



Insectbot Kit

SKU: KIT0051

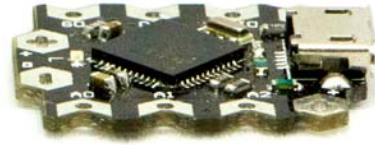
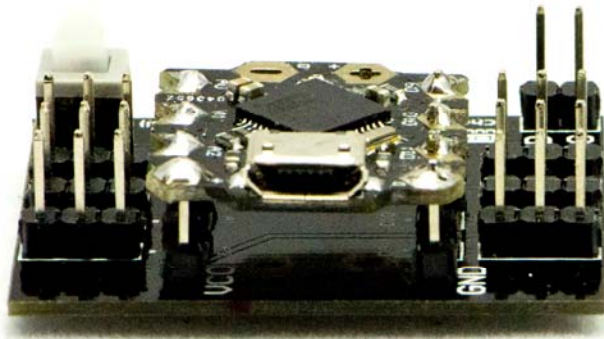


INTRODUCTION

The Insect Bot mini is an easy to assemble robot for young engineers from 6 to 100. With assembling this robot you will learn the basic robotics in terms of how all the components work together. There is a microcontroller which is working as the robot brain and two servo motors for the movement. The IR sensor on it's head will act as an eye to detect obstacles in front. The programming can be done by simply connecting the Beetle controller with the USB port on your computer. It is the best way to start building robot on Arduino.

Assembling parts

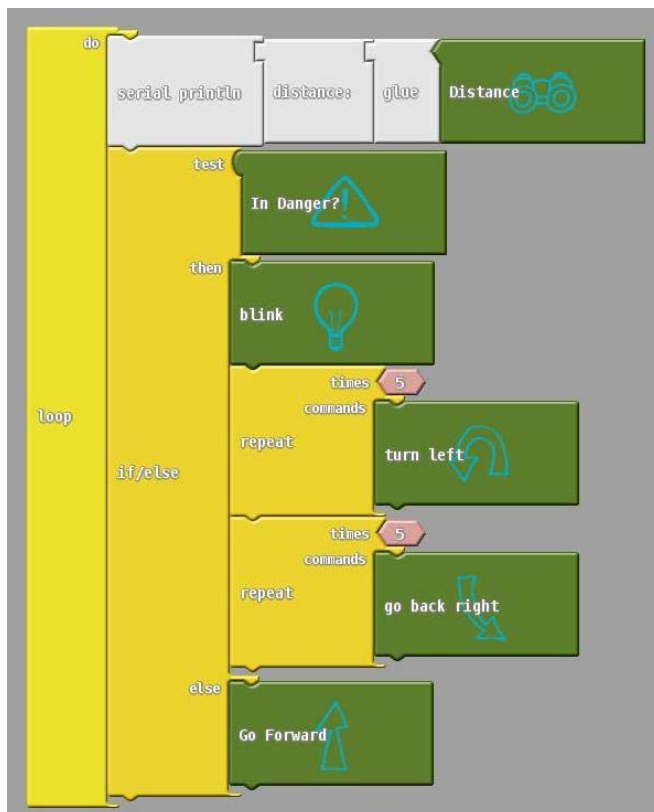
The brain of Insectbot is "world's smallest Leonardo", a.k.a. Beetle. It is ideal for DIY projects, wearable projects and etc. Its body is made up of two 9-gram servos powered by a rechargeable 3.7V LiPo battery. Its eyes are an infrared sensor to detect obstacles. It requires no special tools except a soldering iron, scissors, screwdriver, pliers. You can decorate your Insectbot Mini to give him a unique, cute or funny Christmas outfit. We also provide a step-by-step instruction to help you assemble it.



Beetle and Beetle Shield

Programming for Insectbot

We provide 3 programming languages for you such as Ardublock, Mind+ and Arduino IDE. For beginners, you can program it simply by dragging and dropping pre-designed blocks visa visual programming softwares Ardublock and Mind+. For advanced DIYers, you also modify Arduino IDE for your liking.



Programming Insectbot with Ardublock

```
File Edit Sketch Tools Help
InsectBot_Mini | Arduino 1.0.4

// =====
// SELECT THE KIT
//
// modified by Lou for Insect bot
//
// =====

// Servo Library
#include <Servo.h>
// Servo name
Servo frontServo;
Servo rearServo;
// time delay between steps
int walkSpeed = 500;
// motor names
int centerPin = 90;
// servo angles for walking pattern
int frontRightPin = 70;
int frontLeftPin = 110;
int backRightForward = 70;
int backLeftForward = 110;
// motor names position
int centerTurnPin = 90;
// servo angles for walking pattern
int frontTurnRightPin = 70;
int frontTurnLeftPin = 110;
int backTurnRightForward = 70;
int backTurnLeftForward = 110;
// variables for distance value
int distance = 0;
// setup distance value
int distanceCheck = 0;
// keep for distance value
int walkDistance(0);
// variables for sensors
int k;
int f;
int r;
// setup analog pin A0
int sensorPin = A0;
// distance value for bigger steps. Bigger values are greater distance and smaller values are lower distance
```

Programming Insectbot with Arduino IDE

Tools Needed:

- Soldering iron
- Scissors
- Screwdriver
- Pliers

Note: tools are not included in the kit

Check [this guide](http://www.instructables.com/id/Insect-Bot-mini/) if your sensor wiring is switched. <http://www.instructables.com/id/Insect-Bot-mini/>

SHIPPING LIST

- 1x Beetle (Arduino compatible)
- 1x Beetle Shield
- 2x 9g Micro Servo
- 1x Sharp IR Sensor
- 1x LiPo Battery 3.7V/ 180mAh + Charger
- 2x Steel Wire 200mm x 1 mm(7.87"x0.039")
- 1x ABS Sheet (50x50mm)(1.97"x1.97")
- 1x Double Sided Foam Tape(L/W/H:40x30x3mm)(L/W/H:1.57x1.18x0.12")
- 5x Cable Tie 1.8x100mm90.07x3.93')
- 1x Cable Tie 4x200mm(0.16x7.87')