



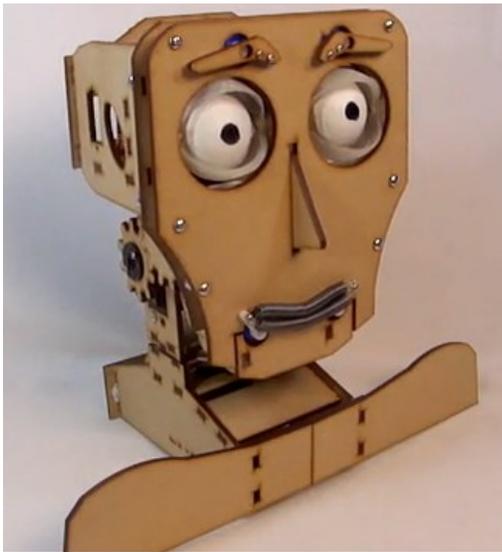
## Basic Fritz Kit: Special Assembly Instructions, Rev 1

The purpose of this document is to augment the existing assembly instruction video for the Advanced Fritz kit for those that have a Basic Kit. So, you can watch the assembly video at

<http://youtu.be/JI74iR-i9hc> (or open youtube and do a search for “Fritz the Robotic Head Assembly”)

and this doc will show what to do differently from those instructions.

First off, here are photos of the two version of Fritz.



Advanced Fritz



Basic Fritz

As you can see, the basic version does not have eyelids, eyebrows, or lips. What you can't see as obviously is that the Basic kit neck does not allow movement like the Advanced does.

For assembly, there are 7 major differences to keep in mind.

- 1) Advanced kit has a **neck rotation servo motor**, allowing the upper head to rotate on the base. Basic uses the red plastic adapter to permanently mount the neck and skull onto the base.
- 2) Advanced kit has a **neck tilt servo motor**, allowing the head to tilt up and down. The Basic kit has a single fixed position (head is looking straight ahead). This is done by a screw that permanently fixes the head tilt position.
- 3) Advanced kit has 2 **eyelid** plastic pieces and 2 micro (blue) servos to control them. Basic does not have eyelids, so no plastic eyelids and those motors are not present.
- 4) The Advanced kit **jaw face piece** has holes for the lip motors also. Basic jaw piece does not

- have these holes. Again, so that the basic face does not have holes in it which would look odd.
- 5) The Advanced kit **faceplate** has holes for the eyebrow and lip motors. Basic does not have these holes since they would be empty and look very odd.
  - 6) Advanced kit has 2 **eyebrow** parts, and 2 micro servo motors to control them. The Basic kit does not have eyebrows or the 2 motors to drive them.
  - 7) Advanced kit has 2 spring **lips**, which are driven by 2 micro motors. Basic kit does not have lips.

This instruction document will tell you how to handle these differences.

### Steps for Basic kit, different from advanced kit video.

## 1 – Neck rotation servo motor, replace with basic neck parts

Follow video instructions up until 2:10

DO NOT DO THIS (add neck rotate servo)



In the video at about time 2:10, the neck rotation servo is installed. You will not do this step, so **skip from 2:10 to 2:48** and proceed as shown to assemble the neck assembly. This goes through 3:19

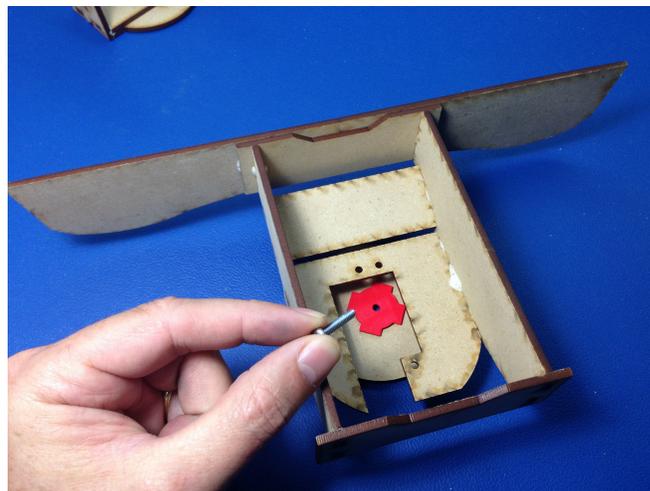
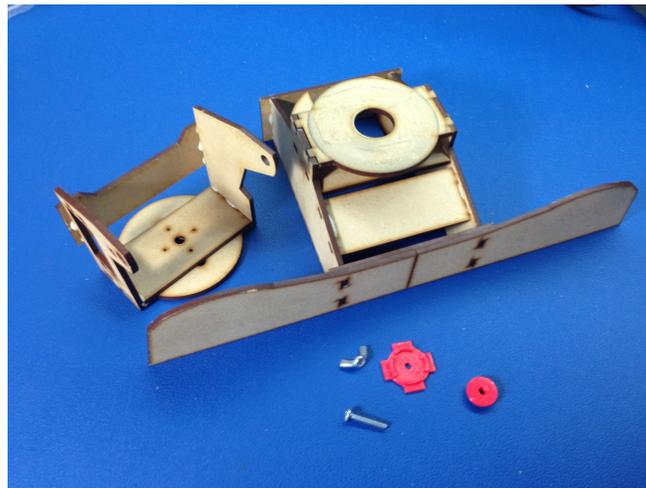
DO THIS (Neck Assembly) 2:48 – 3:19



DO NOT DO THIS (do not install standard servo for neck tilt) skip 3:19 to 3:37



DO THIS INSTEAD (Add the neck rotate basic parts, 2 red plastic parts, a bolt and a wing nut)





2 – **DO NOT** install neck servo motor

At time 3:38 in video, **skip from 3:38 through 5:00**



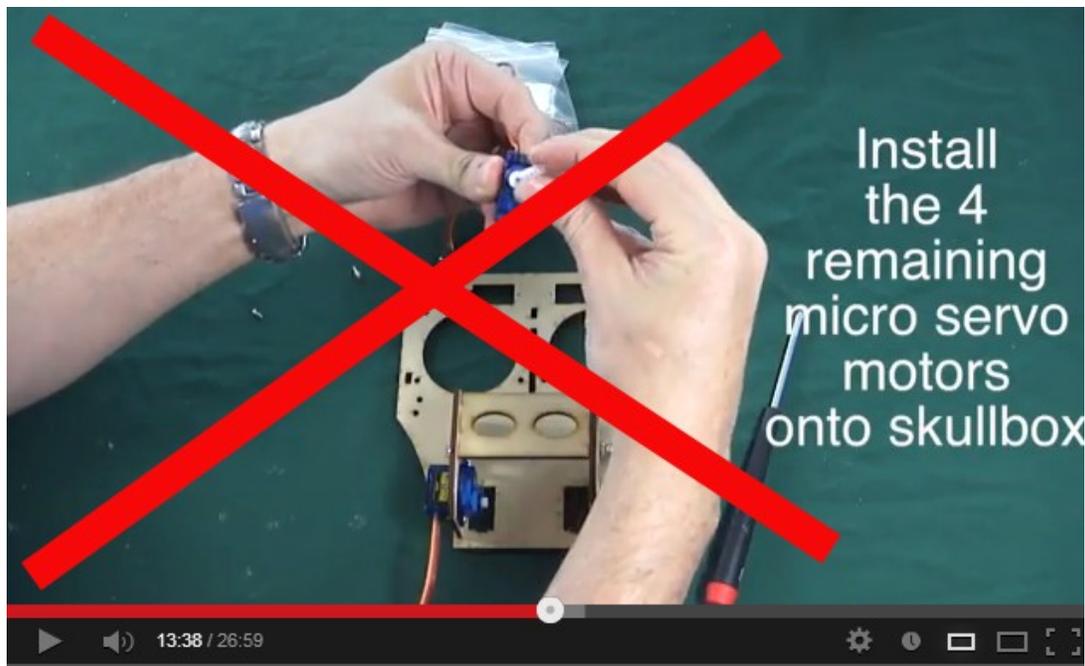
### 3 – Do not install eyelids or the eyelid control motors

Follow instructions from 5:00 to 7:33, then skip from 7:33 to 8:43. This section is installation of the eyelid motors. You do not have these motors.



Then continue to follow instructions from 8:43 through 13:37

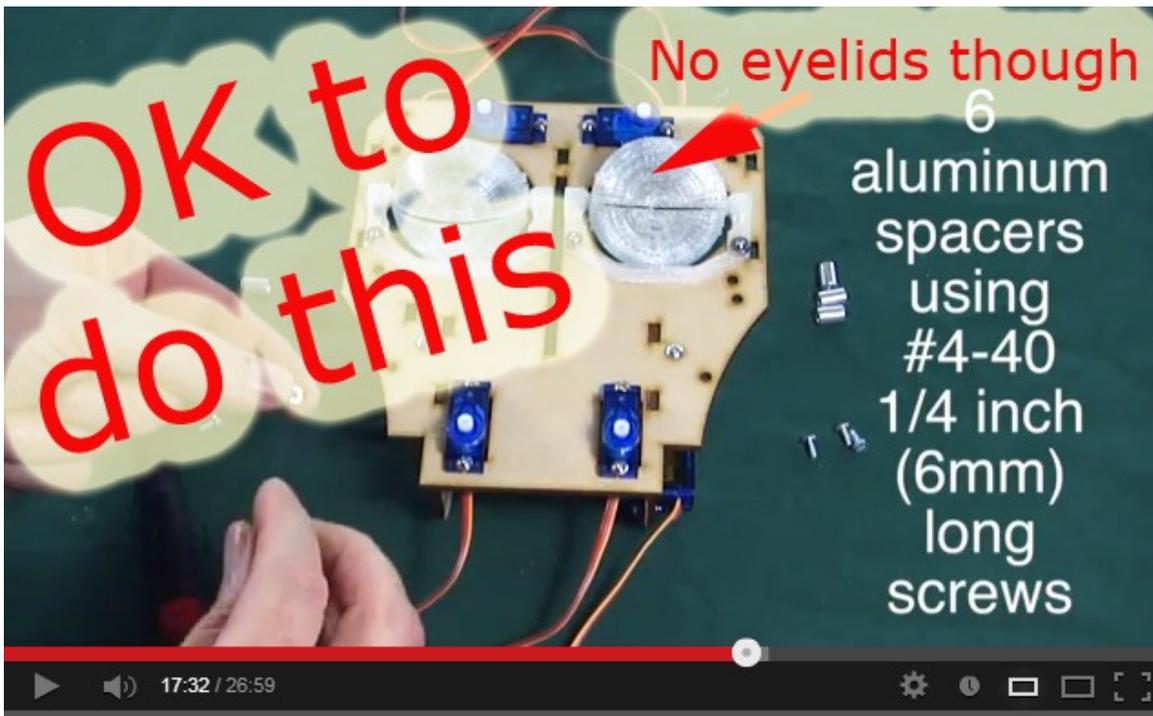
Do not install the motors for eyebrows or lips, so skip 13:38 through 13:49



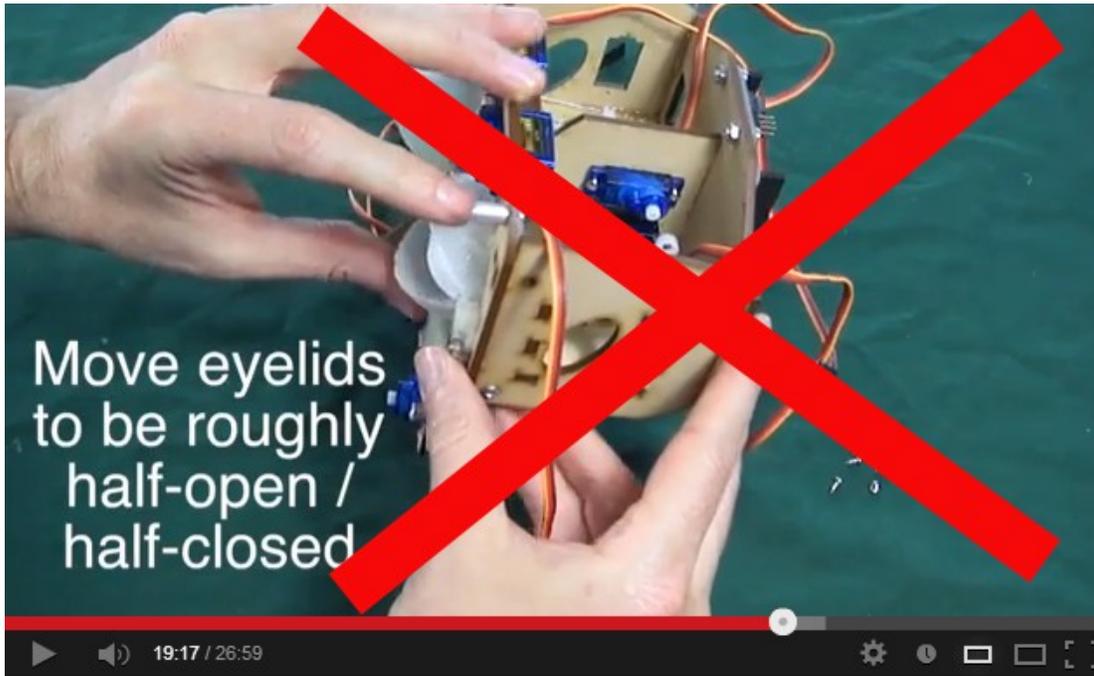
DO NOT install eyelids. You do not have these pieces. So skip 13:49 through 17:23



then continue to follow directions from 17:23 through 19:14. However note that the video shows eyelids installed, which you do not have. Also note that the section about 18:20 will be easy since you don't have eyelid wires that have to go through the eye holes.

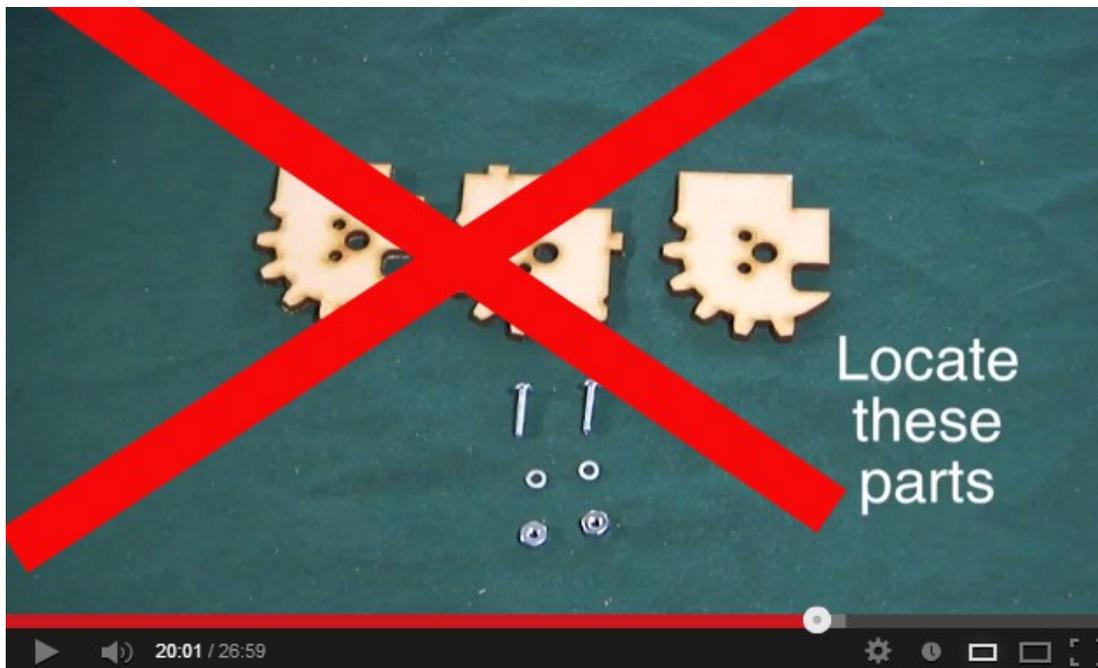


Since you do not have eyelids with control wires or eyelid motors, Do not install eyelid control wires to the eyelid motors. **Skip 19:14 through 19:55**



**Then continue to follow instructions from 19:56 through 20:00 and install screws on the eye motors.**

Do not assemble/install the neck gears. You CAN do this, but they will not have any function, but you might like the look. **Skip to 20:00 to 20:47**

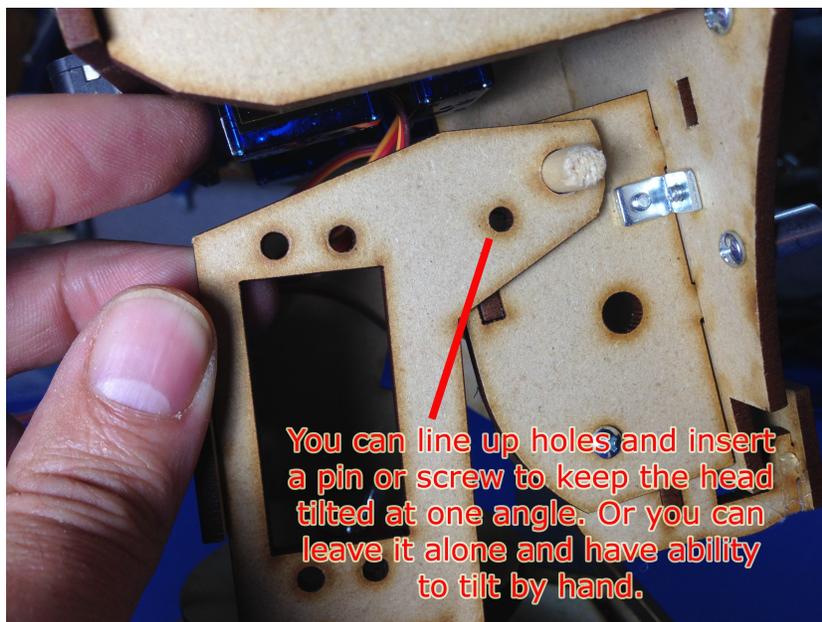


then continue to follow directions from 20:48 through 23:00

4 – Jaw face piece will look different. No holes for lip motors.



at 23:00, the skull is installed onto the neck. Yours will look different since there is no neck tilt servo motor. Yours will look like this. The skull will naturally sit with a slight upward tilt to it. If you wish, you can place a screw or anything that will fit into the holes.



5 – Faceplate will look different. No holes for eyebrow or lip motors.

Continue following these directions at 23:40, but be aware that the faceplate looks like picture below.



6 – DO NOT install eyebrows. Basic kit does not have eyebrows. Skip 23:59 through 24:37



7 – Do not install lip springs. Basic kit does not have lip springs. Skip 24:38 through 25:47



Follow the remaining directions to install battery pack.

## **Servo setup and use of software:**

Then go to

<http://www.xyzbot.com/help/Installation.php>

for instructions on how to connect the servos and calibrate with the software. Note that the software has controls for eyebrows, lids, lips and neck that the Basic model does not have physically. It is best to **not enable those parts** during setup.