

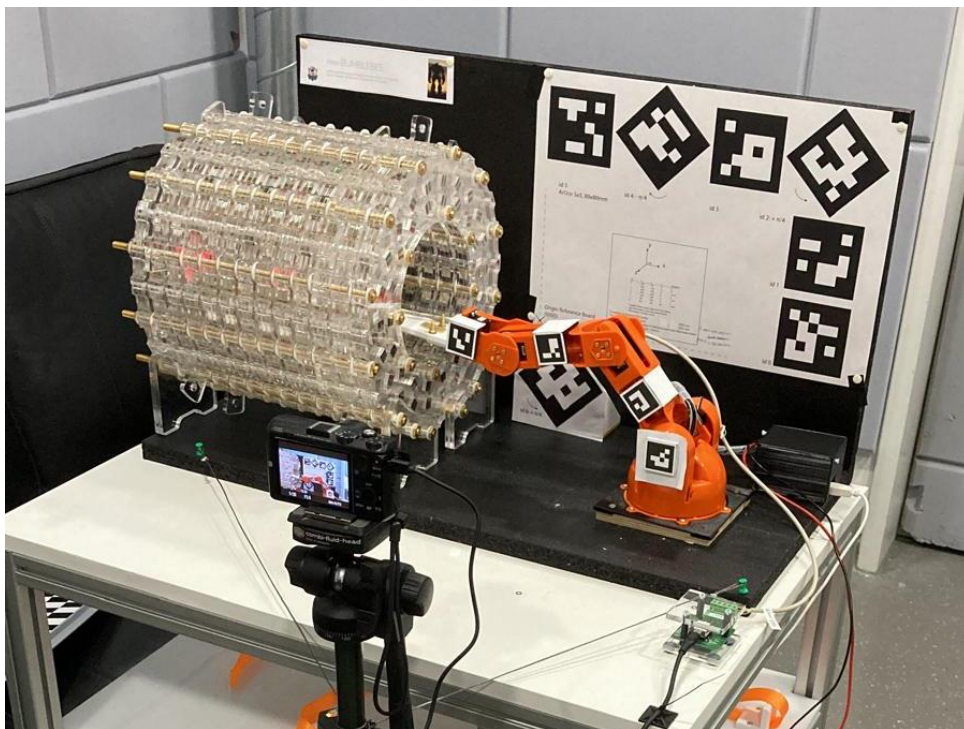
# Instructions to setting up the Robot

Project

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

Pavel Povolni

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# 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