

Magnetic Motion Robot (MMR): How MMR moves



```
40 void loop() {
41
42     mmrMove(20, velocity, 30, servo_1, servo_2);
43     delay(velocity);
44     mmrTurnRight(5, velocity, 30, servo_1);
45     delay(velocity);
46     mmrMove(20, velocity, 30, servo_1, servo_2);
47     delay(velocity);
48     mmrTurnRight(5, velocity, 30, servo_1);
49     delay(velocity);
50     mmrMove(20, velocity, 30, servo_1, servo_2);
51     delay(velocity);
52     mmrTurnRight(5, velocity, 30, servo_1);
53     delay(velocity);
54     mmrMove(20, velocity, 30, servo_1, servo_2);
55     delay(velocity);
56     mmrTurnRight(5, velocity, 30, servo_1);
57     delay(velocity);
58
59     _loop();
60 }
61
62 void _delay(float seconds) {
63     long endTime = millis() + seconds * 1000;
64     while(millis() < endTime) _loop();
65 }
66
67 ...
```

Teachers

The code “DemoCircularMovement.sb2” is an example how the MMR describes a closed square trajectory. The code is very simple as you can see in the block section in the image:

- Initialize the Magnetic Motion Robot (MMR).
- Initialize the velocity variable to 150 (time between each MMR step 150 milliseconds)
- The block "forever" (loop in the Arduino code).
- Basically the MMR describes a clockwise closed square trajectory using the “move” and “turnRight” blocks.

Kids

ACTIVITY 1

Code the MMR to describe an anticlockwise closed square trajectory faster than the example above.

ACTIVITY 2

Code the MMR to describe a clockwise closed circular trajectory