



LEGO Ideas Ecto-1 (#21108) Light and Sound Kit Installation Instructions

This guide outlines the steps needed to install the Brickstuff light and sound kit for the LEGO Ideas Ecto-1 set (set #21108), which was released in 2014.

Written By: Rob K



INTRODUCTION

This guide outlines the steps needed to install the Brickstuff light and sound kit for the LEGO Ideas Ecto-1 set (set #21108), which was released in 2014. This guide does NOT cover the CREATOR Ecto-1 released in 2020.



PARTS:

- [Ghostbusters Ecto-1](#) (1)
 - [1x Brickstuff Light + Sound Kit](#) (1)
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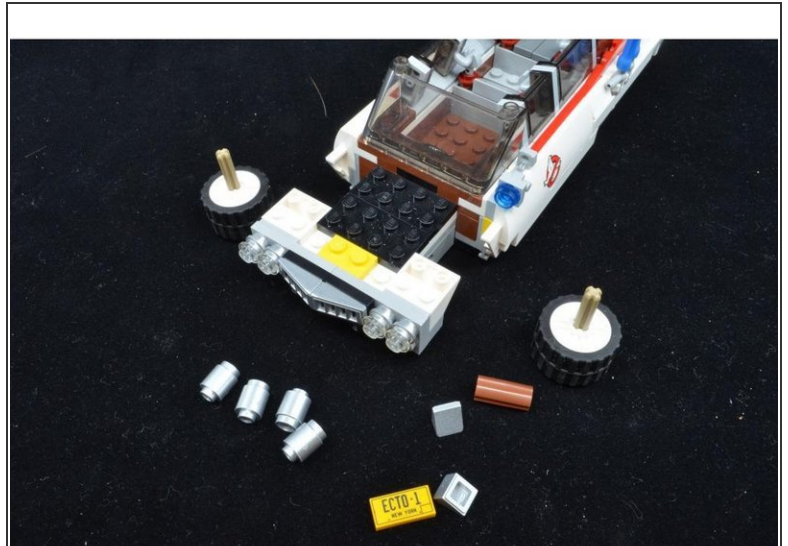
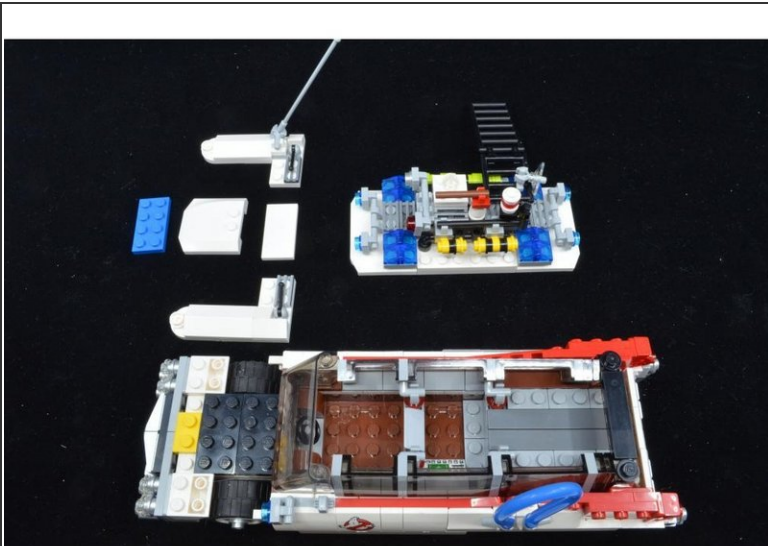
Step 1 — Build your Ecto-1



i Note that you can print this guide as a PDF if you'd like-- just click on the "Options" text in the upper right corner of the guide screen, and select "Download PDF" from the menu.

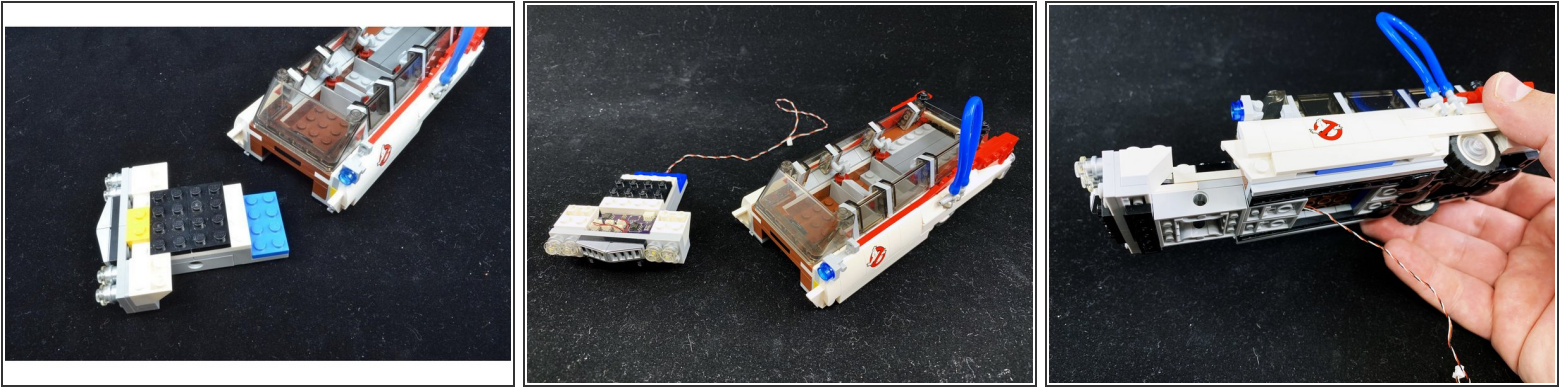
- These instructions are written assuming you have already assembled your Ecto-1 kit.

Step 2 — Remove Roof and Hood Parts



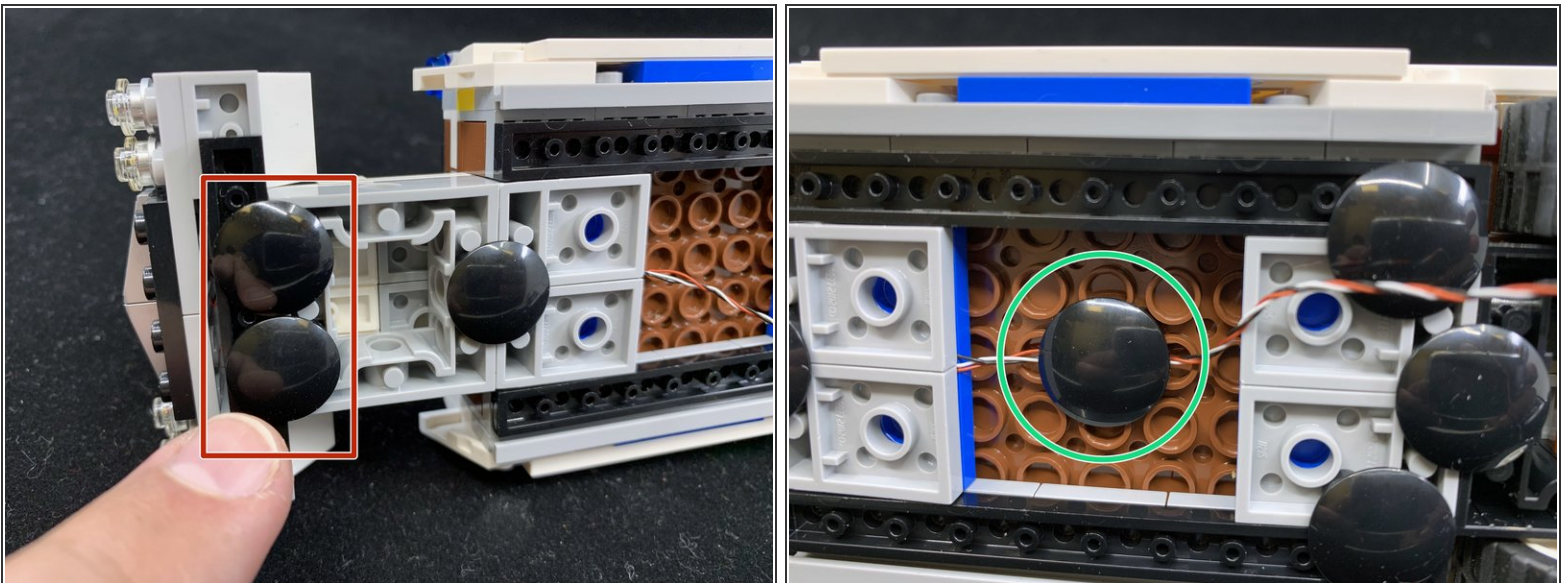
- Carefully remove the roof from your Ecto-1, and also remove the top hood parts as shown in the first photo.
- As shown in the second photo, remove the front wheels and axles, and also remove the silver parts and license plate from the front grille.

Step 3 — Remove and Replace Hood Assembly



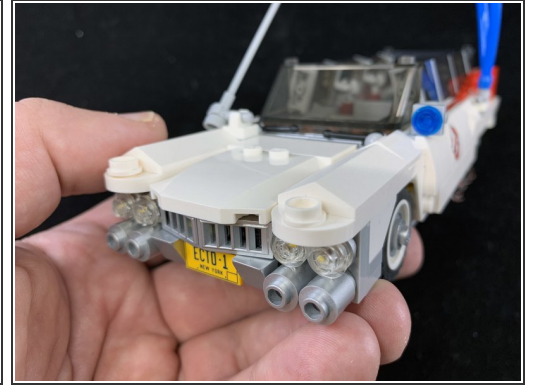
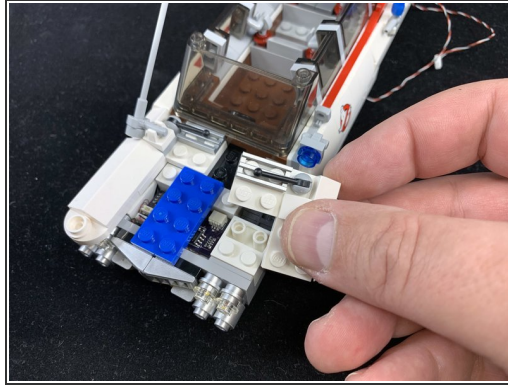
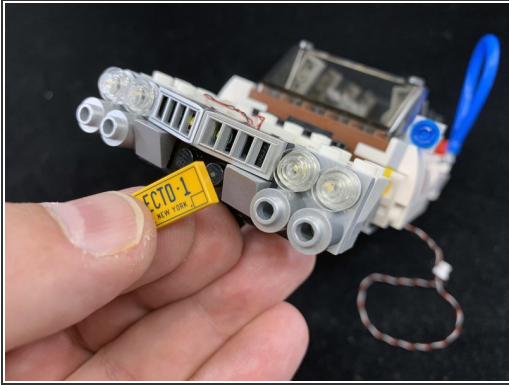
- Remove the entire front hood assembly as shown in the first photo.
- Remove the pre-assembled Brickstuff hood assembly from its anti-static bag, and mount onto the front of the Ecto-1 as shown in the third photo.

Step 4 — Finish Mounting the New Hood



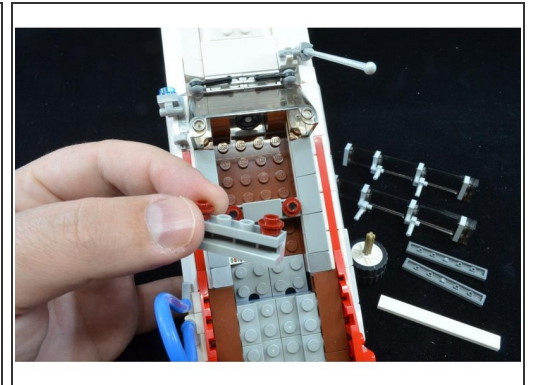
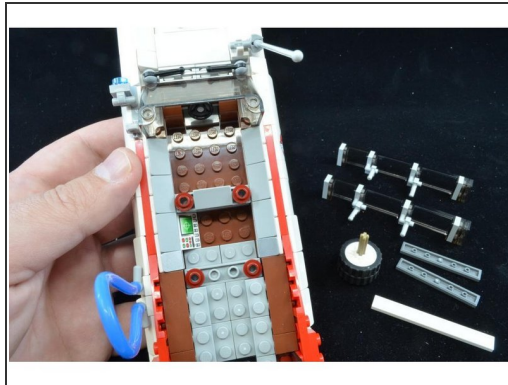
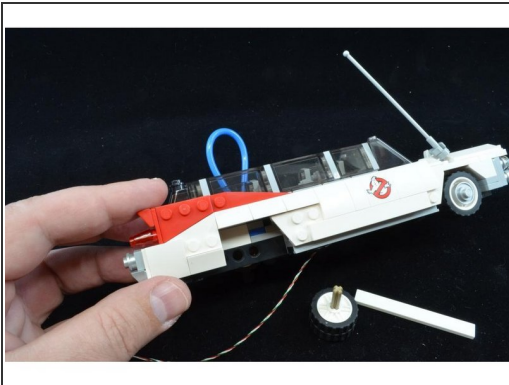
- Remove the two black "boat stud" pieces from the bottom of the original hood assembly and attach them to the Brickstuff assembly as shown in the first photo by the red square.
- As shown by the green circle in the second photo, make sure the wire extends toward the back of the Ecto-1. Secure the wire using the "boat stud" supplied with your Brickstuff kit.

Step 5 — Re-attach Hood Parts



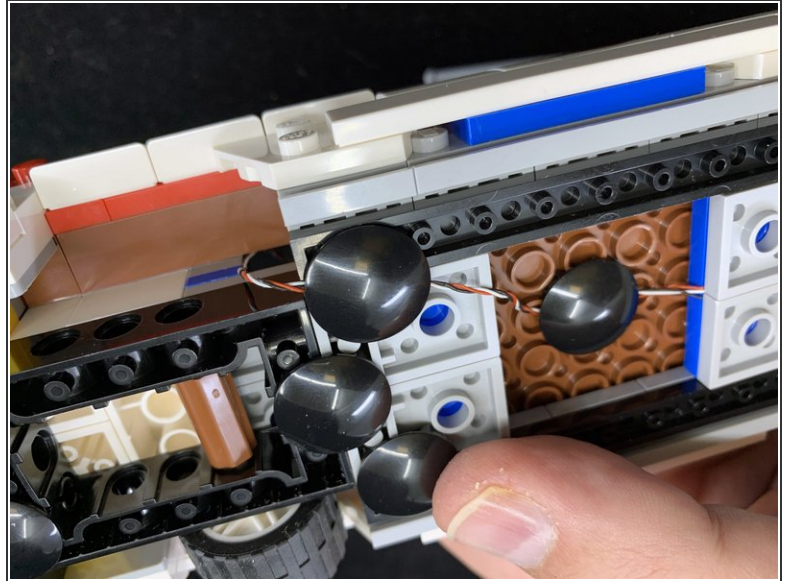
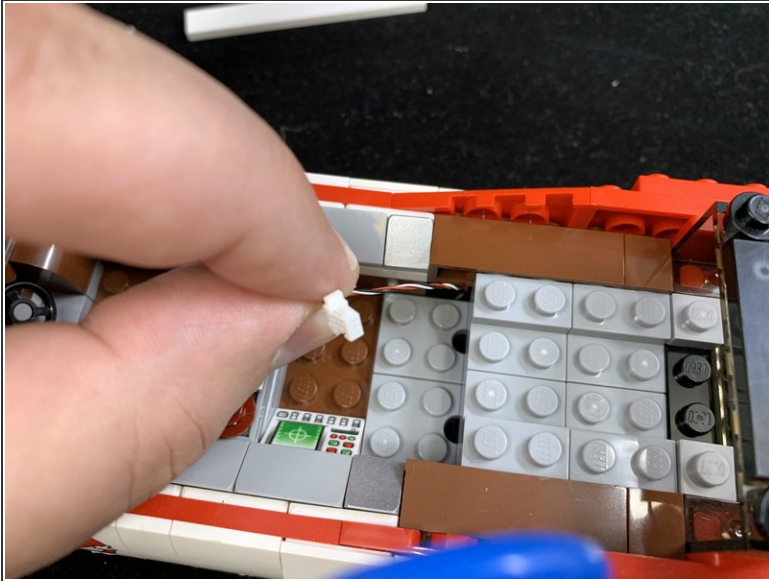
- Re-attach the hood parts you removed in Step 2.
- Your Ecto-1 should now look as it did before you started installing the lighting kit-- except for the wire on the underside.

Step 6 — Prepare to Feed the Wire



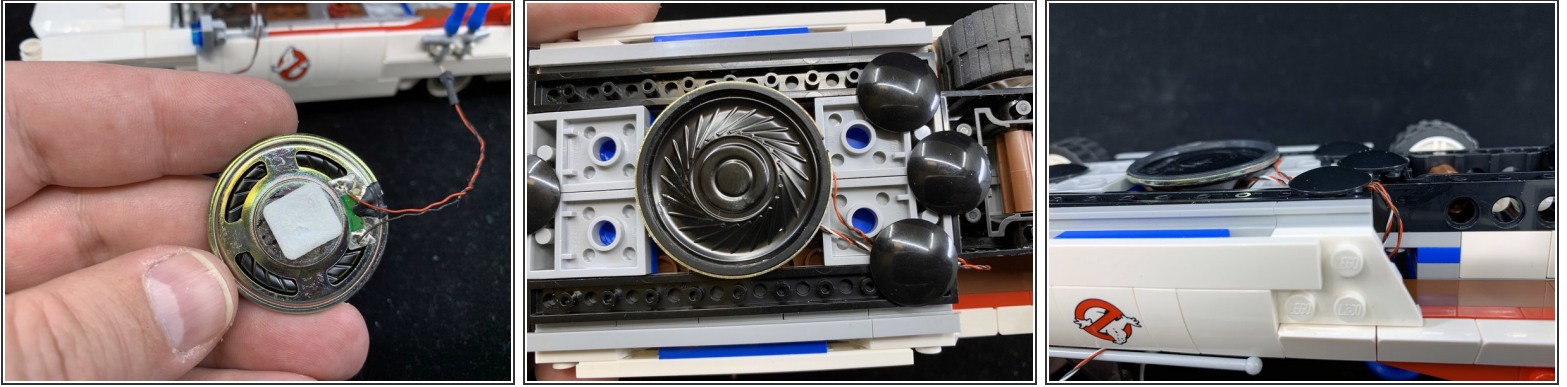
- The wire coming from the front needs to be fed into the rear interior area of the Ecto-1. Remove the right rear wheel and side panel as shown in the first photo.
- As shown in the second photo, remove the two dark gray tiles from the center back section, and also remove the two side window assemblies.
- As shown in the third photo, remove the 1x4 brick with the two red plates on top.

Step 7 — Feed the First Wire



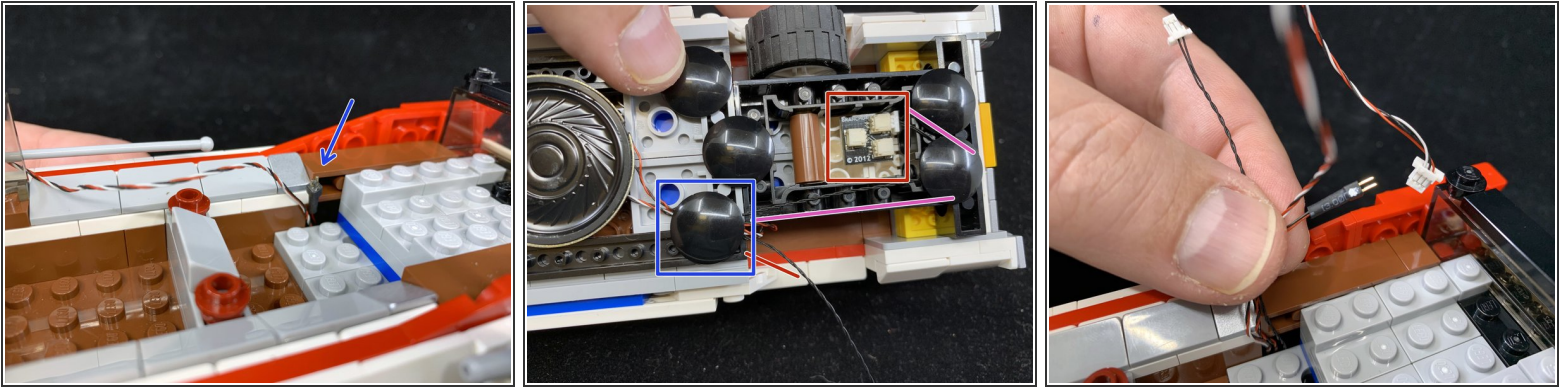
- As shown in the first photo, pull the wire up through the space above the wheel well.
 - As shown in the second photo, on the underside of the car, remove the black "boat stud" on the right side, and hold the wire so it is **BETWEEN** the four studs shown by the four red circles in the photo.
- ⚠ It is critical that the wire run between the four studs, so that when the "boat stud" part is re-attached, its studs do not pinch any wires. The wire must run in the gap between the studs.
- Re-attach the "boat stud" so it holds the wire in place.

Step 8 — Mount the Speaker



- Attach one of the sticky squares included with your kit to the bottom of the speaker as shown in the first photo.
- As shown in the second photo, press the speaker and sticky square down onto the "boat stud" you used in Step 4 to hold the wire coming from the front hood assembly.
- ⓘ Make sure the speaker is centered on the bottom of the car.
- As shown in the third photo, make sure the speaker is pressed down so it sticks to the "boat stud" and also so that it is flat.

Step 9 — Run the Speaker and Power Wires



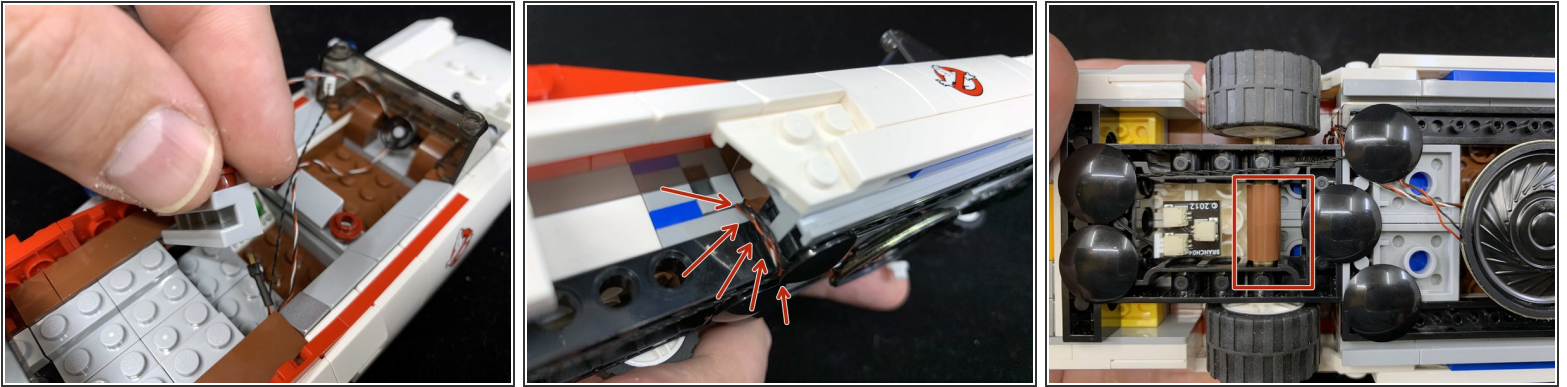
- As shown in the first photo (see the blue arrow), pull the speaker wire up into the main body of the car like you did with the wire from the front hood.
- As shown in the second photo, connect the 6" black connecting cable to one of the plugs on the BRANCH04 adapter board, and attach it to the bottom rear of the car using a sticky square.
- Carefully run the black wire as shown in the second photo (purple lines) by removing "boat studs", running the wire between studs underneath, then re-attaching the "boat studs".

⚠ Make sure not to pinch any wires under any of the studs when re-attaching the "boat studs".

⚠ Make sure the black wire follows the path shown by the purple lines in the second photo-- it must not rub against the wheel axle or cause friction when the wheel turns.

- As shown by the blue square in the second photo, use this "boat stud" to hold three wires: the wire coming from the hood, the speaker wire, and the black cable.
 - As shown in the third photo, pull the black cable up into the main body of the car.
- i** You should now have all three wires pulled up into the main body of the car. Make sure the wires are pulled tight underneath so they don't rub against the wheel.

Step 10 — Verify Wire Placement

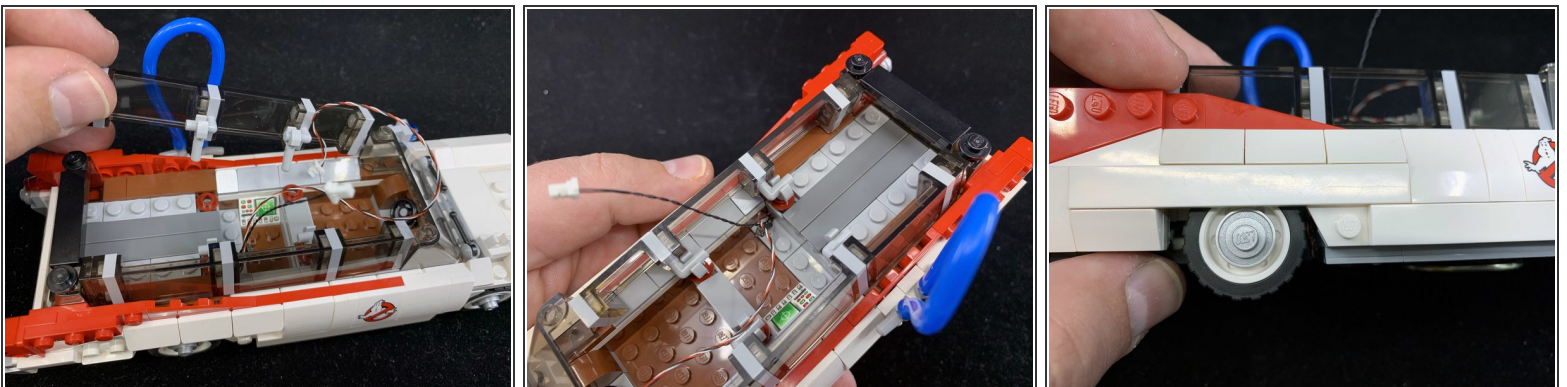


- As shown in the first photo, re-attach the part you removed in Step 6.

⚠ When re-attaching the part, make sure the three wires are pulled tight and that they run between the studs underneath the part.

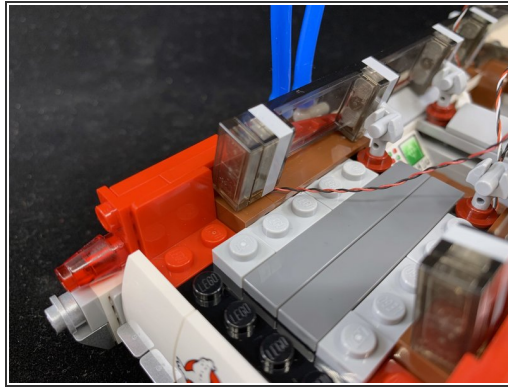
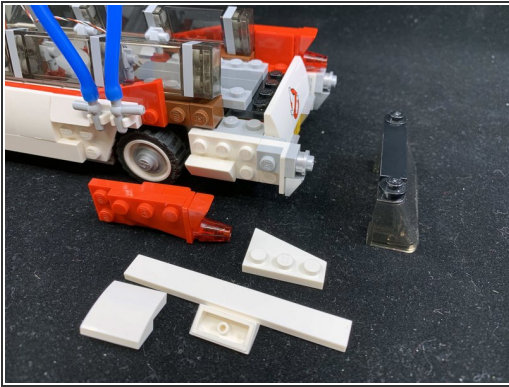
- As shown in the second photo (red arrows), make sure the wires are tight enough so they will not rub against the wheel.
- Re-attach the wheel. As shown by the red box in the third photo, make sure your wires run so they are not loose and so they do not rub against the wheel.

Step 11 — Re-Attach Parts



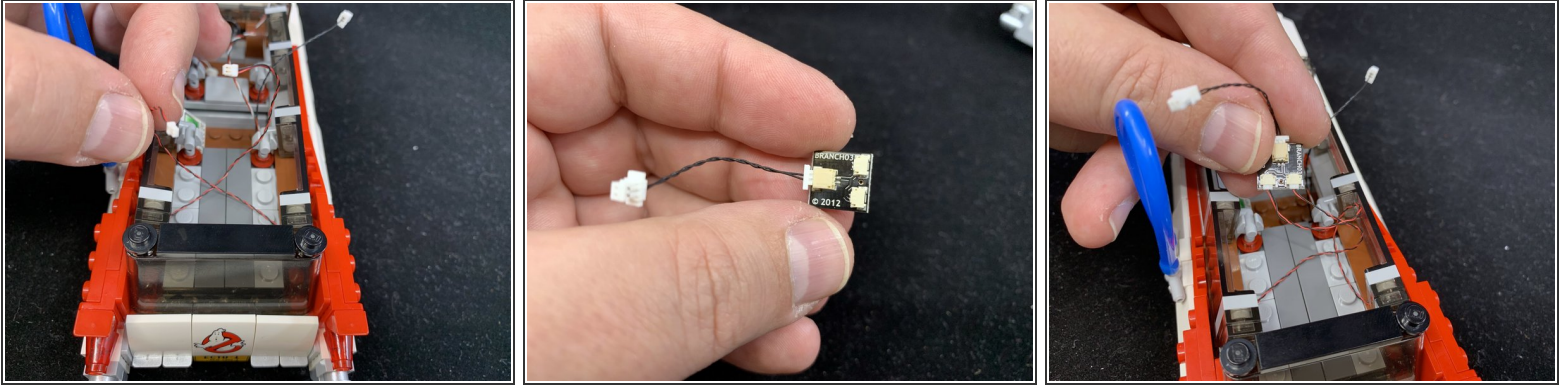
- As shown in the three photos for this step, re-attach the side windows, dark bluish gray tiles, and wheel well cover you removed in earlier steps.

Step 12 — Attach the Rear Tail Lights



- The Brickstuff kit includes replacement tail light assemblies with red Pico LEDs pre-mounted. As shown in the first photo, remove the existing tail light and its surrounding parts.
- As shown in the second and third photos, attach the Brickstuff tail light part, and then re-attach the surrounding parts.
- ⓘ As shown in the second photo, make sure the tail light power wire runs under the side window and into the main interior of the car.
- Repeat for the other tail light.
- Re-attach the parts you removed at the beginning of this step.

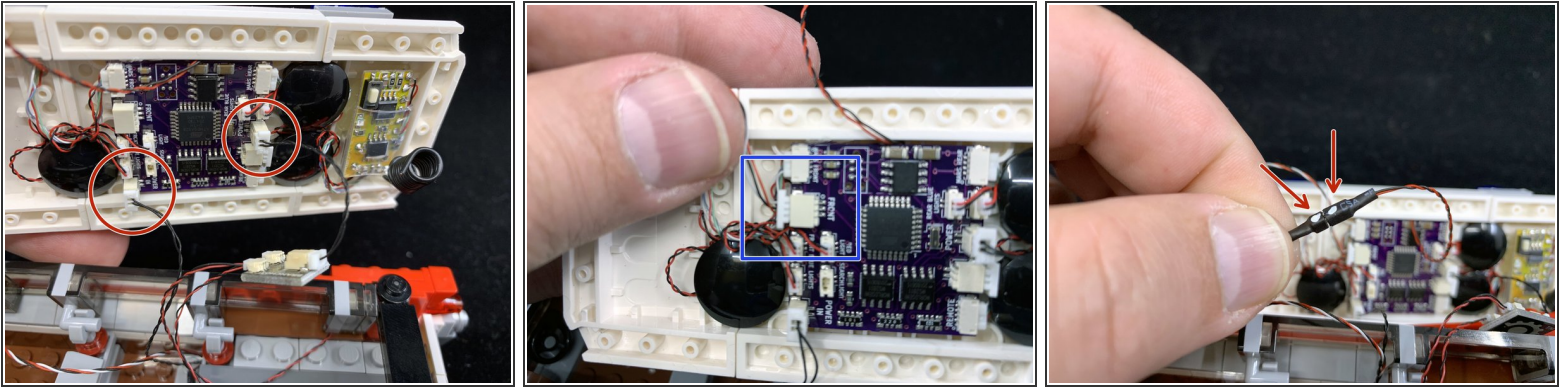
Step 13 — Connect the Tail Lights



- As shown in the first photo, the two tail light wires should extend into the rear section of the Ecto-1.
- As shown in the second photo, connect the 1.5" black connecting cable to the large connector on the BRANCH03 adapter board included with your kit.
- As shown in the third photo, connect the two tail lights to the small connectors on the BRANCH03 adapter board.

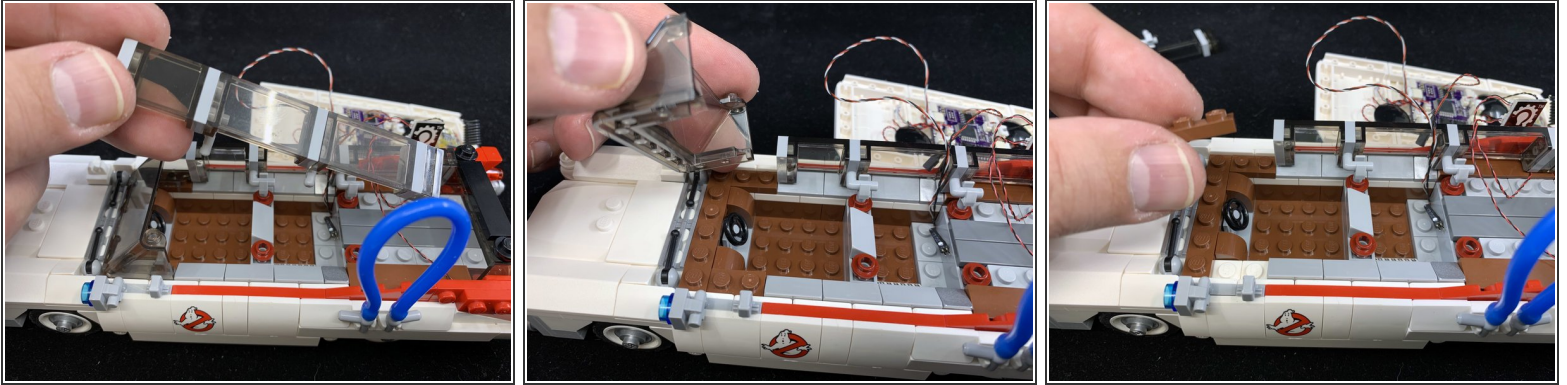
⚠ When connecting the plugs to the adapter board, note that the plugs will insert only one way-- Do not force the plugs in the wrong way. Press firmly with your fingernail to insert the plugs. You will feel a soft "click" when the plugs are in all the way.

Step 14 — Connect Wires to the Roof



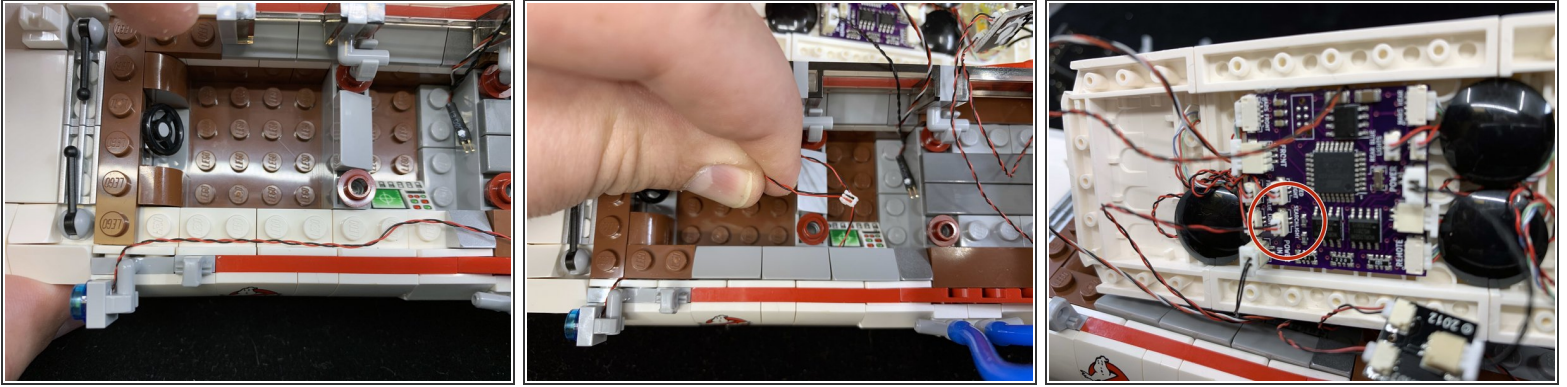
- Take the pre-wired roof assembly out of its anti-static bag.
 - As shown by the red circles in the first photo, insert the two black power wires into the two large connecting plugs under the roof.
 - ⓘ The photo shows the main power wire connected to the front plug and the tail lights connected to the rear plug, but you can connect either wire to either plug.
 - As shown in the second photo (blue square), carefully insert the 3-wire plug (from the front hood assembly) into the plug under the roof labeled "PIXEL".
 - ⓘ Use your fingernail to press the 3-wire plug all the way into the PIXEL connector. If you later find that the hood lights do not work, it is likely because this plug is not fully inserted.
- ⚠ Note that the plugs will only insert one way-- do not force them.**
- Finally, connect the speaker wire as shown in the third photo. Make sure the two white dots on the plugs are aligned when connecting as shown by the two red arrows.

Step 15 — Remove Parts to Mount the Searchlight



- As shown in the three photos for this step, remove parts to make room for installing the searchlight.

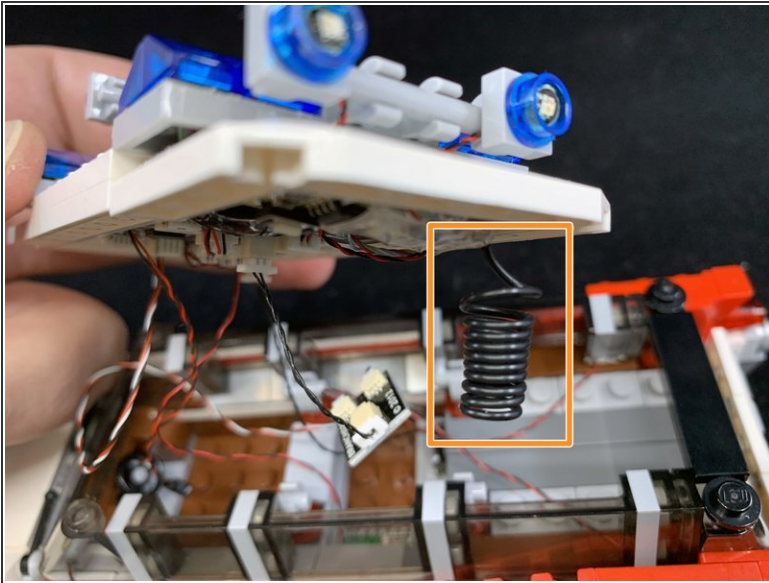
Step 16 — Install the Searchlight



- Remove the searchlight from the car, and replace with the pre-lit searchlight included with this kit.
- As shown in the first photo, run the searchlight wires along the edge of the top of the door, **making sure the wires run next to the studs, not on top of them.**
- As shown in the second photo, re-attach the parts you removed in Step 15. The searchlight wire should extend out from under the light bluish gray slope parts as shown in the second photo.
- As shown by the red circle in the third photo, carefully insert the searchlight power wire plug into the socket labeled "Searchlight".

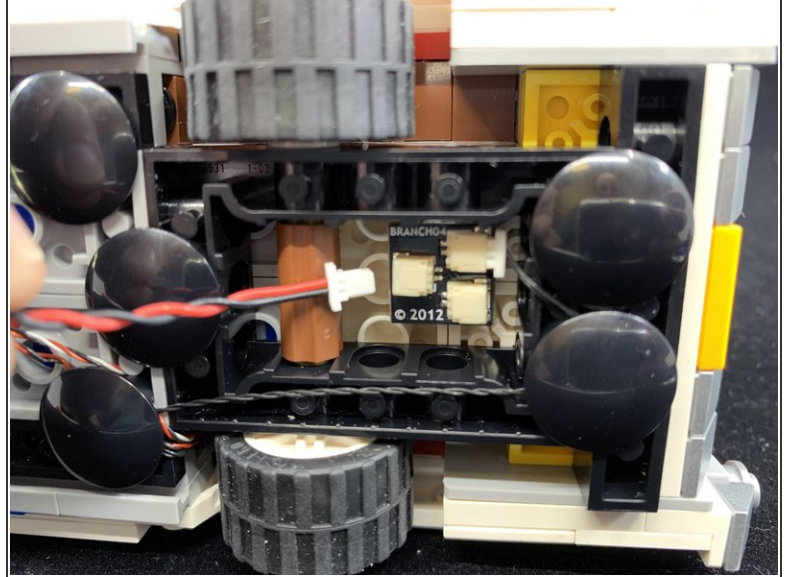
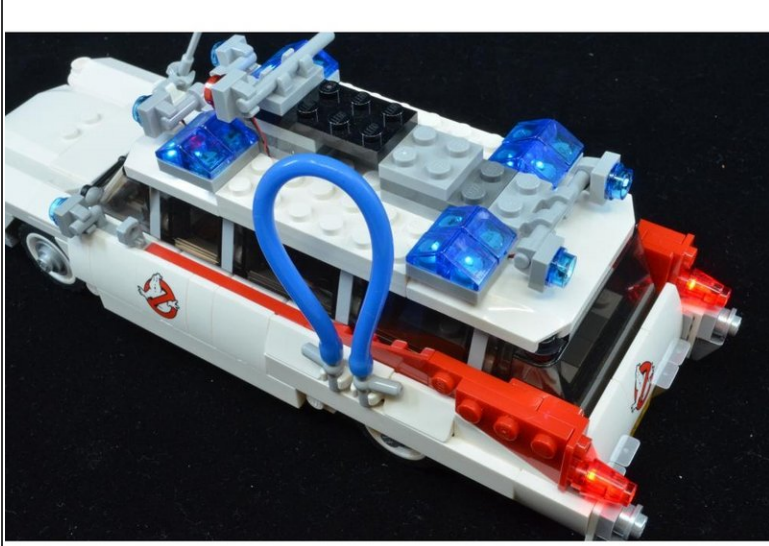
⚠ When connecting the searchlight, note that the plug will insert only one way-- Do not force the plug in the wrong way. Press firmly with your fingernail to insert the plugs. You will feel a soft "click" when the plugs are in all the way.

Step 17 — Re-Attach the Roof



- As shown by the orange square in the first photo, make sure the thick black coiled wire is pointing downward before re-attaching the roof. This is the antenna wire for the remote control.
- ① If the antenna wire is not facing downward, gently bend it so it is aligned as shown in the second photo. **Use care when bending so the wire does not snap off.**
- Re-attach the roof as shown in the second photo. Make sure no wires are sticking out the sides.

Step 18 — Finishing Up



- Take the decorative parts from your original kit roof and attach them to the Brickstuff kit roof to complete your installation.
- As shown in the second photo, attach the USB power cable that came with your kit to one of the open plugs on the BRANCH04 adapter underneath the car.
- Connect the USB cable to power. Some or all of the lights on your Ecto-1 may come on right away, or none may come on. The important thing is to look inside under the roof and see if a red light is on. This is on the wireless receiver. If you see a red light on inside the car, you know your Ecto-1 is powered up and ready for use.

Step 19 — Using the Remote



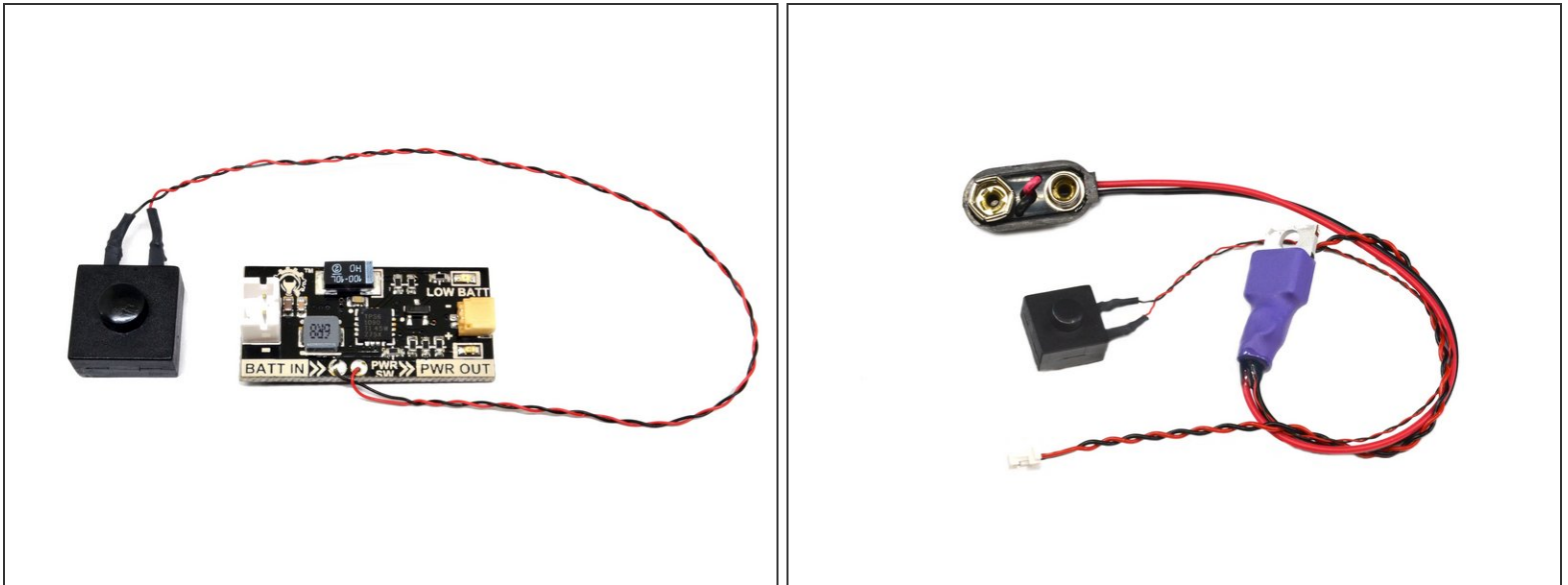
- Once your Ecto-1 is connected to power, you can control its functions using the included 4-button remote control.
 - Press the "A" button quickly to turn the roof lights and hood strobes on and off. Press and hold the "A" button for longer to change the speed of the roof and hood strobe lighting effects.
 - Press the "B" button quickly to turn the headlights on and off. Press and hold the "B" button for longer to change the brightness of the headlights.
 - Press the "C" button quickly to turn the searchlight on and off. Press and hold the "C" button for longer to change the brightness of the searchlight.
 - Press the "D" button quickly to activate the Ecto-1 siren sound. Press and hold the "D" button for longer to adjust the volume of sound playback.
- i** All settings you adjust are saved even when power is turned off.

Step 20 — Enjoy Your Ecto-1!



- Your Ecto-1 should now be fully operational.
- If any lights do not work, double-check their plugs where they connect to an adapter or circuit board. If the plugs are loose, gently press on them to make sure they are fully inserted.
- If you have any trouble with your kit, please send us an e-mail at support@brickstuff.com and we'll do our best to help get you back on track.
- If you would like to find out about alternate ways to power your Ecto-1, see the next step.
- Enjoy your kit!

Step 21 — Alternate Power Methods



- If you would like power to be self-contained inside your Ecto-1, there are several options.
- The first photo shows the [Brickstuff LiPo power supply](#), which you can use with a number of rechargeable batteries to provide self-contained power.
- ❗ Batteries must be purchased separately. See [this link](#) for a list of tested batteries. We have found that the 500mA battery size fits inside the Ecto-1 and will power it for about 90 minutes of continuous use.
- As shown in the second photo, you can also use the [Brickstuff 9V Battery Power Supply](#) to power the Ecto-1. With a little creative wrangling of wires, you should be able to get the battery and cables to fit inside the Ecto-1.
- Both of these options also include an on/off power switch, so you can mount this on the bottom of the Ecto-1 to turn power on and off without needing to remove the roof.
- ❗ Because of the high power demands of the lights in this kit, we do not recommend using coin cell battery packs or rechargeable batteries.