

# FACTOR4 GRILLE LIGHT

## Installation Instructions



### Required Tools:

10 mm socket (with extension) or 10 mm wrench  
#2 Phillips screwdriver

Hybrid only: 13 mm socket/wrench

### FACTOR4 Parts:

2x FACTOR4 Grille Lights

Optional: 1x FACTOR4 Plug-n-Play Wiring Harness

Optional: 3x Cable ties

Optional: FACTOR4 Removal Tool (included with Wiring Harness)

**Document Version:** 9-30-2020

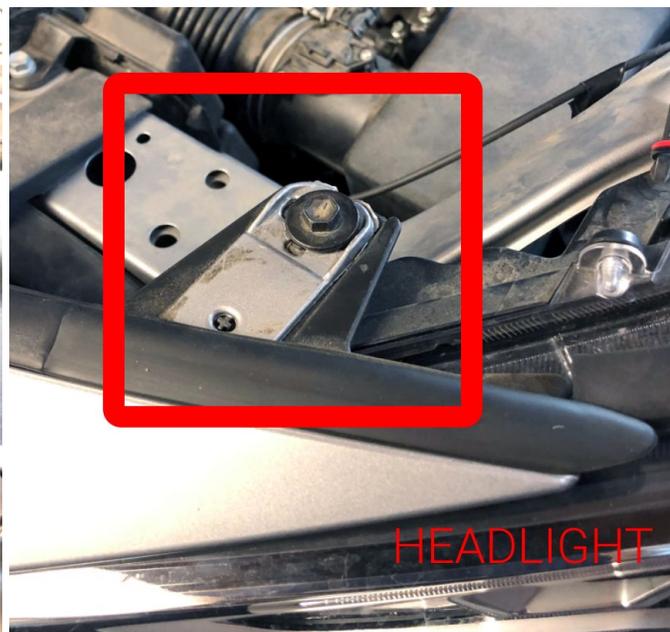
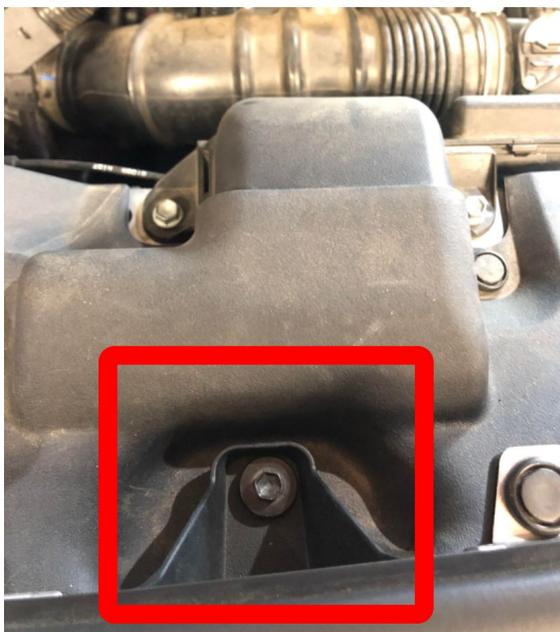
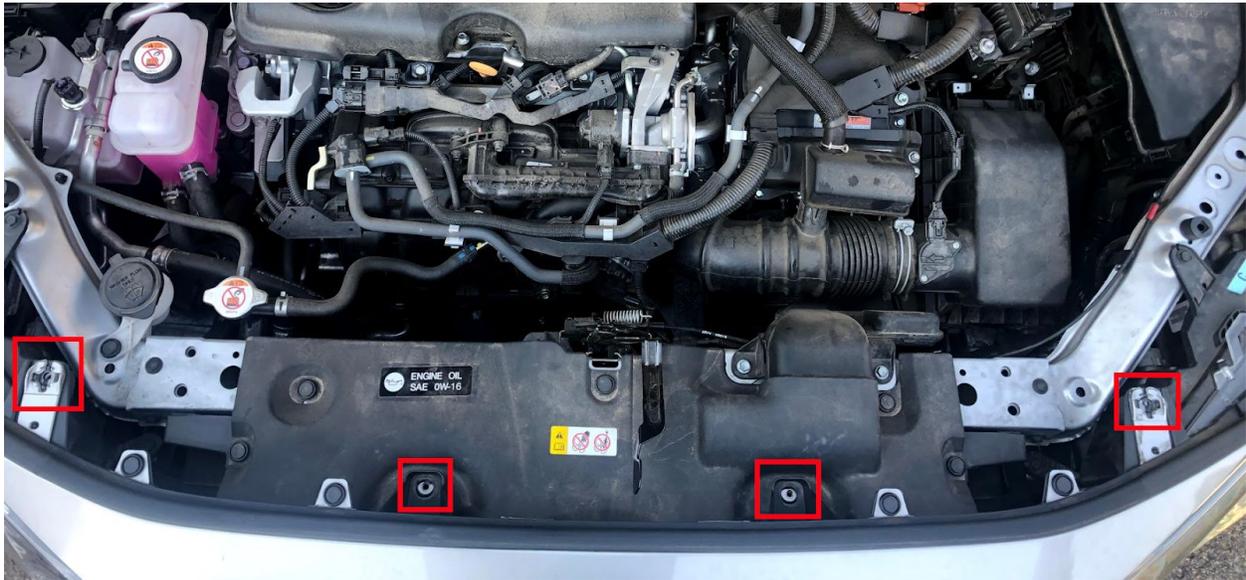
**Questions:** [factor4.co@gmail.com](mailto:factor4.co@gmail.com)

Step 1:

Turn off the vehicle and pop the hood

Step 2:

To aid installation and access, use a 10 mm socket/wrench to remove the four upper bolts holding the front bodywork/bumper in place. For the centermost bolts, it is easier if you have an extension on your socket.



Step 3:

While gently pulling the front bodywork forward (to aid access), use a #2 Phillips screwdriver and remove the screw holding the upper grille in place.

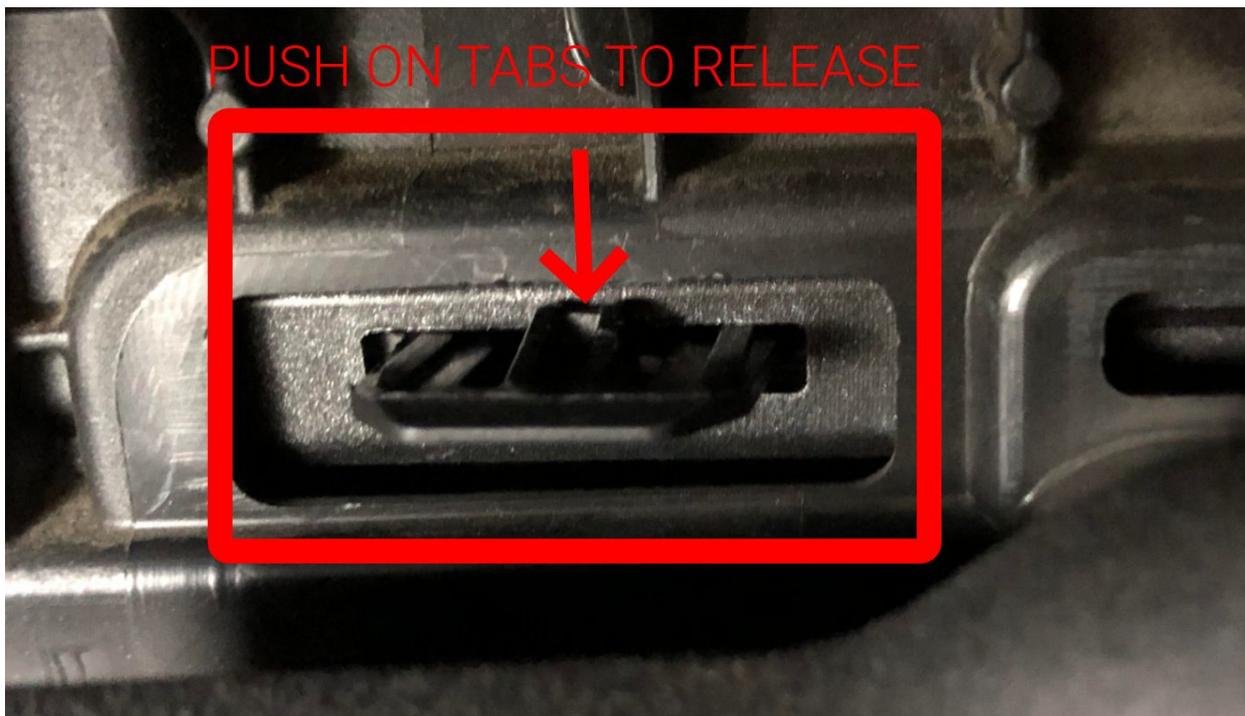
**Important: Take care when removing the screw since if you drop it, it can be hard to retrieve.**

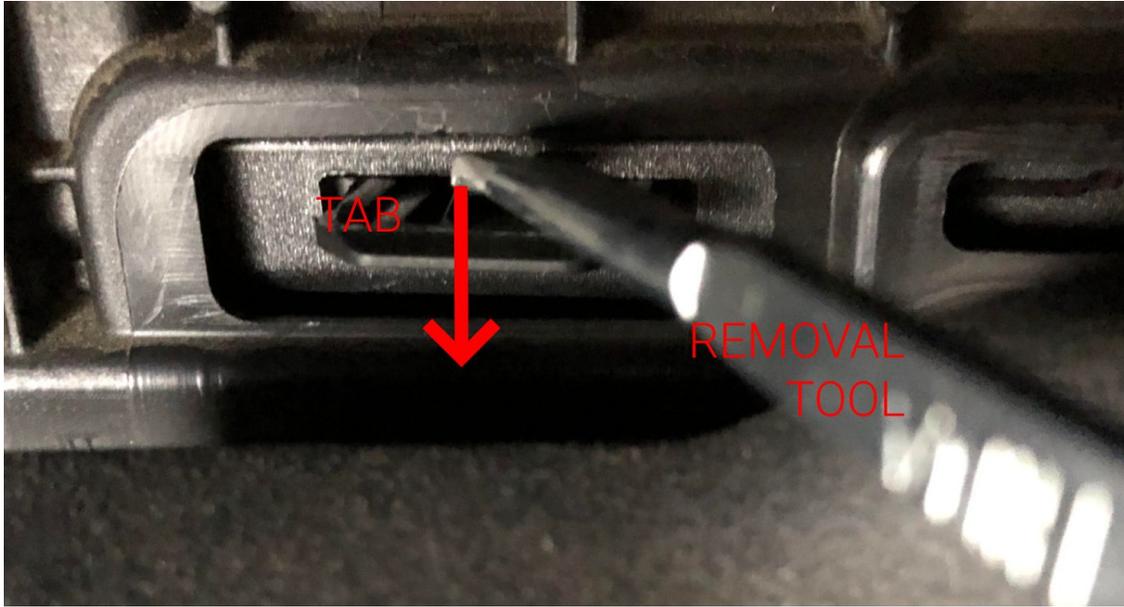


Step 4:

Take a look at the FACTOR4 Grille Lights, to see what tabs look like, making it easier to understand how to remove the ones installed on the car.

Starting on the left (driver) side of the vehicle (which is the easier side), push in the tabs which are holding the upper grille piece in place. You can either use a finger (if you can reach), or use the FACTOR4 Removal Tool to push the tabs in. While you push a tab in, gently push the grille outwards. You may have to move between the three tabs and push on them several times while gently pushing the grille outwards. The center tab needs to be pushed up and the left/right tabs need to be pushed down.





Move over to the right (passenger) side (**this is the most difficult step of the install, so be sure to take your time**). Start by loosening the left and right tabs, then move over to the center tab. Gently pull the front bumper forward and insert the FACTOR4 Removal Tool below the tab in the opening shown in the image below.



Using the tool, push the tab upwards while gently pulling the upper grille out.



### Step 5:

Take a deep breath and celebrate that you've completed the most difficult step of the install. You can save the remove plastic parts should ever want to return to the stock look.

### Step 6:

Starting on the left side, feed the cables from the FACTOR4 Grille Lights into the opening shown in the image below.

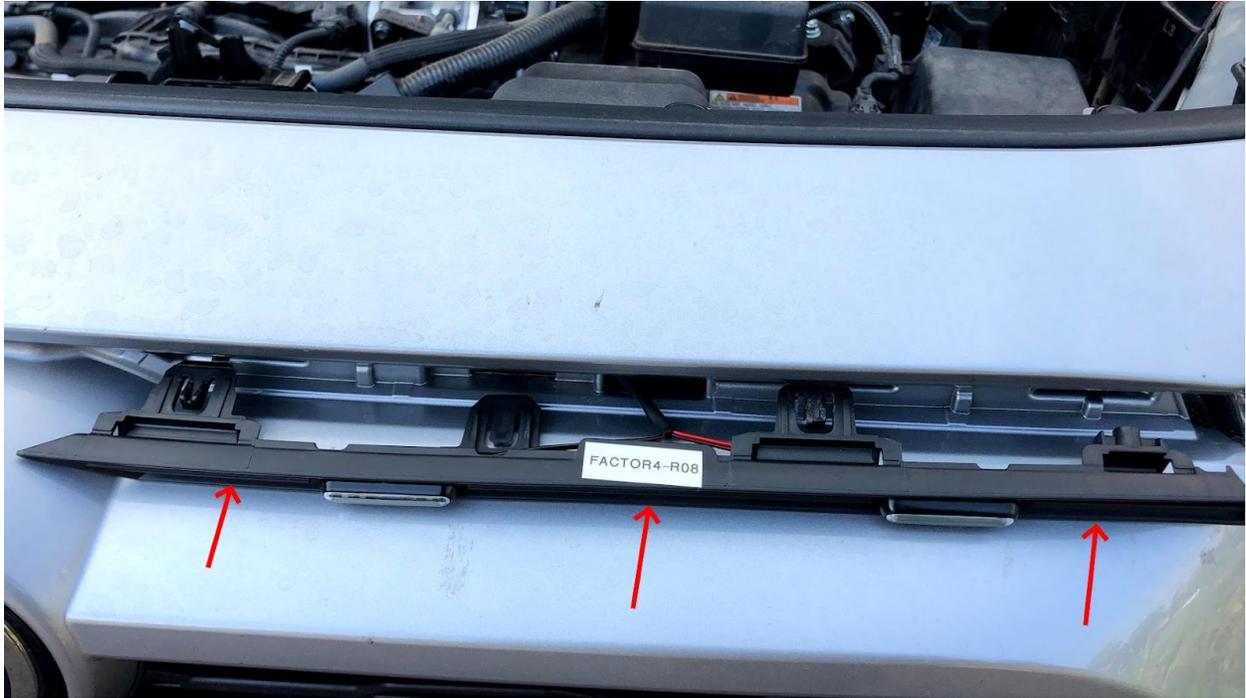


Feed the cables towards the center of the car. Looking from the top, route the cables into the area shown in the image below.



Step 7:

While gently pulling on the cable that has been fed through (to make sure it doesn't get tangled), push the FACTOR4 lights into place. They will click in place. Once done, repeat the same process on the other side, feeding the cables in the same way towards the center of the car.



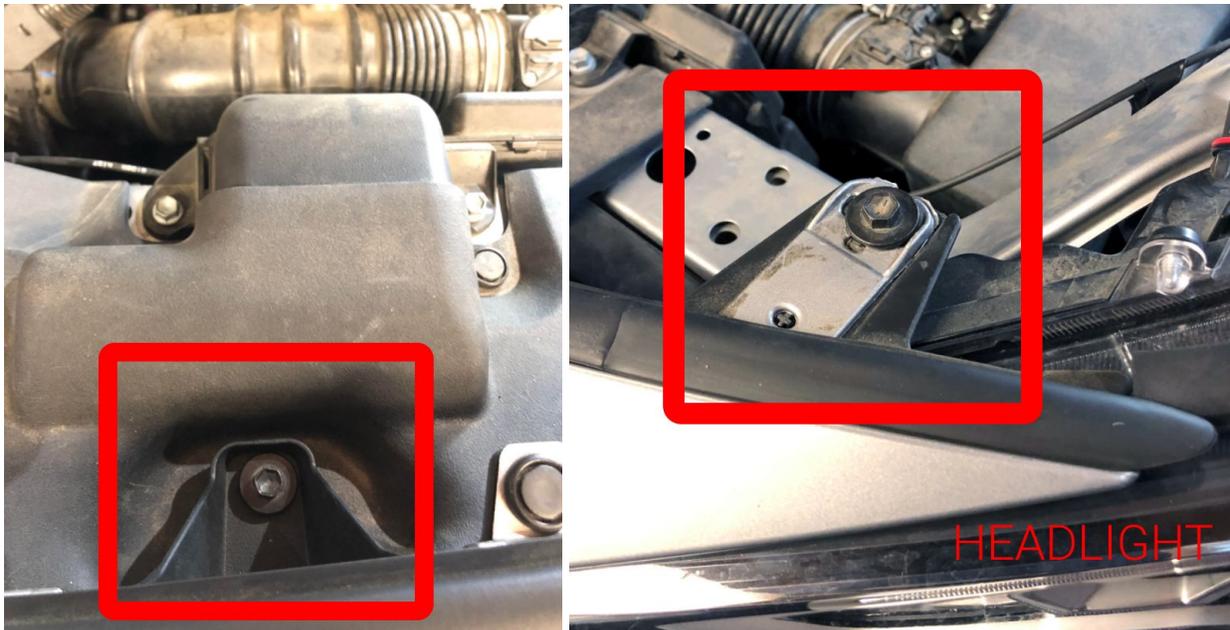
Step 8:

Using the #2 Phillips screwdriver, fasten the upper grille pieces (both left and right). Be careful not to drop the screw as it will be hard to retrieve. As when you removed the screw, gently pull the front bodywork forward to make it easier to access the screw and hole.



Step 9:

Using the 10 mm socket/wrench, reattach the four bolts holding the front bodywork in place. Be careful not to overtighten these screws as they are clamping on plastic components.



Step 10:

You've now finished the install of the FACTOR4 Grille Lights. If you have purchased the FACTOR4 Plug-N-Play Wiring Harness, you can follow the steps below.

Step 11:

Locate the fuse box at the back of the engine bay, on the driver side. Remove the fuse box lid by pushing on the three tabs while pulling upwards.





Step 14:

Insert the smaller end of the removal tool around the fuse in the USB2 location (which should be a brown fuse that says 7.5 on top). Once the tool has gripped around the fuse, pull it straight out.

Note: Photo below shows USB2 fuse in a Hybrid. The fuse layout for gas RAV4s will be different, please refer to the fuse box lid schematics.



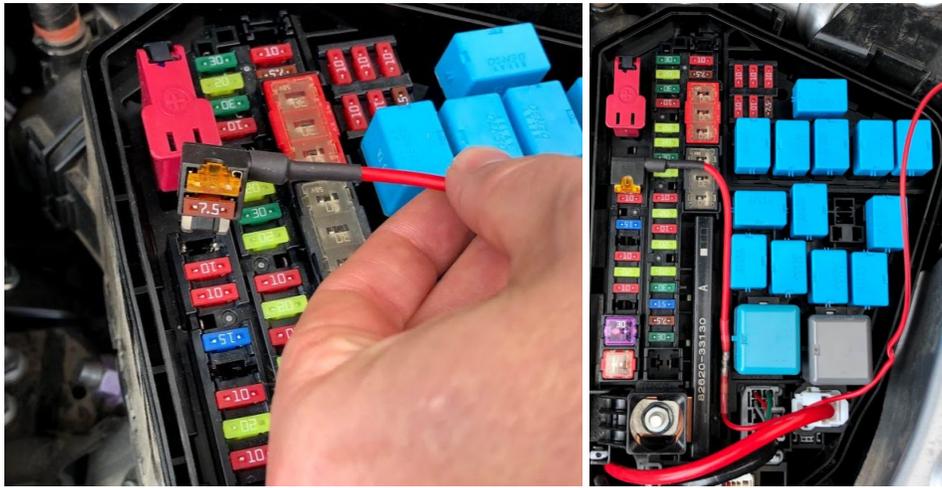
Step 15:

Insert the fuse that you just removed into the open slot of the fuse connector on the FACTOR4 Wiring Harness.



Step 16:

Inset the fuse connector on the harness into the USB2 slot (where you just removed the fuse from). Route the cable out towards the edge of the fusebox.



Put the fuse removal tool back in its place and gently put the fusebox lid back.

**Recommended:** The best way to ensure the longevity of the FACTOR4 Wiring Harness, you may want to cut/drill an additional opening in the fusebox to reduce the stress on the cable sheathing which may occur when you close the fuse box lid.

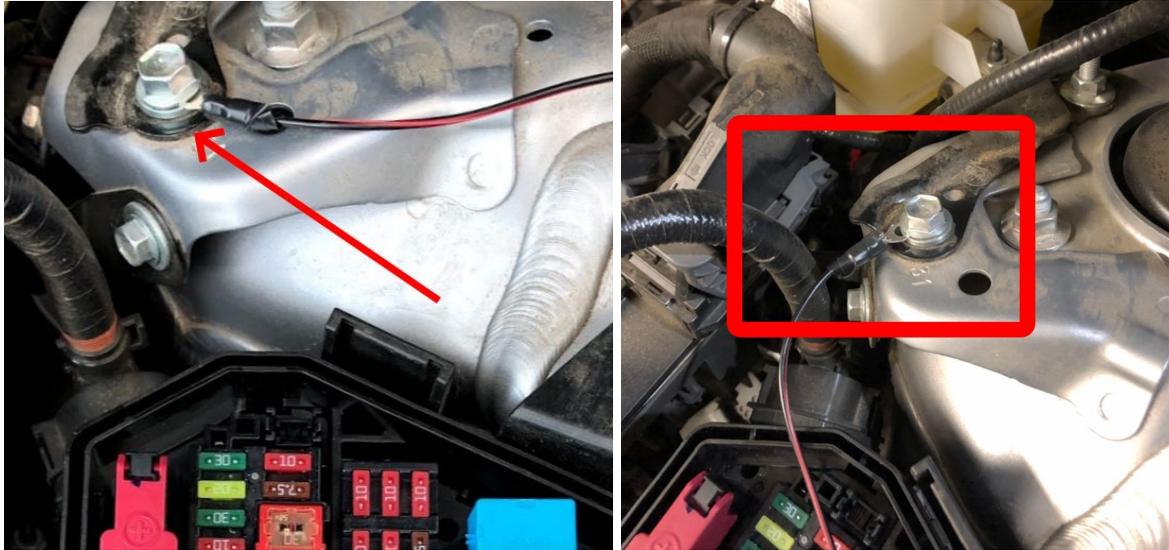
Step 17:

**Gas/Non-Hybrid:**

Install the ground terminal connector on the negative (black/ground) pole of the battery, which is located next to the fuse box.

**Hybrid:**

Using a 13 mm socket/wrench, slightly loosen the bolt shown in the image below and slide in the ground connector between the bolt and washer. Tighten the bolt.



Step 18:

Route the connectors and cables, under the plastic cover sheet and around the fender bracket as shown in the image below.



Continue feeding the connectors and cables towards, the FACTOR4 grille lights. You can route the cable below the plastic bracket which holds the headlight in place.

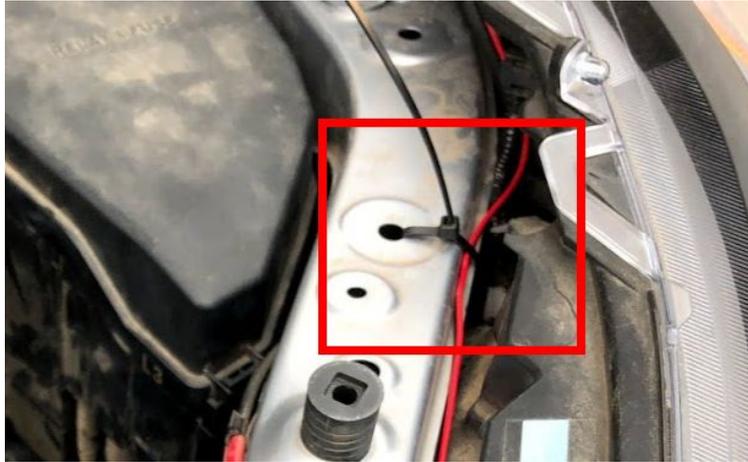


**Step 19:**

Connect the harness to connectors to the connectors on the lights. By pushing them together as shown in the image below.



Once everything is connected, you can use the provided cable ties to secure the cable to the chassis structure. Remember to trim the excess cable tie for a neat installation.



**Step 20:**

Turn-on the ignition in the car and take a moment to admire your new FACTOR4 Grille Lights! If you don't already, follow us on Instagram ([factor4.co](https://www.instagram.com/factor4.co)) and we'd love to see a photo of the lights installed on your RAV!

If you have any questions or feedback on any parts of the installation or this document, please let us know - we'd love to hear from you: [factor4co@gmail.com](mailto:factor4co@gmail.com)