7/27/17 Updated UgBox Manual

**Step 1.**

1. USB8MP…use full part numbers. I did command FIND because it was difficult to parse the partial part number from the list. Full part number is more user oriented
2. Should have some instruction: **Locate** vs. **Parts needed -** or instead of Step 1. call it Part I and have step 1… begin after, in the interest of consistency.

**Step 3.**

1. On the image, label light sense board and camera board.

**Step 4.**

1. Same note as **Step 1.**, use full part numbers.
2. Same note as **Step 1.**, some action verb instead of **parts needed**.

**Step 6.**

1. Label the USB500W02M label, I’m not sure what you’re referring to.
2. Change **3d** to **3D**.

**Step 7.**

1. Same note as **Step 1.**, use some action verb instead of **parts needed**.

**Step 8.**

1. I don’t know what is meant by: “…that allow it to be flush with both the front and the back of the base plate (see picture).” This phrase should be made more clear.

**Step 9.**

1. Replace “Connect with” with “Place”.
2. Replace “…put nut side with locking washer” with “…lock washer should face nut”

**Step 10.**

1. Same note at **Step 1.**, use some action verb instead of **Parts needed**.
2. “Attach XU4 to back of ….” sounds like I should attach it now versus wait for the following steps to guide me.

**Step 11.**

1. 2nd bullet: “The XU4 will be perpendicular to the base plate…” this phrase could be more clear. It should say “The XU4 will sit below the baseplate above the acrylic legs…” or something along those lines.

**Step 12.**

1. 1st bullet: Replace “Connect XU4 using 4 copper screw holes…” with “XU4 connects to baseplate via 4 copper screw holes…” or something along those lines.
2. On the image, label the SD card slot and ethernet port.
3. 2nd bullet: Replace “XU4 will have…” with “XU4 has SD card slot and ethernet port facing the acrylic legs.”
4. Take an additional image labeling and showing how the USB ports face the center of the acrylic baseplate.
5. 3rd bullet: Replace “Put white…” with “Place white spacer between XU4 and base plate (see order below).”
6. Add a note about checking that SD card is secured with tape, if not, tape it down.

**Step 13.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed**.
2. On the image, label C1+.

**Step 14.**

1. On the image, label the writing (Wagman URL).

**Step 15.**

1. “…to top” should be “…to top of Wagman board”
2. should read “Attach C1+ to top of Wagman board (side with writing) via 4 brass holes indicated in Step 14 image. The GPIO port on C1+ should face the long side of Wagman board.”
3. On the image, label GPIO port.

**Step 16.**

1. On the image, label power pigtail, C1+ power jack, Wagman J9 port, slot 2 and slot 4.
2. Replace image with image that includes new standardized wire placement.

**Step 17.**

1. Label the heartbeat cable and Wagman J9 port slot 3.

**Step 18.**

1. On the image, label SRE board, label Wagman J2 port.
2. Replace “…face it away from the C1+…” with “…. the silver and black round tower on the SRE should face the edge of the board. SRE and C1+ board should not overlap.”

**Step 19.**

1. On the image, label C1+ GPIO pin 27 and SRE JP9 port pin 1 and pin 2.

**Step 20.**

1. On the image, label C1+ GPIO pin 39.

**Step 21.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .
2. On the image, label Wagman and C1+ assembly.

**Step 22.**

1. 1st bullet: This phrase is confusing, I don’t know which 4 screw holes are on the top right of the base plate because I only see 2.
2. 2nd bullet: what is **they**? and what is **it**?

**Step 23.**

1. Replace “Align Wagman so C1+ is toward….” with “Align Wagman so C1+ is nearest the camera slots on the baseplate.” “The screw holes should also be aligned with the brass screw holes.”
2. 2nd bullet: Replace “Put spacers….” with “Place spacers between Wagman and base plate.”
3. Include an image where the RTC battery and RTC battery port is labeled.
4. Add a note about taping the RTC batteries down.

**Step 24.**

1. On the image, label the XU4 boot switch cable and Wagman J4.

**Step 25.**

1. Update image to new image that includes new standardized wiring.
2. On the image, label power pigtail and Wagman power port J5.

**Step 26.**

1. On the image, label XU4 GPIO pin 4 and Wagman power port J5, slot 3.

**Step 27.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .
2. On the image, label side camera.

**Step 28.**

1. On the image, label GPIO port.

**Step 29.**

1. Make a note that the side camera should sit above the acrylic base plate.
2. The 4th bullet would be clearer if a labeled image was included.

**Step 30.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .

**Step 33.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .

**Step 34.**

1. On the image, label USB cable port.

**Step 35.**

1. On the image, label USB cable port.

**Step 36.**

1. On the image, label the black USB cable slots and connectors.
2. Replace this image with one the images that include the updated standardized wiring.

**Step 37.**

1. On the image, label RJ45 cable.

**Step 38.**

1. Change the “green USB cable” USB cable may not be green.
2. On the image, label C1+ slot and Lightsense uUSB slot.

**Step 39.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .

**Step 40.**

1. Include an image of how to connect the ACDC converter to the raiser.
2. Should the screws go through the top or bottom of the raiser?

**Step 41.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .
2. On the image, label the elements listed in the image.

**Step 43.**

1. Which way does the metal hex nut face?

**Step 45.**

1. 4th image, not sure how to push the wire or what is being asked.
2. Label the heat-shrunk portion of the DC Power Assembly.

**Step 46.**

1. Zoom in on the wire connectors.

**Step 47.**

1. Zoom in on the wire connectors.

**Step 48.**

1. Same note as **Step 1.**, stick with “Gather” or use some action verb instead of **Parts needed —** .

**Step 50.**

1. On the image, label “main UglyBox” and “metal backplane”.

**Step 51.**

1. Here I thought we were talking about the main UglyBox but then it mentions “power box” in the second bullet.

**Step 54.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .

**Step 55.**

1. On the image, label the “flat nut”.

**Step 56.**

1. On the image, label the “flat over nuts” an dhow they fit into the top shield.
2. Not sure wha the 2nd bullet is describing, an additional image would be helpful.

**Step 57.**

1. 2nd bullet: label the direction for the black screws through backplane
2. 3rd bullet: reads “behive” instead of “beehive”

**Step 58.**

1. On the image, highlight the proper mounting holes.
2. On the image, label the CAT6 cable and female RJ45 jack inside the box.
3. 5th bullet: How will they know whether or not to use the AlphaSense?
4. Last bullet: label the power cable to the Wagman power port.

**Step 59.**

1. Same note as **Step 1.**, use some action verb instead of **Parts needed —** .
2. On the image, label the AirSense, ChemSense…etc. boards.

**Step 61.**

1. On the image, label the PM sensor.

**Step 66.**

1. On the image, label the ChemSense board etc.
2. Zoom in on the connectors for ethernet.