



Robo4girls EntwicklerInnen-Dokumentation

What is it?

The context of the project is described in more detail in the "User Documentation".

The goal was to build robots with contemporary technology that look and feel similar to the Lego Mindstorms RCX, can be attached with Lego, for example also work with the Lego trolleys of the RCX and are very easy to program, as we use them in workshops Use 10 year old girls. We have developed a robot based on Micro: bit with a Waveshare Motor Driver Board, with a 3D printing housing and our own web app based on Blockly.

All files and instructions relevant to users are described in detail in the user documentation:

1. Manufacturing instructions R4G
2. parts list
3. 3D printing housing
4. Hex files plus instructions
5. Test Instructions
6. Workshop Guide
7. Building instructions Roberta (body, heads)
8. R4G App

For whom is it?

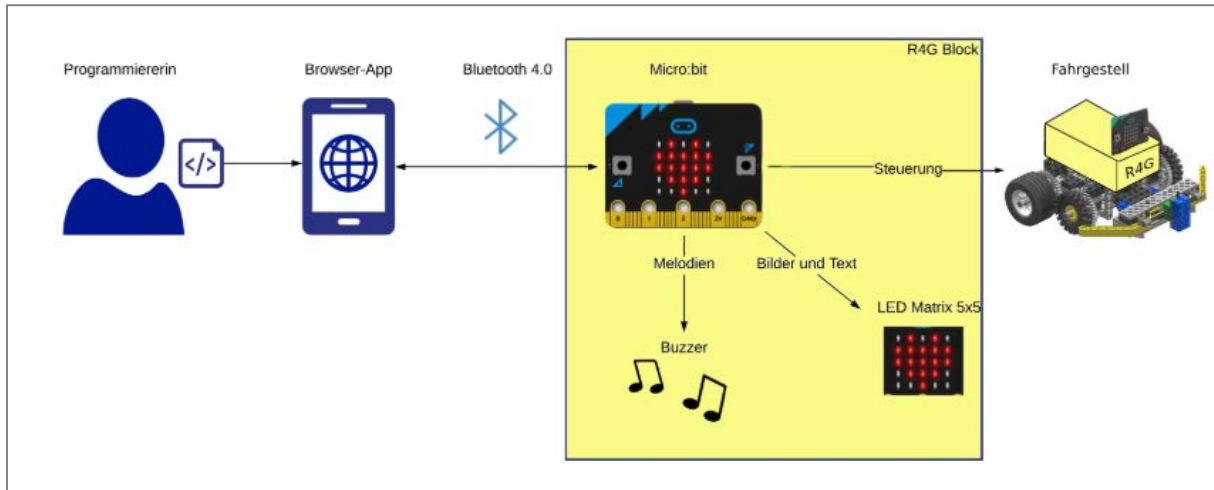
In principle, the R4G is for teachers, parents and children who are interested in robots or IT. But it can also be interesting for Lego Mindstorms fans, because you can do a lot with it with just a few extensions.

This document is for developers who are thinking of expanding the R4G app and / or converting the housing.

- The R4G app can currently only
- Compound motor commands, eg "forward" instead of "motor A on, motor B on, wait 3 seconds, motor A off, motor B off".
- combined commands, for example "zigzag".
- LED displays
- some melodies
- a loop.

This can be a very good and easy entry into programming, but the system will of course soon reach its limits. For example, we don't use sensors. In order to enable sensors, the corresponding connections were already provided in the 3D model and the manufacturing instructions.

How does it work?



- A detailed documentation of the software is available in our Github repository <https://github.com/ZimdVienna/Robo4girls/>, on which developers can build.
- The R4G app is located at <https://zimdvienna.github.io/Robo4girls/>.
- The 3D model for the housing is located at <https://github.com/ZimdVienna/Robo4girls/tree/master/3D-print>.
- All Informations for Users you find under www.netidee.at/robo4girls and in the document https://www.netidee.at/sites/default/files/2020-01/R4G-User-Dokumentation-en_0.pdf.

We ask developers who take up this project for information to d.e@zimd.at or +4369911369902 (Dorothea Erharter) or +4369911362799 (Andreas Landl) and are happy to answer any questions at these numbers.

We would like to thank the **Internet Privatstiftung Austria**, which promoted this project as part of the **Netidee**, and the **Kapsch TrafficCom**, which supported us with the development of the housing.