

FIGURE 9-26 Seven-step control sequencer.

Figure 9-27 illustrates how an eight-input multiplexer can be used to implement the logic circuit that satisfies the given truth table. The input variables A, B, C are connected to  $S_0$ ,  $S_1$ ,  $S_2$ , respectively, so that the levels on these inputs determine which data input appears at output Z. According to the truth table, Z is supposed to be LOW when CBA = 000. Thus, multiplexer input  $I_0$  should be