SHEET INDEX

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ASSOCIATED M & A PLANS

M PLAN		A PLAN
M-WESI4	M-WESI5	A-HOGPC
M-WESI6	M-WESIH	A-H3APC
M-WESIG	M-WESIM	A-E7EPC
M-WESIJ	M-WES34	A-HOGPX
M-WESIL	M-WES35	A-H3ADX
M-WESIN	M-WES3B	A-HOGDX
M-WESIQ	M-WES3C	
M-WESIR		
M-WESIS		

REQ NO

SHOP ORDER NO.

BELL SYSTEM PRACTICES

598-083-100	830A
598-083-102	830B
598-083-103	830C
591-816-100	830A, 930B & 830C

SUPPORTING INFORMATION

CATEGORY	ISSUED BY	NO.	ISSUE NO.
820D-LIA	BTL	SD-3D031-01	8B
108A	BTL	SD-3D024-01	5D
108C	BTL	SD-3D032-01	5D
109A	BTL	SD-3D025-01	4D
108D-LI	BTL	SD-73060-01	9BI
108E-LI	BTL	SD-1D229-01	4BI
109E-LI	BTL	SD-1D198-01	3BI
830A-LI	BTL	SD-1D250-01	5DI
830B-LI	BTL	SD-1D250-01	5DI
830C-LI	BTL	SD-1D250-01	5DI

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

INFORMATION NOTES

A. - UNLESS OTHERWISE SPECIFIED ALL LEADS SHALL BE 22 GA, GREEN, TYPE G S STATION WIRE PER A.T.&T. CO. SPEC. 7089.

B. - ASSOCIATED COMPANY ENGINEERING SHALL BE RESPONSIBLE FOR STATION ARRANGEMENTS OTHER THAN THOSE CONTAINED IN THE BELL SYSTEM TELETYPEWRITER STATION ENGINEERING ARRANGEMENTS.

C. - UNLESS OTHERWISE SPECIFIED. RESISTANCE VALUES ARE IN OHMS. CAPACITANCE VALUES ARE IN MICROFARADS. VALUES PRECEDED BY THE SYMBOL +(PLUS) OR —(MINUS) ARE IN VOLTS.

D. - WIRE MAN SHALL LINE OUT ALL FIGURES NOT USED ON COPY OF WIRING WHICH ACCOMPANIES STATION.

E. - DATA SETS 108AI, 108CI, 109AI AND 109A2 ARE RATED M.D. THESE DATA SETS ARE ACCEPTABLE SUBSTITUTION ONLY IN SOME APPLICATIONS 108DLI REPLACES 108CI 108E-LI REPLACES 108AI AND 109E-LI REPLACES 109AI AND 109A2.
THE 820D-LIA IS RATED M.D., BUT IS AN ACCEPTABLE SUBSTITUTE.

EQUIPMENT NOTES

1.01 SCREW SWITCH SETTINGS AND STRAPPING ON THE 108 AND 109 DATA SETS WILL BE PERFORMED BY THE INSTALLER.

1.02 THE 820-LIA CONSISTS OF AN 820-LI WITH THE COVER OF THE PLASTIC HOUSING OMITTED. THE 820D-LI IS SUPPLIED WITH THE "A" POWER CORD AND THE 820D-LI IS SUPPLIED WITH THE "B" POWER CORD. THE "A" POWER CORD IS EQUIPPED WITH A HUBBELL CONNECTOR FOR CONNECTION TO THE 820D AT ONE END, AND WITH A PARALLEL BLADE GROUNDING-TYPE MOLDED PLUG FOR CONNECTION TO THE POWER OUTLET AT THE END. THE "B" POWER CORD IS ALSO EQUIPPED WITH A HUBBELL CONNECTOR AT ONE END, BUT THE OTHER END IS TERMINATED IN SPADE TIPS FOR CONNECTION TO POWER ACCESSIBLE ON A SCREW-TYPE TERMINAL STRIP.

W-WESI4
SHEET A1

RECORD OF CHANGES

ISSUE 1	1-2-68
ISSUE 2	9-1-70
ISSUE 3	2-1-74
SHEET INDEX, SUPPORT INFO. AND ASSOC M & A PLANS CHANGED.	
ISSUE 4	5-5-75
ADDED 830 SERIES DATA AUXILIARY SETS	
ISSUE 5	10-1-76
ADDED 830 PARTS UPDATED 109E, 108D & 108E	

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W-WESI4
22 SHEETS

820D-LIA, 830A-LI, 830B-LI AND 830C-LI
DATA AUXILIARY SETS
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET A1

BSTSEA

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
EEK	3 4 75	JPC	JPC	RGM	

300-427

OPTION INDEX

1.01

	FEATURE		OPT.	SCREW OR LINKS OPEN	SCREW OR LINKS CLOSED	ROTARY SWITCH SETTING	SLIDE SWITCH SETTING	SHEET LOC.
FOR 109A	WITH LIGHTNING PROTECTION		Z	NO SCREW SWITCH SETTINGS				J7
FOR 109A	WITHOUT WESIF (13A1 D.U.)		Y					B3
FOR 109A	WITH WESIF (13A1 D.U.)		X					B3
FOR AR 17	EIA INTERFACE		W	B2,B4,B6,A2,A4	B1,B5,A1,A3			J1
FOR AR 17	CURRENT INTERFACE		V	B1,B5,A1,A3	B2,B4,B6,A2,A4			J1
FOR AR 17	COPY IN TEST MODE		T		B12			J1
FOR AR 17	NO COPY IN TEST MODE		S	B12				J1
FOR AR 17	LOCAL COPY		R		B10			J1
FOR AR 17	NO LOCAL COPY		O	B10				J1
FOR AR 17	MARK HOLD ON CARR FAIL		N		A5			J1
FOR AR 17	SPACE HOLD ON CARR FAIL		M	A5				J1
FOR AR 17	SQUELCH ON CARR FAIL		K		A7			J1
FOR AR 17	NO CARR SQUELCH ON CARR FAIL		J	A7				J1
FOR AR 430	CA LOOPED TO CB		H	G	H			J2
FOR AR 430	CB LOOPED TO CC		G	H	G			J2
FOR AR 430	RCV SPACE TIMER		F	E	F			J2
FOR AR 430	CAMP ON DETECTOR		E	F	E			J2
FOR AR 430	CC TURNED OFF BY CD		A		A			J2
FOR AR 430	CC INDEPENDENT OF CD		ZA	A				J2
109E-LI	NO CURRENT SQUELCH		Y	S2				J8, J14
109E-LI	CURRENT SQUELCH		Z		S2			J8, J14
109E-LI	BB LEAD	SPACE HOLD	V	S1B	S1A			J8, J14
109E-LI	BB LEAD	MARK HOLD	U	S1A	S1B			J8, J14
109E-LI	CROSS OVER SHIFT	SPACE	R	S3-1	S3-2			J8, J14
109E-LI	CROSS OVER SHIFT	MARK	Q	S3-1, S3-2				J8, J14
109E-LI	CROSS OVER SHIFT	NONE	P	S3-2	S3-1			J8, J14
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	4 WIRE SERVICE		Z	A2-3	A1-2,3-4			J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	2 WIRE SERVICE		Y	A1-2, 3-4	A2-3			J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	DIRECTION CONTROL	FDX	X (DX)			SIC-F		J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	DIRECTION CONTROL	HDX	* W (DX)			SIC-H		J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	TL LEAD	SPACE HOLD	V (TL)			SIA-S		J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	TL LEAD	MARK HOLD	U (TL)			SIA-M		J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	RL LEAD	SPACE HOLD	* T (RL)			SIB-S		J5, J6, J11
108E-LI SERIES 2B UP / 108D-LI SERIES 3 & UP	RL LEAD	MARK HOLD	* S (RL)			SIB-M		J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	4 WIRE SERVICE		Z	A2-3	A1-2,3-4			J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	2 WIRE SERVICE		Y	A1-2, 3-4	A2-3			J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	DIRECTION CONTROL	FDX	X (DX)				S1-F	J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	DIRECTION CONTROL	HDX	* W (DX)				S1-H	J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	TL (BB) LEAD	SPACE HOLD	V (TL)				S2-S	J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	TL (BB) LEAD	MARK HOLD	U (TL)				S2-M	J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	RL LEAD	SPACE HOLD	* T (RL)				S3-S	J5, J6, J11
108E-LI SERIES 1 / 108D-LI SERIES 1&2	RL LEAD	MARK HOLD	* S (RL)				S3-M	J5, J6, J11

*NOT USED IN STATION APPLICATION.

1.02 DATA AUXILIARY SET 830A-LI INSTALLER OPTIONS:

FEATURE	OPTION	SWITCH SETTING	
		OPEN SWITCH	CLOSE SWITCH
COPY IN TEST MODE	Z		S1-1
NO COPY IN TEST MODE	Y	S1-1	
CA LOOPED TO CB	X	S1-3, S1-4	S1-2
RS CONNECTED TO C5	W	S1-3, S1-2	S1-4
CARRIER SQUELCH ON CARRIER FAIL	T	S1-3	S1-5
NO CARRIER SQUELCH ON CARRIER FAIL	S	S1-5	
RESISTOR BYPASS FOR -24 VOLT LEAD (-P) ON J2-10 OF CP2	R		S2A
RESISTOR IN SERIES WITH -24 VOLT LEAD (-P) ON J2-10 OF CP2	Q	S2A	
REMOTE TEST CONNECTION VIA J2-18 OF CP2.	P		S1-6
NO REMOTE TEST CONNECTION VIA J2-18 OF CP2	N	S1-6	
FRAME GRD (AA) CONNECTED TO SIGNAL GRD	M		S2B
FRAME GRD (AA) NOT CONNECTED TO SIGNAL GRD	L	S2B	

OPTION X MAY NOT BE USED WITH OPTION W.
OPTION T MAY ONLY BE USED WITH 108D AND 108E D.S.

1.03 DATA AUXILIARY SET 830B-LI INSTALLER OPTIONS:

FEATURE	OPTION	SWITCH SETTING	
		OPEN	CLOSE
HALF DUPLEX	Z		S1A
FULL DUPLEX	Y	S1A	
PAPER ALARM STOPS MOTOR	X	S2B	
PAPER ALARM DOES NOT STOP MOTOR	W		S2B
EOT-DISCONNECT	V		S2A
NO EOT DISCONNECT	U	S2A	
SPACE CLAMP	T		S1B
MARK CLAMP	S	S1B	

1.04 DATA AUXILIARY SET 830C-LI INSTALLER OPTIONS:

FEATURE	OPTION	LINK POSITION
LOCAL COPY	Z	E4 TO E5
NO LOCAL COPY	Y	E4 TO E6
ARRANGED FOR USE WITH DAS 830A	X	E1 TO E2
ARRANGED FOR USE WITH DAS 820D	W	E2 TO E3

1.05 DATA AUXILIARY SET 830C-LI TERMINAL CONNECTIONS:

TERMINATION	SEND LEADS	RECEIVE LEADS
4-WIRE	+ → SDR	+ → RDR
	− → SDT	− → RDT

1.06 DATA AUXILIARY SET 820D LI AND 820D LIA INSTALLER OPTION

FEATURE	OPTION	SHEET LOCATION
CD CONT OF TRMT SUPV	ZC	B1, B3, B6, AND B8
KEY CONT OF TRMT SUPV	ZD	B1, B3, B6, AND B8

SEE NOTE 1.02

W-WESI4
SHEET A2

RECORD OF CHANGES

ISSUE 1 9-1-70

ISSUE 2 2-1-74
OPTION INDEX CHANGED, NOTES E & F ADDED

ISSUE 3 5-5-75
ADDED 830 SERIES DATA AULIXIARY SETS

ISSUE: 4 10-1-76
UPDATED 1.01, 1.02 & 1.05 CH

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W-WESI4
22 SHEETS

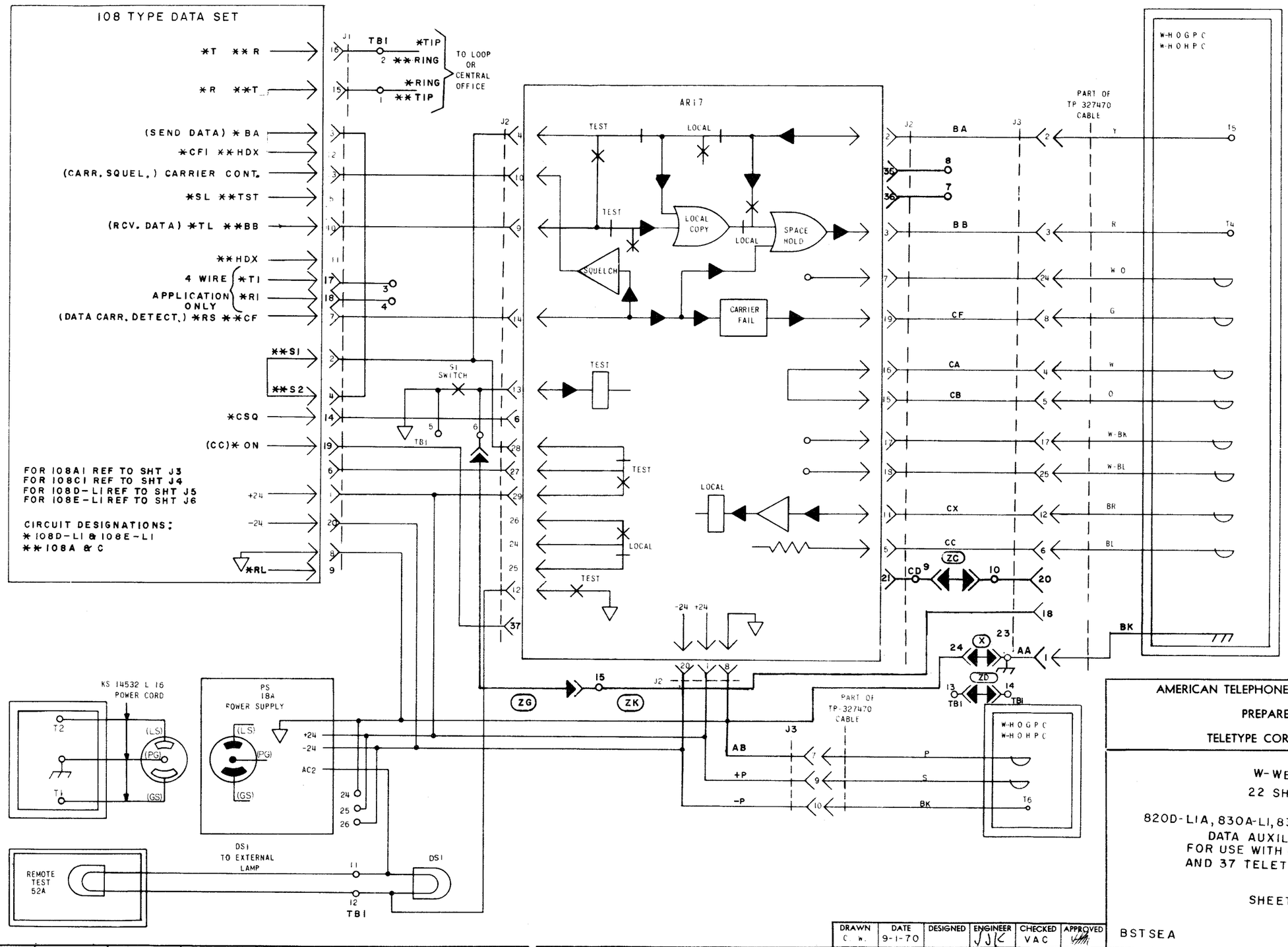
820D-LIA, 830A-LI, 830B-LI AND 830C-LI DATA AUXILIARY SETS FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET A2

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
E E K	3-6-75	J P C	J P C	R G M	

BSTSEA

FSI CURRENT INTERFACE 820D-LIA E/W 108A,C,D-LI OR E-LI TYPE DATA SET



ISSUE	DATE
ISSUE 1	1-2-68
ISSUE 2 PC 005	9-1-70
ISSUE 3 REF. TO 108 C,D-LI AND E-LI ADDED.	2-1-74
ISSUE 4 CORRECTED TERMINAL DESIGNATIONS AT ZC AND ZD OPTIONS	5-5-75
ISSUE 5 ADDED OPTIONS X, ZG & ZK	10-1-76

W-WES 14
SHEET B1

RECORD OF CHANGES

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W-WES14

22 SHEETS

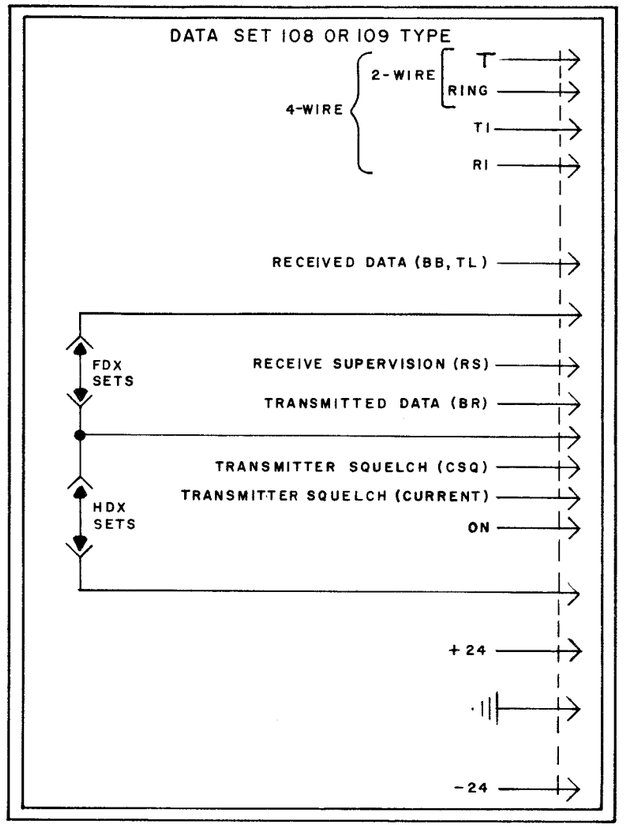
820D-LIA, 830A-LI, 830B-LI AND 830C-LI
DATA AUXILIARY SETS
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

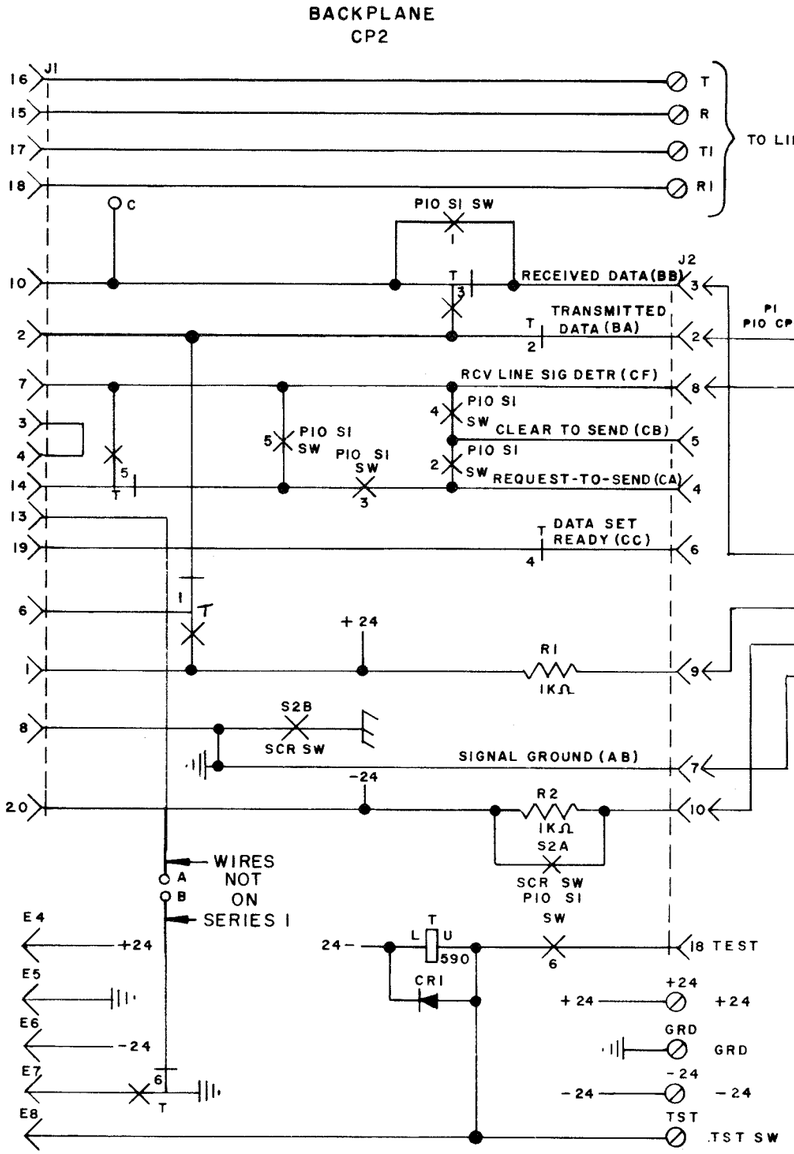
SHEET B1

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C W.	9-1-70		JJK	VAC	

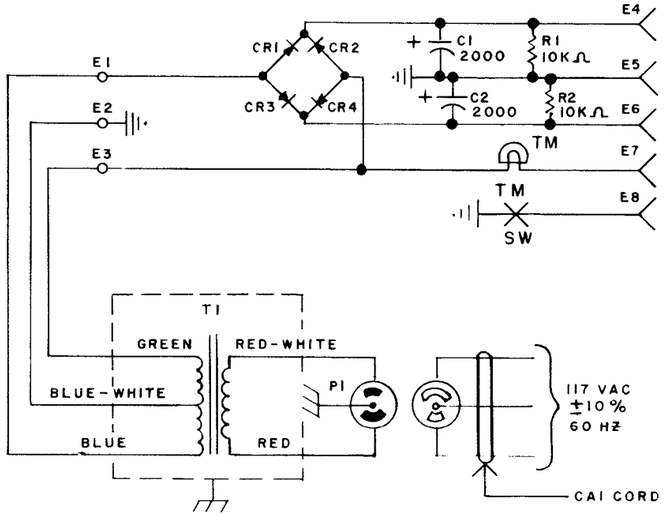
BSTSEA

CURRENT INTERFACE 830A-LI, & 830C-LI E/W 108A, C, D, E & 109 A OR E DATA SET





POWER SUPPLY CIRCUIT CP1



W-WES14
SHEET 82

RECORD OF CHANGES

ISSUE 2	5-5-75
ADDED 830 SERIES DATA AUXILIARY SETS	
ISSUE 3	10-1-76
ADDED CF LEAD	

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W-WES14

22 SHEETS

820D-LIA, 830A-LI, 830B-LI AND 830C-LI
DATA AUXILIARY SETS
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET 82

BSTSEA

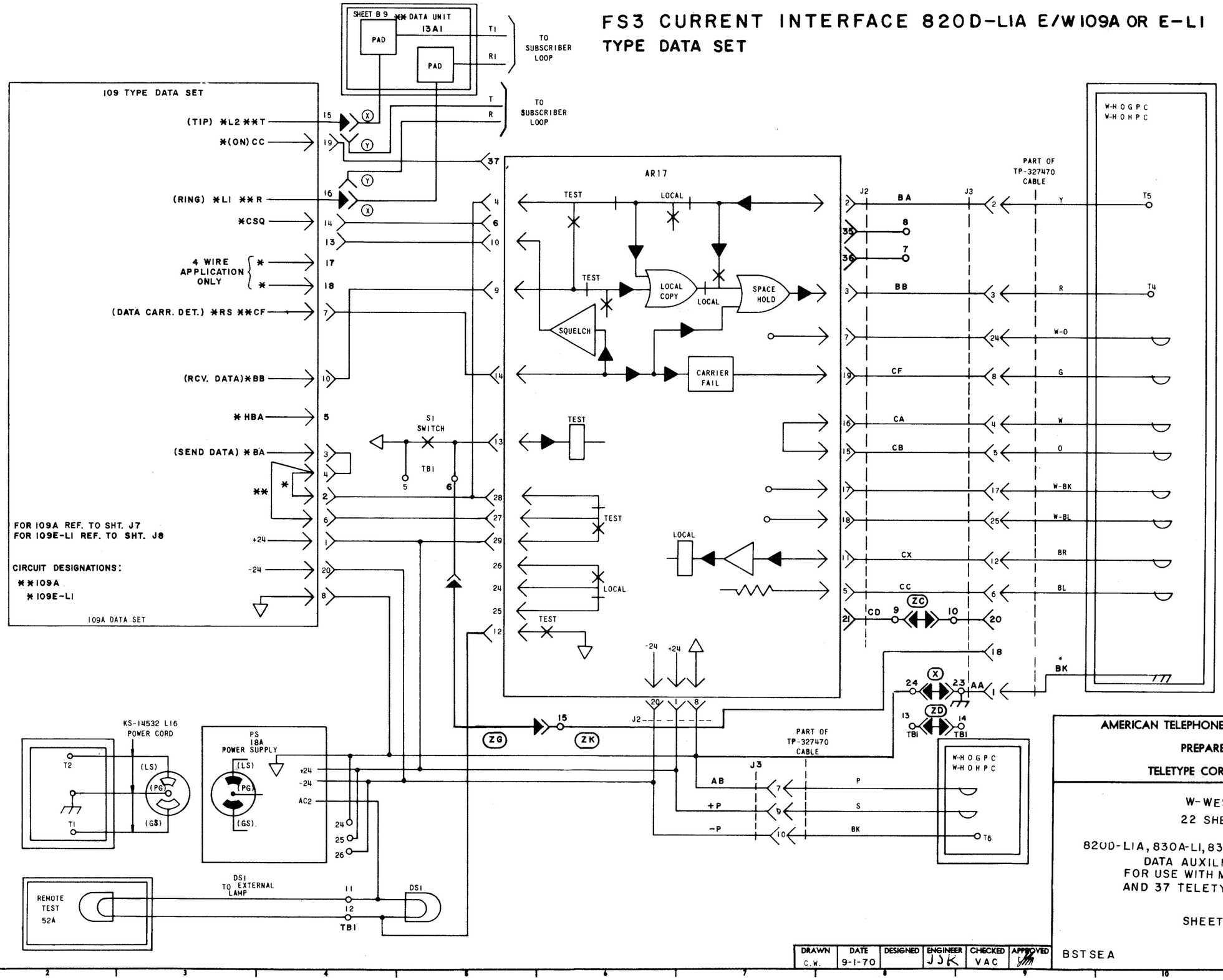
DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
EEK	3-10-75	JPC	JPC	RGM	

FS3 CURRENT INTERFACE 820D-LIA E/W109A OR E-LI TYPE DATA SET

W-WES 14
SHEET B3

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2 REF. TO 109E-LI ADDED	2-1-74
ISSUE 3 CORRECTED TERMINAL DESIGNATIONS AT ZC AND ZD OPTIONS	6-5-75
ISSUE 4 ADDED OPTIONS — ZG & ZK	10-1-76



DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.W.	9-1-70		JJK	VAC	

BSTSEA

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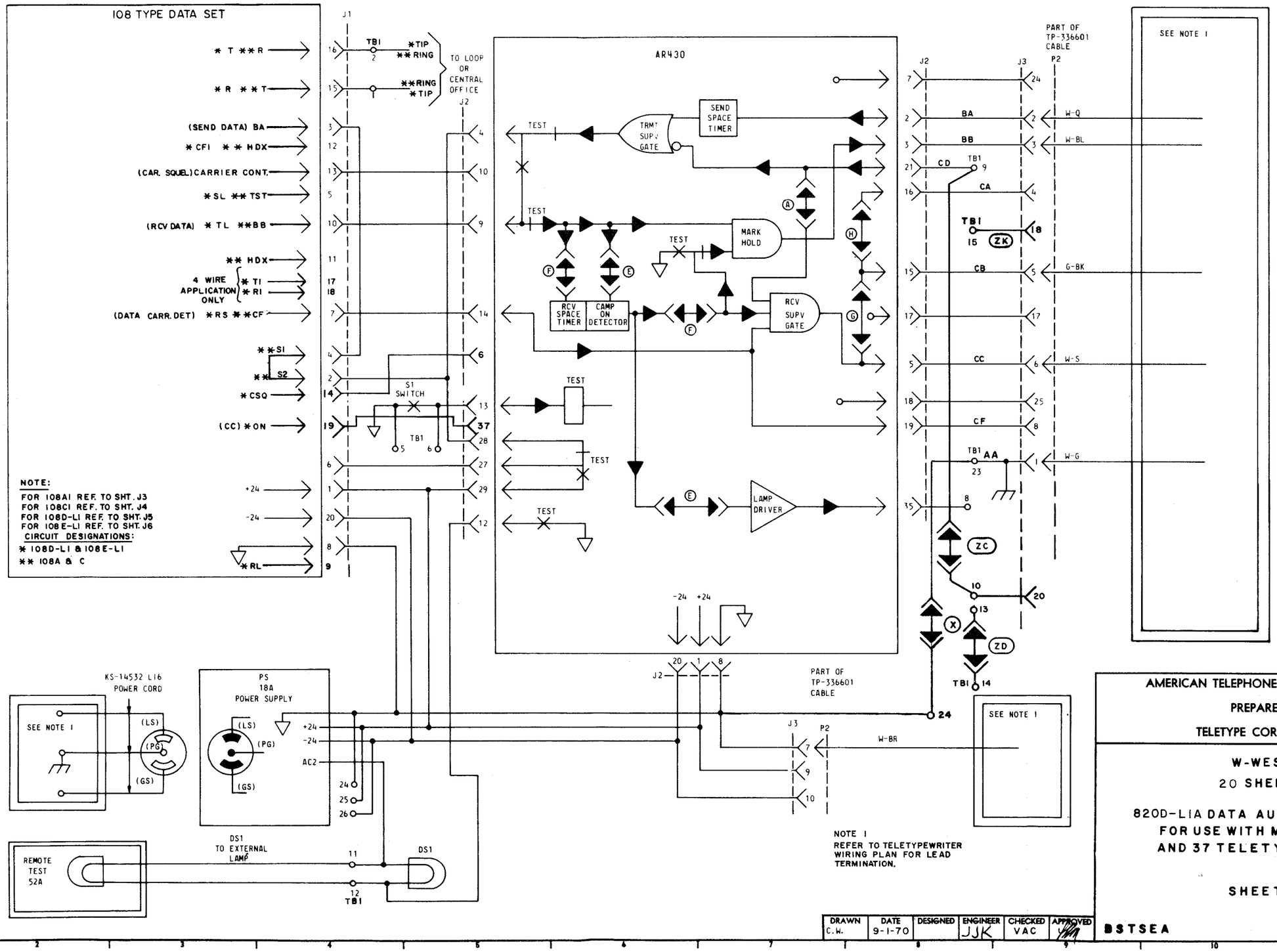
W-WESI4
22 SHEETS

820D-LIA, 830A-LI, 830B-LI AND 830C-LI DATA AUXILIARY SETS FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET B3

FS4 VOLTAGE INTERFACE 820D LIA 108 E/W A, C, D-LI OR E-LI TYPE DATA SET FOR DATA LINE CONCENTRATOR SYSTEM



W-WES 14
SHEET B4

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2	2-1-74
REF. TO 108C D-LI AND E-LI ADDED.	
ISSUE 3	10-1-76
ADDED OPTIONS X & ZK	

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W-WES14

20 SHEETS

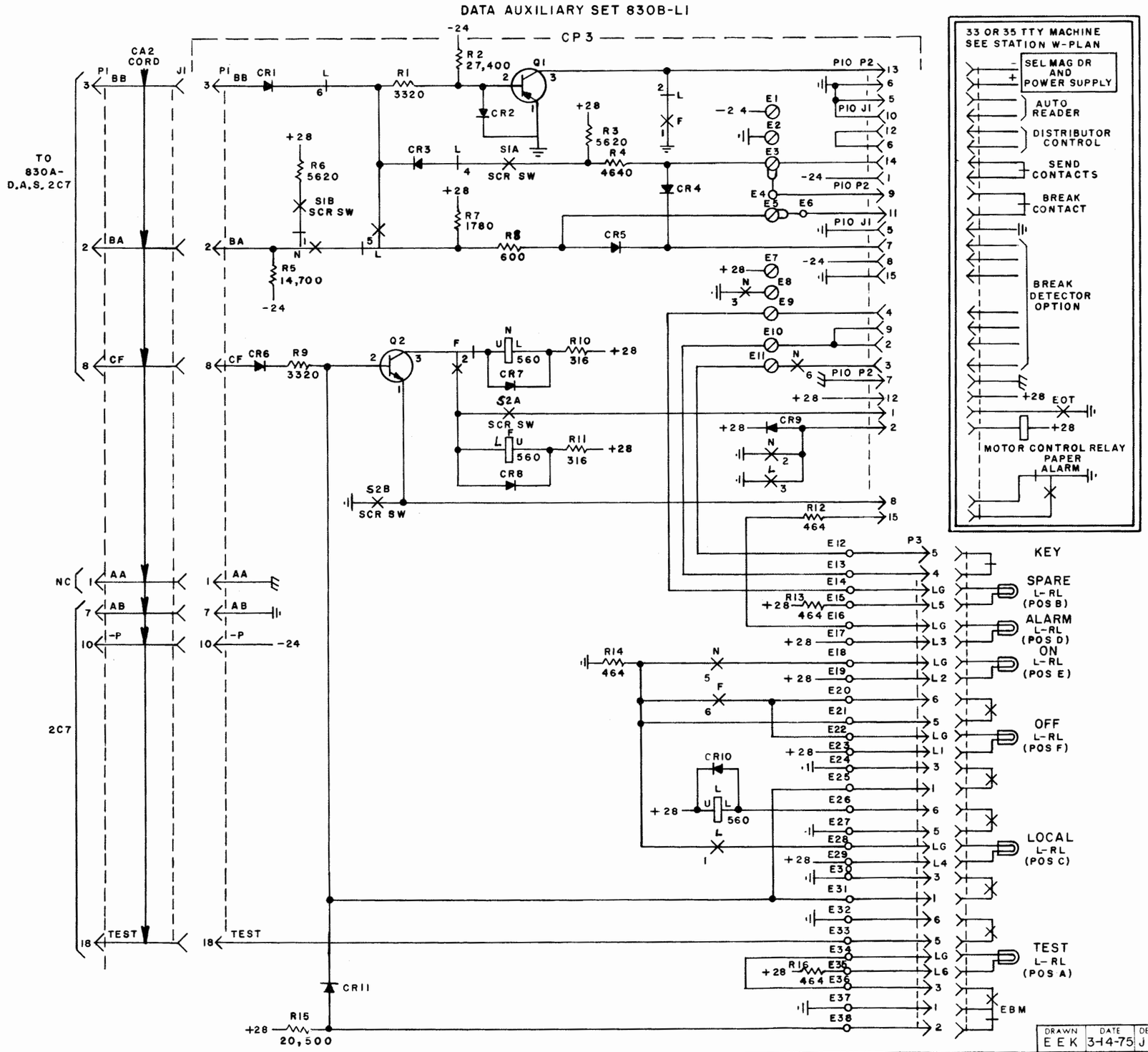
820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET B4

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.W.	9-1-70		JJK	VAC	

BSTSEA

VOLTAGE INTERFACE 830A-LI, & 830B-LI E/W 108 A, C, D, E & 109 A OR E DATA SET



W-WES14 SHEET B5
RECORD OF CHANGES
ISSUE 2 5-5-75 ADDED 830 SERIES DATA AUXILIARY SETS
ISSUE 3 10-1-76 ADDED "CP3" AND -24 AT E1

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W-WES14

22 SHEETS

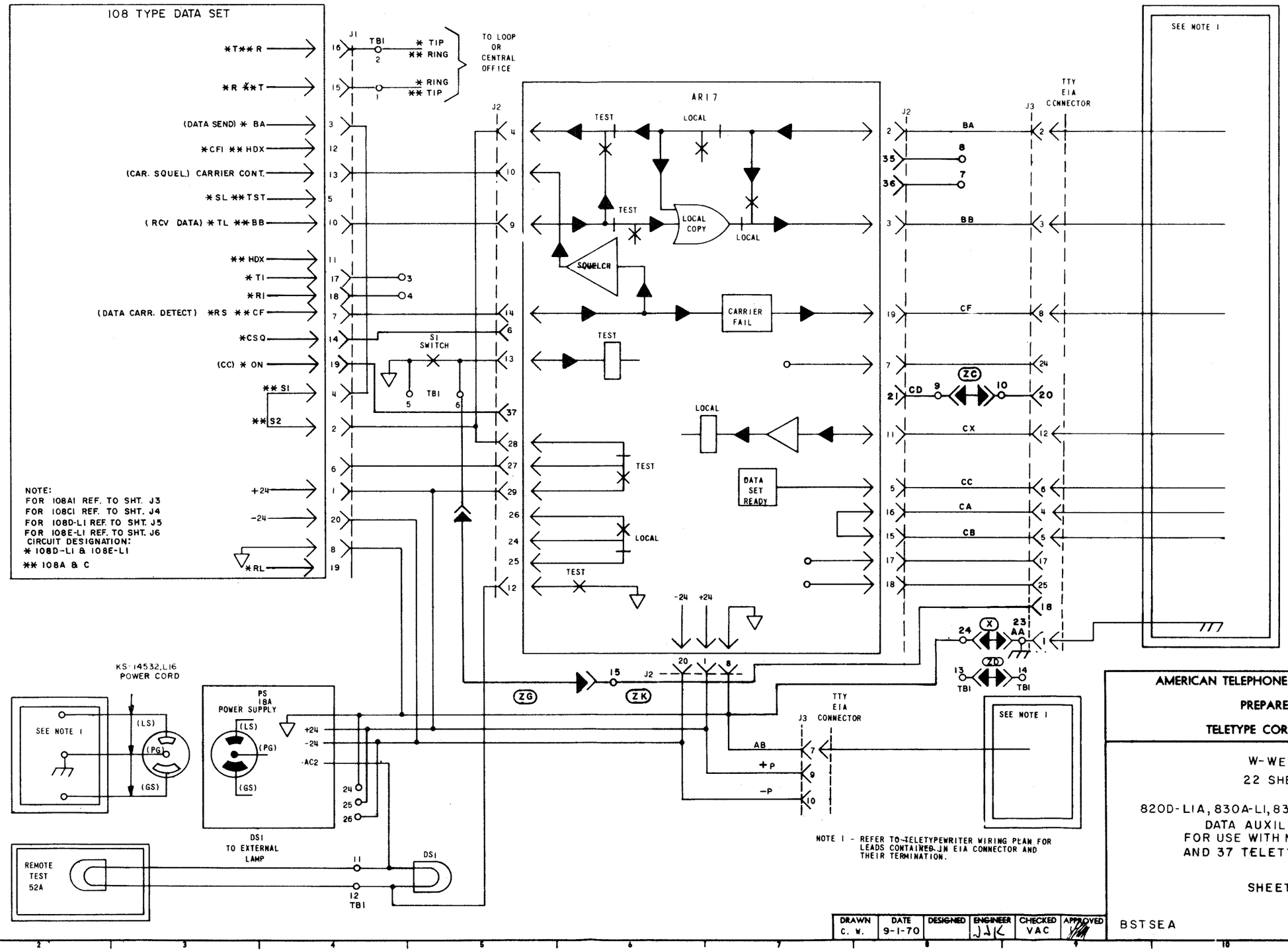
820D-LIA, 830A-LI, 830B-LI AND 830C-LI DATA AUXILIARY SETS FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET B5

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
E E K	3-14-75	J P C	J P C	R G M	

BSTSEA

FS6 VOLTAGE INTERFACE 820D-LIA E/W 108A,C,D-LI OR E-LI TYPE DATA SET FOR PRIVATE LINE



W-WES 14
SHEET B6

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2 REF. TO 108C,D-LI AND E-LI ADDED	2-1-74
ISSUE 3 CORRECTED TERMINAL DESIGNATIONS AT ZC AND ZD OPTIONS	5-5-75
ISSUE 4 ADDED OPTIONS X, ZG & ZK	10-1-76

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W-WES14

22 SHEETS

820D-LIA, 830A-LI, 830B-LI AND 830C-LI
DATA AUXILIARY SETS
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET B6

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C. W.	9-1-70		JJK	VAC	

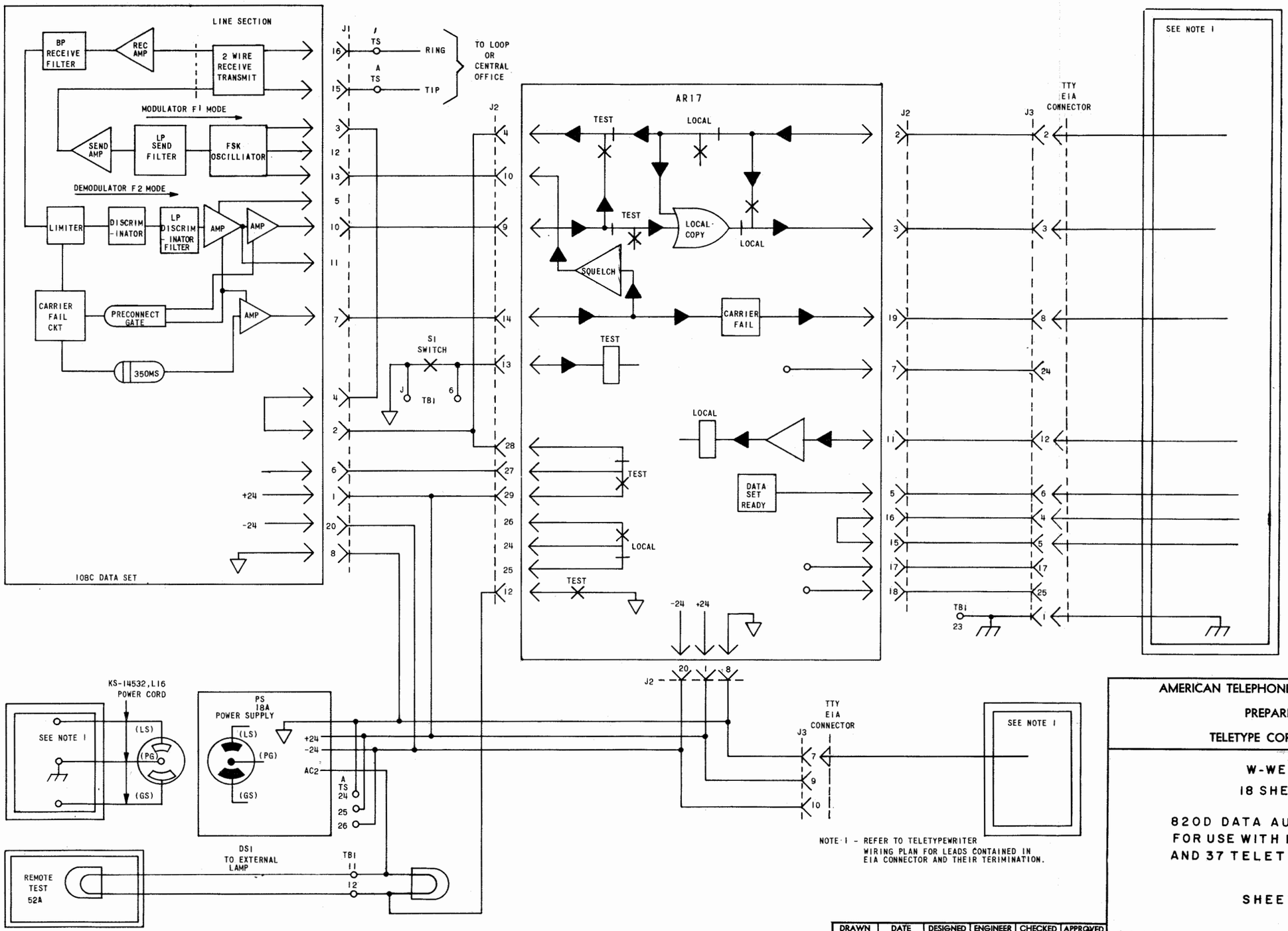
BSTSEA

FS7 VOLTAGE INTERFACE 820D E/W 108C FOR PRIVATE LINE

W-WES 14
SHEET B7

RECORD OF CHANGES

ISSUE 1 9-1-70



NOTE 1 - REFER TO TELETYPEWRITER WIRING PLAN FOR LEADS CONTAINED IN EIA CONNECTOR AND THEIR TERIMINATION.

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W-WES14

18 SHEETS

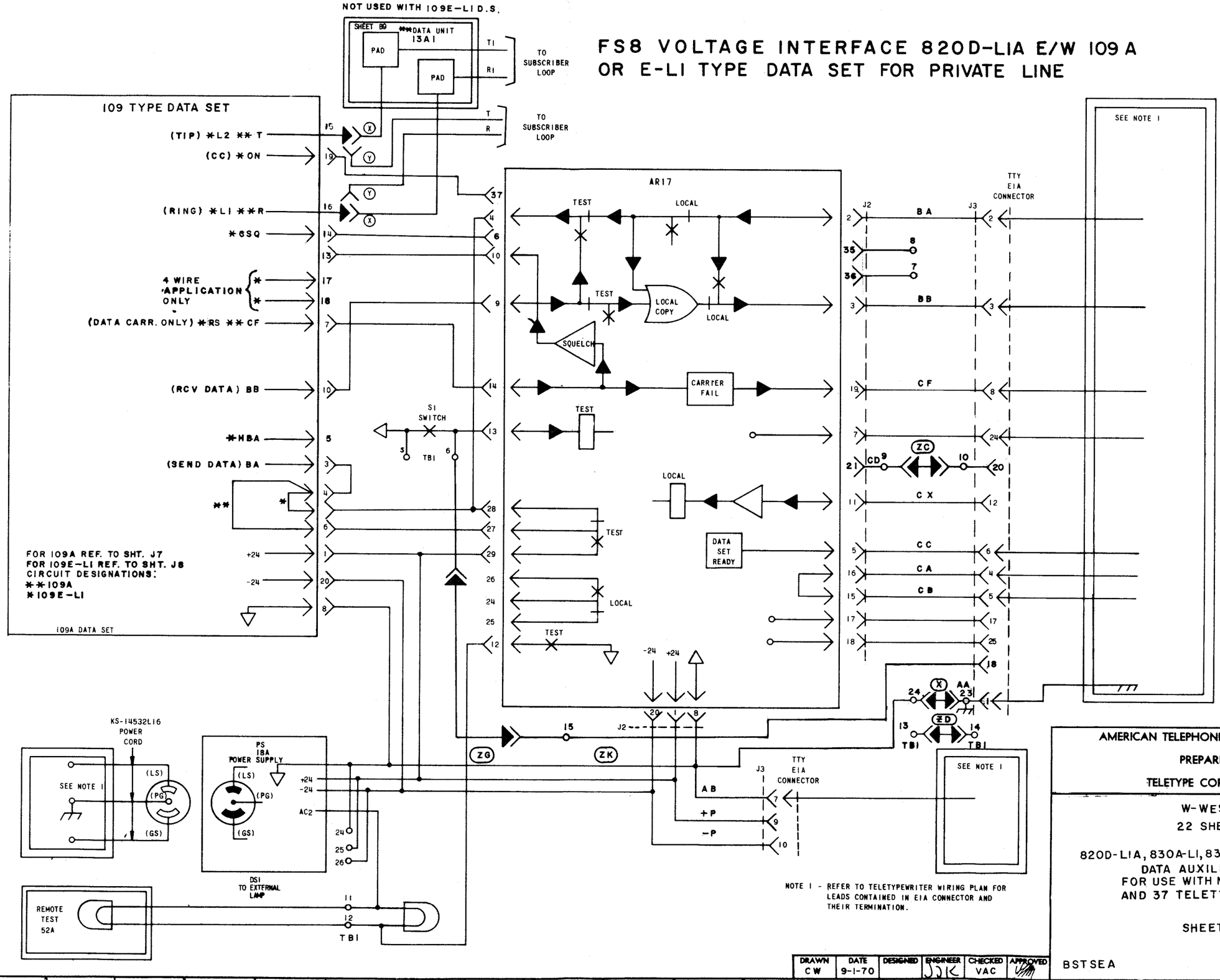
820D DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET B7

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
CW	9-1-70			VAC	

BSTSEA

FS8 VOLTAGE INTERFACE 820D-LIA E/W 109 A OR E-LI TYPE DATA SET FOR PRIVATE LINE



NOTE 1 - REFER TO TELETYPEWRITER WIRING PLAN FOR LEADS CONTAINED IN EIA CONNECTOR AND THEIR TERMINATION.

W-WES14
SHEET B8

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2 REF. TO 109E-LI ADDED	2-1-74
ISSUE 3 CORRECTED TERMINAL DESIGNATIONS AT ZG AND ZD OPTIONS	5-5-75
ISSUE 4 ADDED OPTIONS X, ZG & ZK	10-1-76

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TELETYPE CORPORATION

W-WES14
22 SHEETS

820D-LIA, 830A-LI, 830B-LI AND 830C-LI
DATA AUXILIARY SETS
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET B8

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
CW	9-1-70		JJK	VAC	

BSTSEA

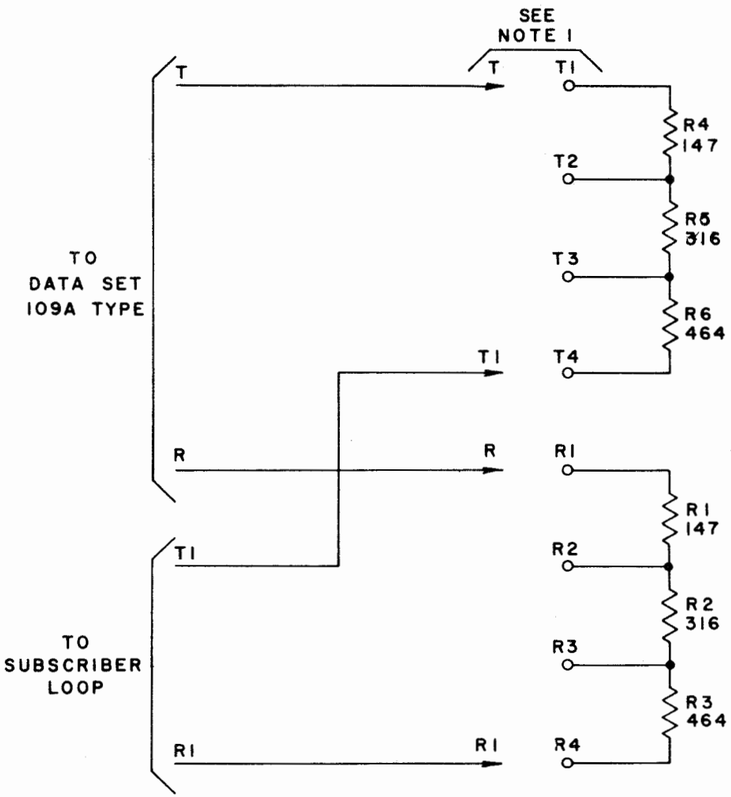
FS9 WESIF 13AI DATA UNIT

TERMINALS TI TO T4 AND RI TO R4 SHALL BE INSTALLER WIRED IN ACCORDANCE WITH THE FOLLOWING TABLE.

MEASURED LOOP RESISTANCE	LEAD DESIGNATION				STRAP TERMINALS
	T	R	TI	RI	
	CONNECT TO TERM.				
0 TO 300	T 4	R 4	T 2	R 2	
300 TO 600	T 4	R 4	T 1	R 1	T2 , T3 ; R2 , R3
600 TO 900	T 4	R 4	T 3	R 3	
900 TO 1200	T 3	R 3	T 2	R 2	
1200 TO 1500	T 2	R 2	T 1	R 1	
1500 TO 1800	T 1	R 1	T 1	R 1	

2. THE 13AI DATA UNIT IS USED ONLY WHEN OPERATING A DATA SET 109A WITH ANOTHER DATA SET 109A AND MAY BE INSTALLED AT EITHER END.

3. THE 13AI DATA UNIT IS USED WITH DATA SET 109A (WHEN ASSOCIATED WITH DATA AUXILIARY SETS 820D OR 820E). THE DATA UNIT PERMITS STRAPPING TO ADJUST THE TELEPHONE LINE TO A NORMAL 1800 OHMS LOOP RESISTANCE FOR WORKING TWO DATA SETS 109A AGAINST EACH OTHER.



W-WES14
SHEET 89

RECORD OF CHANGES

ISSUE 1 9-1-70

ISSUE 2 JH 2-1-74
SHEET NUMBERS CHANGED

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W-WES14

20 SHEETS

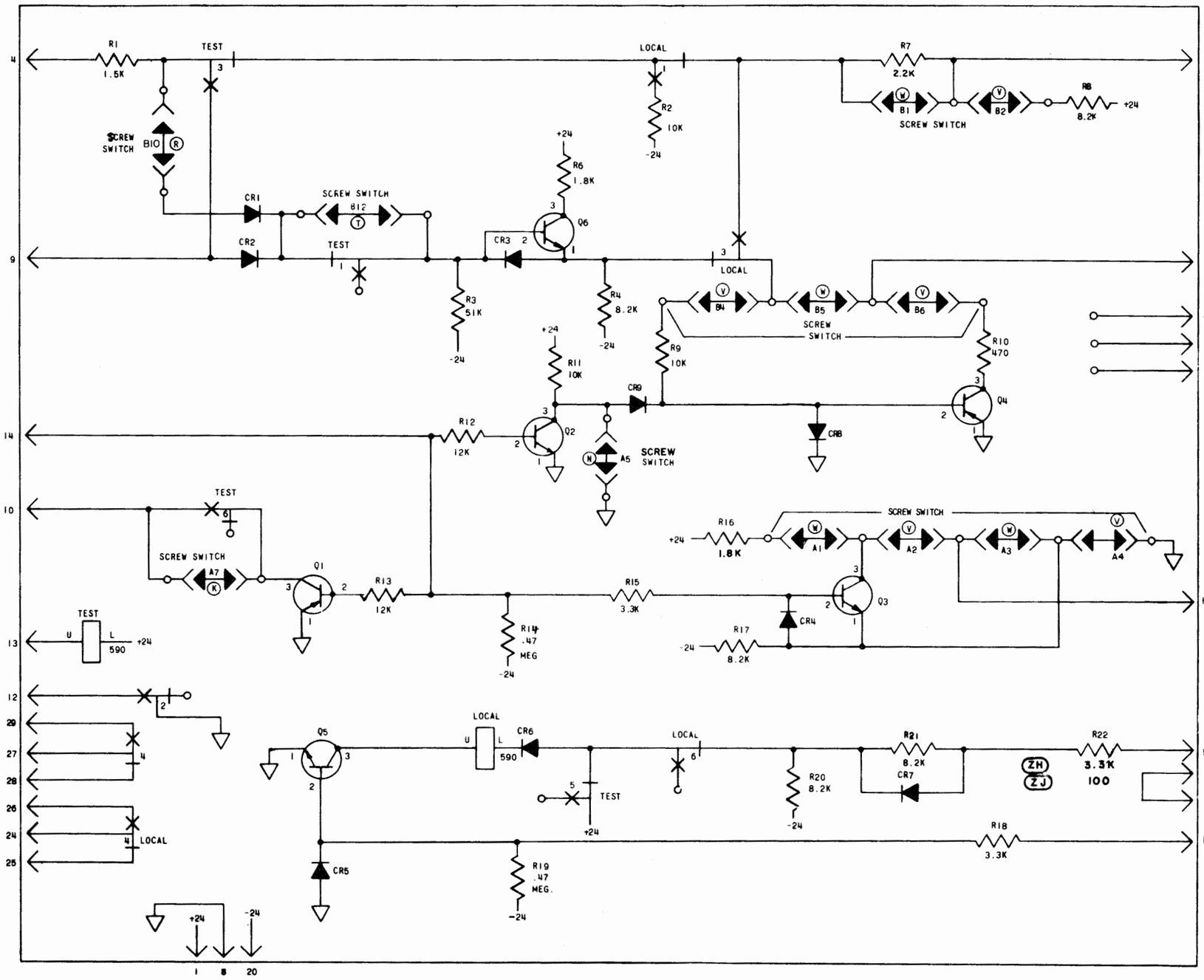
820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET 89

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.H.	9-1-70		JK	V.A.C.	

BSTSEA

AR17 CIRCUIT PACK SCHEMATIC



1. ▽ GROUND RETURN
2.

OPT	FEATURE	SCREW OPEN	SCREW CLOSED
W	EIA INTERFACE	B2, B4, B6 A2, A4	B1, B5, A1 A3
V	CURRENT INTERFACE	B1, B5 A1, A3	B2, B4, B6 A2, A4
T	COPY IN TEST MODE		B12
S	NO COPY IN TEST MODE	B12	
R	LOCAL COPY		B10
O	NO LOCAL COPY	B10	
N	MARK HOLD ON CARR FAIL		A5
M	SPACE HOLD ON CARR FAIL	A5	
K	SQUELCH ON CARR FAIL		A7
J	NO CARR SQUELCH ON CARR FAIL	A7	

3. ZJ IS STD, ZH IS M.D.

W-WES 14
SHEET J1

RECORD OF CHANGES

ISSUE 1 9-1-70

ISSUE 2 2-1-74
NOTE 1 REMOVED.
NOTE 2 CHANGED TO NOTE 1. NOTE 2 REF. ADDED.

ISSUE 3 10-1-76
ADDED OPTIONS ZH & ZJ

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W-WES14
20 SHEETS

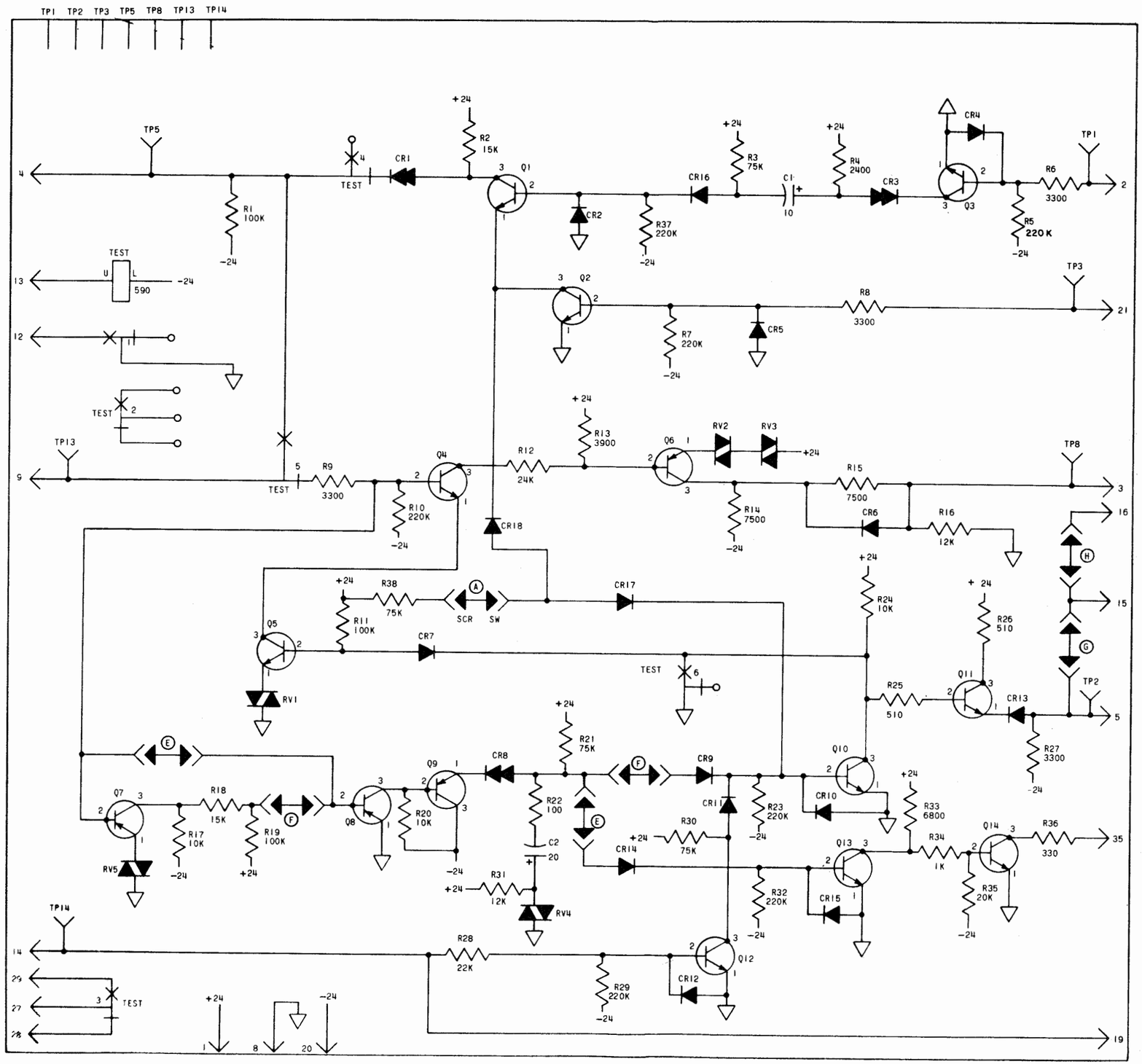
820D-L1A DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J1

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.W.	9-1-70		JJK	V.A.C.	

BSTSEA

AR430 CIRCUIT PACK SCHEMATIC



2.

OPT	FEATURE	OPEN SCREWS OR LINKS	CLOSED SCREWS OR LINKS
H	CA LOOPED TO CB	G	H
G	CB LOOPED TO CC	H	G
F	RCV SPACE TIMER	E	F
E	CAMP-ON DETECTOR	F	E
A	CC TURNED OFF BY CD		A
ZA	CC INDEPENDENT OF CD	A	

W-WES14
SHEET J2

RECORD OF CHANGES

ISSUE 1 9-1-70

ISSUE 2 2-1-74
NOTE 1 REMOVED. NOTE 2 CHANGED TO NOTE 1.
NOTE 2 REF. ADDED.

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W-WES14
20 SHEETS

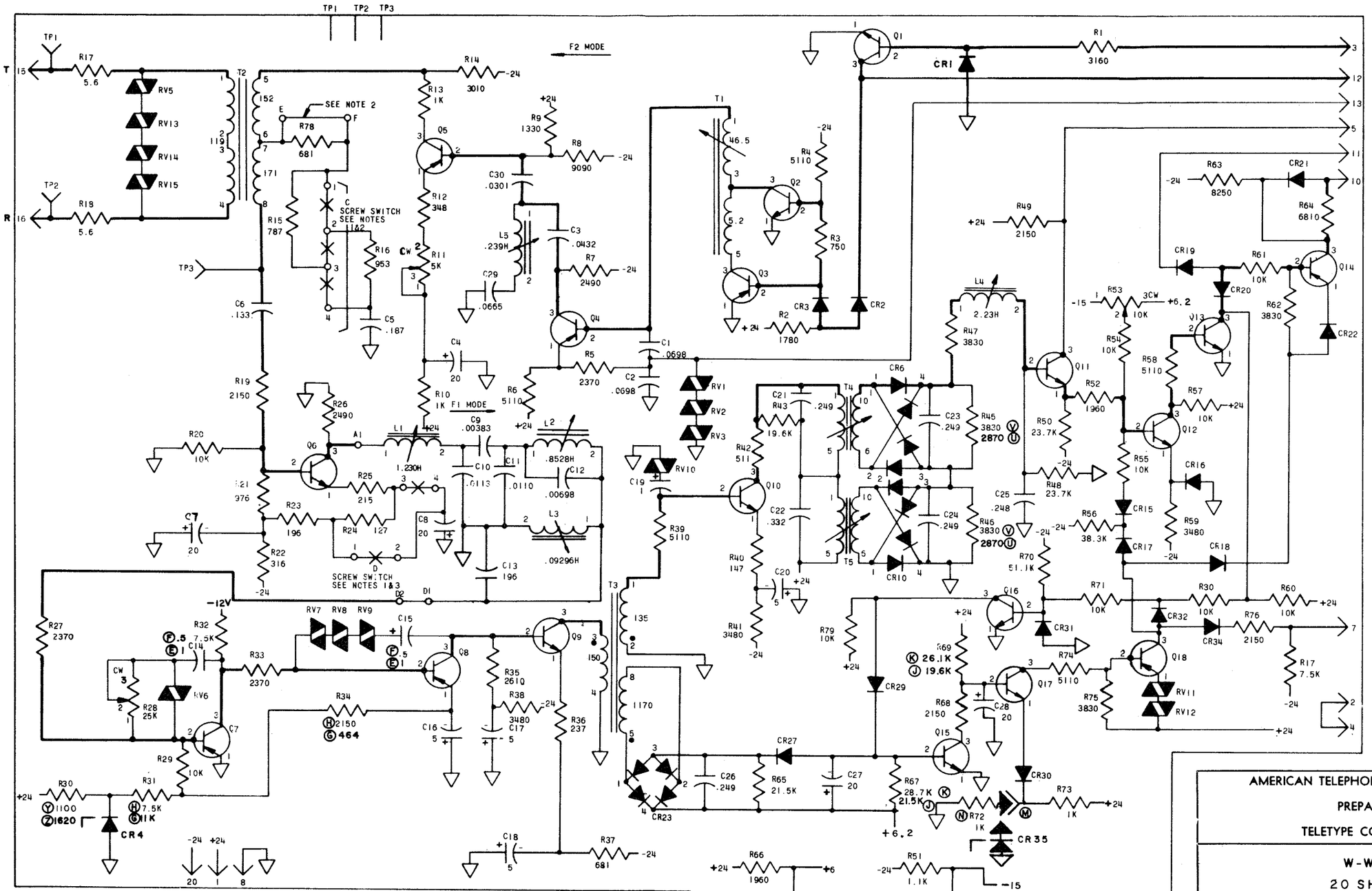
820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J2

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
A.J.M.	9-1-70		JSK	VAC	

BSTSEA

108A DATA SET SCHEMATIC



SHEET NOTES:

1. THE SECTIONS OF THE SCREW SWITCHES ARE NOT MECHANICALLY INTERLOCKED. EACH SECTION WORKS INDEPENDENTLY OF ONE ANOTHER.
2. ADJUST (*) STRAP E-F AND SCREW SWITCH (C) AS PER BSP ON INSTALLATION TO MAXIMIZE TRANSHYBRID LOSS.

   (*) THIS STRAP TO BE PROVIDED AT TIME OF MANUFACTURE.

3.

DB REDUCTION IN GAIN	SCREW SWITCH	
	CLOSE	OPEN
8		1-2, 3-4
4	1-2	3-4
0	3-4	1-2

4. THE FOLLOWING DESIGNATIONS ARE STANDARD: Y,W,U,M,J,G,E.
   THE FOLLOWING DESIGNATIONS ARE M.D.: Z,X,V,N,K,H,F.

W-WES14
SHEET J3

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2 DIRECTION OF CR1 CHANGED. (E)(G)(M)(U)(Z) ADDED. NOTE 4 ADDED.	2-1-74

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W-WES14
20 SHEETS

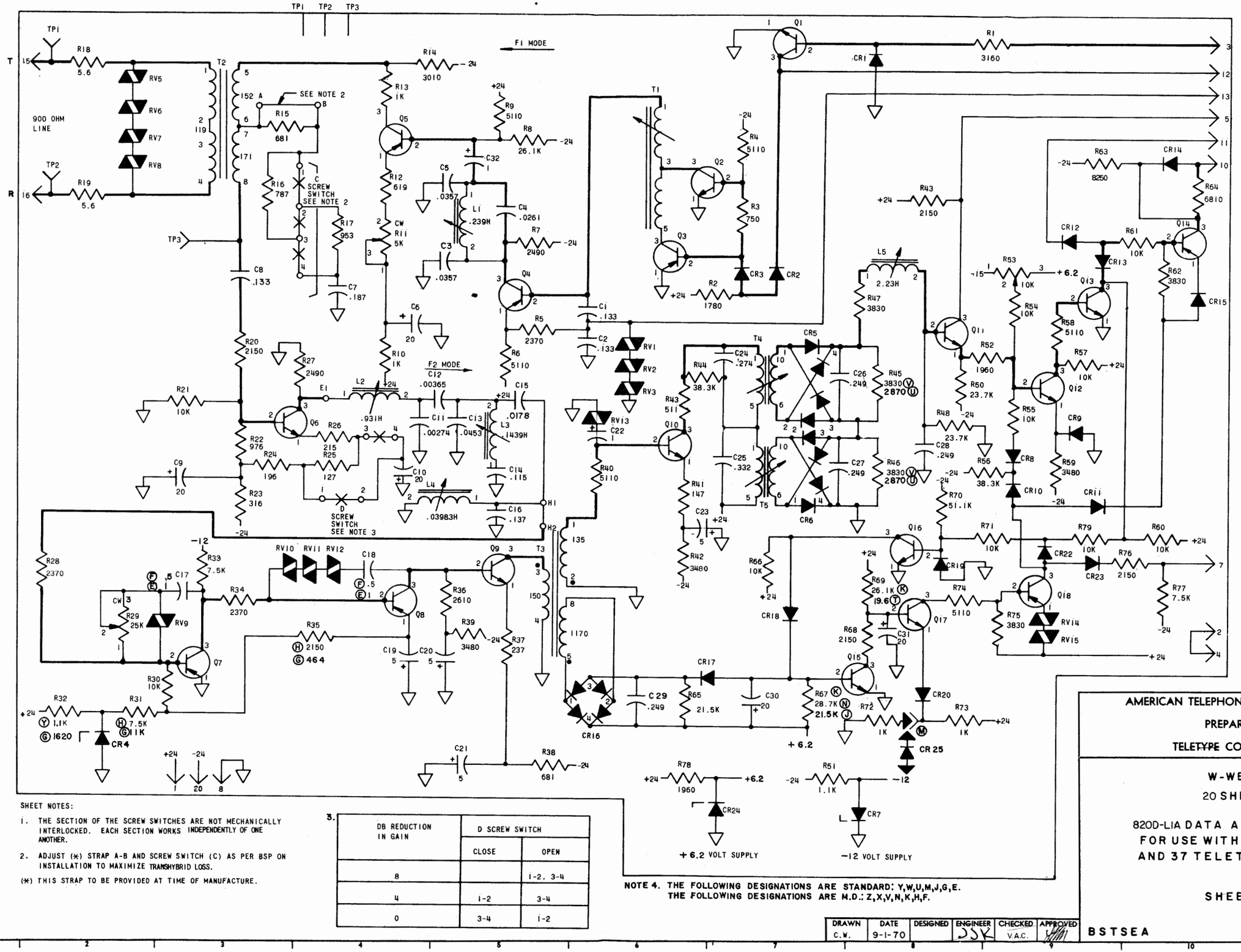
820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J3

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.H.	9-1-70		JJK	V.A.C.	

BSTSEA

108C DATA SET SCHEMATIC



SHEET NOTES:

1. THE SECTION OF THE SCREW SWITCHES ARE NOT MECHANICALLY INTERLOCKED. EACH SECTION WORKS INDEPENDENTLY OF ONE ANOTHER.
2. ADJUST (*) STRAP A-B AND SCREW SWITCH (C) AS PER BSP ON INSTALLATION TO MAXIMIZE TRANSHYBRID LOSS.

(*) THIS STRAP TO BE PROVIDED AT TIME OF MANUFACTURE.

3.

DB REDUCTION IN GAIN	D SCREW SWITCH	
	CLOSE	OPEN
8		1-2, 3-4
4	1-2	3-4
0	3-4	1-2

NOTE 4. THE FOLLOWING DESIGNATIONS ARE STANDARD: Y,W,U,M,J,G,E.
THE FOLLOWING DESIGNATIONS ARE M.D.: Z,X,V,N,K,H,F.

W-WES14
SHEET J4

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2 DIRECTION OF CR1 CHANGED. STD. AND M.D. DESIGNATIONS ADDED. NOTE 4 ADDED.	2-1-74 JSV

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W-WES14
20 SHEETS

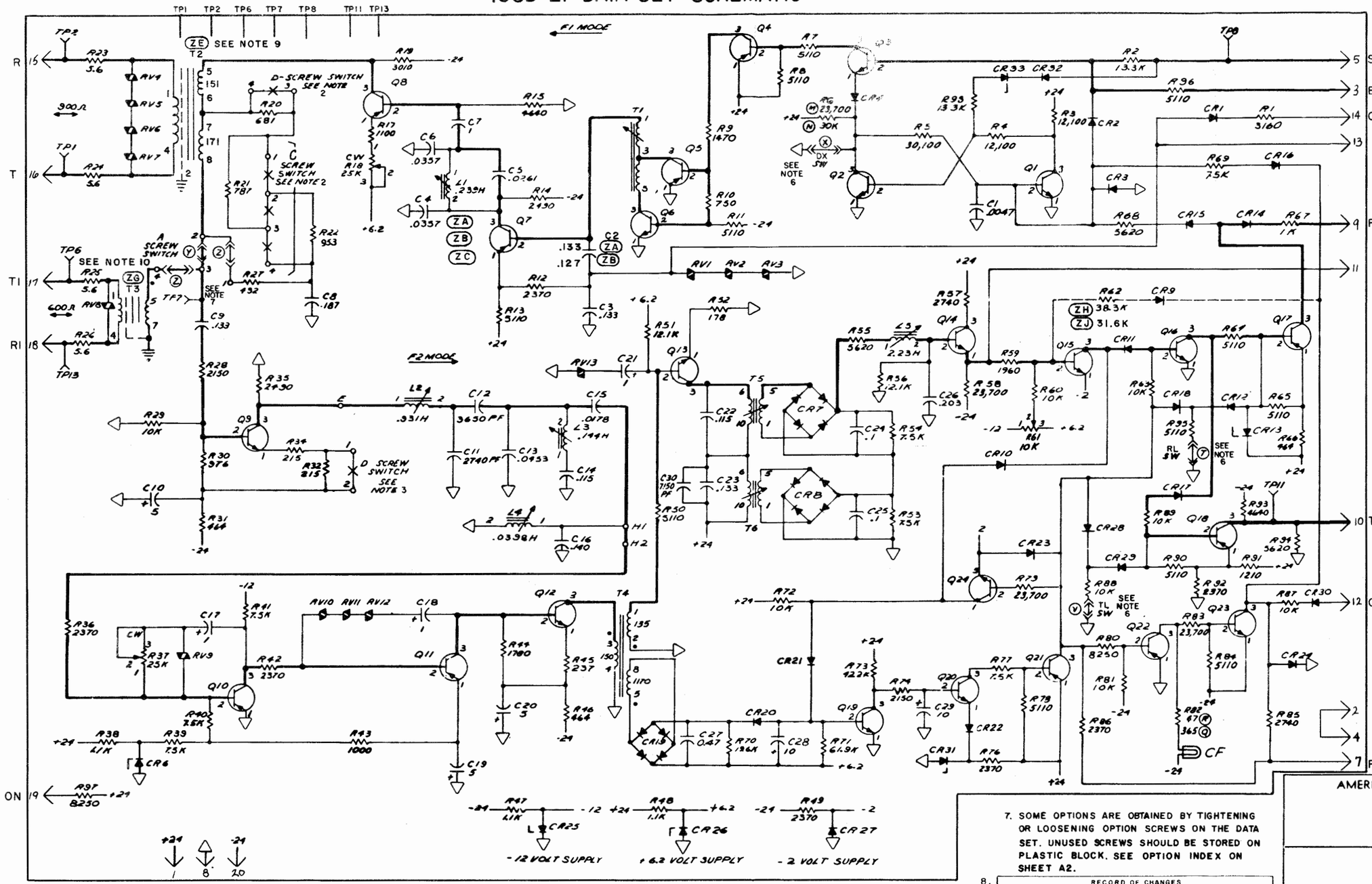
820D-L1A DATA AUXILIARY SET
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET J4

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.W.	9-1-70		JSV	V.A.C.	

BSTSEA

108D-LI DATA SET SCHEMATIC



SHEET NOTES:

1. THE SECTIONS OF THE SCREW SWITCHES ARE NOT INTERLOCKED. EACH SECTION WORKS INDEPENDENTLY OF EACH OTHER.

2. ADJUST SCREW SWITCH (D) 3-4 AND SCREW SWITCH (C) AS PER BSP ON INSTALLATION TO MAXIMIZE TRANSHYBRID LOSS. UNUSED SCREWS SHOULD BE STORED ON PLASTIC BLOCK.

3.

RECEIVER DB REDUCTION IN GAIN	D SCREW SWITCH	
	CLOSE	OPEN
6	—	1-2
0	1-2	—

4. SERIES 1 DATA SET, (R) OPTION (T1, 28 VOLT 24-30 MA LAMP) SERIES 2 & UP DATA SET, (Q) OPTION (52A LAMP).

5. OMIT.

6. SOME OPTIONS ARE OBTAINED BY OPENING OR CLOSING METAL SLIDE SWITCHES ON THE DATA SET 108D (SERIES 1&2). DATA SET 108D (SERIES 3 AND HIGHER) USES A THREE PART ROTARY SCREW SWITCH S1 IN PLACE OF THE THREE SLIDE SWITCHES PREVIOUSLY USED. SEE OPTION INDEX ON SHEET A2.

7. SOME OPTIONS ARE OBTAINED BY TIGHTENING OR LOOSENING OPTION SCREWS ON THE DATA SET. UNUSED SCREWS SHOULD BE STORED ON PLASTIC BLOCK. SEE OPTION INDEX ON SHEET A2.

8.

RECORD OF CHANGES							
CHANGED ON ISSUE	IF MARKINGS ON SET SPECIFY CODE	IF MARKINGS ON SET SPECIFY SERIES	SEE NOTE	USE STD		USE MD	
28	108D	2	203	Q		R	
48				M		N	
601				ZB		ZA	
781		4		ZE, ZG		ZD, ZF	
981		8		ZC		ZB	
981		9		ZJ		ZH	

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
BSTSEA	1-19-74		JJK		

W-WES14
SHEET J5

RECORD OF CHANGES

ISSUE 1 9-1-70

ISSUE 2 2-1-74
109A D/S CHANGED TO 108D-LI SEE J7 FOR D/S 109A

ISSUE 3 10-1-76
ADDED OPTIONS ZA, ZB, ZC, ZE, ZG, ZH & ZJ.
ADDED NOTES 8, 9 & 10.

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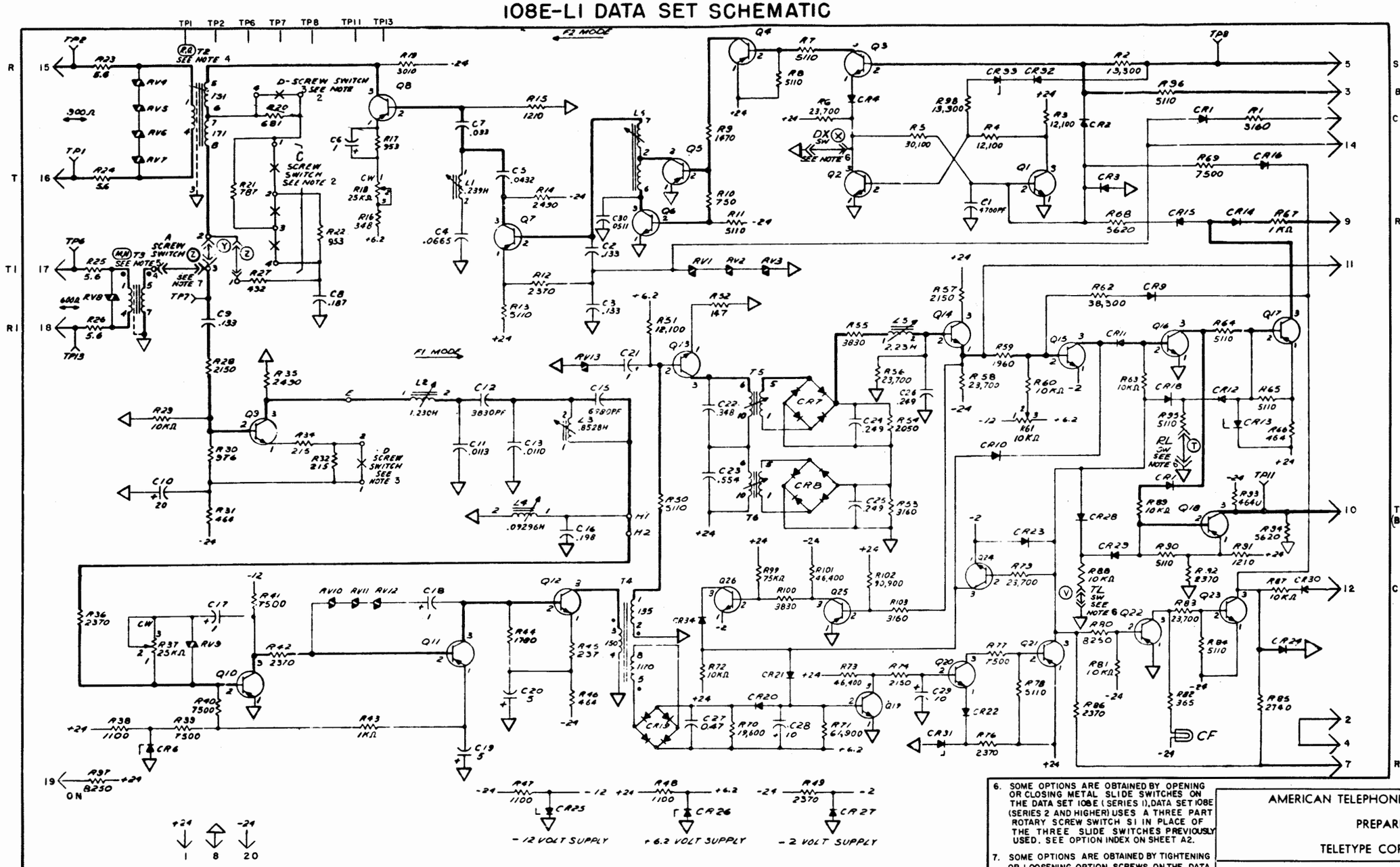
W-WES14

20 SHEETS

820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J5

108E-LI DATA SET SCHEMATIC



SHEET NOTES:

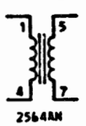
1. THE SECTIONS OF THE SCREW SWITCHES ARE NOT INTERLOCKED. EACH SECTION WORKS INDEPENTLY OF ONE ANOTHER.
2. ADJUST SCREW SWITCH(D)3-4 AND SCREW SWITCH(C) AS PER BSP ON INSTALLATION TO MAXIMIZE TRANSHYBRID LOSS. UNUSED SCREWS SHOULD BE STORED ON PLASTIC BLOCK.

3

RECEIVER DB REDUCTION IN GAIN	D SCREW SWITCH	
	CLOSE	OPEN
6	–	1-2
0	1-2	–

4. OPTION (R) (MFR DISC)

5. OPTION (N) (MFR DISC)



6. SOME OPTIONS ARE OBTAINED BY OPENING OR CLOSING METAL SLIDE SWITCHES ON THE DATA SET 108E (SERIES 1), DATA SET 108E (SERIES 2 AND HIGHER) USES A THREE PART ROTARY SCREW SWITCH S1 IN PLACE OF THE THREE SLIDE SWITCHES PREVIOUSLY USED. SEE OPTION INDEX ON SHEET A2.
7. SOME OPTIONS ARE OBTAINED BY TIGHTENING OR LOOSENING OPTION SCREWS ON THE DATA SET. UNUSED SCREWS SHOULD BE STORED ON PLASTIC BLOCK. SEE OPTION INDEX ON SHEET A2.

W-WES14
SHEET J6

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2	2-1-74
COMPONENTS LIST MOVED TO J9 D/S 108E-LI ADDED	

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W-WES14

20 SHEETS

820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33,35 AND 37 TELETYPEWRITERS

SHEET J6

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
BSTSEA	1-18-74		JJK		

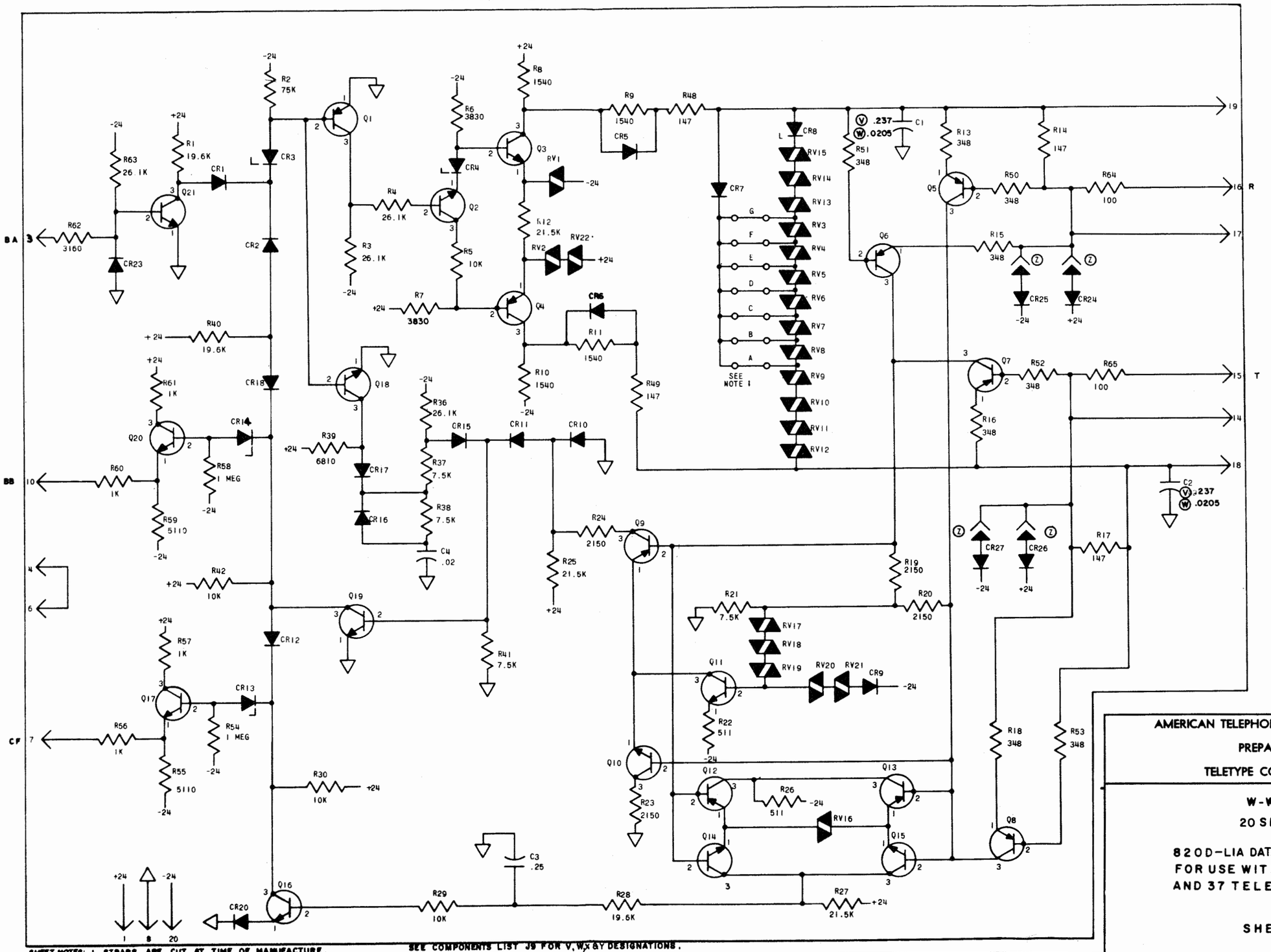
109A DATA SET SCHEMATIC

W-WES14
SHEET J7

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2	2-1-74

COMPONENTS LIST MOVED TO J10 D/S 109A ADDED



SHEET NOTES: 1. STRAPS ARE CUT AT TIME OF MANUFACTURE.
2. THE FOLLOWING DESIGNATIONS ARE STANDARD: X, V.
THE FOLLOWING DESIGNATIONS ARE M.D.: Y, W.

SEE COMPONENTS LIST J9 FOR V, W, X & Y DESIGNATIONS.

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C. W.	9-1-70			V.A.C.	

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W-WES14

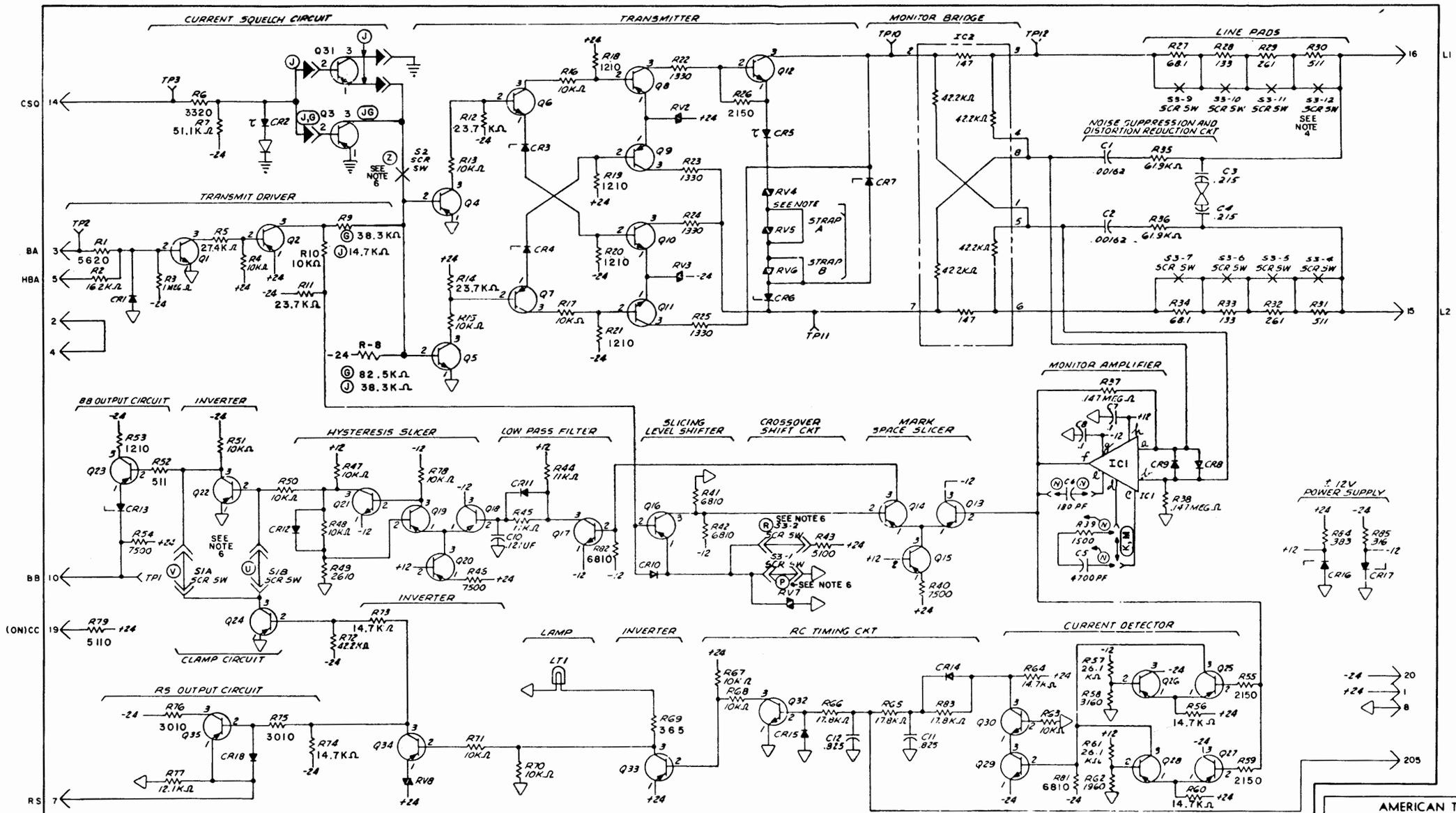
20 SHEETS

820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J7

BSTSEA

109 E-LI DATA SET SCHEMATIC



SHEET NOTES:

1. SCREW SWITCH S1 CONTAINS TWO SECTIONS, DESIGNATED S1A AND S1B. SCREW SHOULD NOT BE INSERTED IN THE CENTER POSITION OF SCREW SWITCH S1.
2. SCREW SWITCH S3 CONTAINS TWELVE SECTIONS, DESIGNATED S3-1 THROUGH S3-12. SECTIONS 3 AND 8 ARE NOT USED; SCREWS SHOULD NOT BE INSERTED IN THESE SECTIONS.
3. THE SECTIONS OF THE SCREW SWITCHES ARE NOT INTERLOCKED, EACH SECTION WORKS INDEPENDENTLY OF THE OTHER.
4. ADJUST LINE PAD RESISTANCE AS PER BSP UPON INSTALLATION.
5. (N) THE KS-20391-L4 INTEGRATED CIRCUIT IS AN OPERATIONAL AMPLIFIER THAT AMPLIFIERS THE VOLTAGE APPLIED BETWEEN INPUT TERMINALS 2 AND 3.
   (M) THE 503A INTEGRATED CIRCUIT IS AN OPERATIONAL AMPLIFIER THAT AMPLIFIES THE VOLTAGE BETWEEN INPUT TERMINALS 2 AND 3.
6. OPTIONS ARE OBTAINED BY OPENING OR CLOSING SCREW SWITCHES ON THE DATA SET. SEE OPTION INDEX ON SHEET A 2
7. WIRE STRAPS A AND B ARE FACTORY INSTALLED.
8.

RECORD OF CHANGES						
CHANGED ON ISSUE	IF MARKINGS ON SET SPECIFY		PREV. FURN.	USE		
	CODE	SERIES		STD		MD
2B	109E-LI	2	N	M		N
3B	109E-LI	3	M	K		M
		4		G		J

PRIOR TO SERIES 4, OPTION J WAS FURNISHED.

RECORD OF CHANGES	
ISSUE 1	2-1-74
ISSUE 2	10-1-76
ADDED OPTIONS G, J & K	

W-WES14
SHEET J8

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
JCS	12-15-75		JJK		

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W-WES14
20 SHEETS

820D-LIA DATA AUXILIARY SET
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET J8

AR17 COMPONENT LIST

DESIG	LOCAL		TEST			
CODE	MB5		MB5			
OPTION						
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
6	EMB	2F5	EMB	2D3		
5	EMB		EMB	2F5		
4	EMB	2F2	EMB	2F2		
3	EMB	2C6	EMB	2B3		
2	EMB		EMB	2E3		
1	EMB	2B6	EMB	2C3		
COIL		2F5		2E2		

RELAY NOT ADJUSTABLE, REPLACE WHEN THERE IS MALFUNCTION.

DIODE

DESIG	CODE (ZH)	CODE (ZJ)
CR1	KS - 16986,L2	458C
CR2	KS - 16986,L2	458C
CR3	KS - 16986,L2	458C
CR4	KS - 16986,L2	458C
CR5	KS - 16986,L2	458C
CR6	KS - 16986,L2	458C
CR7	KS - 16986,L2	458C
CR8	KS - 16986,L2	458C
CR9	449A	

RESISTOR

DESIG	CODE
R1	KS - 13491,L1,1.5K
R2	KS - 16645,L1,10K
R3	KS - 16645,L1,51K
R4	KS - 13490,L1,3.2K
R6	KS - 13490,L1,1.8K
R7	KS - 13491,L1,2.2K
R8	KS - 13490,L1,8.2K
R9	KS - 16645,L1,10K
R10	KS - 13492,L1,470
R11	KS - 16645,L1,10K
R12	KS - 16645,L1,12K
R13	KS - 16645,L1.12K
R14	KS - 16645,L1,47MEG
R15	KS - 13490,L1,3.3K
R16	KS - 13491,L1,1.8K
R17	KS - 13490,L1,8.2K
R18	KS - 13490,L1,3.3K (ZH)
R19	KS - 16645,L1,47MEG
R20	KS - 13490,L1,8.2K
R21	KS - 13490,L1,8.2K
R22	KS - 13490,L1,3.3K (ZH) 100 (ZJ)

TRANSISTOR

DESIG	CODE
Q1	12G
Q2	16J
Q3	16J
Q4	12G
Q5	16J
Q6	16J

AR 430 COMPONENT LIST

DESIG	TEST	
CODE	MB5	
OPTION		
	CONT ARR	LOC
6	EMB	3E6
5	EBM	3D4
4	EBM	3B4
3	EBM	3G2
2	EBM	3C3
1	EMB	3C3
COIL		3C3

CAPACITOR

DESIG	CODE
C1	604A
C2	602C

DIODE

DESIG	CODE
CR1	449A
CR2	459B
CR3	449A
CR4	KS - 16986,L2
CR5	KS - 16986,L2
CR6	KS - 16986,L2
CR7	KS - 16986,L2
CR8	449A
CR9	KS - 16986,L2
CR10	KS - 16986,L2
CR11	KS - 16986,L2
CR12	KS - 16986,L2
CR13	459C
CR14	KS - 16986,L2
CR15	KS - 16986,L2
CR16	KS - 16986,L2
CR17	KS - 16986,L2
CR18	KS - 16986,L2

RESISTOR

DESIG	CODE
R1	KS - 13490,L1,100K
R2	KS - 13490,L1,15K
R3	KS - 16312,L3A,75K
R4	KS - 13490,L1,2400
R5	KS - 13490,L1,220K
R6	KS - 13490,L1,2300
R7	KS - 13490,L1,220K
R8	KS - 13490,L1,3300
R9	KS - 13490,L1,3300
R10	KS - 13490,L1,220K
R11	KS - 13490,L1,100K
R12	KS - 13490,L1,2WK
R13	KS - 13490,L1,3900
R14	KS - 13490,L1,7500
R15	KS - 13490,L1,7500
R16	KS - 13490,L1,12K
R17	KS - 13490,L1,10K
R18	KS - 13490,L1,15K
R19	KS - 13490,L1,100K
R20	KS - 13490,L1,10K
R21	KS - 13490,L1,75K
R22	KS - 13490,L1,100
R23	KS - 13490,L1,220K
R24	KS - 13490,L1,10K
R25	KS - 13490,L1,510
R26	KS - 13490.L1,510
R27	KS - 13490.L1.3300
R28	KS - 13490,L1,22K
R29	KS - 13490,L1,220K
R30	KS - 13490,L1,75K
R31	KS - 13490,L1,12K
R32	KS - 13490,L1,220K
R33	KS - 13490,L1,6800
R34	KS - 13490,L1,1K
R35	KS - 13490,L1,20K
R36	KS - 13490,L1,330
R37	KS - 13490,L1,220K
R38	KS - 13490,L1,75K

COMPONET LIST (CONT)

TRANSISTOR

DESIG	CODE
Q1	16J
Q2	16J
Q3	16J
Q4	16J
Q5	16J
Q6	12N
Q7	12G
Q8	12G
Q9	12G
Q10	16J
Q11	16G
Q12	16J
Q13	16J
Q14	16J

VARISTOR

DESIG	CODE
RV1 RV2 RV3 RV4	100A
RV5	

109A COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	(W) 5358N (Y) 535CF
C2	(W) 5358N (Y) 535CF
C3	542G
C4	S35BN

DIODE

DESIG	CODE
CR1	KS-16986 L2
CR2	KS-16986 L2
CR3	420A
CR4	420A
CR5	420B
CR6	420B
CR7	420B
CR8	420A
CR9	420B
CR10	KS-16986 L2
CR11	KS-16986 L2
CR12	KS-19686 L2
CR13	420M
CR14	420M
CR15	KS-16986 L2
CR16	KS-16986 L2
CR17	KS-16986 L2
CR18	KS-16986 L2
CR20	KS-16986 L2
CR23	KS-16986 L2
(Z) CR24	440A
(Z) CR25	440A
(Z) CR26	440A
(Z) CR27	440A

RESISTOR

DESIG	CODE
R1	237A 19.6K
R2	237A. 75K
R3	237A,26.1K
R4	237A,26.1K
R5	221A,10K
R6	237A,3830
R7	237A,3830
R8	KS-16266,L3C,1540
R9	KS-16266,L3C,1540
R10	KS-16266,L3C,1540
R11	KS-16266,L3C,1540
R12	238A, 21. 5K
R13	237A,348
R14	237A,147
R15	237A,348
R16	237A,348
R17	237A,147
R18	237A,348
R19	238A,2150
R20	238A,2150
R21	237A,7.5K
R22	237A,511
R23	238A,2150
R24	238A 2150
R25	238A,21.5K
R26	237A,511
R27	238A,21.5K
R28	237A,19.6K
R29	237A,10K
R30	237A,10K
R36	237A,261K
R37	237A,7.5K
R38	237A,7.5K
R39	238A,6810
R40	237A,19.6K
R41	237A,7.5K
R42	237A,10K
R48	237A,147
R49	237A,147
R50	237A,348
R51	237A,348
R52	237A,348
R53	237A,348
R54	KS,16645,L1,1,MEG

RESISTOR (CONT)

DESIG	CODE
R55	221A, 5110
R56	237A, 1K
R57	237A, 1K
R58	KS - 16645,L1,1 MEG
R59	221A, 5110
R60	237A, 1K
R61	237A, 1K
R62	237A, 3160
R63	237A, 261K
R64	KS - 14603,L3C 100
R65	KS - 14603,L3C 100

TRANSISTOR

DESIG	CODE
Q1	12G
Q2	16F
Q3	16L
Q4	12N
Q5	12F
Q6	12F
Q7	12F
Q8	12F
Q9	16F
Q10	16F
Q11	16F
Q12	12G
Q13	12G
Q14	16F
Q15	16F
Q16	16J
Q17	(X) 16L (Y) 16F
Q18	16F
Q19	16J
Q20	(X) 16L (Y) 16F
Q21	16F

VARISTOR

DESIG	CODE
RV1-RV22	100A

NOTE: V & X ARE STANDARD
W & Y ARE M.D.
SEE SHEET J7 FOR Z POSITIONS

W-WES14
SHEET J9

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2	2-1-74
DESIGNATIONS V,W,X,Y,Z ADDED. COMPONENT CODES UPDATED.	JSF
ISSUE 3 UPDATED AR17	10-1-76 WB

AMERICAN TELEPHONE & TELEGRAPH CO.

PREPARED BY

TELETYPE CORPORATION

W-WES14

20 SHEETS

820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J9

BSTSEA

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C. W.	9-1-70		JSK	V.A.C.	

108C COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	570FY
C2	570FY
C3	570HB
C4	570LF
C5	570HB
C6	602C
C7	535DN
C8	535BK
C9	602C
C10	602C
C11	570NH
C12	570ES
C13	570PH
C14	570LR
C15	570PE
C16	570FW
C17	(F) 542A (B) 600A
C18	(F) 542A (B) 600A
C19	601A
C20	601A
C21	601A
C22	600A
C23	601A
C24	570RA
C25	570RD
C26	535S
C27	535S
C28	535S
C29	535S
C30	602C
C31	602C
C32	600A

DIODE

DESIG	CODE
CR1	KS-16986,L2
CR2	KS-16986,L2
CR3	449A
CR4	446M
CR5	(V) 462A (U) 491A
CR6	(V) 462A (U) 491A
CR7	(Z) 420N (Y) 446D
CR8	458C
CR9	449A
CR10	KS-16986,L2
CR11	KS-16986,L2
CR12	KS-16986,L2
CR13	KS-16986,L2
CR14	KS-16986,L2
CR15	449A
CR16	(X) 462A W 491A
CR17	KS-16986,L2
CR18	449A
CR19	KS-16986,L2
CR20	458C
CR22	458A
CR23	KS-16986,L2
CR24	459B
CR25	(M) 446AD

INDUCTOR

DESIG	CODE
L1	1642A .239H
L2	1642A .931H
L3	1642A .1414H
L4	1642A .0398H
L5	1642A 2.23H

JACK

DESIG	CODE
TP1	SKT - 5BC
TP2	SKT - 5BC
TP3	SKT - 5BC

POTENTIOMETER

DESIG	CODE
R11	KS-14786,L20 5K
R29	KS-16803,L4,25K
R53	KS-16803,L4,10K

RESISTOR

DESIG	CODE
R1	221A, 3160
R2	221A, 1780
R3	750
R4	5110
R5	2370
R6	KS-20616,L1A 5110
R7	2490
R8	26.1K
R9	5110
R10	221A, 1K
R12	619
R13	1K
R14	KS-20616,L1A 3010
R15	681
R16	787
R17	953
R18	KS-19151 L1 5.6
R19	KS-19151 L1 5.6
R20	2150
R21	KS-20616,L1A 10K
R22	976
R23	221A, 316
R24	196
R25	127
R26	KS-20616,L1A 215
R27	2490
R28	2370
R30	(G) 10K
R31	KS-20616,L1A,11K (H) 237A, 7.5K
R32	(Y) KS-20616,L1A,1K (Z) 238A, 1620
R33	KS-20616,L1A 7.5K
R34	2370
R35	(G) KS-20616,L1A,464 (H) 237A, 2150
R36	KS-20616,L1A 2610
R37	237
R38	221A, 681
R39	KS-20616,L1A 3480
R40	5110
R41	147
R42	221A, 3480
R43	KS-20616,L1A 511
R44	(W) 38.3K
R45	(U) KS-20616,L1A,2870 (V) 237A, 3830
R46	KS-20616,L1A,2870 (V) 237A, 3830
R47	3830
R48	23.7K
R49	2150
R50	23.7K
R51	1.1K
R52	1960
R54	10K
R55	KS-20616,L1A 10K
R56	38.3K
R57	10K
R58	5110
R59	3480
R60	10K
R61	10K
R62	3830
R63	221A, 8250
R64	6810
R65	KS-20616,L1A 21.5K
R66	(J) 10K
R67	KS-20616,L1A,21.5K (K) 237A, 23.7K
R68	KS-20616,L1A 2150
R69	(J) KS-20616,L1A,19.6K (K) 237A, 26.1K
R70	51.1K
R71	KS-20616,L1A 10K
R72	(N) 221A, 1K
R73	221A, 1K

RESISTOR (CONT)

DESIG	CODE
R74	KS-20616,L1A 511.0
R75	3830
R76	221A, 2150
R77	KS-13490,L1 7.5K
R78	221A, 1960
R79	KS-20616,L1A 10K

SWITCH

DESIG	CODE
C	P49D632
D	P49D632

TRANSFORMER

DESIG	CODE
T1	2576AC
T2	2564AM
T3	2564L
T4	2576AA
T5	2576AB

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	66G
Q3	51C
Q4	51A
Q5	51B
Q6	66F
Q7	(H) 126 (G) 51A
Q8	51A
Q9	66F
Q10	66L
Q11	66J
Q12	66J
Q13	66J
Q14	51B
Q15	66F
Q16	66F
Q17	66F
Q18	51B

VARISTOR

DESIG	CODE
RV1	100D
RV2	100D
RV3	100D
RV5	100E
RV6	100E
RV7	100E
RV8	100E
RV9	100D
RV10	100D
RV11	100D
RV12	100D
RV13	100D
RV14	100A
RV15	100A

NOTE: E, G, J, M, U, W & Y ARE STANDARD
F, H, K, N, V, X & Z ARE M.D.
SEE PAGE J4.

108A COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	570GH
C2	570GH
C3	570KN
C4	602C
C5	535DN
C6	535BK
C7	602C
C8	602C
C9	570MR
C10	570JA
C11	570EN
C12	570PA
C13	570MF
C14	(F) 542A (E) 600A
C15	(F) 542A (E) 600A
C16	601A
C17	601A
C18	601A
C19	600A
C20	601A
C21	570LA
C22	570RD
C23	535S
C24	535S
C25	535S
C26	535S
C27	602C
C28	602C
C29	570GJ
C30	570HF

DIODE

DESIG	CODE
CR1	KS-16986,L2
CR2	KS-16986,L2
CR3	449A
CR4	446N
CR6	(V) 462A (U) 419A
CR10	(V) 462A (U) 419A
CR14	446D
CR15	485C
CR16	449A
CR17	KS-16986,L2
CR18	KS-16986,L2
CR19	KS-16986,L2
CR20	KS-16986,L2
CR21	KS-16986,L2
CR22	449A
CR23	(X) 462A (W) 491A
CR27	KS-16986,L2
CR28	459B
CR29	449A
CR30	458C
CR31	KS-16986,L2
CR32	458A
CR34	KS-16986,L2
CR35	(M) 446AD

INDUCTOR

DESIG	CODE
L1	1642A, 1.23H
L2	1642A, .853H
L3	1642A, .0930H
L4	1642A, 2.23H
L5	1642A, .239H

JACK

DESIG	CODE
TP1	SKT-58C
TP2	SKT-58C
TP3	SKT-58C

POTENTIOMETER

DESIG	CODE
R11	KS-14786,L20,5K
R28	KS-16803,L4,25K
R53	KS-16803,L4,10K

RESISTOR

DESIG	CODE
R1	221A, 3160
R2	221A, 1780
R3	750
R4	5110
R5	KS-20616,L1A 2370
R6	5110
R7	2490
R8	221A, 9090
R9	KS-20616,L1A 1330
R10	221A, 1K
R12	348
R13	1K
R14	KS-20616,L1A 3010
R15	787
R16	953
R17	KS-19151,L1,5.6
R18	KS-19151,L1,5.6
R19	2150
R20	KS-20616,L1A 10K
R21	1976
R22	221A, 316
R23	196
R24	127
R25	215
R26	KS-20616,L1A 2490
R27	2370
R29	10K
R30	(Y) KS-20616,L1A,1100 (Z) 238A, 1620
R31	(G) KS-20616,L1A,11K (H) 237A, 7.5K
R32	KS-20616,L1A 7.5K
R33	2370
R34	(G) KS-20616,L1A,464 (H) 237A, 2150
R35	KS-20616,L1A 2610
R36	237
R37	221A, 681
R38	3480
R39	KS-20616,L1A 5110
R40	147
R41	221A, 3480
R42	511
R43	KS-20616,L1A 19.6K
R45	(J) KS-20616,L1A,2870 (V) 237A, 3830
R46	(J) KS-20616,L1A,2870 (V) 237A, 3830
R47	3830
R48	23.7K
R49	2150
R50	23.7K
R51	1.1K
R52	1960
R54	10K
R55	KS-20616,L1A 10K
R56	38.3K
R57	10K
R58	5110
R59	3480
R60	10K
R61	10K
R62	3830
R63	221A, 8250
R64	6810
R65	KS-20616,L1A 21.5K
R66	221A, 1960
R67	(J) KS-20616,L1A 21.5K (K) 237A, 28.7K
R68	KS-20616,L1A 2150
R69	(J) KS-20616,L1A,19.6K (K) 237A, 26.1K
R70	KS-20616,L1A 51.1K
R71	KS-20616,L1A 237A, 10K
R72	(N) 221A, 1K

RESISTOR (CONT)

DESIG	CODE
R73	221A, 1K
R74	KS-20616,L1A 5110
R75	3830
R76	221A, 2150
R77	KS-13490,L1 7.5K
R78	681
R79	KS-13490,L1 10K
R80	10K

SWITCH

DESIG	CODE
C	P49D632
D	P49D632

TRANSISTOR

DESIG	CODE
T1	2576AD
T2	2564AM
T3	2564L
T4	2576W
T5	2576Y

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	66G
Q3	51C
Q4	51A
Q5	51B
Q6	66F
Q7	(H) 126 (G) 51A
Q8	51A
Q9	66F
Q10	66L
Q11	66J
Q12	66J
Q13	66J
Q14	51B
Q15	66F
Q16	66F
Q17	66F
Q18	51B

VARISTOR

DESIG	CODE
RV1	100D
RV2	100D
RV3	100D
RV5	100E
RV6	100D
RV7	100D
RV8	100D
RV9	100D
RV10	100D
RV11	100A
RV12	100A
RV13	100E
RV14	100E
RV15	100E

NOTE: E, G, J, M, U, W & Y ARE STANDARD
F, H, K, N, V, X & Z ARE M.D.
SEE PAGE J3.

W-WES14
SHEET J10

RECORD OF CHANGES

ISSUE 1	9-1-70
ISSUE 2	2-1-74

COMPONENT CODES CHANGED STD. & M.D.. DESIGNATIONS ADDED.

AMERICAN TELEPHONE & TELEGRAPH CO.

PREPARED BY

TELETYPE CORPORATION

W-WES14

20 SHEETS

820D-LIA DATA AUXILIARY SET
FOR USE WITH MODEL 33, 35
AND 37 TELETYPEWRITERS

SHEET J10

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
C.H.	9-1-70		JJK	V.A.C.	

BSTSEA

108D-LI COMPONENT LIST

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	(ZA) KS-19774, L1, .0047
C2	570FY (ZB) 570PP
C3	570FY
C4	570HB
C5	570LF
C6	570HB
C7	KS-19107, L4, 1
C8	535DN
C9	535BK
C10	601A
C11	570WH
C12	570ES
C13	570FH
C14	570LR
C15	570PE
C16	535DE
C17	600A
C18	600A
C19	601A
C20	601A
C21	600A
C22	570LR
C23	570FY
C24	535AB
C25	535AB
C26	535B
C27	KS-19107, L4, 0.47
C28	601B
C29	601B
C30	570AS

DIODE

DESIG	CODE
CR1	458C
CR2	458C
CR3	KS-16986, L2-M1
CR4	458C
CR6	446AD
CR7	491A
CR8	491A
CR9	458C
CR10	458C
CR11	KS-16986 L2-M1
CR12	KS-16986 L2-M1
CR13	446B
CR14	KS-16986 L2-M1
CR15	458C
CR16	KS-16986 L2-M1
CR17	458C
CR18	KS-16986 L2-M1
CR19	491A
CR20	KS-16986 L2-M1
CR21	KS-16986 L2-M1
CR22	458C
CR23	KS-16986 L2-M1
CR24	458C
CR25	446AD
CR26	446B
CR27	449A
CR28	KS-16986 L2-M1
CR29	KS-16986 L2-M1
CR30	KS-16986 L2-M1
CR31	459J
CR32	KS-16986 L2-M1
CR33	459AA

INDUCTOR

DESIG	CODE
L1	1642A .239H
L2	1642A .931H
L3	1642A .144H
L4	1642A .0398H
L5	1642A 2.23H

COMPONENT LIST (Cont'd)

LAMP

DESIG	CODE
CF	(Q) 52A (R) T1 (Bulb)

POTENTIOMETER

DESIG	CODE
R18	KS-16803 L2, 25K
R37	KS-20231 L2, 25K
R61	KS-20231 L2, 10K

RESISTOR

DESIG	CODE
R1	KS-20616, L1A, 3160
R2	KS-20616, L1A, 13.3K
R3	KS-20616, L1A, 12,100
R4	KS-20616, L1A, 12,100
R5	KS-20616, L1A, 30,100
R6	(M) KS-20616, L1A, 23,700 (N) KS-16645, L1, 30K
R7	KS-20616, L1A, 5110
R8	KS-20616, L1A, 5110
R9	KS-20810, L1A, 1470
R10	KS-20616, L1A, 750
R11	KS-20616, L1A, 5110
R12	KS-20616, L1A, 2370
R13	KS-20616, L1A, 5110
R14	KS-20616, L1A, 2490
R15	KS-20616, L1A, 4640
R17	KS-20616, L1A, 1100
R19	KS-20616, L1A, 3010
R20	KS-20616, L1A, 681
R21	KS-20616, L1A, 787
R22	KS-20616, L1A, 953
R23	KS-19151, L1, 5.6
R24	KS-19151, L1, 5.6
R25	KS-19151, L1, 5.6
R26	KS-19151, L1, 5.6
R27	KS-20616, L1A, 432
R28	KS-20616, L1A, 2150
R29	KS-20616, L1A, 10K
R30	KS-20616, L1A, 976
R31	KS-20616, L1A, 464
R32	KS-20616, L1A, 215
R34	KS-20616, L1A, 215
R35	KS-20616, L1A, 2490
R36	KS-20616, L1A, 2370
R38	KS-20810, L1A, 1.1K
R39	KS-20616, L1A, 7.5K
R40	KS-20616, L1A, 7.5K
R41	KS-20616, L1A, 7.5K
R42	KS-20616, L1A, 2370
R43	KS-20616, L1A, 1000
R44	KS-20616, L1A, 1780
R45	KS-20616, L1A, 237
R46	KS-20616, L1A, 464
R47	KS-20810, L1A, 1.1K
R48	KS-20289, L6C, 1.1K
R49	KS-20810, L1A, 2370
R50	KS-20616, L1A, 5110
R51	KS-20616, L1A, 12.1K
R52	KS-20616, L1A, 178
R53	KS-20616, L1A, 7.5K
R54	KS-20616, L1A, 7.5K
R55	KS-20616, L1A, 5620
R56	KS-20616, L1A, 12.1K
R57	KS-20810, L1A, 2740
R58	KS-20616, L1A, 23,700
R59	KS-20616, L1A, 1960
R60	KS-20616, L1A, 10K
R62	(ZH) KS-20616, L1A, 38.3K (ZJ) KS-20616, L1A, 31.6K
R63	KS-20616, L1A, 10K
R64	KS-20616, L1A, 5110
R65	KS-20616, L1A, 5110
R66	KS-20616, L1A, 464
R67	KS-20616, L1A, 1K

COMPONENT LIST (Cont'd)

RESISTOR (Cont'd)

DESIG	CODE
R68	KS-20616, L1A, 5620
R69	KS-20616, L1A, 7.5K
R70	KS-20616, L1A, 19.6K
R71	KS-20616, L1A, 61.9K
R72	KS-20616, L1A, 10K
R73	KS-20616, L1A, 42.2K
R74	KS-20616, L1A, 2150
R76	KS-20810, L1A, 2370
R77	KS-20616, L1A, 7.5K
R78	KS-20616, L1A, 5110
R79	KS-20616, L1A, 23,700
R80	KS-20616, L1A, 8250
R81	KS-20616, L1A, 10K
R82	(Q) KS-20616, L1A, 365 (R) KS-16645, L1, 47
R83	KS-20616, L1A, 23,700
R84	KS-20616, L1A, 5110
R85	KS-20810, L1A, 2740
R86	KS-20810, L1A, 2370
R87	KS-20616, L1A, 10K
R88	KS-20616, L1A, 10K
R89	KS-20616, L1A, 10K
R90	KS-20616, L1A, 5110
R91	KS-20289, L6C, 1210
R92	KS-20616, L1A, 2370
R93	KS-20810, L1A, 4640
R94	KS-20616, L1A, 5620
R95	KS-20616, L1A, 5110
R96	KS-20616, L1A, 5110
R97	KS-20616, L1A, 8250
R98	KS-20616, L1A, 13.3K

TRANSFORMER

DESIG	CODE
T1	2597AN
T2	(ZD) 2564AM (ZE) 2564BH
T3	(ZF) 2564AN (ZG) 2564BJ
T4	2564L
T5	2597AL
T6	2597AM

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	66J
Q3	66G
Q4	51A
Q5	(ZA) 17D (ZB) 51A, (ZC) 51C
Q6	8B
Q7	17D
Q8	51A
Q9	66G
Q10	51A
Q11	51A
Q12	66G
Q13	66G
Q14	66G
Q15	66J
Q16	66G
Q17	51A
Q18	51A
Q19	66J
Q20	66J
Q21	51A
Q22	51A
Q23	66G
Q24	66J

NOTE: N&R ARE M.D.
SEE PAGE J6

COMPONENT LIST (Cont'd)

VARISTOR

DESIG	CODE
RV1	100D
RV2	100D
RV3	100D
RV4	100E
RV5	100E
RV6	100E
RV7	100E
RV8	100E
RV9	100D
RV10	100D
RV11	100D
RV12	100D
RV13	100D

108E-LI COMPONENT LIST

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	KS-19774, L1, 4700PF
C2	535BK
C3	535BK
C4	570GJ
C5	570KN
C6	600A
C7	KS-19774, L5, .033
C8	535DN
C9	535BK
C10	602C
C11	570JA
C12	570NR
C13	570EH
C15	570PA
C16	535DG
C17	600A
C18	600A
C19	601A
C20	601A
C21	600A
C22	535HM
C23	535G
C24	535S
C25	535S
C26	535S
C27	KS-19107, L4, 0.47
C28	601B
C29	601B
C30	542W

DIODE

DESIG	CODE
CR1	458C
CR2	458C
CR3	KS-16986, L2-M1
CR4	458C
CR6	446AD
CR7	491A
CR8	491A
CR9	458C
CR10	458C
CR11	KS-16986, L2-M1
CR12	KS-16986, L2-M1
CR13	446B
CR14	KS-16986, L2-M1
CR15	458C
CR16	KS-16986, L2-M1
CR17	458C
CR18	KS-16986, L2-M1
CR19	491A
CR20	KS-16986, L2-M1
CR21	KS-16986, L2-M1
CR22	458C
CR23	KS-16986, L2-M1
CR24	458C
CR25	446AD
CR26	446B
CR27	449A
CR28	KS-16986, L2-M1
CR29	KS-16986, L2-M1
CR30	KS-16986, L2-M1
CR31	459J
CR32	KS-16986, L2-M1
CR33	459AA
CR34	KS-16986, L2-M1

INDUCTOR

DESIG	CODE
L1	1642A .239H
L2	1642A 1.23H
L3	1642A .853H
L4	1642A .0930H
L5	1642A 2.23H
L6	1683C

COMPONENT LIST (Cont'd)

LAMP

DESIG	CODE
CF	52A

POTENTIOMETER

DESIG	CODE
R18	KS-16803L6, 25K
R37	KS-20231L2, 25K
R61	KS-20231L2, 10K

RESISTORS

DESIG	CODE
R1	KS-20616, L1A, 3160
R2	KS-20616, L1A, 13,300
R3	KS-20616, L1A, 12,100
R4	KS-20616, L1A, 12,100
R5	KS-20616, L1A, 30,100
R6	KS-20616, L1A, 23,700
R7	KS-20616, L1A, 5110
R8	KS-20616, L1A, 5110
R9	KS-20810, L1A, 1470
R10	KS-20616, L1A, 750
R11	KS-20616, L1A, 5110
R12	KS-20616, L1A, 2370
R13	KS-20616, L1A, 5110
R14	KS-20616, L1A, 2490
R15	KS-20616, L1A, 1210
R16	KS-20616, L1A, 348
R17	KS-20616, L1A, 953
R19	KS-20616, L1A, 3010
R20	KS-20616, L1A, 681
R21	KS-20616, L1A, 787
R22	KS-20616, L1A, 953
R23	KS-19151, L1, 5.6
R24	KS-19151, L1, 5.6
R25	KS-19151, L1, 5.6
R26	KS-19151, L1, 5.6
R27	KS-20616, L1A, 432
R28	KS-20616, L1A, 2150
R29	KS-20616, L1A, 10K
R30	KS-20616, L1A, 976
R31	KS-20616, L1A, 464
R32	KS-20616, L1A, 215
R34	KS-20616, L1A, 215
R35	KS-20616, L1A, 2490
R36	KS-20616, L1A, 2370
R38	KS-20810, L1A, 1100
R39	KS-20616, L1A, 7500
R40	KS-20616, L1A, 7500
R41	KS-20616, L1A, 7500
R42	KS-20616, L1A, 2370
R43	KS-20616, L1A, 1K
R44	KS-20616, L1A, 1780
R45	KS-20616, L1A, 237
R46	KS-20616, L1A, 464
R47	KS-20810, L1A, 1100
R48	KS-20289, L6C
R49	KS-20810, L1A, 2370
R50	KS-20616, L1A, 5110
R51	KS-20616, L1A, 100
R52	KS-20616, L1A, 147
R53	KS-20616, L1A, 3160
R54	KS-20616, L1A, 2050
R55	KS-20616, L1A, 3830
R56	KS-20616, L1A, 23,700
R57	KS-20616, L1A, 2150
R58	KS-20616, L1A, 23,700
R59	KS-20616, L1A, 1960
R60	KS-20616, L1A, 10K
R62	KS-20616, L1A, 38,300
R63	KS-20616, L1A, 10K

COMPONENT LIST (Cont'd)

RESISTOR (Cont'd)

DESIG	CODE
R64	KS-20616, L1A, 5110
R65	KS-20616, L1A, 5110
R66	KS-20616, L1A, 464
R67	KS-20616, L1A, 1K
R68	KS-20616, L1A, 5620
R69	KS-20616, L1A, 7500
R70	KS-20616, L1A, 19,600
R71	KS-20616, L1A, 61,900
R72	KS-20616, L1A, 10K
R73	KS-20616, L1A, 46,400
R74	KS-20616, L1A, 2150
R76	KS-20810, L1A, 2370
R77	KS-20616, L1A, 7500
R78	KS-20616, L1A, 5110
R79	KS-20616, L1A, 23,700
R80	KS-20616, L1A, 8250
R81	KS-20616, L1A, 10K
R82	KS-20616, L1A, 365
R83	KS-20616, L1A, 23,700
R84	KS-20616, L1A, 5110
R85	KS-20810, L1A, 2740
R86	KS-20810, L1A, 2370
R87	KS-20616, L1A, 10K
R88	KS-20616, L1A, 10K
R89	KS-20616, L1A, 10K
R90	KS-20616, L1A, 5110
R91	KS-20289, L6C, 1210
R92	KS-20616, L1A, 2370
R93	KS-20810, L1A, 464C
R94	KS-20616, L1A, 5620
R95	KS-20616, L1A, 5110
R96	KS-20616, L1A, 5110
R97	KS-20616, L1A, 8250
R98	KS-20616, L1A, 13,300
R99	KS-20616, L1A, 74K
R100	KS-20616, L1A, 3830
R101	KS-20616, L1A, 46,400
R102	KS-20616, L1A, 90,900
R103	KS-20616, L1A, 3160

SWITCH

DESIG	CODE
S1	KS-20983, L1

TRANSFORMER

DESIG	CODE
T2	(R) 2564AM, (Q) 2564BH
T3	(N) 2564AN, (M) 2564PJ
T4	2564L
T5	2597AL
T6	2597AM

TRANSISTOR

DESIG	CODE
Q1	66J
Q2	66J
Q3	66G
Q4	51A
Q5	51C
Q6	66G
Q7	51A
Q8	51A
Q9	66G
Q10	51A
Q11	51A
Q12	66G
Q13	66G
Q14	66G
Q15	66J
Q16	66G
Q17	51A
Q18	51A
Q19	66J
Q20	66J
Q21	51A
Q22	51A
Q23	66G
Q24	66J
Q25	51A
Q26	66J

VARISTOR

DESIG	CODE
RV1	100D
RV2	100D
RV3	100D
RV4	100E
RV5	100E
RV6	100E
RV7	100E
RV8	100E
RV9	100D
RV10	100D
RV11	100D
RV12	100D
RV13	100D

NOTE: M IS STANDARD
N IS M.D.
Q&R ARE OPTIONS
SEE PAGE J5

W-WES14
SHEET J11

RECORD OF CHANGES

ISSUE 1	12-15-73
ISSUE 2 UPDATE FOR 108D	10-1-76

AMERICAN TELEPHONE & TELEGRAPH CO.

PREPARED BY

TELETYPE CORPORATION

W-WES14
20 SHEETS

820D-LIA DATA AUXILIARY SET
FOR USE WITH MODEL 33,35
AND 37 TELETYPEWRITERS

SHEET J11

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
RGS	12-15-73		JJK		

BSTSEA

830A-LI COMPONENT LIST

CONNECTOR

DESIG	LOC	CODE
P1	2G2	HUBBELL, BL12583

TRANSFORMER

DESIG	LOC	CODE
T1	2G2	KS-21376, L1

CIRCUIT PACK

DESIG	LOC	CODE
CP1	2E2	840341036

CAPACITOR

DESIG	CODE
C1	KS-19658, L30, 2000
C2	KS-19658, L30, 2000

DIODE

DESIG	CODE
CR1	446K
CR2	446K
CR3	446K
CR4	446K

LAMP

DESIG	CODE
TM	52A, (24 VOLT)

RESISTOR

DESIG	CODE
R1	KS-20289, L6C, 10K
R2	KS-20289, L6C, 10K

SWITCH

DESIG	CODE
TM	SCHADOW, F-FSB/BLK 2U EE

CIRCUIT PACK

DESIG	LOC	CODE
CP2	2A5	840341051

EW
RELAY

DESIG	T	
CODE	MB1A	
OPTION		
X	CONT ARR	LOC
6	EBM	2F5
5	EBM	2C4
4	EBM	2C6
3	EBM	2B6
2	EBM	2B6
1	EBM	2D5
COIL	X	2E6

CONNECTOR

DESIG	CODE
J1	908L
J2	KS-19087, L6

DIODE

DESIG	CODE
CR1	458A

RESISTOR

DESIG	CODE
R1	KS-20289, L6C, 1K
R2	KS-20289, L6C, 1K

SWITCH

DESIG	CODE
S1	KS-21193, L3

830B-LI COMPONENT LIST

CIRCUIT PACK

DESIG	LOC	CODE
CP3	5A4	840341226

E/W
RELAY

DESIG	F		L		N	
CODE	MB1A		MB1A		MB1A	
OPTION						
X	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
6	EBM	5E5	EBM	5A3	EBM	5C6
5	EBM		EBM	5B3	EBM	5E5
4	EBM		EBM	5B4	EBM	
3	EBM		EBM	5D6	EBM	5C5
2	EBM	5C4	EBM	5B5	EBM	5D6
1	EBM	5B5	EBM	5F5	EBM	5B3
COIL	X	5D4	X	5F5	X	5C4

CONNECTOR

DESIG	CODE
J1(CONN)	MOLEX, 1375R (WITHOUT MTG EARS), E/W 15 2019-T TERMINALS
P1 (PLUG)	KS-19088, L22
P2 (PLUG)	MOLEX, 1375P (WITHOUT MTG EARS), E/W 15 2018-T TERMINALS

DIODE

DESIG	CODE
CR1	458C
CR2	458C
CR3	458C
CR4	458C
CR5	458C
CR6	458C
CR7	458A
CR8	458A
CR9	458A
CR10	458A
CR11	458C

RESISTOR

DESIG	CODE
R1	KS-20616, L1A, 3320
R2	KS-20616, L1A, 27,400
R3	KS-20810, L1A, 5620
R4	KS-20810, L1A, 4640
R5	KS-20810, L1A, 14,700
R6	KS-20810, L1A, 5620
R7	KS-20289, L6C, 1780
R8	KS-20810, L1A, 600
R9	KS-20616, L1A, 3320
R10	KS-20810, L1A, 316
R11	KS-20810, L1A, 316
R12	KS-20289, L6C, 464
R13	KS-20289, L6C, 464
R14	KS-20289, L6C, 464
R15	KS-20616, L1A, 20,500
R16	KS-20289, L6C, 464

TRANSISTOR

DESIG	CODE
Q1	51A
Q2	66G

LAMP

DESIG	LOC	CODE
OFF	5F7	51A
ON	5E7	51A
ALARM	5E7	51A
LOCAL	5F7	51A
SPARE	5E7	51A
TEST	5G7	51A

CORD

DESIG	LOC	CODE
CA2	5A2	M25A

CONNECTOR

DESIG	LOC	CODE
P3	5D7	507A

830C-LI COMPONENT LIST

CIRCUIT PACK

DESIG	LOC	CODE
CP4	2B9	

E/W
CAPACITOR

DESIG	CODE
C1	KS-20736, L1, 1

CONNECTOR

DESIG	CODE
P1	KS-19088, L2, E/W KS-19196, L2, HOOD

DIODE

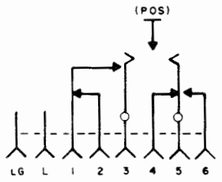
DESIG	CODE
CR1	459B, 6V
CR2	458C
CR3	458C
CR4	458C
CR5	459AD, 18V

RESISTOR

DESIG	CODE
R1	KS-20616, L1A, 12,100
R2	KS-20289, L6C, 162
R3	KS-20289, L6C, 1K
R4	KS-20616, L1A, 3010
R5	KS-20616, L1A, 30,100
R6	KS-20810, L1A, 1K
R7	KS-20616, L1A, 2610
R8	KS-20289, L6C, 825
R9	KS-20810, L1A, 464

TRANSISTOR

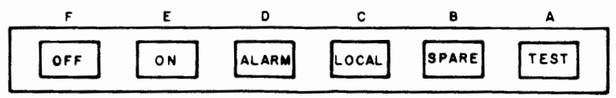
DESIG	CODE
Q1	51A
Q2	66K



KEY
KEY
635T2

DESIG	OFF	ON	ALARM	LOCAL	SPARE	TEST
POSITION	F	E	D	C	B	A
TERM.	LOC	LOC	LOC	LOC	LOC	LOC
6	5E7			5F7		5G7
5	5E7			5F7	5D7	5G7
4					5E7	
3	5F7			5F7		5G7
2						5G7
1	5F7			5G7		5G7
L-	5F7	5E7	5E7	5F7	5E7	5G7
LG	5F7	5E7	5E7	5F7	5E7	5G7

E/W
KEYTOP



109E-LI COMPONENT LIST

COMPONENT LIST

CAPACITOR

DESIG	CODE
C1	KS-20977,L1,1620pf
C2	KS-20977,L1,1620pf
C3	702C, .215uf
C4	702C, .215uf
Ⓝ C5	KS-19774,L2,4700pf
Ⓝ C6	KS-14056,L25,180pf
C7	KS-19774,L5,.1uf
C8	KS-19774,L5,.1uf
C10	702C, .121uf
C11	701C, .825uf
C12	701C, .825uf

DIODES

DESIG	CODE
CR1	458C
CR2	449A
CR3	459F
CR4	459F
CR5	449A
CR6	446AD
CR7	446M
CR8	458C
CR9	458C
CR10	458C
CR11	KS-16986,L2,M1
CR12	KS-16986,L2,M1
CR13	459C
CR14	KS-16986,L2,M1
CR15	458C
CR16	426P
CR17	426P
CR18	458C

INTEGRATED CIRCUITS

DESIG	CODE
IC1	Ⓝ KS-20391,L4
	Ⓜ 503A
	Ⓔ 502A
IC2	31A

LAMP

DESIG	CODE
LT1	52A

RESISTOR

DESIG	CODE
R1	KS-20810,L1A,5620
R2	KS-20616,L1A,16.2K
R3	KS-20810,L1A,1MEG
R4	KS-20810,L1A,10K
R5	KS-20810,L1A,27.4K
R6	KS-20810,L1A,3320
R7	KS-20810,L1A,51.1K
R8	Ⓘ KS-20810,L1A,38.3K
	Ⓒ KS-20616,L1A,82.5K
R9	Ⓕ KS-20810,L1A,14.7K
	Ⓒ KS-20616,L1A,38.3K
R10	KS-20810,L1A,10K
R11	KS-20810,L1A,23.7K
R12	KS-20810,L1A,23.7K
R13	KS-20810,L1A,10K
R14	KS-20810,L1A,23.7K
R15	KS-20810,L1A,10K
R16	KS-20810,L1A,10K
R17	KS-20810,L1A,10K
R18	KS-20810,L1A,1210
R19	KS-20810,L1A,1210
R20	KS-20810,L1A,1210
R21	KS-20810,L1A,1210
R21	KS-20810,L1A,1210
R22	KS-20289,L6C,1330
R23	KS-20289,L6C,1330
R24	KS-20289,L6C,1330
R25	KS-20289,L6C,1330
R26	KS-20810,L1A,2150
R27	KS-20627,L1A,68.1
R28	KS-20617,L1A,133
R29	KS-20627,L1A,261
R30	KS-20627,L1A,511
R31	KS-20627,L1A,511
R32	KS-20627,L1A,261
R33	KS-20627,L1A,133
R34	KS-20627,L1A,68.1
R35	KS-20616,L1A,61.9K
R36	KS-20616,L1A,61.9K
R37	KS-20616,L1A, .147MEG
R38	KS-20616,L1A, .147MEG
Ⓝ R39	KS-13490,L1,1500
R40	KS-20616,L1A,7500
R41	KS-20616,L1A,6810
R42	KS-20616,L1A,6810
R43	KS-20810,L1A,5110
R44	KS-20616,L1A,11K
R45	KS-20616,L1A,11K
R46	KS-20616,L1A,7500
R47	KS-20616,L1A,10K
R48	KS-20616,L1A,10K
R49	KS-20616,L1A,2610
R50	KS-20810,L1A,10K
R51	KS-20810,L1A,10K
R52	KS-20810,L1A,511
R53	KS-20810,L1A,1210
R54	KS-20810,L1A,7500
R55	KS-20810,L1A,2150
R56	KS-20810,L1A,14.7K
R57	KS-20616,L1A,26.1K
R58	KS-20616,L1A,3160
R59	KS-20810,L1A,2150
R60	KS-20810,L1A,14.7K
R61	KS-20616,L1A,26.1K
R62	KS-20616,L1A,1960
R63	KS-20810,L1A,10K
R64	KS-20616,L1A,14.7K
R65	KS-20616,L1A,17.8K
R66	KS-20616,L1A,17.8K
R67	KS-20810,L1A,10K
R68	KS-20810,L1A,10K
R69	KS-20810,L1A,365
R70	KS-20810,L1A,10K
R71	KS-20810,L1A,10K
R72	KS-20616,L1A,42.2K
R73	KS-20810,L1A,14.7K
R74	KS-20810,L1A,14.7K
R75	KS-20810,L1A,3010
R76	KS-20810,L1A,3010
R77	KS-20616,L1A,12.1K
R78	KS-20810,L1A,10K
R79	KS-20810,L1A,5110
R81	KS-20810,L1A,6810
R82	KS-20810,L1A,6810
R83	KS-20616,L1A,17.8K
R84	KS-20289,L6C,383
R85	KS-20289,L6C,316

TRANSISTOR

DESIG	CODE
Q1	66G
Q2	51B
Q3	Ⓘ 51A Ⓔ 51J
Q4	51A
Q5	66G
Q6	66L
Q7	51B
Q8	51B
Q9	51B
Q10	66L
Q11	66L
Q12	66J
Q13	51C
Q14	51C
Q15	51A
Q16	51A
Q17	66G
Q18	51C
Q19	51C
Q20	51A
Q21	66G
Q22	51C
Q23	51B
Q24	51C
Q25	51C
Q26	51C
Q27	51C
Q28	51C
Q29	66G
Q30	66G
Q31	Ⓘ 51A
Q32	66G
Q33	51A
Q34	51B
Q35	51B

VARISTORS

DESIG	CODE
RV2	100A
RV3	100A
RV4	100A
RV5	100A
RV6	100A
RV7	100D
RV8	100A

SWITCHES

DESIG	CODE
S1	P30H563
S2	P30H562
S3	P46M797

NOTE: SEE SHEET J8 FOR OPTIONS.

W-WES14
SHEET J12

RECORD OF CHANGES

ISSUE 1	2-1-74
ISSUE 2	10-1-76

ADDED COMPONENTS FOR 830A, B & C; ADDED 109E OPTIONS G, J & K

AMERICAN TELEPHONE & TELEGRAPH CO.
PREPARED BY TELETYPE CORPORATION

W-WES14
20 SHEETS

820D-LIA DATA AUXILIARY SET FOR USE WITH MODEL 33, 35 AND 37 TELETYPEWRITERS

SHEET J12

DRAWN	DATE	DESIGNED	ENGINEER	CHECKED	APPROVED
EK	9-9-76	RGM	JJK		

BSTSEA