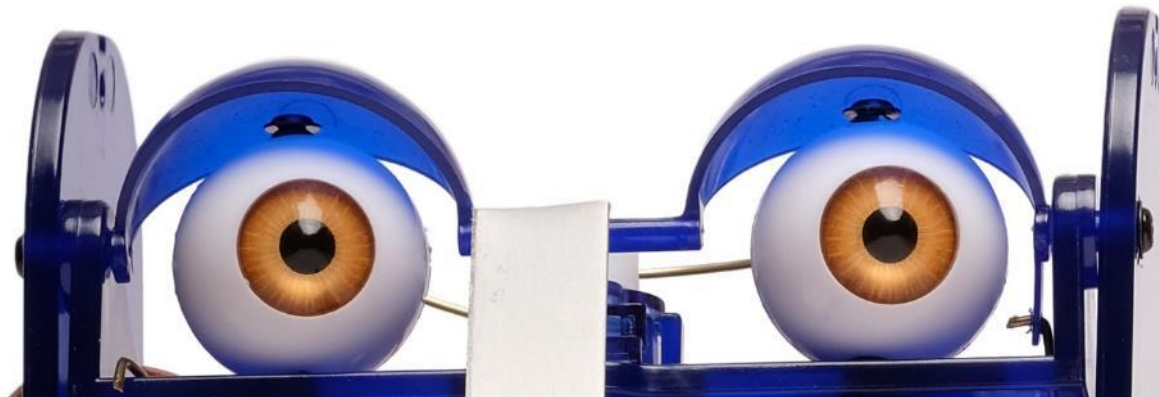


Replace a Motor

Instructions



Spare parts

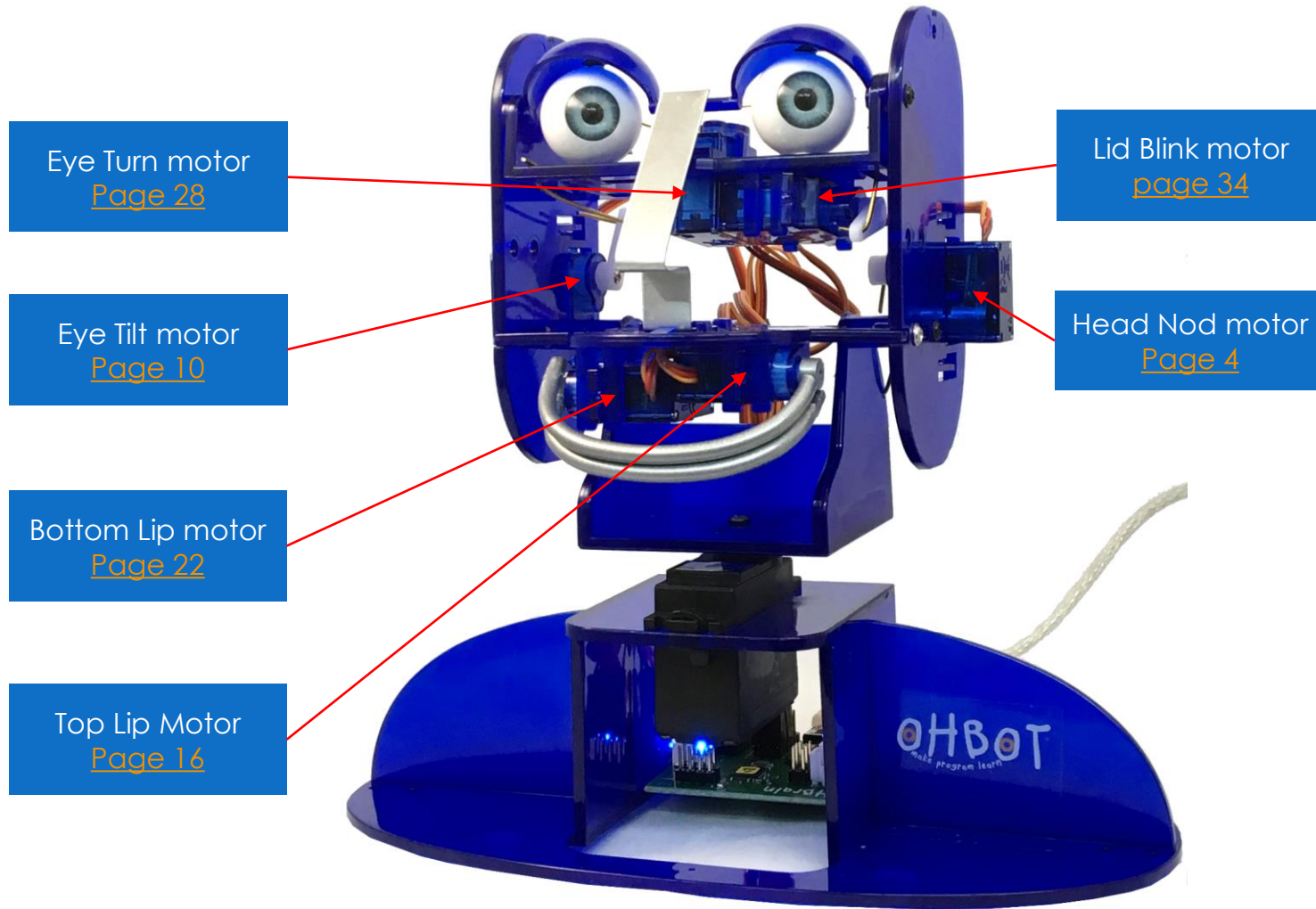
Provided



Needed

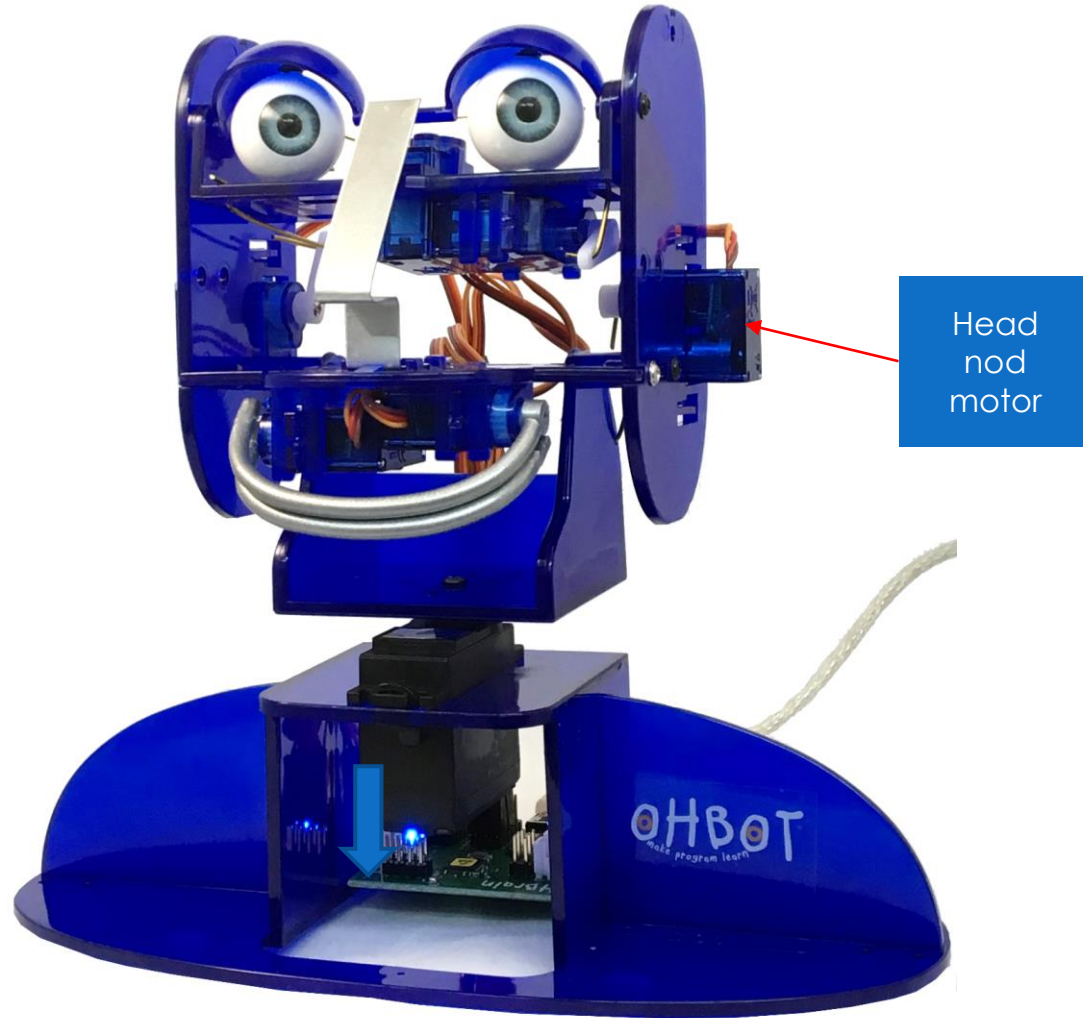


Index

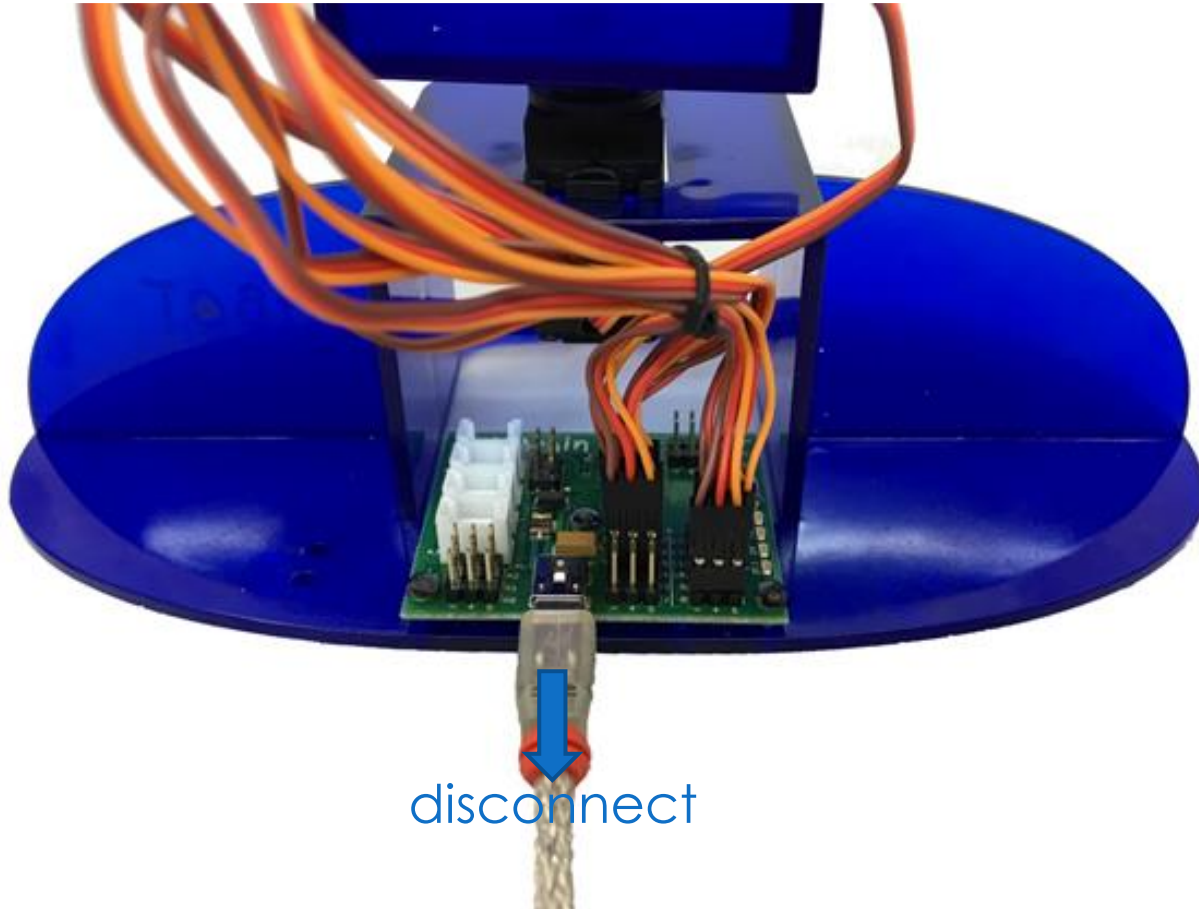




How to replace Ohbot's Head Nod motor

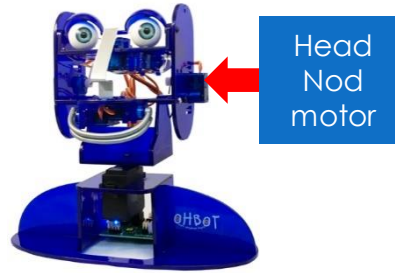


Disconnect USB plug





Remove Head Nod motor

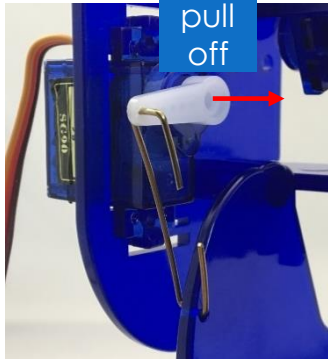
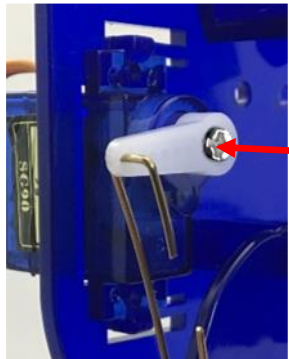


You will need:



1. Use screwdriver to undo the screw holding white arm onto Head Nod motor. Keep the screw.

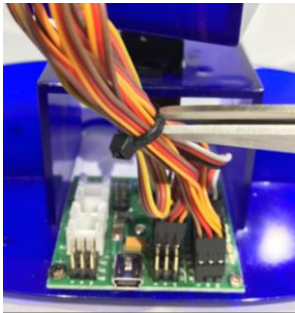
2. Pull the white arm off the shaft of the motor



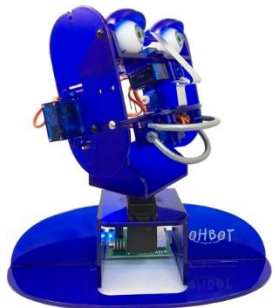
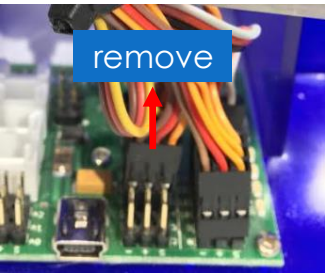
3. Push the clips apart and pull the motor through



4. Use scissors to cut the cable ties holding the wires together



5. Find the plug for the head nod motor on the control board. It is connected to the pins marked 4. Remove it.



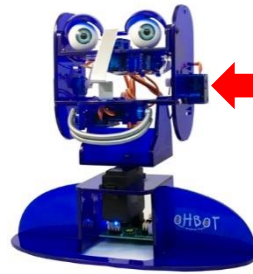


Fit Head Nod motor

You will need:



6. Thread the cable through the hole. Orient the motor with the cable coming out towards the top of the cheek.



Head
Nod
motor

7. Push the motor through at an angle, starting with the end of the motor where the cable comes out.

8. Clip the motor in place.



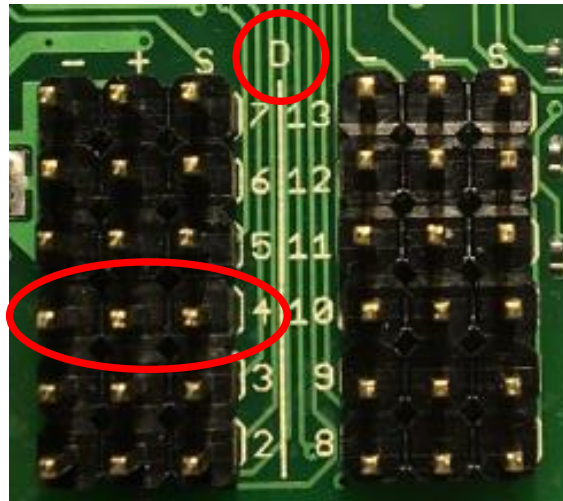


Connect Head Nod motor to the control board

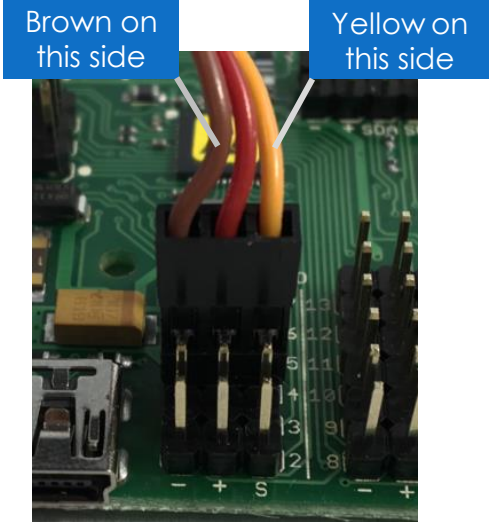
9. Find the socket at the end of the wire for the Head Nod motor.



10. On the Ohbrain board locate the set of pins marked D4.



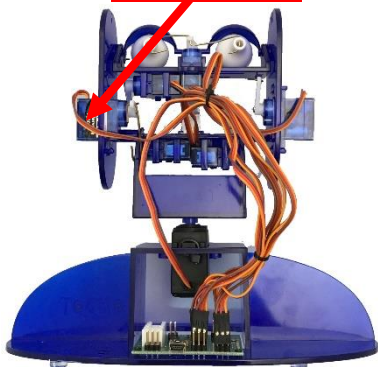
11. Attach the socket to the pins marked D4. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).



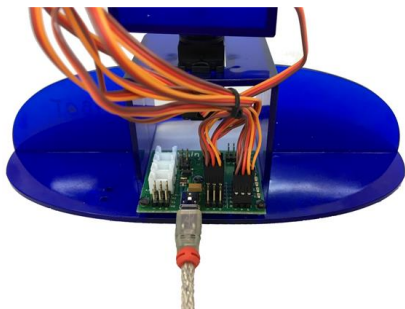


Set up Head Nod motor

Head Nod

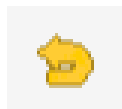


12. Connect the plug.



connect

13. Start the Ohbot application. Click the reset button.



14. Hold Ohbot's head upright.



Not like this



Yes! That's right

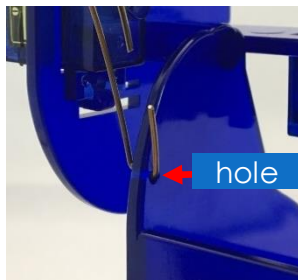
end hole



15. Thread the link through the hole on the side of the neck.



B



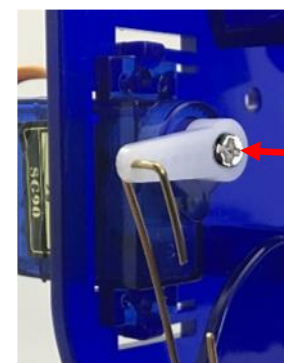
hole

16. Find **Motor 4**. Push the arm onto the motor so it holds Ohbot's head **upright**.

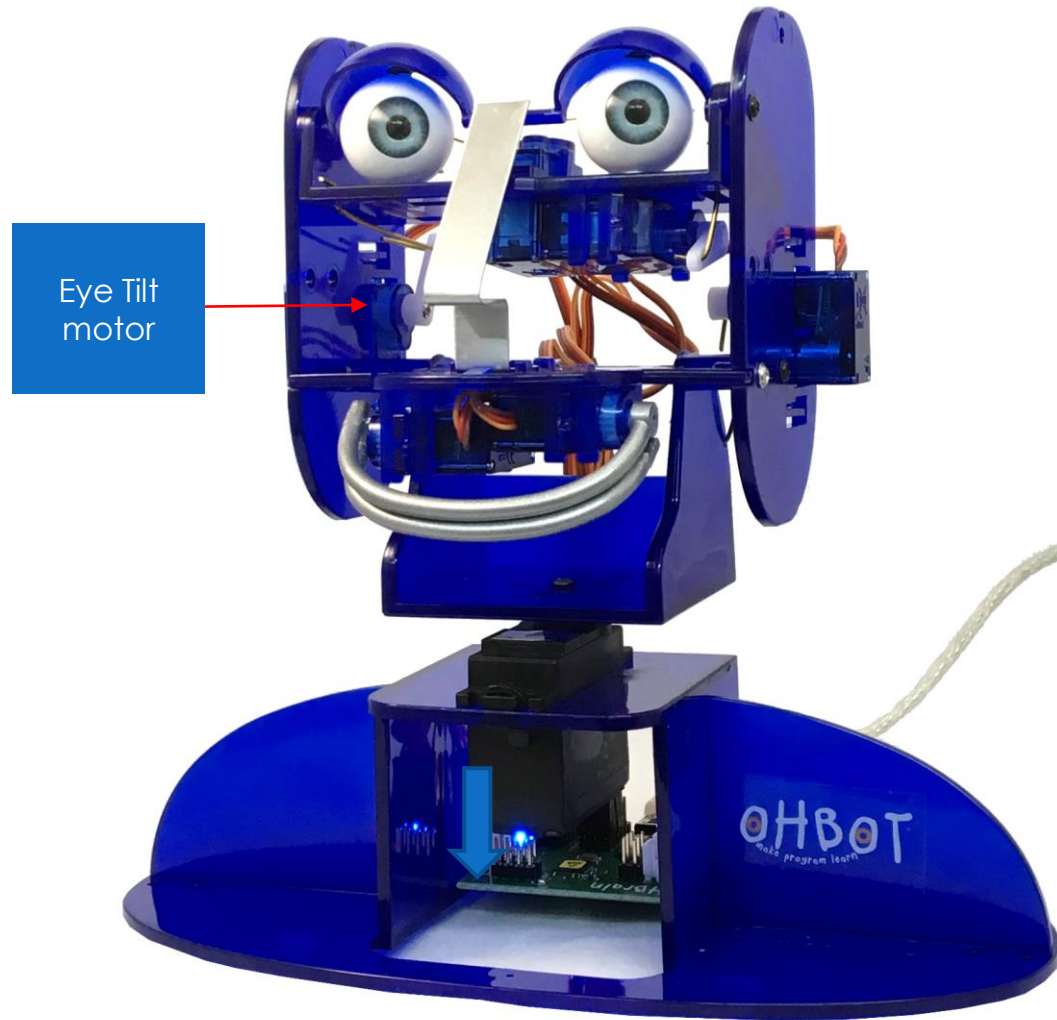


push onto motor

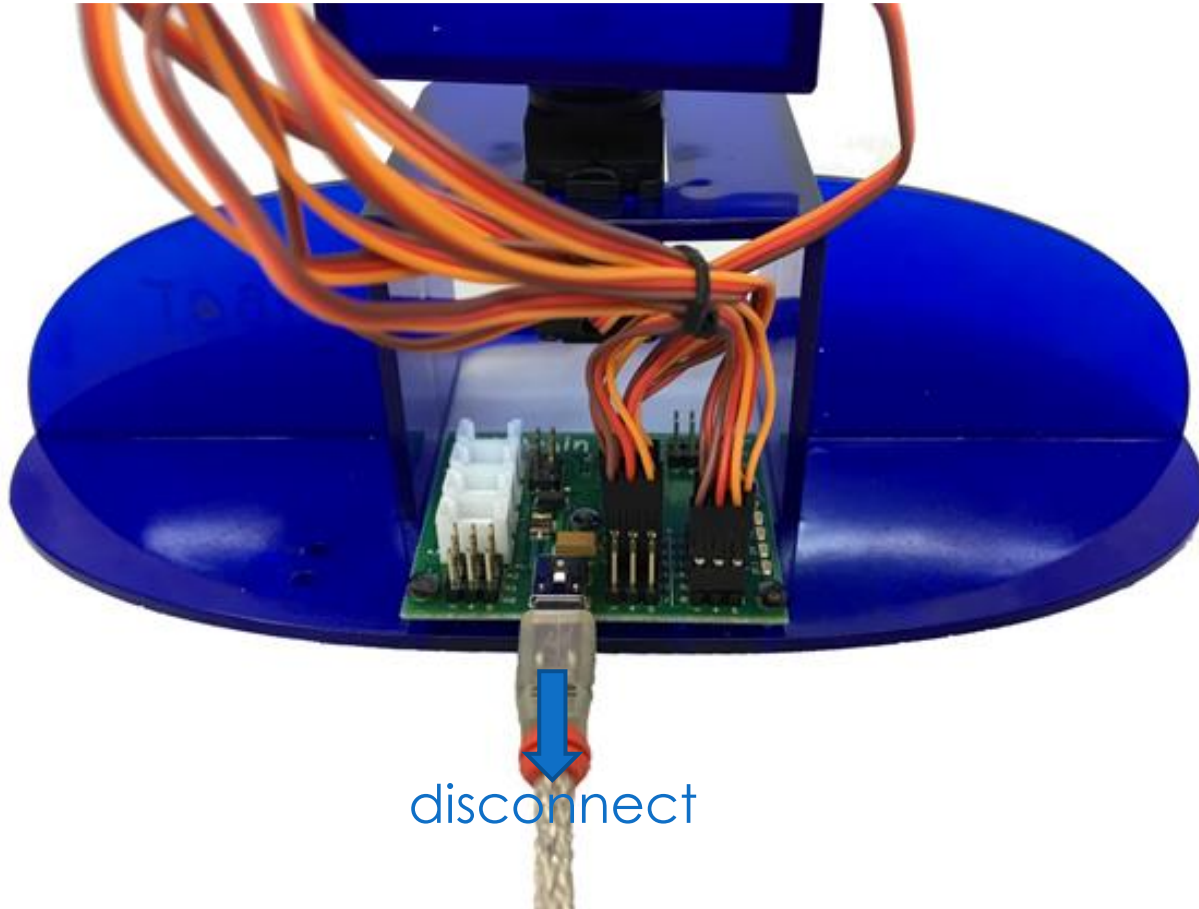
17. Fix the arm onto the motor using the screw.



How to replace Ohbot's Eye Tilt motor



Disconnect USB plug



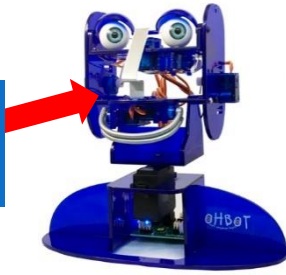


Remove Eye Tilt motor

You will need:



Eye Tilt motor



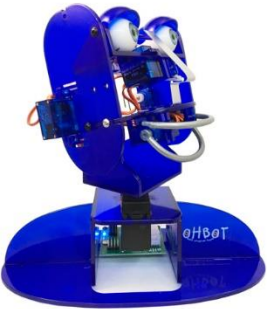
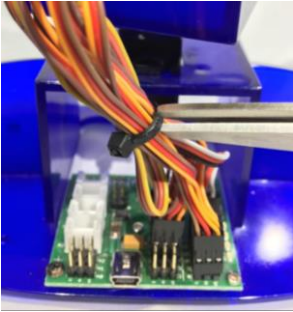
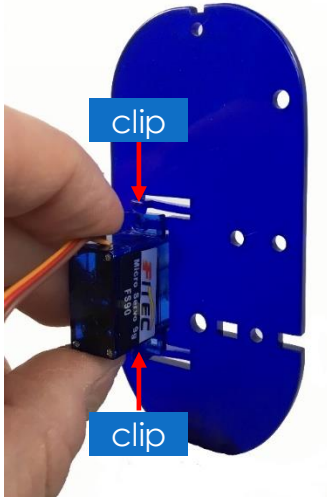
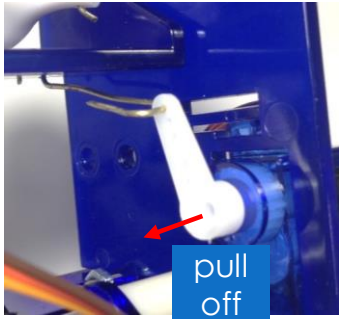
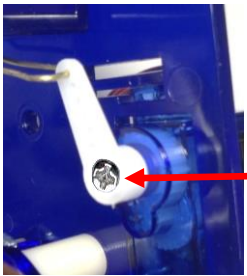
1. Use screw driver to undo the screw holding white arm onto the Eye Tilt motor. Keep the screw.

2. Pull the white arm off the shaft of the motor.

3. Push the clips apart and remove the motor.

4. Use scissors to cut the cable ties holding the wires together.

5. Find the plug for the Eye Tilt motor on the control board. It is connected to the pins marked D10. Remove it.



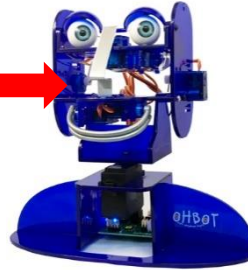


Fit Eye Tilt motor

You will need:



Eye Tilt motor



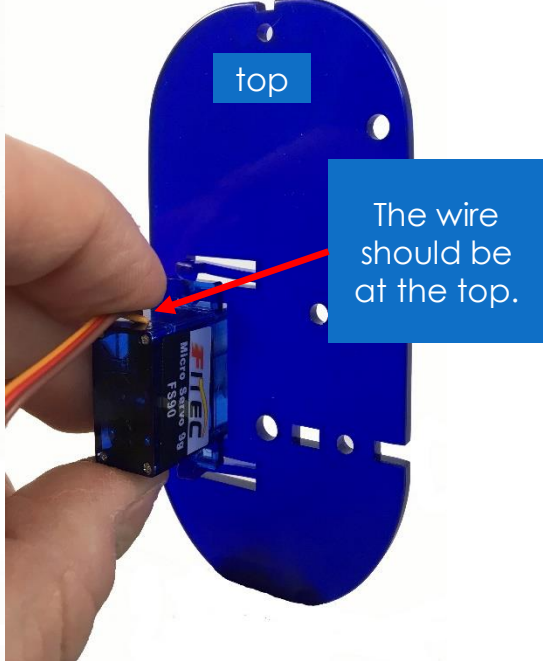
6. Orient the motor this way round, with the wire coming out of the motor to the top of the cheek.

7. Clip in place.



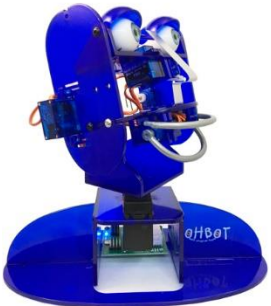
wire

top



top

The wire should be at the top.



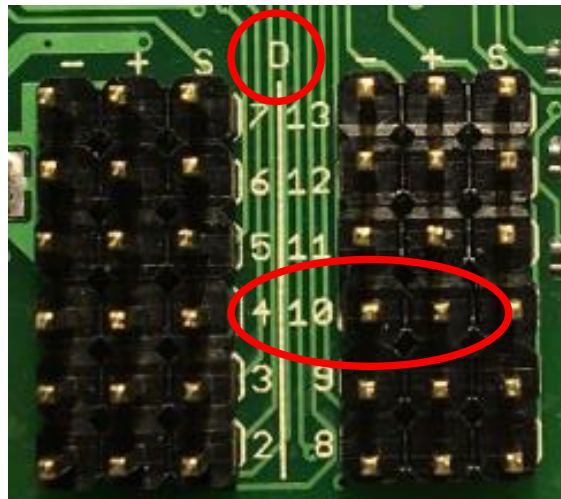


Connect Eye Tilt motor to the control board

8. Find the socket at the end of the wire for the Eye Tilt motor.



9. On the Ohbrain board locate the set of pins marked D10.



10. Attach the socket to the pins marked D10. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).

Brown on this side

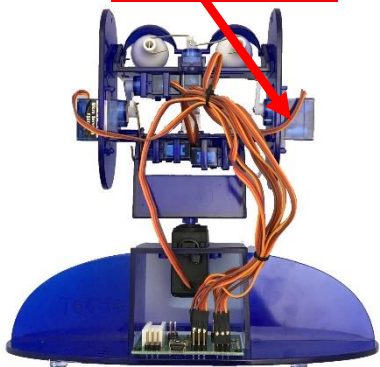
Yellow on this side



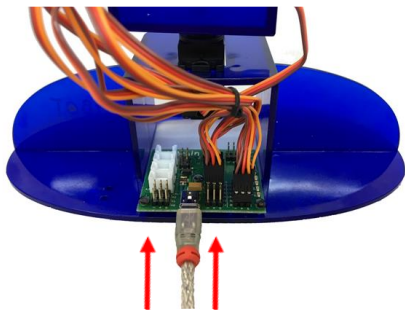


Set up Eye Tilt motor

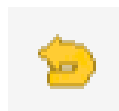
Eye Tilt Motor



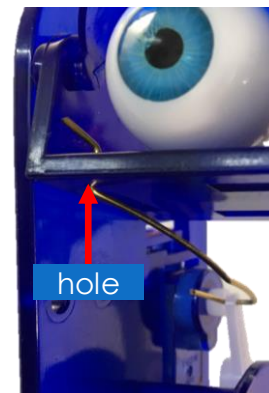
11. Connect.



12. With Ohbot connected to the computer start the Ohbot software. Click the reset button.



13. Thread the S shaped end of the link into the hole at the front corner of the eye box.



end hole

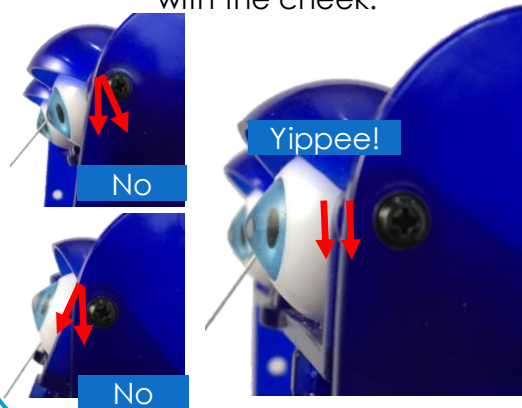
arm



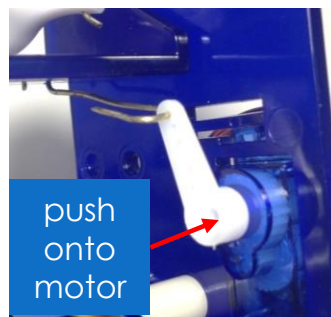
s shaped end

hook shaped end

14. Hold the eyebox so the upright on its front edge is flush with the cheek.



15. Find **Motor 10**. Push the arm onto the motor so it holds the eyebox horizontal.

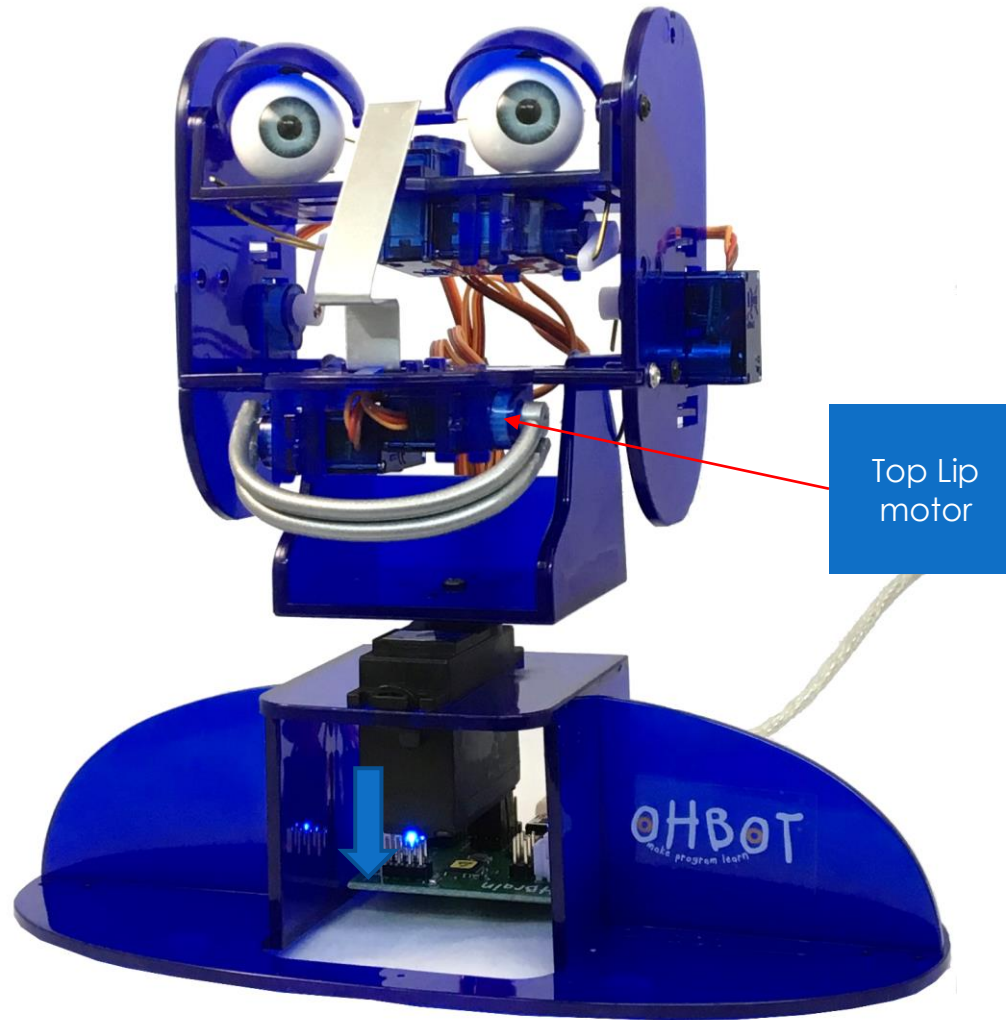


push onto motor

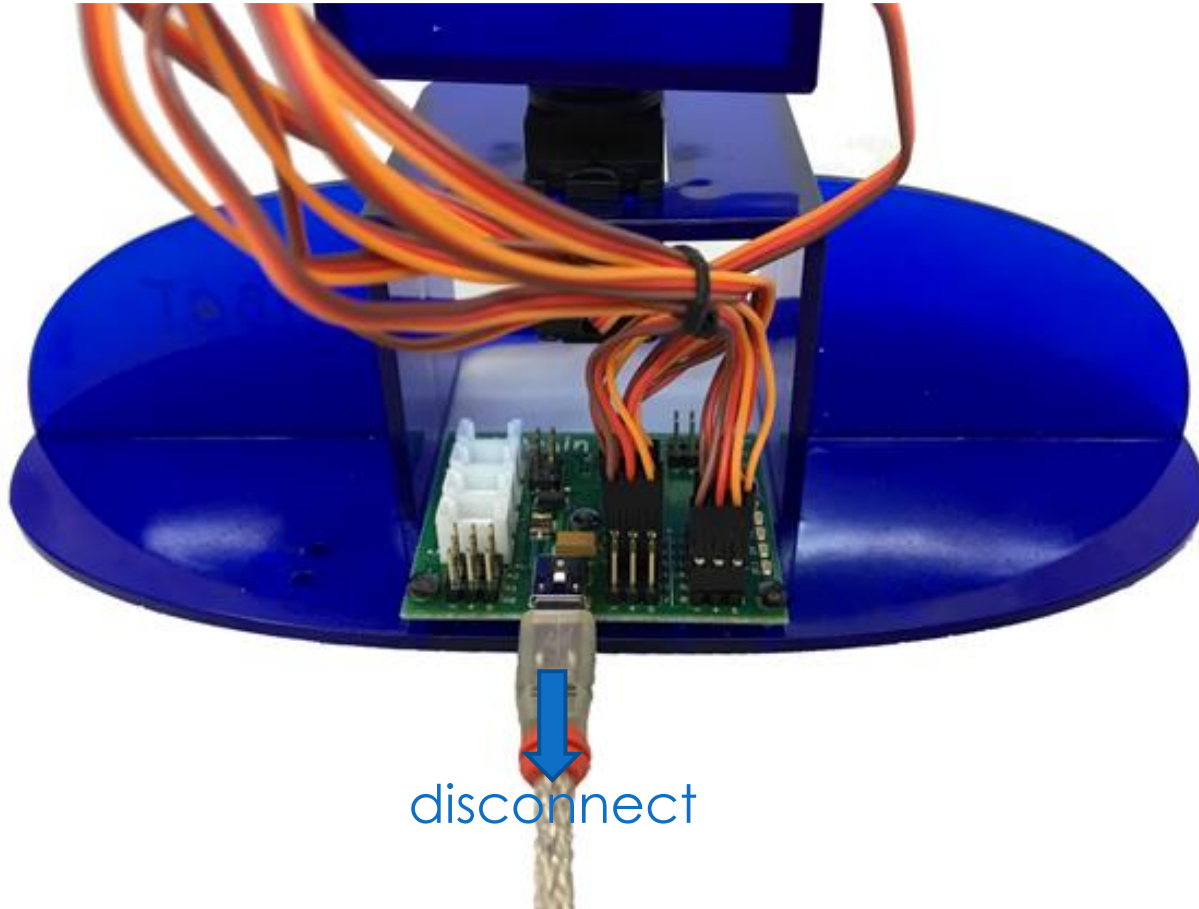
16. Fix the arm onto the motor using the screw.



How to replace Ohbot's Top Lip motor



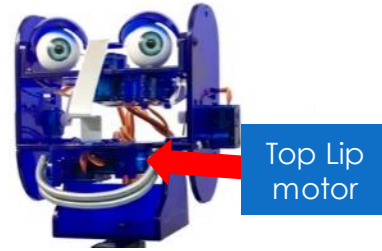
Disconnect USB plug





Remove Top Lip motor

You will need:



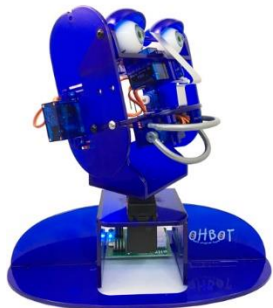
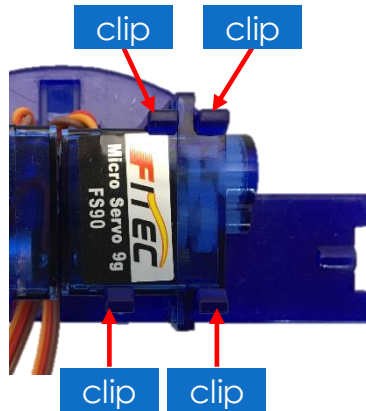
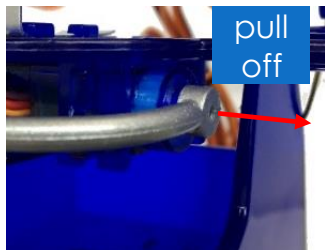
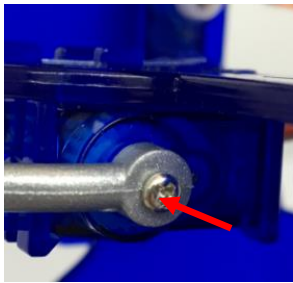
1. Use the screw driver to undo the screw holding white arm onto the Top Lip motor. Keep the screw.

2. Pull the top lip off the shaft of the motor.

3. Tilt the head back to access the motor. Push the clips apart and remove the motor.

4. Use scissors to cut the cable ties holding the wires together.

5. Find the plug for the Top Lip motor on the control board. It is connected to the pins marked D8. Remove it.





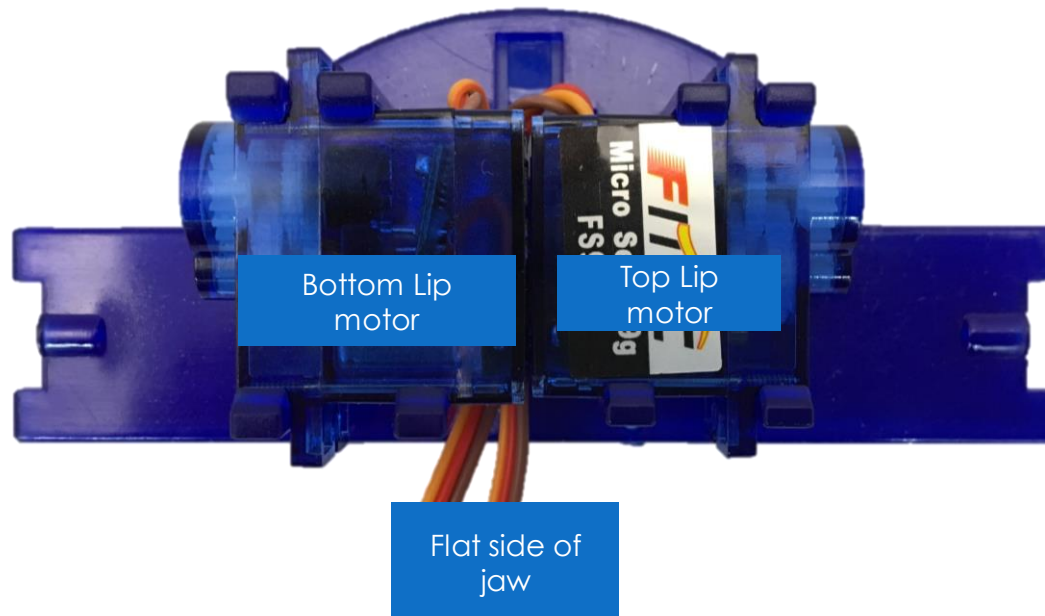
Fit Top Lip motor

You will need:



6. Clip the Top Lip motor in. Ensure that the wires come out of the motor on the curved side of the jaw and go through underneath the Bottom lip motor.

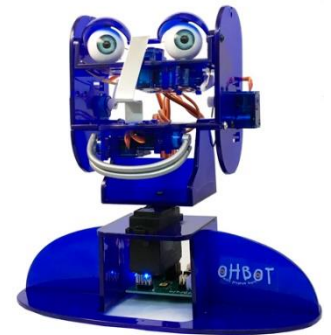
Curved side
of jaw



Bottom Lip
motor

Top Lip
motor

Flat side of
jaw



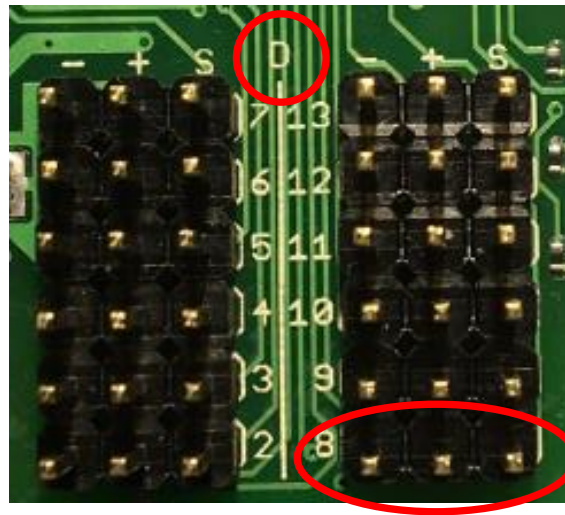


Connect Top Lip motor to the control board

7. Find the socket at the end of the wire for the Top Lip motor.



8. On the Ohbrain board locate the set of pins marked D8.



9. Attach the socket to the pins marked D8. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).

Brown on this side

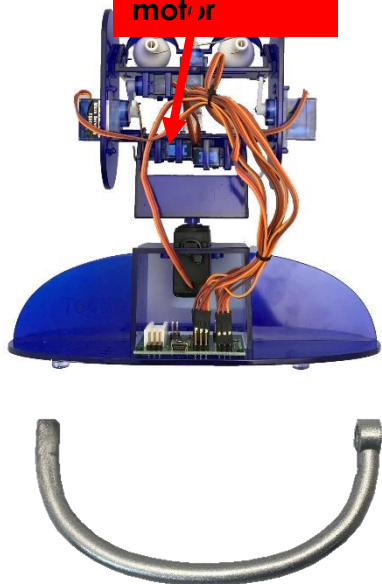
Yellow on this side



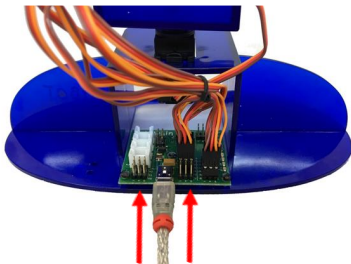


Set up Top Lip motor

Top Lip motor



10. Connect.



11. With the Ohbot connected to the computer start the Ohbot application. Click the reset button.



13. Check it is in the right position by clicking the reset button again. The lip should remain in the horizontal position.



12. Push the lip onto the motor so that it is horizontal.

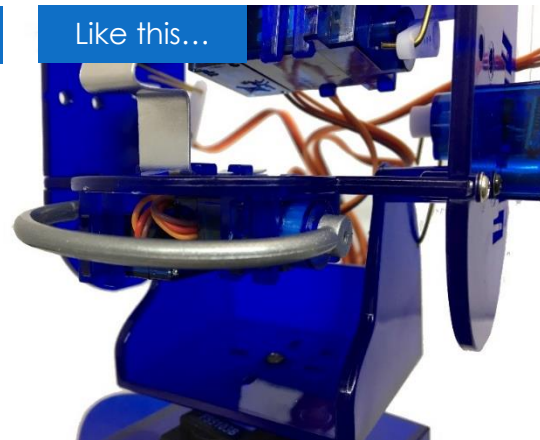
Not like this...



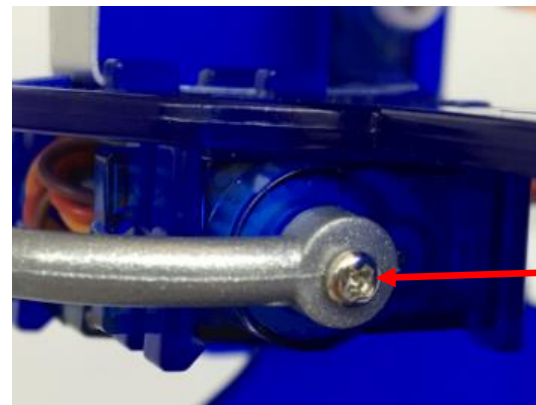
...or this



Like this...

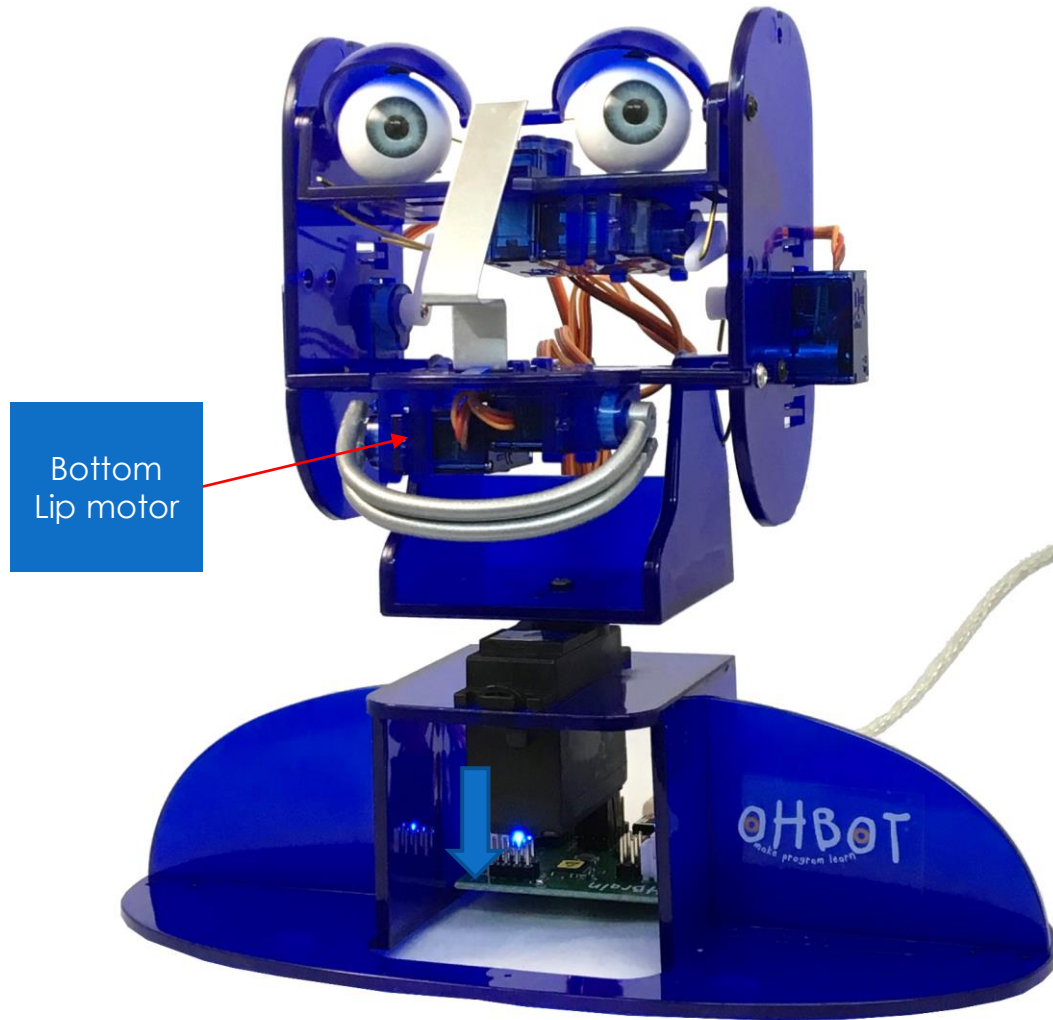


14. Use screw B to secure the lip in place.

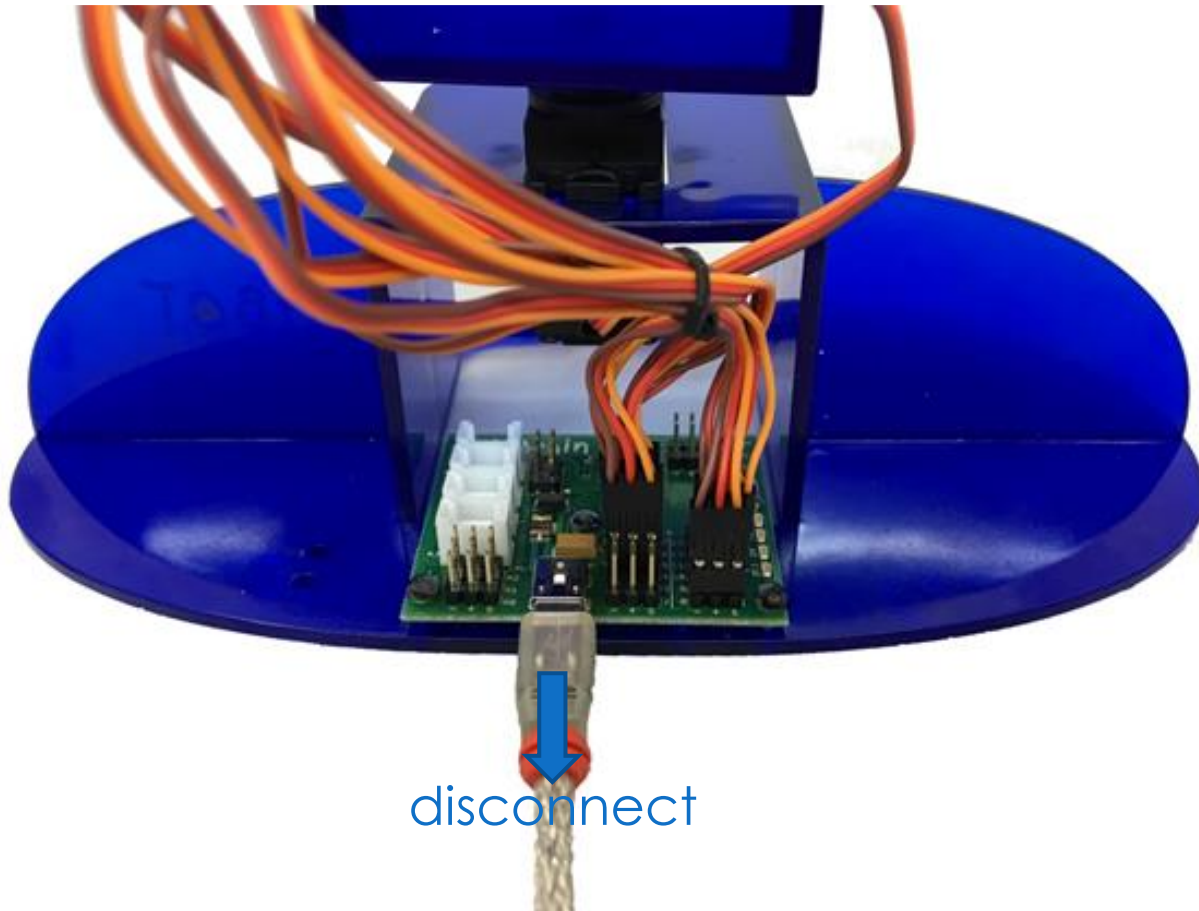




How to replace Ohbot's Bottom Lip motor



Disconnect USB plug

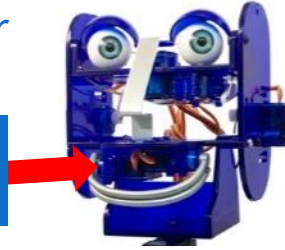


Remove Bottom Lip motor

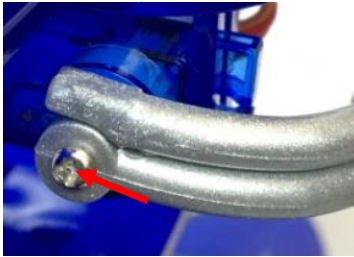
You will need:



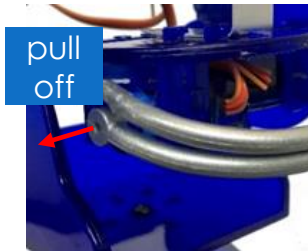
Bottom Lip motor



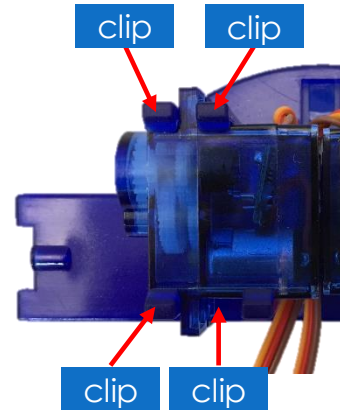
1. Use the screw driver to undo the screw holding white arm onto the Bottom Lip motor. Keep the screw.



2. Pull the Bottom Lip off the motor.



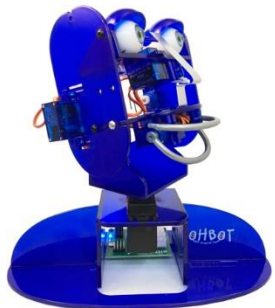
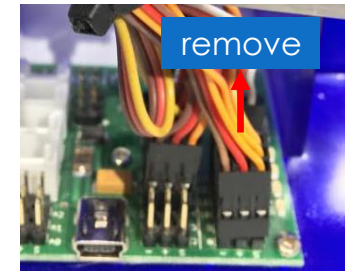
3. Tilt the head back to access the motor. Push the clips apart and remove the motor.



4. Use scissors to cut the cable ties holding the wires together.



5. Find the plug for the Bottom Lip motor on the control board. It is connected to the pins marked D9. Remove it.





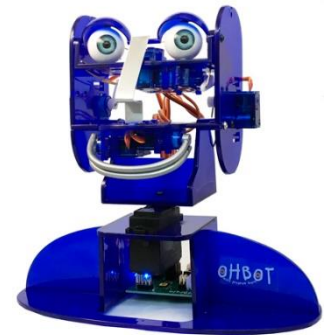
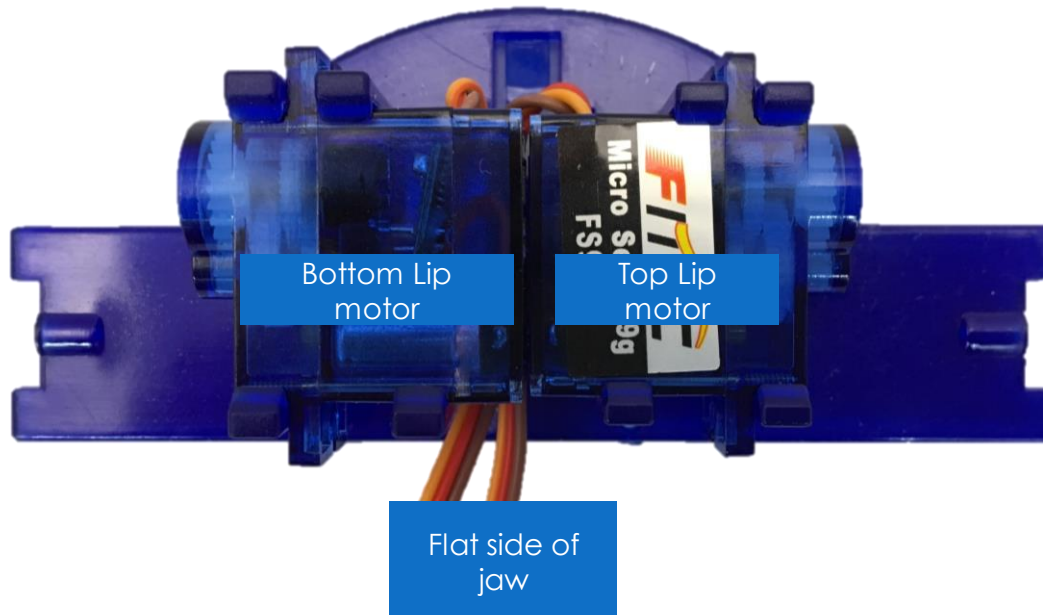
Fit Bottom Lip motor

You will need:



6. Clip the Bottom Lip motor in. Ensure that the wires come out of the motor on the curved side of the jaw and go through underneath the Bottom Lip motor.

Curved side
of jaw



25



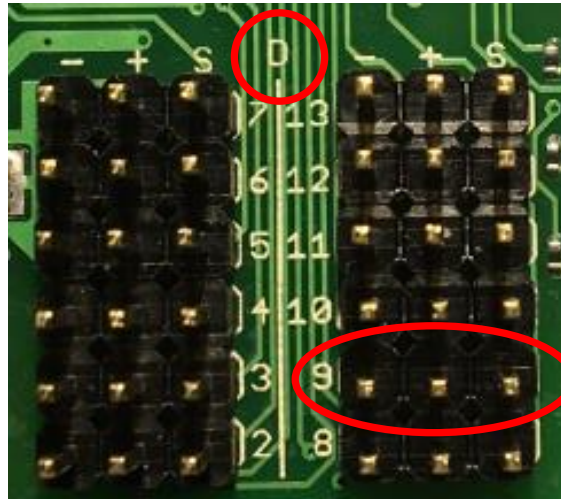


Connect Bottom Lip motor to the control board

7. Find the socket at the end of the wire for the Bottom Lip motor.



8. On the Ohbrain board locate the set of pins marked D9.



9. Attach the socket to the pins marked D9. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).

Brown on this side

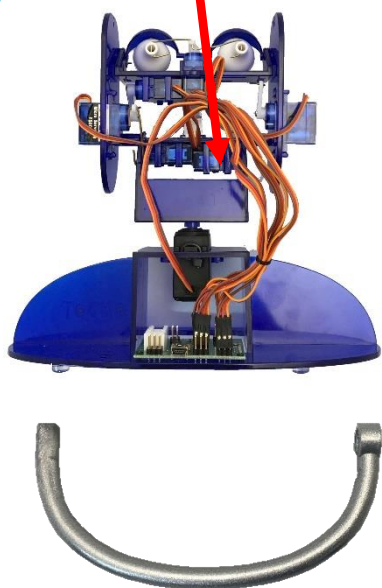
Yellow on this side



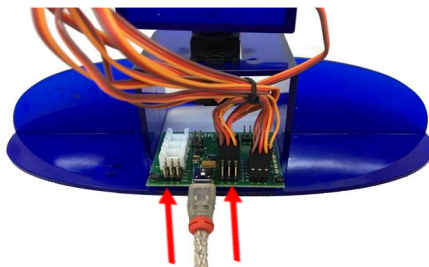


Set up Bottom Lip motor

Bottom Lip motor



10. Connect.



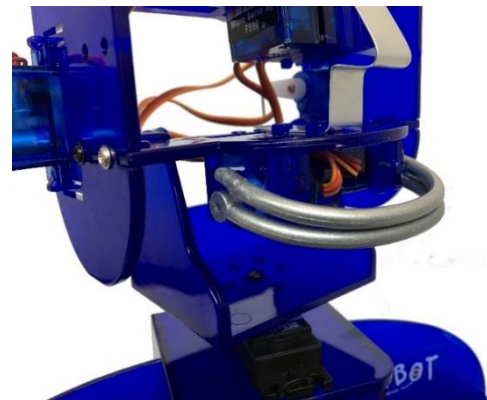
11. With Ohbot connected to the computer start the Ohbot software. Click the reset button.



13. Check it is in the right position by clicking the reset button again. The lips should remain in the horizontal position.



12. Push the the Bottom Lip onto the the servo so that it is horizontal beneath the top lip just like in the picture

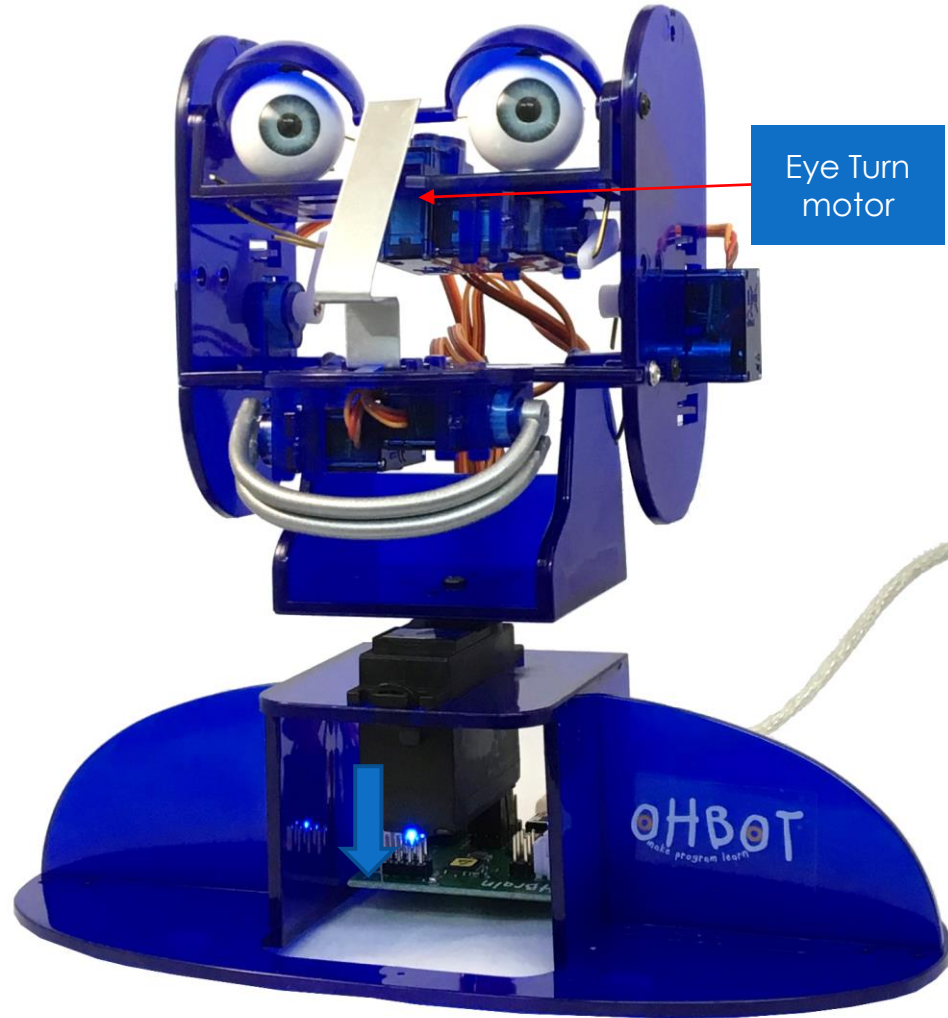


14. Use screw to secure the lip in place

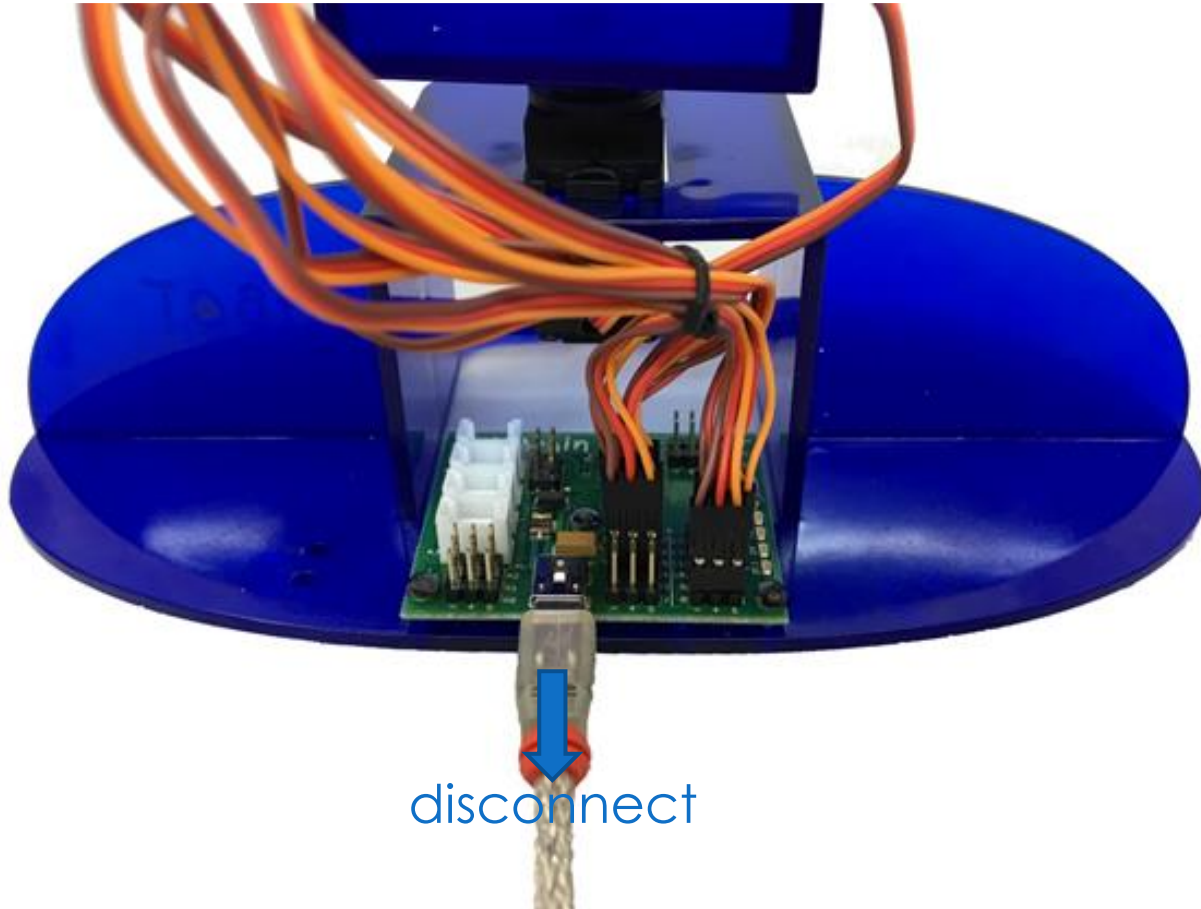




How to replace Ohbot's Eye Turn motor



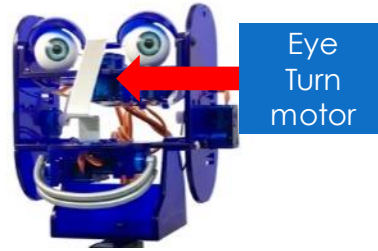
Disconnect USB plug





Remove Eye Turn motor

You will need:



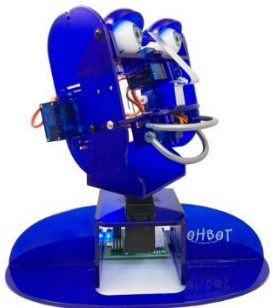
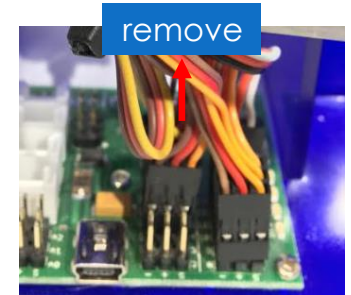
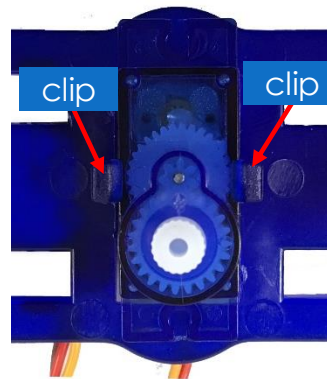
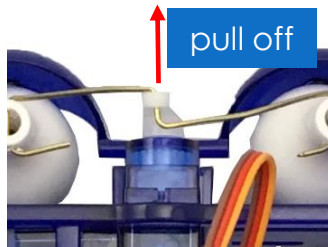
1. Use the screw driver to undo the screw holding white arm onto the Eye Turn motor. Keep the screw.

2. Pull the white arm off the shaft of the motor.

3. Push the clips apart and remove the motor.

4. Use scissors to cut the cable ties holding the wires together.

5. Find the plug for the Eye Turn motor on the control board. It is connected to the pins marked D6. Remove it.





Fit Eye Turn motor

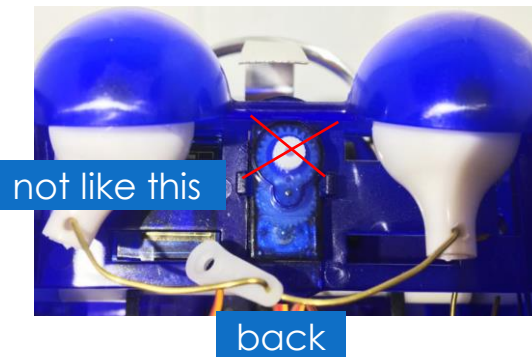
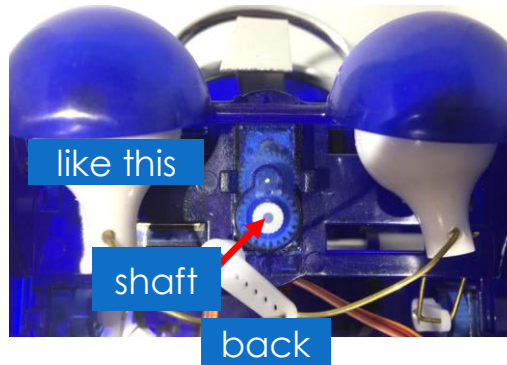
You will need:



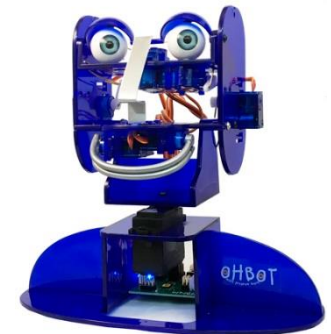
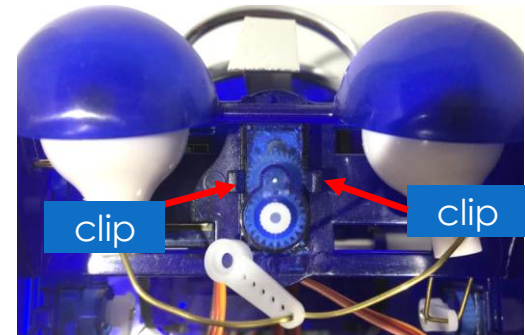
6. Thread the wire through the hole.



7. Orientate the motor so that the shaft is towards the back.



8. Clip the motor in place.



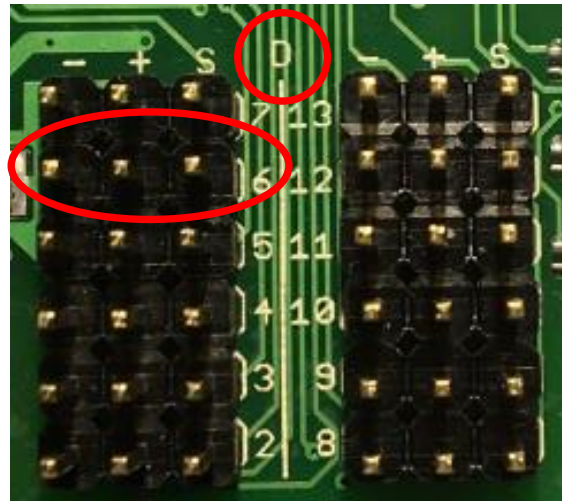


Connect Eye Turn motor to the control board

9. Find the socket at the end of the wire for the Eye Turn motor.



10. On the Ohbrain board locate the set of pins marked D6.



11. Attach the socket to the pins marked D6. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).

Brown on this side

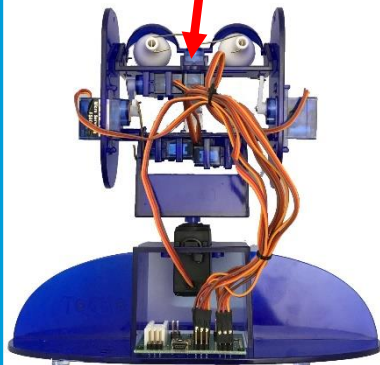
Yellow on this side



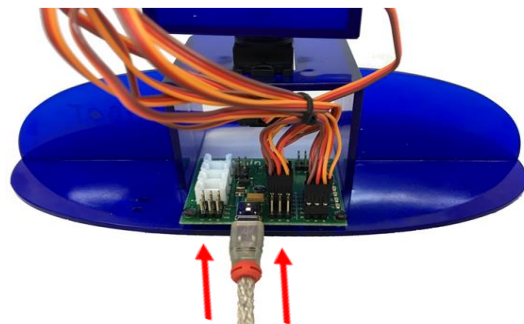


Setting up Eye Turn motor

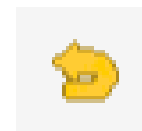
Eye Turn motor



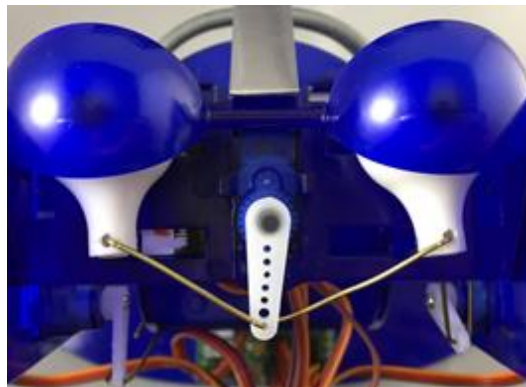
12. Connect.



13. With Ohbot connected to the computer start the Ohbot software. Click the reset button.



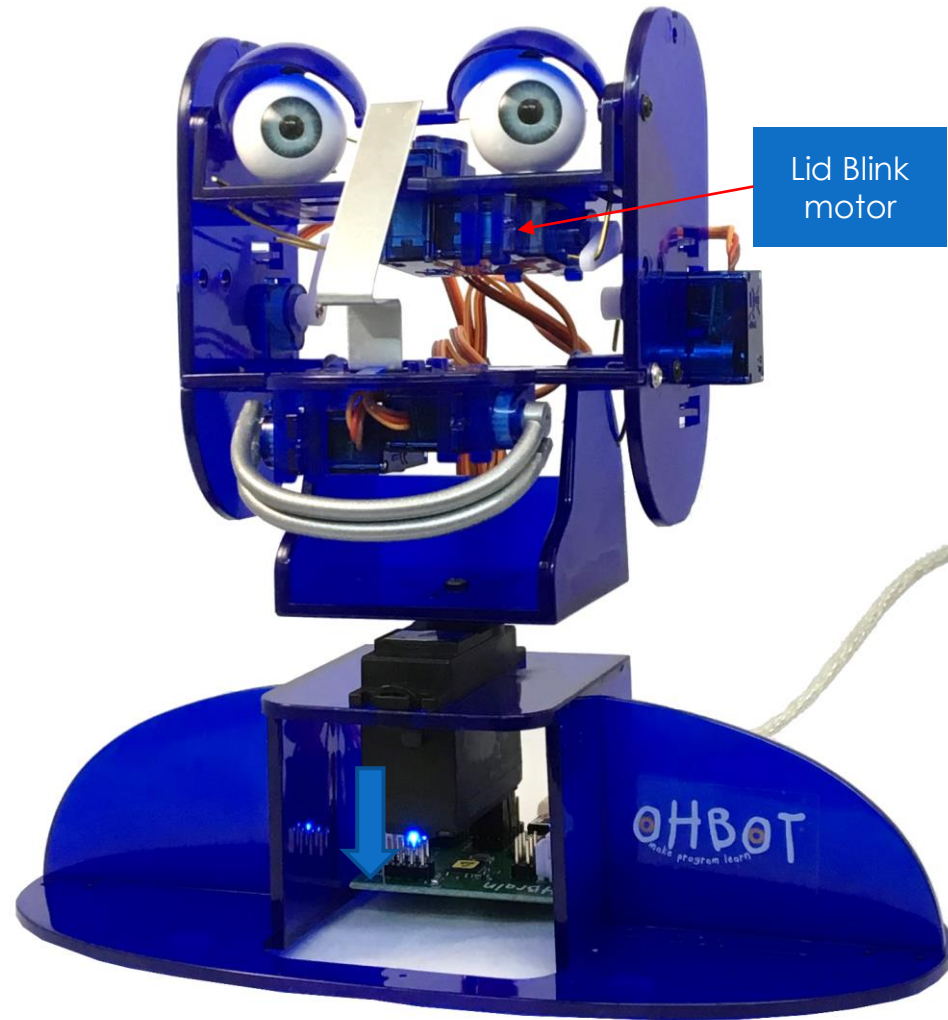
14. Push the white arm onto the motor in the position shown, so that Ohbot's eyes face straight forward.



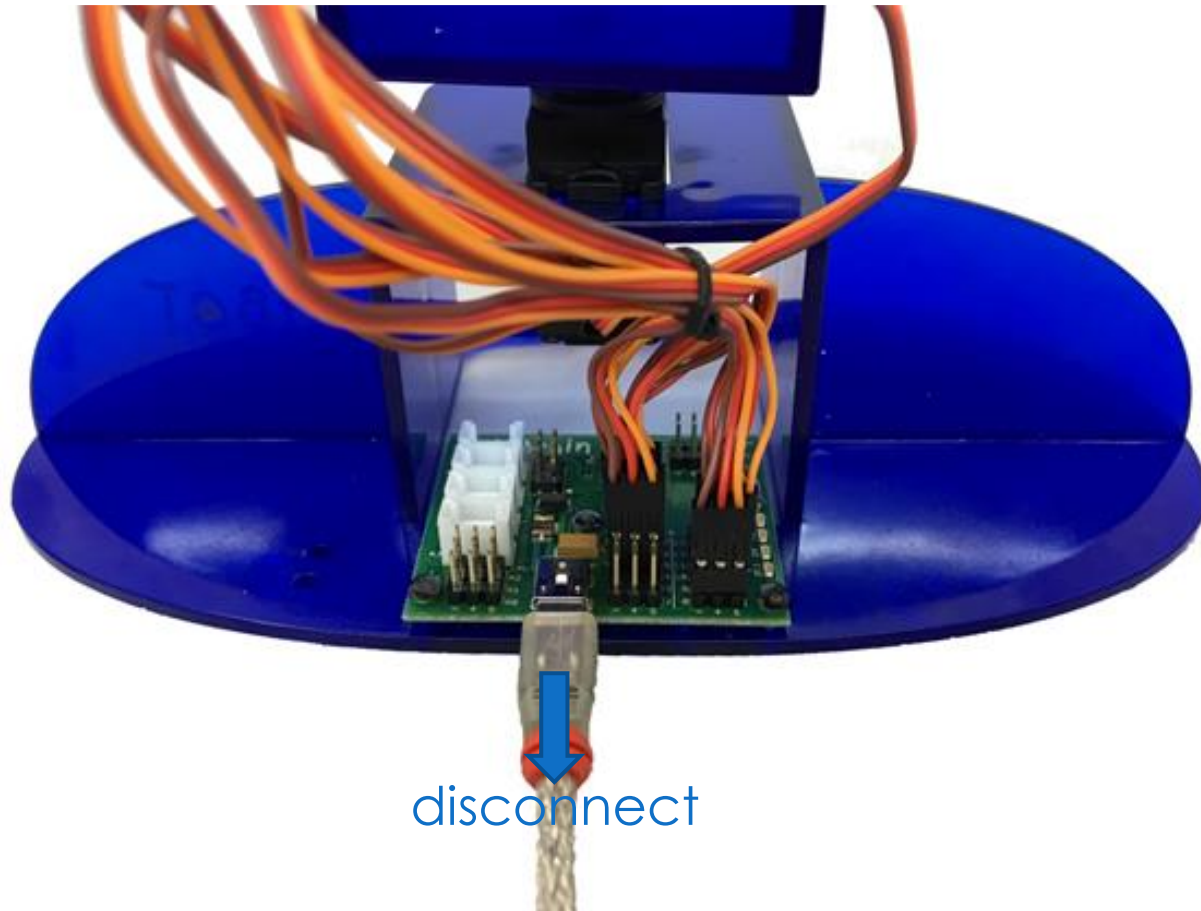
15. Fix the arm onto the motor using the screw.



How to replace Ohbot's Lid Blink motor



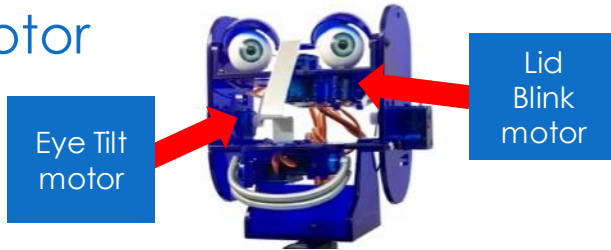
Disconnect USB plug





Remove Lid Blink motor

You will need:

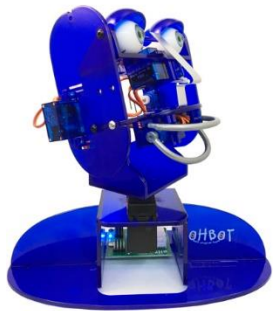
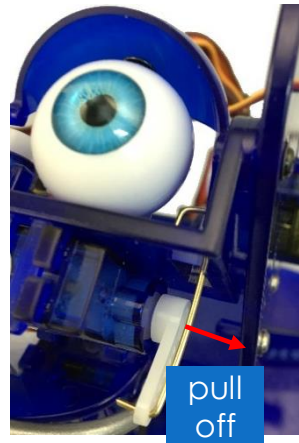
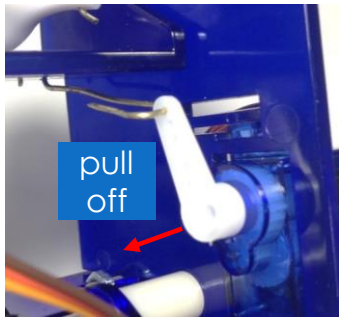
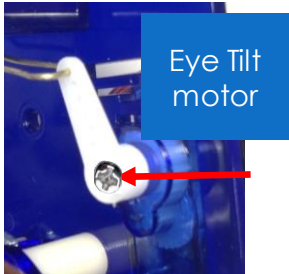


1. To access the lid blink you will need to remove the Eye Tilt motor link first. Use screw driver to undo the screw holding white arm onto the Eye Tilt motor. Keep the screw.

2. Pull the white arm off the motor.

3. Now you can tilt the eyes up so they face the ceiling. Remove the screw holding the white arm onto the Lid Blink motor. Keep the screw.

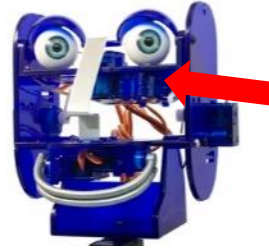
4. Pull the white arm off the motor.





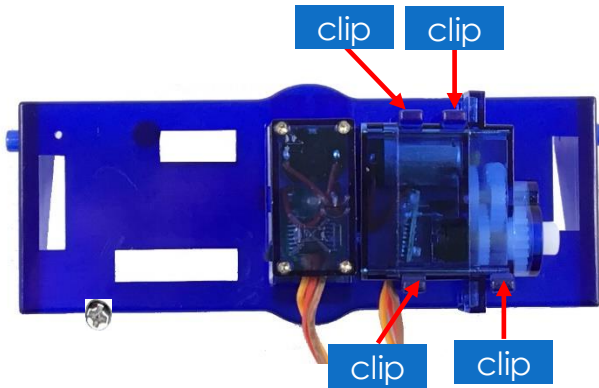
Remove Lid Blink motor

You will need:



Lid
Blink
motor

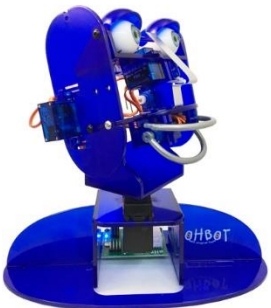
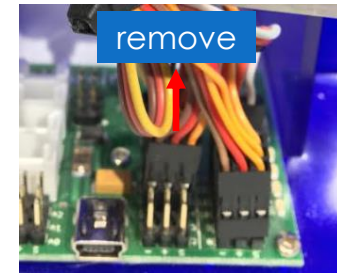
5. Push the clips
apart and
remove the
motor.



6. Use scissors to
cut the cable ties
holding the wires
together.



7. Find the plug
for the Lid Blink
motor on the
control board. It is
connected to the
pins marked D7.
Remove it.



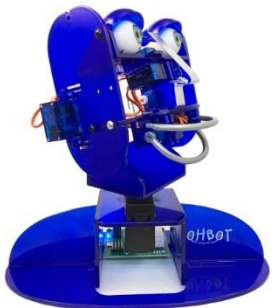
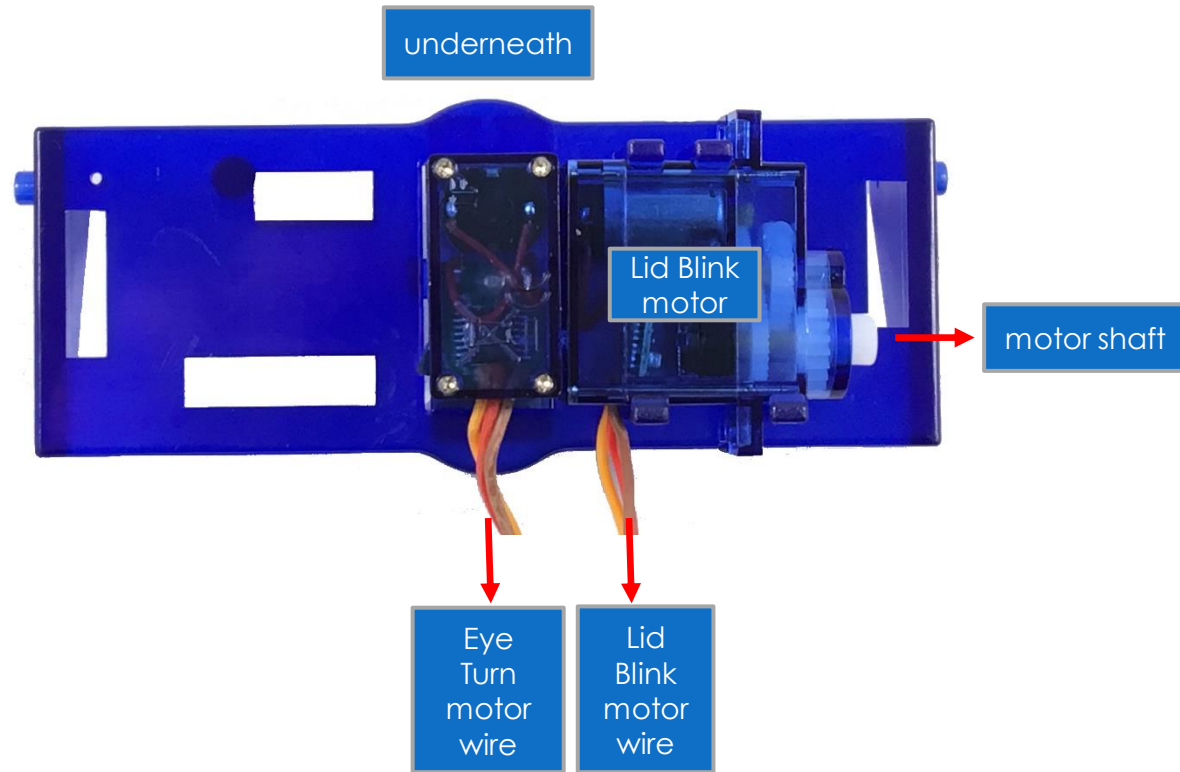


Fit Lid Blink motor

You will need:



8. Orient the Lid Blink motor as shown. Ensure the wires for both the Eye Turn and Lid Blink motors come out on the same side. Clip in place.



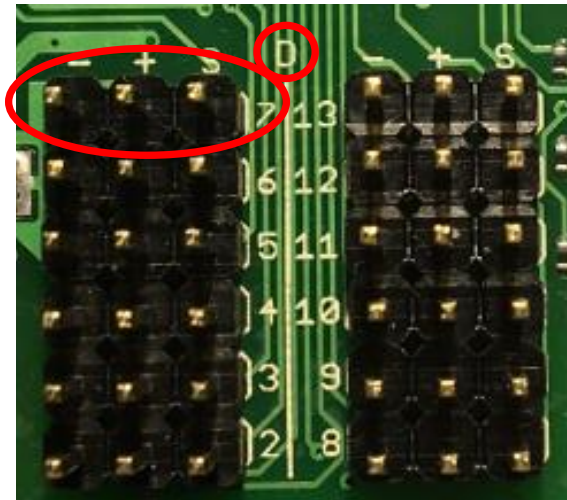


Connect Lid Blink motor to the control board

9. Find the socket at the end of the wire for the Lid Blink motor.



10. On the Ohbrain board locate the set of pins marked D7.



11. Attach the socket to the pins marked D7. Make sure the brown wire is to the left (-) and the yellow wire is to the right (S).

Brown on this side

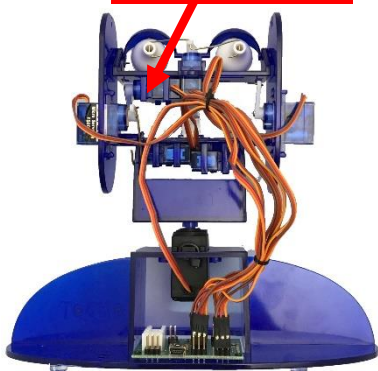
Yellow on this side



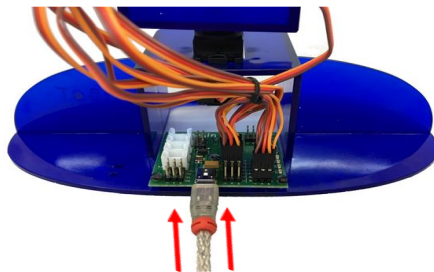


Set up Lid Blink motor

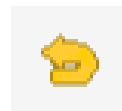
Lid Blink motor



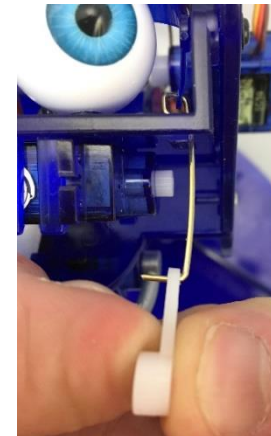
1. Connect.



2. With Ohbot connected to the computer start the Ohbot software. Click the reset button.



3. Thread the link onto the end hole on the arm.



3. Push the arm onto the motor so that it holds the eyelids wide open.



4. Tilt the eyebox up fix the arm onto the motor using the screw.



4. Turn to page 12 and follow instructions to reattach the Eye Tilt motor arm.

