ORDER OF ASSEMBLY: Read these instructions carefully, take your time, and don't rush. This board accommodates 8K worth of memory if you have ordered the 4K version. It may be expanded to a full 8K at a later date by adding more parts.

PRELIMINARIES: Check off the parts in your kit against the parts list to familiarize yourself with the various components. Note that the socket and bus connectors are the same as used in the 80 line computers. Set up the parts to match your computer. SOLDERING: Use a fine tip soldering iron, rated at about 25 watts. Use only rosin core solder; using any other type of solder invalidates the warranty. Solder every pin of every socket. This board uses a solder mask to reduce the chances of bridges and solder shorts; be sparing with your solder, and heat both the lead and pad while soldering.

(1) Mount resistors R1 and R2; then solder, and remove excess lead length.

(2) Mount the 64-pin socket (C) on the board. The double lead on the socket is the common lead, and must remain connected. There is no separate socket for the 64-pin lead. Solder the two 16-pin sockets (C) in place. Note: In the 4K version, only 32 sockets will be left. Mount and solder them in rows 1L, 2L, 3L, and 4L, leaving rows 5L, 6L, 7L, and 8L unpopulated.

(3) Mount and solder the 64 rayon-plated 16 pin sockets. Note: In the 4K version, only 32 sockets will be left. Mount and solder them in rows 1L, 2L, 3L, and 4L, leaving rows 5L, 6L, 7L, and 8L unpopulated.

(4) Mount and solder the 64 rayon-plated 16 pin sockets. Note: In the 4K version, only 32 sockets will be left. Mount and solder them in rows 1L, 2L, 3L, and 4L, leaving rows 5L, 6L, 7L, and 8L unpopulated.

(5) Mount and solder all other capacitors in place. Note: In the 4K version, do not solder capacitors into locations 05, 10, 11, 15, 16, 17, 22, 23, 24, and 25.

(6) Check for solder shorts before proceeding by attaching an ohmmeter across C3-4-4. A reading of 0 ohms indicates a problem — check your work over if this is the case.

(7) Mount the regulator (12V-104C13) on the board and push its leads into the designated holes on the board; then bend them over on top of the heat sinks. As shown in figure 1. Although not required, adding some silicone heat sink compound to the regulator and heat sink improves the efficiency of the heat sink. Mount the regulator heater/sink combinations into place using the hardware provided. (Note: In the 4K version, C13, along with associated heat sink, is not required.) Finally, solder the regulator leads.

(8) Check the card and connectors, plug this board into your computer. Measure the 35V across C5-C6 (Note: C4 is not included in 4K board) with an ohmmeter. If you obtain readings other than 55 ± 5%, recheck your work.

(9) Orient the board with the components side facing you and the edge connector pointing down. Solder the two-soldering points in place. (Note: In the 4K version, DIP switch 8 is not used.)

(10) Carefully check your solder connections for bridges, cold joints, or any other possible causes of difficulty. Once satisfied with your work, plug in the various ICs as shown on the component layout diagram. This completes assembly of your unit.

SETTING THE DIP SWITCHES: The ICs contained in rows 1L - 3L form a 4K block of memory, designated “Block A.” The ICs contained in rows 4L - 8L form another 4K block of memory, designated “Block B.” Either block may be configured anywhere in the 64K range directly addressable by your computer via setting the appropriate DIP switch — switch A corresponds to Block A; switch B corresponds to Block B. In lots switches, the right hand toggle toggles (3-4) choose one of 4 16K blocks; the left hand toggle switches (1-2) choose a 4K block within the chosen 16K block. Table 1 shows which toggles must be “on” in order to select the desired block of memory. Note 2 points of interest: unlike some other memory boards, blocks A 6 6 6 and B 6 6 6 do not require configuration to each other. Additionally, having all switches in the “off” position makes it impossible to either read from or write into the memory. This can be useful if you want to have two blocks of memory occupying the same space, and need to disable one or the other as the need arises.

SETTING THE DIP SWITCHES: Orient the board with the component side facing you and the edge connector pointing down. The right hand slider switch should be on the “up” position (0 wait states). For memory boards with the 382 processor, driven by a 4 MHz clock, it is recommended in this instance. Slide the switch into the down position. The left hand slider switch is the write strobe select switch. For most conventional systems employing a front panel, this switch should be on the “up” position, which selects WRITE as the write strobe. If you have a system with no front panel and therefore no WRITE signal the switch should be in the down position, which selects R/W as the write strobe.

VECTOR INTERRUPT OPTION: This board has provisions to provide your system with a vectored interrupt (by stroking one of the vectors) to alert the processor to an interrupt). If an interrupt is not acknowledged by the board, an interrupt will be generated. If PE goes low while the write strobe signal is present, an additional vector will be generated to indicate an interrupt. This will cause the processor to enter the vectored interrupt routine and execute the vector.

VECTORS: The vector is generated if PE goes low while the vector interrupt signal is present. It should be noted that this option is not applicable to all systems, and will also generate the vectored interrupt if PS is produced by any other board in the system during a write attempt. Your system must be configured so that it can latch this interrupt signal during the write attempt. Which requires appropriate hardware and software. Unless your system is specifically designed to accommodate this option, do not attempt to implement it. Standard 5-100 bus systems do not require implementation of this feature for proper functioning.

FIGURE 1: Schematic diagram of the 8K econoram II data sheet. The board is designed to be a plug-in replacement for the 8K econoram. It is compatible with all 80 line computers and can be used in conjunction with any econoram II data sheet. The board is designed to be a plug-in replacement for the 8K econoram. It is compatible with all 80 line computers and can be used in conjunction with any econoram II data sheet.
(DIP switch B is not included in the 4K version)
NOTES: VCC1 TO ALL SUPPORT CHIPS AND MEMORY

VCC2 TO MEMORY BANK 'A'

VCC2 TO MEMORY BANK 'B'

BOTH REGULATORS MOUNT ON HEAT SINKS
Thank you for choosing this memory board. Much time and effort have gone into making this unit not just another memory board, but one with a full range of options...like the vector interrupt provision, the tri-state outputs, ability to configure as two separate blocks, and so on. Static RAMs and conservative engineering contribute to a board that will not just work, but work for a long time in your system. If we can be of any help to you in applying this board, let us know.