Margay Operations Guide

Initialize
1. Ensure that all connections are secure and SD card is inserted
2. Turn battery pack on
3. Wait for GREEN - GREEN - 5x Blue Flash.
> - If you see this, the logger is properly recording data. To double-check, go to "**Check**".
> - If you see a different flash pattern, go to "**Error**".

Check
1. After going through "**Initialize**", wait 2-3 minutes.
2. Follow the instructions in the "**Download**" section
3. Check to make sure that all the data are being recorded at the proper (UTC) time.
4. Check that valid values are being recorded for sensors.
7. Whether or not files are properly recorded, return to "Initialize"
> - If files are not recorded, replace the SD card, check all connections, turn the logger back on, and try again
> - If there is an issue with a specific sensor, check connections and troubleshoot
> - If files are recorded properly, return to **Initilaize** and do not return to "**Check**"

SD card swap
1. Turn battery pack off.
2. Remove SD card. Ensure that it is labeled. Put it somewhere safe and memorable.
3. Replace the SD card with an equivalently labeled SD card.
4. Go to "**Initialize**"

Download
1. Turn battery pack off.
2. Remove SD card.
3. Insert SD card in computer.
4. Navigate in the SD card to the most recent "log" file (NW→<serial_number>→Log<number>.txt).
5. Save the data file in a well-labeled and organized place.
6. Safely eject the SD card from the computer
7. Go to "**Initialize**"

Error
(Status Codes)

The first LED (AUX) will turn green so long as power is applied.
The second LED (STAT) will have one of the colors below.

Green: All systems check out OK, logging will proceed

Orange: A sensor system is not registering properly, some sensor data may be missing or incorrect
- Verify correct polarity of sensor connection
- Ensure the right sensor is connected
- Verify the screw terminals are well connected to the wires (a lose connection can cause a failure)
- Make sure battery power is applied, some sensors can fail otherwise

Cyan: Clock time is incorrect, but logger is otherwise working correctly
- Connect the logger to a computer and reset the clock using the Northern Widget Time Set GUI
  - Start Processing
  - Open the Northern Widget Time Set program
  - Note and record the wrong time if the logger has been out in the field, alongside the current (correct) time, to correct the prior measurements
  - Click the "set time" button and check that you are <3 seconds off of the correct time.
  - Click the "close" button.

Pink (looks like purple to some people): SD card is not inserted
- Insert the SD card, or remove and re-insert to make sure card is fully seated

Red: Critical on board component is not functioning correctly, such as SD card or clock. Logging will likely not be able to proceed
- Attempt power cycle
- Try different SD card
- Disconnect all sensors; reconnect one by one and check.

Yellow, Fast Blinking: <50% battery capacity.
- Replace batteries: turn battery pack off, replace batteries, and turn battery pack back on.

Red, Fast Blinking: Batteries <3.3V. Voltage too low to properly function.
- Replace batteries: turn battery pack off, replace batteries, and turn battery pack back on.

General tips to solve many kinds of errors
- Turn the the logger off and on
- Verify the quality of all screw terminal connections by gently tugging on the wires and making sure they stay in place, if not, remove, replace, and re-tighten the connection
- Ensure sensors and/or cables are not damaged, this can result is shorts or other problems
- Make sure batteries have sufficient voltage to run the logger (>3.3 V)