

EE₃₅₆ – ELECTRONIC PRODUCT DESIGN AND MANUFACTURE

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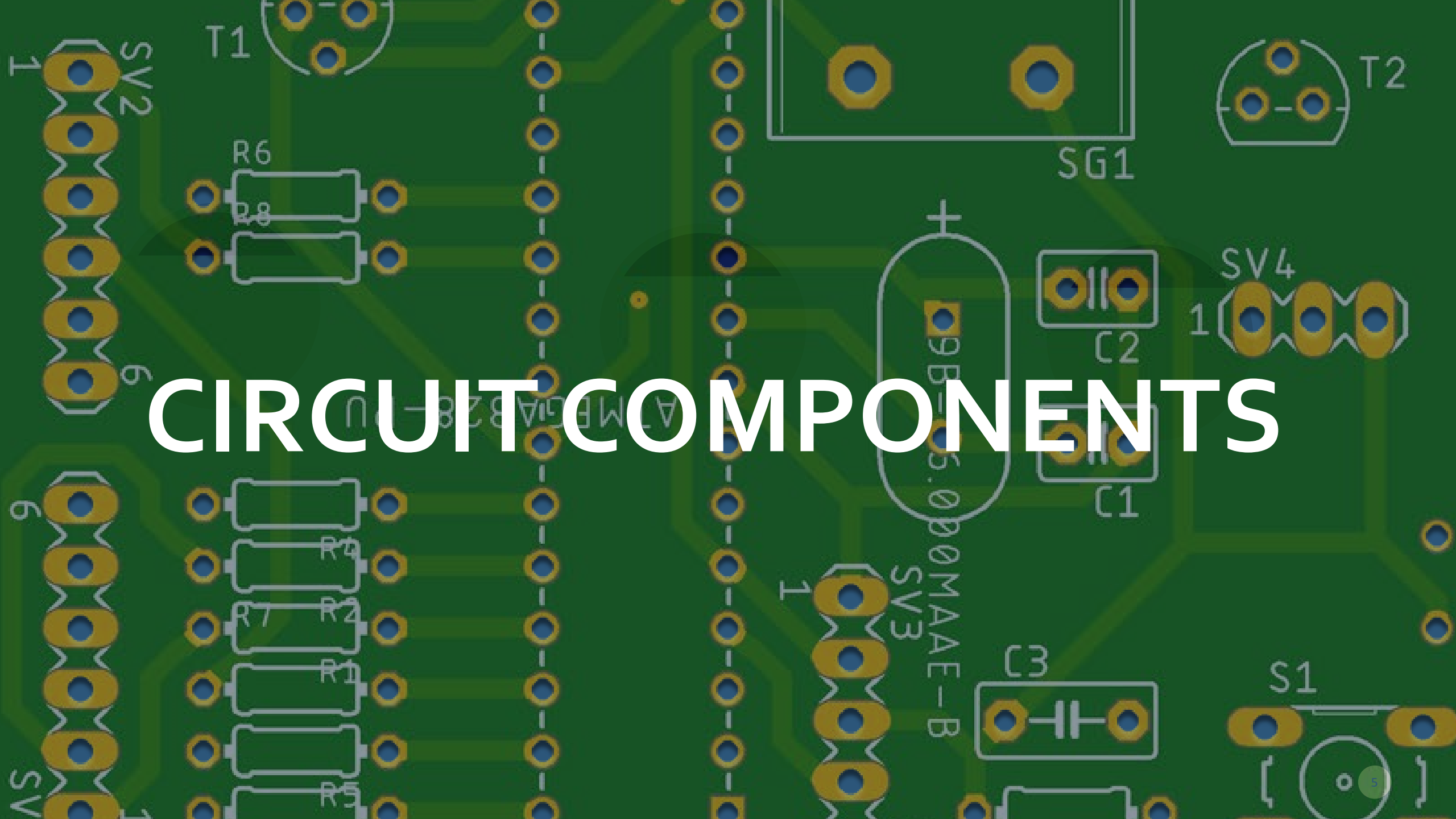
EE356 – ELECTRONIC PRODUCT DESIGN AND MANUFACTURE

INTRODUCTION

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- Electrical timer plug socket is simply a timer that operates an electrical plug socket controlled by the timing mechanism.
- Electrical timer plug socket can be used for any device that is connected to an electrical outlet or plug socket; consisting of lights, televisions, pumps, air conditioners.

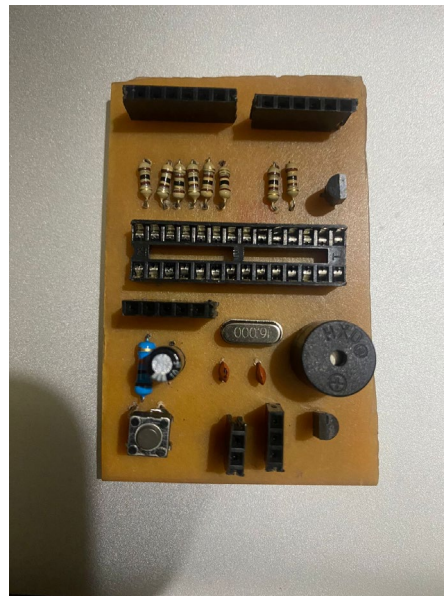
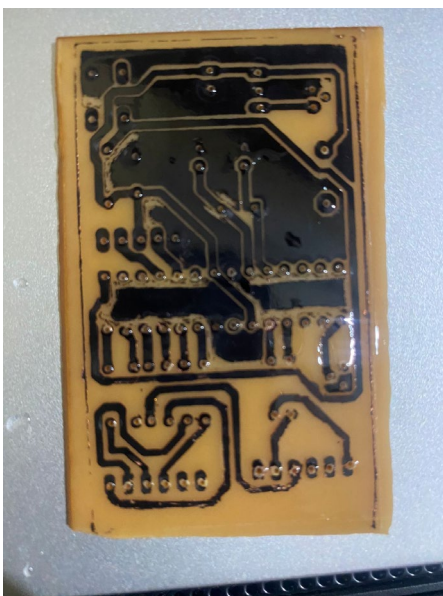
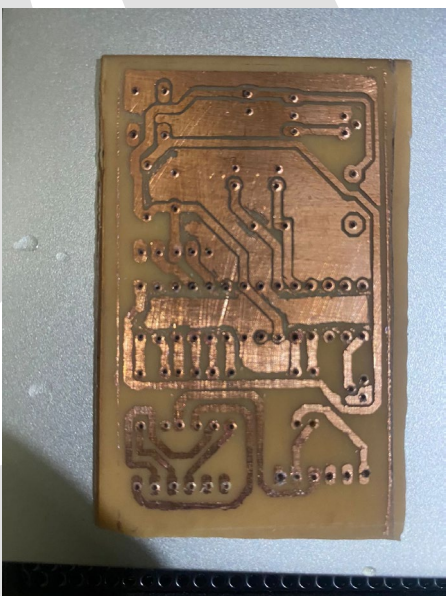
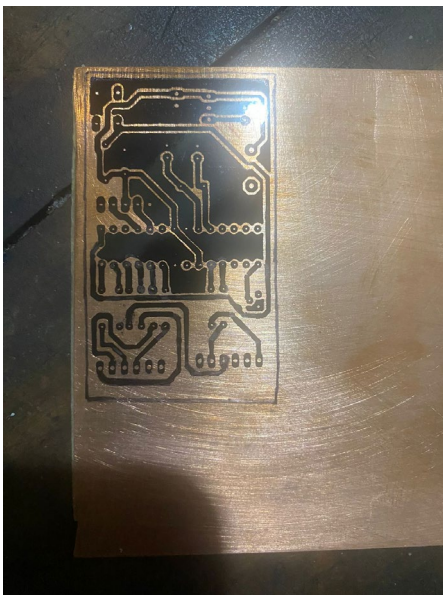
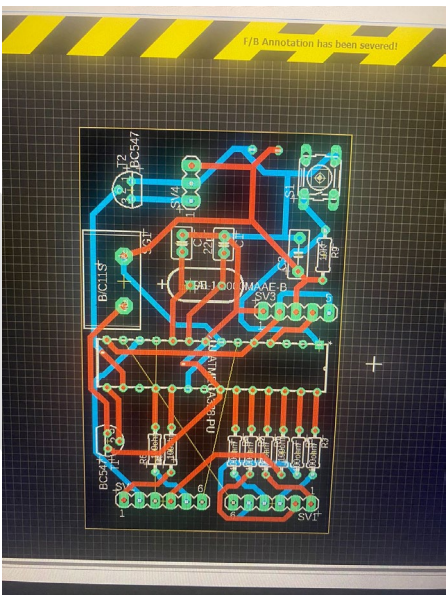
CIRCUIT COMPONENTS



- ATMEGA328PU IC
- 4 Digits 7 Segment LED Display
- Rotary Encoder
- 5V Relay
- Two Way Switch
- AC-DC Converter (230V-5V)
- Buck Converter (5V-3.3V)

The background of the slide is a dark blue-grey color with a complex, light blue-grey circuit board pattern. The pattern consists of various lines, pads, and vias, typical of a printed circuit board layout. In the center, the text "PCB DESIGN" is written in a large, white, sans-serif font. There are also some faint, semi-transparent circular shapes in the background, adding to the design's aesthetic.

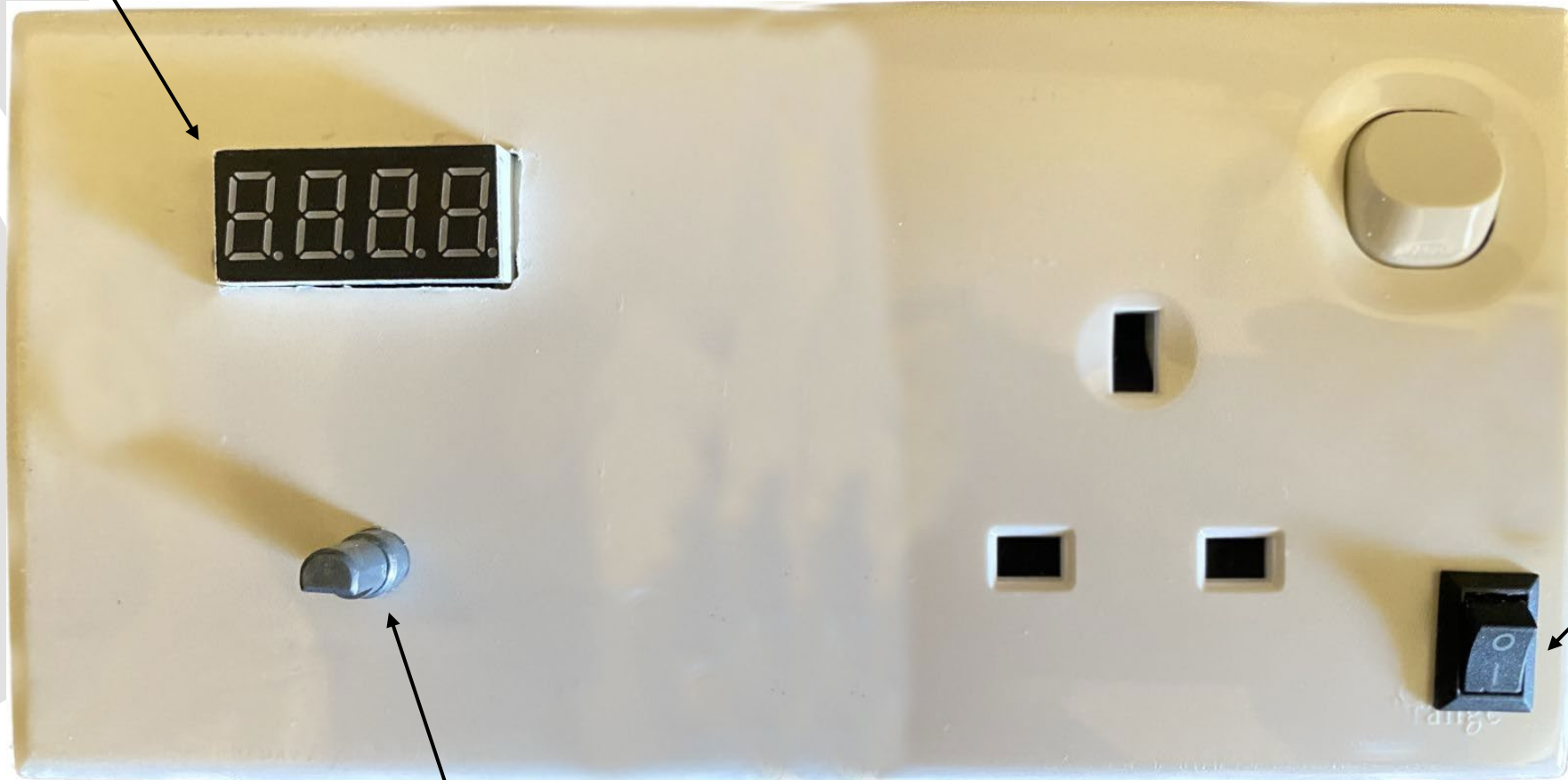
PCB DESIGN



A close-up, blue-tinted photograph of a control panel. The panel features a digital display on the left showing four zeros, a large rotary knob on the top right, and several rectangular buttons and a toggle switch arranged below. The text "THE PRODUCT" is centered in white.

THE PRODUCT

Timer Display



**Timer
Controller
Switch**

Rotary Encoder

FUNCTIONS

FUNCTIONS

- 4 digits 7 segments LED Display
- Rotary encoder allows setting the required timer value.
- Timer can be set up to 100 minutes
- Rotary encoder switch used to start the timer.
- Timer can be paused with a press of switch.
- Second press resumes.
- Double Press at pause state ends the timer.
- Can be used as a normal plug socket by switch off the timer using the two sided switch.



THANK YOU!
