

WELCOME!!

Please take a few minutes to read the manual before turning on your new game. The manual contains the set up information and dip switch information you will need to operate your game properly.

This machine is suitable for indoor use only. Also please avoid places of high humidity or excessive temperatures.

To ensure that this machine functions properly, it must be connected directly to a wall or power outlet, and not to an extension outlet, with other machines running off of it. The machine will not run properly if the supply voltage is low unless the proper solenoid taps are used. This is outlined later in the manual.

When working on the machine, make sure the line cord is removed from the ac socket.

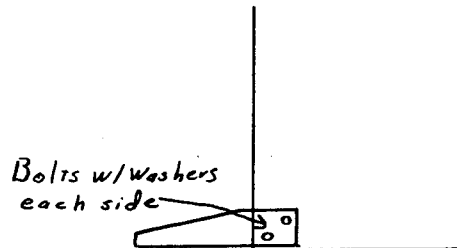
The game has been programed for ticket, replay and free play awards. Also a software test of the switches, lamps and solenoids has been provided, please see dip switch options.

HILL CLIMBER

SET-UP

AFTER INSPECTING FOR DAMAGE AND UNCRATING YOUR HILL CLIMBER YOU WILL HAVE TO DO A LITTLE SET-UP. OPEN THE CASH BOX AND REMOVE THE HARDWARE.

FIRST ATTACH THE BOTTOM STEP PLATE. DO THIS BY SLIDING THE STEP PLATE ON THE BOTTOM FRONT OF THE CABINET WITH THE BRACKETS POINTING TO THE FRONT OF THE CABINET. ALIGN THE HOLES IN THE BRACKETS WITH THE HOLES ON THE CABINET. USING THE 4 WASHERS AND BOLTS, SCREW THE FOOT STEP



SIDE BRACKETS TO THE CABINET. THIS PIECE IS TO GIVE THE CABINET STABILITY, WHEN PLAYING THE GAME.

NEXT, THE STEERING WHEEL MUST BE INSTALLED ON THE SHAFT. FIRST PUT THE KEY ON THE SHAFT AND ALIGN THE STEERING WHEEL TO THE KEY. PUSH THE STEERING WHEEL ON THE SHAFT. NEXT, ATTACH THE STEERING WHEEL TO THE SHAFT WITH THE NUT AND LOCK WASHER. USE THE THREADS ON THE CENTER OF THE SHAFT. TIGHTEN THE NUT.

NEXT, INSTALL THE STEERING WHEEL CAP OVER THE CENTER OF THE STEERING WHEEL. USE THE TAMPER PROOF SCREW TO HOLD IT ON.

OPEN THE UPPER REAR PART OF THE CABINET AND INSERT THE BALL IN PLAYFIELD. THERE IS A SMALL ACCESS HOLE IN THE REAR OF THE MECHANISM.

IT IS VERY IMPORTANT THAT THIS GAME IS LEVEL. IF NOT BALL LIFT PROBLEMS AND PLAY WILL BE AFFECTED. THEREFORE INSTALL THE LEG LEVELERS AND LEVEL THE GAME.

HILL CLIMBER

OPTIONS

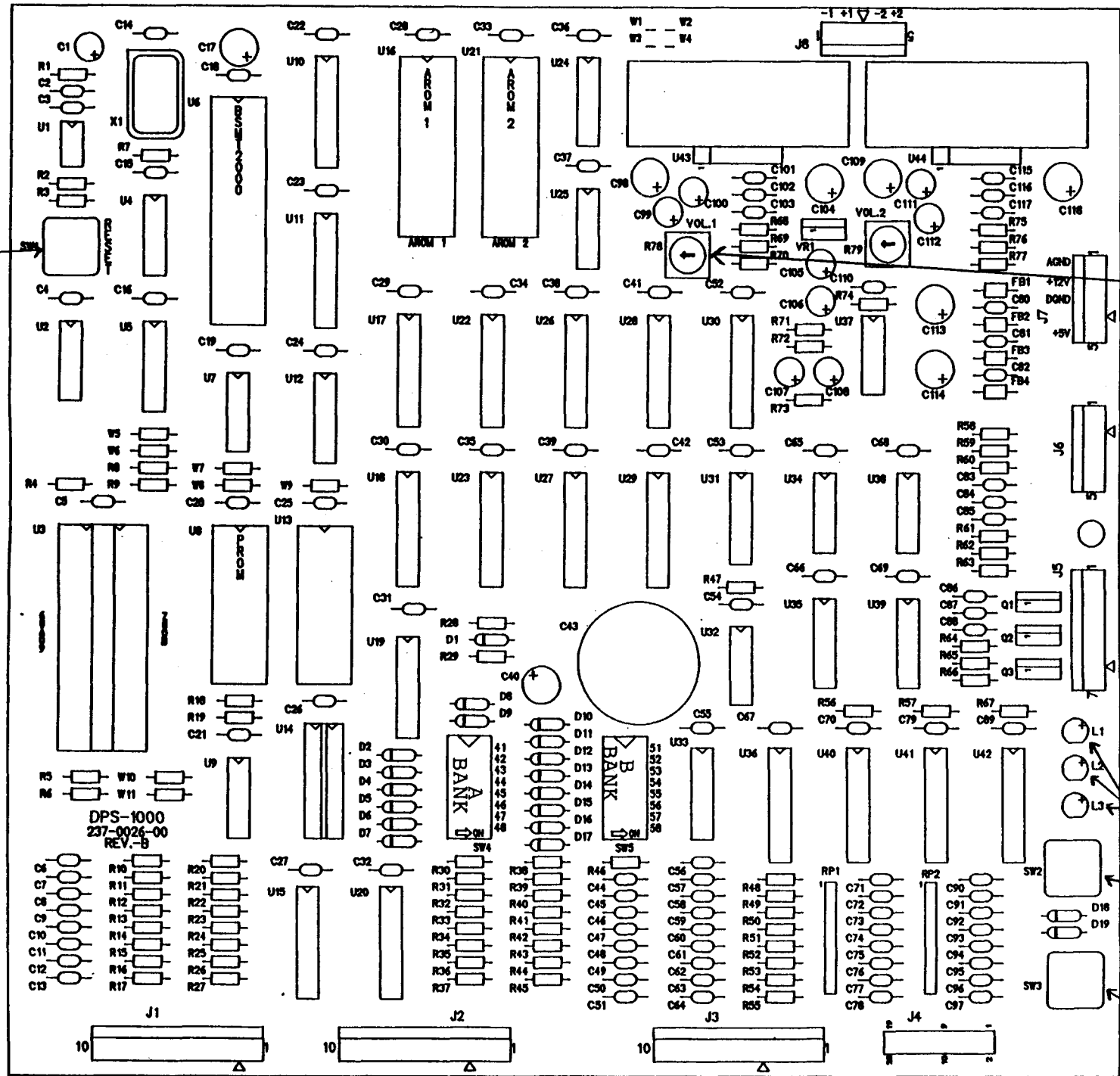
THIS GAME HAS A COUPLE OF OPTIONS THAT ARE OPERATOR INSTALLED IF YOU WANT.

- 1) THERE IS THE OPTION OF A "MARS" LITE. THIS IS A ROTATING LAMP THAT COMES ON WHEN TICKETS ARE EARNED AND DISPENSED. THE WIRING IS IN THE UPPER CABINET NEAR THE FLUORESCENT LIGHT.

- 2) COIN AND TICKET METER WIRING IS PROVIDED. IT IS LOCATED ON A 4 POSITION CONNECTOR NEAR THE COIN DOOR. THE 12 VAC METERS CAN BE BOUGHT FROM WICO. USE IN4004 diode REVERSED BIASED ACROSS THE METERS OR DAMAGE TO THE OUTPUT TRANSISTORS COULD RESULT.

- 3) TILT WIRES ARE PROVIDED. THEY ARE LOCATED UP NEAR THE PLAYFIELD ON THE RIGHT SIDE OF THE CABINET. IF THE LOCATION IS ABUSIVE THEN INSTALL A PIN BALL STYLE TILT MECHANISM. EVERY TILT AND THE PLAYER LOSES A BALL.

RESET
SW



VOLUME POT

STATUS LEDS

AUDIT START &
ADVANCE

AUDIT CLEAR

HILL CLIMBER
VERSION 2.0

3/3/92

CHECKSUMS...

PROGRAM: ODOEH 4/29/92

SOUND0 : 4CDAH 3/1/92

SOUND1 : 21EEH 3/1/92

DIPSWITCH SETTINGS BANK A

		1	2	3	4	5	6	7	8
NUMBER	1 BALL	OFF	OFF	OFF					
OF	2 BALLS	ON	OFF	OFF					
BALLS	3 BALLS	OFF	ON	OFF					
PER	4 BALLS	ON	ON	OFF					
GAME	5 BALLS	OFF	OFF	ON					
	(not used)	ON	OFF	ON					
	(not used)	OFF	ON	ON					
	(not used)	ON	ON	ON					
DOUBLE BONUS ON THE LAST BALL		DISABLED			OFF				
		ENABLED			ON				
COIN ADJUST	1 COIN 1 CREDIT	OFF	OFF	OFF					
	1 COIN 2 CREDITS	ON	OFF	OFF					
	2 COINS 1 CREDIT	OFF	ON	OFF					
	3 COINS 1 CREDIT	ON	ON	OFF					
	3 COINS 2 CREDITS	OFF	OFF	ON					
	(not used)	ON	OFF	ON					
	(not used)	OFF	ON	ON					
	FREEPLAY	ON	ON	ON					
ATTRACT MODE SOUNDS					NORMAL			OFF	
					NO ATTRACT MODE SOUNDS			ON	

DIPSWITCH SETTINGS BANK B

	1	2	3	4	5	6	7	8
TENNESSEE STYLE	OFF	OFF						
TICKET	ENABLED	ON						
FREEGAME AWARD (SEE NOTE 1)	DISABLED	OFF						
	ENABLED	ON						
TEST MODE		OFF	OFF					
		ENABLED	ON					
TICKET MODE	1	TICKET FOR EVERY 3 PTS		OFF	OFF	OFF		
	1	TICKET FOR EVERY 4 PTS		ON	OFF	OFF		
TICKET	1	TICKET FOR EVERY 5 PTS		OFF	ON	OFF		
PER	1	TICKET FOR EVERY 6 PTS		ON	ON	OFF		
POINTS	1	TICKET FOR EVERY 7 PTS		OFF	OFF	ON		
	1	TICKET FOR EVERY 8 PTS		ON	OFF	ON		
	1	TICKET FOR EVERY 10 PTS		OFF	ON	ON		
	1	TICKET FOR EVERY 20 PTS		ON	ON	ON		
REPLAY MODE	1	REPLAY FOR 20 POINTS		OFF	OFF	OFF		
	1	REPLAY FOR 30 POINTS		ON	OFF	OFF		
REPLAY	1	REPLAY FOR 40 POINTS		OFF	ON	OFF		
PER	1	REPLAY FOR 50 POINTS		ON	ON	OFF		
POINTS	1	REPLAY FOR 60 POINTS		OFF	OFF	ON		
	1	REPLAY FOR 70 POINTS		ON	OFF	ON		
	1	REPLAY FOR 80 POINTS (not used)		OFF	ON	ON		
				ON	ON	ON		
MODE SELECT					TICKET MODE	OFF		
TICKETS OR REPLAY					REPLAY MODE	ON		
MAX CREDIT LIMIT						NORMAL	OFF	
					LIMIT MAX CREDITS AT 12		ON	

NOTE 1: Freegame award is for the two player game only....

When the Freegame award is enabled, Replay Mode and Ticket Mode are Disabled.

A Freegame will be awarded to the player with the highest score at the end of the game. Displays will flash the winner for 5 seconds

NOTE 2: Tilt switch is active during game play, and a ball is deducted when the tilt switch is activated.

AUDITS:

- 01= ACTIVE COINS
- 02= TOTAL COINS INSERTED
- 03= TOTAL TICKETS
- 04= AVERAGE NUMBER OF TICKETS PER GAME
- 05= NUMBER OF TIMES TOP EXIT REACHED
- 06=

ERROR CODES:

- 01= SOFTWARE ERROR (CREATED MORE MODULES THAN ALLOCATED)
- 02= SOFTWARE ERROR (NO MODULES FOUND TO EXTERM)
- 03=
- 04=
- 05= SOFTWARE ERROR (MODULE STOP COMMAND)
- 06=
- 07=

* TEST ROUTINES: *

TEST 1= DISPLAY TEST
display cycles from 0-9 then repeats

TEST 2= SWITCH TEST
displays shorted switch number

- 01 = (J1- 9) TICKET SWITCH
- 02 = (J1-10) COIN 1 SWITCH
- 03 = (J1- 6) COIN 2 SWITCH
- 04 = (J1- 4) BALL LIFT SWITCH
- 05 = (J1- 8) START SWITCH PLAYER 1
- 06 = (J1- 7) START SWITCH PLAYER 2
- 07 = (J4- 4) BALL EXIT LEVEL 1
- 08 = (J4- 5) BALL EXIT LEVEL 2
- 09 = (J4- 2) BALL EXIT LEVEL 3
- 10 = (J4- 7) BALL EXIT LEVEL 4
- 11 = (J4- 3) BALL EXIT LEVEL 5
- 12 = (J4- 8) BALL EXIT LEVEL 6
- 13 = (J4- 1) BALL EXIT LEVEL 7
- 14 = (J4- 9) BALL EXIT TOP LEVEL
- 15 = (J1-10) AUDIT SWITCH ADVANCE
- 16 = (J1-9) AUDIT SWITCH CLEAR
- 17 = (J1-4) TILT SWITCH

TEST 3= LAMP TEST

player 1 start button on = exits to next test
player 2 start button off = halts at current lamp output
on = advances to next lamp output

- 01 = (J9-9) PLAYER 1 START SWITCH LAMP
- 02 = (J9-10) PLAYER 2 START SWITCH LAMP

TEST 4= METER, SOLENOID TEST

automatically cycles through motor and meters

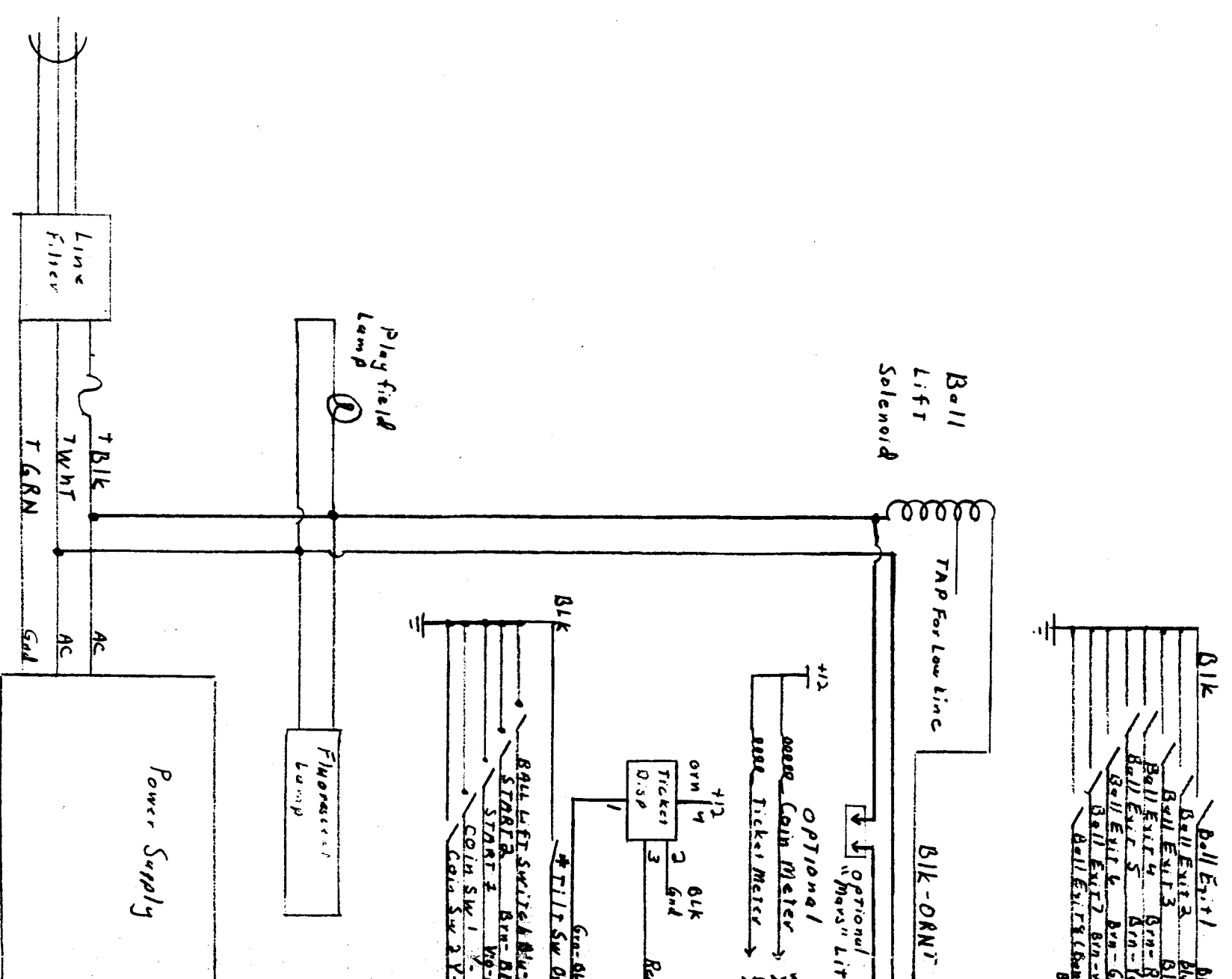
- 01 = (J8-1) BALL LIFT SOLENOID
- 02 = (J9-1) ROTATING LAMP
- 03 = (CJ5-3) COIN METER
- 04 = (CJ5-5) TICKET METER

TEST 5= SOUND TEST

automatically cycles through all sounds

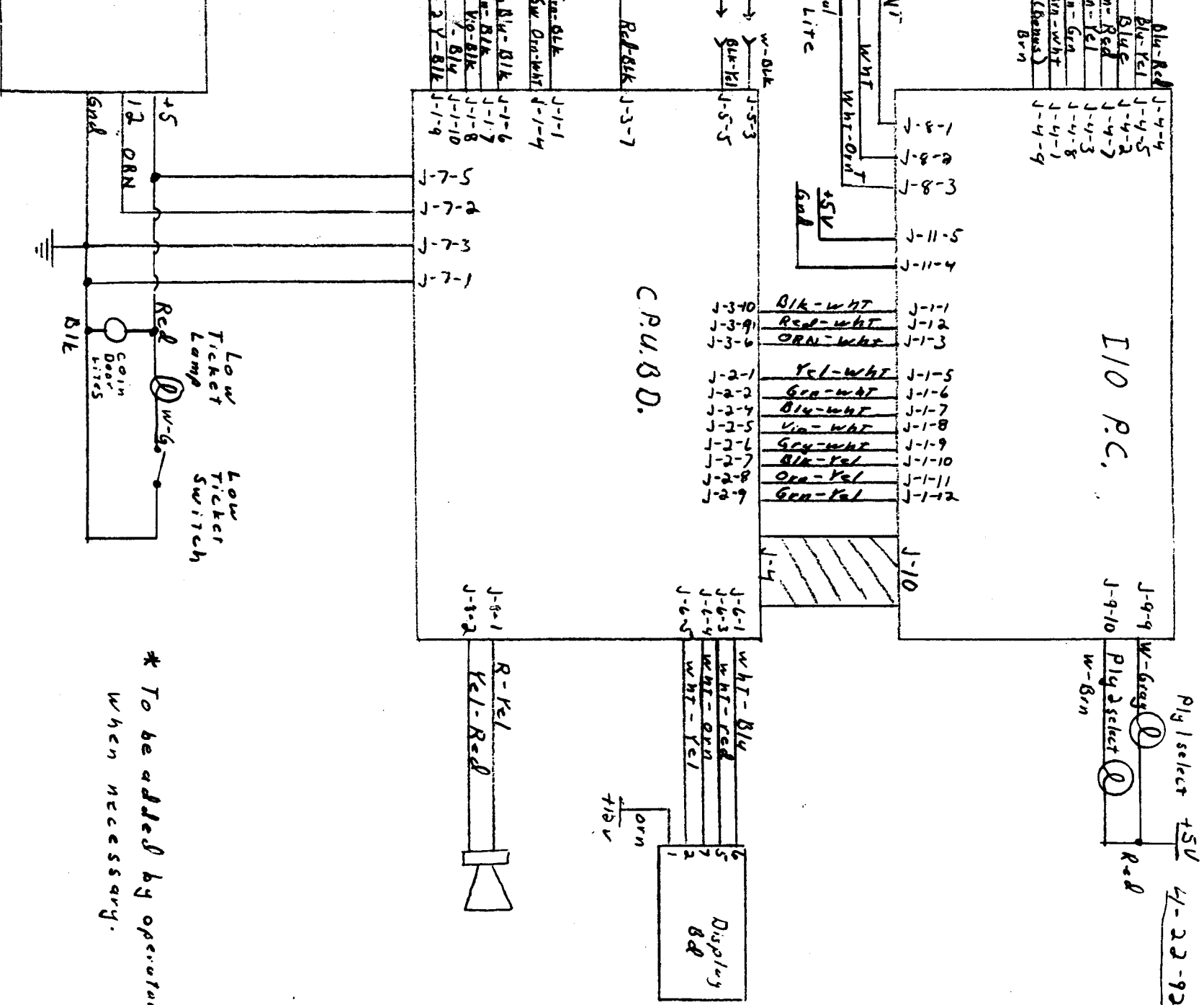
- 00 = COUNTRY MUSIC
- 01 = ENDING MUSIC IF THERE IS A WINNER
- 02 = ENDING MUSIC IF THERE IS NO WINNER
- 03 = ALL SOUND OFF
- 04 = REGISTER RING
- 05 = PEEL OUT
- 06 = IDLING
- 07 = SKIDDING
- 08 = ENGINE REV
- 09 = CROWD CHEER
- 10 = "HILL CLIMBER" VOICE
- 11 = "WINNER" VOICE
- 12 = "JUST MISSED" VOICE
- 13 = "TRY AGAIN" VOICE
- 14 = "GET YOUR HANDS OFF THAT WHEEL" VOICE
- 15 = "OH..NO, MAN" VOICE
- 16 = "YOU GOT REAL CLOSE" VOICE
- 17 = "MMMMMMMMONSTER TRUCK"

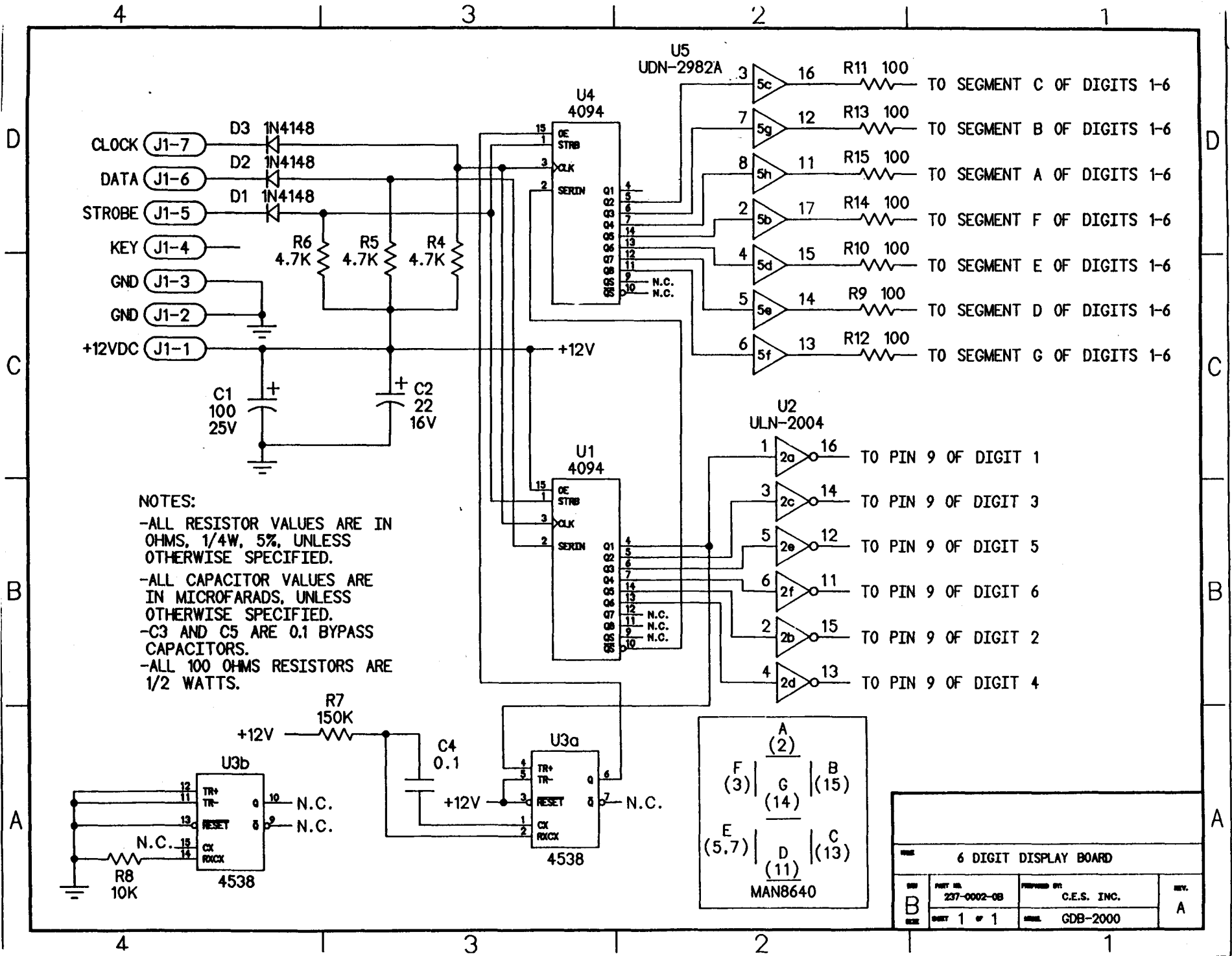
H:11 C



T 18 A.W/6.

Climber





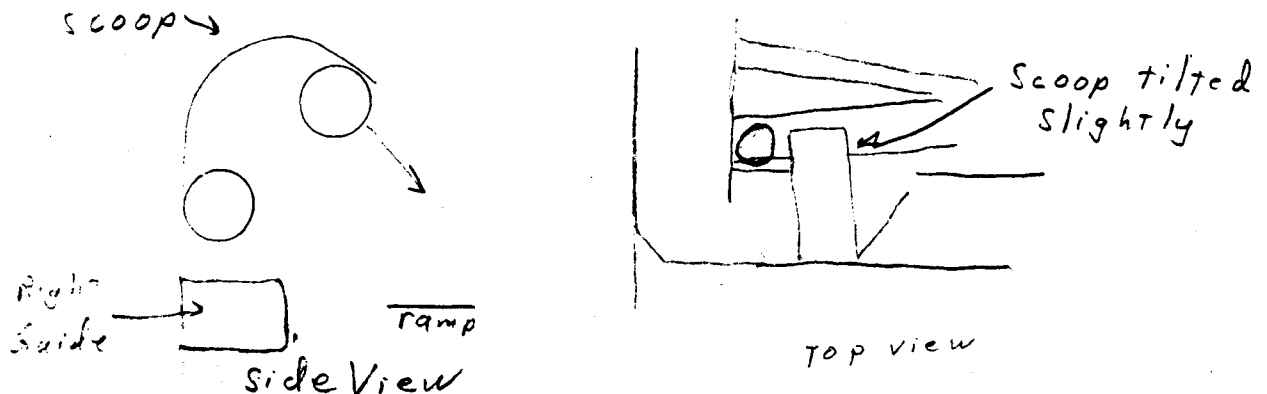
NOTES:
 -ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 5%, UNLESS OTHERWISE SPECIFIED.
 -ALL CAPACITOR VALUES ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.
 -C3 AND C5 ARE 0.1 BYPASS CAPACITORS.
 -ALL 100 OHMS RESISTORS ARE 1/2 WATTS.

6 DIGIT DISPLAY BOARD			
REV. B	PART NO. 237-0002-08	PREPARED BY C.E.S. INC.	REV. A
DATE	SHEET 1 OF 1	MODEL GDB-2000	

Hill Climber Adjustments

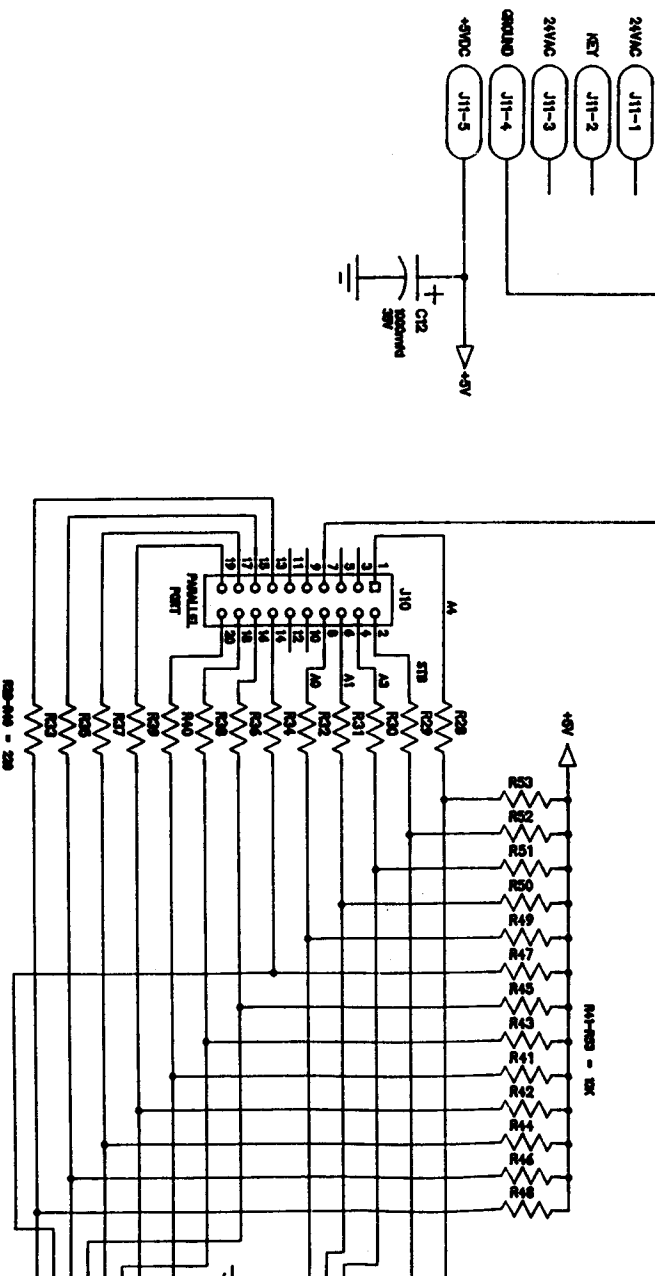
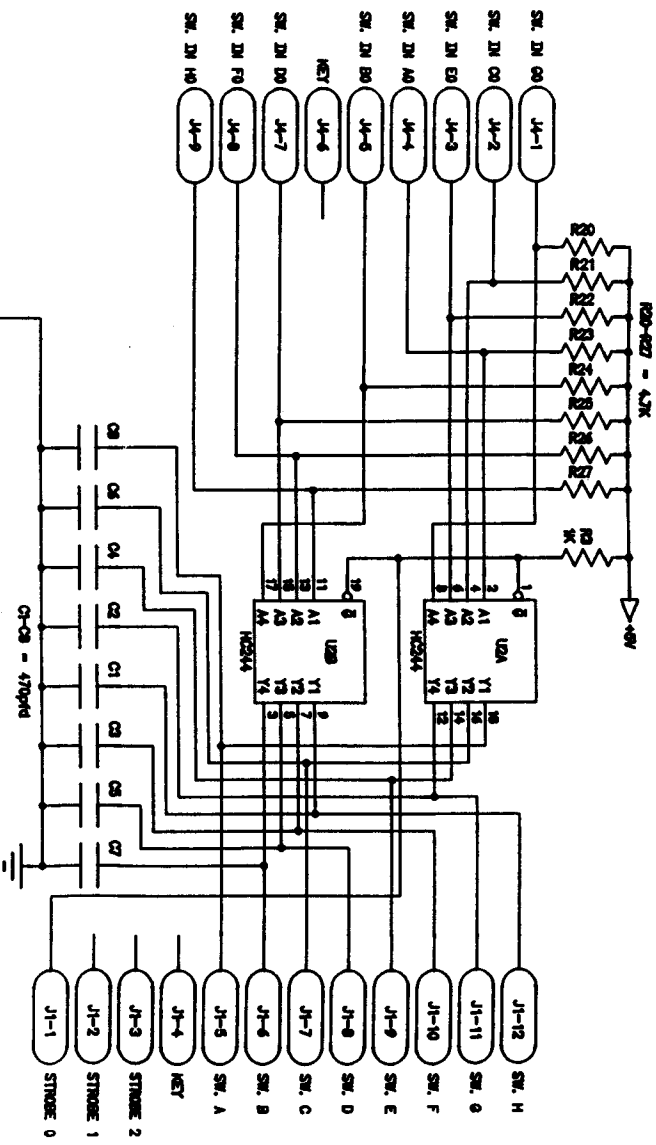
We can't stress enough the importance of a level game. Please before you adjust anything level the game.

You may notice that sometimes the ball does not land on the first rail on the first launch. If this happens occasionally it is normal, and should be left alone. If you notice the ball does not have enough height then most likely one of two things has occurred. Low line voltage, or the ball is hitting something when launched. Measure the ac line voltage, verify it is low. If low, unplug the coil from the red and black wires and use the plug with the black/red and black wires. If the ball is hitting something. Start a game and try to observe what is in the way. If the ball is hitting the side bend the left or right guide out of the way. If the ball is hitting the top scoop and not landing on the top rail then make sure the ball is seating on the plunger. If not, adjust the plunger bracket, bend it forward or back so ball seats. If the ball hits the top of the scoop and does not get directed to the ramp then the scoop needs adjustment. To do this use a pair of pliers. Try to adjust the scoop as shown.



As an aid to the operator the displays will flash rapidly during normal game play if an error in the switches is detected. The error could be an open or stuck switch. Put the unit into switch test. Putting on dip switch 3 of bank B, resetting the game gets you into test. By pressing the player 1 button you advance through the tests. See the test routine section for more info. A stuck switch will be displayed, (disconnect ticket dispenser or it will appear as a stuck switch). An open switch will have trouble reading the ball when it rolls over it. Adjust the switches as necessary.

The playfield unit is lubricated at the factory. The black powder is graphite, the silver paste is a lubricant. You should check the lubrication if binding is felt in the steering or every 4 to 6 months.

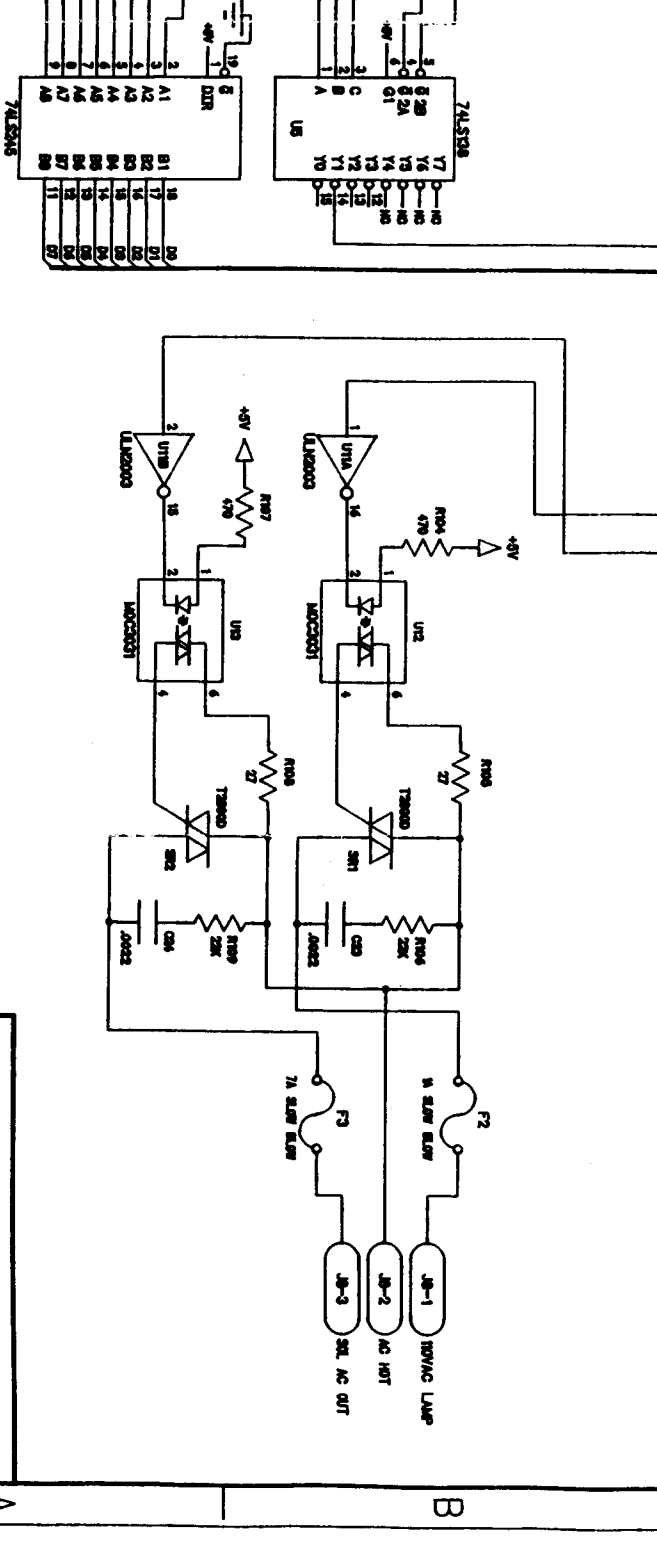
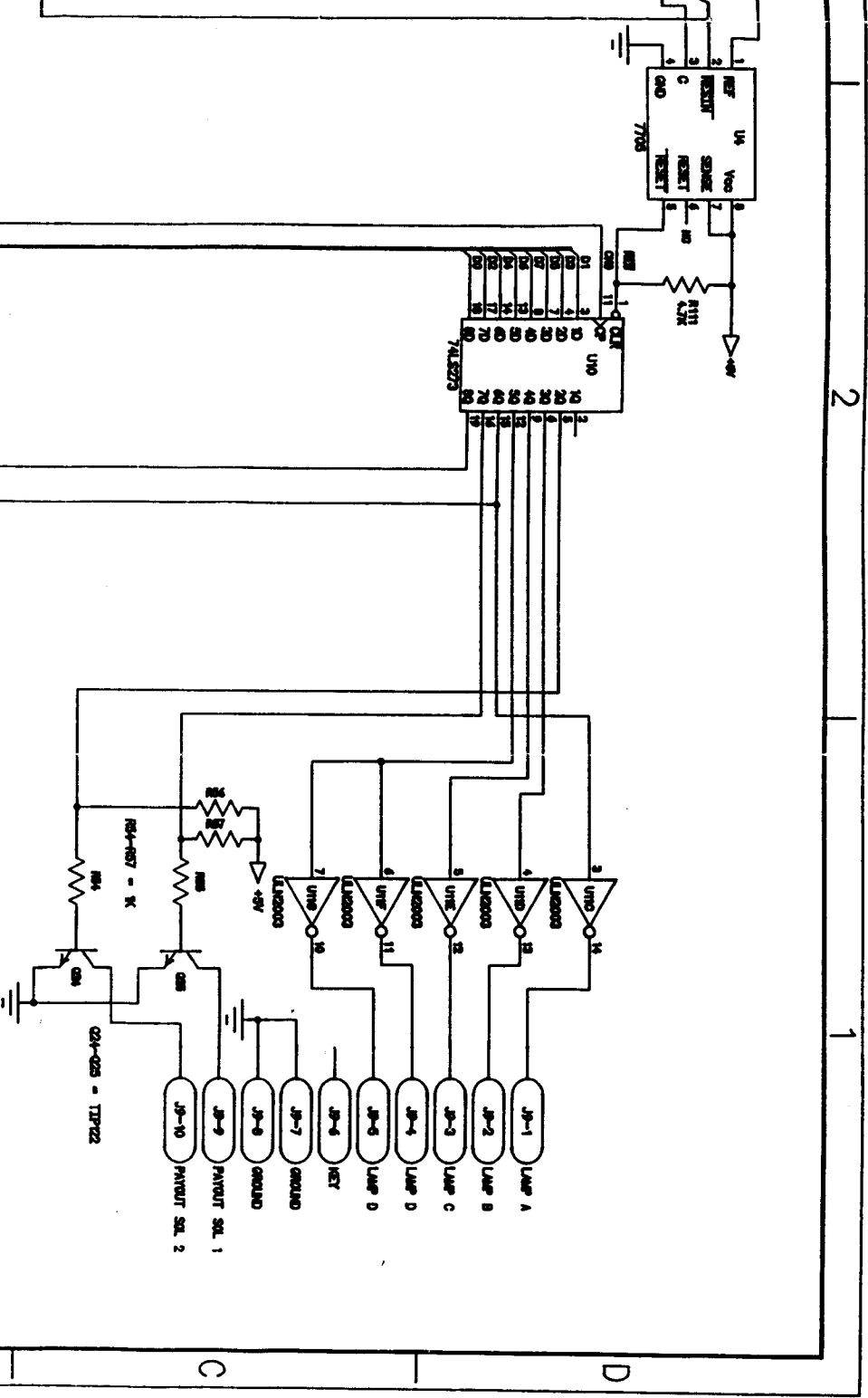


NOTES:
 - ALL RESISTOR VALUES ARE IN OHMS.
 - 1/4W. RES. UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITOR VALUES ARE IN MICROFARADS.
 - UNLESS OTHERWISE SPECIFIED.
 - SWITCH CAPACITOR VALUE IS 25 pF/MV

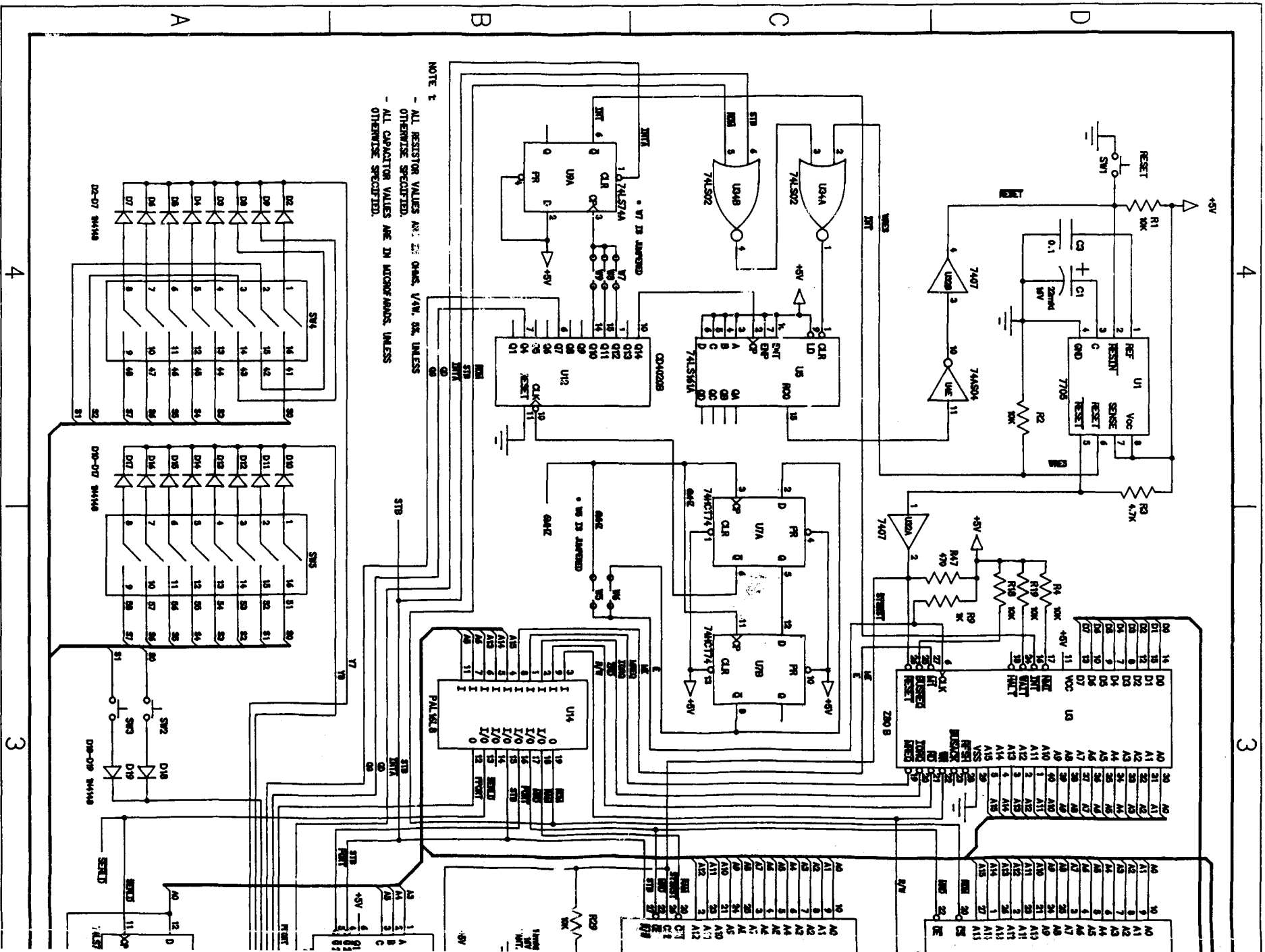
A B C D

4 3 4

3



SOLENOID DRIVER BOARD	
REV. 1	REV. A
DATE 2/27/00	DESIGNER SCD-2000
QUANTITY 1 of 1	REV. A



4

3

A

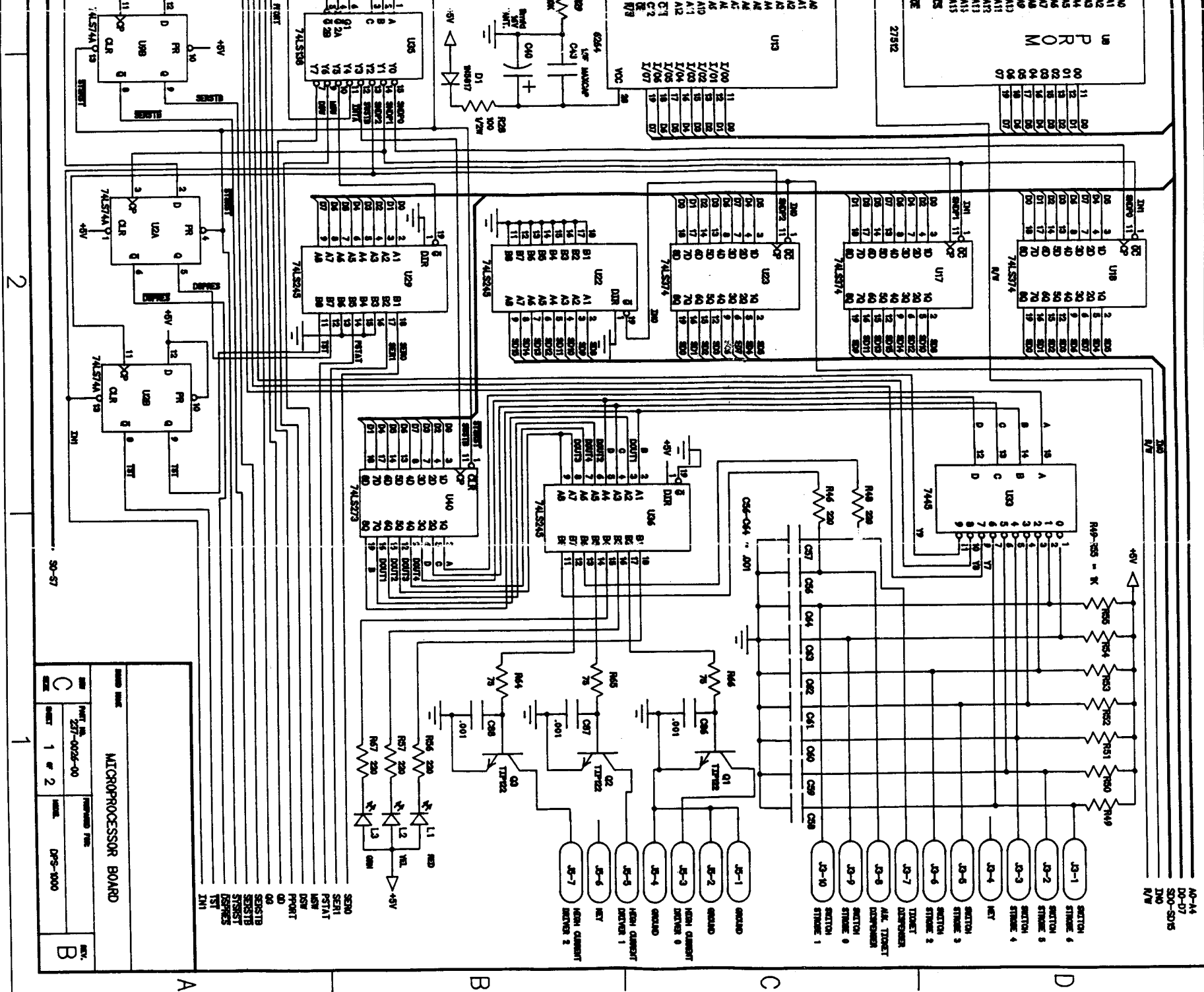
B

C

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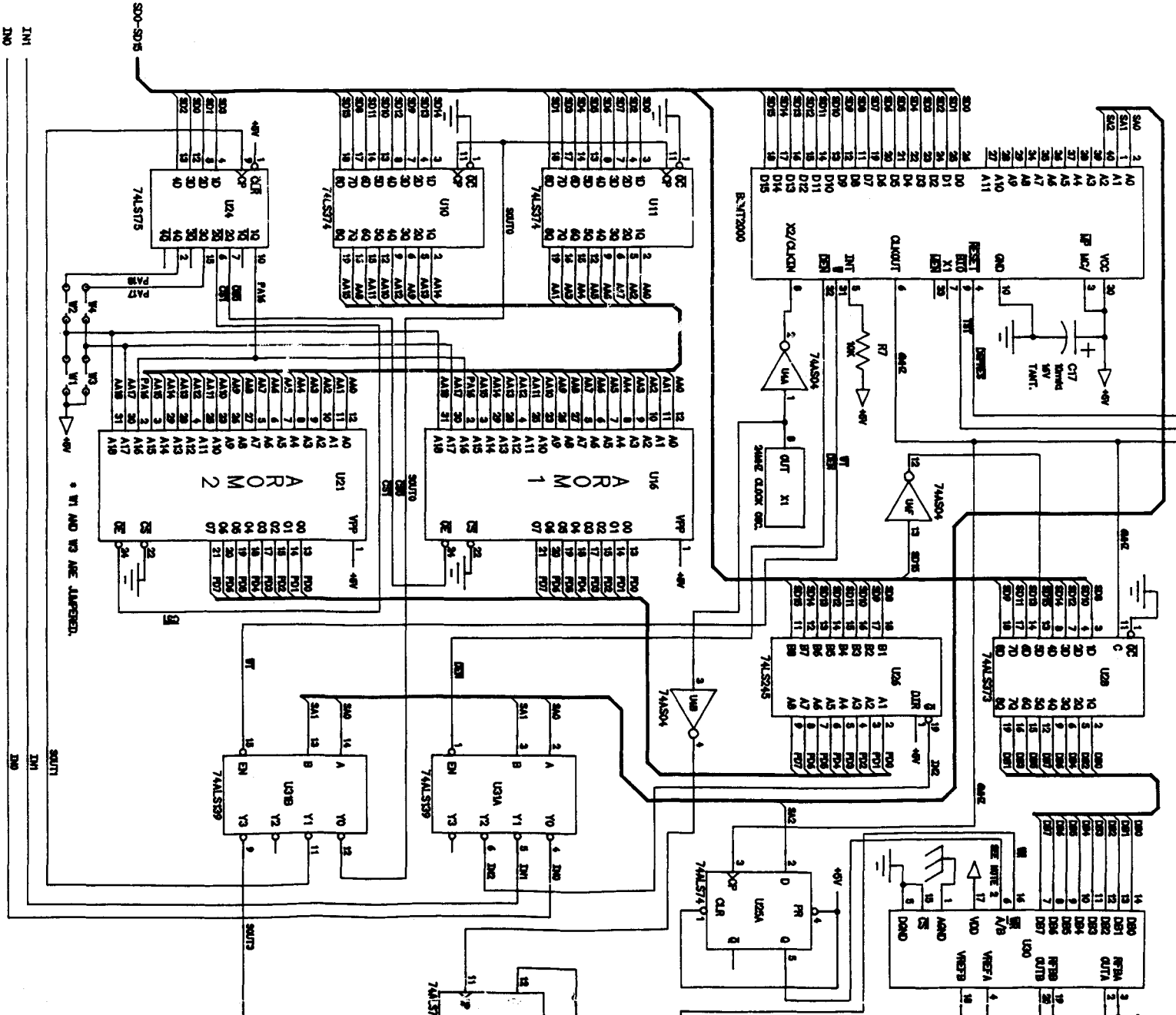
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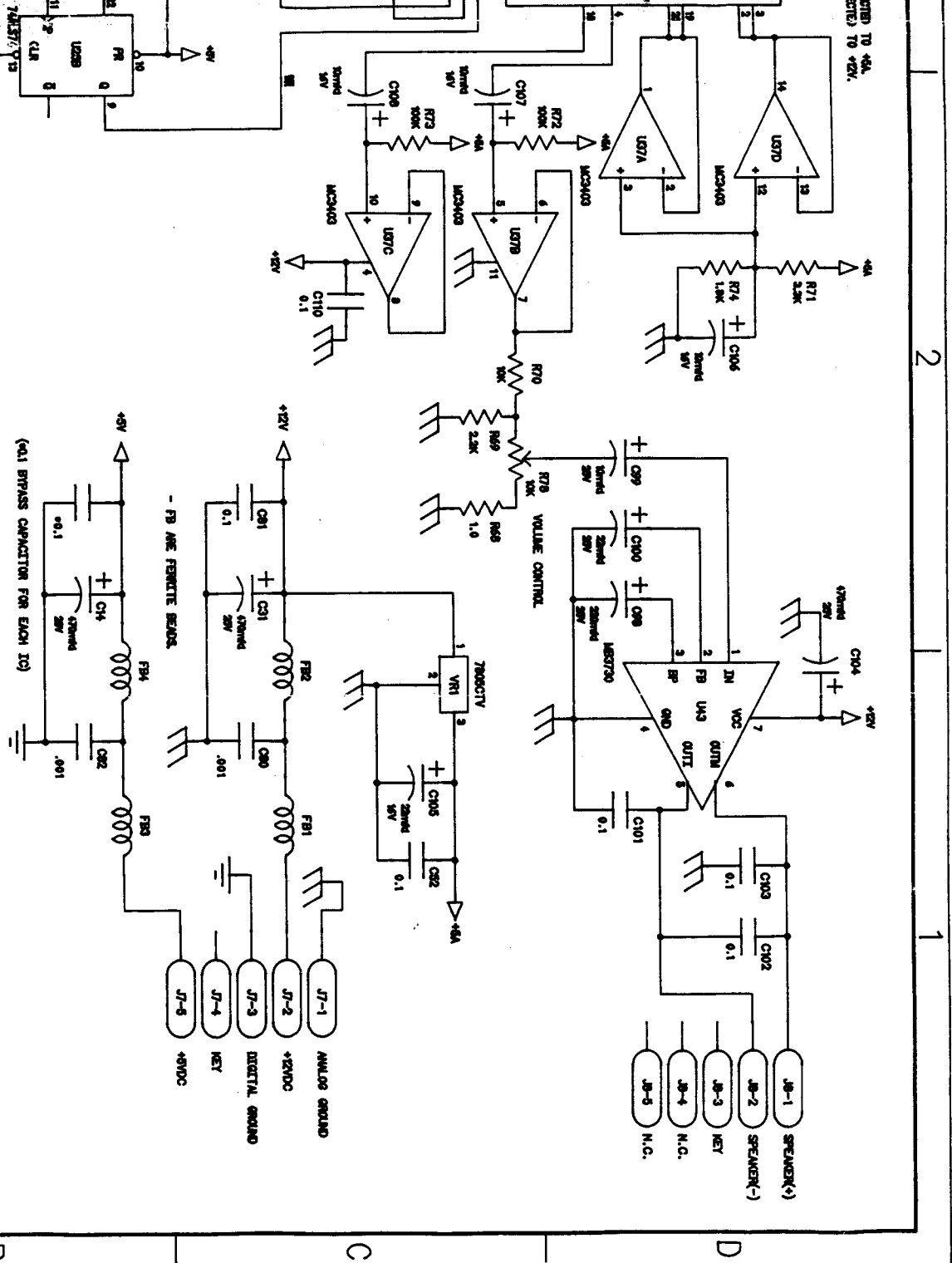
PART NO. 227-0026-00		REV. B
SHEET 1 OF 2		
DATE 07-9-1000		
MICROPROCESSOR BOARD		
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Q3	SEN2	
Q4	SEN3	
Q5	SEN4	
Q6	SEN5	
Q7	SEN6	
Q8	SEN7	
Q9	SEN8	
Q10	SEN9	
Q11	SEN10	
Q12	SEN11	
Q13	SEN12	
Q14	SEN13	
Q15	SEN14	
Q16	SEN15	
Q17	SEN16	
Q18	SEN17	
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Q93	SEN92	
Q94	SEN93	
Q95	SEN94	
Q96	SEN95	
Q97	SEN96	
Q98	SEN97	
Q99	SEN98	
Q100	SEN99	

4442
TEST
ESPESES



* W1 AND W3 ARE JUMPERED.

NOTE 2:
-IF U20 IS A W72209, VDD IS CONNECTED TO
-IF U20 IS A W72209, VDD IS CONNECTED TO



NOTE 1
 - ALL RESISTOR VALUES ARE IN OHMS, V/W, SK, UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITOR VALUES ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.

PART NO.		MICROPROCESSOR BOARD		REV.
REV.	PART NO.	REVISED FOR		
C	227-0026-00			B
QTY	2 of 2	DATE	DF-3-1000	

2

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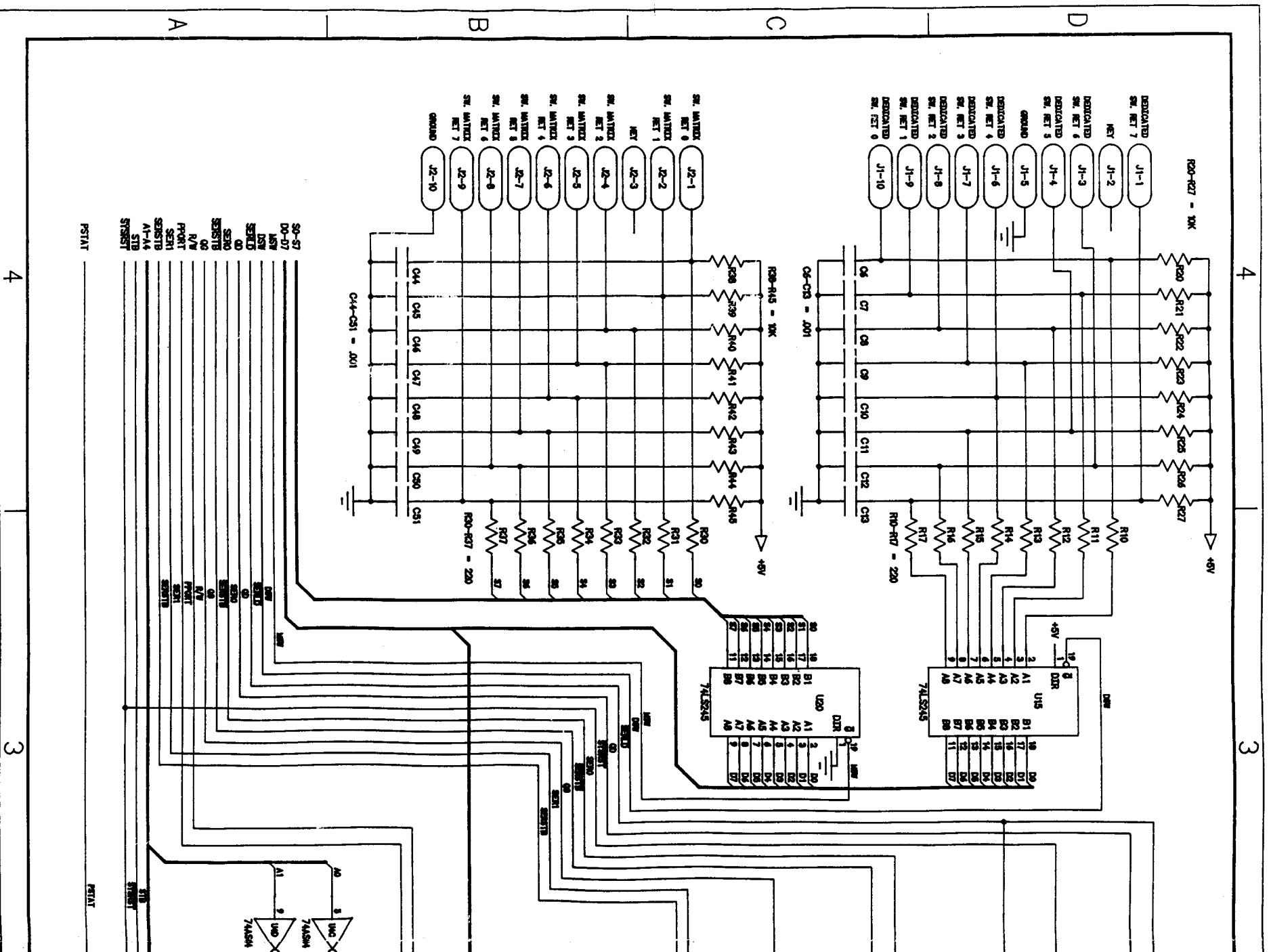
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A

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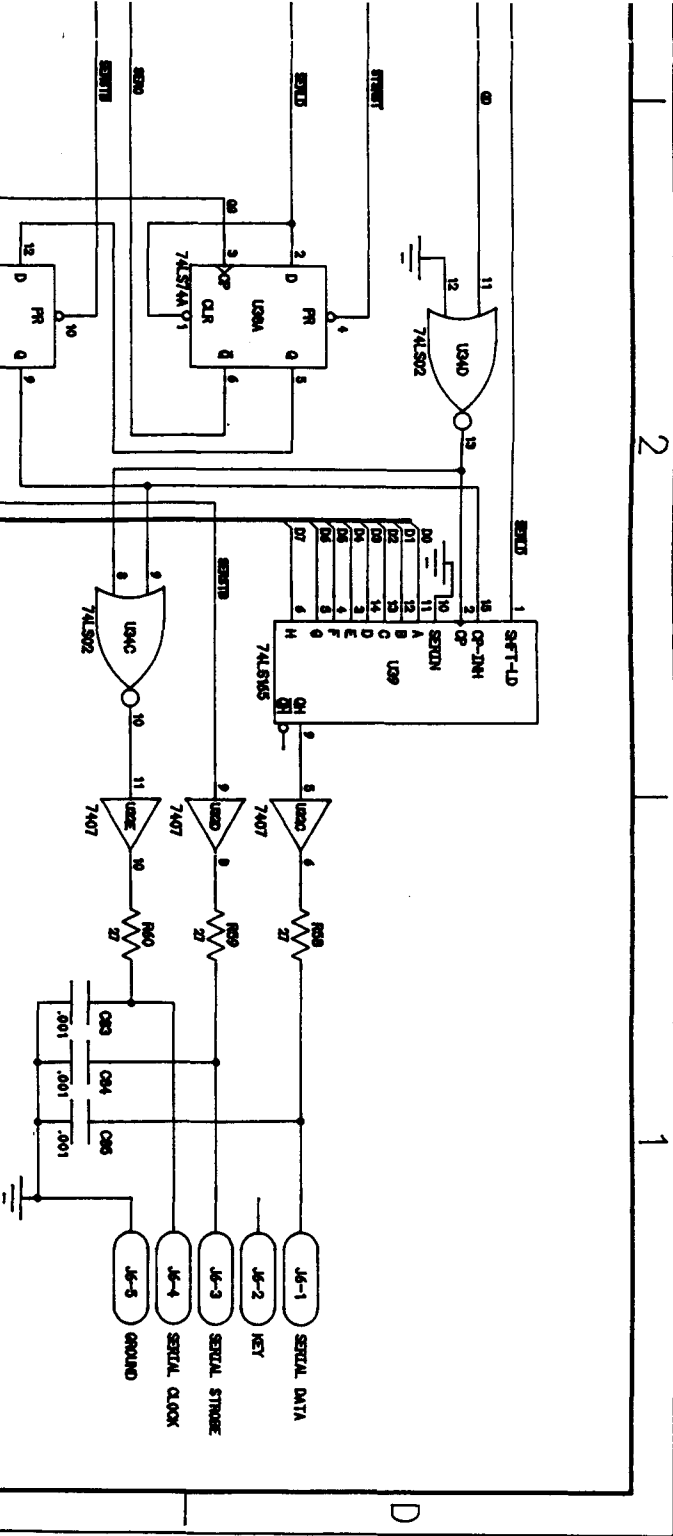


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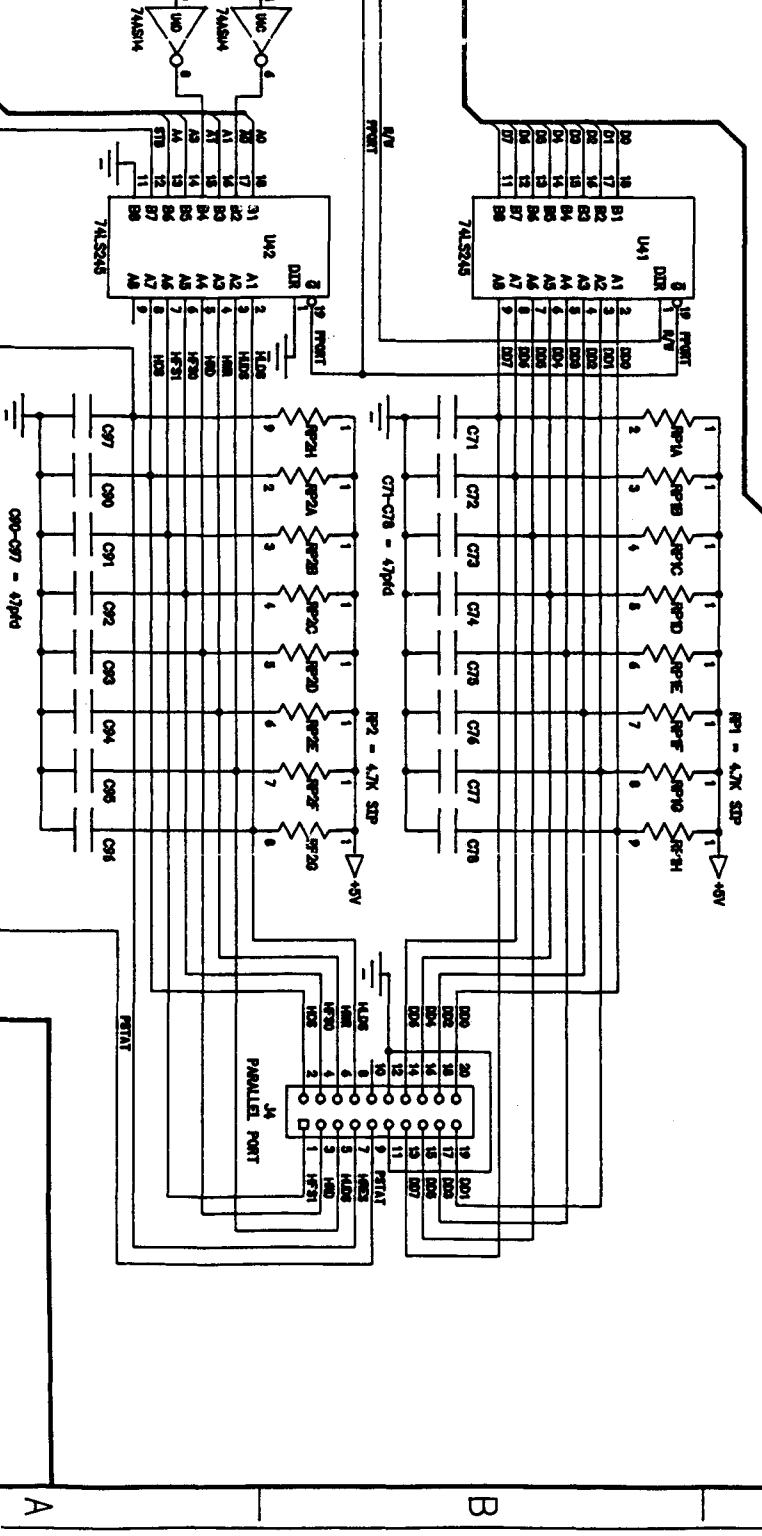
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3



NOTE 1
 - ALL RESISTOR VALUES ARE IN OHMS, V/V, OR, UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITOR VALUES ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.



BOARD NAME		MICROPROCESSOR BOARD	
PART NO.		237-0026-00	
REV.		B	
SHEET		3 of 2	
DATE		DPS-1000	

2

1