Instructions to setting up the

Robot

Project

Easy Scalable, Low-Cost Open Source Magnetic Field Detection System for Evaluating Low-Field MRI Magnets using a Motion Tracked Robot

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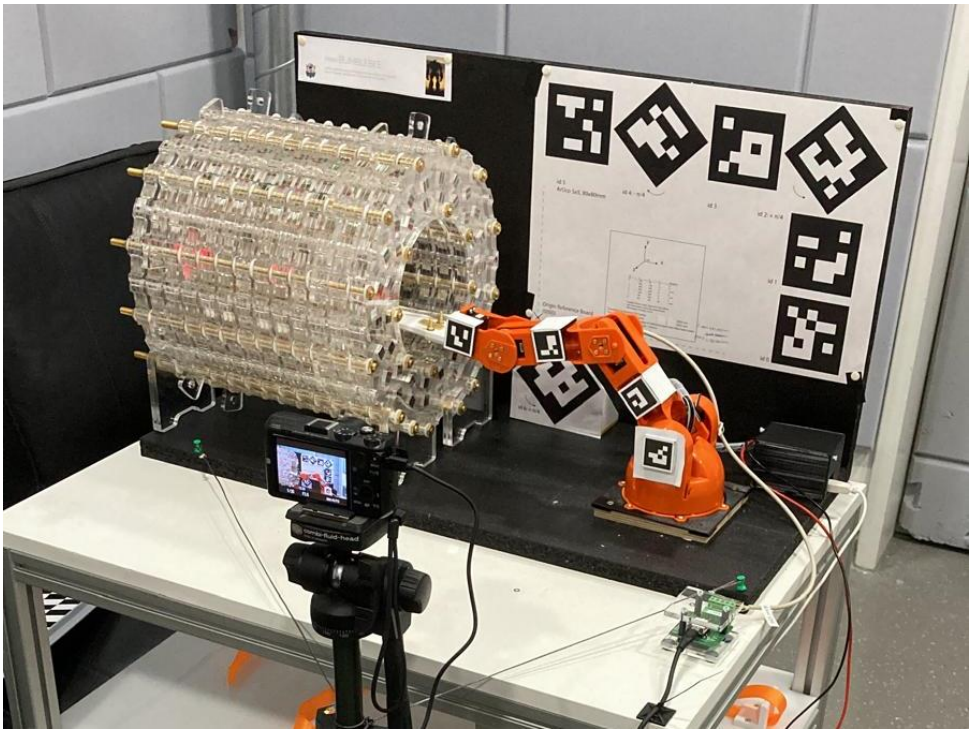

Content

1 Preamble

This manual is still a work in progress and will be completed in the next few weeks.
If you have any questions in the meantime, please feel free to ask

2 Hardware

2.1 PCB Power Electronic Drive

2.1.1 Assembly

2.1.2 Supply

2.2 Mechanical Design Robot

2.2.1 Design of used Robot (Arduino Tinkercad Braccio)

2.2.1.1 Tinkercad Braccio

2.2.1.2 Hallsensor Holder

2.2.1.3 Extract Translation for Motion Tracking

2.2.2 Hardware for ArUco Marker

2.2.3 Hardware for Base-Sensor

2.2.4 Assembly

3 Embedded Software

3.1.1 Library

3.1.2 Usage (Serial Commands)

4 Calibration of Base Sensor

4.1.1 SetUp

4.1.2 Evaluation / Linearization