1. Astable timer
   1. 1x 555 timer IC
   2. 1x 1MΩ potentiometer
   3. 2x 1kΩ resistors
   4. 1x 100kΩ resistor
   5. 1x 330Ω resistor
   6. 1x 2µF capacitor
   7. 1x 0.1µF capacitor
   8. 1x 0.01µF capacitor
2. Monostable timer
   1. - 1x 555 timer IC
   2. - 1x 1kΩ resistor
   3. - 1x 1MΩ resistor
   4. - 1x 330Ω resistor
   5. - 1x 2µF capacitor
   6. - 1x 0.1µF capacitor
   7. - 1x 0.01µF capacitor
3. Bistable timer
   1. - 1x 555 timer IC
   2. - 2x 1kΩ resistors
   3. - 1x 330Ω resistor
   4. - 1x 0.01µF capacitor
4. Clock logic
   1. - 1x 74LS04 (Hex inverter)
   2. - 1x 74LS08 (Quad AND gate)
   3. - 1x 74LS32 (Quad OR gate)
5. Sr latch
   1. 1x 74LS32 (Quad two-input OR gate)
   2. 1x 74LS02 (Quad two-input NOR gate)
   3. 3x 330Ω resistor
6. D latch
   1. 4x 74LS02 (Quad two-input NOR gate)
   2. 2x 74LS08 (Quad two-input AND gate)
   3. 8x 330Ω resistor
   4. 1x 1kΩ resistor
7. D ff
   1. 1x 74LS02 (Quad two-input NOR gate)
   2. 1x 74LS08 (Quad two-input AND gate)
   3. 2x 330Ω resistor
   4. 1x 1kΩ resistor
   5. 1x 0.1µF capacitor
8. 8 bit register
   1. - 1x 74LS04 (Hex inverter)
   2. - 1x 74LS08 (Quad AND gate)
   3. - 1x 74LS32 (Quad OR gate)
   4. - 1x 74LS74 (Dual D flip-flop)
   5. - 2x 74LS173 (4-bit D-type register)
   6. - 1x 74LS245 (Octal bus transceiver)
9. Testing 8 bit
   1. - 6x 74LS173 (4-bit D-type register)
   2. - 3x 74LS245 (Octal bus transceiver)
10. Alu
    1. - 2x 74LS283 (4-bit binary full adder)
    2. - 2x 74LS86 (Quad XOR gate)
    3. - 1x 74LS245 (Octal bus transceiver)
11. Ram
    1. - 2x 74LS189 (64-bit random access memory)
    2. - 2x 74LS04 (Hex inverter)
    3. - 1x 74LS173 (4-bit D-type register)
    4. - 4x 74LS157 (Quad 2-to-1 line data selector)
    5. - 1x 74LS245 (Octal bus transceiver)
    6. - 1x 74LS00 (Quad NAND gate)
    7. - 14x LEDs (9 red, 4 yellow, 1 green)
    8. - 3x 1KΩ resistors
    9. - 1x 0.01µF capacitor
12. Jk ff racing
    1. - 1x 74LS02 (Quad 2-input NOR gate)
    2. - 1x 74LS11 (Triple 3-input AND gate)
    3. - 3x 1KΩ resistors
    4. - 1x 100Ω resistor
    5. - 1x 0.001µF capacitor
13. Master slace jk ff
    1. - 1x 74LS02 (Quad 2-input NOR gate)
    2. - 1x 74LS11 (Triple 3-input AND gate)
    3. - 1x 74LS08 (Quad 2-input AND gate)
    4. - 1x 74LS04 (Hex inverter)
    5. - 2x 1KΩ resistors
14. Binary counter
    1. - 4x 74LS76 (Dual master-slave JK flip-flops)
15. Program counter
    1. - 1x 74LS161 (4-bit synchronous binary counter)
    2. - 1x 74LS245 (Octal bus transceiver)
16. Eeprom to replace combo logic
    1. - 1x 28C16 EEPROM
    2. - 8x LEDs
    3. - 8x 330Ω resistors
    4. - 1x 8-position DIP switch
    5. - 1x 4-position DIP switch
    6. - 12x 10kΩ resistors
    7. - 1x 100nF capacitor
    8. - 1x 680Ω resistor
    9. - 1x momentary tact switch
    10. - 1x Common Anode 7-segment display
    11. - 1x 100Ω resistor
17. Aruidno programmer
    1. - 1x Arduino Nano (or most any other kind)
    2. - 2x 74HC595
    3. - 1x 28C16 EEPROM (should also work for 28C64 or 28C256)
18. 8 bit decimal display
    1. - 1x 28C16 EEPROM
    2. - 1x 555 timer IC
    3. - 1x 74LS76 (Dual JK flip-flop)
    4. - 1x 74LS139 (Dual 2-line to 4-line decoder)
    5. - 4x Common cathode 7-segment displays
    6. - 1x 1k resistor
    7. - 1x 100k resistor
    8. - 2x 10nF capacitors
19. Bus
    1. - 1x 74LS273 (Octal D flip-flop with clear)
    2. - 1x 74LS08 (Quad 2-input AND gate)
    3. You could also use two 74LS137s like
    4. Additional parts for the bus
    5. - 8x 10kΩ resistors
    6. - 8x LEDs
20. Control signal
    1. - 15x LEDs to indicate which control signals are active
    2. - 15x 470Ω resistors for the control signal LEDs
    3. - 15x 470Ω resistors for the bus LEDs
    4. - 2x 74LS04 Hex inverter (optional, but makes the control word simpler to interpret)
    5. - Red gel (e.g., <https://www.amazon.com/dp/B004GE19E2>)

1x 74LS00 (Quad NAND gate)

8x 74LS02 (Quad 2-input NOR gate)

7x 74LS04 (Hex inverter)

7x 74LS08 (Quad 2-input AND gate)

2x 74LS11 (Triple 3-input AND gate)

3x 74LS32 (Quad two-input OR gate)

1x 74LS74 (Dual D flip-flop)

5x 74LS76 (Dual master-slave JK flip-flops)

2x 74LS86 (Quad XOR gate)

1x 74LS137

1x 74LS139 (Dual 2-line to 4-line decoder)

4x 74LS157 (Quad 2-to-1 line data selector)

1x 74LS161 (4-bit synchronous binary counter)

9x 74LS173 (4-bit D-type register)

2x 74LS189 (64-bit random access memory)

7x 74LS245 (Octal bus transceiver)

1x 74LS273 (Octal D flip-flop with clear)

2x 74LS283 (4-bit binary full adder)

2x 74HC595

1x Common Anode 7-segment display

3x 28C16 EEPROM (should also work for 28C64 or 28C256)

1x 555 timer IC

Red gel (e.g., <https://www.amazon.com/dp/B004GE19E2>)