

PICK AND PLACE ROBOT

INTRODUCTION:

This is an abstract on the model pick and place robot which is a Bluetooth controlled model. This abstract explains about the working mechanism and the components used to build the model.

COMPONENTS:

- *Arduino UNO
- *DOF robot arm with gripper and base
- *HC-05 Bluetooth module
- *Adafruit motor shield
- *2WD Smart robot car chasis
- *NiMH Rechargeable battery
- *Mini breadboard
- *Jumper wires(generic)
- *Soldering iron(generic)
- *Servo motors

PICK AND PLACE ROBOT:

First of all we must know how the robot takes the order. We are using a Bluetooth module which will be connected to a mobile app using a Bluetooth connection.

The servo motors which are used to run the robot are fitted in the chassis. The servo motors are then soldered using soldering iron to give the external connection to run the model.

The Arduino is given a code to control the movement of the model as per the code. Then the Arduino is soldered with the pin header to extend the connections.

The Adafruit motor shield allows to talk with the motors. The motor shield helps to control the direction of the motor. The motor shield allows you up to 4 bi directional DC motors with individual 8 bit speed selection.

The Bluetooth module is the channel to send orders and take action. It has six pins and we used four pins only. The four pins are RX-TX-GND-+5.

*+5 on the Bluetooth module to the 5v on the arduino

*GND on the Bluetooth module to the GND on the arduino.

*RX on the Bluetooth module to the TX on the arduino

*TX on the Bluetooth module to the RX on the arduino.

The hand containing two servo motors are fitted and the breadboard connections are made where the external source is applied and the final model is tested.

Thank you for your patience on reading the abstract.

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