# Contributing guidelines

The rtl\_433 project is built on the work of many contributors analyzing,

documenting, and coding device support.

We are happy to accept your contribution of yet another sensor!

Please check if your contribution is following these guidelines

to improve the feedback loop and decrease the burden for the maintainers.

## Commit messages

PRs will be added as squash commit

and the commit message will likely be updated to follow this format.

The commit messages should follow the common format of

<area\_of\_work>: <verb> <commit\_message>

Area of work is optional and may be one of the following:

- build: for build/build system related work

- docs: for documentation related work, both in code and readme/docs folder

- ci: for work related to continuous integration

- test: for test related work

- deps: for changes related to (external) dependencies (e.g. soapysdr is updated or mongoose is updated)

- cosmetics: for housekeeping work, code style changes

Verb may be one of the following:

- Add: for new additions, e.g. device support

- Fix: for changes that don't change anything to input/output (security related or bug fixing)

- Remove: for changes that remove behaviour (e.g. some old algorithms are cleaned up)

- Change: for changes that modify input/output behaviour (e.g. added checksums, preambles)

- Improve: for improvements without changes in normal output/behaviour

## Supporting Additional Devices and Test Data

Some device protocol decoders are disabled by default. When testing to see if your device

is decoded by rtl\_433, use `-G 4` to enable all device protocols.

This will likely produce false positives, use with caution.

The first step in decoding new devices is to record the signals using `-S unknown`.

The signals will be stored individually in files named g\*\*NNN\*\*\\_\*\*FFF\*\*M\\_\*\*RRR\*\*k.cu8 :

| Parameter | Description

|---------|------------

| \*\*NNN\*\* | signal grabbed number

| \*\*FFF\*\* | frequency

| \*\*RRR\*\* | sample rate

This file can be played back with `rtl\_433 -r gNNN\_FFFM\_RRRk.cu8`.

These files are vital for understanding the signal format as well as the message data. Use both analyzers

`-a` and `-A` to look at the recorded signal and determine the pulse characteristics, e.g. `rtl\_433 -r gNNN\_FFFM\_RRRk.cu8 -a -A`.

Make sure you have recorded a proper set of test signals representing different conditions together

with any and all information about the values that the signal should represent. For example, make a

note of what temperature and/or humidity is the signal encoding. Ideally, capture a range of data

values, such a different temperatures, to make it easy to spot what part of the message is changing.

Add the data files, a text file describing the captured signals, pictures of the device and/or

a link the manufacturer's page (ideally with specifications) to the rtl\_433\_tests

github repository. Follow the existing structure as best as possible and send a pull request.

https://github.com/merbanan/rtl\_433\_tests

Please don't open a new github issue for device support or request decoding help from others

until you've added test signals and the description to the repository.

The rtl\_433\_test repository is also used to help test that changes to rtl\_433 haven't caused any regressions.