

## Reference

# While Loop

A while loop is a structure within ROBOTC which allows a portion of code to be run over and over, as long as a certain condition remains true.

Below is the pseudocode outline of a while loop.

```
while (condition)
{
    // repeated-commands
}
```

**(condition)**  
Either **true** or **false** (see Reference > Boolean Logic).

**Repeated commands**  
Commands placed here will run over and over as long as the (condition) is **true** when the program checks at the beginning of each pass through the loop.

Below is an example of a program using a While Loop.

```
task main()
{
    while (nMotorEncoder[motorC] < 360)
    {
        motor[motorC] = 100;
        motor[motorB] = 100;
    }
}
```

The condition is true as long as the rotation sensor detects less than 360 degrees of rotation.

While the condition is true, both motors will receive 100% power.

This while loop runs as long as the rotation sensor detects less than 360° of spin. As long the condition remains true, motor A and motor B are told to run at full power. When the condition becomes false, i.e. the rotation sensor detects more than 360° of spin, the loop ends and the robot goes on to the next line of code. In this case, the program ends.