

Bluetooth Controlled Robotic Arm

ABSTRACT

A simple, 3D Printed, Android Phone based, Arduino & Bluetooth Controlled Robotic Arm is designed and developed in this project. We will now see the operation and working of this Robotic Arm.

Install the Application in your Android Phone and provide necessary permissions to access the device's Bluetooth. If the Bluetooth Module (HC-05) is not paired with the mobile, pair it using the Bluetooth Settings of the Phone. Once the device is paired, open the App and it will automatically list out the paired Bluetooth devices. Select the correct Bluetooth Module and if everything goes well, you will enter into the main control panel.

Working

- This Robotic Arm can be controlled using any Android based Smart Phone with Bluetooth.
- Dedicated App for Android Phone to control the Robotic Arm.
- There are two modes of operation: Manual Mode and Automatic Mode.
- For regular or manual operation, you can control the Robotic Arm by manipulating the values of individual servo motors of the Robotic Arm.
- When Programming Mode is enabled, you can program your Robotic Arm for fully automatic operation.
- The Robotic Arm contains four Metal Gear Servos and 3D Printed Parts for the structure.

Components

- Arduino Uno
- Bluetooth

- servo Motor
- 3d printed parts
- Potentiometer

Project image



Circuit Diagram

