

Wombat Controller Overview

Wombat Controller Overview

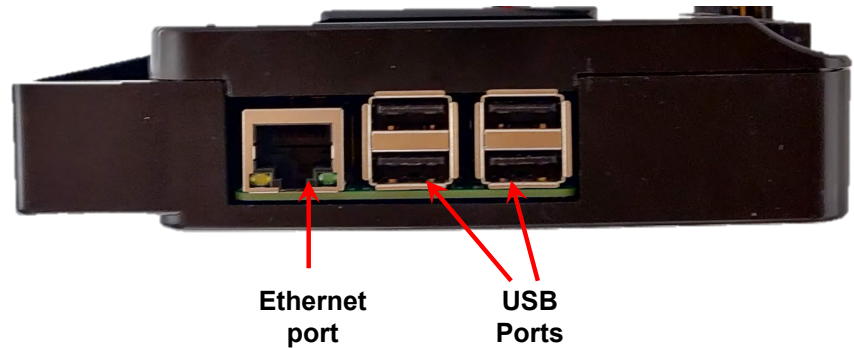
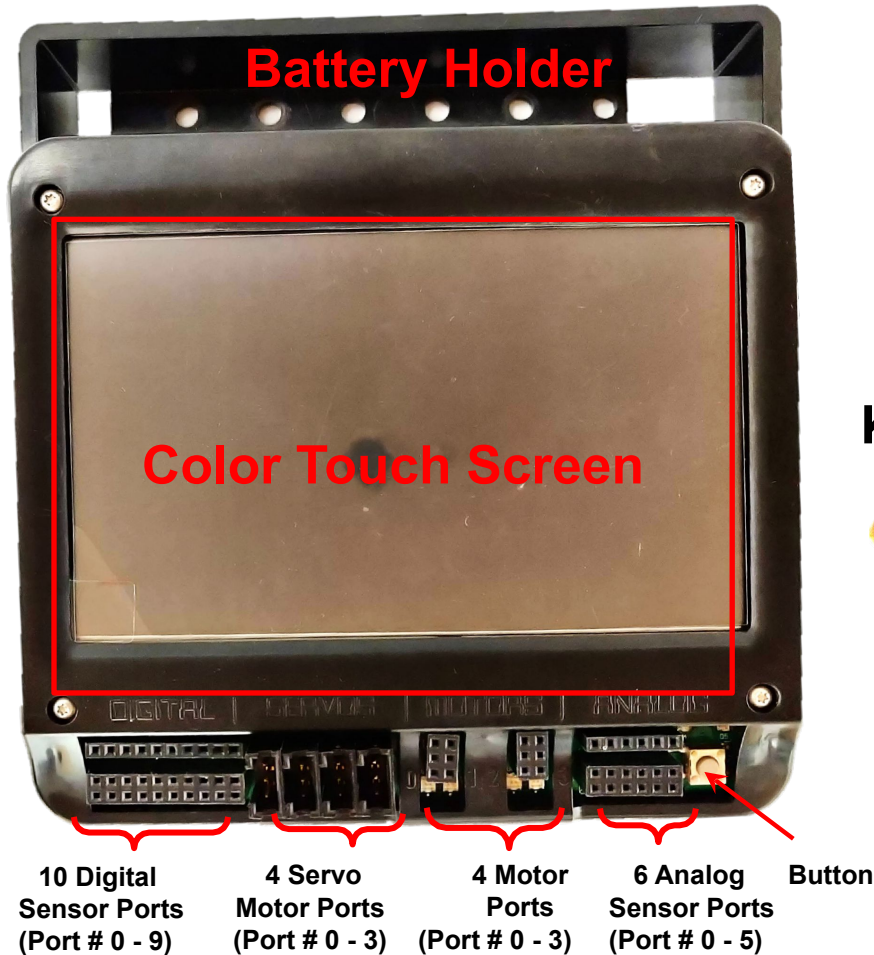
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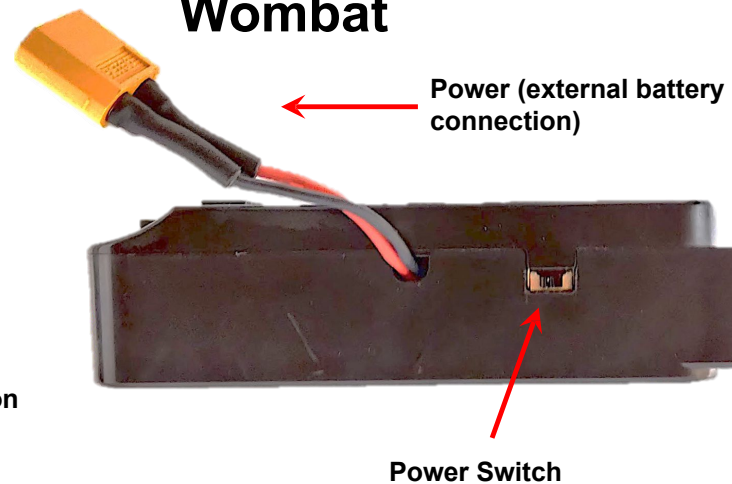
Wombat Controller Guide

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KIPR Robotics Controller - Wombat



- The Wombat uses an external battery pack for power
 - It will void your warranty to use a battery pack with the Wombat that hasn't been approved by KIPR.
- Make sure to follow the shutdown instruction on slides 18 and 19
 - Failure to do so will drain your battery to the point where it can no longer be charged.
 - If you plug your battery into the charger and the blue lights continue to flash then you have probably drained your battery to the point where it cannot be charged again. You will need to purchase a replacement battery.

Charging the Battery

For charging the controller's battery, use only the power supply which came with your controller, see next slide for connection example.

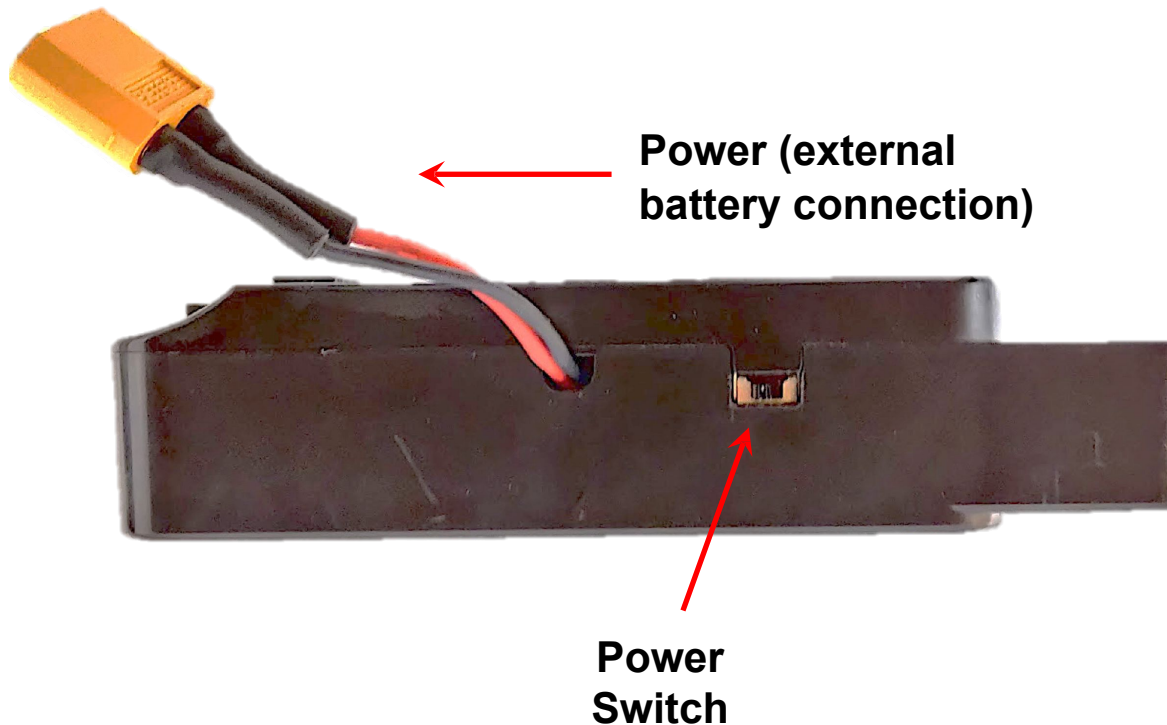
It is possible to damage the battery by using the wrong charger or excessive discharge!



The standard power pack is a lithium iron (LiFe) battery, a safer alternative to lithium polymer batteries. The safety rules applicable for charging any battery still apply:

- Do NOT leave the battery unattended while charging.
- Charge in a cool, open area away from flammable materials.

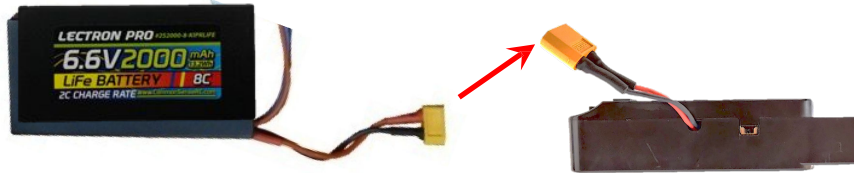
- ***The power switch is located on the side of the Wombat controller next to the external battery connection***



Making the Connection

All connections are as follows:

- **Yellow to Yellow** (battery to controller)



- **White small to White small** (charger to battery)

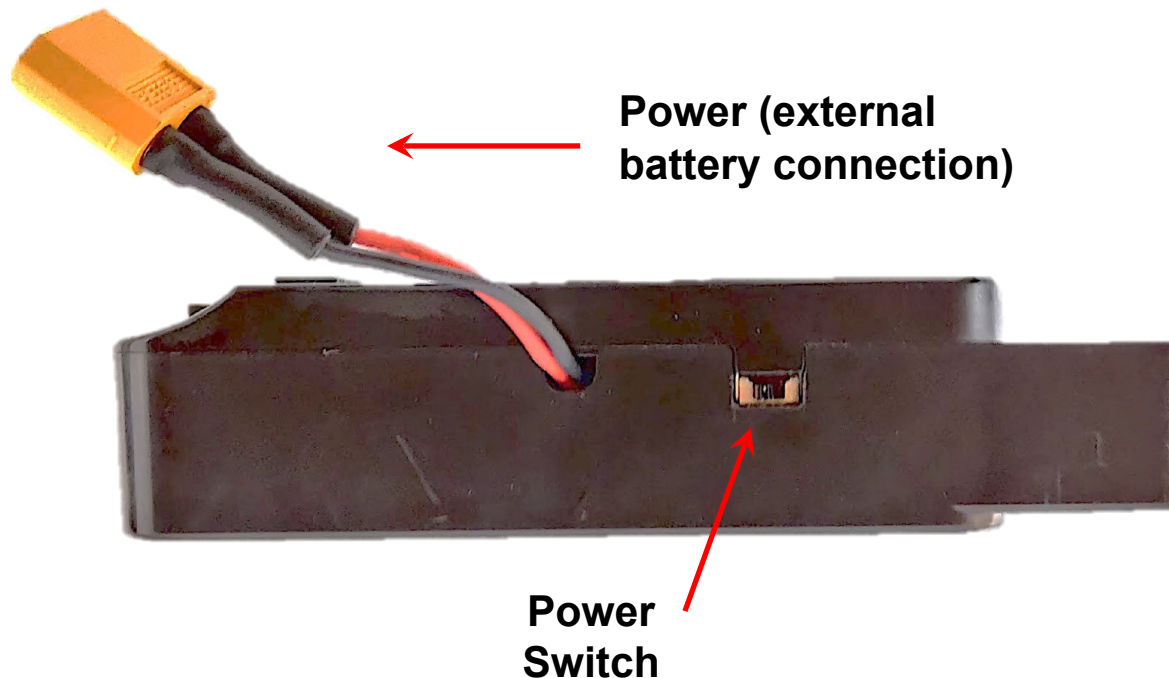
- Yours may vary slightly, use caution when unplugging



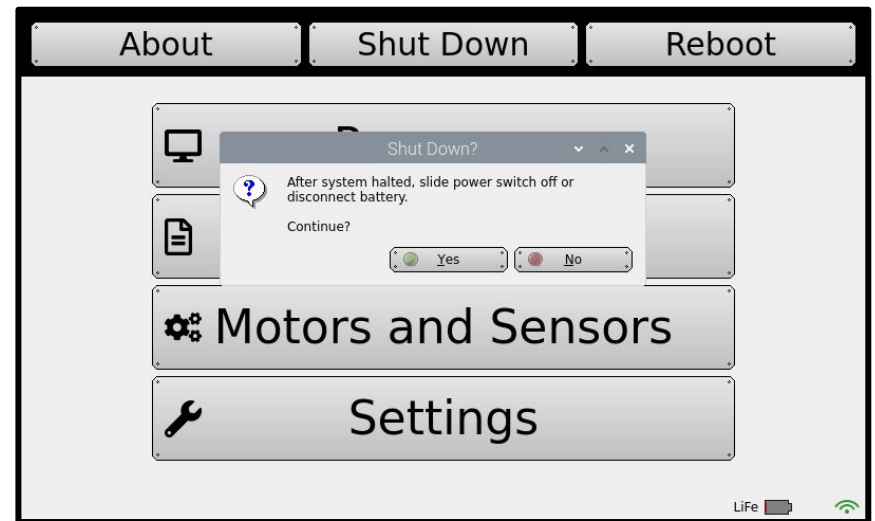
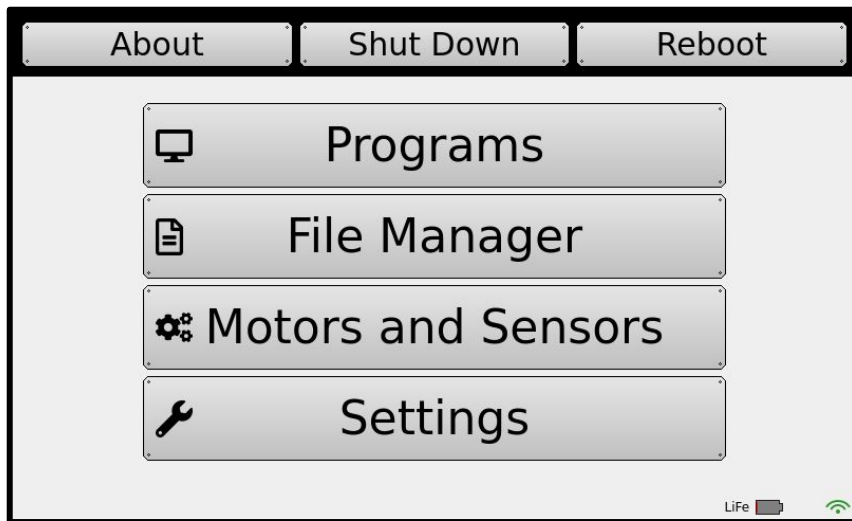
- **Black to Black** (motors, servos, sensors)

Wombat Power Down

- ***After shutting down from the main home screen***, slide the power switch to off AND unplug the battery; use/grab the yellow connectors, being careful not to pull on the wires

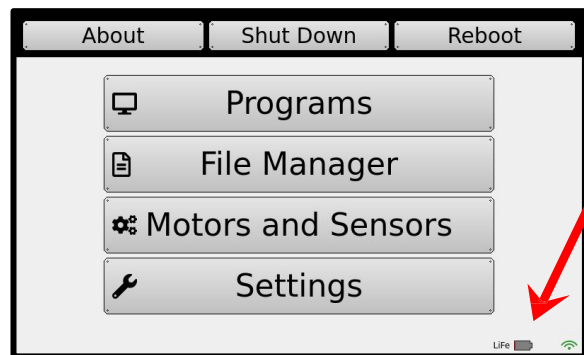


- From the Wombat Home Screen press *Shutdown*
 - Select *Yes*



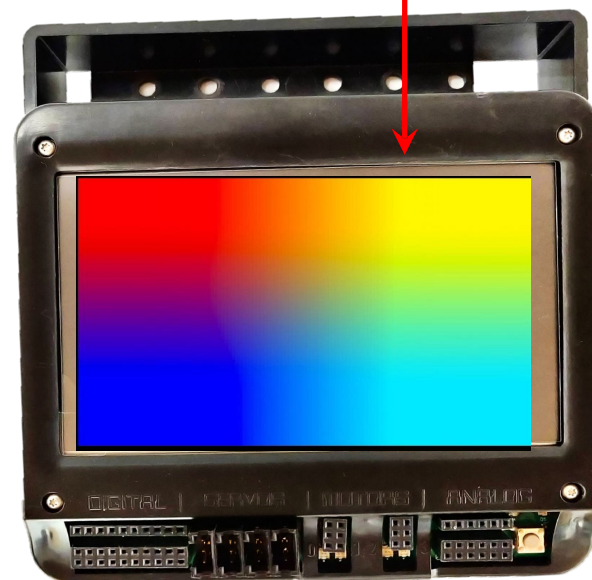
Battery Level

- The KIPR Robotics Controller – Wombat has a color keyed battery indicator (green-yellow is ok, red is getting low)
- A Yellow LED will flash when the battery is critically low
- If it gets too low, you may see this rainbow screen
 - If this happens, turn the Wombat off and replace the battery with one that is charged



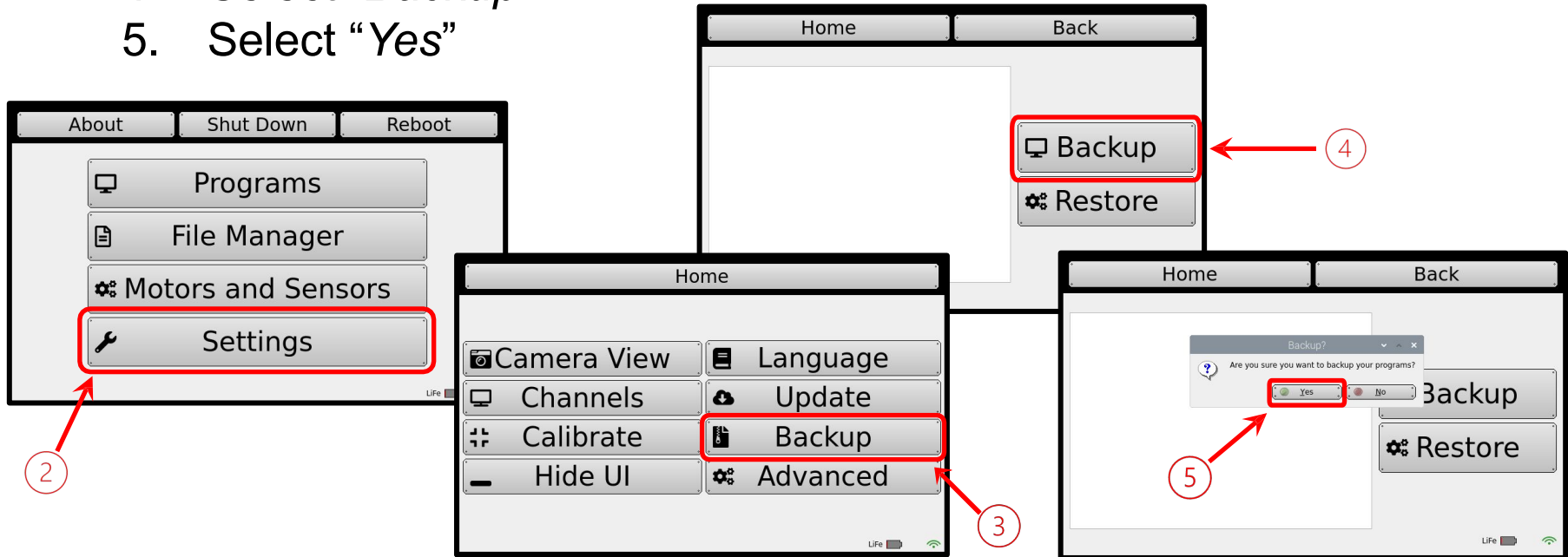
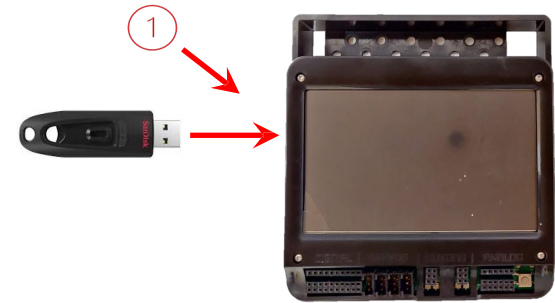
Battery doesn't reflect actual life

Yellow LED, visible only when battery is critically low



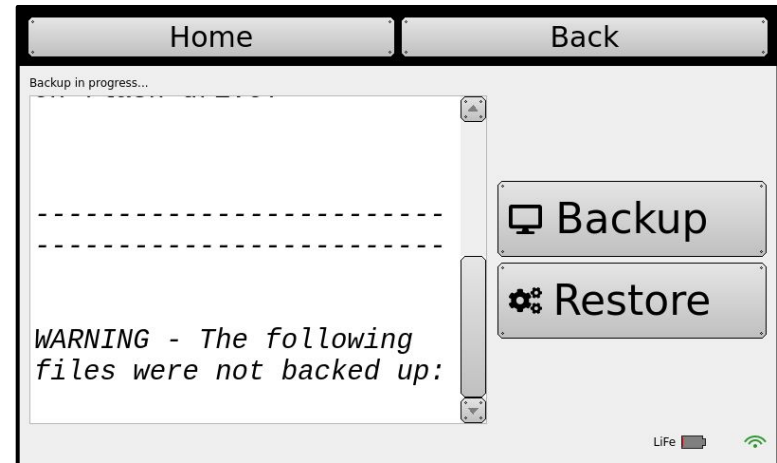
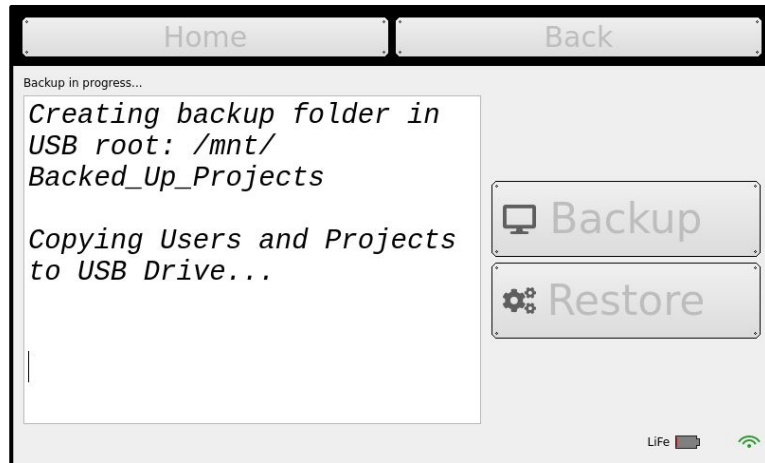
Backup Programs via Botui

1. Boot up and insert USB drive into Wombat
2. Select “Settings”
3. Select “Backup”
4. Select “Backup”
5. Select “Yes”



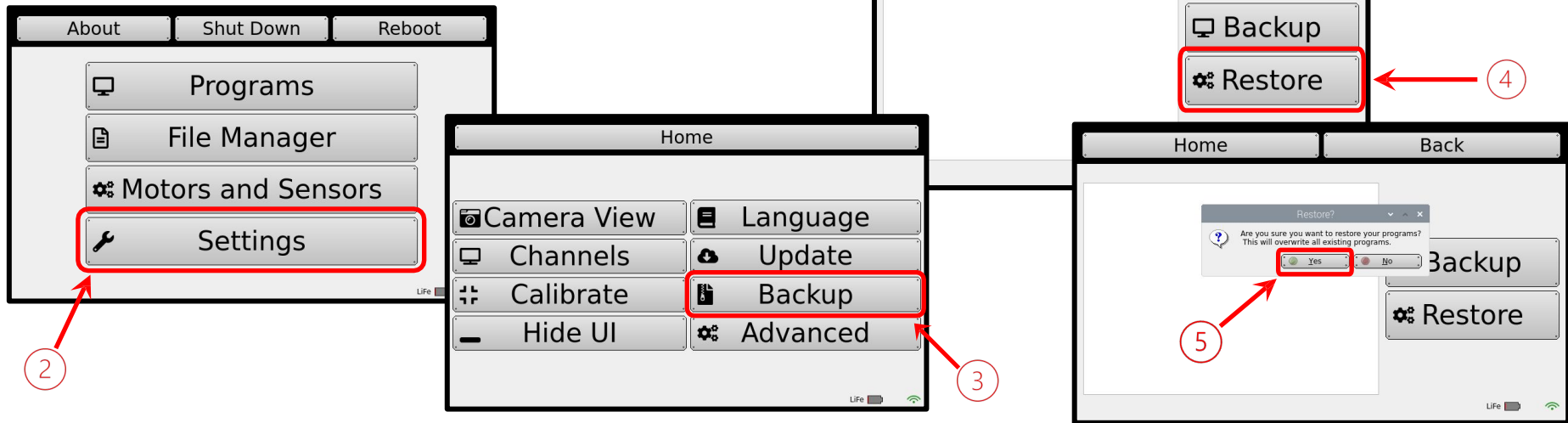
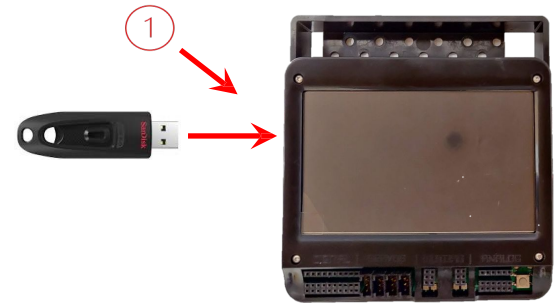
Backup Programs via Botui

1. You'll see the output of the Backup process
2. When finished, you'll be able to scroll through the output log to see what specific files were not backed up and why (usually due to a special character



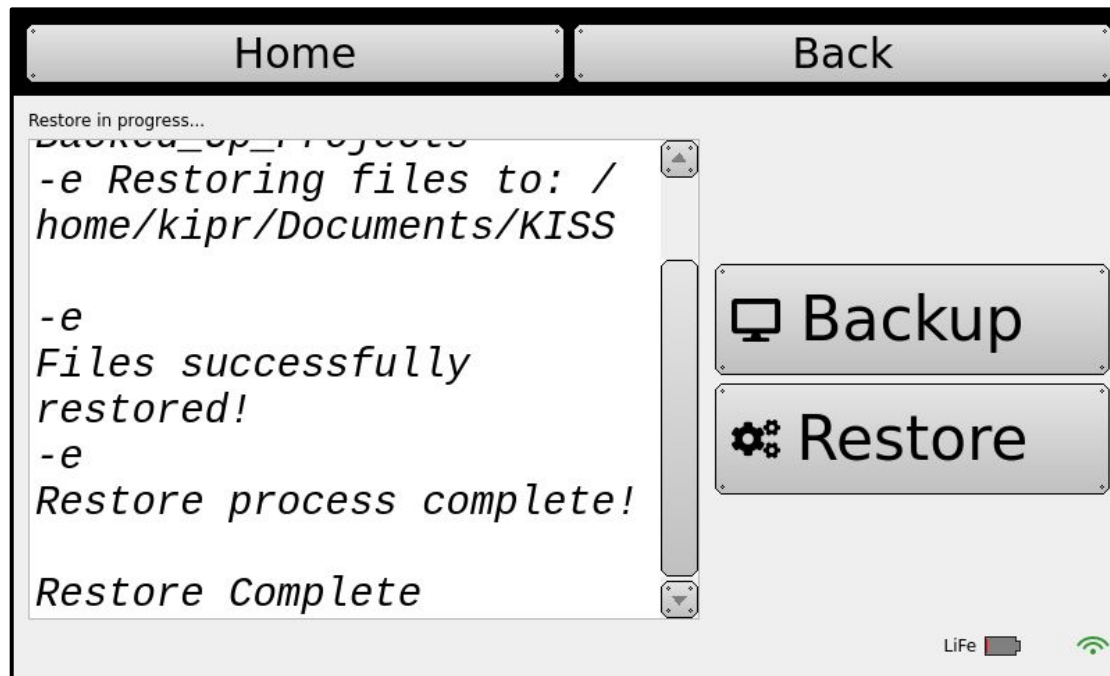
Restore Programs via Botui

1. Insert a flash drive into one of the USB ports on the Wombat that has your programs on it (that you have previously backed up)
2. Select “*Settings*”
3. Select “*Backup*”
4. Select “*Restore*”
5. Select “*Yes*”
6. Wait for Restore Complete Message



Restore Programs via Botui

1. You'll see an output of the Restore process begin and end



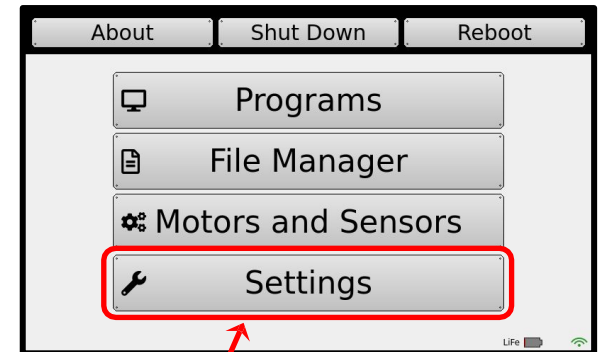
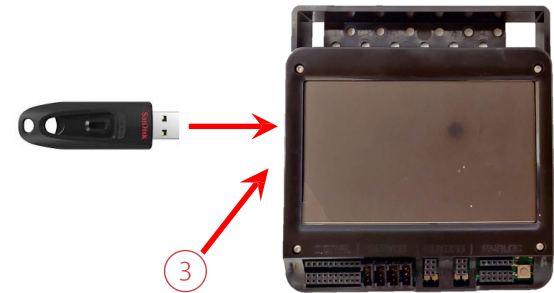
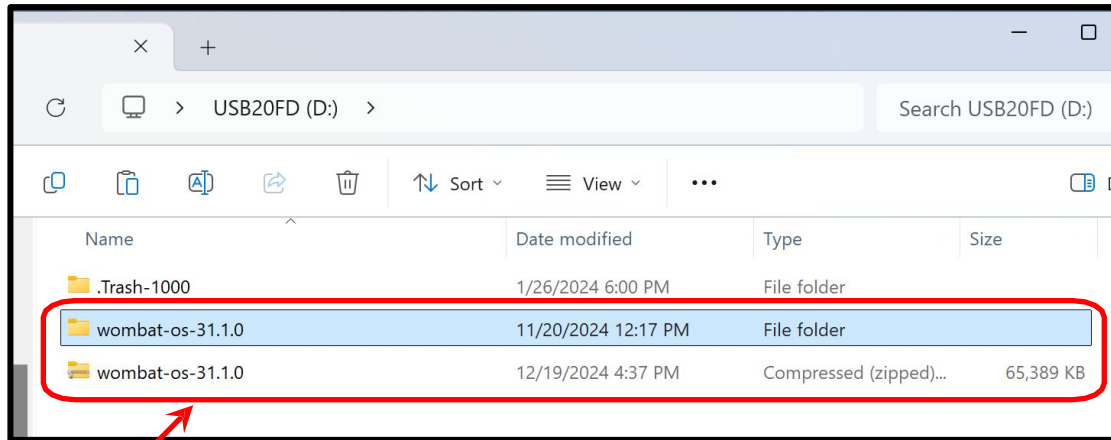
Update Wombat: Option 1 - USB

(versions $\geq 30.2.1$ and $\leq 30.2.5$)

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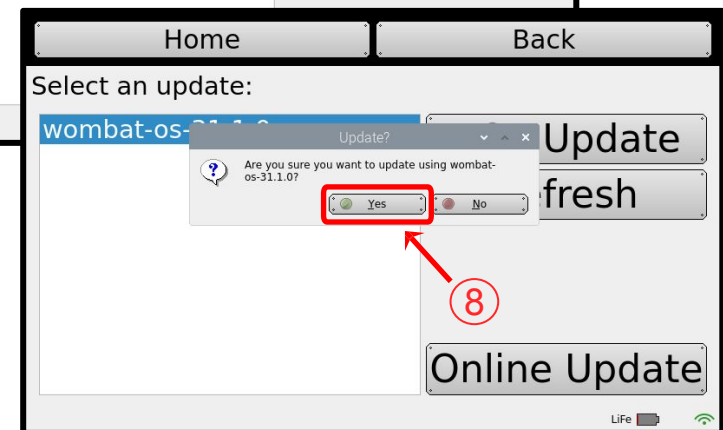
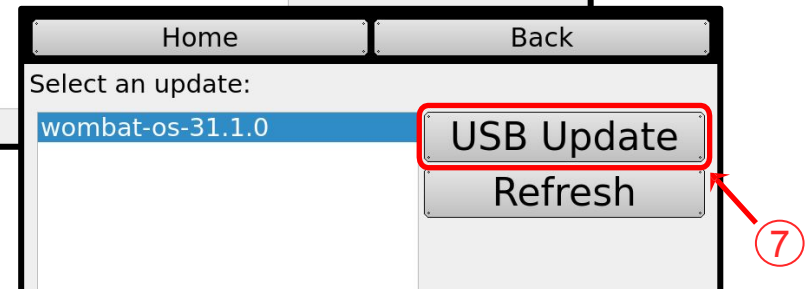
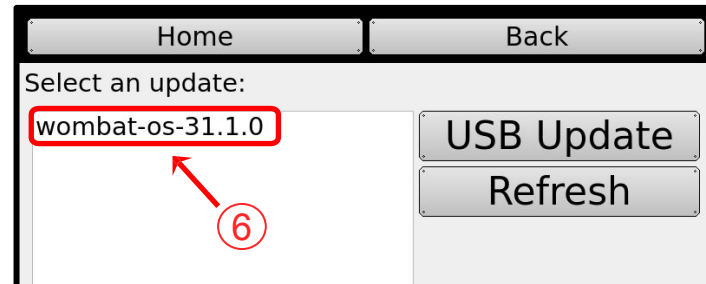
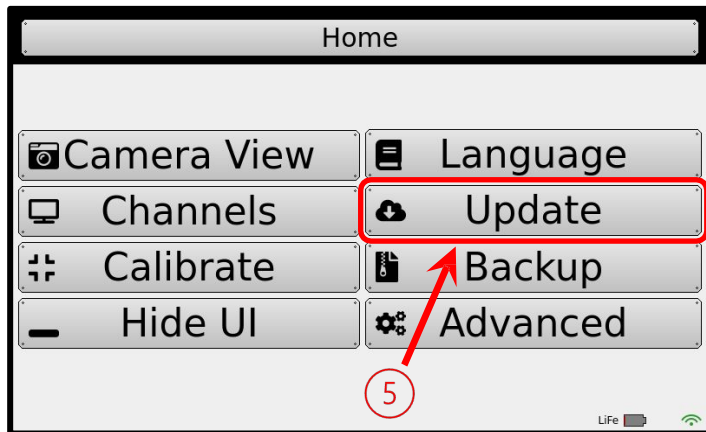
1. Extract the wombat-os.31.1.0.zip to a USB
2. Make sure the extracted folder does not have the same folder nested inside
3. Plug your USB into the Wombat
4. Select “Settings”



Update Wombat: Option 1 - USB

(versions $\geq 30.2.1$ and $\leq 30.2.5$)

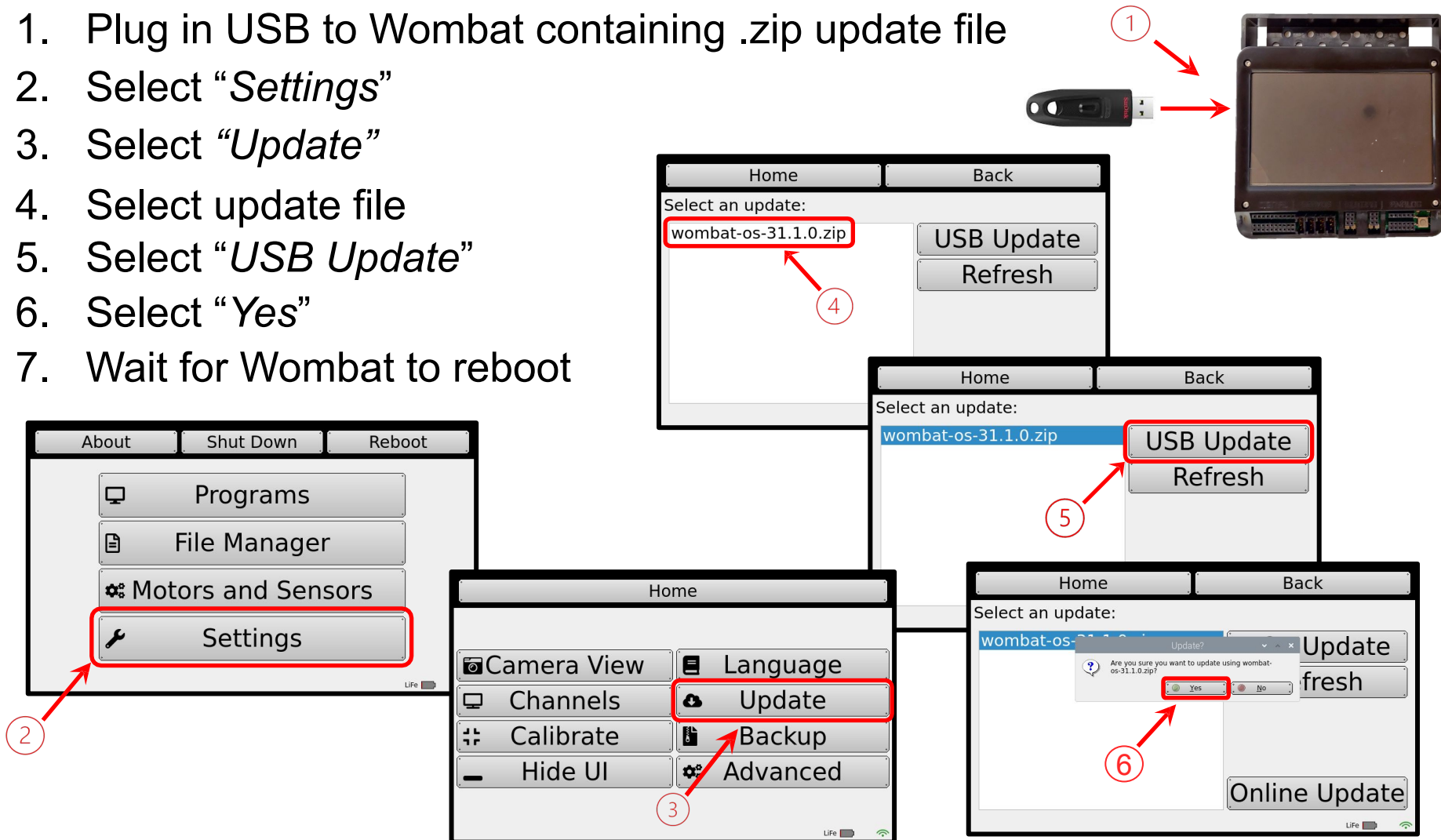
5. Select “*Update*”
6. Select update file
7. Select “*USB Update*”
8. Select “*Yes*”
9. Wait for Wombat to reboot



Update Wombat: Option 1 - USB

(versions $\geq 31.0.0$)

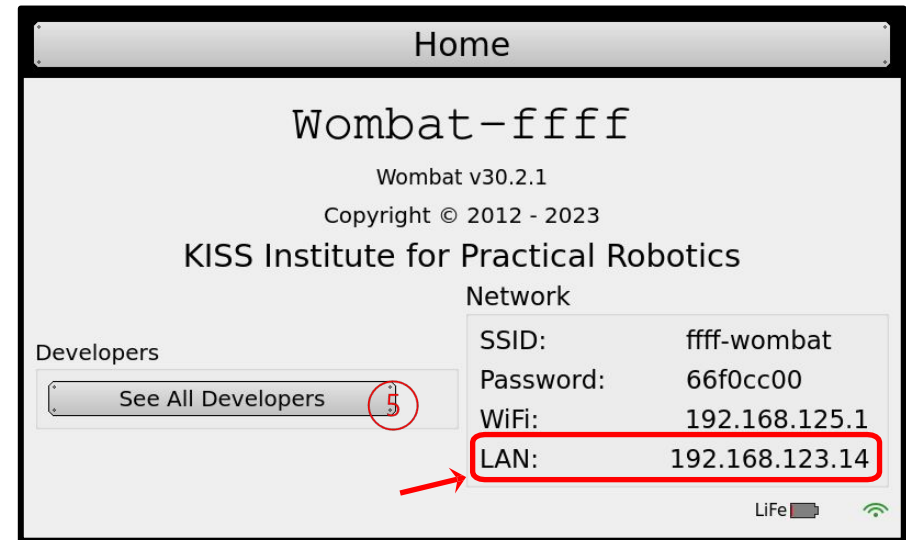
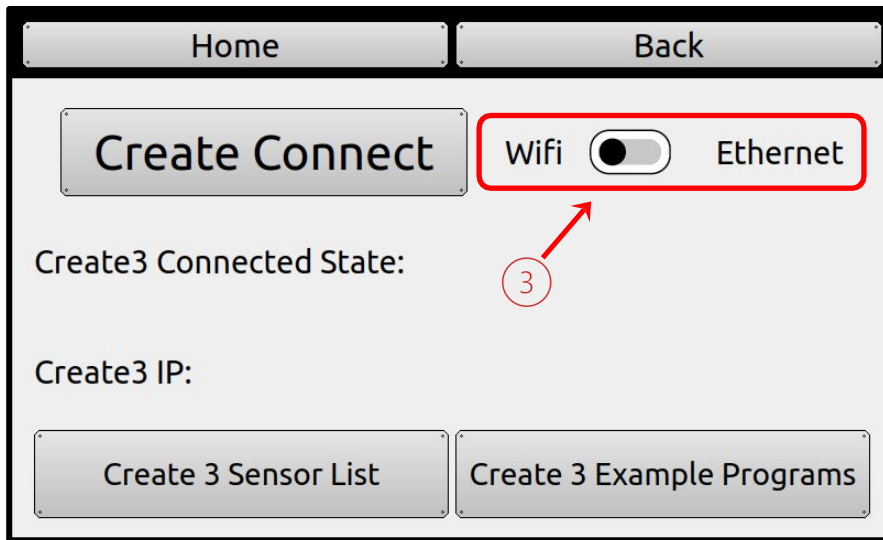
1. Plug in USB to Wombat containing .zip update file
2. Select “Settings”
3. Select “Update”
4. Select update file
5. Select “USB Update”
6. Select “Yes”
7. Wait for Wombat to reboot



Update Wombat: Option 2 - Online

(versions $\geq 31.2.1$ and $\leq 30.2.5$)

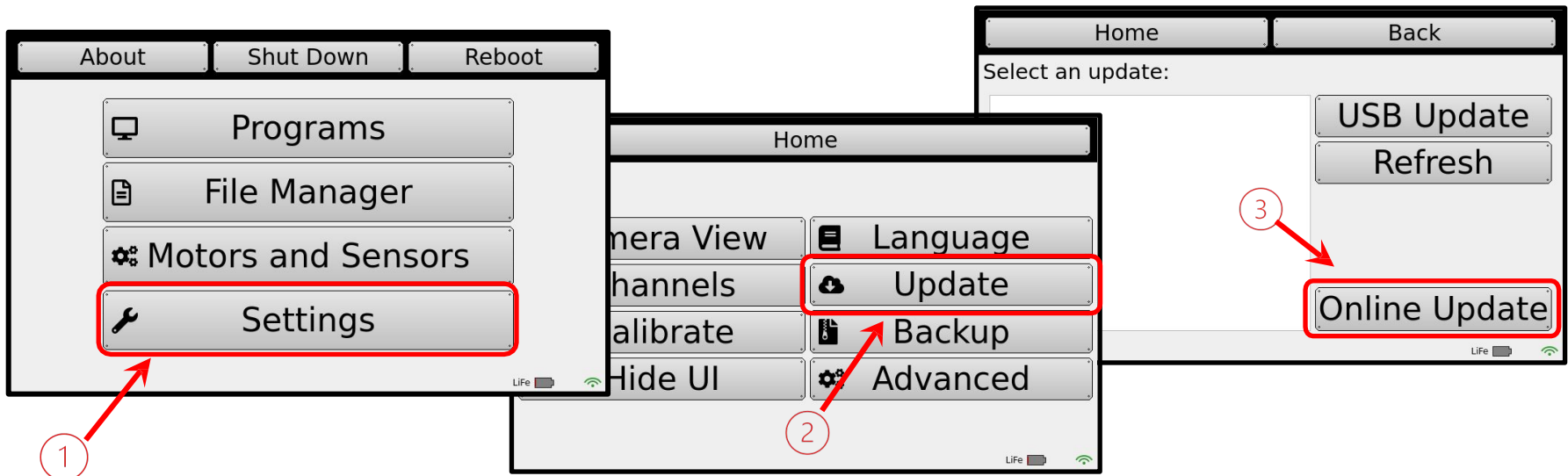
1. Ensure Wombat is not in Create 3 Ethernet Mode
2. Select “*Motors and Sensors*” -> “*Create 3*”
3. Ensure toggle is switched to Wifi
4. Check the “About” page
5. Ensure LAN **doesn't** say **192.168.186.3**



Update Wombat: Option 2 - Online

(versions $\geq 30.1.1$)

1. Select “Settings”
2. Select “Update”
3. Be sure to be connected to Wi-Fi via Client Mode (slide 40) or connected by ethernet to a router
4. Select “Online Update”
5. Select “Yes”



Inverting Your Screen

1. Select “*Settings*”
2. Select “*Advanced*”
3. Select “*GUI*”
4. Select “*Invert Screen*”
5. Wait for reboot

