



ECE3520 Lab Session 6:

Seven Segment Decoder and Display

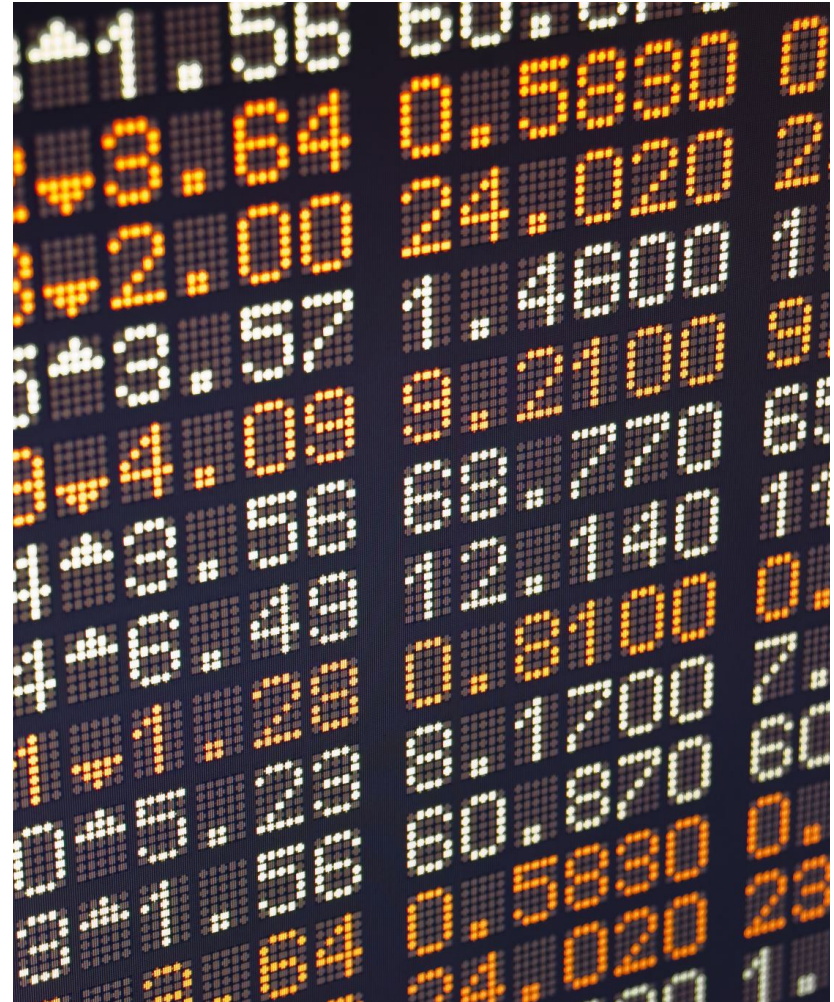
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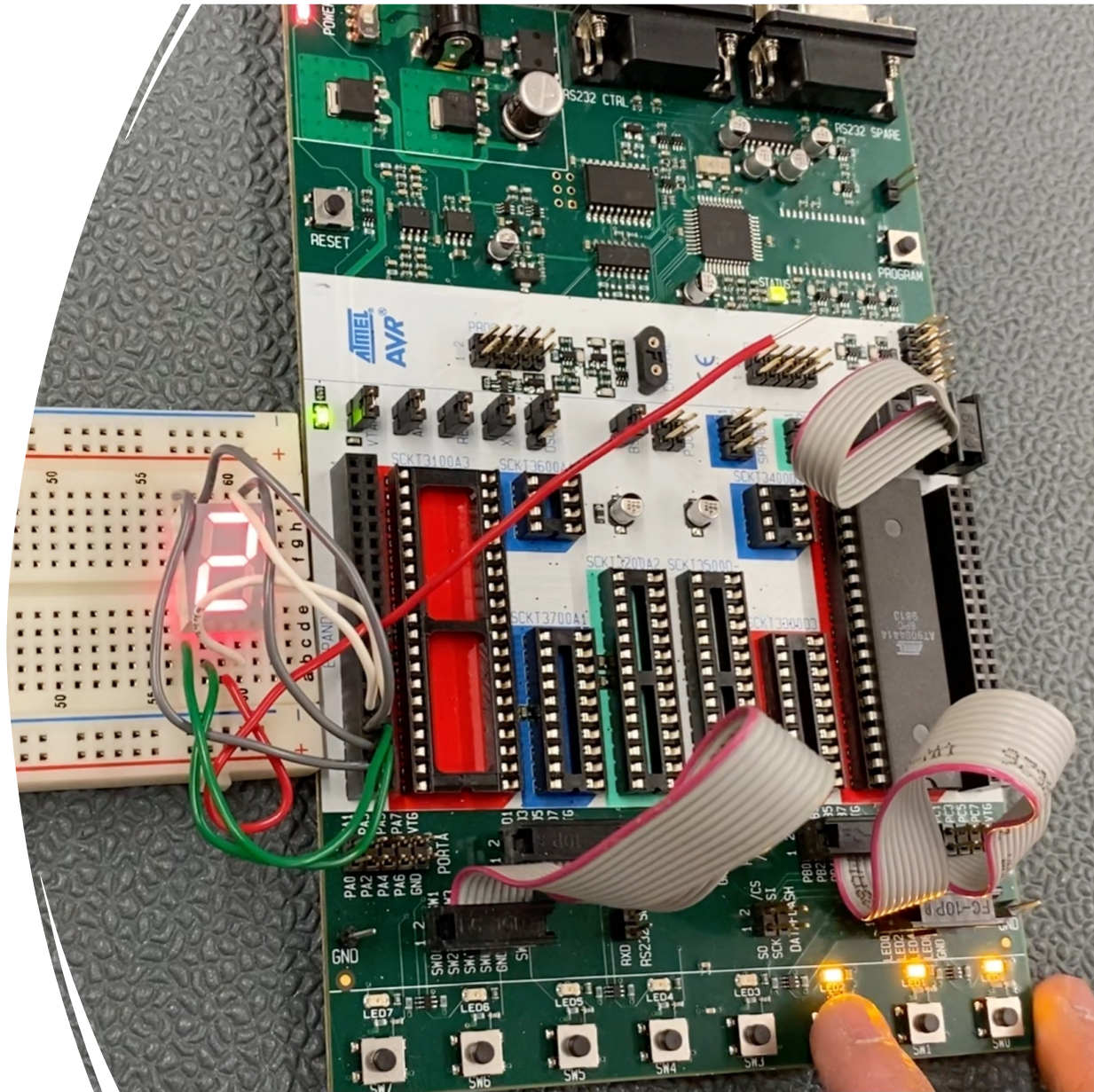
Step1: Lab Preparation

- Breadboard, Seven Segment Display, Hookup wire, Wire stripper
- Use references
 - STK500 User Guide (page 3-24)
 - data sheet for seven segment display
- Draw the wiring diagram
 - connects seven segments to Port A of uC through Expansion Connector 0 (EXPAND0).
- Write a C program for STK500
 - display switch number to a seven-segment display connected to Port A.
 - For example, if you press SW3, number 3 is displayed on the seven-segment display.



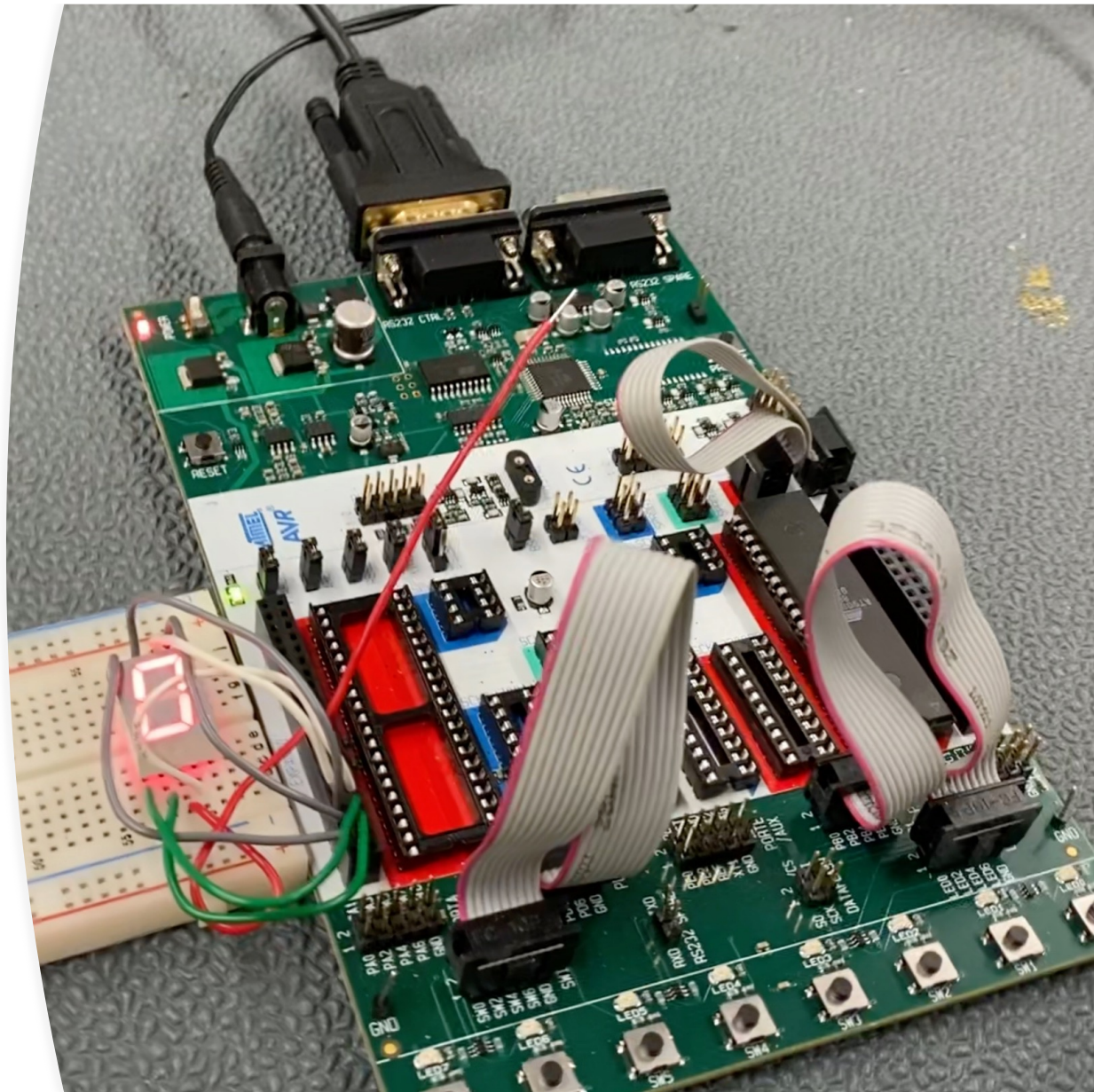
Step2: Hardware Connection

- Wire a seven-segment display to STK500 via Expansion Connector 0 using the breadboard and hookup wires.



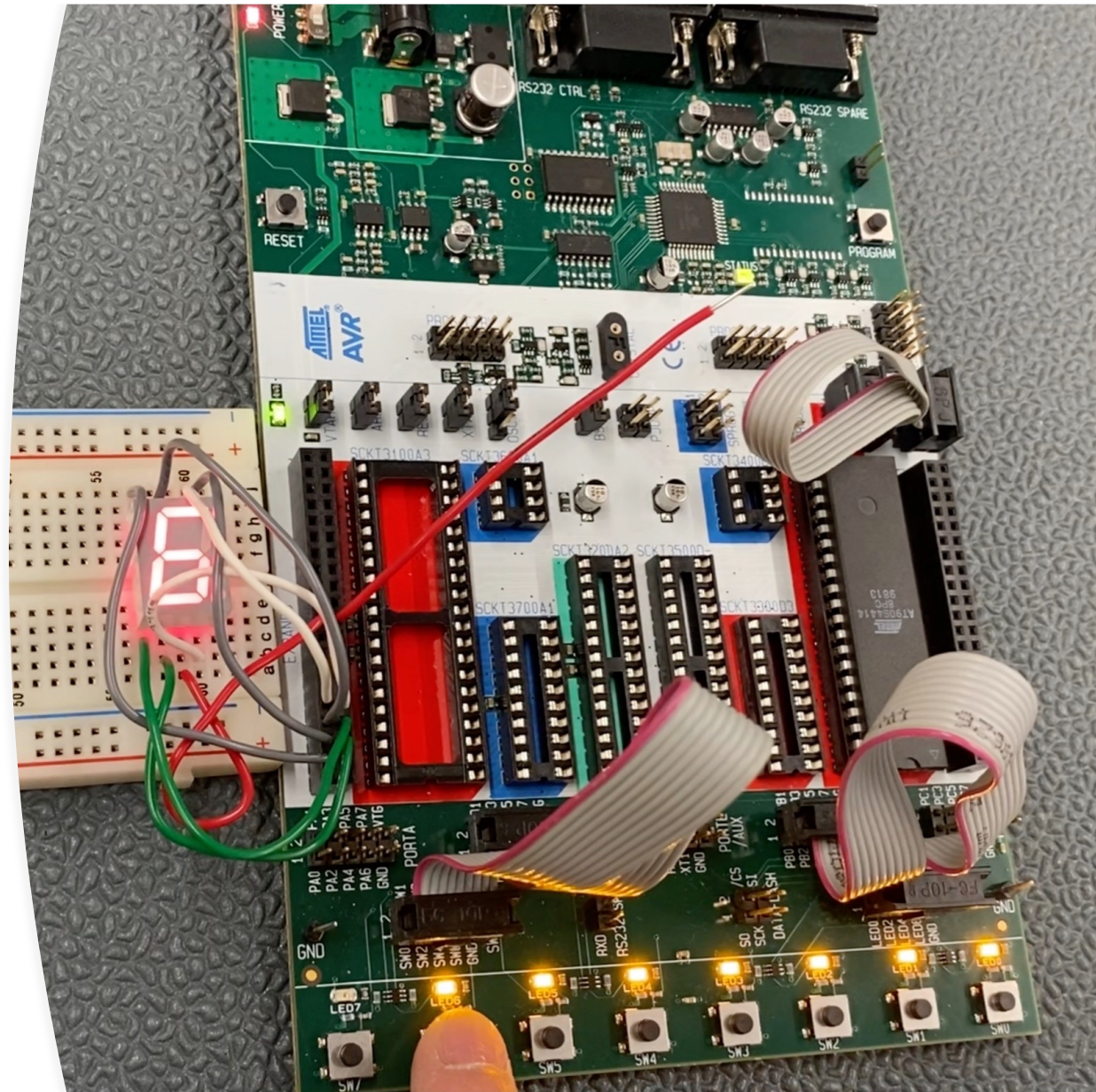
Step3: Configure Experiment

- Set up the STK500 board as in Experiment 4
- Program AT90S4414 using C language
- Download the Hex file onto board after compiling your C code



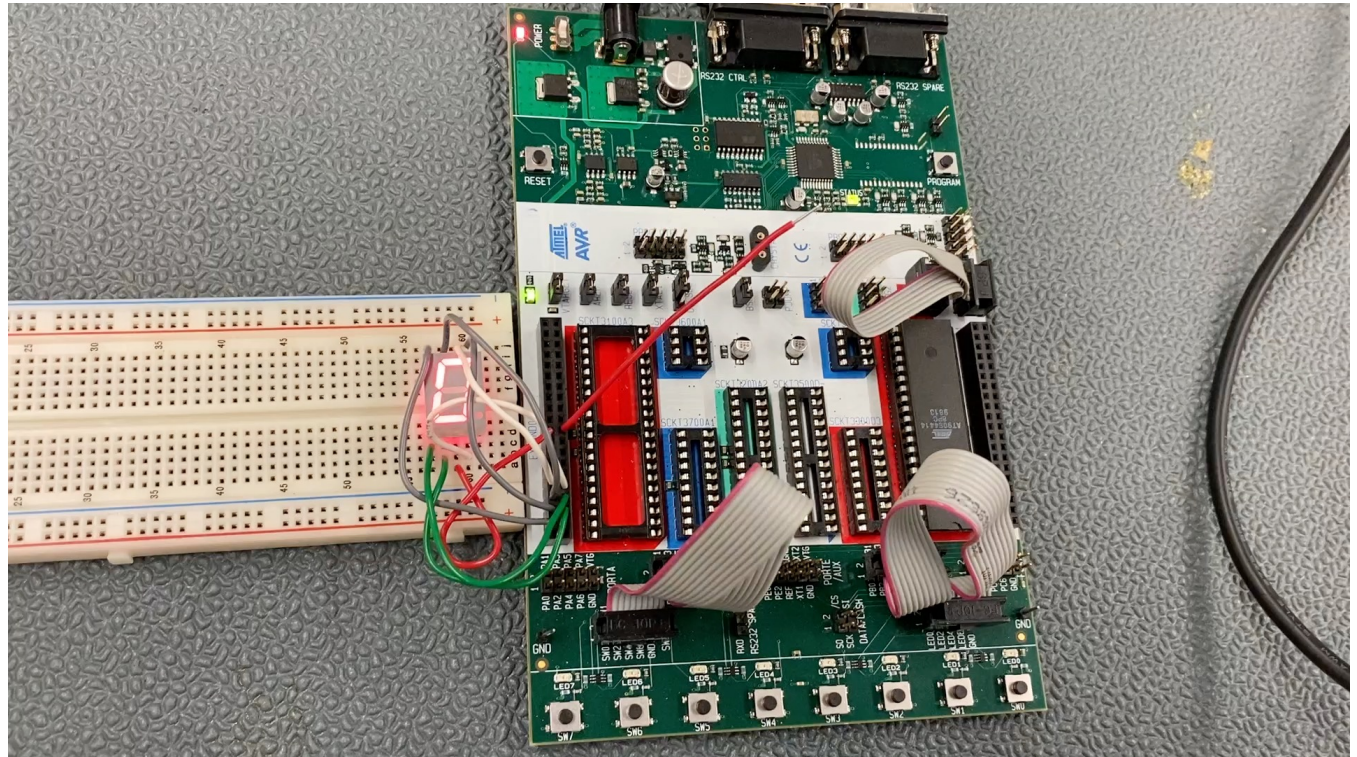
Step4: Test and Observe

- Press each of eight switches
- Test if your program works correctly



Step5: Demo Video

- Please reference the video after you finished the experiment.



Step6: Open Questions

- What happens if you press multiple switches at the same time?
- Why does your system work this way?

