J. Schultz	2658	30 E St. S.W.
919	J. J. Schultz	2658	30 E St. S.W.

THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY

Listed below are frequently used drawings and their use.

<u>NUMBERS</u>	<u>TITLE OR USE</u>
K 1004 E,S,& W.	4 - Wire Key Signal PL For 201 Data Set E/W 804 AUX.
C 1131 E,S,& W,	Loop to Ground Start Conversion
E 9046 E & S	Panel Mounted KTU For Single DX Signalling
CD & SD 1D061.01	Data Set - 201 Terminations
CD & SD 1D070.01	Data Set - 201 Terminations
CD & SD 1D071.01	Data Set - 201 Terminations
ES 65602.01	PBX Long Trunk Circuit
ES 65625.01	PBX AUX. Trunk Circuit
CD & SD 65718.01	Dial Repeating Tie Trunk
CD & SD 65718.02	Dial Repeating Tie Trunk
CD & SD 66522.01	PBX Ringdown Tie Trunk
CD & SD 66523.01	PBX Dial Tie Trunk
CD & SD 66524.01	PBX Auto Tie Trunk
CD & SD 69254.01	2 & 4 Wire P.L. Sta. CKT.
SD & CD 69288.01	Panel Mounted Key Telephone Units
CD & SD 69292.01	E & M Signal 20 Cycle 2 Wire
CD & SD 69343.01	Voice Operated Switch
CD & SD 69449.01	4 - Wire Private Line Circuit
CD & SD 69487.01	Speaker Phone 2 & 4 Wire
CD & SD 69488.01	4 - Wire Subscriber Line Circuit E & M Signal Rotary Dial

<u>NUMBERS</u>	<u>TITLE OR USE</u>
CD & SD 69491.01	AUX Transfer E & M Sig.
CD & SD 69527.01	Telephoto 110 A Key Equipment
CD & SD 69542.01	2 or 4 Wire Speaker Phone Control CKT.
CD & SD 69543.01	4 - Wire Autovon
CD & SD 69544.01	Autovon - Transfer
CD & SD 69566.01	4 - Wire PL Station Termination
CD & SD 69594.01	SSIA Selective Signalling System
CD & SD 81838.01	Audio Tone Generator
CD & SD 95387.01	DX 1 Signalling Circuit
CD & SD 95488.01	DX 2 Signalling Circuit
CD & SD 96251.01	Dial Long Line Circuit
CD & SD 96252.01	Dial Long Line Circuit
CD & SD 98093.01	SSI Selective Signalling System
CD & SD 99739.01	24 V4 Repeater

SYSTEM SERVICE ORDER FORMAT

NOTE: Bold face codes
req'd on all orders

ADDRESSEE	TO
ORIGINATOR	ORG
SALESMAN NAME AND TELEPHONE NUMBER	SLS TN
TYPE OF SSO	
TYPE OF ORDER EXPLAIN IN ENGLISH	
SYSTEM SERVICE ORDER NUMBER RELATED SSO	SSO RO
ORDER NUMBER (Billing Service Order) RELATED ORDER NUMBER	ORD RO
CIRCUIT NO. X OR TELEPHONE NUMBER	CKT or TN
APPLICATION DATE & CODE ISSUED DATE OF SSO	APP ID
PLANT TEST DATE & REQUISITION DUE DATE	PTD RDD
DUE DATE AND CODE	DD
CONTRACTING CUSTOMER NAME AND TEL NO	CCN TN
CONTRACTING CUSTOMER LOCATION AND CONTACT	CCL CON
PLANT CONTROL OFFICE ENGINEERING CONTROL OFC. STATION ENGINEERING CON. OFC. ACCOUNTING CONTROL OFC.	PCO ECO / SECO ACO
PLACE ACTION CODE I (IN, O, OUT) OR C (CHANGE) IN SPACE BEFORE APPLICABLE CODE LISTED NAME NON LISTED NAME NON PUBLISHED NAME FOREIGN LISTED NAME	--- LIST
ACTION CODE LISTED ADDRESS	LN NL ST NP FL
ACTION CODE YELLOW PAGE HEADING & CODE NUMBER	LA YPH
FOREIGN DIRECTORY NAME DELIVER (NUMBER)	--- DIR
DIFFERENT DELIVERY ADDRESS	FDN / DEL
DIRECTORY DELIVERY INSTRUCTIONS	DDA DDI

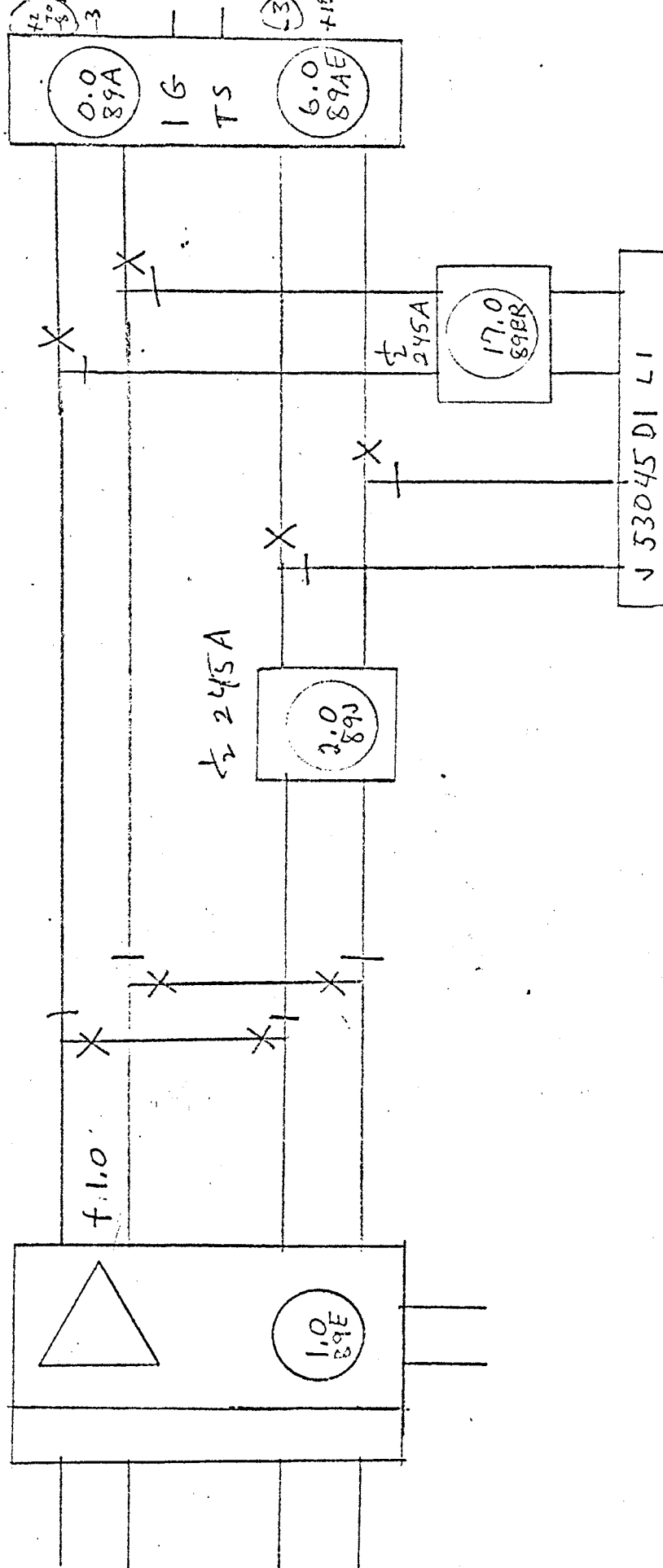
TRAINING DATE	--- TFC
TRAINING INSTRUCTIONS	TND TNI
BILLING NAME (LINE 1)	--- BILL
BILLING ADDRESS (LINE 2)	BN1
POST OFFICE CITY & ZIP	BA2
CREDIT CLASS	PO
SPECIAL BILLING INSTRUCTIONS	CC SB
REMARKS	--- RMKS
CIRCUIT LOCATION (LETTER, CITY, STATE)	RMK --- S & E
SERVICE NAME LISTED NAME SHOW ONLY IF DIFFERENT THAN SN	CKL
SERVICE ADDRESS LISTED ADDRESS SHOW ONLY IF DIFFERENT THAN SA	SN /LN SA /LA
CUSTOMER CONTACT TEL NO	CON /TN
ACTION CODES I (IN), O (OUT), M (MOVE) OR C (CHANGE), T (TO) OR X (TO & MOVE); QUANTITY OF EQUIPMENT; USOC CODE; DESCRIPTION OF SERVICE AND IF APPLICABLE ESSENTIALITY CLASSIFICATION	/DES
BILLING INSTRUCTION (BI) OR SERVICE AND EQUIPMENT INSTRUCTION (SEI) ENTRIES FOLLOW THE ENTRY THEY RELATE TO.	BI SEI
SUBSEQUENT CIRCUIT LOCATIONS (CKL) OR STATIONS (STA) SHOULD BE ENTERED IN THE FORMAT LISTED FOR THE INITIAL LOCATION.	

FOR ADDITIONAL INFORMATION SEE BSP 010-520-112

4W PL
 4-W Voice
 2-W DATA

227B

241A or B



0.0

-1/6

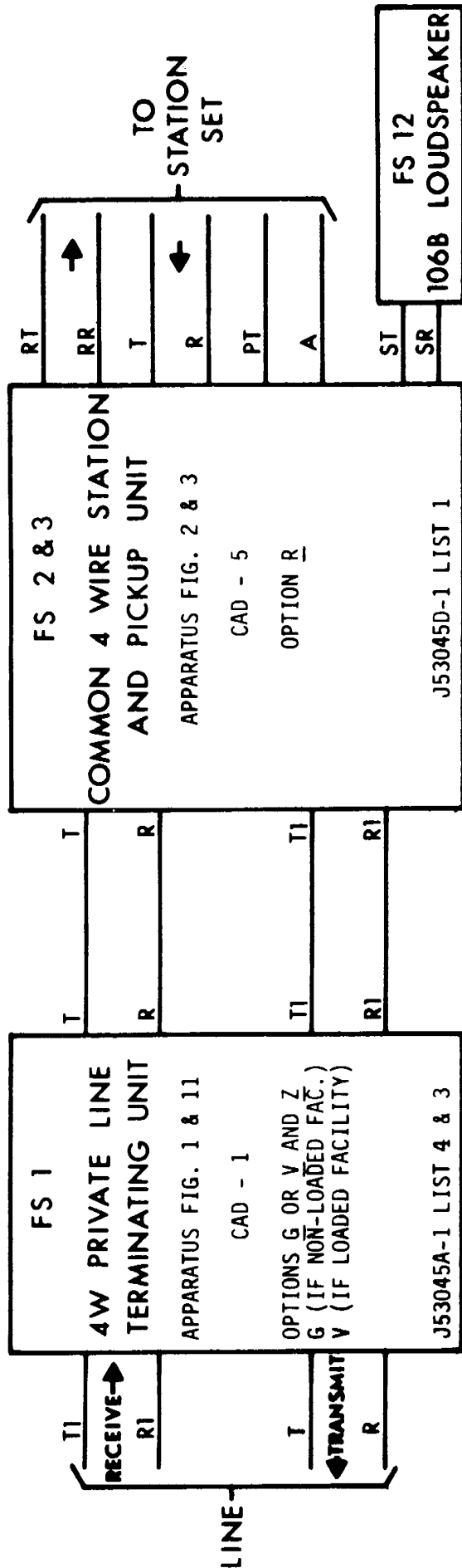
:-NOTES:-

1. REFER TO SD-69366-01.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "C" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
5. IF OTHER 4 WIRE PRIVATE SERVICES TERMINATE AT THE SAME LOCATION, IT MIGHT BE ADVANTAGEOUS TO USE S50-102.

SSD-101AW

**4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING-SINGLE STATION**

11-69



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045D-1, LIST 1 4-WIRE PRIVATE LINE STATION & PICKUP RELAY UNIT
- 1 SET, SPEAKER, LOUD 106B
- 1 AMPLIFIER, 227D

NOTES --

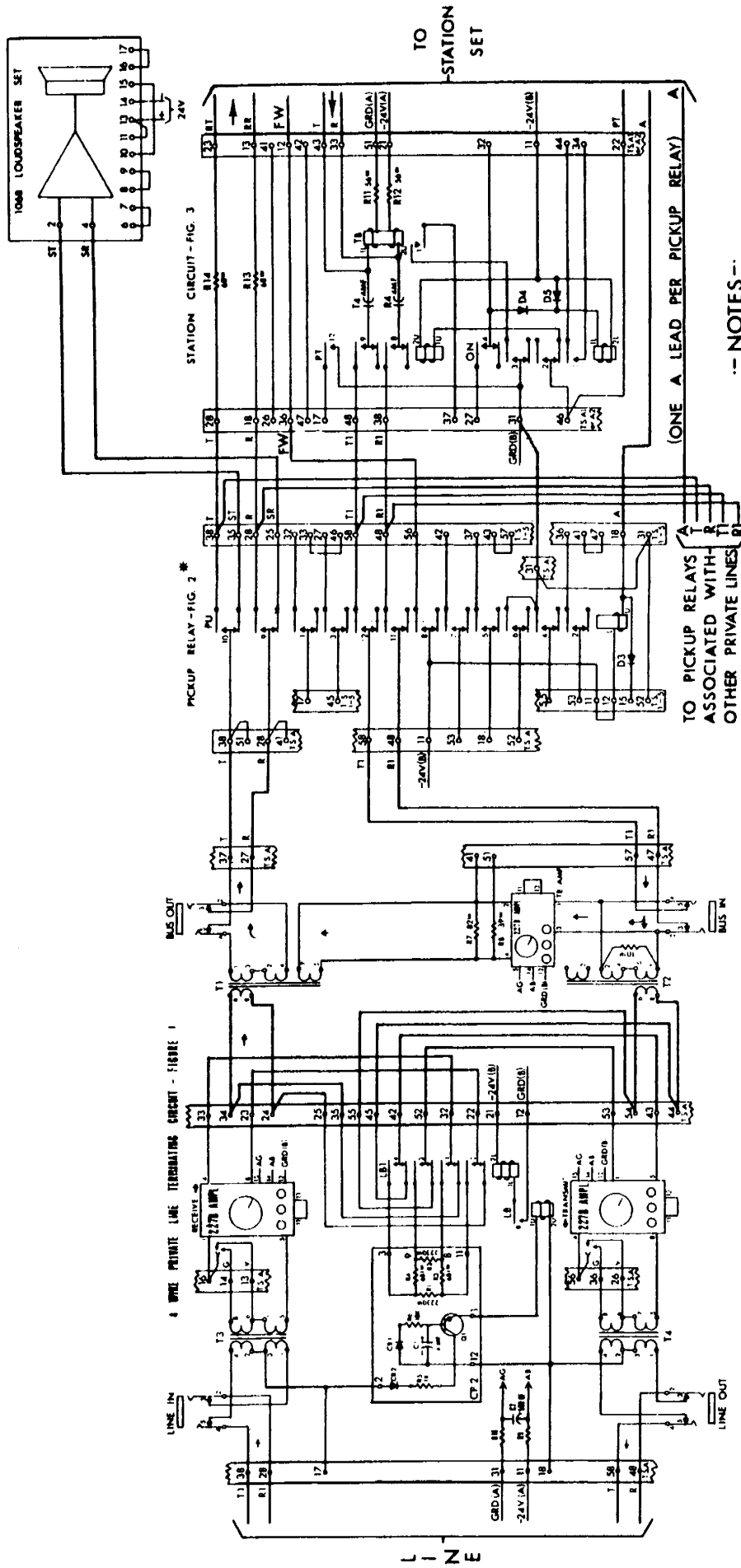
- 1. REFER TO SD-69566-01.
- 2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
- 3. REFER TO BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
- 4. IF OTHER 4-WIRE PRIVATE SERVICES TERMINATE AT THE SAME LOCATION, IT MIGHT BE ADVANTAGEOUS TO USE SSD-102.
- 5. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET.

SSD-101 W

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING-SINGLE STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 10-69
WLT

FIGURE 12



NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.

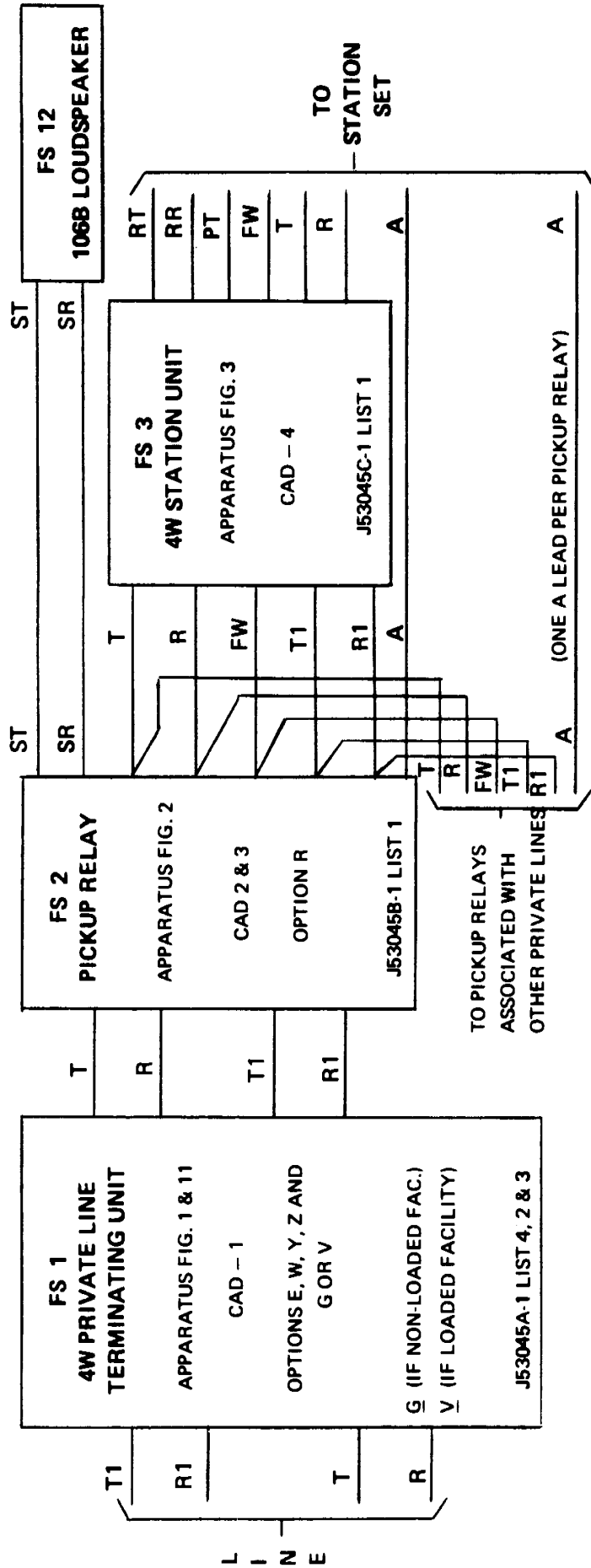
TABLE

FIG. 2 - TERMINAL STRIP "A"				
PICKUP RELAY				
1	2	3	4	5
38	37	36	35	34
28	27	26	25	24
18	17	16	15	14
8	7	6	5	4
38	37	36	35	34
28	27	26	25	24
18	17	16	15	14
8	7	6	5	4

SSD-102AW

4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING WITH LOOP-BACK
MULTI-PRIVATE LINE ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO.



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 & 2 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT
- 1 J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT
- 1 AMPLIFIER, 227D
- 1 SET, SPEAKER, LOUD 106B

SSD-102W

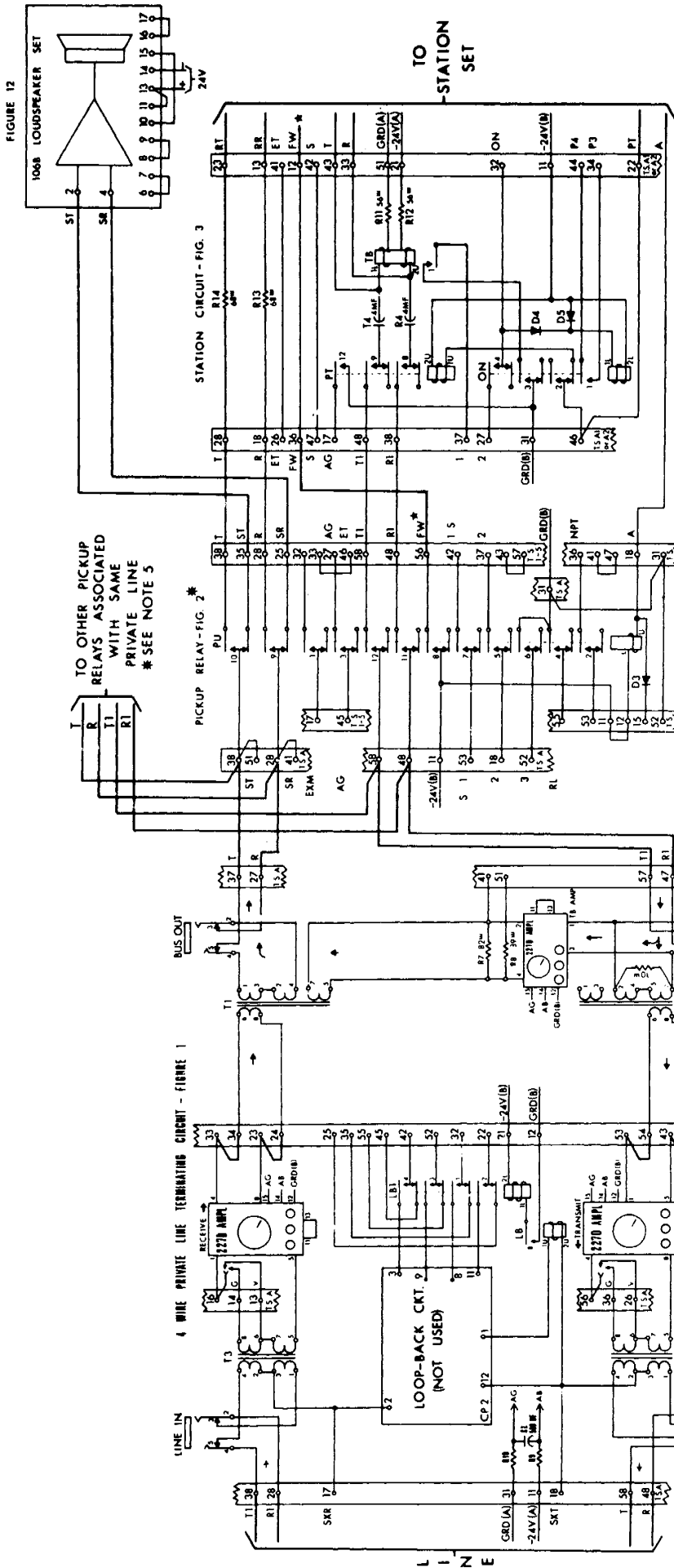
4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING WITH LOOP-BACK
MULTI-PRIVATE LINE ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

10-69

NOTES

- 1. REFER TO SD-59566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
- 2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY LOCAL INSTALLATION FORCES.
- 3. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET.



NOTES--

1. REFER TO SD-69566-01, RSP 518-600-100 THRU 518-600-END AND RSP 463-220-100.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "C" (STRAP 16 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.
6. "FW" LEAD REQUIRED IF KEY TELEPHONE SET IS USED.

TABLE *

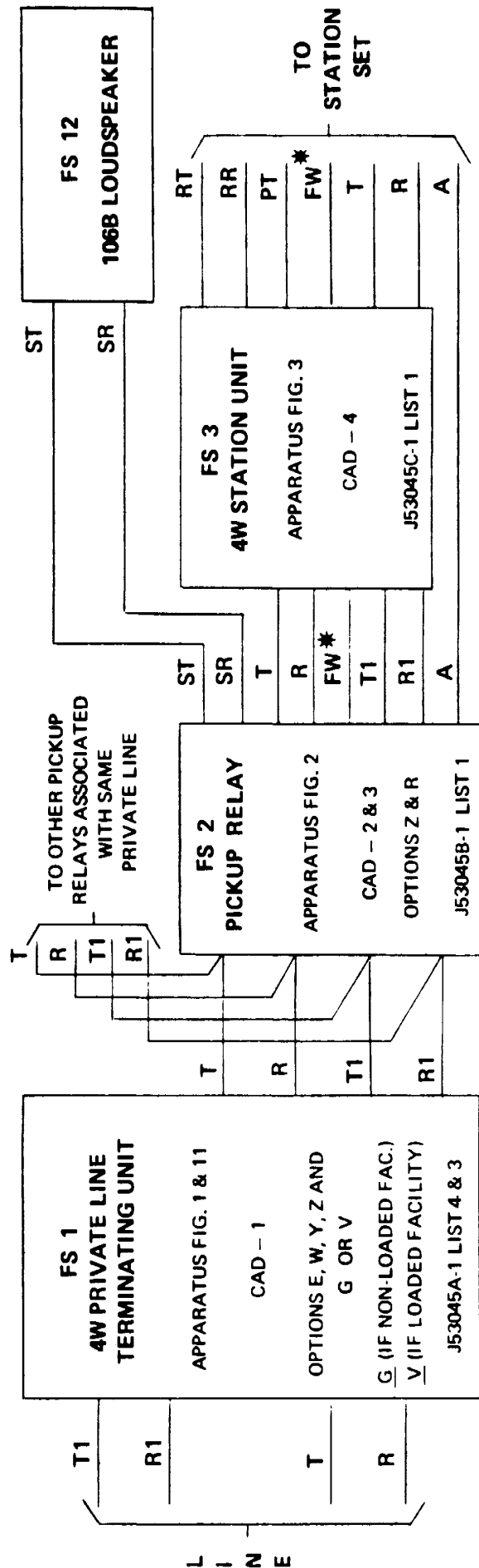
FIG. 2 - TERMINAL STRIP "A"

PICKUP RELAY					
1	2	3	4	5	
1	38	37	36	35	34
2	28	27	26	25	24
3	18	17	16	15	14
4	8	7	6	5	4
5	3	2	1	0	0

SSD-103AW

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING--MULTI-STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 10-69



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT
- 1 J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT
- 1 AMPLIFIER, 227D
- 1 SET, SPEAKER, LOUD 106B

SSD-103 W

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING -- MULTI-STATION

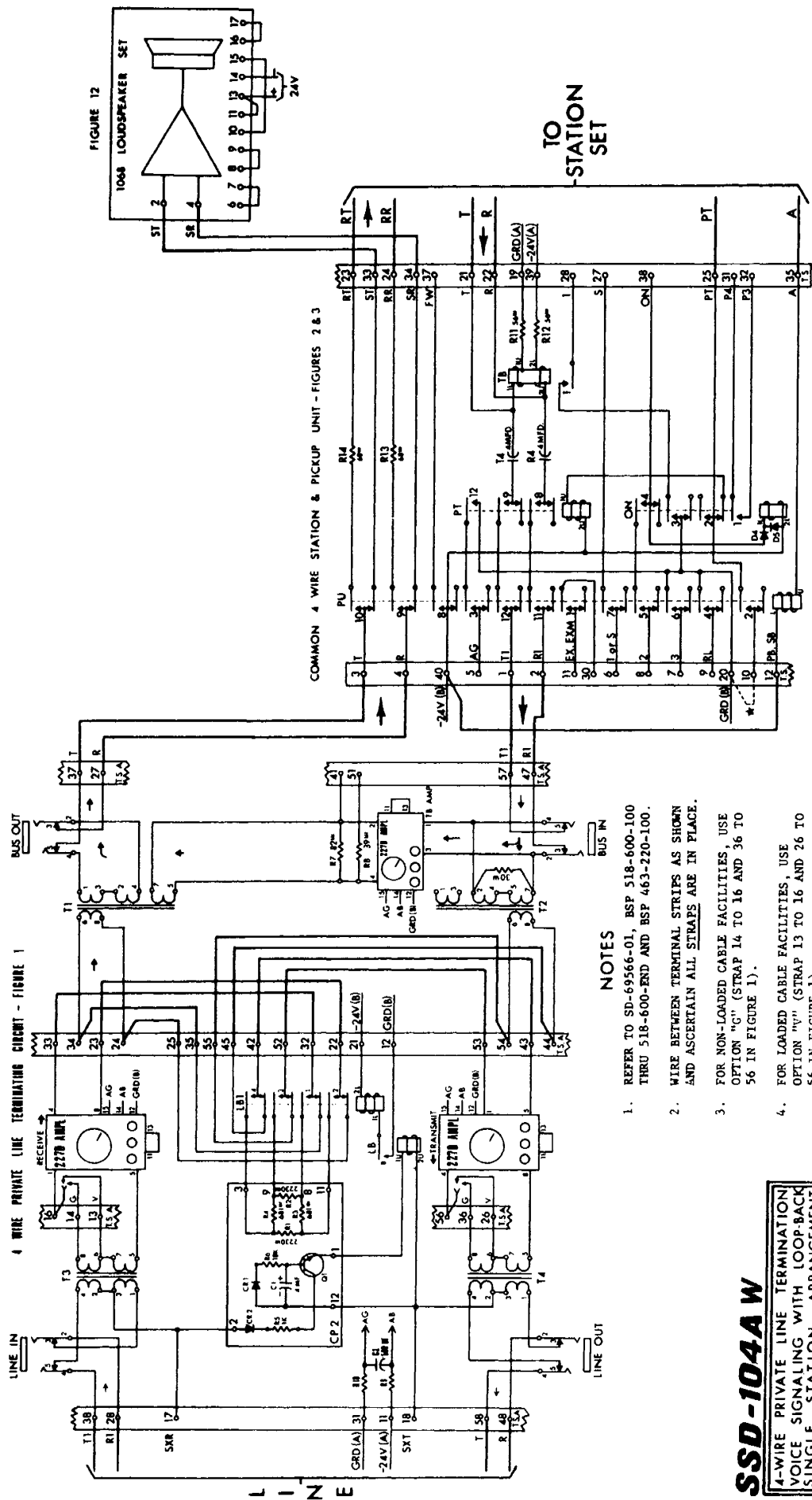
THE CHESAPEAKE & POTOMAC TELEPHONE CO.

WLT

10-68

NOTES

1. REFER TO SD-69566-01, BSP 518-600-100
THRU 518-600-END AND BSP 463-220-100
2. POWER SUPPLY, CABINET, AND MOUNTING
REQUIREMENTS TO BE DETERMINED BY
LOCAL INSTALLATION FORCES.
3. STRAP TERMINAL 11 ON 106B LOUDSPEAKER
TO SCREW ON AMPLIFIER RETAINING BRACKET.
- * 4. FW LEAD REQUIRED IF KEY TELEPHONE SET
IS USED.



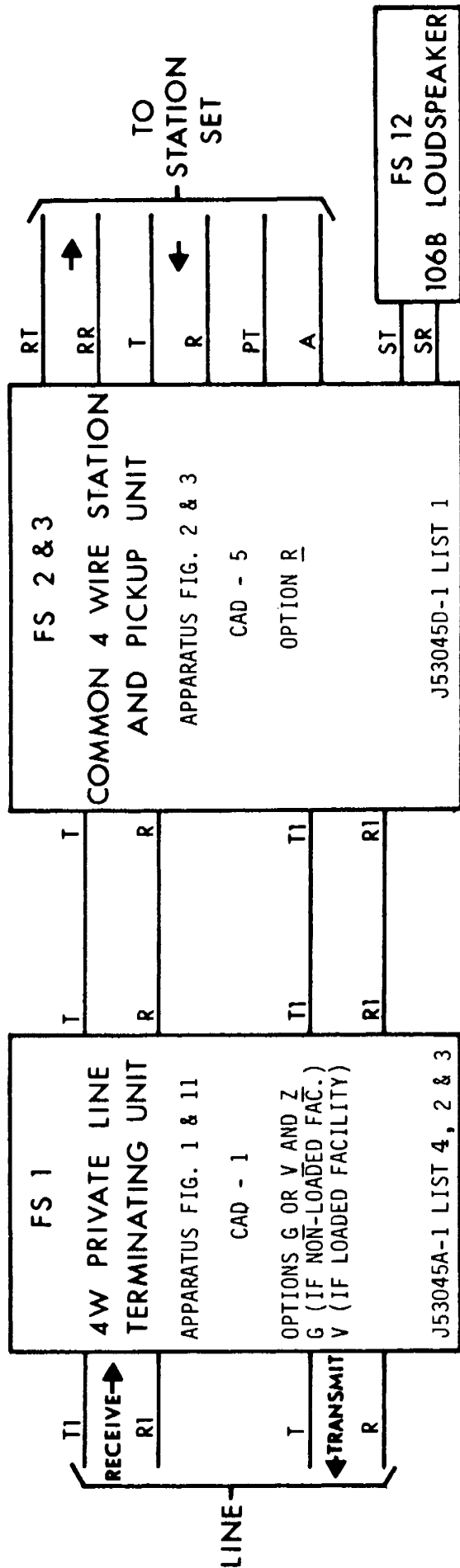
NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- *5. IF PUSH-TO-TALK IS NOT DESIRED, STRAP TERMINAL 10 TO 20 AS SHOWN BY DOTTED LINE.

SSD-104A W

4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING WITH LOOP-BACK
SINGLE STATION ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 8-69



ORDERING INFORMATION

-- NOTES --

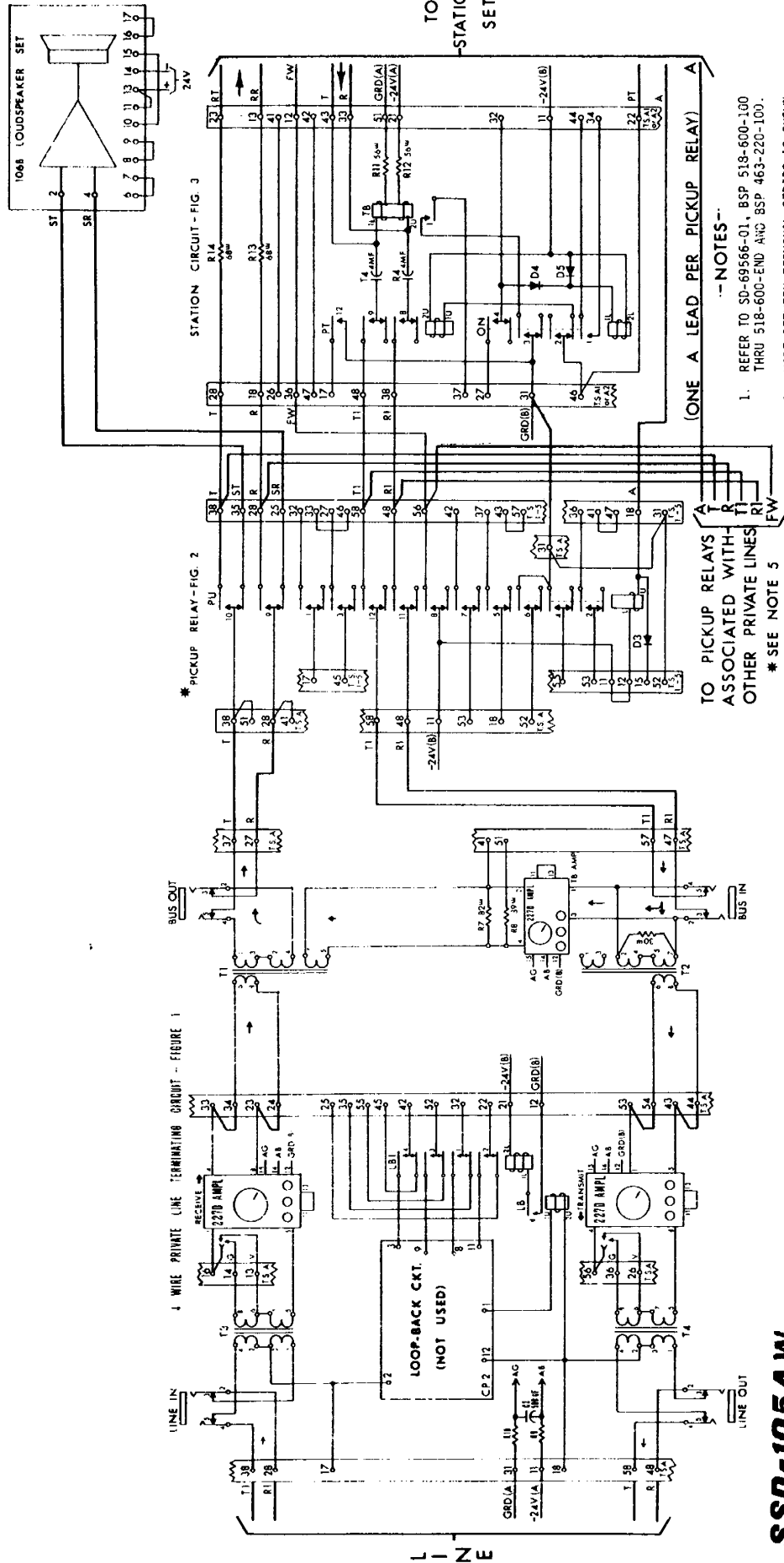
- 1 J53045A-1, LIST 4 & 2 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045D-1, LIST 1 4-WIRE PRIVATE LINE STATION & PICKUP RELAY UNIT
- 1 AMPLIFIER, 227D
- 1 SET, SPEAKER, LOUD 106B

1. REFER TO SD-69566-01.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
3. REFER TO BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
4. IF OTHER 4-WIRE PRIVATE SERVICES TERMINATE AT THE SAME LOCATION, IT MIGHT BE ADVANTAGEOUS TO USE SSD-102.
5. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET

SSD-104W

4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING WITH LOOP-BACK
SINGLE STATION ARRANGEMENT

FIGURE 12



SSD-105A W

4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING
MULTI-PRIVATE LINE ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 10-69

* TABLE

FIG. 2 - TERMINAL STRIP "A"

	PICKUP RELAY				
	1	2	3	4	5
T	38	37	36	35	34
R	28	27	26	25	24
T1	58	57	56	55	54
R1	48	47	46	45	44
S	53	43	33	23	13

- *5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 ARE THE SAME FOR EACH PICKUP RELAY. "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.

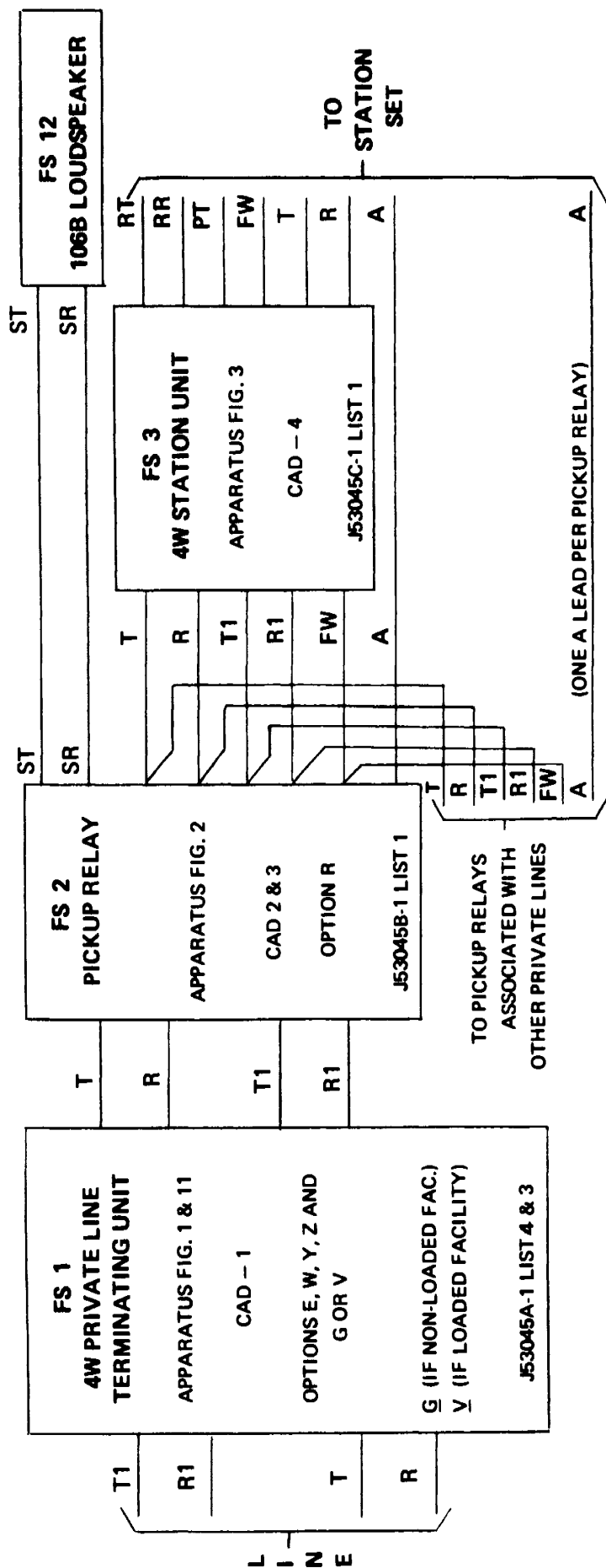
--NOTES--

1. REFER TO SD-69566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).

(ONE A LEAD PER PICKUP RELAY) A

TO PICKUP RELAYS
ASSOCIATED WITH
OTHER PRIVATE LINES R1
* SEE NOTE 5

L - N E



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT
- 1 J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT
- 1 AMPLIFIER, 227D
- 1 SET, SPEAKER, LOUD 106B

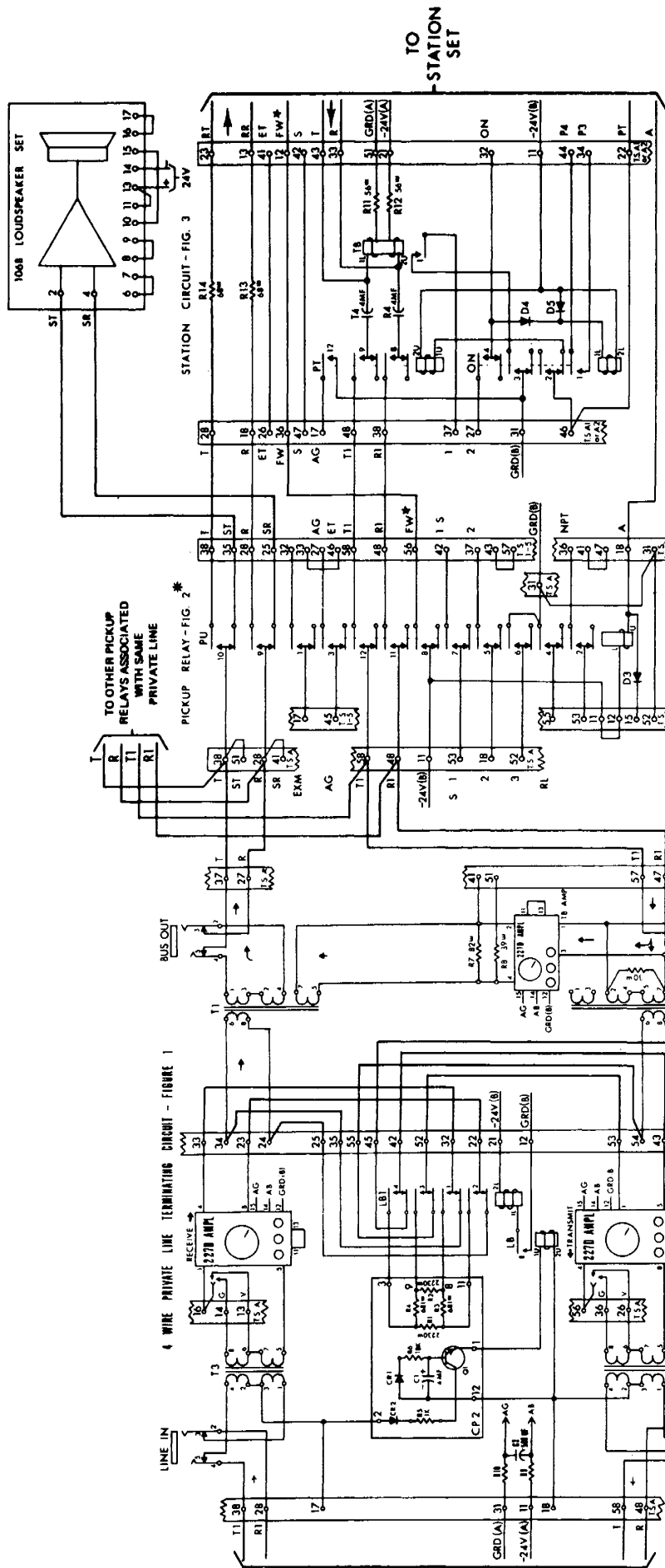
SSD-105 W

4-WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING
MULTI-PRIVATE LINE ARRANGEMENT

NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY LOCAL INSTALLATION FORCES.
3. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET.

FIGURE 12



NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END AND BSP 463-220-100.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN THAT ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIG. 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- *5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.
- *6. "FW" LEAD IS REQUIRED IF KEY TELEPHONE SET IS USED.

TABLE

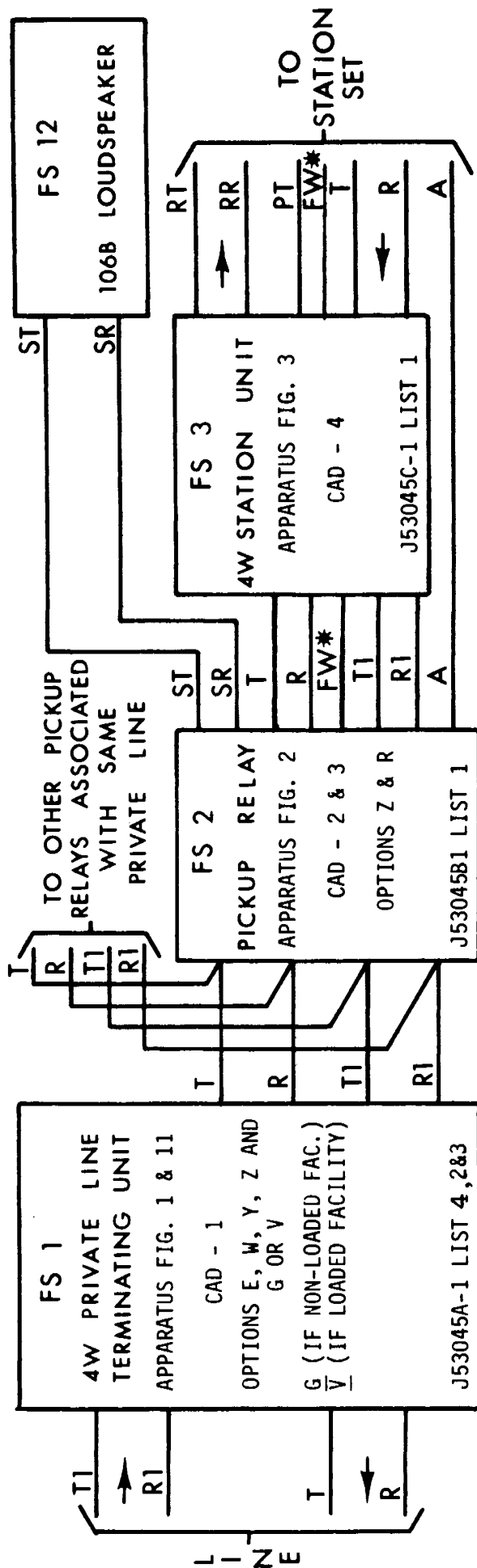
FIG. 2 - TERMINAL STRIP "A"

	PICKUP RELAY				
	1	2	3	4	5
T	38	37	36	35	34
R	28	27	26	25	24
T1	58	57	56	55	54
R1	48	47	46	45	44
S	53	43	33	23	13

SSD-106A W

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING...MULTI-STATION
WITH LOOP-BACK ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 11-69
WLT



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 & 2 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT
- 1 J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT
- 1 AMPLIFIER, 227D
- 1 SET, SPEAKER, LOUD 106B

SSD-106 W

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING--MULTI-STATION
WITH LOOP-BACK ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

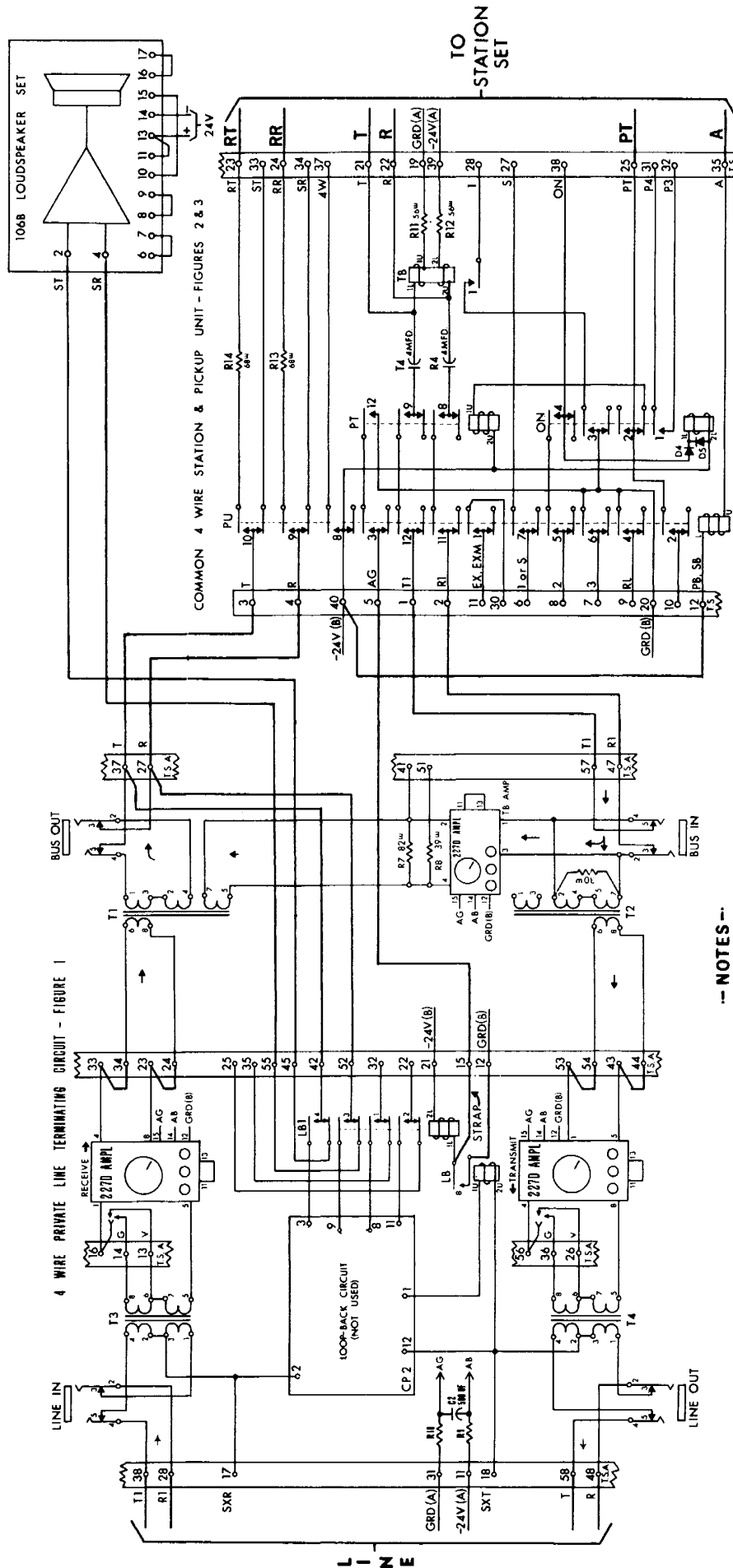
10-69

WLT

NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU 518-600-END AND BSP 463-220-100
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY LOCAL INSTALLATION FORCES.
3. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET.
- *4. FW LEAD REQUIRED IF KEY TELEPHONE SET IS USED.

FIGURE 12



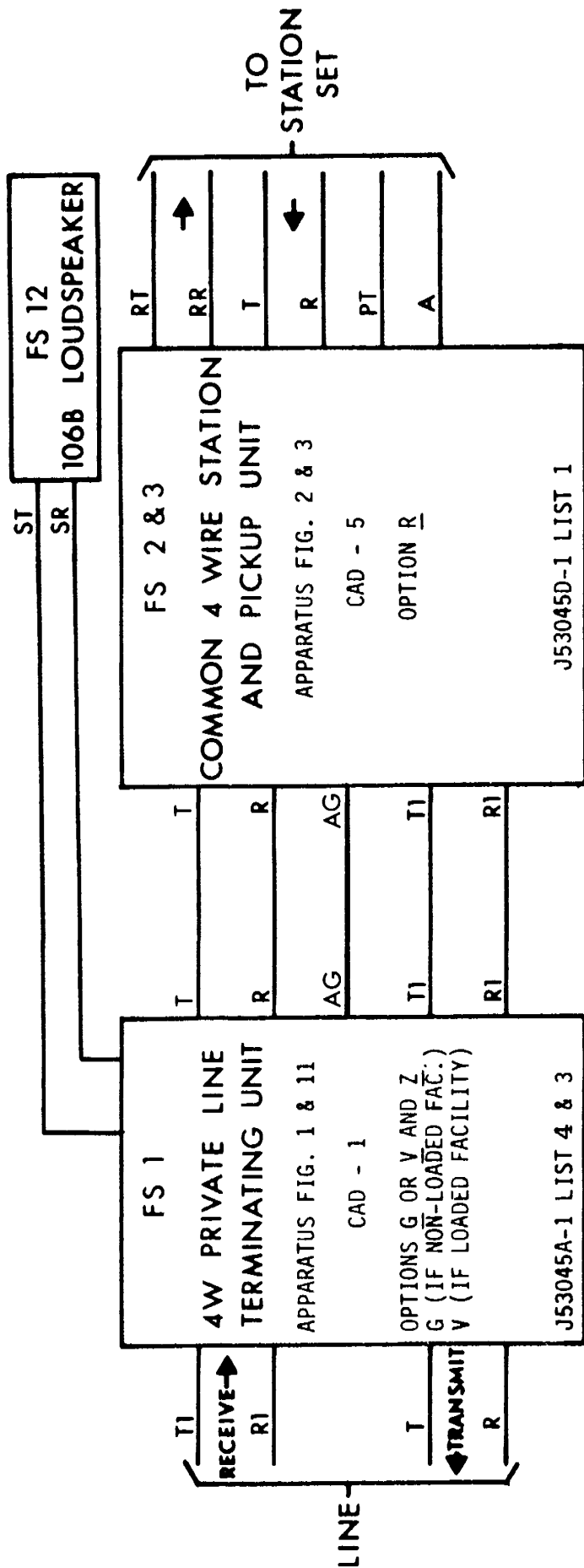
NOTES

1. REFER TO SD-69566-01.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "C" (STRAP 14 TO 16 AND 36 TO 54 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
5. IMPORTANT - STRAP FROM 15 ON T.S.A. TO 1L ON LBI RELAY IN FIGURE 1.

SSD-107A W

**4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING - SINGLE STATION
LOUDSPEAKER CUT-OFF CONTROLLED
BY PUSH-TO-TALK KEY**

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 3-71
W1



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045D-1, LIST 1 4-WIRE PRIVATE LINE STATION & PICKUP RELAY UNIT
- 1 SET, SPEAKER, LOUD 106B
- 1 AMPLIFIER, 227D

SSD-107 W

4 WIRE PRIVATE LINE TERMINATION
VOICE SIGNALING - SINGLE STATION
LOUDSPEAKER CUT-OFF CONTROLLED
BY PUSH-TO-TALK KEY

NOTES

1. REFER TO SD-69566-01.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
3. REFER TO BSP 480-615-100 AND BSP 463-220-100.
4. STRAP TERMINAL 11 ON 106B LOUDSPEAKER TO SCREW ON AMPLIFIER RETAINING BRACKET.
5. IMPORTANT - STRAP FROM 15 ON T.S.A. TO 1L ON LB1 RELAY IN FIGURE 1.

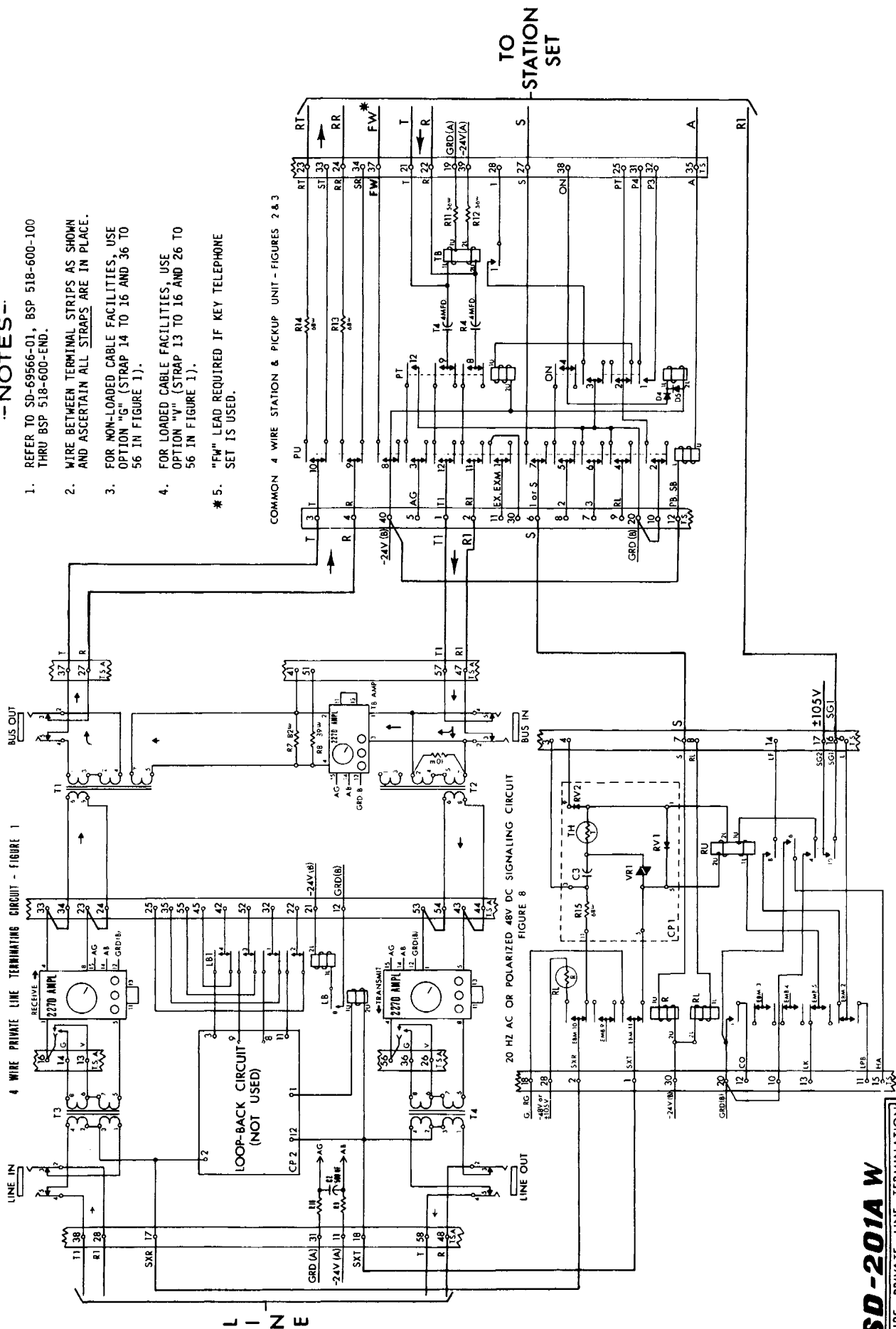
THE CHESAPEAKE & POTOMAC TELEPHONE CO.

3-71

--NOTES--

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END.
 2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
 3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
 4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- * 5. "FW" LEAD REQUIRED IF KEY TELEPHONE SET IS USED.

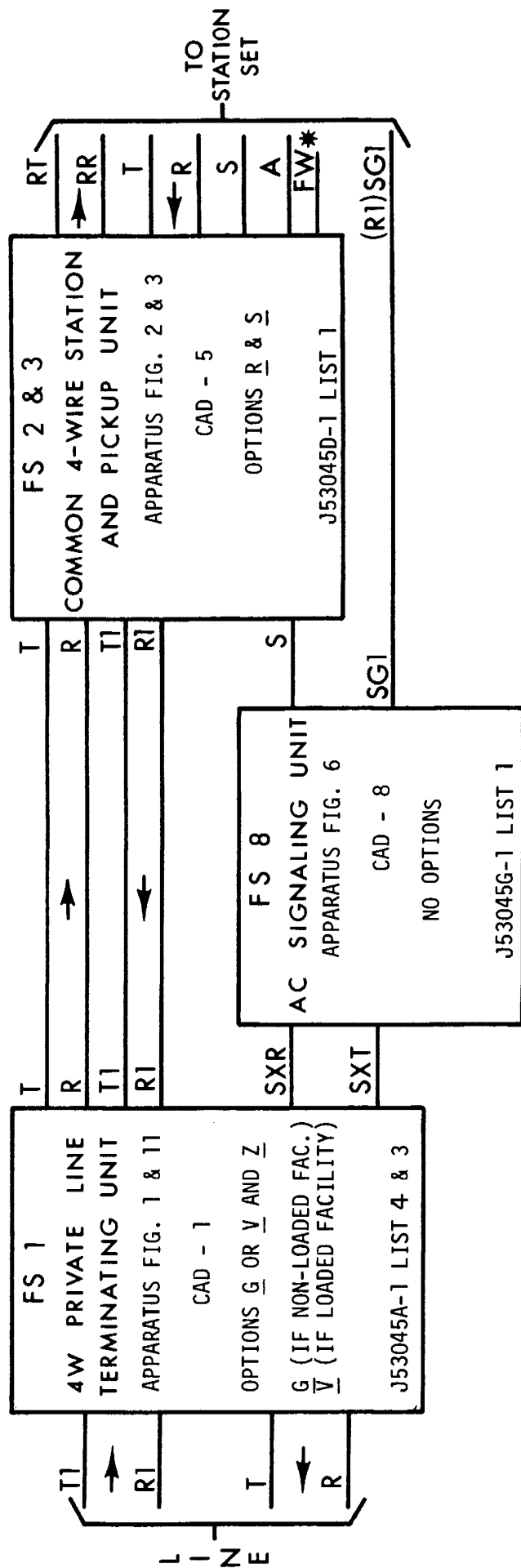
COMMON 4 WIRE STATION & PICKUP UNIT - FIGURES 2 & 3



SSD-201A W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING-SINGLE STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045D-1, LIST 1 4-WIRE PRIVATE LINE STATION & PICKUP RELAY UNIT
- 1 J53045G-1, LIST 1 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT
- 1 AMPLIFIER, 227D

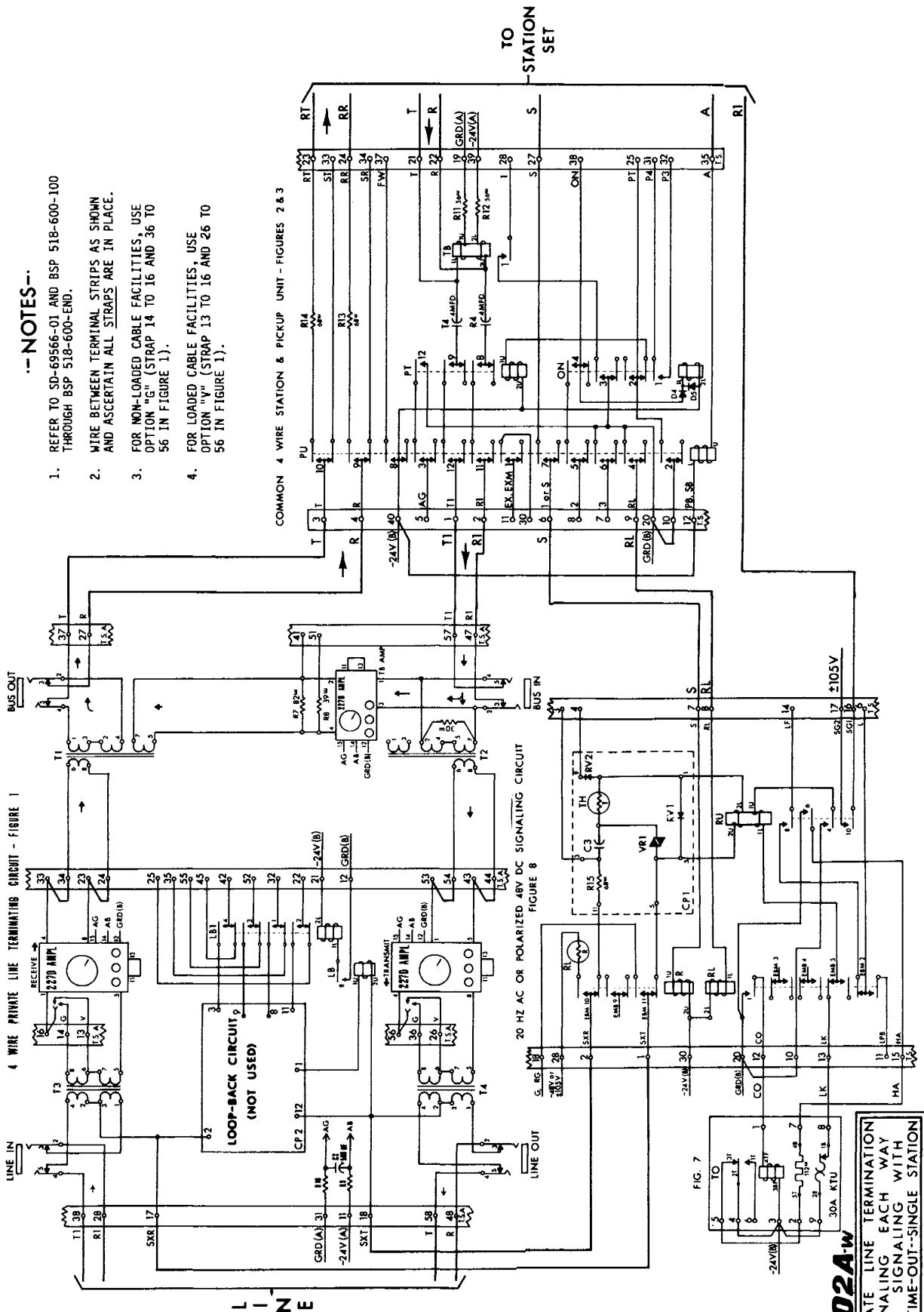
NOTES

1. REFER TO SD-69566-01 AND BSP 518-600-100 THRU BSP 518-600-END.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
- * 3. FW LEAD REQUIRED IF KEY TELEPHONE SET IS USED.

SSD-201W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING--SINGLE STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.



---NOTES---

1. REFER TO SD-69566-01 AND BSP 518-600-100 THROUGH BSP 518-600-END.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).

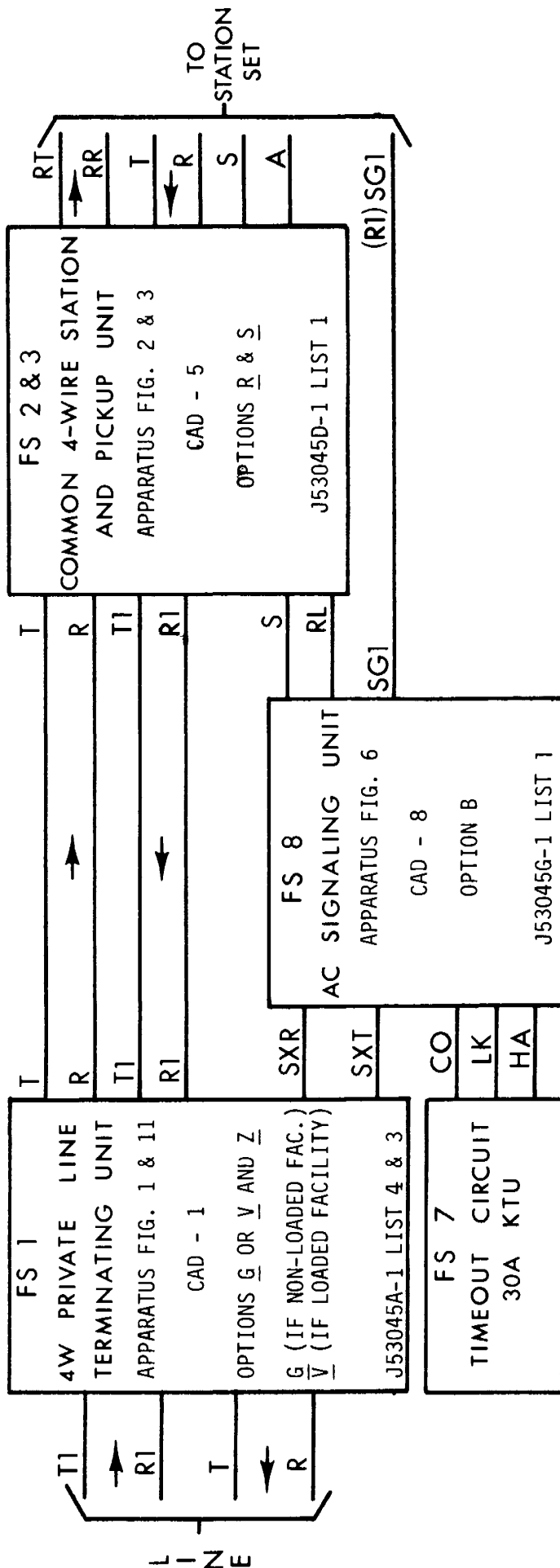
COMMON 4 WIRE STATION & PICKUP UNIT - FIGURES 2 & 3

TO
STATION
SET

SSD-202A

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING EACH WAY
LOCKED-IN SIGNALING WITH
AUTOMATIC TIME-OUT--SINGLE STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 12-69
MLT



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045D-1, LIST 1 4-WIRE PRIVATE LINE STATION & PICKUP RELAY UNIT
- 1 J53045G-1, LIST 1 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT
- 1 AMPLIFIER, 227D
- 1 UNIT, TELEPHONE, KEY, 30A (ORDER ONLY IF REQUIRED)

-- NOTES --

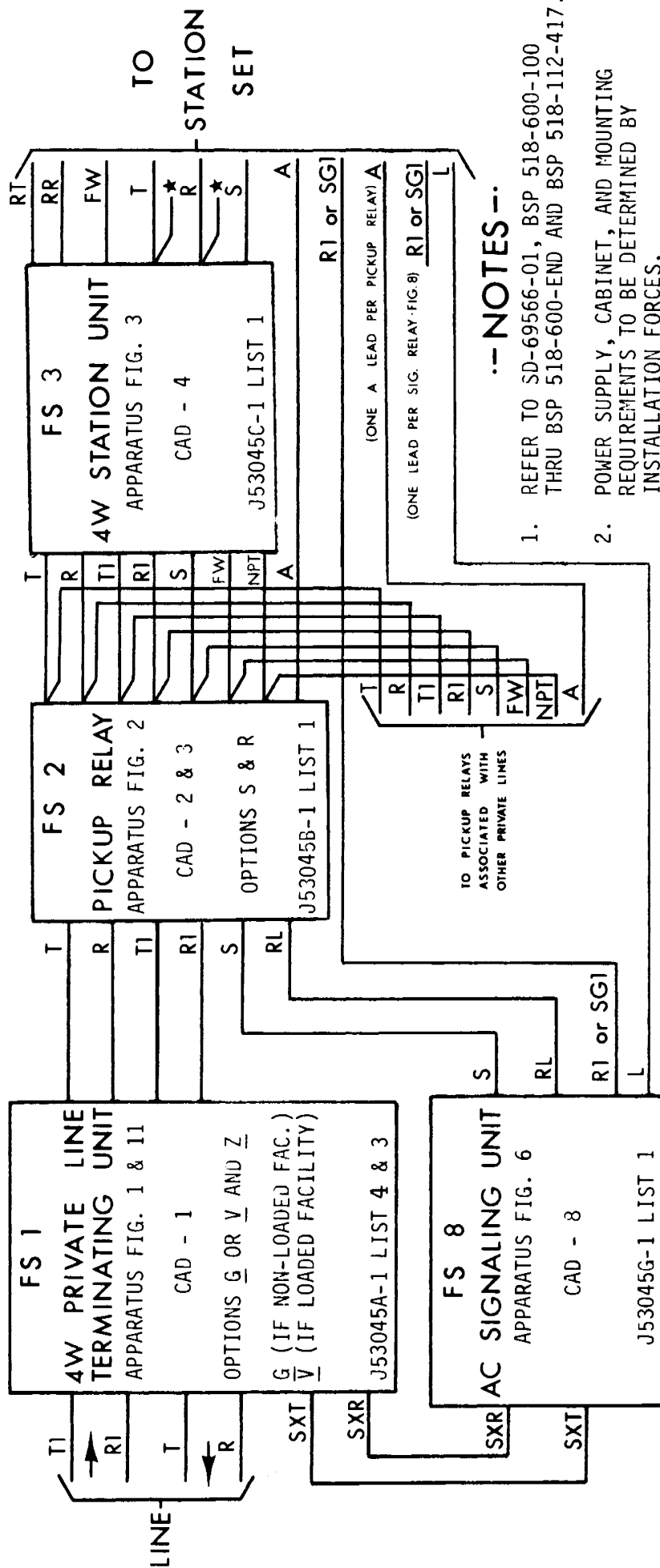
1. REFER TO SD-69566-01 AND BSP 518-600-100 THRU BSP 518-600-END
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
3. IF OTHER 4-WIRE PRIVATE SERVICES TERMINATE AT THE SAME LOCATION, IT MIGHT BE ADVANTAGEOUS TO USE SSD-204.

SSD-202 W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING EACH WAY
LOCKED-IN SIGNALING WITH
AUTOMATIC TIME-OUT--SINGLE STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

11-69



NOTES --

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END AND BSP 518-112-417.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
- ★3. THESE LEADS HAVE TO BE MULTIPLIED TO EACH PICKUP KEY ASSOCIATED WITH A 4-WIRE PRIVATE LINE.

SSD-204 W

4-WIRE PRIVATE LINE TERMINATION
20 HZ LOCKED-IN SIGNALING
WITH AUTOMATIC TIME-OUT
MULTI-PRIVATE LINE ARRANGEMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

WLT

11-69

ORDERING INFORMATION

- | | | |
|---|-------------------|---|
| 1 | J53045A-1, LIST 4 | 4-WIRE PRIVATE LINE TERMINATION UNIT |
| 1 | J53045B-1, LIST 1 | 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT |
| 1 | J53045C-1, LIST 1 | 4-WIRE PRIVATE LINE STATION UNIT |
| 1 | J53045G-1, LIST 1 | 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT |
| 1 | AMPLIFIER, 227D | |
- SEE SSD-910 FOR ORDERING INFORMATION ON TIME-OUT CIRCUIT

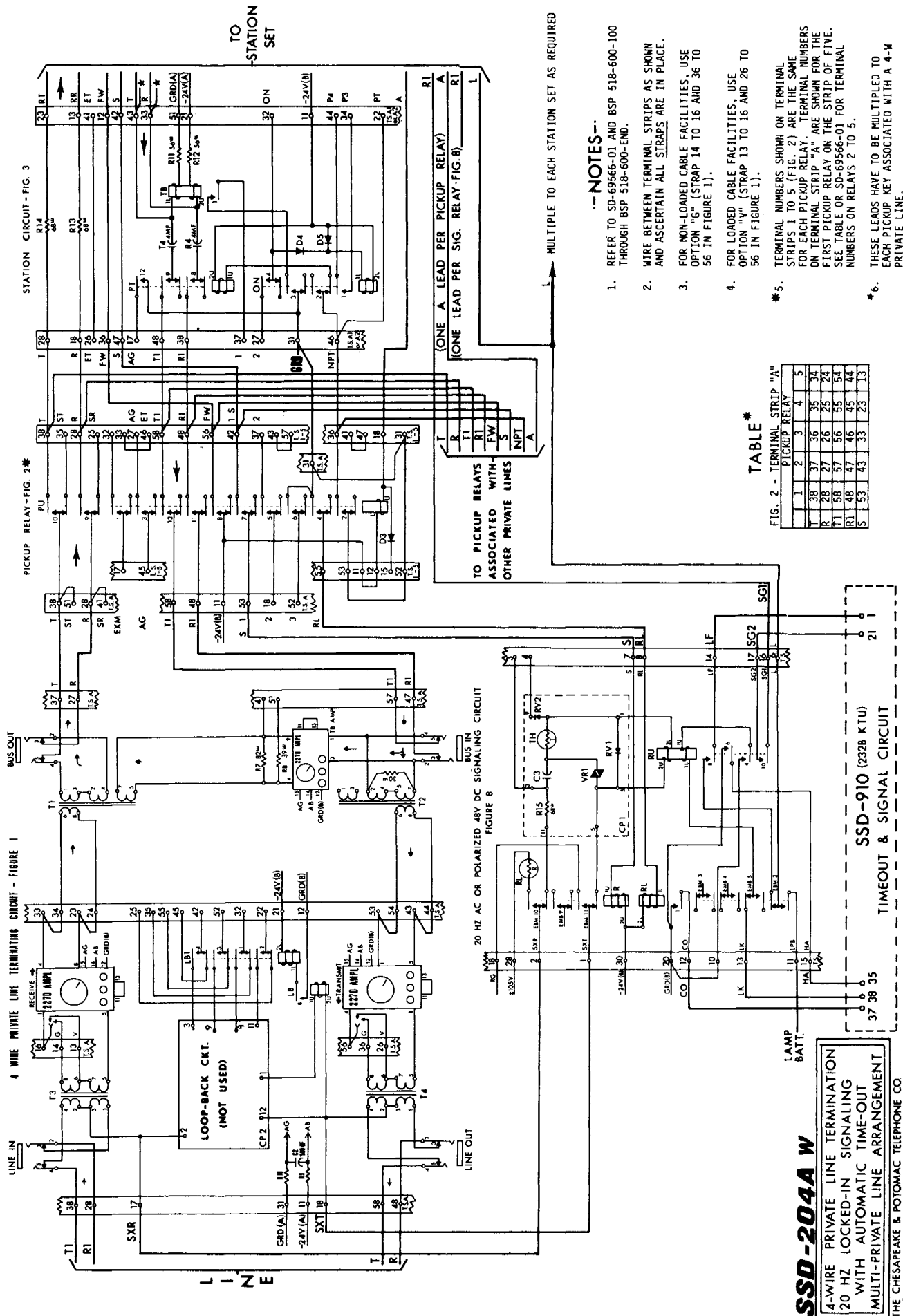


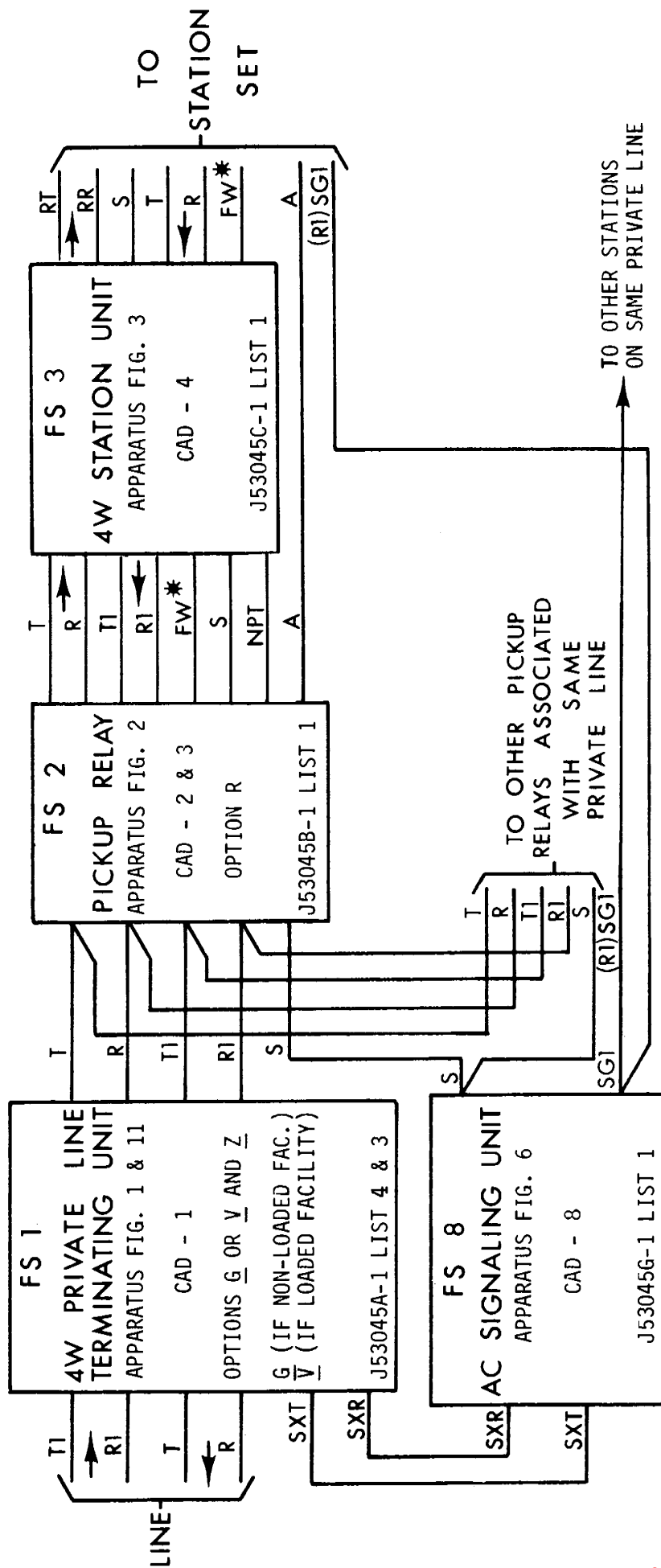
TABLE *

FIG. 2 - TERMINAL STRIP "A" PICKUP RELAY

1	2	3	4	5
T	38	37	36	35
R	28	27	26	25
FW	58	57	56	55
S	48	47	46	45
NPT	53	43	33	23
A				13

--NOTES--

1. REFER TO SD-69566-01 AND BSP 518-600-100 THROUGH BSP 518-600-END.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- *5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 (FIG. 2) ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.
- *6. THESE LEADS HAVE TO BE MULTIPLIED TO EACH PICKUP KEY ASSOCIATED WITH A 4-W PRIVATE LINE.



ORDERING INFORMATION

- 1 J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT
- 1 J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT
- 1 J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT
- 1 J53045G-1, LIST 1 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT
- 1 AMPLIFIER, 227D

SSD-205 W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING -- MULTI-STATION

-- NOTES --

1. REFER TO SD-69566-01 AND BSP 518-600-100 THRU BSP 518-600-END.

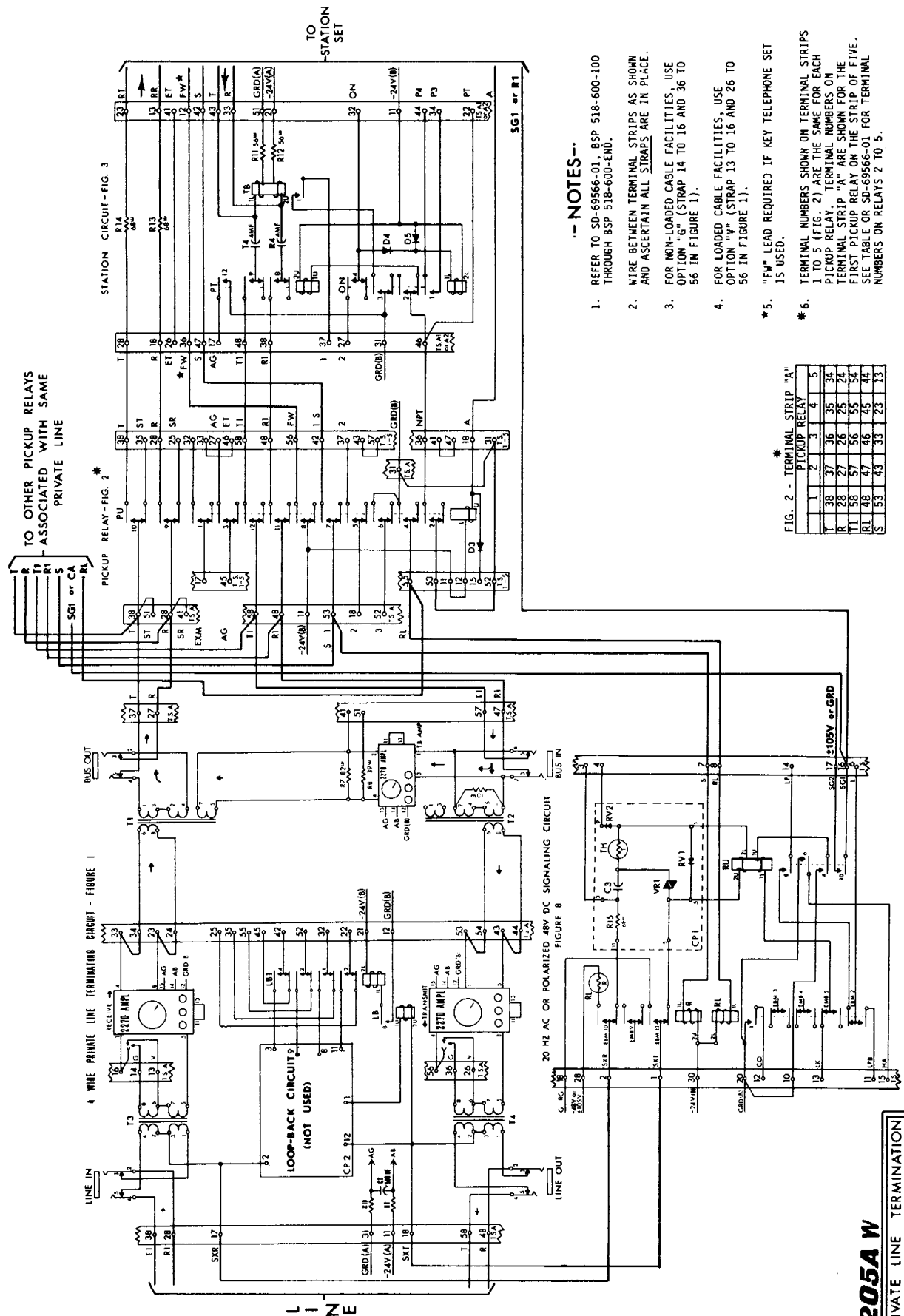
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

- * 3. FW LEAD REQUIRED IF KEY TELEPHONE SET IS USED.

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

11-69

WLT



-- NOTES --

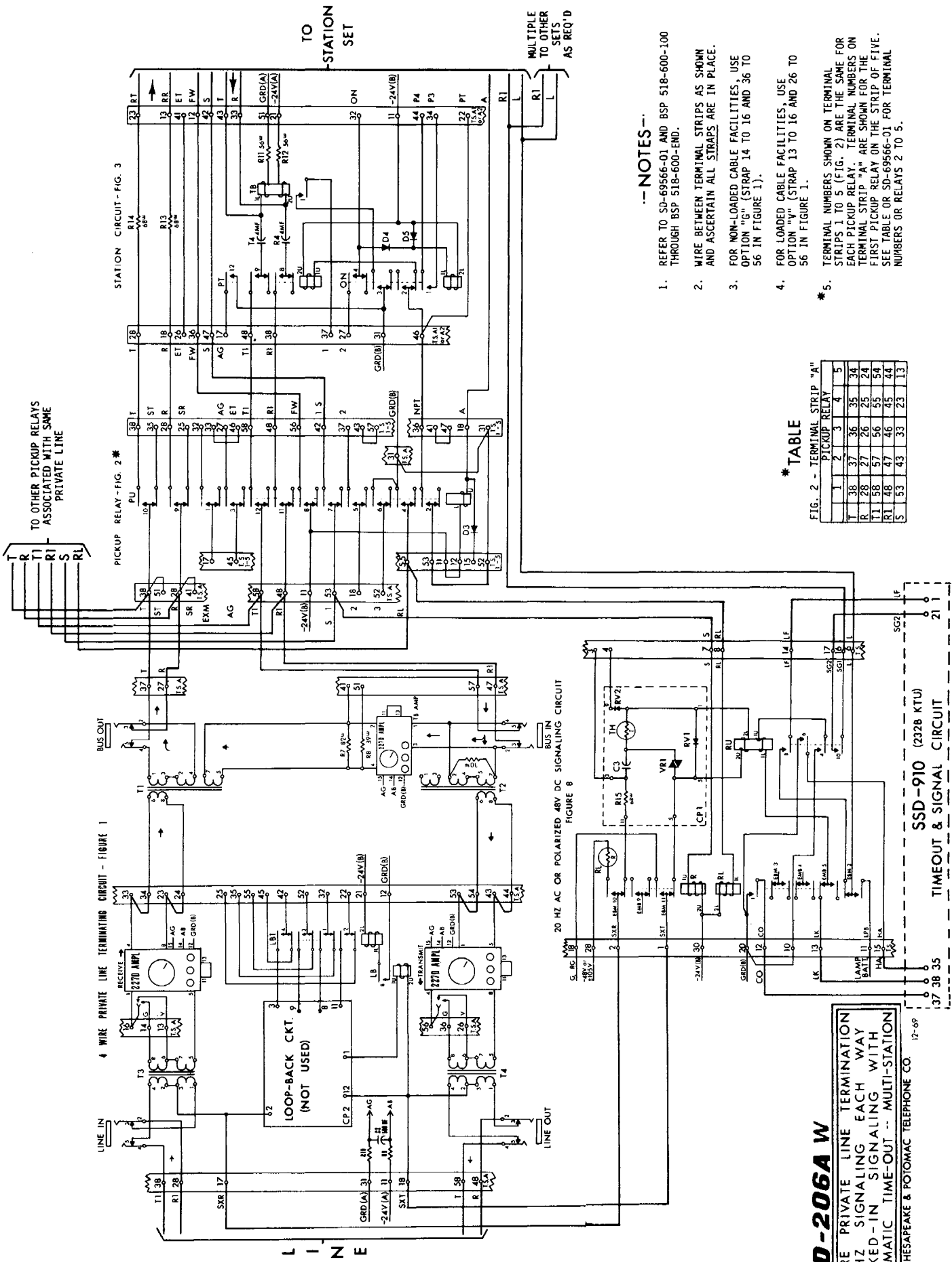
1. REFER TO SD-69566-01, BSP 518-600-100 THROUGH BSP 518-600-END.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "6" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "7" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- *5. "FW" LEAD REQUIRED IF KEY TELEPHONE SET IS USED.
- *6. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 (FIG. 2) ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS ON RELAYS 2 TO 5.

FIG. 2 - TERMINAL STRIP "A"

	1	2	3	4	5
T	38	37	36	35	34
R	28	27	26	25	24
T1	58	57	56	55	54
R1	48	47	46	45	44
S	53	43	33	23	13

SSD-205A W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING -- MULTI-STATION
THE CHESAPEAKE & POTOMAC TELEPHONE CO. WLT



NOTES--

1. REFER TO SD-69566-01 AND BSP 518-600-100 THROUGH BSP 518-600-END.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE.
3. FOR NON-LOADED CABLE FACILITIES, USE OPTION "G" (STRAP 14 TO 16 AND 36 TO 56 IN FIGURE 1).
4. FOR LOADED CABLE FACILITIES, USE OPTION "V" (STRAP 13 TO 16 AND 26 TO 56 IN FIGURE 1).
- * 5. TERMINAL NUMBERS SHOWN ON TERMINAL STRIPS 1 TO 5 (FIG. 2) ARE THE SAME FOR EACH PICKUP RELAY. TERMINAL NUMBERS ON TERMINAL STRIP "A" ARE SHOWN FOR THE FIRST PICKUP RELAY ON THE STRIP OF FIVE. SEE TABLE OR SD-69566-01 FOR TERMINAL NUMBERS OR RELAYS 2 TO 5.

* TABLE

FIG. 2 - TERMINAL STRIP "A"

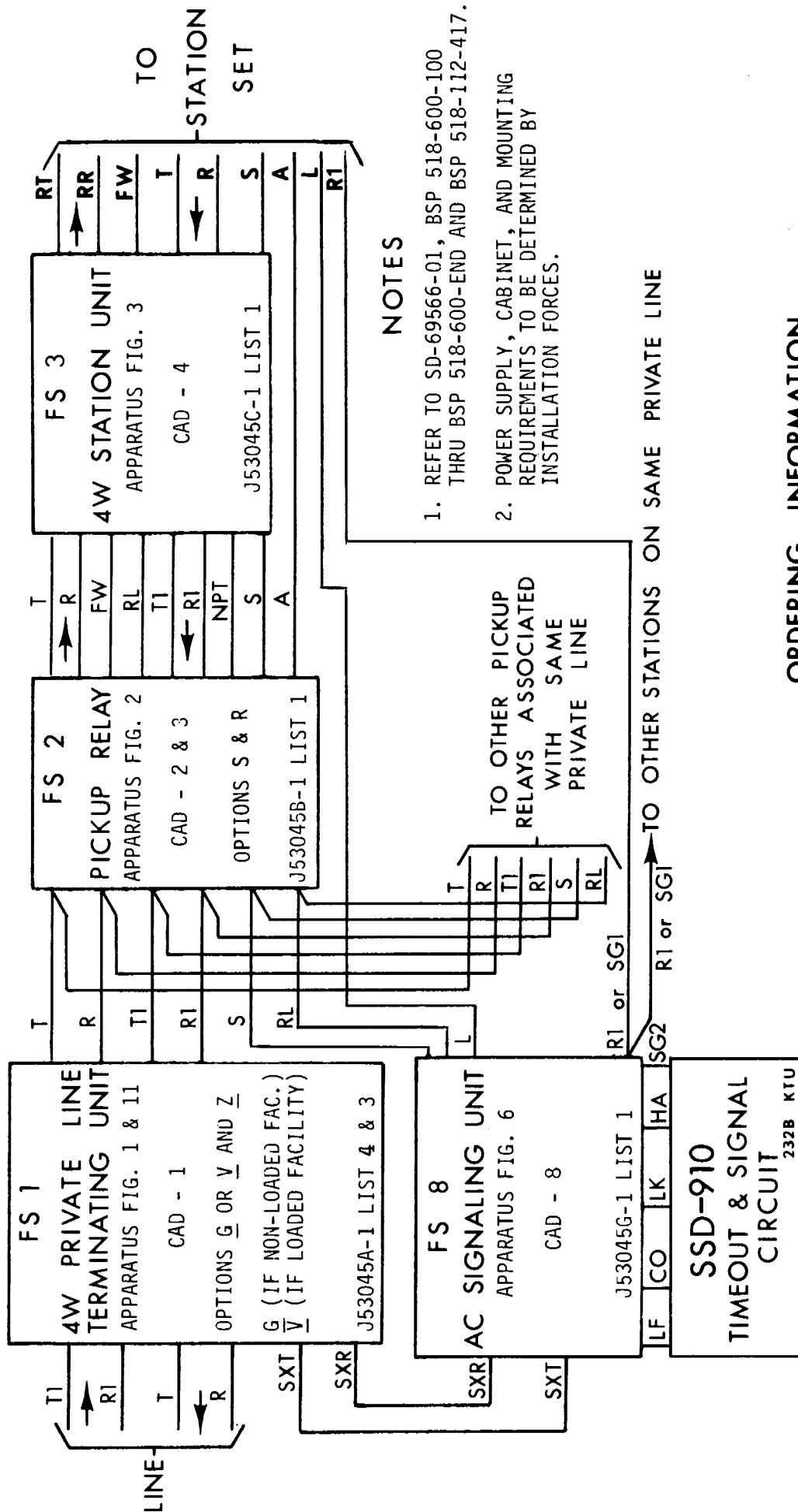
PICKUP RELAY	
1	2
38	37
36	35
34	33
32	31
30	29
28	27
26	25
24	23
22	21
20	19
18	17
16	15
14	13
12	11
10	9
8	7
6	5
4	3
2	1

SSD-206A W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING EACH WAY
LOCKED-IN SIGNALING WITH
AUTOMATIC TIME-OUT -- MULTI-STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

12-49



NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END AND BSP 518-112-417.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

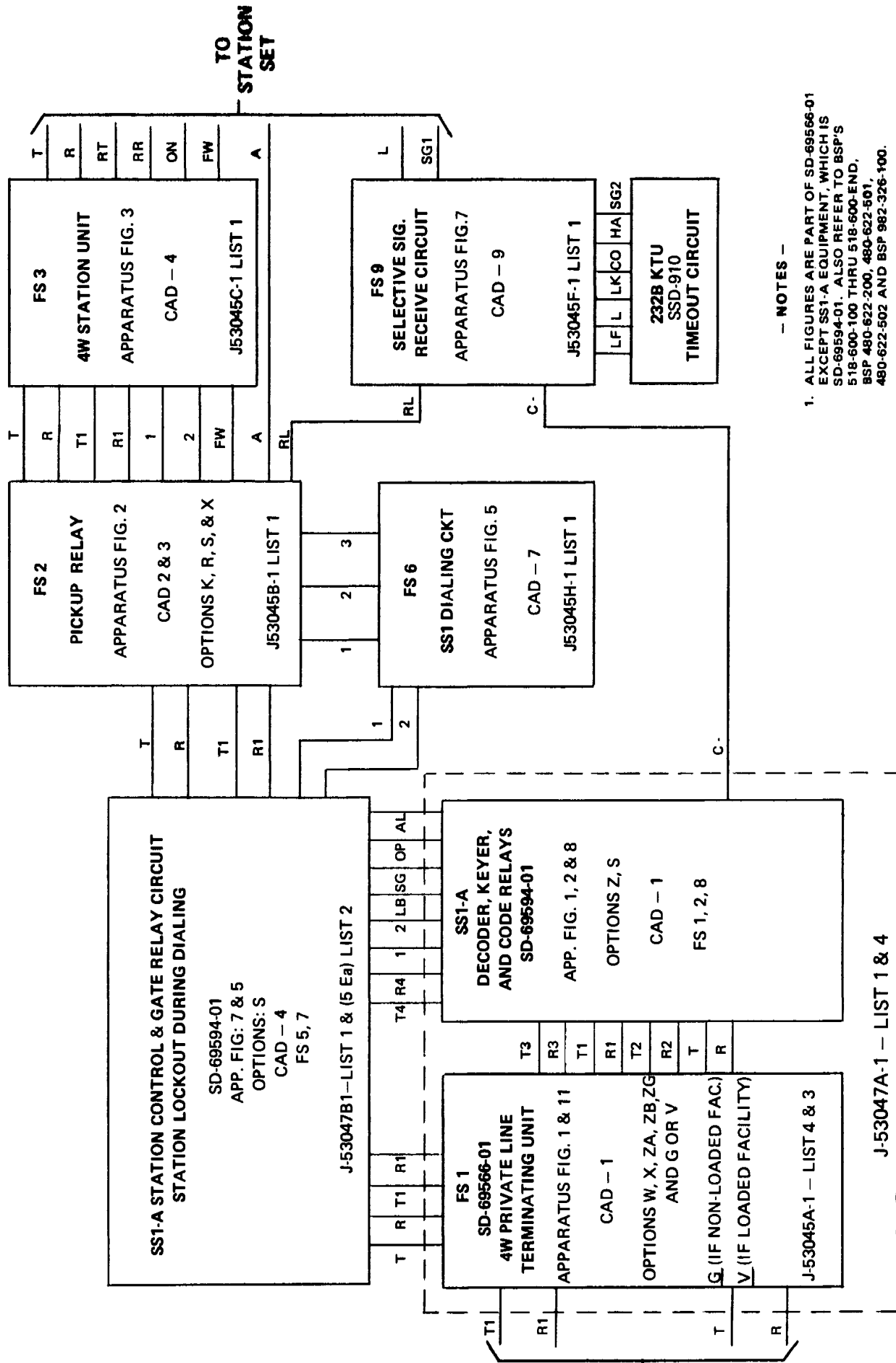
ORDERING INFORMATION

- | | |
|---|---|
| 1 | J53045A-1, LIST 4 4-WIRE PRIVATE LINE TERMINATION UNIT |
| 1 | J53045B-1, LIST 1 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT |
| 1 | J53045C-1, LIST 1 4-WIRE PRIVATE LINE STATION UNIT |
| 1 | J53045G-1, LIST 1 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT |
| 1 | AMPLIFIER 227D |
- SEE SSD-910 FOR ORDERING INFORMATION ON TIME-OUT CIRCUIT

SSD-206 W

4-WIRE PRIVATE LINE TERMINATION
20 HZ SIGNALING EACH WAY
LOCKED-IN SIGNALING WITH
AUTOMATIC TIME-OUT -- MULTI-STATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.
WLT



— NOTES —

1. ALL FIGURES ARE PART OF SD-69566-01 EXCEPT SS1-A EQUIPMENT, WHICH IS SD-69594-01. ALSO REFER TO BSP'S 518-600-100 THRU 518-600-END, BSP 480-622-200, 480-622-501, 480-622-502 AND BSP 982-326-100.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY LOCAL INSTALLATION FORCES.
3. FS 1 IS TO BE ORDERED AS PART OF SS1-A PACKAGE -- SEE SSD 400 SERIES.

SSD-401W

4-WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING

ORDERING AND MOUNTING INFORMATION

PREPARATIONS FOR ORDERING

To provide your installation with the proper amount and type of equipment and to give you adequate room for growth, you should first answer and note the following questions.

1. How many stations are to be provided?
2. What type of telephone sets are to be provided?
3. What approximate growth (stations) is possible considering customer, size of operation, total station sets now on premise?
4. Do I have an equipment room to install a relay rack in or a well to provide a wall mounted relay rack with covers, or will I use an enclosed cabinet?
5. Do I have sufficient power available (48V DC, 24V DC, 10V AC and 20 cycle ring supply) or should I provide complete power?
6. Commercial power of 105- to 125-volt 60 Hz service on a separate 15 ampere fuse not controlled by a switch.
7. Does the order indicate any other requirements that will require additional Engineering and Equipment?

ORDERING INFORMATION

<u>QUAN.</u>	<u>ITEM</u>	<u>DESCRIPTION AND NOTES</u>
1	J-53047A-1-Lists 1	Send and receive SS1-A Unit
1	Amplifier 227D	Talk back <u>NOTE:</u> This unit includes the J-53045A-Terminating unit.
()	J-53047B-1-List 1	Station Control Unit.
	E/W 5 List 2.	<u>NOTE:</u> 1 unit for six (6) stations.
1	J-98613DE-1-List 1, B, C, D, E	IN Bend Signaling Unit (E4B)
()	J-53045B-1-List 1	Multiple station line P.U. Relay Unit. <u>NOTE:</u> 1 unit for five (5) stations.
()	J-53045C-1-List 1	Station Relay Unit. <u>NOTE:</u> 1 unit for two (2) stations.
()	J-53045F-1-List 1	Signaling Relay Unit. <u>NOTE:</u> 1 unit for three (3) station codas.
()	J-53045H-1-List 1	SS1 Dialing Relay Unit. <u>NOTE:</u> 1 unit for two (2) stations.
1	Unit Telephone Key 232B	<u>NOTE:</u> Provides for time out, interrupted ring, lamp flash.
1	Interrupter KS-15900 List 1	<u>NOTE:</u> Plugs into 232B.
()	Bracket 67B	<u>NOTE:</u> Minimum of 2 for each row of KTU type units.
()	P-37A901	Bar mounting. <u>NOTE:</u> 2 for each 2 67B brackets to obtain proper spacing of bars on racks and cabinet drilled for 2" mounting plates.
4200 Ft.	Wire BU 24 gauge	Green
	Single P46A562	
4200 Ft.	Wire BU 24 gauge	Red
	Single P46A566	
4200 Ft.	Wire BU 24 gauge	Black
	Single P46A567	
4000 Ft	Wire BH 20 gauge	Yellow and Yellow-Green and Red and Red-Green
	Quad P46A143	
1	Bracket 89B	Mounting for 66M1-50 Connecting block
1	Block Connecting 66M1-50	<u>NOTE:</u> Used as X-Conn at equipment for line station leads.
()	Power	See power.
()	Relay rack or cabinet	See relay racks and cabinets.

SSD-401-1 W

SHEET 1

**4 WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING**

POWER

1. Model RT10 Lorain ringing, talking and signaling power supply. Will provide you with all your power requirements and mounts on 2-67B bars. (Preferred)
2. KS-15620 List 14 Rectifier (-48V DC) Requires 2 — P-41U546 Adapters, 1 — KS-7586 List 3 Cord (15'0") and 8 — P-353446 Screws.
3. Unit Power 30C1 Provides 24V DC, 10V AC, and 30 Hz ring supply.
REF: BSP 167-446-101.

NOTE: See BSP 167-400-200 on general installation requirements.

RELAY RACKS AND CABINETS

NOTE: With reference to Fig. 1 of SSD (401-1) showing the equipment mounting arrangement, you must consider the total 2" Mounting Plates required for your installation. When selecting from the following:

1. ED-91981-70-G17 Cabinet Apparatus: Metal with fixed mounting frame, hinged doors front and back with maximum of 40-2"x23" Mounting Plates.
2. ED-92185-70-G6 Cabinet Apparatus: Metal with fixed mounting frame, hinged doors front and back with maximum of 23-2"x23" Mounting Plates.
3. ED-92465-70-G1 Relay Rack: Exposed type rack with maximum of 36-2"x23" Mounting Plates.
4. ED-69463-50-G1 & 5 Wall Relay Rack: Is E/W two gates providing 17-2"x23" Mounting Plates each (total of 34 Mounting Plates)
5. ED-69463-50-G6 Cover: Order 2 for each wall type Relay Rack.

NOTE: See BSP 463-140-100 on identification.

MOUNTING

NOTE: See figure 1 (SSD 401-1) which provides a mounting arrangement on a relay rack having 23-2"x23" Mounting Plates for a five (5) station package with room for growth to 12 stations.

1. Locate and mount relay rack or cabinet as covered in BSP 463-140-200.
2. After uncrating equipment, inspect for:
 - A. Excessive damage.
 - B. Crossed contact springs.
 - C. Slipped coverplates.
 - D. Cracked plastic parts.
3. Mount equipment in place, taking care that the units are arranged correctly, with the exception of the E4B "SF" unit which will be covered later.
4. Place the 227D talk back amplifier in the mounting position provided on the J-53045A terminating unit.
5. The ground side of the power plant output, [usually the positive (+)] , shall be connected to an approved ground by a No. 14 gauge wire, and tagged.
6. The relay rack or cabinet should also be connected to an approved ground by a No. 14 gauge wire, and tagged.
7. The power cord should be connected to "AC" outlet and the power plant checked for abnormal conditions.
8. Remove power cord from power outlet until all wiring has been connected between the power plant and associated equipment.
9. On the final connection to the commercial power a retainer assembly should be provided to prevent accidental removal of the power cord plug.
10. Mount the 66-type connecting block on or near equipment to serve as a distribution point to and from the equipment.
11. Proceed from here with connection information provided in SSD 401-2

SSD-401-1 W

SHEET 2

4 WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING

SSD 401-1
4 WIRE PRIVATE LINE
TERMINATION
SS1-A SIGNALING (NON P
STATION LOCKOUT DURING

4 WIRE PRIVATE LINE
TERMINATION
SSI-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING

CONNECTIONS

GENERAL

The wiring of this equipment is done in 5 steps.

1. Placing of all power leads (Table A)
2. Strapping required on each unit (Table B)
3. Connection required between units (Drawing 401-2 & Table C)
4. Multipling to additional units (Tables D, E, & F)
5. Connections to station telephone sets (BSP or SSD)

NOTE: Before stations are connected to equipment, a temporary set should be connected at equipment for making operation tests.

SELECTION OF WIRE:

1. 20 gauge quad. for connection between power supply and first point of connection on units.
 - A. Yellow and Yellow Green 10V AC lamp supply and ring generator.
 - B. Red and Red Green for 24V DC and -48V DC signal and talk bat. and grd.
2. 24 gauge single red and black inter-unit strapping of -48V DC and 24V DC.
3. 24 gauge single green for all other strapping.

POWER CONNECTIONS:

TABLE A

RUN LEADS TO FIRST UNIT OF EACH TYPE USING 20 GAUGE WIRE.						MULTIPLE TO ADDITIONAL UNITS USING 24 GAUGE RED & BLACK WIRE SAME TS AND PCHG UNLESS NOTED	
FROM PWR SUP		TO		LEAD	TS AND PCHG		
-48V DC	J-53047A- SS1-A Unit	BAT		TSC11			NONE
		GRD		TSC14			
-24V DC "A" TALK	J-53045A- Terminating Unit	BAT		TSA11			NONE
		GRD		TSA31			
	J-53045C Station Unit	BAT		TSA1-21	TSA2-21	TO ADDITIONAL UNITS	
		GRD		TSA1-51	TSA2-51		
-24V DC "B" SIG.	J-53045A- Terminating Unit	BAT		TSA21			NONE
		GRD		TSA12			
	J-53045B- MULT. P.U. Unit	BAT		TSA11			TO ADDITIONAL UNITS
		GRD		TSA31			
	J-53045C- Station Unit	BAT		TSA1-11	TSA2-11	TO ADDITIONAL UNITS	
		GRD		TSA1-31	TSA2-31		
	J-53045H Dialing Unit	BAT		40	31	TO ADDITIONAL UNITS	
		GRD		20	11		
	J-53045F- Signaling Unit	BAT		40			TO ADDITIONAL UNITS
		GRD		30			
232B KTU	BAT		24			NONE	
	GRD		25				
10V AC	J-53045F- Signaling Unit	BAT		8			TO ADDITIONAL UNITS
		GRD		—			
	232B KTU	BAT		26	9	MULTIPLE 9 TO 10, 19, 20 ON SAME UNIT	
		GRD		27			
105V± GENERATOR	232B	105V±		29			NONE
		R-GRD		—			
FROM J-53047A- SS1A Unit	BAT	TSC17	TO	BAT	TSB11		WILL BE SHOWN ON TABLE PROVIDED TO ADD ADDITIONAL UNITS.
	GRD	TSC24	J-53047B- SS1-A Sta. Control	GRD	TSB41		

1. With a "DC" test meter check for negative (— 48 volt) battery on TS.C11 of the J-53045A SS1-A unit. If battery has not been connected properly or you have not grounded properly you can destroy the E4B (SF) unit.
2. Place the E4B "SF" unit in space provided on the J-53047A (SS1-A) unit.

SSD-401-2-W SHEET 1

4 WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING

STRAPPING ON UNITS

TABLE B

UNIT	FROM	TO	FROM	TO	FROM	TO	FROM	TO
J-53045A- Terminating Unit	TSA55	TSA54	TSA45	TSA44	TSA35	TSA34	TSA25	TSA24
J-53047A SS1-A Unit	TSB38	TSB18	TSB47	TSB27				
J-53047B- SS1-A Station Control	TSB11	TSA17						
J-53045B- Mult. P.U. Unit	TS()-41	TS()-42	TS()-11	TS()-12	TS()-52	TS()-53		
	NOTE: PLACE SAME STRAPS ON TS1, 2, 3, 4 and 5.							
J-53045F- Signaling Unit	5	15	15	25				
232B KTU	35	36						

CONNECTION BETWEEN UNITS

1. Place all inter-unit leads as shown on drawing 401-2 – Sheet 3.
2. Table C provides terminal connections on SS1-A unit for code leads required.

TABLE C

SECOND NUMBER OF CODE

	2	3	4	5	6	7	8	9	0
2	F58	F48	F38	F28	F18	F57	F47	F37	F27
3	F17	F66	F46	F36	F26	F16	F55	F45	F35
4	F25	F15	F54	F44	F34	F24	F14	F53	F43
5	F33	F23	F13	F52	F42	F32	F22	F12	F51
6	F41	F31	F21	F11	G58	G48	G38	G23	G18
7	G57	G47	G37	G27	G17	G56	G46	G36	G26
8	G16	G55	G45	G35	G25	G15	G54	G44	G34
9	G24	G14	G53	G43	G33	G23	G13	G52	G42
0	G32	G22	G12	G51	G41	G31	G21	G11	H58

NOTE: SEE 401-2 SHEET 3 OF 66M1-50 CONNECTING BLOCK FOR INFORMATION ON PROVIDING GROUP CODES.

ADDING ADDITIONAL UNITS

SS1-A STATION CONTROL (J-53047B)

TABLE D

LEAD	B1	OP	LC	AL	1A	1	2	T1	R1	T	R	T4	R4	GRD
FROM UNIT 1	TSA18	TSA15	TSB48	TSB38	TSB28	TSB18	TSB57	TSB47	TSB37	TSB27	TSB17	TSB56	TSB46	TSB41
TO UNIT 2	TSA17	TSA16	TSB48	TSB38	TSB28	TSB18	TSB57	TSB47	TSB37	TSB27	TSB17	TSB56	TSB46	TSB41

- NOTE:
1. Place straps on additional unit shown on Table "B."
 2. Leads to additional multiple station line pick-up unit (J-53045B-) and SS1 Dialing Unit (J-53045H-) are as shown on drawing.

SSD-401-2^W SHEET 2

4 WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING

MULTIPLE STATION LINE PICK-UP UNIT (J-53045B-)

TABLE E

LEAD	1	3
FROM UNIT 1	TSA53	TSA52
TO UNIT 2	TSA53	TSA52

NOTE: 1. Place straps on additional unit shown on Table "B".
2. All other Leads as shown on drawing.

SIGNALING RELAY UNIT (J-53045F-)

TABLE F

LEAD	SG2	LF	LK	CO	HA
FROM UNIT 1	15	7	10	9	6
TO UNIT 2	5	7	10	9	6

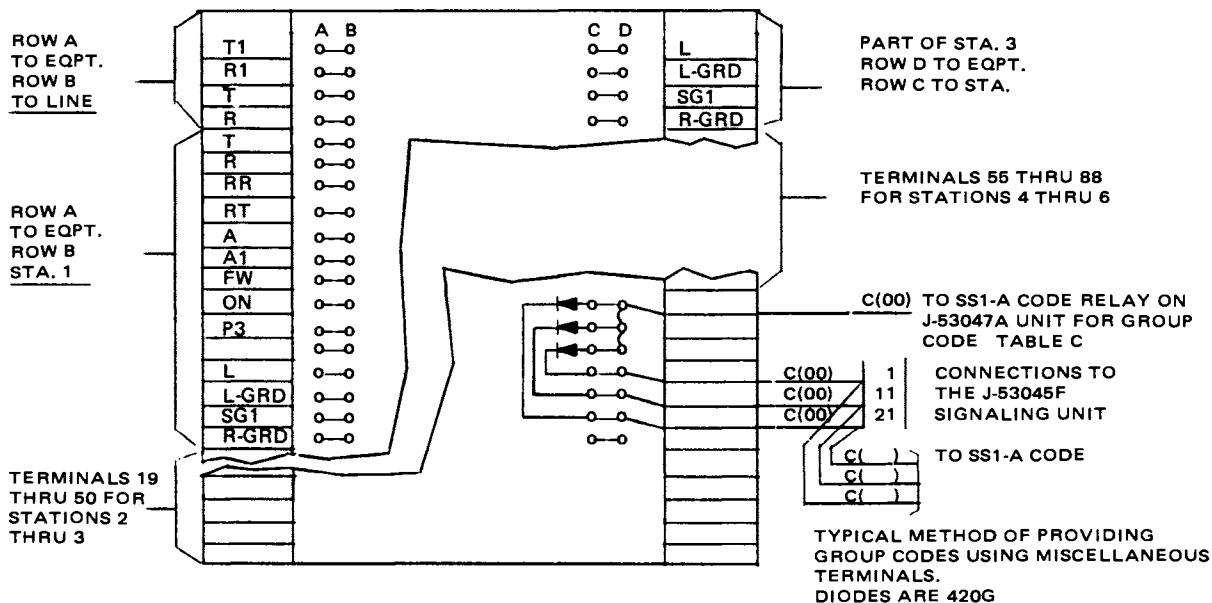
NOTE: 1. Place straps on additional unit shown on Table "B".
2. All other Leads as shown on drawing.

CONNECTIONS TO STATION SETS

1. 568 Type 6 Button Sets	BSP 502-532-400
2. 608 or 618 Call Directors	BSP 502-608-400
3. 6050-6051 Keys	SD-69485-01
4. 500AD-3 4-wire Telephone Set	SSD 905
5. 558F Wall Set	SSD
6. Hang up Hand Set	SSD
7. Head Set, Jack and Key	SSD

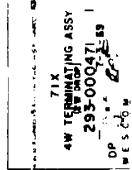
66M1-50 CONNECTING BLOCK

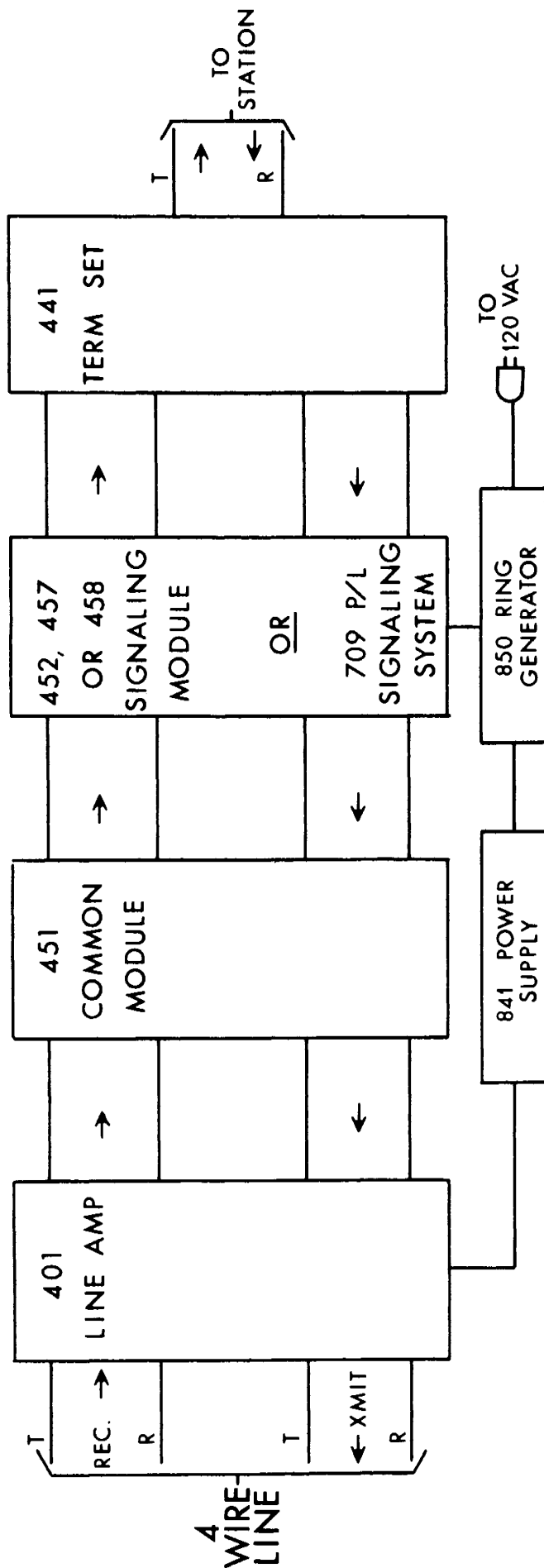
The 66M1-50 Connecting Block is arranged with 2 rows of 50 (double terminal) each for a total of 100 leads. The first 4 terminals of the first block should be used for your line facilities. Reserve 14 terminals for each station regardless of type set. One 66M1-50 Connecting Block will accommodate the 4-wire line feed and 6 stations with 12 spare terminals. The spare terminals are reserved for group code connections and miscellaneous. Order and use second Connecting Block for additional stations and miscellaneous as required.



SSD-401-2W SHEET 3

4 WIRE PRIVATE LINE TERMINATION
SS1-A SIGNALING (NON PRIVACY)
STATION LOCKOUT DURING DIALING





NOTES

1. RINGING GENERATOR, CODE 1 (A-C INPUT) IS PROVIDED WITH POWER SUPPLY, CODES A OR B.
2. RINGING GENERATOR, CODE 2 (D-C INPUT) IS PROVIDED WITH POWER PACK, CODE C.
3. A RINGING GENERATOR IS NOT NORMALLY PROVIDED WITH THIS PACKAGE AND CODE 0 SHOULD BE INDICATED.
4. THE 709 P/L CAN BE WIRED IN ONE OF THREE MODES: TWO-POINT AUTOMATIC; MANUAL RING-DOWN (UNDER CONTROL OF PUSH BUTTON OR RING KEY); OR SWITCH-AND 20-HZ RING-DOWN TO RINGDOWN.
5. THE 71P CANNOT BE EQUIPPED WITH TWO CIRCUITS IN THE SMALLER APPARATUS CASE. THE 71A, 71B, AND 71C ASSEMBLIES ALSO CANNOT BE EQUIPPED WITH TWO CIRCUITS IF THE -24 VDC POWER PACK (CODE C) IS SPECIFIED.

ORDERING INFORMATION

ASSEMBLY APPLICATION	CODE	TERM SET 2-N IMPEDANCE	POWER SUPPLY OUTPUT VOLTAGE	RING GEN. INPUT	NO. OF CIRCUITS
FX, OPX	71A	600 OHMS	-24VDC	AC (Note 1)	ONE
STSCR END	71B	900 OHMS	-48 VDC	DC (Note 2)	TWO
FX, OPX	71C	600/900 OHMS	-24VDC POWER PACK (Note 5)	NONE	CIRCUITS (Note 5)
OFFICE END (Note 3)					ARRANGED FOR TWO CIRCUITS BUT EQPTD WITH ONLY ONE (Note 5)
E & M, TTY (Note 3)					
KINGDOWN (Note 4)	71P	NONE	NONE	NONE	NONE

PICK ONE ITEM DESIRED IN EACH BLOCK AND PUT CODES DOWN LEFT TO RIGHT.

EXAMPLE: FX, SUBSCRIBER END (71A); 2 WIRE IMPEDANCE, 900 OHMS (-2); -24 VDC POWER SUPPLY (-A); AC RING GENERATOR INPUT (-1); FOR 2 CIRCUITS (-B). THIS EXAMPLE WOULD BE ORDERED AS:

1 WESCOM 71A-2-A-1-B TERMINATING ASSEMBLY

SSD-501W

WESCOM TYPE 71 TERMINATING ASSEMBLY

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

WLT

8-70

756A PBX AND DIAL TIE TRUNK SD-65718-02

This information is being provided to aid and simplify the procedures necessary to provide these tie trunks in a 756A PBX.

It is not intended to replace the drawings or BSP sections normally required to do this work.

IDENTIFICATION & LOCATION

1. The tie trunk equipment (normally requested by the Engineering Department) for you to order and install may be 1 of 2 arrangements.

- A. 2-WIRE (tie trunk only)
- B. 4-WIRE (tie trunk with 24V4 repeater shelf)

These items of equipment can be identified by referring to BSP — 534-364-210 (tie trunk) and BSP — 332-105-101 or 103 (repeaters).

2. This equipment can be mounted on slides 2 and 3 of the 756A or on an external relay rack or cabinet.
3. When mounted in the PBX on slide 2, use mtg. positions R thru AA, and in slide 3 use mtg. positions W thru AB.

NOTE: Consideration is to be given to other miscellaneous trunks that on an optional basis may also be located in these positions. (Ref. BSP — 551-144-210)

4. It is recommended that when this equipment is mounted externally to the PBX that a KS-15620 List 15 (—48 Volt) rectifier to be provided for power and a J-58833A-2 List 3 fuse panel for distribution to equipment.

WIRING

1. Shown on pages 2 thru 4 are 3 arrangements which are titled to indicate equipment and basic operation involved, and each provided with notes for connections. The following is a list of Circuit Description, Drawings, and BSP's with footnotes which you must have to properly perform your work.

CD-SD-65718-02 BSP-534-364-210	}	Tie Trunk Circuit
CD-SD-97047-01 or BSP-332-105-101 and 103 or SSD-924 & 927	}	Covers the 24V4A and 24V4C repeaters. (They are not required for Arrangement 3.)
CD-SD-65746-01 (CAD 11 & 16) CD-SD-65741-01 (FS 26)	}	These should be available as part of the on location drawing provided for your 756A PBX.
BSP-551-100-212	}	House and Feeder cable to PBX.
BSP-551-144-210	}	Misc. equipment and installation information 756A PBX. NOTE: Paragraphs 101, 102, 301 thru 305 table B.
BSP-551-147-210	}	Service option in 756A. NOTE: Part 8 and 9 Fig. 8 Tables E, G, H, I.
BSP-332-104-500	}	Telephone repeater lineup.
See Special Services Drawings (SSD) Book Under Test Section.	}	Transmission — Balance on Special Service
	}	DX Signaling Line-Up

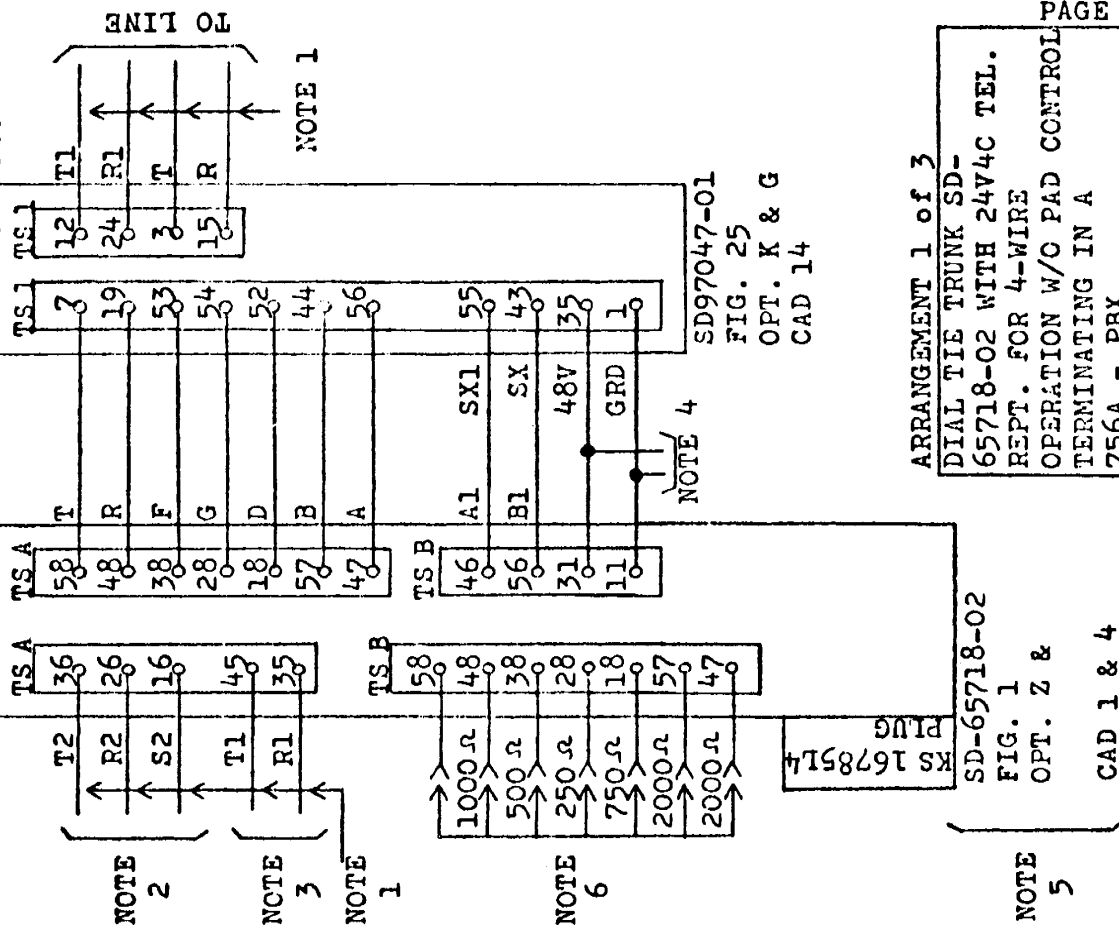
SSD-601 W
DIAL TIE TRUNK SD-65718-02
IN A 756A PBX

THE CHESAPEAKE & POTOMAC TELEPHONE CO
HSG

5-71

J-58824CF-1
LIST
DIAL. TIE TRU

J-98615BJ-1
LIST 2
24V4C TEL. 1



1. Depending on whether this equipment is located in the 756A on slides (1 or 2) or external to the PBX on a R.R. or cabinet the leads required are extended to the PBX from the 75 pair feeder cable pairs 61 thru 67 to the misc. term strip in slide (2) on mtg. plate (P) or you may provide a direct cable if more leads are required.
2. A. When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS B) (CAD 16) on mtg. plate positions (N) or (P) per number assigned.
B. When trunks are mtg. in slide (3) connect these leads to (TS B)(CAD 16) on mtg. plate position (V).
3. A. When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS C) (CAD 16) on mtg. plate (Q) per number assigned.
B. When trunks are mtg. in slide (3) connect these leads to (TS B) mtg. plate (V).
4. A. When trunks are mtg. externally to PBX it is recommended power be provided from a KS-15620 rectifier.
B. When trunks are mtg. in slide (2) BAT & GRD are provided on (TS A)(CAD 16) on mtg. plates (N or P).
C. When trunks are mtg. in slide (3) BAT & GRD are provided on (TS A)(CAD 16) on mtg. plates (V).
5. Refer to SD-65718-02 CADS 1 and 4 to provide options given here.
6. Refer to SD-65718-02 circuit note 107B for strapping information.

See page 1 and 2 of this instruction titled "756A-PBX and Dial Tie Trunk SD-65718-02" for information, drawings and BSP's covering installation and tests.

ARRANGEMENT 1 of 3

DIAL TIE TRUNK SD-
65718-02 WITH 24V4C TEL.
REPT. FOR 4-WIRE
OPERATION W/O PAD CONTROL
TERMINATING IN A
756A - PBX

H.S.G. 4-23-71

NOTES

- Depending on whether this equipment is located in the 756A on slides (1 or 2) or external to the PBX on a R.R. or cabinet the leads required are extended to the PBX from the 75 pair feeder cable pairs 61 thru 67 to the misc. term strip in slide (2) on mtg. plate (P) or you may provide a direct cable if more leads are required.
- When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS B) (CAD 16) on mtg. plate positions (N) or (P) per number assigned.
 - When trunks are mtg. in slide (3) connect these leads to (TS B) (CAD 16) on mtg. plate position (V).
 - Trunks for circuits 80-84 mtg. on slide (2) trunks for circuits 85-89 can mtg. on slides (2 or 3).
- When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS C) (CAD 16) on mtg. plate (Q) per number assigned.
 - When trunks are mtg. in slide (3) connect these leads to (TS B) mtg. plate (V).
- When trunks are mtg. externally to PBX it is recommended power be provided from a KS-15620 rectifier.
 - When trunks are mtg. in slide (2) BAT & GRD are provided on (TS A) (CAD 16) on mtg. plates (N or P).
 - When trunks are mtg. in slide (3) BAT & GRD are provided on (TS A) (CAD 16) on mtg. plates (V).
- Refer to SD-65718-02 CADS 1 and 4 to provide options given here.
- Refer to SD-65718-02 circuit note 107B for strapping information.

See page 1 and 2 of this instruction titled "756A-PBX and Dial Tie Trunk SD-65718-02" for information, drawings and BSP's covering installation and tests.

SSD-601W

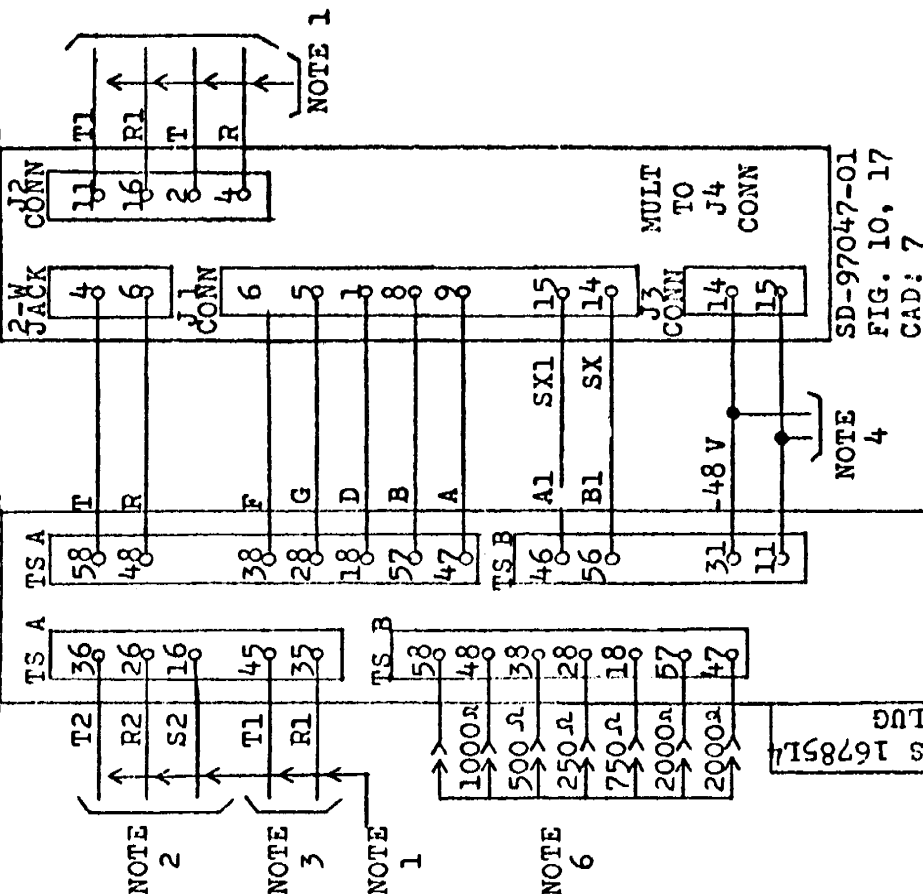
DIAL TIE TRUNK SD-65718-02
IN A 756A PBX

THE CHESAPEAKE & POTOMAC TELEPHONE CO
HSG

5-71

J-58824CF-1
LIST
DIAL TIE TRUNK

J-98615AJ-2
LIST 2
24V4A TEL REPT



PAGE 3 of 4

ARRANGEMENT 2 of 3

DIAL TIE TRUNK SD-65718-02
WITH 24V4A TEL. REPT FOR
4-WIRE OPERATION W/O PAD
CONTROL TERMINATING IN A
756A-PBX

H.S.G. 4-23-71

SD-65718-02

FIG. 1
OPT. 2 AND

CAD. 1 AND 4

SD-97047-01
FIG. 10, 17
CAD: 7

NOTE 4

NOTE 5

NOTE 6

NOTE 1

NOTE 3

NOTE 2

NOTE 1

NOTES

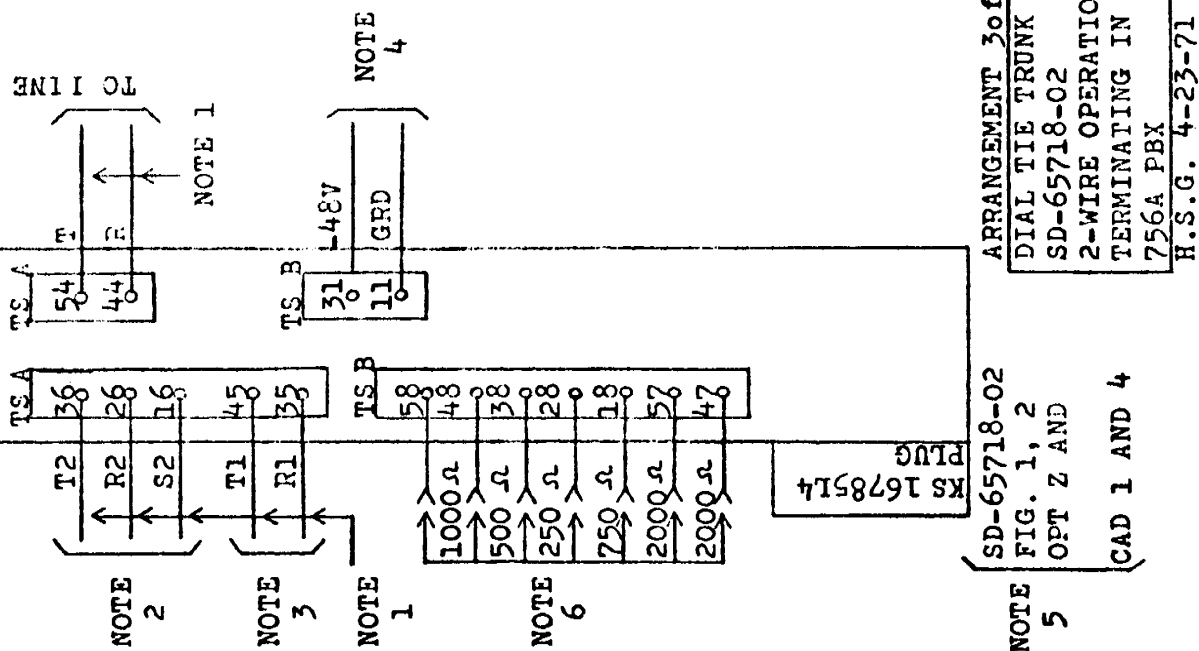
1. Depending on whether this equipment is located in the 756A on slides (1 or 2) or external to the PBX on a R.R. or cabinet the leads required are extended to the PBX from the 75 pair feeder cable pairs 61 thru 67 to the misc. term strip in slide (2) on mtg. plate (P) or you may provide a direct cable if more leads are required.
2. A. When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS B) (CAD 16) on mtg. plate positions (N) or (P) per number assigned.
B. When trunks are mtg. in slide (3) connect these leads to (TS B)(CAD 16) on mtg. plate position (V).
C. Trunks for circuits 80-84 mtg. on slide (2) trunks for circuits 85-89 can mtg. on slides (2 or 3).
3. A. When trunks are mtg. in slide (2) or external to PBX connect these leads to (TS C) (CAD 16) on mtg. plate (Q) per number assigned.
B. When trunks are mtg. in slide (3) connect these leads to (TS B) mtg. plate (V).
4. A. When trunks are mtg. externally to PBX it is recommended power be provided from a KS-15620 rectifier.
B. When trunks are mtg. in slide (2) BAT & GRD are provided on (TS A)(CAD 16) on mtg. plates (N or P).
C. When trunks are mtg. in slide (3) BAT & GRD are provided on (TS A)(CAD 16) on mtg. plates (V).
5. Refer to SD-65718-02 CADS 1 and 4 to provide options given here.
6. Refer to SD-65718-02 circuit note 107A for strapping information.

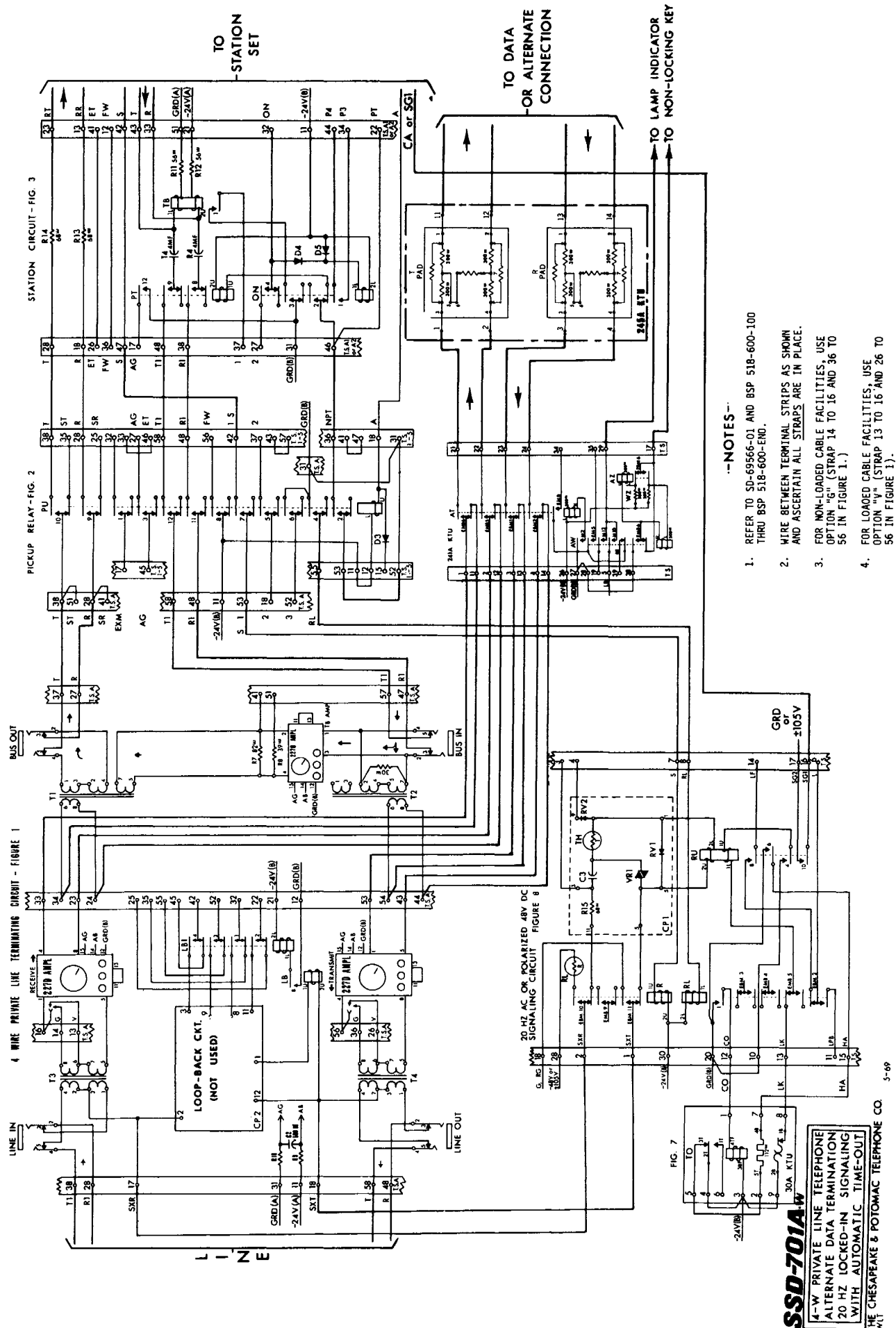
See page 1 and 2 of this instruction titled "756A-PBX and Dial Tie Trunk SD-65718-02" for information, drawings and BSP's covering installation and tests.

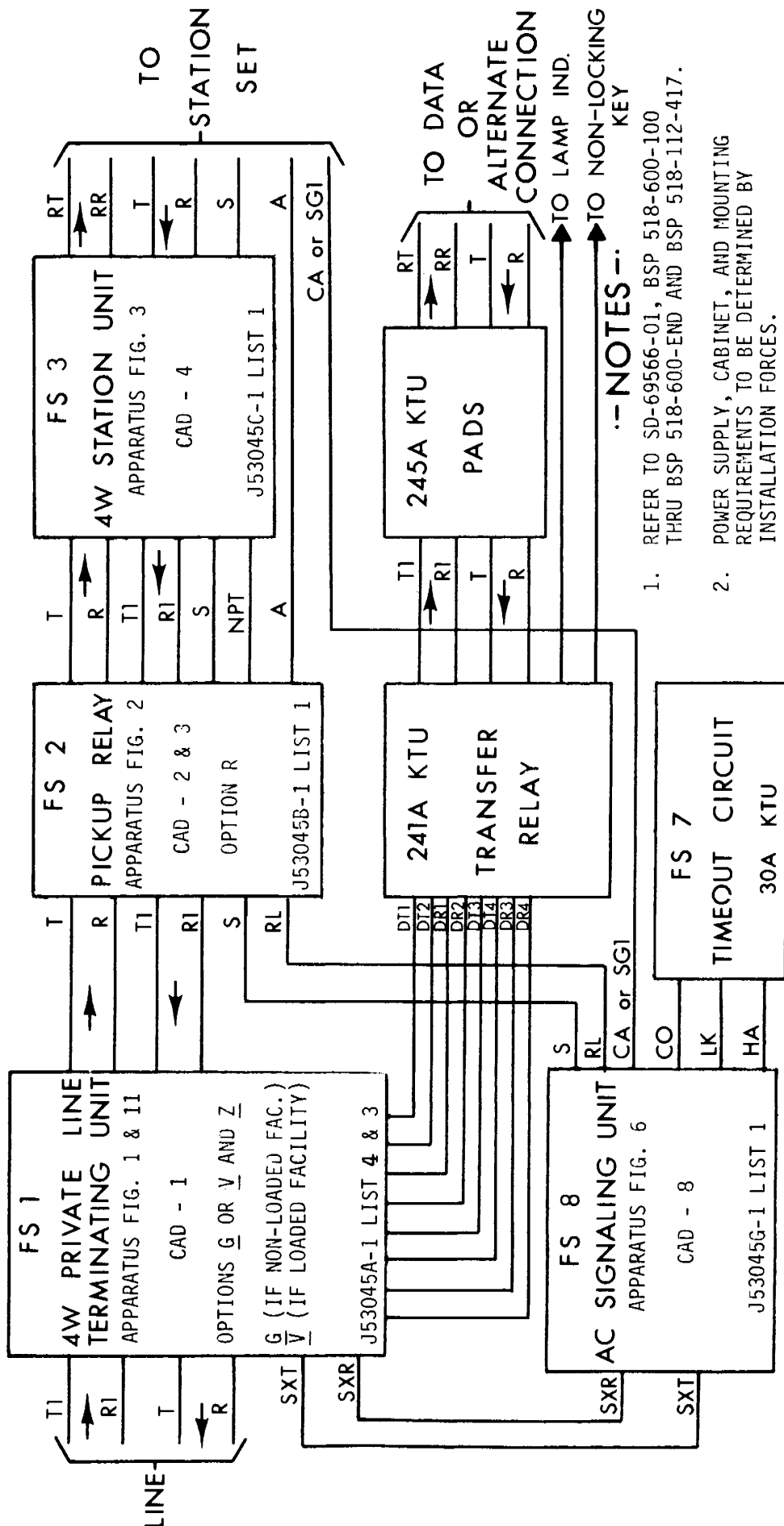
J-58824CF-1

LIST

DIAL TIE TRUNK







NOTES --

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END AND BSP 518-112-417.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

SSD-701 W

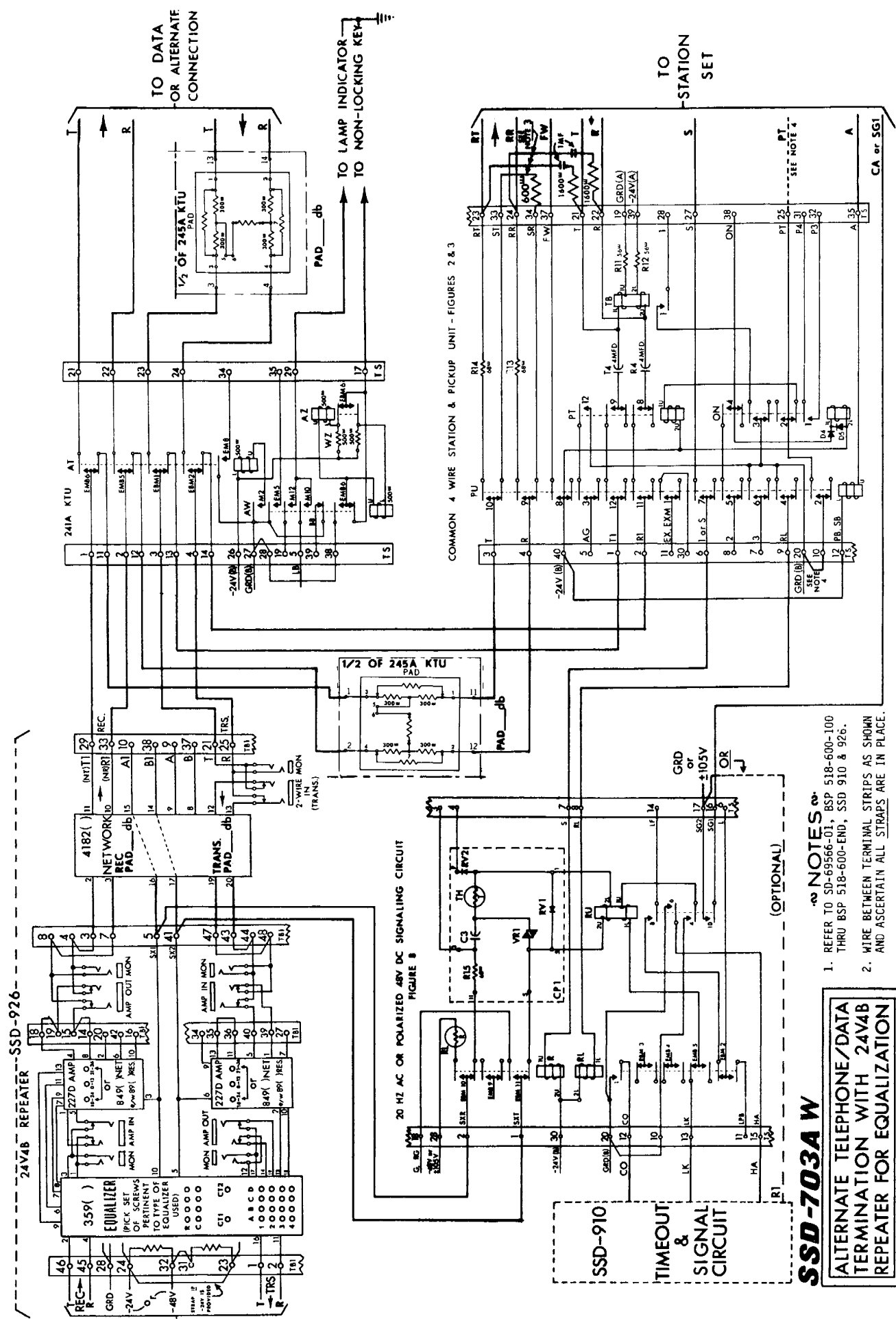
4-W PRIVATE LINE TELEPHONE
ALTERNATE DATA TERMINATION
20 HZ LOCKED-IN SIGNALING
WITH AUTOMATIC TIME-OUT

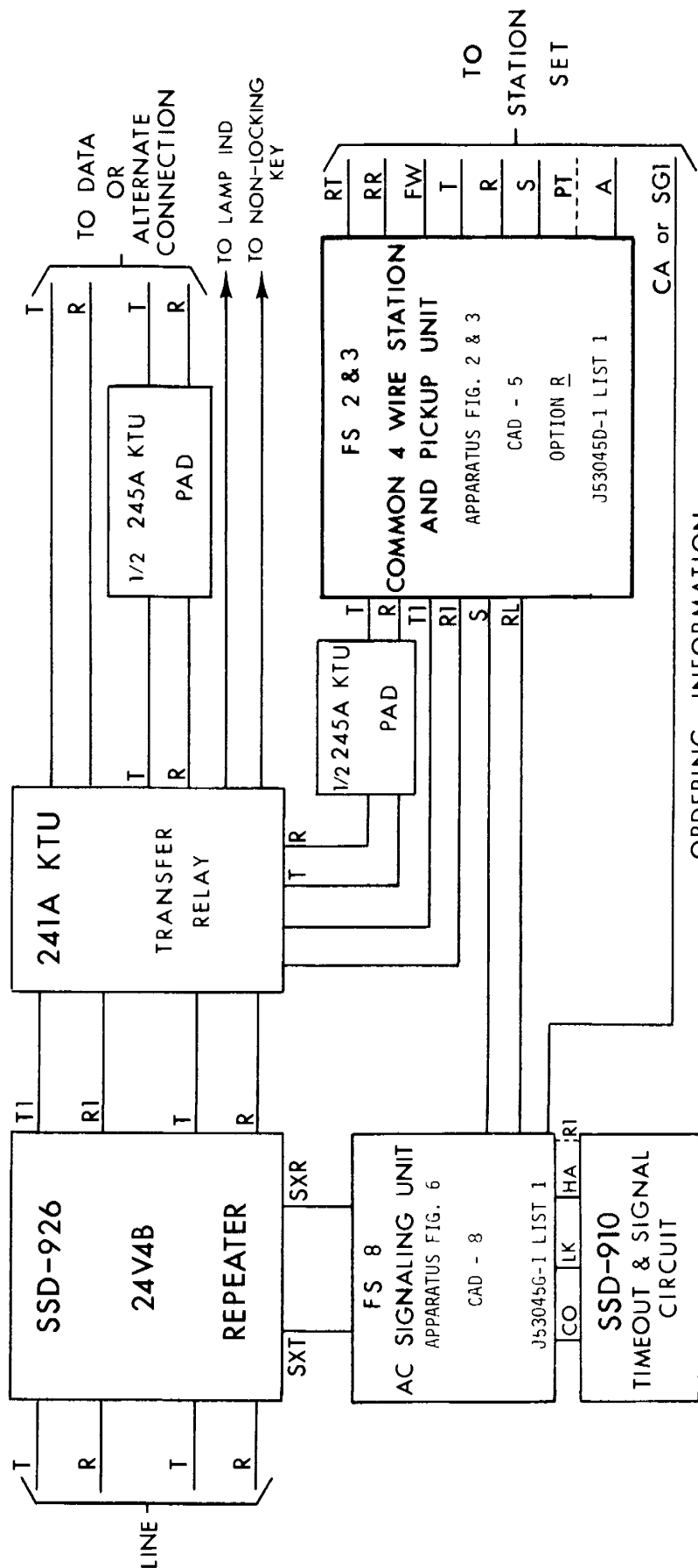
ORDERING INFORMATION

- | | | |
|---|--------------------------|---|
| 1 | J53045A-1, LIST 4 | 4-WIRE PRIVATE LINE TERMINATION UNIT |
| 1 | J53045B-1, LIST 1 | 4-WIRE MULTIPLE STATION LINE PICKUP RELAY UNIT |
| 1 | J53045C-1, LIST 1 | 4-WIRE PRIVATE LINE STATION UNIT |
| 1 | J53045G-1, LIST 1 | 4-WIRE PRIVATE LINE AC OR DC SIGNALING RELAY UNIT |
| 1 | UNIT TELEPHONE KEY, 30A | (ONE PER LOCATION) |
| 1 | UNIT TELEPHONE KEY, 241A | |
| 1 | UNIT TELEPHONE KEY, 245A | |
| 1 | AMPLIFIER, 227D | |

THE CHESAPEAKE & POTOMAC TELEPHONE CO

11-69





ORDERING INFORMATION

QUANTITY	ITEM
	J53045D1 L1 4-WIRE PVT LINE STA & PICKUP RELAY UNIT
	J53045G1 L1 4-WIRE PVT LINE AC OR DC SIG RELAY UNIT
	UNIT TELEPHONE KEY 241A
	UNIT TELEPHONE KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	INDICATOR 15D-49
	KEY 551A-3
	SEE SSD-910 FOR ORDERING INFO ON TIME-OUT & SIG CKT
	SEE SSD-926 FOR ORDERING INFO ON 24V4B REPEATER
	CAPACITOR 542D
	RESISTOR 145A 600 OHMS
	RESISTOR 145A 2000 OHMS

NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END, BSP 518-112-417, SSD-910 AND SSD-926.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.
3. FOR LOOP-BACK ARRANGEMENT SEE SSD-704

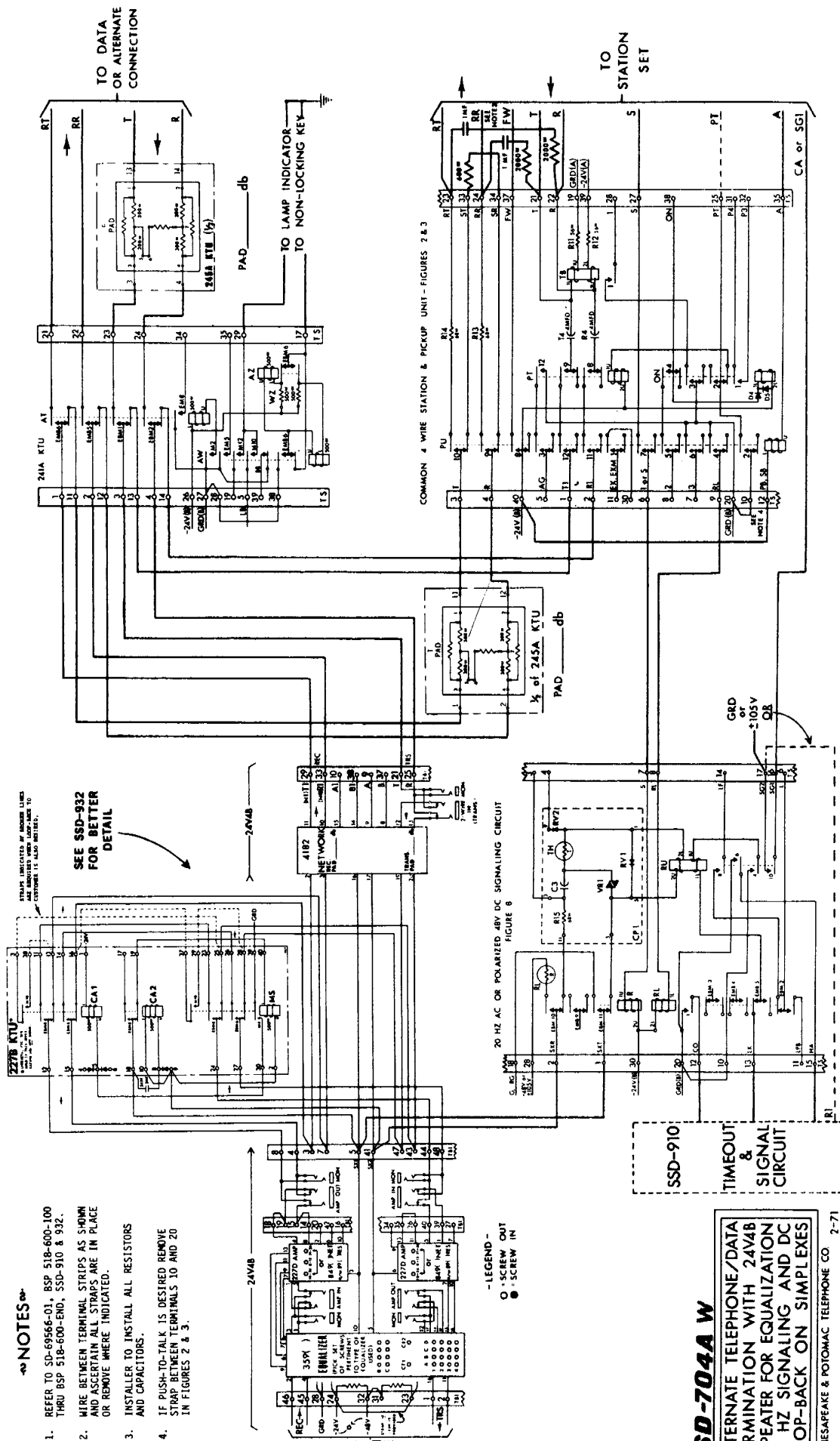
SSD-703 W

ALTERNATE TELEPHONE/DATA
TERMINATION WITH 24V4B
REPEATER FOR EQUALIZATION

THE CHESAPEAKE & POTOMAC TELEPHONE CO.
WLT
REV. 1-71

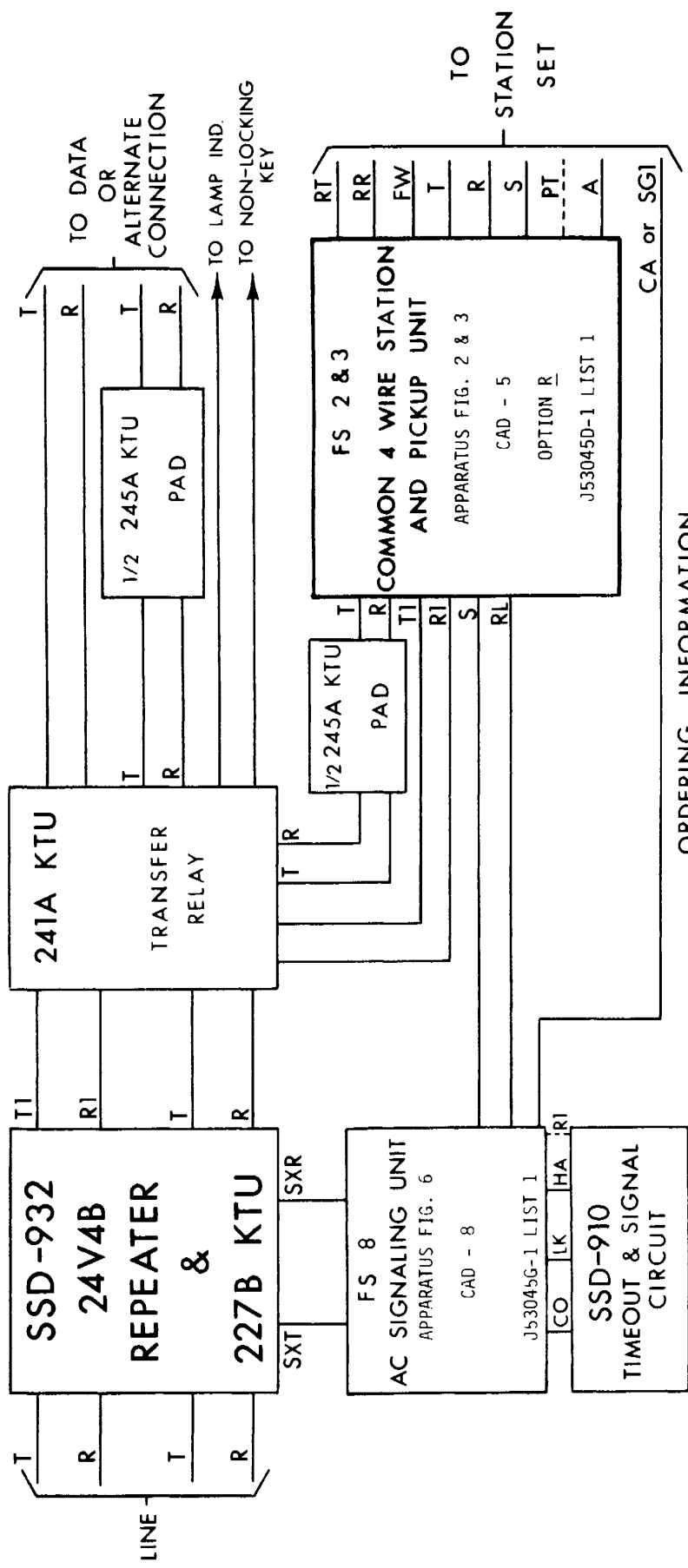
NOTES

1. REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END, SSD-910 & 932.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE OR REMOVE WHERE INDICATED.
3. INSTALLER TO INSTALL ALL RESISTORS AND CAPACITORS.
4. IF PUSH-TO-TALK IS DESIRED REMOVE STRAP BETWEEN TERMINALS 10 AND 20 IN FIGURES 2 & 3.



SSD-704A W
 ALTERNATE TELEPHONE/DATA
 TERMINATION WITH 24VAC
 REPEATER FOR EQUALIZATION
 20 HZ SIGNALING AND DC
 LOOP-BACK ON SIMPLEX

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 2-71



ORDERING INFORMATION

QUANTITY	ITEM
	J53045D1 L1 4-WIRE PVT LINE STA & PICKUP RELAY UNIT
	J53045G1 L1 4-WIRE PVT LINE AC OR DC SIG RELAY UNIT
	UNIT TELEPHONE KEY 241A
	UNIT TELEPHONE KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	INDICATOR 15D-49
	KEY 551A-3
	SEE SSD-910 FOR ORDERING INFO ON TIME-OUT & SIG CKT
	SEE SSD-932 FOR ORDERING INFO ON 24V4B & 227B KTU
	CAPACITOR 542D
	RESISTOR 145A 600 OHMS
	RESISTOR 145A 2000 OHMS

SSD-704 W
 ALTERNATE TELEPHONE/DATA
 TERMINATION WITH 24V4B
 REPEATER FOR EQUALIZATION
 20 HZ SIGNALING AND DC
 LOOP-BACK ON SIMPLEXES

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 2-71
 WLT

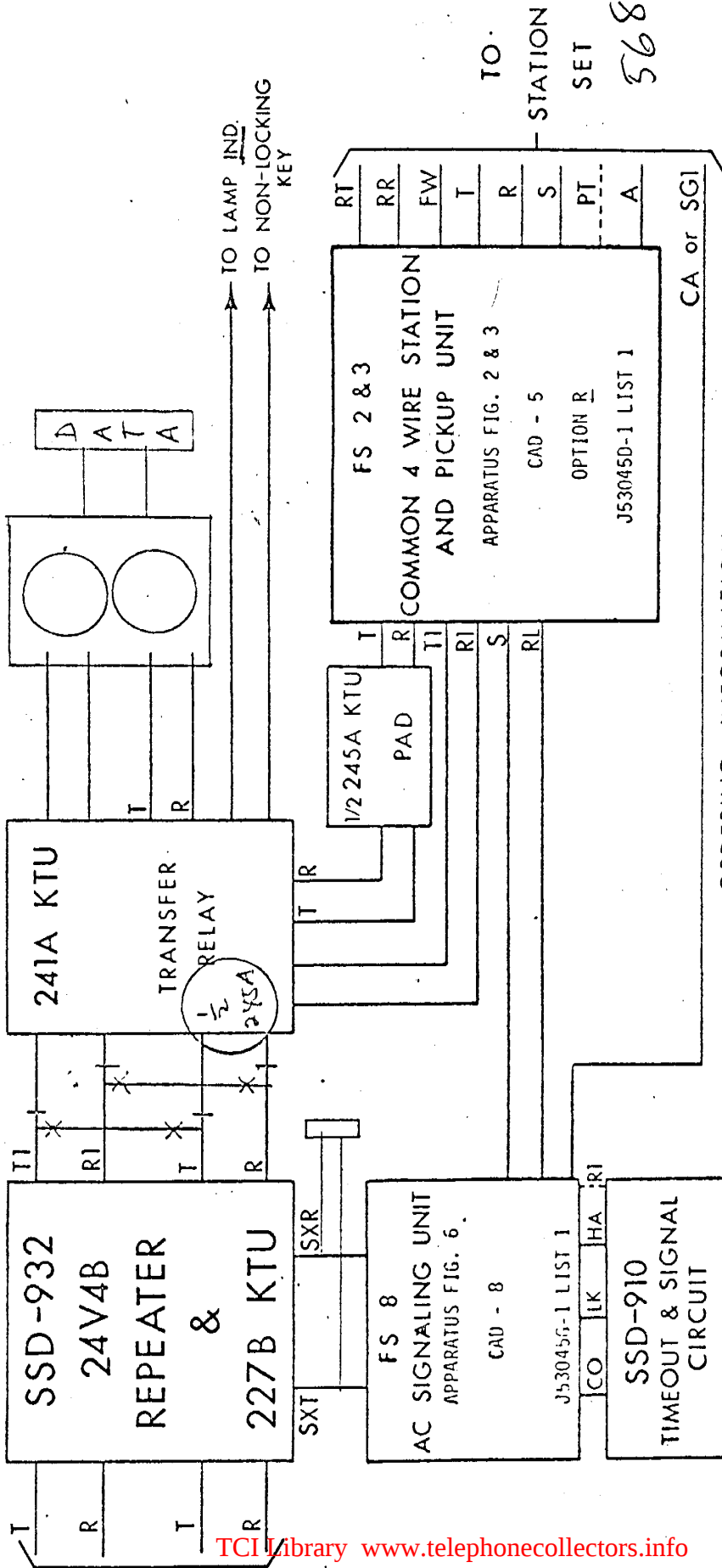
NOTES

1. REFER TO SD-69566-01, BSP 480-615-100, SSD-910 AND SSD-932.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

227B
look
Back

(SSD-932)

16
Term Set



ORDERING INFORMATION

QUANTITY	ITEM
	J53045D1 L1 4-WIRE PVT LINE STA & PICKUP RELAY UNIT
	J53045G1 L1 4-WIRE PVT LINE AC OR DC SIG RELAY UNIT
	UNIT TELEPHONE KEY 241A
	UNIT TELEPHONE KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	INDICATOR 15D-49
	KEY 551A-3
	SEE SSD-910 FOR ORDERING INFO ON TIME-OUT & SIG CKT
	SEE SSD-932 FOR ORDERING INFO ON 24V4B & 227B KTU
	CAPACITOR 542D
	RESISTOR 145A 600 OHMS
	RESISTOR 145A 2000 OHMS

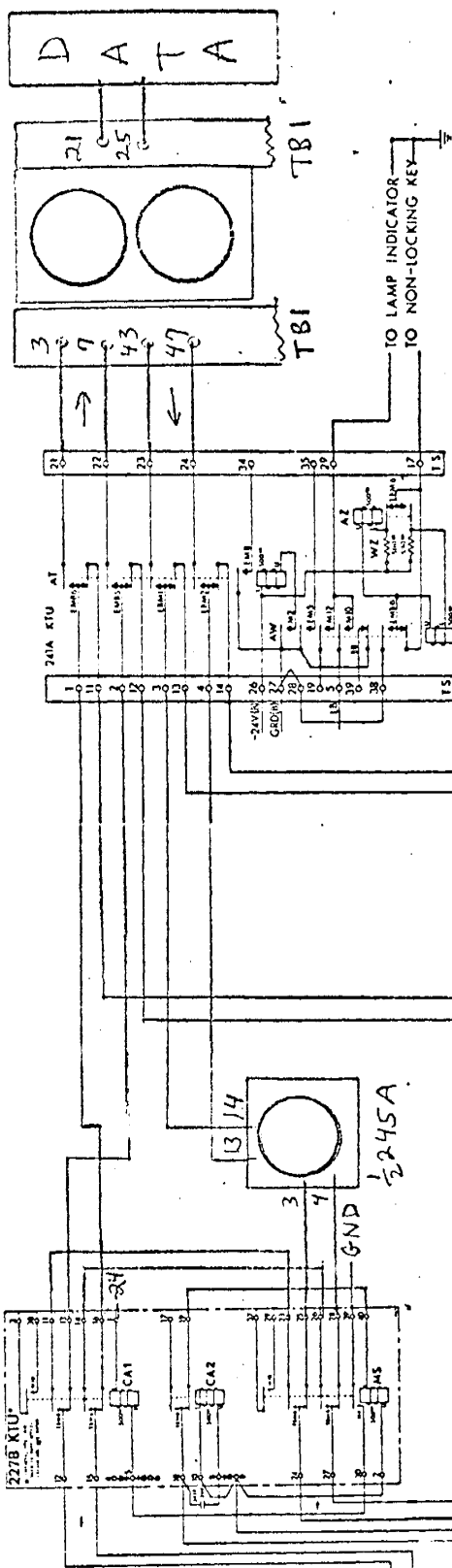
NOTES

1. REFER TO SD-69566-01, BSP 480-615-100, SSD-910 AND SSD-932.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

B-704 Model for 2-wire data

ERNATE TELEPHONE/DATA
MINATION WITH 24V4B
EATER FOR EQUALIZATION
HZ SIGNALING AND DC
OP-BACK ON SIMPLEXES

1 G
Term Set



NOTES

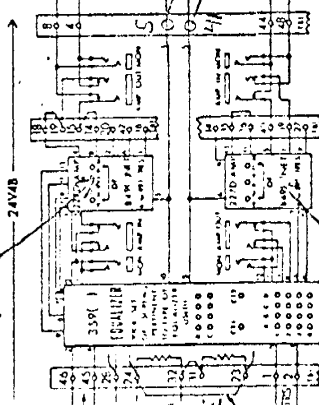
REFER TO SD-69566-01, BSP 518-600-100 THRU BSP 518-600-END, SSD-910 & 912.

WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE OR REMOVE WHERE INDICATED.

INSTALLER TO INSTALL ALL RESISTORS AND CAPACITORS.

IF PUSH-TO-TALK IS DESIRED REMOVE STRAP BETWEEN TERMINALS 10 AND 20 IN FIGURES 2 & 3.

227D
Amp



LEGEND -
O - SCREW OUT
• - SCREW IN

349A
Ver

COMMON 4 WIRE STATION & PICKUP UNIT - FIGURES 2 & 3

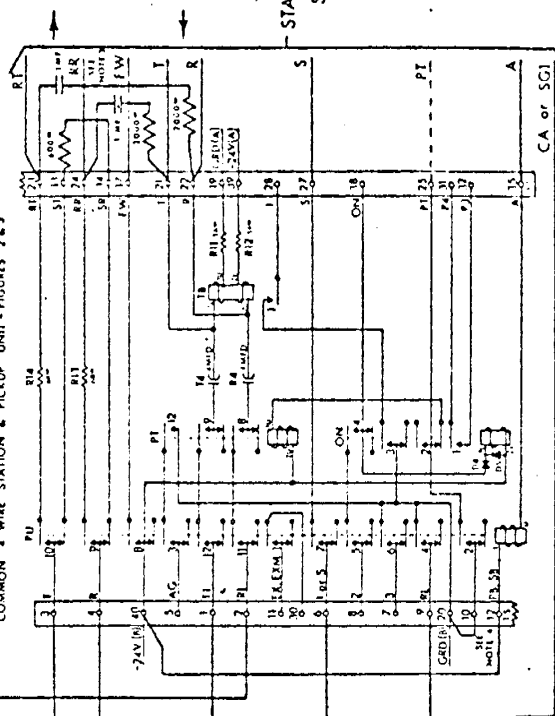
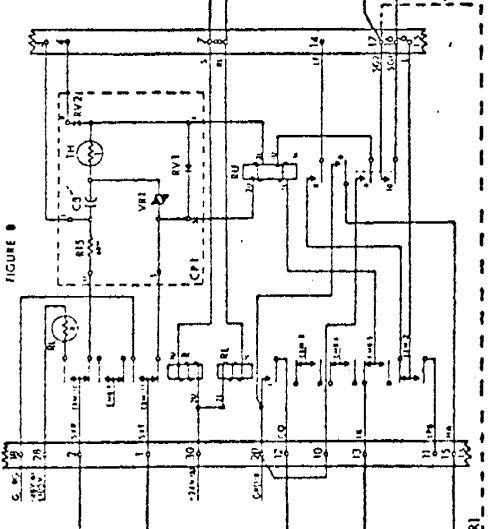


FIGURE 8
20 HZ AC OR POLARIZED 48V DC SIGNALING CIRCUIT



SSD-910
TIMEOUT
&
SIGNAL
CIRCUIT

704A

ERNATE TELEPHONE/DATA
MINATION WITH 24V4B
ATER FOR EQUALIZATION
IZ SIGNALING AND DC
P-BACK ON SIMPLEXES

PEACE & POTOMAC TELEPHONE CO. 62-71

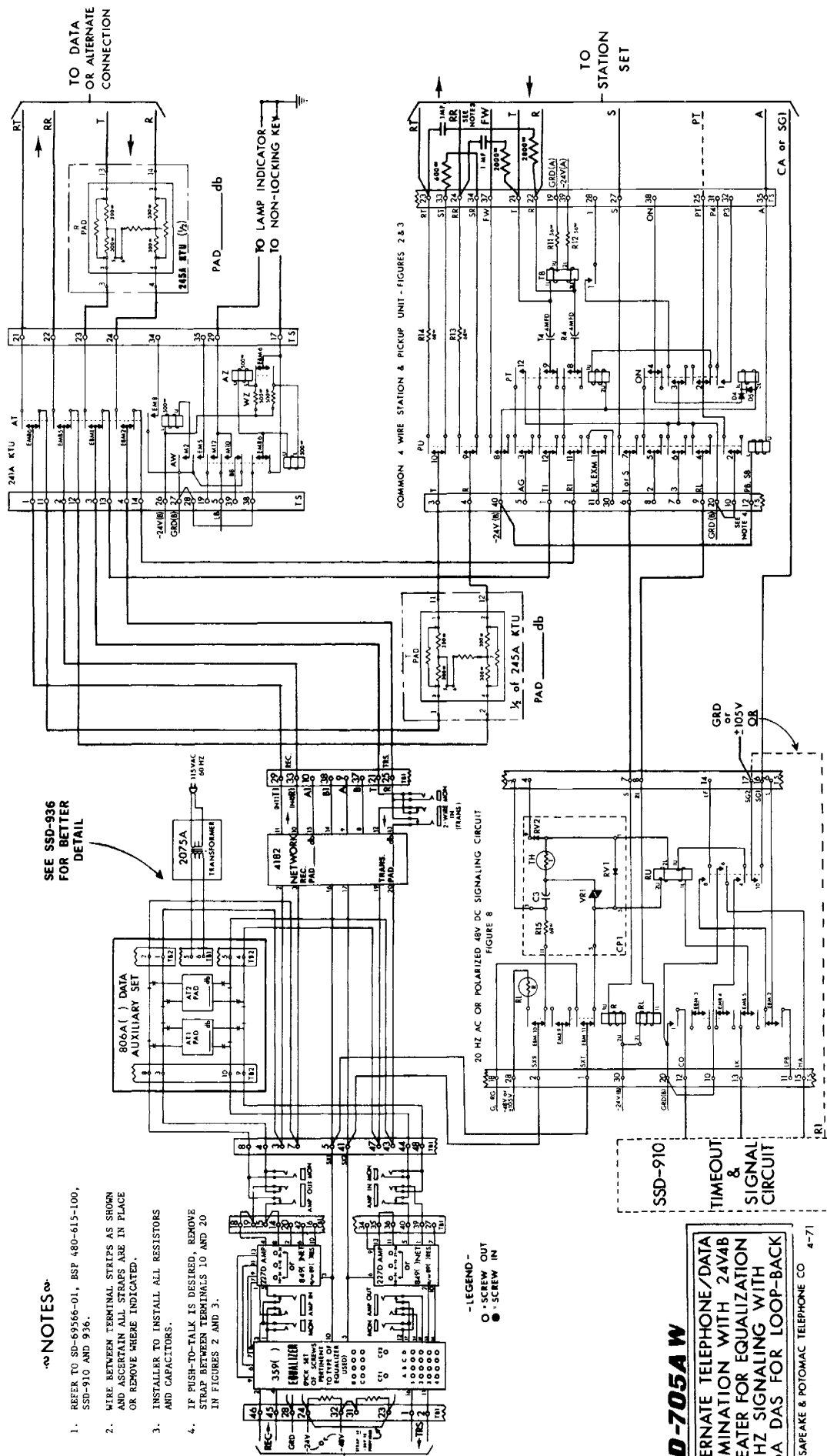
TO
STATION
SET
568
H8

mod for 2-w data

NOTES

1. REFER TO SD-69566-01, BSP 480-615-100, SSD-910 AND 936.
2. WIRE BETWEEN TERMINAL STRIPS AS SHOWN AND ASCERTAIN ALL STRAPS ARE IN PLACE OR REMOVE WHERE INDICATED.
3. INSTALLER TO INSTALL ALL RESISTORS AND CAPACITORS.
4. IF PUSH-TO-TALK IS DESIRED, REMOVE STRAP BETWEEN TERMINALS 10 AND 20 IN FIGURES 2 AND 3.

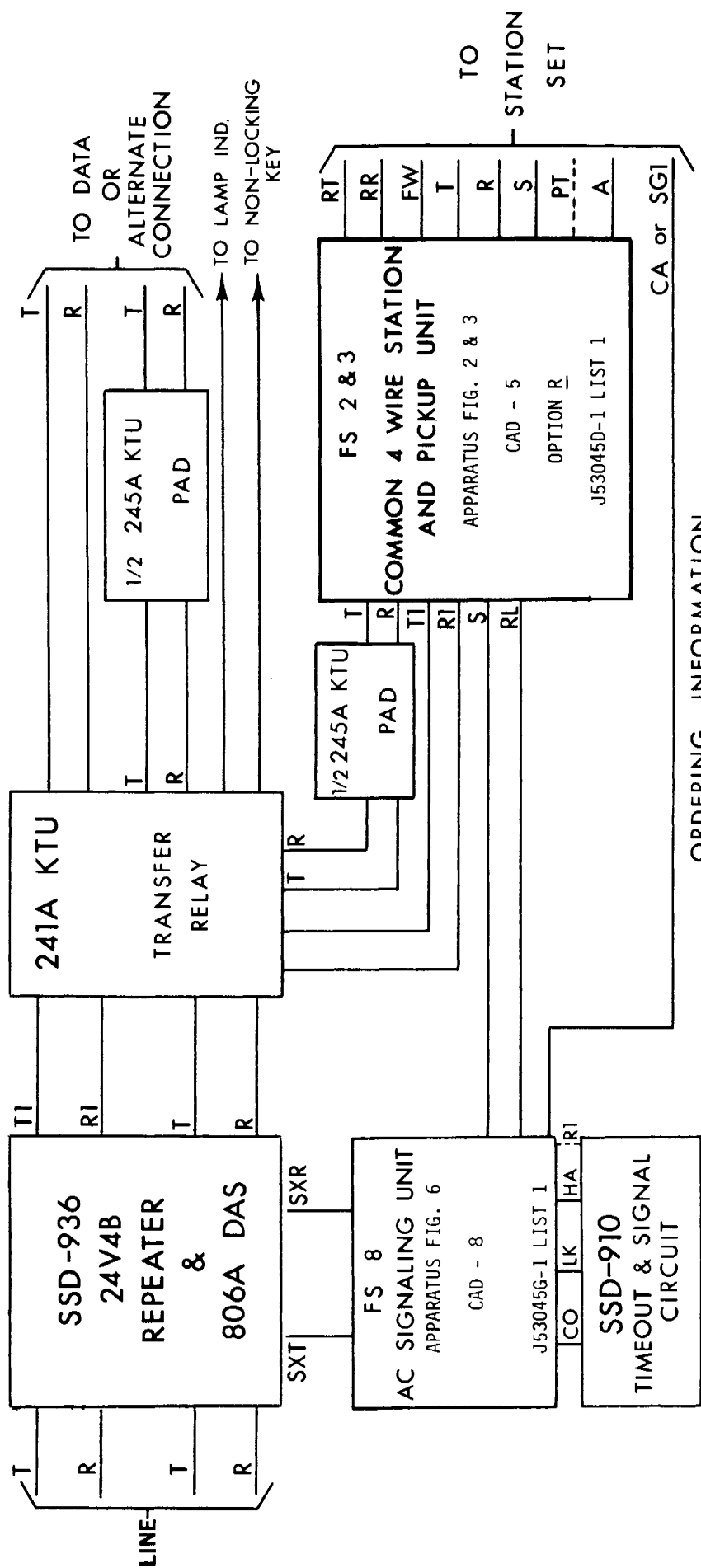
SEE SSD-936 FOR BETTER DETAIL



SSD-705A W

ALTERNATE TELEPHONE/DATA TERMINATION WITH 24V4B REPEATER FOR EQUALIZATION 20 HZ SIGNALING WITH 806A DAS FOR LOOP-BACK

THE CHESAPEAKE & POTOMAC TELEPHONE CO 4-71



SSD-705 W

ALTERNATE TELEPHONE/DATA
TERMINATION WITH 24V4B
REPEATER FOR EQUALIZATION
20 HZ SIGNALING WITH
806A DAS FOR LOOP-BACK

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 4-71
WLT

ORDERING INFORMATION

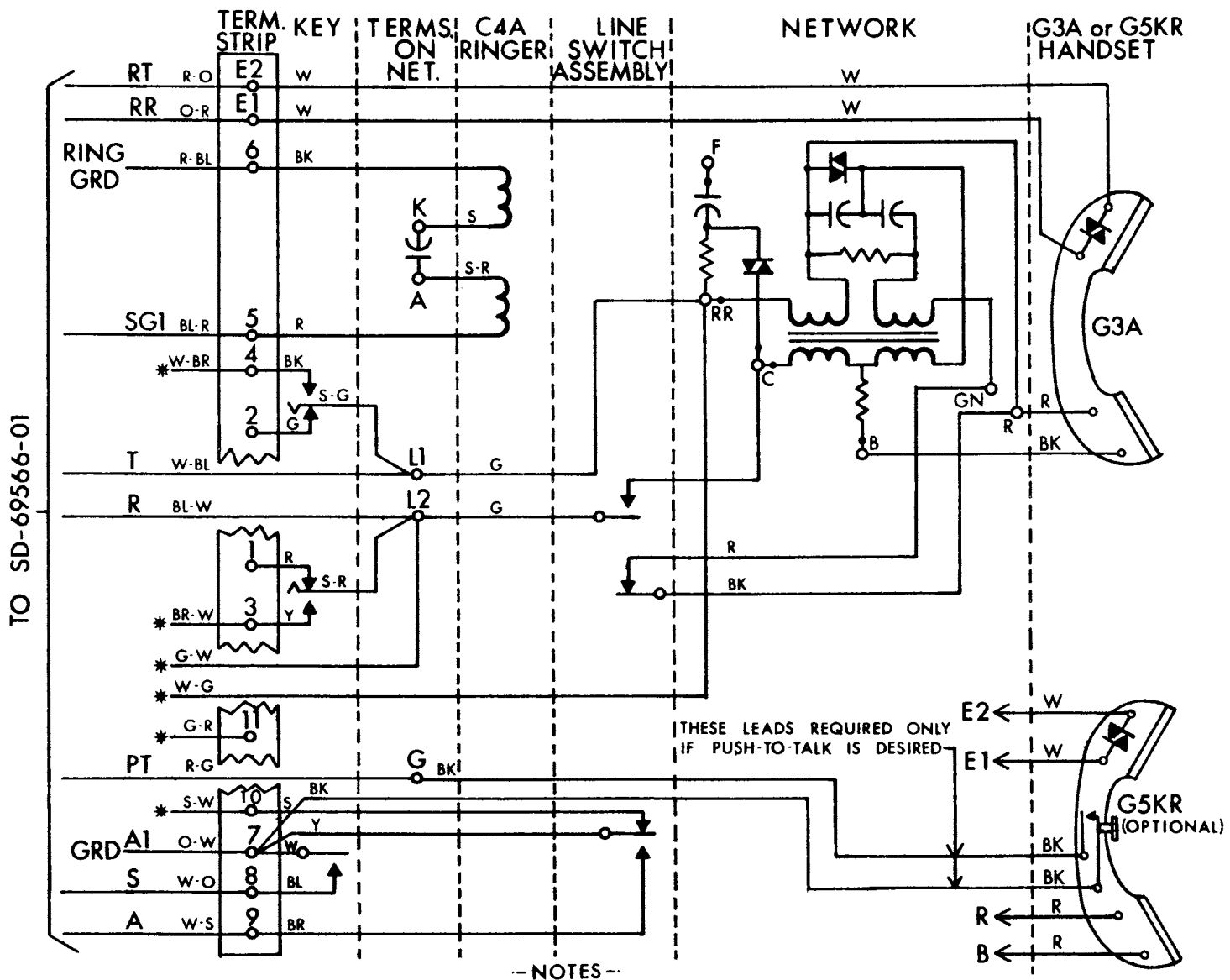
QUANTITY	ITEM
	J53045D1 L1 4-WIRE PVT LINE STA & PICKUP RELAY UNIT
	J53045G1 L1 4-WIRE PVT LINE AC OR DC SIG RELAY UNIT
	UNIT TELEPHONE KEY 241A
	UNIT TELEPHONE KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	INDICATOR 15D-49
	KEY 551A-3
	SEE SSD-910 FOR ORDERING INFO ON TIME-OUT & SIG CKT
	SEE SSD-936 FOR ORDERING INFOR ON 24V4B & 806A DAS
	CAPACITOR 542D
	RESISTOR 145A 600 OHMS
	RESISTOR 145A 2000 OHMS

NOTES

1. REFER TO SD-69566-01, BSP 480-615-100, SSD-910 AND SSD-936.
2. POWER SUPPLY, CABINET, AND MOUNTING REQUIREMENTS TO BE DETERMINED BY INSTALLATION FORCES.

INSTRUCTIONS

1. REMOVE COVER FROM SET.
2. REMOVE DIAL AND ITS WIRING FROM SET.
3. REMOVE EXCLUSION KEY AND ITS WIRING FROM SET.
4. MOVE BLUE-WHITE LEAD FROM 1 ON TERMINAL STRIP TO L2 ON 425 NETWORK.
5. MOVE WHITE-BLUE LEAD FROM 2 ON TERMINAL STRIP TO L1 ON 425 NETWORK.
6. IF PUSH-TO-TALK FEATURE IS DESIRED REPLACE G3A HANDSET WITH A G5KR HANDSET AND WIRE AS SHOWN BELOW IN OPTIONAL ARRANGEMENT.
7. MOVE WHITE HANDSET LEADS FROM GN TERMINAL AND R TERMINAL ON 425 NETWORK TO E1 AND E2 ON TERMINAL STRIP.
8. MOVE GREEN LEAD FROM F AND PLACE ON RR ON 425 NETWORK.
9. PLACE A 95C ADAPTOR IN PLACE OF DIAL.



ORDERING INFORMATION

- 1 SET TELEPHONE, 511DR-
- 1 BLANK APPARATUS, 95C-

1. REFER TO BSP 502-515-400.
2. LEADS MARKED WITH * ARE NOT USED
3. SOME OF THE OLDER SETS MAY HAVE A G1 HANDSET INSTEAD OF A G3A.
4. IF LEAD COLORS ARE DIFFERENT FROM THOSE SHOWN, SEE B50.

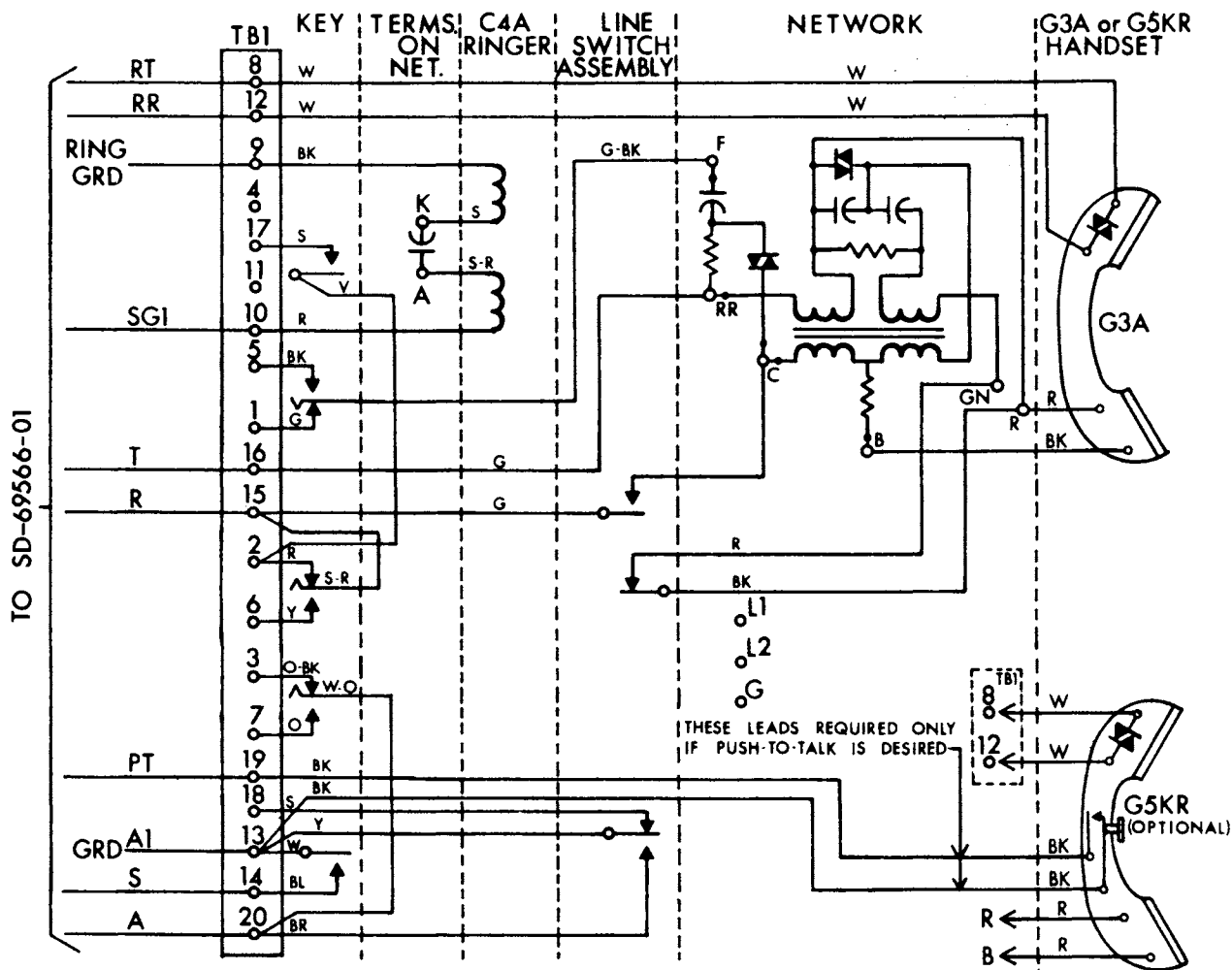
SSD-901W

MODIFICATION OF 511DR TELEPHONE SET FOR 4-WIRE MANUAL OPERATION WITH SD-69566-01

THE CHESAPEAKE & POTOMAC TELEPHONE CO. WLT REV. 6-70

INSTRUCTIONS

1. REMOVE COVER FROM SET.
2. REMOVE DIAL AND ITS WIRING FROM SET.
3. REMOVE EXCLUSION KEY AND ITS WIRING FROM SET.
4. MOVE RED RINGER LEAD FROM 1 ON TB1 TO 10 ON TB1.
5. MOVE BLACK RINGER LEAD FROM 2 ON TB1 TO 9 ON TB1.
6. MOVE YELLOW LEAD FROM 4 ON TB1 TO 13 ON TB1.
7. IF PUSH-TO-TALK FEATURE IS DESIRED, REPLACE G3A HANDSET WITH A G5KR HANDSET AND WIRE AS SHOWN BELOW IN OPTIONAL ARRANGEMENT.
8. MOVE WHITE HANDSET LEADS FROM "GN" AND "R" TERMINALS ON 425 NETWORK TO TERMINALS 8 AND 12 ON TB1.
9. PLACE A GREEN LEAD BETWEEN "RR" ON 425 NETWORK AND TERMINAL 16 ON TB1.
10. PLACE A 95C APPARATUS BLANK IN PLACE OF DIAL.



-- NOTES --

ORDERING INFORMATION

- 1 SET TELEPHONE, 558F
- 1 BLANK APPARATUS, 95C-

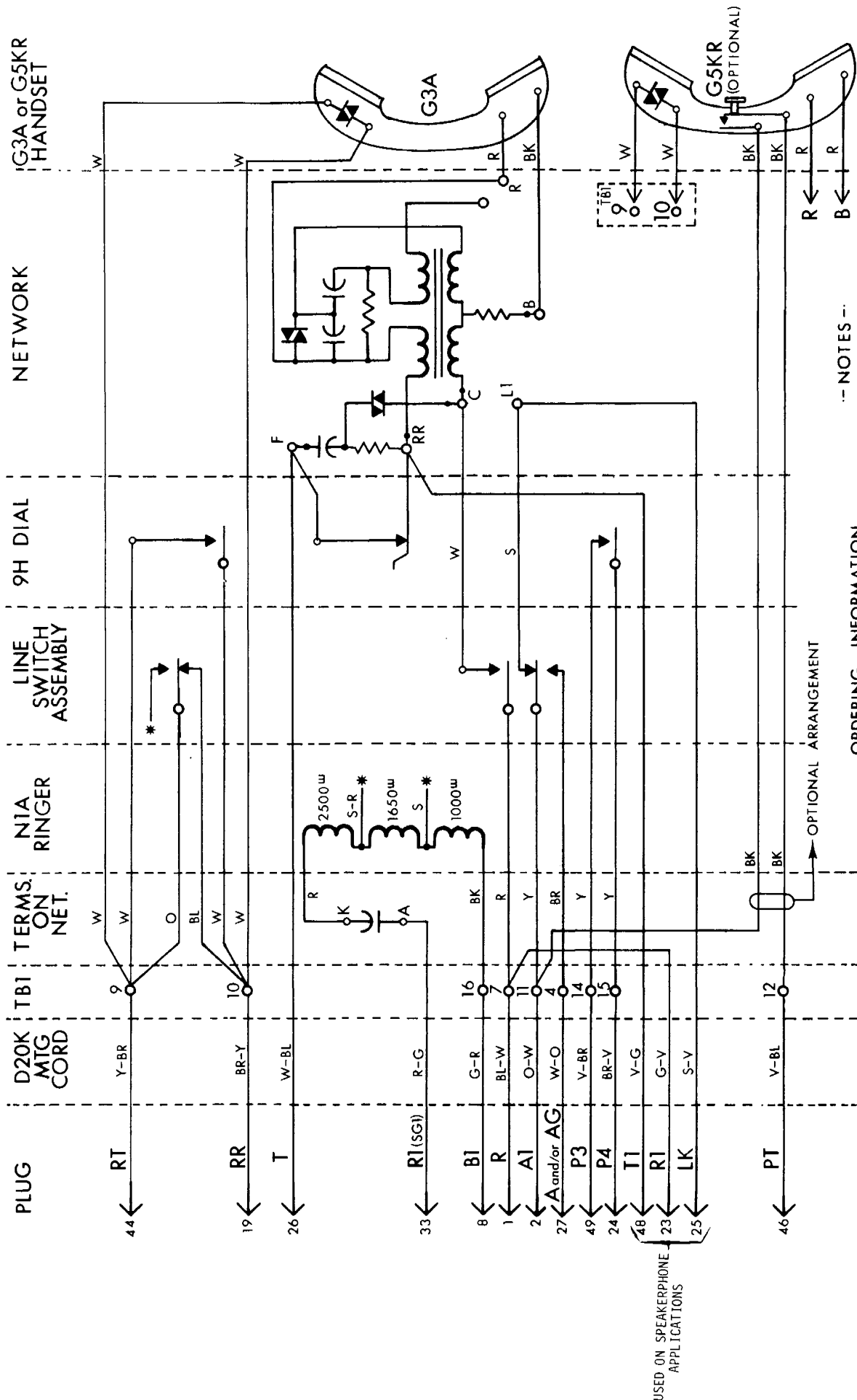
1. REFER TO BSP 502-515-401.
2. SOME OF THE OLDER SETS MAY HAVE A G1 HANDSET INSTEAD OF A G3A.
3. IF LEAD COLORS ARE DIFFERENT FROM THOSE SHOWN, SEE BSP.

SSD-902 W

MODIFICATION OF 558F TELEPHONE
SET FOR 4-WIRE MANUAL
OPERATION WITH SD-69566-01

THE CHESAPEAKE & POTOMAC TELEPHONE CO.
WLT

REV. 6-70



- NOTES --
1. REFER TO BSP 502-512-401.
 2. LEADS NOT REQUIRED IN THIS ARRANGEMENT ARE NOT SHOWN.
 3. LEADS DESIGNATED WITH AN ASTERISK * ARE INSULATED AND STORED.

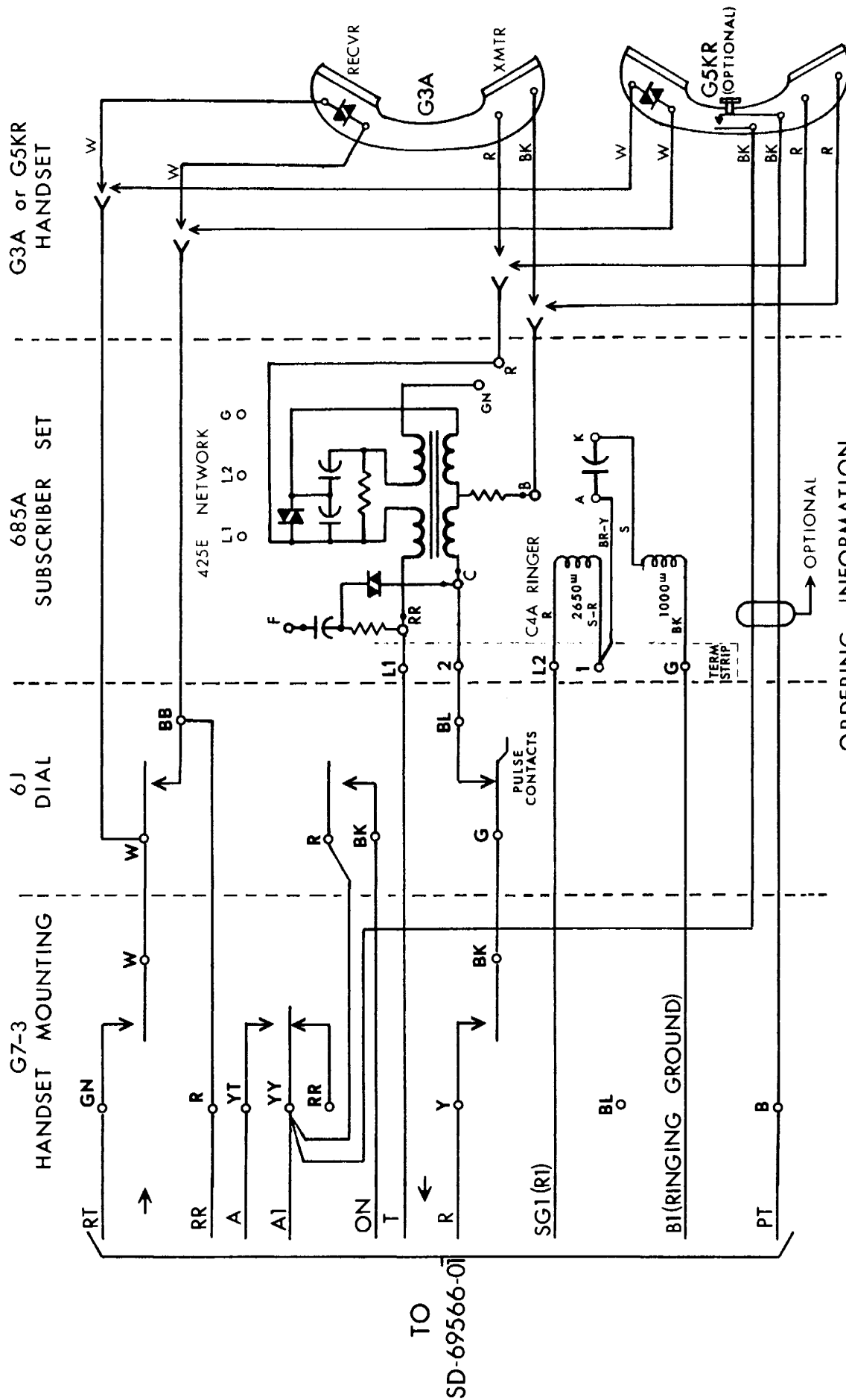
ORDERING INFORMATION

- 1 SET, TELEPHONE, 500AD
IF PUSH-TO-TALK IS
DESIRED ALSO ORDER.
1 SET, HAND, G5KR

SSD-905 W

500AD TELEPHONE SET
[AS USED WITH SD-69566-01]

THE CHESAPEAKE & POTOMAC TELEPHONE CO
REV. 6-70



TO
SD-69566-01

SSD-906 W

4-W HANGUP HANDSET
FOR USE WITH SSI-A

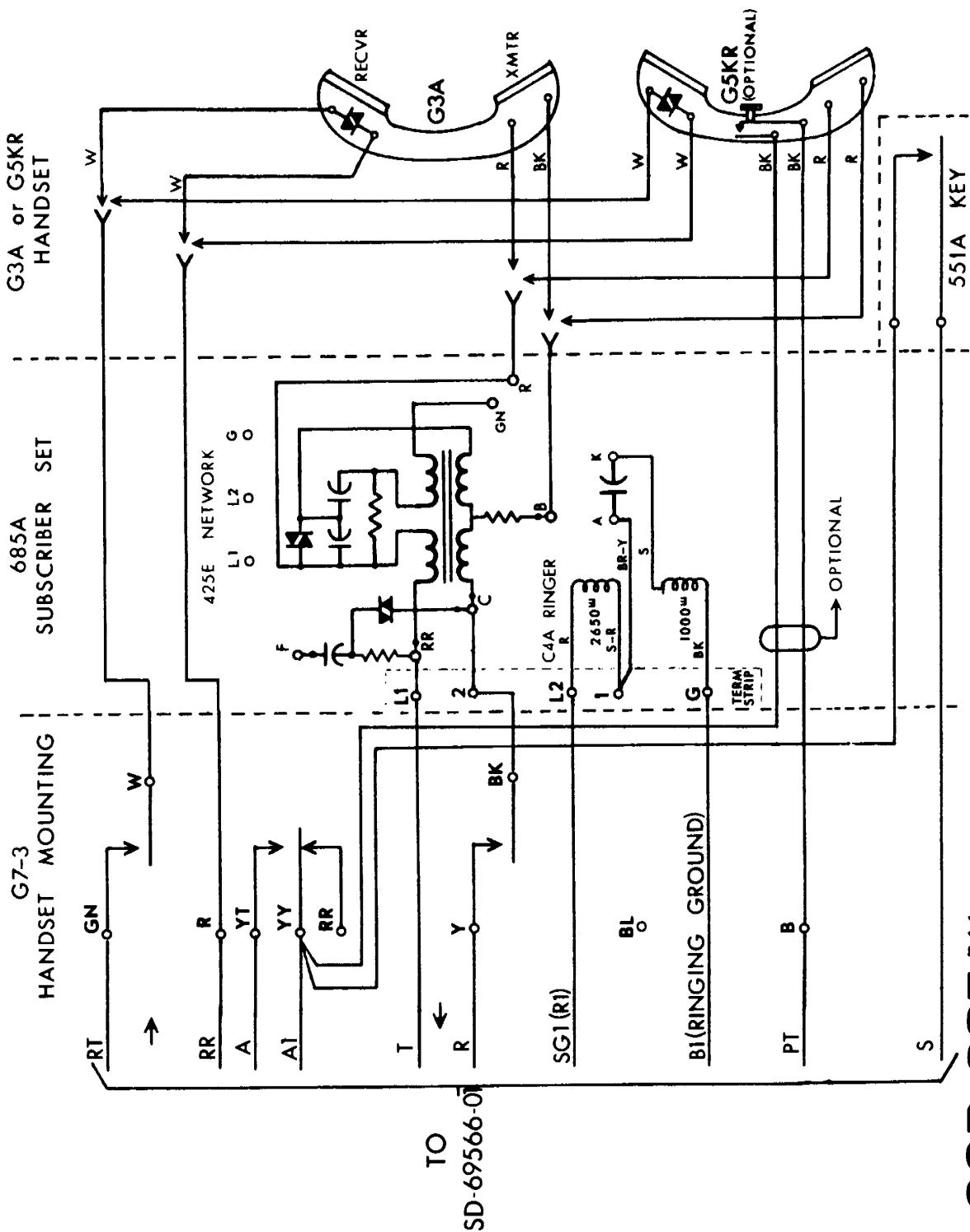
THE CHESAPEAKE & POTOMAC TELEPHONE CO.
WLT

QUANTITY	ITEM
	DIAL, 6J
	MOUNTING, DIAL, 43A
	MOUNTING, SET, HAND, G7-3
	SET, HAND, G3A4
	SET, HAND, G5KR
	SET, SUBSCRIBER, 685A

ORDERING INFORMATION

REFERENCES

- BSP 501-210-100
- BSP 501-210-102
- BSP 502-200-404
- BSP 502-300-100



SSD-907 W

4-W HANGUP HANDSET FOR MANUAL
OPERATION WITH SD-69566-01

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

WLT

7-70

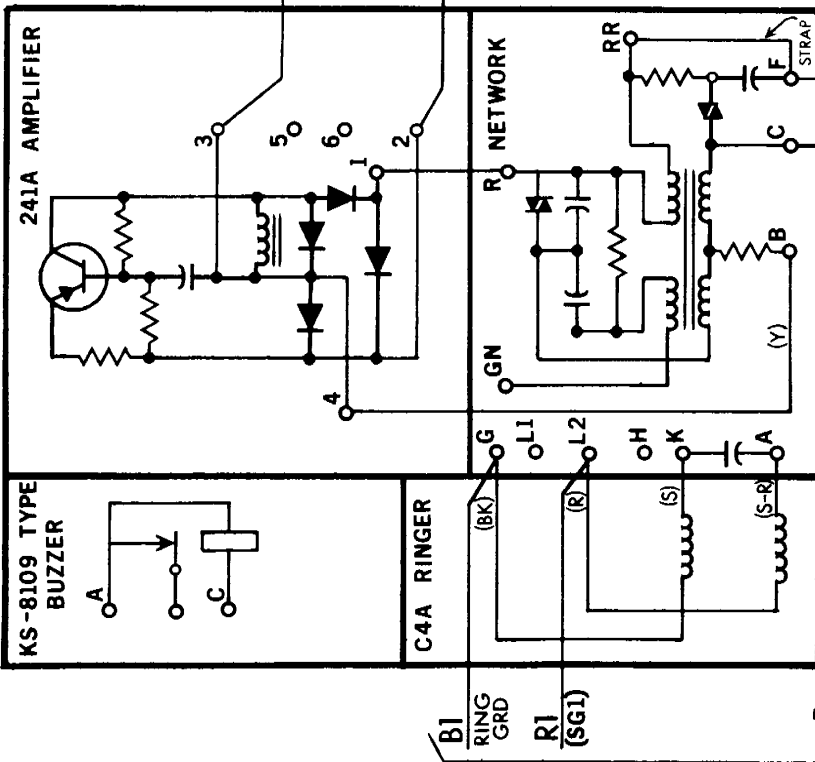
ORDERING INFORMATION

QUANTITY	ITEM
	MOUNTING, SET, HAND, G7-3
	KEY, 551A
	SET, HAND, G3A4
	SET, HAND, G5KR
	SET, SUBSCRIBER, 685A

~ REFERENCES ~
BSP 501-210-102
BSP 502-200-404
BSP 502-300-100

688C SUBSCRIBER SET

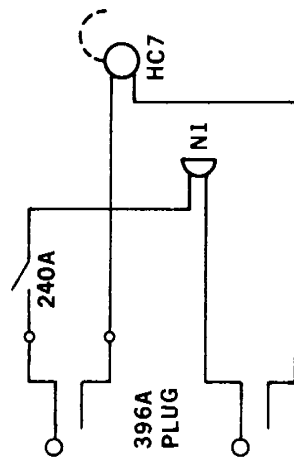
KS-8109 TYPE
BUZZER



ORDERING INFORMATION

- 1 SET, SUBSCRIBER 688C 49
- 1 KEY, 551A
- 1 KEY, 6026C
- 1 SET, TELEPHONE, HEAD 53LR

53LR HEADSET



NOTES

- *1. IF THIS CIRCUIT CONNECTS TO A J53045D-1 UNIT, CONNECT "R" LEAD TO TERMINAL 30 INSTEAD OF 22 ON THAT UNIT. ALSO STRAP 11 TO 22.
- *2. IF THIS CIRCUIT CONNECTS TO A J53045C-1 UNIT, CONNECT "R" LEAD TO TERMINAL 17 ON TS 1-5 ON J53045B-1. STRAP FROM TERMINAL 32 ON TS 1-5 ON J53045B-1 TO TERMINAL 33 ON TS A1 OR A2 ON J53045C-1.
3. SINCE PUSH-TO-TALK IS PROVIDED FOR IN THIS CIRCUIT, WIRE SD-69566 FOR NON PUSH-TO-TALK.
4. IF PUSH-TO-TALK IS NOT DESIRED, A 53A OR 53J HEADSET MAY BE USED.
5. FOR ADDITIONAL INFORMATION, REFER TO BSP 028-361-811, 502-200-408, 502-220-100 AND 512-210-100.

SSD-909 W

HEADSET, JACK & KEY
ARRANGEMENT FOR USE
WITH SD-69566-01

FIG. 1
1350:600

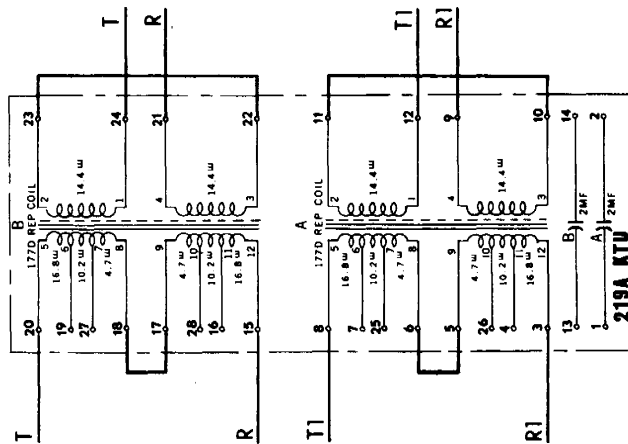


FIG. 2
600:600

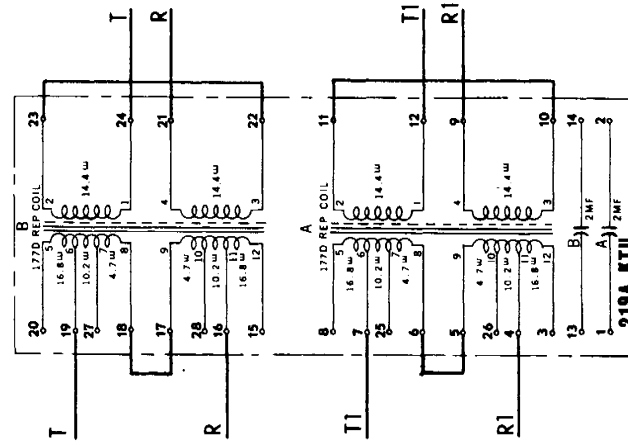


FIG. 3
150:600

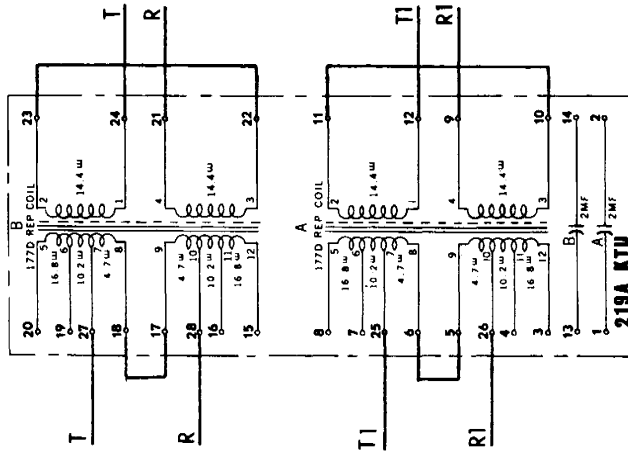


FIG. 4
340:600

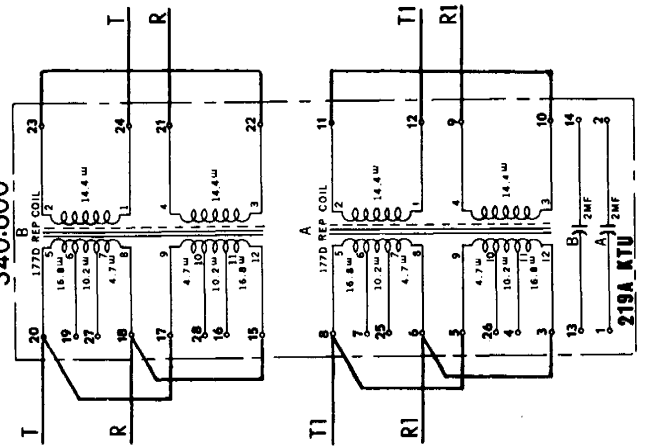
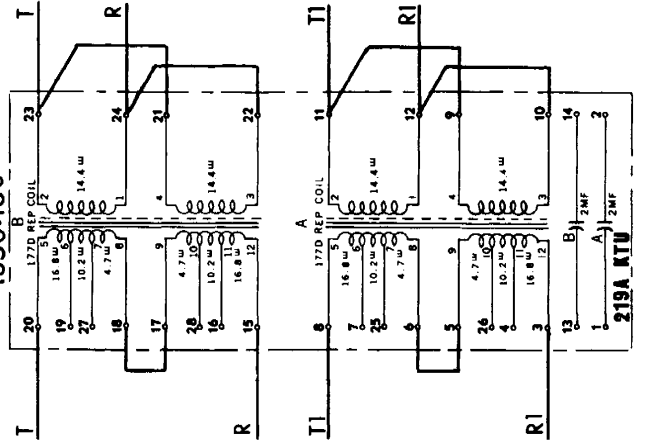


FIG. 5
1350:150



SSD-912W
219A KTU
CONNECTIONS

[illegible][illegible]

The diagram illustrates the internal circuitry of a 945A KTH cable tester, showing two test channels, T and R, connected to a common COAX EQT. Channel T includes a 120H inductor, a 5.5-ohm resistor, and a 78-ohm resistor. Channel R includes a 120H inductor, a 5.5-ohm resistor, and a 78-ohm resistor. The diagram also shows connections to a NON-LOADED CABLE PAIR and a COAX EQT.

[illegible]

QUANTITY	ITEM
	ED 91938-32 G10 & A KEY TELEPHONE UNIT
	ED 91938-32 G11 & B KEY TELEPHONE UNIT
	UNIT TELEPHONE KEY 245A
	RESISTOR 89()
	RESISTOR 89()

PRIVATE LINE TERMINATIONS
FOR USE WITH COAM EQUIPMENT

THE CHESAPEAKE & POTOMAC TELEPHONE CO.
WLT
REV. 8-70

QUESTION

FIG. 1 2-WIRE NON-LOADED CABLE WITH PAD

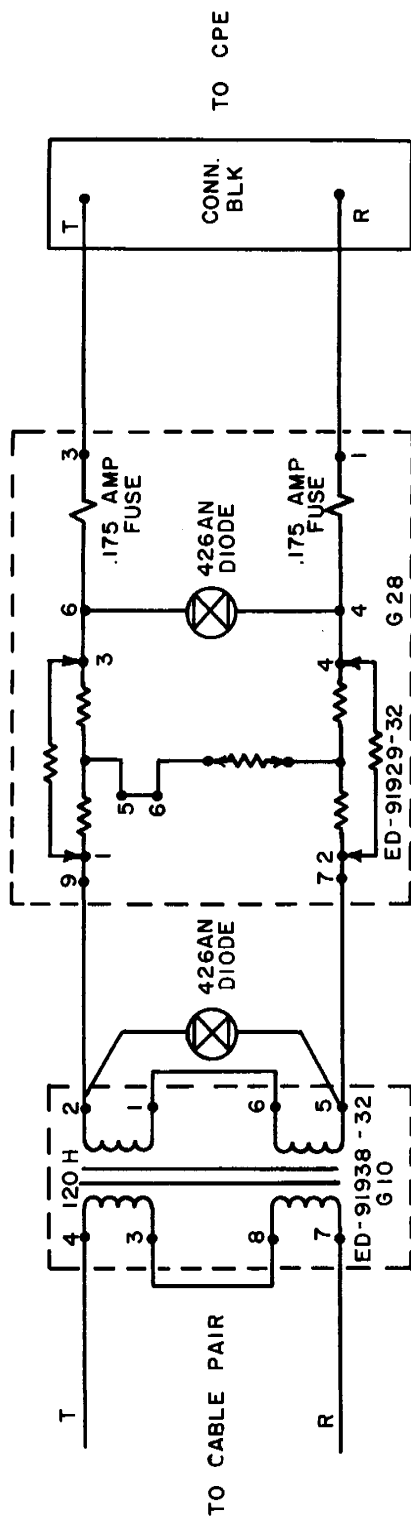
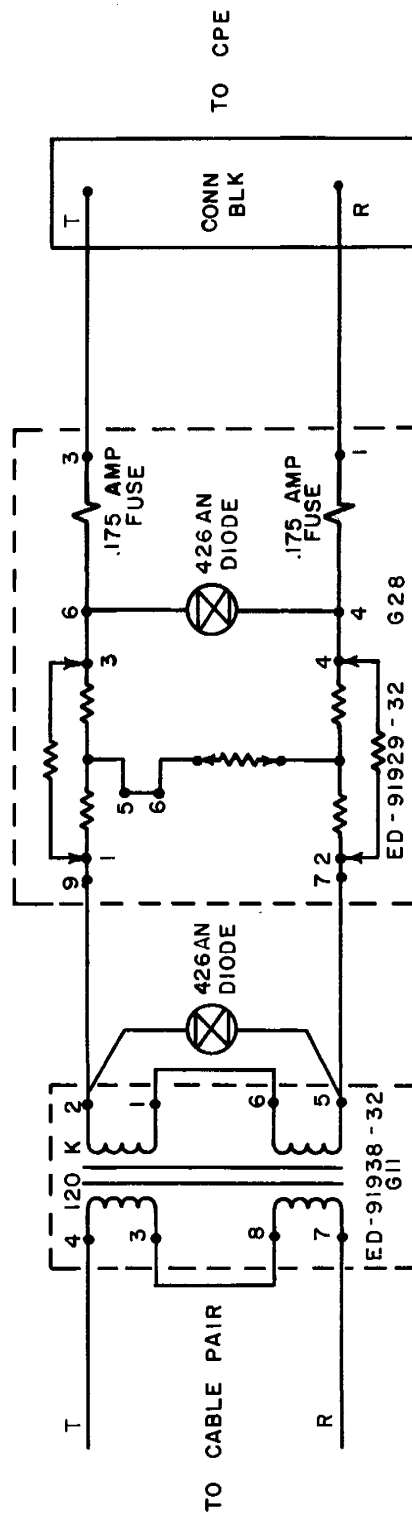


FIG. 2 2-WIRE LOADED CABLE WITH PAD



SSD-913.1W

2 WIRE PRIVATE LINE
TERMINATION FOR USE
WITH CUSTOMER PROVIDED
EQUIPMENT (CPE)

C & P TELEPHONE CO. 5-72

QTY	ITEM
	ED91938-32 G10 & A KEY TELEPHONE UNIT
	ED91938-32 G11 & B KEY TELEPHONE UNIT
	ED91929-32 G28 KEY TELEPHONE UNIT
	RESISTOR 89 ()
	FUSE (LITTEL FUSE CO. NO. 318.175 OR EQUIV.)
	DIODE 426AN



- 1 J53022DE1 LIST 1 SWITCH UNIT
(MOUNTING FOR 3 234B SWITCHES)
1 SWITCH, 234B
1 INDICATOR, 15D-49
1 LAMP, SWITCHBOARD, A3

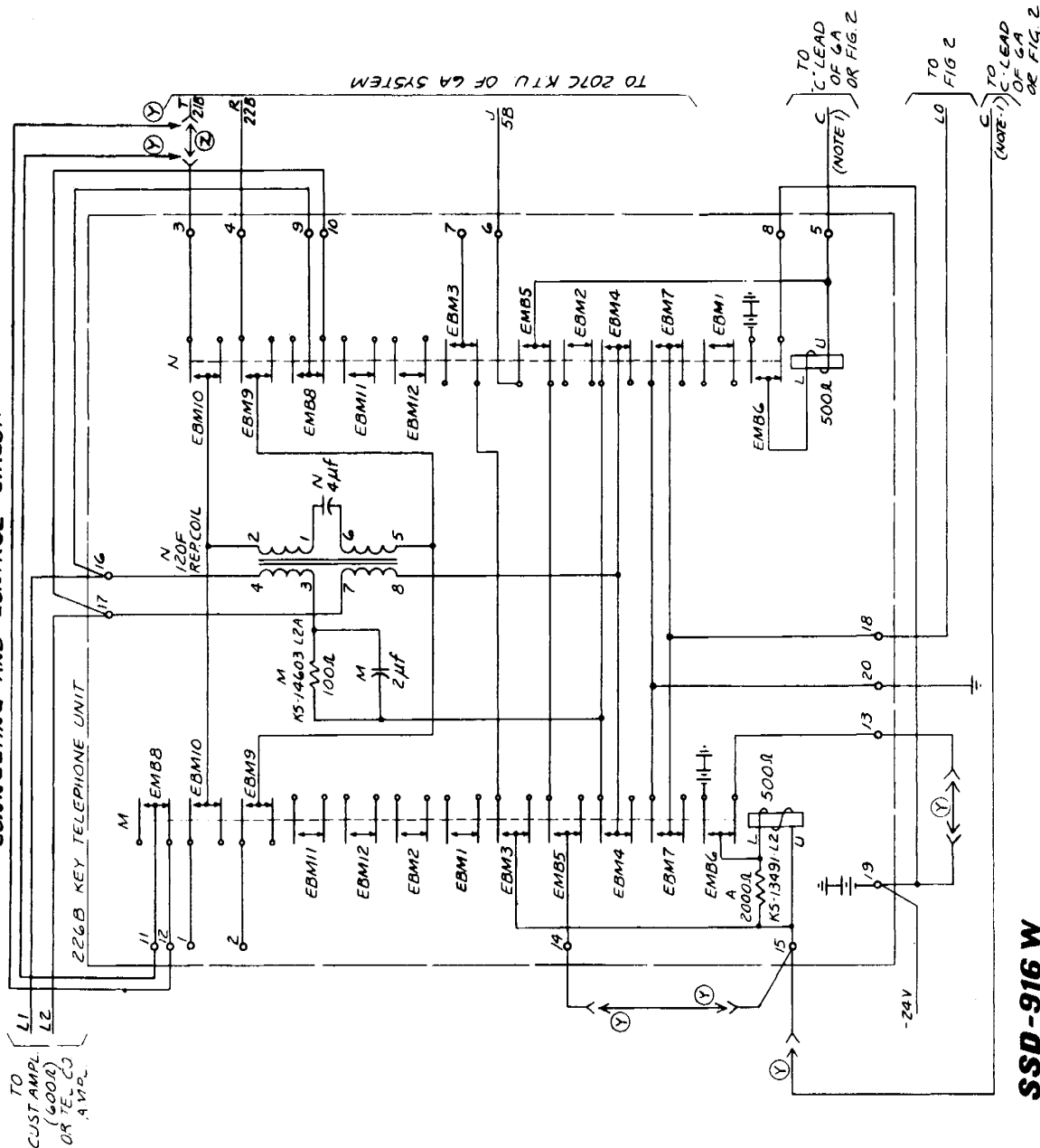
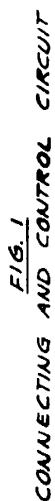
..NOTES..

1. FOR ADDITIONAL INFORMATION SEE BSP 463-240-100 AND SD-69343-01.
2. FOR OTHER POWER ARRANGEMENTS SEE BSP 463-240-100.
3. THE "SENS" POT REGULATES SENSITIVITY.
4. THE "TD" POT REGULATES RELAY RELEASE TIME.

SSD-915 W

VOICE OPERATED BUSY SWITCH
FOR USE WITH SD-69566-01

THE CHESAPEAKE & POTOMAC TELEPHONE CO.



1. CONNECT THE "C" LEAD OF THIS CIRCUIT TO THE "C" LEAD OF THE "CODE" ASSIGNED FOR PAGING.
2. USE FIG. 2 WHEN MORE THAN ONE PAGING LINE OF 6A INTERCOM IS REQUIRED.
3. RESISTANCE TO EQUAL SPEAKER LOAD.
4. USE OPTION "Y" FOR TOUCH TONE APPLICATIONS. THIS PROVIDES A DELAY IN CUT-THRU TO THE PAGING SYSTEM AND REMOVES THE CHANCE OF TOUCH TONES GETTING INTO THE SYSTEM.
5. REFER TO SD 69286-01 AND SD 69529-01 FOR ADDITIONAL INFORMATION.

ORDERING INFORMATION

QUANTITY	ITEM
	UNIT TELEPHONE KEY, 226B
	UNIT TELEPHONE KEY, 229B
	RESISTOR ()
	DIODE, 420G

SSD-916 W

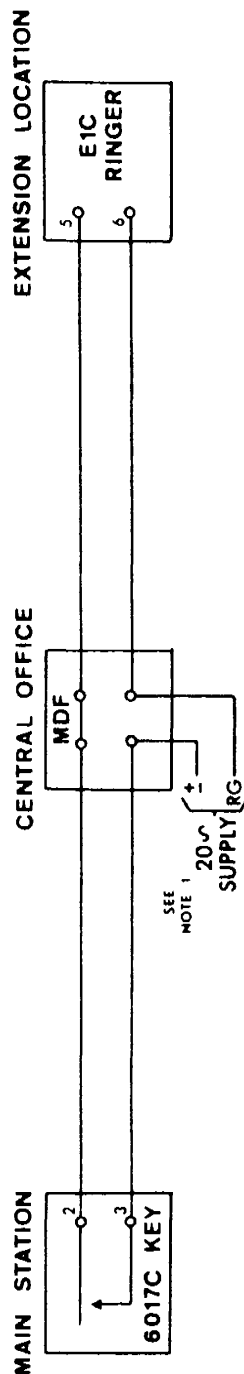
6A KEY SYSTEM CONNECTION
TO CUSTOMER OR TELCO
PAGING SYSTEM

ORDERING INFORMATION

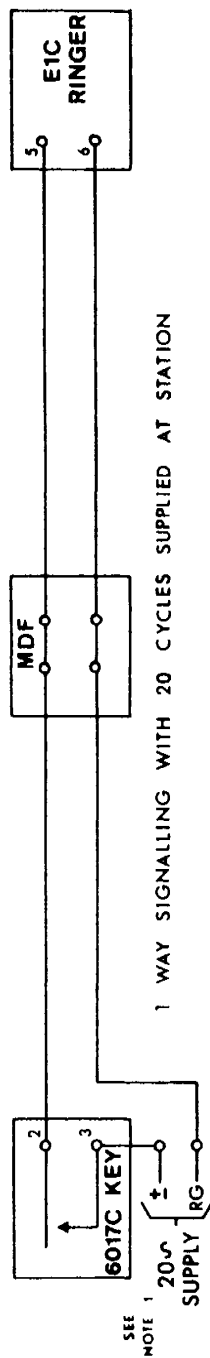
- 1 RINGER ETC 49
- 1 KEY 6017C

- NOTES -

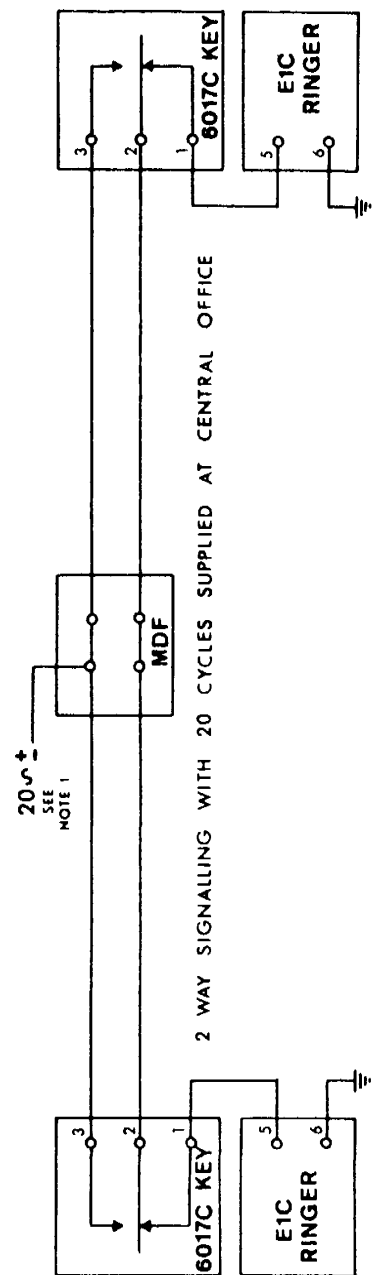
1. 20 CYCLE SIGNALLING MAY BE SUPPLIED AT THE CENTRAL OFFICE OR AT EITHER END OF CIRCUIT.
2. IF A BUZZER IS DESIRED DAMPEN GONGS ON RINGER.
3. DO NOT USE DC FOR SIGNALING SINCE THIS CAUSES NOISE TO BE INDUCED INTO CABLE.



1 WAY SIGNALLING WITH 20 CYCLES SUPPLIED AT CENTRAL OFFICE



1 WAY SIGNALLING WITH 20 CYCLES SUPPLIED AT STATION



SSD-917 W

SIGNALLING CIRCUITS FOR USE
WITHIN LOCAL EXCHANGE PLANT

PLANT DEPT. C&P TELEPHONE CO.
WLT

7-69

24V4 PLUG-IN COMPONENTS

COMPONENT	USE IN	PRIMARY FUNCTION
227 AMPLIFIER	ALL V4 REPEATERS	GAIN DEVICE
359 EQUALIZER	ALL V4 REPEATERS	VARY SLOPE & ENVELOPE DELAY
648A FILTER	24V4C REPEATER	PREVENT SINGING
849 NETWORK	ALL V4 REPEATERS	LOSS DEVICE
4066 NETWORK	24V4C REPEATER	IMPROVE HYBRID BALANCE
4182 NETWORK	24V4 REPEATERS	CONVERT 24V4 2W LINE TO 4W
434A PLUG	24V4C REPEATER	DUMMY FOR CKT. CONTINUITY
1 TYPE TERM SET	24V4 REPEATERS	4W TO 2W HYBRID

227 AMPLIFIERS

TYPE	USAGE TYPE CABLE	USAGE TYPE CIRCUIT	SURGE PROTECTION PROVIDED
227A	U. G.	VOICE	NO
227B	AERIAL OR U. G.	VOICE	YES
227C	AERIAL OR U. G.	VOICE & DATA	YES
227D	AERIAL OR U. G.	VOICE & DATA	YES
227E	U. G.	VOICE	NO
227F	AERIAL OR U. G.	VOICE	YES

1. ALL AMPLIFIERS HAVE 600^W OR 1200^W INPUT & OUTPUT IMPEDANCES.
2. 227A, 227B & 227C HAVE 180° PHASE SHIFT MAKING THEM UNSUITABLE FOR SOME FORMS OF DATA.
3. IMPORTANT - 10-24 SCREW MUST BE IN AS WELL AS THE 21-36 SCREW IF 21 TO 36 DB GAIN IS DESIRED.
4. 227D, 227E & 227F ARE THE ONLY TYPES MANUFACTURED NOW. IT IS RECOMMENDED THAT ONLY 227D AMPLIFIERS BE ORDERED. THEY MEET ALL THE REQUIREMENTS OF THE OTHER AMPS PLUS THEY ARE BETTER SUITED FOR DATA. PRICE-WISE, THEY VARY FROM 20¢ LESS TO \$2.10 MORE THAN THE OTHERS.

SSD-920W

**24V4 REPEATER
PLUG-IN COMPONENTS**

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 5-70

359 TYPE EQUALIZERS

TYPE	DIRECTION OF EQUALIZATION	USAGE	1000 HZ LOSS	ADJUSTABLE	TRANSFORMER IMPEDANCE EQPT:LINE
359A	RECEIVE	H88 CABLE WITH RECEIVE AMPLIFIER. TRANSMIT AMP OR NETWORK OPTIONAL.	6.2 TO 9.2 db	YES	NO TRANSFORMER
359B	BOTH	NON-LOADED CABLE (LONG LENGTHS) USUALLY WITH AMPS BUT NETWORKS CAN BE USED.	0.5 db PLUS REFLECTION LOSS	NO	TRANS. 600:150 REC. 600:150
359C	NONE	NON-LOADED CABLE (SHORT & MEDIUM LENGTHS) TRANS. & REC. LINES ARE WIRED STRAIGHT THROUGH (600 ^W)	0.0 db	NO	NO TRANSFORMER
359D	RECEIVE	H88 CABLE WITH RECEIVE 849B NETWORK TRANSMIT AMP OR NETWORK OPTIONAL.	0. - 3.0 db	YES	NO TRANSFORMER
359E	NONE	SAME AS 359A EXCEPT NO EQUALIZATION REQ'D. TRANS. & REC. LINES ARE WIRED STRAIGHT THROUGH (1200 ^W)	0.0 db	NO	NO TRANSFORMER
359F	BOTH	SHORT LENGTHS NON-LOADED CABLE (600 ^W) WITH AMPS OR NETWORKS - LOOPS SIGNALING.	0.5 db PLUS REFLECTION LOSS	NO	TRANS. 600:600 REC. 600:600
359G	RECEIVE	NEGATIVE SLOPE EQUALIZATION FOR LOADED CABLE OR CXR CHANNELS . . . PRIMARILY DATA.	+0.2 - +2.2 db	YES	NO TRANSFORMER
359H	RECEIVE	SAME AS 359G EXCEPT POSITIVE SLOPE EQUALIZATION.	0.1 - 2.3 db	YES	NO TRANSFORMER
359J	NONE	SAME AS 359D EXCEPT NO EQUALIZATION REQ'D. - TRANS. & REC. LINES WIRED STRAIGHT THROUGH (1200 ^W)	0.0 db	NO	NO TRANSFORMER
359K	RECEIVE	H44 CABLE WITH RECEIVE AMPLIFIER TRANSMIT AMP OR NETWORK OPTIONAL.	0 - 2 db	YES	NO TRANSFORMER
359L	RECEIVE	H44 CABLE WITH 849G NETWORK - TRANSMIT AMP OR NETWORK OPTIONAL.	0 - 2 db	YES	NO TRANSFORMER
359M	BOTH	SAME AS 359B EXCEPT BETTER TRANSFORMERS FOR DATA & CENTER TAPS OF DROP OF REPT. COILS ARE ACCESSIBLE BY SCREW SWITCHES.	0.3 db	NO	TRANS. 600:150 REC. 600:150
359N	BOTH	SAME AS 359F EXCEPT BETTER TRANSFORMERS FOR DATA & CENTER TAPS OF DROP OF REPT. COILS ACCESSIBLE BY SCREW SWITCHES.	0.3 db	NO	TRANS. 600:600 REC. 600:600

+ DENOTES GAIN

REFERENCES

BSP 332-104-100 THRU 332-104-102
BSP 332-116-101 THRU 332-116-113
BSP 332-105-103

849 TYPE NETWORKS

TYPE	IMPEDANCE EQPT. LINE	USAGE	AMP SOCKET UNIT IS PLUGGED INTO
849A	600:1200	TRANSMITTING INTO H88 CABLE SX SIGNALING	TRANSMIT
849B	600:1200	RECEIVING FROM H88 CABLE SX SIGNALING	RECEIVE
849C	600:600	PAD ONLY - NO REPEAT COIL NO SX	TRANSMIT OR RECEIVE
849D	600:150	TRANSMITTING INTO LONG LENGTHS OF NL CABLE - EQUALIZATION REQUIRED - SX SIGNALING	TRANSMIT
849E	600:600	TRANSMITTING INTO SHORT LENGTHS OF NL CABLE - SX SIGNALING	TRANSMIT
849F	600:600	TRANSMITTING INTO H44 CABLE CRITICAL VOICEBAND DATA - LOW DELAY DISTORTION - SX SIGNALING	TRANSMIT
849G	600:600	SAME AS 849F FOR RECEIVE LINE	RECEIVE

NOTE - 849F MAY BE USED IN RECEIVE AMP SOCKET IF INPUT & OUTPUT LEADS
ARE INTERCHANGED ON SOCKET

FREQUENCY LOSS & DELAY

849A		849B		849D		849E		849F	849G
FREQUENCY	LOSS RELATIVE TO 1000 HZ	DELAY MICROSECONDS	LOSS RELATIVE TO 1000 HZ	DELAY MICROSECONDS	LOSS RELATIVE TO 1000 HZ	DELAY MICROSECONDS	LOSS RELATIVE TO 1000 HZ		
100	1.9	575	1.9	575	1.2	450	0.7	300	
200	0.9	200	0.9	200	0.6	150	0.3	110	
300	0.5	110	0.5	110	0.4	75	0.2	50	
400	0.4	70	0.4	70	0.3	40	0.1	32	
500	0.3	43	0.3	43	0.2	30	0.1	20	
700	0.1	25	0.1	25	0.1	17	0.1	13	
1000	0	16	0	16	0	10	0	8	
2000	-0.1	-	-0.1	7	0	4	-0.1	3	
3000	-0.1	-	-0.1	6	0	3	-0.1	3	

NOTE - NO VALUES SHOWN FOR 849C SINCE IT IS PAD ONLY.

→ 1000 HZ LOSS OF ALL 849 TYPE NETWORKS EXCEPT 849C IS .3 TO .5 DB + PAD LOSS.

1 TYPE 4-WIRE TERM SETS

TYPE	db LOSS W AMP	IMPEDANCE W/O AMP	PAD 2W LINE	SOCKETS	PURPOSE
1A	3.9	4.0	900 ω	NO	PROVIDES INTERCONNECTION BETWEEN 900 ω 2W LINE AND 600 ω 4W INDUCTOR IN SX LEADS.
1B	4.4	4.5	600 ω	NO	PROVIDES INTERCONNECTION BETWEEN 600 ω 2W LINE AND 600 ω 4W INDUCTOR IN SX LEADS.
1C	4.0	4.0	900 ω	YES	SIMILAR TO 1A EXCEPT PAD SOCKETS FOR 89 TYPE RESISTORS PROVIDED NO INDUCTOR IN SX LEADS.
1D	4.5	4.5	600 ω	YES	SIMILAR TO 1B EXCEPT PAD SOCKETS FOR 89 TYPE RESISTORS PROVIDED NO INDUCTOR IN SX LEADS.
1F	4.0	4.0	900 ω	YES	SAME AS 1C EXCEPT SX INDUCTOR IN SERIES WITH A & B LEADS
1G	4.0	4.0	900 ω	YES	SIMILAR TO 1C EXCEPT EXTRA CAPACITANCE PROVIDED ACROSS A & B LEADS & NETWORK
1K	3.9	4.0	900 ω	NO	SAME AS 1A EXCEPT SX INDUCTORS IN SERIES WITH A & B LEADS
1L	4.4	4.5	600 ω	NO	SAME AS 1B EXCEPT SX INDUCTORS IN SERIES WITH A & B LEADS

SSD-920.1W

24V4 REPEATER
PLUG-IN COMPONENTS

THE CHESAPEAKE & POTOMAC TELEPHONE CO.

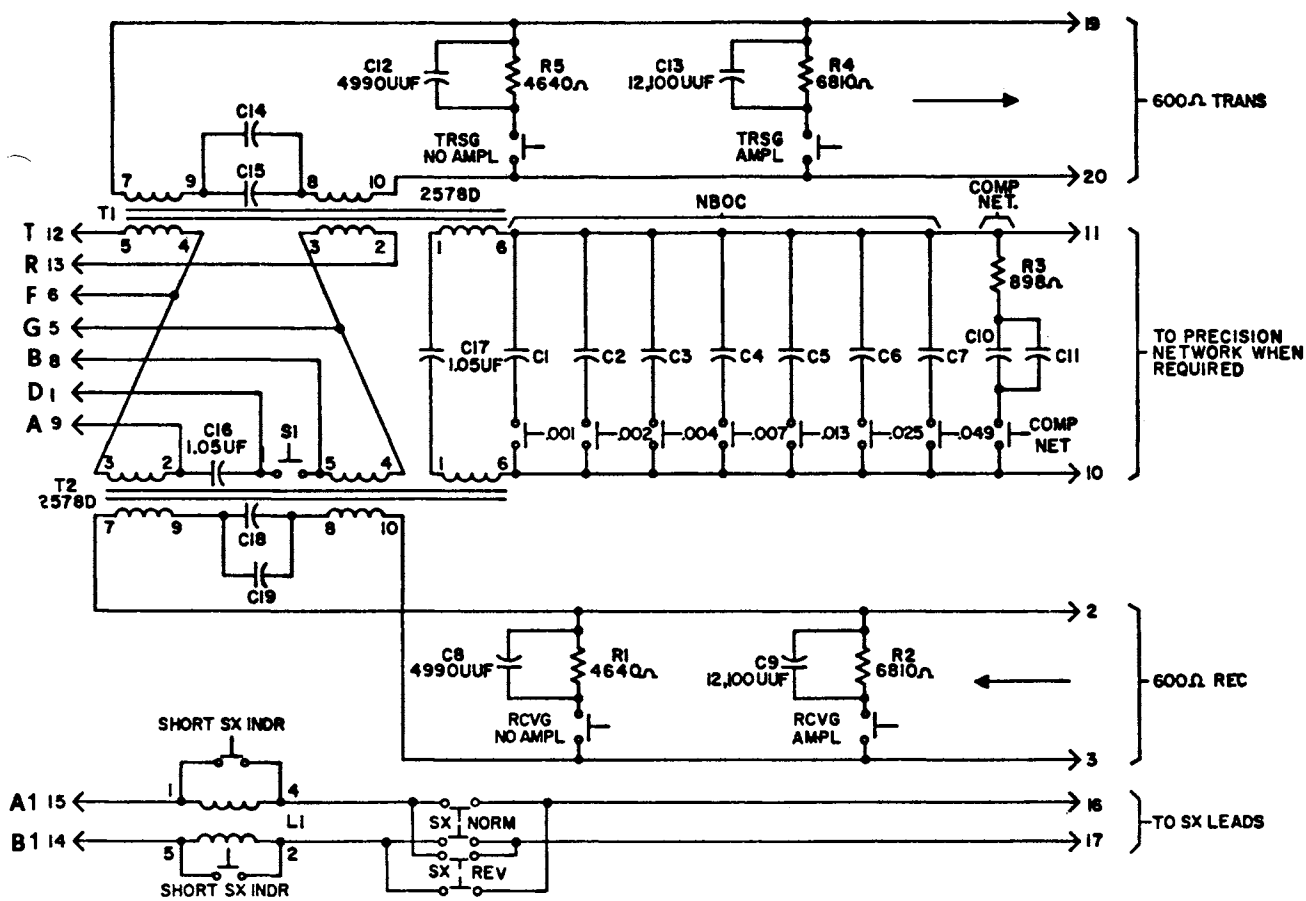
5-70

REFERENCES

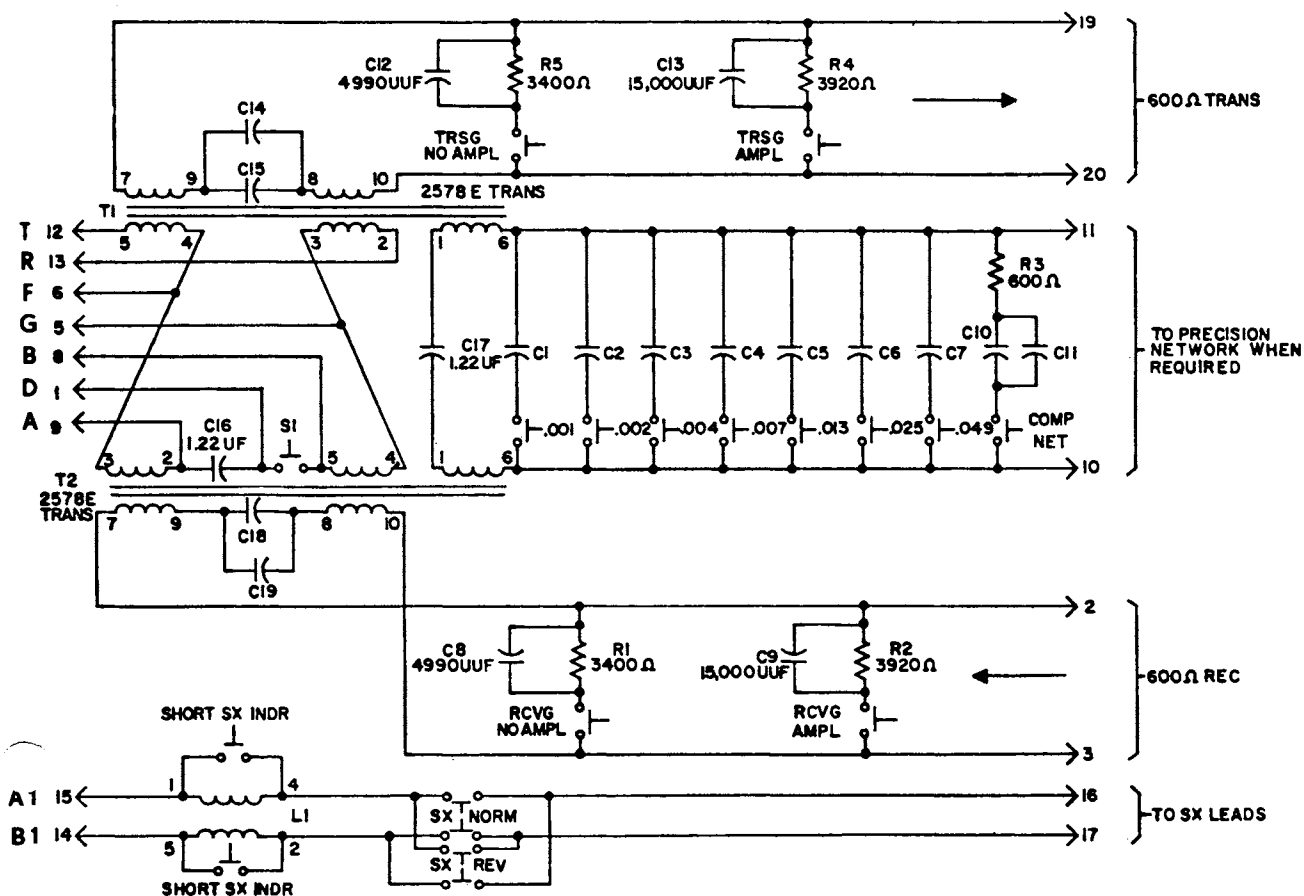
- 849 NETWORKS - BSP 332-115-101
THRU 332-115-107 & AB24.100.01
1 TYPE TERM SETS - BSP 332-800-101
THRU 332-800-105 & AB24.100.01

NOTES

- 1A & 1B TERM SETS HAVE SIMPLEX INDUCTORS IN THE SX LEADS - DON'T USE FOR DX SIGNALING.
- IF 1K & 1L SETS HAVE SIMPLEX INDUCTORS IN THE A & B LEADS - MAY BE USED FOR DX SIGNALING.
- SI SCREW ON TERM SET SHOULD BE "IN" UNLESS SET IS CONNECTED TO A TRUNK CIRCUIT WHICH HAS AN EQUIVALENT CAPACITOR ACROSS THE A & B LEADS.
- SX SCREWS - SCREW IN BOTH "NORM" SCREWS OR BOTH "REV" SCREWS OR BOTH "SHORT" SCREWS. -CAUTION- SCREWING BOTH "REV" AND "NORM" SCREWS IN AT SAME TIME WILL SHORT SX LEADS.
- AMPL OR NO AMPL - SCREW IN "AMPL" SCREW IF AMPLIFIER IS USED, IF 849 NETWORK IS USED SCREW IN "NO AMPL" SCREW.
- COMP NET - SCREW IN WHEN COMPROMISE NETWORK IN TERM SET IS DESIRED.
- N. B. O. C. - SCREW IN SCREWS TO OBTAIN BEST BALANCE WITH EITHER COMP OR PRECISION NET.



1A Terminating Set for 900-ohm 2-wire Office Equipment

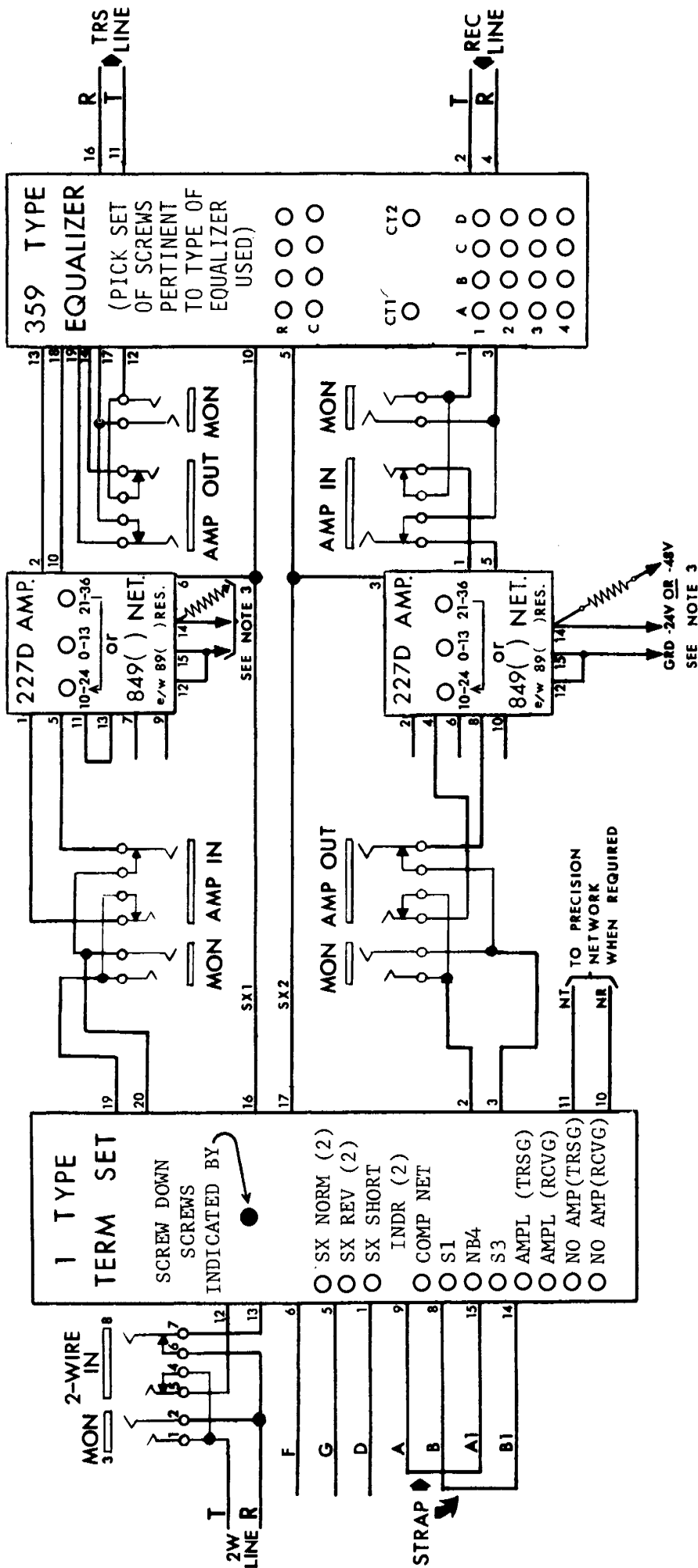


1B Terminating Set for 600-ohm 2-wire Office Equipment

SSD-921W

TYPICAL TERMINATING SETS
USED WITH 24V4 REPEATERS

THE CHESAPEAKE & POTOMAC TELEPHONE CO.



ORDERING INFORMATION

QUANTITY	ITEM
	J98615 AJ2 LIST 2 REPEATER SHELF
	AMPLIFIER 227D
	SET, TERMINATING 1()
	EQUALIZER, 359()
	RESISTOR 89()
	RESISTOR 89()
	NETWORK 849()
	NETWORK ()

SSD-924W

24V4A REPEATER

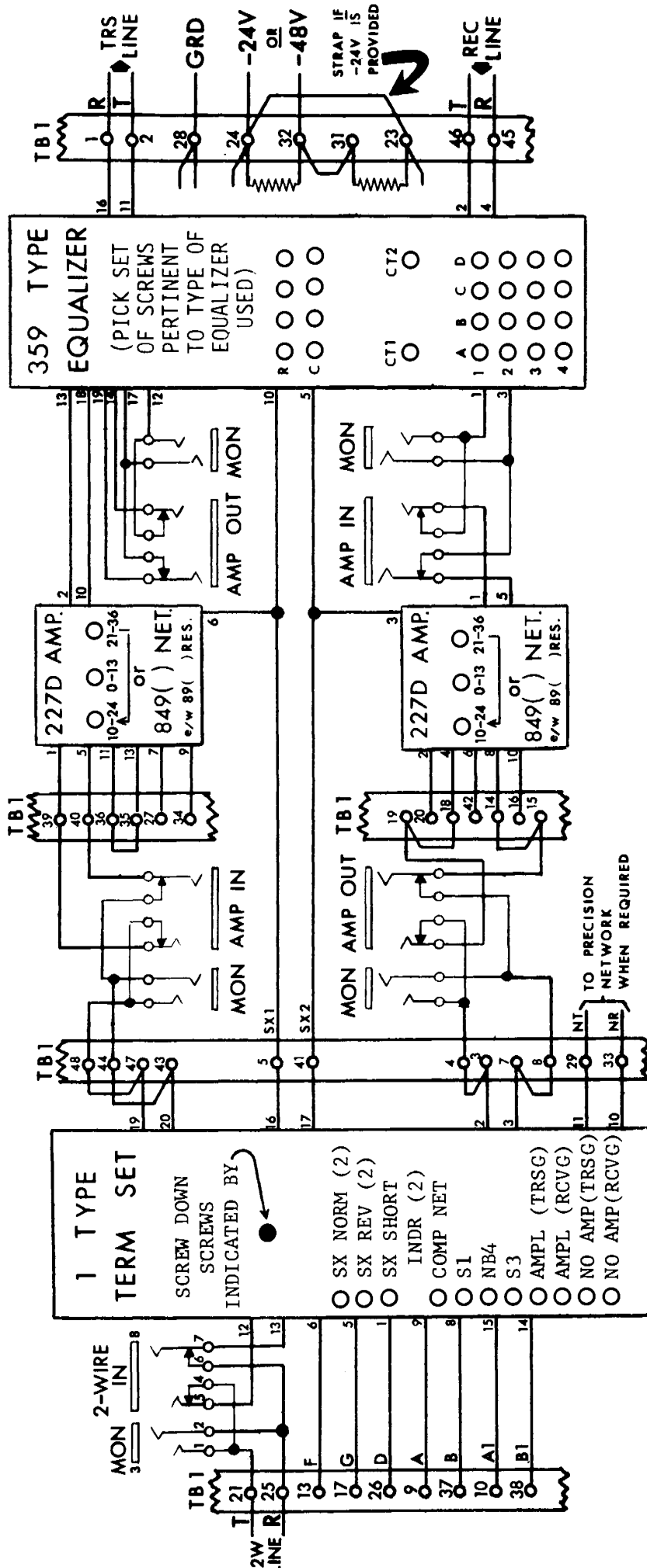
C&P TELEPHONE CO 7-70

- NOTES -

- For additional information see BSP 332-104-500 and SD-97047-01
- Resistors shown are 228A type, 1400 ohms
- Battery and ground should be connected to only one Amp jack. Strap 14 on J3 and J4 if -24V is used

- LEGEND -

- O = SCREW OUT
● = SCREW IN



-LEGEND -
○ = SCREW OUT
● = SCREW IN

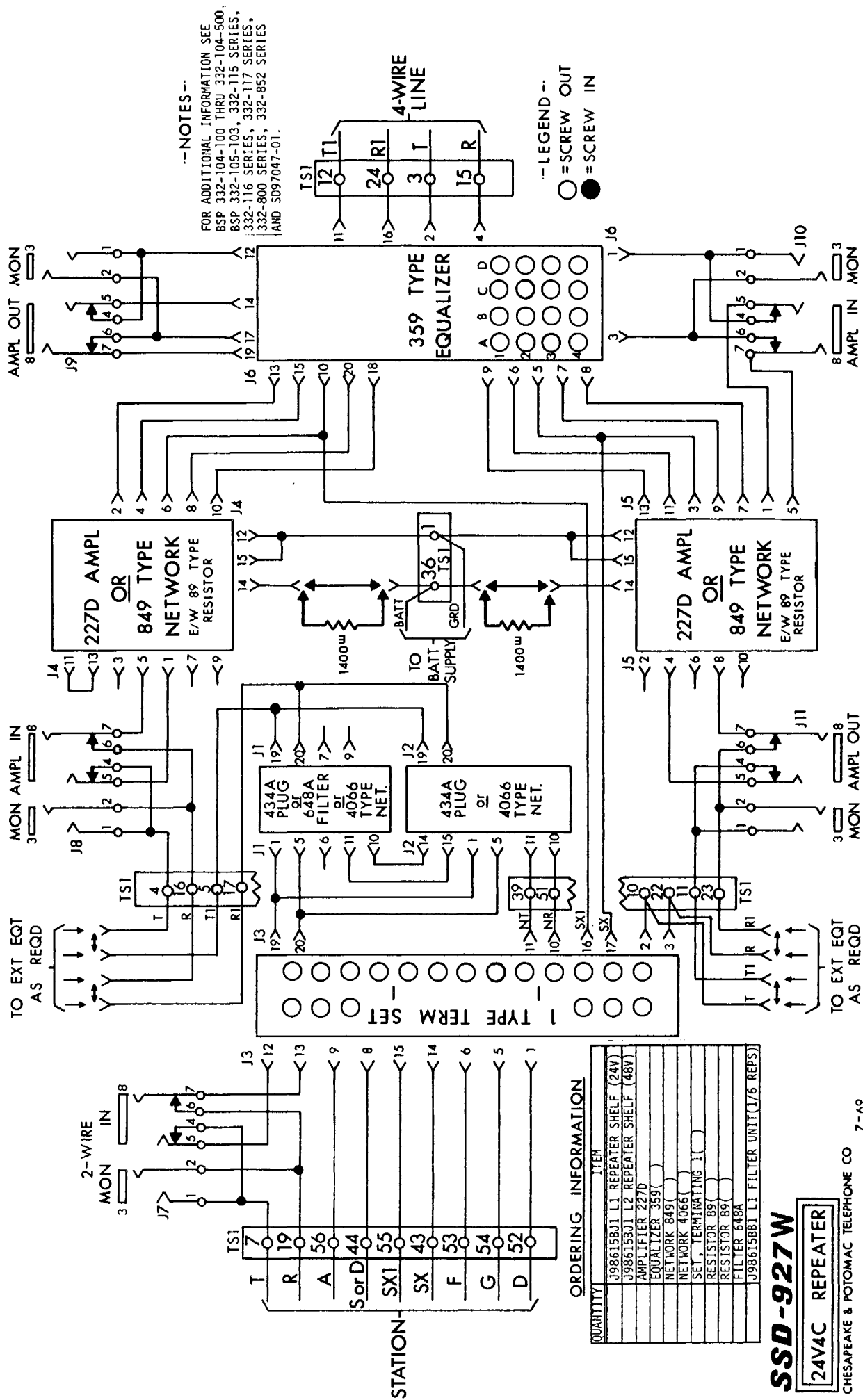
- NOTES -**
1. For additional information see BSP 332-104-102 and SD-99739-01
 2. Resistors shown are 228A type, 1400 ohms
 3. IMPORTANT-Strap as shown

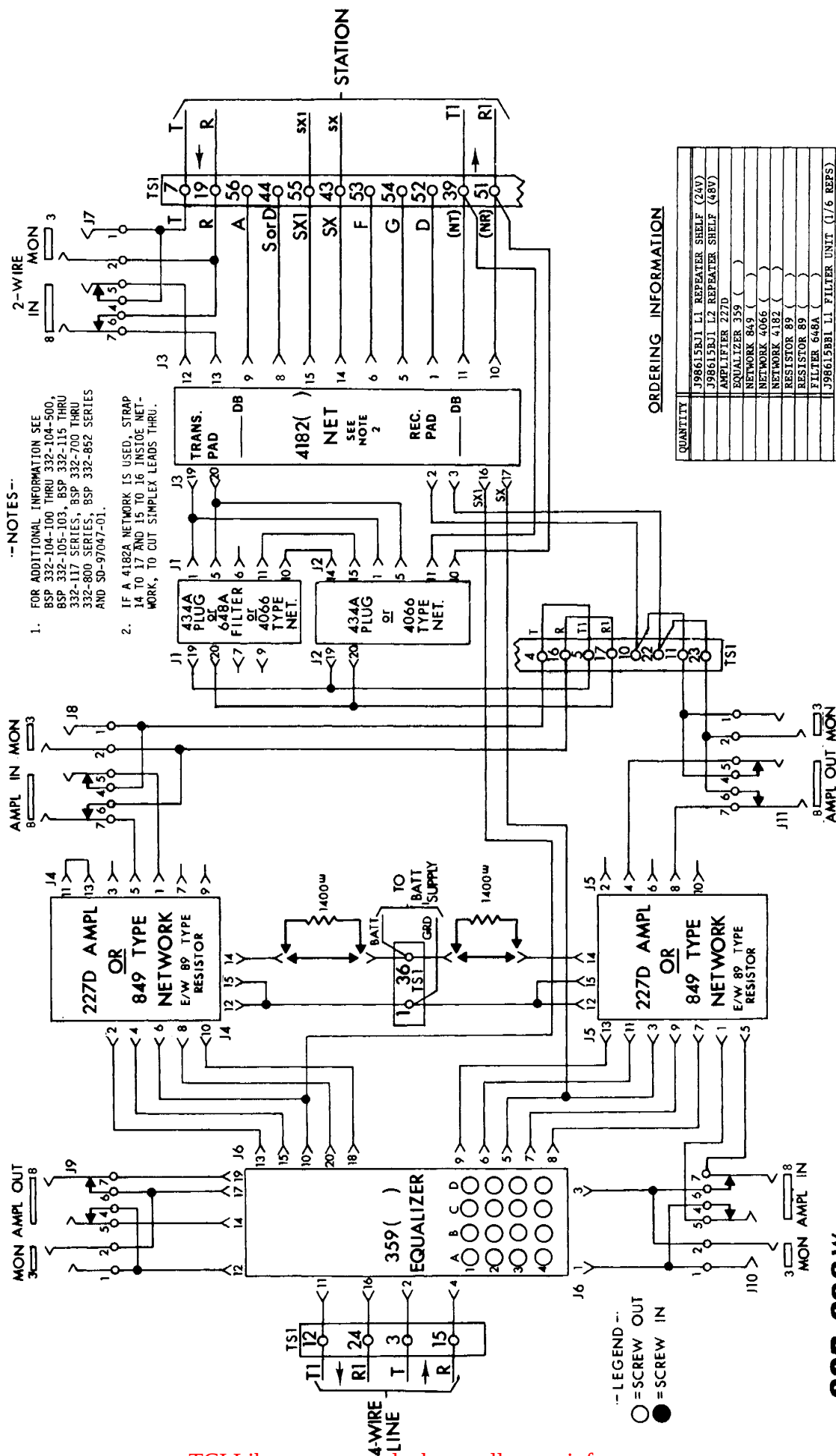
ORDERING INFORMATION

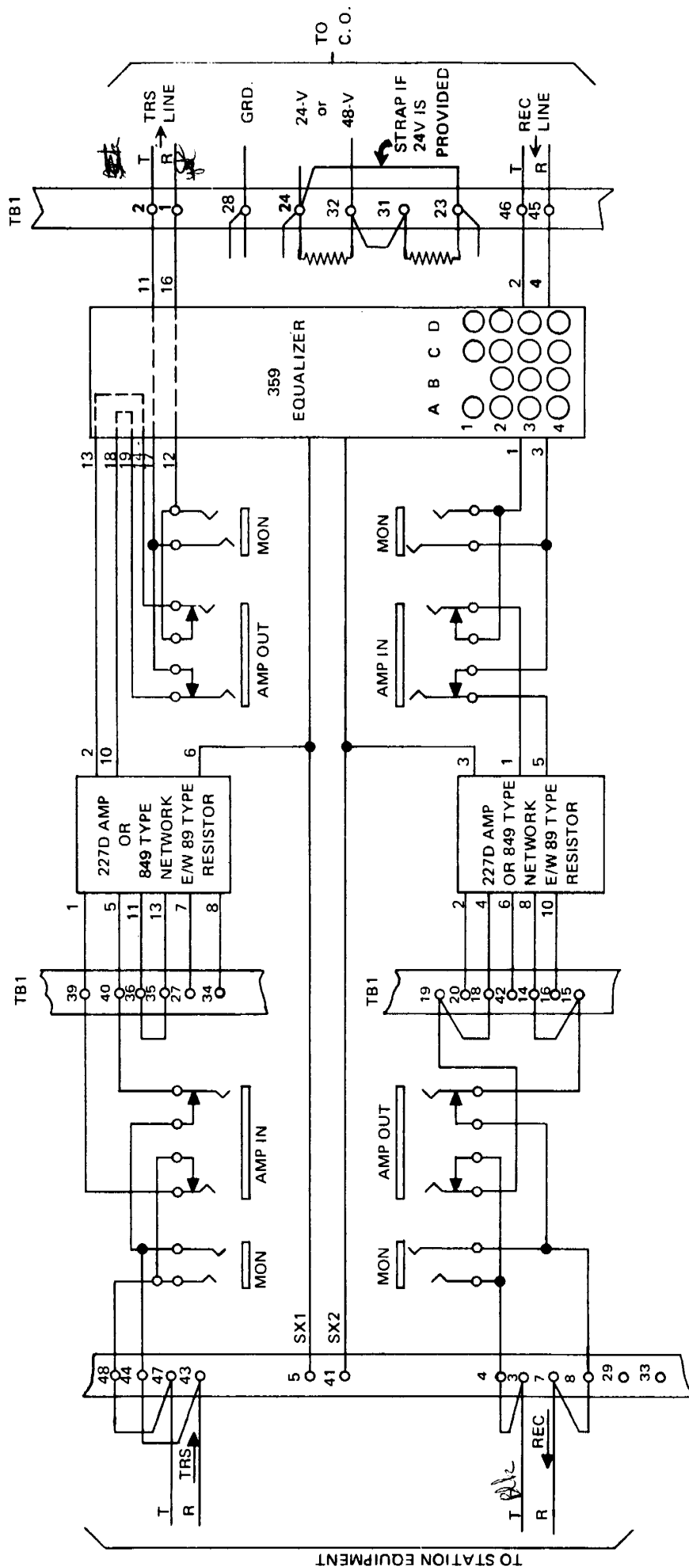
QUANTITY	ITEM
	J98615BA1 L1 MTG SHELF
	AMPLIFIER 227D
	SET, TERMINATING 1()
	EQUALIZER, 359()
	RESISTOR 89()
	RESISTOR 89()
	NETWORK 849()

SSD-925W
24V4B REPEATER

C&P TELEPHONE CO 7-70







— LEGEND —
 ○ = SCREW OUT
 ● = SCREW IN

- NOTES —
1. FOR ADDITIONAL INFORMATION SEE BSP 332-104-102 AND SD 99739-01
 2. RESISTORS SHOWN ARE 228A TYPE, 1400 OHMS.
 3. IMPORTANT -- STRAP AS SHOWN.

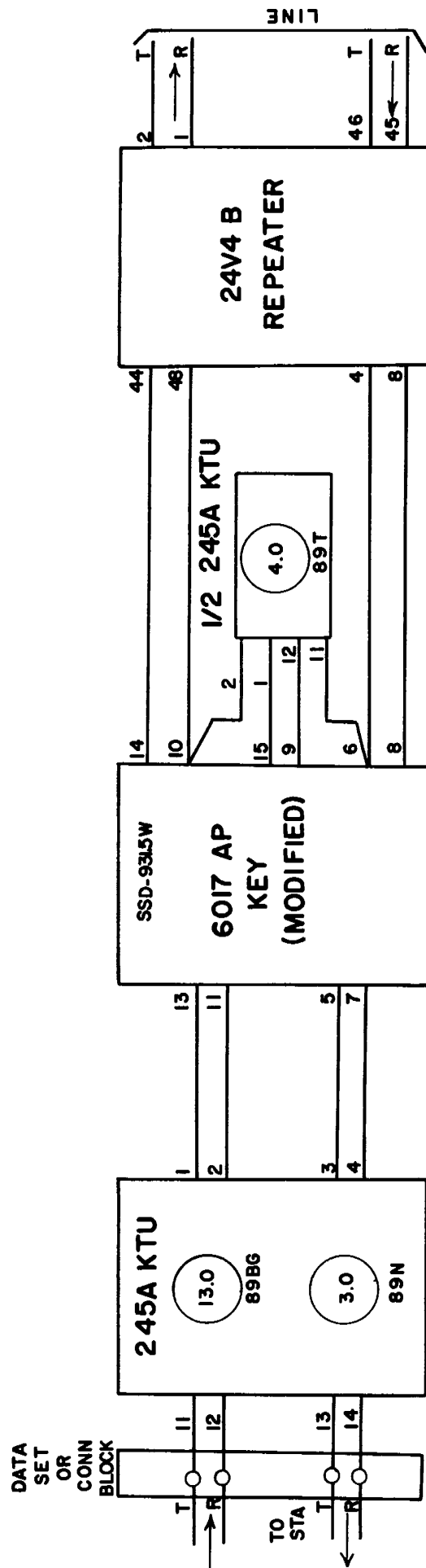
ORDERING INFORMATION

Quantity	ITEM
	J98615BA-L1, MTG. SHELF
	359() EQUALIZER
	227D AMPLIFIER
	NETWORK 849 ()
	RESISTOR 89 ()
	RESISTOR 89 ()

SSD-929W

24V4B TELEPHONE REPEATER
 MODIFIED FOR USE WITH
 4-WIRE STATION EQUIPMENT.

The Chesapeake & Potomac Telephone Co.



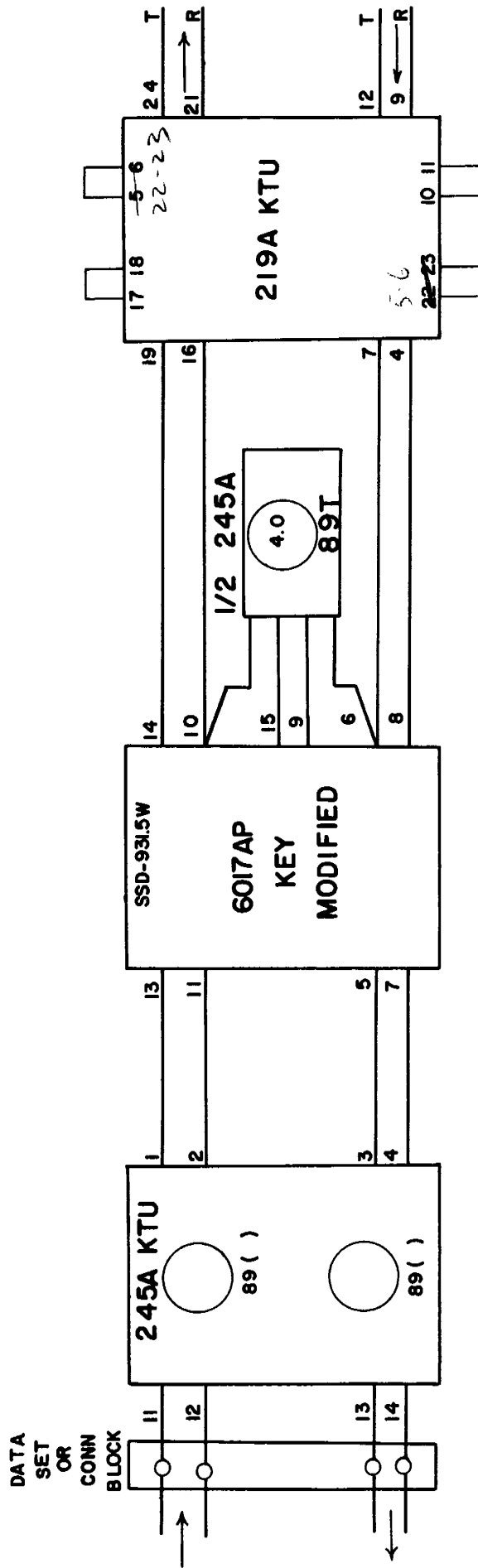
ORDERING INFORMATION

QTY	ITEM
1	UNIT TEL. KEY 245A
1	RESISTOR 89 (T)
1	RESISTOR 89 (N)
1	RESISTOR 89 (BG)
1	KEY 6017 - AP
	SEE SSD 929W FOR 24V4
	SEE SSD 931.5W - 6017 AP

SSD - 931.2W

4 WIRE PRIVATE LINE LOOP
BACK ARRANGEMENT
CUSTOMER CONTROL
WITH 24V4 B

THE C&P TEL. CO.
JHG 1-71



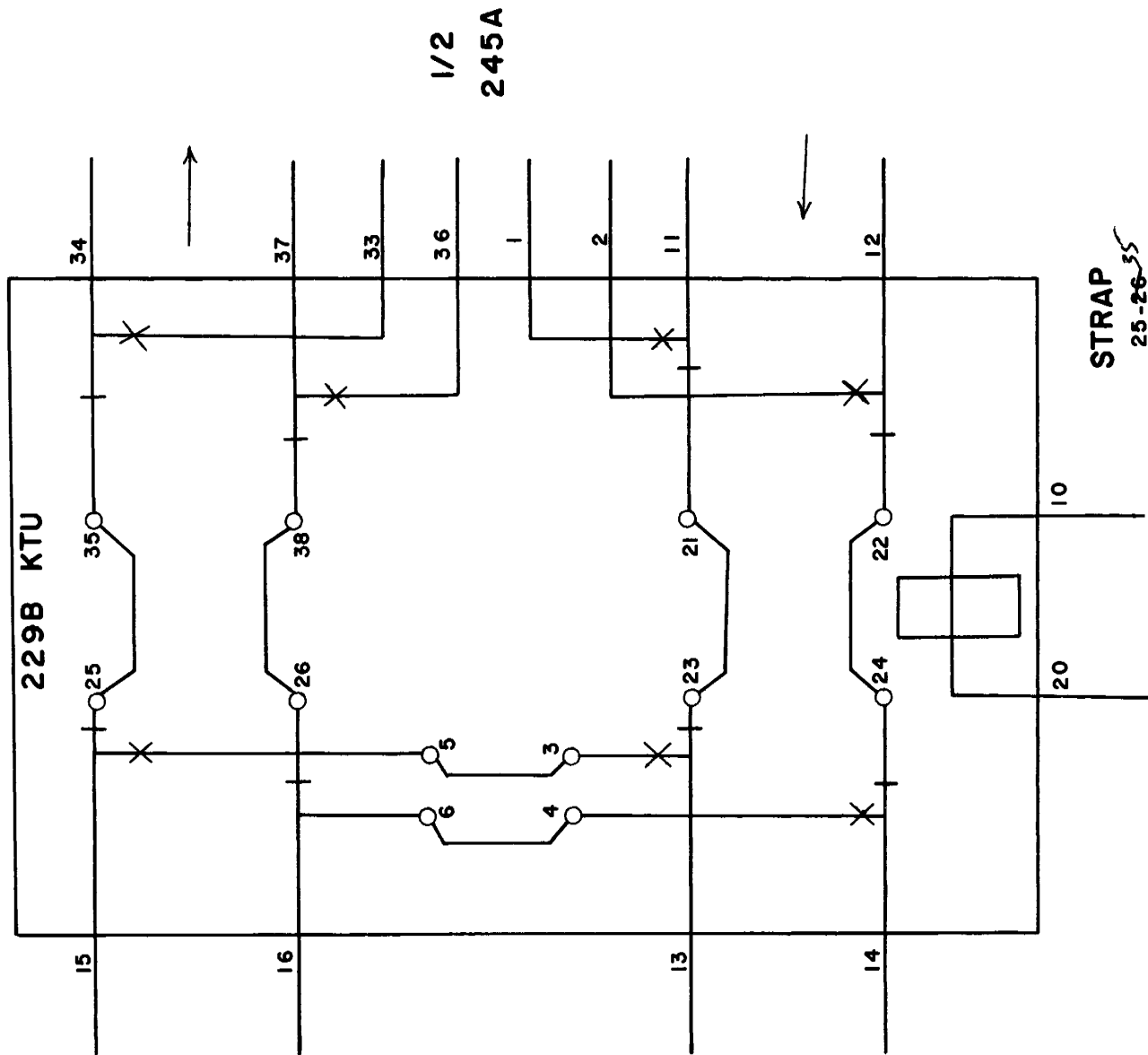
ORDERING INFORMATION

QTY.	ITEM
2	UNIT TEL. KEY 245A
1	RESISTOR 89T
1	RESISTOR 89 ()
1	RESISTOR 89 ()
1	KEY 6017AP
	SEE 931.5W 6017AP

SSD-931.4W

4 WIRE PRIVATE LINE
LOOP-BACK ARRANGEMENT
CUSTOMER CONTROL
WITH 219A KTU
CONNECTED 600Ω TO 600Ω

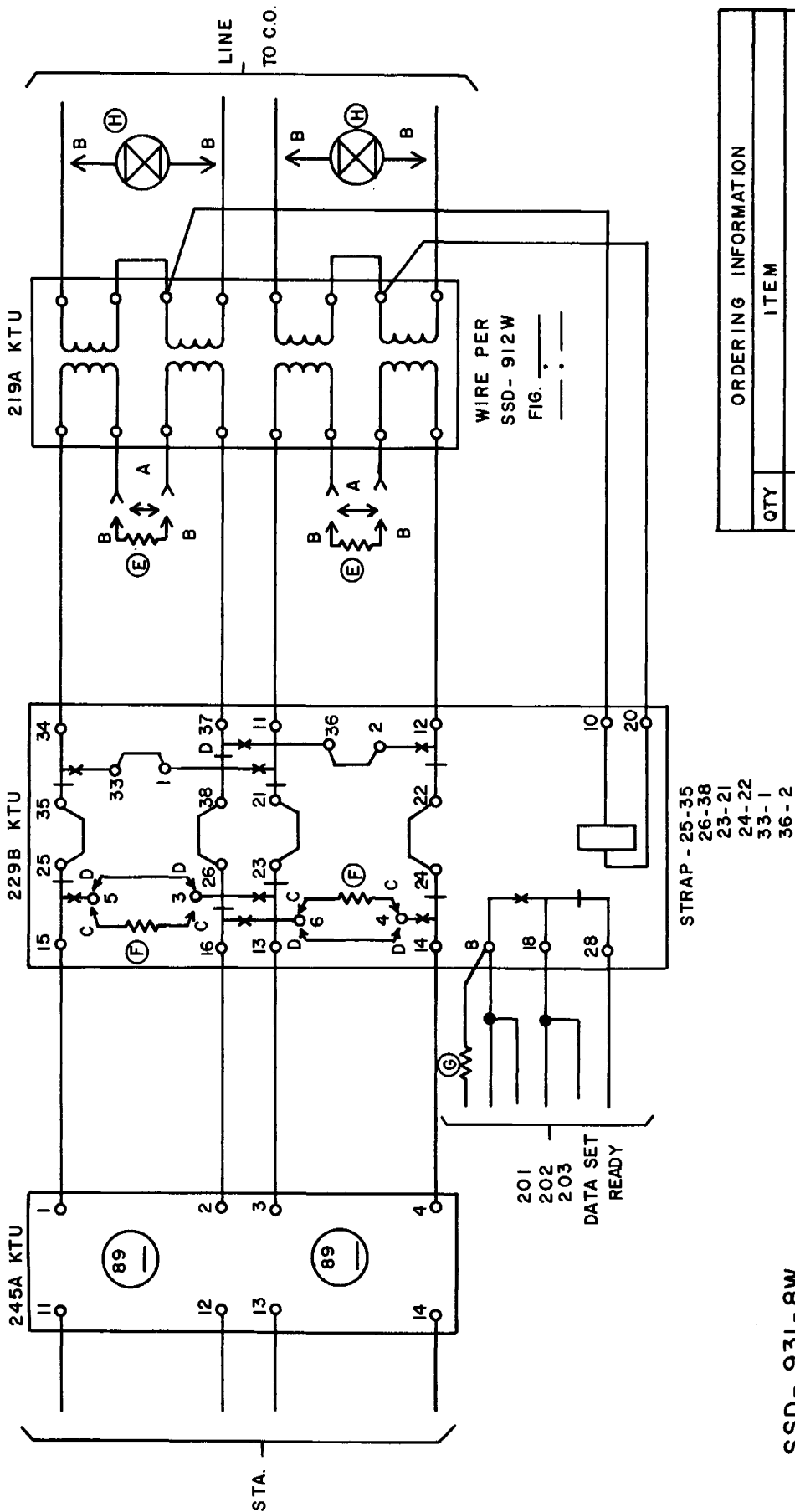
THE C&P TEL. CO.
JHG 1-71



SSD- 931. 6W

229B KTU ARRANGED FOR
LOOP BACK

THE C&P TEL. CO.
JHG 1-71



SSD- 931-8W

4 WIRE PRIVATE LINE
WITH OR WITHOUT HAZARDOUS
VOLTAGE PROTECTION
E/W LOOP BACK CONTROLLED
BY TEST CENTER

OPTIONS

A	WITHOUT HAZARDOUS VOLTAGE PROTECTION
B	WITH HAZARDOUS VOLTAGE PROTECTION
C	STA EQUIP TERM IN 600 OHMS
D	STA.EQUIP LOOPED BACK

ORDERING INFORMATION	
QTY	ITEM
	UNIT TEL. KEY 219A
	UNIT TEL. KEY 229B
	UNIT TEL. KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	RESISTOR KS 20200 LI (47 Ω /1/8 W) (E)
	RESISTOR 145A (600 Ω) (F)
	RESISTOR KS20616 LIA (2150) Ω (G)
	DIODE 426 AN (H)

C & P TELEPHONE CO.

10 - 71

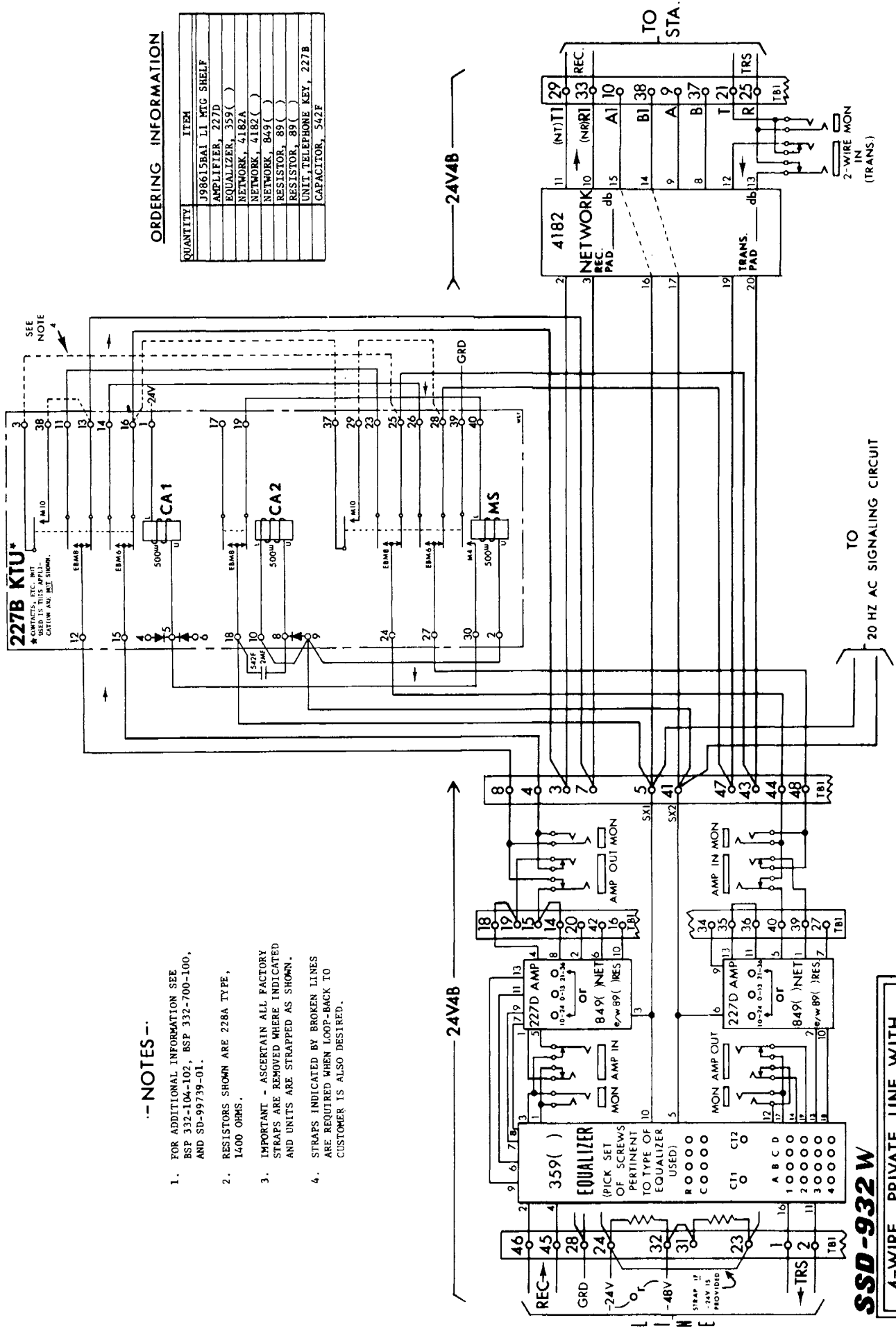
JLW

NOTES --

1. FOR ADDITIONAL INFORMATION SEE BSP 332-104-102, BSP 332-700-100, AND SD-99739-01.
2. RESISTORS SHOWN ARE 228A TYPE, 1400 OHMS.
3. IMPORTANT - ASCERTAIN ALL FACTORY STRAPS ARE REMOVED WHERE INDICATED AND UNITS ARE STRAPPED AS SHOWN.
4. STRAPS INDICATED BY BROKEN LINES ARE REQUIRED WHEN LOOP-BACK TO CUSTOMER IS ALSO DESIRED.

ORDERING INFORMATION

QUANTITY	ITEM
	J98615BA1 LI MTG SHELF
	AMPLIFIER, 227D
	EQUALIZER, 359 ()
	NETWORK, 4182A ()
	NETWORK, 4182 ()
	NETWORK, 849 ()
	RESISTOR, 89 ()
	UNIT, TELEPHONE KEY, 227B
	CAPACITOR, 542F



SSSD-932W

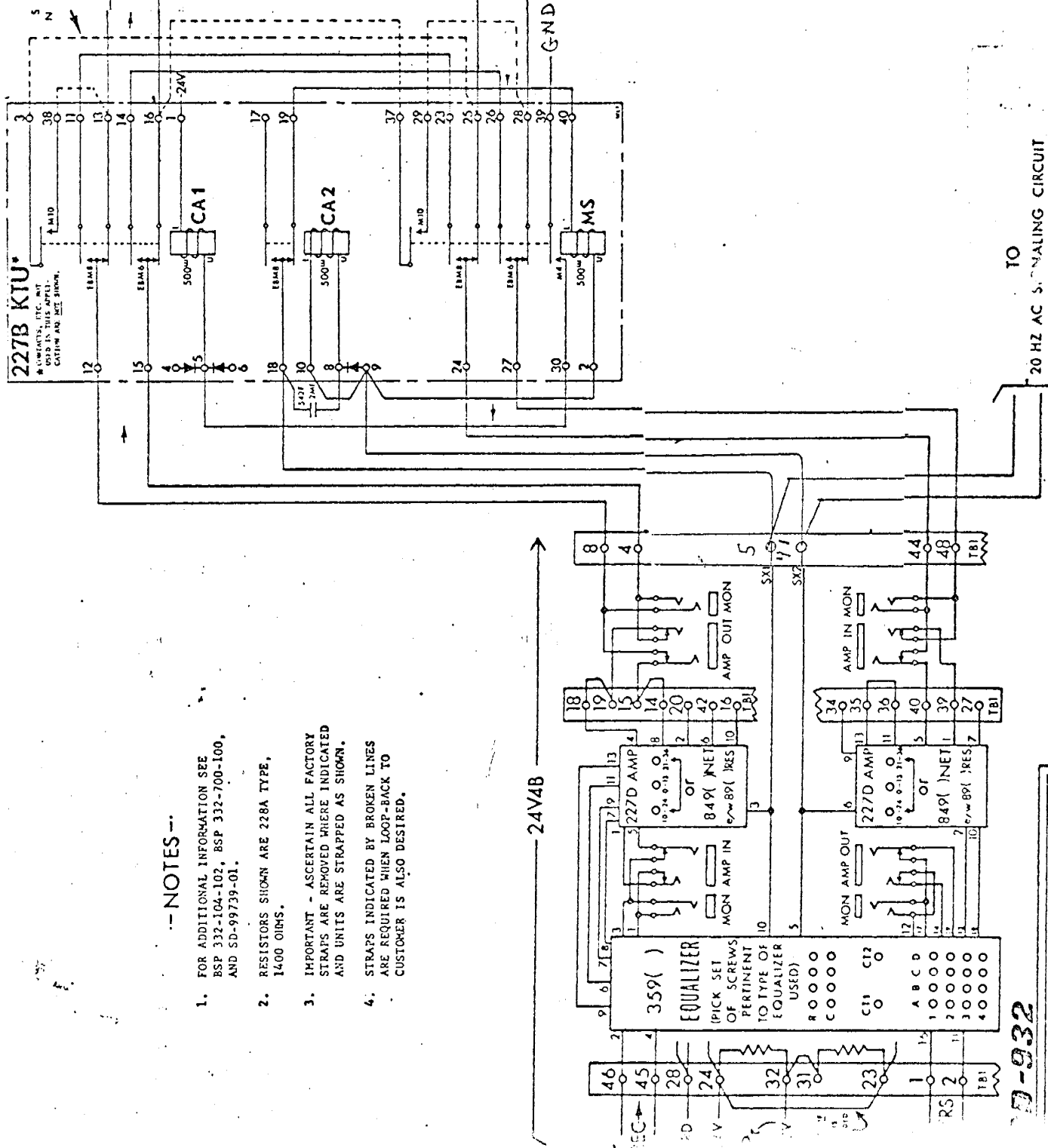
4-WIRE PRIVATE LINE WITH BOTH 20 HZ SIGNALING AND DC LOOP-BACK ON SIMPLEX LEADS

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 1-71

241A

J53045D2

1/2 245



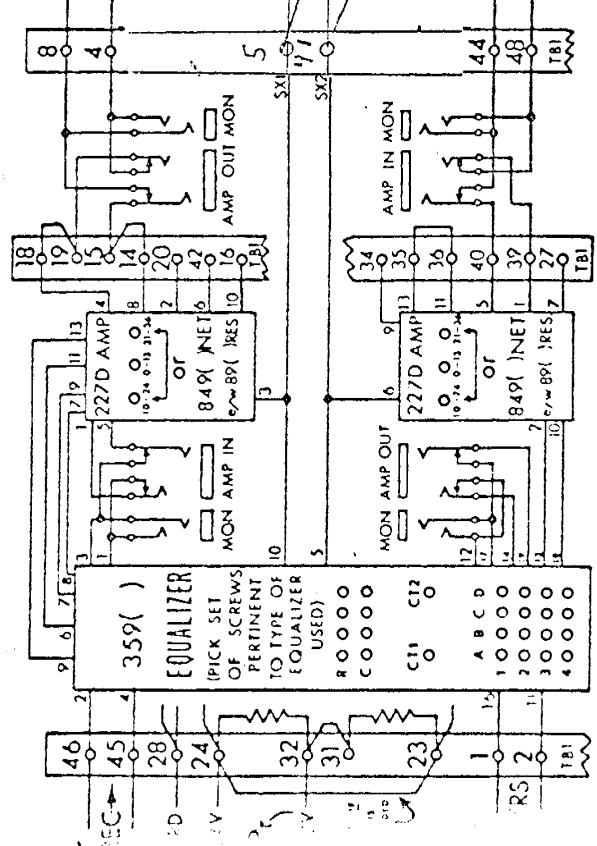
NOTES --

1. FOR ADDITIONAL INFORMATION SEE BSP 332-104-102, BSP 332-700-100, AND SD-99739-01.
2. RESISTORS SHOWN ARE 228A TYPE, 1400 OHMS.
3. IMPORTANT - ASCERTAIN ALL FACTORY STRAPS ARE REMOVED WHERE INDICATED AND UNITS ARE STRAPPED AS SHOWN.
4. STRAPS INDICATED BY BROKEN LINES ARE REQUIRED WHEN LOOP-BACK TO CUSTOMER IS ALSO DESIRED.

24V4B

TO 20 HZ AC SIGNALING CIRCUIT

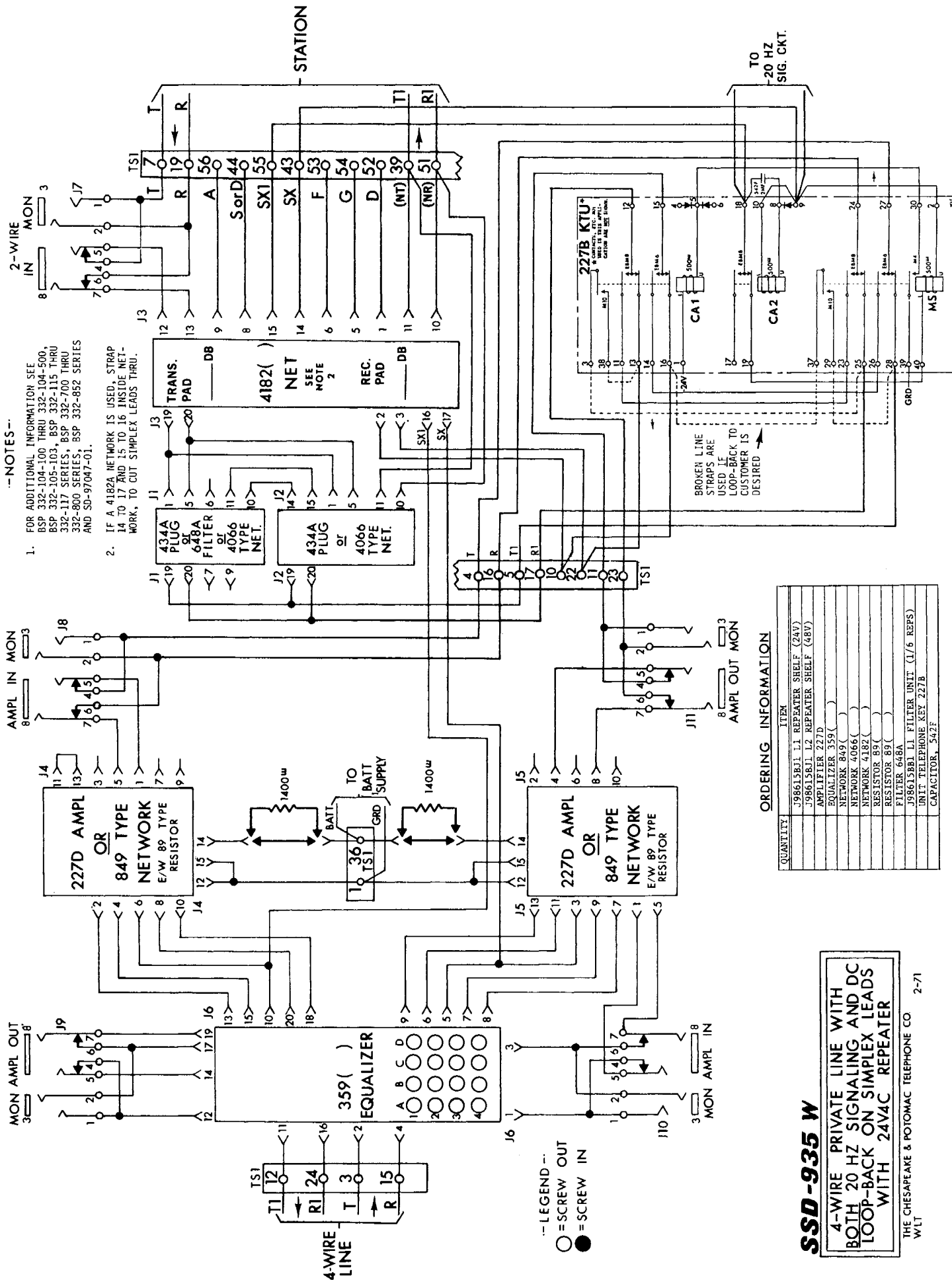
Mod for 2-w data



332

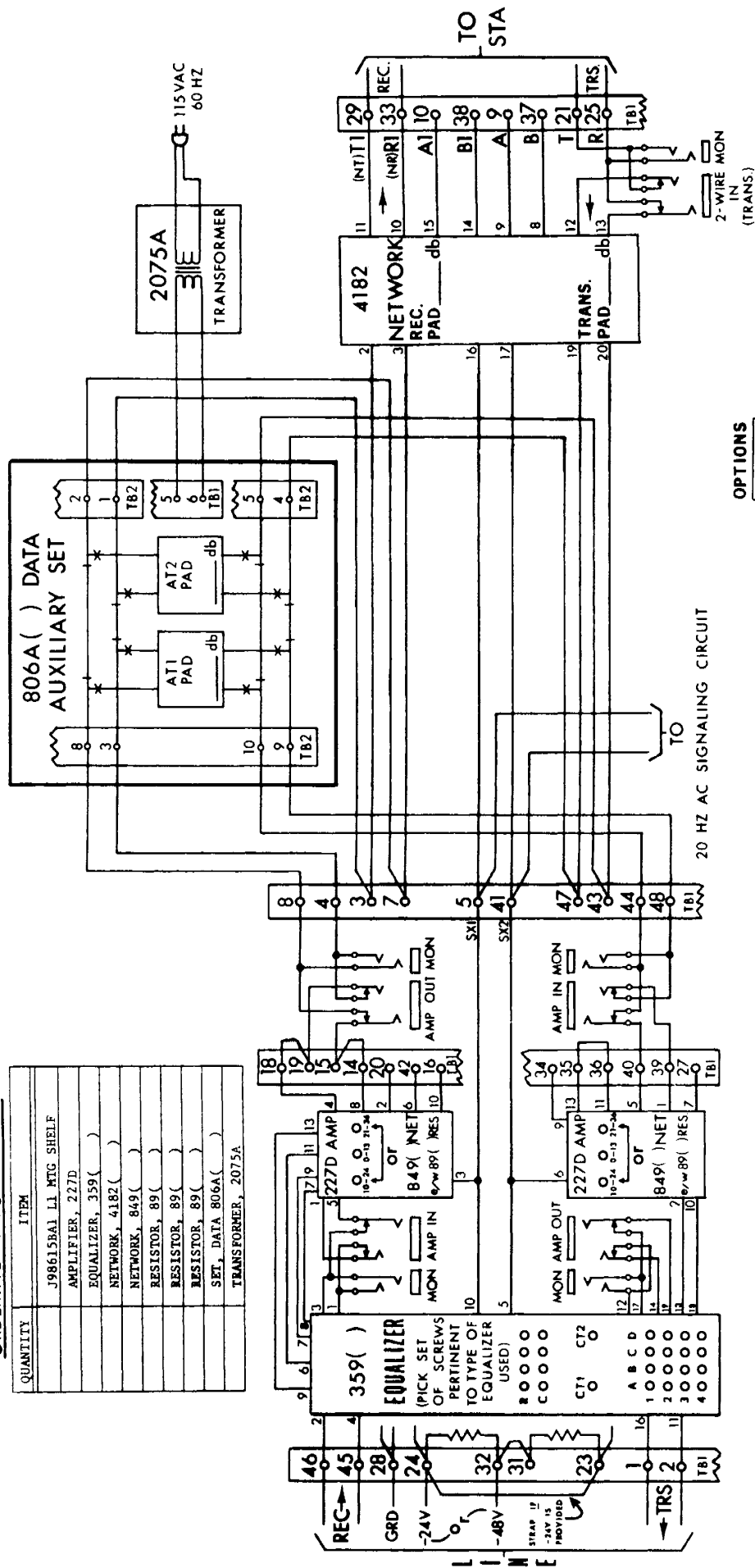
3-WIRE PRIVATE LINE WITH 20 HZ SIGNALING AND DC LOOP-BACK ON SIMPLEX LEADS

SAFAR & POTOMAC TELEPHONE CO. OF VA.



ORDERING INFORMATION

QUANTITY	ITEM
	J98615BA1 L1 MTG SHELF
	AMPLIFIER, 227D
	EQUALIZER, 359()
	NETWORK, 4182()
	RESISTOR, 849()
	RESISTOR, 89()
	RESISTOR, 89()
	SET, DATA 806A()
	TRANSFORMER, 2075A



OPTIONS

NOTES

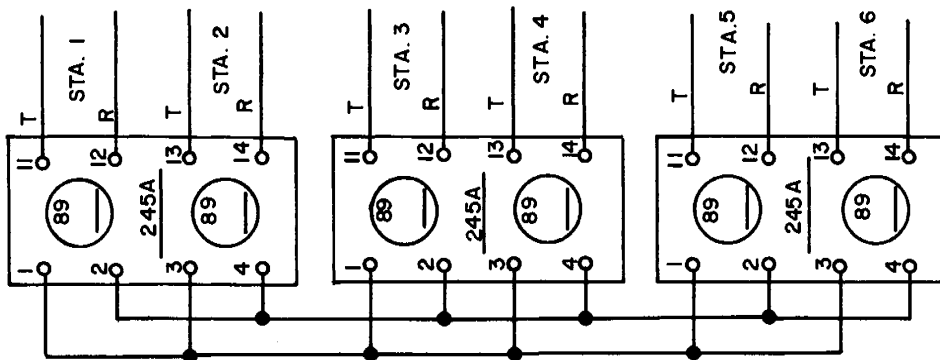
1. FOR ADDITIONAL INFORMATION SEE BSP 332-104-102, BSP 332-700-101, BSP 598-036-100, 200, 300, 500, SSD-926 AND SD-99739.
2. IMPORTANT - ASCERTAIN ALL FACTORY STRAPS ARE REMOVED WHERE INDICATED AND UNITS ARE STRAPPED AS SHOWN.

LEGEND -
O - SCREW OUT
● - SCREW IN

SSD-936 W

4-WIRE PRIVATE LINE WITH
806A DATA AUXILIARY SET
AND 24V4B REPEATER

THE CHESAPEAKE & POTOMAC TELEPHONE CO. 2-71
WLT



SSD-942

2 WIRE BRIDGE
 USING 245A KTU'S
 PROVIDES UP TO
 SIX (6) TWO WIRE
 PORTS

C&P TELEPHONE CO.
 CFE 10-71

ORDERING INFORMATION

QTY	ITEM
	UNIT TEL. KEY 245A
	RESISTOR 89 ()
	RESISTOR 89 ()
	RESISTOR 89 ()
	RESISTOR 89 ()

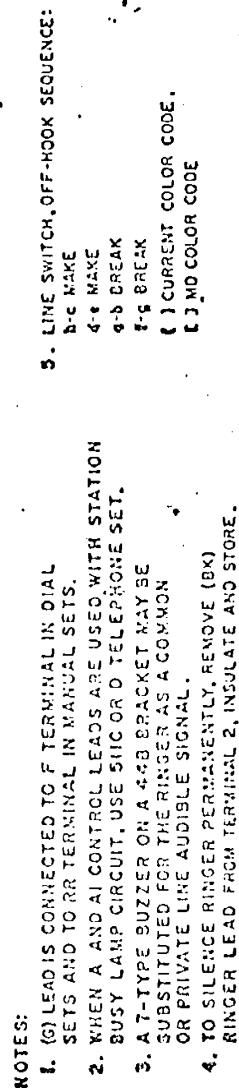


Fig. 16—502A and B Telephone Set Connections

MODIFICATION OF 510 BR-3 TEL SET FOR TURN KEY DATA TRANSFER AND
PUSH BUTTON SIGNALING

1. REMOVE LEADS ON L-1 AND L-2 TERMS OF NETWORK
2. TAPE AND STORE LEAD LIFTED FROM L-1
3. CONNECT LEAD LIFTED FROM L-2(S/R) TO LUG 4 OF TERM STRIP--EXTEND TO TERM 10 OF 229B KTU
4. REMOVE BELL LEADS FROM LUGS 1 AND 2 OF TERM STRIP AND PLACE ON LUGS E-1 AND E-2 OF TERM STRIP
5. CONNECT GND TO LUG 3 OF TERM STRIP
6. Move white lead from F of Network to RR of Network

T- L-1

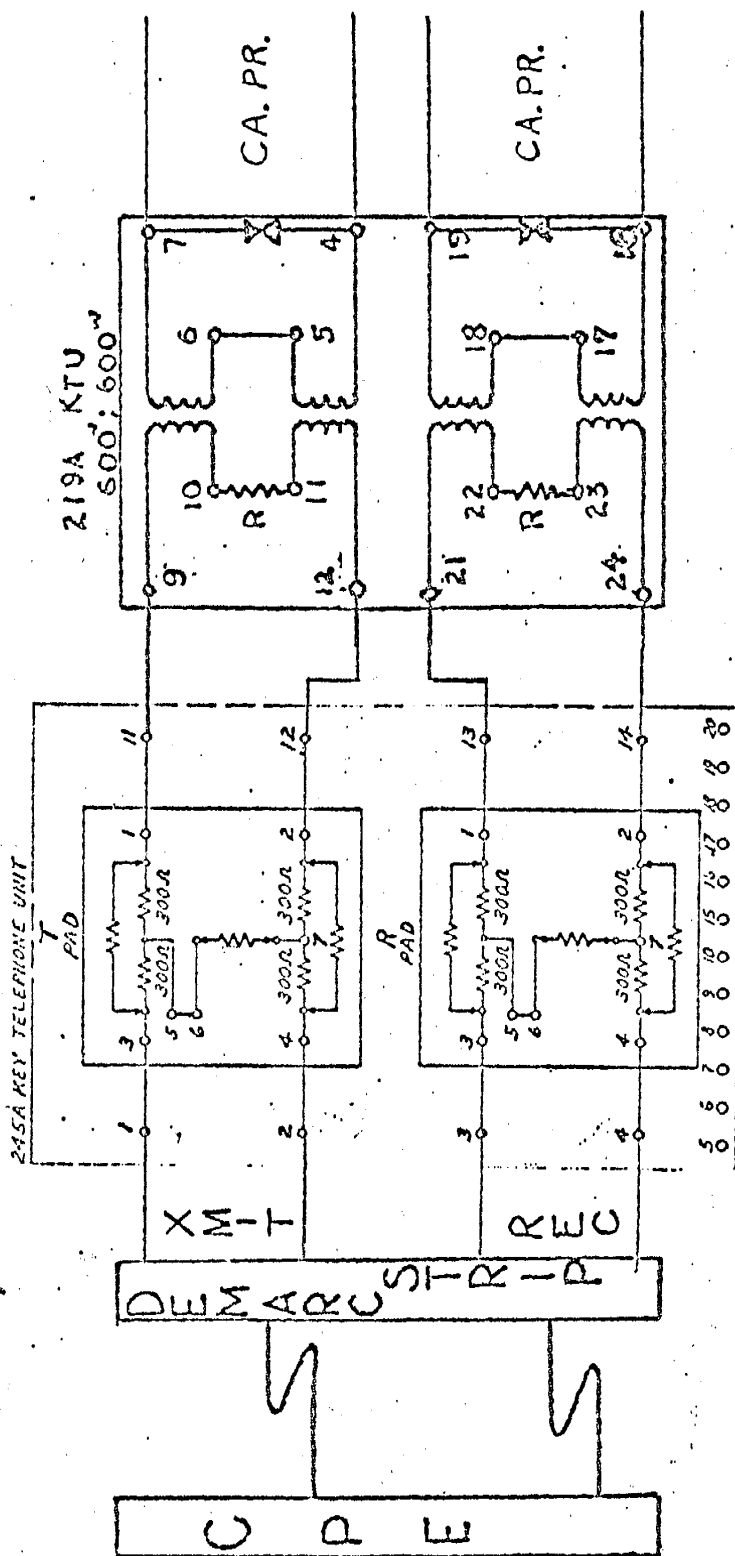
R- L-2

Transfer - 3 + 4

Signal - 5 + 6

Bell - E-1 + E-2

Customer Provided Equipment



426 AN DIODE

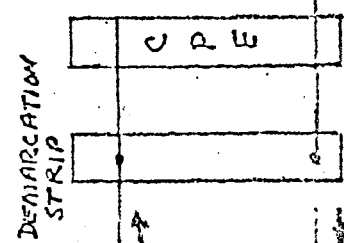
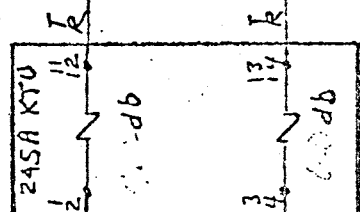
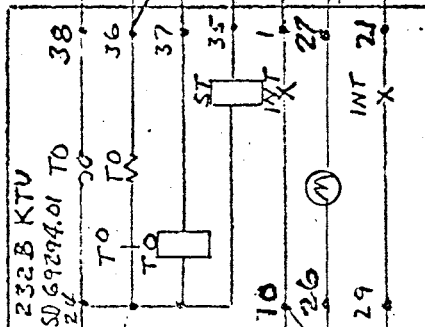
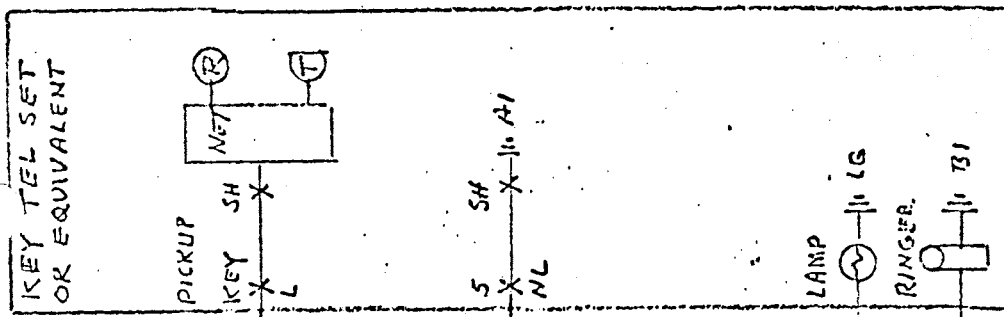
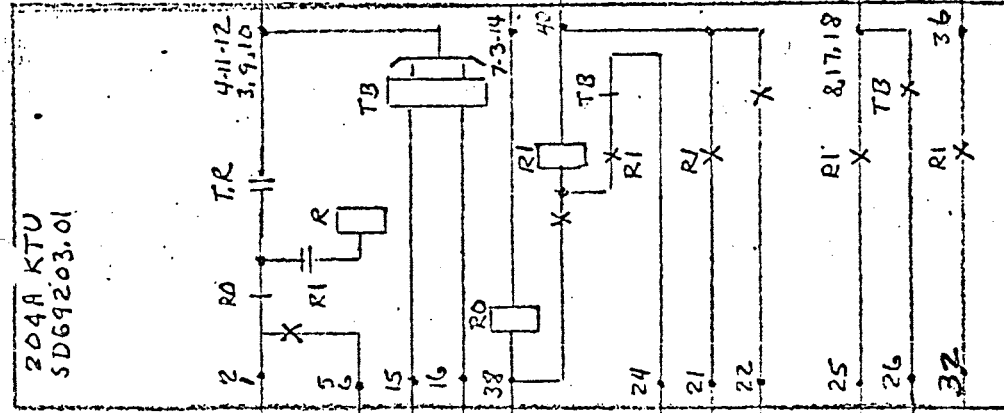
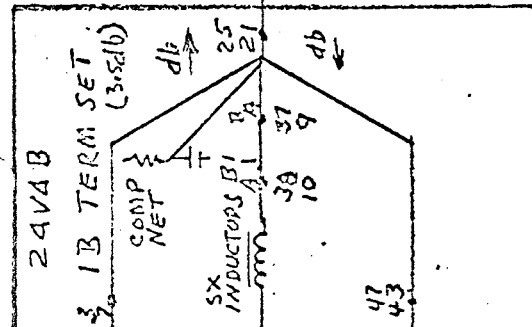
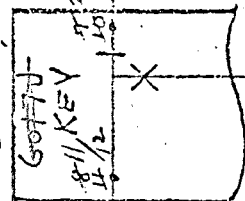
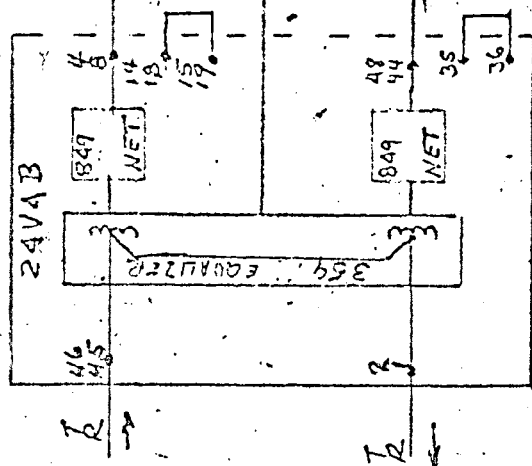
VARISTOR
± 18V_{0.75}

R-KS-20200-L1

47Ω 1/8 Watt

C70

227-B



ORDERING INFORMATION

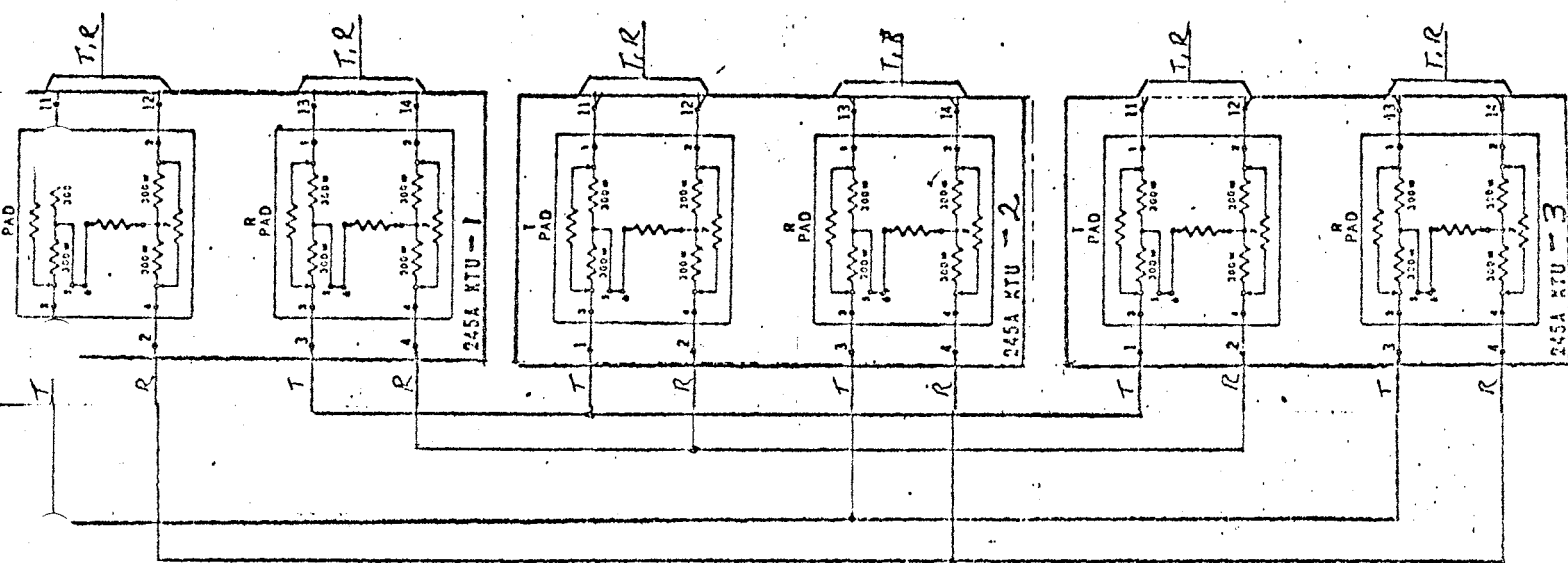
- 1- J-98615BAI LI MTS SHELF
- 1- SET, TERMINATING 1(B)
- 1 EQUALIZER 354 (.)
- 1 RESISTOR 89 (.)
- 3 RESISTOR 89 (.)
- 1-NETWORK 849 (.)
- 1-NETWORK 849 (.)

4-WIRE ALT VOICE DATA
E/W AUTO SIG TERMINATING
IN CUSTOMER PROVIDED
EQUIPMENT

A.F. REED EXT 2266 11/10/71

STA PKG
FOR 16 GDA 132
CA 12611 DD-11-11
DATA FAX 11/13/71
130

PC-DE-VD



MODIFICATION OF 510 BR-3 TEL SET FOR TURN KEY DATA TRANSFER AND
PUSH BUTTON SIGNALING

1. REMOVE LEADS ON L-1 AND L-2 TERMS OF NETWORK
2. TAPE AND STORE LEAD LIFTED FROM L-1
3. CONNECT LEAD LIFTED FROM L-2(S/R) TO LUG 4 OF TERM STRIP--EXTEND TO TERM 10 OF 229B KTU
4. REMOVE BELL LEADS FROM LUGS 1 AND 2 OF TERM STRIP AND PLACE ON LUGS E-1 AND E-2 OF TERM STRIP
5. CONNECT GND TO LUG 3 OF TERM STRIP

6. Move W lead from F of network to RR of network

T- L-1

R- L-2

Transfer 3+4

Signal 5+6

Bell E-1 + E-2

PAD TABLE

CODE OF RESISTOR	LOSS DB 600 Ω	CODE OF RESISTOR	LOSS DB 600 Ω
89A	0	89AR	8.5
89CH	0.25	89AS	8.75
89C	0.5	89AT	9.0
89D	0.75	89AU	9.25
89E	1.0	89AW	9.5
89F	1.25	89AY	9.75
89G	1.5	89BA	10.0
89H	1.75	89BB	10.5
89J	2.0	89BC	11.0
89K	2.25	89BD	11.5
89L	2.5	89BE	12.0
89M	2.75	89BF	12.5
89N	3.0	89BG	13.0
89P	3.25	89BH	13.5
89R	3.5	89BJ	14.0
89S	3.75	89BK	14.5
89T	4.0	89BL	15.0
89U	4.25	89BM	15.5
89W	4.5	89BN	16.0
89Y	4.75	89BP	16.5
89AA	5.0	89BR	17.0
89AB	5.25	89BS	17.5
89AC	5.5	89BT	18.0
89AD	5.75	89BU	18.5
89AE	6.0	89BW	19.0
89AF	6.25	89BY	19.5
89AG	6.5	89CA	20.0
89AH	6.75	89CB	20.5
89AJ	7.0	89CC	21.0
89AK	7.25	89CD	21.5
89AL	7.5	89CE	22.0
89AM	7.75	89CF	25.0
89AN	8.0	89CG	30.0
89AP	8.25	89GD	24.0
		89GE	27.0

EXCHANGE CABLE LOSSES

NONLOADED CABLE	DB/MI	R/MI IN OHMS	IMPEDANCE IN OHMS
26 AST	2.6	440	988
26 BST	2.8	440	922
24 ASM, CSM	2.1	274	766
24 DSM	2.3	274	709
22 BSA, CSA	1.8	171	569
19 CNB	1.3	85	399
19 DNB	1.1	85	450
16 TH	.8	42	319

LOADED CABLE	DB/MI	R/MI IN OHMS	IMPEDANCE IN OHMS
26 BST H88	1.8	448	1199
24 CSM H88	1.1	282	1160
24 DSM H88	1.20	282	1080
22 CSA H88	.78	179	1050
19 CNB H88	.43	93	1017
19 DNB H88	.37	93	1136
16 TH H88	.21	50	1130
24 DSM H135	1.00	282	1303
22 CSA H135	.64	179	1308
19 DNB H135	.30	93	1424
16 TH H135	.17	50	1420
24 DSM B88	.94	290	1420
19 DNB B88	.30	101	1565
19 DNB H44	.56	89	723
22 BSA H44	1.04	175	783

OPEN WIRE	DB/MI	R/MI IN OHMS	IMPEDANCE IN OHMS
.109 Steel	.38	68	1425
.080 C.S. 40%	.26	43	995
.104 C.S. 40%	.18	25	806
.080 Copper	.12	18	766
.104 Copper	.08	10	693
B Urban Wire	3.00	274	550
B, D or E Rural	1.14	86	446

REPEATING COILS

TYPE	RATIO LINE:DROP	TYPE	RATIO LINE:DROP
62A	1:1	93H	1:24:1
62B	1:1.62	93J	2:28:1
62C	1.62:1	120C	1:1
62D	1:2.66	120D	1.5:1
62E	2.66:1	120E	1:1.5
62F	1:2.76	120F	1:2.5
62G	1:2.34	120G	1:1.5
93A	1:1		1:2.5
93B	1:1.62	120H	1:1
93C	1.62:1	120J	1.5:1
93D	1:2.66	120K	1:1.5
93E	2.66:1	120L	1:2.5
93F	1.62:1	120M	1:1.33
93G	2.66:1	120N	1:2

ALTHOUGH THERE ARE EXCEPTIONS, GENERALLY, COILS WITH 1:1 RATIO ARE FOR NON-LOADED FACILITIES.

FOR ADDITIONAL INFORMATION ON REPEATING COILS SEE BSP AB22.277, AB23.326 AND AB23.327.

LOADING COILS

CODE NO.	INDUCTANCE	R/OHMS
632	88 MH	9.0
638	44 MH	5.1
639	22 MH	2.6
641	44 MH	3.7
642	88 MH	6.3
643	135 MH	9.3
644	175 MH	13.0
645	250 MH	19.3
651	44 MH	7.7

CONVERSION TABLE

FEET TO MILES

Feet	Miles
0	0.0
53	0.01
106	0.02
158	0.03
211	0.04
264	0.05
317	0.06
370	0.07
422	0.08
475	0.09
528	0.10
581	0.11
633	0.12
686	0.13
739	0.14
792	0.15
845	0.16
897	0.17
950	0.18
1,003	0.19
1,056	0.2
1,109	0.21
1,162	0.22
1,214	0.23
1,267	0.24
1,320	0.25
1,373	0.26
1,425	0.27
1,478	0.28
1,531	0.29
1,584	0.3
1,637	0.31
1,689	0.32
1,742	0.33
1,795	0.34
1,848	0.35
1,900	0.36
1,953	0.37
2,006	0.38
2,059	0.39
2,112	0.4
2,165	0.41
2,217	0.42
2,270	0.43
2,323	0.44
2,376	0.45
2,429	0.46
2,481	0.47
2,534	0.48
2,587	0.49

Feet	Miles
2,640	0.5
2,693	0.51
2,745	0.52
2,798	0.53
2,851	0.54
2,904	0.55
2,957	0.56
3,009	0.57
3,062	0.58
3,115	0.59
3,168	0.6
3,221	0.61
3,273	0.62
3,326	0.63
3,379	0.64
3,432	0.65
3,485	0.66
3,537	0.67
3,590	0.68
3,643	0.69
3,696	0.7
3,749	0.71
3,801	0.72
3,854	0.73
3,907	0.74
3,960	0.75
4,013	0.76
4,056	0.77
4,118	0.78
4,171	0.79
4,224	0.8
4,329	0.82
4,435	0.84
4,541	0.86
4,646	0.88
4,752	0.9
4,857	0.92
4,963	0.94
5,069	0.96
5,174	0.98
5,280	1.0
5,544	1.05
5,808	1.1
6,072	1.15
6,336	1.2
6,600	1.25
6,864	1.3
7,128	1.35
7,392	1.4
7,658	1.45

Feet	Miles
7,920	1.5
8,184	1.55
8,448	1.6
8,712	1.65
8,976	1.7
9,240	1.75
9,504	1.8
9,768	1.85
10,032	1.9
10,296	1.95
10,560	2.0
10,824	2.05
11,088	2.1
11,352	2.15
11,616	2.2
11,880	2.25
12,144	2.3
12,408	2.35
12,672	2.4
12,936	2.45
13,200	2.5
13,464	2.55
13,728	2.6
13,992	2.65
14,256	2.7
14,520	2.75
14,784	2.8
15,048	2.85
15,312	2.9
15,576	2.95
15,840	3.0
16,104	3.05
16,368	3.1
16,632	3.15
16,896	3.2
17,160	3.25
17,424	3.3
17,688	3.35
17,952	3.4
18,216	3.45
18,480	3.5
18,744	3.55
19,008	3.6
19,272	3.65
19,536	3.7
19,800	3.75
20,064	3.8
20,328	3.85
20,592	3.9
20,856	3.95

Feet	Miles
21,120	4.0
21,384	4.05
21,648	4.1
21,912	4.15
22,176	4.2
22,440	4.25
22,704	4.3
22,968	4.35
23,232	4.4
23,496	4.45
23,760	4.5
24,024	4.55
24,288	4.6
24,552	4.65
24,816	4.7
25,080	4.75
25,344	4.8
25,608	4.85
25,872	4.9
26,136	4.95
26,400	5.0
26,664	5.05
26,928	5.1
27,192	5.15
27,456	5.2
27,720	5.25
27,984	5.3
28,248	5.35
28,512	5.4
28,776	5.45
29,040	5.5
29,304	5.55
29,568	5.6
29,832	5.65
30,096	5.7
30,360	5.75
30,624	5.8
30,888	5.85
31,152	5.9
31,416	5.95
31,680	6.0
31,944	6.05
32,208	6.1
32,472	6.15
32,736	6.2
33,000	6.25
33,264	6.3
33,528	6.35
33,792	6.4
34,056	6.45

Feet	Miles
34,320	6.5
34,584	6.55
34,848	6.6
35,112	6.65
35,376	6.7
35,640	6.75
35,904	6.8
36,168	6.85
36,432	6.9
36,696	6.95
36,960	7.0
37,224	7.05
37,488	7.1
37,752	7.15
38,016	7.2
38,280	7.25
38,544	7.3
38,808	7.35
39,072	7.4
39,336	7.45
39,600	7.5
39,864	7.55
40,128	7.6
40,392	7.65
40,656	7.7
40,920	7.75
41,184	7.8
41,448	7.85
41,712	7.9
41,976	7.95
42,240	8.0
42,504	8.05
42,768	8.1
43,032	8.15
43,296	8.2
43,560	8.25
43,824	8.3
44,088	8.35
44,352	8.4
44,616	8.45
44,880	8.5
45,144	8.6
45,408	8.7
45,672	8.8
45,936	8.9
46,200	9.0
46,464	9.1
46,728	9.2
46,992	9.3
47,256	9.4
47,520	9.5
47,784	9.6
48,048	9.7
48,312	9.8
48,576	9.9
48,840	10.0

- SERVICE CODES -

ALL PRIVATE SERVICES USUALLY HAVE A TWO LETTER IDENTIFYING CODE IN THEIR CIRCUIT NUMBER. THE FUNCTION AND TYPE OF SERVICE DETERMINE THE CODE USED. A FAMILIARITY WITH THESE CODES WILL BE HELPFUL IN INSTALLING OR MAINTAINING THESE SERVICES.

LISTED BELOW ARE THE CODES AND THEIR USAGE. ALL NON-GOVERNMENT SERVICES, OTHER THAN DISPATCH TYPE, WILL USE THE BASIC CODES. THE GOVERNMENT CODES ARE NOT ONLY USED FOR THE FEDERAL GOVERNMENT BUT FOR STATE, COUNTY AND CITY GOVERNMENTS AS WELL.

IF THE SERVICE CODE IS NOT PRECEDED BY ANY NUMBERS THE SERVICE WILL BE A LONG LINES SERVICE; EX. FD14831.

A C&P OF VA. INTEREXCHANGE SERVICE WILL CARRY A SINGLE NUMBER PREFIX; EX. 2FD14831.

A C&P OF VA. INTRAEXCHANGE SERVICE WILL HAVE A TWO NUMBER PREFIX; EX. 55FD14831.

SERVICES THAT GO FROM ONE COMPANY'S AREA INTO ANOTHER COMPANY'S AREA WILL CARRY A SUFFIX CODE DESIGNATING THE COMPANY WHICH IS BILLING FOR THE SERVICE; EX. 55FD14831CV.

SEE BSP 682-000-012CV FOR ADDITIONAL INFORMATION.

<u>SERVICE</u>	<u>CODES</u>		
	<u>BASIC</u>	<u>GOVERNMENT</u>	<u>DISPATCH</u>
<u>TELEPHONE</u>			
FULL PERIOD	FP	GP	DP
FULL PERIOD TERMINATING IN RADIO OUTLET	FR	GR	DR
FOREIGN EXCHANGE	FX	GX	DX
OFF-PREMISES EXTENSION STATIONS - INTEREXCHANGE	EO	EG	ED
PRIVATE LINE	PL	GL	DL
PAGING SYSTEM	PS	-	-
ALTERNATE FULL PERIOD AND FOREIGN EXCHANGE	FA	GA	DA
REFERENCE FREQUENCY	RF	-	-
SHORT PERIOD	SP	-	-
TIE LINE	TL	TG	TD
TURRET LINE	TU	GU	DU
TELEPHOTOGRAPH	TF	GF	DF
CONTROL CHANNEL OR REMOTE METERING	VM	GM	DM
WESTERN UNION TELEGRAPH CO. - VF LAYOUTS	WF	WG	-
WESTERN UNION TELEGRAPH CO. - VOICE CIRCUITS	WV	WU	-
DATA TRANSMISSION	FD	GD	DD
FULL PERIOD - DATA	FPD	GPD	DPD
FOREIGN EXCHANGE - DATA	FXD	GXD	DXD
<u>TELEGRAPH</u>			
MORSE	M	-	-
CONTROL CHANNEL OR REMOTE METERING	TC	GC	DC
TELETYPESETTER	TS	-	-
TELETYPEWRITER PRIVATE LINE	TT	GT	DT
TELETYPEWRITER FOREIGN EXCHANGE	TE	GE	-
WESTERN UNION TELEGRAPH CO.	WU	-	-
DATA TRANSMISSION	TB	GB	DB
<u>PROGRAM</u>			
NETWORK (INTEREXCHANGE)	PN	GN	-
LOCAL CHANNEL	PT	-	-
<u>VIDEO</u>			
NETWORK (INTEREXCHANGE)	VN	GB	-
EDUCATIONAL TV	EV	VG	-
COMMUNITY ANTENNAE TELEVISION	CV	-	-
LOCAL CHANNEL	VT	-	-
<u>MISCELLANEOUS</u>			
PROTECTIVE ALARMS (BRIDGED OR POINT TO POINT)	BA	-	-
PROTECTIVE ALARMS (SERIES CIRCUIT)	SC	-	-
BELLS AND LIGHTS (CIVIL AIR DEFENSE WARNING)	BL	-	-
DECCO BILLING - EXCHANGE SERVICE	-	GZ	-
SIREN CONTROL	BS	-	-
CODE CALL SYSTEM	CC	-	-
CHANNEL SERVICE (LEASED LINES)	CS	-	-
MUSIC TRANSMISSION (WIRED MUSIC)	MT	-	-
PRIVATE RADIO SYSTEM	RT	RG	-
MISCELLANEOUS	MS	GS	DS
BROAD BAND (UP TO 100 KC) CHANNELS FOR DATA, ETC.	FW	GW	DW
CIRCUIT SECTIONS FOR WESTERN UNION (100-5000 CYCLES, 50-8000 CYCLES OR 50-15,000 CYCLES)	WA	-	-
TELPAK CHANNEL	TK	GK	DK
WESTERN UNION TELEGRAPH COMPANY TELPAK	WK	-	-

FIG. 1

LOOP OR GROUND START OPERATION TO 2600 HZ SIGNALING

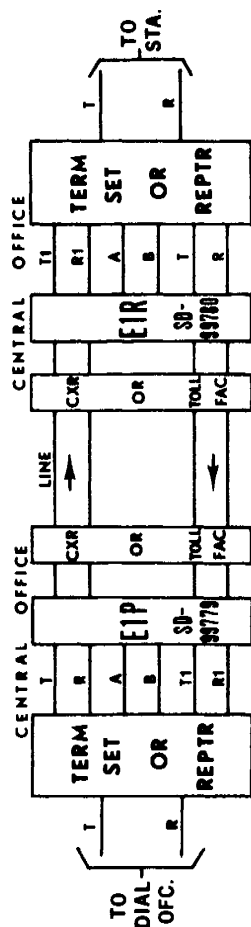


FIG. 4

LOOP AND 20 HZ SIGNALING TO 2600 HZ SIGNALING *

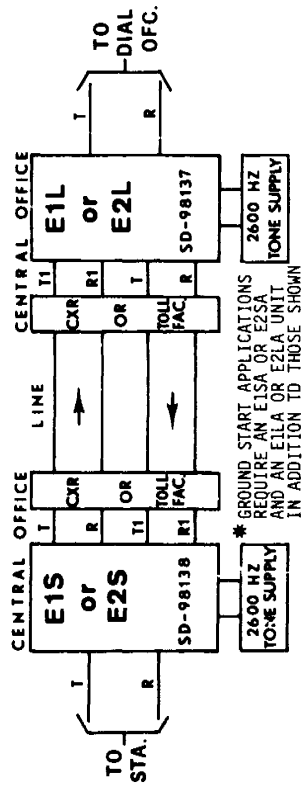


FIG. 2

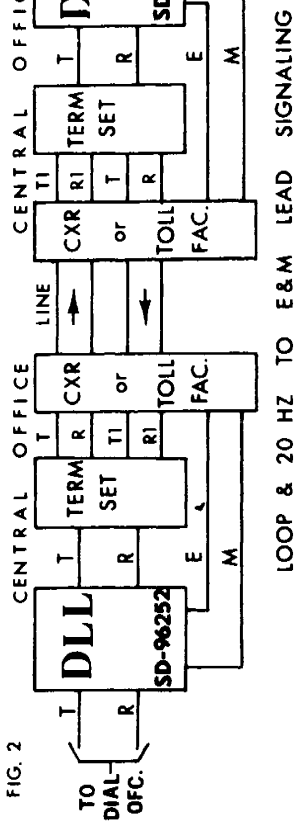


FIG. 5

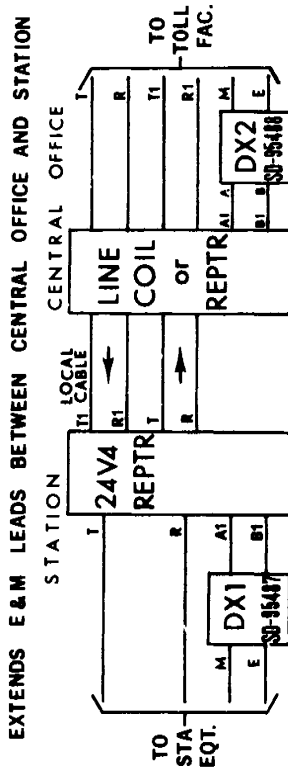


FIG. 3

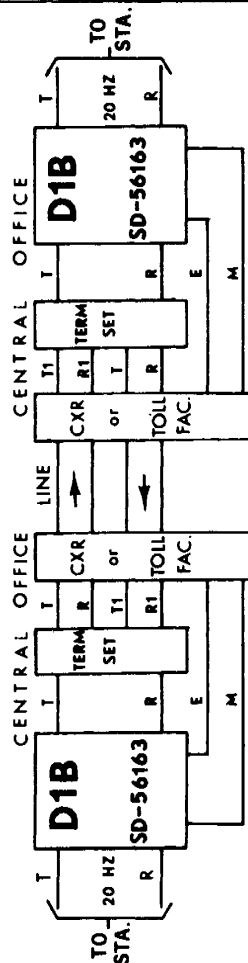
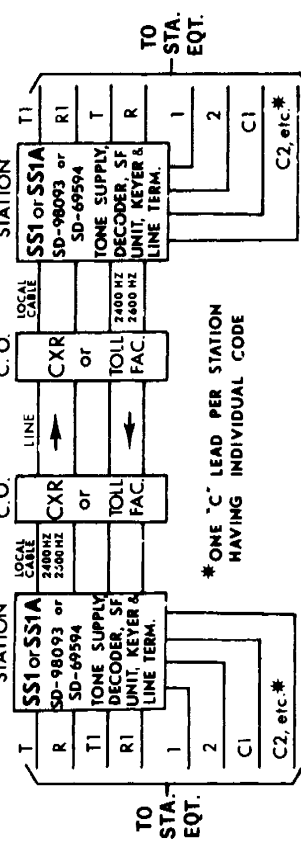


FIG. 6



SSI-5 W

TYPICAL SIGNALING ARRANGEMENTS

THE CHESAPEAKE & POTOMAC TELEPHONE CO. WLT

--NOTES--

FOR ADDITIONAL INFORMATION, SEE
BSP 311-200-180, BSP 859-288-101,
AND BSP 859-751-101.

4-WIRE MULTISTATION DIAL SELECTIVE SIGNALING ARG'T.