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# Multi-Channel I/R Remote Control Box

## 1 Product Introduction:

a) I/R remote control box with four channels.  
   Set up the different channels by switching the left-hand slide switch.

b) By using infrared, the unit can control 2 motors to turn forward and backward.

c) Four units can play together by setting different channels.

### Power source required:
Voltage/Electronic/Mechanical: 4x 'AA' batteries (not included)

## 2 Tools You May Need:

- Long Nose Pliers
- Diagonal Cutter
- Screwdriver
- 4xAA Batteries

## 3 Mechanical Parts List:

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Qty</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Battery terminal-1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>Battery terminal-2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>P3</td>
<td>Battery terminal-3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Tapping screw</td>
<td>4 (2.3x7)</td>
<td></td>
</tr>
<tr>
<td>P5</td>
<td>Tapping screw</td>
<td>4   (2.6x7)</td>
<td></td>
</tr>
</tbody>
</table>

![PC Board Diagram]
5 Mechanical Assembly:

1. P1x2  P2x2
   P3x2
   C
   Bend down the tag

2. 4XAA

3. Break off the tag
Turn ON the power switch (SW8 to right position), use 4pcs P4 to screw the PC board tightly until the red LED light turns on.
Finished Product
ROBOT BEETLE

1 Product Introduction:

An infrared remote control mechanical beetle which provides 4 different channels to enable 4 beetles to play together. 6 wheels have it moving forward, backward, left and right smoothly. 2 motors to control its claw to open and close, lift and lower. Learning how to control its claw and grab article properly.

Power source required:
Voltage/Electronic/Mechanical: 4x 'AA' batteries (not included)

2 Tools You May Need:

- Long Nose Pliers
- Diagonal Cutter
- Screwdriver
- 4xAA Batteries

3 Mechanical Parts List:

<table>
<thead>
<tr>
<th></th>
<th>Motor</th>
<th>Qty</th>
<th></th>
<th>Motor</th>
<th>Qty</th>
<th></th>
<th>Motor</th>
<th>Qty</th>
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<td>P1</td>
<td>Yellow</td>
<td>1</td>
<td>P2</td>
<td>Orange</td>
<td>1</td>
<td>P3</td>
<td>White</td>
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<td></td>
<td>Green</td>
<td></td>
<td></td>
<td>Blue</td>
<td></td>
<td></td>
<td>Purple</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>Gray</td>
<td>1</td>
<td>P5</td>
<td>Pinion Gear 8T</td>
<td>2</td>
<td>P6</td>
<td>Gear With Shaft(Green)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Brown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P7</td>
<td>Gear With Shaft(Orange)</td>
<td>4</td>
<td>P8</td>
<td>Gear 44/18T(Blue)</td>
<td>4</td>
<td>P9</td>
<td>Gear 48/18T(White)</td>
<td>2</td>
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<td>Description</td>
<td>Quantity</td>
<td>Dimensions</td>
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<td>P10</td>
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<td>Output Gear 10T(Black)</td>
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<td>P14</td>
<td>Round Shaft</td>
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<tr>
<td>P15</td>
<td>Round Shaft</td>
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<td>(2x16)</td>
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<td>P16</td>
<td>Eyelet</td>
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<tr>
<td>P17</td>
<td>Tapping Screw</td>
<td>32</td>
<td>(3x7)</td>
<td></td>
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<tr>
<td>P18</td>
<td>Tapping Screw</td>
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<tr>
<td>P19</td>
<td>Tapping Screw</td>
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<td>(2.3x7)</td>
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<tr>
<td>P20</td>
<td>Tapping Screw</td>
<td>2</td>
<td>(2x12)</td>
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<tr>
<td>P21</td>
<td>Screw</td>
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<td>(3x11)</td>
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<td>P22</td>
<td>Screw</td>
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<td>(3x16)</td>
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<tr>
<td>P23</td>
<td>Battery Terminal</td>
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<td>P24</td>
<td>Battery Terminal With Connector</td>
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<td>P25</td>
<td>Battery Terminal With Wire</td>
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<tr>
<td>P27</td>
<td>Sponge</td>
<td>2</td>
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<td></td>
</tr>
</tbody>
</table>
Plastic Parts:

* Please ignore this part
5 Mechanical Assembly:

1. Yellow → Green
   P1 → P01 → P5

2. Orange → Blue
   P2 → P01 → P5
Important!

A and B must be same distance to the central.
35 P28 PC Board

36 P17x3

37 Finished Product
7 How it works:

1. I/R remote control box:

a) Select the channel first by sliding the left-hand switch to A, B, C or D. Then turn the power switch on, the red LED will light. (The channel won’t be changed once the power is on.)

b) The 4 buttons (▲, ▼) control its moving: forward, backward, left or right. Push right-hand front button (②) and right side ▲ or ▼ button together to control its claw up and down. Left-hand front button (①) and left side ▲ or ▼ button to have its claw open and close. Push the 2 front buttons (②) together for 3 seconds, its headlight will turn on, push them 3 seconds again to turn it off.

2. Mechanical Beetle:

a) The Mechanical Beetle has a built-in receiver module and it will learn the channel from the remote controller. Turn the power on, the red LED will flash. Point the remote controller in the direction of the Beetle, push any button of the remote controller for 3-5 seconds, the LED will stop flashing and become lighter when it receives signal from the remote controller.

b) ![Control Diagram](image)

c) The Beetle needs to learn the channel from the remote controller every time the power is turned on.

d) To set a different channel, both the remote controller and the Beetle need to be turned off, then follow step 1 a) and 2 a) again.

e) If there are 2 or more players (maximum for 4), please note to set up the channel one by one. Make sure the other Beetles are powered off when anyone is setting up the channel. If the Beetles have already learned the channel, leave the power on, it won't learn another channel again.

f) The two gearboxes used for claw equipped with safety gear, when the claw open, close, up or lower to the maximum position, and user keeps pushing the buttons, the safety gear will start to work to protect the gearbox and make ‘da, da, da...’ sound.

To extend the life of gearbox, release the buttons once you hear the safety gear emit the ‘da, da, da’ sound.
8 Trouble shooting:

1. I/R remote control box:
Check if the battery terminals are contacted properly to the PCB, also check if the batteries are
inserted correctly. Make sure the PCB is screwed tightly to the case. (Refer to 8 on page 3)

2. Mechanical Beetle:
   a) Ensure all wirings are correct.
   b) If Beetle moves wrong direction when you push the remote controller, check if the wiring of P1,
P2 are reversed. (Refer to 8 on page 24)
   c) If its claw works oppositely, check if the wiring of P3, P4 are reversed. (Refer to 8 on page 24)
   d) If the headlight doesn't light, check if the wiring of LED is correct. (Refer to 8 on page 24)

9 Circuit Diagram:

[Diagram of Remote Control Box]

[Diagram of IR Beetle]
• Removal and replacement of batteries should be carried out by an adult or under adult supervision.
• Do not attempt to recharge non-rechargeable batteries. Rechargeable batteries must be removed from the toy before recharging.
• Avoid short circuiting the contacts in the battery compartment or the battery terminals.
• Remove exhausted batteries from the product to avoid leakage.
• Do not mix used batteries and new batteries or batteries of different types.
• Use of rechargeable batteries or mercury oxide batteries are not recommended for this product.