ELT220

555 Timer Exercise

Report Guidelines and Format

The report on the 555 timer exercise should be done in a professional format. All schematics must be done using Multisim or CircuitMaker. I have sent out the electronic version of the handout so you may answer the questions and insert schematic diagrams and screen captures into the electronic version for printing. The original paper handout must be attached at the back of the report as an appendix and will include the instructors signatures that verify that the various steps in the exercise were completed correctly. On the instructors signature line in the printed electronic version of the report indicate "See appendix for signature"

Format:

1. Cover page
   1. The completed cover page from the electronic version of the handout.
   2. Cover page must be completed electronically, not filled in by hand.
   3. The underlines on the electronic version are to show where dates and names should appear and should be removed before typing names and dates.
2. The printed handout containing the answers to the questions asked in the various steps in the procedure.
   1. Any calculations that are required may be done by hand as an attachment in the appendix, although the calculations shown using Equation Editor would look much more professional when inserted into the printed electronic version of the handout. If the calculations are done as an appendix be sure and indicate the circuit (monostable / astable) that the calculations are for as well as the procedure step number. If the calculations are done as an appendix indicate in the printed electronic version "See appendix for calculations" in the steps where calculations are done.
   2. As mentioned above any schematics must be done using an electronic drafting program such as Multisim or CircuitMaker.
   3. Screen captures for the various steps should be inserted at the appropriate points in the report to verify proper circuit operation.
3. Circuit operation description
   1. The operation of the circuit completed and used in steps 21 and 22 must be described. You do not have to describe how the monostable and astable multivibrators work but you should describe the outputs seen from each as well as how the two circuits work together to provide a control signal to the servo motor. You should explain why the astable output needs to be approximately 20ms and why the monostable output needs to be able to vary between 1ms and 2ms.
4. Appendix
   1. The entire original paper handout with the instructors signatures
   2. Any calculations not electronically inserted into the printed electronic version of the handout.
   3. Photographs of your astable and monostable circuits.
      1. Be sure to label each photograph with the type of circuit shown.