Product: /09, S/09 Computer
Date: June 8, 1981 J.D., G.K.

Proper Computer Operation with M-64 and M-256 Dynamic Memory Boards

    In order to assure proper operation of /09 and S/09 computers with
SWTPC M-64 and M-256 dynamic memory boards, the MP-09, MP-09A or MP-09B
processor board in the computer must be modified. This modification
entails connecting the upper eight address lines of the 6809
microprocessor (A8-A15) to +5 thru 4.7K ohm 1/4 watt resistors or SIP
resistor packs. This modification prevents invalid memory addresses from
being output onto the bus during trailing dead cycles following a DMA
disk transfer. This modification must be performed on computers running
the UniFLEX disk operating system.

    This modification can best be made using two five wide integrated,
single in line resistor packs but may be made using individual 1/4 watt
resistors. The resistors should be attached to the leads of 6809 (IC14)
integrated circuit itself on the bottom side of the board. Attach one
end of a resistor to pins 16, 17, 18, 19, 20, 21, 22, 23. Connect the
unattached ends of the resistors together and run them to pin 14 of IC5
on the processor board. If you are using a single in line resistor pack
(SIP), one side of all of the resistors are internally commoned together
and are brought out on the end lead of the pack indicated with a raised
or printed bump or dot. This lead must be attached to pin 14 of IC5. Be
sure to trim off unused leads on the resistor packs.

    Once the board has been modified, MP-09B boards should be marked
"REV A" and MP-09A and MP-09 boards should be marked "REV D", assuming
all prior modifications have been made.

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