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## JOHN GILBERT & COMPANY LTD.

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Electronic parts and equipment

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### SYSTEM 80 KITSET INSTRUCTIONS 64K MEMORY UPGRADE

- 1/ Remove cover.
- 2/ Disconnect and remove keyboard unit- handle connecting cable carefully.
- 3/ Disconnect CPU board from interface board- again handle connecting cable carefully.
- 4/ Disconnect power cable from CPU board then remove CPU board.

#### On Component Side of CPU Board

- 1/ Cut trace between pin 6 and pin 11 of X2.
- 2/ Fit three diodes with cathodes to pins 6,7 and 8 of X2, and anodes to pins 12,11 and 10 of X2 respectively.
- 3/ Connect a 2K2 ohm resistor from pin 12 of X2 to pin 16 of Z25.
- 4/ Remove Z27 to Z34 inclusive and replace with 64K RAM IC's.
- 5/ Remove C17 capacitor (2nd capacitor beside Z27).

#### Underneath CPU Board

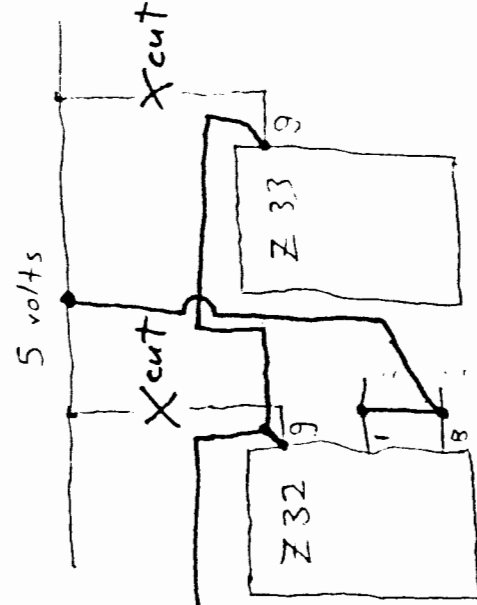
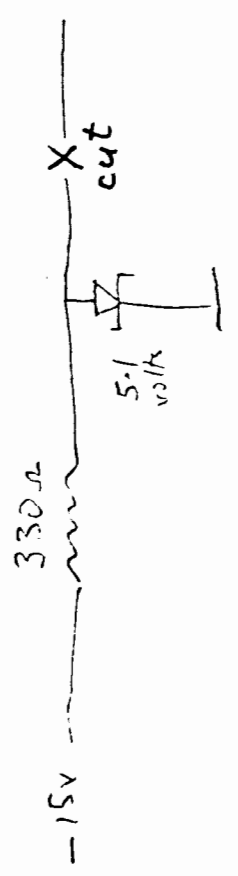
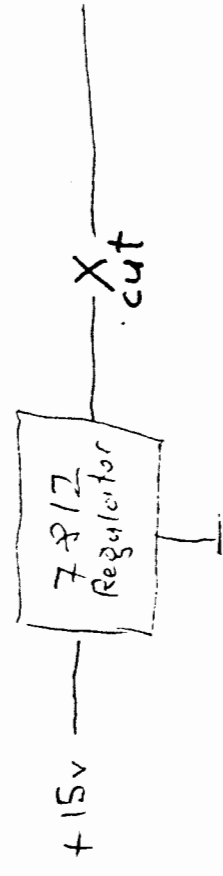
- 1/ Cut Vcc trace to pin 9 of Z34.
- 2/ Cut Vcc trace to pin 9 of Z32.
- 3/ Cut trace from 7812 regulator output. *> r. Those 2 very importa*
- 4/ Cut trace from D2 anode (5.1V Zener).
- 5/ Connect pin 14 of Z25 to pin 14 of Z24.
- 6/ Connect pin 13 of Z25 to pin 13 of Z24.
- 7/ Connect pin 12 of Z24 to pin 9 of Z32 then to pin 9 of Z33.
- 8/ Connect pin 1 to pin 8 of Z32.
- 9/ Connect pin 8 of Z32 to Vcc trace previously cut next to pin 9 of Z32.
- 10/ Connect pin 7 of X2 to pin 10 of Z25.
- 11/ Connect pin 8 of X2 to pin 9 of Z25.
- 12/ Connect pin 10 and pin 11 of X2.

#### Reassemble system and test

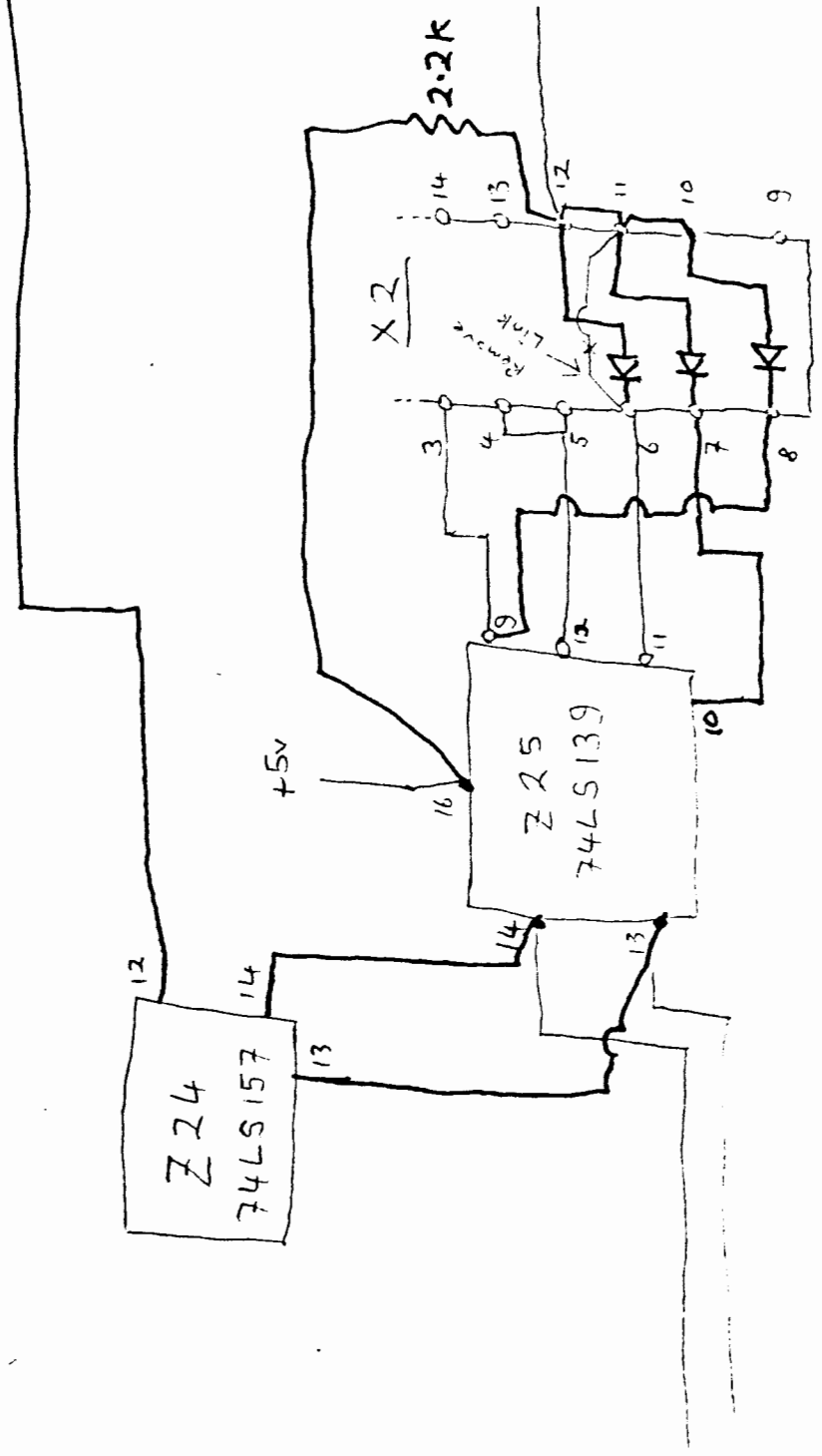
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*Res Pin 7 Z 25 Ind wire  
--- Pin 16 ---*

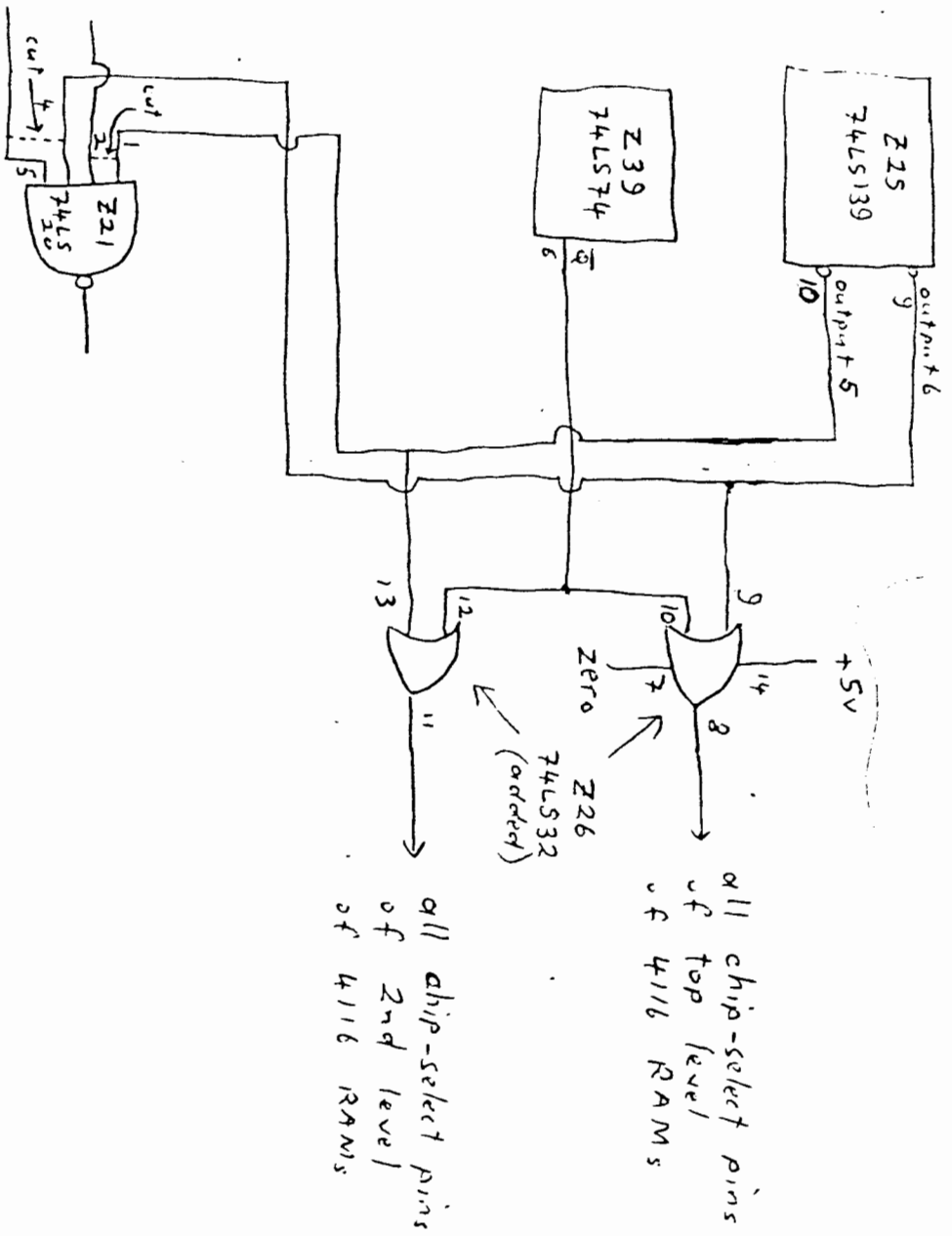
original circuits  
 added circuits



(change all RAMs to 4164s)



Schematic for  
 Gilbert's 64K  
 Upgrade mod.  
 (all performed on  
 CPU board)



all chip-select pins  
of top level  
of 4116 RAMs

all chip-select pins  
of 2nd level  
of 4116 RAMs

Memory Expansion  
by using extra 4116s  
and a 74LS32