

- MRT3 curriculum is developing for helping students(age 6 13+), through robotics, learn essential STEM (science, technology, engineering, and math) concepts.
- Step by step and systematic building instructions for MRT3 educational robot kits.





MRT3-2. Beginner Level





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Part list

Block

* The form and color of some parts may be different when compared to actual parts due to continues improvement of production quality.







Power Connector Connects to the 6V battery packs. Mode Setting

1. Press mode button and the LCD will be changed as below. Please select your favorite function.

2..After selecting your favorite mode, press start button and the robot will move.



Remote control control



Line Tracer



Avoider

MODE 9



Stalker



Drop Checker





Remote Control + IR

Remote Control + Touch



Remote Control(R)

IR Sensor



An infrared signal is sent to the object. If there is a reflection, the information is sent to the 'receive' light part.

"Receive" light

This receives the signal from the above part and converts that signal into the input signal.



This sensor receives the Sound from MB and sent out.

Toch Sensor



set the ontput singnal as ON/OFF function.



% The maximum number of channels can be set as shown below without interference. Use the picture to assign the channels to the communication ID.



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1. Mini Tank



2. Duckling

4. Sumo-Bot



3. Power Spin









6. Huna-E



7. Line Tracer Train



8. Target shooting game with gun



9. Car and car key







































Setting mode

- 1. Ensure battery case/DC Motor Connector are connected.
- 2. Turn on the power.
- 3. Press the MODE button and select as the follow mode.







IR sensor?

- An IR sensor has a send and receive part. The time taken to receive the signal can be converted into a distance for the robot to measure An IR Sensor can also detect between light and dark surfaces.

















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Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect R/C receiver board to R/C connector.
- 5. Connect Right IR sensor to R connector.
- 6. Comect speaker sensor to INZ connector.







STEM 3. Learn the principle of Light

Kind of light

- Infrared ilght : Infrared light: Infrared radiation is popularly known as "heat" or sometimes "heat radiation", since many people attribute all radiant heating to infrared light and/or to all infrared radiation to being a result of heating.
- **Visible ilght :** Humans can see the this kind of light. More specifically, you see the light that is not absorbed by objects.
- **Ultraviolet ilght :** It is believed to induce the production of Vitamin D and can also be used for sterilization and pasteurization. However, it is harmful to our eyes and skin if we are exposed to direct sunlight.







































Make your own spinner for battle with your friends!









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MY ROBOT TIME Workbook series















Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect Left IR sensor to R connector.
- 5. Connect Right IR sensor to R connector.

 Setting mode

 1. Ensure battery case/DC Motor Connector are connected.

 2. Turn on the power.

 3. Press the MODE button and select as the follow mode.

 MODE # 6

 MODE # 6

 Drop Checker Mode

 4. Select Remote ID.

 5. Press the START button.



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Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect Left IR sensor to R connector.
- 5. Connect Right IR sensor to R connector.
- 6. Comect speaker sensor to INZ connector.





ST Science STEM 7. The eyes of Technology Robot-IR Sensor2



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Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect Left IR sensor to R connector.
- 5. Connect Right IR sensor to R connector.




















































28 X1 X2 X1 X2 X1 X2 X1 X2 X1 X2 X1 X1 X2

30



















X2





X1

X1



Flip

49



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End





Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect Left IR sensor to L connector.
- 5. Connect Middle IR sensor to C connector.
- 6. Connect Right IR sensor to R connector.
- 7. Connect the Speaker Sensor to IN2 connector.



- 1. Ensure battery case/DC Motor Connector are connected.
- 2. Turn on the power.
- 3. Press the MODE button and select as the follow mode.



- 4. Select Remote ID.
- 5. Press the START button.



TechnologySTEM 11. Learn about the
position of sensor



King the second s

% If you find out the reason, please try to change to Mobe 0. and operate it. What will happen?





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- 4. Select Remote ID.
- 5. Press the START button.















































































Beginner Level



Connect in this order.

- 1. Connect Battery Cases to Power connector.
- 2. Connect Left-DC motor to Left-motor connector.
- 3. Connect Right-DC motor to Right-motor connector.
- 4. Connect IR sensor to C connector.
- 5. Connect R/C Receiver to R/C connector.
- 6. Connect Speaker Sensor to IN2 connector.

Setting mode

- 1. Ensure battery case/DC Motor Connector are connected.
- 2. Turn on the power.
- 3. Press the MODE button and select as the follow mode.



- 4. Select Remote ID.
- 5. Press the START button.





of energy it can be changed into.

Beginner Level

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