

1. GOAL

Power up the GuP and run the hidden test program. Optionally, install the USB drivers on your personal computer.

2. MATERIALS

- a. Gator uProcessor (GuP) Mainboard
- b. 5V Power Supply
- c. USB Type-B Cable and PC Computer OR VGA Computer Monitor and PS/2 Computer Keyboard

3. INSTALLATION OF USB DRIVERS

You only need to install the USB Drivers if you are using the USB Cable (i.e. you are using materials 3a). If you are using the computer monitor and keyboard (materials 3b) you can skip to Section D.

- a. Download the “CP210x USB to UART Bridge VCP Driver Kit” which is available at the Silicon Labs website, www.silabs.com. As of the writing of this document, the exact link is <https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx> but the best way to find the drivers is to google “CP210x VCP Driver”.
- b. **The driver kit is installed in two steps.** First the files are copied to your hard drive. After this step, don’t miss the checkbox **Launch the CP210x Installer**. Put a check in the box before continuing, otherwise the drivers won’t install!
- c. Once the kit is installed, reboot your computer. Then you can connect your GuP to power (check the **POWER LED**), and to the computer. If the VCP drivers have installed correctly your hardware will be identified.
- d. You need to determine which COM port has been automatically assigned to your GuP. In Windows, you will find this in the Device Manager (Start -> Run -> **devmgmt.msc**). In the Device Manager, find the heading **Ports (COM & LPT)** and click the + to expand it. Look for the entry **Silicon Labs CP210x USB to UART Bridge**. Next to this listing is the COM port, e.g. COM1.
- e. *{Need instructions for Mac / Linux – Contact the GuP Team if you can help}*
- f. Now use a Terminal program to connect on the assigned COM port. In windows, you can use HyperTerminal (Start -> Run -> **hypertrm**).
- g. When you load HyperTerminal, give your session any name and icon, and then hit OK.
- h. On the next window, find the **Connect using:** dropdown box and select the appropriate COM port from step (4).
- i. Now the COM properties window opens. Set as follows: Bits per second **9600**, Data bits **8**, Parity **None**, Stop Bits **1**, Flow Control **None** then hit OK. Now you are connected to the GuP’s built-in monitor program, *Buffalo*.

4. **USING *Buffalo* TO RUN THE HIDDEN TEST PROGRAM**

- a. Make sure the **CONFIG ROM SELECT** jumper on the GuP Mainboard has bridged the jumpers labeled **INT**. Always disconnect power before changing the jumper position.
- b. Power the GuP (check the POWER LED) and press the nRESET pushbutton.
- c. Press enter a few times until you see the instruction list and the prompt (>). The prompt indicates *Buffalo* is ready to receive a command.
- d. Type **go 113** and press enter to start the test program.
- e. To return to *Buffalo*, press the **nRESET** pushbutton on the GuP Mainboard.