FIGURE 9.0-5

Z80–CPU DESIGN CONSIDERATIONS: CLOCK CIRCUITRY

When using the Z80-CPU at less than its rated speed, the Clock Input (Φ) can be driven by a 7400 TTL gate with a resistor pull up (typically 330 ohms) to +5 Volts. Because of dynamic currents flowing into the Clock Input Pin, the rise time of the Clock Input waveform will be typically 60-80 nanoseconds. The resistor will eventually pull the clock input up to Vcc but with a slow rise time which will limit the maximum frequency of operation. Figure 9.0-6 shows a Clock Input driver which has an active pull-up and which will allow maximum frequency operation. The circuit is recommended for all but the most cost sensitive Z80 applications.

Z80 CPU CLOCK BUFFER CIRCUITRY

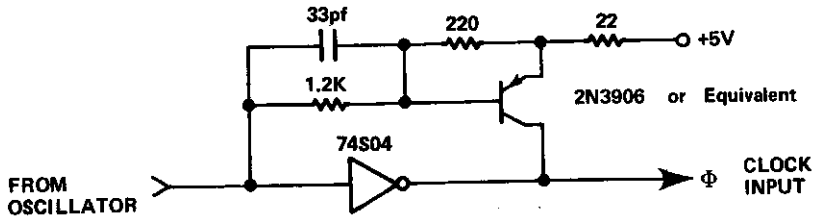

FIGURE 9.0-6