

TCU SENDER BOARD

MOUNTING OF THE BOARD:

To mount the board inside the OFgear TCU you will need some basic tools and knowledge.

The board is "press fit" onto the TCU board underneath the Arduino MEGA MCU. Even thou the board function with just the press fit, the connections will be insecure over time because of the vibrations in the car.



Tools required:

- Soldering Iron (min. 60watt recommended...)
- Solder wire (with flux)
- (Metric) Allen key for opening the TCU enclosure.
- File/files.

Mounting:

- 1. Open the OFgear enclosure using the Allan key and lift the PCB out of the box.
- 2. Detach the Arduino MCU from the main PCB.
- 3. Place the Are-Inc TCU sender board in the place where the Arduino MCU was mounted making sure that you get the correct placement on the pins.

The pinhole marked with a "Square" needs to fit over pin1 in the row closest to the OFgear TCU main connector.

When correctly mounted your bord should fit tightly against the component marked "221"









SOLDERING PINS

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There are 4 soldering points needed on the board, but you can solder more if you like to add more stability. (The 4 joints are enough)

The needed soldering points are marked with orange circle in the picture to the left.

When soldering the points make sure to keep the solder points as "low/tiny" as possible because you will need as flat surface as possible when reattaching the Arduino MCU board back.

PREPARING THE ARDUINO

CUT LINE

Before reattaching the Arduino board there is some small modification needed to the Arduino. This step is NOT necessary but if you want your OFgear enclosure to have the lid perfectly flat after mounting you need to "file/grind" down some of the pin headers on the Arduino by 1,4mm to even the hight for the "Add-on" board.

Just use a file or Dremel and file down the headers marked with orange in the picture.

NB!

It's not necessary to modify the pin headers on the Arduino but if you don't, the lid for the OFgear enclosure wont be flush mounted to the box and will leave a 1 mm gap between the lid and the box.





MOUNTING IT ALL TOGETHER



When the 4 pins are soldered and the Arduino pin header is filed down, it's Tim to assemble the TCU again.

Mount the Arduino back to its position on the TCU mainboard and put the whole mainboard assembly back in to the enclosure.

Check that the Arduino USB connector is bottomed in its grove in the enclosure and mounted flat (parallel) to the mainboard.

WEB_BOOT



SETTING UP THE BOARD

When you power up the board for the first time you need to have the "boot strap" mounted. You do this by shorten the two pins shown in the picture before powering the TCU.

This will set the board in "Web AP mode" giving you access to the settings on the board.

When powered up, a new WIFI SSID will pop up that you connect to on your Phone/Tablet/Laptop/PC...

SSID: OfgearConfig2025 Password: 123456789

When logged on to this WIFI, you open

your browser and enter 192.168.4.1 and you will be presented with the setup for this board.

(More on this in the documentation of the software. You find information on the "Support" page online.)

ADDING EXTERNAL BUTTON

For easy login to the web GUI you can add an external button to the board instead of adding a "boot strap" each time you want to logon to the system.

A simple push button mounted between the two pins (A & B) is enough.



Are-INC

FINAL ASSEMBLY

When you put the lid back onto the enclosure, it should be fully engaged to the box with no gaps in between. (If you did the "Arduino pin header modification).

Now Finnish it off, putting the screws back and tighten firmly but not too hard.





ARE-INC TCU SENDERBOARD V2 MINI

If you like to use our other version of the sender board, there will be some additional soldering and connections needed to be done.

There will be documentation on this board under the "Support" link on our homepage.

This version of the board is connected to the OFgear TCU with wires and can be placed inside or outside the main OFgear TCU enclosure.

There are 4 cables to solder onto the ofgear main bord to this external board so it is an easy instalment.

