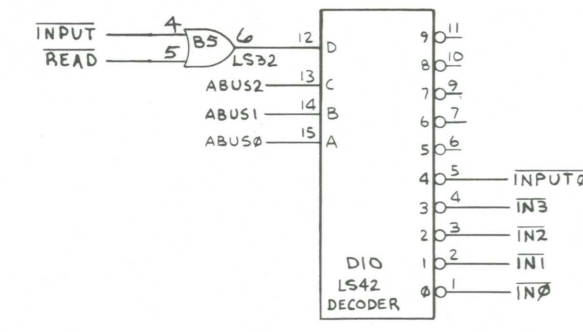


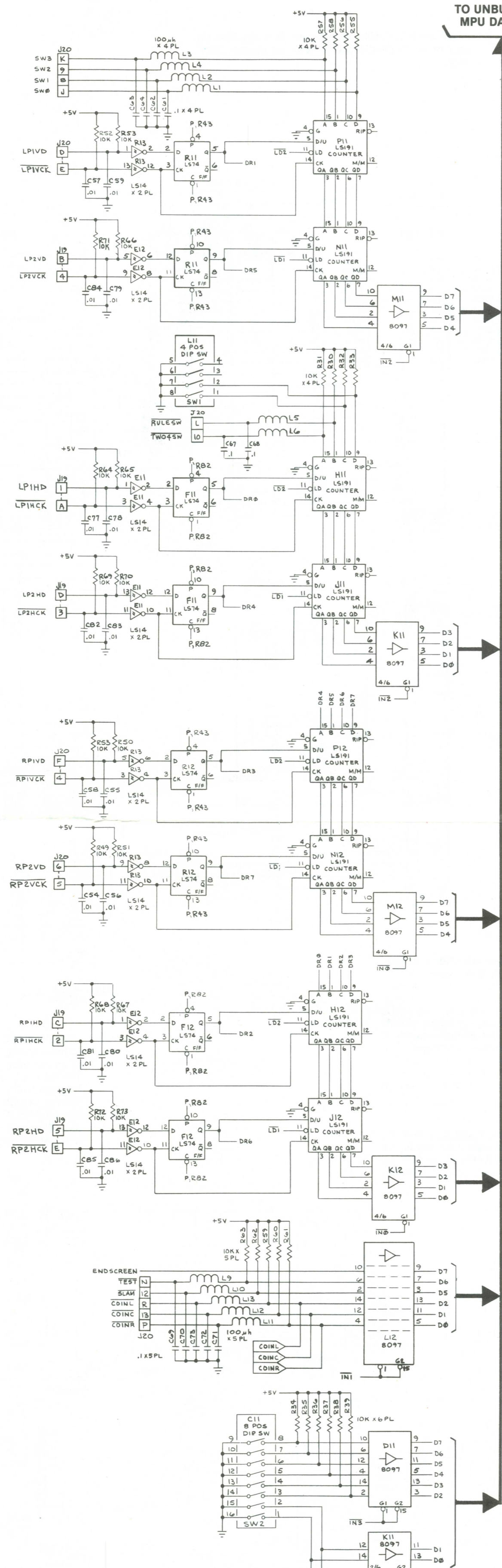
SWITCH and TRAK BALL INPUTS



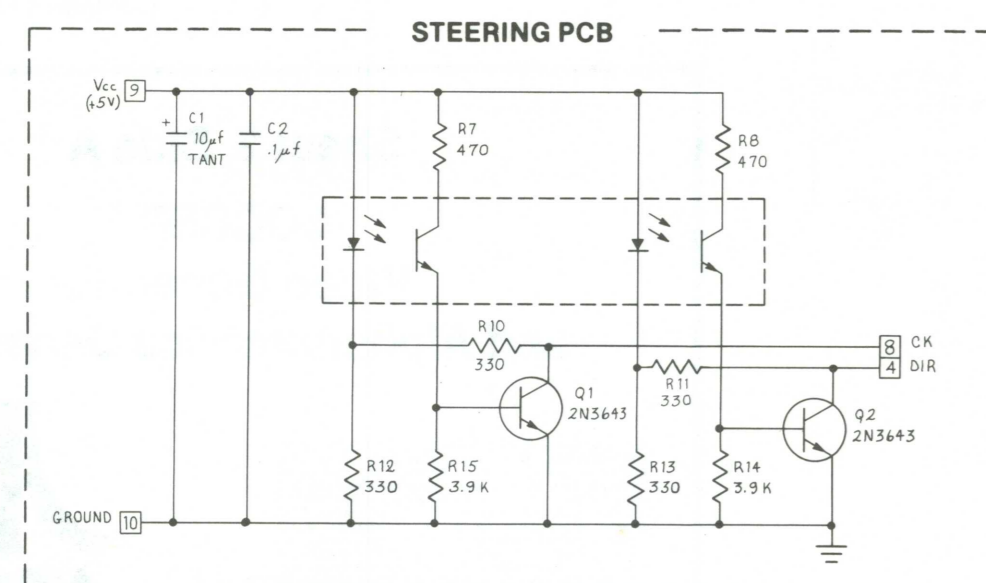
- The sequence for reading the RULESW, TWO4SW, and 4-position DIP option switch and kick buttons are as follows:
- LD1 and LD2 are latched low at the output of D6 on the rising edge of OUT1.
  - IN2 from the address decoder enables input ports K11 and M11.
  - The microprocessor reads the switches on data lines D0 to D7 through counters J11, H11, N11 and P11.

The Trak Balls are read by the microprocessor through input ports K11, M11, K12 and M12. Ports K11 and M11 are enabled by IN2 from the address decoder, and K12 and M12 are enabled by IN0. When LD1 and LD2 are both high, the microprocessor reads the rate of turn for the Trak Balls connected to J12 and N12, or connected to J11 and N11. When LD1 is low and LD2 is high, the microprocessor reads the rate of turn for the Trak Balls connected to the input of counters H12 and P12, or H11 and P11. When LD1 and LD2 are both low, the microprocessor reads the direction of the "PLAYER 2" Trak Balls on data lines D4-D7, and the "PLAYER 1" Trak Balls on data lines D0-D3.

The option switch toggles are read on data lines D0 thru D7 when IN3 from address decoder enables input ports D11 and K11.



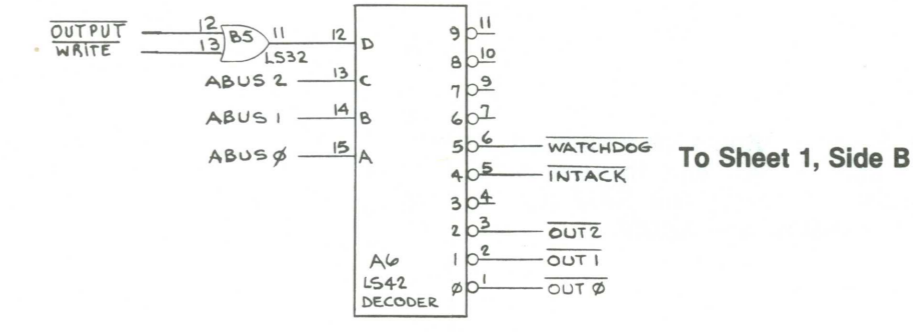
Coin slam and self-test switch inputs are connected to +5 VDC through pullup resistors. When a switch is closed, that input is pulled to ground. The switch is read by the microprocessor when switch input port L12 is enabled by IN1 from the address decoder.



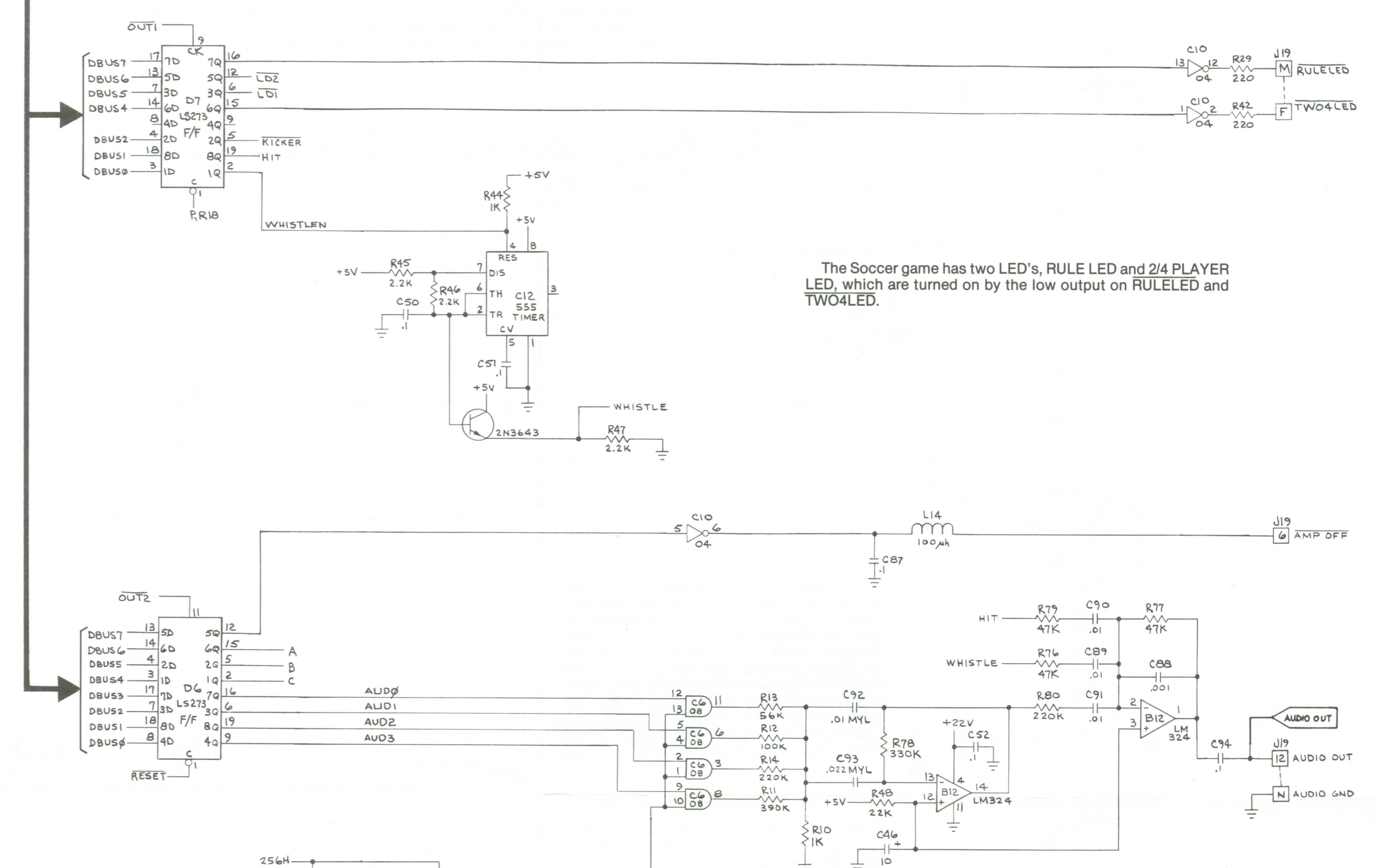
TO UNBUFFERED MPU DATA BUS

FROM BUFFERED MPU DATA BUS

AUDIO, LED, and COIN COUNTER OUTPUTS



To Sheet 1, Side B

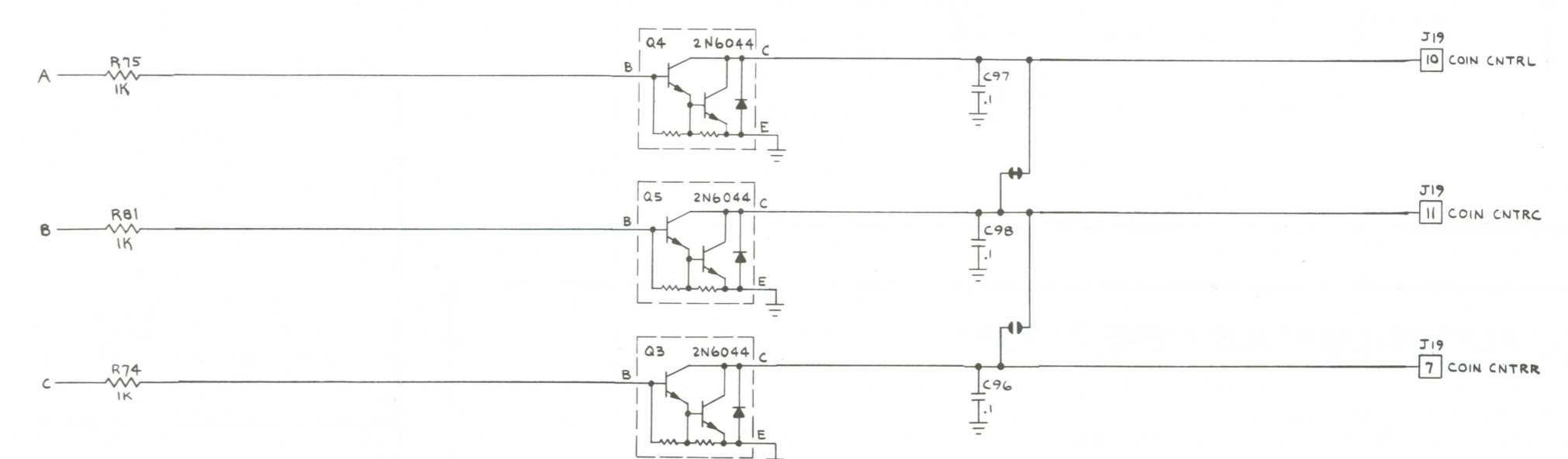


The Soccer game has two LED's, RULE LED and 2/4 PLAYER LED, which are turned on by the low output on RULELED and TWO4LED.

The audio generator generates the crowd, hit, and whistle sounds. The crowd sound is generated from random noise from B7 and C7. The volume of the crowd sound is controlled by the AUD0 thru AUD3 data latched at the output of D6. Hit is enabled by the HIT data latched at the output of D7. (A "hit" occurs when the ball is kicked).

Whistle is enabled by WHISTLEN data from the output of latch D7. The amplifier is enabled when AMPPOFF from latch D6 is high.

Coin counters are activated by low outputs on COIN CNTRL, COIN CNTRC and COIN CNTRR which are controlled by the latched outputs A, B and C, from D6.

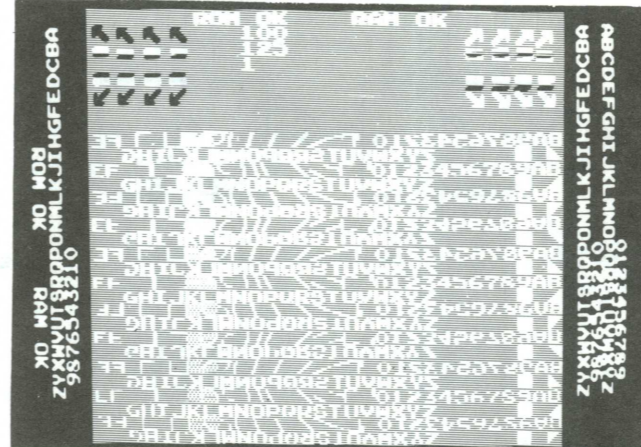


Option Switch Settings

To change toggle positions of the switch assemblies, you need not remove the game PCB. The switches, usually colored blue, are easily accessible when the PCB is mounted in place. When changing the options, verify proper results on the TV monitor display during self-test.

Toggle settings of 8-toggle switch on game PCB				Option	TV Monitor Display During Self-Test
8	7	6	5 4 3 2 1		
NOT USED	ON	ON	OFF OFF OFF	4:00 per credit	Three digits of first line immediately below ROM OK message (picture below indicates time setting of 1:00 per credit)
NOT USED	ON	OFF	OFF OFF ON	3:30 per credit	
NOT USED	OFF	ON	OFF ON OFF	3:00 per credit	
NOT USED	OFF	OFF	OFF ON ON	2:30 per credit	
NOT USED	ON	OFF	ON OFF OFF	2:00 per credit	
NOT USED	ON	ON	ON OFF ON	1:40 per credit	
ON	OFF	OFF	ON ON OFF	1:20 per credit	Second digit of second line below ROM OK message (picture below indicates 2 time credits per coin).
ON	ON	OFF	ON ON ON	1:00 per credit	
ON	ON	ON	OFF OFF OFF	1:00 per credit	
OFF	ON	ON	ON ON ON	Left coin mech multiplied by 1	Third digit of second line below ROM OK message (picture below indicates 5 time credits per coin).
OFF	ON	OFF	ON OFF ON	Right coin mech multiplied by 1	
OFF	OFF	ON	OFF ON ON	Right coin mech multiplied by 4	
OFF	OFF	OFF	OFF OFF OFF	Right coin mech multiplied by 5	Single digit in third line below ROM OK message (picture below indicates 1 coin minimum).
OFF	OFF	ON	OFF OFF ON	Right coin mech multiplied by 6	
ON	OFF	OFF	OFF OFF OFF	1 coin minimum	
OFF	OFF	ON	OFF OFF ON	2 coin minimum	

Toggle setting of 4-position switch on game PCB				Language
4	3	2	1	
N	N	ON	ON	English
O	O	ON	OFF	German
T	T	OFF	ON	French
U	U	OFF	OFF	Spanish
S	E	E	E	
E	E	E	E	
D	D	D	D	



Sheet 2, Side B  
SOCCER  
Switch Inputs, Audio, Coin Counter,  
and LED Outputs

034905-XX A

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denotes a test point