

# PACKAGE 5 12K BYTE STATIC RAM ADD-ON

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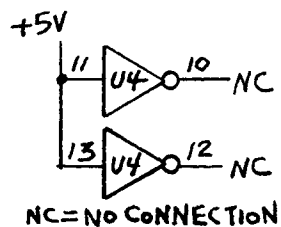
SPARES SCHEMATIC

LAYOUT

## COMMENTS

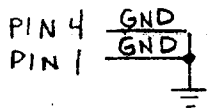
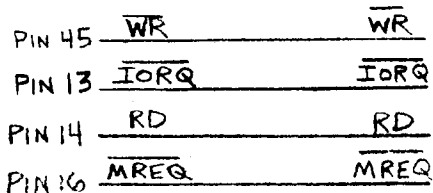
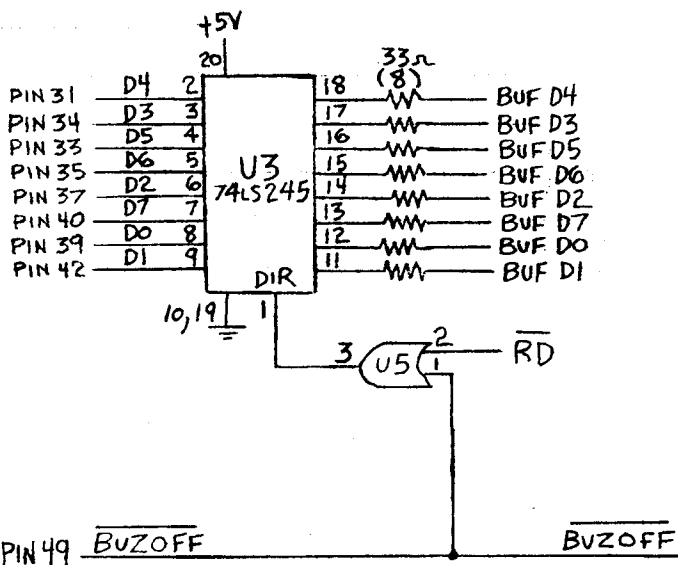
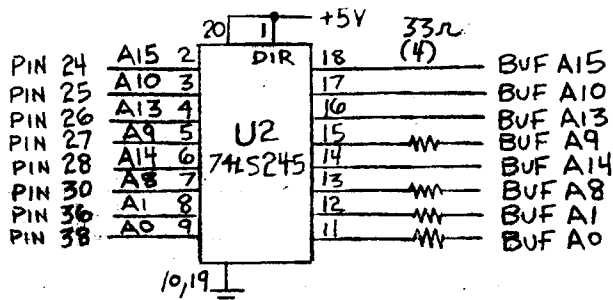
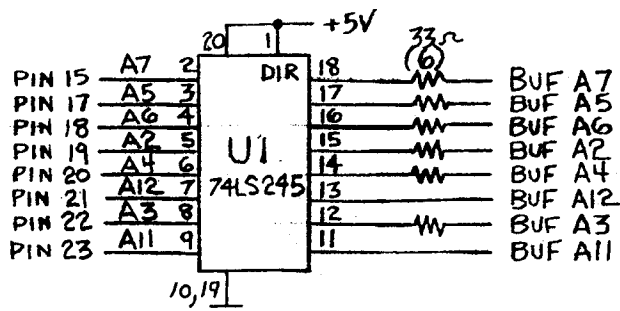
STATIC RAM DOES NOT REQUIRE ANY REFRESHING OR SPECIAL TIMING CIRCUITRY. DATA WILL REMAIN INTACT AS LONG AS +5V IS SUPPLIED TO THE BOARD AND THE WRITE PROTECT SWITCH IS ON. THIS FEATURE ALLOWS THE BOARD TO BE DISCONNECTED FROM ONE COMPUTER AND CONNECTED TO A SECOND COMPUTER OR ALLOW CARTRIDGE SWAPPING WITHOUT RUNNING LOOPS. IN EITHER CASE, THE DATA IN STATIC RAM WILL REMAIN INTACT (UNCHANGED). THE BALCHECK II DISPLAY IS OPTIONAL AND IS USED BY BALCHECK II SOFTWARE (NOT AVAILABLE AT THIS TIME) TO AID IN TROUBLESHOOTING THE MOTHER BOARD OR STATIC RAM. THE VIDEOCADE CONNECTOR ALLOWS A VIDEOCADE TO BE COPIED TO TAPE. A VIDEOCADE PC BOARD, REMOVED FROM ITS CARTRIDGE, IS INSERTED IN THE VIDEOCADE CONNECTOR. ASTROCADE BASIC (OR BALLY BASIC) IS THEN USED TO COPY THE CONTENTS OF 6000 - 7FFF<sub>H</sub> TO TAPE. INCIDENTLY, THIS ADD-ON CAN BE USED WITH THE PACKAGE 1 UPGRADE (CONNECTED TO 50 PIN EXPAND HEADER). THIS ADD-ON REQUIRES ONLY A +5V POWER SUPPLY. REFER TO POWER SUPPLY SCHEMATIC IN PACKAGE 1. SOLDER A 0.1 $\mu$ F 12V DISC CAPACITOR, FROM V<sub>CC</sub> TO GND, ON TO THE BOTTOM OF WIREWRAP SOCKETS U1-U10, U11, U36 AND ON ALTERNATE STATIC RAM SOCKETS U12, U25, U14..... U33, U22 AND U35. SOLDER A 15 $\mu$ F TANTALUM CAPACITOR, OBSERVING POLARITY, FROM V<sub>CC</sub> TO GND, ON TO THE BOTTOM OF WIREWRAP SOCKETS U24 AND U23. WIRE A 15 $\mu$ F TANTALUM (OBSERVING POLARITY) AND 0.1 $\mu$ F DISC CAPACITOR, FROM +5V TO GND, WHERE THE +5V AND GND POWER LINES ENTER THE RAM BOARD. THE FOUR SPARE SOCKETS SHOWN ON THE LAYOUT DRAWING ARE NOT REQUIRED (OOPS!).

QUESTIONS REGARDING THE ADD-ON CAN BE DIRECTED AS DISCUSSED ON THE PACKAGE 2 TITLE PAGE. THIS ADD-ON IS RECOMMENDED ONLY FOR USE WITH SEPARATE COMPOSITE VIDEO AND AUDIO OUTPUTS FED TO A MONITOR/TV. STATIC RAM CAN BE ADDED IN 1K INCREMENTS. CHIPS U12 AND U24 CONSTITUTE 1K, U13 AND U25 ANOTHER 1K AND SO ON. WIRE THE SPARES AS SHOWN BELOW.



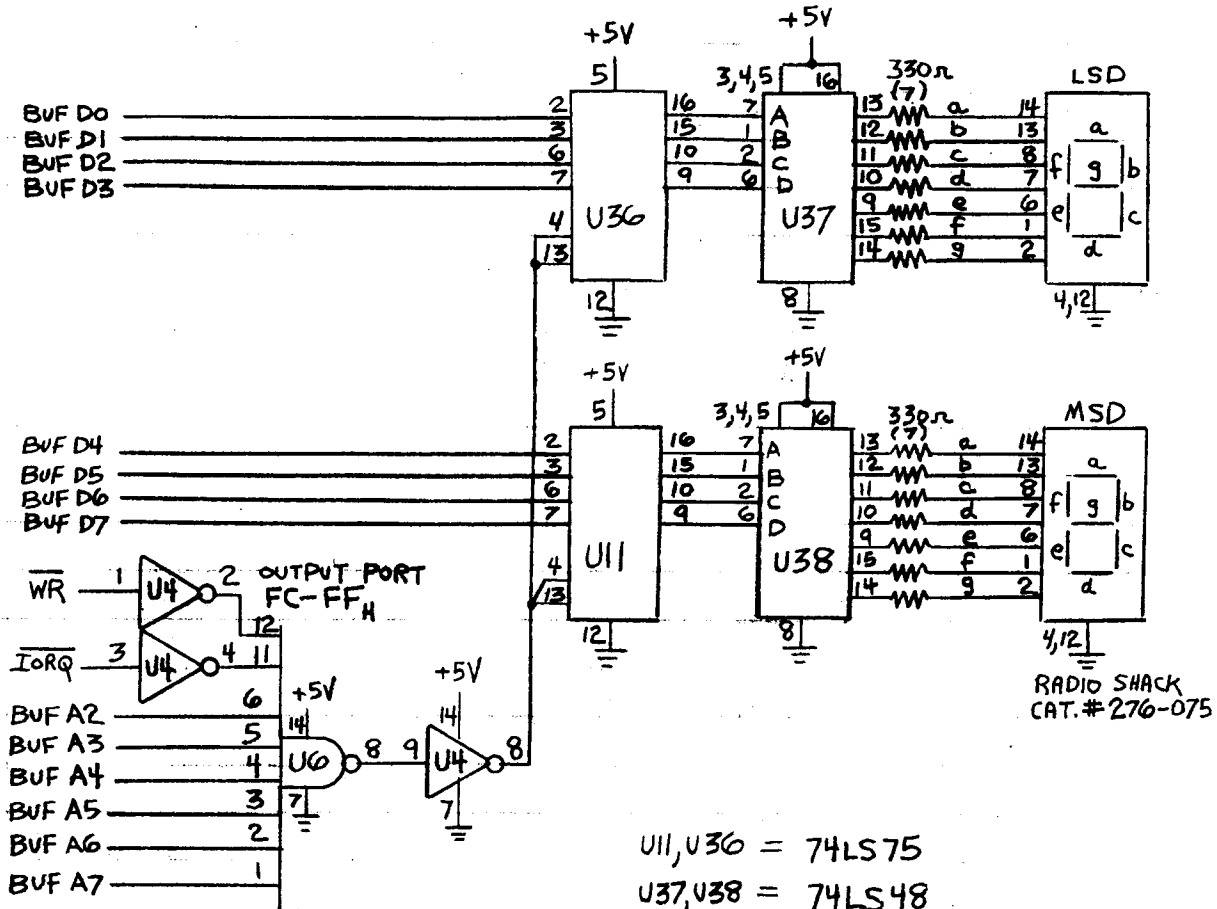
# MULTI-FUNCTION BOARD 1

50 CONTACT (PIN) ①  
EXPAND  
INTERFACE



# MULTI-FUNCTION BOARD 1

BALCHECK II ②  
DISPLAY

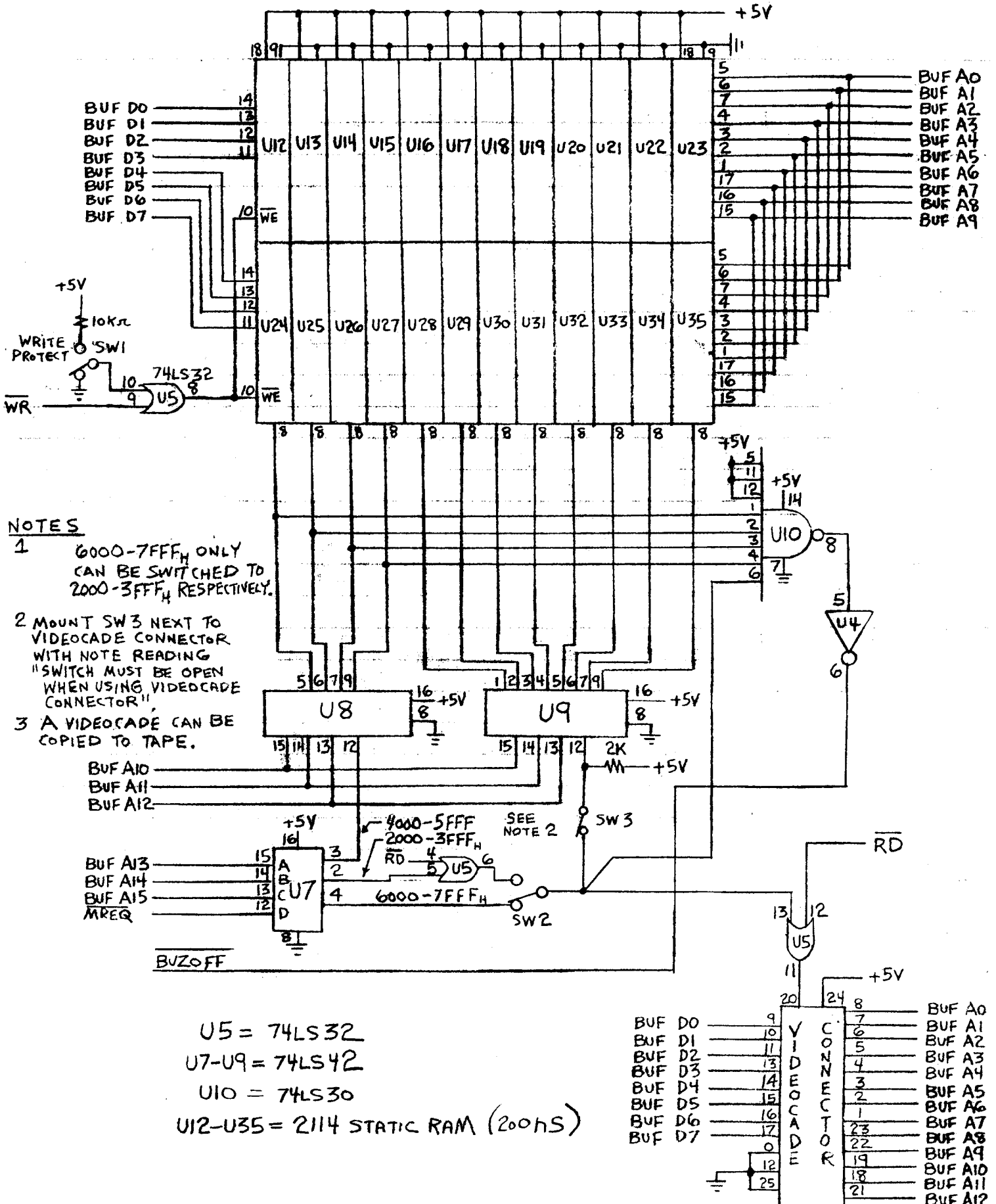


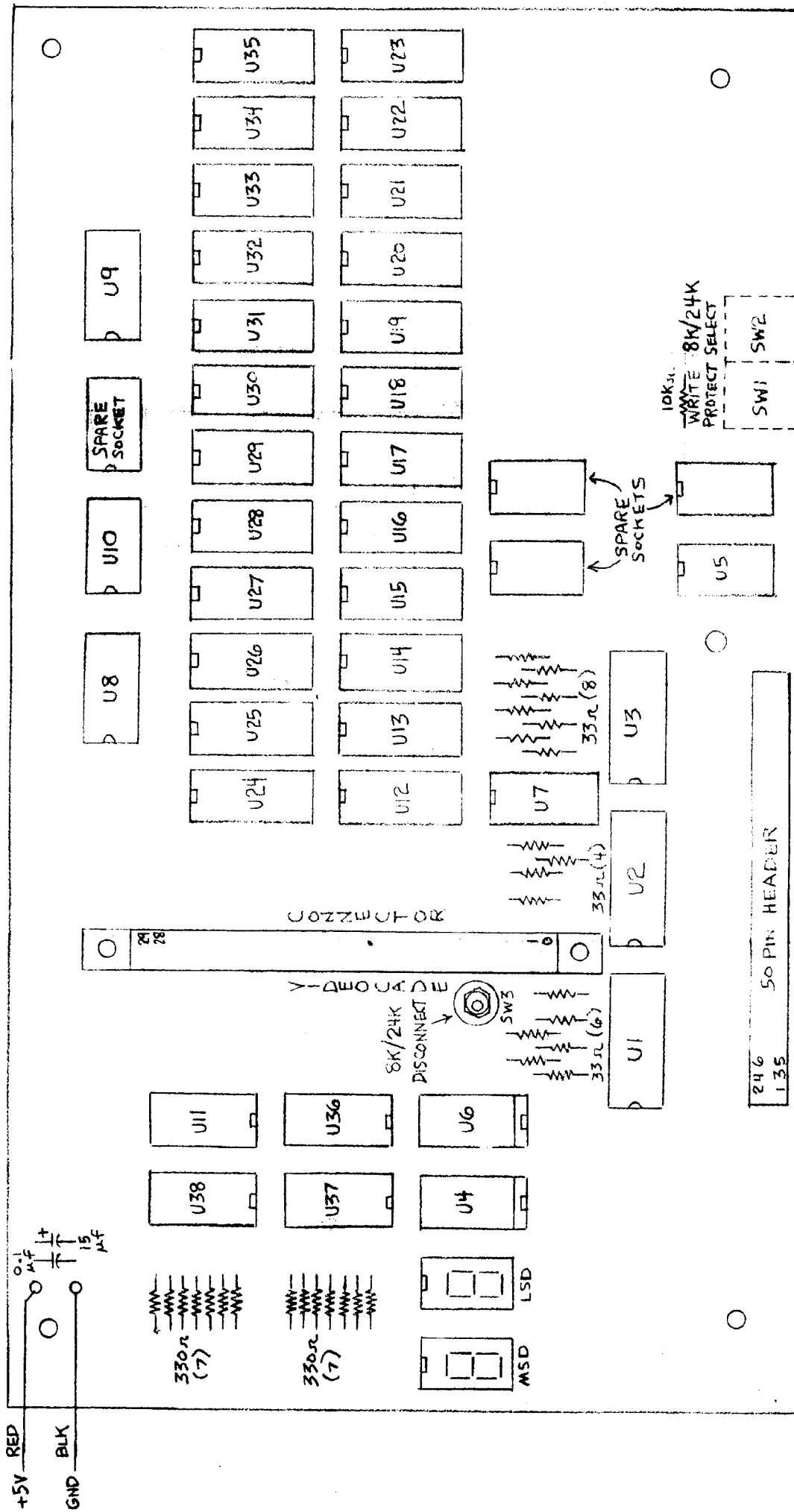
RADIO SHACK  
CAT.# 276-075

- U11, U36 = 74LS75
- U37, U38 = 74LS48
- U6 = 74LS30
- U4 = 74LS04

# MULTI-FUNCTION BOARD 1

5000-7FFF<sub>H</sub> STATIC RAM (3)  
 VIDEOCADE COPIER 3





MULTI-FUNCTION BOARD 1