

Using MAKE

Carston Wiebe

24.2.2025

Contents

1	Introduction	3
2	Writing Programs	3
2.1	Naming Components	4
2.2	Taking Actions	4
3	Advanced Topics	4
3.1	Glossary Of Classes And Functions	4
3.2	Creating Schema For New Components	4

1 Introduction

MAKE is the Python embedded-programming library used by PROTO. It is built on top of CircuitPython, and is designed to be hardware independent using a schema system to “swap out” different electrical components.

2 Writing Programs

Each program consists of two parts: First you name the components that you will use in the program, and then you take actions using those named components. In programming terms, you first define your variables and instantiate your objects, and then you call your functions.

(Note that you need to start every program with the same line: `import make`. This tells the robot that you want to use the MAKE library, so that it knows where to look to find our code.)

```
import make

# name components
leftmotor = make.largemotor(port=6)
rightmotor = make.largemotor(port=7)

# take actions
leftmotor.spin(power=100)
rightmotor.spin(power=-100)

make.wait(seconds=2)

leftmotor.stop()
rightmotor.stop()
```

2.1 Naming Components

2.2 Taking Actions

3 Advanced Topics

3.1 Glossary Of Classes And Functions

3.2 Creating Schema For New Components