

**HAL COMMUNICATIONS CORP.**  
 BOX 365, URBANA, ILLINOIS 61801

FIGURE 5.1  
 ST-5000  
 BLOCK DIAGRAM

DATE APR. 19, 1977 SCALE -

DRN BY J. P. D. No. C1020  
 APP BY

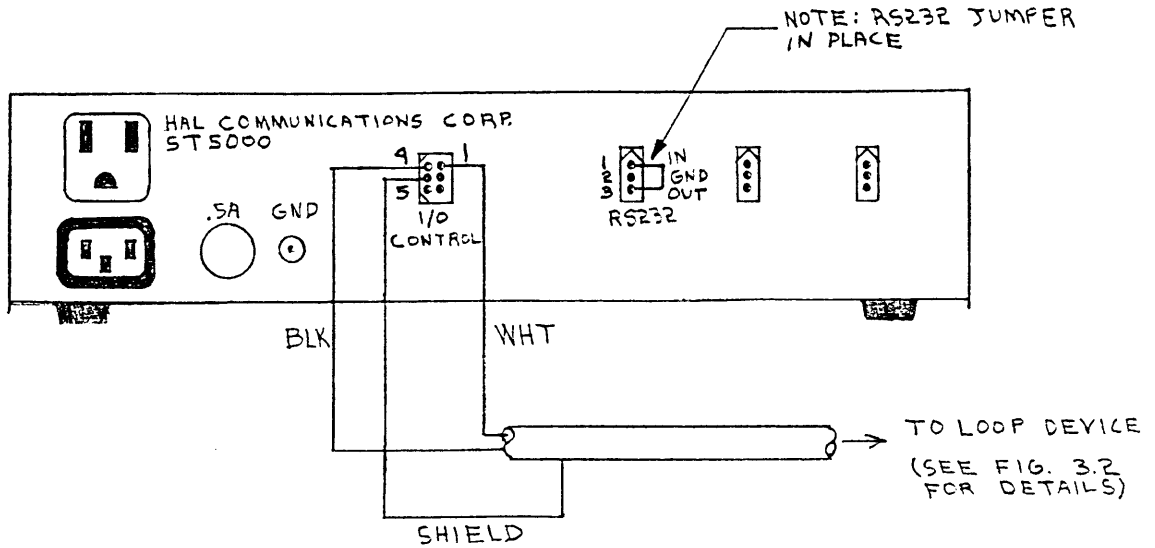


Figure A.1  
Loop Configuration

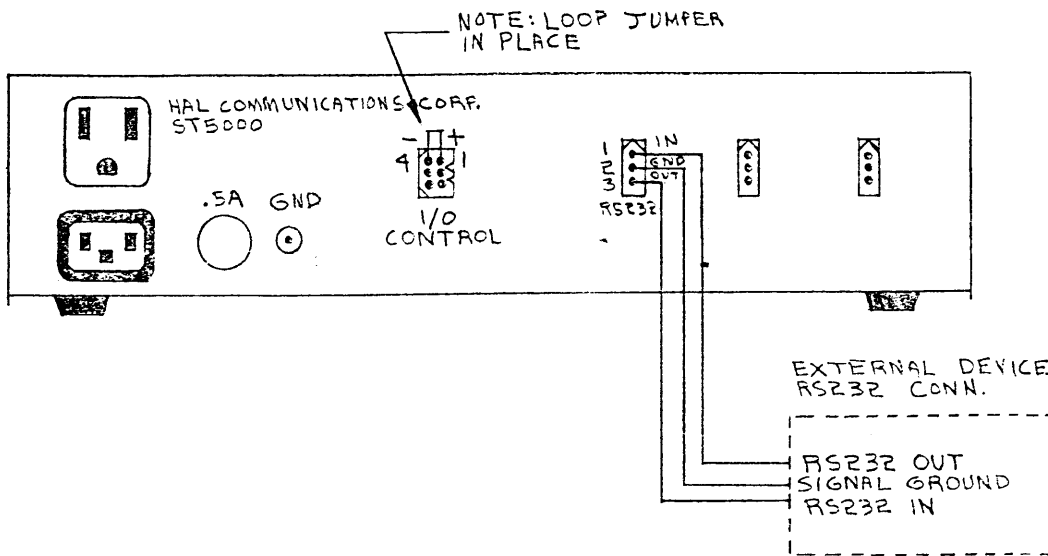
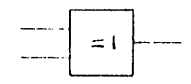
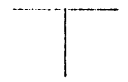


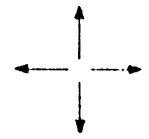
Figure A.2  
RS232 Configuration



EXCLUSIVE OR  
A030



CONNECTION



412V, -12V  
CONNECTION



NO CONNECTION



GROUND  
CONNECTION  
(0 VOLTS)



BOARD  
CONNECTIONS



TEST POINT

NOTE: ALL RESISTORS ARE 1/4 W  
UNLESS OTHERWISE SPECIFIED

ALL CAPACITORS ARE CERAMIC  
UNLESS OTHERWISE SPECIFIED

- MYL - MYLAR
- SM - SILVER MICA
- ELECT - ELECTROLYTIC

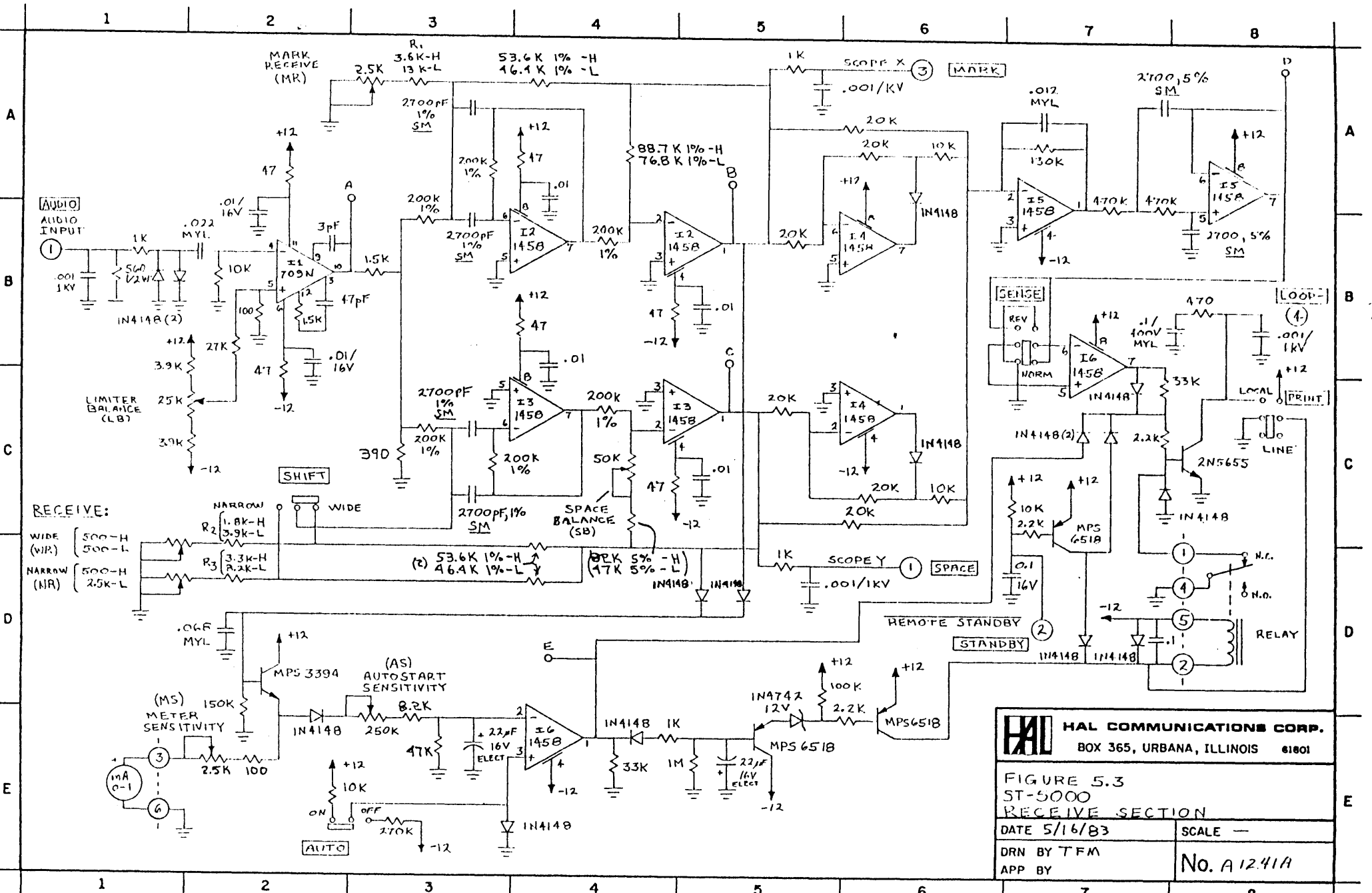
RESISTOR VALUES FOLLOWED BY:


- H - DENOTES HIGH TONES (MARK = 2125 Hz)
- L - DENOTES LOW TONES (MARK = 1275 Hz)

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FIGURE 5.2  
ST-5000  
DRAWING CONVENTIONS

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<b>FIGURE 5.3</b> <b>ST-5000</b> <b>RECEIVE SECTION</b>	
DATE 5/16/83	SCALE —
DRN BY TFM APP BY	<b>No. A1241A</b>

1 2 3 4 5 6 7 8

A

TRIM POTG

MR-MARK RECEIVE  
1K-H, 2.5K-L

NR-NARROW RECEIVE  
500-H, 2.5K-L

WR-WIDE RECEIVE  
500-H, 500-L

B

MT-MARK TRANSMIT  
2.5K-H, 5K-L

NT-NARROW TRANSMIT  
50K-H, 50K-L

WT-WIDE TRANSMIT  
5K-H, 5K-L

C

MS-METER SENSITIVITY  
10K

AS-AUTOSTART SENSITIVITY  
250K

SB-SPACE BALANCE  
50K

OL-OUTPUT LEVEL  
100K

D

RESISTORS

R<sub>1</sub>-3.9K-H, 12K-L

R<sub>2</sub>-1.6K-H, 3.9K-L

R<sub>3</sub>-3.3K-H, 8.2K-L

RA-43K-H, 47K-L

RB-220K-H, 210K-L

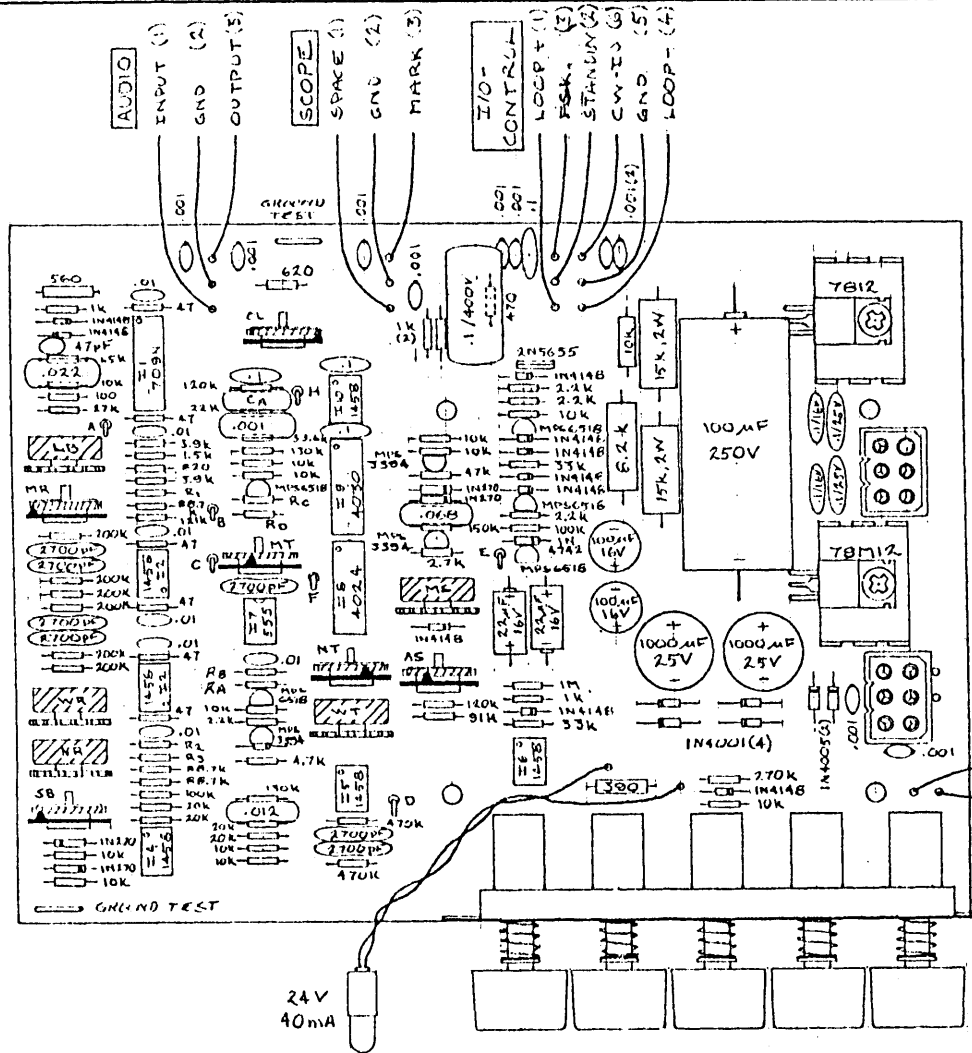
RC-1K-H, 3.3K-L

RD-17.6K, 1%<sup>-</sup>-H, 30.9K, 1%<sup>-</sup>-L

E

CAPACITORS

CA-0.001 MYL-H, .0012 MYL-L



CONNECTOR TO  
MOTOR RELAY  
AND METER

CONNECTOR TO  
TRANSFORMER  
AND LOOP RESISTOR

TO A.C. VOLTAGE

SHIFT SENSE AUTO PRINT POWER

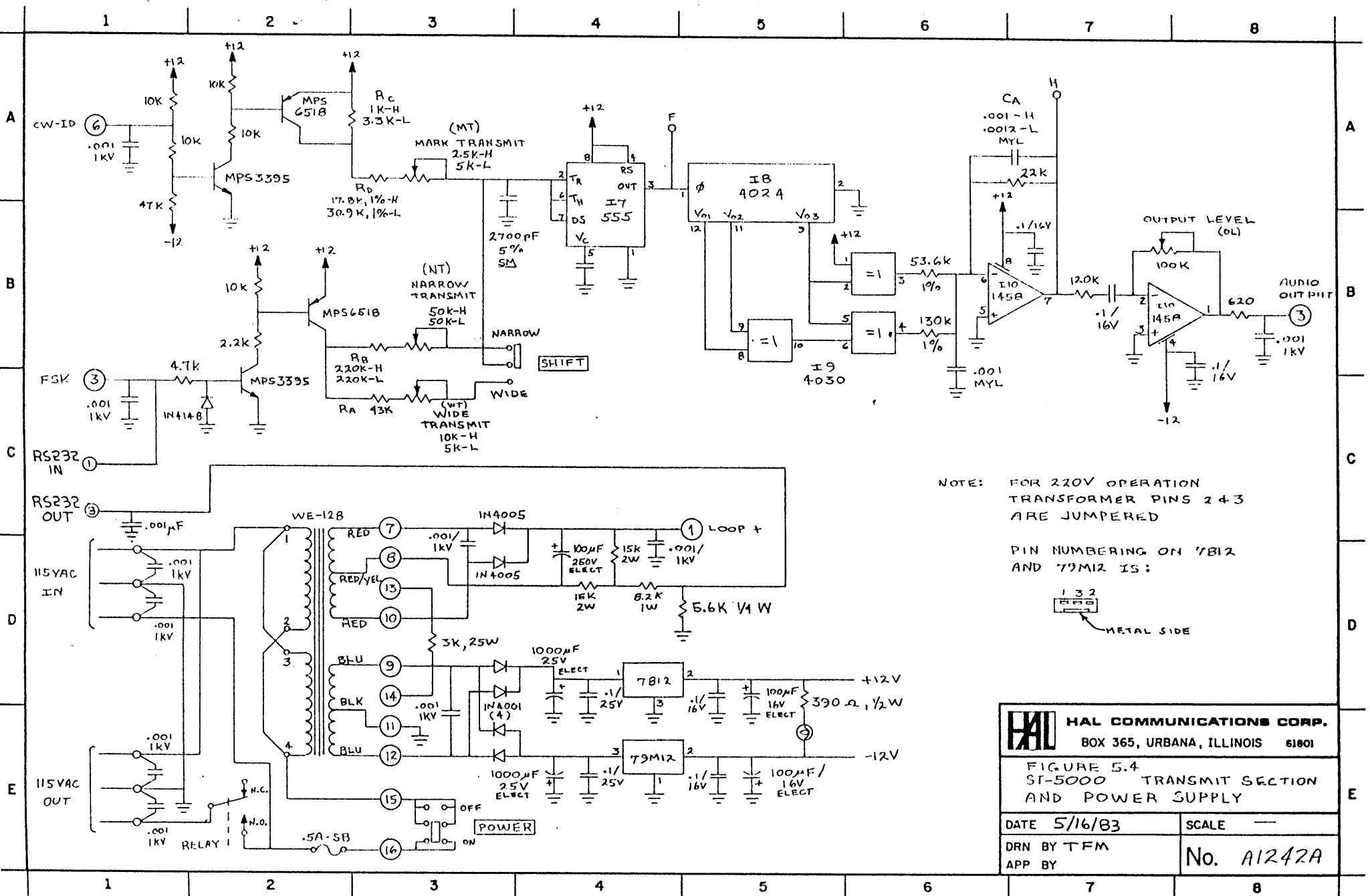
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FIGURE 5.5  
ST-5000  
CIRCUIT BOARD LAYOUT

DATE APR. 25, 1977 SCALE -

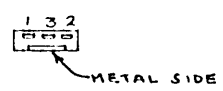
DRN BY J.P.D. APP BY No. B1148

1 2 3 4 5 6 7 8



NOTE: FOR 220V OPERATION  
TRANSFORMER PINS 2 & 3  
ARE JUMPED

PIN NUMBERING ON 7812  
AND 79M12 IS:



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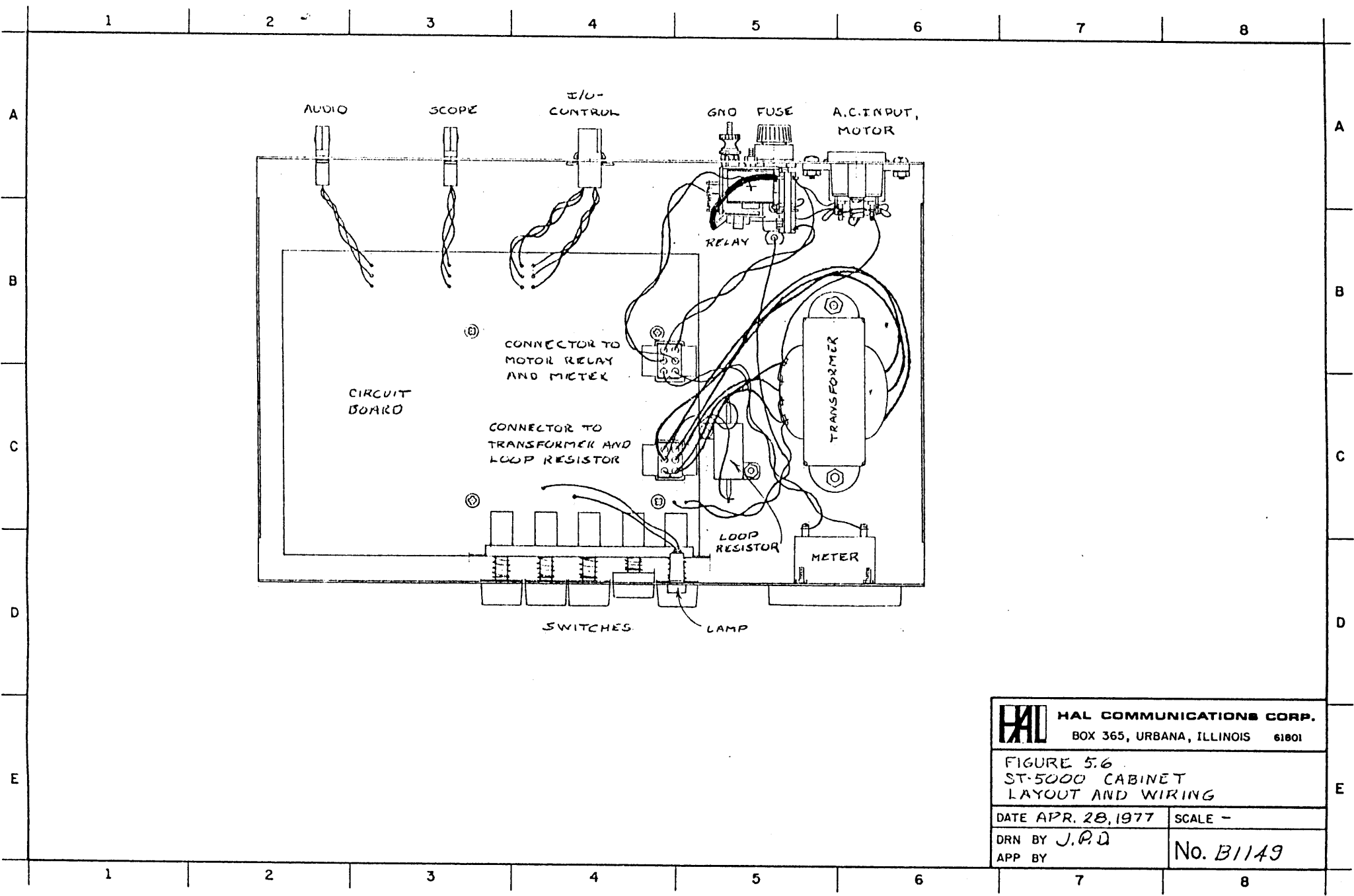
FIGURE 5.4  
ST-5000 TRANSMIT SECTION  
AND POWER SUPPLY


DATE 5/16/83

SCALE —

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No. A1242A



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FIGURE 5.6 ST-5000 CABINET LAYOUT AND WIRING	
DATE APR. 28, 1977	SCALE -
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