



Allied Part # Part Description H-bridge, 3A, 55V 288-1572 623-1997 Acoustic buzzer 12V, .42A dc power 653-0242 881-3322 10 nF capacitor 296-5216 Normally open button 948-7199 977-1951 Proto board 852-0011 1,000 microF capacitor Ontical detector 263-0909 980-9991 Infrared emitter

Additional parts required: 1 Xilinx Spartan-3 Starter Kit (Xilinx part number DO-SPAR3-DK)

referring his tennis games to be of the table-top variety, Dimitri didn't like to repeatedly bend down and pick up balls. It slowed down his play and created wear-and-tear on his back. So he built a microcontroller-based, automatic ball dispenser. A player simply pushes a switch on the four-ball device, releasing one ball at a time. Using an infrared optical detector, the system automatically counts down the ball inventory, updating and displaying the number remaining. When the last ball is released, a buzzer sounds, notifying players to replenish.

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