

Otto Ninja robot Arduino Nano design



Otto Robot

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Summary

Early design of this open source robot that used an Arduino Nano with shield (not as the latest version)

[Hobby & Makers](#) > [RC & Robotics](#)

Tags: [toy](#) [robot](#) [arduino](#) [opensource](#) [ninja](#) [ottodiy](#)

⚠️WARNING⚠️

This previous design of Otto Ninja was publish because the community requested. This design is old compared to the new [Otto Ninja Starter robot](#), **some functionalities might not work properly or it will be difficult to assemble, code or calibrate**, since it was an early prototype test, all this limitations lead to a more compact and balanced design in the new [Otto Ninja Humanoid](#).

Arduino open source robot that can walks & roll.

Features

- **Walk & dance**
- **Transforms quickly into a wheeled robot**
- Simple Programming with [Otto Blockly](#) or Arduino

- ⚙ Metal high performance quality gear servos
- Expandable and modular
- Avoid obstacles with ultrasonic sensor
- Makes emotional sounds and melodies
- Button for interactions
- **Wireless communication - for remote control install the [Bluetooth - Dabble - App](#)**
- **Rechargeable battery & quick switch**

Print instructions

Recommended using an FDM 3D printer.

No need of supports or rafts.

Resolution: 0.2 mm or less

Fill density 15%

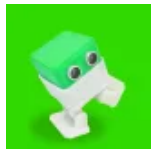
List of Parts

- Otto Nano Microcontroller
- Nano I/O shield board
- Micro USB cable Data Sync 1 m
- Battery 6F22 Rechargeable Lithium 9V 650mAh with micro USB port
- Switch + XH connector + Battery connector
- 2 x Ninja Servo 180° metal gears (it comes with 3 screws)
- 2 x Ninja Servo 360° continuous rotation metal gears (it comes with 3 screws)
- 2 x Oring 68 mm OD 60 mm ID 4 mm
- Ultrasonic sensor HC-SR04
- Button with headers
- 4pin Dupont cable with connector
- 2 x 3pin Dupont cable with connector
- Buzzer with headers
- Screwdriver Phillips 2.5X40mm (with magnetic tip)
- 4 x Metal self-tapping screw M2*5 (they must be ferromagnetic)
- 3D printed parts in V1 or V2 folder

Build your own robot like a Ninja 🐱

We invested lots of time and resources to provide open source code, software and hardware, please support this project by just **giving us a ♥ Like and share** and you are **welcome to be a part of this friendly community** of robot builders, teachers and makers. **Join today our [Otto Builder community](#)**

This remix is based on



Otto DIY build your own robot

by Otto Robot

Model files



v2

24 files



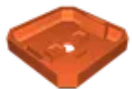
head-top-humanoid_v2.stl



head-bottom-humanoid_v2.stl



body-top-humanoid_v2.stl



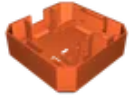
body-topv2.stl



body-middlev2.stl



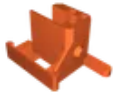
plate-ultrasonicv2.stl



body-bottomv2.stl



legsv2.stl



anklemirrorv2.stl



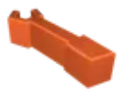
anklev2.stl



footv2.stl



armv2.stl



armmirrorv2.stl



clip-legsv2.stl



clip-body-servov2.stl



clip-body-servomirrorv2.stl



clip-bodyv2.stl



clip-body-smallv2.stl



clip-headv2.stl



clip-buttonv2.stl



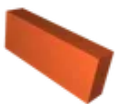
espada.stl



hombro_step-hombro.stl



pin_espada.stl

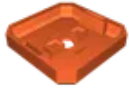


pin_brazo.stl



V1

12 files



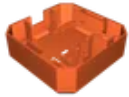
body-topv1.stl



body-middlev1.stl



ultrasonicplatev1.stl



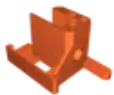
body-bottomv1.stl



legsv1.stl



anklev1.stl



anklemirrorv1.stl



footv1.stl



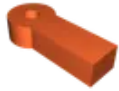
clip-legsv1.stl



clip-bodyv1.stl



clip-buttonv1.stl



support-push-switchv1.stl

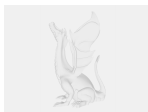


ottoninjahumanoidarduino.step

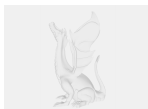


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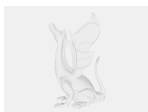
Other files



ninja-assembly-instructions.pdf

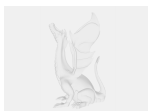


otto-ninja-wiring-connections.pdf



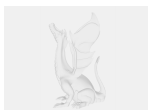
varspeedservo-master.zip

☐ Arduino Libraries



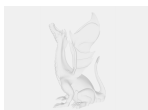
dabble-master.zip

☐ Arduino Libraries



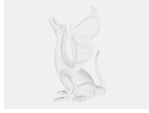
otto_ninja_testcode.ino

☐ Arduino code for testing



otto_ninja_2021_test_code.ino

☐ Arduino code for testing updated



otto_ninja_2021_all_functions_code.ino

☐ all movements in one code



otto_ninja_dabbleapp_v1.ino

☐ Arduino code for Dabble Bluetooth App control



otto_ninja_dabbleapp_v2.ino

☐ Arduino code for Dabble Bluetooth App control

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