Differences between Rev.C and Rev. F of the CPU Support card.

EPROM:

On the Rev. F board the ERPOM has been changed to the single supply Intel-type 2716 rather than the three supply TMS2716 used on the Rev. C board.

An Intel-type 2732 may also be used; jumper ROM selects the 2732 type by placing the jumper in the "32" position. The standard 2716 is selected by placing the ROM jumper in the "16" position. If a 2732 is used the ADDR jumper should be remove entirely. A 2732 appears in memory at F000 hex - FFFF hex or at FF000 hex - FFFFF hex if extended addressing is used.

The EPROM may be disabled by accessing I/O port BASE+14. Any access will do, input or output, the bits have no effect. This is handy for turning off the EPROM so it doesn't take up address space for RAM. The EPROM always comes up enabled to run a monitor or boot a disk operating system. After the operating system comes up it can turn off the EPROM. The PHANTOM* line may be used to disable the RAM while the EPROM is on (see below).

A driver for the PHANTOM* line and a jumper to control it have been added. With the PHANTOM jumper in the "+" position the PHANTOM* line will be driven low when the EPROM is addressed to disable RAM. Placing the jumper in the "-" position disables the PHANTOM* driver.

PARALLEL INPUT/OUTPUT:

The interrupt requests from the parallel input and parallel outputs to the slave 8259A interrupt controller have been interchanged to give the receiver higher priority. Slave IR2 is the parallel input interrupt request, slave IR6 is the parallel output interrupt request.

SERIAL INPUT/OUTPUT:

The DCD input from the serial port has been removed. DCD status is no longer available at port BASE+13, bit 4.

EXTERNAL POWER SUPPLY FOR 9513:

The three 10k described in the Rev. C manual under "NON-INTERRUPTIBLE POWER SUPPLY" are no longer needed. The +5 volt pad and the E-F jumper have been replaced with the EXT PWR connector and the 9513 PWR jumper. If the bus supplies power to the 9513 the EXT PWR connector should be in the "INT" position. If an external supply is used it should be connected to the EXT PWR connector using GND and +5 (regulated) or +8 (unregulated) as appropriate and the 9513 PWR jumper should be placed in the "EXT" position.

INTERRUPT CONTROLLERS:

The problems with the 8259A interrupt controllers using them with 8080s and Z80s have been fixed. The CPU Support card now takes over the status bus during interrupt acknowledge and provides the correct status for the 8259As. The CPU jumper has been provided to select which type of CPU is used. In the "86" position the two byte 8086 type interrupt acknowledge sequence is selected. In the "80" position the three byte "CALL" type of interrupt acknowledge is selected for 8080 and Z80 CPUs. In addition, the CPU support card takes over the address bus and drives the three 8259A "CAS" (cascade) lines on A0-A2. In this way additional 8259A interrupt controllers can be slaved to the master 8259A on CPU Support card. The additional 8259As should have their "INT" outputs drive one of the seven S-100 VI lines connected to the master 8259A (see the manual) and their CAS inputs connected to A0-A2 to receive the proper cascade identification.

JUMPERS RENAMED:

The names of the jumpers have been changed to better explain what they do.

Name in Rev. C manual	Rev. F name	Position 1 equivalent	Position 2 equivalent
A	POWER	5	8
B	DTR	-	+
C	OUT	+	-
D	ADDR	HI (8)	LO (0)

Only the names have been changed, the function remains the same.

Rev. F Manual:

The complete Rev. F manual completely describing the Rev. F board should be available in a few weeks. The new manual will feature a greatly improved section on the operation of the 8259A interrupt controllers as well as the new features described above.