Howard Board Hardware Notes

There is a bank of eight DIP switches located next to the cartridge connector. The functions are as follows:

SW1 & SW2 - Analyzer RAM Configuration. Up to 128K words of trace RAM may be installed, either as 16 32K x 8 parts or 4 128K x 8 parts. There is no need to notify the system of the size of RAM chip being used, only the total number of physical parts.

SW2	SW1	Amount of RAM
on	on	4 32K x 8 RAMS - 32K lines of trace or 4 128K x 8 RAMS - 128k lines of trace
on	off	8 32K x 8 RAMS - 64K lines of trace
off	on	16 32K x 8 RAMS - 128K lines of trace
off	off	Trace disabled

SW3 through SW6 - Cartridge emulation RAM. Up to 512K bytes of emulation RAM may be installed in each section of cartridge space, using 4 128K x 8 RAMS. With 32K x 8 RAMS, up to eight may be installed, allowing for 256K bytes of emulation memory. Optionally, EPROMS may be installed in the sockets as desired. The option switches specify the type of chips used. Each section is independant, but only one type of memory chip may be used in each section.

SW4	SW3	Section Zero Memory Type (Read from address FCB2)
on	on	32K x 8 RAM
on	off	32K x 8 EPROM
off	on	128K x 8 RAM
off	off	128K x 8 EPROM

SW6	SW5	Section One Memory Type (Read from address FCB3)
on	on	32K x 8 RAM
on	off	32K x 8 EPROM
off	on	128K x 8 RAM
off	off	128K x 8 EPROM

SW7 - Reset operation. This switch controls whether the system comes out of reset into **Debug** mode, or **Handy** mode. A reset into **Debug** mode means that communication with the Amiga is established as soon as reset negates. No code is executed. A reset into **Handy** mode means that the system begins executing MIKEY ROM, looking for a cartridge, etc. Normally, the system should reset into **Debug** mode.

SW7	Reset Operation
off	Reset into **Debug** mode
on	Reset into **Handy** mode

SW8 - Cartridge memory write protect. This switch controls whether the cartridge emulation memory may be written while in **Handy** mode. Normally, writing while in **Handy** mode should be prohibited. However, if a developer has decided to put RAM into a cartridge, this switch will enable the signal **AUDIN** to function as a read/write line for the cartridge RAM.

SW8	Cartridge Memory Write Protect
on	Cartridge is write protected in **Handy** mode
off	**AUDIN** functions as a cartridge read/write line in **Handy** mode.

Note - RAMs used for trace and emulation memory must have an access time at least as fast as 100 ns.