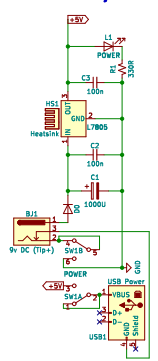


TEC-1G

Power Delivery



General Input/Output

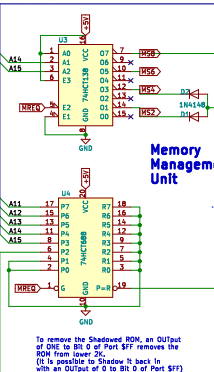


The TEC Deck

The new way to expand your TEC-1G with appropriate plug-in modules, expansion boards can be slotted on top of each other. Just the original TEC-1G and now you have access to ALL the 280 pins as well as port and memory select lines. Memory expansion of 512K with ease. Input/output options for ease.



With the Shadow ROM switch ON (on Reset or OUT FF.501), the lower 2K of the 16K ROM is mapped to the lowest 2K of the memory map. This is to provide backward compatibility to older TEC-1 machines and their ROMs.



Memory Management Unit

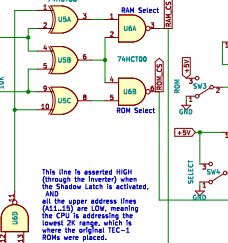
To remove the Shadowed ROM, an output of ONE to Bit 0 of Port FFF removes the ROM from lower 2K. (It is possible to Shadow it back in with an output of 0 to Bit 0 of Port FFF)

The ROM is selected (asserted LOW) if:

Any address in the lower 2K is requested (with Shadow ON)

If an address is within the top 16K of 64K.

Otherwise, the ROM is selected if the address falls within the lower half (32K) of the memory map.



Memory Protection

On Reset, all RAM is writable. Under software control, sending Bit 2 high of Port FFF turns ON write protect of the RAM in the second 16K memory space. Sending to Port FFF a value with Bit 2 clear will remove write protection.

System Latch

This critical latch controls a lot of important functions, and will also be the centre of huge memory expansions to come.

Status lights showing which output options are active.

STATUS

RESET

74HC138

74HC138

74HC138

74HC138

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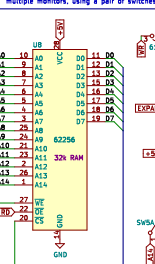
74HC138

74HC138

64K Memory

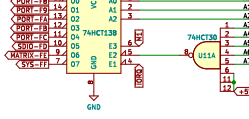
The lower 32K of all RAM is a single chip.

The upper 16K of the memory map is reserved for the system ROM, although it is made up of up to a 64K EPROM to allow selection of multiple monitors, using a pair of switches.



I/O Decoders

On Reset, all RAM is writable. Under software control, sending Bit 2 high of Port FFF turns ON write protect of the RAM in the second 16K memory space. Sending to Port FFF a value with Bit 2 clear will remove write protection.



System Input

CONFIG

2. Protect OFF / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

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EXPANSION LG / HI

EXPANSION LG / HI

EXPANSION LG / HI

7 Segment Display Unit

DISG6

DISG5

DISG4

DISG3

DISG2

DISG1

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

Disco LEDs

DISG6

DISG5

DISG4

DISG3

DISG2

DISG1

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

DISG0

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CPU & Clock

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Matrix Keyboard & Joystick

KEY0

KEY1

KEY2

KEY3

KEY4

KEY5

KEY6

KEY7

KEY8

KEY9

KEY10

KEY11

KEY12

KEY13

KEY14

KEY15

KEY16

KEY17

KEY18

KEY19

KEY20

KEY21

KEY22

KEY23

KEY24

KEY25

KEY26

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KEY35

KEY36

KEY37

KEY38

KEY39

KEY40

KEY41

KEY42

KEY43

KEY44

KEY45

KEY46

KEY47

KEY48

KEY49

HexPad Encoder

KEY0

KEY1

KEY2

KEY3

KEY4

KEY5

KEY6

KEY7

KEY8

KEY9

KEY10

KEY11

KEY12

KEY13

KEY14

KEY15

KEY16

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KEY22