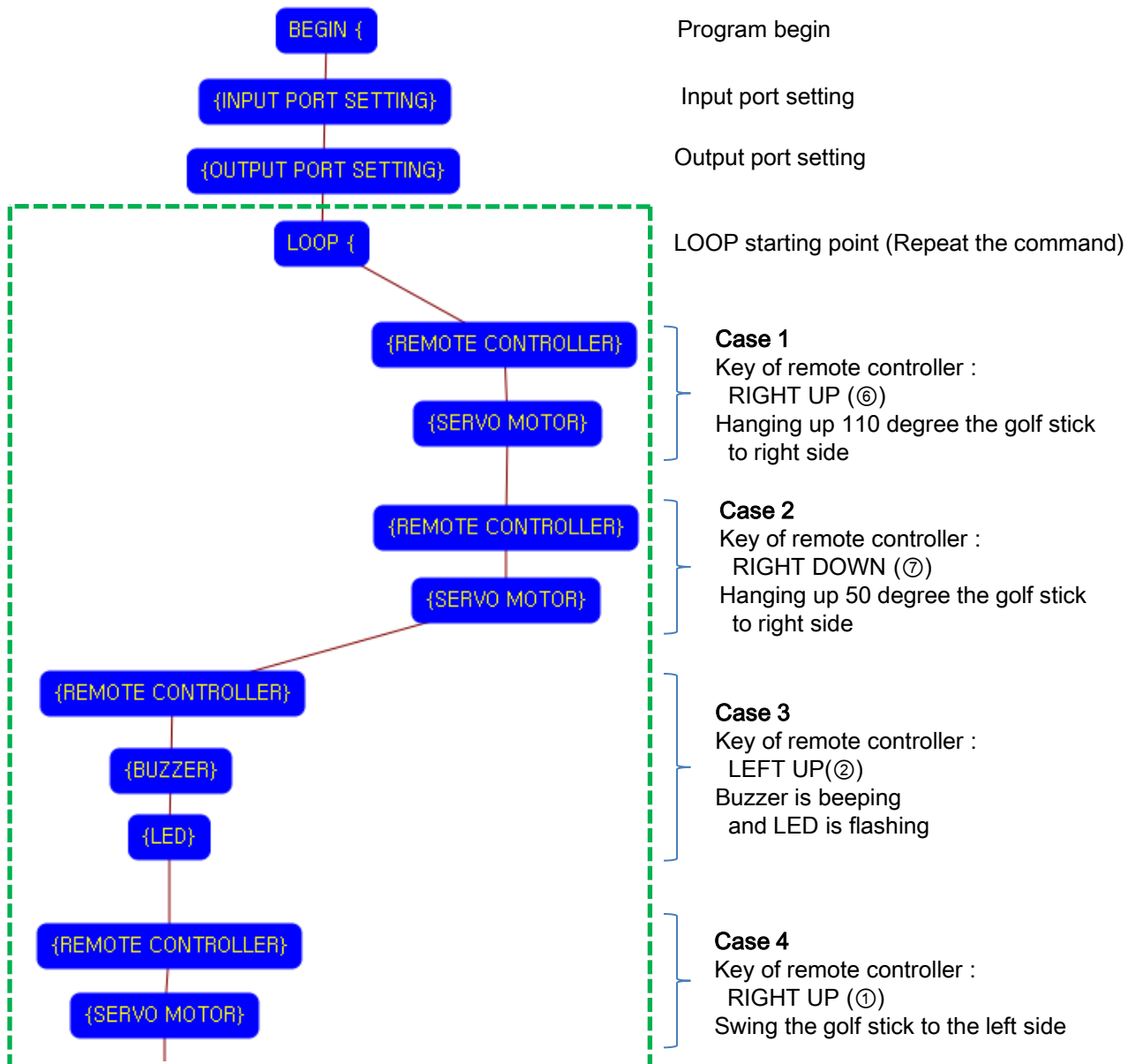
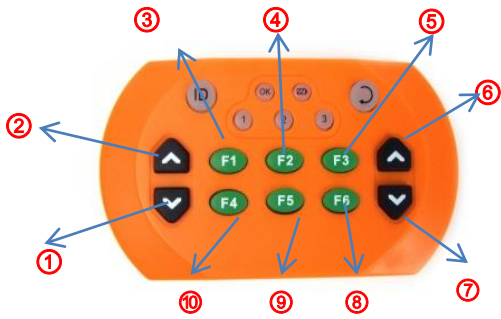


EQ-ROBO Programming : Golf robot

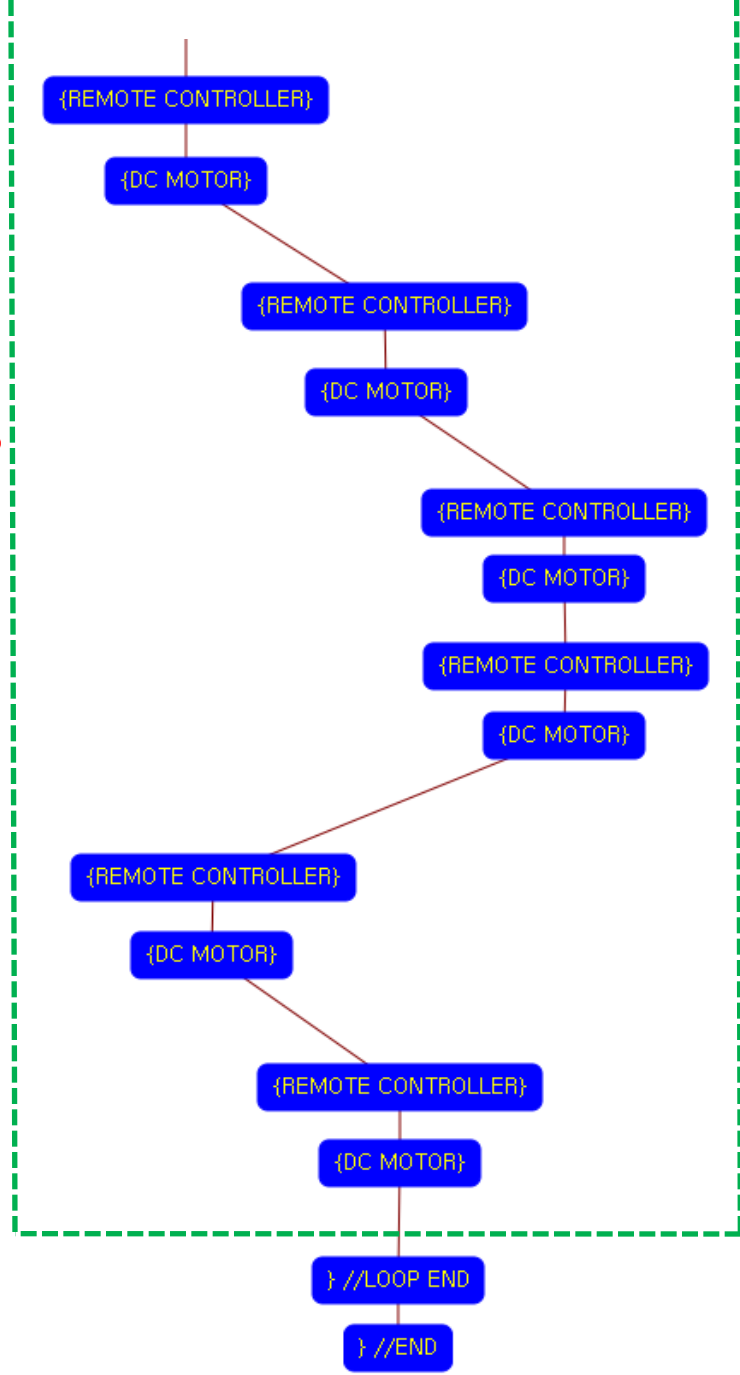


Input: Remote signal receiver
 Output: DC motor, Servo motor
 Work: Moving, swing and putting





- ① Swing the golf stick to the left side
- ② Buzzer is beeping, LED is flashing
- ③ Turning the left side
- ④ Go forward
- ⑤ Turning the right side
- ⑥ Hanging up the 110 degree
- ⑦ Hanging up the 50 degree
- ⑧ Spinning the right side
- ⑨ Go backward
- ⑩ Spinning the left side



F1 Case 5
Turning left side

F2 Case 6
Go forward

F3 Case 7
Turning right side

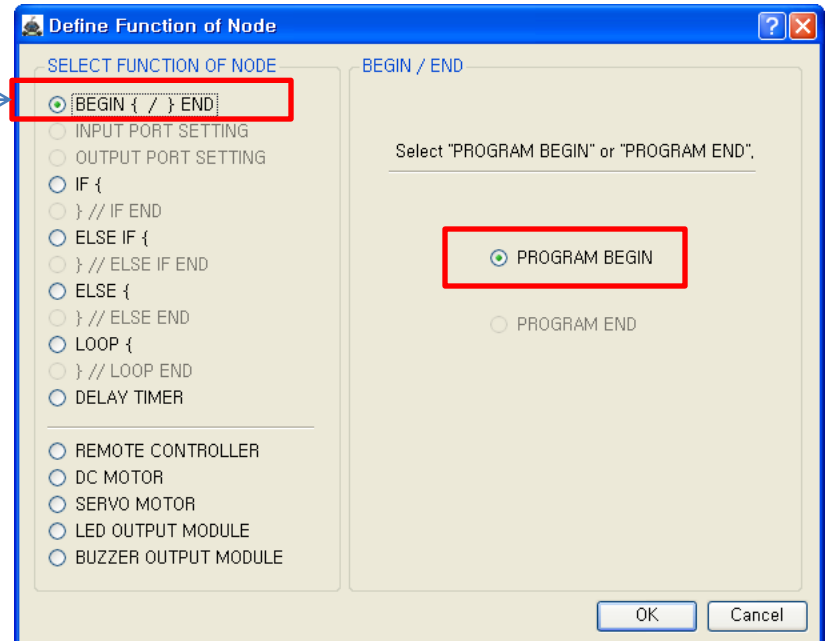
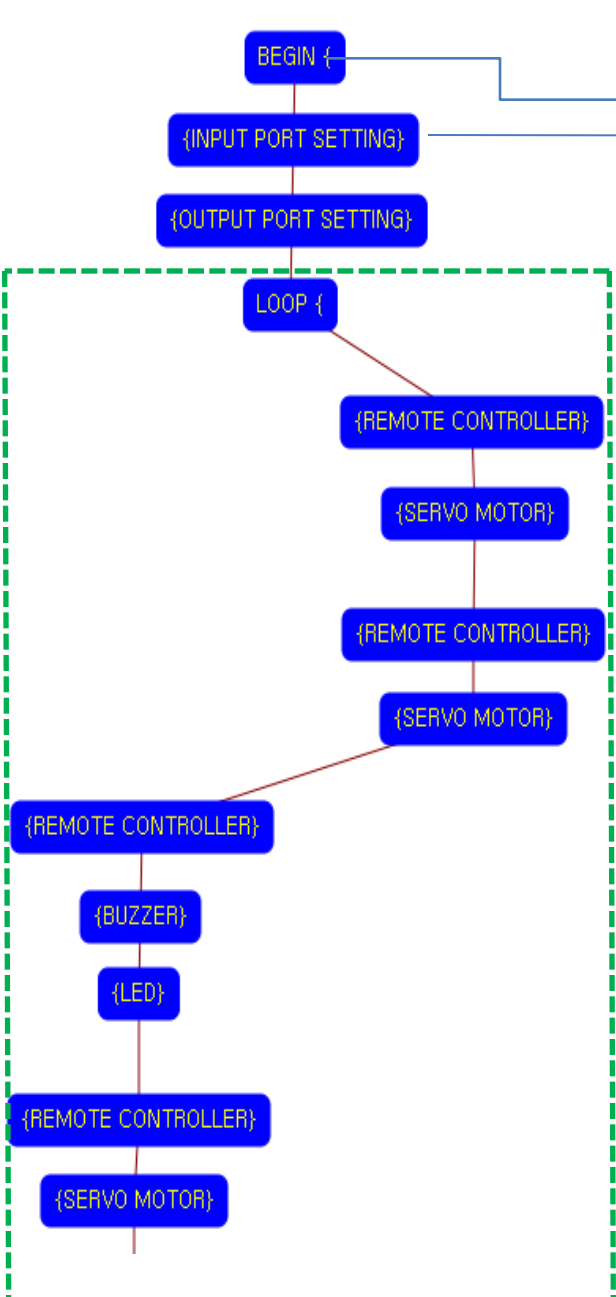
F6 Case 8
Spinning right side

F4 Case 9
Spinning left side

F5 Case 10
Go backward

LOOP ending point

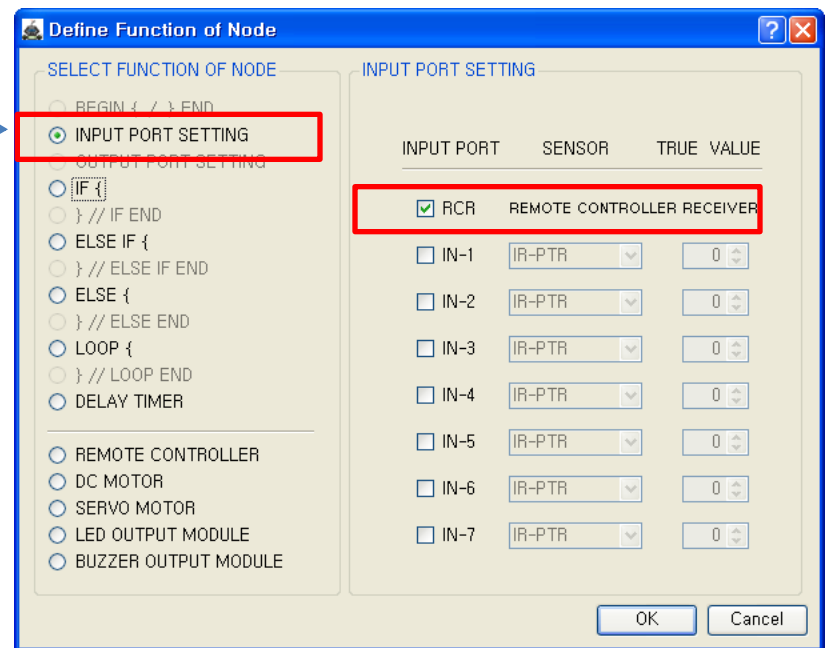
Program end



This means that program begins from here.

You have to place this node at the first of program.

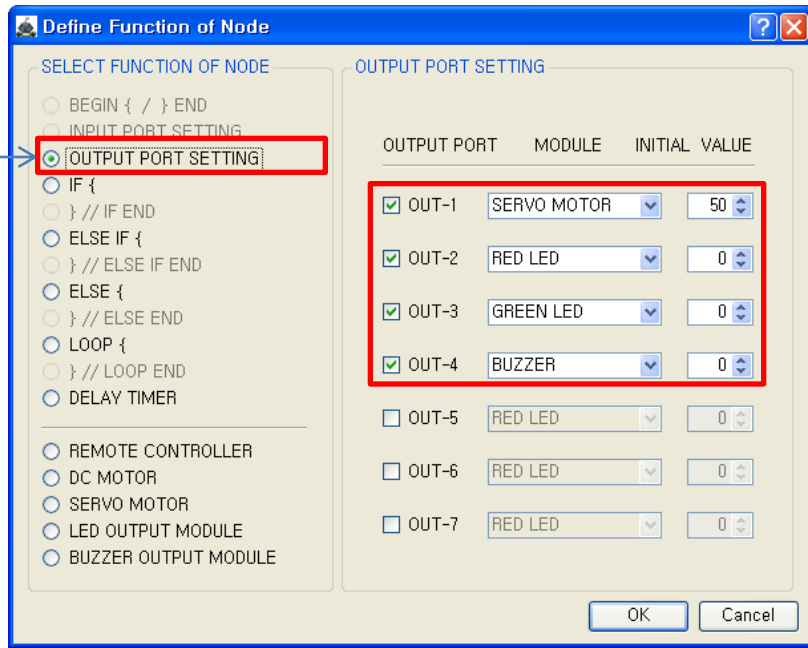
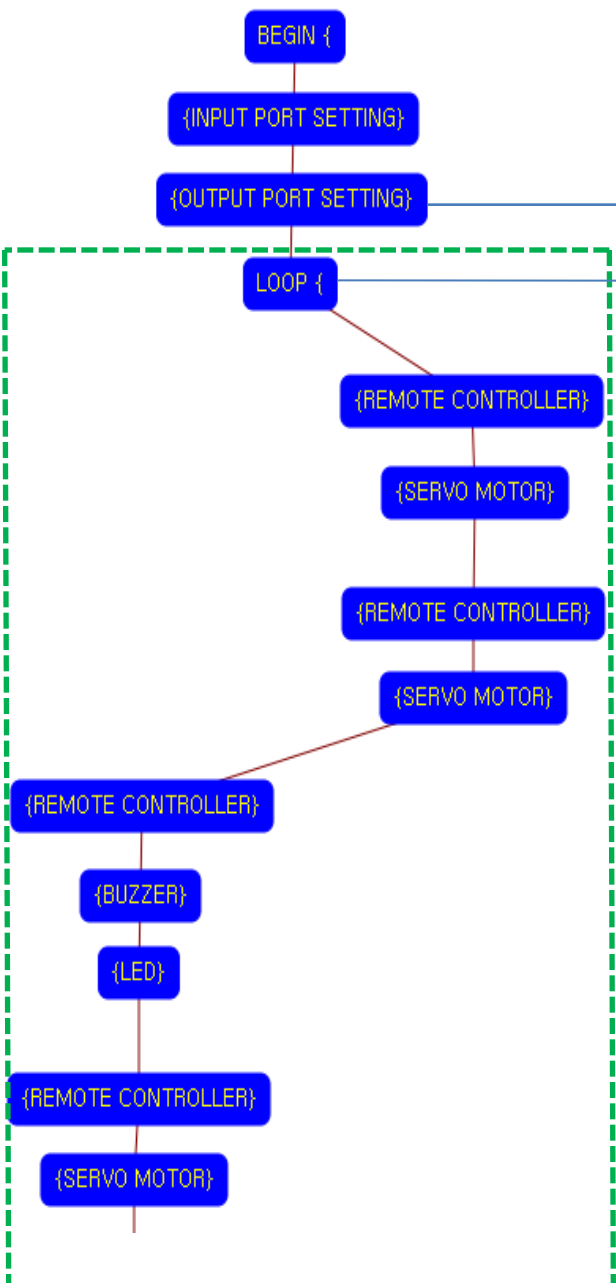
“PROGRAM END” is not active because you did not define “PROGRAM BEGIN” yet.



This model use 1 remote control receiver module as input device.

You have to connect the remote control receiver to the RCR input port of main board. And check the RCR in software to use.

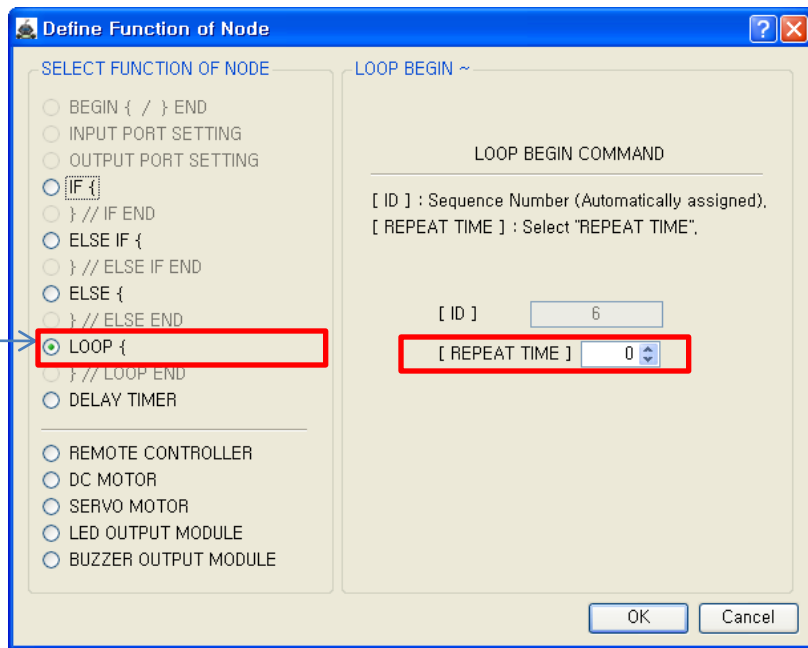
If the real connection of sensors are different to the setting on software, it will make robot to wrong operation.



This model use 2 LED modules, 1 Buzzer module and 1 Servo Motor as output device.

You have to connect the Servo motor to the OUT-1 output port, LED module (RED) to the OUT-2 output port, LED module (GREEN) to the OUT-3 output port and Buzzer module to the OUT-4 output port of main board. The initial value of Servo motor is to be 50.

If the real connection of output modules are different to the setting on software, it will make robot to wrong operation.

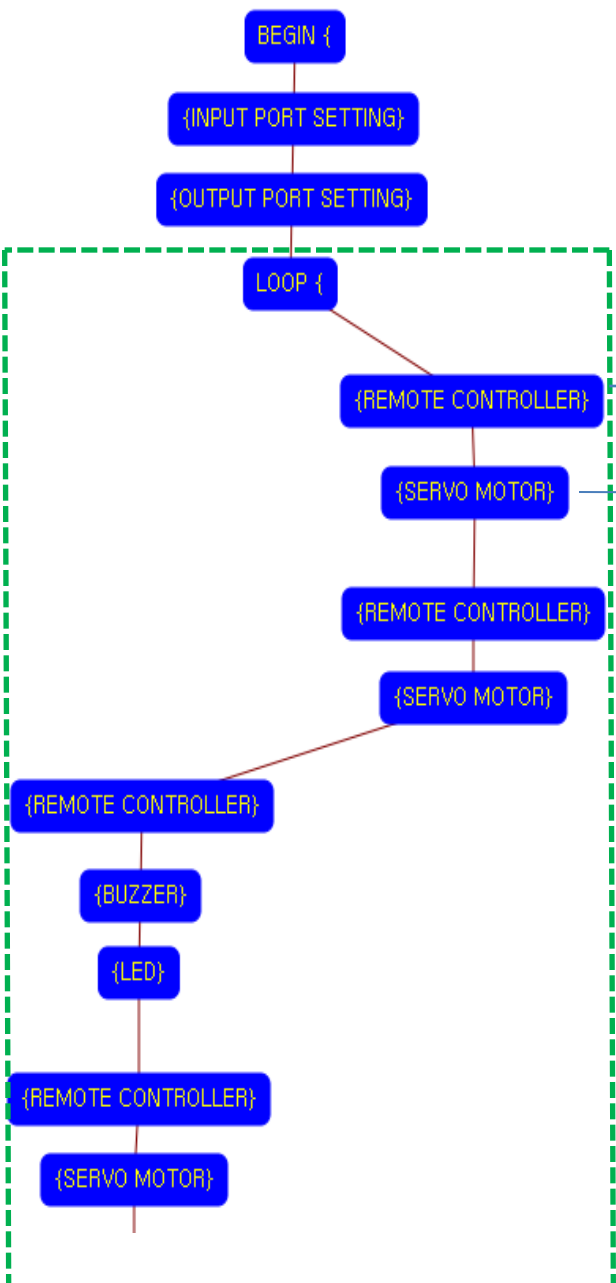


LOOP command is used to repeat the commands.

"REPEAT TIME" is the repeat number you want. If you want permanent repetition, you have to set "0".

ID is automatically assigned. You have to set the same ID at "LOOP END".

Automatically assigned ID is different according to the sequence of making nodes.

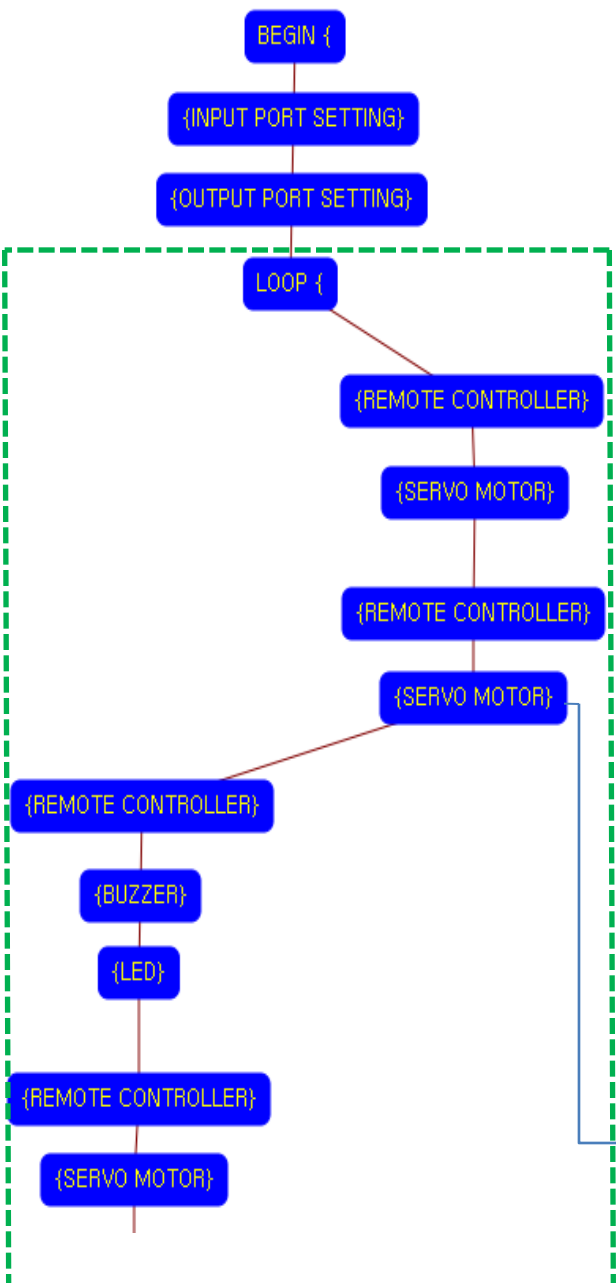


Set the "RIGHT UP" key of remote controller.



If the "RIGHT UP" key is pressed, the servo motor sets to the 110 degree.

This make the robot hang up the golf stick 110 degree. (If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

REMOTE CONTROLLER

[DIRECTION KEY]

LEFT UP RIGHT UP

LEFT DOWN **RIGHT DOWN**

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

F1 F2 F3

F4 F5 F6

OK Cancel

Set the "RIGHT DOWN" key of remote controller



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

SERVO MOTOR

OUTPUT PORT SERVO MOTOR ANGLE

OUT-1 50

OUT-2 0

OUT-3 0

OUT-4 0

OUT-5 0

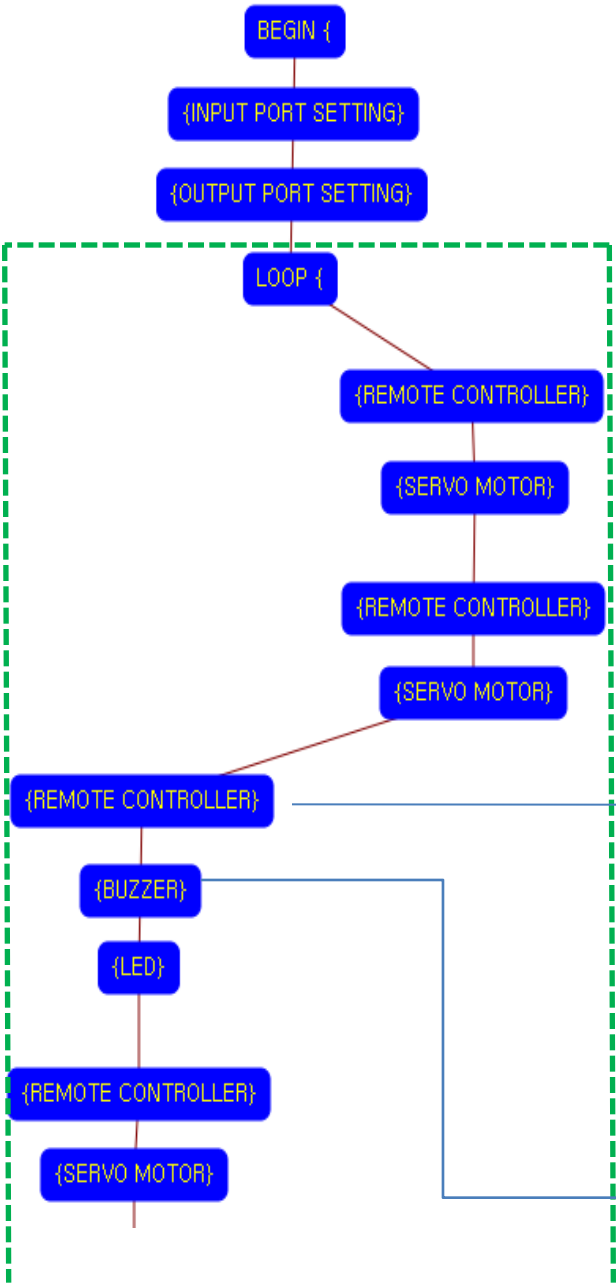
OUT-6 0

OUT-7 0

OK Cancel

If the "RIGHT DOWN" key is pressed, the servo motor sets to the 50 degree.

This make the robot hang up the golf stick 50 degree. (If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RREMOTE CONTROLLER

[DIRECTION KEY]

[DIRECTION MIXED KEY]

[FUNCTION KEY]

Set the "LEFT UP" key of remote controller.



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

BUZZER OUTPUT MODULE

OUTPUT PORT	On TIME	Off TIME	REPEAT
<input type="checkbox"/> OUT-1			
<input type="checkbox"/> OUT-2			
<input type="checkbox"/> OUT-3			
<input checked="" type="checkbox"/> OUT-4	5	5	1
<input type="checkbox"/> OUT-5			
<input type="checkbox"/> OUT-6			
<input type="checkbox"/> OUT-7			

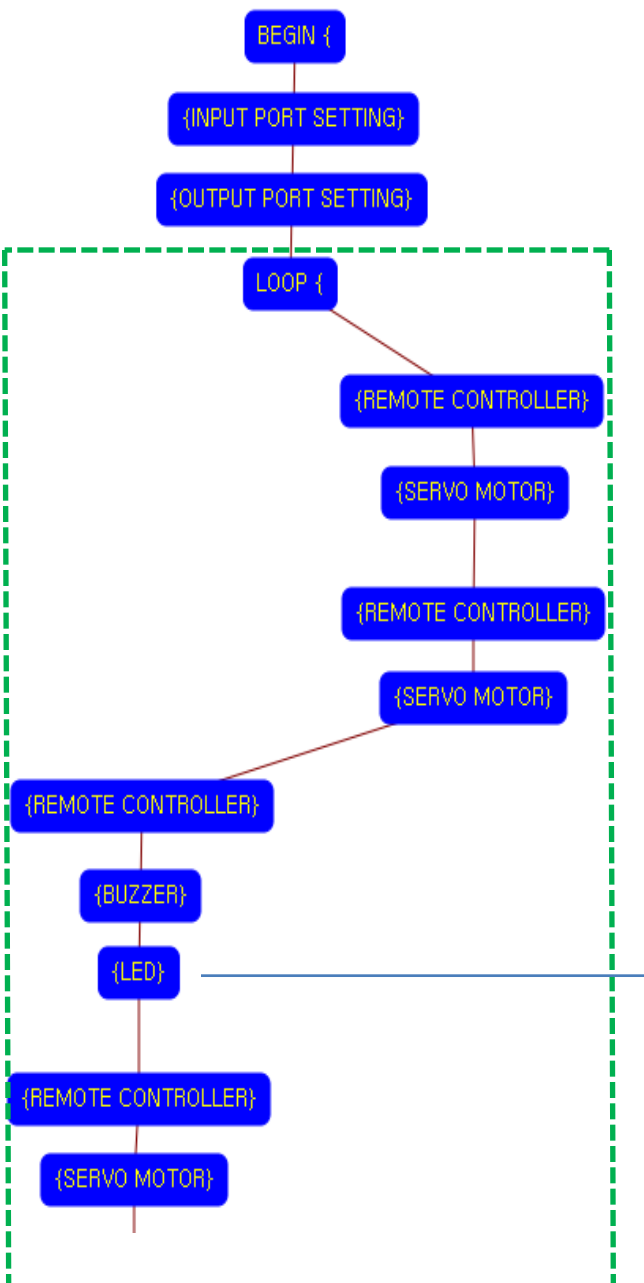
[On TIME] : Select the LED ON time
[Off TIME] : Select the LED OFF time
5 : 0,5 seconds
10 : 1,0 seconds
15 : 1,5 seconds
20 : 2,0 seconds

[REPEAT] : Select the REPEAT times (0 ~ 10)

If the "LEFT UP" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-4) turns on 0.5 seconds and turns off 0.5 seconds for 1 times.

On TIME : On time of LED
Off TIME: Off time of LED
REPEAT: Repetition number



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

LED OUTPUT MODULE

OUTPUT PORT	On TIME	Off TIME	REPEAT
<input type="checkbox"/> OUT-1			
<input checked="" type="checkbox"/> OUT-2	5	5	1
<input checked="" type="checkbox"/> OUT-3			
<input type="checkbox"/> OUT-4			
<input type="checkbox"/> OUT-5			
<input type="checkbox"/> OUT-6			
<input type="checkbox"/> OUT-7			

[On TIME] : Select the LED ON time
[Off TIME] : Select the LED OFF time
5 : 0.5 seconds
10 : 1.0 seconds
15 : 1.5 seconds
20 : 2.0 seconds

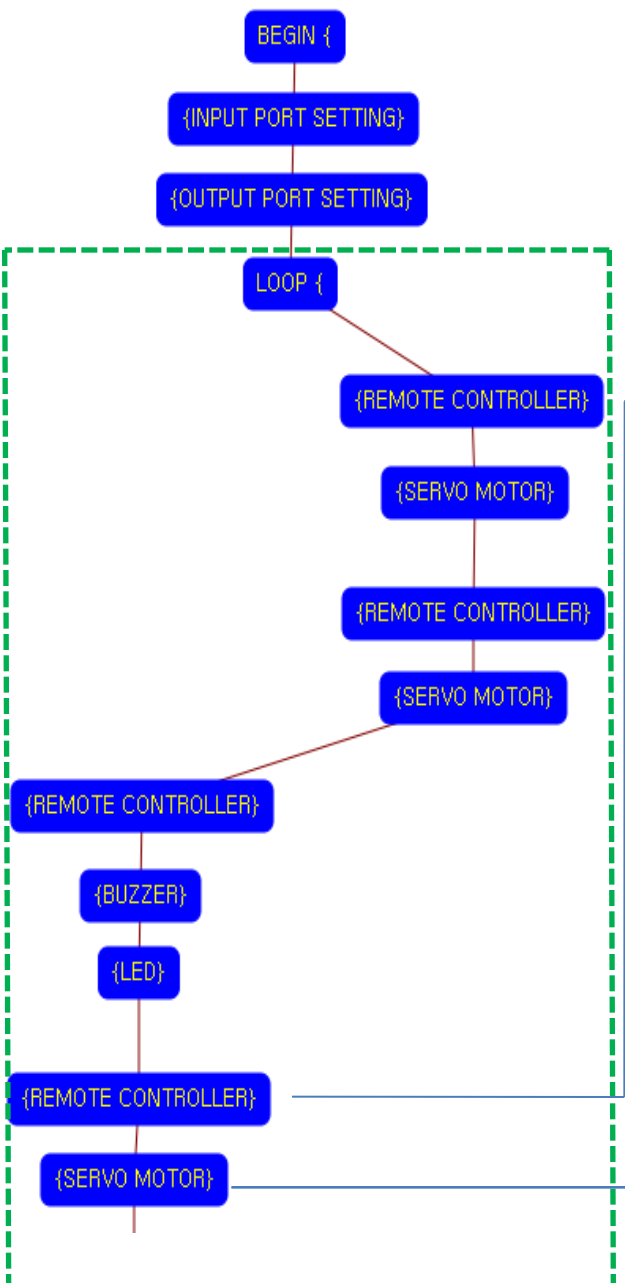
[REPEAT] : Select the REPEAT times (0 ~ 10)

OK Cancel

After buzzer is beeping, LEDs are flashing like as followings.

LED modules(OUT-2, OUT-3) are turn on 0.5 seconds and turn off 0.5 seconds for 1 times.

On TIME : On time of LED
Off TIME: Off time of LED
REPEAT: Repetition number



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

RTREMOTE CONTROLLER

[DIRECTION KEY]

LEFT UP RIGHT UP

LEFT DOWN RIGHT DOWN

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

F1 F2 F3

F4 F5 F6

OK Cancel

Set the "LEFT DOWN" key of remote controller.



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

SERVO MOTOR

OUTPUT PORT	SERVO MOTOR ANGLE
<input checked="" type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input type="checkbox"/> OUT-4	0
<input type="checkbox"/> OUT-5	0
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

REMOTE CONTROLLER

SERVO MOTOR

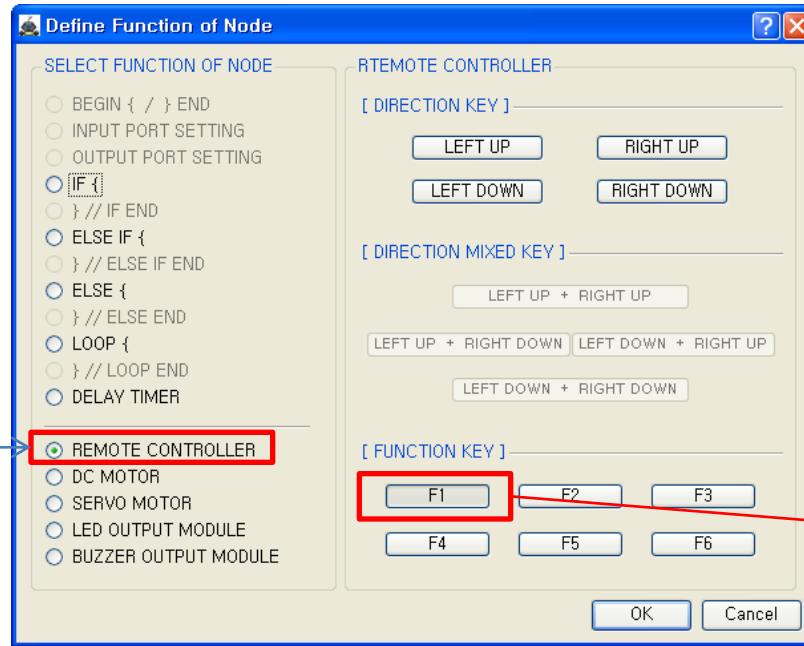
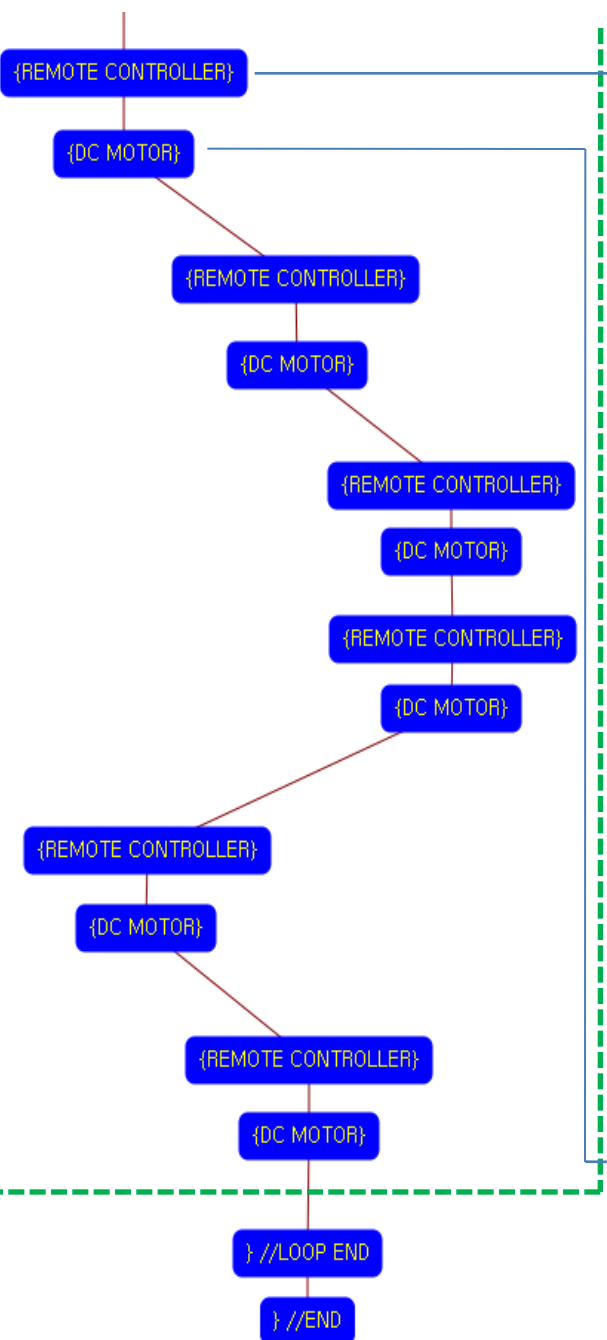
LED OUTPUT MODULE

BUZZER OUTPUT MODULE

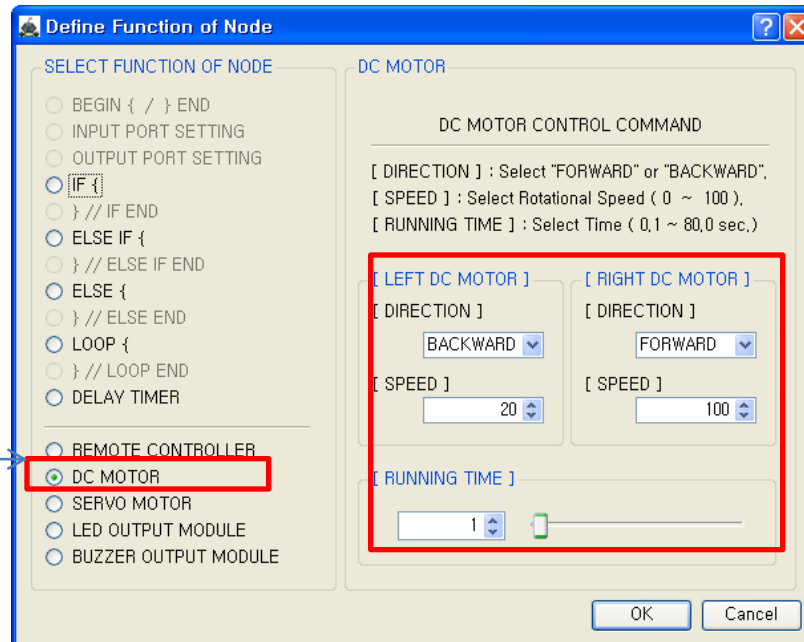
OK Cancel

If the "LEFT DOWN" key is pressed, the servo motor sets to the 0 degree.

This make the golf stick is positioned at the down side. (If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)

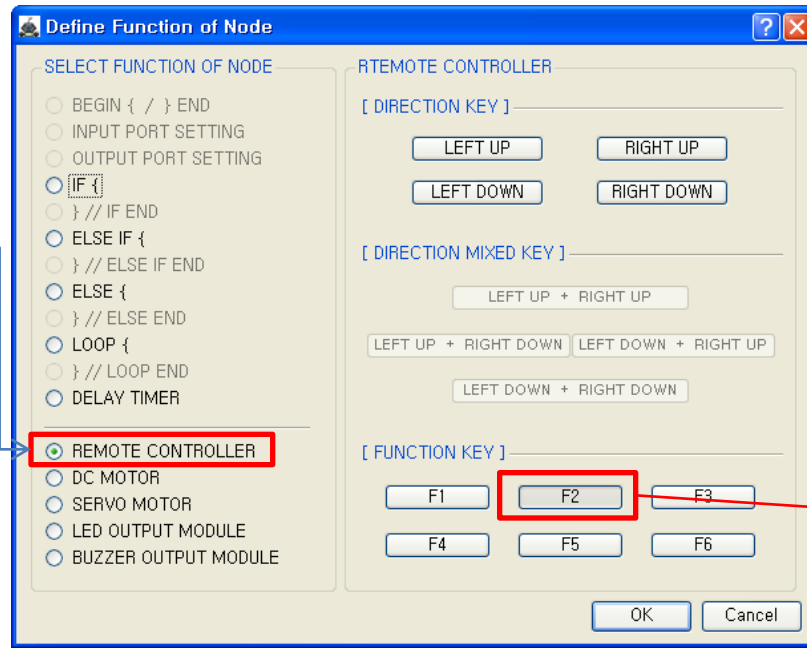
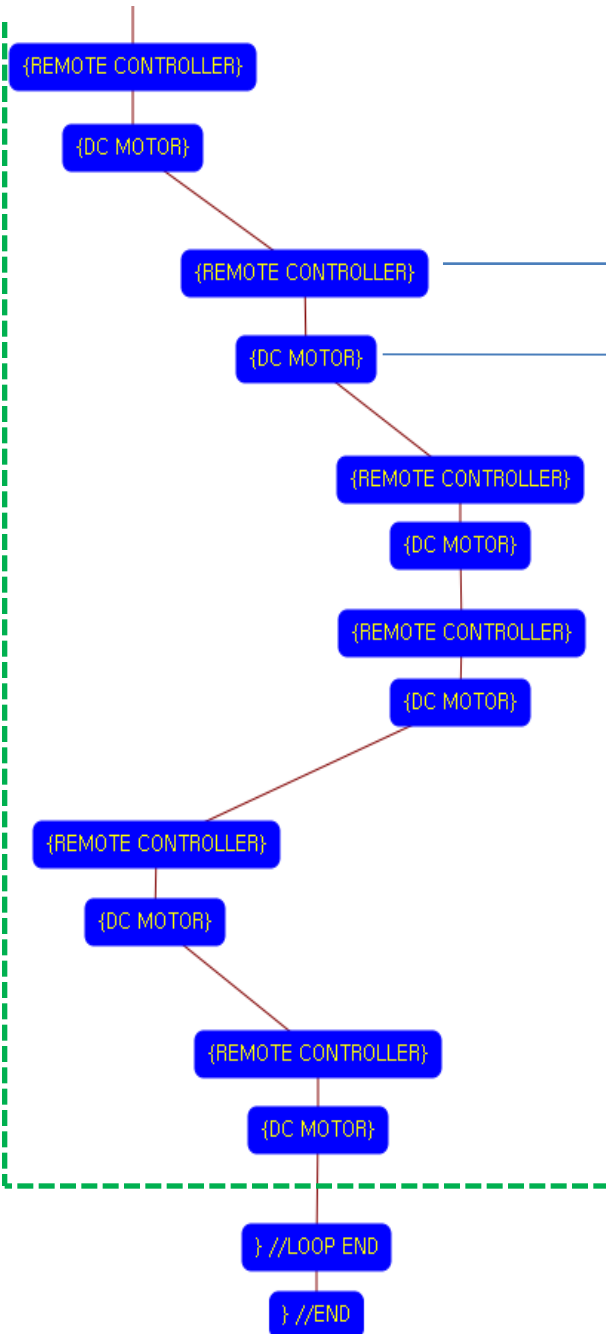


Set the “F1 ” key of remote controller.

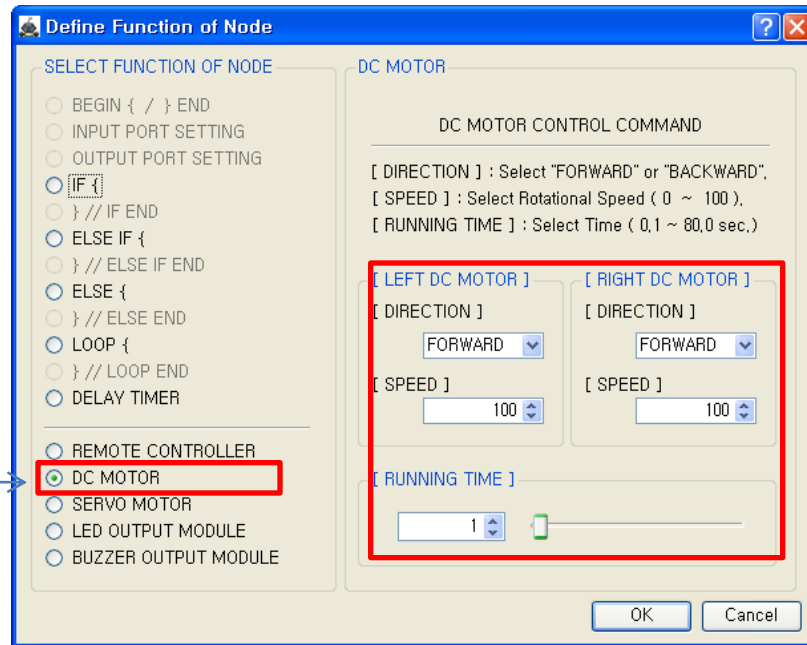


Left DC Motor
- Direction : Backward
- Speed : 20
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
→Robot turns left during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is turning continuously during the “F1” key is pressed.

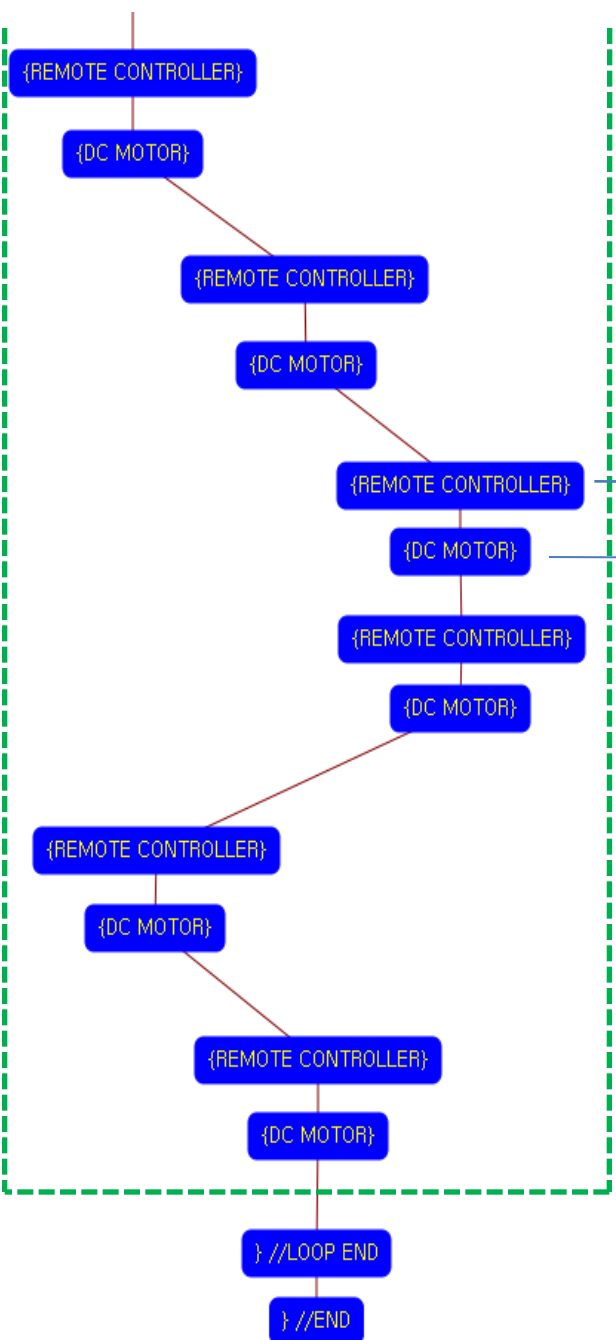


Set the “F2” key of remote controller.



- Left DC Motor
- Direction : Forward
 - Speed : 100
 - Running Time : 1
- Right DC Motor
- Direction : Forward
 - Speed : 100
 - Running Time : 1
- Robot goes forward during 0.1 second

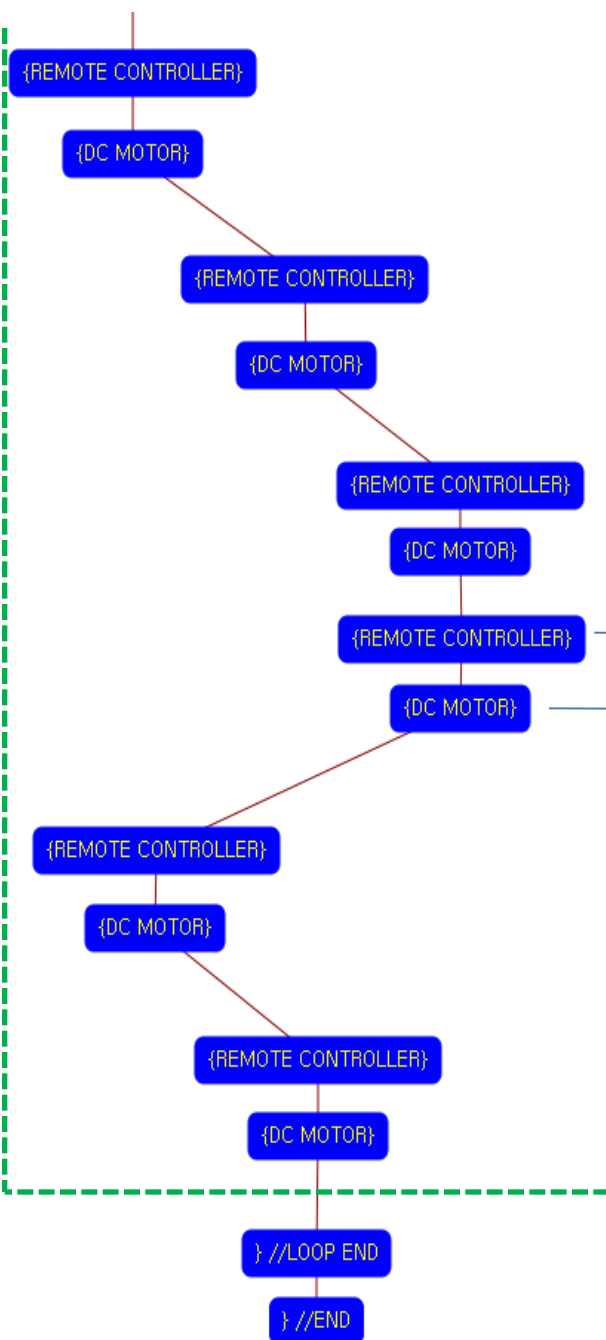
Although the setting value of running time is 0.1 seconds, the robot is going forward continuously during the “F2” key is pressed.



Set the "F3" key of remote controller.

Left DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Backward
- Speed : 20
- Running Time : 1
→ Robot turns right during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is turning continuously during the "F3" key is pressed.

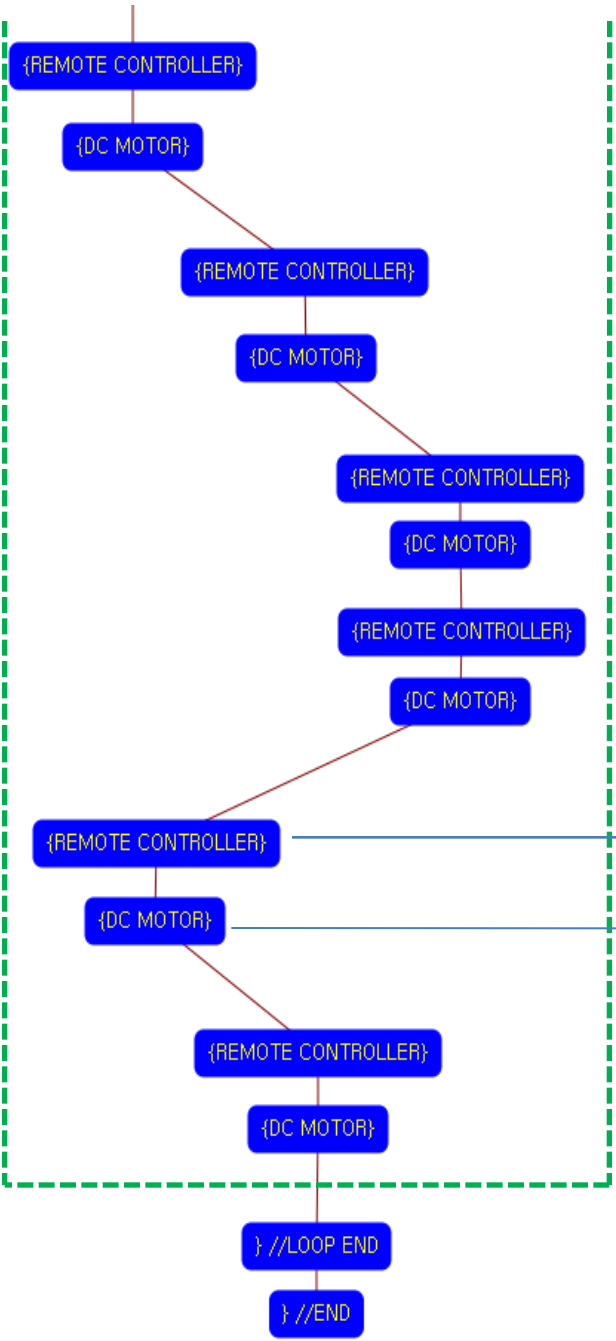


Set the "F6" key of remote controller.



Left DC Motor
- Direction : Forward
- Speed : 50
- Running Time : 1
Right DC Motor
- Direction : Backward
- Speed : 50
- Running Time : 1
→ Robot spins right during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is spinning continuously during the "F6" key is pressed.

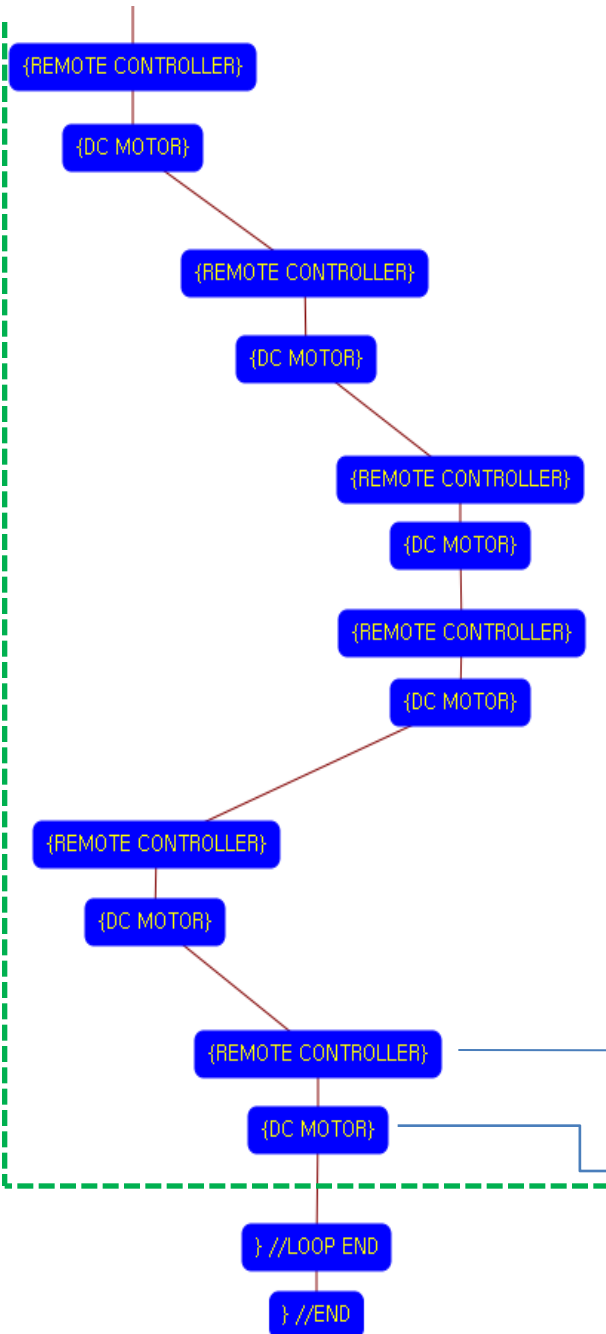


Set the "F4" key of remote controller.



Left DC Motor
- Direction : Backward
- Speed : 50
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 50
- Running Time : 1
→ Robot spins left during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is spinning continuously during the "F4" key is pressed.

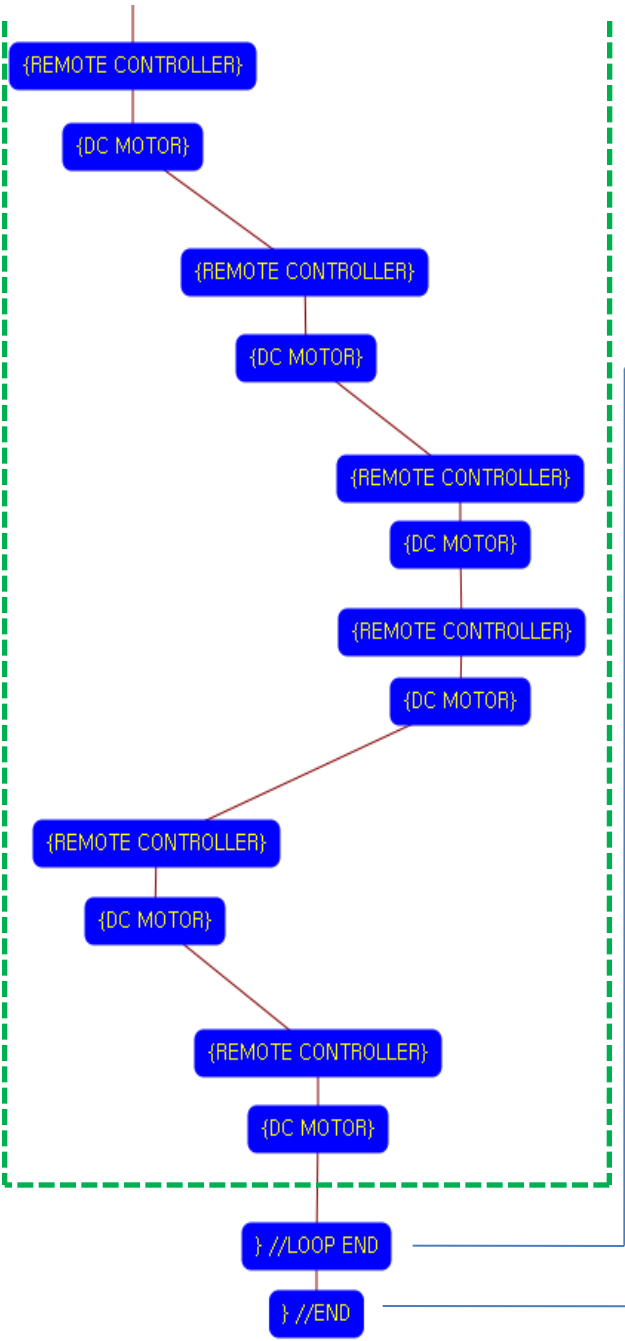


Set the "F5" key of remote controller.



Left DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
→ Robot goes backward during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is going backward continuously during the "F5" key is pressed.



Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

REMOTE CONTROLLER

DC MOTOR

SERVO MOTOR

LED OUTPUT MODULE

BUZZER OUTPUT MODULE

~ LOOP END

LOOP END COMMAND

[ID] : Sequence Number (Manually assigned).

[ID] 6

OK Cancel

The end point of "LOOP {" repetition command.

You have to assigned the ID of paired "LOOP {" repetition command.

(It is necessary to know that which "LOOP {" among the many "LOOP {" repetition commands in program.

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

REMOTE CONTROLLER

DC MOTOR

SERVO MOTOR

LED OUTPUT MODULE

BUZZER OUTPUT MODULE

BEGIN / END

Select "PROGRAM BEGIN" or "PROGRAM END".

PROGRAM BEGIN

PROGRAM END

OK Cancel

This means that program ends hear.

You have to place this node at the end of program.

"PROGRAM BEGIN" is not active because you already define at the program.

To run the robot, it is necessary to download the program into the robot. (Refer to download manual)