

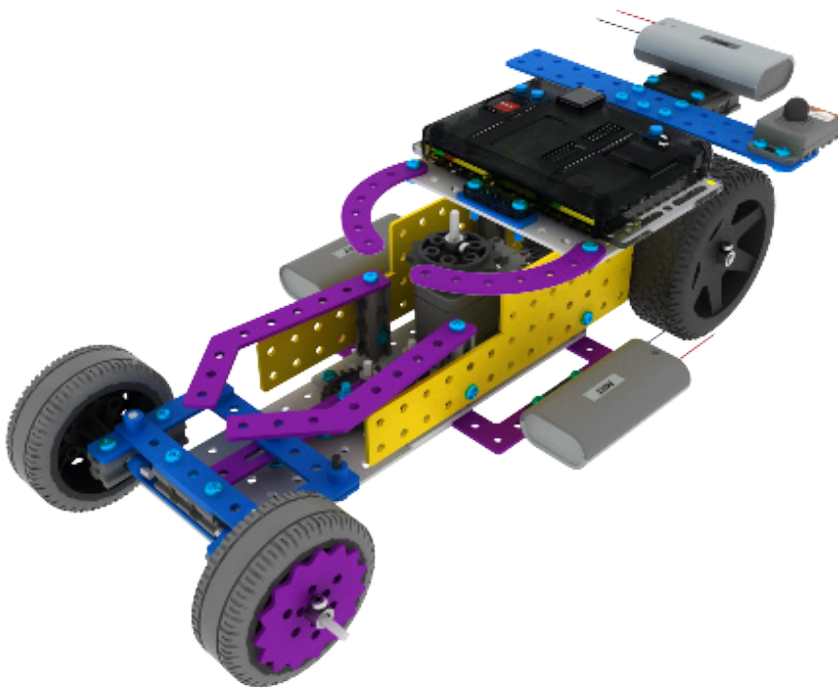


MY ROBOT TIME



Training course Of Professional

STEP I



Training course Of Professional I

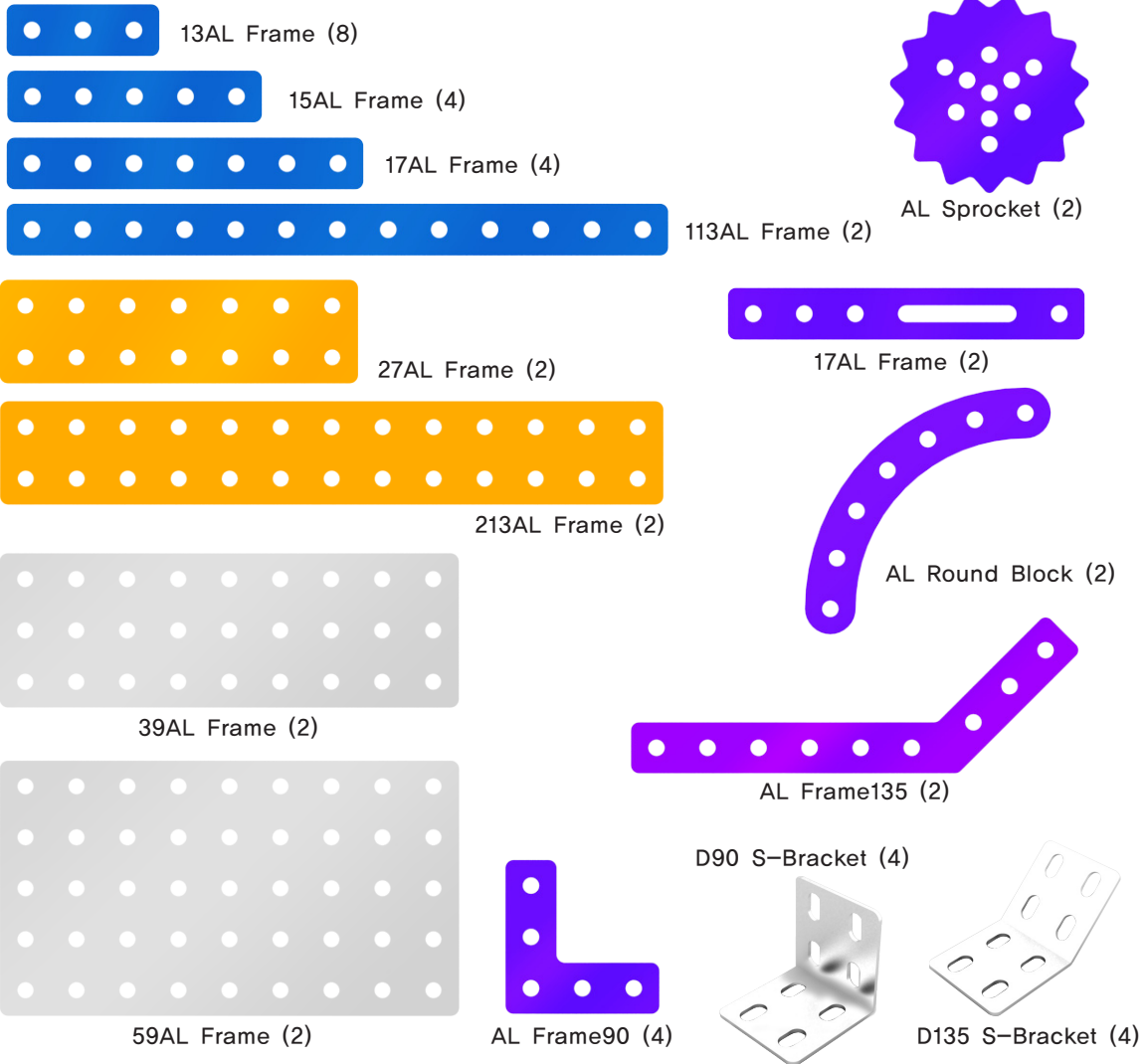
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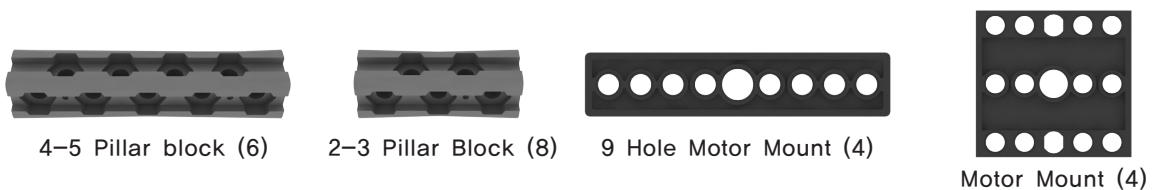
Packing list

AL frame and steel bracket

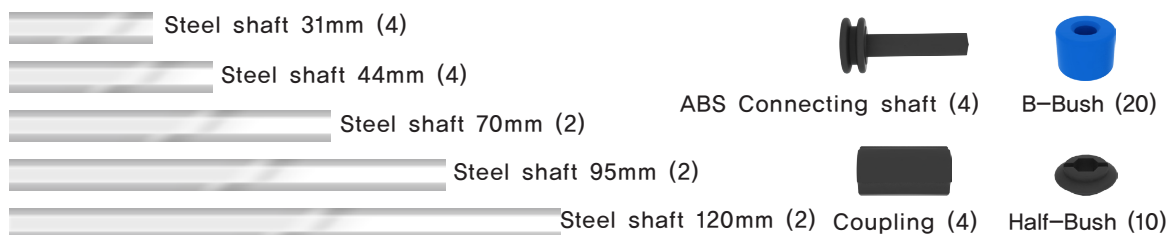
※ AL : Aluminum



Pillar and Motor Mount



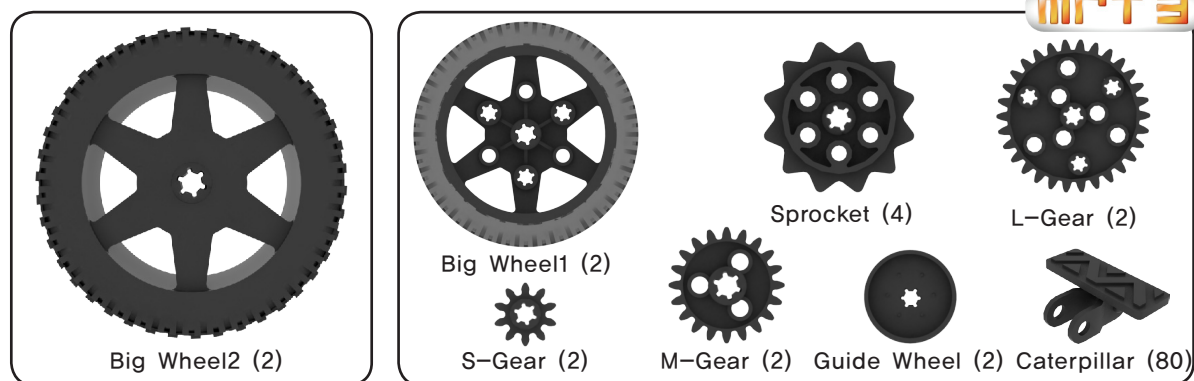
Steel Shaft and Bush



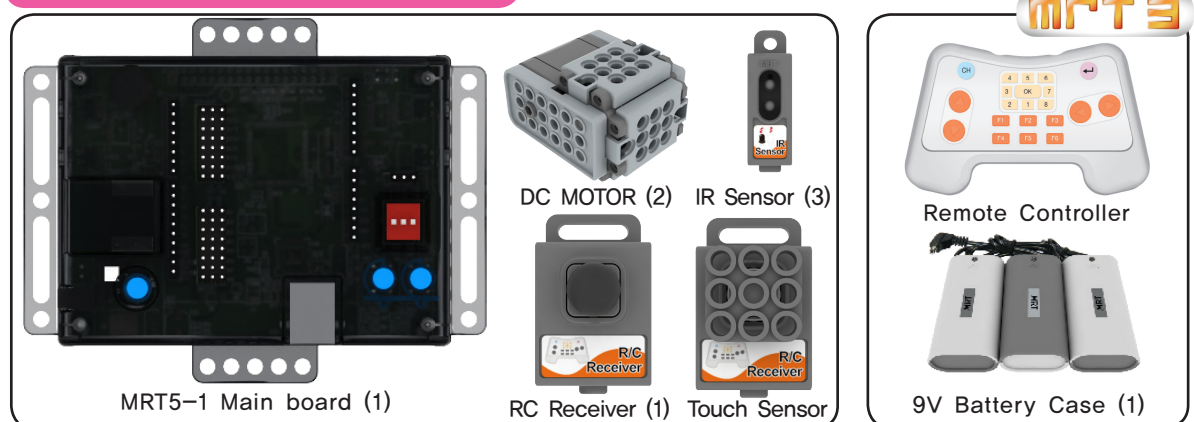
Bolt and nut



Gear and Wheel

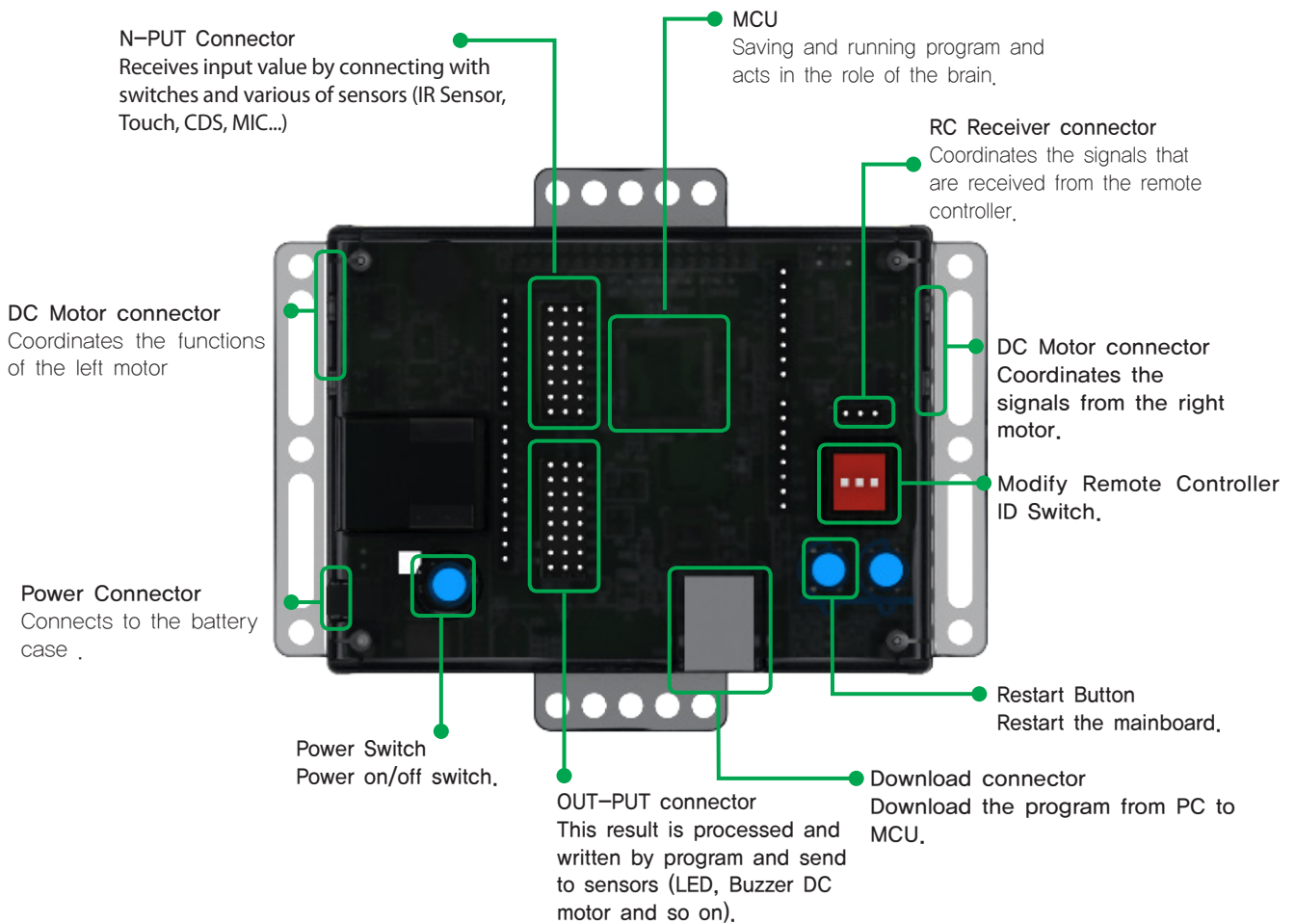


Mainboard and Electronic Parts

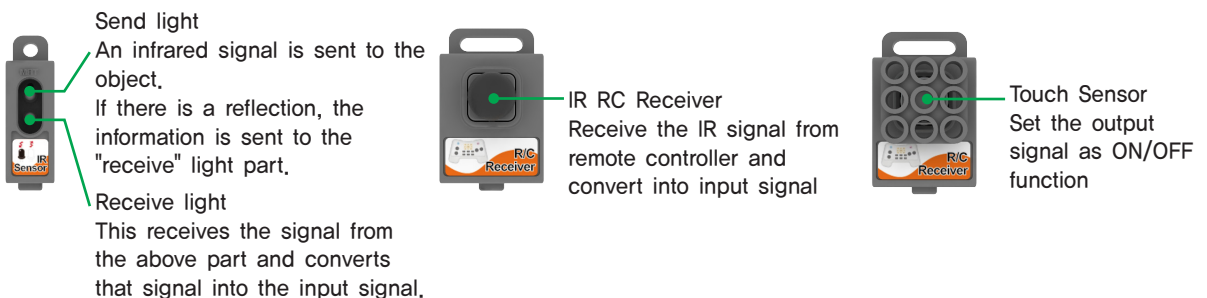


Electric parts

Mainboard assemble

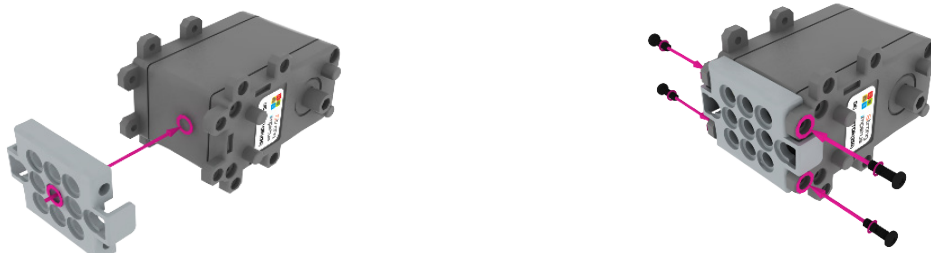


Various of Sensors and Function

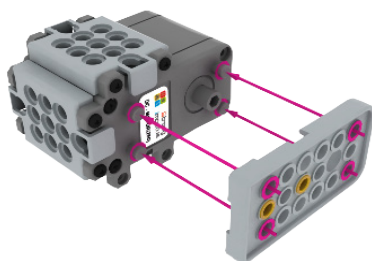


The usage of DC Motor

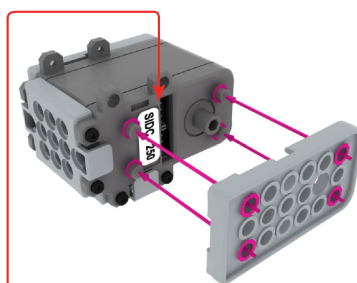
The assemble of DC motor



Assemble DC motor with motor mount block

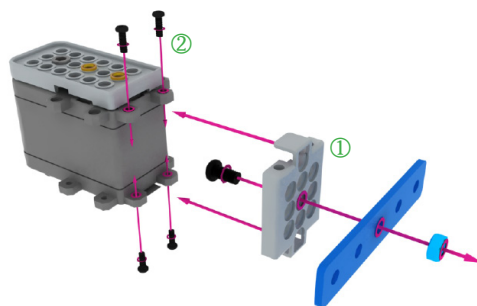
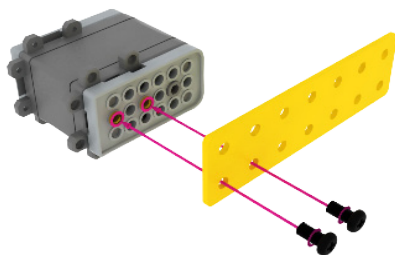


1. Use the insert module to fix frame.



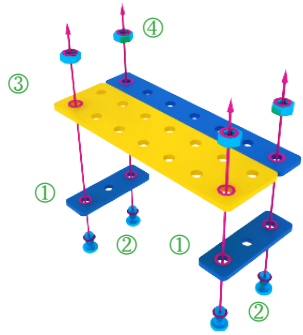
2. Insert the line first and then assemble the DC motor.

Assemble frame and motor

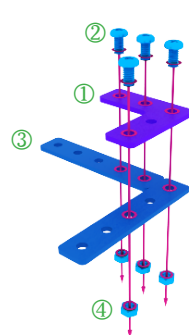


Learn how to assemble each part and its function

Assemble frame

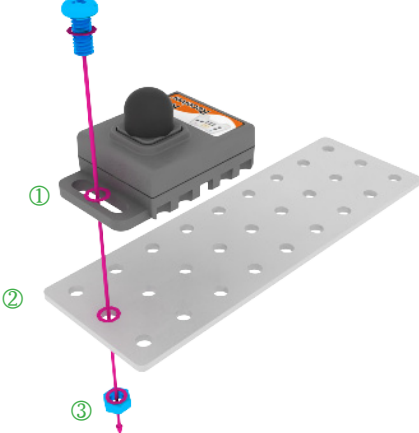


① Frame → ② Bolt → ③ Frame → ④ Nut



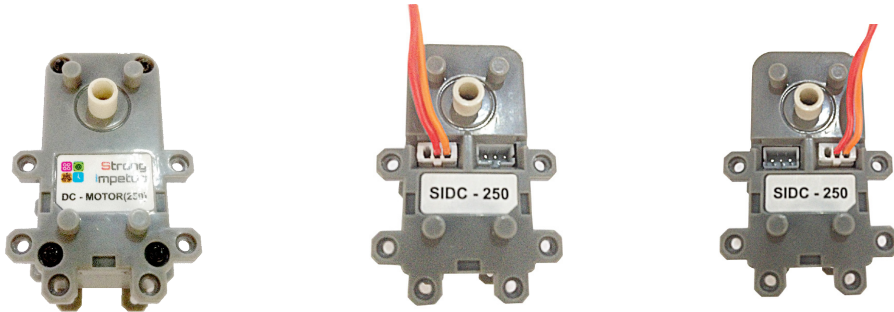
① Frame → ② Bolt → ③ Frame → ④ Nut

Assemble sensor and frame

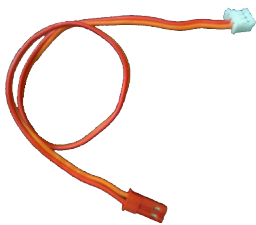


① Frame → ② Bolt → ③ Sensor

Assemble motor line



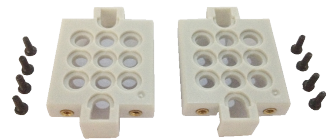
Connect to the side which is easier to connect.



Motor line

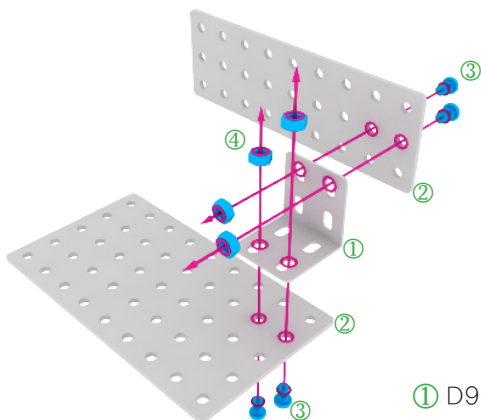


Motor Mount



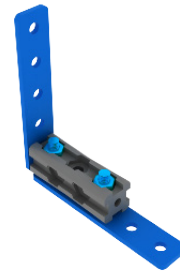
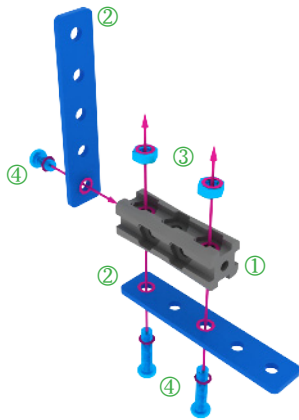
Motor block

Assemble frame and D90 S- Bracket

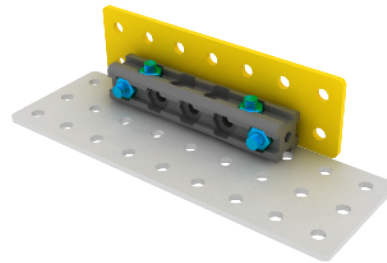
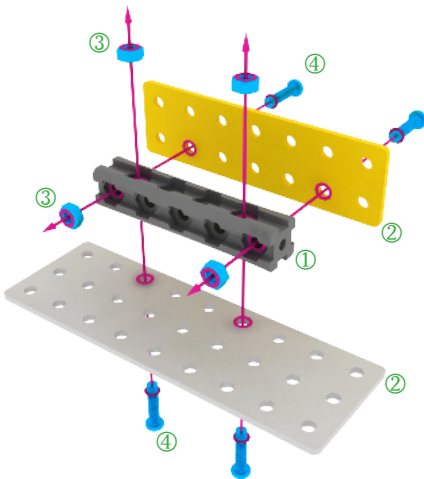


① D90 S-Bracket → ② Frame → ③ Bolt → ④ Nut

Assemble frame and pillar block



① Pillar block → ② Frame → ③ Nut → ④ Bolt



① Pillar block → ② Frame → ③ Nut → ④ Bolt

※ Fix the nut onto the pillar block first when combined with each frame.

Steel Shaft Scale drawing

Steel shaft 31mm

Steel shaft 44mm

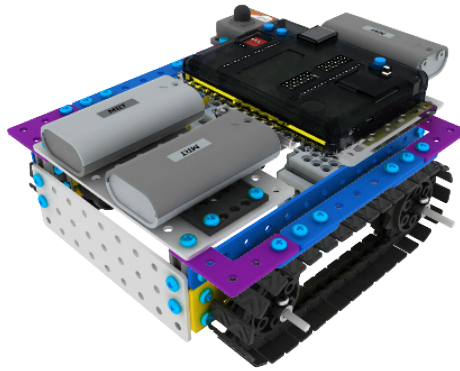
Steel shaft 70mm

Steel shaft 95mm

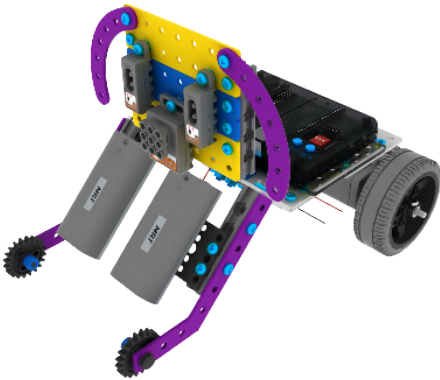
Steel shaft 120mm



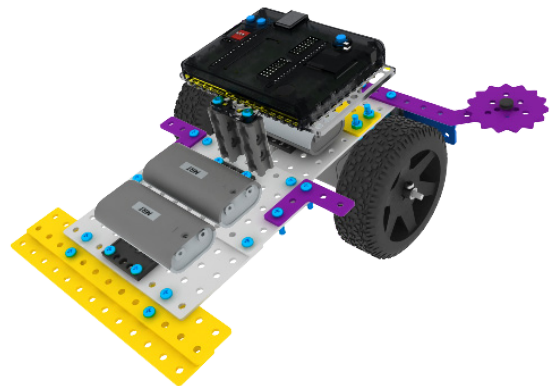
Learn how to assemble these robots !



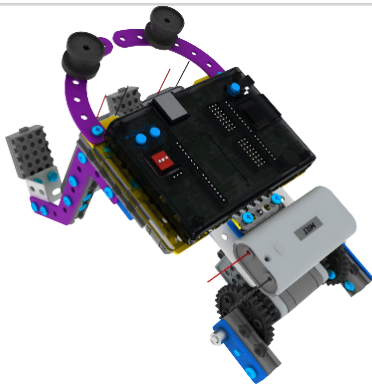
1. Basic Tank



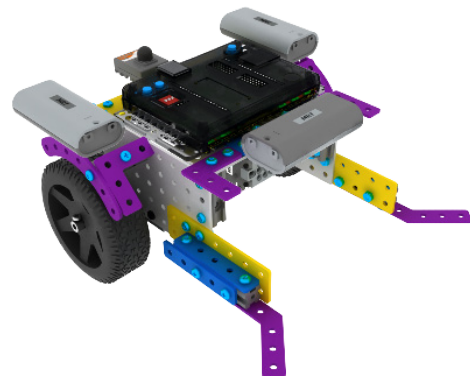
2. Dog Stalker



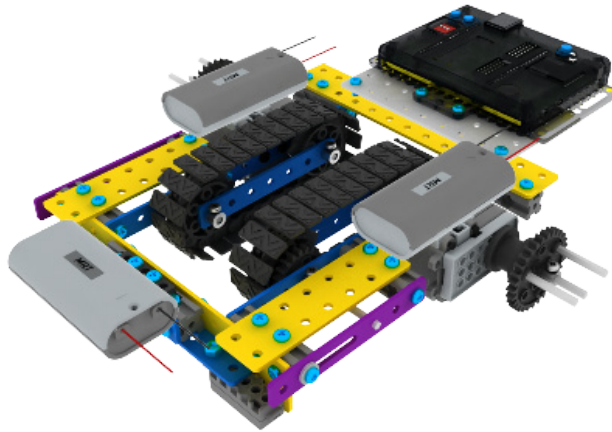
3. Battle Robot



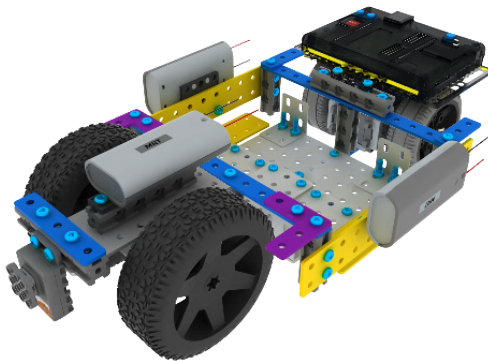
4. Frog-Bot



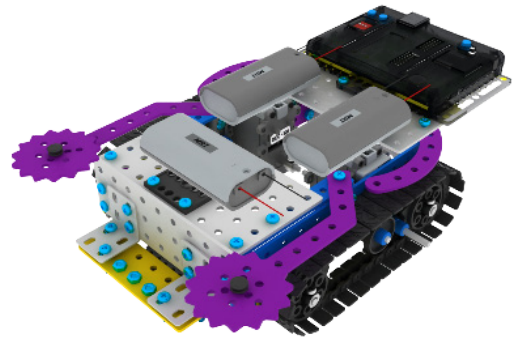
5. Soccer Robot



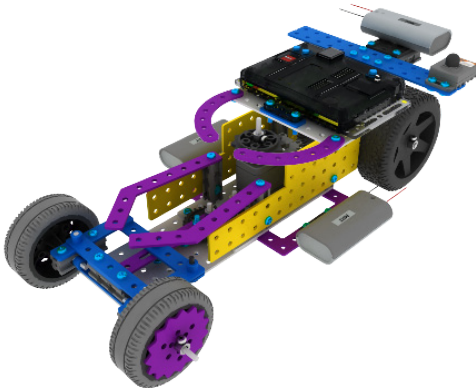
6.Drop Checker



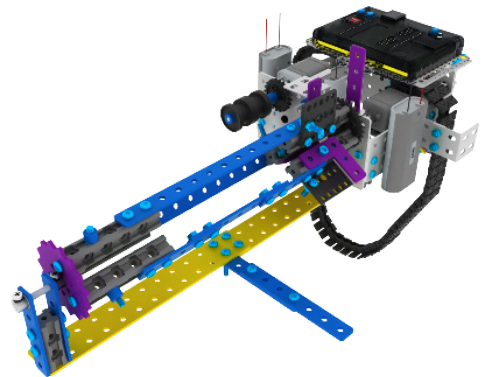
7. Shuttle Carrier



9. Tracing Tank



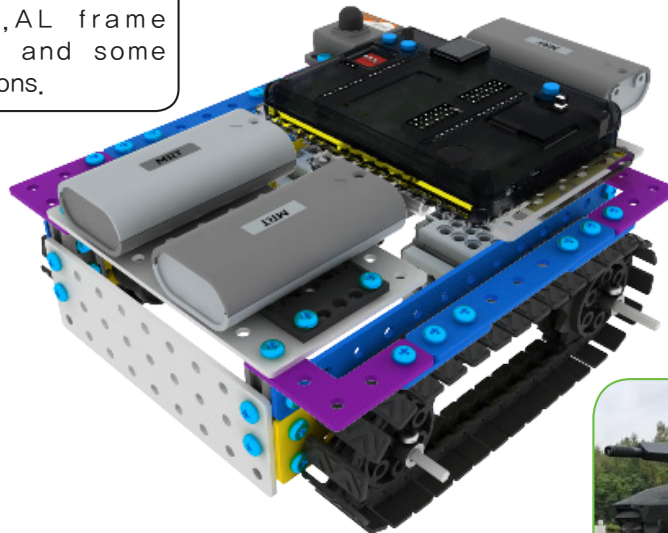
9.Classic Car



10. Machine Gun

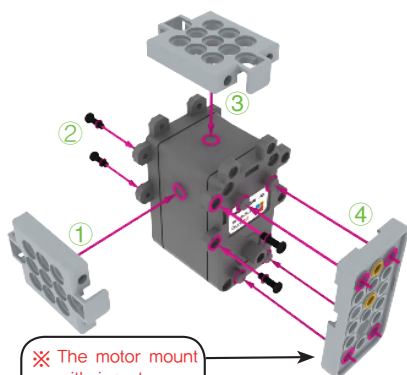
BASIC TANK

To learn how to assemble DC motor, AL frame, Caterpillar and some basic operations.

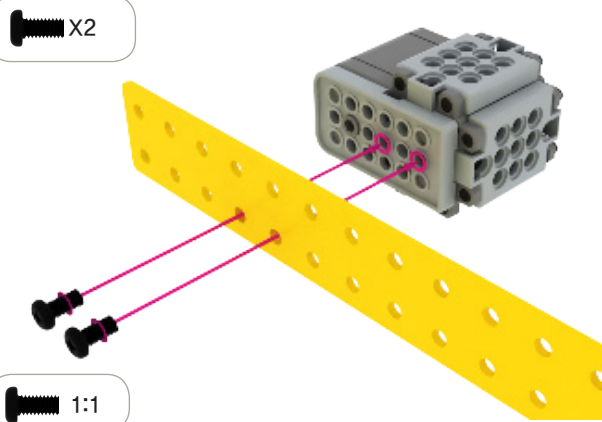


Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel Lshaft 95mm		2	9V Battery Case		1	Bolt		4
Steel shaft 70mm		2	MRT5-1 Main board		1	Bolt 8mm		15
13AL Frame		4	DC MOTOR		2	Bolt 16mm		22
15AL Frame		1	Remote Controller		1	Nut		32
17AL Frame		2	AL Frame90		4	Half-Bush		4
113AL Frame		2				Guide Wheel		2
213AL Frame		2				M-Gear		2
39AL Frame		2				L-Gear		4
59AL Frame		2				Sprocket		4
Motor Mount		3				Sleeve pipe		8
2-3Pillar Block		4				RC Receiver		1
						Caterpillar		66

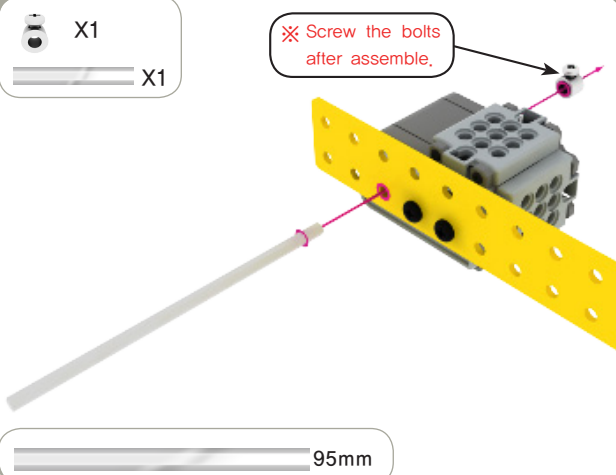
1



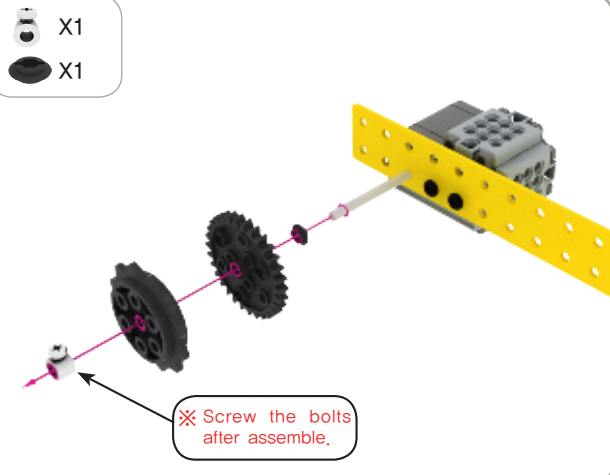
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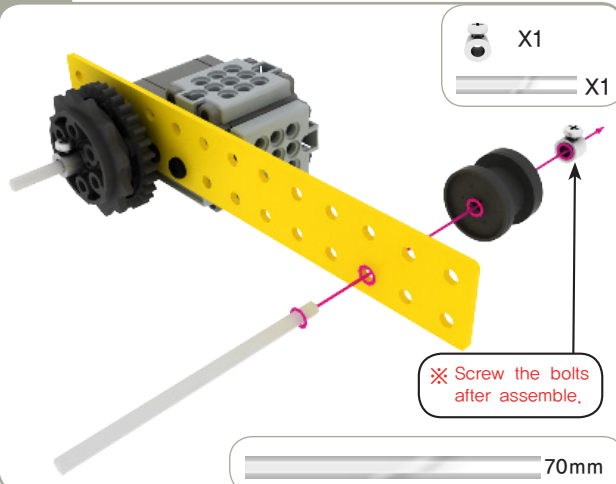
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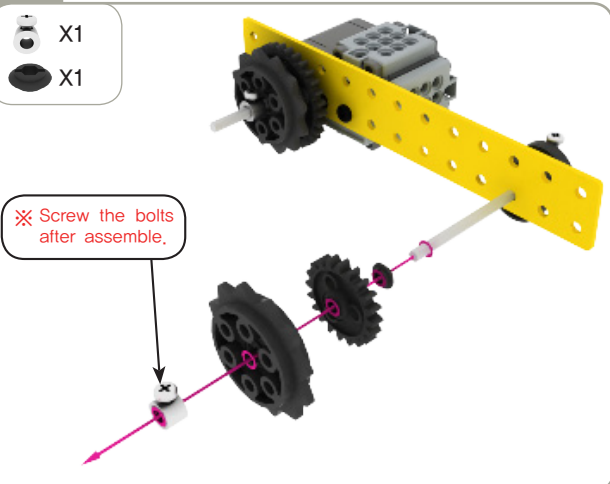
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5

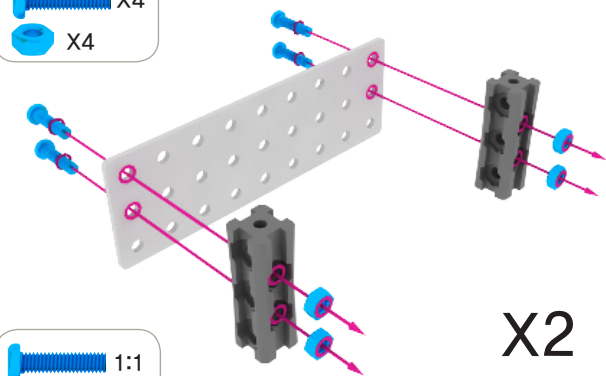


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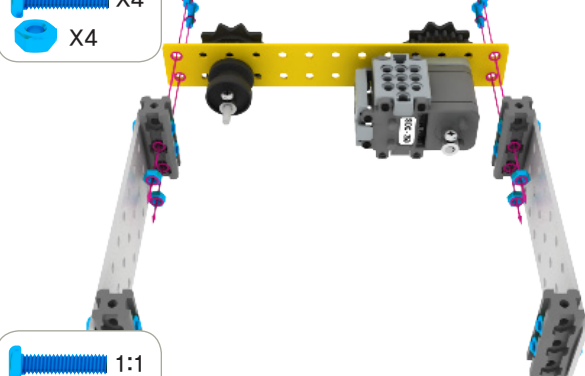
7

16mm X4
X4



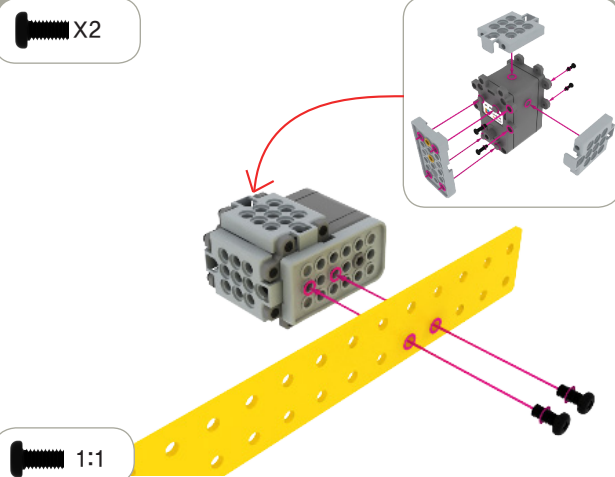
8

16mm X4
X4



9

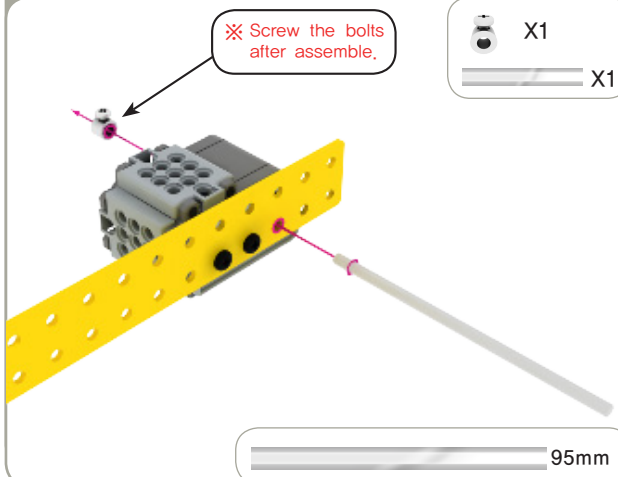
X2



10

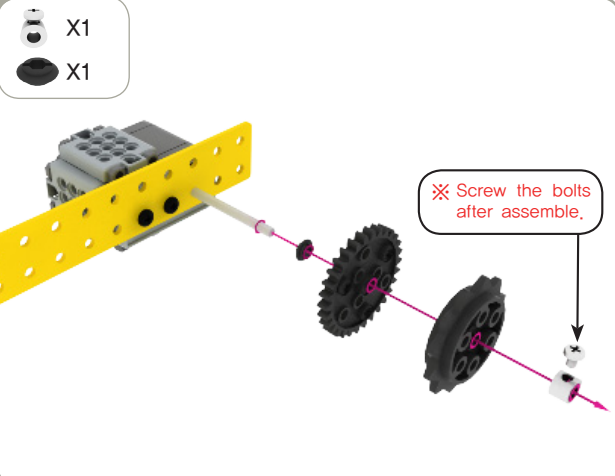
✗ Screw the bolts after assemble.

X1
X1



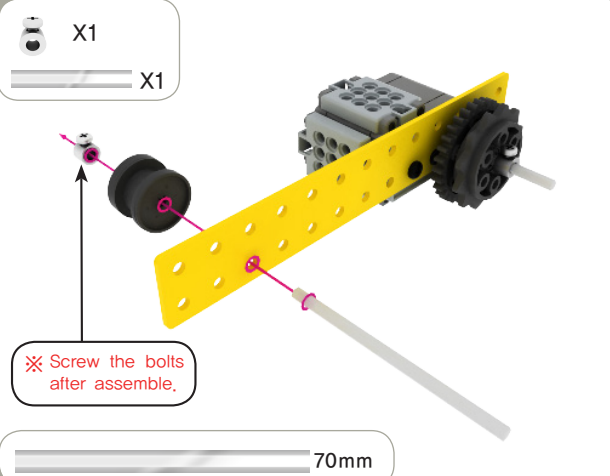
11

X1
X1



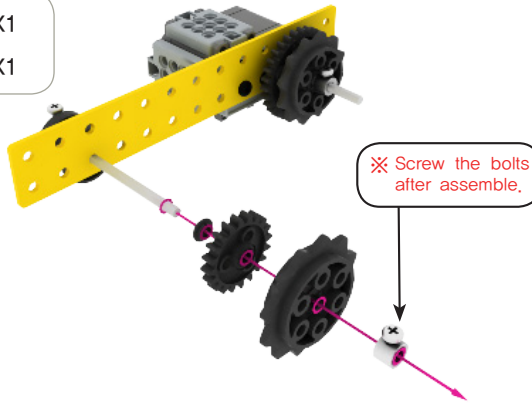
12

X1
X1



13

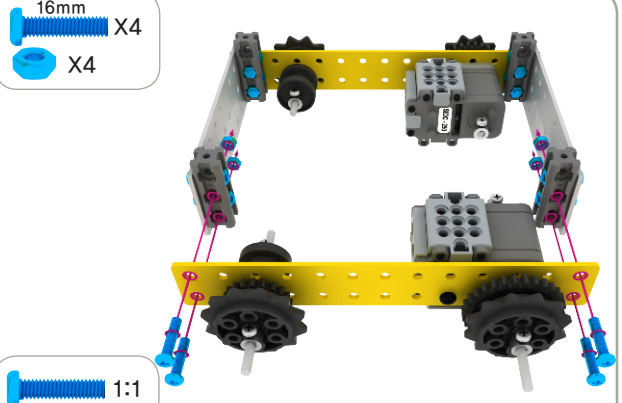
X1
X1



14

16mm X4
X4

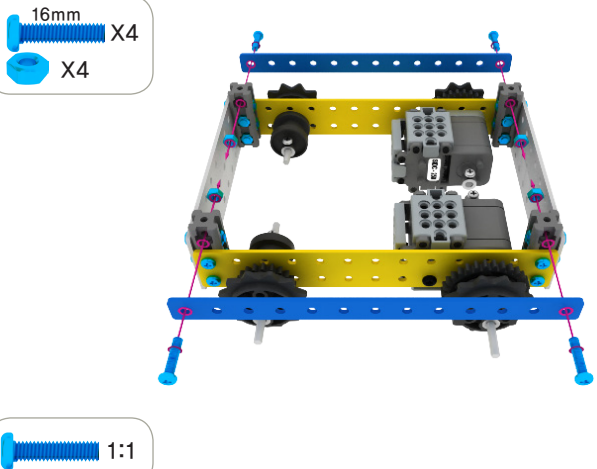
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15

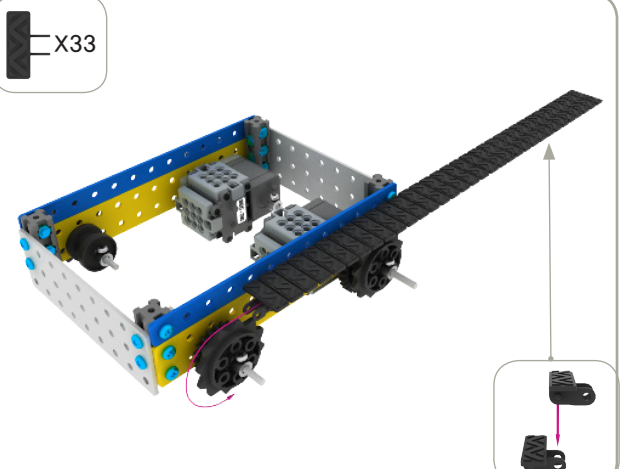
16mm X4
X4

1:1



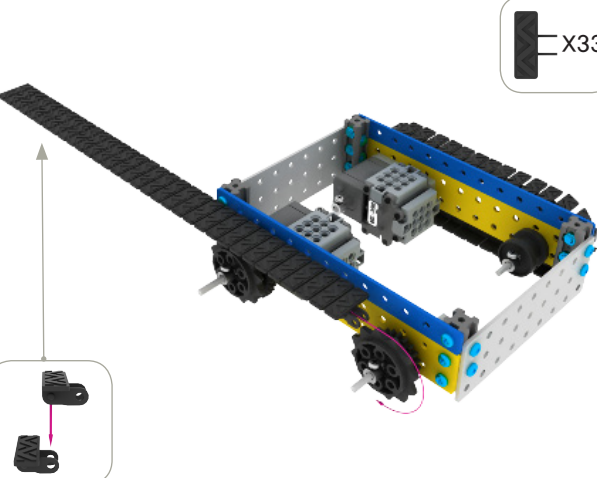
16

X33



17

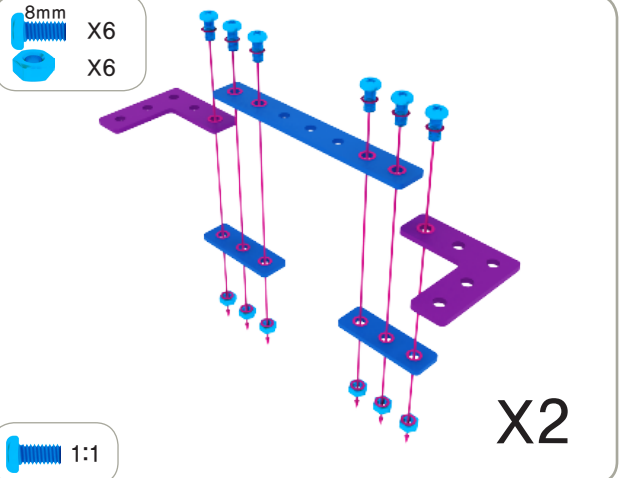
X33



18

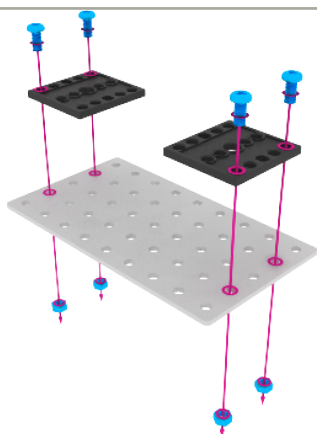
8mm X6
X6

1:1



19

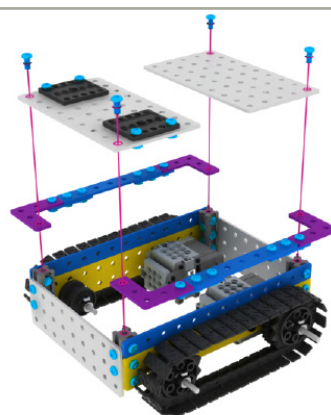
8mm X4
X4



1:1

20

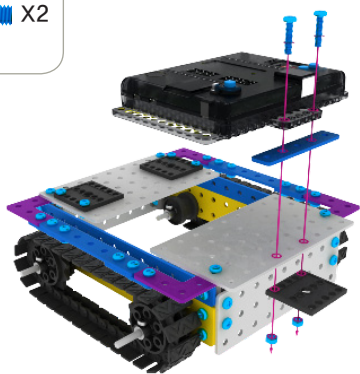
8mm X4



1:1

21

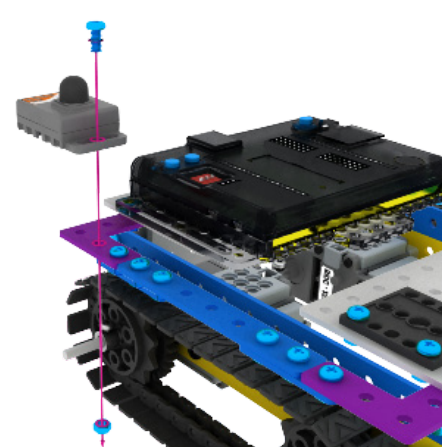
16mm X2
X2



1:1

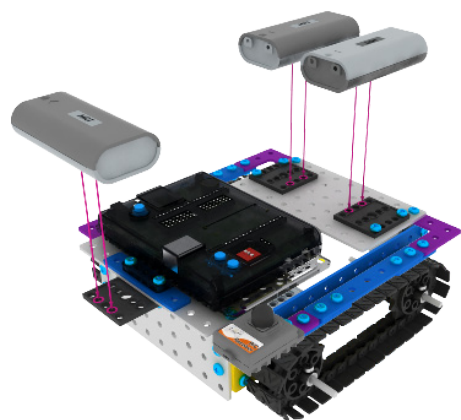
22

8mm X1

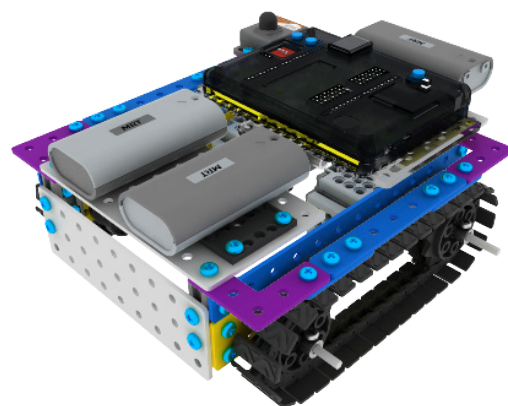


1:1

23

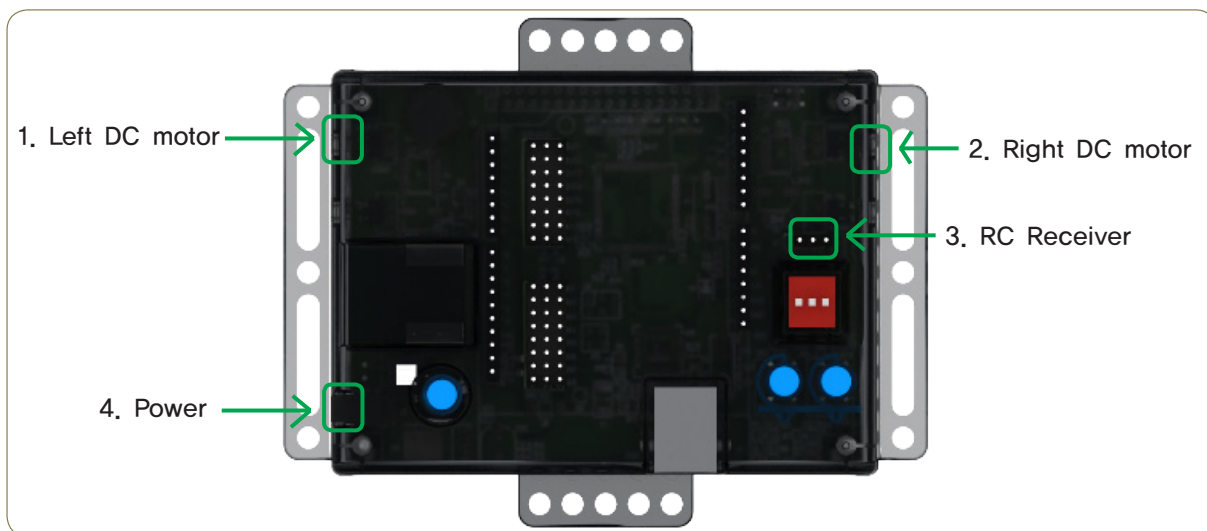


Complete





Connecting the mainboard

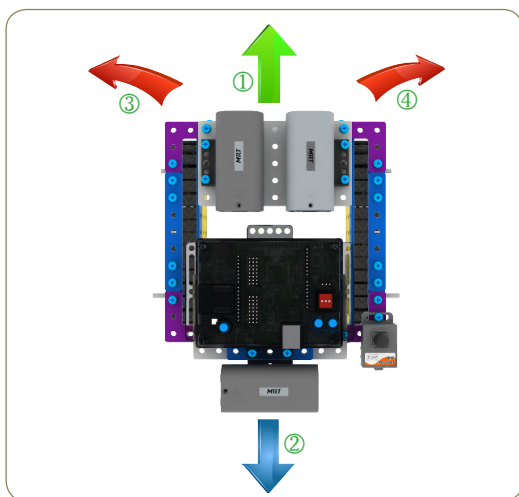


Please connect in this order:

1. Connect left DC motor to L-MOTOR connector.
2. Connect right DC motor to R-MOTOR connector.
3. Connect RC Receiver to R/C connector.
4. Connect battery case to Power connector.



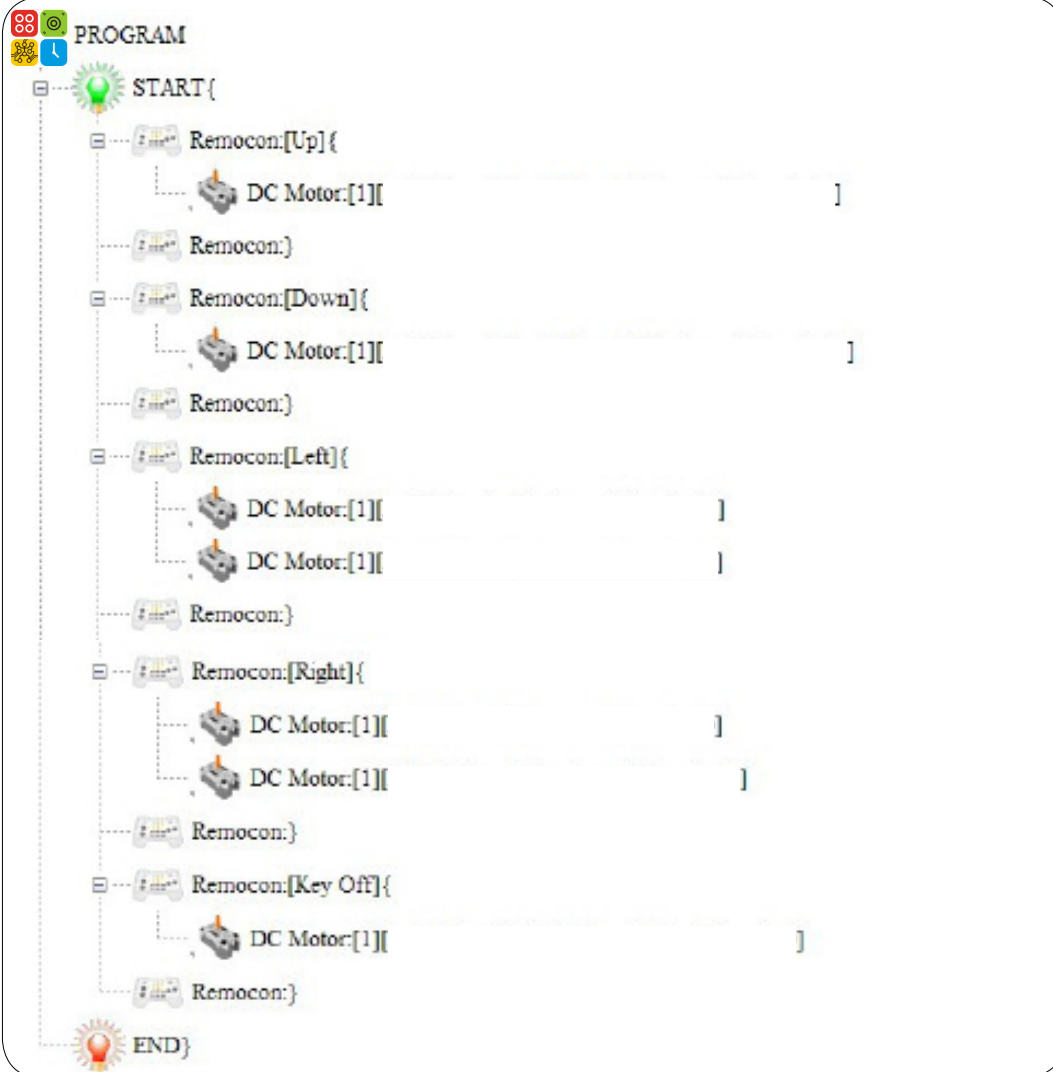
Motion Pattern





Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Press the directional key (up/down) of remote controller, the robot will move forward and backward.
2. Press the directional key (left / right) of remote controller, the robot will move left and right .
3. It's possible to compile the program as your idea, like press "up" and "left/right" together or press "down" and "left/right"together.

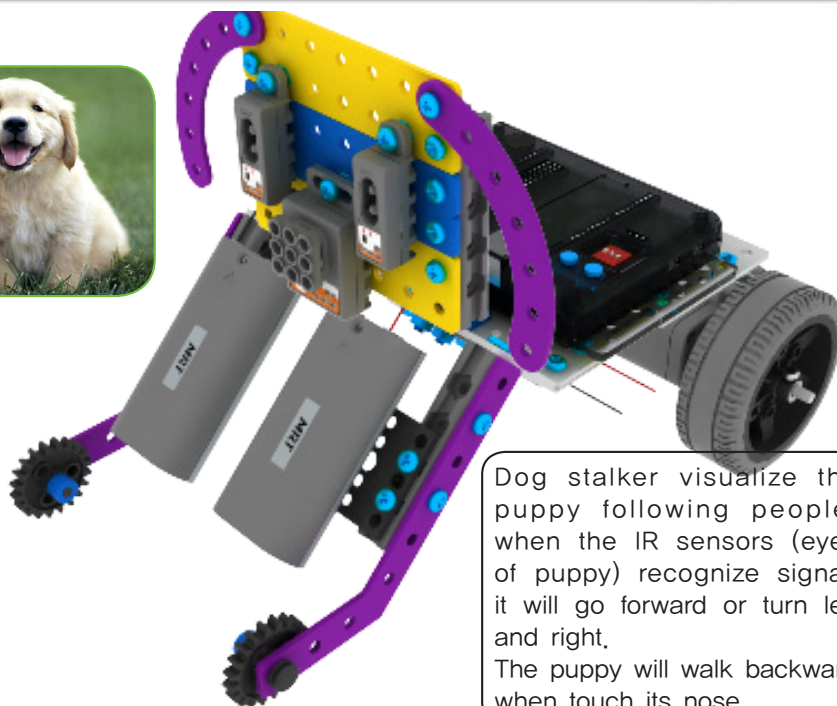
※ Program example : [Refer to the back of book.](#)



Program download

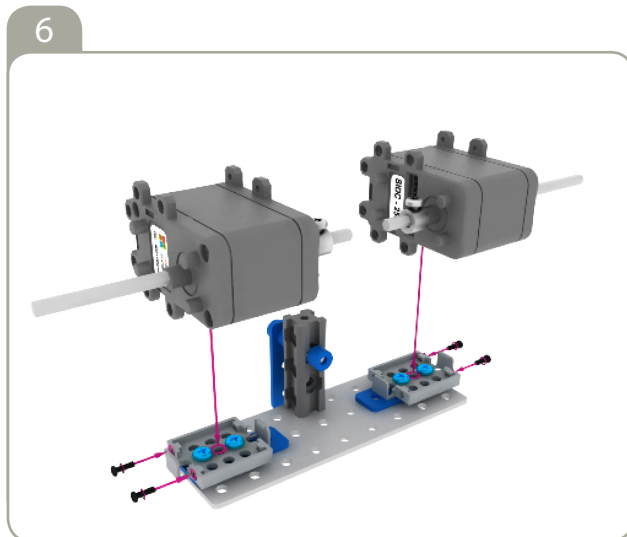
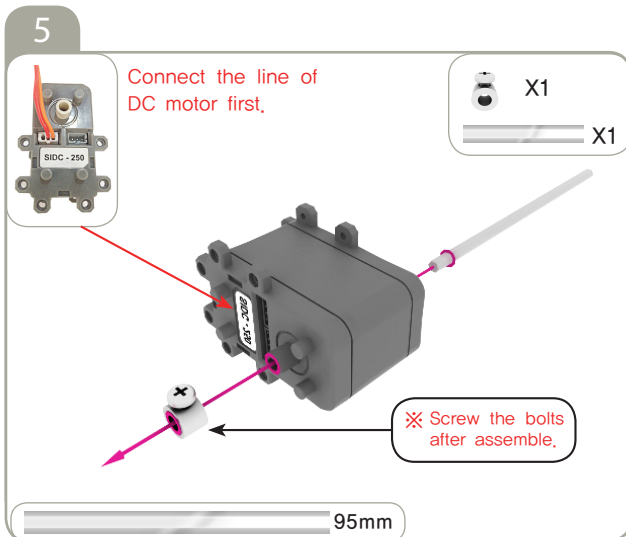
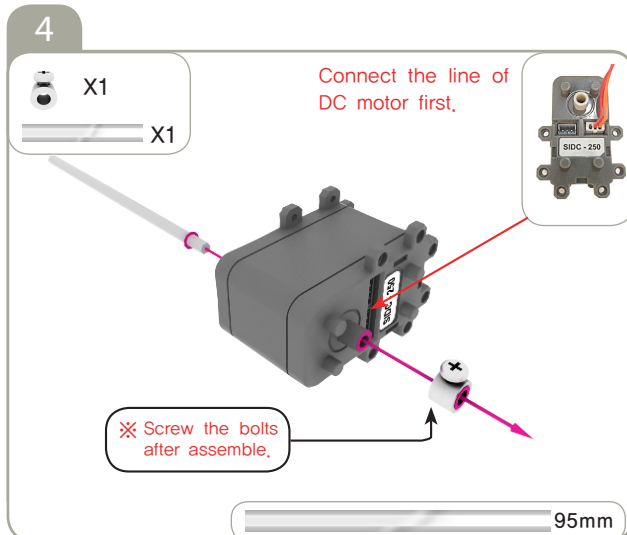
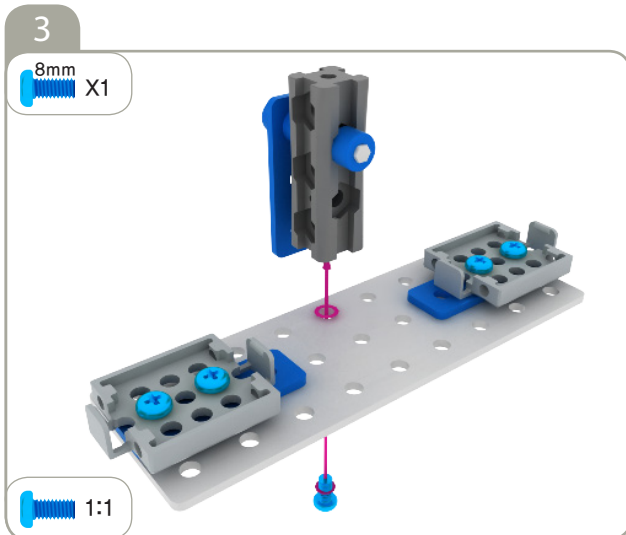
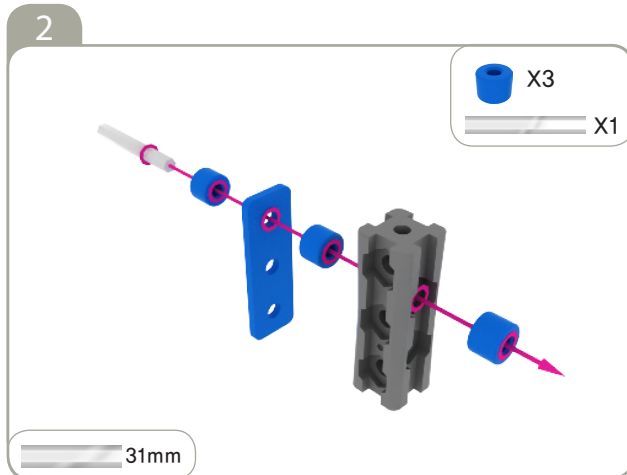
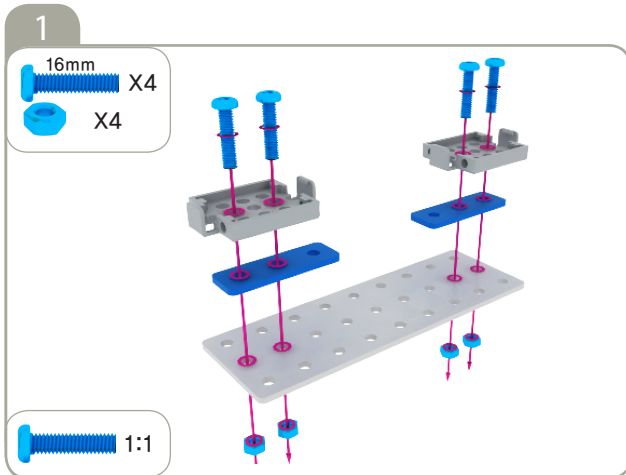
1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press"SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

DOG STALKER



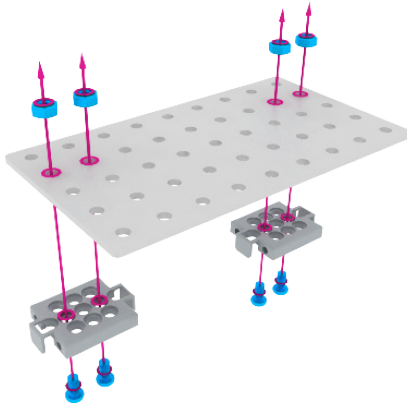
Dog stalker visualize the puppy following people, when the IR sensors (eyes of puppy) recognize signal, it will go forward or turn left and right.
The puppy will walk backward when touch its nose.

Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 31mm		1	9V Battery Case		1	Bolt 8mm		27
Steel shaft 70mm		2	MRT5-1 Main board		1	Bolt 16mm		22
13AL Frame		3	DC MOTOR		2	Nut		46
17AL Frame		2	AL Round Block		2	ABS Connecting shaft		2
27AL Frame		2	AL Frame135		2	B-Bush		5
39AL Frame		2				M-Gear		2
59AL Frame		2				Sleeve pipe		4
4-5 Pillar block		4				Big Wheel2		2
2-3 Pillar Block		1				IR Sensor		2
Motor Mount		3				Touch Sensor		1
						D135 S-Bracket		4



7

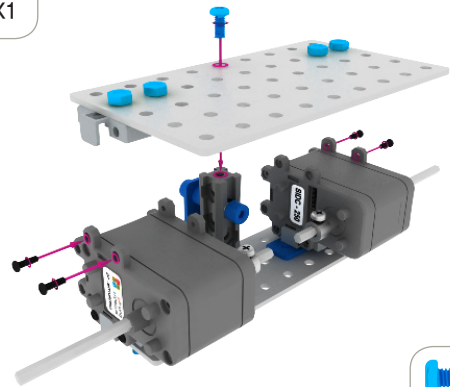
8mm X4
X4



1:1

8

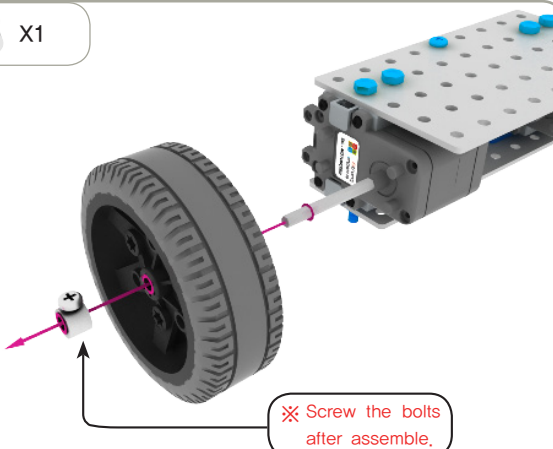
8mm X1



1:1

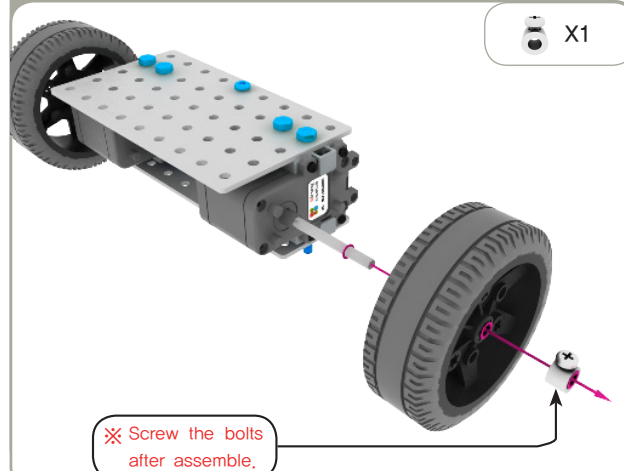
9

X1



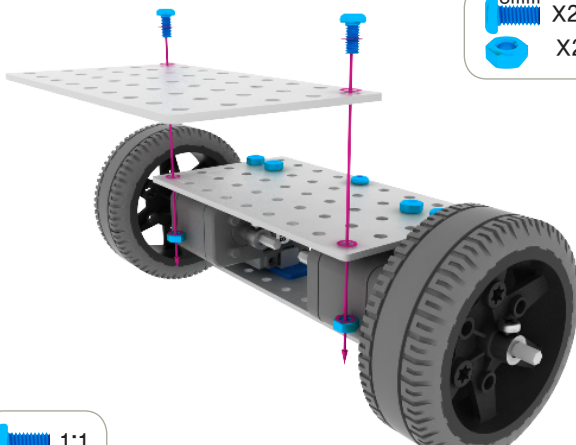
10

X1



11

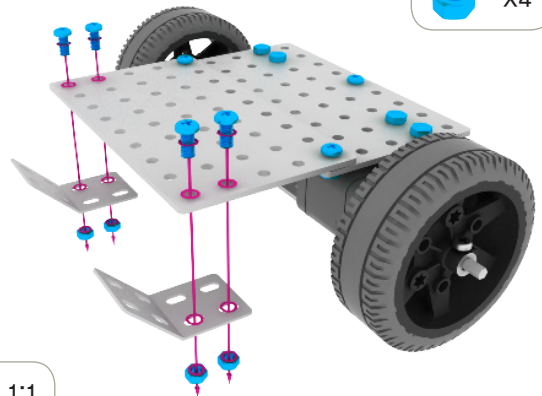
8mm X2
X2



1:1

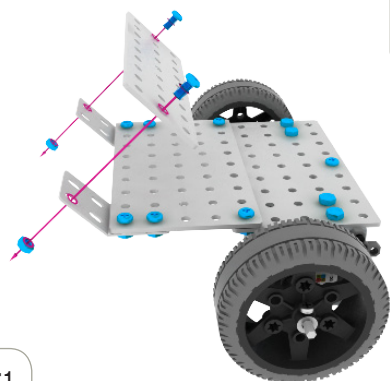
12

8mm X4
X4



1:1

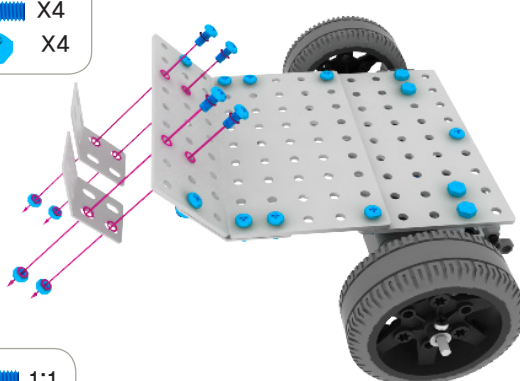
13



8mm X2
 X2

1:1

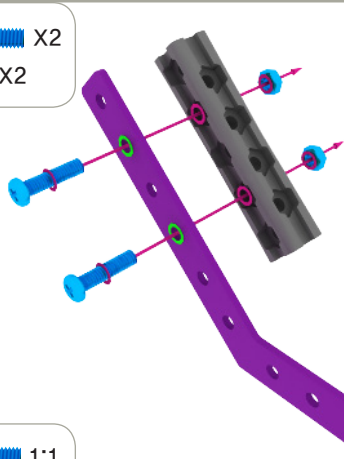
14



8mm X4
 X4

1:1

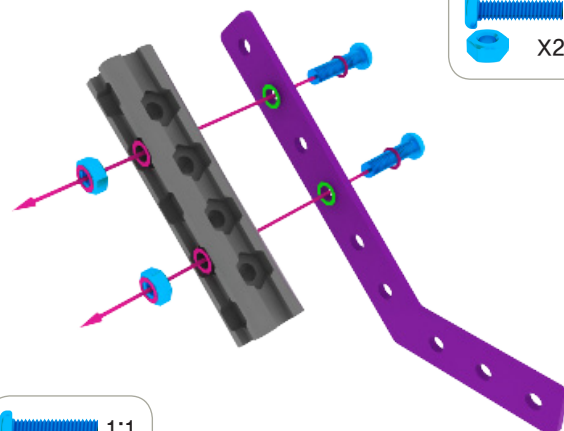
15



16mm X2
 X2

1:1

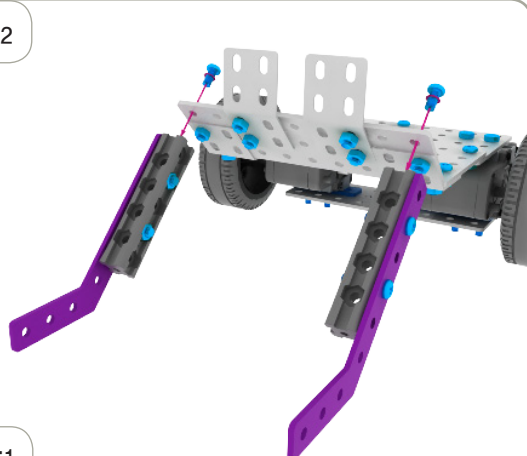
16



16mm X2
 X2

1:1

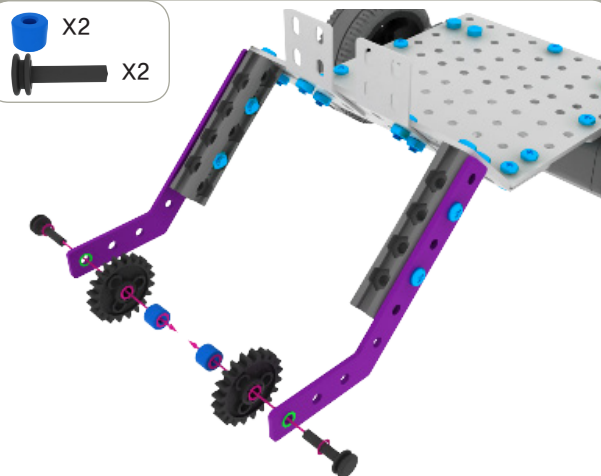
17



8mm X2

1:1

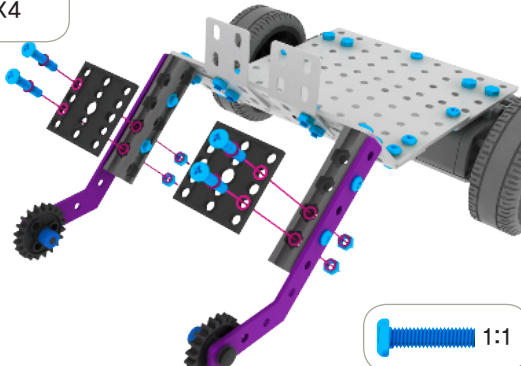
18



X2
 X2

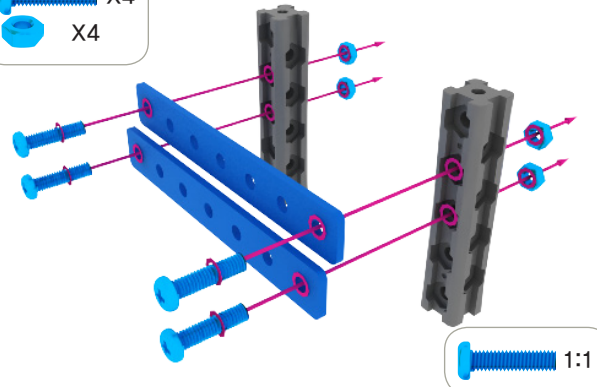
19

16mm X4
X4



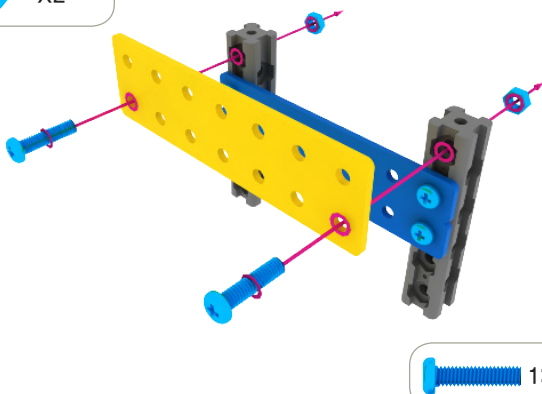
20

16mm X4
X4



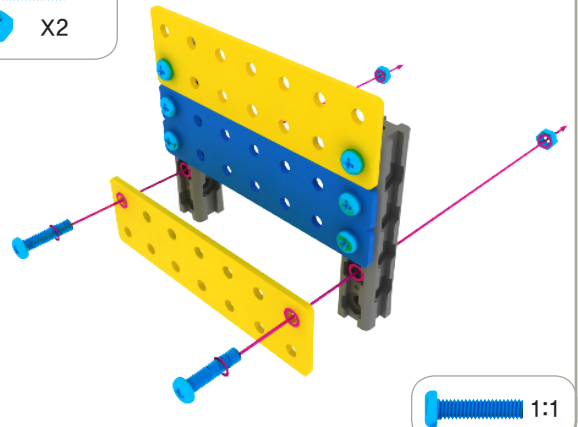
21

16mm X2
X2



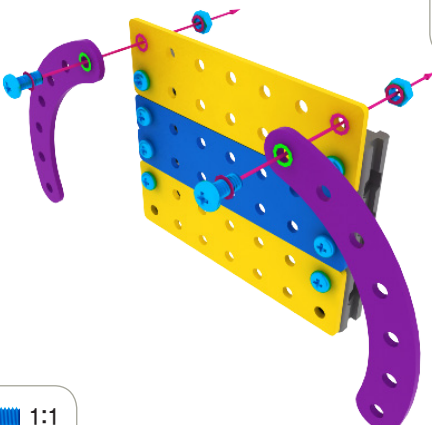
22

16mm X2
X2



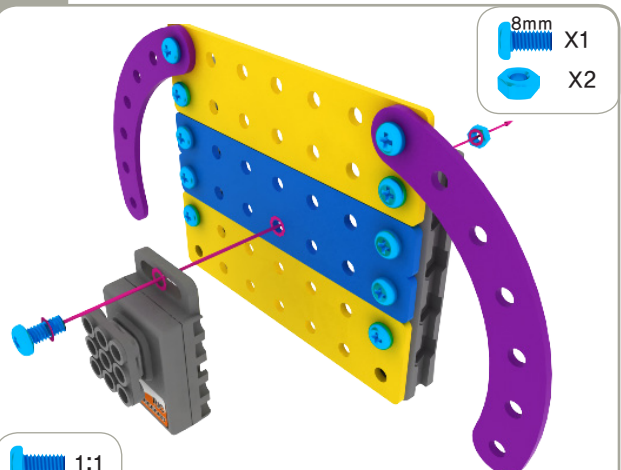
23

8mm X2
X2



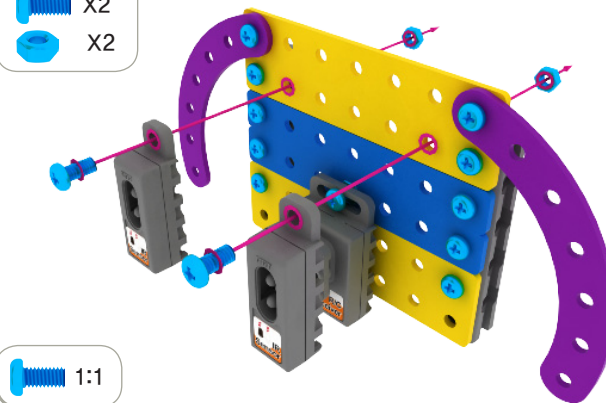
24

8mm X1
X2



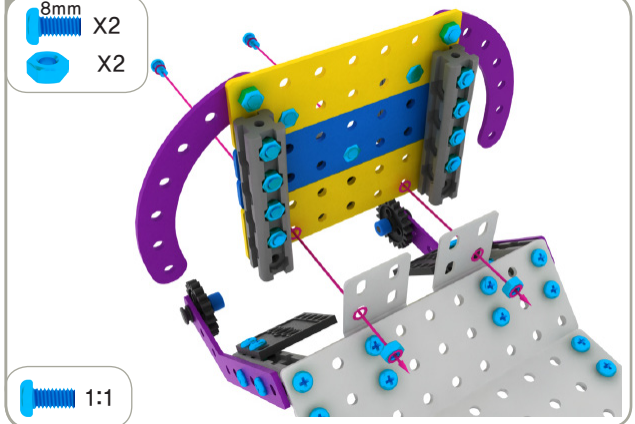
25

8mm X2
X2



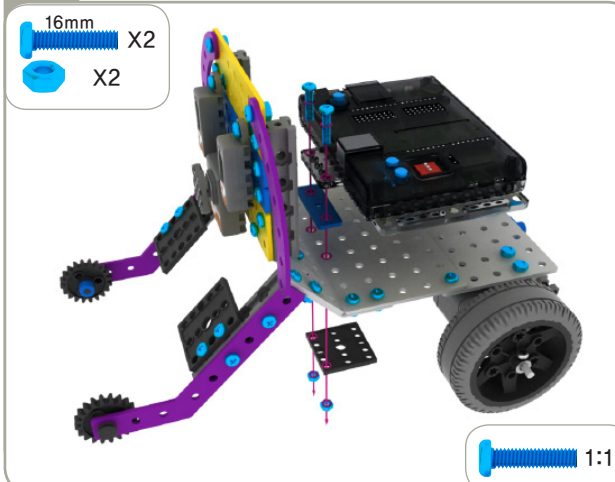
26

8mm X2
X2

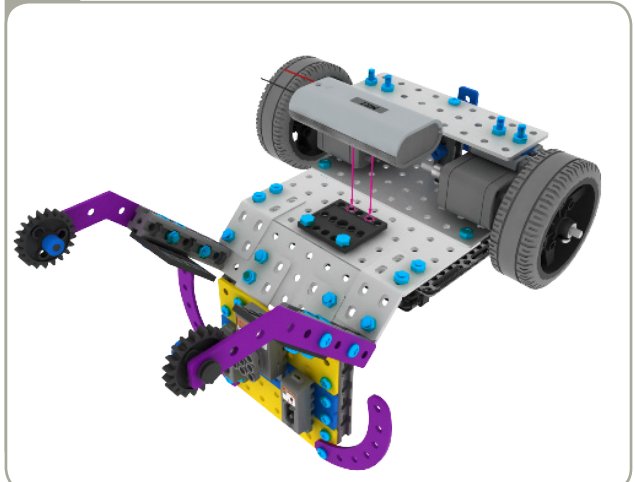


27

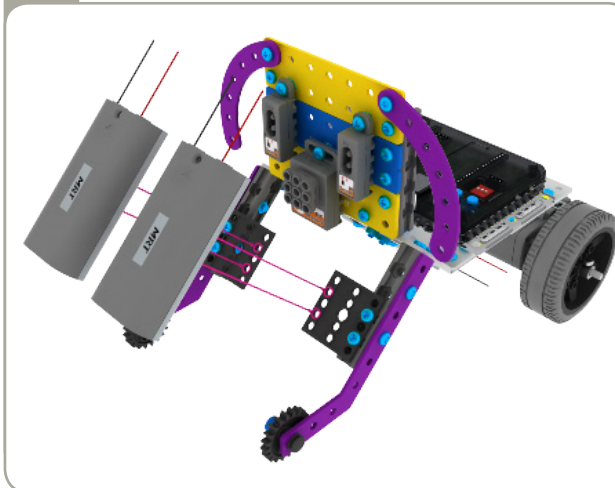
16mm X2
X2



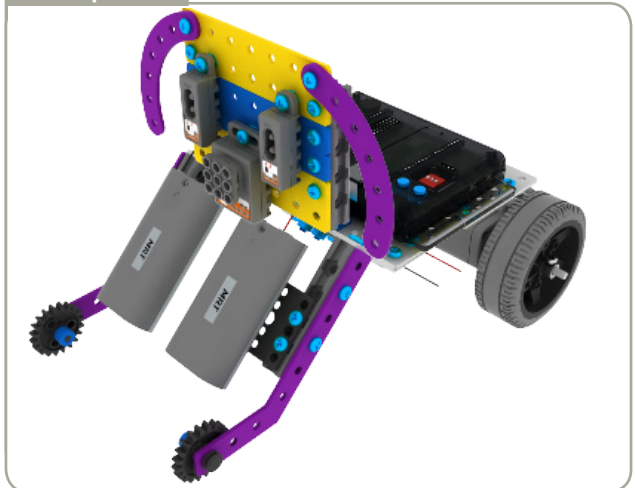
28



29

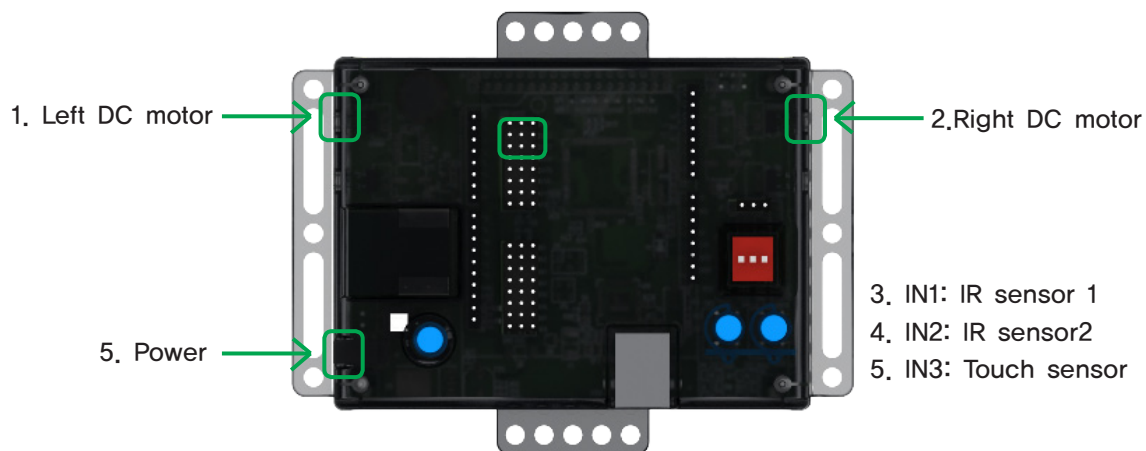


Complete





Connecting the mainboard

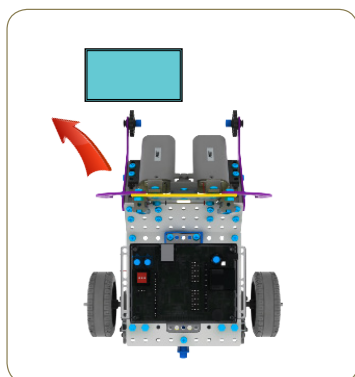


Connect in this order :

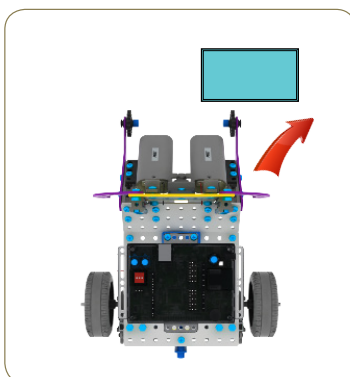
1. Connect left DC motor to L-MOTOR connector1.
2. Connect right DC motor to R-MOTOR connector 2.
3. Connect IR sensor1 to INPUT connector1.
4. Connect IR sensor2 to INPUT connector2.
5. Connect Touch sensor to INPUT connector3.
6. Connect battery case to POWER connector.



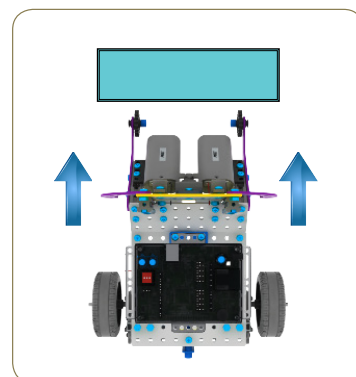
Motion Pattern



1. Recognize left IR sensor, will turn left.



2. Recognize right IR sensor, will turn right.



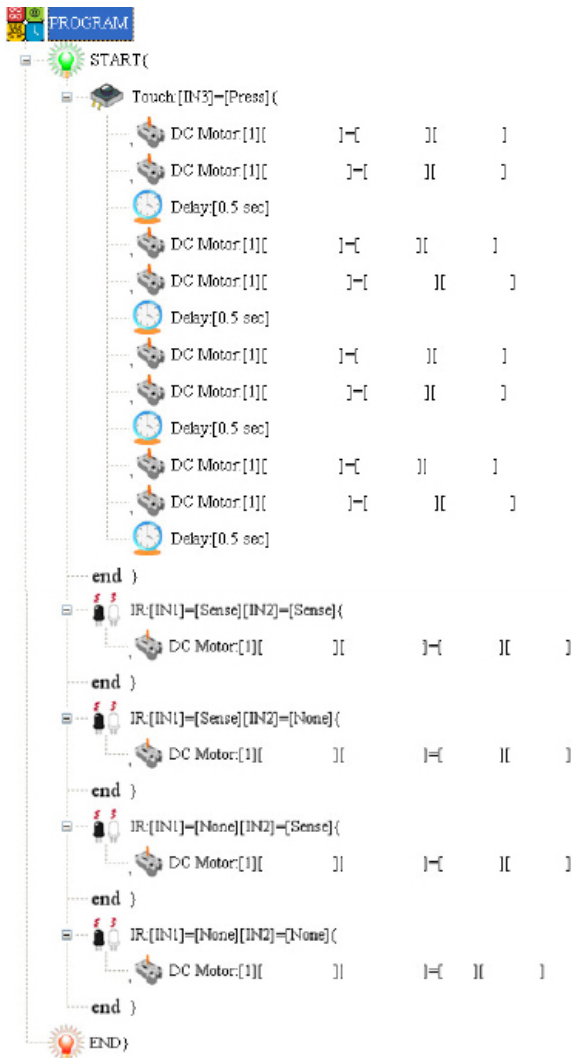
3. Recognize both left and right IR sensor, will go forward.

※ Recognize touch sensor, will go backward.



Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Recognize left IR sensor, will turn left.
2. Recognize right IR sensor, will turn right.
3. Recognize both left and right IR sensor, will go forward.
4. Recognize touch sensor, will go backward

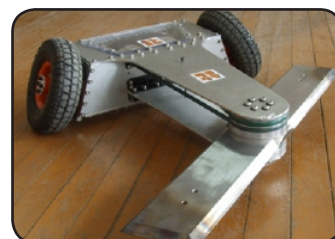
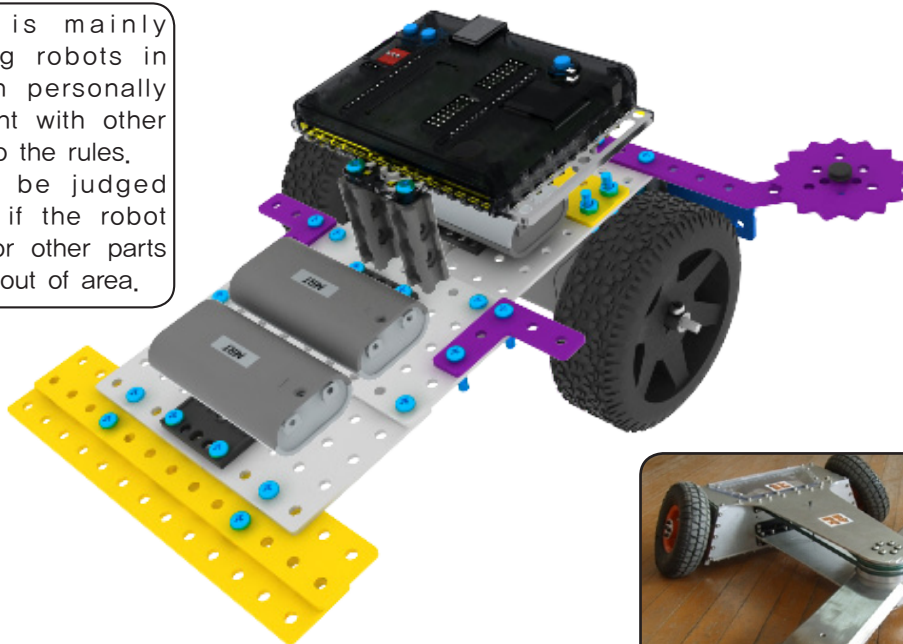


Program Download

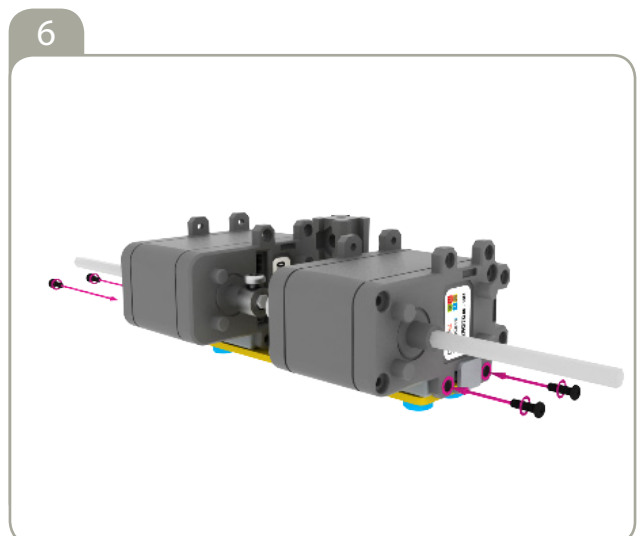
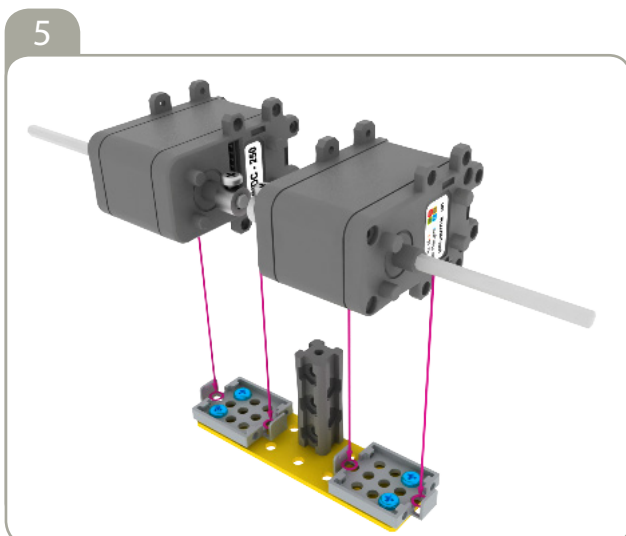
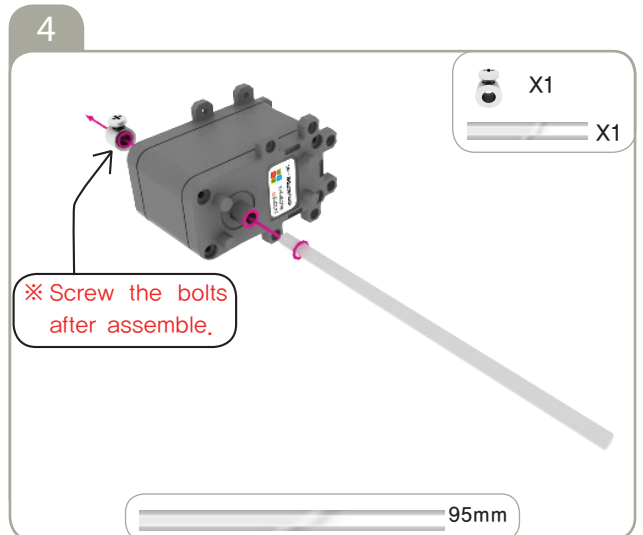
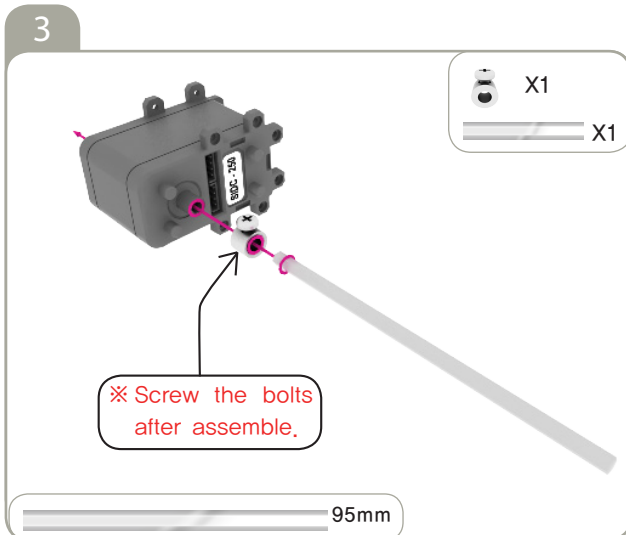
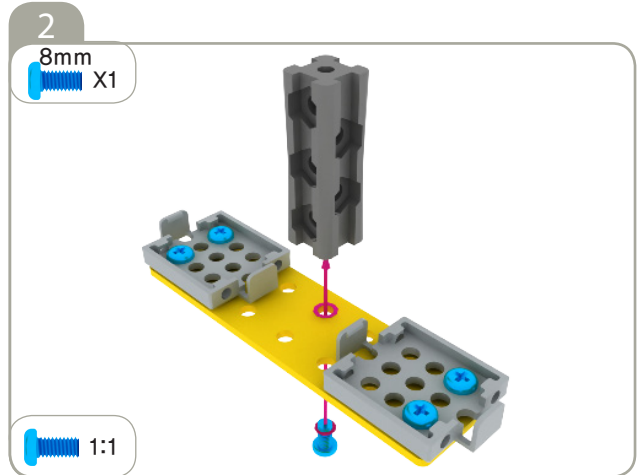
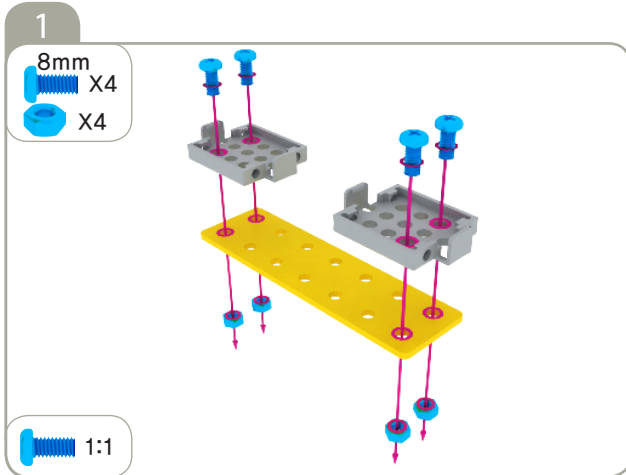
1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

BATTLE ROBOT

Battle Robot is mainly used as fighting robots in competition, often personally assembled to fight with other robots according to the rules. The player will be judged loose the game if the robot can't move, arm or other parts damaged or push out of area.

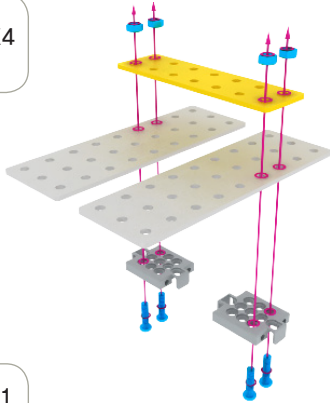


Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 95mm		2	9V Battery Case		1	Bolt 8mm		30
13AL Frame		1	MRT5-1 Main board		1	Bolt 16mm		22
17AL Frame		3	DC MOTOR		2	Nut		40
113AL Frame		2	Remote Controller		1	ABS Connecting shaft		2
27AL Frame		2	AL Frame135		2	B-Bush		2
213AL Frame		2	Motor Mount		3	Guide Wheel		2
39AL Frame		2				L-Gear		2
59AL Frame		2				Sleeve pipe		4
AL Frame90		2				Big Wheel2		2
AL Sprocket		2				RC Receiver		1
						4-5 Pillar block		2
						2-3 Pillar Block		5



7

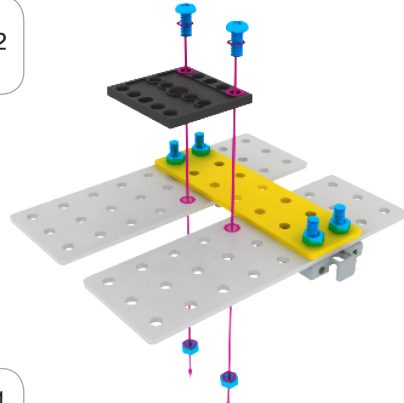
16mm X4
X4



1:1

8

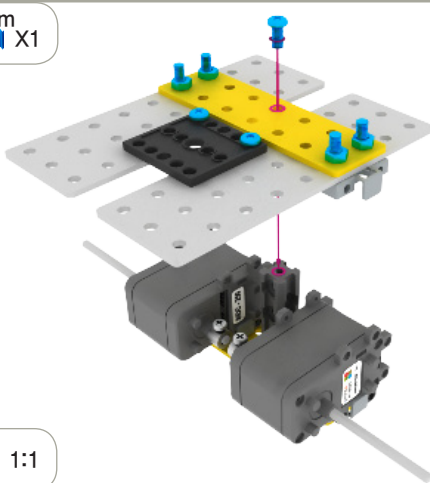
8mm X2
X2



1:1

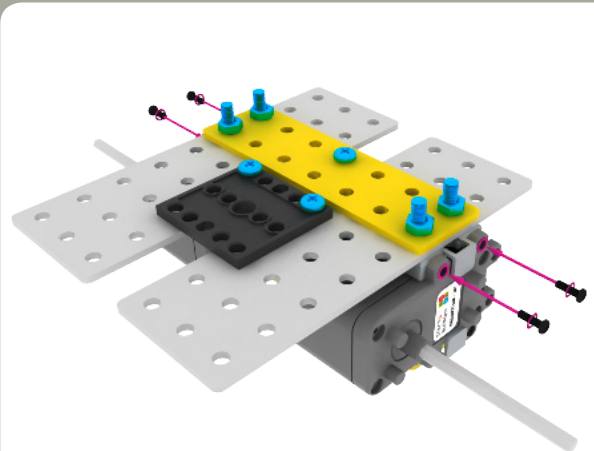
9

8mm X1



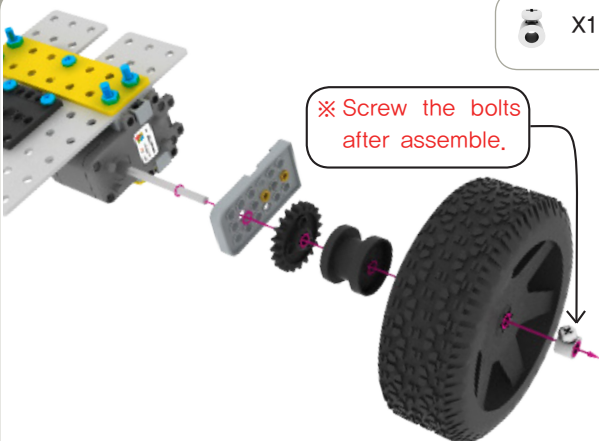
1:1

10



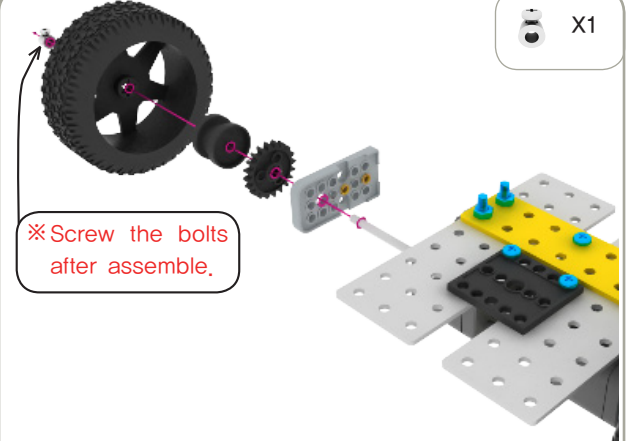
11 Assemble left wheel

X1



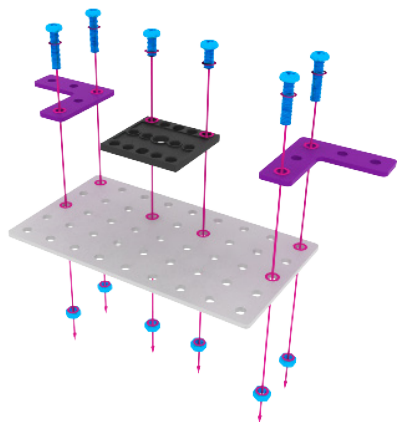
12 Assemble right wheel

X1



13

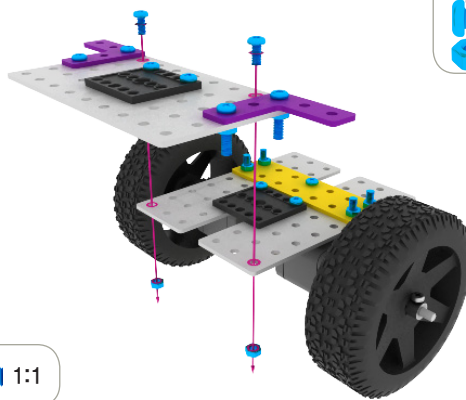
16mm X4
8mm X2
X6



1:1
1:1

14

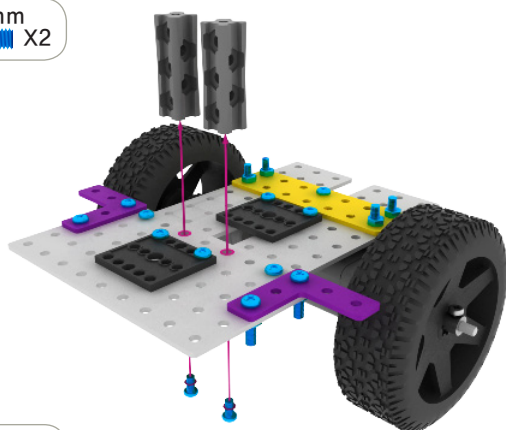
8mm X2
X2



1:1

15

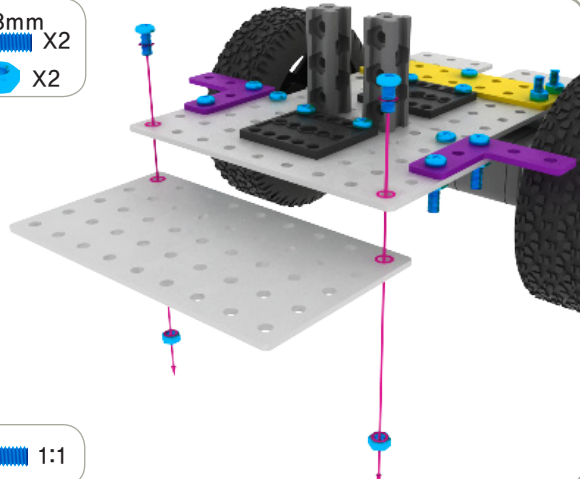
8mm X2



1:1

16

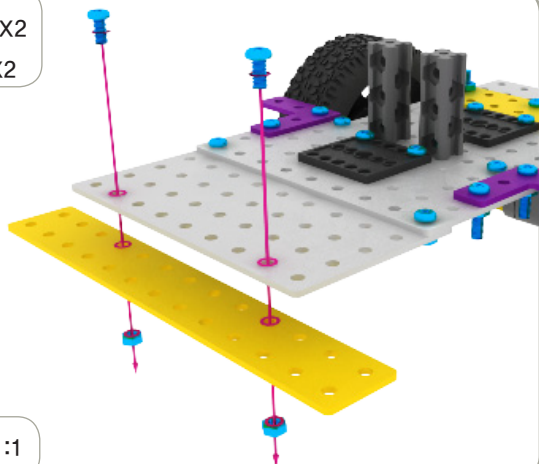
8mm X2
X2



1:1

17

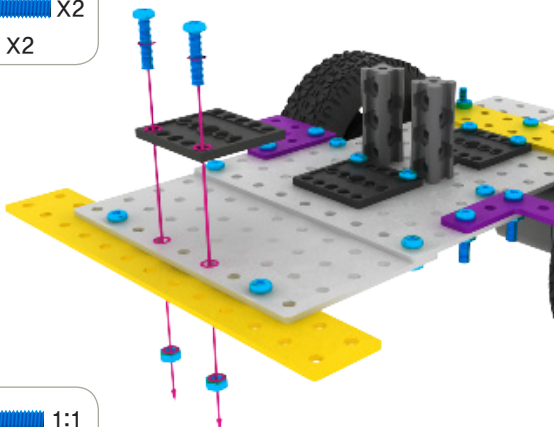
8mm X2
X2



1:1

18

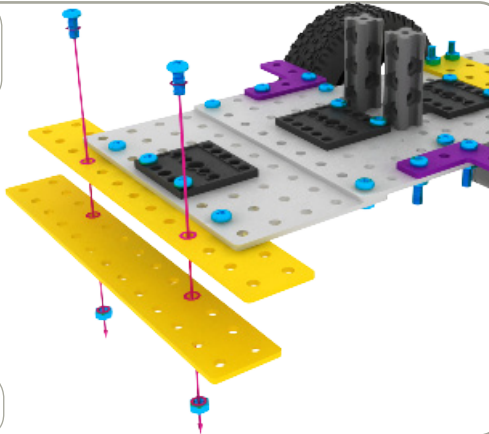
16mm X2
X2



1:1

19

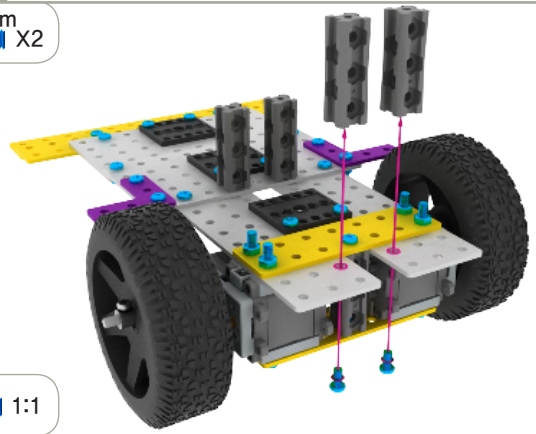
8mm X2
X2



1:1

20

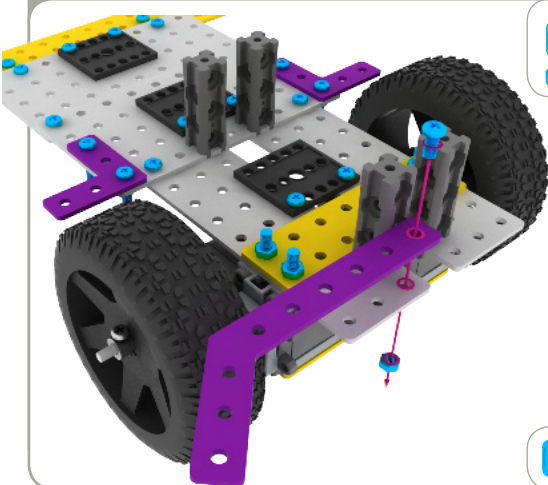
8mm X2



1:1

21

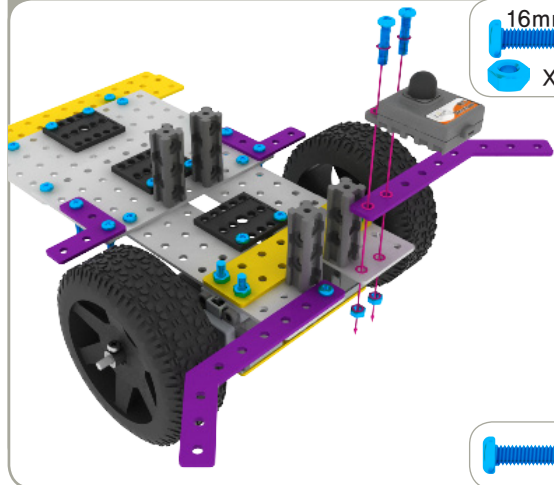
8mm X2
X2



1:1

22

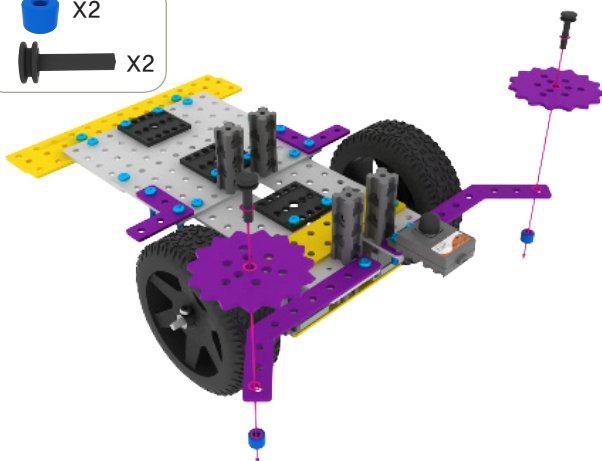
16mm X2
X2



1:1

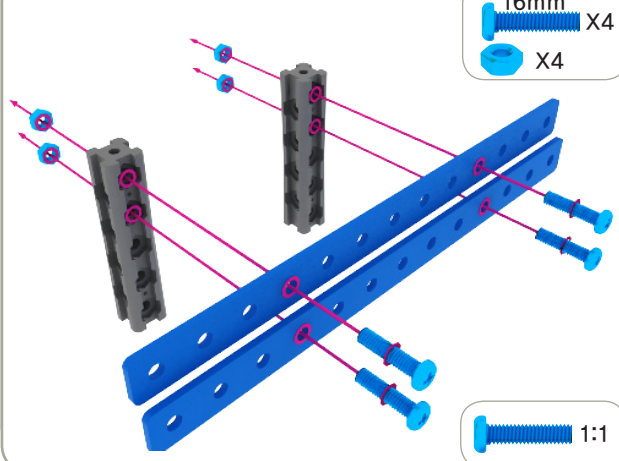
23

X2
X2



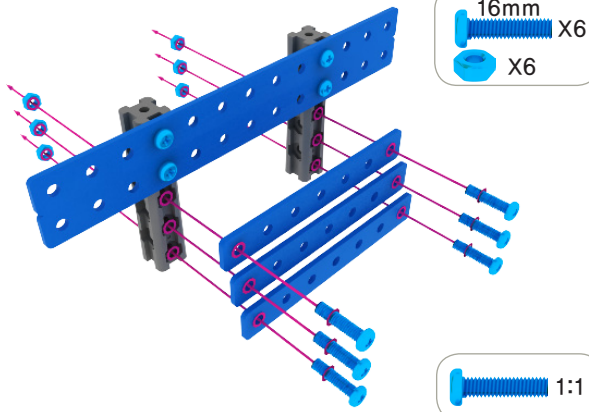
24

16mm X4
X4

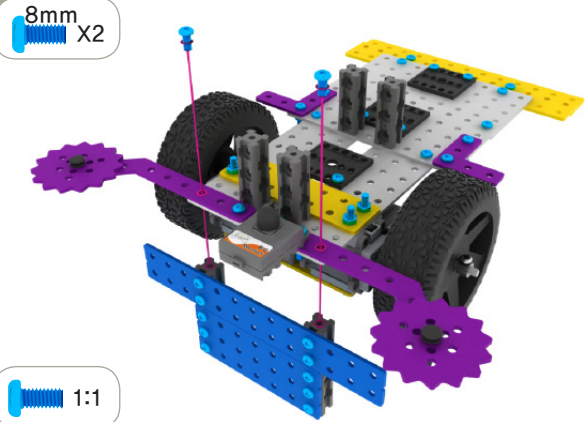


1:1

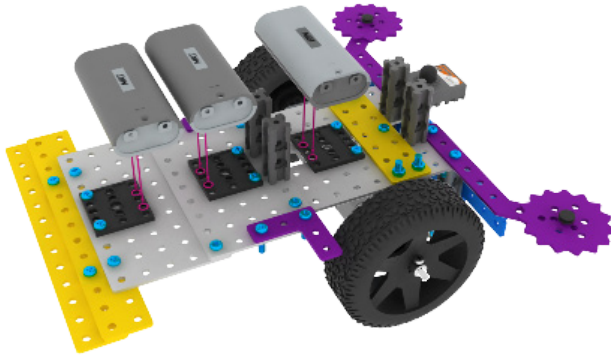
25



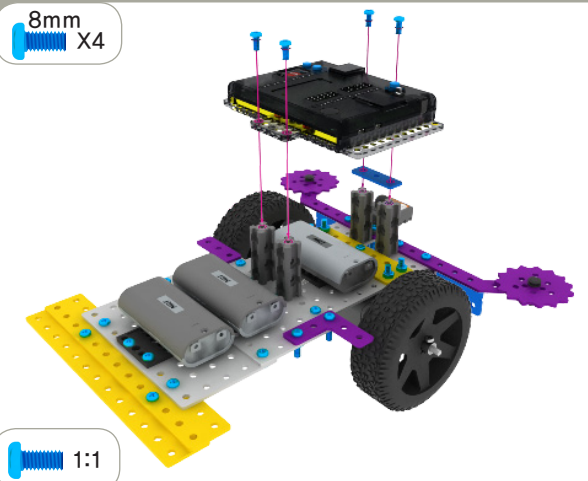
26



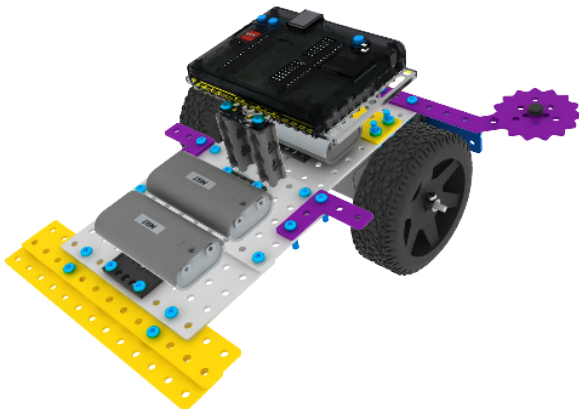
27



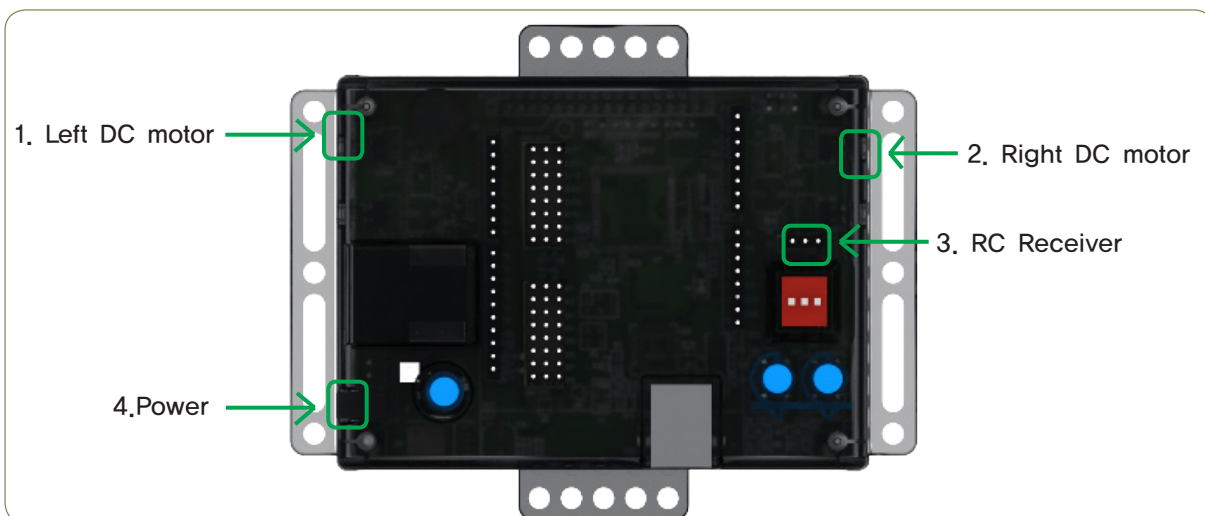
28



Complete



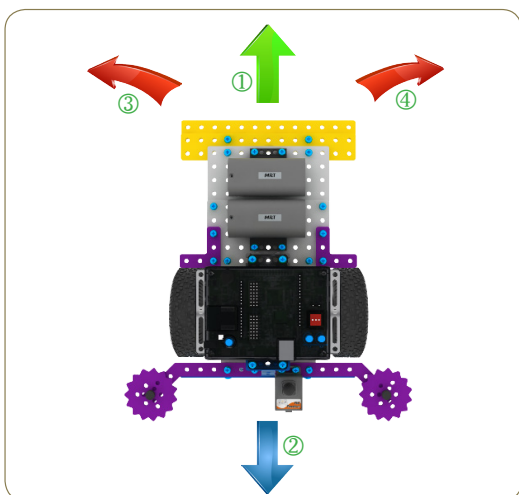
Connecting the mainboard



Please connect in this order:

1. Connect left DC motor to L-MOTOR connector.
2. Connect right DC motor to R-MOTOR connector.
3. Connect RC Receiver to R/C connector.
4. Connect battery case to Power connector.

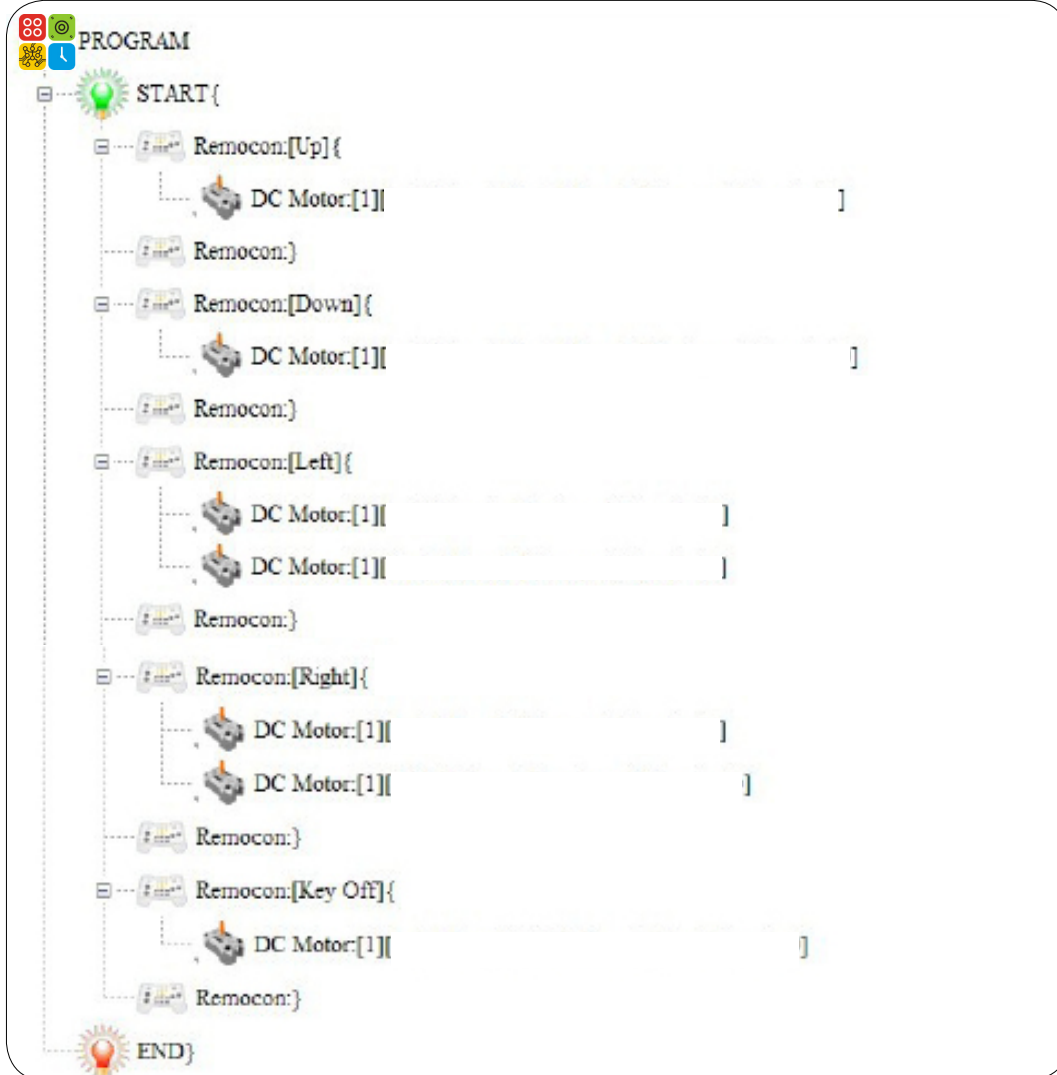
Motion Pattern





Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Press the directional key (up/down) of remote controller, the robot will move forward and backward.
2. Press the directional key (left / right) of remote controller, the robot will move left and right .
3. It's possible to compile the program as your idea, like press "up" and "left/right" together or press "down" and "left/right"together.

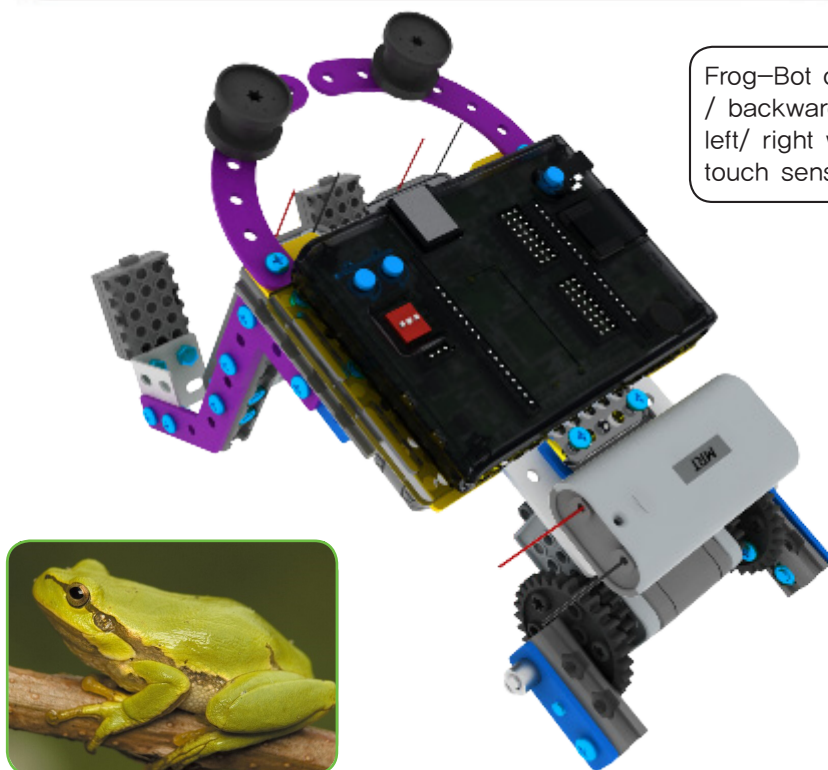
※ Program example : Refer to the back of book.



Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press"SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

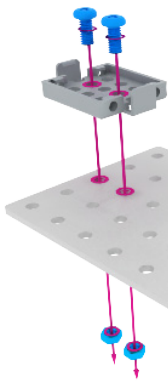
FROG-BOT



Frog-Bot can go forwarder / backward, also can turn left/ right when recognize touch sensor.

Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 95mm		1	9V Battery Case		1	Bolt 8mm		20
Steel shaft 20mm		1	MRT5-1 Main board		1	Bolt 16mm		22
13AL Frame		5	DC MOTOR		2	Bolt 20mm		2
17AL Frame		2	AL Frame 90		2	Nut		44
27AL Frame		2	AL Round Block		2	ABS Connecting shaft		2
59AL Frame		1	AL Frame 135		2	Half-Bush		2
4-5 Pillar block		4				Guide Wheel		2
2-3 Pillar Block		2				M-Gear		2
Motor Mount		3				L-Gear		2
						Sleeve pipe		4
						Big Wheel1		2
						Touch Sensor		2
						D90 S-Bracket		2

1



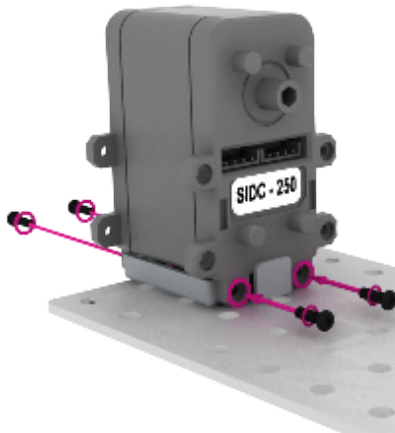
8mm X2
X2

1:1

2



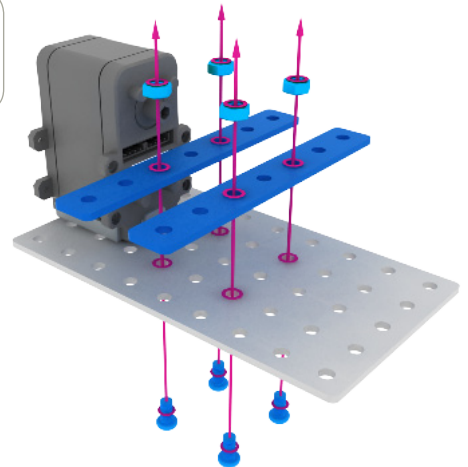
3



4

8mm X4
X4

1:1



5

※ Screw the bolts
after assemble.

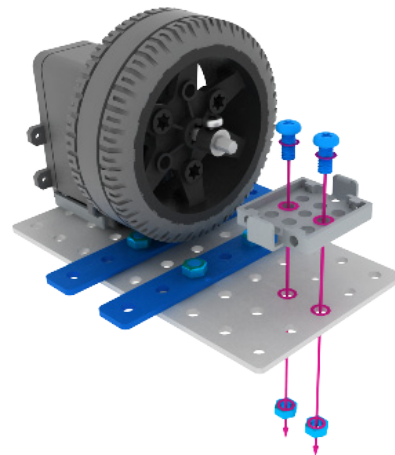
Connect the line
of DC motor first.

X2
X1

95mm



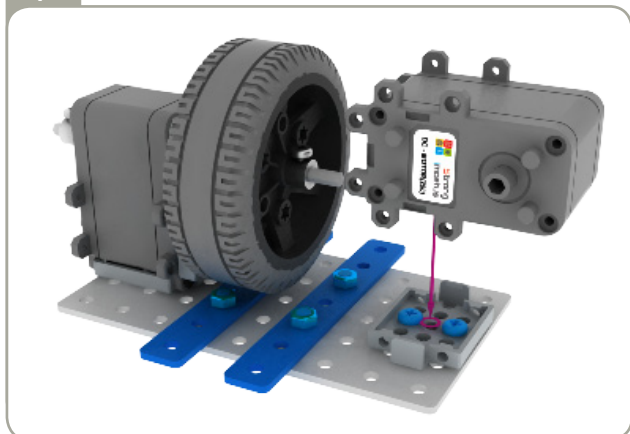
6



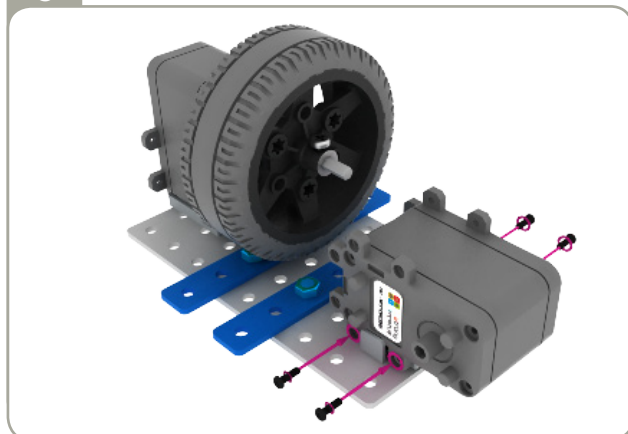
8mm X2
X2

1:1

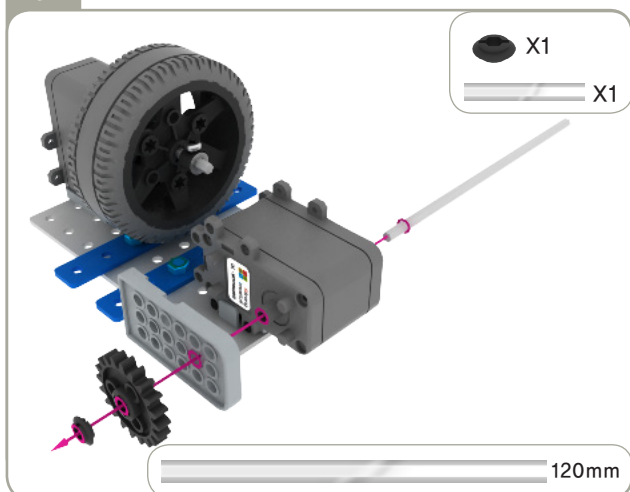
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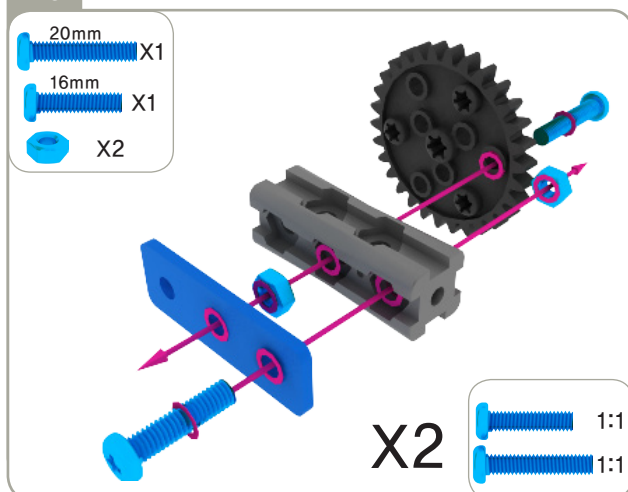
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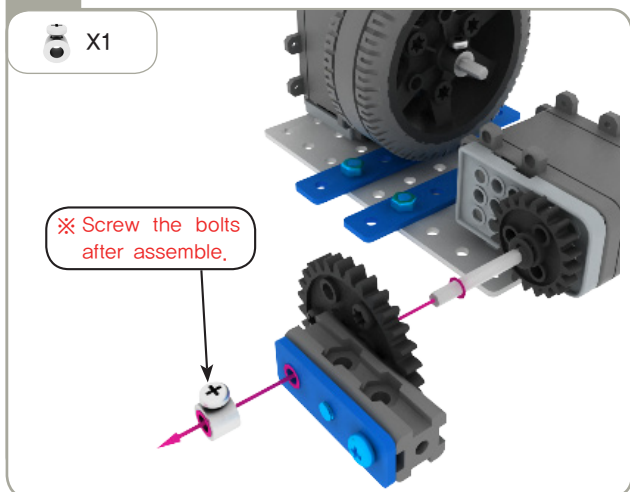
9



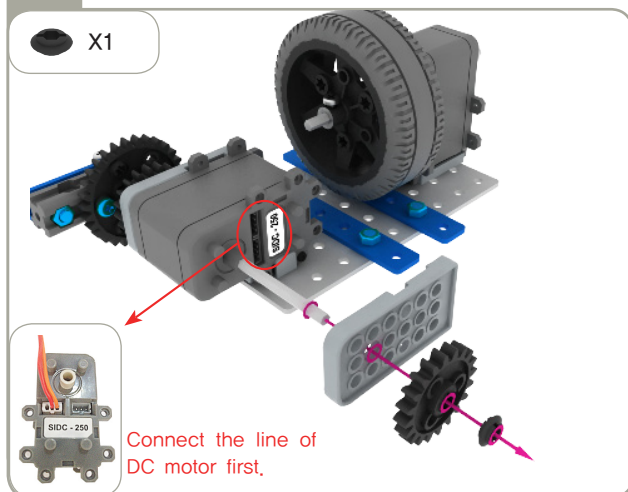
10



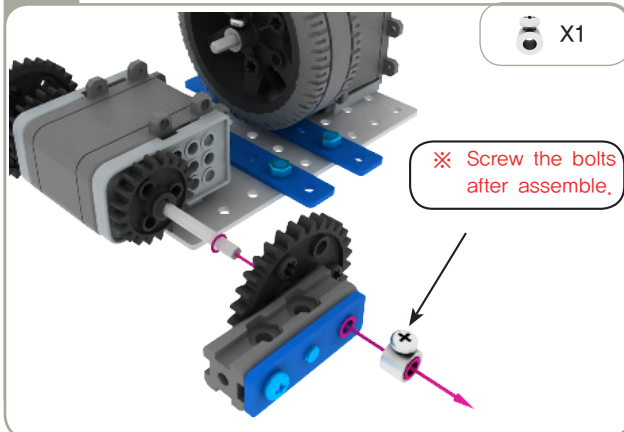
11



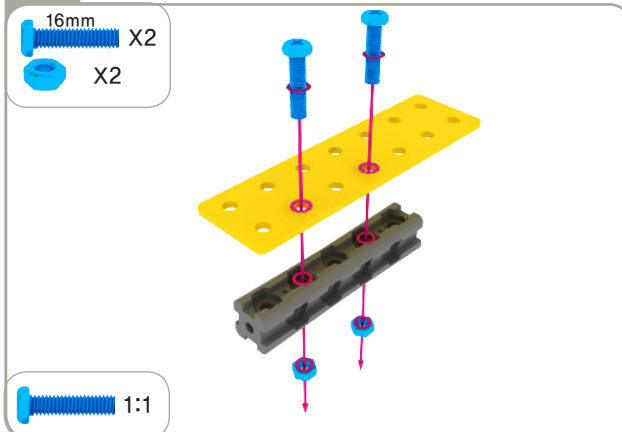
12



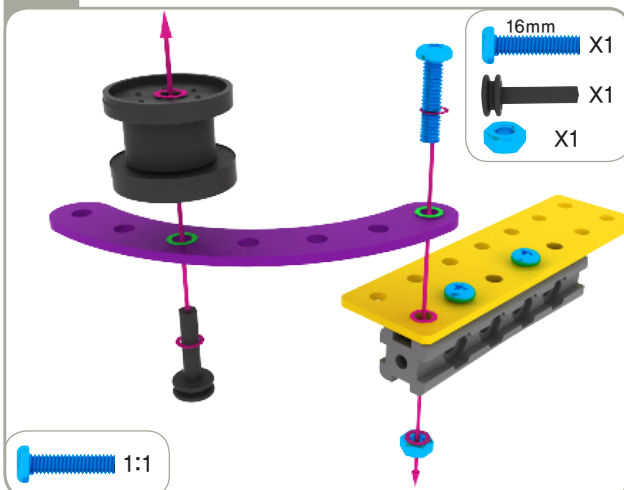
13



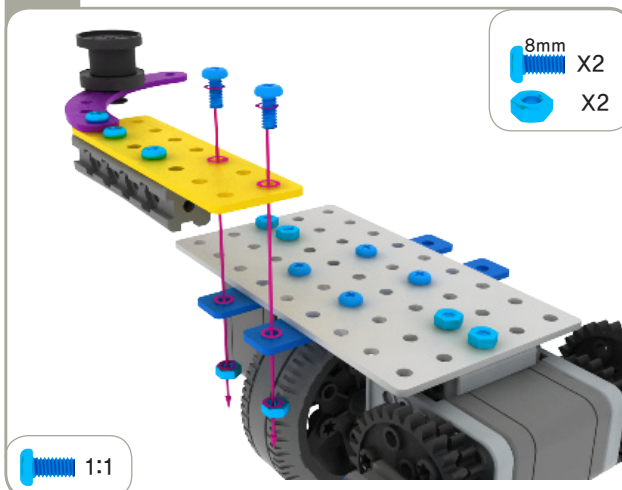
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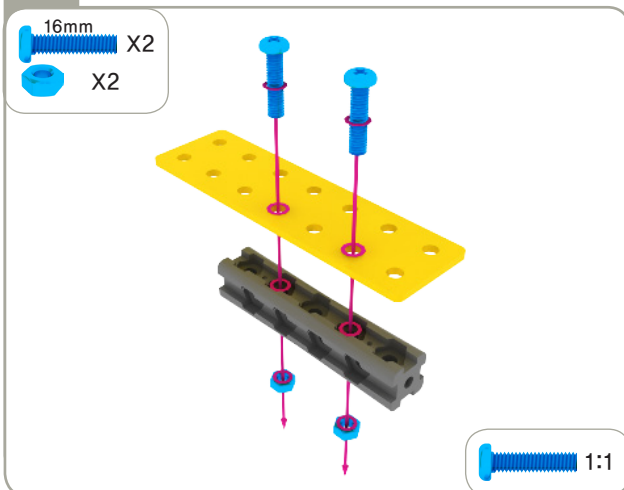
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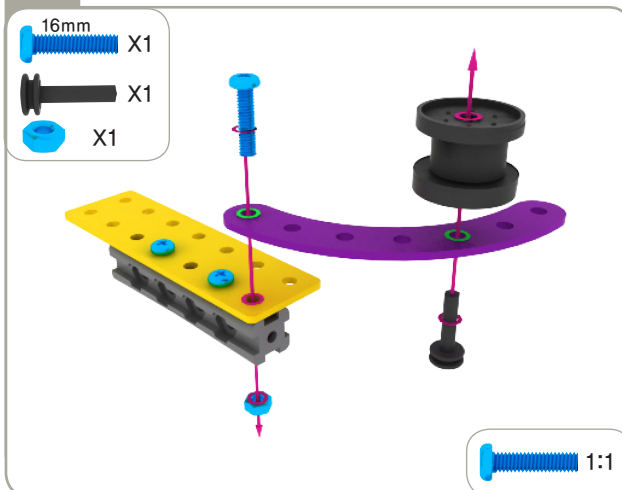
16



17

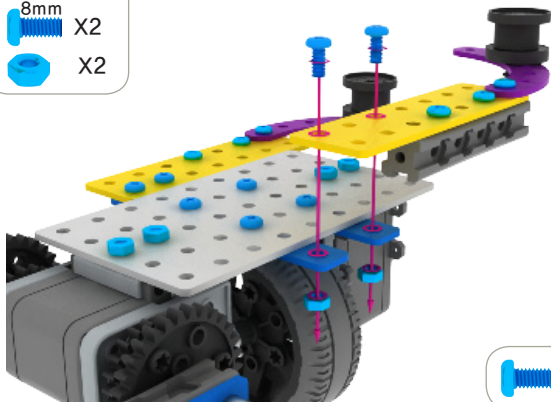


18



19

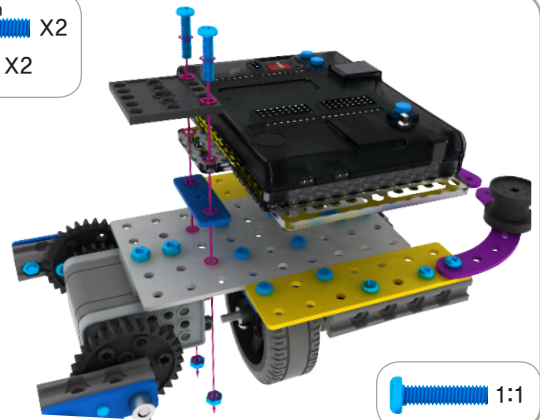
8mm X2
X2



1:1

20

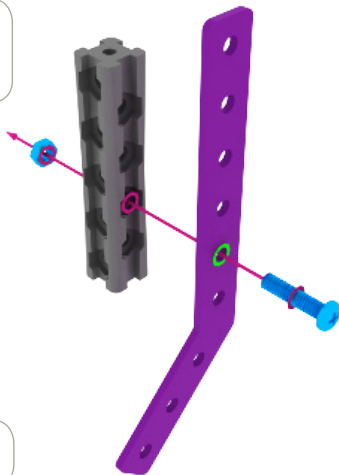
16mm X2
X2



1:1

21

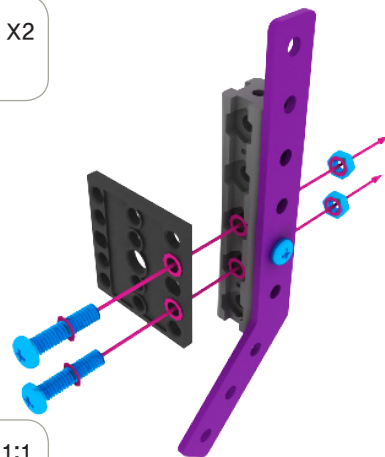
16mm X1
X1



1:1

22

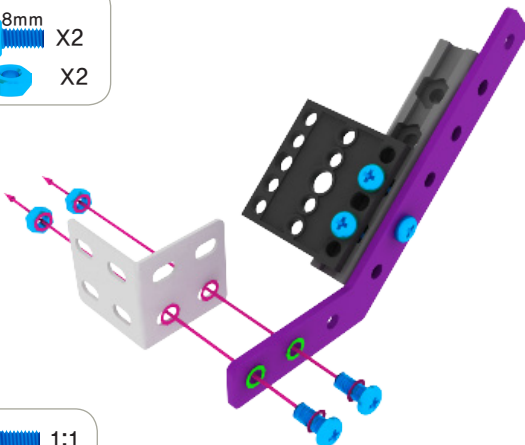
16mm X2
X2



1:1

23

8mm X2
X2

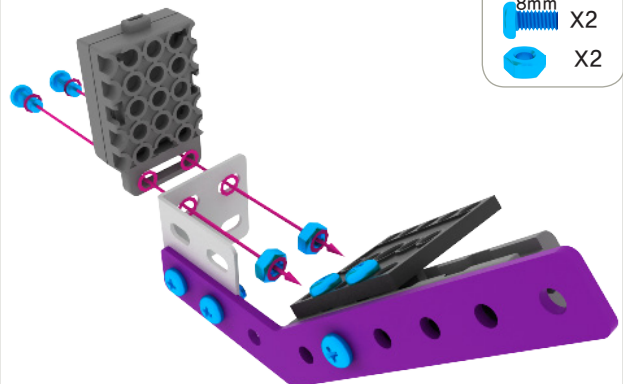


1:1

24

Assemble touch sensor.

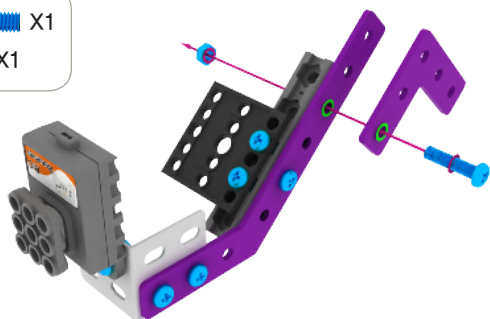
8mm X2
X2



1:1

25

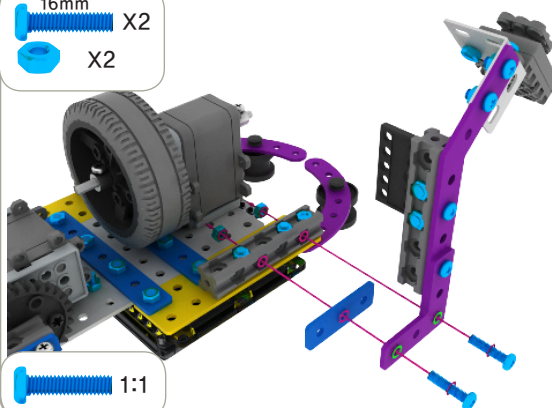
16mm X1
 X1



1:1

26

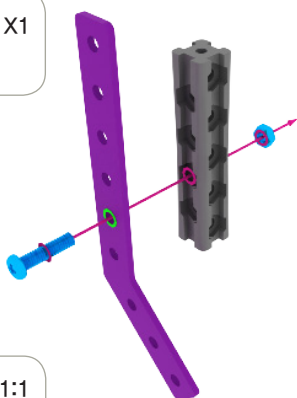
16mm X2
 X2



1:1

27

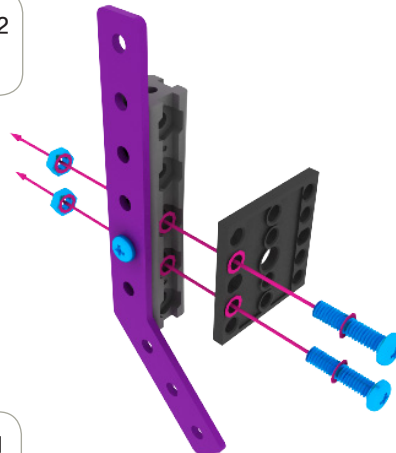
16mm X1
 X1



1:1

28

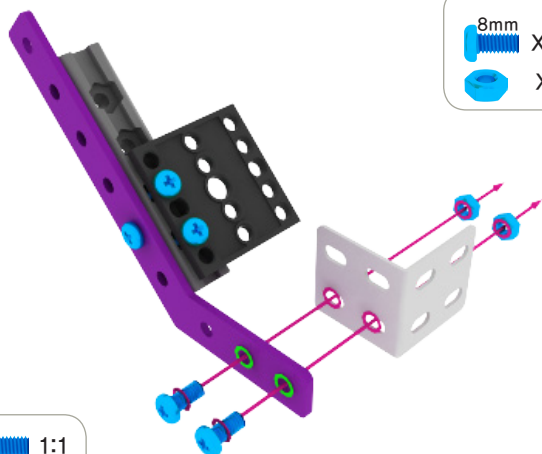
16mm X2
 X2



1:1

29

8mm X2
 X2

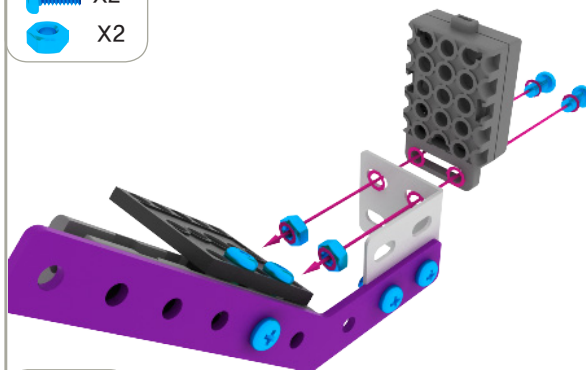


1:1

30

assemble touch sensor.

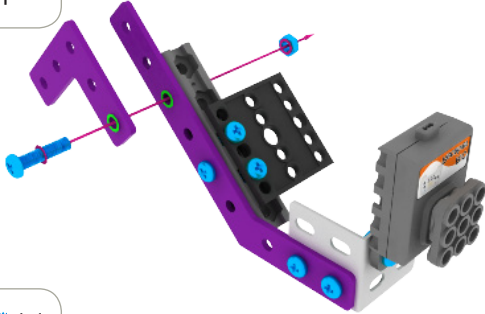
8mm X2
 X2



1:1

31

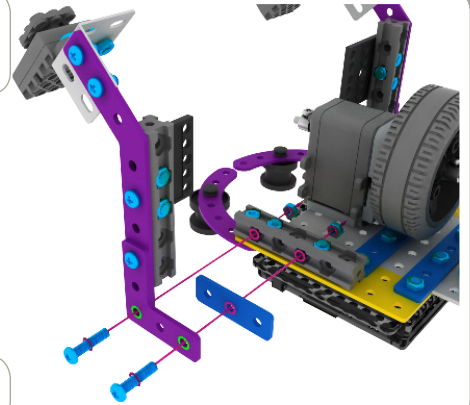
16mm X1
X1



1:1

32

16mm X2
X2

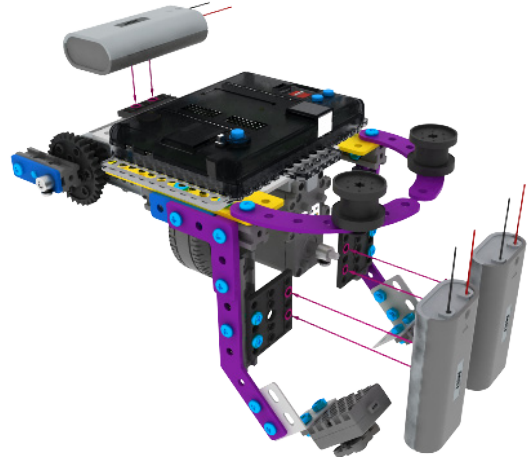


1:1

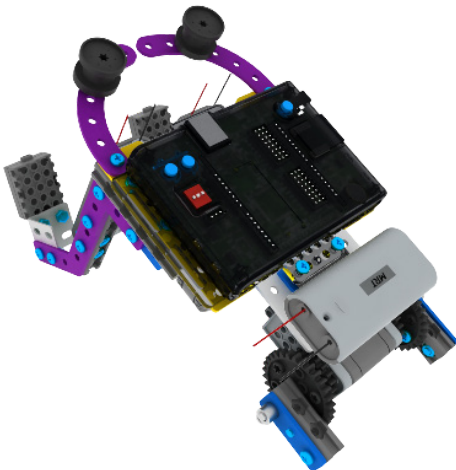
33



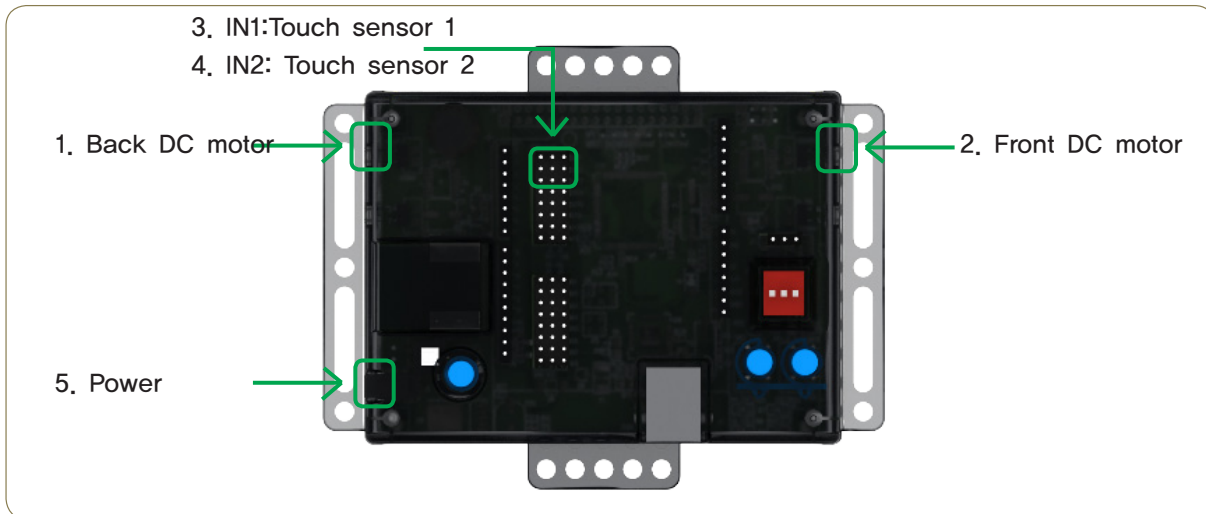
34



Complete



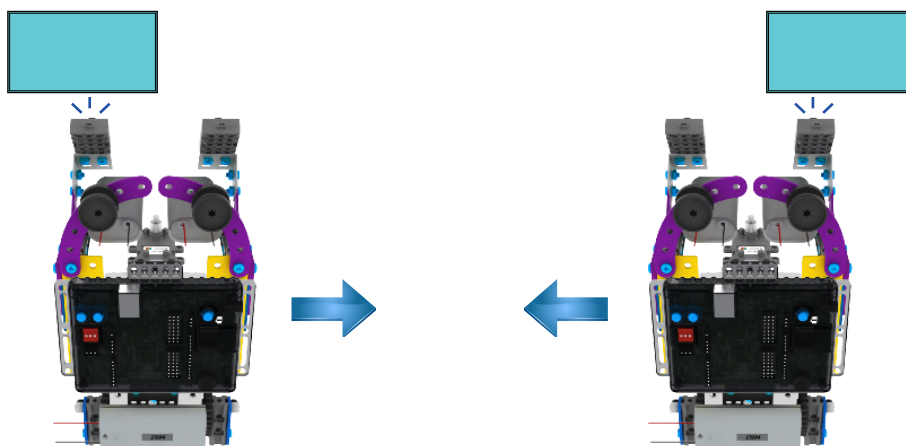
Connecting the mainboard



Please connect in this order:

1. Connect left DC motor to L-MOTOR connector1.
2. Connect right DC motor to R-MOTOR connector2.
3. Connect Touch sensor1 to INPUT1 connector.
4. Connect Touch sensor2 to INPUT2 connector.
5. Connect battery case to Power connector.

Motion Pattern



[Recognize left touch sensor]

1. Go Backward for a while
2. Turn right

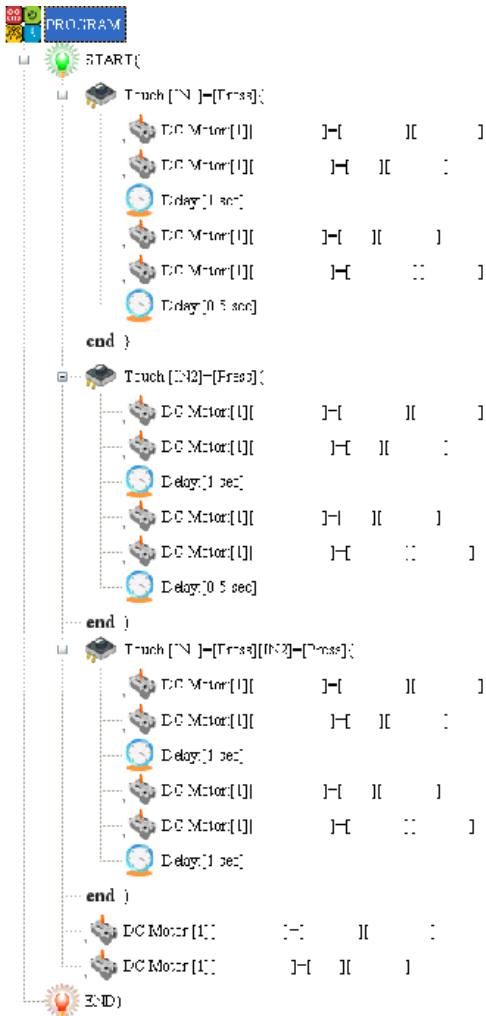
[Recognize right touch sensor]

1. Go backward for a while
2. Turn left



Learn to compile program in advance

Try to write down the program before we compile on software.



1. Recognize nothing, the robot go forward.
2. Recognize left touch sensor and back for a while then turn right to go ahead, back for a while
3. It's possible to compile the program as your idea, like press "up" and "left/right" together or press "down" and "left/right" together.

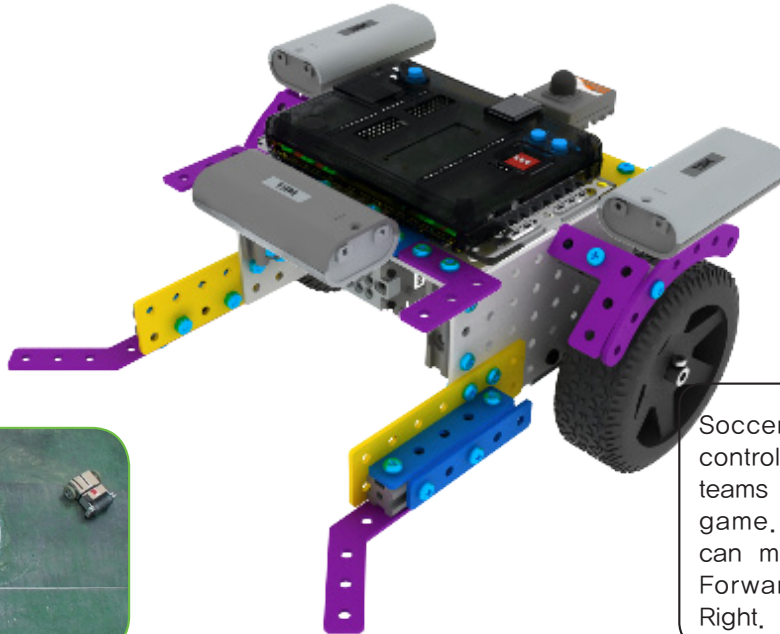
※ Program example : Refer to the back of book.



















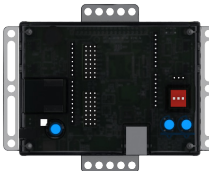










Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

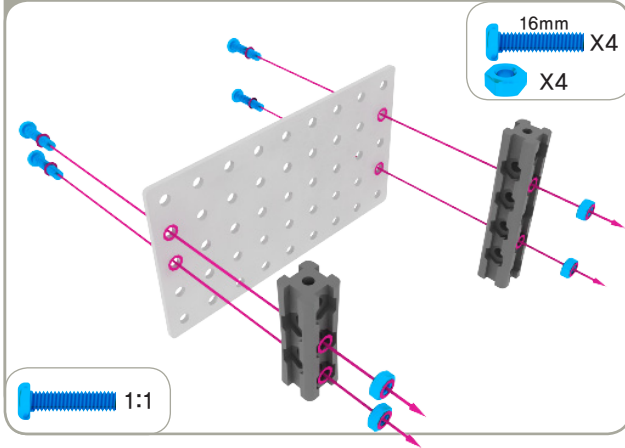
Soccer Robot



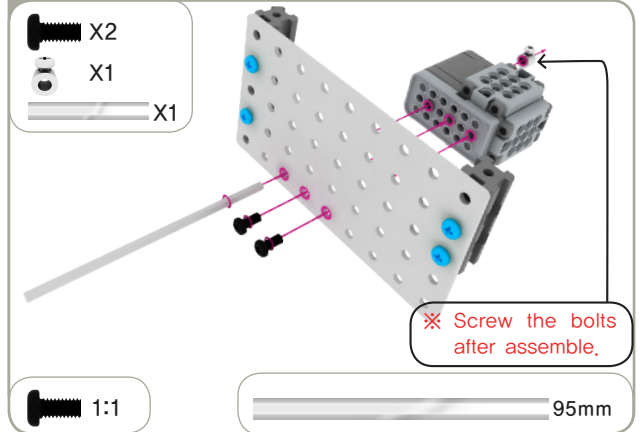
Soccer Robot with remote controller, divided into two teams and play the soccer game. The Soccer Robot can move in 4 directions : Forward/ Backward, Left/ Right.

Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 95mm		2	9V Battery Case		1	Bolt		4
27AL Frame		2				Bolt 8mm		20
213AL Frame		1				Bolt 16mm		18
39AL Frame		2	IR RC Receiver		1	Bolt 20mm		8
AL Frame 135		2	DC MOTOR		2	Nut		38
59AL Frame		2				S-Gear		2
			Guide Wheel		2			
			MRT5-1 Main board		1	Remote Controller		1
AL Frame 90		4				4-5 Pillar block		4
15AL Frame		4				2-3 Pillar Block		4
17AL Frame		2				Sleeve pipe		4
AL Round Block		2	Motor Mount		3			
			Big Wheel2		2			

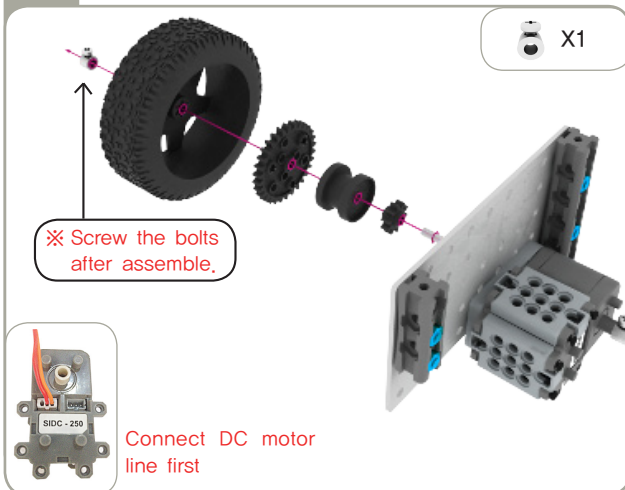
1



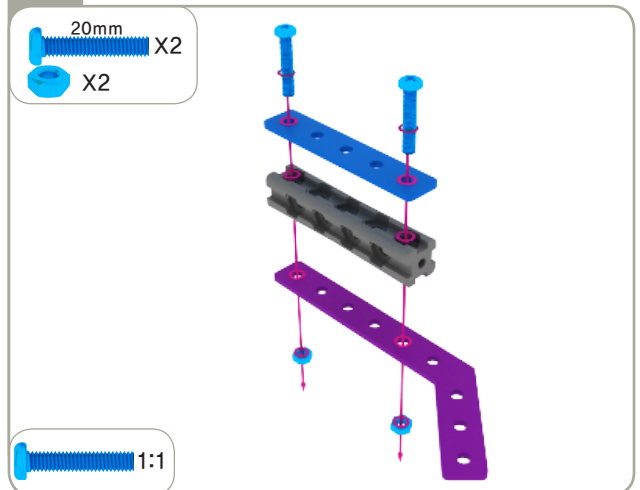
2



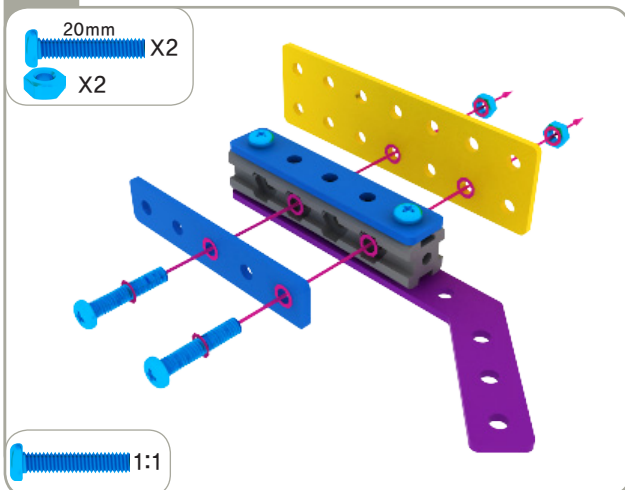
3



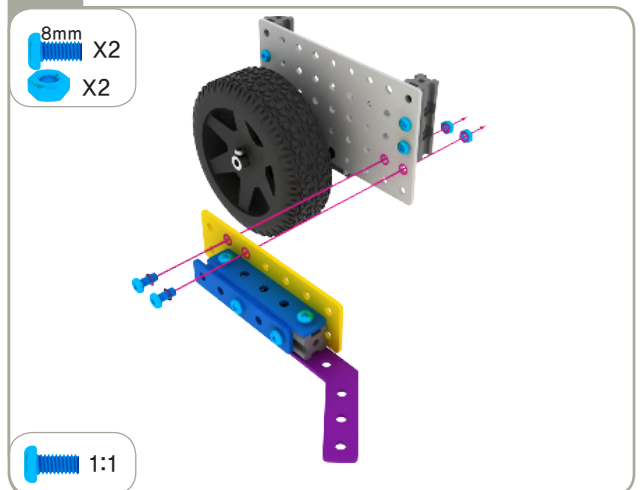
4

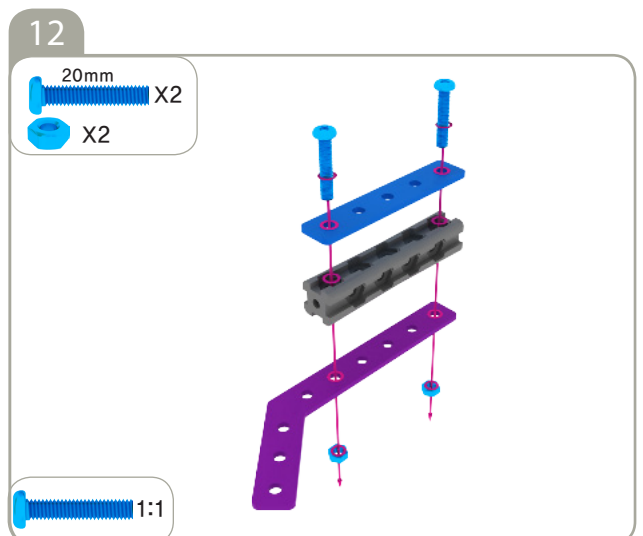
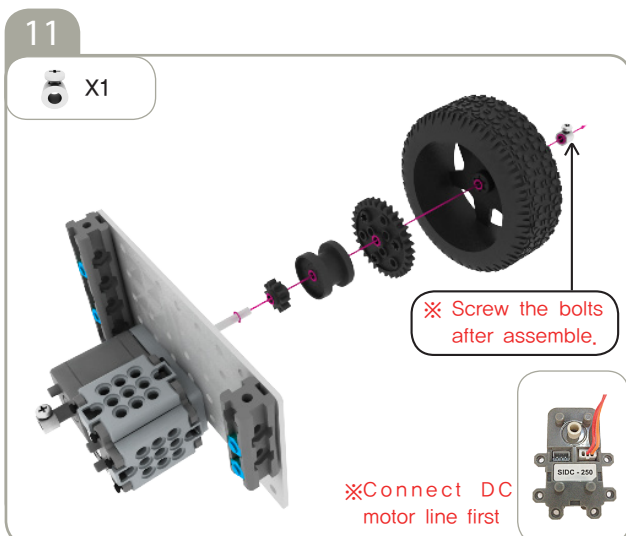
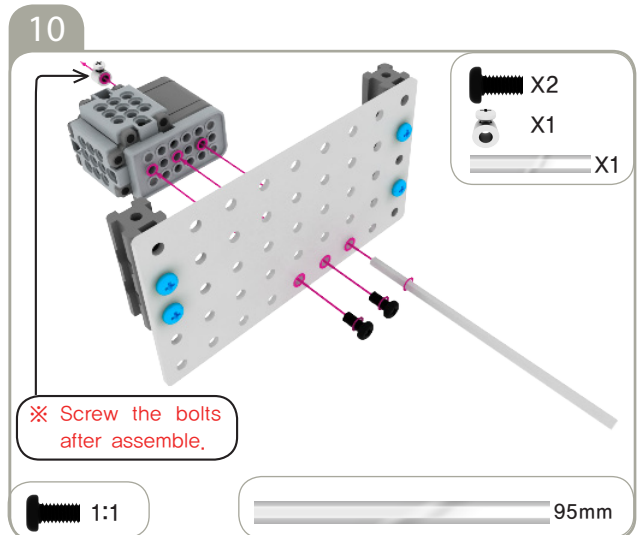
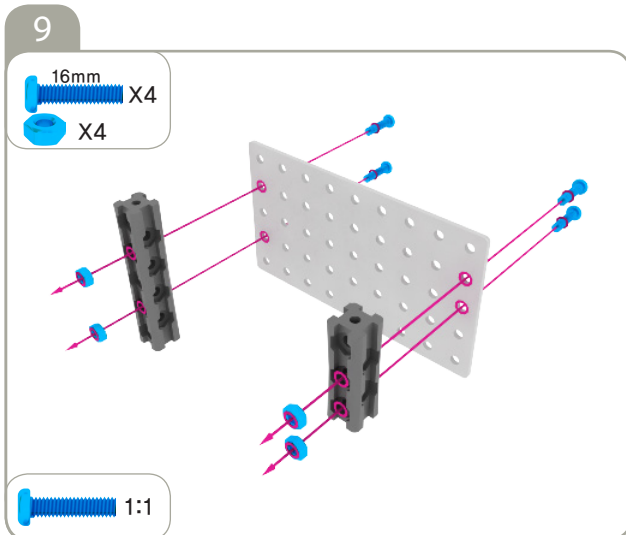
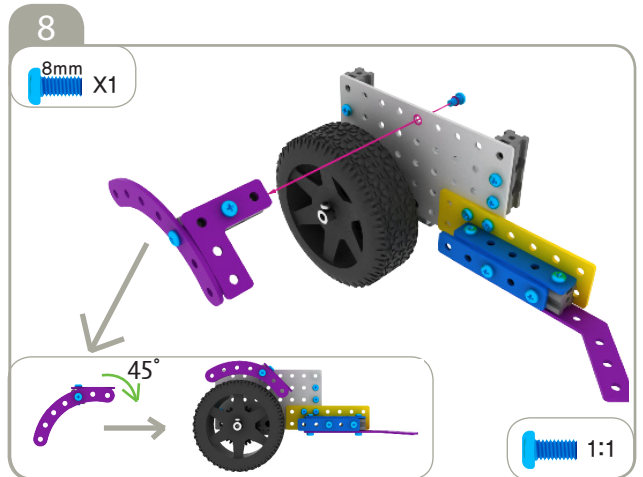
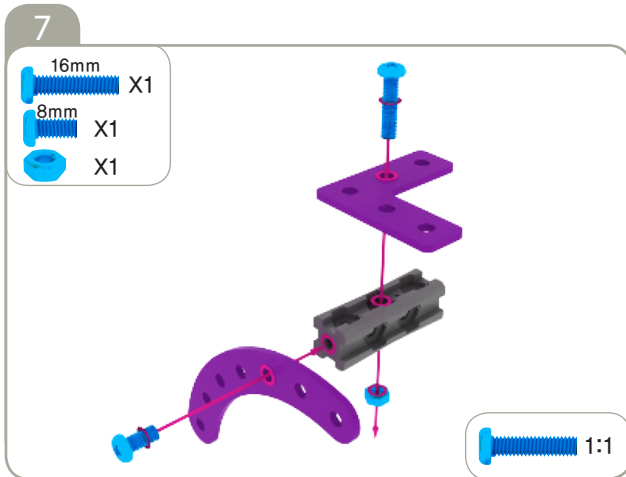


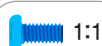
5



6



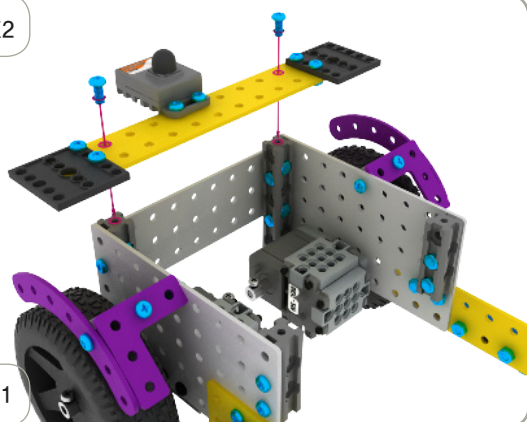




19

8mm X2

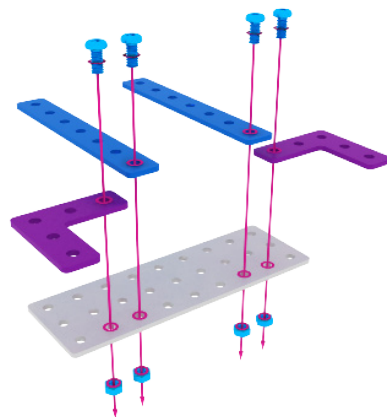
1:1



20

8mm X4
X4

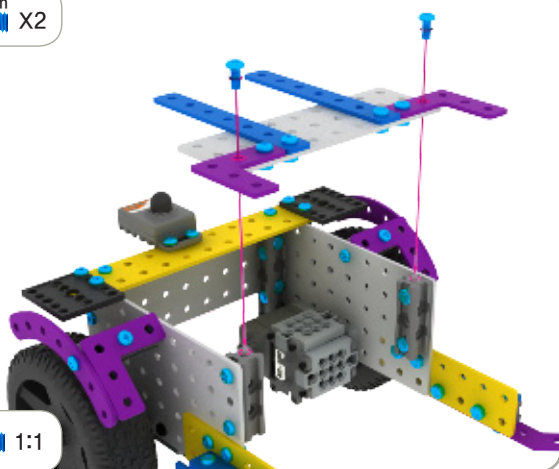
1:1



21

8mm X2

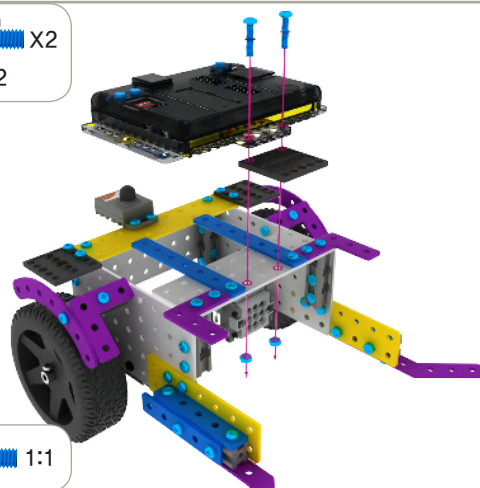
1:1



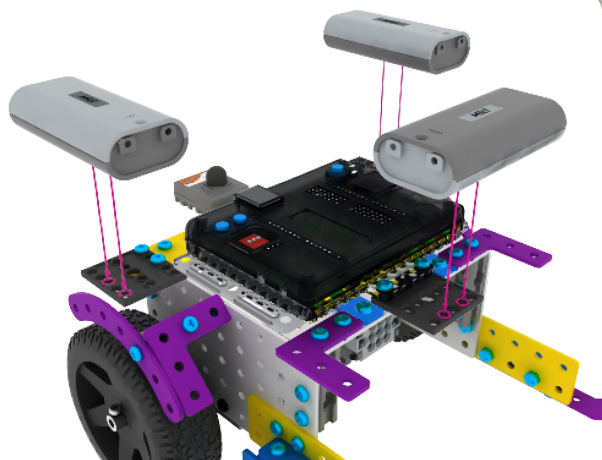
22

16mm X2
X2

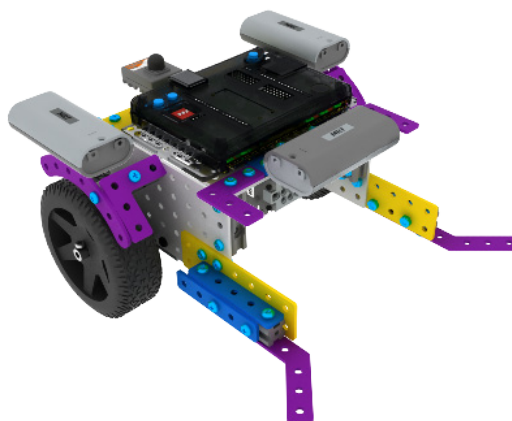
1:1



23

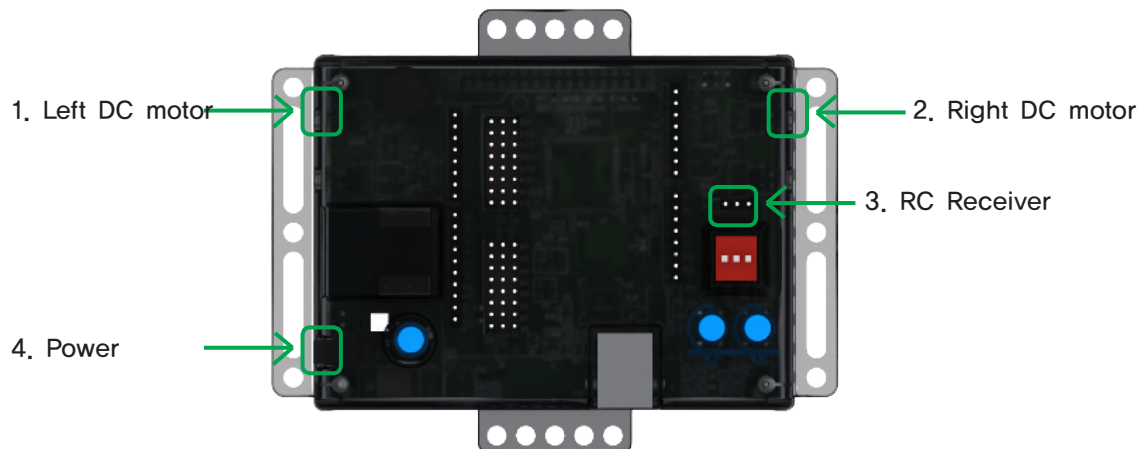


Complete





Connecting the mainboard

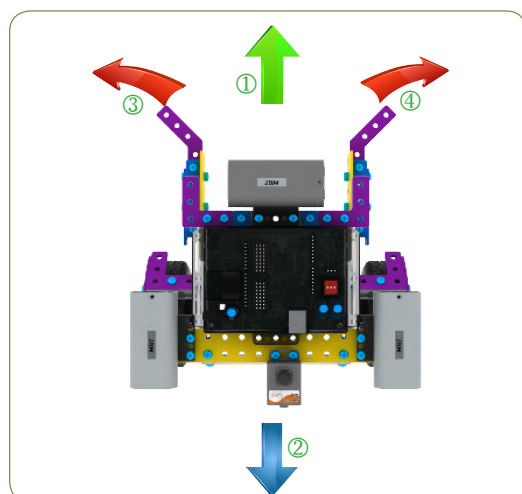


Please connect in this order:

1. Connect left DC motor to L-MOTOR connector1.
2. Connect right DC motor to R-MOTOR connector2.
3. Connect RC Receiver to R/C connector.
4. Connect battery case to Power connector.



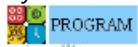
Motion Pattern



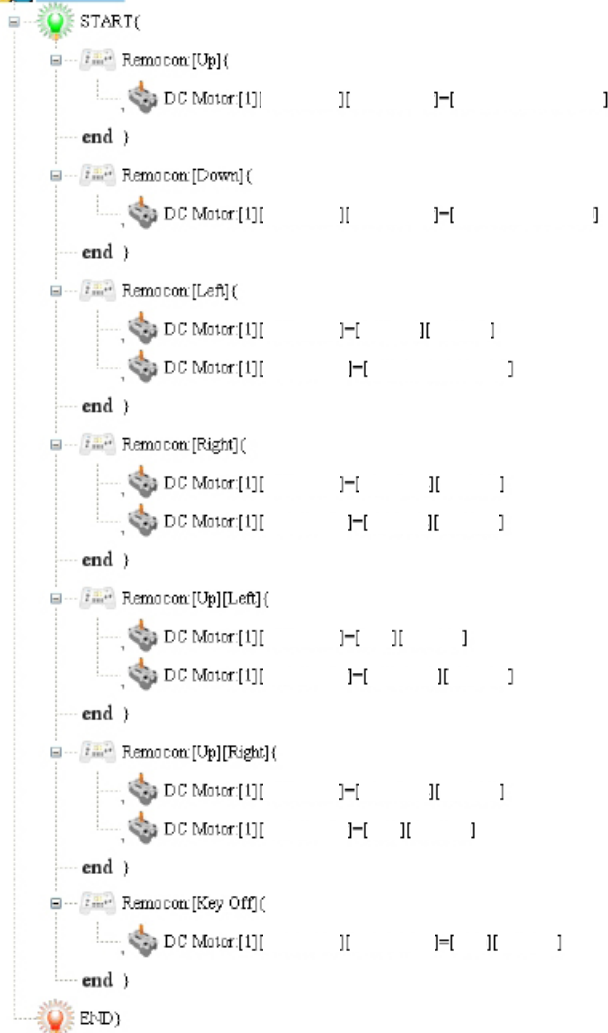


Learn to compile program in advance

Try to write down the program before we compile on software.



PROGRAM



1. Both left and right DC motors go backward, the robot will go forward.
2. Left DC motor goes forward and right DC motor goes backward, the robot will turn left.
3. Left DC motor backward and right DC motor forward, the robot will turn right.
4. Both left and right DC motors go forward, the robot will go backward.
5. Release all buttons, the robot will stop.

✖ Program example : Refer to the back of book.

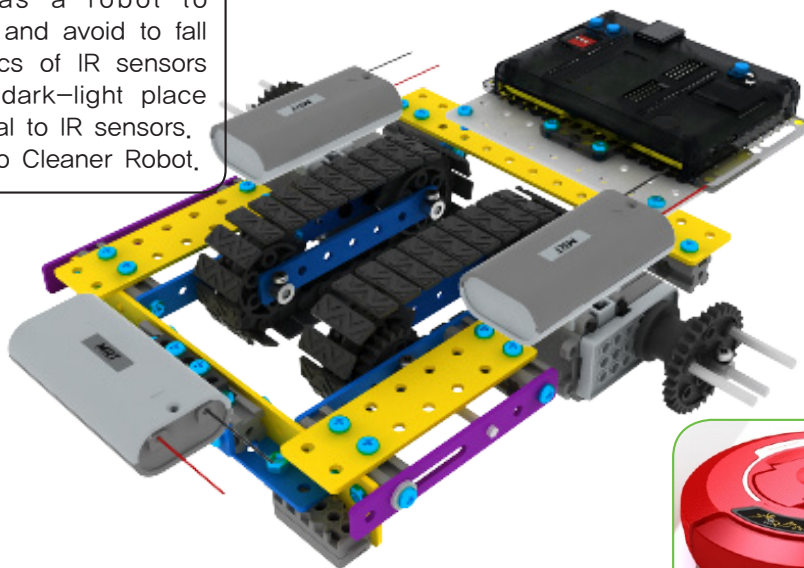


Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

Drop Checker

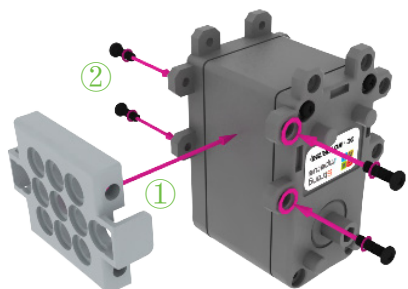
Drop Checker as a robot to recognize the cliff and avoid to fall down, it with 2 pcs of IR sensors to recognize the dark-light place and send the signal to IR sensors. The same theory to Cleaner Robot.



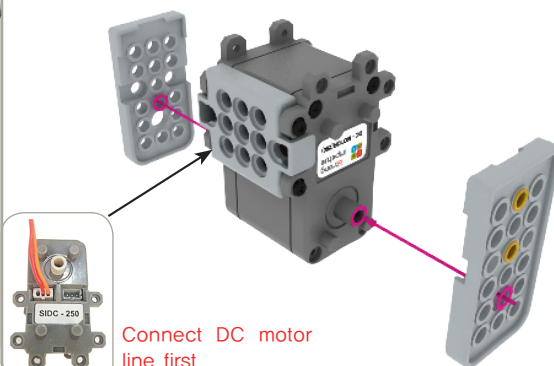
Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 31mm		4	9V Battery Case		1	Bolt		4
Steel shaft 70mm		2				Bolt 8mm		16
Steel shaft 120mm		2	MRT5-1 Main board		1	Bolt 16mm		18
15AL Frame		3				Bolt 20mm		4
17AL Frame		2				Nut		28
113AL Frame		2				Washer		6
27AL Frame		2	DC MOTOR		2	S-Gear		2
213AL Frame		2				Half-Bush		4
29AL Frame		1	L17AL Frame		2	Guide Wheel		2
			4-5 Pillar block		1	M-Gear		2
			2-3 Pillar Block		6	L-Gear		2
IR Sensor		2	Motor Mount		1	Sprocket		4
			Caterpillar		50	Sleeve pipe		8



1

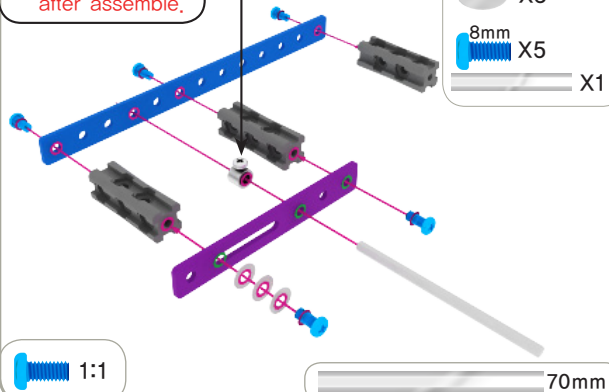


2

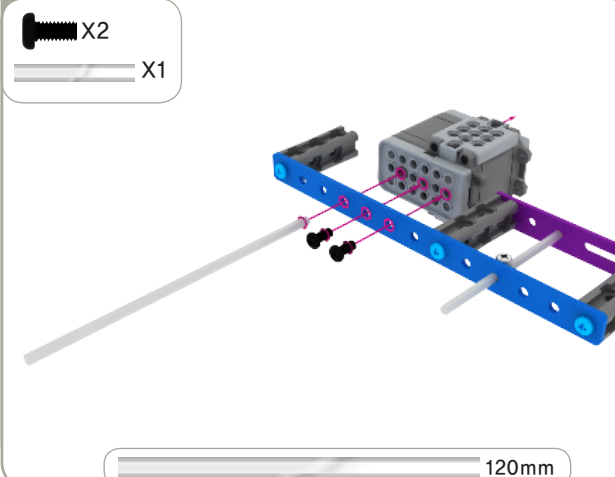


3

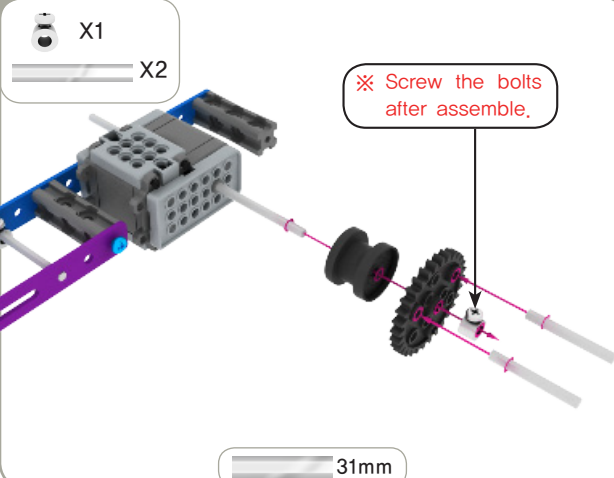
※ Screw the bolts after assemble.



4

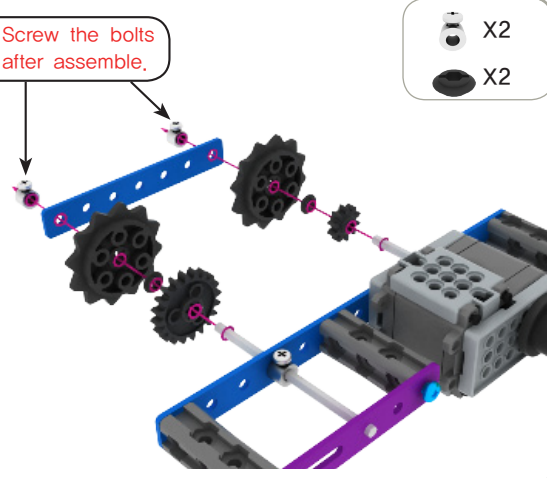


5



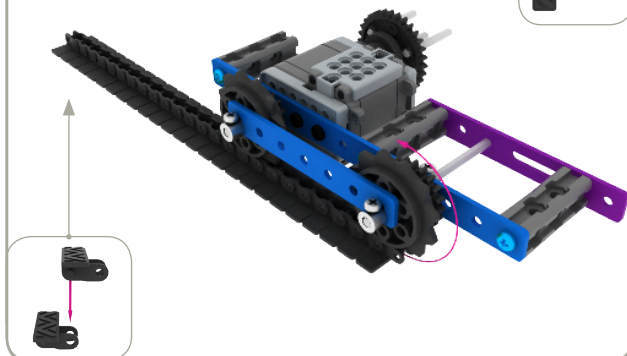
6

※ Screw the bolts after assemble.



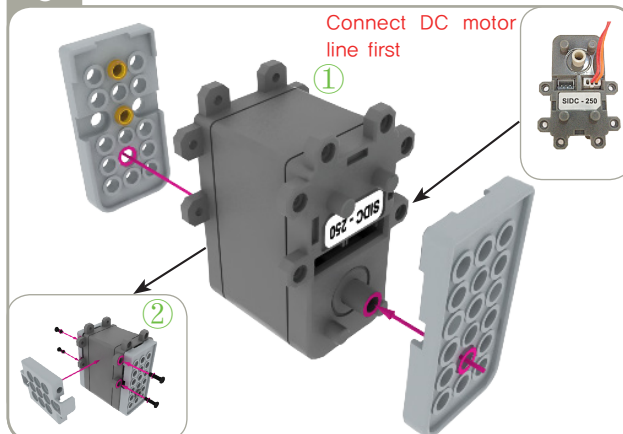
7

X25



8

Connect DC motor line first



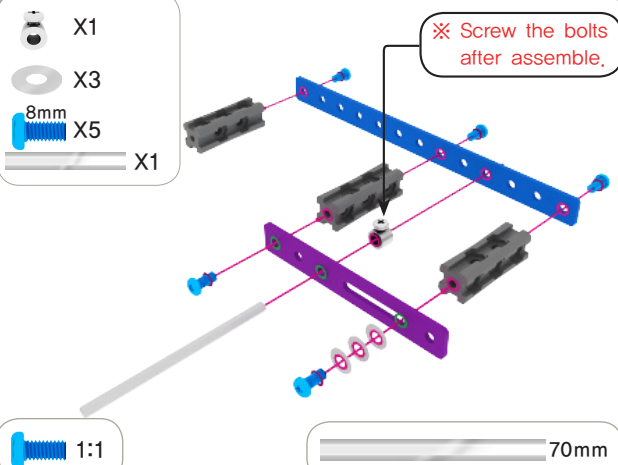
9

X1
X3
8mm X5
X1

※ Screw the bolts after assemble.

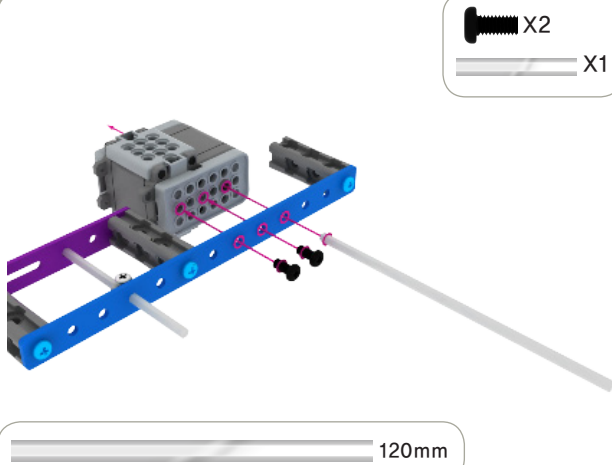
1:1

70mm



10

X2
X1

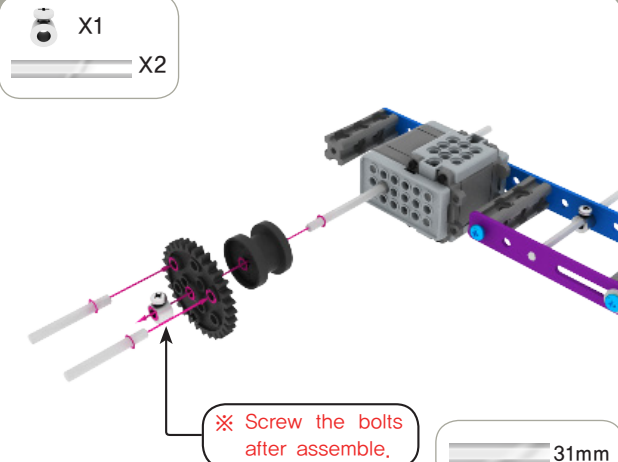


11

X1
X2

※ Screw the bolts after assemble.

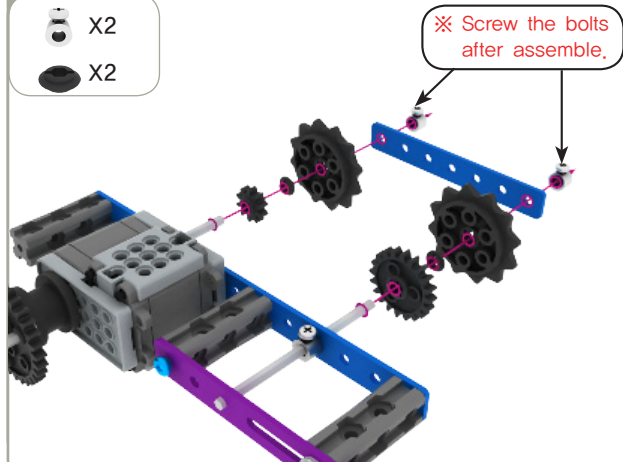
31mm



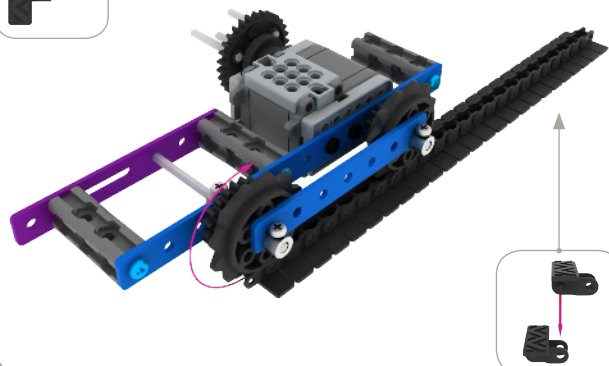
12

X2
X2



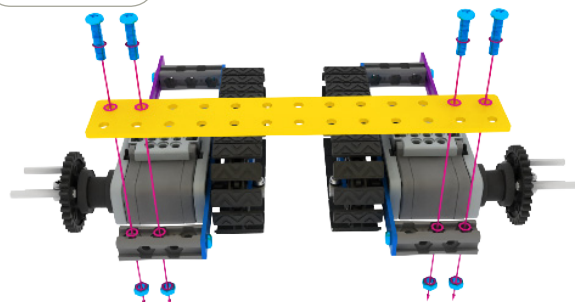
※ Screw the bolts after assemble.





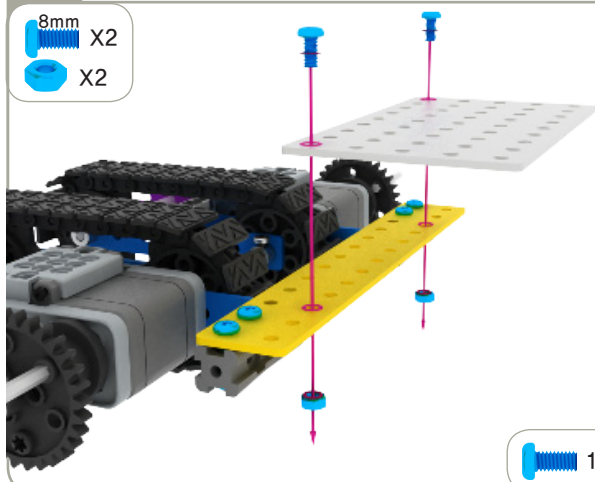
13

 X25




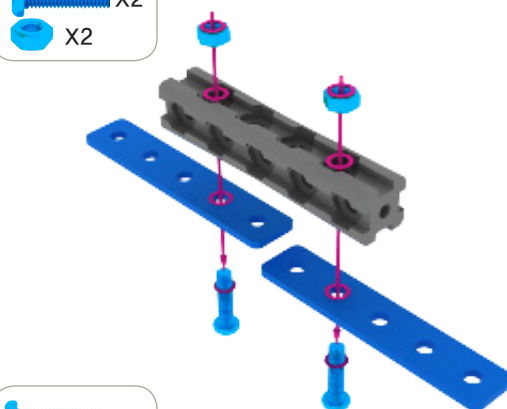
14

 X4
 X4




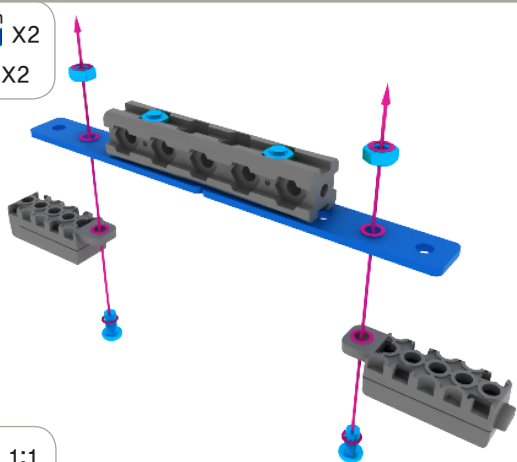

15

 X2
 X2

 1:1



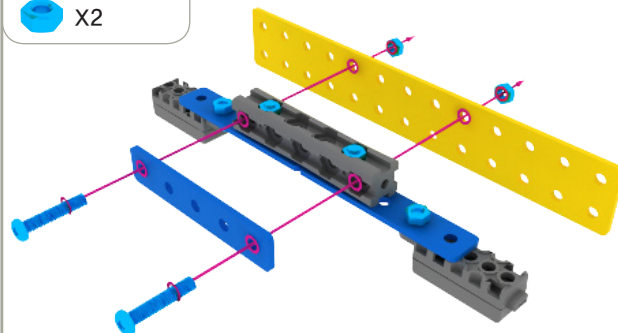
16

 X2
 X2

 1:1

17 Connect IR sensor

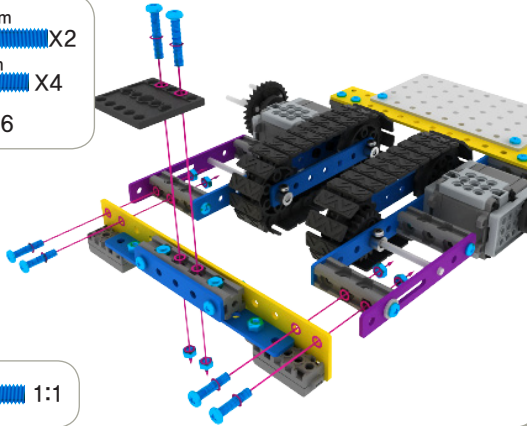
 X2
 X2

 1:1

18

 X2
 X2

 1:1

19

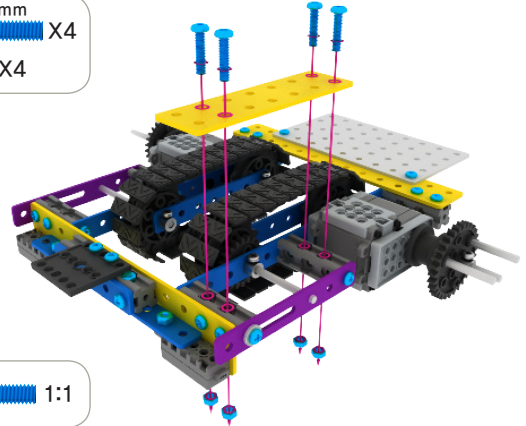
20mm X2
16mm X4
X6



1:1

20

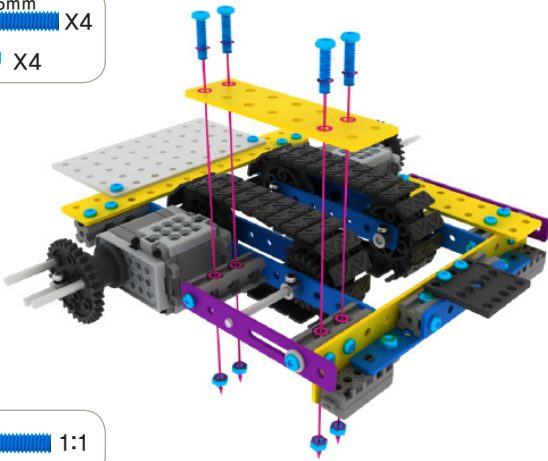
16mm X4
X4



1:1

21

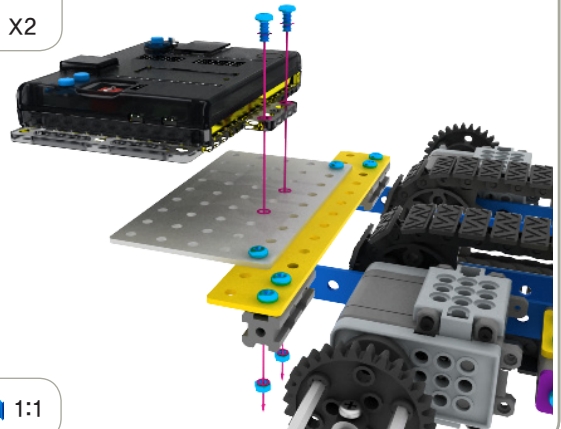
16mm X4
X4



1:1

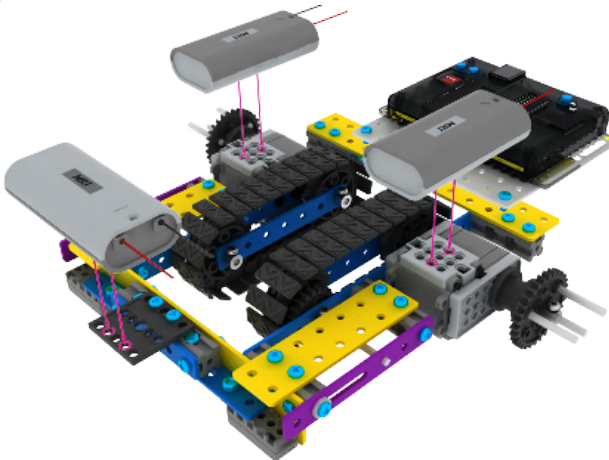
22

8mm X2
X2

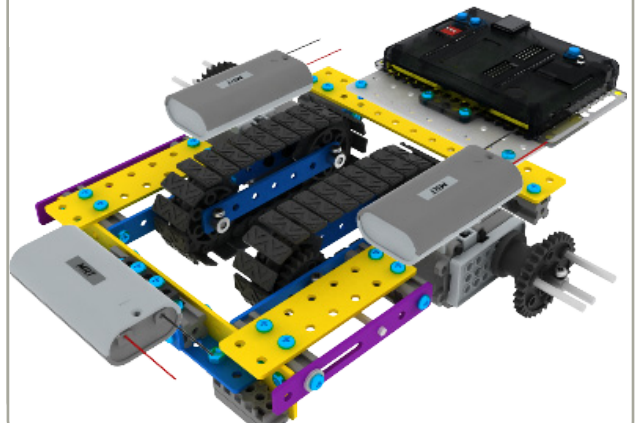


1:1

23

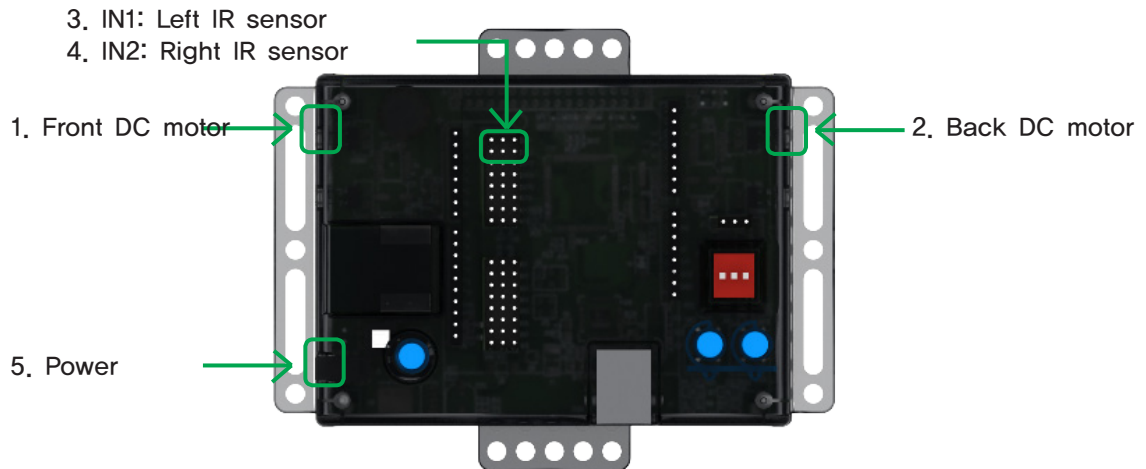


Complete





Connecting the mainboard

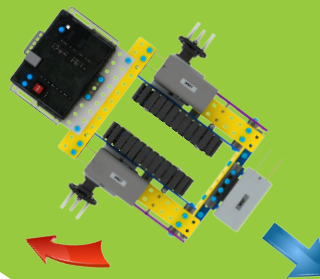


Please connect in this order:

1. Connect front DC motor to L-MOTOR connector1.
2. Connect back DC motor to R-MOTOR connector 1.
3. Connect left IR sensor to INPUT1 connector.
4. Connect right IR sensor to INPUT2 connector.
5. Connect battery case to Power connector.



Motion Pattern

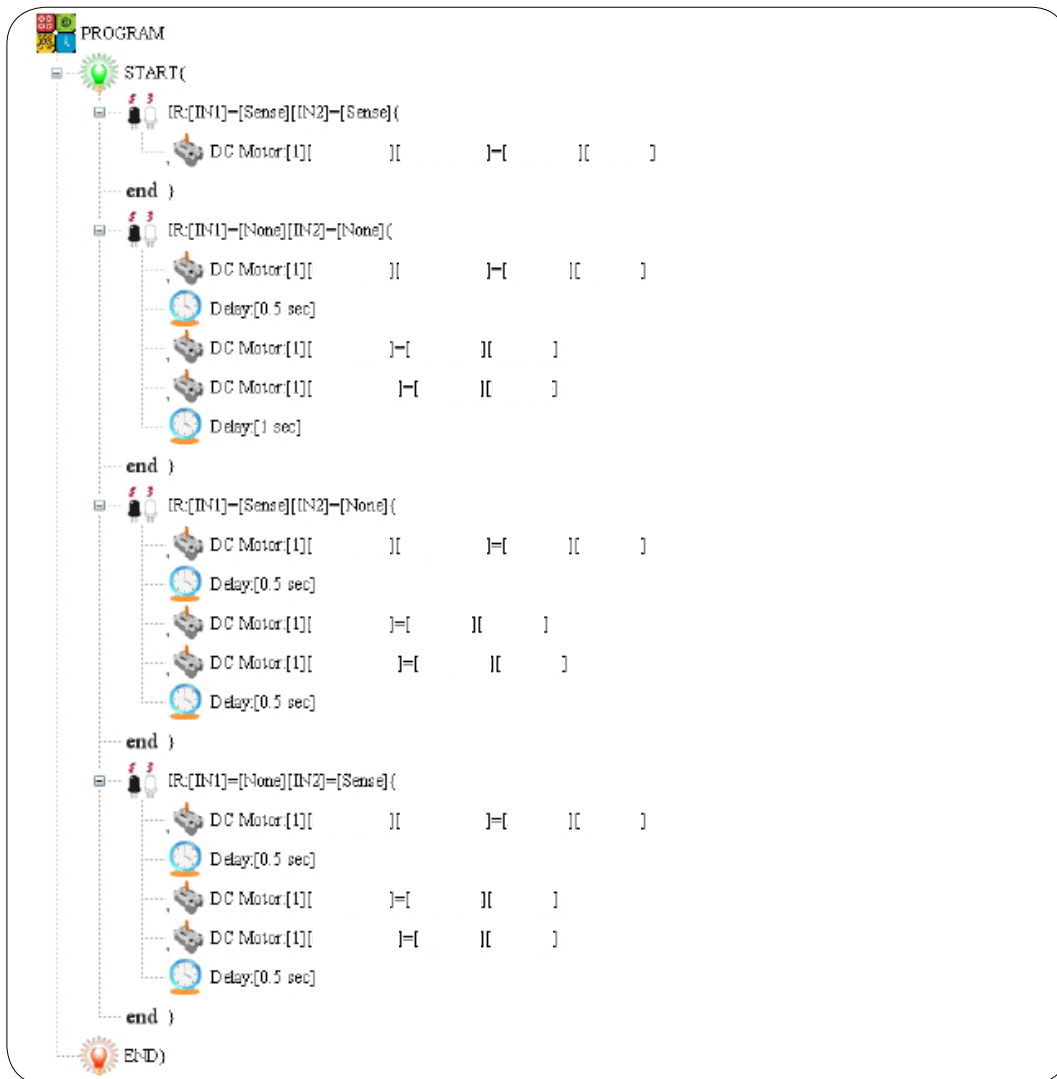


※ Robot will turn left or right , or turn 180 degrees when recognize the edge.



Learn to compile program in advance

Try to write down the program before we compile on software.



1. Recognize left IR sensor, robot will go backward and turn right.
2. Recognize right IR sensor, robot go backward and turn left.
3. Recognize both IR sensors, robot go backward and turn 180 degrees.
4. Regonize nothing, robot goes forward.

✖ Program example : Refer to the back of book.



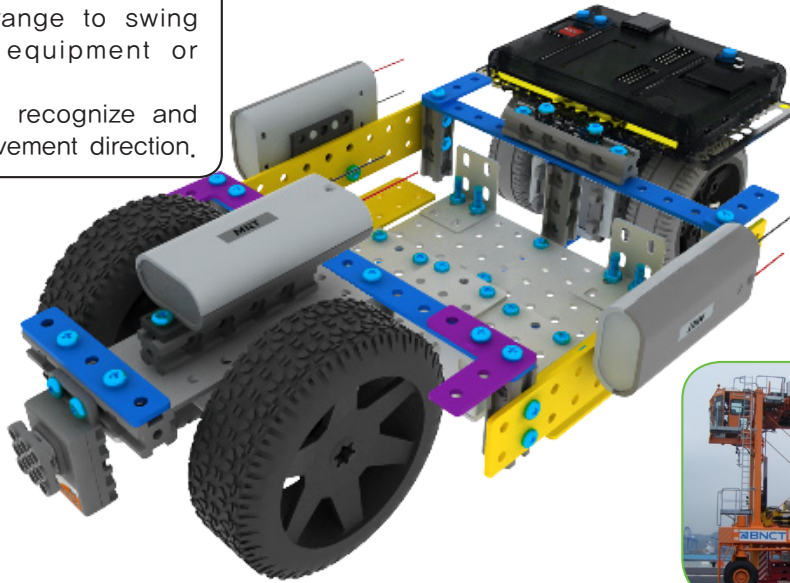
Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

SHUTTLE CARRIER

Shuttle Carrier as a transport ship within a certain range to swing transport heavy equipment or human.

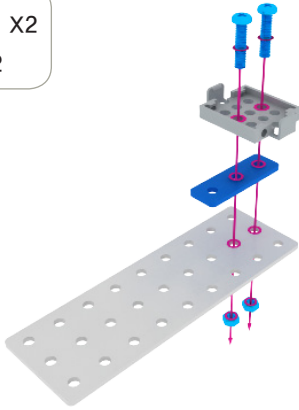
Two touch sensors recognize and aboard the anti-movement direction.



Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 120mm		2	9V Battery Case		1	Bolt 8mm		28
13AL Frame		7	MRT5-1 Main board		1	Bolt 16mm		30
15AL Frame		3	DC MOTOR		2	Bolt 20mm		3
17AL Frame		2	AL Frame90		2	Nut		51
113AL Frame		2	4-5 Pillar block		3	Guide Wheel		2
27AL Frame		2	2-3 Pillar Block		8	M-Gear		2
213AL Frame		2	Motor Mount		2	Sleeve pipe		4
39AL Frame		2				Big Wheel1		2
59AL Frame		2				Big Wheel2		2
						Touch Sensor		2
						D90 S-Bracket		4
						9 Hole Motor Mount		1

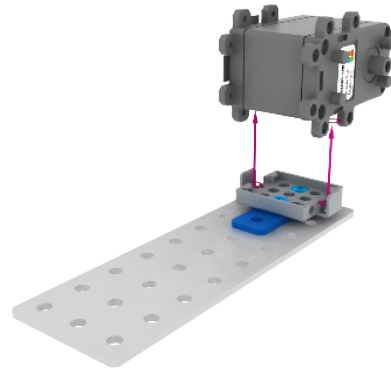
1

16mm X2
X2

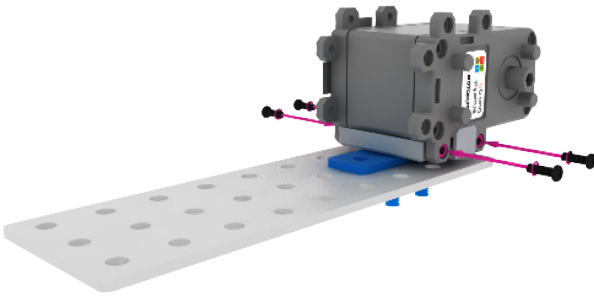


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2

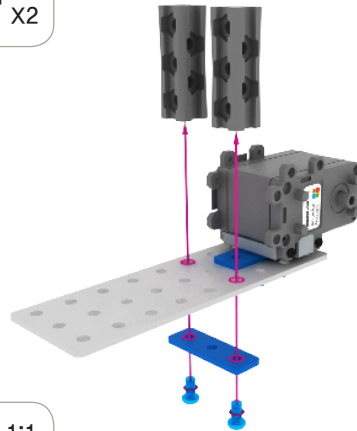


3



4

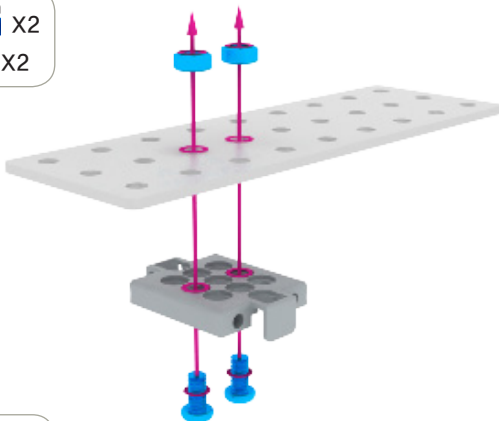
8mm X2



1:1

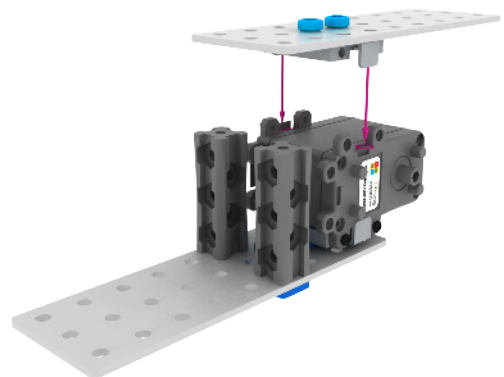
5

8mm X2
X2

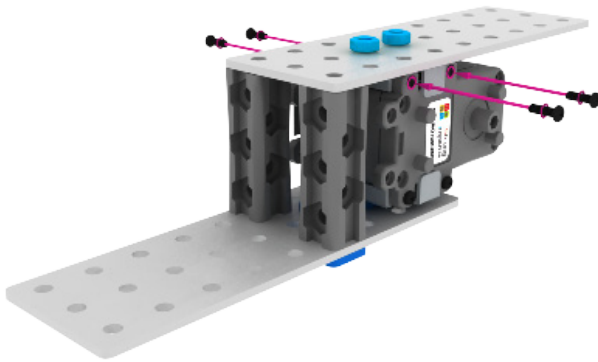


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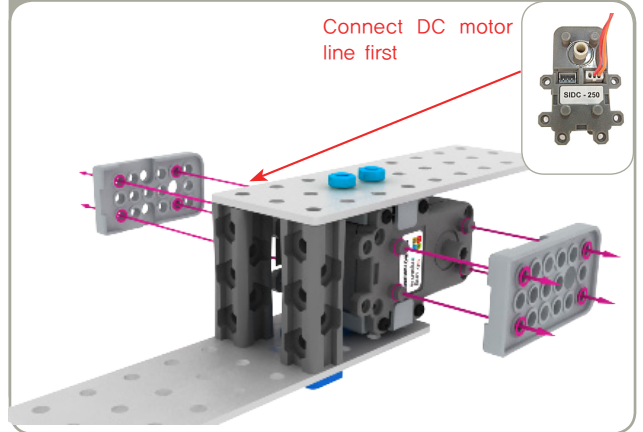
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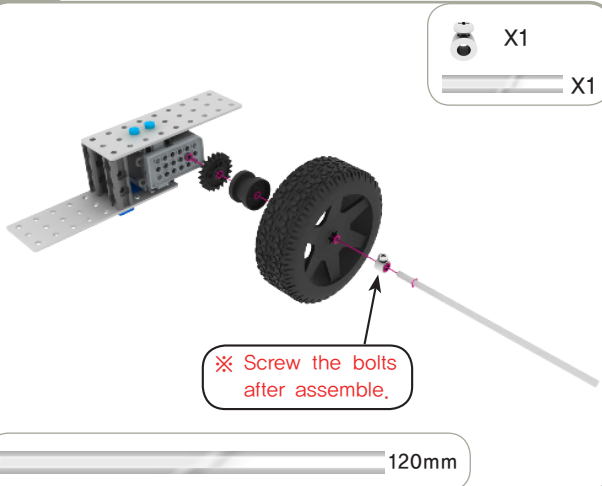
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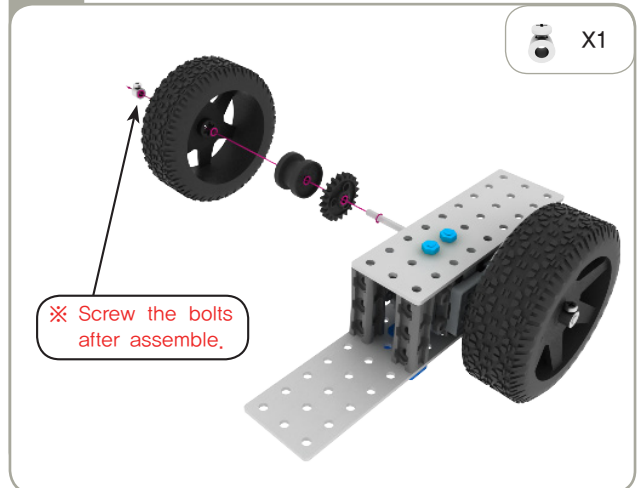
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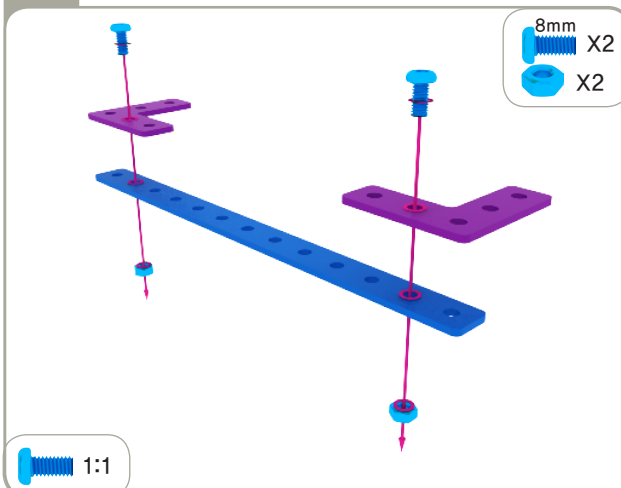
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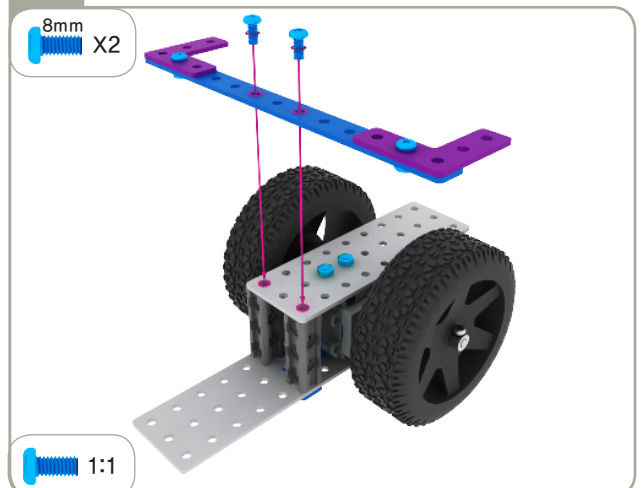
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11

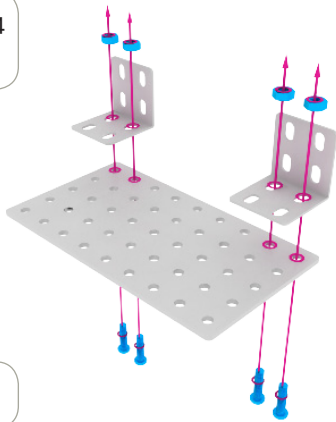


12



13

16mm X4
X4

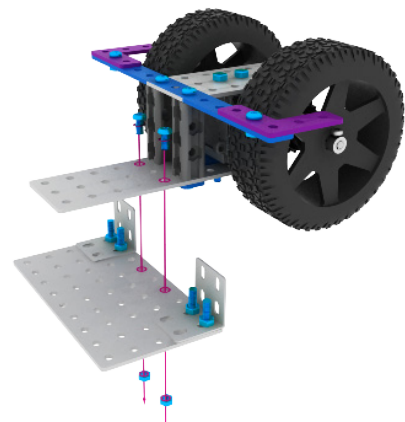


1:1

X2

14

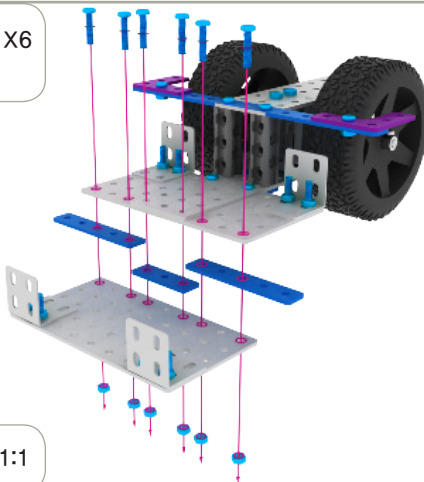
8mm X2
X2



1:1

15

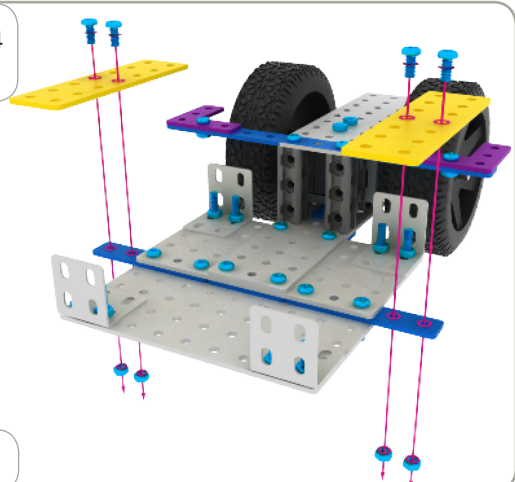
16mm X6
X6



1:1

16

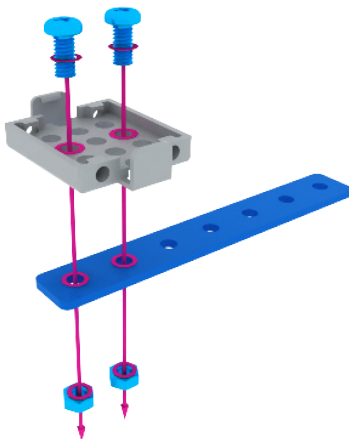
8mm X4
X4



1:1

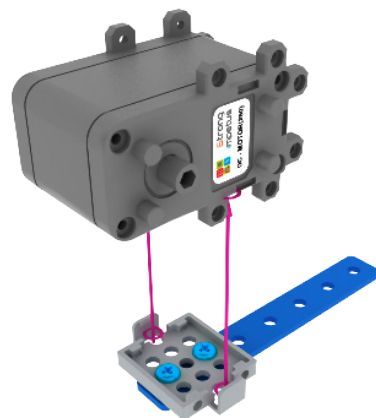
17

8mm X2
X2

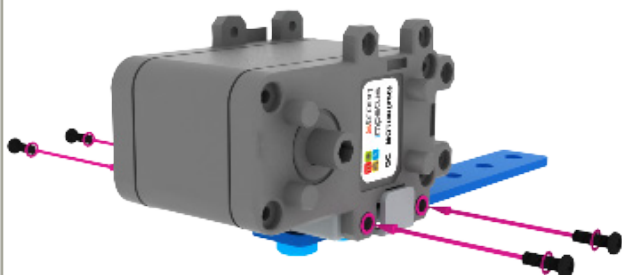


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18

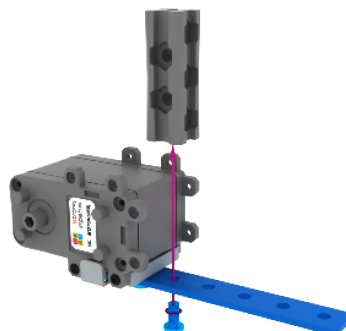


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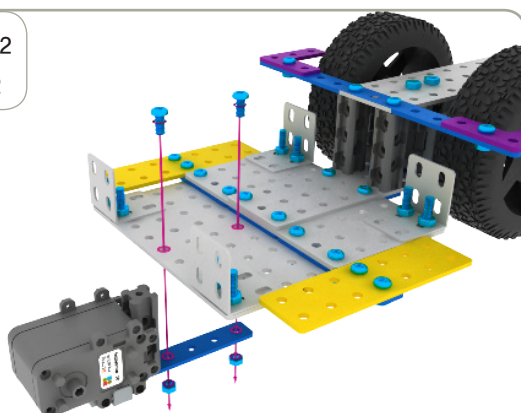
20

8mm X1



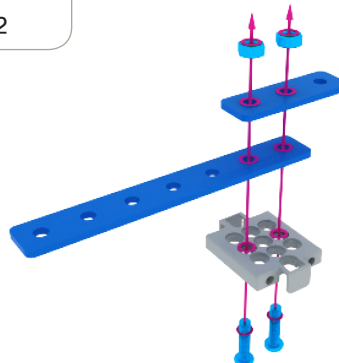
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21

8mm X2
X2

1:1

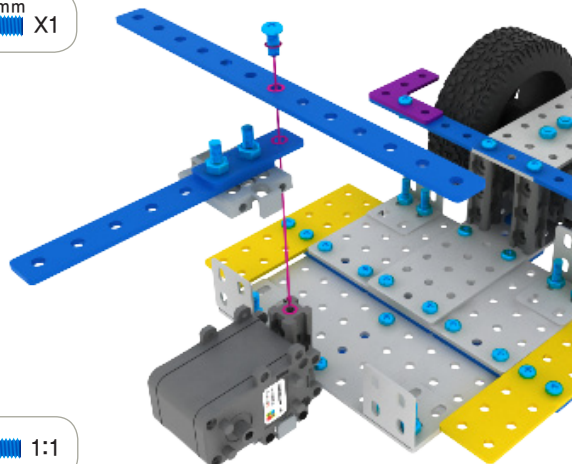
22

16mm X2
X2

1:1

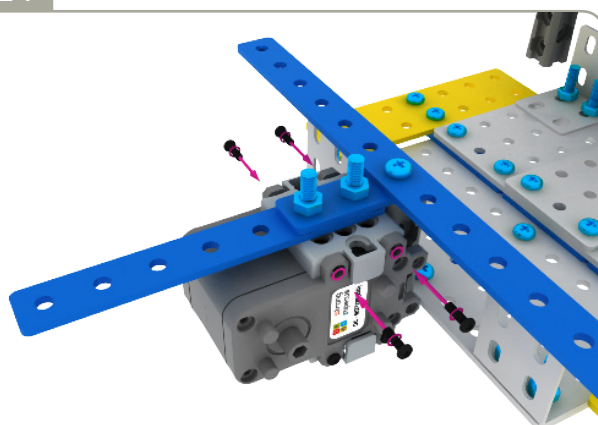
23

8mm X1

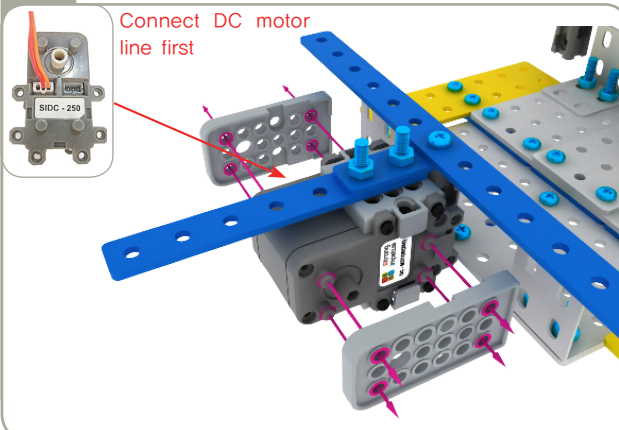


1:1

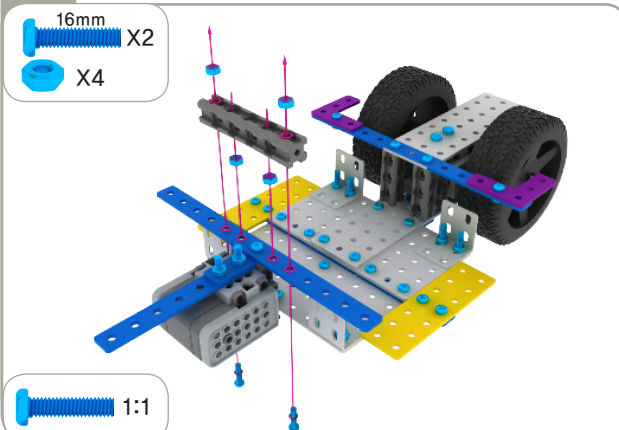
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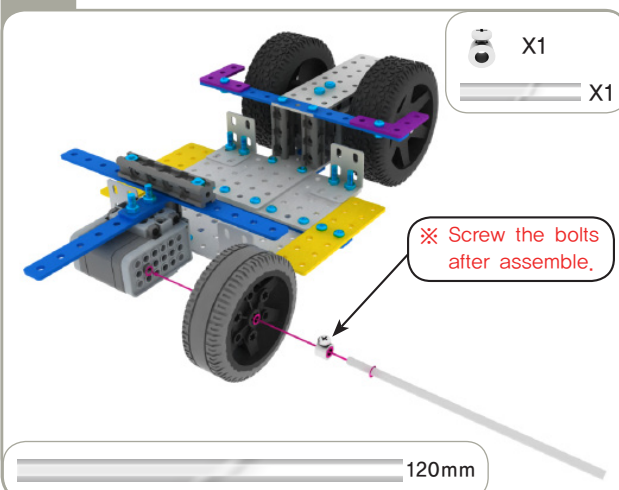
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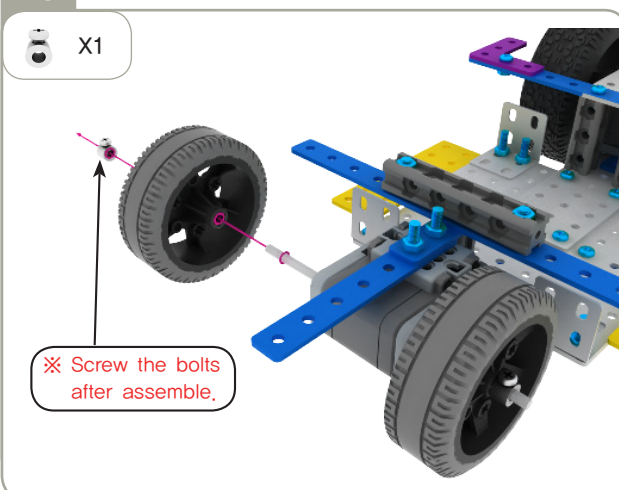
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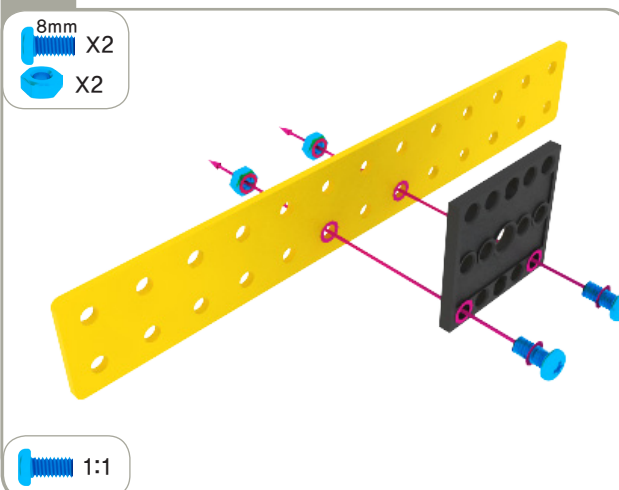
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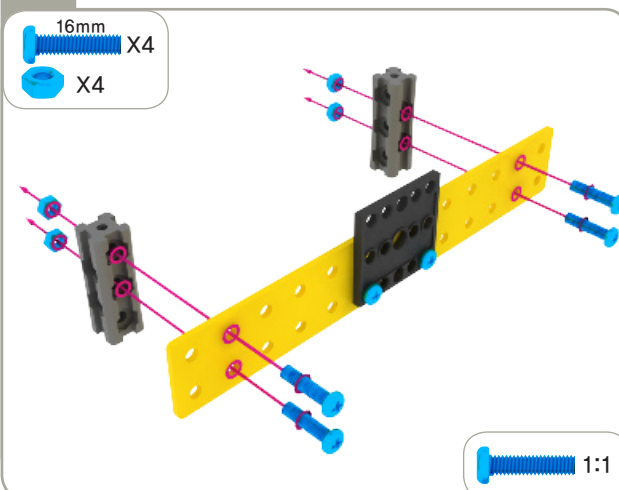
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29

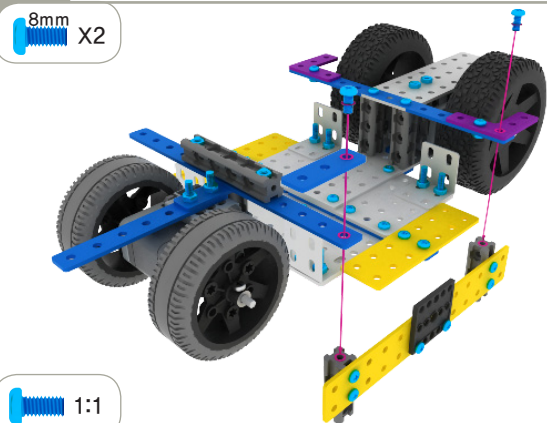


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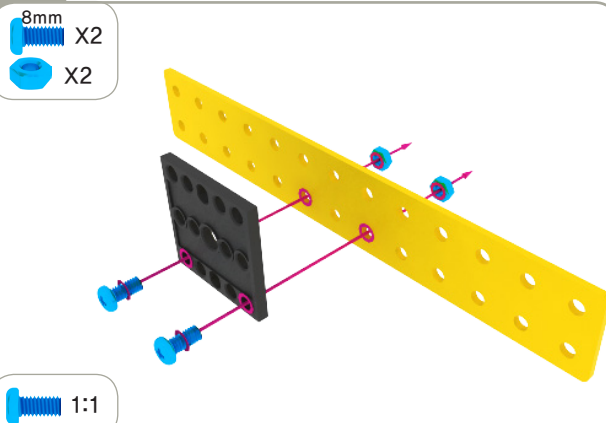
31

8mm X2



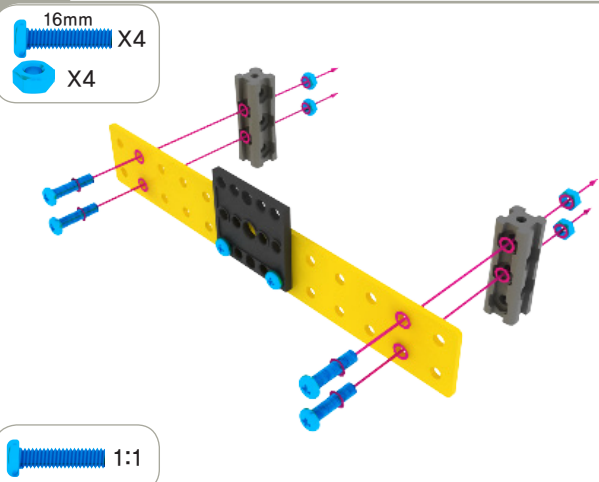
1:1

32

8mm X2
X2

1:1

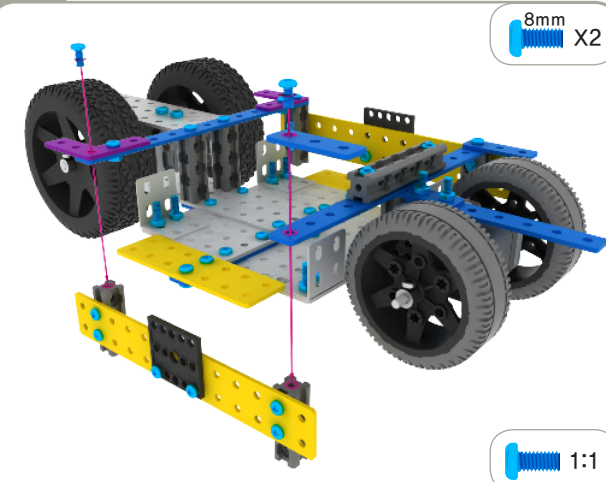
33

16mm X4
X4

1:1

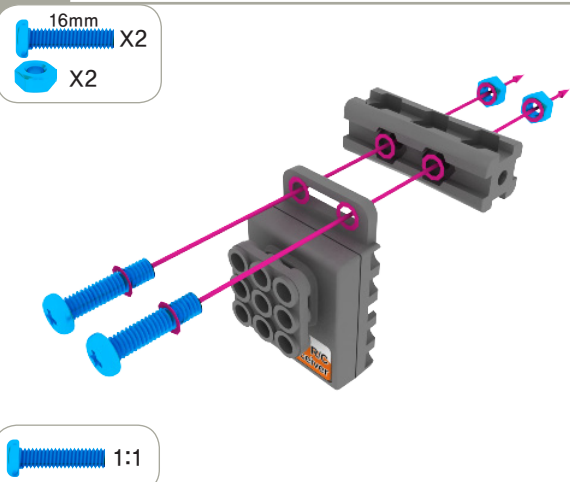
34

8mm X2



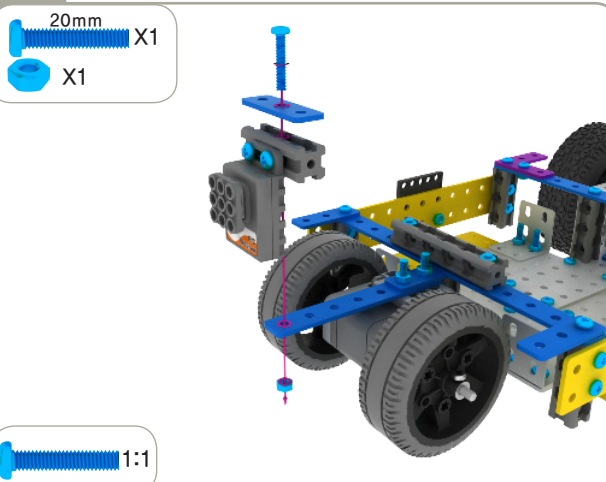
1:1

35

16mm X2
X2

1:1

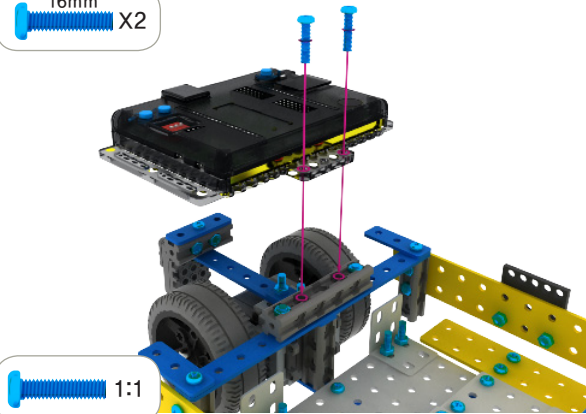
36

20mm X1
X1

1:1

37

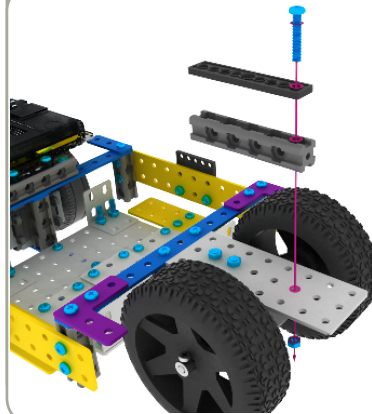
16mm X2



1:1

38

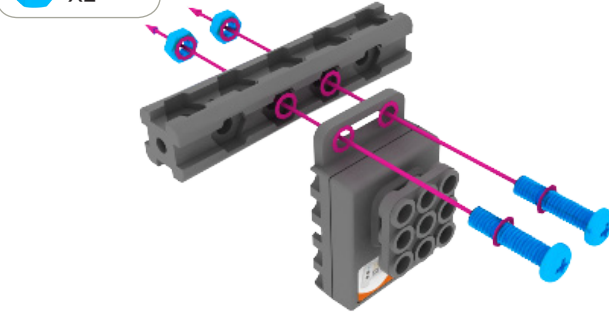
20mm X1
X1



1:1

39

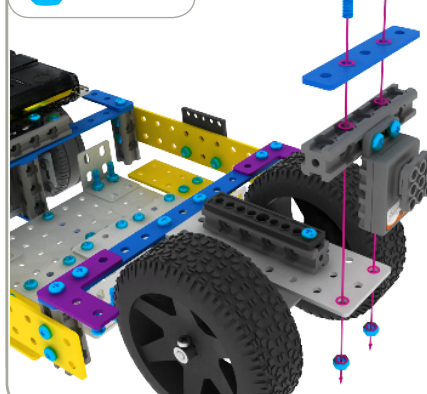
16mm X2
X2



1:1

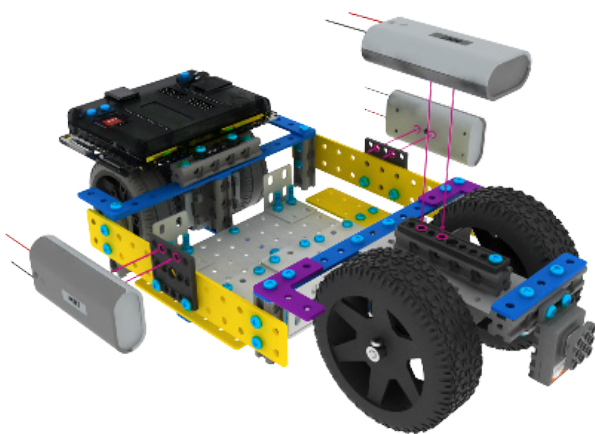
40

20mm X2
X2

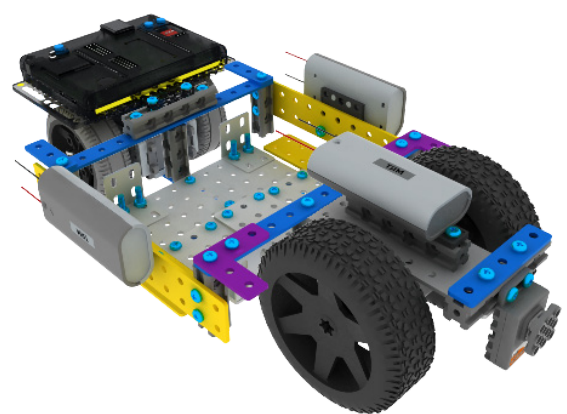


1:1

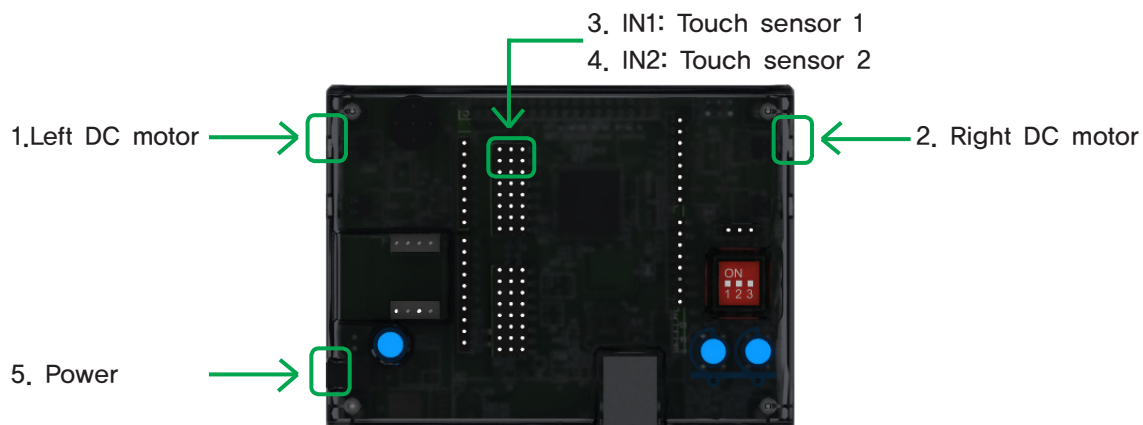
41



Complete



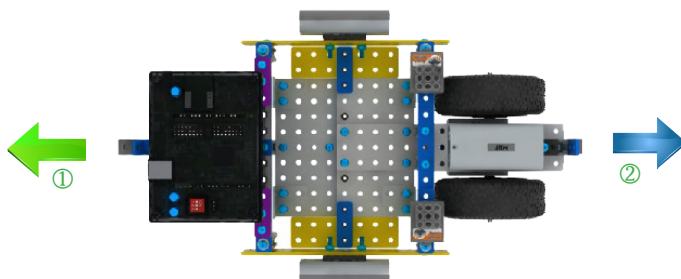
Connecting the mainboard



Please connect in this order:

1. Connect left DC motor to L-MOTOR connector.
2. Connect right DC motor to R-MOTOR connector.
3. Connect Touch sensor1 to INPUT1 connector.
4. Connect Touch sensor2 to INPUT2 connector.
5. Connect battery case to Power connector.

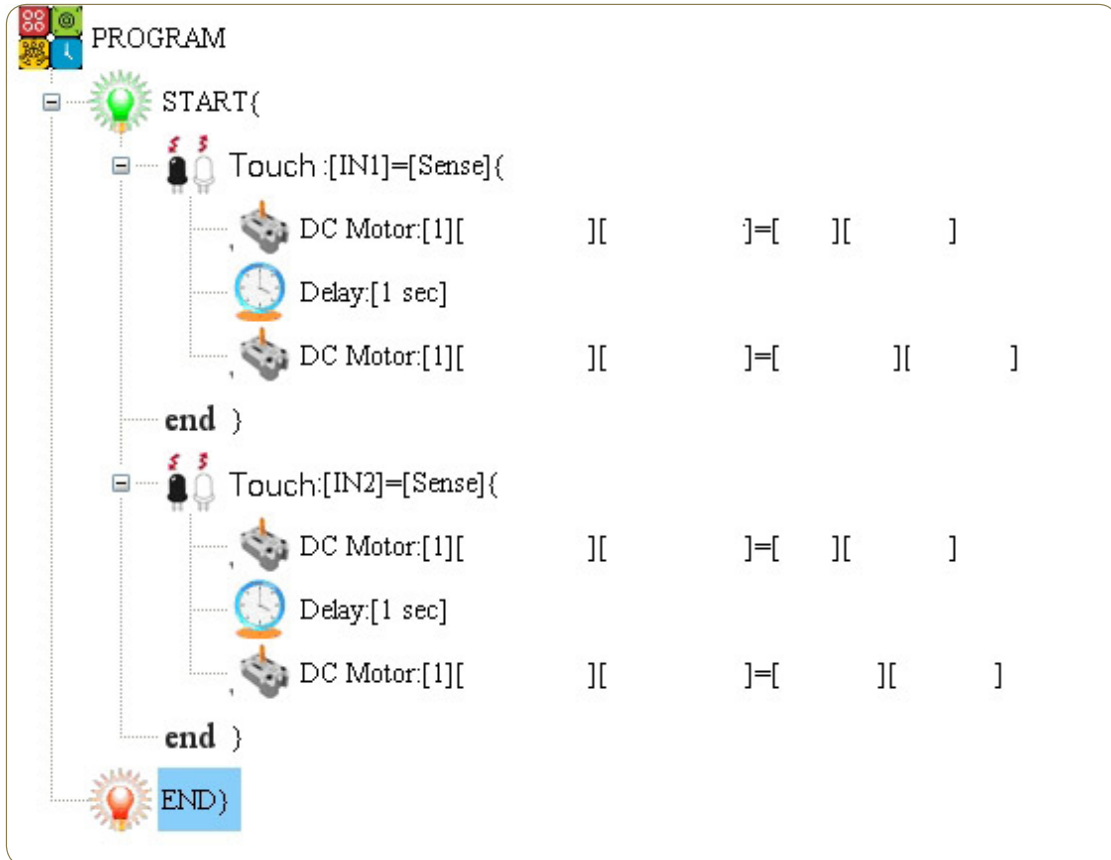
Motion Pattern





Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Recognize Touch sensor1, robot will move in opposite direction.
 2. Recognize Touch sensor 2, robot will move in opposite direction again.
- ※ Movement and transport ship are similar theory.

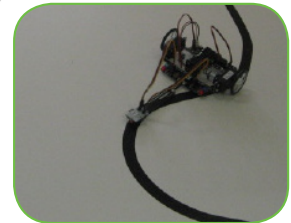
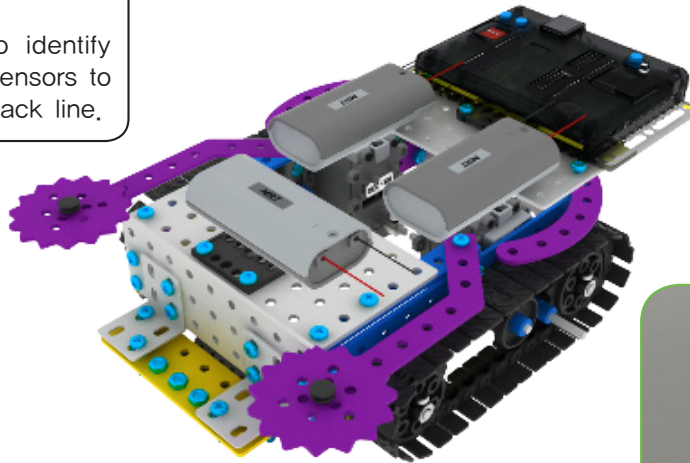


Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download" to start.
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

TRACING TANK

Tracing Tank walks along the black line with 3 pcs of IR sensors.
Using reflection to identify the infrared light sensors to walks along the black line.

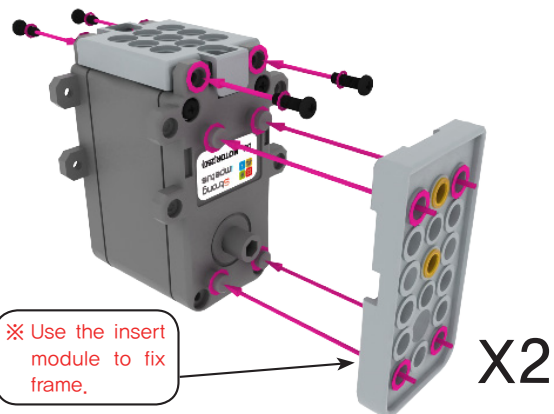


Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 44mm		4	9V Battery Case		1	Bolt		4
Steel shaft 70mm		2	MRT5-1 Main board		1	Bolt 8mm		19
Steel shaft 95mm		2				Bolt 16mm		16
17AL Frame		2	DC MOTOR		2	Bolt 20mm		12
113AL Frame		2				Nut		41
27AL Frame		1	AL Frame 90		4	ABS Connecting shaft		2
213AL Frame		2	AL Sprocket		2	B-Bush		10
39AL Frame		2	AL Round Block		2	Washer		6
59AL Frame		2	AL Frame 135		2	S-Gear		2
2-3 Pillar Block		6	M-Gear		2	Half-Bush		4
Motor Mount		1				Guide Wheel		2
Caterpillar		66				L-Gear		2
IR Sensor		3				Sprocket		4
						Sleeve pipe		10
						D90 S-Bracket		2

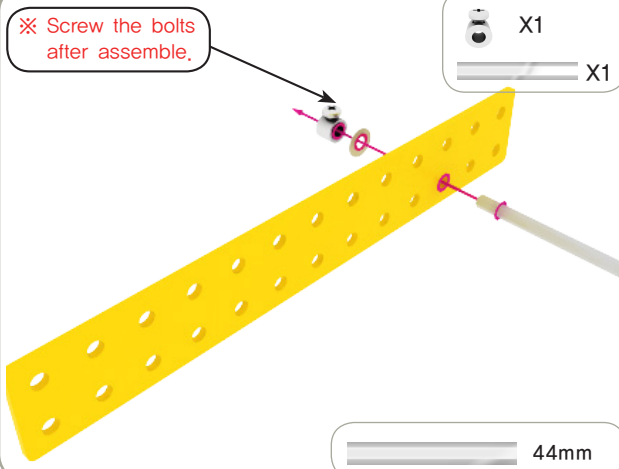
1



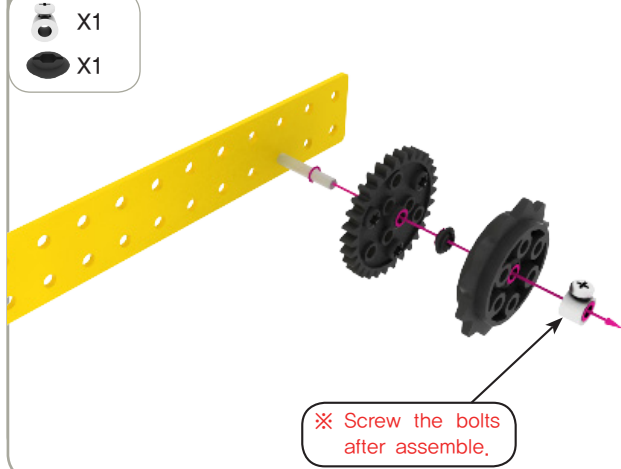
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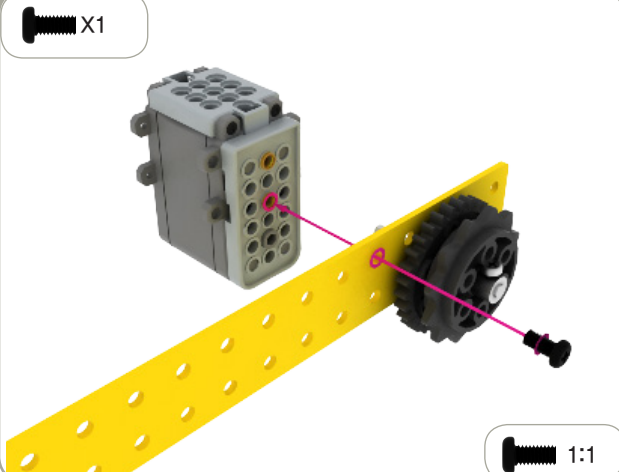
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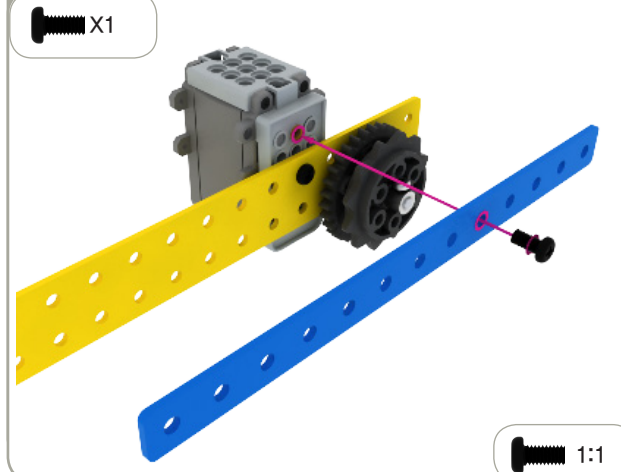
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5



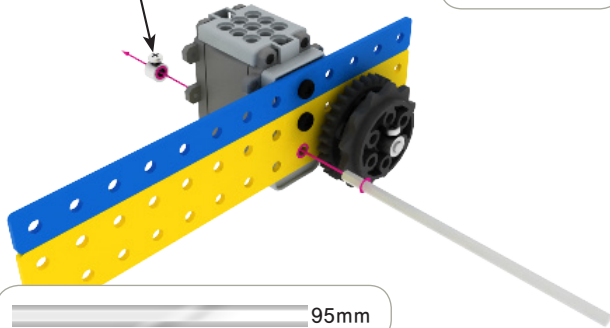
6



7

※ Screw the bolts
after assemble.

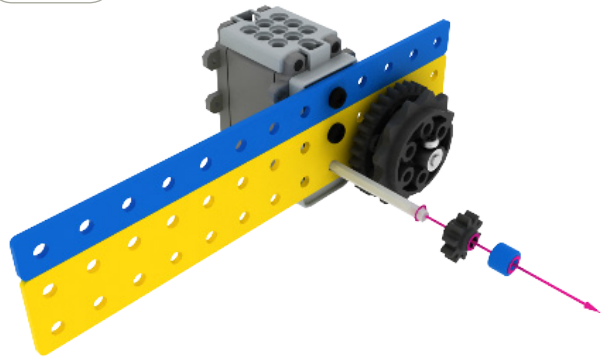
X1
X1



95mm

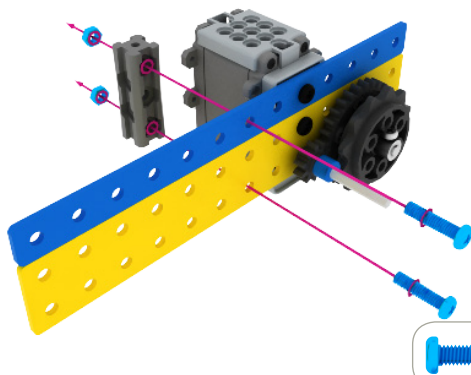
8

X1



9

16mm X2
X2

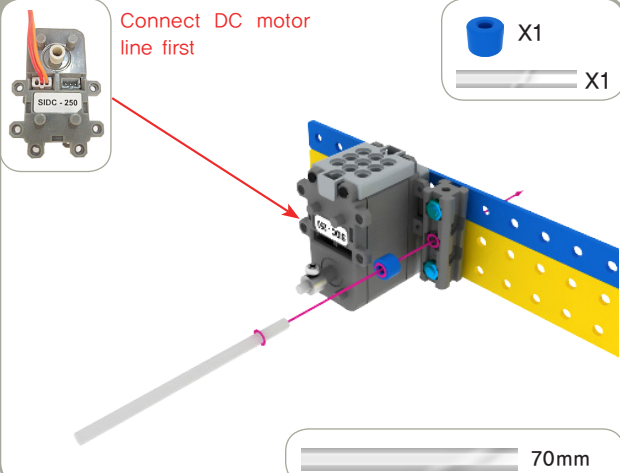


1:1

10

Connect DC motor
line first

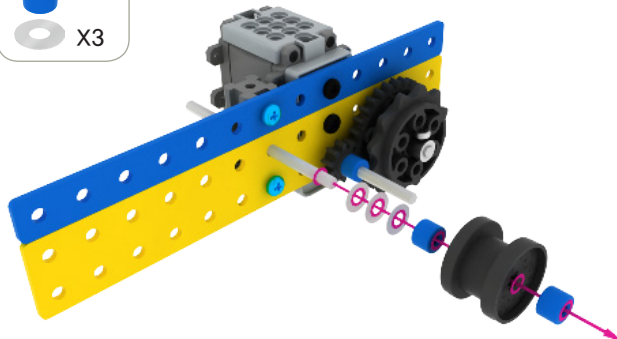
X1
X1



70mm

11

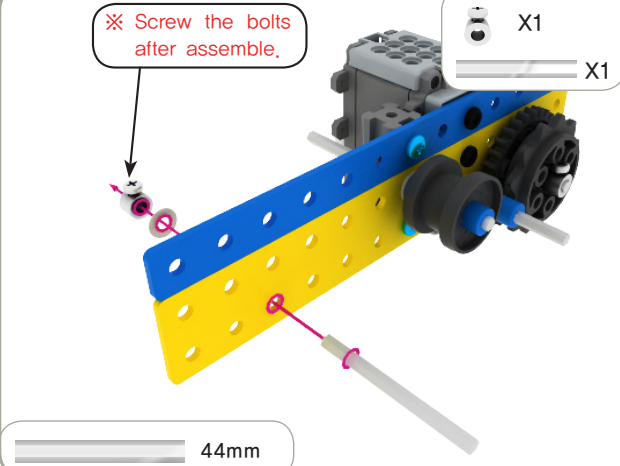
X2
X3



12

※ Screw the bolts
after assemble.

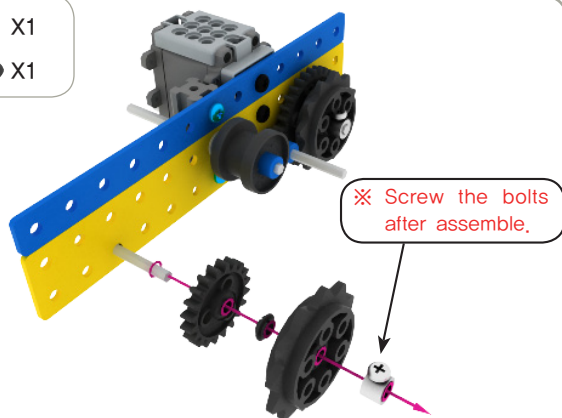
X1
X1



44mm

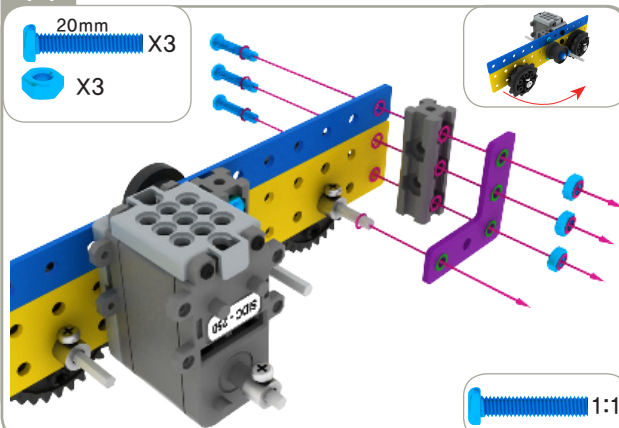
13

X1
X1



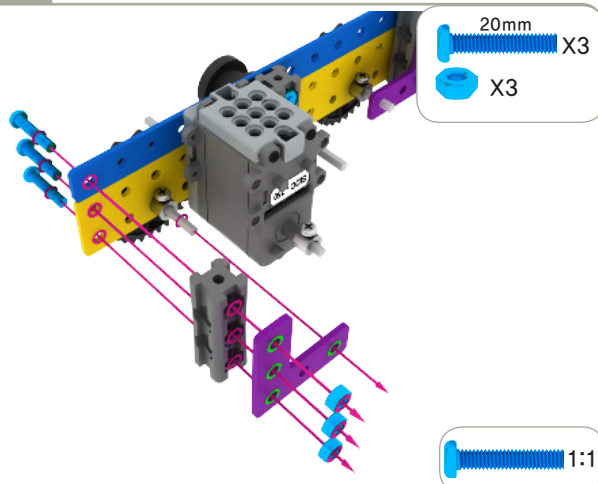
14

20mm X3
X3



15

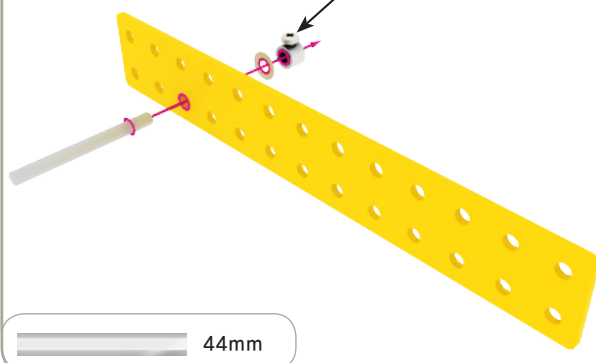
20mm X3
X3



16

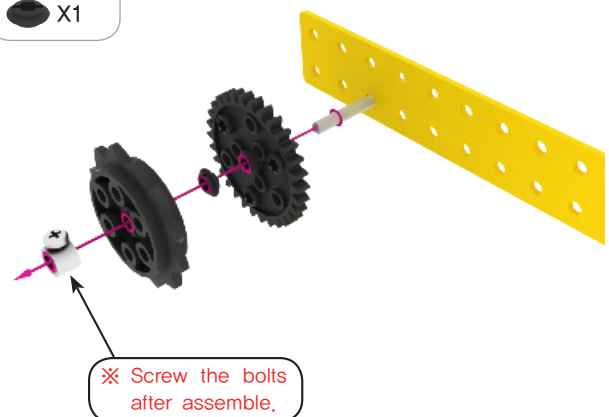
X1
X1

※ Screw the bolts after assemble.



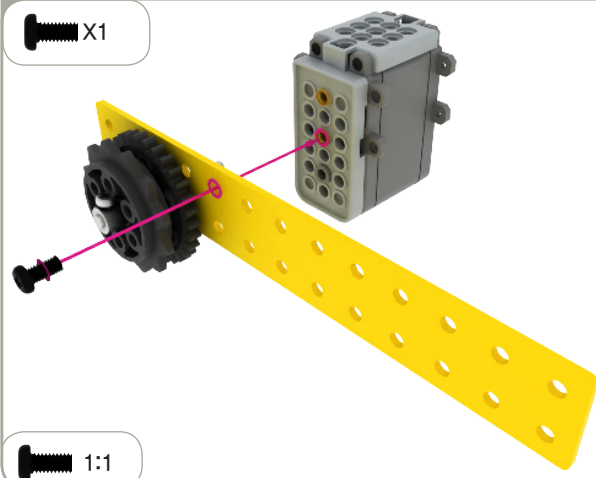
17

X1
X1

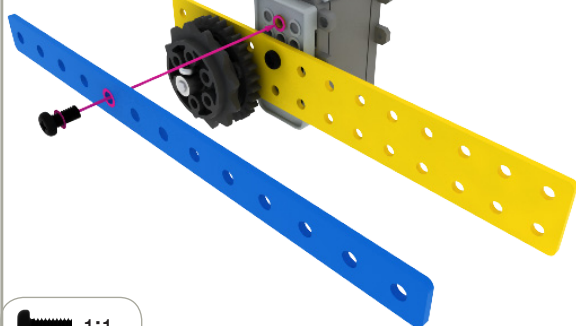


18



X1



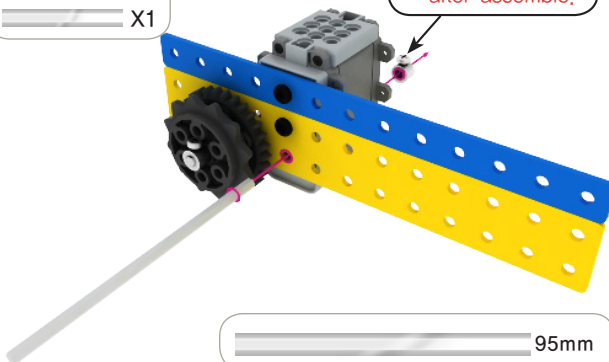
19

 X1

 1:1

20

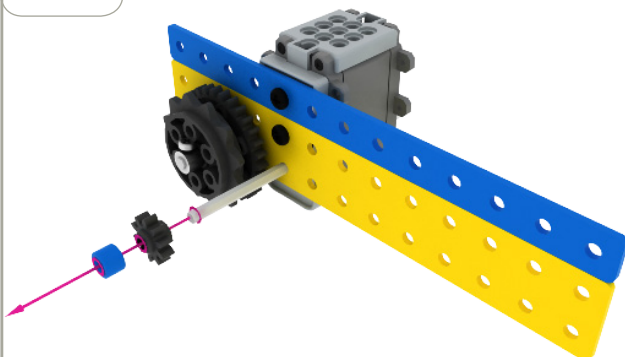
 X1
 X1

⌘ Screw the bolts
after assemble.



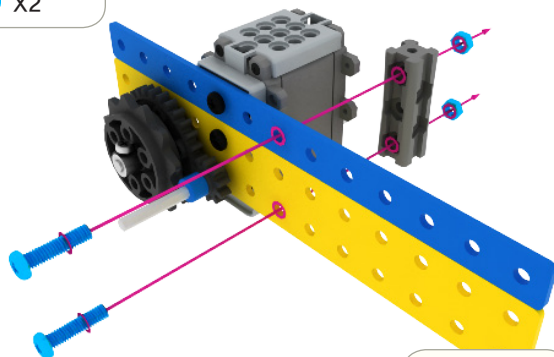


95mm

21

 X1


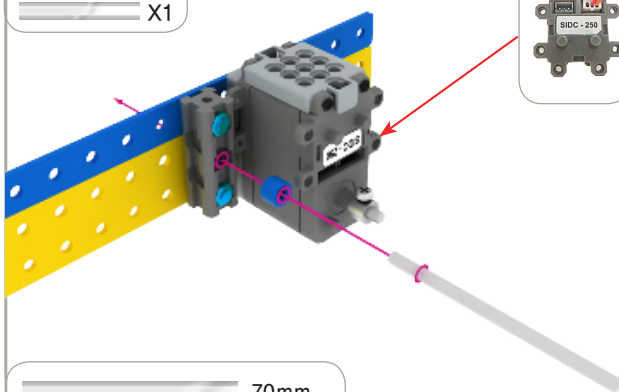
22

 16mm X2
 X2

 1:1

23

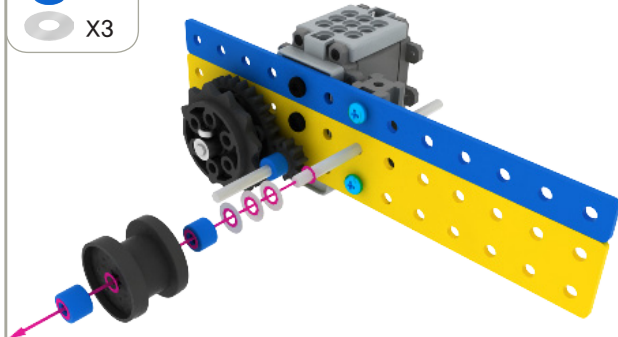
 X1
 X1

Connect DC motor
line first



70mm

24

 X2
 X3


25

X1
X1

※ Screw the bolts after assemble.

44mm

26

X1
X1

※ Screw the bolts after assemble.

27

20mm X3
X3

1:1

28

20mm X3
X3

1:1

29

16mm X4
X4

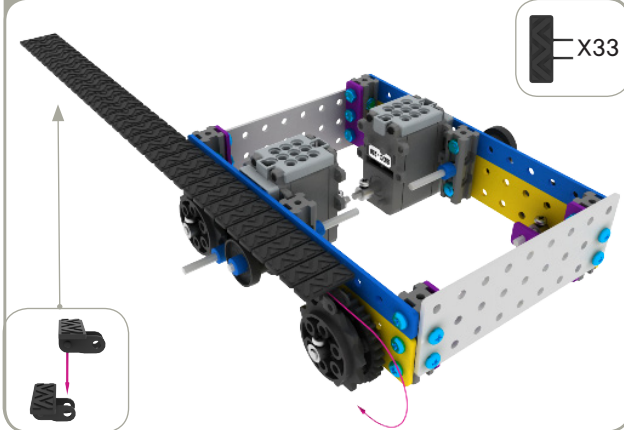
1:1

30

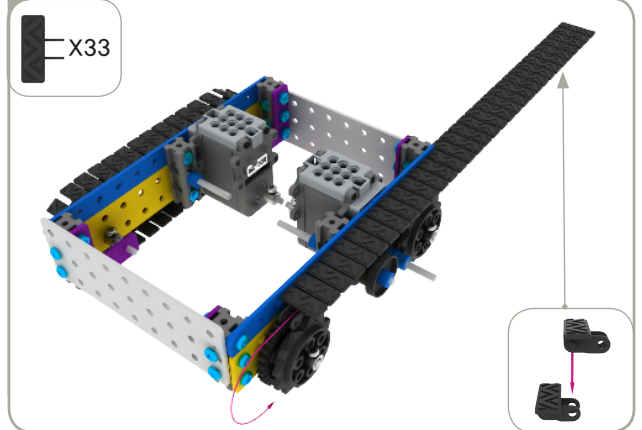
16mm X4
X4

1:1

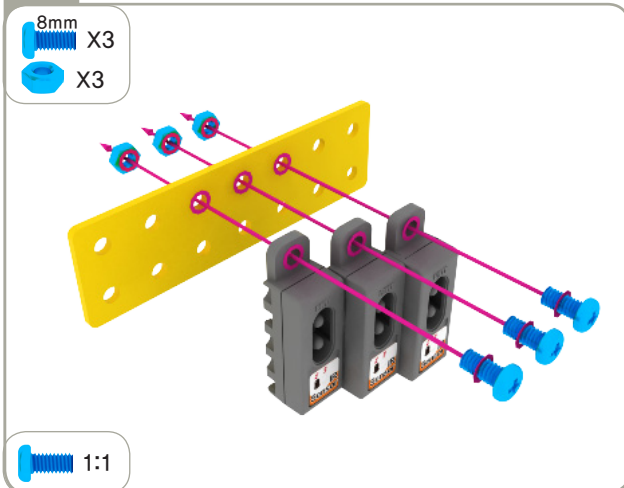
31



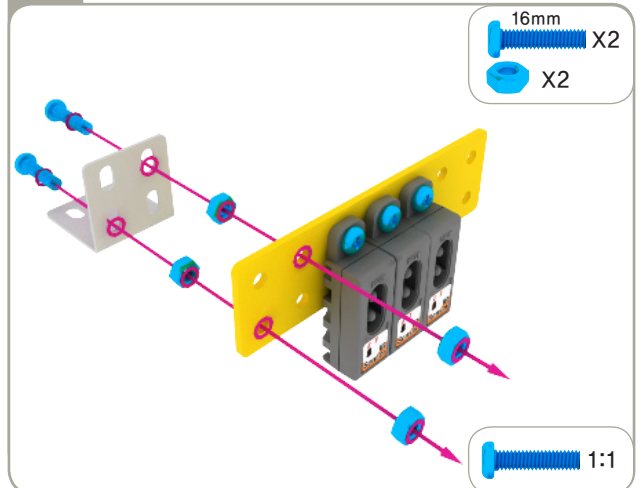
32



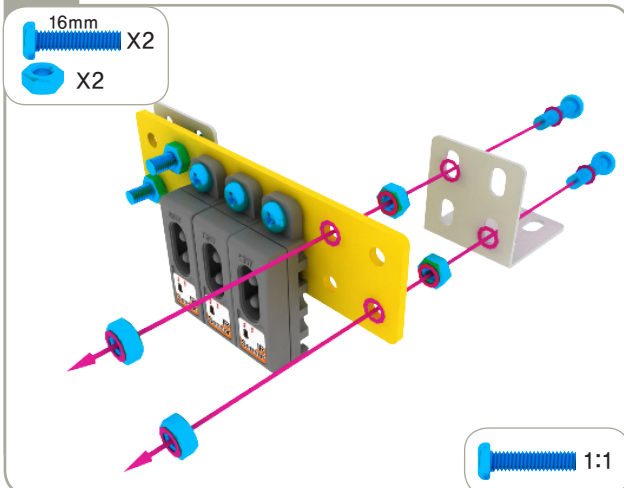
33



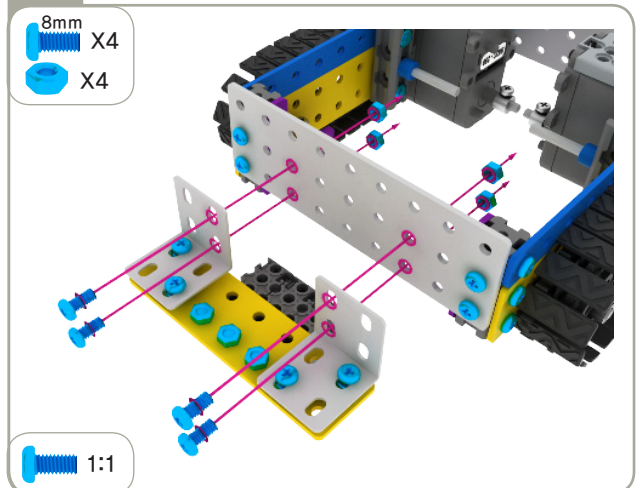
34



35

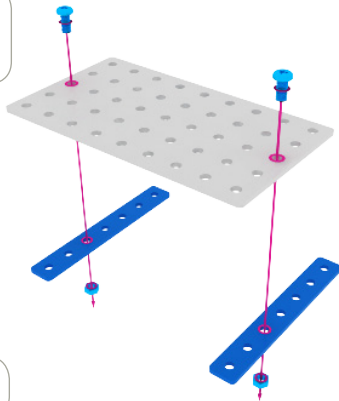


36



37

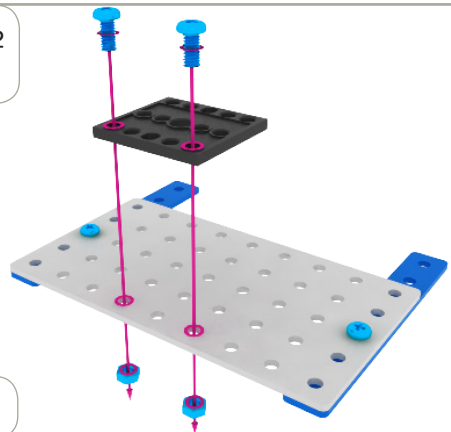
8mm X2
X2



1:1

38

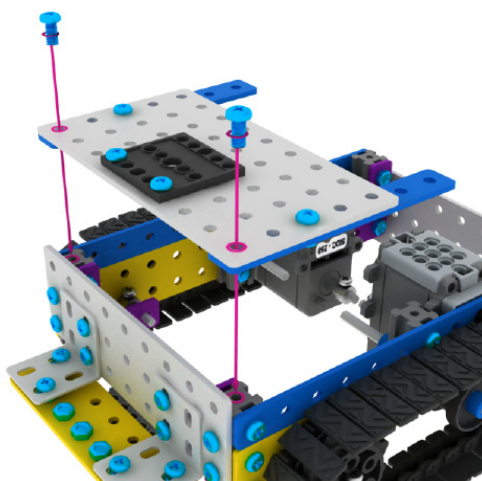
8mm X2
X2



1:1

39

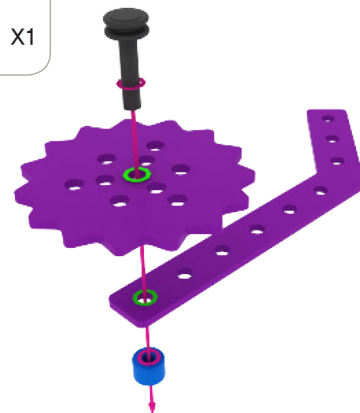
8mm X2



1:1

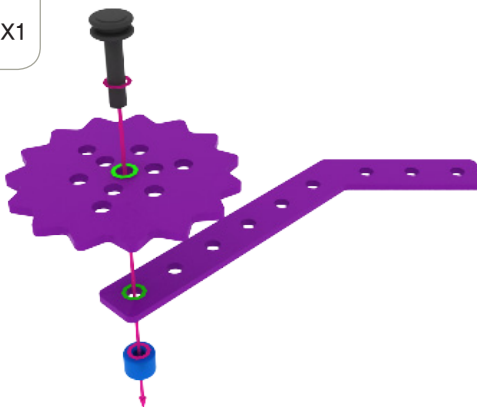
40

X1
X1



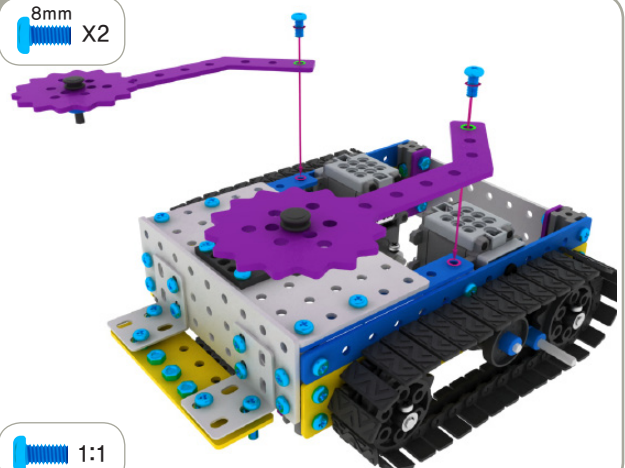
41

X1
X1



42

8mm X2

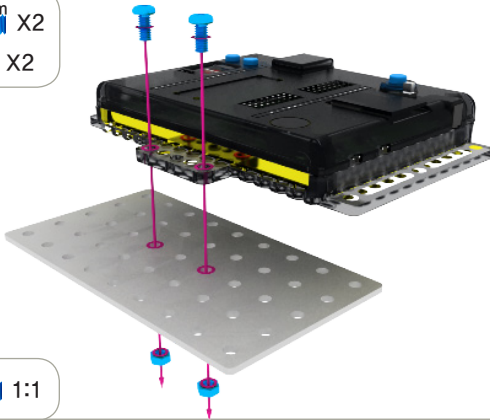


1:1

43

8mm X2
 X2

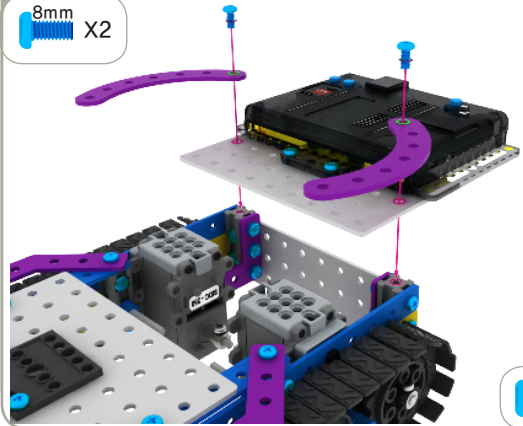
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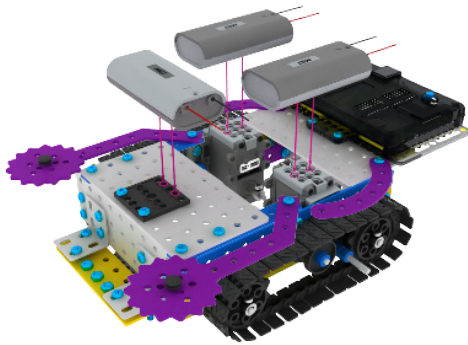
44

8mm X2

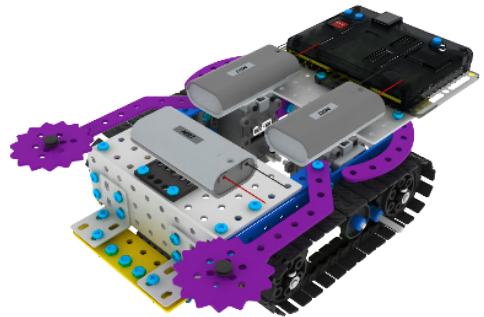
1:1



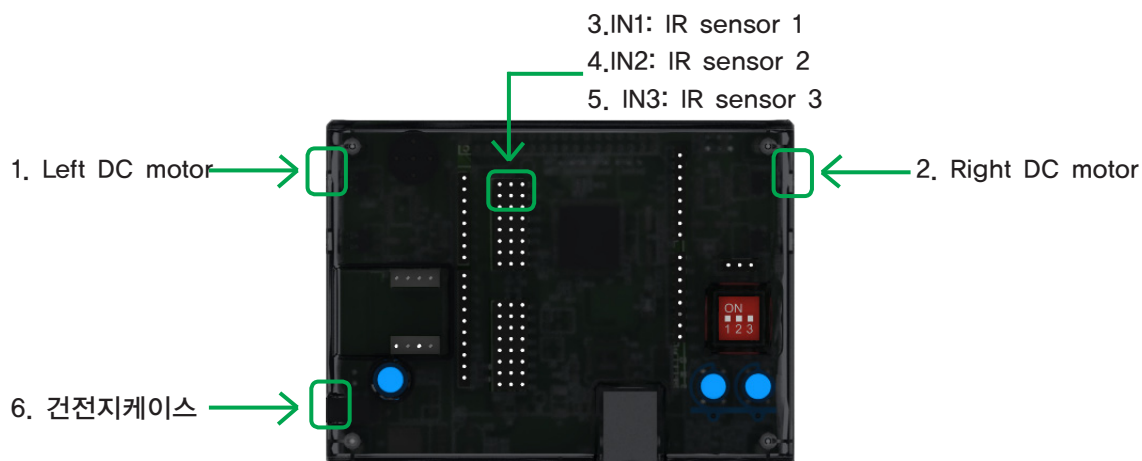
45



Complete



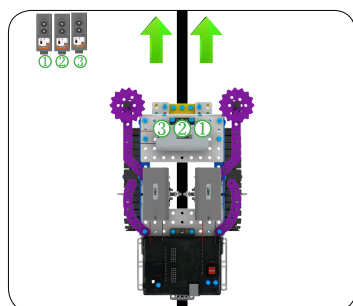
Connecting the mainboard



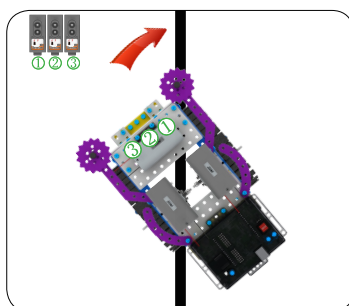
Please connect in this order:

1. Connect left DC motor to L-MOTOR connector.
2. Connect right DC motor to R-MOTOR connector.
3. Connect IR sensor1 to INPUT1 connector.
4. Connect IR sensor2 to INPUT2 connector.
5. Connect IR sensor3 to INPUT3 connector
6. Connect battery case to Power connector.

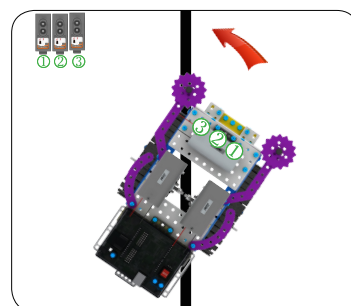
Motion Pattern



Recognize No.1 and 3 IR sensors, robot will go forward.



Recognize No.2 and 3 IR sensors, robot will turn right.



Recognize No.1 and 2 IR sensors, robot will turn left.



Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Recognize No.1 and 3 IR sensors, robot will go forward.
2. Recognize No.2 and 3 IR sensors, robot will turn left.
3. Recognize No.1 and 2 IR sensors, robot will turn right.

※ Program example : Refer to the back of book.

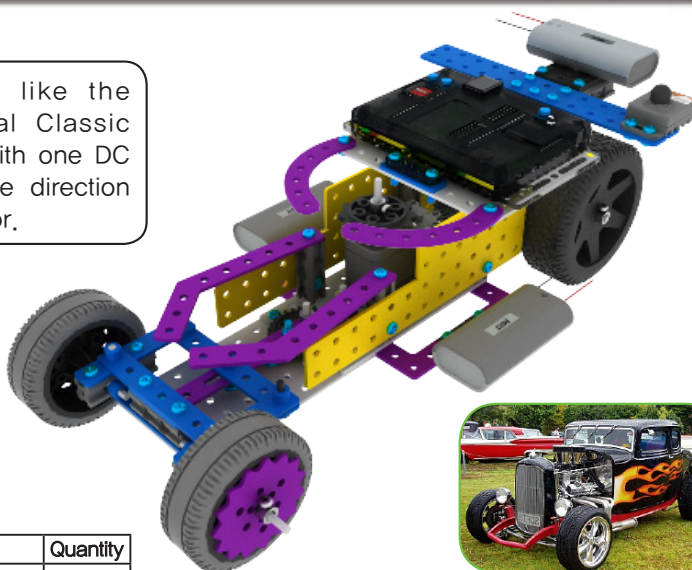


Program download

1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

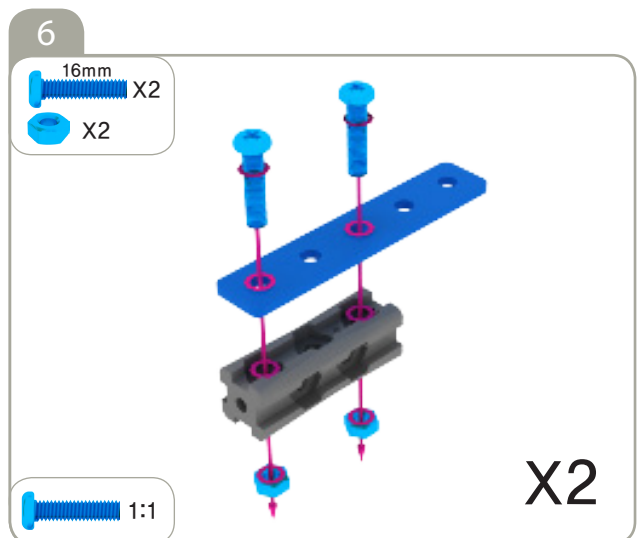
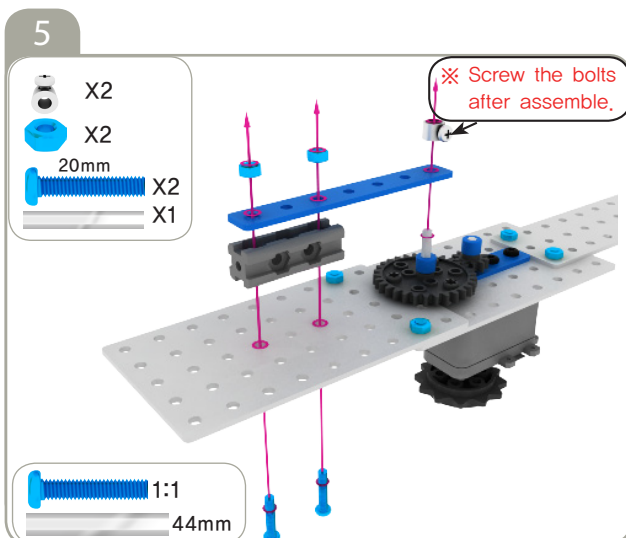
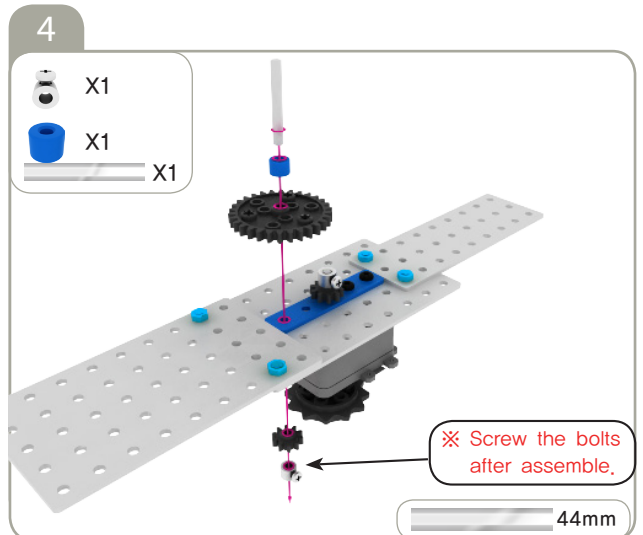
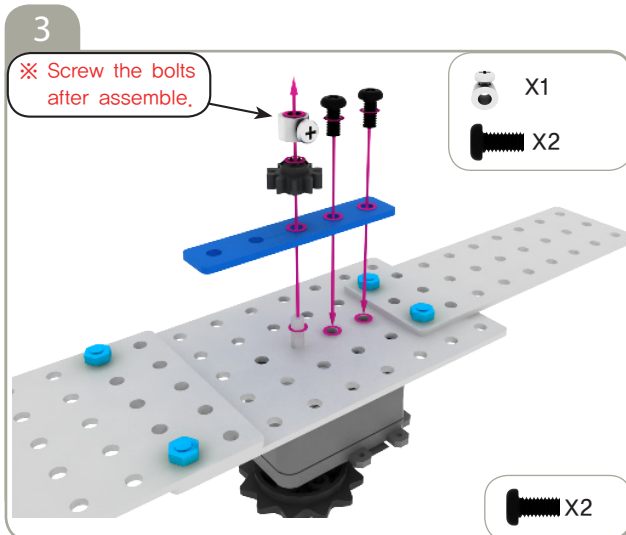
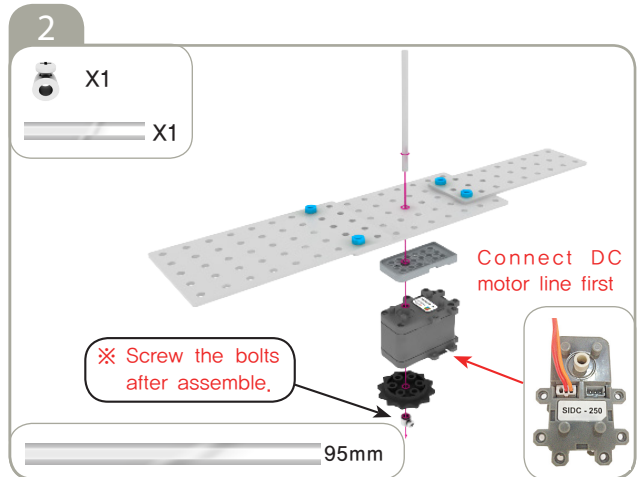
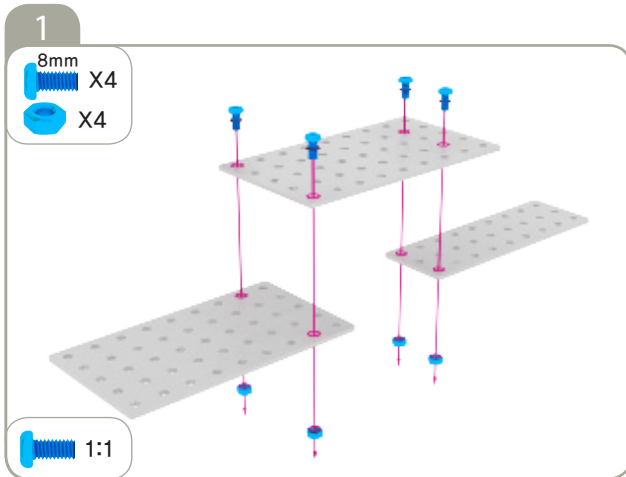
Classic Car

Classic Car looks like the Visualization of real Classic cars. Drive the car with one DC motor and control the direction with another DC motor.



Name	Picture	Quantity
Steel shaft 31mm		2
Steel shaft 44mm		2
Steel shaft 70mm		2
Steel shaft 95mm		1
Steel shaft 120mm		1
13AL Frame		2
15AL Frame		4
17AL Frame		4
113AL Frame		2
27AL Frame		2
213AL Frame		2
39AL Frame		2
59AL Frame		2
4-5 Pillar block		4
2-3 Pillar Block		8
Motor Mount		3

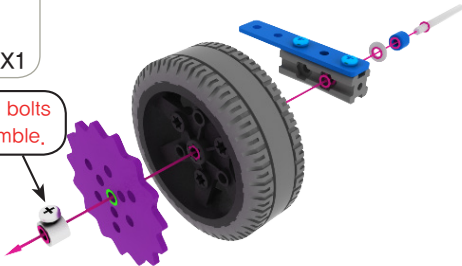
Name	Picture	Quantity	Name	Picture	Quantity
9V Battery Case		1	Bolt		2
MRT5-1 Main board		1	Bolt 8mm		26
DC MOTOR		2	Bolt 16mm		21
Remote Controller		1	Bolt 20mm		5
AL Frame90		4	Nut		40
AL Sprocket		2	ABS Connecting shaft		3
L17AL Frame		1	B-Bush		9
AL Round Block		2	Washer		2
AL Frame135		2	S-Gear		2
			Guide Wheel		2
			M-Gear		2
			L-Gear		2
			Sprocket		1
			Sleeve pipe		10
			Big Wheel1		2
			Big Wheel2		2
			RC Receiver		1



7

- X1
- X1
- X1
- X1

※ Screw the bolts after assemble.

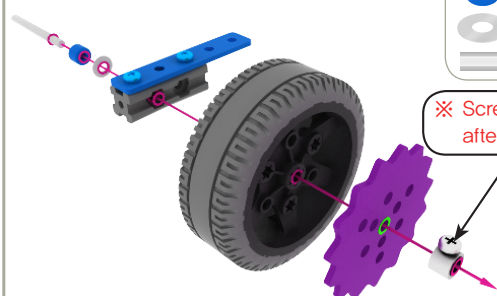


70mm

8

- X1
- X1
- X1
- X1

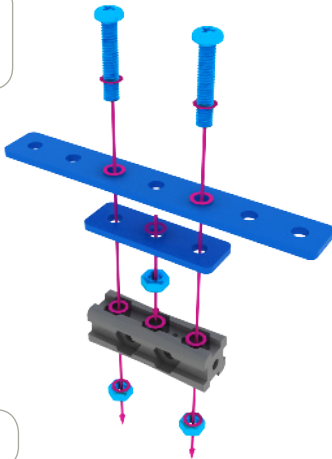
※ Screw the bolts after assemble.



70mm

9

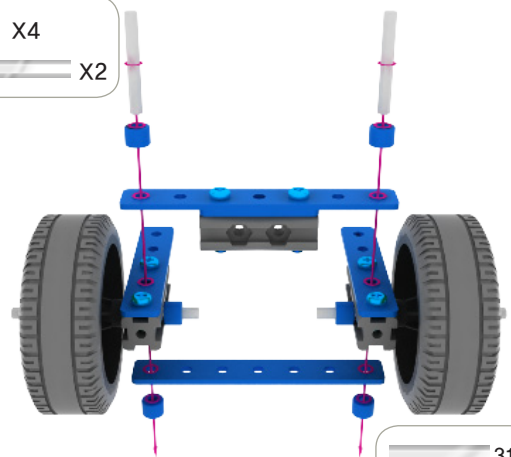
- X3
- 20mm
- X2



- 1:1

10

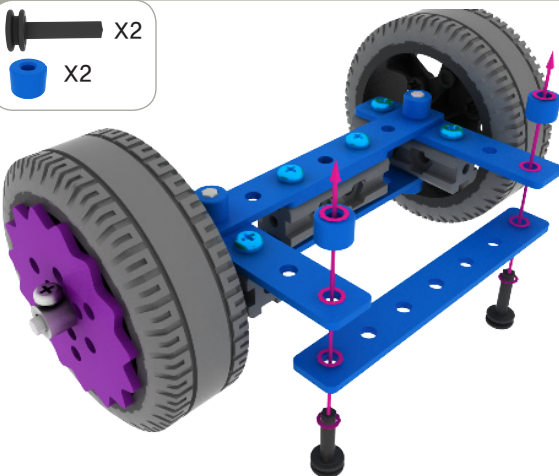
- X4
- X2



31mm

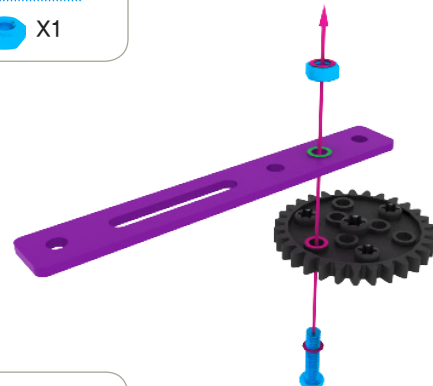
11

- X2
- X2





12

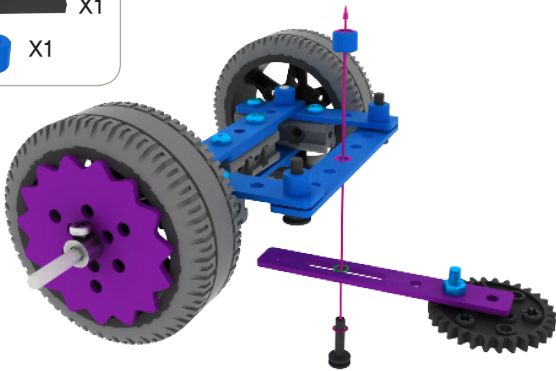
- 16mm
- X1
- X1





- 1:1

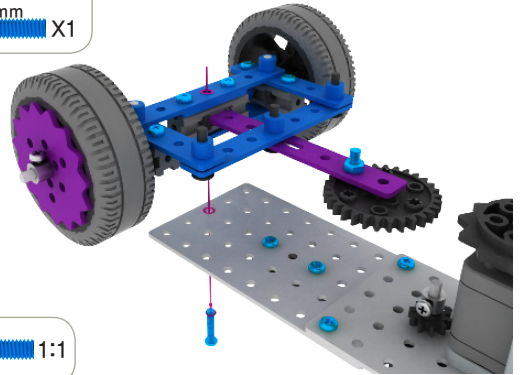
13

 X1
 X1



14

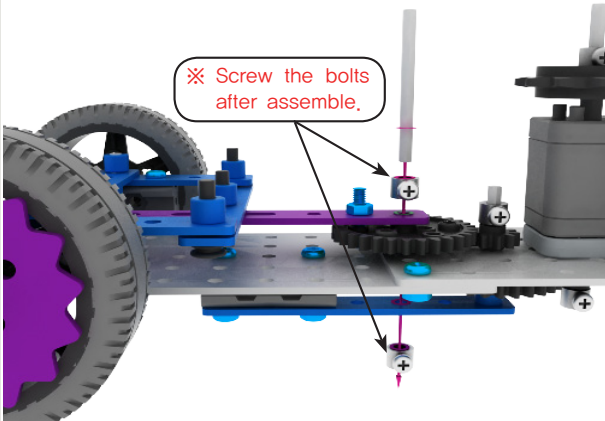
 X1
 X1





 1:1

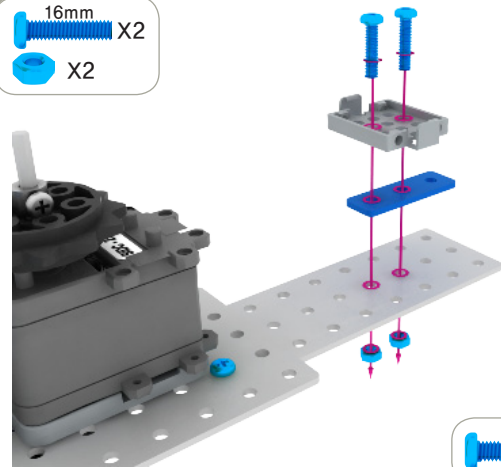
15

※ Screw the bolts after assemble.



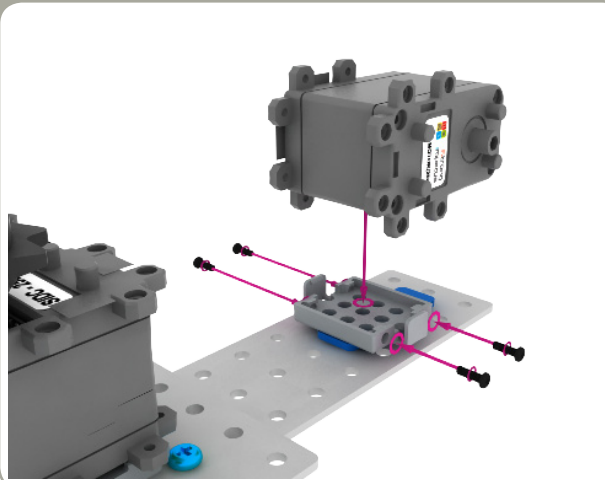
16

 16mm X2
 X2



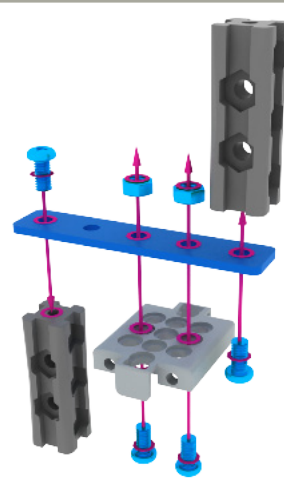
 1:1

17



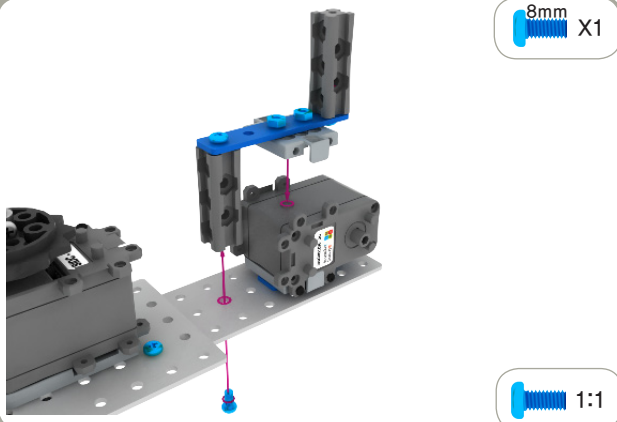
18

 8mm X4
 X2

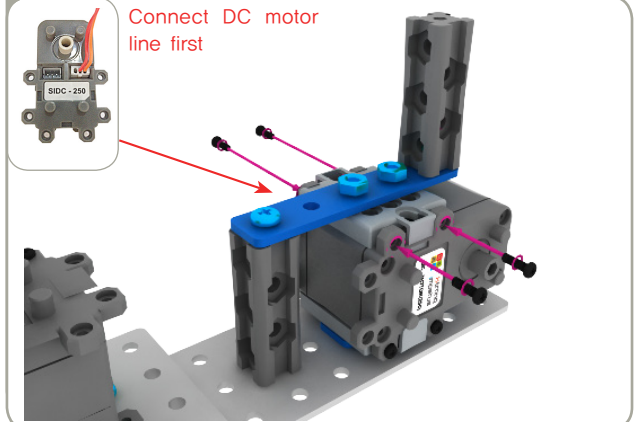


 1:1

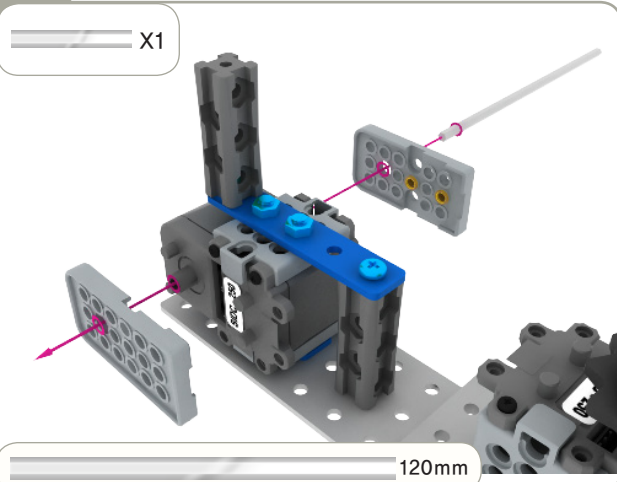
19



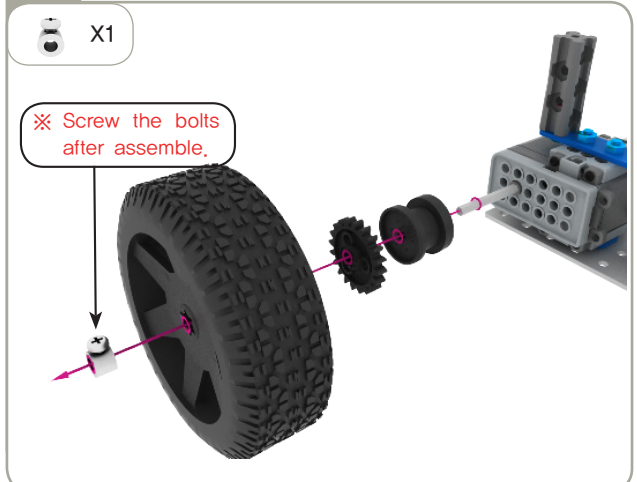
20



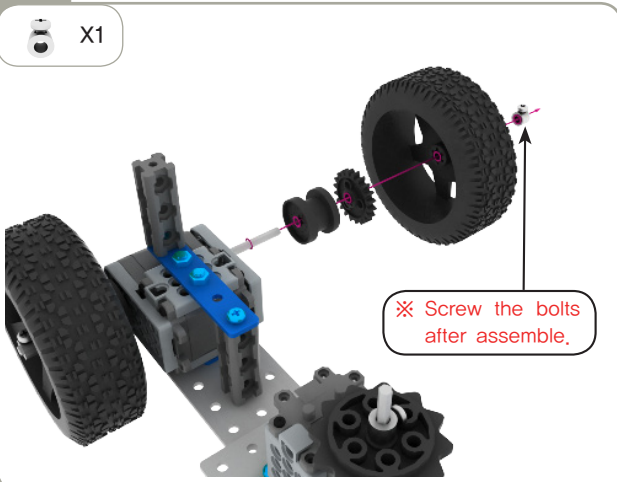
21



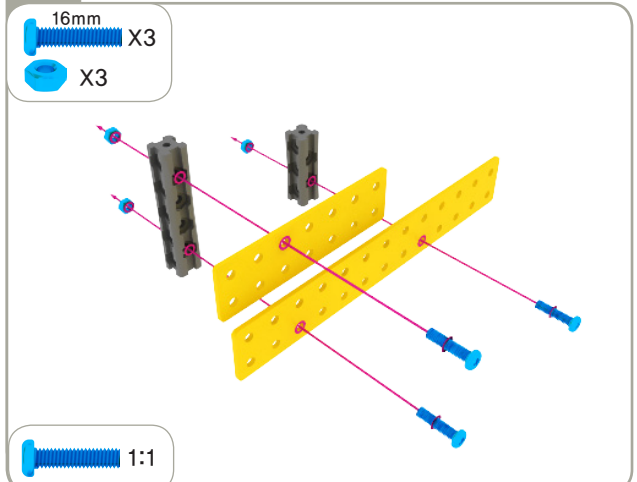
22



23

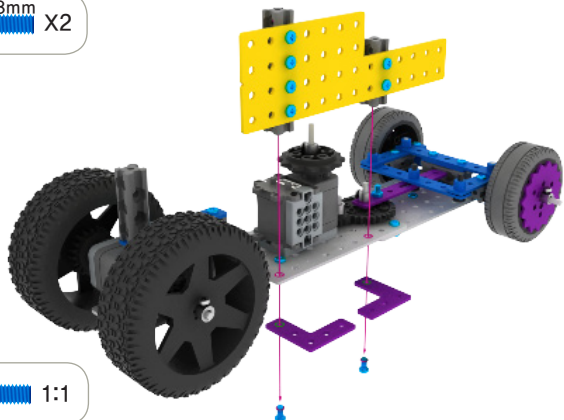


24



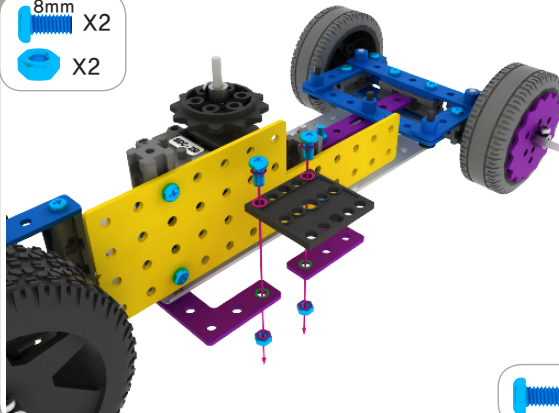
25

8mm X2



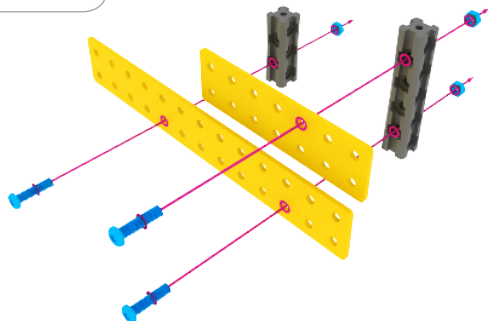
1:1

26

8mm X2
X2

1:1

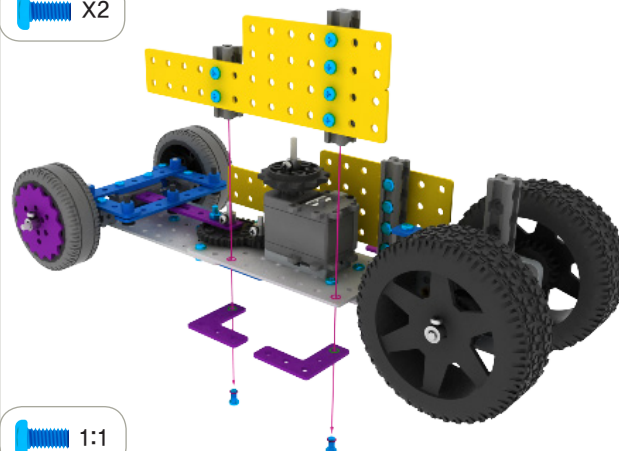
27

16mm X3
X3

1:1

28

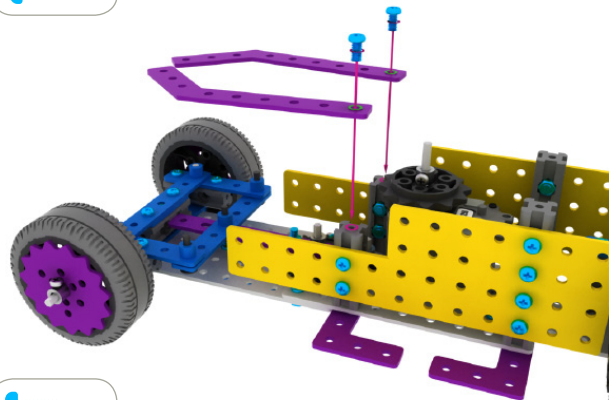
8mm X2



1:1

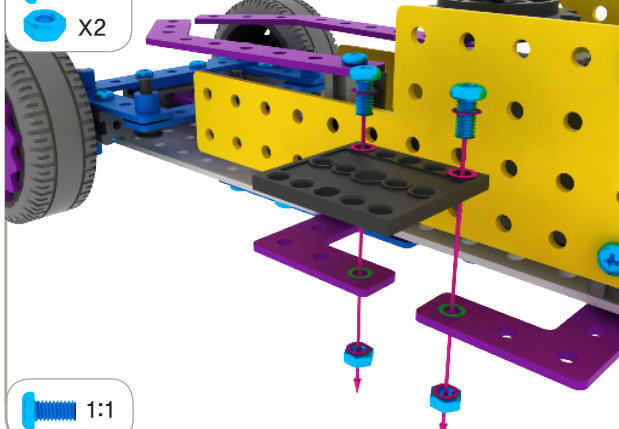
29

8mm X2



1:1

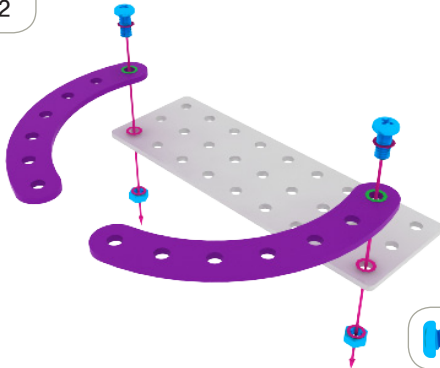
30

8mm X2
X2

1:1

31

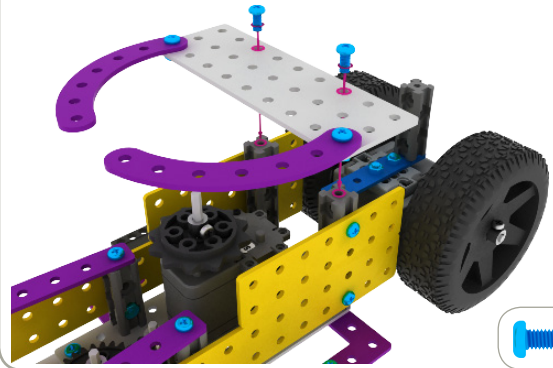
8mm X2
X2



1:1

32

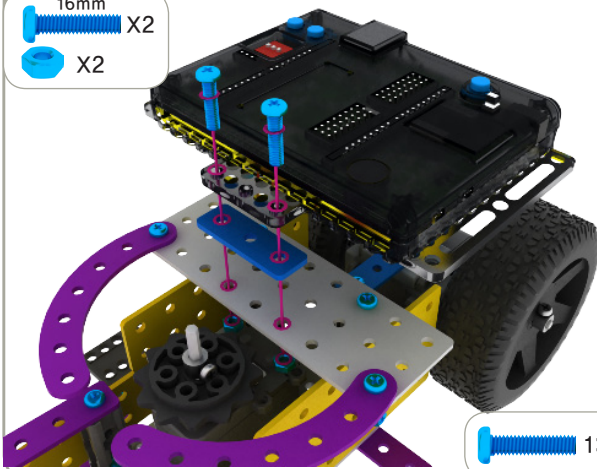
8mm X2



1:1

33

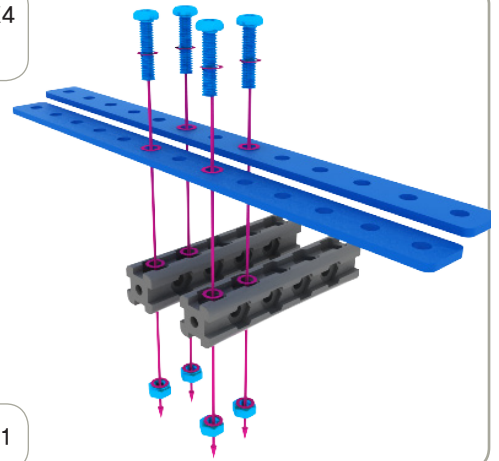
16mm X2
X2



1:1

34

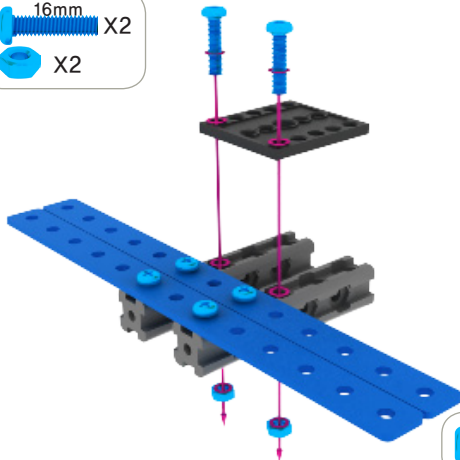
16mm X4
X4



1:1

35

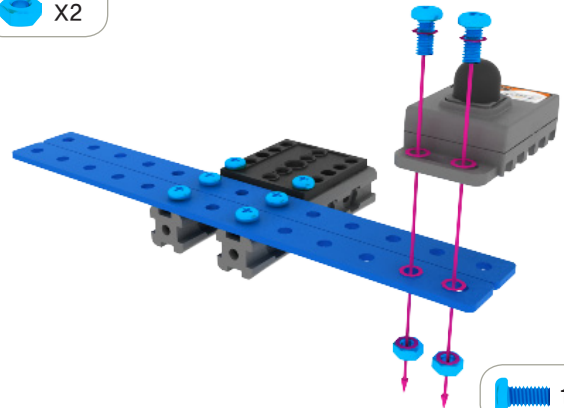
16mm X2
X2



1:1

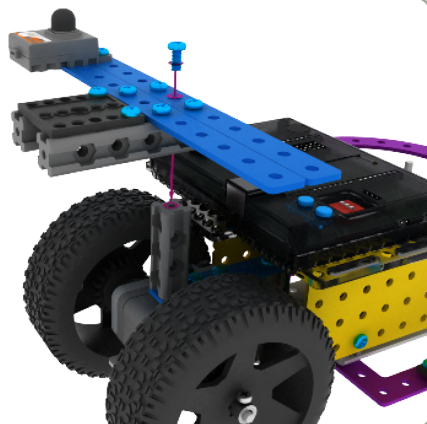
36

8mm X2
X2



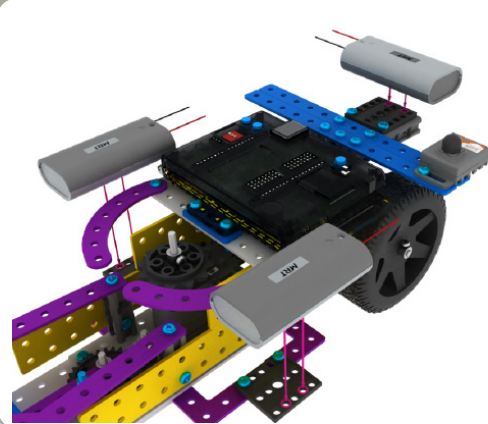
1:1

37

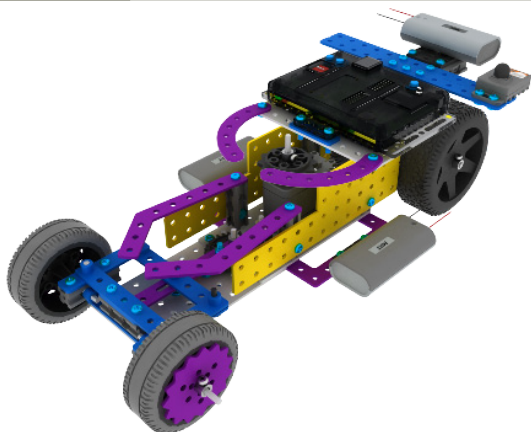
8mm
X1

1:1

38



Complete





Connecting the mainboard

1. Front DC motor

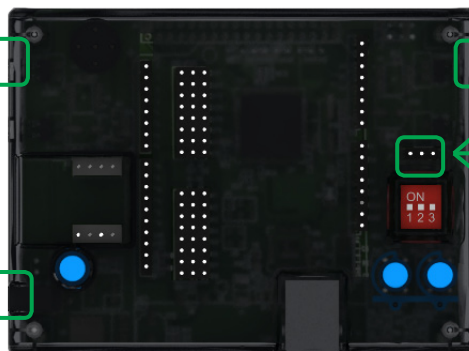


2. Back DC motor



3. RC receiver

4. Power

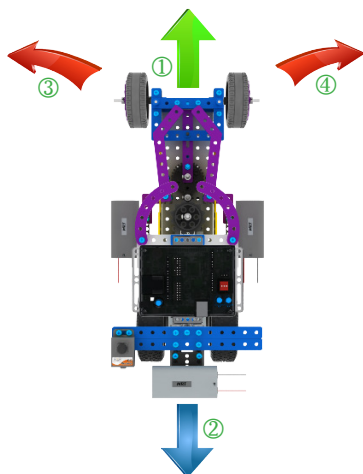


Connect in this order :

1. Connect left DC motor to L-MOTOR connector1.
2. Connect right DC motor to R-MOTOR connector 2.
3. Connect RC receiver to R/C connector.
4. Connect battery case to POWER connector.



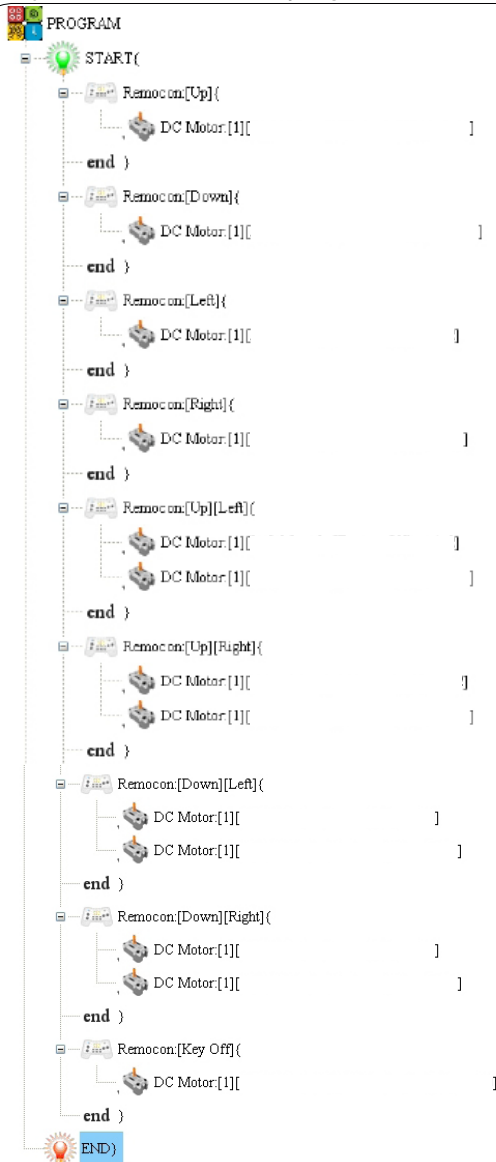
Motion Pattern





Learn to compile program in advance

※ Try to write down the program before we compile on software.



1. Press the directional key (left / right) of remote controller, the robot will move left and right .
2. Press the directional key (left / right) of remote controller, the robot will move left and right .

※ Program example : Refer to the back of book.

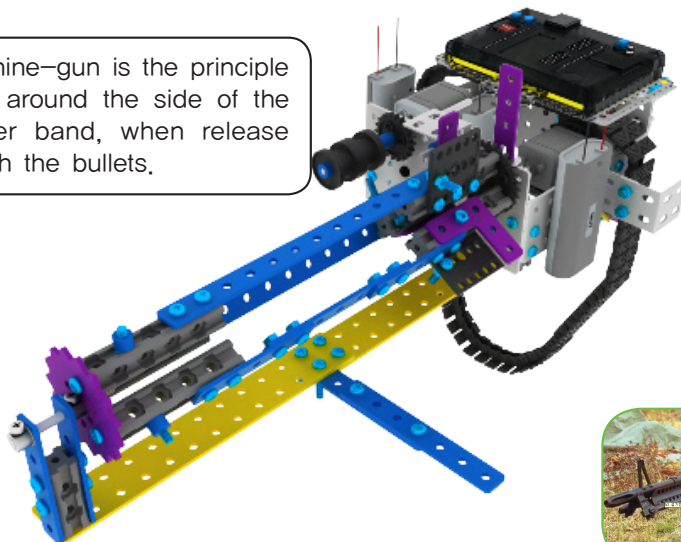


Program download

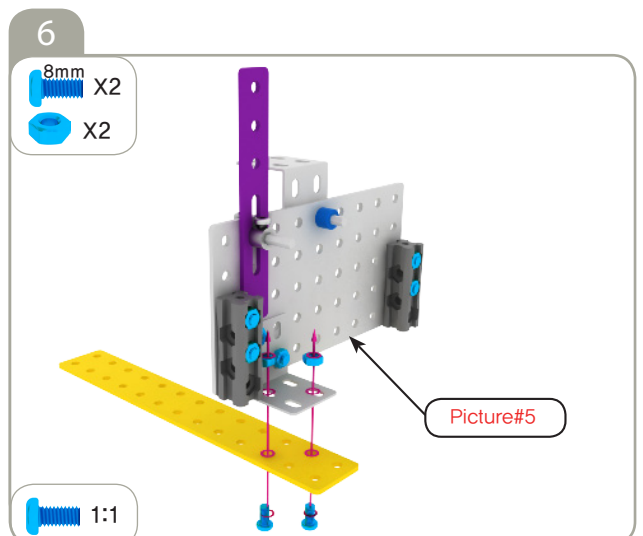
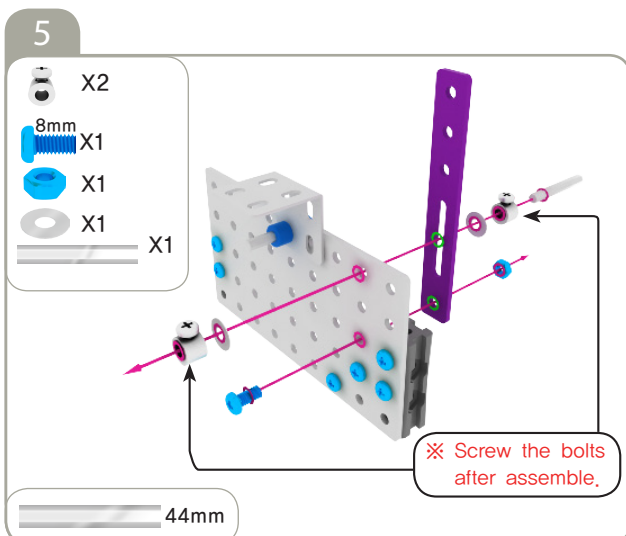
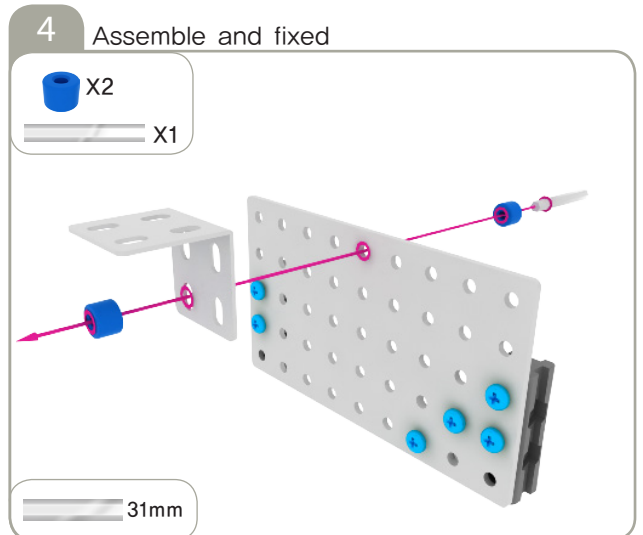
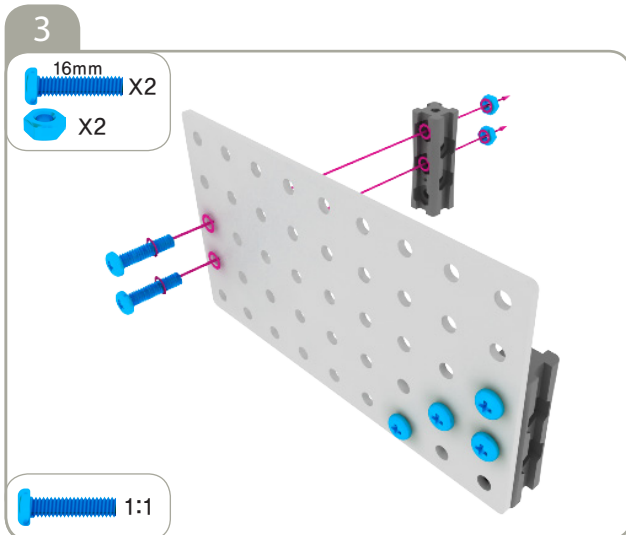
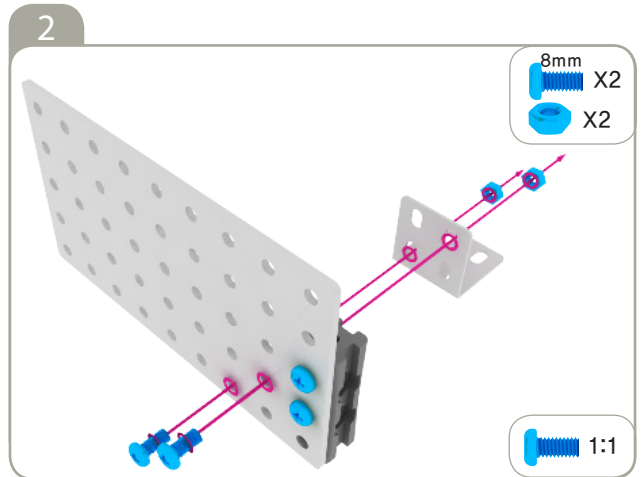
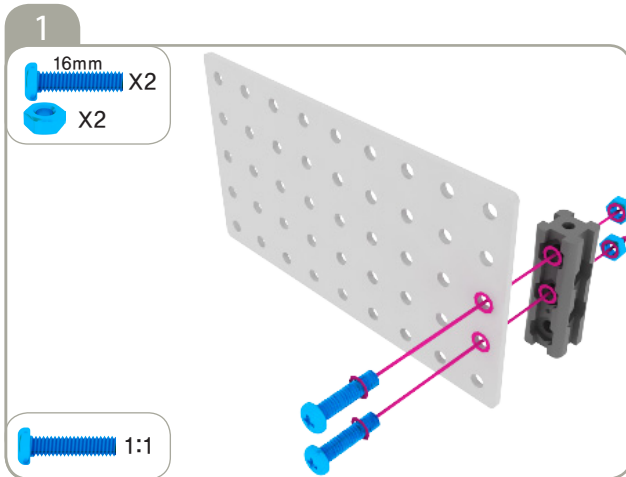
1. Compile program
2. Confirm the Battery case, DC motor and other sensors are all connected to the right connectors.
3. Connect the download cable.
4. Press "SAVE" on the compile window and then press "Download to start".
5. Turn on the power or press "Restart" button when the "download" window opens.
6. Once the download is completed, remove the download cable and turn the power off and then on.

MACHINE GUN

30 bursts of machine-gun is the principle of wrapping wire around the side of the barrel with rubber band, when release the line will launch the bullets.



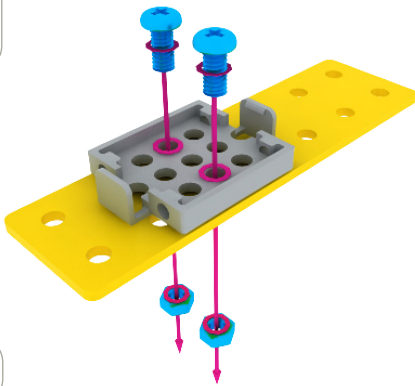
Name	Picture	Quantity	Name	Picture	Quantity	Name	Picture	Quantity
Steel shaft 31mm		2	9V Battery Case		1	Bolt		2
Steel shaft 44mm		2				Bolt 8mm		38
Steel shaft 70mm		1	MRT5-1 Main board		1	Bolt 16mm		36
Steel shaft 120mm		1				Bolt 20mm		13
15AL Frame		4				Nut		64
17AL Frame		3				B-Bush		9
113AL Frame		2	DC MOTOR		2	Washer		4
27AL Frame		2				Guide Wheel		2
213AL Frame		2	AL Frame90		3	M-Gear		1
39AL Frame		2	AL Sprocket		1	L-Gear		1
59AL Frame		2	17AL Frame		1	Sprocket		1
			AL Frame135		2	Sleeve pipe		10
Motor Mount		3	4-5 Pillar block		6	Touch Sensor		1
Caterpillar		80	2-3 Pillar Block		8	D90 S-Bracket		4
						D135 S-Bracket		1



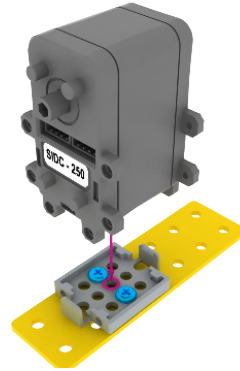
7

8mm X2
X2

1:1



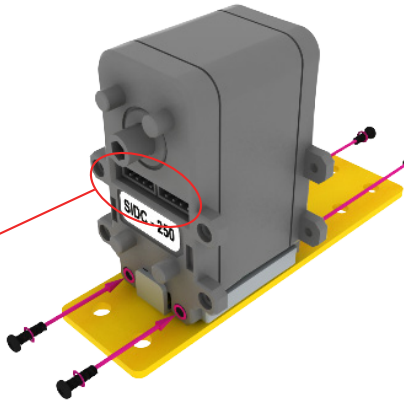
8



9

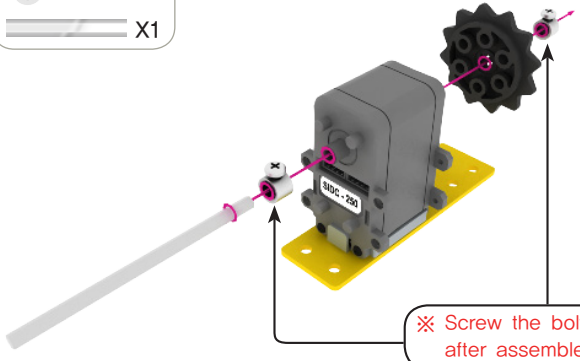


Connect DC motor line first



10

X2
X1

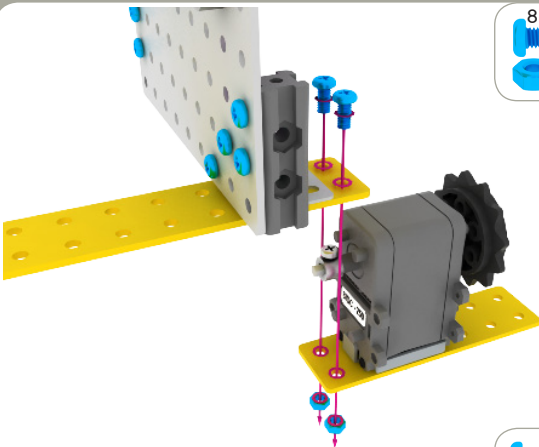


70mm

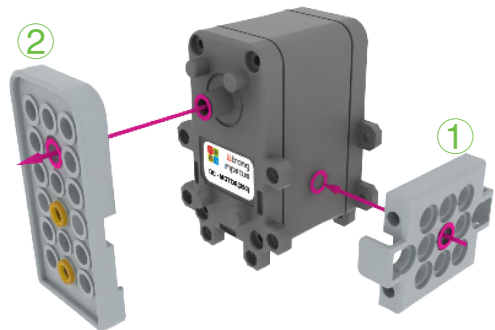
11

8mm X2
X2

1:1






12



Use the insert module to fix frame.

 1:1

 X2
 X1
 X1

※ Screw the bolts after assemble.


120mm

 X4

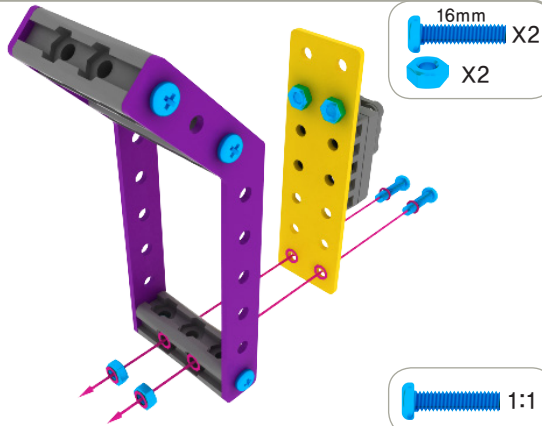
Like the picture, tie around one meter line on the guide wheel.

8mm X6

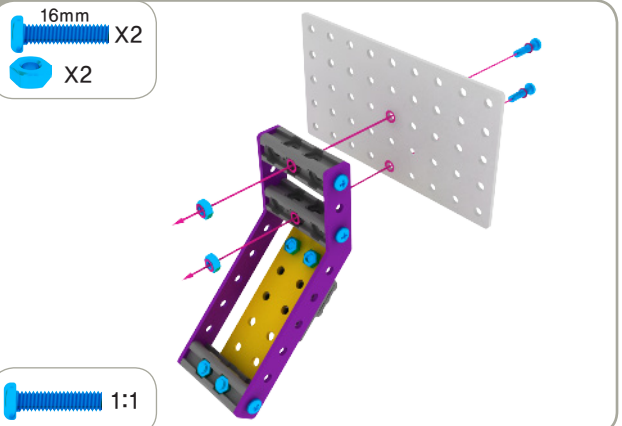
8mm X2
X2

 1:1

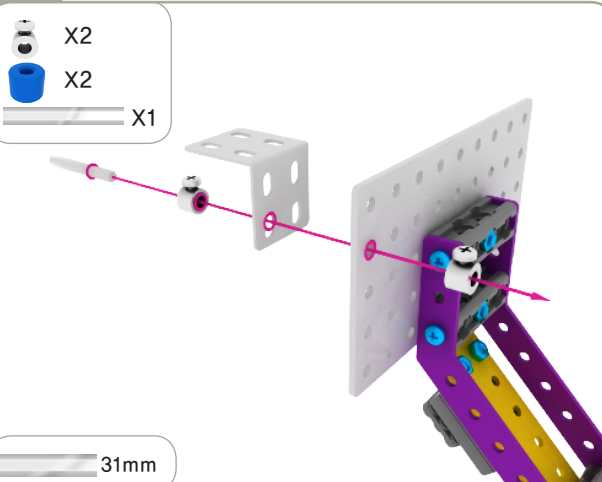
19



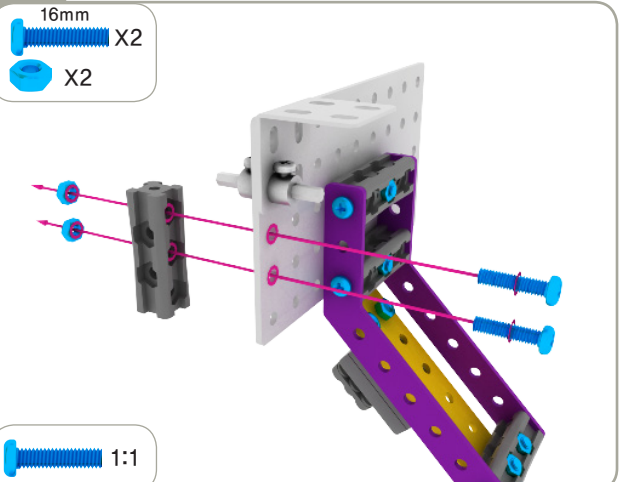
20



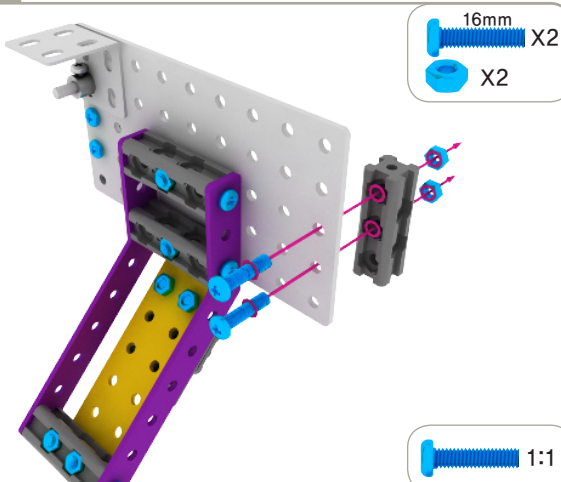
21



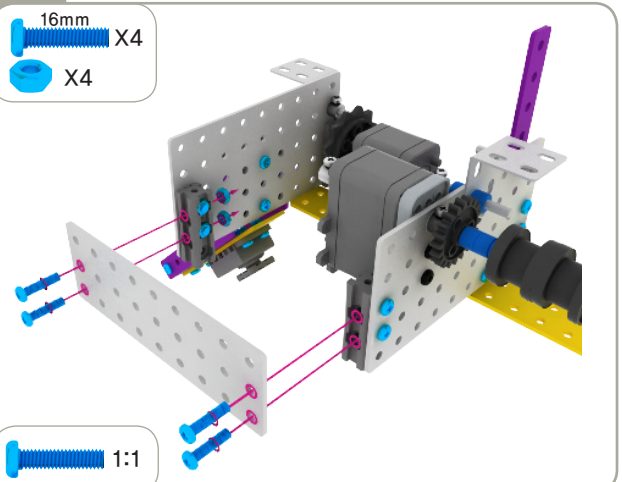
22



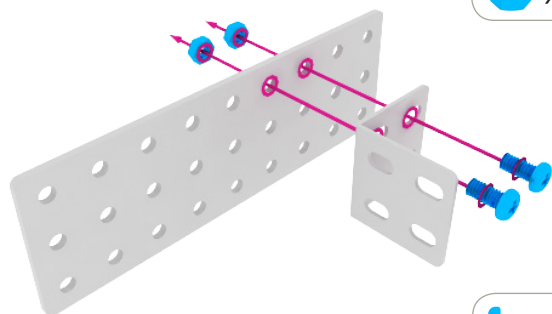
23



24



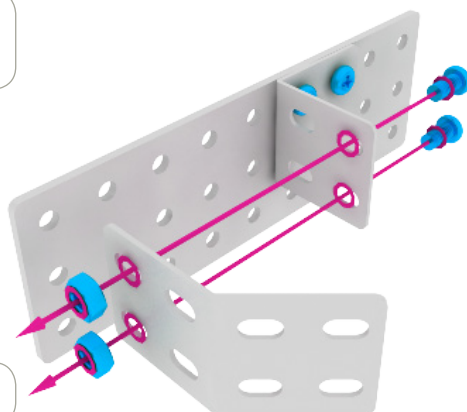
25



8mm X2
X2

1:1

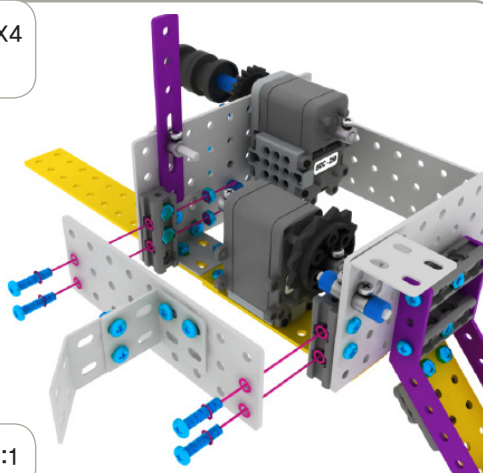
26



8mm X2
X2

1:1

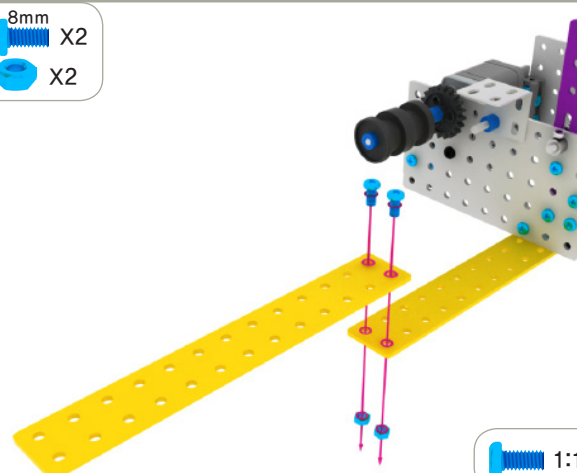
27



16mm X4
X4

1:1

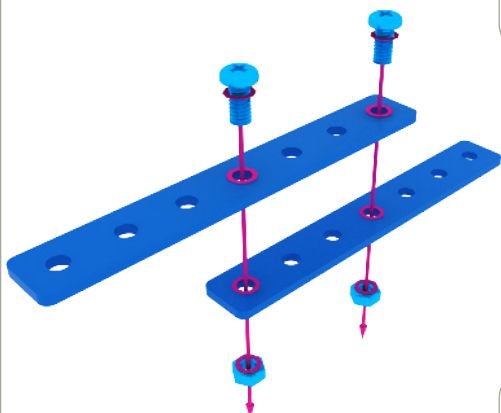
28



8mm X2
X2

1:1

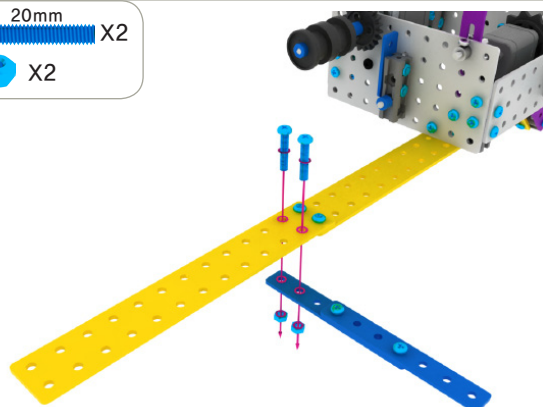
29



8mm X2
X2

1:1

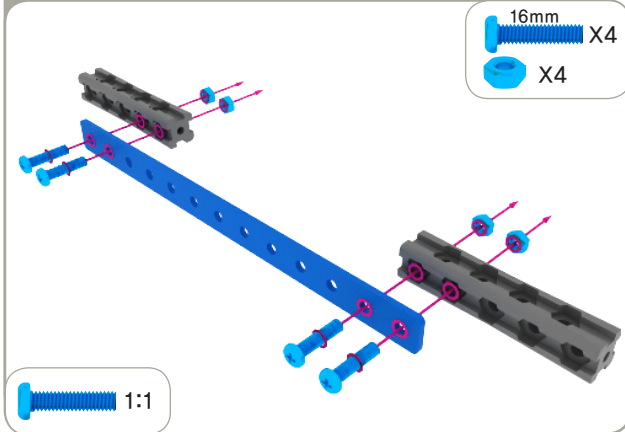
30



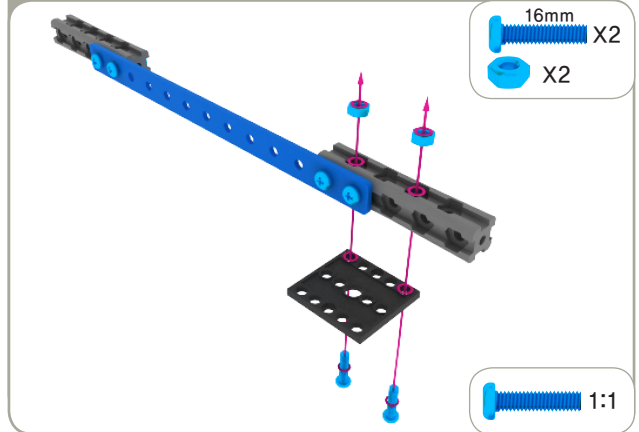
20mm X2
X2

1:1

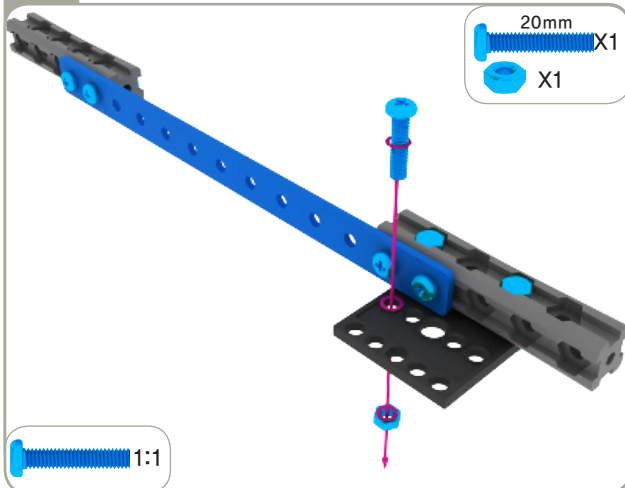
31



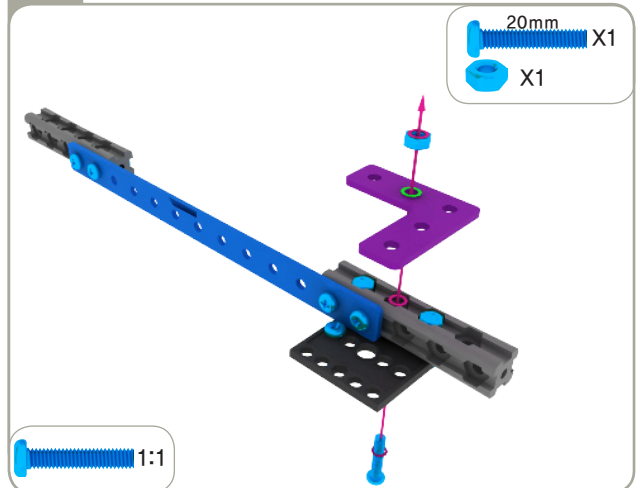
32



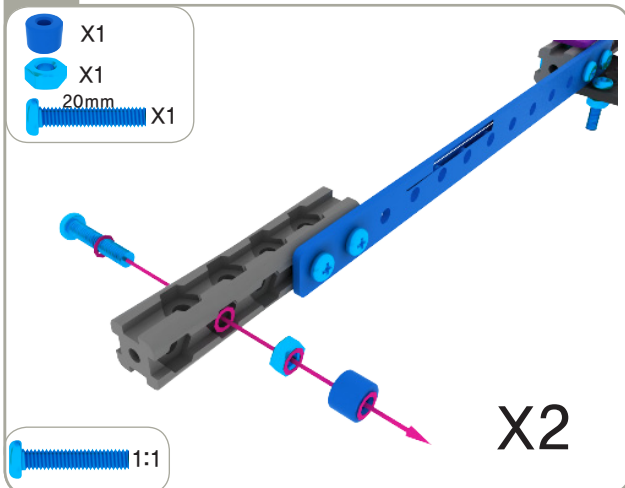
33



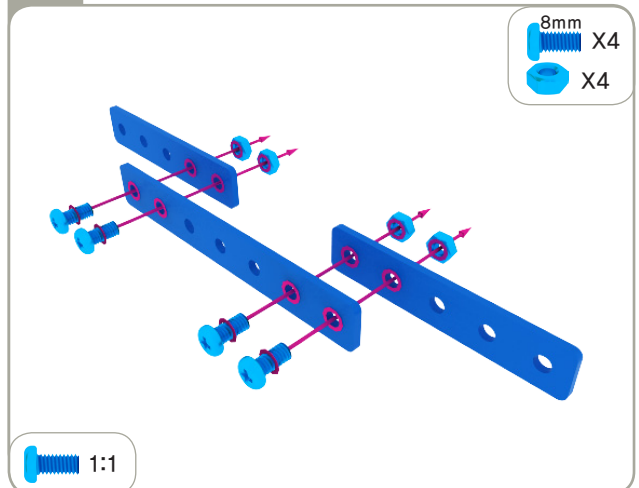
34



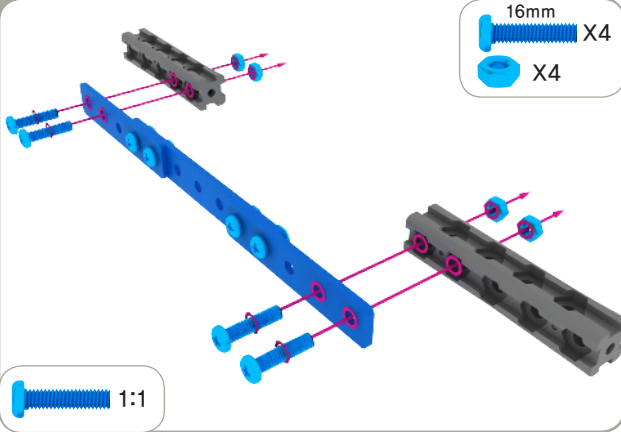
35



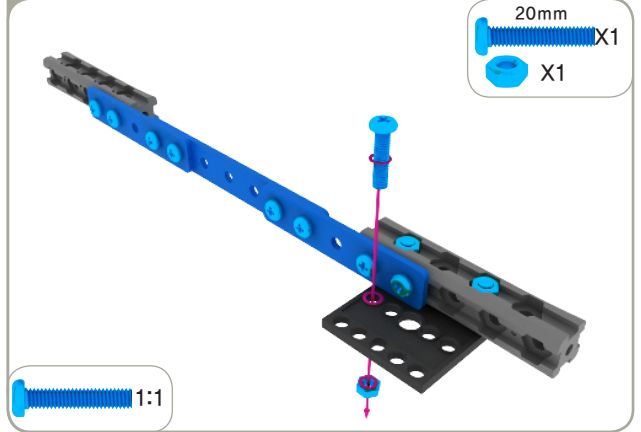
36



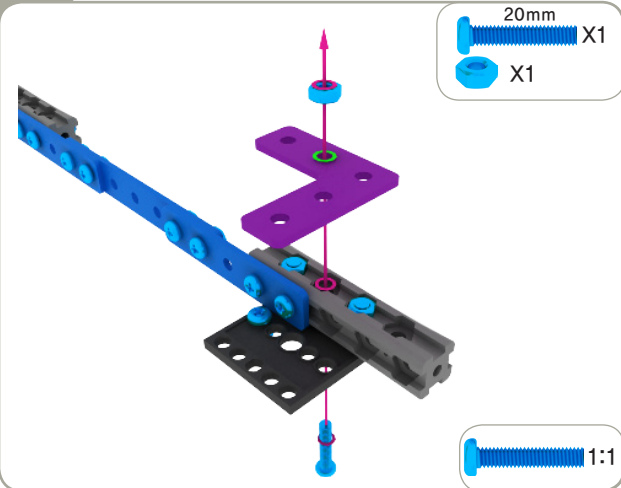
37



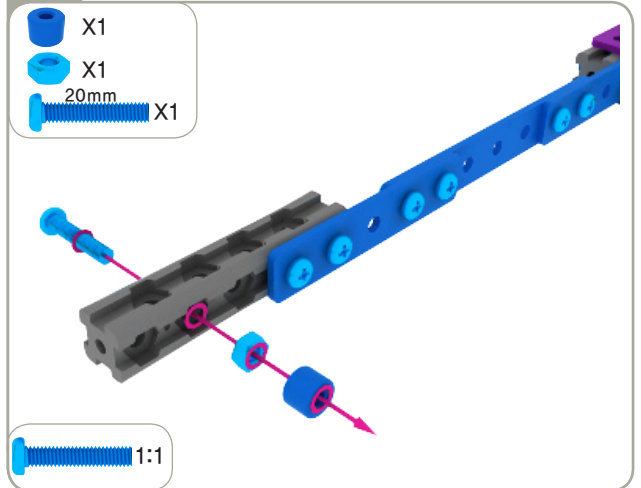
38



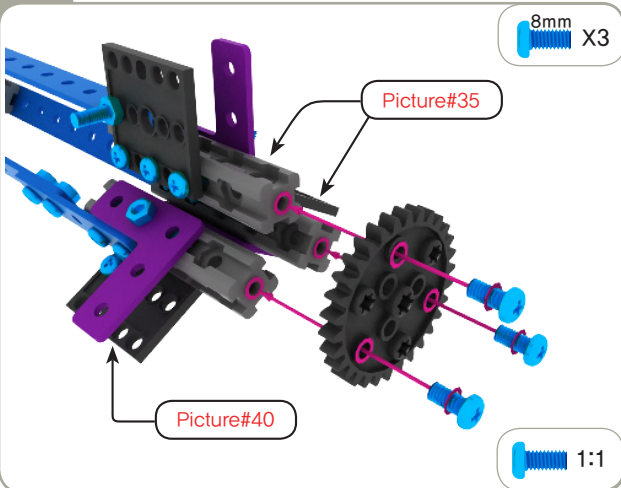
39



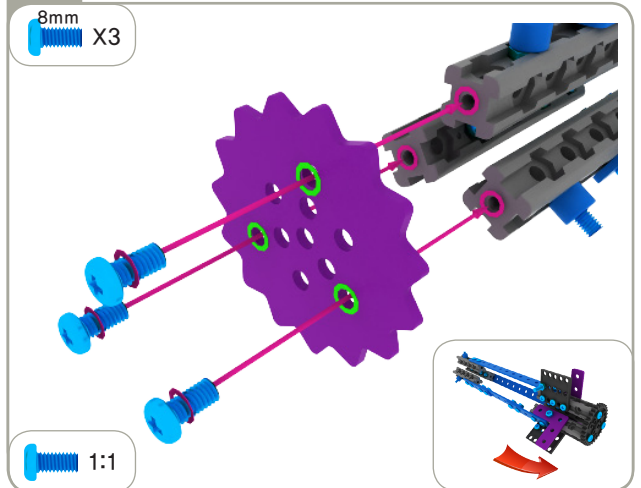
40



41

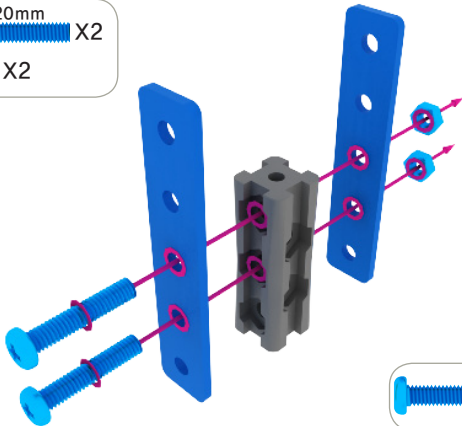


42



43

20mm X2
X2

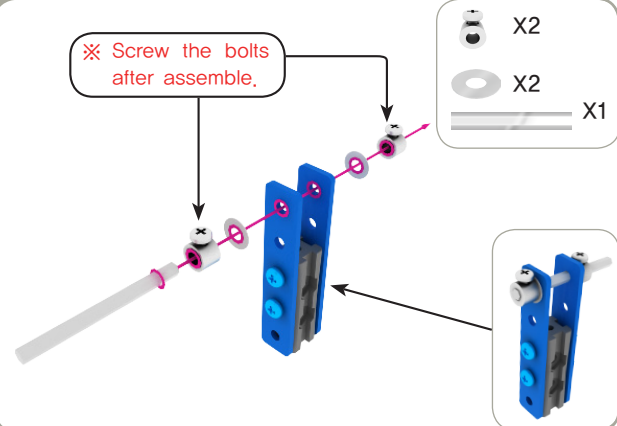


1:1

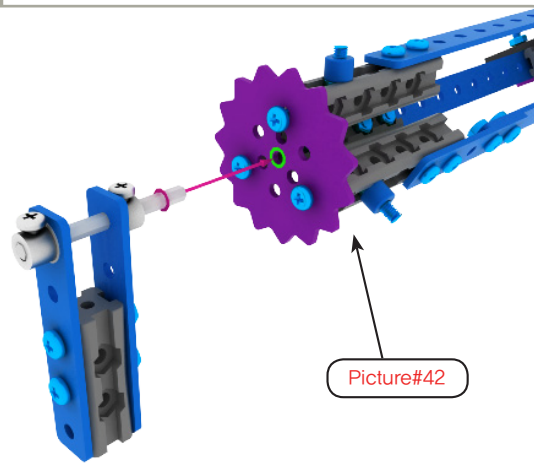
44

※ Screw the bolts after assemble.

X2
X2
X1



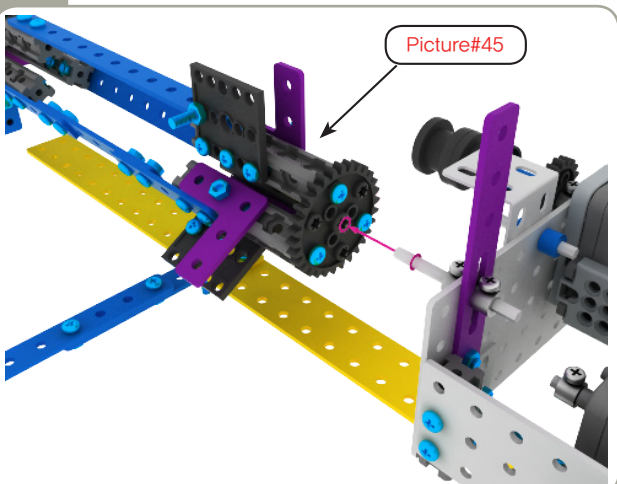
45



Picture#42

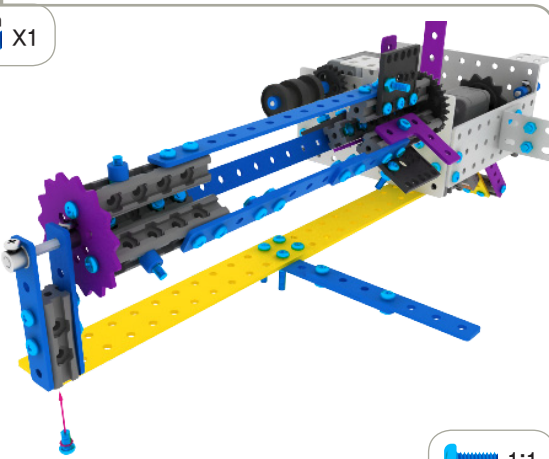
46

Picture#45



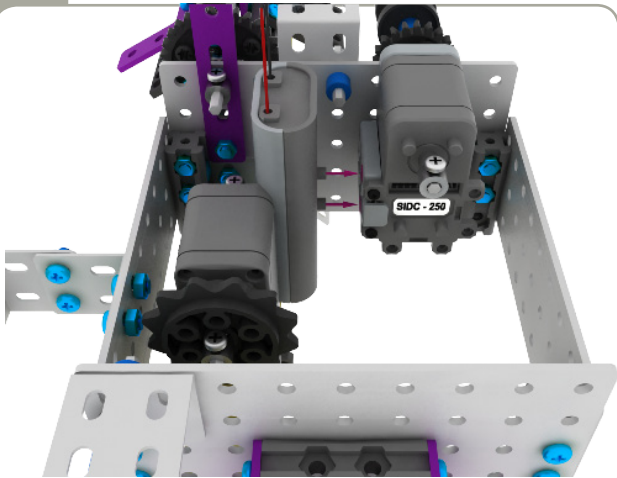
47

8mm X1

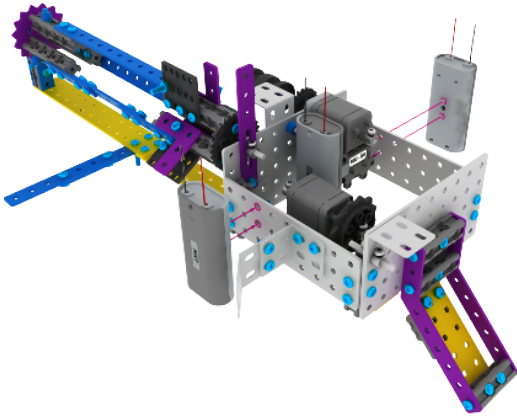


1:1

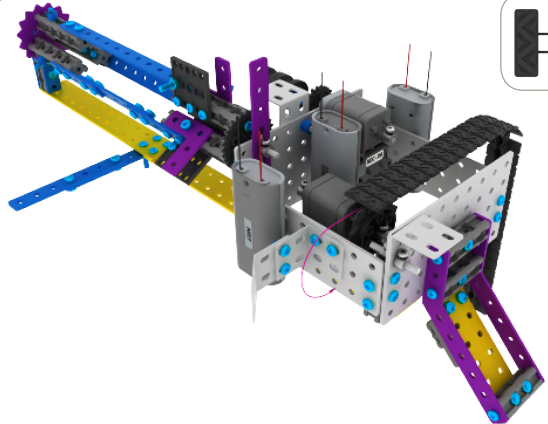

48



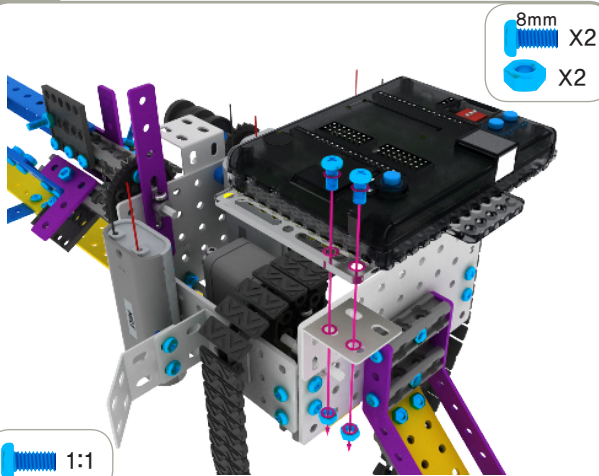


49



50 Assemble bullet clip


 x80

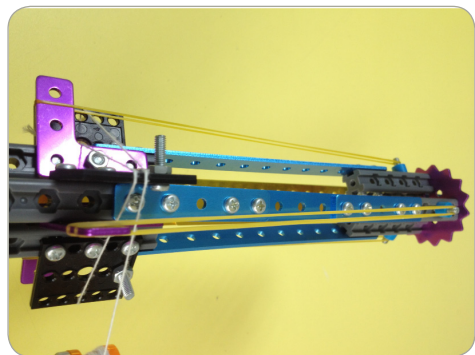
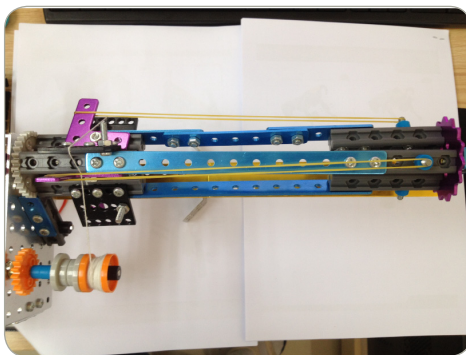
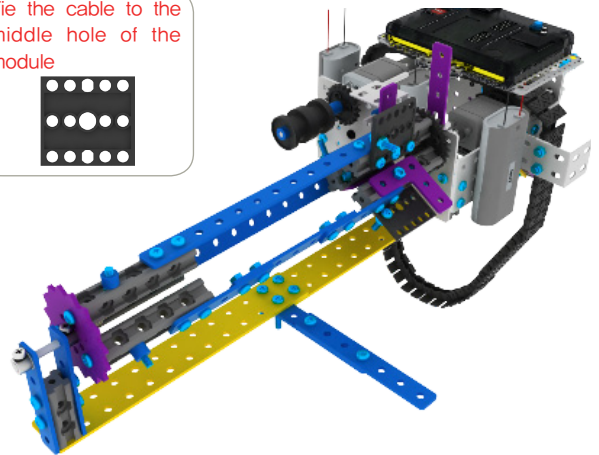
51


 8mm X2
 X2

 1:1

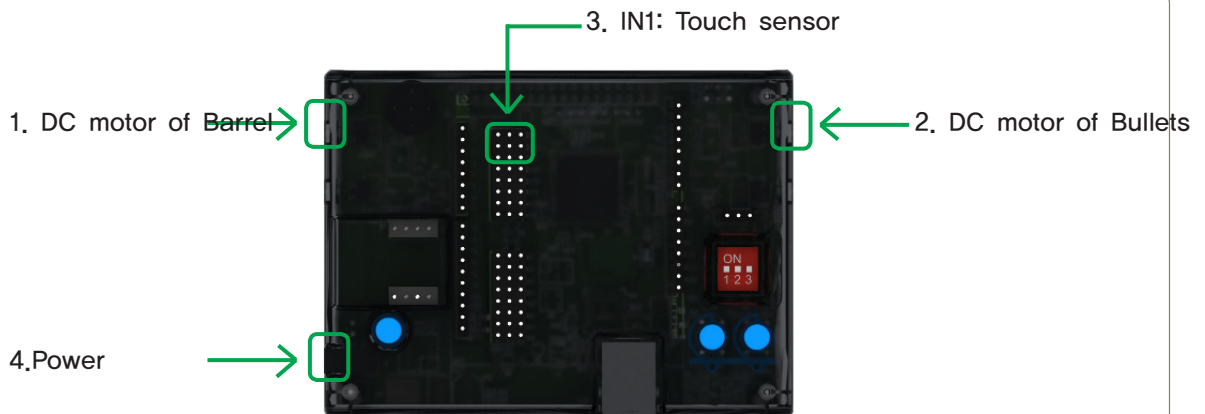
Complete

Tie the cable to the middle hole of the module



Wrapped around the cable as pictures, each filled with a rubber band wrapped around a cable.

Connecting the mainboard



Connect in this order :

1. Connect the Barrel DC motor to L-MOTOR connector1.
2. Connect Bullet DC motor to R-MOTOR connector 2.
3. Connect Touch sensor to INPUT connector.
4. Connect battery case to POWER connector.

Learn to compile program in advance

※ Try to write down the program before we compile on software.

```

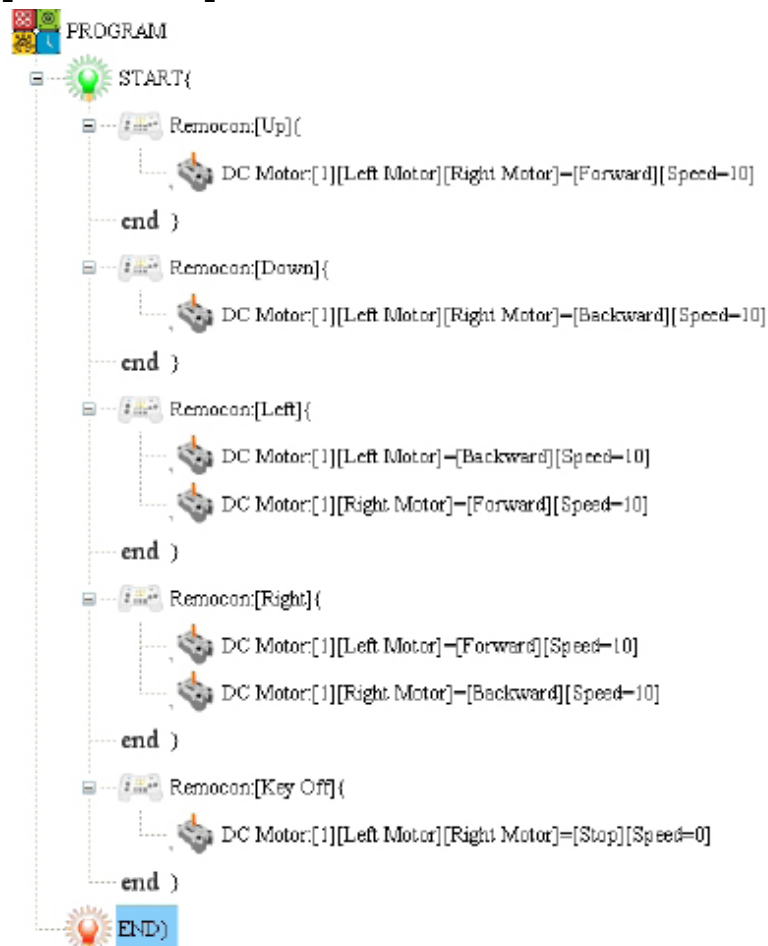
PROGRAM
START{
  Touch:[IN1]=[Press]{
    DC Motor:[1][ ]=[ ]
    DC Motor:[1][ ]=[ ]
  }
end }
Touch:[IN1]=[None]{
  DC Motor:[1][ ]=[ ]
}
end }
END}
  
```

※ Program example : Refer to the back of book.

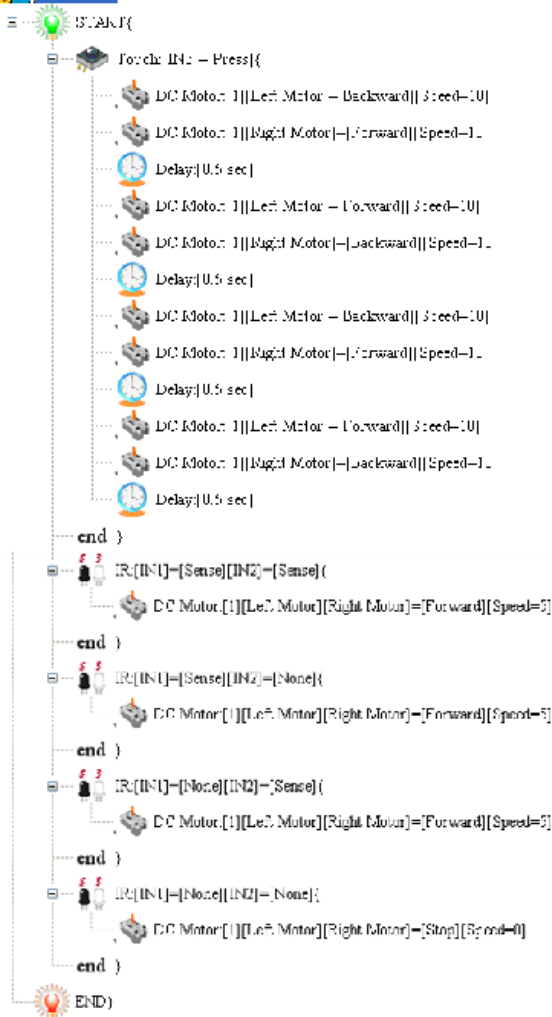
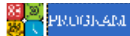


Program Example

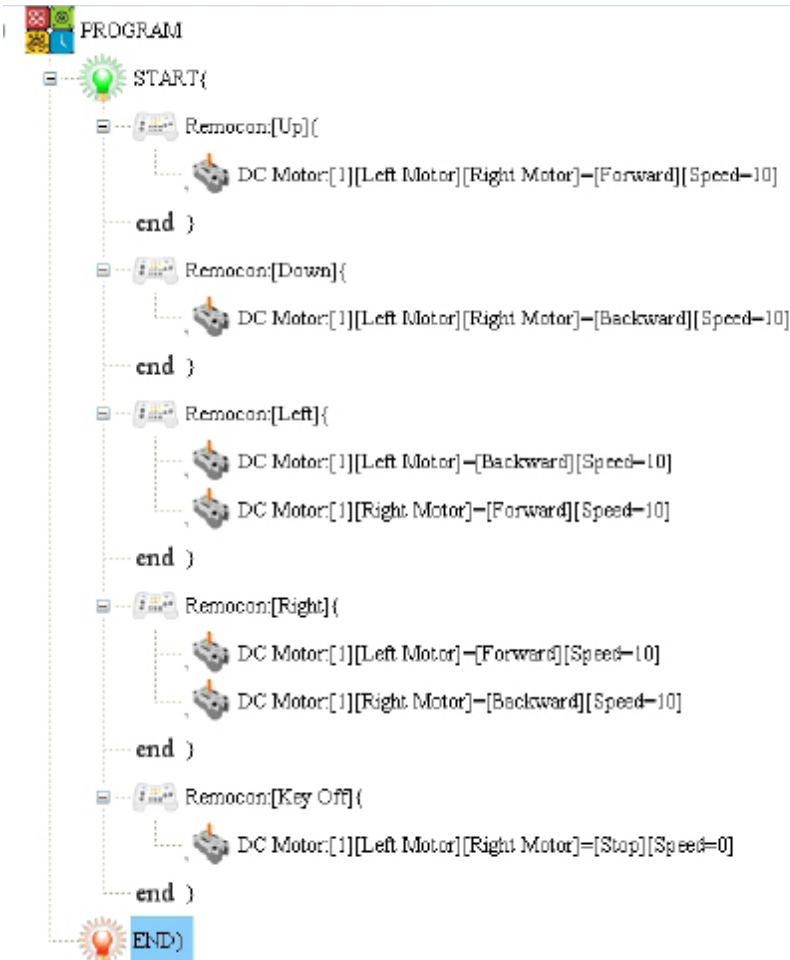
[BASIC TANK]



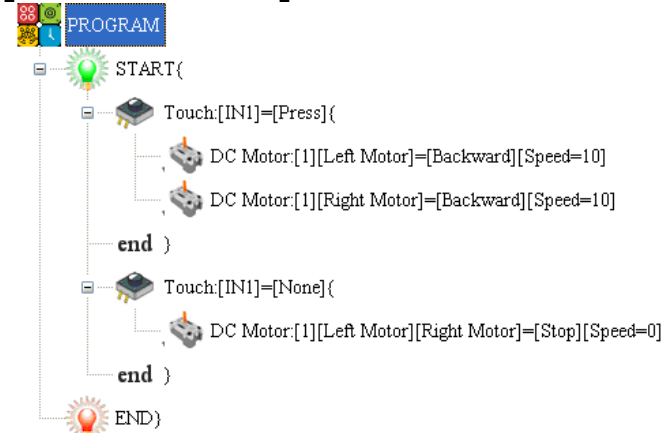
[DOG STALKER]



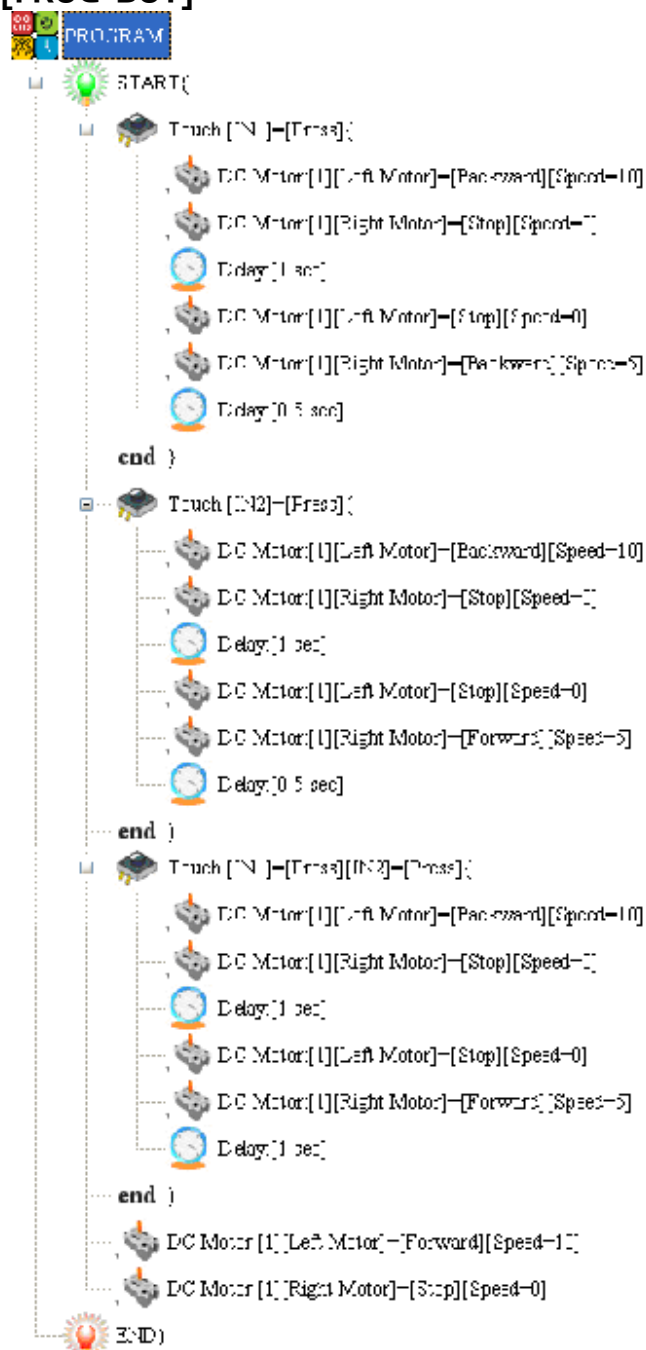
[BATTLE ROBOT]



[TOUCH AVOIDER]



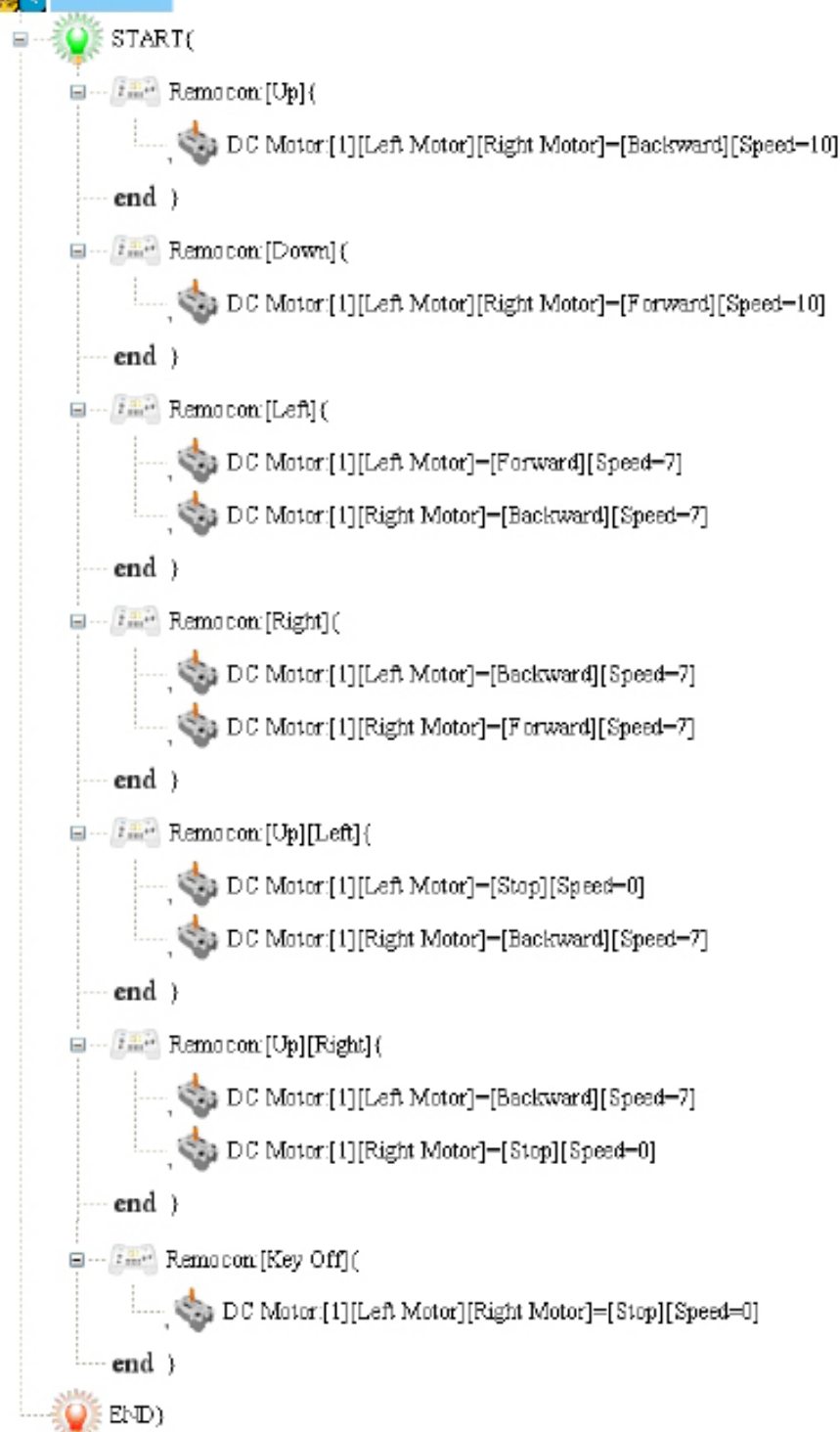
[FROG-BOT]



[SOCCER ROBOT]



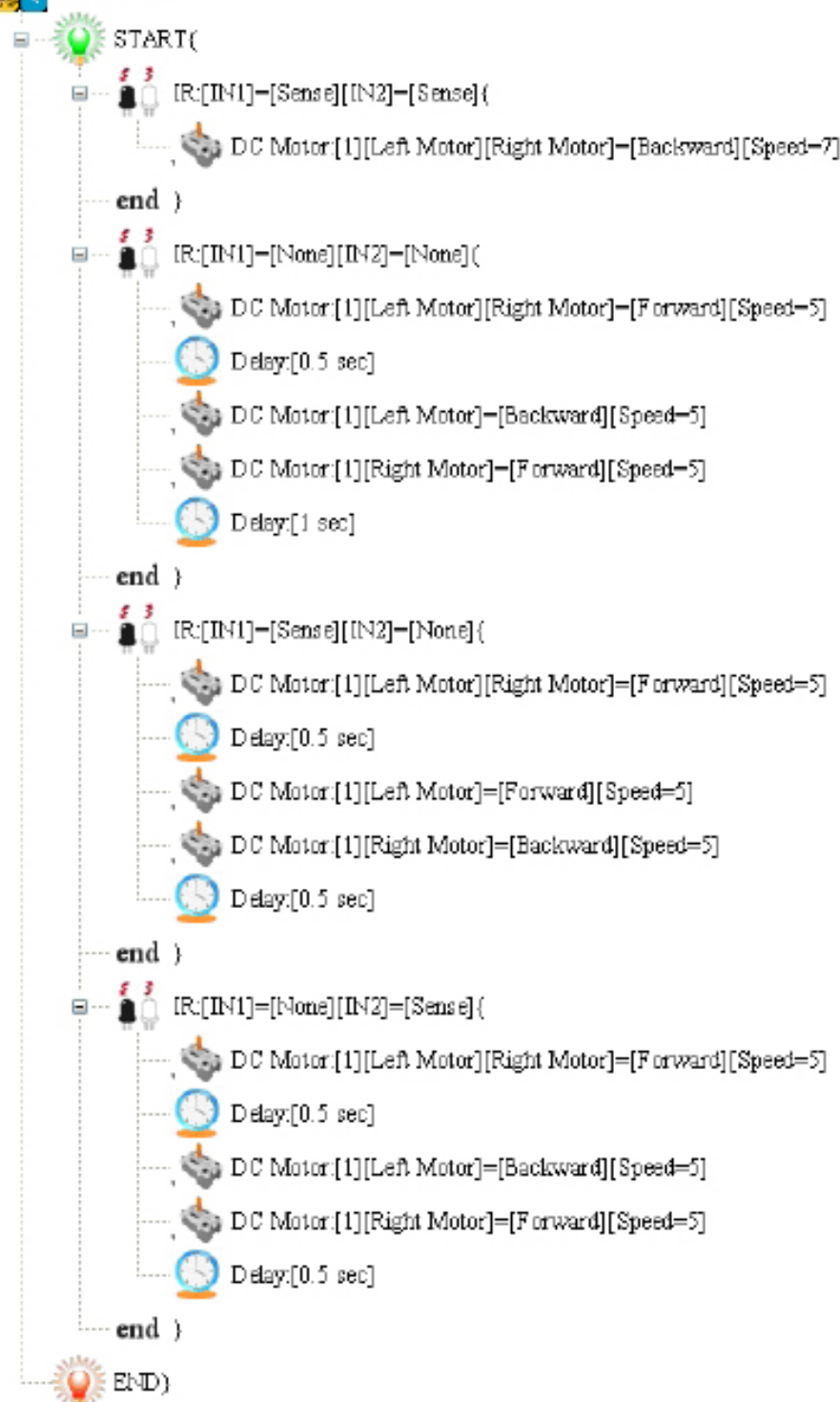
PROGRAM



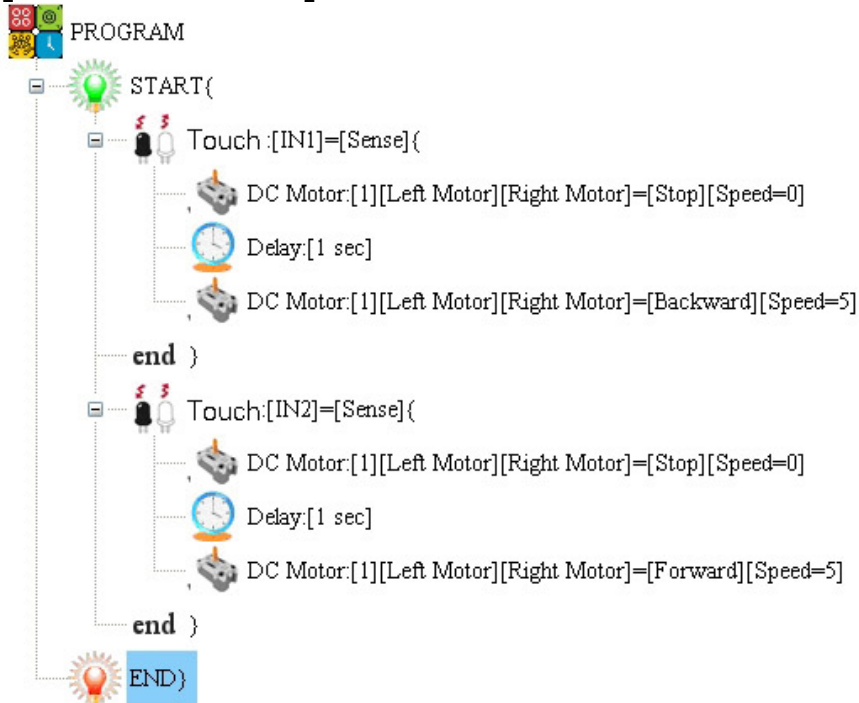
[DROP CHECKER]



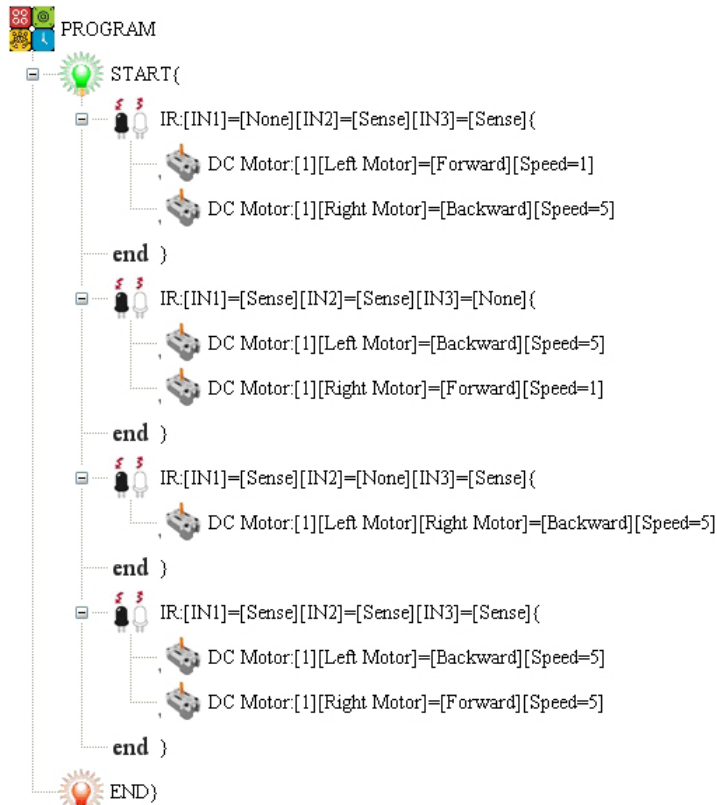
PROGRAM



[SHUTTLE CARRIER]



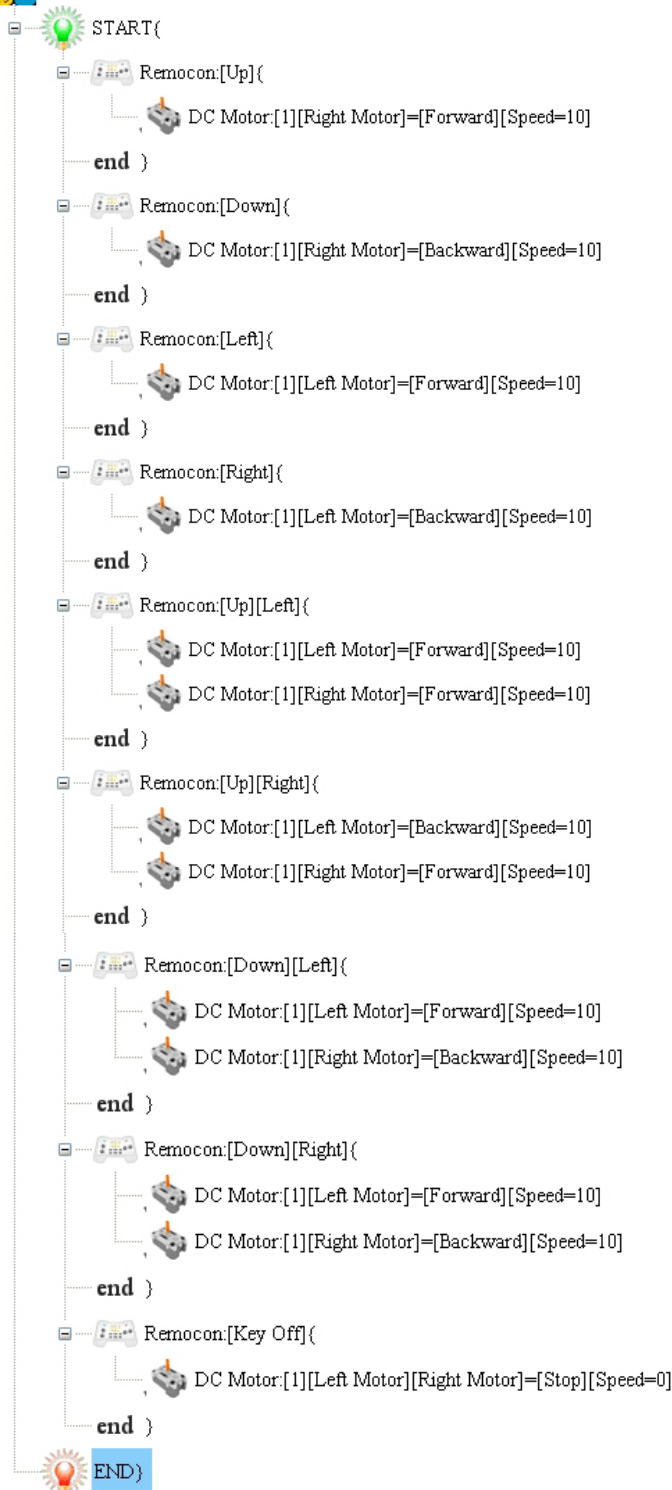
[TRACING TANK]

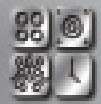


[CLASSIC CAR]

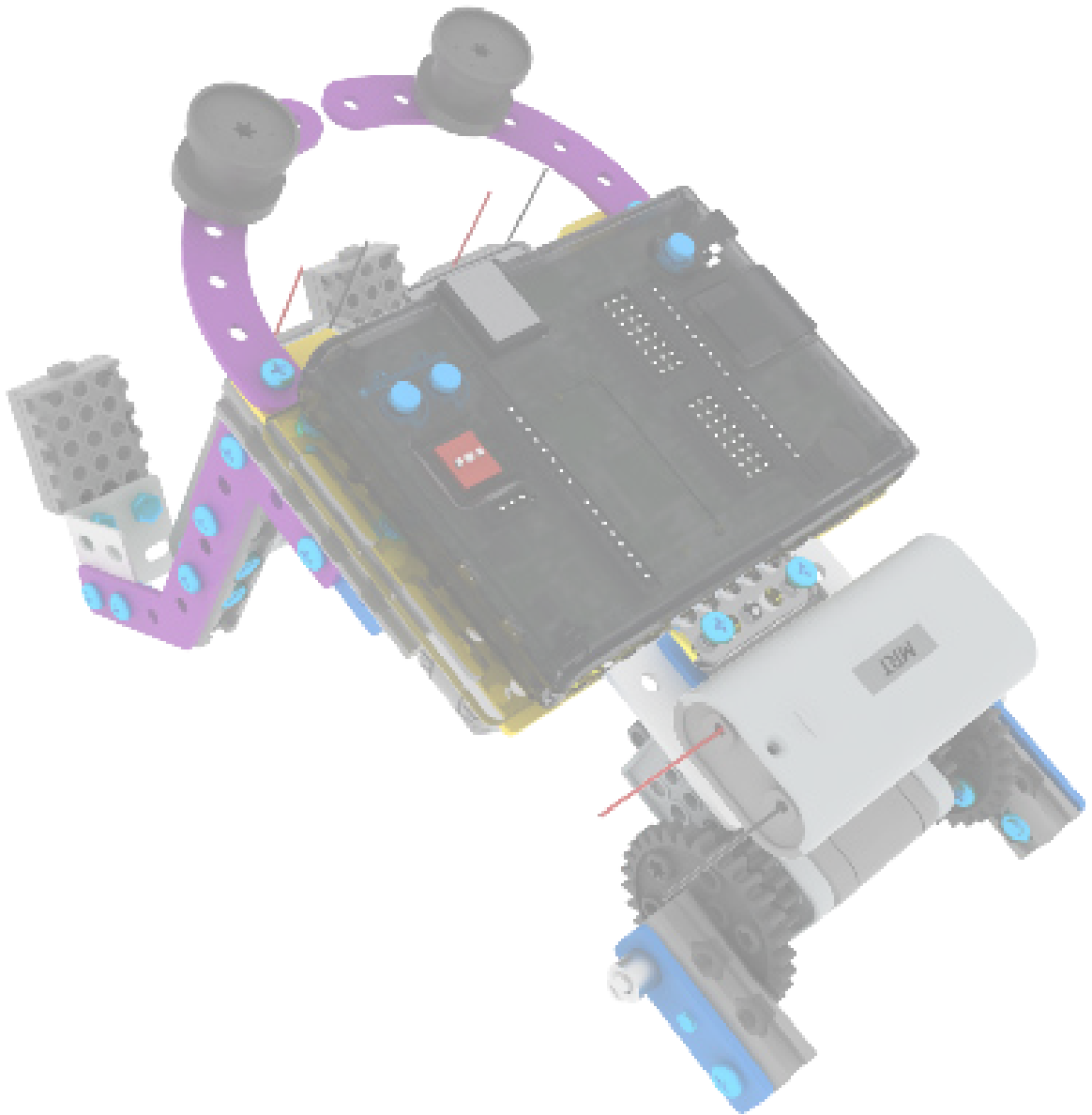


PROGRAM

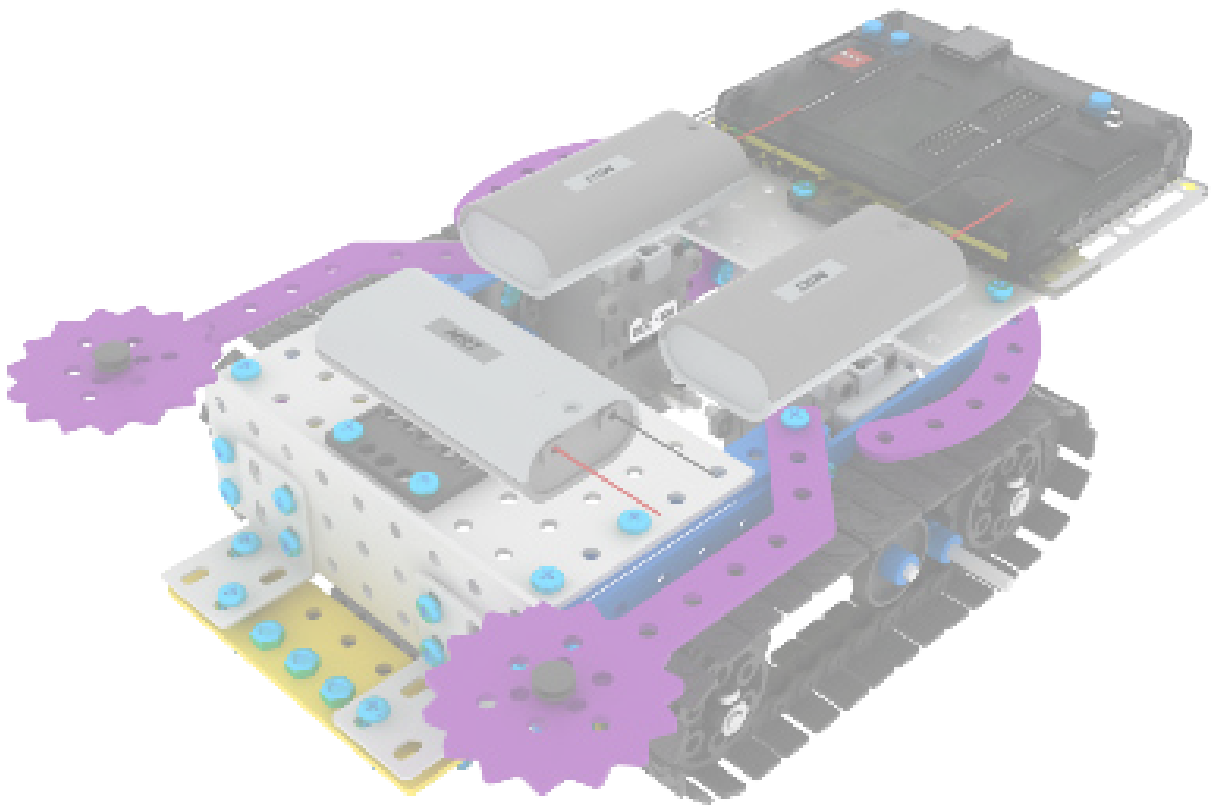




MEMO



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