

## SWTPC MP-A CPU Board Mod for FLEX Support and Updateable SWTBUG

On the MP-A CPU board, the 128 byte onboard RAM appears over and over in the \$A000-\$BFFF address range. To support FLEX 2.0 and newer, that address range needs to instead access offboard RAM installed on the SS-50 bus. In addition to running FLEX, I also wanted to add some features to SWTBUG. To do this, I needed to disable on-board access of SWTBUG (which repeats over and over in the \$E000-\$FFFF address range) and instead, access offboard EPROM or EEPROM in this address range.

Moving both the FLEX address range (\$A000-\$BFFF) and the SWTBUG address range (\$E000-\$FFFF) offboard can be accomplished by cutting a single trace on the back side of the board that feeds IC16 pin 10 and then tying that pin to ground (a feedthru on the trace makes this easy). However, I also wanted the ability to operate the computer in its original form with RAM and SWTBUG on the MP-A board. So I installed a switch on the front of the MP-A board that either connects IC16 pin 10 to ground (on-board RAM/SWTBUG disabled) or keeps the original connection (onboard RAM and SWTBUG work). See the following two pictures for this mod:



