

33093

"B"

TECHNICIANS: YOUR COOPERATION IS REQUESTED IN COMPLETING THIS DATA WHICH IS REQUIRED FOR THE PURPOSE OF EVALUATION AND IMPROVEMENT OF THE PRODUCT. PLEASE MAIL ASAP AFTER INSTALLATION. NO POSTAGE REQUIRED.

CSO \_\_\_\_\_ DROP \_\_\_\_\_

CUSTOMER \_\_\_\_\_

ARRANGEMENT \_\_\_\_\_

EQUIPMENT \_\_\_\_\_

**EQUIPMENT CHECKOUT LIST**

TECHNICIAN: PLACE (✓) IN SQUARES BELOW WHICH DESCRIBE THE EQUIPMENT AS RECEIVED AT TIME OF INSTALLATION.

- EQUIPMENT MEETS ALL REQUIREMENTS
- SCRATCHES, DENTS, HOLES OR CRACKED GLASS
- MOUNTING BOLTS NOT TIGHT W/LOCK WASHERS
- EOLI OR CONSOLE LIGHTS NOT WORKING
- WIRES BROKEN OR NOT SOLDERED
- IMPROPER LUBRICATION
- STUNT BOX MALFUNCTION
- TYPEBOX POSITIONING OFF
- IMPROPER KEYBOARD TOUCH
- RIBBON MECHANISM MALFUNCTION RIBBON DRY
- WORN PARTS \_\_\_\_\_
- DEFECTIVE PRINTED CIRCUIT CARD TYPE \_\_\_\_\_

**TROUBLE OTHER THAN LISTED ABOVE**

1. INCORRECT - STRAPPING, CODING, ADJUSTMENT, ETC. \_\_\_\_\_

REPORTED BY TECH'N \_\_\_\_\_ DATE \_\_\_\_\_

33093

"C"

CSO \_\_\_\_\_ DROP \_\_\_\_\_

CUSTOMER \_\_\_\_\_

ARRANGEMENT \_\_\_\_\_

EQUIPMENT \_\_\_\_\_

TECHNICIANS: PLEASE MAIL THIS CARD, NOTING ANY TROUBLES FOUND DURING FIRST MNTCE VISIT OR TROUBLE CALL. NO POSTAGE REQUIRED.

REASON: (CHECK APPROPRIATE BOX)

 ROUTINE MNTCE TROUBLE CALL

EXPLANATION OF DEFECTS: (IF ANY)

TECH'S INITIALS \_\_\_\_\_

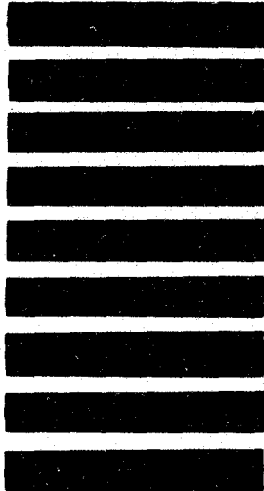
DATE \_\_\_\_\_

FIRST CLASS  
PERMIT NO. 1891  
ALLENTOWN, PA.

**BUSINESS REPLY MAIL**  
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

WESTERN UNION TELEGRAPH CO.  
ALLENTOWN SHOPS  
MANAGER-ENGINEERING  
2200 SOUTH 12TH STREET  
ALLENTOWN, PA. 18103



**BUSINESS REPLY MAIL**  
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ALLENTOWN SHOPS  
MANAGER-ENGINEERING  
2200 SOUTH 12TH STREET  
ALLENTOWN, PA. 18103

FIRST CLASS  
PERMIT NO. 1891  
ALLENTOWN, PA.



"C" BLOCK OF ASR

DRAWING NUMBER  
**SS-1317**

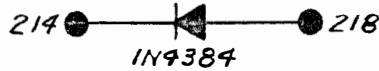
REVISIONS

~~B- 2-25-72  
ADDED XTR  
PULSING CKT  
7H Smith  
N Cook~~

C- 10-26-72  
MODIFIED 'ACK'  
CKT 7H Smith  
N Cook JR

4-33	24-199	195-207
5-215	34-181	210-211
6-8-11	125-205	2-30-35-182-209-217
9-186	126-127	14-37-140-144
10-185	128-204	15-25-40-141-150
12-19	130-200	29-36-196-218
13-18	132-142	138-146-147-148
16-129	134-183	
17-131	137-149	

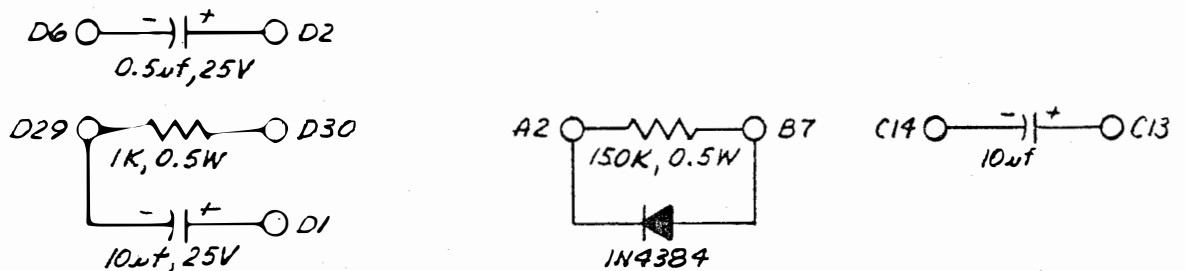
ADD DIODE



TB2 STRAPPINGS

A1-C4-D5	A26-C22	B3-B12-B18
A2-C10-D24	A28-D39 - C32	B4-B16
	A29-D40	B9-C28-D22
	A31-B33	B13-B17
A10-B10	A32-C29	B22-B26-B28-C35-D19
A11-B11	A38-B40	B23-B25-B27-B50-D49
A16-A17	A40-B42-B44	C5-D3
A18-B15	A41-C26	C16-D38
A19-B14	A43-C27-D23	
A21-D37	A49-D27	C8-C11-D31
A22-C21		C12-C25
A24-D26		C14-C24
D2-B21-B31-B35-B38-C13-B29		C19-D25
		C20-D16-D32
		C23-C50
		D15-D20-D21

ADD COMPONENTS TO TB2



CHICAGO NORTH WESTERN RR (POLAR)

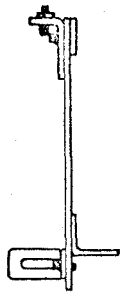


PLAN 115-B W/ XTR PULSING  
SEND AND RECEIVE OUTSTATION  
STRAPPINGS

DRAWN <i>7Smith</i>	DSGN. ENGR.	SPEC. ENGR. <i>N Cook</i>	APVD <i>N Cook</i>	ISSUE <b>A</b>	DATE <b>11-8-71</b>	DRAWING NUMBER <b>SS-1317</b>	SIZE <b>1</b>
DATE <b>11-4-71</b>	DATE	DATE <b>11-8-71</b>	DATE <b>11-8-71</b>			SHEET	

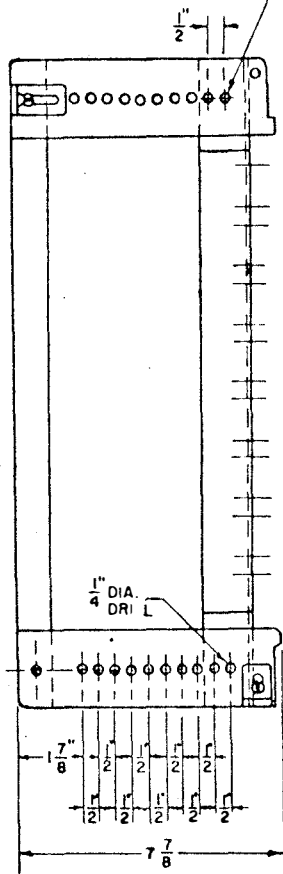
SCALE

REVISION 5  
 B-20 JAN 66  
 117-B ADDED  
 TO TITLE.  
*R.A. [Signature]*  
 MOUNTING ANGLE  
 BRKT CHANGED TO  
 SHOW CORRECT  
 MOUNTING

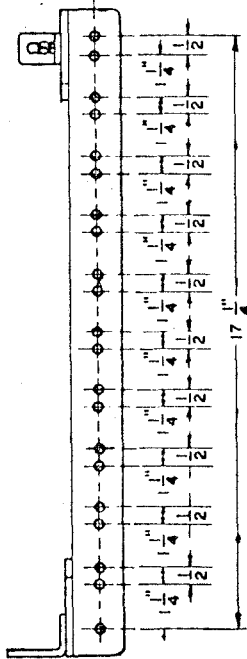


TOP VIEW

NOTE: AN ADDITIONAL 1/4" DIA. HOLE MUST BE DRILLED ADJACENT TO EXISTING HOLE AS SHOWN.

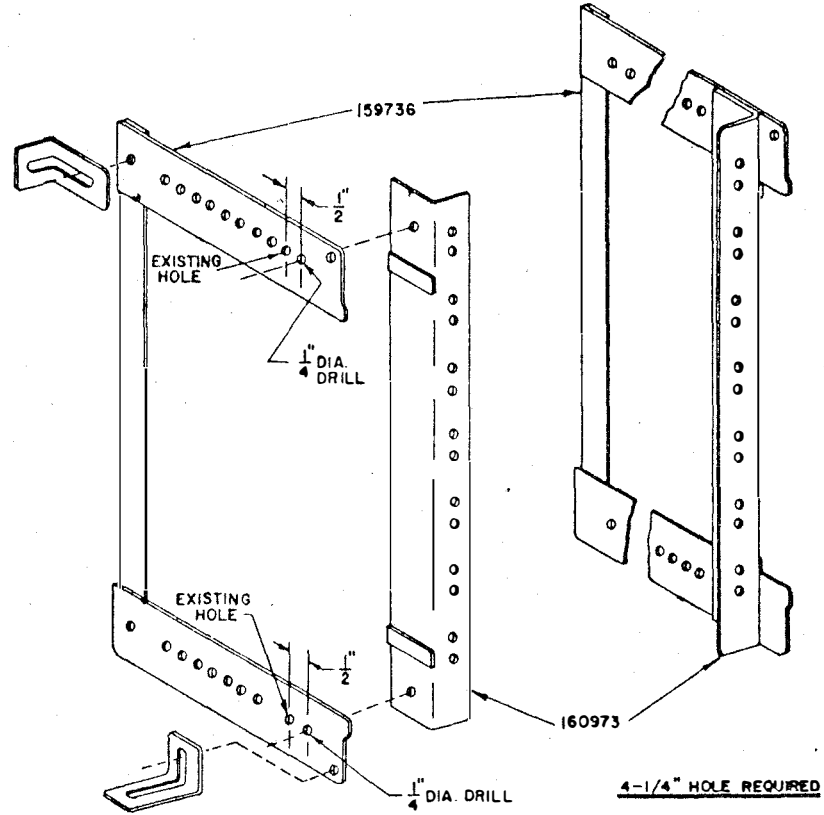


SIDE VIEW



FRONT VIEW

SCALE: 1/4" = 1"



(SCREWS AND NUTS NOT SHOWN)

PERSPECTIVE VIEW

THIS DWG MODIFIED FOR SYSTEM SHOPS USE

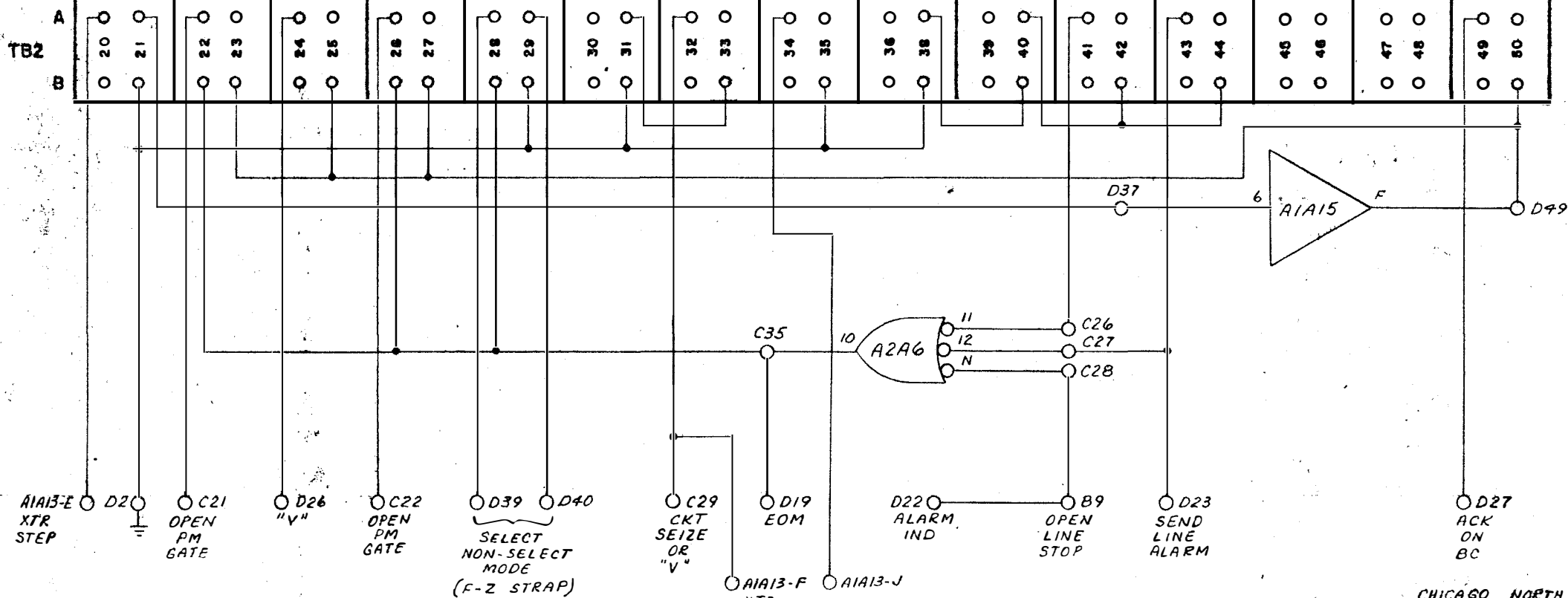
NEXT ASSY		USED ON		TOLERANCE UNLESS OTHERWISE SPECIFIED	SCALE	WESTERN UNION	
MATERIAL:				DECIMAL	1/16 DRAWN R.T.S.	SWITCHING SYSTEM - 115-B/117-B	
FINISH:				FRACTIONAL	DES. ENG	M-28 ASR SET	
RET. HOLES				ANGULAR	SP. ENG	MODIFICATION KIT-160387	
				DATE	ISSUE	DATE	DRAWING NO. IS
				16 APR 65	A	16 APR 65	507947-3

REVISIONS

B-2-24-72  
REV. FOR XTR  
PULSE & TWO  
LOOP OPN  
7th Smith  
N. Cook.

C-10-26-72  
MODIFIED 'ACK'  
CKT 7th Smith  
D. Cook J.R.S.

	CC	SSC	SSC	BC	EOA	ITS	ITS	XTR STEP	EOM SLA	EOM SLA	EOM	SLA	OPTIONAL BC		
SLOT	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CODE	**	*	*	LF	SP	***	*	LTRS "V"	FIGS	H	LTRS	BL			LF
ADD STRAP	R F Z L M	C	C Y E L M			E F Z L M	C L M								(NOTE 1) L M



NOTES:  
1. REMOVE CARD A1A30 IF ACK ON BC NOT REQ'D.

- \* - STATION CALL
- \*\* - CIRCUIT CALL
- \*\*\* - FIRST 'ITS' CHARACTER

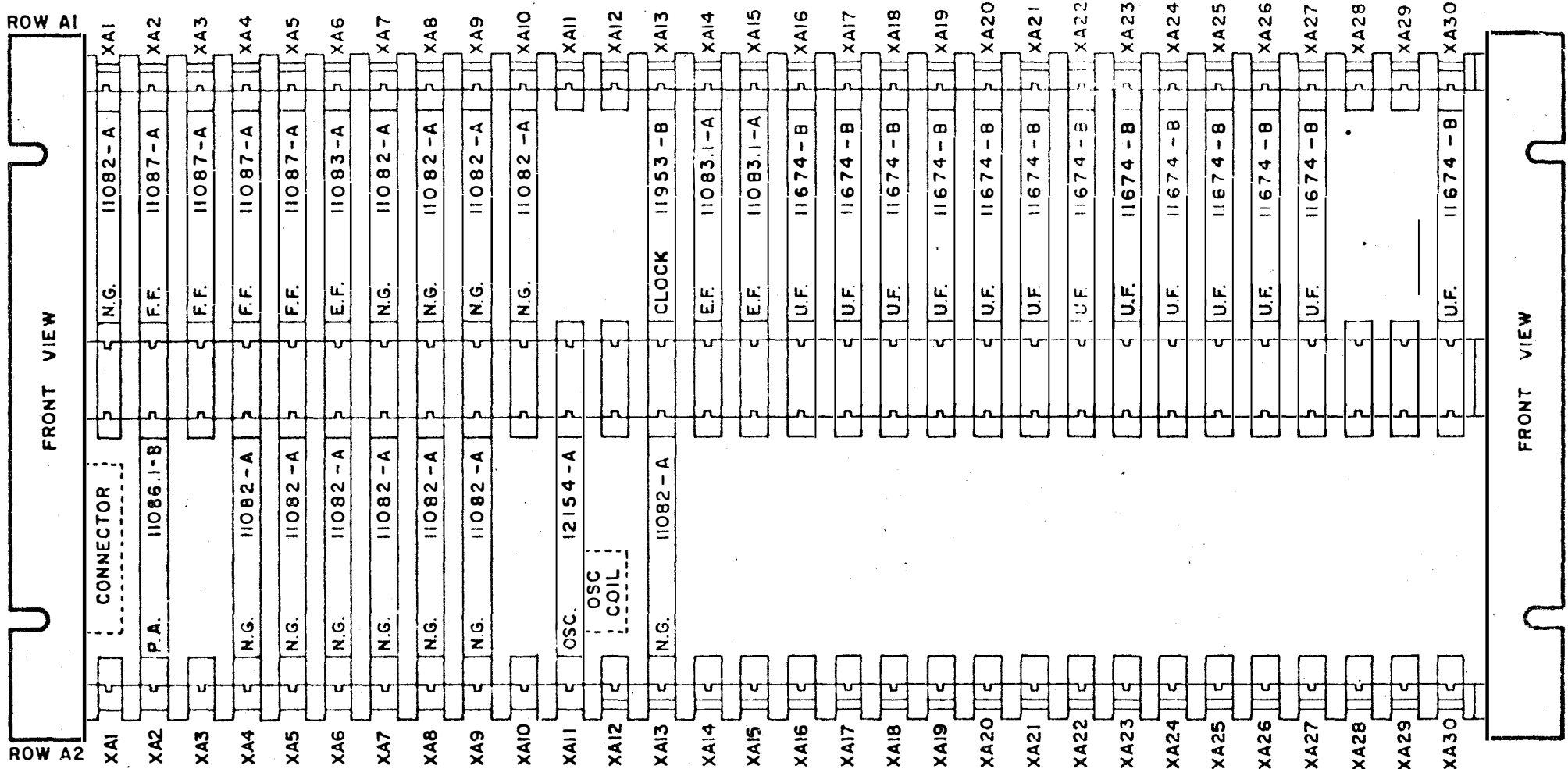
SHEET  
 DRAWING NUMBER  
 SS-1315-2

CHICAGO NORTH WESTERN R.R.

**western union**

PLAN 115-B W/ XTR PULSING  
SER OUTSTATION  
PROGRAM

DRAWN 7th Smith DATE 11-9-71	DSGN ENGR DATE	SPEC ENGR N. M. Cook DATE 11-23-71	APPD J.R.S. DATE 11/23/71	ISSUE A DATE 11-23-71	DRAWING NUMBER SS-1315	SIZE 2
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# --- STATION CALL  
 ## --- CIRCUIT CALL  
 \*\*\* --- FIRST ITS CHAR

5 LEVEL CODE

DWG. 503186 — MODIFIED FOR: CHICAGO N.W. RR - ASR  
 APPLY CHANGE ORDER 4343 TO "MI" CARD

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
(**)	(*)	(*)	(LF)	(SP)	(***)	(*)	(V/LTR)	(FIG)	(H)	(LTR)	(BL)	( )	( )	(LF)
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. D. E. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.

OPTIONAL  
 B.C.  
 30  
 (LF)

62-12263-8

A & W INSTR. SEC. 1

CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

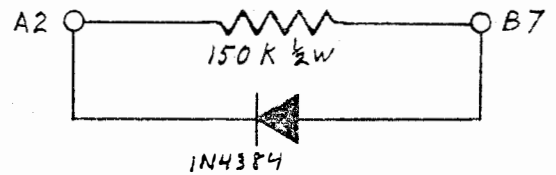
MATERIAL REQUIREMENTS FOR TB2

- ✓ 1 - DIODE IN4384 OR IN4385
- 1 - 1K 1/2 W RESISTOR
- 1 - .5 OR .47 MFD CAPACITOR
- 2 - 10 MFD CAPACITOR

TB2 STRAPPING (STRAP ALL WIRES IN ORDER SHOWN) ALL STRAPS TO BE 24 GA SOLID WIRE.

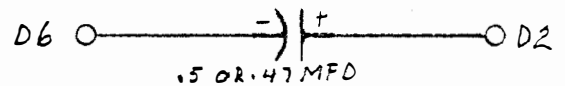
- A1-C4-D5
- A2-C10-D24
- \* D2-C13-B21-B29-B31-B35-B38
- B3-B12-B18
- D3-C5
- B4-B16

ADD THE FOLLOWING COMPONENTS

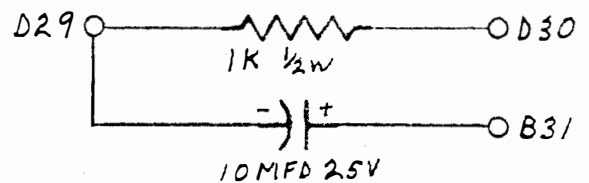
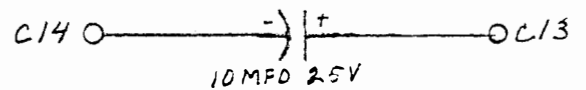


✓ C8-C11-D31

- B9-D22-C28
- A10-B10
- A11-B11
- C12-C25
- B13-B17
- B14-A19
- C14-C24
- B15-A18
- D15-D20-D21
- A16-A17
- C16-D38
- D16-C20-D32
- C19-D25
- D19-B22-B26-B28-C35



- A21-D37
- C21-A22
- C22-A26
- B23-B25-B27-D49-B50
- C23-C50
- D23-C27-A43
- A24-D26
- C26-A41
- D27-A49
- A28-C32-D39
- A29-D40
- C29-A32
- A31-B33



- A38-B40
- A40-B42-B44

\* THIS WIRE TO BE WHITE 24 GA SOLID WIRE.

## CHICAGO NORTHWESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

✓ MATERIAL REQUIREMENTS FOR 11704-C CARD CHASSIS

- 1 - 11704-C CARD CHASSIS
- 1 - CONNECTOR 500100-230
- 2 - 4/40-3/8" R.H.M.S.
- 5 - LUG TERMINAL, RED SPADE CRIMP, IDP 01360017

CARDS

- 12 - NOR GATE 11082-A
- 4 - FLIP FLOP 11087-A
- 1 - EMITTER FOLLOWER 11083-A
- 1 - START-STOP CLOCK 11953-B
- 2 - EMITTER FOLLOWER 11083.1-A
- 12 - UNIVERSAL FUNCTION 11674-B
- 1 - POWER AMPLIFIER 11086.1-B
- 1 - OSCILLATOR 12154-B

1. APPLY CHANGE ORDERS 4346, 4353 AND 4829
2. USE CONNECTOR 500100-230 IN SLOT A2-A13. USE 4/40-3/8" R.H.M.S.
3. STRAP POWER BUSS WITH #22 GA SOLID WIRE AS FOLLOWS:

A2XA13-13 TO TB1-3  
A2XA13-14 TO TB1-4  
A2XA13-15 TO TB1-5

4. STRAP REAR OF SELECTOR AS FOLLOWS: (USE #24 GA SOLID WIRE)  
A2XA13-H TO A2XA13-L  
A2XA13-1 TO C36  
A2XA13-2 TO A3  
A2XA13-E TO A20  
A2XA13-F TO A32  
A2XA13-H TO C31  
A2XA13-J TO A34
5. STRAP OSCILLATOR SOCKET A2-A11 FROM D TO L (75 WPM)
6. APPLY CHANGE ORDER 4343 TO START-STOP CLOCK CARD 11953-B
7. CLEAN ALL CARDS AND INSTALL CARDS PER DWG. 503186
8. CODE UNIVERSAL FUNCTION CARD AND PLACE A "KUM-KLEEN" LABEL ON OUTER EDGE OF UNIVERSAL FUNCTION CARD STATING WHAT FUNCTION CARD IS CODED FOR.
9. REMOVE ADDITIONAL 3" OF OUTER SLEEVING FROM TWO CONDUCTOR CABLE. CRIMP RED TERMINAL LUGS TO TWO CONDUCTOR CABLE AND THREE CONDUCTOR CABLE.



62-12450-0

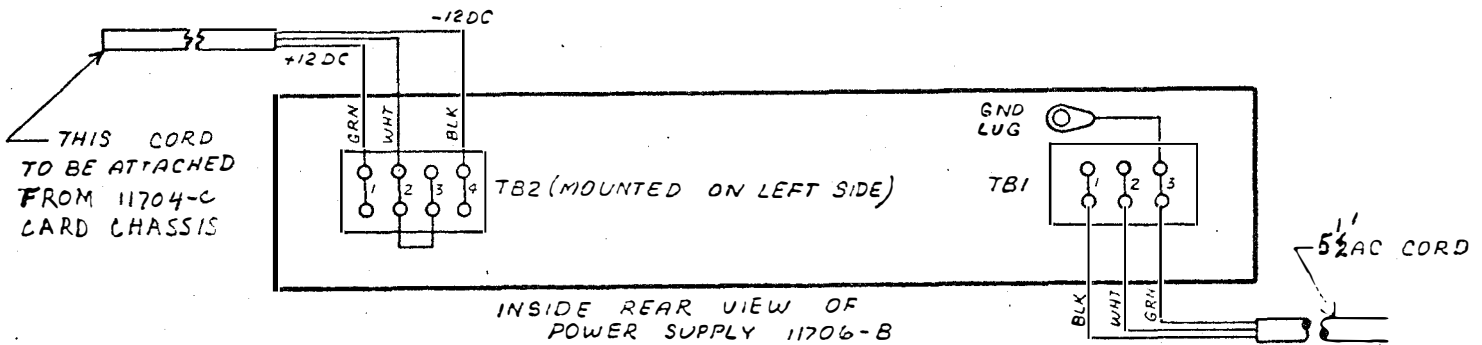
CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

MATERIAL REQUIREMENTS FOR ASSEMBLY OF RELAY RACK 160387

- 1 - RELAY RACK MOD KIT 160387
- 1 - 11706-B POWER SUPPLY
- 1 - 11704-C CARD CHASSIS
- 5½' - #18 GA 3 CONDUCTOR CABLE
- 6 - LUG TERMINAL RED SPADE CRIMP IDP 01360017
- 8 - 12/24 SPEED NUTS
- 8 - 12/24-1/2" R.H.M.S.
- 8 - 12/24 SHAKEPROOF WASHERS

ASSEMBLY OF RELAY RACK 160387

- ✓ 1. MODIFY AND ASSEMBLE RACK 160387 PER DWG. 507947
- ✓ 2. REMOVE 3" OF OUTER SLEEVING ON BOTH ENDS OF 5-1/2' 3 CONDUCTOR CABLE AND CRIMP RED SPADE TERMINAL LUGS TO BOTH ENDS. ATTACH CABLE TO POWER SUPPLY BY PUTTING CORD THROUGH EXISTING HOLE ON REAR OF POWER SUPPLY, KNOTTING CORD AND CONNECTING TO TB1.
- ✓ 3. MOUNT POWER SUPPLY TO RACK (SECOND AND SEVENTH HOLES FROM BOTTOM) WITH FOUR 12/24-1/2" R.H.M.S., SHAKEPROOF WASHERS, AND 12/24 SPEED NUTS.
- ✓ 4. MOUNT 11704-C CARD CHASSIS ABOVE POWER SUPPLY WITH FOUR 12/24-1/2" R.H.M.S., SHAKEPROOF WASHERS AND SPEED NUTS.
- ✓ 5. CONNECT 3 CONDUCTOR CABLE FROM CARD CHASSIS TO POWER SUPPLY BY INSERTING CABLE THROUGH EXISTING HOLE ON LEFT SIDE OF POWER SUPPLY, KNOTTING CORD AND ATTACHING TO TB2. STRAP TB2-2 TO TB2-3.
- ✓ 6. COIL UP SLACK AND WRAP WITH TWO WRAPS OF 3/4" MASKING TAPE. PLACE CABLE BETWEEN EQUIPMENT AND SIDE FRAME OF RACK.



## CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

MATERIAL REQUIREMENTS FOR FINAL ASSEMBLY OF M28 ASR CONSOLE

- 1 - M28 ASR CONSOLE
- 1 - MOUNTING RACK WITH POWER SUPPLY AND CARD CHASSIS
- 1 - MOD KIT 159384 (TERMINAL 181-220)
- 1 - 11707 WIRING CABINET
- 1 - 9828 "U" CONNECTOR
- 2 - 503652 "R.F." CONNECTOR
- 1 - 503626 "W.C." CONNECTOR
- 1 - 502656 ADAPTER
- 1 - 182510 POWER CORD
- 1 - SIGNAL CORD 900643
- 1 - CONTROL PANEL 11705-B
- 2 - SPARK KILLERS 9071
- 2 - 1/4-20-1/2" R.H.M.S.
- 2 - 1/4-20 LOCK WASHERS
- 4 - 12/24-1/2" R.H.M.S.
- 4 - 12/24 SHAKEPROOF WASHERS
- 2 - 12/24 SPEED NUTS
- 2 - 12/24 NUTS
- 4 - 6/32-1/2" R.H.M.S.
- 4 - 6/32 FLAT WASHERS
- 4 - 6/32 LOCK WASHERS
- 4 - 6/32 NUTS
- 3 - LUGS TERMINAL RED SPADE
- 8 - SOLDERLESS LUGS
- 4' - 3 CONDUCTOR GRAY CABLE
- 1 - MOD KIT 176713 (LOW PAPER) (OPTIONAL EQUIPMENT)
- 1 - DIODE IN4384 OR IN4385
- 2 - CORD GRIPS #112

CHICAGO NORTHWESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

1. INSTALL MOD KIT 159384 WITH SCREWS PROVIDED ABOVE TERMINAL BLOCKS NUMBERED 1 TO 40.
2. STRAP "C" BLOCK OF ASR AS FOLLOWS: USE #22 GA SOLID WIRE EXCEPT AS SPECIFIED.

- 125-205 ✓
- 126-127 ✓
- 128-204 ✓
- 129-16 ✓
- 130-200 ✓
- 131-17 ✓
- 132-142 ✓
- 134-183 ✓
- 137-149 ✓
- 138-146-147-148 ✓
- 140-144-14-37 BLACK #18 GA SOLID WIRE ←
- 141-150-15-25-40 WHITE #18 GA SOLID WIRE ←
- 181-34 ✓
- 182-2-209-30-35-217 ✓
- 4-33 ✓
- 185-10 ✓
- 5-215 ✓
- 186-9 ✓
- 6-8-11 ✓
- 12-19 ✓
- 13-18 ✓
- 195-207 ✓
- 196-29-36-218 ✓
- 199-24 ✓
- 210-211 ✓



3. RELOCATE SIGNAL BELL:
 

FROM	<i>OK</i>	TO
C29		C23
C30		C38

4. RELOCATE E.O.L. LAMP AND COPY LIGHT SWITCH:

	FROM	TO
BLACK	C36	C149 <i>OK</i>
WHITE	C37	C183 <i>OK</i>
BLUE	C38	REMOVE AND TAPE BACK <i>OK</i>
RED	144	C132 <i>OK</i>

REMOVE STRAP FROM 143 TO 146 *OK*

5. CONNECT THE FOLLOWING CABLES PER DWG. 505136:

"U" CONNECTOR 9828 *OK*  
 "W.C" CONNECTOR 503626 *OK*  
 ADAPTER 502656 *OK*

*✗*

CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

✓ 6. CONNECT THE "R" AND "F" CONNECTOR AS FOLLOWS:

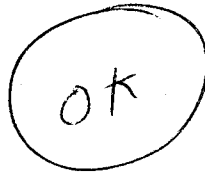
"R" CONNECTING CORD 503652

<u>CONNECTOR TERMINALS</u>	<u>WIRES START FROM FARTHEREST END OF CABLE</u>	<u>"C" BLOCK CONNECTIONS</u>
0	GREEN	24
1	YELLOW	22
2	ORANGE	*
3	RED	22
4	BROWN	24
6	BLACK	23
8	WHITE	*
10	GRAY	*
12	BLACK	26
13	WHITE	27
15	GREEN	31
5	YELLOW	*
7	ORANGE	*
9	RED	25
11	BROWN	*
14	GRAY	*
16	YELLOW	28
17	BLACK	*
18	GREEN	29
19	WHITE	30



"F" CONNECTING CORD 503652

<u>CONNECTOR TERMINALS</u>	<u>WIRES START FROM FARTHEREST END OF CABLE</u>	<u>"C" BLOCK CONNECTIONS</u>
0	GREEN	132
1	YELLOW	133
2	ORANGE	134
3	RED	135
4	BROWN	*
6	BLACK	137
8	WHITE	138
10	GRAY	139
12	BLACK	140
13	WHITE	141
15	GREEN	142
5	YELLOW	*
7	ORANGE	*
9	RED	136
11	BROWN	*
14	GRAY	*
16	YELLOW	143
17	BLACK	*
18	GREEN	*
19	WHITE	*



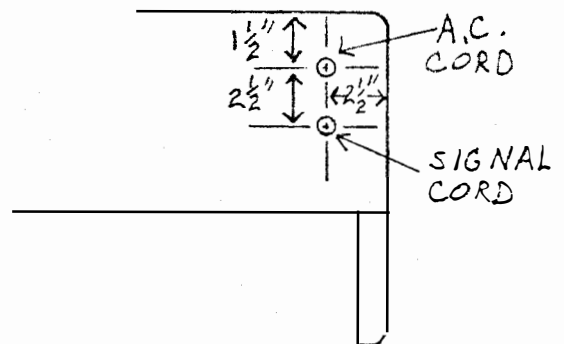
\* TAPE UP TERMINALS

CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

- ✓ 7. REMOVE LAMPS FROM REAR OF SWITCHES ON CONTROL PANEL 11705-B. REMOVE BLANK FACE PLATE ON ASR AND MOUNT CONTROL PANEL, WIRE CONTROL PANEL TO "C" BLOCK PER DWG. 505136.
- ✓ 8. MOUNT SPARK KILLERS AT A CONVENIENT LOCATION IN THE REAR AND TO THE LEFT OF ASR WITH FOUR 6/32-1/2" R.H.M.S., FLAT WASHER, LOCK WASHER AND NUTS. WIRE TO "C" BLOCK PER DWG. 505136 WITH 3 CONDUCTOR GRAY CABLE, CRIMP TERMINAL BLOCK END OF CABLE WITH SOLDERLESS TERMINALS LUGS.
- ✓ 9. MOUNT 11707 WIRING CABINET WITH TWO 1/4-20 R.H.M.S. AND LOCK WASHERS. ATTACH "W.C." CONNECTOR 503626. INSTALL EXTERNAL HANDLE TO POWER SWITCH ON 11707.
- ✓ 10. WHEN LOW PAPER MOD KIT 176713 IS REQUIRED, ASSEMBLE AND WIRE MOD KIT, REMOVE PLATE ON REAR OF M28 CONSOLE (ABOVE 11707 WIRING CABINET) FOR FORM FEED PAPER. INSTALL LOW PAPER CONTACT ABOVE THE OPENING ON THE HINGE WITH HARDWARE PROVIDED. CONNECT WIRES AS FOLLOWS:
  - PURPLE - 29
  - YELLOW - 30
- ✓ 11. PUNCH TWO KNOCK OUTS FOR TWO CORD GRIPS IN BASE OF CONSOLE ON RIGHT SIDE (SEE BELOW) AND MOUNT CORD GRIPS. INSERT AC POWER CORD AND SIGNAL CORD THROUGH CORD GRIPS AS SHOWN BELOW. WIRE TO "C" BLOCK AS FOLLOWS: (USE TEMPLATE IN A & W SHOP)

✓ AC POWER CORD (USE RED SPADE LUGS)  
WHITE TO C40  
BLACK TO C39  
GREEN TO FRAME GROUND

✓ SIGNAL CORD (USE SOLDERLESS LUGS)  
BLACK TO C1  
WHITE TO C2  
RED TO C3



CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR

- ✓ 12. MODIFICATION TO BASE OF CONSOLE FOR EQUIPMENT RACK.
  - A. DRILL A 1/4" HOLE IN THE SECOND MOUNTING STRIP (FROM TOP) 8-1/2" IN FROM THE LEFT. (CENTER BETWEEN THE SIXTH AND SEVENTH HOLE)
  - B. DRILL THE EXISTING HOLES IN BASE CONSOLE NEAR THE FRONT TO 1/4".
- ✓ 13. INSTALL EQUIPMENT RACK IN BASE OF CONSOLE, LINE UP RACK WITH FIRST HOLE ON THE RIGHT, SECOND MOUNTING STRIP (FROM TOP). MOUNT RACK WITH FOUR 12/24-1/2" R.H.M.S., SHAKEPROOF WASHER, TWO 12/24 SPEED NUTS AND TWO 12/24 NUTS.
- ✓ 14. CONNECT TWO CONDUCTOR CABLE FROM CARD CHASSIS TO "C" BLOCK.
  - WHITE TO C2
  - BLACK TO C20
- ✓ 15. CONNECT AC CORD FROM POWER SUPPLY TO "C" BLOCK.
  - BLACK TO C39
  - WHITE TO C40
  - GREEN TO FRAME GROUND
- ✓ 16. CONNECT ADAPTER CORD PLUG TO 11704-C CARD CHASSIS.
- 17. INSTALL PRINTER AND TRANSMITTER. CONNECT "U" CONNECTOR AND "R" AND "F" CONNECTOR TO TRANSMITTER AND PRINTER.

CHICAGO NORTH WESTERN R.R. PLAN 115 OUTSTATION ASR POLAR  
MODIFICATION OF 11707 WIRING CABINET

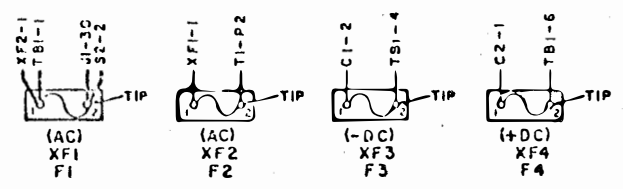
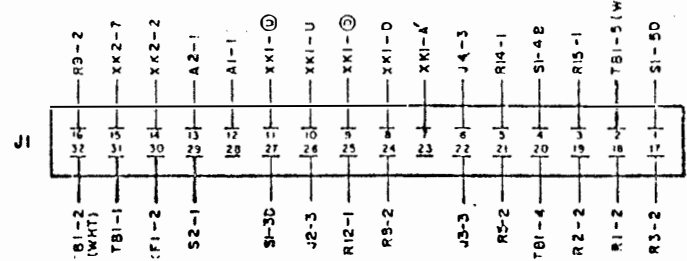
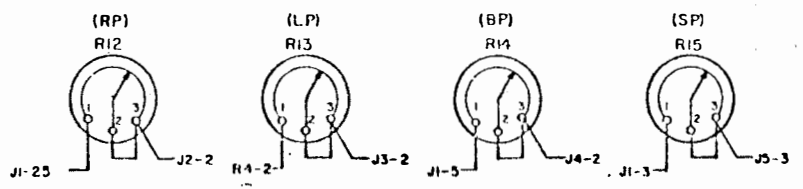
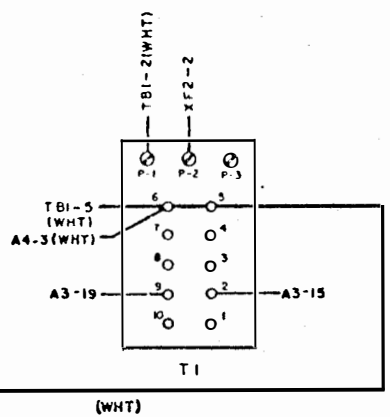
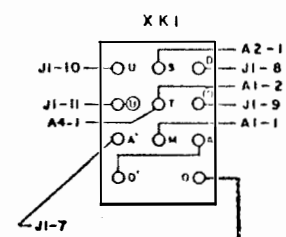
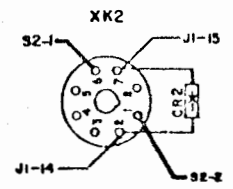
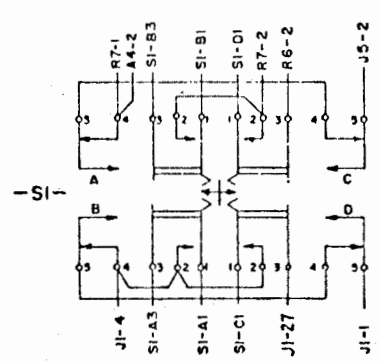
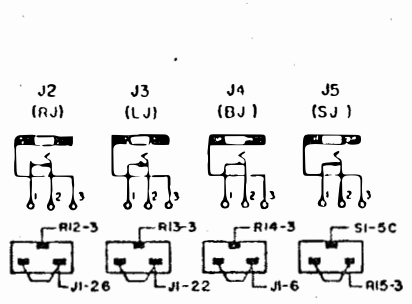
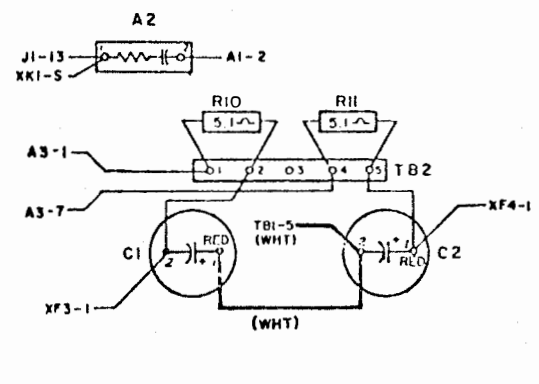
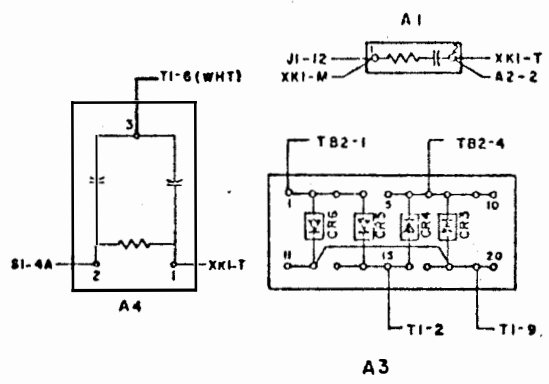
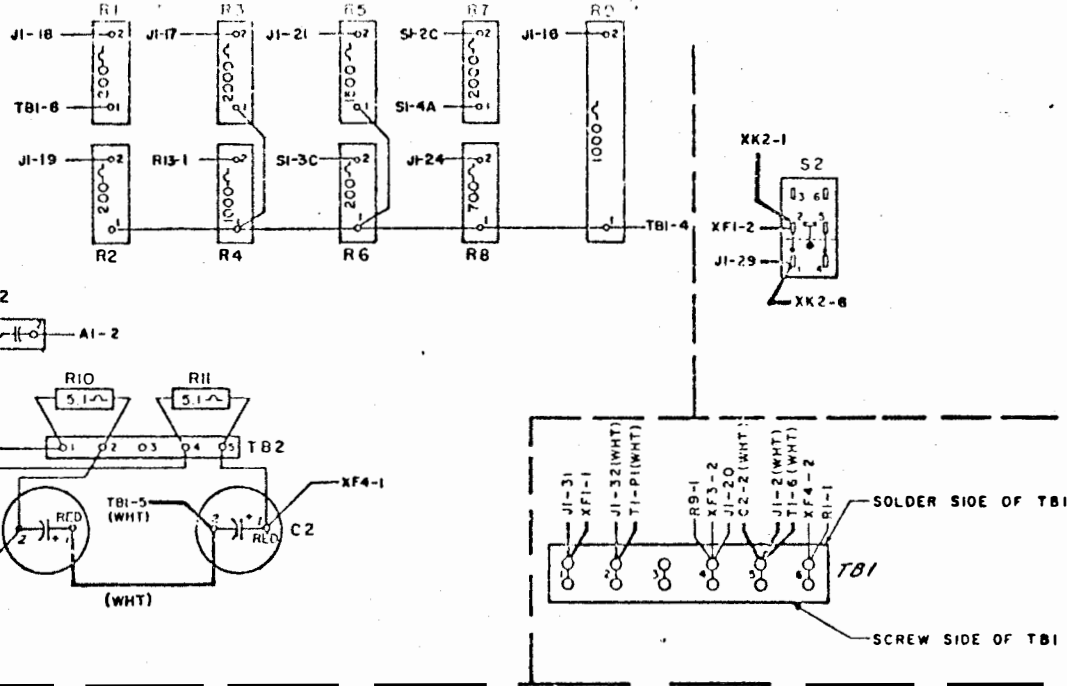
MATERIAL REQUIREMENTS

- 1 - KRP-1C-115V AC RELAY
- 1 - 202 RELAY
- 4 - 8/32 FLAT WASHERS #101633 TELETYPE IDP 01777201

1. MODIFY 11707 WIRING CABINET AS FOLLOWS:

REFER TO DRAWING 503695-D-8, IN SPECIFICATIONS 14992

- ✓1. REMOVE WIRES AT XK2-6 AND XK2-1 AND TAPE BACK
- ✓2. REMOVE DIODE ACROSS XK2-2 AND XK2-7
- ✓3. ADD WIRE FROM XK2-1 TO TB1-5
- ✓4. ADD WIRE FROM XK2-3 TO J1-28
- ✓2. LOWER SIDE BRACKETS ON WIRING CABINET USING FLAT WASHER UNDER SCREWS.
- ✓3. PLUG IN RELAYS.
- ✓4. LABEL WIRE CABINET: "MODIFIED FOR MOTOR ON RELAY".



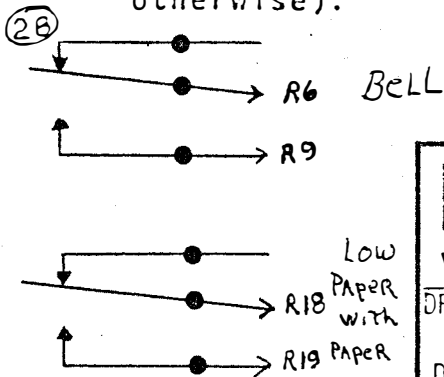
WESTERN UNION	
WIRING CABINET 11707-A	
WIRING	
A	503650



	FUNCTION PERFORMED	CODE	FUNCTION MECH.	SHIFT MECH.	CONTRACT AGENCY
1	UNSHIFT ON SPACE	<del> </del>	211905		
2	FIGURES SHIFT	FIGS.	211906		
3	LETTERS SHIFT	LTRS.	211906	213226	
4					
5	CARRIAGE RETURN	CR.	212751		
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27	DELETE SPACE ON BLANK	BL.	211906		
28	BELL SIGNAL	J P.u/c	211906		212242
29					
30					
31					
32					
33					
34					
35					
36					
37					
38	DELETE SPACE ON LINEFEED	LF.	211906		
39					
40	LINEFEED	P.LF.	211905		
41					
42	RESERVED FOR FORM FEED OUT, IF USED				

**NOTES:**

**SIGNAL BELL:**  
 Connect to R6 and R9 if used with solid state selector.  
 Connect to 1 and 3 of stunt box cord if not being used  
 with solid state selector; (unless advised to do  
 otherwise).



CHGO NW RR

				STANDARD STUNT BOX FF OR SF 1128 (As received from TELETYPE CORP.)			
DRAWN	DSGN ENGR	SPEC ENGR	APPD	ISSUE	DATE	DRAWING NUMBER	SHEET
DATE	DATE	DATE	DATE	A			1
						SHEET	

C-1141 P-115 IN. DR001:VN 17 N Y. REPROVEL NO 410M

PATRON \_\_\_\_\_  
ARR. OR  
DESCRIPTION \_\_\_\_\_

## DATA SET INSTRUCTIONS

 - A & W  
 - APPSECTION 0  
SHEET 1 OF 1  
DATE 11-9-76

## MATERIAL:

- 1 - Box 13551-B Line Interface
- 1 - Set 13588-A Data
- 2 - SIGNAL CORDS 900643
- A. Box 13551-B Line Interface

## ✓ 1. Connect a line cord

J6-1 Black  
J6-2 Red

These terminals are located on the top inside edge of the Vertical Mother Board. Label Cord "2 Wire S and R"

## ✓ 2. Connect a line cord

TB1-1 Red  
TB1-2 Black  
TB1-3 White

Label Cord "To Teletype Equipment"

- B. Program the 13588 Data Set Card by adding straps *OR SWITCHES*

*VADIC CARD OR SWITCH CARD*

Add strap A  
Add strap D  
Add strap N  
Add strap B  
Add strap K

E1 to E2 Strap

S2-1 Off

S2-2 ON

S2-3 ON

S2-4 OFF

S1-1 Off

S1-2 Off

S1-3 Off

S1-4 Off

S3-1 Off

S3-2 On

S3-3 On

S3-4 On

No strap M

No strap C

No strap H

No strap J

No strap E

No strap F

No strap G

Push the Switches Down to Posn Indicated.

Install the 13588 Card in J3 which is the Card Connector nearest the Power Supply. Components up.

Route the two Signal Cords so cover will close.



# SYSTEM SHOP PROJECT WORK ORDER

DATE 1-14-78  
 ISSUE 2  
 SHEET 1 OF 1


TO SYSTEM SHOP: ALLENTOWN, PA.  DALLAS, TEXAS

PATRON: Chicago N.W. RR. CSO/PROJ. 62-12263-8 AMENDT 1  
 DATE ISSUED: \_\_\_\_\_ DATE REQUIRED: \_\_\_\_\_ SERVICE DATE: 1-15-79

### (A) GENERAL REQUIREMENTS SYSTEM

WPM: <u>75</u>	BAUD	PALLET LAYOUT <u>A</u>	STYLE <u>Elite Gothic</u>	H. TAB CHAR	V. TAB CHAR
CKT CALL	KBD LAYOUT <u>A</u>	<input type="checkbox"/> U/S SPACE	FFO CHAR	BELL CHAR	
INVITE INITIATE	EOA	EOM <u>FIG H2TR</u>	<input checked="" type="checkbox"/> H. DUX	<input type="checkbox"/> F. DUX	
BDCST CALL	EOT	SLA			

### (B) SPECIFIC DROP REQUIREMENTS

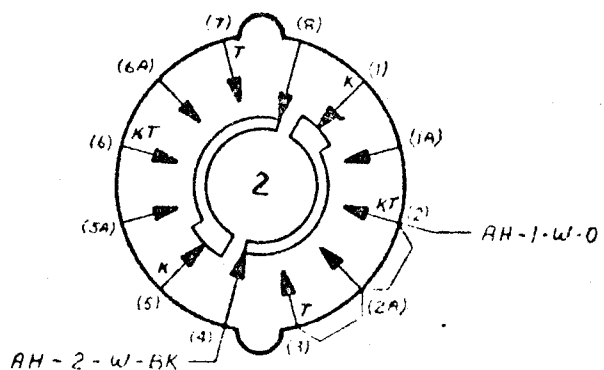
	(1) DROP NUMBER <u>AA</u>	(2) DROP NUMBER	SPECIAL INSTRUCTIONS
1 CITY LOCATION	<u>BELVIDERE ILL</u>		<p><u>SS-1315</u> <u>1317</u> <u>1318</u></p> <p><i>to adapt this set for TLA</i></p> <p><i>add 2 zero dials on TLA</i></p>  <p><i>Adjust ASR to least send current possible. adjust ASR Rec to least resistance possible.</i></p> <p><i>* must check this with the ASR</i></p>
2 CIRCUIT NUMBER	<u>CW-3</u>		
3 CLASS OF OPERATION	<u>-POLAR TLA</u>		
4 ARRANGEMENT NUMBER			
5 BASIC EQUIPMENT <u>M2B</u>	<u>ASRIC</u>		
6 SELECTOR <u>1170B</u>	<u>✓</u>		
7 11288 CABINET			
8 SSC	<u>RC</u>		
9 ITS	<u>EC</u>		
10 12509 M.K.(B.I.)			
11 12510 M.K.(ARC)			
12			
13 TIME SWITCH/MCU			
14 PAPER WINDER/DISPLAY RACK			
15 PAPER SUPPLY BOX			
16 R.H. COPY HOLDER			
17 LOW PAPER	<u>✓</u>		
18 ANSWERBACK CODE			
19 FFO SIZE			
20 PLATEN TYPE SIZE	<u>FF 8 1/2</u>		
21 EOLI MARGIN	<u>65 72</u>		
22 H. TAB STOPS			
23 CHAR/INCH	<u>12</u>		
24 V. TAB STOPS			
25 VERT. LINES/INCH			
26 XD CONTROL			
27 FORM STRIP M.K.			
28 PAPER JAM M.K.			
29 XSCVR/D.S.			
30 <u>13551/13588</u>	<u>✓*</u>		
31			
UNIT CODE			

DRP	SHIP TO ADDRESS	DATE STARTED	DATE COMPLETED
(1)	<u>12240 Mgr Sel Shop</u> <u>427 So. La Salle St</u> <u>Chicago Ill 60605</u>		
	ROUTING:	DAILY CHARGES	
		ABW	TOTAL
		APP	
		QC	
(2)		CHARGE REPAIRS TO S.O. <u>05-03991 - B</u>	
		ABW	
		APP	

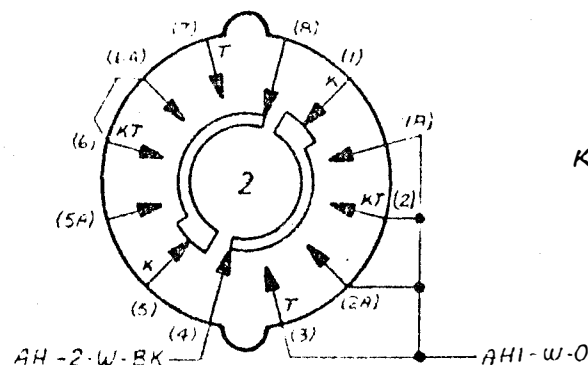
REVISIONS

B-

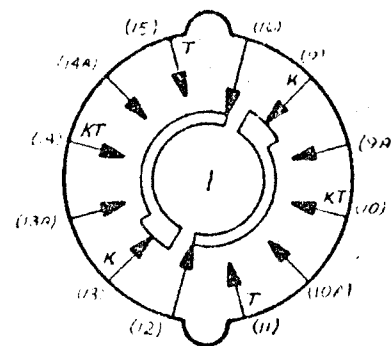
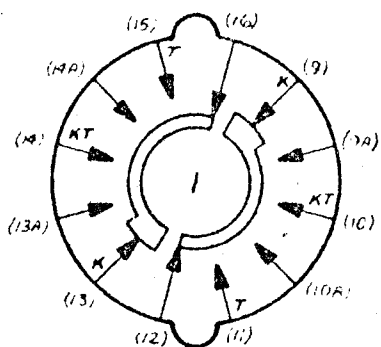
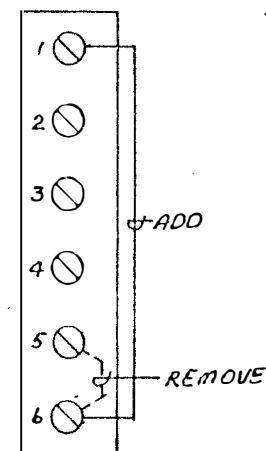
AC  
AUXILIARY SWITCH



AC  
AUXILIARY SWITCH



AH  
KBD TERM. BLOCK  
(NOTE 3)



AS REC'D FROM TTY CORP.  
DWG 184744

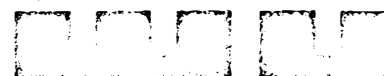
MODIFIED WIRING  
PER DWG. 512404 & 518165

SHEET

DRAWING NUMBER  
SS-1124-1

NOTES:

1. ALL VIEWS OF SWITCH TAKEN FROM REAR
2. SECTION # 1 CLOSEST TO KNIFE OF SWITCH
3. STRAP "AH" TERM. BLOCK AS SHOWN



western union

SPLIT ASR SET  
LAH-3 KBD AUXILIARY SWITCH  
MODIFICATIONS

DESIGNED	CHECKED	SPEC. ENGR.	APPR.	ISSUE	DATE	DRAWING NUMBER	SIZE
1/2	A.C.			A	10-9-69	SS-1124	1
DATE	DATE	DATE	DATE			SHEET	
10-9-69	10-9-69						



# SYSTEM SHOP PROJECT WORK ORDER

DATE 11-14-78  
 ISSUE 1  
 SHEET 1 OF 1

TO SYSTEM SHOP: ALLENTOWN, PA.  DALLAS, TEXAS

PATRON: <u>Chicago N.W. RR.</u>		CSO/PROJ. <u>62-12263-8</u>	AMEND T
DATE ISSUED:	DATE REQUIRED:	SERVICE DATE: <u>1-15-79</u>	

### (A) GENERAL REQUIREMENTS SYSTEM

WPM <u>75</u>	BAUD	PALLET LAYOUT <u>A</u>	STYLE <u>elite GOTH</u>	H. TAB CHAR	V. TAB CHAR
CKT CALL	KBD LAYOUT <u>A</u>	<input type="checkbox"/> U/S SPACE	FFO CHAR	BELL CHAR	
INVITE INITIATE	EOA	EOM <u>FIG H LTR</u>	<input checked="" type="checkbox"/> H. DUX	<input type="checkbox"/> F. DUX	
BDCST CALL	EOT	SLA			

### (B) SPECIFIC DROP REQUIREMENTS

	(1) DROP NUMBER <u>AA</u>	(2) DROP NUMBER	SPECIAL INSTRUCTIONS
1	CITY LOCATION	<u>BELVIDERE ILL</u>	<u>SS-1315</u> <u>1317</u> <u>1318</u>
2	CIRCUIT NUMBER	<u>CW-3</u>	
3	CLASS OF OPERATION	<u>POLAR</u>	
4	ARRANGEMENT NUMBER		
5	BASIC EQUIPMENT <u>M2B</u>	<u>ASRIC</u>	
6	SELECTOR <u>1170B</u>	<u>✓</u>	
7	11288 CABINET		
8	SSC	<u>RC</u>	
9	ITS	<u>EC</u>	
10	12509 M.K.(B.I.)		
11	12510 M.K.(ARC)		
12			
13	TIME SWITCH/MCU		
14	PAPER WINDER/DISPLAY RACK		
15	PAPER SUPPLY BOX		
16	R.H. COPY HOLDER		
17	LOW PAPER	<u>✓</u>	
18	ANSWERBACK CODE		
19	FFO SIZE		
20	PLATEN TYPE SIZE	<u>FF 8 1/2</u>	
21	EOLI MARGIN	<u>65 72</u>	
22	H. TAB STOPS		
23	CHAR/INCH	<u>12</u>	
24	V. TAB STOPS		
25	VERT. LINES/INCH		
26	XD CONTROL		
27	FORM STRIP M.K.		
28	PAPER JAM M.K.		
29	XSCVR/D.S.		
30			
31			

### UNIT CODE

DRP	SHIP TO ADDRESS	DATE STARTED	DATE COMPLETED
(1)	<u>12240 Mgr Sel Shop</u> <u>427 So. La Salle St</u> <u>Chicago Ill 60605</u>		
	ROUTING:	DAILY CHARGES	
(2)		ABW	TOTAL
	ROUTING:	APP	
		QC	
		CHARGE REPAIRS TO S.O. <u>05-039911-B</u>	
		ABW	
		APP	



# SYSTEM SHOP PROJECT WORK ORDER

DATE 11-14-78  
 ISSUE 1  
 SHEET 1 OF 1

TO SYSTEM SHOP: ALLENTOWN, PA.  DALLAS, TEXAS

PATRON: <u>Chicago N.W. RR.</u>		CSO/PROJ. <u>62-12263-8</u>	AMEND T
DATE ISSUED:	DATE REQUIRED:	SERVICE DATE: <u>1-15-79</u>	

### (A) GENERAL REQUIREMENTS SYSTEM

WPM <u>75</u>	BAUD	PALLET LAYOUT <u>A</u>	STYLE <u>elite GTH</u>	H. TAB CHAR	V. TAB CHAR
CKT CALL	KBD LAYOUT <u>A</u>	<input type="checkbox"/> U/S SPACE	FFO CHAR	BELL CHAR	
INVITE INITIATE	EOA	EOM <u>FIG HLTR</u>	<input checked="" type="checkbox"/> H. DUX	<input type="checkbox"/> F. DUX	
BDCST CALL	EOT	SLA			

### (B) SPECIFIC DROP REQUIREMENTS

	(1) DROP NUMBER <u>AA</u>	(2) DROP NUMBER	SPECIAL INSTRUCTIONS
1	CITY LOCATION	<u>BELVIDERE ILL</u>	<u>SS-1315</u> <u>1317</u> <u>1318</u>
2	CIRCUIT NUMBER	<u>CW-3</u>	
3	CLASS OF OPERATION	<u>POLAR</u>	
4	ARRANGEMENT NUMBER		
5	BASIC EQUIPMENT <u>M2B</u>	<u>ASRIC</u>	
6	SELECTOR <u>1170B</u>	<u>✓</u>	
7	11288 CABINET		
8	SSC	<u>RC</u>	
9	ITS	<u>EC</u>	
10	12509 M.K.(B.I.)		
11	12510 M.K.(ARC)		
12			
13	TIME SWITCH/MCU		
14	PAPER WINDER/DISPLAY RACK		
15	PAPER SUPPLY BOX		
16	R.H. COPY HOLDER		
17	LOW PAPER	<u>✓</u>	
18	ANSWERBACK CODE		
19	FFO SIZE		
20	PLATEN TYPE SIZE	<u>FF 8 1/2</u>	
21	EOLI MARGIN	<u>65 72</u>	
22	H. TAB STOPS		
23	CHAR/INCH	<u>12</u>	
24	V. TAB STOPS		
25	VERT. LINES/INCH		
26	XD CONTROL		
27	FORM STRIP M.K.		
28	PAPER JAM M.K.		
29	XSCVR/D.S.		
30			
31			
UNIT CODE			

DRP	SHIP TO ADDRESS	DATE STARTED	DATE COMPLETED
(1)	<u>12240 Mgr Sel Shop</u> <u>427 So. La Salle St</u> <u>Chicago Ill 60605</u>		
	ROUTING:	DAILY CHARGES	
		ABW	TOTAL
		APP	
		QC	
(2)		CHARGE REPAIRS TO S.O. <u>05-039911-81</u>	
		ABW	
		APP	

SYSTEM SHOP MANUFACTURING INSTRUCTIONS

PATRON <u>Chicago Northwestern</u> ARR. OR DESCRIPTION <u>M28 KSR WITH 9100 W.C.</u>	<input checked="" type="checkbox"/> - A & W <input type="checkbox"/> - APP	SECTION <u>1</u> SHEET <u>1</u> OF <u>4</u> DATE <u>10-1-75</u>
---	---	---

AA

MATERIAL REQUIREMENTS FOR ASSEMBLY OF M28 KSR

- 1 - M28 KSR CONSOLE
- 1 - 9100 WIRING CABINET W/MOUNTING STUDS
- 1 - 202 RELAYS
- 1 - POWER CORD 182510
- 1 - SIGNAL CORD 900643
- 1 - W.U. NAME PLATE 901230
- 2 - 4/40 3/16" F.H.M.S.

MISCELLANEOUS ITEMS

- 3 - RED TERMINAL LUGS
- 2 - SOLDERLESS LUGS
- 2 - CORD GRIPS #112

# SYSTEM SHOP MANUFACTURING INSTRUCTIONS

PATRON \_\_\_\_\_  
 ARR. OR DESCRIPTION M28 KSR WITH 9100 W.C.

- A & W  
 - APP

SECTION 1  
 SHEET 2 OF 4  
 DATE 10-1-75

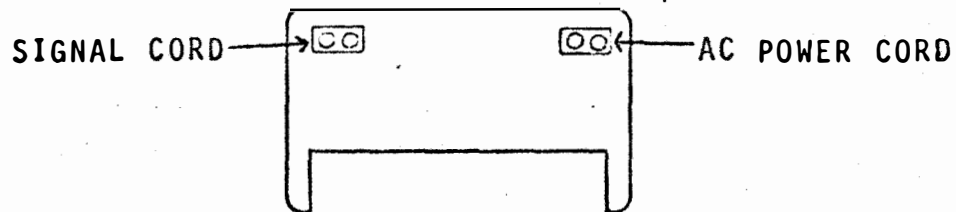
## 1. MODIFICATION AND MOUNTING OF THE FOLLOWING EQUIPMENT

### A. MATERIAL REQUIRED

- 1 - W.U. NAME PLATE 901230
- 2 - 4/40 3/16" F.H.M.S.
- 1 - POWER CORD 182510
- 1 - SIGNAL CORD 900643
- 2 - CORD GRIPS #112

B. USE W.U. NAME PLATE 901230 AS TEMPLATE ON COPYHOLDER, DRILL AND TAP FOR 4/40 SCREW. MOUNT WITH 4/40 3/16" F.H.M.S.

C. MOUNT CORD GRIPS IN BASE OF CONSOLE - ONE ON THE RIGHT SIDE AND ONE ON THE LEFT AS SHOWN BELOW.



D. INSERT CABLES AS SHOWN ABOVE. EXTEND TO "C" BLOCK. TIGHTEN CORD GRIPS (DO NOT CONNECT WIRES).



# SYSTEM SHOP MANUFACTURING INSTRUCTIONS

PATRON \_\_\_\_\_  
 ARR. OR DESCRIPTION M28 KSR WITH 9100 W.C.

- A & W  
 - APP

SECTION 1  
 SHEET 3 OF 4  
 DATE 10-1-75

## STRAPPING OF "C" BLOCK, WIRING OF CABLES

### A. MATERIAL REQUIRED

- 1 - 9100 WIRING CABINET W/MOUNTING STUDS
- 3 - RED SPADE LUGS
- 2 - SOLDERLESS TERMINAL LUGS

### B. MODIFICATION OF 9100 WIRING CABINET

STRAP TS1-2 TO TS1-3

### C. INSERT 202 RELAY ON WIRING CABINET

### D. MOUNT 9100-C WIRING CABINET IN M28 RO W/STUDS PROVIDED

### E. INSTALL EXTERNAL HANDLE TO POWER SWITCH

### F. CONNECT CABLES FROM 9100-C WIRE CABINET AS FOLLOWS:

<u>LEFT CABLE</u>	
<u>"C" BLOCK</u>	<u>COLOR</u>
1	PURPLE
2	WHITE
3	BROWN
4	RED
5	BROWN GRAY
6	ORANGE
7	BLACK
8	GREEN
9	PURPLE
10	GRAY
11	BROWN
12	ORANGE
13	RED
14	BLUE
15	YELLOW
16	PURPLE
17	RED
18	RED
19	ORANGE
20	GRAY

<u>RIGHT CABLE</u>	
<u>"C" BLOCK</u>	<u>COLOR</u>
21	GRAY
22	ORANGE YELLOW
23	WHITE YELLOW
24	BROWN BLACK
25	GRAY
26	GREEN
27	BLUE
28	PURPLE PURPLE
29	BROWN
31	WHITE
32	GREEN
33	ORANGE
34	GREEN
35	YELLOW
36	WHITE
37	BLACK BLACK
38	BLACK GREEN
39	BLACK
40	WHITE WHITE

# SYSTEM SHOP MANUFACTURING INSTRUCTIONS

PATRON _____ ARR. OR DESCRIPTION <u>M28 KSR WITH 9100 W.C.</u>	<input checked="" type="checkbox"/> - A & W <input type="checkbox"/> - APP	SECTION <u>1</u> SHEET <u>4</u> OF <u>4</u> DATE <u>10-1-75</u>
---	---	---

G. STRAP "C" BLOCK AS FOLLOWS: (22 GA SOLID WIRE EXCEPT AS INDICATED)

- 2-10-11
- 4-8-9
- 5-6
- 30-37 (#18 GA SOLID WIRE BLACK)
- 12-13

H. CONNECT A.C. CORD AND SIGNAL CORD TO "C" BLOCK

A.C. CORD (USE RED SPADE LUGS)

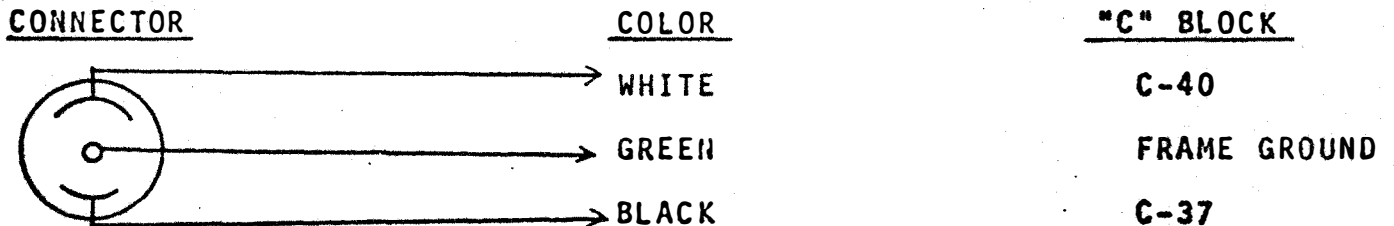
- BLACK - 39
- WHITE - 40
- GREEN - FRAME GROUND

SIGNAL CORD (USE SOLDERLESS TERMINAL LUGS)

- BLACK - C1
- WHITE - C2
- RED - TAPE BACK

**NOTE 1:**

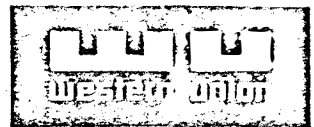
WHEN PAPER WINDER IS REQUIRED ADD A 6' 3 CONDUCTOR #18 GA CABLE WITH CONNECTOR 234825-902290 (TWIST LOCK FEMALE) INSERT CABLE THROUGH CORD GRIP AND WIRE AS FOLLOWS:



INSERT "R" AND "F" CONNECTOR IN CABLE HOLDER AND TIGHTEN CABLE HOLDER.

INSTALL PRINTER WITH STUDS PROVIDED. PLUG IN "R" AND "F" CONNECTORS.

# CUSTOMER SERVICE ORDER



PAGE **21** OF **127**      **770158-00**

LINE NO	ORDER NO.	AMEN	TYPE SVC	ACCOUNT NO.	D P S	OCO	RELATED ORDER	SALESMAN LOC.OFC	CUT OVER			
CIRCUIT/SERVICE NO.		CUSTOMER NO.		REG. OFC.	TIME	SERVICE DATE	FACILITIES	EQUIPMENT		INSTALLATION		
CUSTOMER BILLING NAME					CHANNEL TYPE	S/D	DAYS	HOURS OF SERVICE	T/Z	PRIOR REST	FCST	INTER INTRA
DESCRIPTION OF WORK & REMARKS								OTHER RELATED ORDER NOS.				

LINE NO	STATE, CITY	LOCATION	CITY	STATE	TRANS CODE	COMPLETION	AREA	DIST	TAX	SHIP TO/FR	REQ DATE	WHSE
AT10	480567	00005	WESTALLIS	WI	30	010378	66					
SERVICE NAME				TEL. NO.		ZIP CODE		EQUIPMENT		FACILITIES		
AT11	BOBS COIN & STAMPS			4145418650		53219						
SERVICE ADDRESS				CONTACT(S)			LOC. SERVICE NO.		P.I.			
AT12	8307 W BECHER STREET			ROBERT KOROSEC								
ANSWER BACK				COUNTY	TOWN	VILLAGE	SCHOOL	MISC.	TELCO			
CODE	LABOR	MATERIAL	O.D.	ACCOUNT								
<p style="text-align: right;"><b>CODES</b></p> <p>854 - 'A' ACCT      857 - 'D' ACCT              855 - 'B' ACCT      859 - BILLABLE-R.R. CONT.              856 - 'C' ACCT      860 - BILLABLE-3RD PARTY              861 - BILLABLE-OTHERS</p>												

ACTION	QUANTITY	STA DES.	DESCRIPTION	YEAR INSTL	MATERIAL NO.	S/SUB	SUR SAL	% WU	STR/ROOM	SUB
AT20	61	01	M28A ASR IC FF 75WPM							
AT21	61	01	M/D PAPER WINDER							
AT22	61	01	COPY DISPLAY RACK							
AT22	82	00	ITS BLANK EL CKT X-4987							

WU 1429 (R 12-70)

A1 A75

SYSTEM SHOPS  
TEST PROCEDURE

PATRON: PERSHING & CO

LOCATION: \_\_\_\_\_ ACO \_\_\_\_\_

TYPE OF EQUIPMENT:  
1 - M28C ASR-1C SET, 100 WPM WITH 11708A SOLID STATE SELECTOR PLAN 117B

- SPECIFICATIONS & DRAWINGS REQUIRED FOR TESTS:
- \*(NO NUMBER) TEXT SPECIAL INSTALLATION INSTRUCTIONS - ARRANGEMENT #1
  - SPEC. 14893-B PLAN 115B/PLAN 117B OUTSTATION - INSTALLATION (REFERENCE ONLY)
  - SPEC. 14795-B SOLID STATE SELECTOR 11708-B - THEORY & OPERATION
  - DWG. 508765-10 SSS 11708 - DIGITAL DECODER - THEORY & LOGIC - 5 LEVEL BAUDOT CODE.
  - \*DWG. 532132 PERSHING - PLAN 115/117 - SPLIT ASR - PROGRAM
  - \*DWG. 532134 PERSHING - SPLIT ASR - STRAPPING
  - \*DWG. **532133** PERSHING - PLAN 115/117 - SPLIT ASR - LOGIC SCHEMATIC
  - \*DWG. 525214 ELECTRONIC MOD. KIT 12509A - BLANK IDLING - SCHEMATIC
  - \*DWG. 525215 ELECTRONIC MOD. KIT 12510A - AUTO REQUEST COUNTER - SCHEMATIC.
  - \*DWG. 518180 STUNT BOX ARRANGEMENT

\*INDICATES COPIES TO BE ATTACHED AND SENT TO FIELD WITH SET.

ASSIGNED INVITATION TO SEND (ITS) -----"FIG S \_\_\_\_\_"

ASSIGNED STATION SELECTION (SSC) -----"W \_\_\_\_\_"

OUTSTATION TRANSMITTER DISCONNECT (EOT) -----"BLANK"

OUTSTATION PRINTER DISCONNECT (EOM) -----"FIG-H-LTR" (3 SEQUENTIAL

END OF ADDRESS (EOA) -----"SPACE"

FORM FEEDOUT CONTROL -----U/C "H"

BROADCAST CALL -----WQ

TEST NO.                      OUTSTATION CHECK LIST (CIRCLE NUMBER WHEN TEST COMPLETED)

- 1.----- CONNECT SEND (C3) & REC (C1) LEGS TO POLAR REPEATER.  
CONNECT TELEG. GND (C2). (LEG SWITCH ON 11707 WC SHOULD BE IN "NORMAL" POSITION).
- A)----- ADJUST SEND CURRENT (J5) R15 FOR 50 M.A.
- B)----- ADJUST REC. CURRENT (J2) R12 FOR 50 M.A.
- C)----- ADJUST BIAS (J4) R14 FOR 20M.A. (J4 READS POLARENTIAL CURRENT-NO BREAK WILL BE NOTED WHEN SENDING.)
- D)----- ADJUST LOCAL (J3) R13 FOR 70 M.A.

(NOTE--CABLE CONNECTOR ON THE 11707 WC IS CONSIDERED AS J1. THE FIRST JACK ON LEFT IS J2)

- 2.----- - - - USING A 260 MULTIMETER ADJUST OUTPUT VOLTAGE OF 11706B POWER SUPPLY FOR 12 VOLT POSITIVE (SY) AND NEGATIVE (SX).
- 3.----- - - - PLACE K-KT-T SWITCH IN "T" POSITION.
- 4.----- - - - CHECK 12154B OSC. CARD (POSITION A2A11) OUTPUT ON T.P. WITH HP5212A FREQ. COUNTER - FREQ. SHOULD READ 1780 CYCLES  $\pm$  5 CYCLES.
- 5.----- - - - REFERRING TO DWG. 508767, **508765** AND USING A TEKTRONIC **561 SCOPE**:
- A)----- - - - CHECK OPERATION OF BINARY COUNTER AT TEST POINTS TP2 THRU TP18 WHILE KEYING RECEIVE LINE WITH EXTERNAL KEYBOARD.
- B)----- - - - CHECK MARKING AND SPACING BUSSES OF CHARACTER DECODER WHILE KEYING RECEIVE LINE WITH EXTERNAL KEYBOARD.
- C)----- - - - REFERRING TO DWG. 532132 AND THE FOLLOWING CHART CHECK OPERATION OF THE UNIVERSAL FUNCTION CARDS. (SEE CHART - NEXT PAGE)
- 6.----- - - - ADJUST ANSWER BACK CARD (POSITION A1A13 TOP POT) TO SEND "V". KEY ANSWER BACK LOGIC WITH "SSC" OR "ITS" WITH NO REQUEST.
7. A)----- - - - TO SET BLANK IDLING MOD KIT 12509 FOR IDLING - PREPARE TAPE WITH 10 LTRS AND 20 BLANKS. PLACE TAPE IN XTR WITH LTRS OVER PINS. PLACE XTR CONTROL SW. IN RUN POSITION. THROW REQUEST SWITCH TO "AUTO" POSITION. **SEND SPACE, SEND ITS** - XTR SHOULD SEND LTRS AND DISCONNECT ON FIRST BLANK. XTR SHOULD IDLE BLANKS FOLLOWING THE EOT UNTIL TAPE OUT PIN OPERATES.
- B)----- - - - WITH REQUEST SWITCH IN "AUTO" POSITION - INSERT BLANK TAPE IN XTR. XTR SHOULD IDLE BLANKS AS SOON AS THE XTR CONTROL SW. IS THROWN TO THE RUN POSITION.
- C)----- - - - REPEAT TEST 7B EXCEPT END TAPE WITH LTRS--XTR SHOULD IDLE UP TO THE FIRST LTRS AND STOP.
8. A)----- - - - CHECK "AUTO REQUEST COUNTER" - NO TAPE IN XTR - CONTROL SW. IN FREE POSITION - IF REQUEST LAMP IS LIT THE COUNTER HAS MESSAGE(S) STORED, TO CLEAR-DEPRESS THE BREAK SUBT KEY SEVERAL TIMES IF NECESSARY UNTIL REQUEST LAMP IS EXTINGUISHED. THIS CLEARS THE ARC OF ALL MESSAGES.
- B)----- - - - SEND "FIG-H-LTR" TEN TIMES FROM ASR KEYBOARD. PERFORATOR CONTACTS WILL OPERATE EACH TIME SENT AND STORES A MESSAGE IN THE ARC. THE MAX MSG LAMP SHOULD LITE WHEN THE TENTH EOM IS SENT.
- C)----- - - - DEPRESS THE BREAK SUBT KEY AND THE MAX MSG LAMP SHOULD BE EXTINGUISHED. DEPRESS THE KEY THREE MORE TIMES. SEND EOM FOUR TIMES AND MAX MSG LAMP SHOULD RE-LITE.
- D)----- - - - DEPRESS THE BREAK SUBT KEY TEN TIMES AND REQUEST LAMP SHOULD BE EXTINGUISHED TO CLEAR THE ARC. (TEST FOR AUTO SUBTRACTION OF THE ARC WILL BE MADE IN CONJUNCTION WITH OTHER TEST LATER).

CHECK	CARD CODE	SLOT #	TEST PTS.	LOGIC STATE		LOGIC TIMING <input type="checkbox"/> =MOMENTARY <input type="triangle"/> =ONE CHAR LATCH <input type="square"/> =CAPACITOR LATCH <input type="square"/> =LATCH TO	LOGIC DESCRIPTION
				NON OPR	OPR		
	W	16	A20 A21	+ -	- +	<input type="checkbox"/> EOA SELECT MODE ONLY	STOPS XTR IF SENDING. UNBLOCKS UFC #17-18-20 ICW SSC.
	*	17	A22 A23	+ -	- +	<input type="checkbox"/> EOM	PREPARES GATE FOR PRINT MODE.
	*	18	A24 A25	+ -	- +	<input type="square"/> 25 MFD	GENERATES "V" ANSWER BACK.
	**	19	A26 A27	+ -	- +	<input type="checkbox"/> EOM	(2ND CHAR OF CORRSP BCST) PREPARES GATE FOR PRINT MODE.
	Q	20	A28 A29	+ -	- +	<input type="checkbox"/> EOM	PREPARES GATE FOR PRINT MODE.
	SP	21	A30 A31	+ -	- +	<input type="checkbox"/> EOM	SHIFTS DECODER TO NON-SELECT MODE RELEASES UFC #16. ENABLES PRINT MODE IF RECD AFTER SSC.
	FIG.	22	A32 A33	+ -	- +	<input type="triangle"/>	UNBLOCKS UFC #23-24-27 (1ST CHAR. OF EOM ITS OR SLA)
	H	23	A34 A35	+ -	- +	<input type="triangle"/>	UNBLOCKS UFC #28 (2ND CHAR. OF EOM)
	S	24	A36 A38	+ -	- +	<input type="triangle"/>	UNBLOCKS UFC #25 & 26. DISABLES PRINT MODE. (2ND CHAR OF ITS)
	*	25	A39 A40	+ -	- +	<input type="square"/> 25 MFD.	STARTS XTR IF REQUEST MADE. GENERATES "V" ANS. BACK IF NO RE- QUEST MADE. RELEASES AUTO RE- QUEST FOR ONE CHAR.
	*	26	A41 A42	+ -	- +	<input type="circle"/>	SUBTRACTS ONE MESSAGE FROM "AUTO REQUEST" COUNTER IF TAPE IN XTR AND XTR SENDS.
	S	27	A43 A44	+ -	- +	<input type="circle"/>	RESETS REQ & SEND FLIP-FLOPS SETS ALARM FLIP-FLOP (SEND MODE ONLY)
	LTR	28	A45 A46	+ -	- +	<input type="circle"/>	RELEASES UFC #17-19-20-21 (3RD CHAR OF EOM)
	**	29	A47 A48	+ -	- +	<input type="triangle"/>	UNBLOCKS UFC #19 (1ST CHAR OF CORRSP BCST)
		30	A49 A50	+ -	- +		NOT USED

\* CODE FOR SECOND CHARACTER OF ITS OR SSC.  
 \*\* CODE FOR CORRSP BCST

- 9.----- - - - PREPARE A TEST TAPE - LTR SP RYRYRYR--RYRYRY CR LF (WORD TEST) FIG H LTR 15 BLANKS (REPEAT SAME TEST ETC.). PLACE TAPE IN XTR. (THE ARC SHOULD NOW HAVE TWO MESSAGES STORED--REQUEST LAMP SHOULD BE LIT WITH THE REQUEST SW IN NORMAL POSN.)
- A)----- - - - PUT XTR CONTROL SW IN RUN POSN.
- B)----- - - - SEND ITS FROM EXTERNAL KEYBOARD - SEND LAMP SHOULD LITE AND MESSAGE BE SENT.
- C)----- - - - SEND LAMP SHOULD BE EXTINGUISHED AFTER THE CHARACTER "BLANK" IS TRANSMITTED. THE REQUEST LAMP SHOULD REMAIN LIT.
- D)----- - - - XTR SHOULD IDLE THE BLANKS BETWEEN MESSAGES UP TO THE NEXT MARKING CHARACTER (LTR).
- E)----- - - - REPEAT TEST 9B & 9C--REQUEST LAMP SHOULD BE EXTINGUISHED AFTER THE LAST EOT IS SENT.
- F)----- - - - XTR DOES NOT IDLE REMAINING BLANKS IN TAPE.
- G)----- - - - GIVE MANUAL REQ.- WHILE XTR IS IDLING BLANKS SEND ITS, SHOULD RECEIVE "V" ANS BACK.
- 10.----- - - - SINCE THE ARC IS NOW CLEAR - THROW THE REQUEST SW TO AUTO POSITION AND REPEAT TEST 9A, B, C, D, E, & F. DURING TRANSMISSION OF THE LAST TEST RESTORE THE REQUEST SW TO ITS NORMAL POSITION TO EXTINGUISH THE REQUEST LAMP AFTER THE LAST TEST IS SENT. REPEAT THIS TEST SEVERAL TIMES.
- 11.----- - - - REPEAT TEST 10--WHILE XTR IS SENDING LIFT THE TITE TAPE ARM-XTR SHOULD STOP AND ALARM CONDITION APPEAR. SEND LAMP SHOULD REMAIN LIT. (THROW ALARM SWITCH TO CHECK AUDIBLE ALERT). SEND FIG S TO EXTINGUISH THE SEND LAMP. RELEASE THE ALARM SIGNAL WITH THE ALARM SW.
- 12.----- - - - REPEAT TEST 10--WHILE XTR IS SENDING - SEND FIG S BL (SLA) FROM EXTERNAL KEYBOARD - XTR SHOULD STOP AND ALARM CONDITION APPEAR SAME AS TEST 11 EXCEPT ONLY THE ALARM LAMP SHOULD BE LIT. RELEASE THE ALARM WITH THE ALARM SW AND RESET THE TAPE. (REQUEST LAMP WILL REMAIN LIT ACCOUNT SW IS IN AUTO POSITION.)
- 13.----- - - - RESET TAPE & REPEAT TEST 10--WHILE XTR IS SENDING SEND EOM "W" FROM EXTERNAL KEYBOARD-XTR SHOULD STOP-SEND "SP" XTR SHOULD RESTART. CLEAR "SP" BY SENDING EOM (FIG-H-LTR) FROM EXTERNAL KEYBOARD. REPEAT THIS TEST SEVERAL TIMES.
- 14.----- - - - SEND SSC (WITH ALL SWITCHES NORMAL) FROM EXTERNAL KEYBOARD-ANSWER BACK "V" SHOULD BE RECEIVED IF ASR HAS PAPER.
15. A)----- - - - REPEAT TEST 14--REMOVE PAPER ROLL FROM PRINTER-ALARM LAMP SHOULD LITE AND NO ANSWER BACK SHOULD BE RECEIVED. SEND SP SELECTOR SHOULD NOT GO INTO PRINT MODE. SEND EOM TO CLEAR.
- B)----- - - - REPEAT TEST 15A, BUT SEND ECST CALL INSTEAD OF SSC. SELECTOR SHOULD GO INTO PRINT MODE.
- C)----- - - - REPEAT TEST 15A, BUT SEND CORRSP BCST CALL INSTEAD OF SSC. SELECTOR SHOULD GO INTO PRINT MODE.

- 16.----- REPEAT TEST 14-THROW OUT OF SVC SW-NO ANSWER BACK SHOULD BE RECEIVED AND ALARM LAMP SHOULD BE LIT. RELEASE OUT OF SVC SW.
- 17.----- REPEAT TEST 14-TURN ASR POWER SWITCH OFF-NO ANSWER BACK SHOULD BE RECEIVED AND ALARM LAMP SHOULD BE LIT. TURN POWER BACK ON
18. A)----- SEND ITS WITH OUT OF SVC SW THROWN-ANSWER BACK SHOULD BE RECEIVED.-RELEASE OUT OF SVC SW  
 B)----- SEND ITS WITH ASR POWER SWITCH OFF-ANSWER BACK SHOULD BE RECEIVED.-TURN POWER BACK ON
- 19.----- REPEAT TEST 14-SEND "SP" AFTER ANSWER BACK IS RECEIVED. ASR PRINTER SHOULD NOW COPY ALL AFTER SPACE.
- 20.----- CONTINUE WITH TEST 19-SEND "FIG" TO PLACE PRINTER IN UPPER CASE-SEND ITS FROM EXTERNAL KEYBOARD-PRINTER SHOULD NOT COPY CYCLING CHARACTER-CONTINUE WITH TEST-PRINTER SHOULD HAVE REMAINED IN UPPER CASE.
21. A)----- CONTINUE WITH TEST 19-SEND "LTR" TO PLACE PRINTER IN LOWER CASE-SEND ITS-PRINTER SHOULD NOT COPY CYCLING CHARACTERS-CONTINUE WITH TEST-PRINTER SHOULD HAVE REMAINED IN LOWER CASE.  
 B)----- CONTINUE WITH TEST 19-SEND "FIG" TO PLACE PRINTER IN UPPER CASE-SEND "SP"--PRINTER SHOULD SHIFT TO LOWER CASE. DISCONNECT PRINTER BY SENDING EOM (FIG-H-LTR). PRINTER SHOULD FEEDOUT PAPER ON EOM (FIG-H).
- 22.----- PREPARE TEN SHORT TEST IN CONTINUOUS TAPE-10 LTR SP RYRY--RYRY CR LF FIG H LTR 10 BLANKS ETC. EACH EOM SHOULD STORE A MESSAGE IN THE ARC SO THAT MAX MSG LAMP WILL BE LIT AFTER THE TENTH TEST IS PREPARED. ALL SWITCHES SHOULD BE IN NORMAL POSITIONS. REQUEST LAMP SHOULD BE LIT.  
 A)----- PLACE TAPE IN XTR-CONTROL SW TO RUN POSITION-SEND ITS-FIRST TEST SHOULD BE SENT. AFTER EOT IS SENT XTR WILL IDLE TO NEXT MESSAGE. REPEAT ITS ETC., FOR TEN MESSAGES. AFTER LAST MESSAGE IS SENT THE REQUEST LAMP WILL BE EXTINGUISHED. THE MAX MSG LAMP SHOULD HAVE BEEN EXTINGUISHED AFTER THE FIRST ITS WAS SENT.  
 B)----- USING ONE OF THE TEST UNDER TEST 22A--INITIATE A REQUEST WITH REQUEST SW-SEND ITS-WHILE XTR IS SENDING-OPEN THE RECG. LEG--XTR SHOULD STOP-REQUEST LAMP SHOULD BE EXTINGUISHED-SEND LAMP SHOULD BE EXTINGUISHED--ALARM LAMP SHOULD BE LIT. RELEASE ALARM WITH ALARM SW.
- 23.----- USING LONG TEST TAPE-TAKE BIAS AND DISTORTION READING IN SEND JACK (J5).  
 BIAS \_\_\_\_\_%      DIST'N \_\_\_\_\_%
- 24.----- REPEAT TEST 18 AND 19 TO CUT IN THE ASR PRINTER. USING A 7399 BIAS DISTORTION TEST SET-SEND LONG TEST TO PRINTER AND TAKE RANGE. LOW \_\_\_\_\_ HIGH \_\_\_\_\_ (MINIMUM 70 POINTS).



25. A)----- - - - THROW 11707 WC LEG SWITCH TO BUST BACK. CAUTION- THIS POSITION SHOULD NEVER BE USED FOR PLAN 117 OPERATION.  
 B)----- - - - SEND & REC LINES SHOULD BE BUSTED BACK.  
 C)----- - - - SEND & REC LEGS SHOULD BE BUSTED BACK.
26. A)----- - - - THROW 11707 WC LEG SWITCH TO LOCAL.  
 B)----- - - - SEND LINE (J5) SHOULD BE CLOSED TO 120V NEG AT R6.  
 C)----- - - - REC LINE SHOULD BE CLOSED TO GROUND. (CHECK AT SWBD AS NO JACK IS AVAILABLE IN SET FOR THIS CHECK).  
 D)----- - - - SEND & REC LEGS SHOULD BE BUSTED BACK.
- 27.----- - - - CHECK KEYBOARD FUNCTIONS, EOLI, BACK SPACER, ETC., TO INSURE ALL ARE WORKING CORRECTLY. SEND & REC KEYS SHOULD BE DISABLED. RECHECK ALL THESE FUNCTIONS AFTER THE CONSOLE WRAP AROUND IS INSTALLED.
- 28.----- - - - CHECK TYPEBOX TO INSURE PALLETS MATCH KEYBOARD. KEY-LEVER "S" SHOULD BE BLANK ON UPPER CASE.
29. A)----- - - - THE KEYBOARD CAN BE USED TO SEND A CYCLING CHARACTER AS FOLLOWS:  
 REPEAT TEST 26.. PLACE K-KT-T SWITCH IN K POSITION. THROW MAINT SWITCH TO MAINT ON POSITION. WITH TAPE IN XTR AND SINGLE REQUEST MADE-SEND SSC & SPACE TO CUT IN PRINTER. SEND ITS-XTR SHOULD SEND AND DISCONNECT AFTER EOT. INITIATE ANOTHER SINGLE REQUEST AND THE XTR SHOULD IDLE THE REMAINING BLANKS TO END OF TAPE.  
 B)----- - - - RESTORE LEG SWITCH TO NORMAL POSITION. RESTORE K-KT-T SWITCH TO T POSITION--REMOVE KNOB AND PLUG SHAFT HOLE. RESTORE MAINT SW TO NORMAL ON POSITION.
30. A)----- - - - CHECK OPERATION OF TIME CLOCK.

ENCLOSE THIS TEST AND DRAWINGS MENTIONED WITH THIS SET.

INITIALS OF EMPLOYEE MAKING TESTS \_\_\_\_\_

DATE \_\_\_\_\_



# SYSTEM SHOP PROJECT WORK ORDER

ATTACHMENTS PAGES 20

DATE 2-10-78  
ISSUE 1  
SHEET 1 OF 1

TO SYSTEM SHOP: ALLENTOWN, PA.  DALLAS, TEXAS

PATRON: AUTEX (DIVN ITEL) CSO/PROJ. 30-77015-B AMEND T

DATE ISSUED: \_\_\_\_\_ DATE REQUIRED: ASAP SERVICE DATE: VARIOUS

### (A) GENERAL REQUIREMENTS SYSTEM

WPM <u>75</u>	BAUD	PALLET LAYOUT <u>A</u>	STYLE <u>MURRAY</u>	H. TAB CHAR	V. TAB CHAR
CKT CALL	KBD LAYOUT <u>A</u>	<input type="checkbox"/> U/S SPACE	FFO CHAR	BELL CHAR <u>UcS</u>	
INVITE INITIATE	EOA	EOM	<input checked="" type="checkbox"/> H. DUX	<input type="checkbox"/> F. DUX	
BDCST CALL	EOT	SLA			

DISABLE - SEND, REC, BRKAR KEYS      APOSTROPHY ON U/C J  
CAP HOLES - " " " "      BELL ON U/C S (CLIPPED)

### (B) SPECIFIC DROP REQUIREMENTS

	(1) DROP NUMBER	(2) DROP NUMBER	SPECIAL INSTRUCTIONS
1 CITY LOCATION	<u>PER LIST</u>		<u>SS-2479 STUNT BOX.</u> <u>SS-2480 SCHEMATIC.</u>
2 CIRCUIT NUMBER	<u>VARIOUS LIST</u>		
3 CLASS OF OPERATION	<u>LOOP OR AZ</u>		
4 ARRANGEMENT NUMBER			<b>TEST NOTES:</b> 1. SET SW TO "T" POSN ON ALL DROPS EXCEPT - AF, BZ, DF, DY. ON THESE DROPS TEST IN "T" THEN SET TO "K". ON ALL SETS REMOVE KNOB & CAP HOLE  2. PTR ON LINE ALL TIME. LXD IS PULLED KBD TO PERF LOCAL EXCEPT AS PER NOTE 1.
5 BASIC EQUIPMENT	<u>M2B ASRIC</u>		
6 SELECTOR			
7 11288 CABINET			
8 SSC			
9 ITS			
10 12509 M.K.(B.I.)			
11 12510 M.K.(ARC)			
12			
13 TIME SWITCH/MCU			
14 PAPER WINDER/DISPLAY RACK	<u>LPW300 W/RACK</u>		<b>A&amp;W. ATTACH AUTEX &amp; WU LABEL PER SPECIAL INST.</b>
15 PAPER SUPPLY BOX			
16 R.H. COPY HOLDER			
17 LOW PAPER			
18 ANSWERBACK CODE			
19 FFO SIZE			
20 PLATEN TYPE	<u>FF 8 1/2</u>		
21 EOLI	<u>MARGIN 65 72</u>		
22 H. TAB STOPS			
23 CHAR/INCH	<u>10</u>		
24 V. TAB STOPS			
25 VERT. LINES/INCH	<u>6</u>		
26 XD CONTROL			
27 FORM STRIP M.K.			
28 PAPER JAM M.K.			
29 XSCVR/D.S.			
30			
31			
UNIT CODE	<u>040</u>		

DRP	SHIP TO ADDRESS	DATE STARTED	DATE COMPLETED
(1)	<u>See ATTACHED LISTING</u> <u>PAGES 1 thru 20.</u> <u>See A&amp;W CLERK SPECIAL INST.</u> ROUTING:	DAILY CHARGES	
		ABW	TOTAL
(2)	ROUTING:	CHARGE LABOR & MTL TO PROJECT	
		ABW	TOTAL

PATRON AUTEX  
 ARR. OR DESCRIPTION N28 ASR W/9797 W.C.

- A I W  
 - APP

SECTION 1  
 SHEET 3 OF 3  
 DATE 9-4-75

7. MOUNT TWO CORD GRIPS ON RIGHT MOUNTING PLATE IN BASE OF ASR. INSERT A.C. POWER CORD AND SIGNAL CORD THROUGH CORD GRIPS WIRE TO "C" BLOCK AS FOLLOWS:

**AC POWER CORD**

WHITE TO C40  
 BLACK TO C39  
 GREEN TO FRAME GROUND

USE RED SPADE LUGS

**SIGNAL CORD**

BLACK TO C1  
 WHITE TO C2  
 RED TO C6

USE SOLDERLESS LUGS

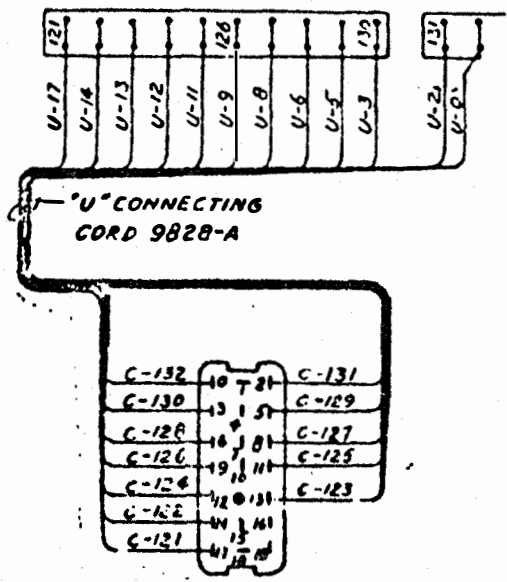
8. INSTALL EXTERNAL HANDLE TO 9797 WIRE CABINET FOR POWER SWITCH.
9. INSTALL PRINTER AND TRANSMITTER. CONNECT "U", "R" AND "F" CONNECTORS TO TRANSMITTER AND PRINTER.

FROM AUTEX  
 ARR. OR DESCRIPTION N28 ASR W/9797 W.C.

- A (W)  
 - APP

SECTION 1  
 SHEET 2 OF 3  
 DATE 9-4-75

1. BELL WIRES ARE TO BE ON  
 C-29  
 C-30
  
2. E.O.L. LAMP AND COPY LIGHT SWITCH ARE TO BE ON "C" BLOCK  
 AS FOLLOWS:  
  
 BLACK C36  
 WHITE C37  
 BLUE C38  
 RED C144
  
3. STRAP "C" BLOCK AS FOLLOWS: (USE #22 GA SOLID WIRE)  
  
125-31  
 126-127  
 128-129  
 130-149  
139-32  
  
 140-150 #18 GA SOLID WIRE WHITE  
 143-146-147-148  
4-132-136  
 5-8-9  
 10-11-131  
 13-15  
7-12  
6-135
  
4. CHECK ALL STRAPS IN 9797 WIRING CABINET PER SPEC 12498, DWG. 237643  
 OR DWG. 241034.
  
5. MOUNT 9797 WIRING CABINET WITH STUDS PROVIDED AND WIRE TO  
 "C" BLOCK PER DWG. 237643
  
6. WIRE TO "U" CONNECTOR TO "C" BLOCK. SEE BELOW:



10/4/100

SYSTEM SHOP MANUFACTURING INSTRUCTIONS

PATRON AUTEX  
 ARR. OR DESCRIPTION M28 ASR W/9797 W.C.

- A I W  
 - APP

SECTION 1  
 SHEET 1 OF 3  
 DATE 9-4-75


AT

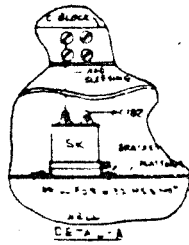
MATERIAL REQUIRED FOR M28 ASR

- 1 - M28 ASR
- 1 - 9797 WIRING CABINET
- 1 - 9828 "U" CORD
- 1 - 182510 POWER CORD
- 1 - 900643 SIGNAL CORD
- 1 - 202 RELAY
- 2 - CORD GRIPS #112
- 3 - SOLDERLESS TERMINAL LUGS
- 8 - RED SPADE LUGS
- 4 - 8/32 R.H.M.S.
- 4 - 8/32 SHAKEPROOF WASHERS
- 4 - 8/32 NUTS

NOTE 1:

WHEN PAPER WINDER IS REQUIRED ADD A 6' 3 CONDUCTOR #18 GA CABLE WITH CONNECTOR 234825-902290 (TWIST LOCK FEMALE) INSERT CABLE THROUGH CORD GRIP AND WIRE AS FOLLOWS:

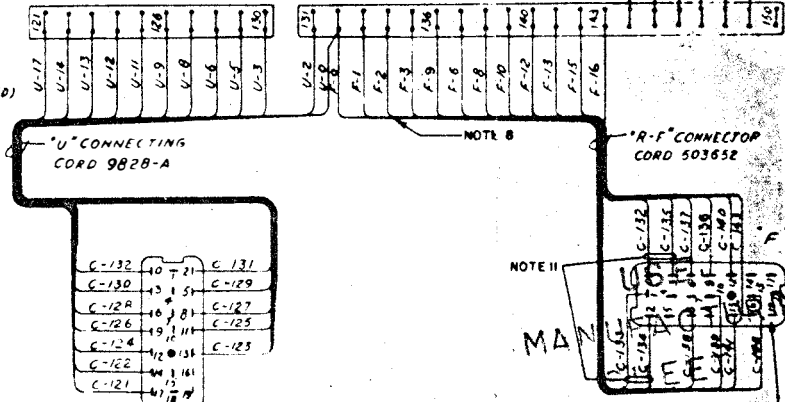
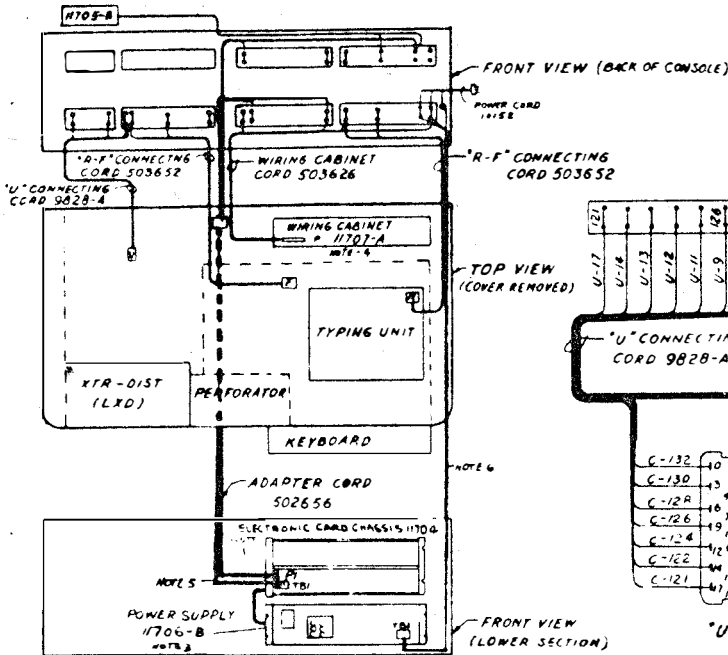
<u>CONNECTOR</u>	<u>COLOR</u>	<u>"C" BLOCK</u>
	WHITE	C-40
	GREEN	FRAME GROUND
	BLACK	C-37



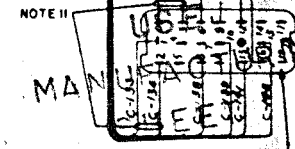
CONTROL PANEL 11705-B

NOTE 2

M-28 ASR SET

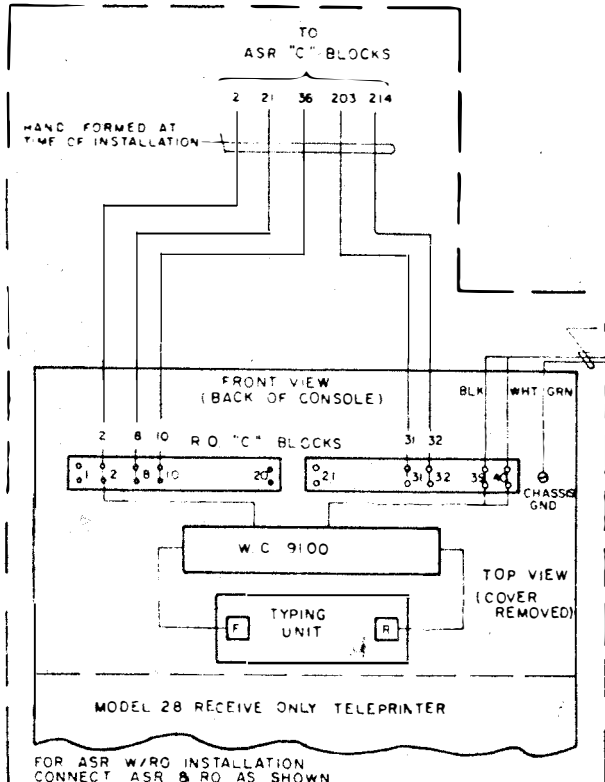


NOTE 8



NOTE 9

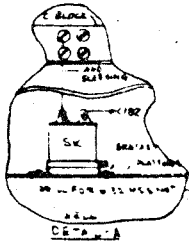
NOTE 5



- NOTES:
1. FOR ASB OF E.C. CHASSIS 11706 REFER TO SPEC 14359
  2. THIS CABLE COMES WITH CONTROL PANEL 11705 AND IS CONNECTED AS SHOWN - SPEC 14350
  3. FOR ASB OF THE POWER SUPPLY 11706-B REFER TO SPEC 14354
  4. FOR ASB OF THE WIRING CABINET 11707 REFER TO SPEC 14354
  5. THIS CORD PROVIDED AS PART OF E.C. CHASSIS 11704
  6. THIS CORD IS TO BE PROVIDED AT TIME OF INSTALLATION IF OUTSTATION SEE ITEM 21 OF I.E. 50794B
  7. FOR C TERMINAL STRAPPING SEE DWG 512403
  8. THIS CABLE NOT FORMED OUT IN ORDER
  9. TERMINALS SHOWN WITHOUT WIRES ARE SPARE WIRES TIED BACK IN CABLE.
  10. WIRES 4, 5 AND 6 OF CONTROL PANEL 11705 CABLE ARE NOT USED. THEY SHALL BE TAPED AND TIED BACK IN THE CABLE.
  11. FOR TYPE II INSTALLATION (A.S.R./R/O) SEE DWG. 11811, PARAGRAPH A-4.

- REFERENCE WIRING DRAWINGS-
- E.C. CHASSIS 11706 - DWG 502808 TRM 402812 503021 503029
  - CONTROL PANEL 11705 - DWG 504206
  - POWER SUPPLY 11706-B DWG 504291
  - WIRING CABINET 11707 - DWG 502625

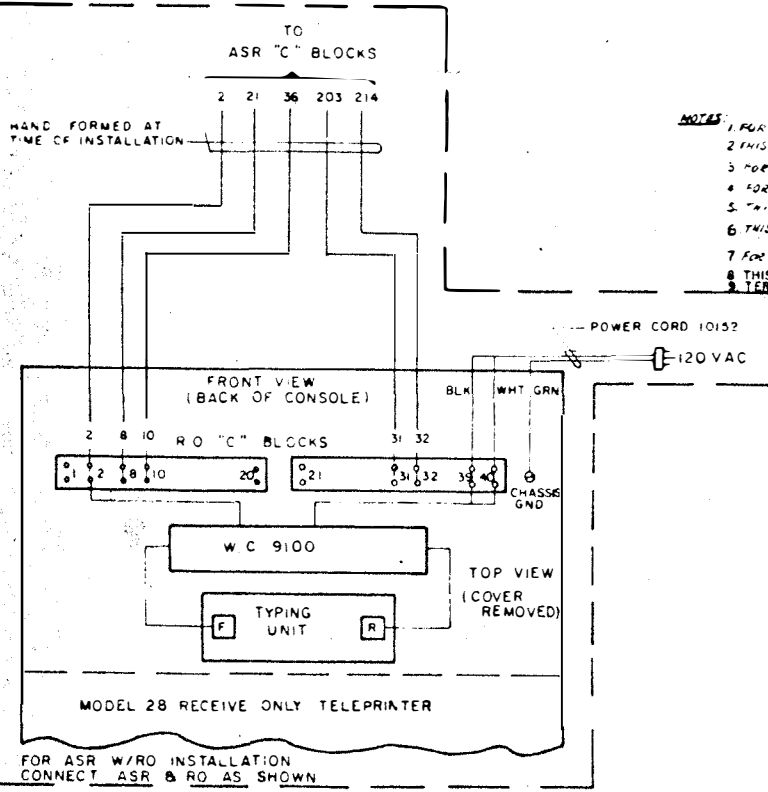
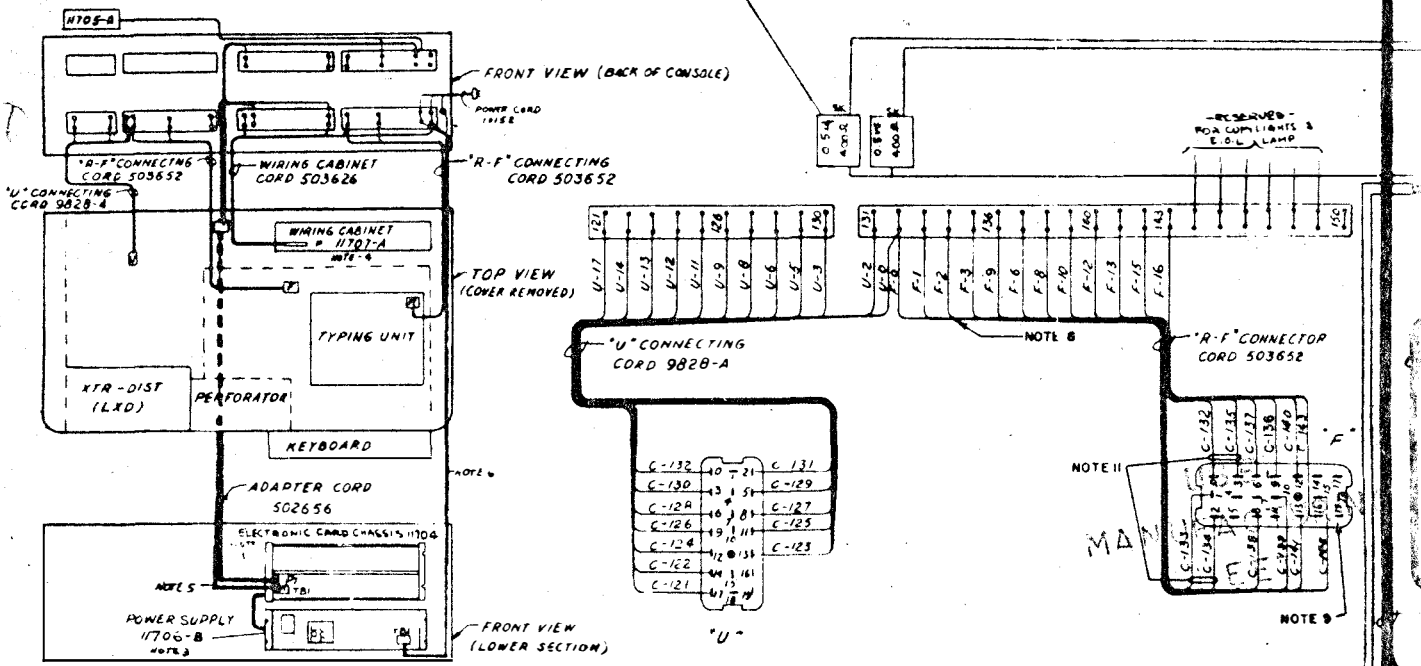
LITHO OF ENGINEERS SKETCH 505136-9



CONTROL PANEL  
11705-B

NOTE 2

M-28 ASR SET



- NOTES:
1. FOR ASW OF E.C. CHASSIS 11704 REFER TO SPEC 14359
  2. THIS CABLE COMES WITH CONTROL PANEL 11705 AND IS CONNECTED AS SHOWN SPEC 14350
  3. FOR ASW OF THE POWER SUPPLY 11706-B REFER TO SPEC 14350
  4. FOR ASW OF THE WIRING CABINET 11707 REFER TO SPEC 14354
  5. THIS CORD PROVIDED AS PART OF E.C. CHASSIS 11704
  6. THIS CORD IS TO BE PROVIDED AT TIME OF INSTALLATION OF OUTSTATION SEE ITEM 27 OF I.E.L. 50794B
  7. FOR C TERMINAL STRAPPING SEE DWG 512403
  8. THIS CABLE NOT FORMED OUT IN ORDER
  9. TERMINALS SHOWN WITHOUT WIRES ARE SPARE WIRES TIED BACK IN CABLE
  10. WIRES 4, 5 AND 6 OF CONTROL PANEL 11705 CABLE ARE NOT USED. THEY SHALL BE TAPED AND TIED BACK IN THE CABLE
  11. FOR TYPE II INSTALLATION (A.S.R./R/O) SEE DWG. 11811, PARAGRAPH A-4.

- REFERENCE WIRING DRAWINGS -
- E.C. CHASSIS 11704 - DWG 502808 TRV 402812 513-21 503-29
  - CONTROL PANEL 11705 - DWG 504206
  - POWER SUPPLY 11706-B - DWG 504391
  - WIRING CABINET 11707 - DWG 508695

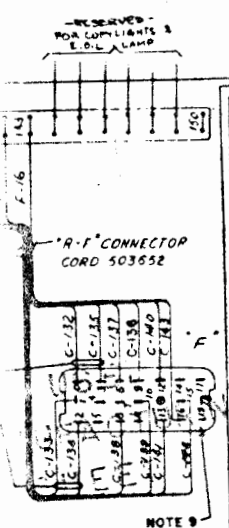
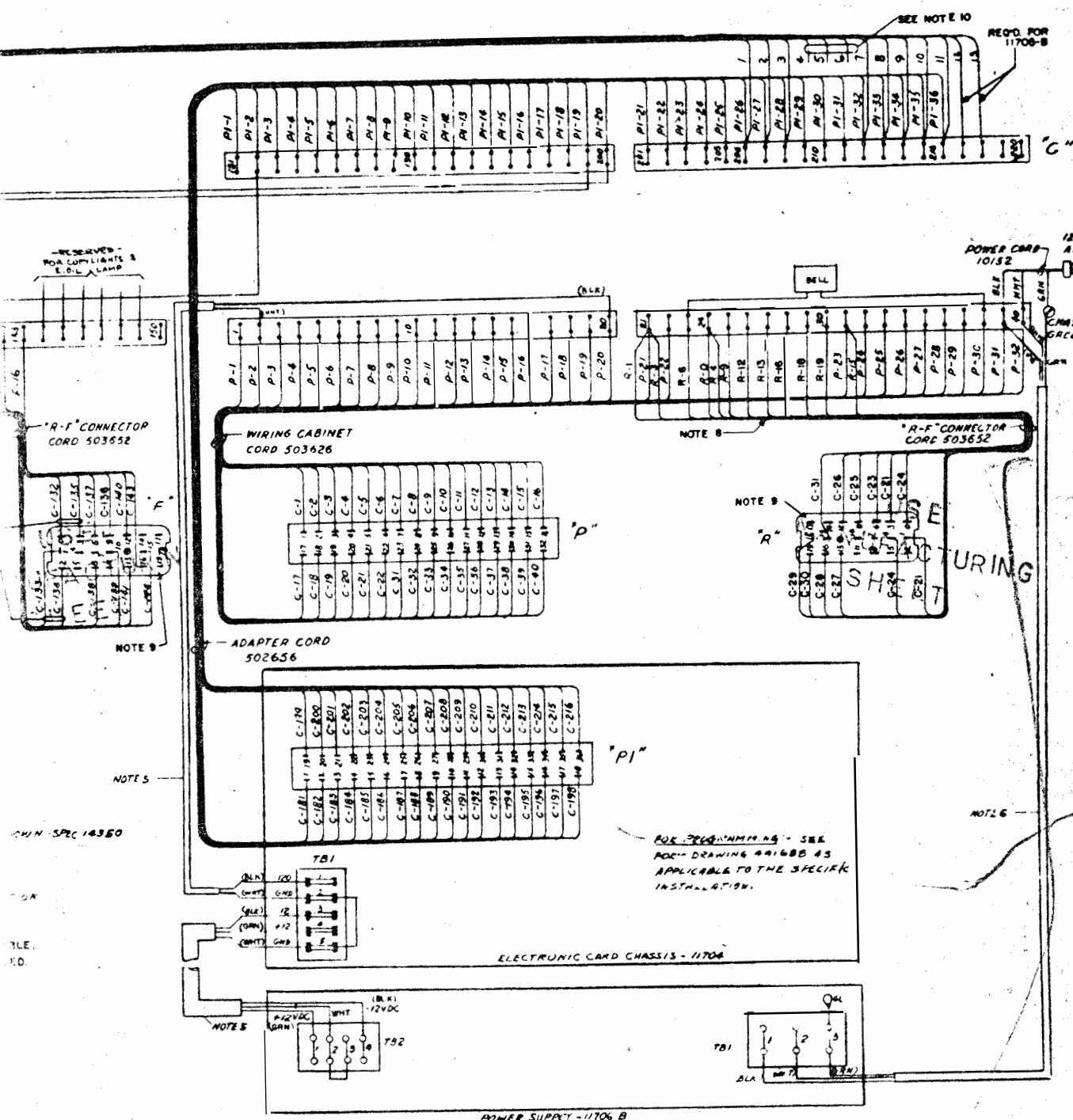
REVISIONS

8 DEC 65  
 LTNO OF 50536-90  
 APPROVED

15 DEC 65  
 TITLE ADDED TO ASR B RO. CABLING ADDED.  
 S.C.

JAN 66  
 REVISION

MAY 66  
 NOTES 10 AND 11 ADDED. WIRE #10 ON R.O. "C" BLOCK WENT TO #24 ON ASR "C" BLOCK. COLOURS OF WIRES ON TB1 (E.C.C.) AND T82 (POW SUPPLY) CHANGED



NOTE 5

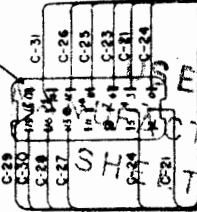
NOTE 9

NOTE 8

NOTE 6

NOTE 10

FOR TERMINALS - SEE FOR-DRAWING 44168B AS APPLICABLE TO THE SPECIFIC INSTALLATION.

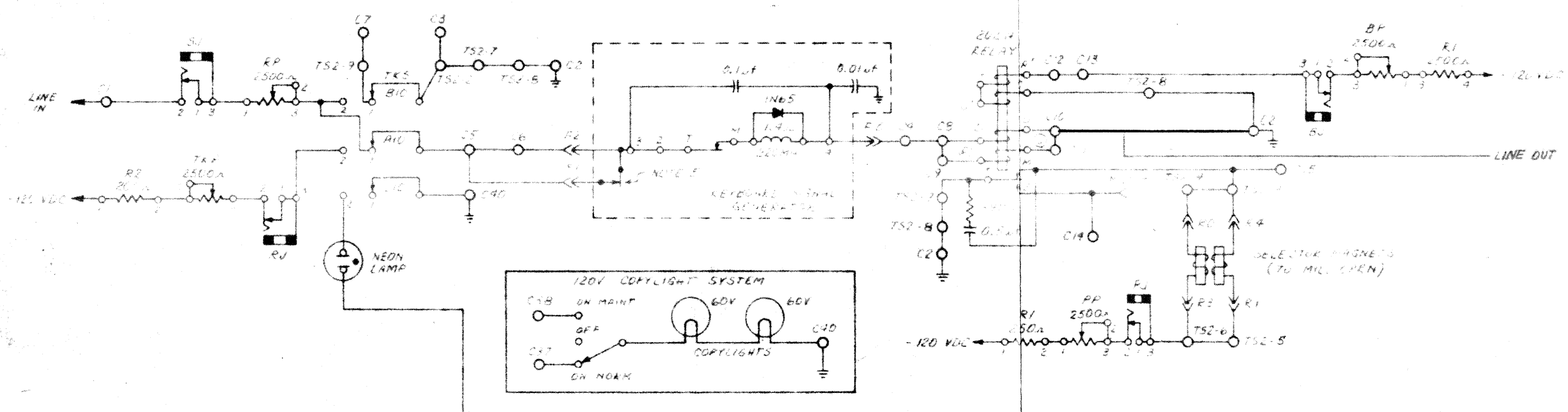


WIRING SHEET

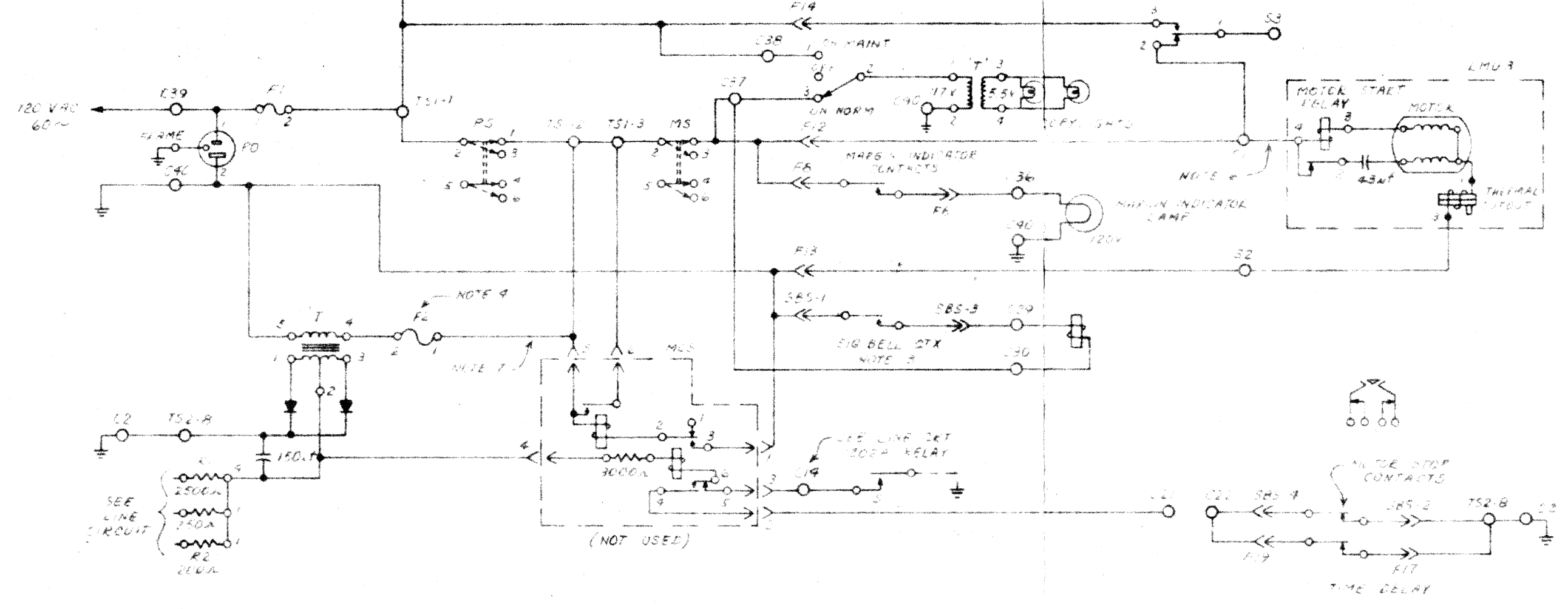
SCALE	WESTERN UNION
DRAWN	SWITCHING SYSTEM - 1158/1170
TITLE	SOLID STATE SELECTOR - 11706-A
REVISION	SEND AND RECEIVE OUTSTATION SELECTOR WITH M-28 ASR SET
DATE	CASE 100
APP'D	50536-9



ZONE	LTR	DESCRIPTION	DATE	APPROVED
	B			



POWER CIRCUIT



- NOTES
- FOR WIRING OF 9100-C W.C. SEE DWG. 256615.
  - ON WIRING DIAGRAM, C TERM SHOWN AS T53 R TERM SHOWN AS T5 E TERM SHOWN AS MS
  - NORMALLY LOCATED IN STUNT BOX SLOT 28
  - THIS FUSE IN 9100-C W.C. ONLY.
  - BREAK SWITCH NOT IN KEYBOARD AS REC'D FROM TELETYPE CORP.
  - MOVE THIS WIRE TO S3 FOR ACTUATING PAPER FEED MOTOR START SWITCH.
  - FOR CONTINUOUS OPERATION OF RECTIFIER MOVE THIS WIRE FROM T51-2 TO T51-1.

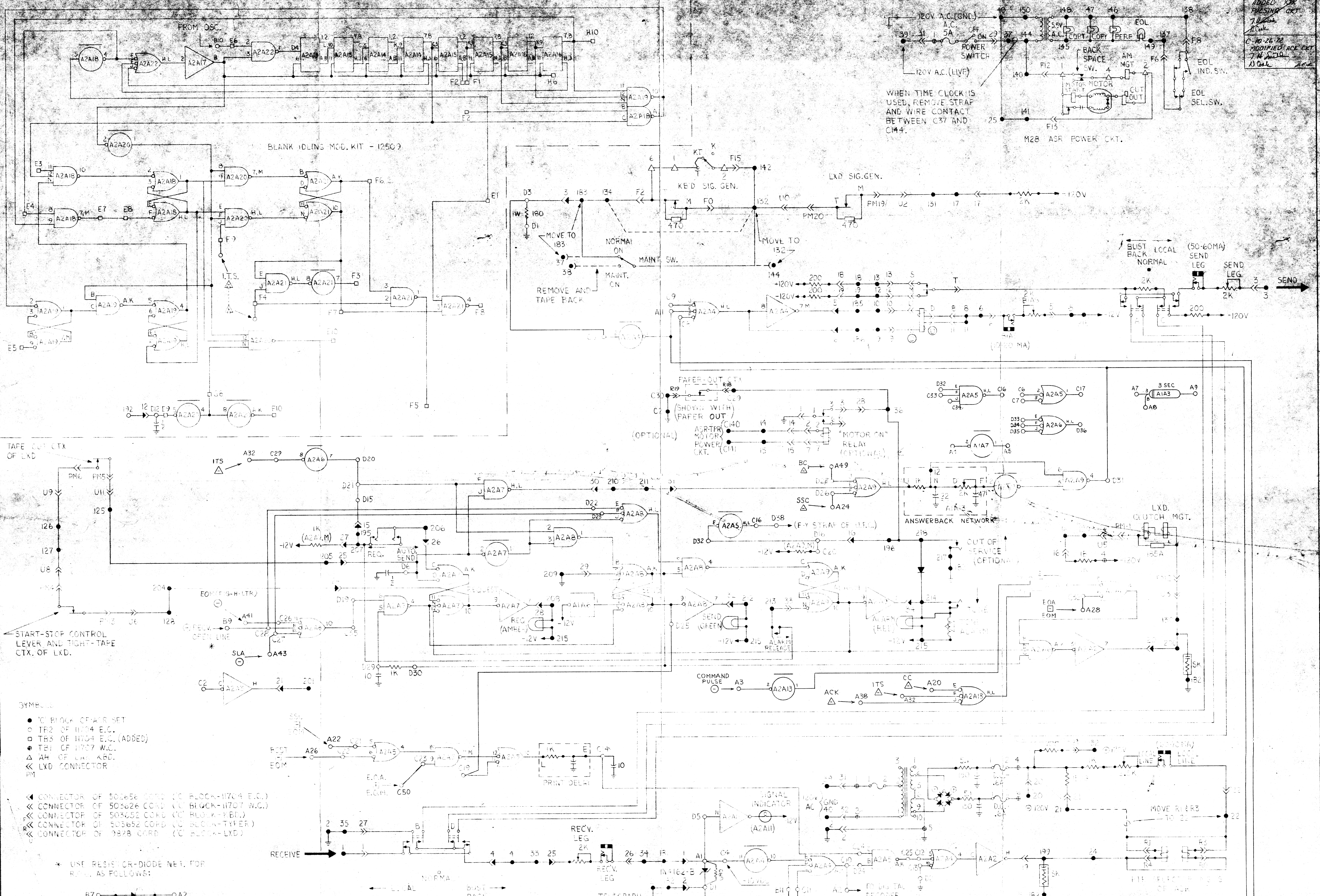
MATERIAL:	FINISH:	ISSUE <b>A</b> 5-30-72	DATE	western union		
		DWN 7. H. Smith 5-30-72	DATE		TITLE	
		CKD T.A. Kulikowski 5-30-72	DATE		M28 KSR/9100 W.C. LOOP OPN W/O MOTOR CONTROL SCHEMATIC	
NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:	APVD J.R. Greene 5/30/72	DATE	SIZE	DWG NO.
		2 PLACE DECIMALS 3 PLACE DECIMALS	APVD	DATE	C	SS-1466
APPLICATION		± .03 ± .005	APVD	DATE	SCALE	SHEET

DWG NO. SS-1466 SHEET



FORM DWG. SS-112

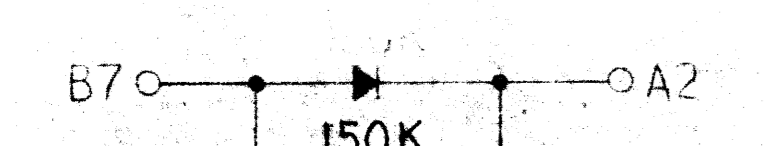
B-2-25-72  
 ADDED X-2  
 PULSING CRT  
 7/1/68  
 C-10-26-72  
 MODIFIED ACK CRT  
 7/1/68  
 A) Cal. Acl.



- SYMBOLS
- 'C' BLOCK OF ACR SET
  - TR2 OF 11704 E.C.
  - TB3 OF 11704 E.C. (ADDED)
  - ▣ TB1 OF 11707 W.C.
  - △ AH OF LXD KBD.
  - ◀ LXD CONNECTOR
  - PM

- ◀◀ CONNECTOR OF 503656 CORD ('C' BLOCK-11704 E.C.)
- ◀◀◀ CONNECTOR OF 503626 CORD ('C' BLOCK-11707 W.C.)
- ◀◀◀◀ CONNECTOR OF 503652 CORD ('C' BLOCK-KBD.)
- ◀◀◀◀◀ CONNECTOR OF 503652 CORD ('C' BLOCK-TYPER)
- ◀◀◀◀◀◀ CONNECTOR OF 9878 CORD ('C' BLOCK-LXD)

\* USE RESISTOR-DIODE NET FOR R-10 AS FOLLOWS:



WHEN TIME CLOCK IS USED, REMOVE STRAP AND WIRE CONTACT BETWEEN C37 AND C144.

M28 ASR POWER CKT.

LXD SIG. GEN.

(50-60 MA)

(OPTIONAL)

(OPTIONAL)

(OPTIONAL)

(OPTIONAL)

(OPTIONAL)

(OPTIONAL)

(OPTIONAL)