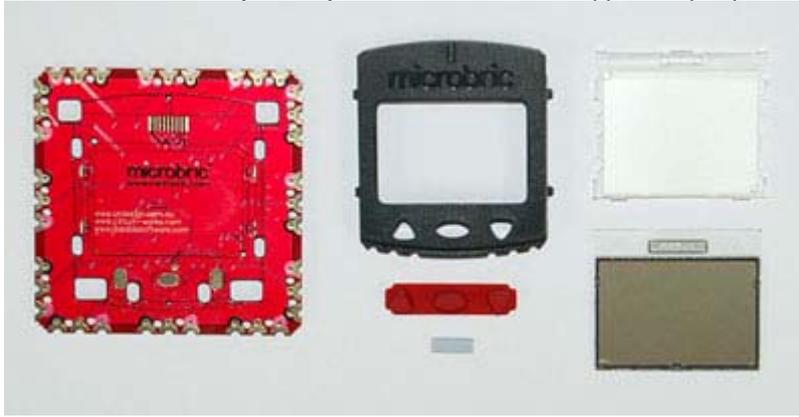


Pack 1 & 2 - Motherboard & LCD Screen

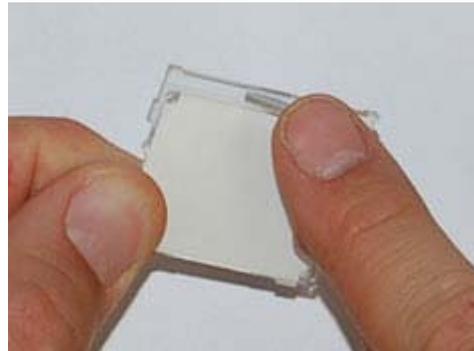
(Screen and motherboard may already be assembled when supplied in pre-packaged kits)



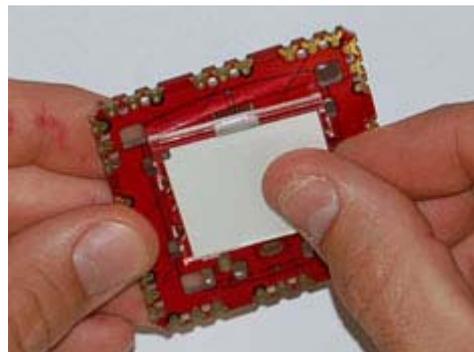
Step 1 > Insert keypad into LCD cover



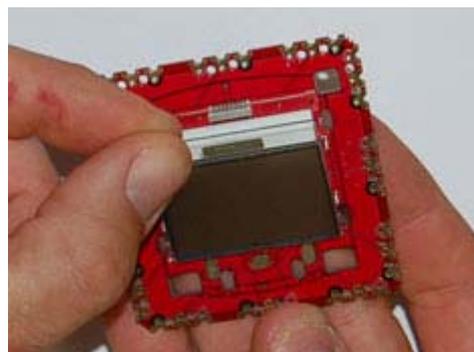
Step 2 > Insert rubber elastomer strip into LCD backing if it is not already inserted.



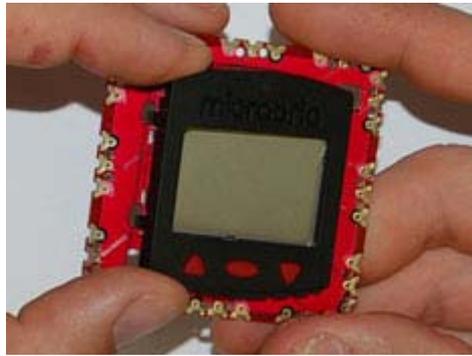
Step 3 > Place LCD backing onto motherboard. There are two locating pins on the LCD backing which fit into locating holes in motherboard to keep the LCD backing in place



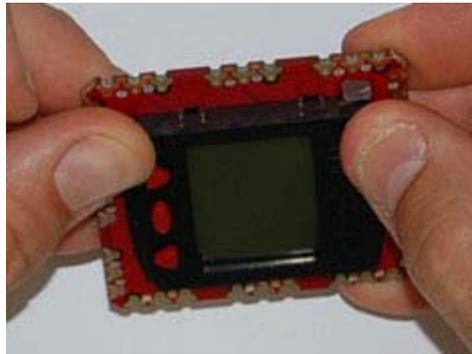
Step 4 > Place the LCD into position directly on top of the LCD backing



Step 5> Place the LCD cover over the LCD screen, inserting the clips on the right hand side of the screen cover into the holes on the right hand side of the motherboard first.



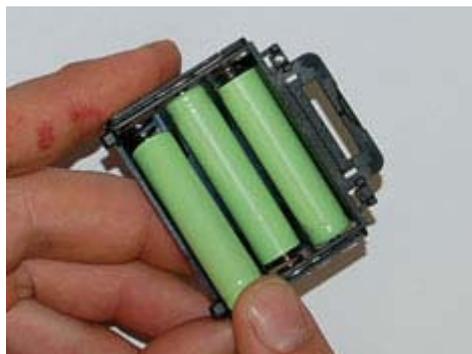
Step 6> Use your fingers to gently press the clips on the left hand side of the screen into the motherboard



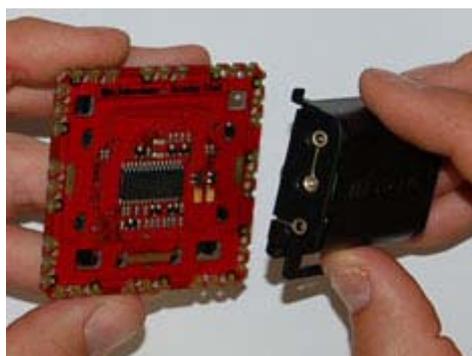
Pack 3 - Battery Box



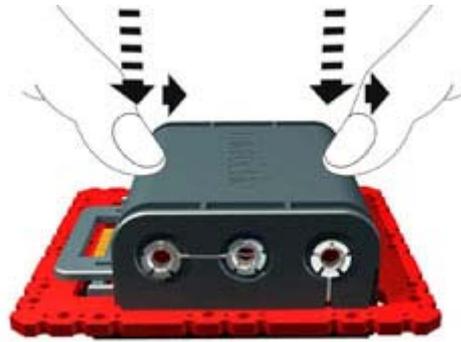
Step1> Load 3 x AAA batteries into the battery box



Step 2> Place the battery holder into position. The four clips on the battery box will fit into slots on the motherboard.



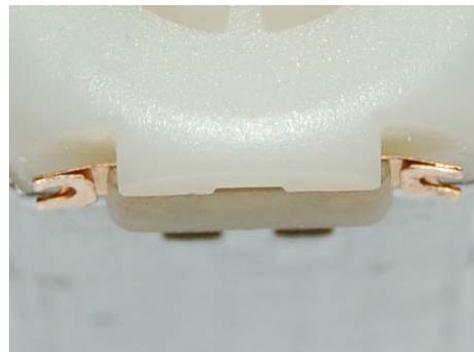
Step 3> READ CAERFULLY - While pressing the battery box down firmly onto the motherboard, slide the battery box into position



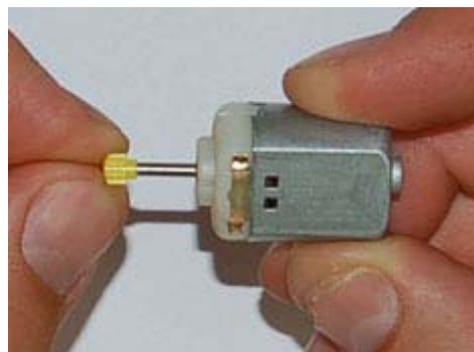
Pack 4, 5 & 6 - Motor, Gearbox & Motor Module (Repeat for Pack 7, 8 & 9)



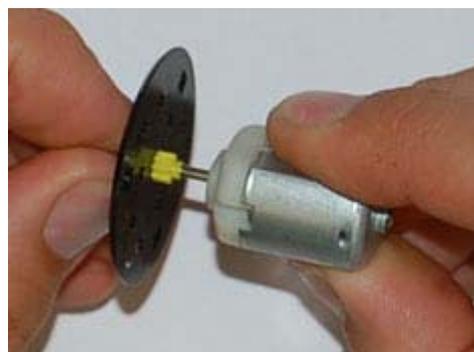
Step 1> Fold each of the terminals on the motor in half as shown in the picture (Pre-packaged kit will already have this done)



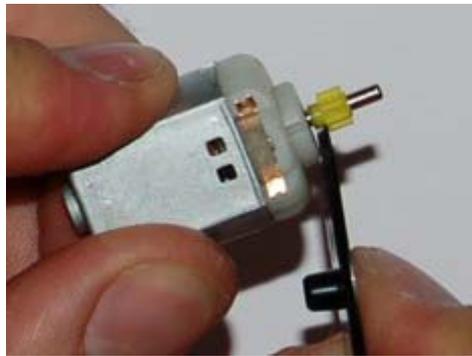
Step 2> Press the pinion gear onto the motor shaft with your fingers.



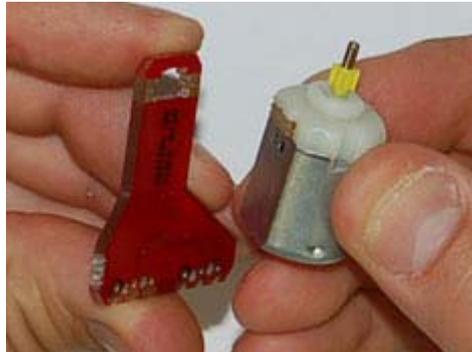
Step 3> Use the hole in the centre of the gear box retainer to press the pinion gear all the way onto the motor shaft.



Use the gear box retainer to lever the pinion gear away from the motor housing approximately half a millimetre.



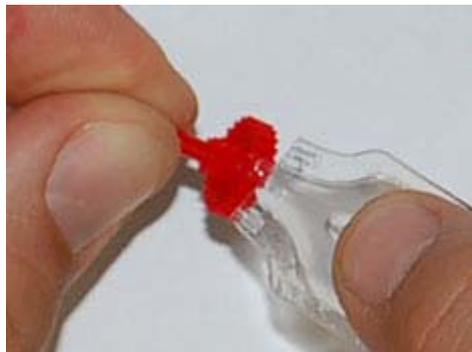
Step 4> Place the motor onto the motor module and hold it in place. Ensure the terminals on the motor are put on the side of the motor module which is marked "Motor on this side".



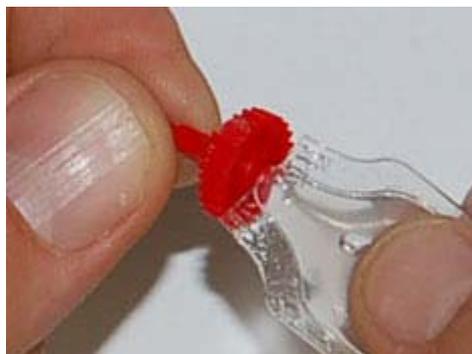
Step 5> While holding the motor and motor module together, insert them into the gearbox housing.



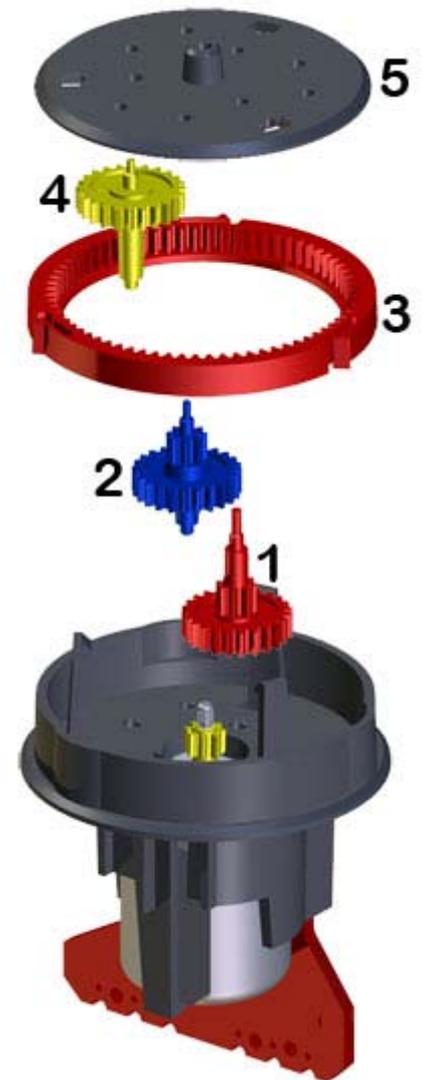
Step 6> Tear the head off of the grease tube. Put a tiny drop of grease onto each toothed gear surface, only a tiny drop is required on each gear as when the gears move the grease will spread over the whole gear.



Step 7> Grease the end of each gear shaft



Step 8> Place the red gear into position as shown (No 1)
 Place the blue gear into position as shown (No 2)
 Place the red ring gear into position (No 3)
 Ensure the ring gear is the correct way around as per the diagram
 Place the yellow gear into position (No 4)
 Check the progress image to make sure the gears are installed correctly before installing the retainer. Install the gearbox retainer into place over the gearbox (No 5). Care will need to be taken to make sure the clips and gear shafts align correctly through the retainer



Completed gear box assemblies



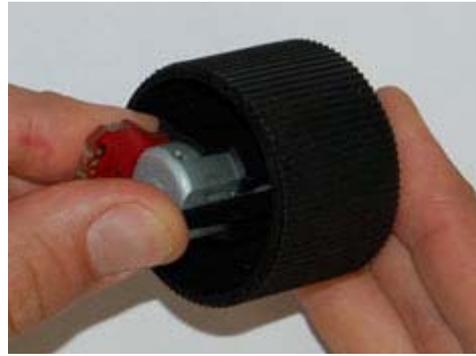
Pack 10 - Wheel, Tyre & Skid (Repeat for Pack 11) Pack 12 - Hardware



Step 1> Place the motor and gear box assembly into the wheel.



Step 2> Press the motor and gear box into the wheel, it will click into place.



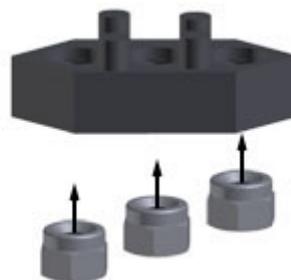
Step 3> Slip the tyre over the wheel. Put the thinner edge of the tyre on first.



Pack 12 - Hardware



Begin by loading nuts into four brics as shown. Make sure you insert the rounded end of the nut first.



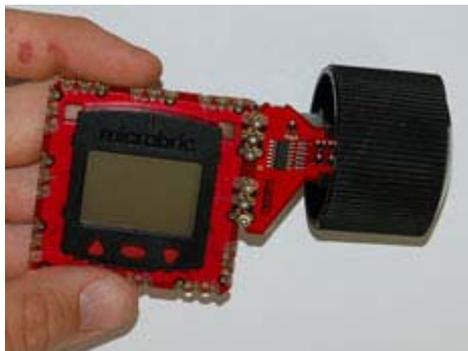
Step 1> Place two brics into the positions shown on the under side of the motherboard.



Step 2> Place the motor module onto the two brics.



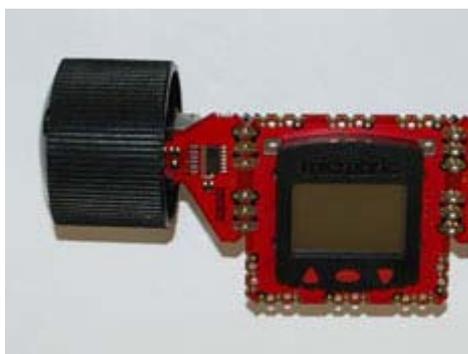
Step 3> Insert six screws into the motor module & tighten.



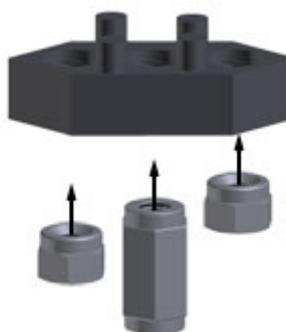
Step 4> Place two brics into the positions shown.



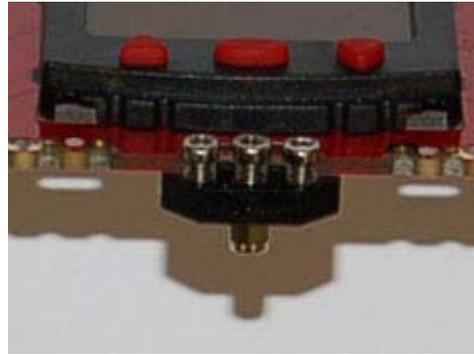
Step 5> Place the motor module on the two brics, Insert the six screws and tighten.



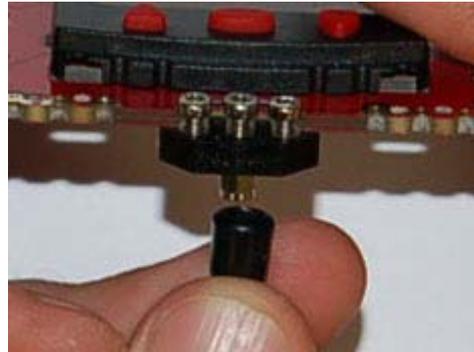
Begin this stage by loading a brick with two nuts on the outer positions (Rounded end first) and an 8mm spacer in the middle.



Step 6> Fit the bric to the front centre position on the motherboard & insert three screws & tighten.



Step 7> Push the skid onto the exposed end of the 8mm spacer.

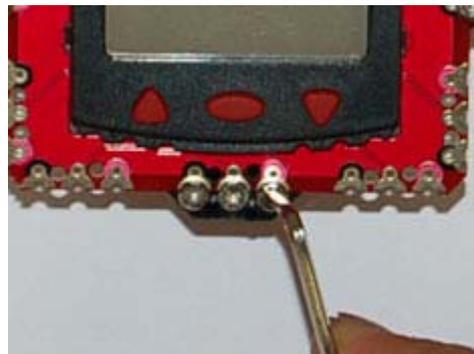


You can now [control your Ai2 by the LCD Screen & Keypad](#). It will be able to perform the driving functions.

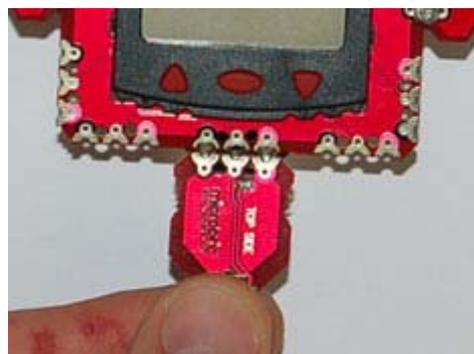
Pack 13 - Line Tracker Module



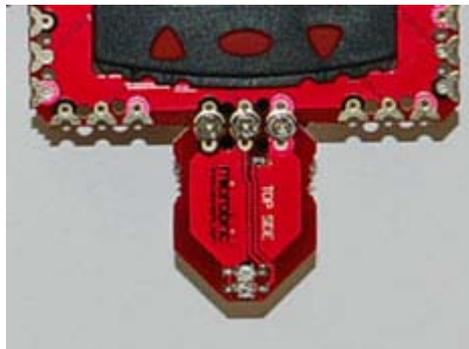
Step 1> Remove the 3 screws on the front centre bric.



Step 2> Place the line tracker module onto the bric.



Step 3> Refit the three screws and tighten.



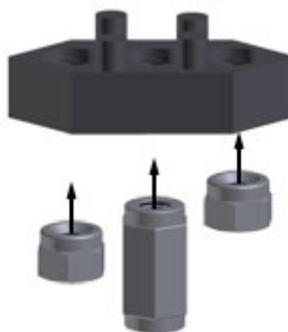
You will be able to use the Line Tracker & Drive in line functions. To start functions that use the line tracker, you will need to start the function with the line tracker over a white section of the activity area.

Pack 14 - LED Modules



Prior to commencing this stage, remove the line tracker and battery box. Accidentally shorting the screw terminals of the LED module could result in a faulty LED.

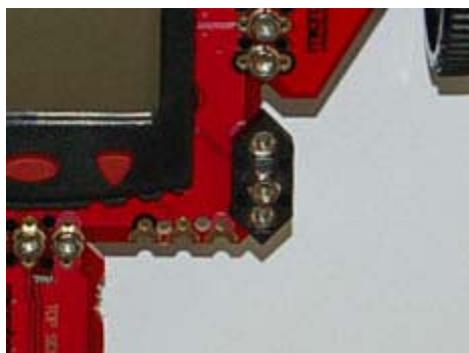
Step 1> Load a spacer brick as per the image. Ensure you insert the nuts rounded end first.



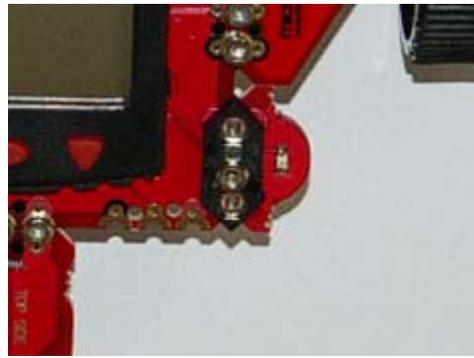
Step 2> Separate the LED modules.



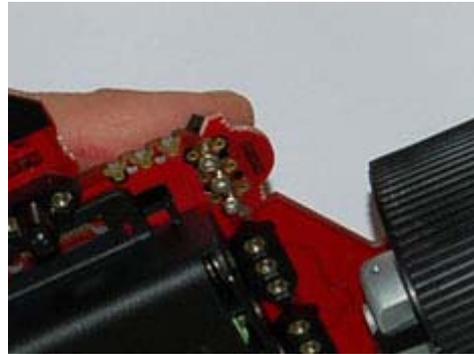
Step 3> Place a spacer brick onto the position shown on the top side of the motherboard.



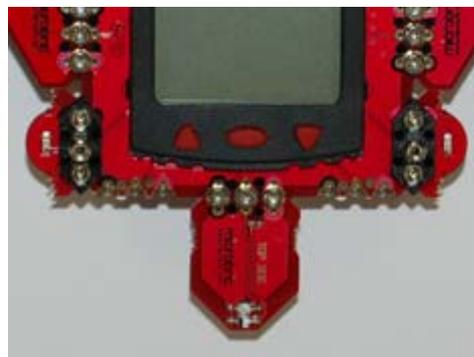
Step 4> Put the LED module into place on the bric.



Step 5> Insert screws from the under side of the motherboard.



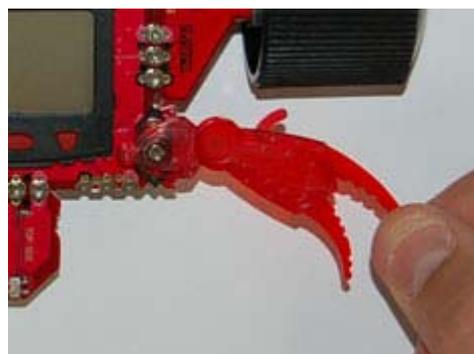
Repeat this process for the other side.



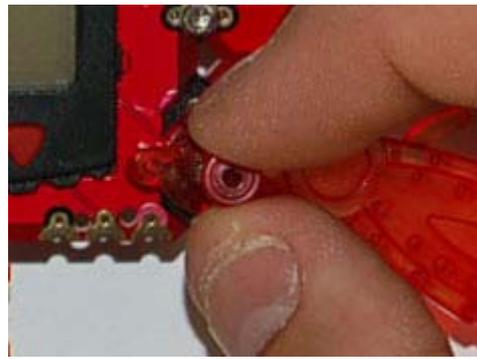
Pack 15 - Claws



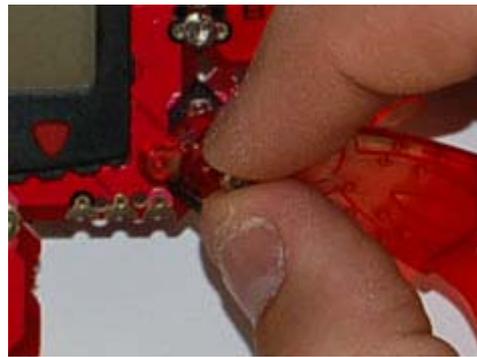
Step 1> Place the claw over the 8mm spacer.



Step 2> Place the washer over the hole in the claw.



Step 3> Insert a screw into the washer and tighten.



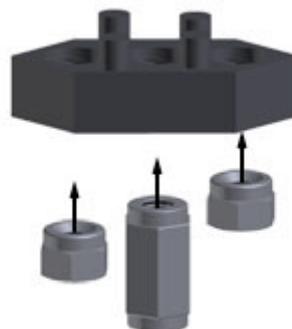
Repeat this for the other side.



Pack 16 - Sounder Module



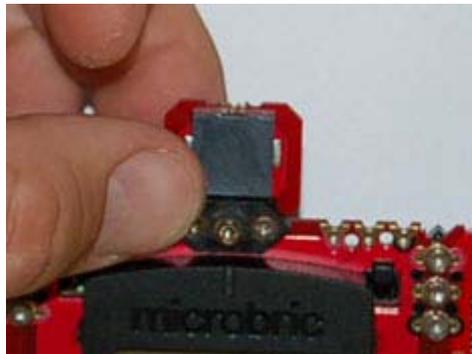
Begin this stage by loading a bric with two nuts on the outer positions (Rounded end first) and 8mm spacer in the middle.



Step 1 > Place the bric in the rear middle position on the top of the motherboard.



Step 2 > Place the sounder module onto the bric.



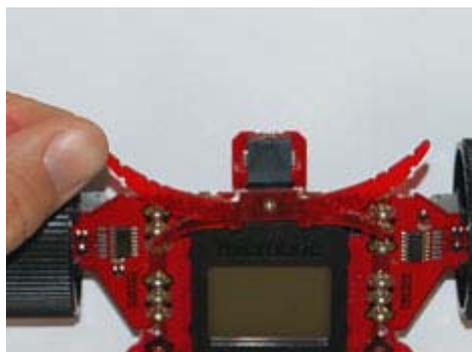
Step 3 > Insert three screws and tighten.



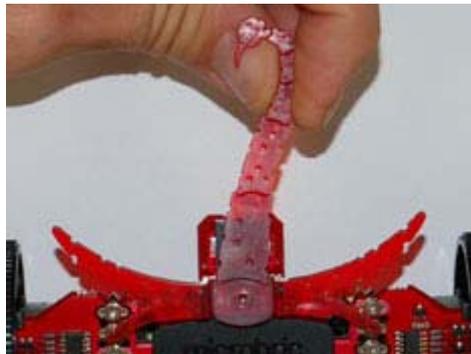
Pack 17 - Tail & Armour



Step 1 > Place the armour over the 8mm spacer on the sounder bric.



Step 2> Place the tail onto the armour. There are two locating pins on the tail that will sit into the locating holes on the armour.



Step 3> Insert a screw through the tail and armour and tighten gently.



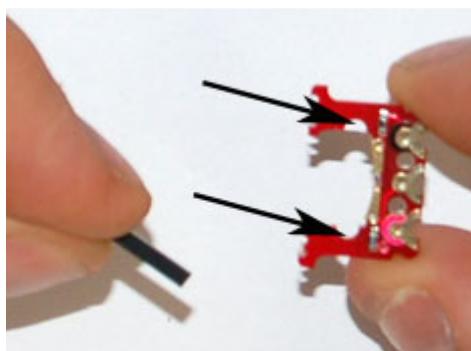
Pack 18 & 19 - Bump Modules, Bumper & Bump Retainer



Step 1 > Separate the bump modules.



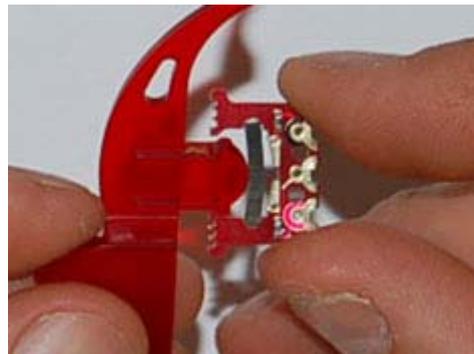
Step 2> Insert one of the black rubber strips into the bump module.



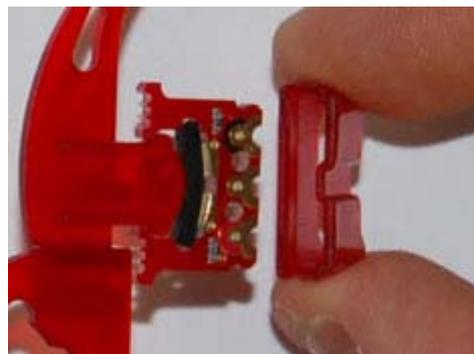
Once inserted it should look like this.



Step 3> Insert the bumper into the bump module. Insert it on an angle and straighten once it is in.



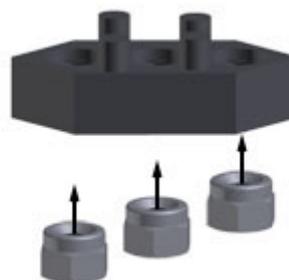
Step 4> Put the bump retainer over the bump module. Make sure you fit it the correct way around as per the diagram. Ensure the side of the retainer with the two raised sections goes over the two small black components (resistors).



Step 5> Push the bump module retainer into place. It will take some force & will click into place. Repeat this process to fit the remaining bump module to the bumper.



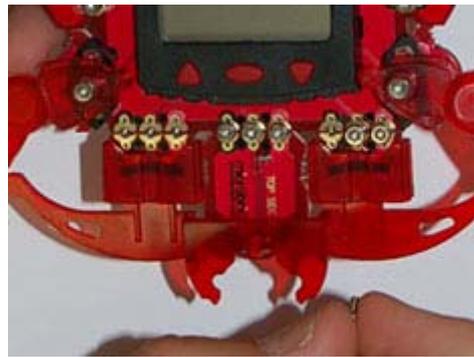
Step 7> Load nuts into two brics as shown. Make sure you insert the rounded end of the nut first.



Step 7> Put the brics in the front left & right positions on the motherboard.



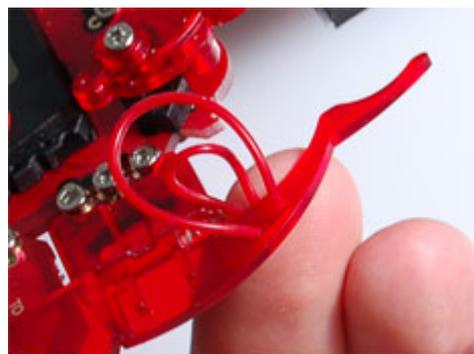
Step 8> Fit the completed bumper assembly to the two bricks on the front of the motherboard. Insert six screws and tighten.



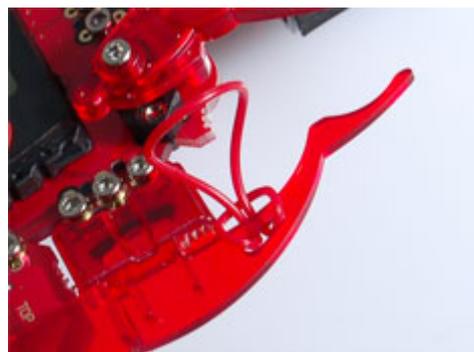
Step 9> Insert one of the red rubber bands into the front of the bumper bar.



Step 10> Push the bottom half of the rubber band up through the top half.



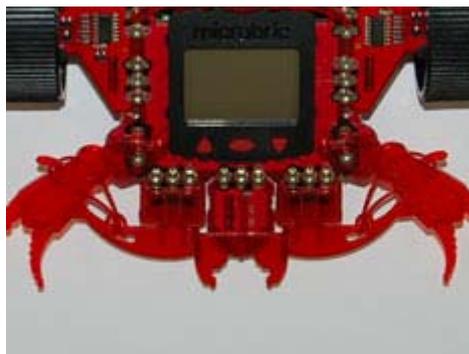
Step 11> Pull the rubber band gently to tighten the loop around the bumper



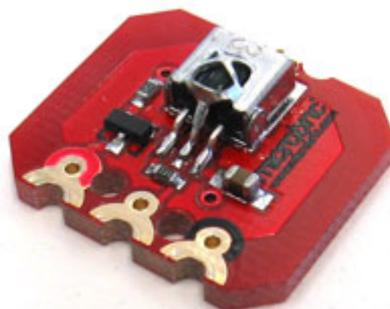
Step 12> Attach the rubber band to the hook on the claw. Ensure the band passes below the claw.



Repeat the process for the other bumper to claw rubber band

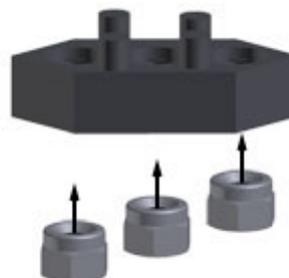


Pack 20 - Infra Red Receiver

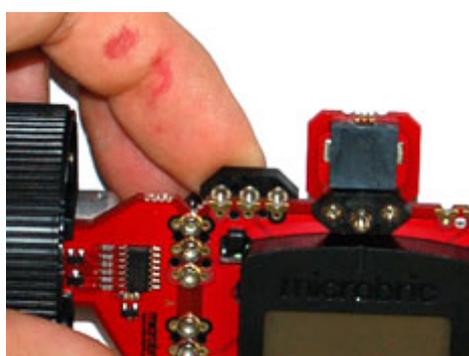


Note: You will need to remove the tail & armour before fitting the IR Receiver.

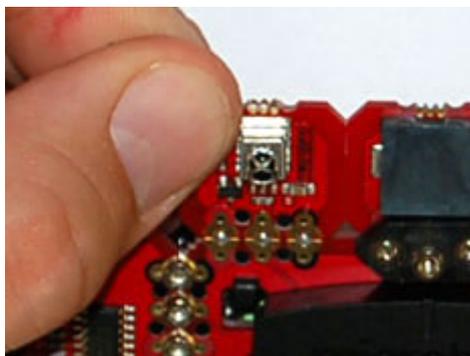
Begin by loading nuts into a brick as shown. Make sure you insert the rounded end of the nut first.



Step 1> Fit the brick to the position shown.



Step 2> Fit the IR Receiver to the bric, insert 3 screws and tighten. Re fit tail and armour.

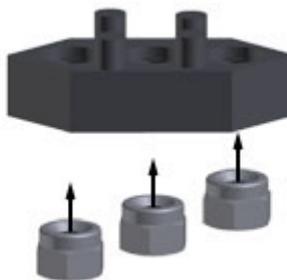


Pack 21 - Infra Red Transmitter

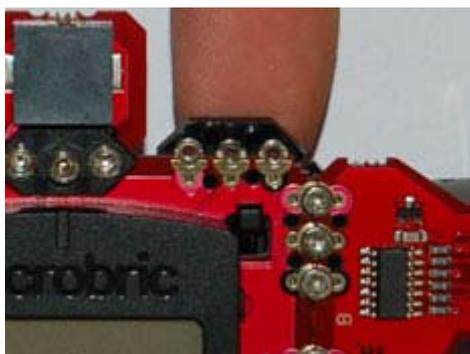


Note: You will need to remove the tail & armour before fitting the IR Receiver.

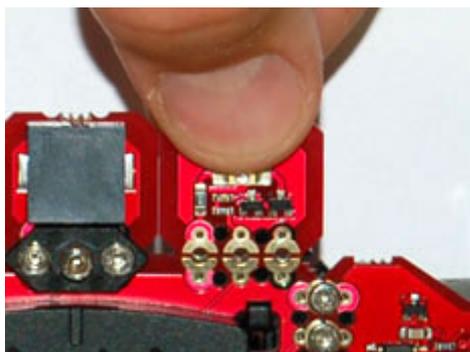
Begin by loading nuts into a bric as shown. Make sure you insert the rounded end of the nut first.



Step 1> Fit the bric to the position shown.



Step 2> Fit the IR Transmitter to the bric, insert three screws & tighten. Refit the Tail & Armour.



Complete!