

1802/1804 FULL BASIC MATH/ROM BOARD

ASSEMBLY INSTRUCTIONS

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INTRODUCTION

The math/ROM printed circuit board is separated into two sections, the math section and the ROM section. The ROM section is not included with this kit. The ROM section will accept the 2317 ROMs or 2716 EPROMs which are available as a separate kit (model 1802 Full Basic ROM or EPROM kit). The ROM area is addressed from 0000 to 1FFF.

Please check your kit against the following parts. Note: Kits are not returnable for credit after construction has been started.

<u>PART DESCRIPTION</u>	<u>QUANTITY</u>
IC Socket 28 Pin	1
IC 1852	2
IC 4049	1
IC 4013	1
IC 57109	1
Transistor 2N4384	2
Diode IN4148	1
Diode IN4739 9.1V Zener	1
Resistor 10K (Brown, Black, Orange)	8
Resistor 470 ohm (Yellow, Violet, Brown)	1
Resistor 1.2K (Brown, Red, Red)	2
Resistor 18K (Brown, Gray, Orange)	1
Resistor 33K (Orange, Orange, Orange)	1
Resistor 150 ohm (Brown, Green, Brown)	1
Capacitor 100pf Disc	1
Capacitor .022 Mylar	1

Resistor 270 ohm (Red, Purple, Brown)

The board also has provisions for two resistors R15, R16, (470 ohm typical) and two LEDs all of which is optional and not required for operation. Provisions have been made so that the SF1 and SF2 functions can be tested if desired. These functions can also be tested with a voltmeter.

ASSEMBLY PROCEDURE (REFER TO ASSEMBLY DRAWING)

- (✓) 1. Mount 28 pin IC socket at location U3. Solder.
- (✓) 2. Install IC's 1852 at locations U1 and U2. Note pin 1. Solder.
- (✓) 3. Install IC 4049 at location U4. Note pin 1. Solder.
- (✓) 4. Install IC 4013 at location U5. Note pin 1. Solder.
- (✓) 5. Install transistors 2N4384 at Q1 and Q2. Note position of tab. Solder.
- (✓) 6. Install diode IN4739 at location D2. Note direction of band. Solder.
- (✓) 7. Install diode IN4148 at location D1. ^{REVERSE} ~~Note~~ direction of band. * Solder.
- (✓) 8. Install capacitor 100pf disc at location C1. Solder.

- (✓) 9. Install capacitor .022 Mylar at location C2. Solder.
- (✓) 10. Install resistors 10K at locations R1,2,3,4,6,7,8,9. Solder.
- (✓) 11. Install resistors 1.2K at locations R10,11. Solder.
- (✓) 12. Install ~~resistor 150 ohm~~ ^{diode 1N4148, board loc R3 *} at location R12. Solder.
- (✓) 13. Install resistor 18K at location R13. Solder.
- (✓) 14. Install resistor 33K at location R14. Solder.
- (✓) 15. Install resistor ~~270~~ ²⁷⁰ ohm at location R5. * Solder.
- () 16. Install IC 57109 into socket at U3. Note pin 1.

Before proceeding check all work carefully a mistake could be costly once you apply power.

The I/O ports for parallel interface are located on the Giant Board using the 67 and 6F I/O instructions.

Make the following connections from the 86 pin socket reserved for the Giant Board and the 86 socket to be reserved for the math/ROM board.

- () 1. Connect -8V DC to pin 15 on math/ROM 86 pin socket.
- () 2. Connect pin 51 of Giant Board socket to pin 51 of math/ROM socket.
- () 3. Connect pin 79 of Giant Board socket to pin 79 of math/ROM socket.

Power up your ELF and load the programs as per instructions with Basic tape. Make sure that you have at least 8K of memory starting at 0000. If you are using a parallel keyboard with a parallel display simply depress a carriage return to initialize the system (same as serial to serial). If you are using a serial keyboard and parallel output type in a CR followed by DEVICE 2 (the DEVICE 2 will not print). If you are using a parallel keyboard with a serial output enter baud code (see SET command) followed by a CR.

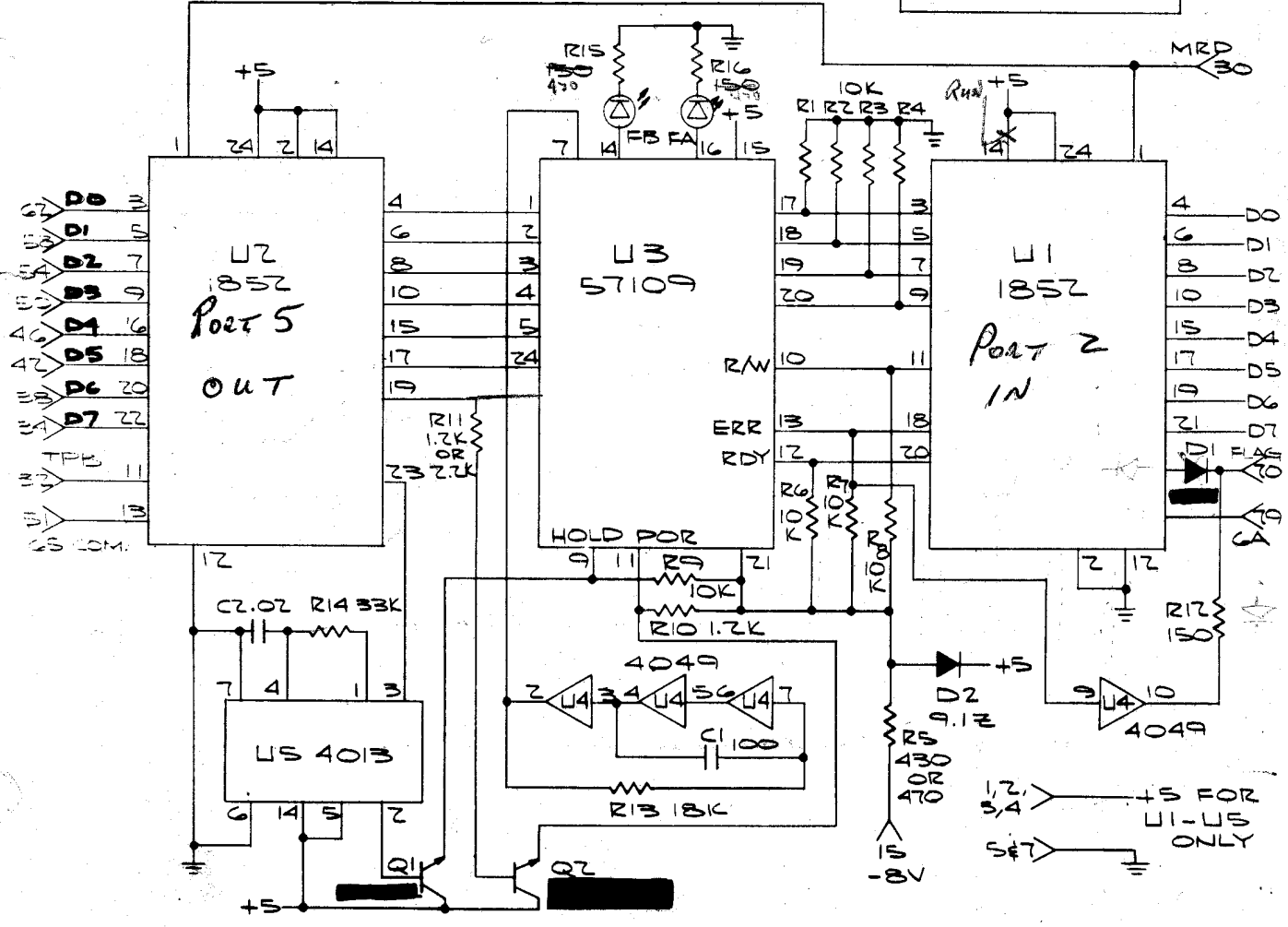
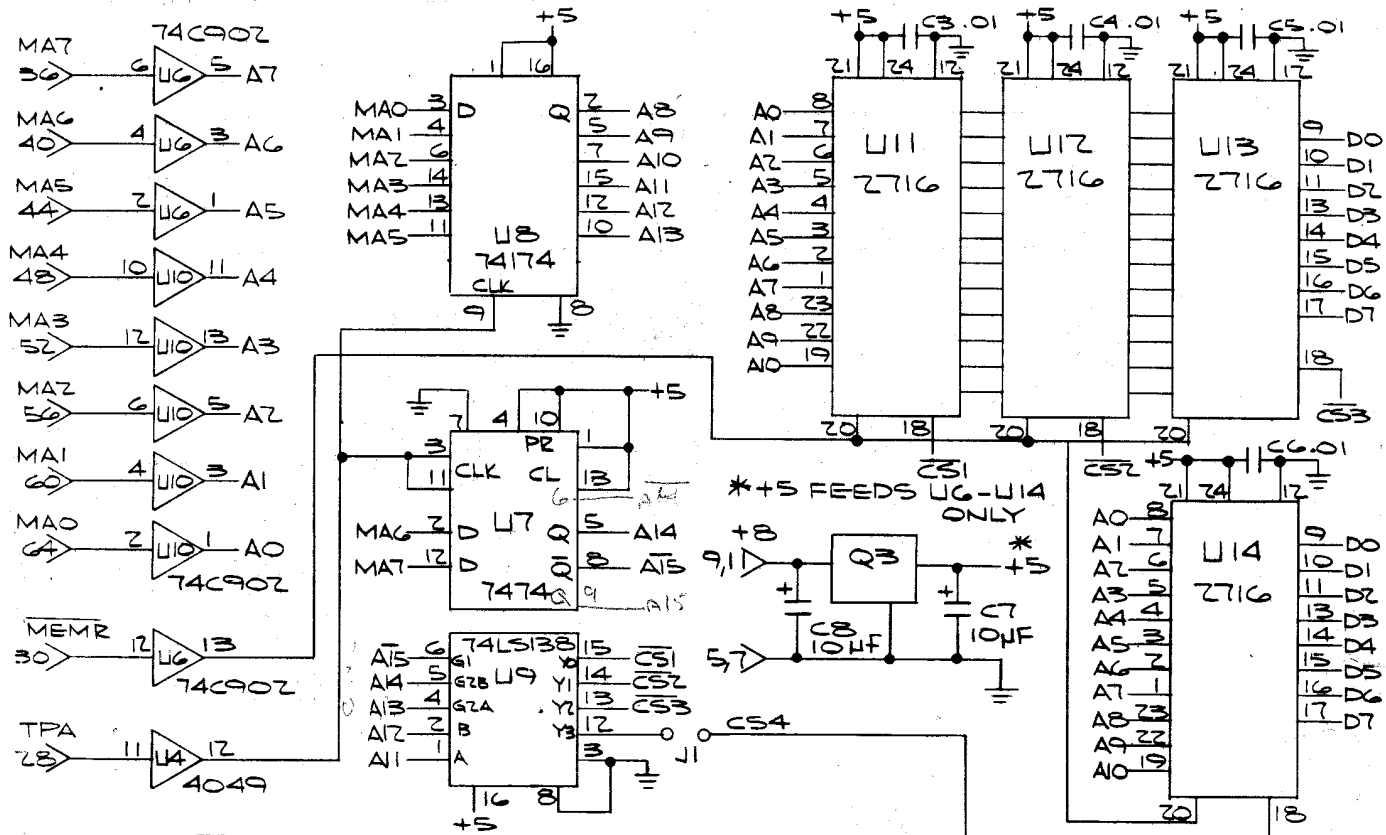
* REVISIONS AS PER REVISION SHEET. A

LIMITED WARRANTY

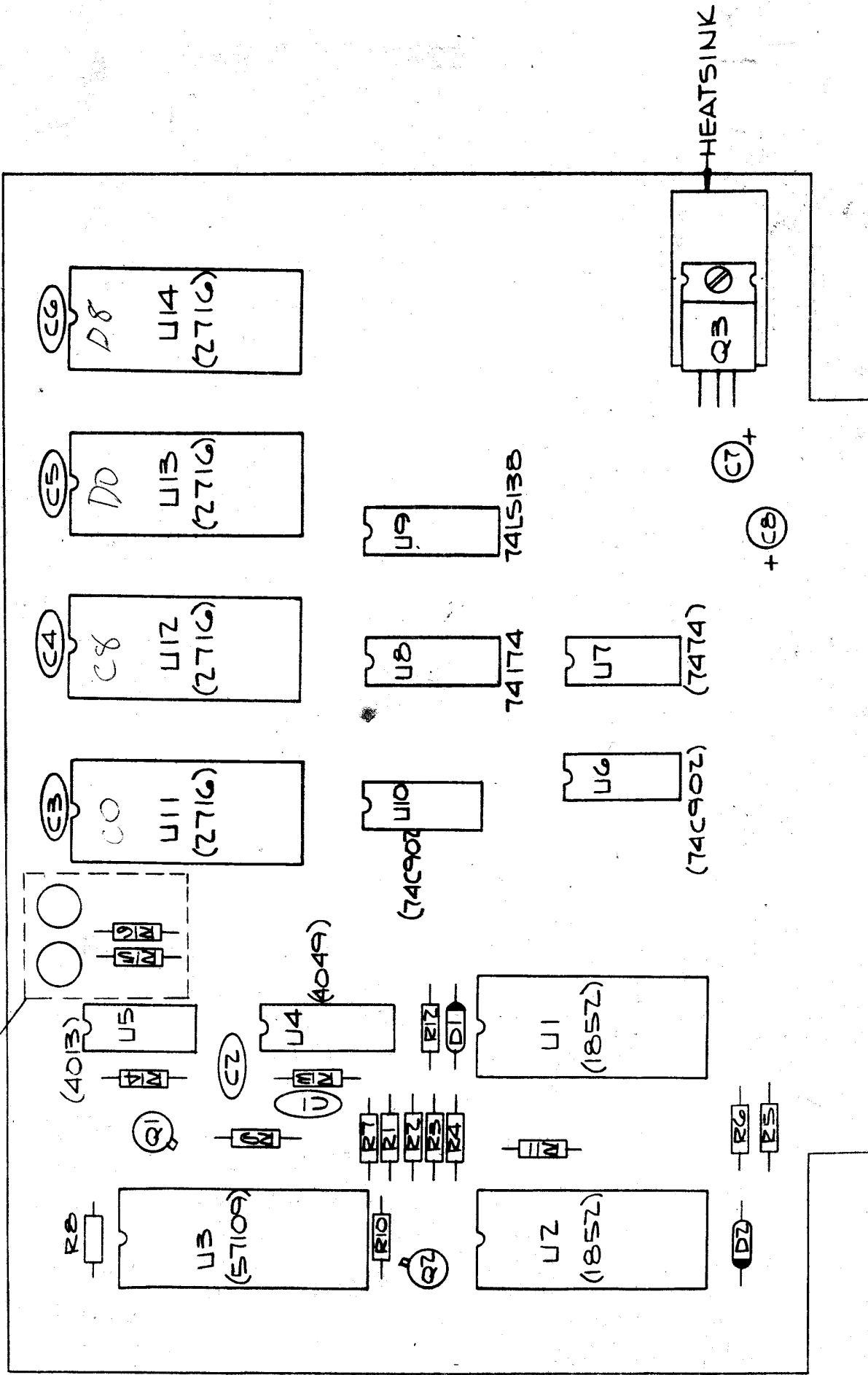
All of the components supplied in this kit are under warranty for six months from date of purchase. Any parts suspected to be defective should be returned to Netronics with \$1.00 for postage and handling. They will be tested and returned postpaid.

IN CASE OF DIFFICULTY

In the event of difficulty, check all wiring against the instructions. Check for solder bridges and all component values. If you still cannot determine the problem, return the defective printed circuit board ONLY. Please enclose a check or money order for \$9.00 and pack the board securely, and insure the parcel. Your unit will be tested and returned insured and postpaid.



LED'S & RIS RIG
OPTIONAL



FULL BASIC MATH / ROM BD.