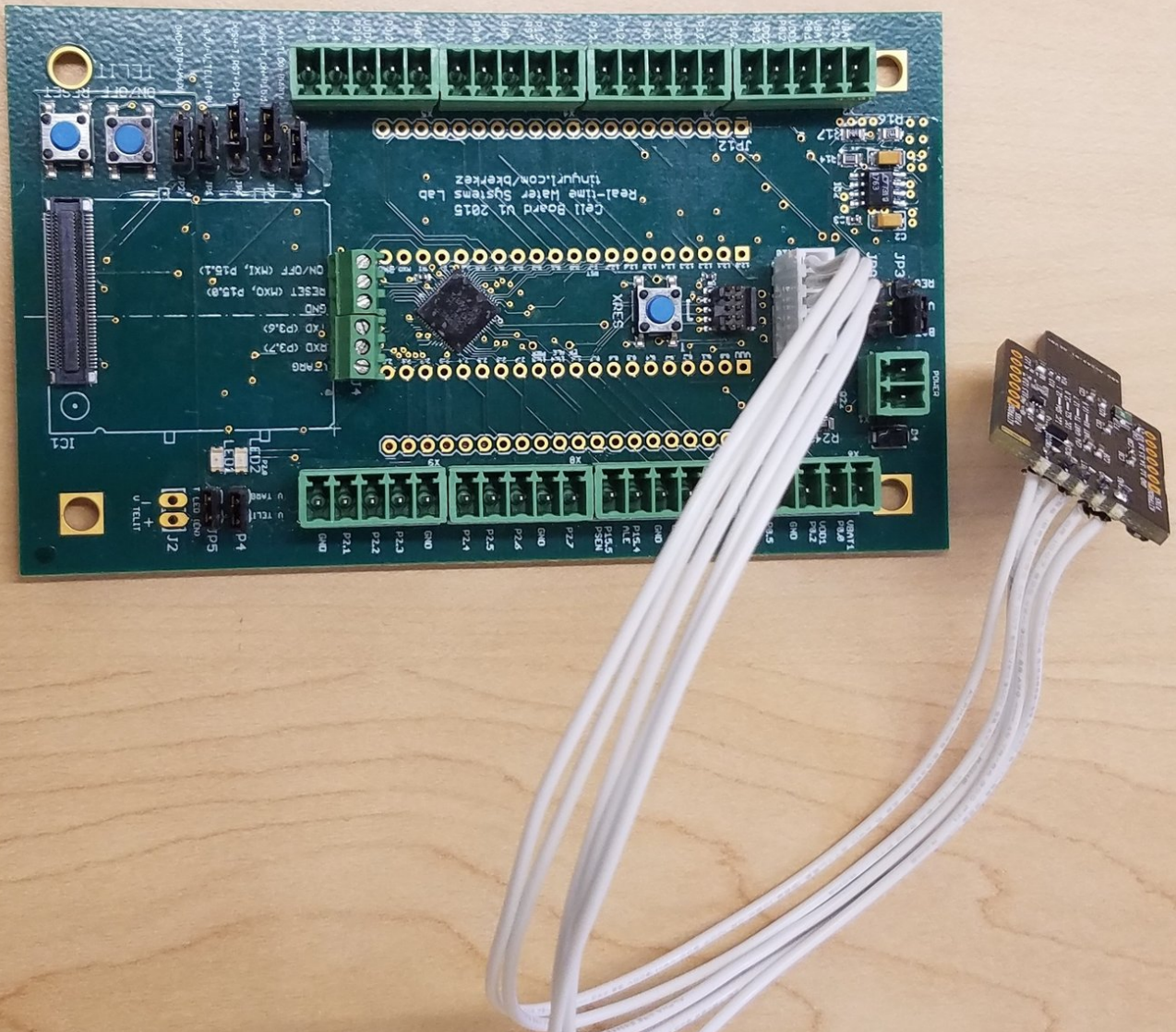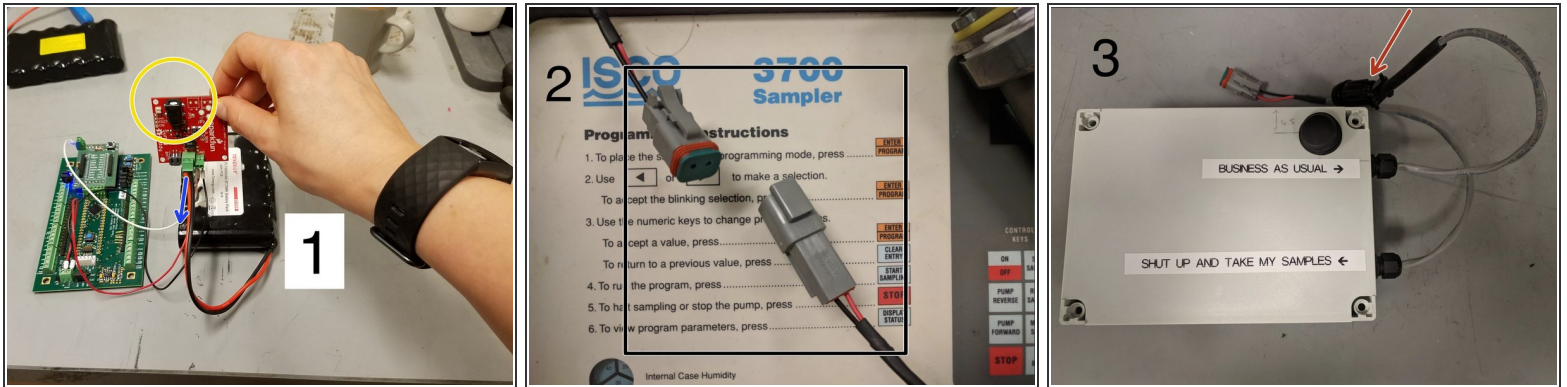# Autosampler Open-Storm Board Reprogramming (For Old & New Versions)

Follow these steps to reprogram the Open-Storm board for the autosampler.

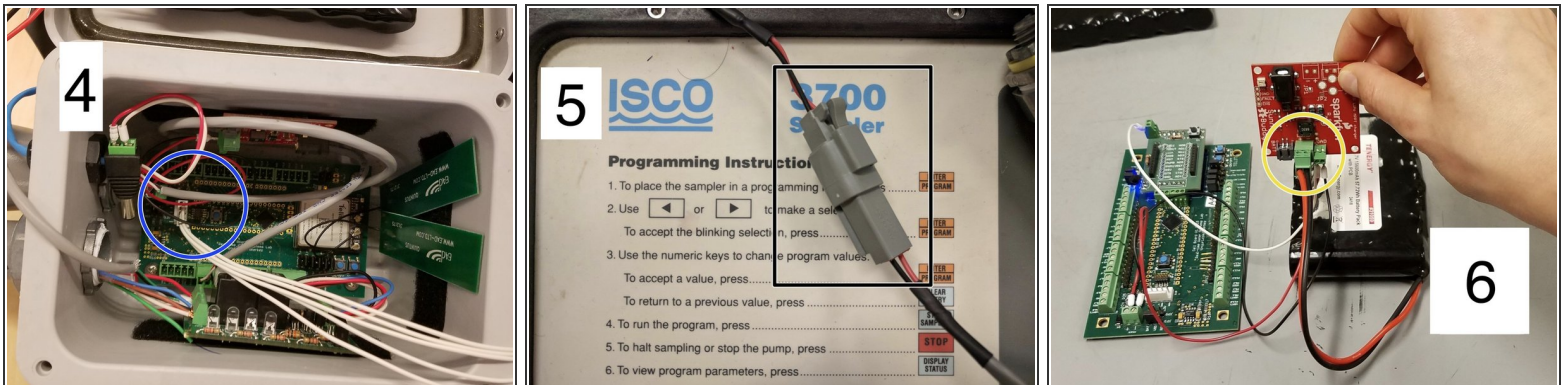Written By: Brooke Mason

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Step 1 — Disconnect the batteries completely.

- 1. Disconnect the plug to the solar panel.

- Then, grabbing the green connector, pull the battery connector from the solar charge controller.

- 2. Disconnect the plugs for the autosampler battery.

- 3. Disconnect the connector that plugs into the battery port of the sampler.

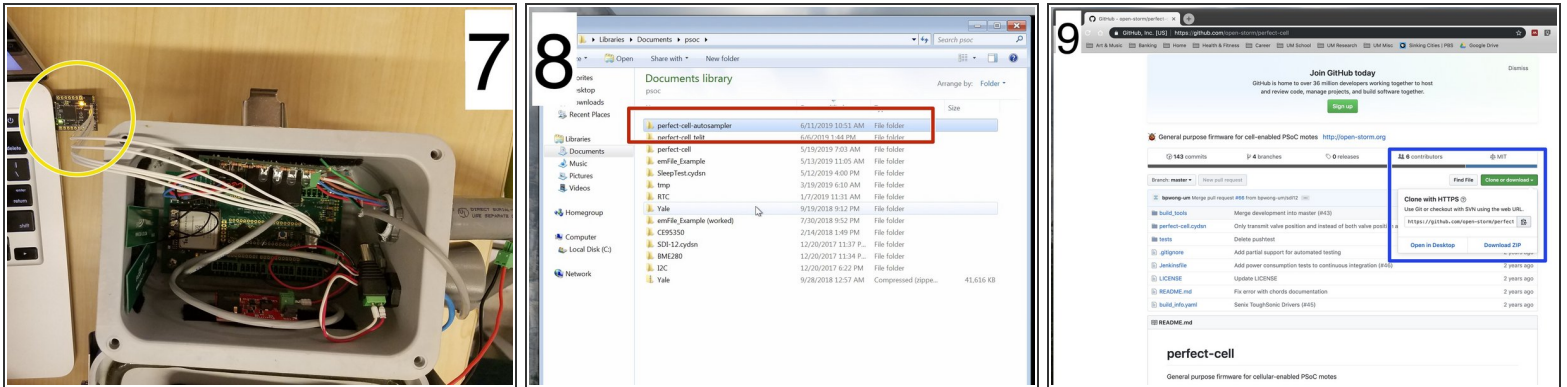⚠ If disconnect battery before solar panel, this can damage the solar charger!

Step 2 — Plug in USB and reconnect batteries.

- 4. Plug in the USB programmer into the Open-Storm board.

- 5. Reconnect the node battery.

- 6. Reconnect the autosampler battery.

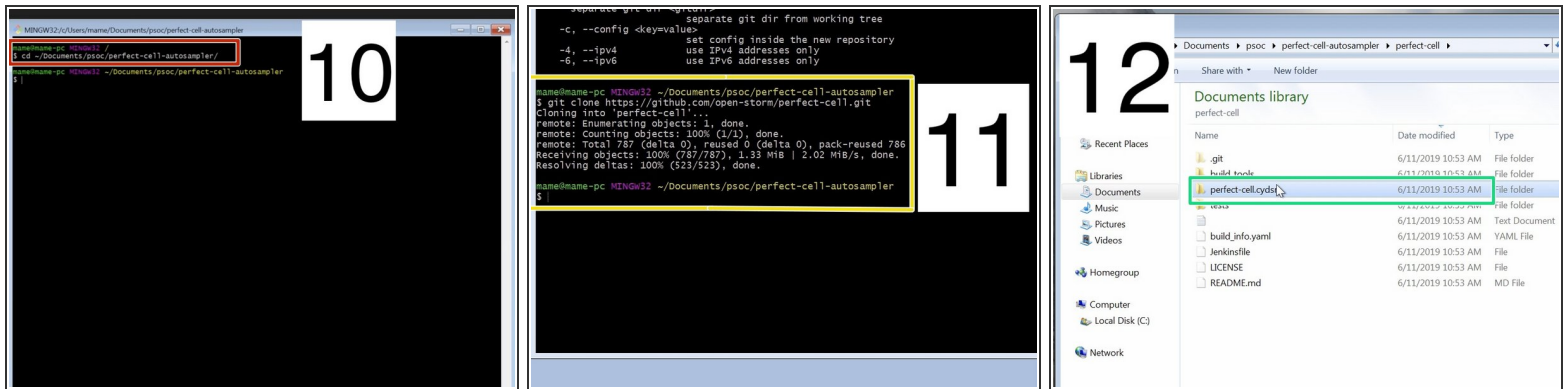This document was generated on 2020-04-05 10:28:34 AM (MST).
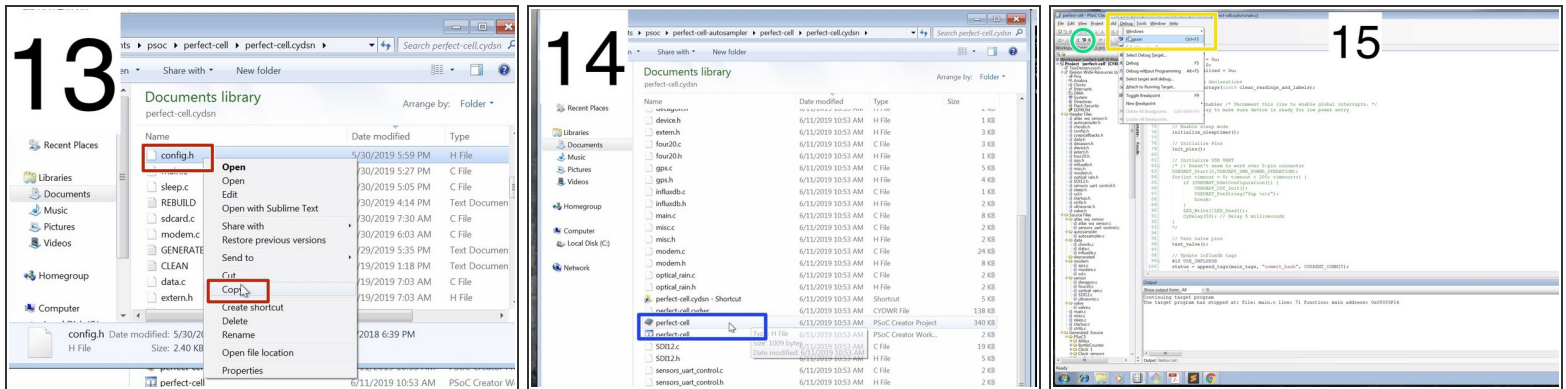
Step 3 — Connecting to the computer.

- 7. Connect the USB programmer into the computer.

- 8. Create a folder for the Open-Storm board code to be stored. In this case, it indicates that we are working with an autosampler.

- 9. The code is stored on GitHub [here](). Click the "Clone or download" button. Copy the address.
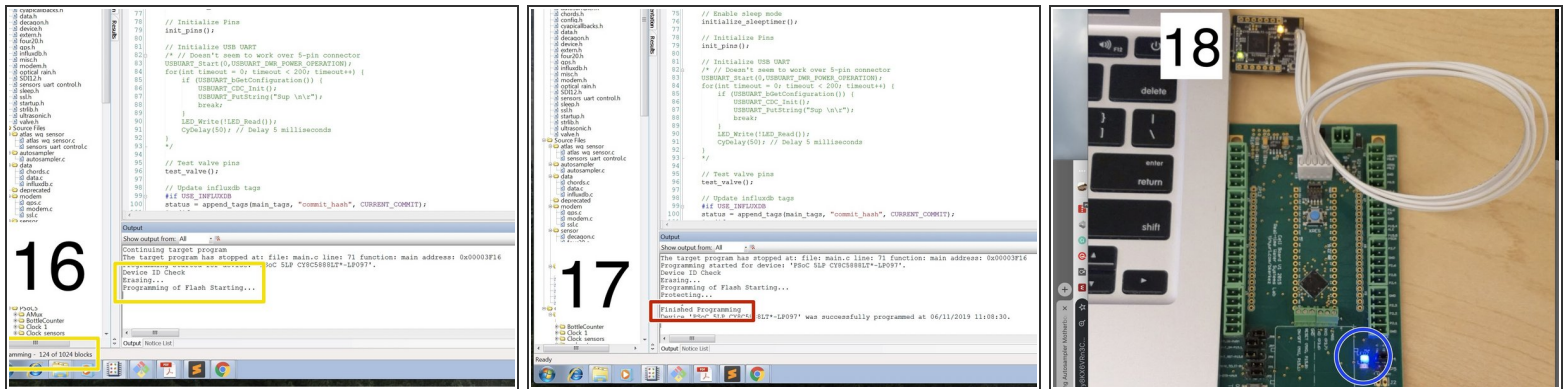
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Step 4 — Downloading the code.

- 10. Open the Git Bash application and type "cd" followed by the address of the folder you created to save the code in. In this case "~/Documents/psoc/perfect-cell-autosampler".

- (i) You can use the "~" if the folder is located in your home directory.

- (i) You will need the free program Git BASH in order to download the code. You can download it here

- 11. Type "git clone" followed by the address copied from git hub here.

- (i) Now the code will download to the desired folder.

- 12. Inside your folder, open the "perfect-cell" folder then open the "perfect-cell.cydsn" folder.

Step 5 — Programming the motherboard.

- 13. Obtain the "config.h" file from an administrator at the Real-Time Water Systems Lab. Then copy the file and paste it in the "perfect-cell.cydsn" file.

- You will need the free program PSoC to program the cell. You can download it [here](#).

- (i) PSoC only works on Windows.

- 14. Then in the perfect-cell.cydsn" file, open the "perfect-cell" PSoC file. Once the PSoC Creator program launches, begin by building the cell. Go to: Build>Build perfect-cell. After it's done building you should not see any errors. Warnings are okay.

- 15. Now it is time to program the cell! There are two ways to do this:

- (1) Press the "Program" button" or;

- (2) Click "Debug" then select "Program"

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Step 6 — Programming the motherboard.

- 16. PSOC will begin flashing the code. You can track the progress by watching the "programming - XX of 1024 blocks".

- 17. When the board is completely programmed, it will say "Finished Programming".

- 18. You will also note the board is completely programmed when the board flashes blue.

- (i) Now you can unplug the USB from the board and the computer.

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