

Functions with Arguments

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Custom Functions (Quick Recap)

When
you call
this
function,
how long
will it run
for?

Source Code

```
1 #include <kipr/wombat.h>
2
3 void drive_forward(); // function prototype
4
5 int main()
6 {
7     drive_forward(); // function call
8     return 0;
9 }
10
11 void drive_forward() // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(4000);
16     ao();
17 }
```

Now, what if you don't want it to run for this long each time?

Functions with Arguments

Source Code

```
1 #include <kipr/wombat.h>
2
3 void drive_forward(int milliseconds); // function prototype
4
5 int main()
6 {
7     drive_forward(4000); // function call
8     return 0;
9 } // end main
10
11 void drive_forward(int milliseconds) // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(milliseconds);
16     ao();
17 }
```

- **Function arguments:** values you will set when you call the function

Writing Custom Functions with Arguments

Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(int milliseconds); // function prototype
4
5  int main()
6  {
7      drive_forward(4000); // function call
8      return 0;
9  } // end main
10
11 void drive_forward(int milliseconds) // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(milliseconds);
16     ao();
17 }
18
19
```

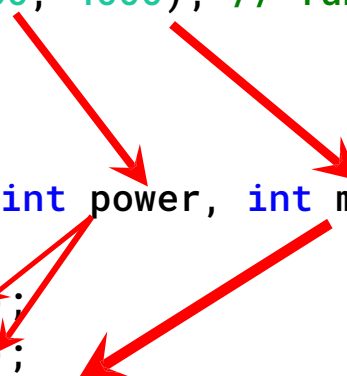
The value in the **function call** sets the value of the **argument...**

... which is then used in the **function definition.**

Writing Your Own Functions with Multiple Arguments

Source Code

```
1 #include <kipr/wombat.h>
2
3 void drive_forward(int power, int milliseconds); // function prototype
4
5 int main()
6 {
7     drive_forward(80, 4000); // function call
8     return 0;
9 } // end main
10
11 void drive_forward(int power, int milliseconds) // function definition
12 {
13     motor(0, power);
14     motor(3, power);
15     msleep(milliseconds);
16     ao();
17 }
18
19
```



The value in the **function call** sets the value of the **argument...**

... which is then used in the **function definition.**

Arguments That Change Over Time

Source Code

```
1 #include <kipr/wombat.h>
2
3 void drive_forward(int power, int milliseconds); // function prototype
4
5 int main()
6 {
7     drive_forward(80, 4000); // function call
8     drive_forward(75, 2000);
9     return 0;
10 } // end main
11
12 void drive_forward(int power, int milliseconds) // function definition
13 {
14     motor(0, power);
15     motor(3, power);
16     msleep(milliseconds);
17     ao();
18 }
19
```

The values in the **SECOND** function call *are now 75 and 2000 respectively*

... which is then used in the **function definition**.