



*Personal Computer
Hardware Reference
Library*

128KB Memory Expansion Option



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Notes:



Description

The IBM Personal Computer AT 128Kb Memory Expansion Option has 18 RAM modules (64Kb x 1) for a total capacity of 128Kb.

Memory Cycles

Memory read and write commands require a 1-wait-state, 3-clock memory cycle. Data moves as a byte (8 data bits and 1 parity bit) or as a word (16 data bits and 2 parity bits) and is parity-checked on the adapter. A parity error causes an I/O channel check (non-maskable interrupt) to the system.

I/O Channel Check

When the I/O channel check occurs, a non-maskable interrupt (NMI) results. Bits 6 and 7 of hex address 0061 are the status bits used to determine the source of the NMI (bit 6 is I/O channel check, and bit 7 is system board parity check). Writing to the failing card will clear the status bit.

Addressing

This adapter responds to addresses from hex 080000 to hex 09FFFF.

Specifications

Voltage Tolerances

The maximum variation of the +5 Vdc is $\pm 5\%$ at the adapter pins.

Power Dissipation

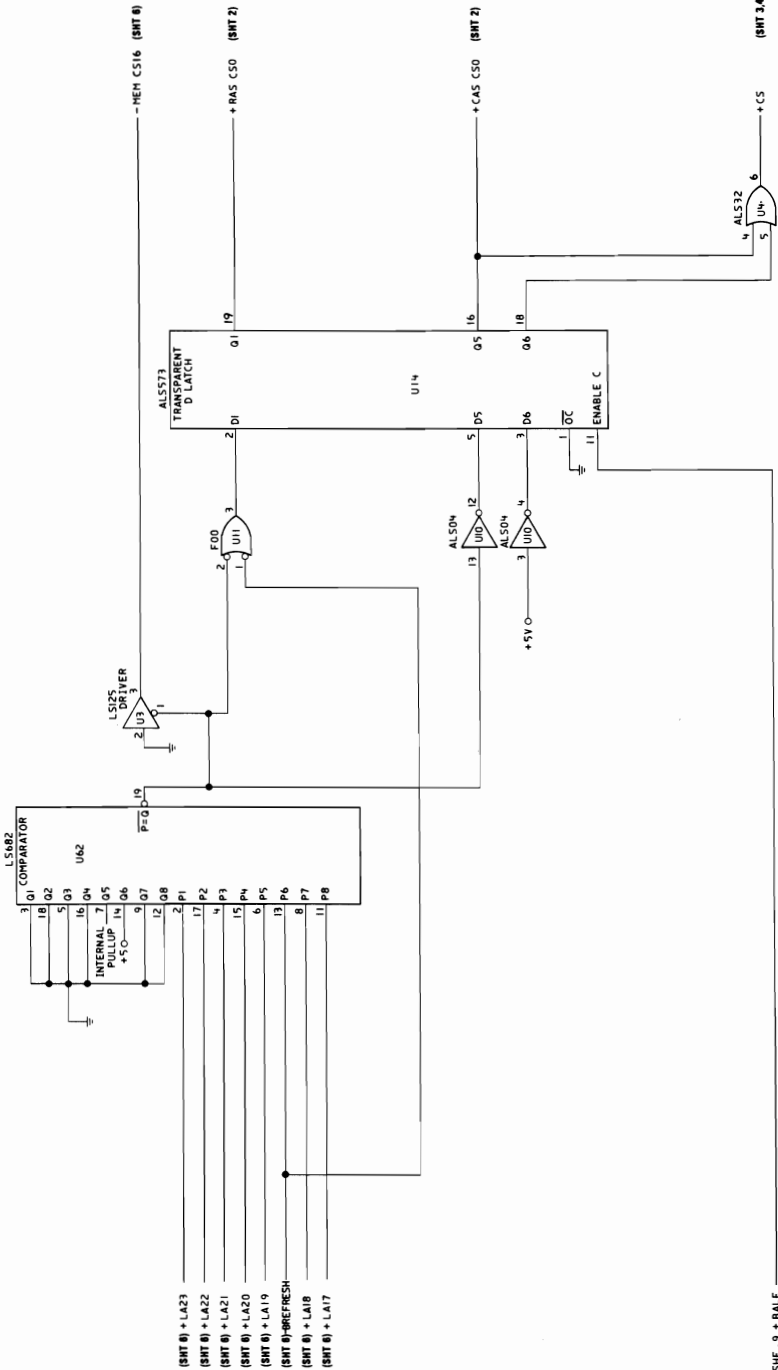
The +5 Vdc power used by the adapter is a maximum of 5.25 watts, and the maximum current used is 1 ampere.

Temperature Variation

The adapter will operate between 10 and 50 degrees Celsius (50 and 122 degrees Fahrenheit).

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Logic Diagrams

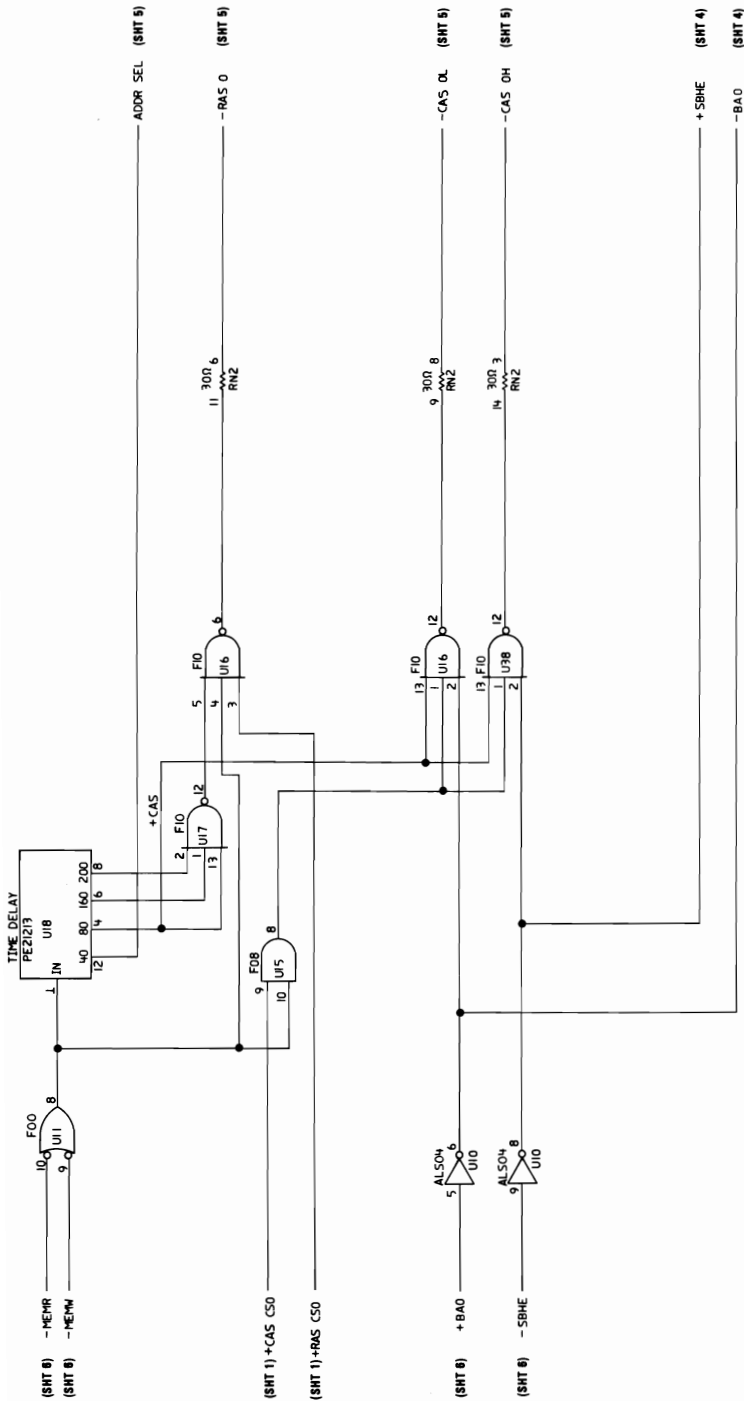


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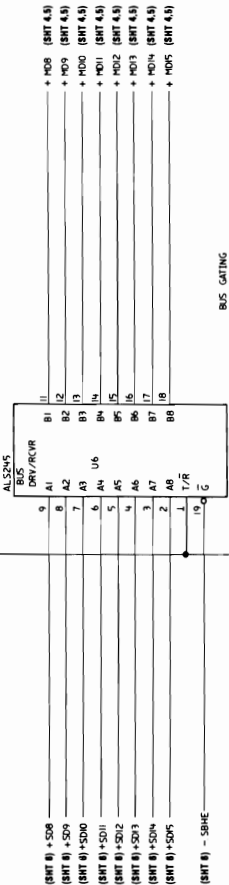
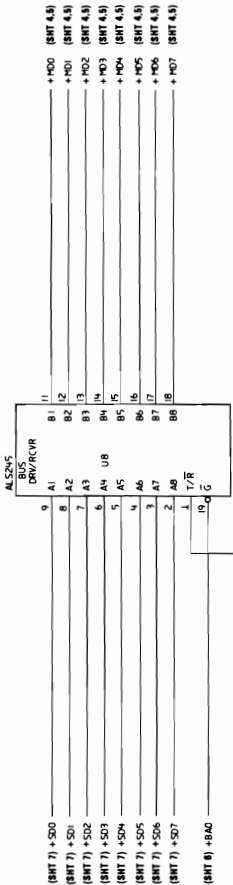
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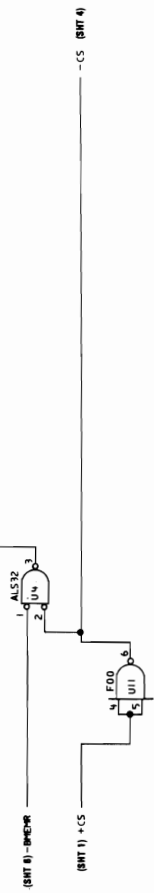
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BUS GATING

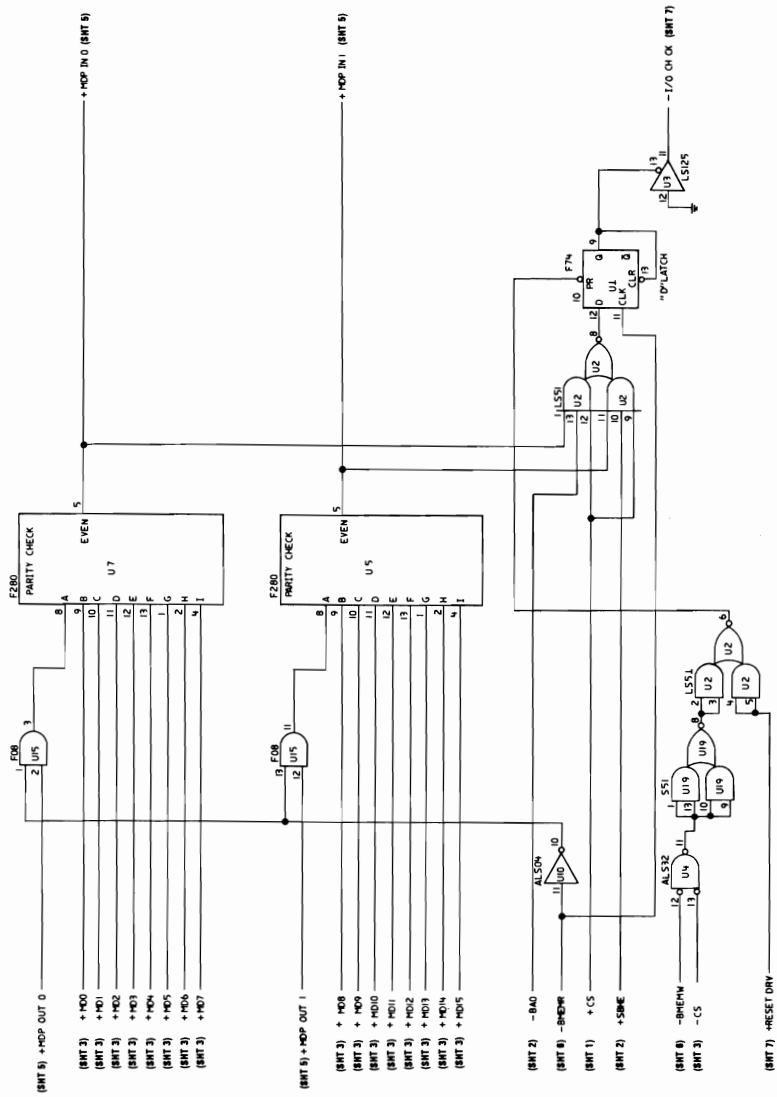
-SBHE	+BAC	OPERATION
-	+	WORD TRANSFER (SD8-SD15)
-	-	BYTE TRANSFER (SD8-SD15)
+	-	BYTE TRANSFER (SD0-SD7)
+	+	NOP



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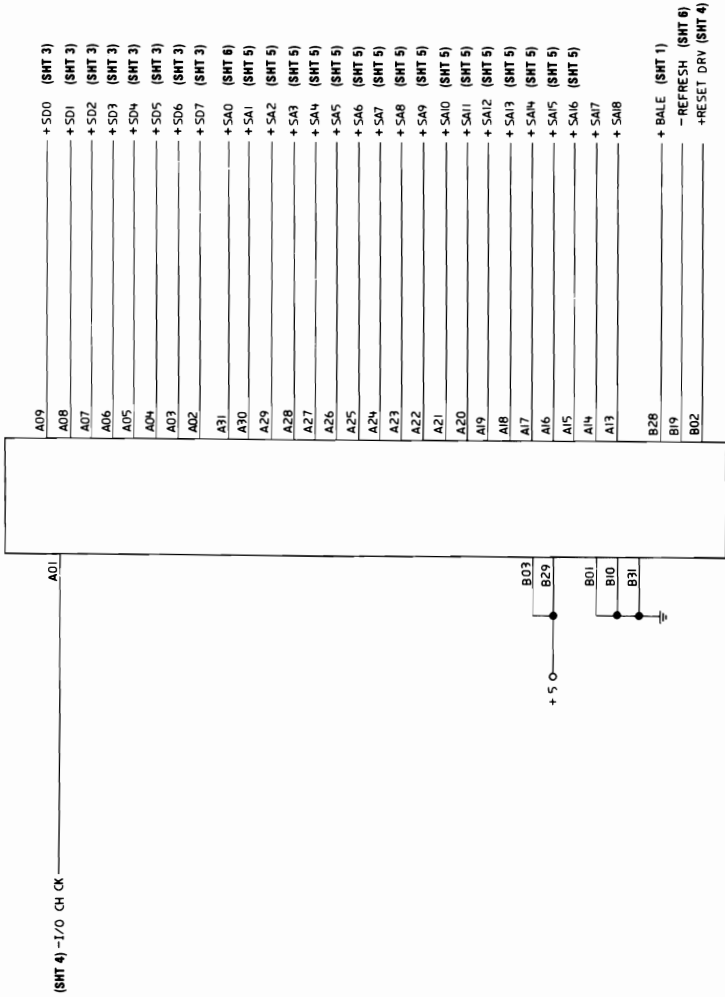


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CARD TABS



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Notes:

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