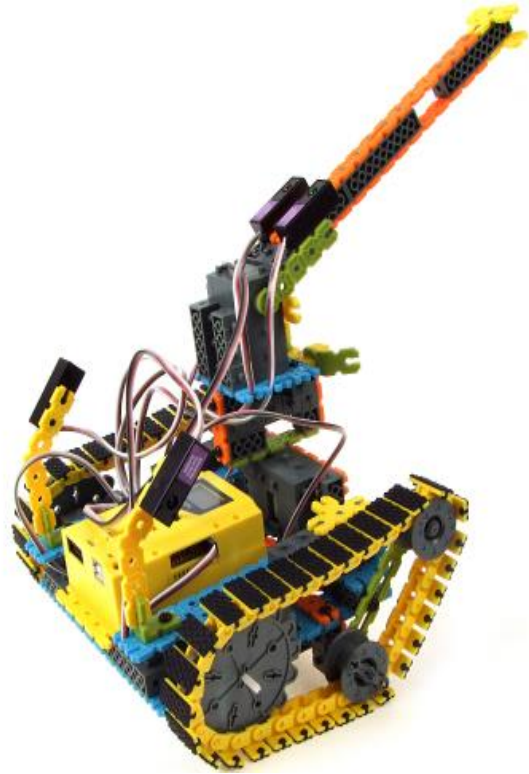
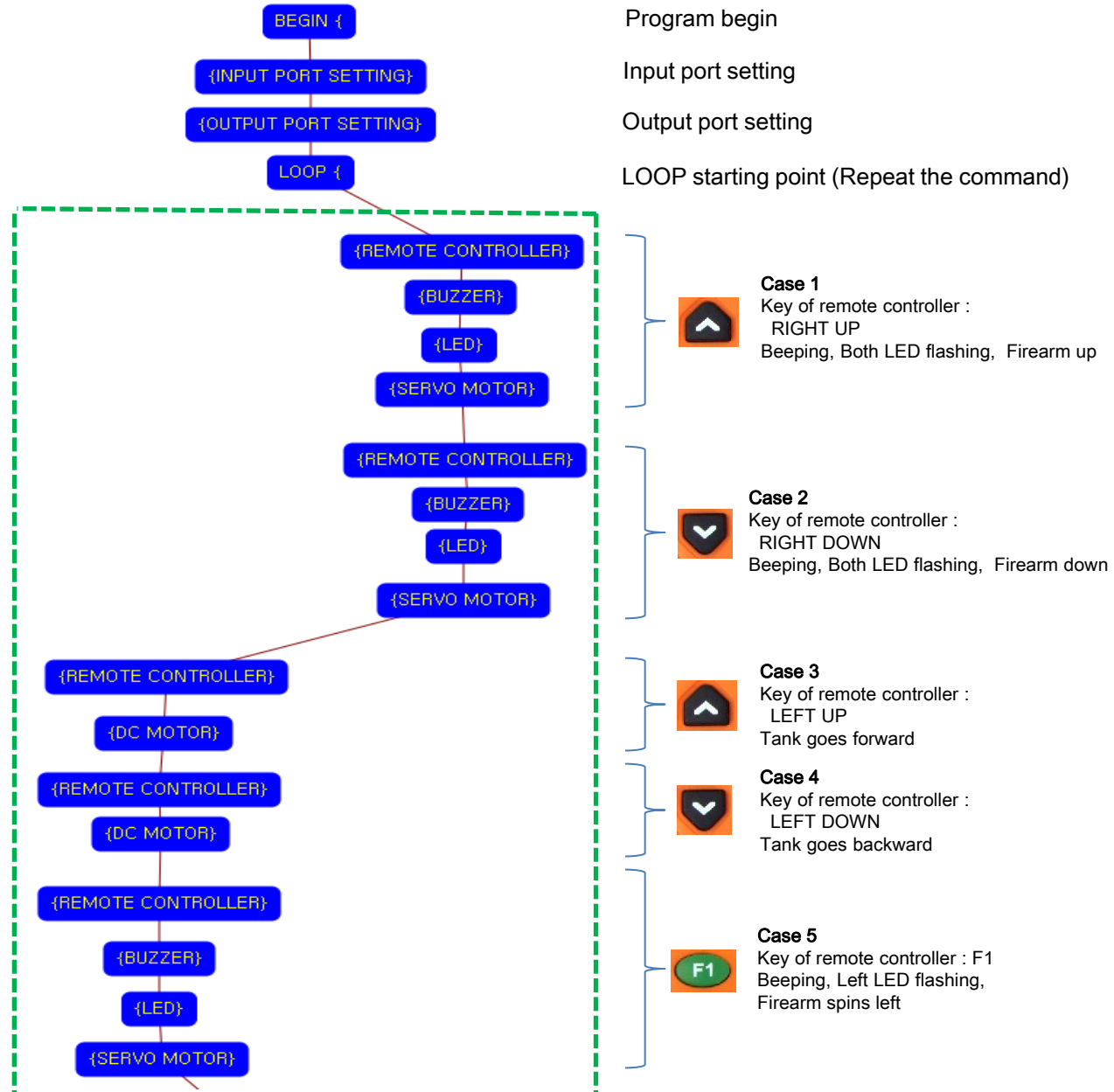
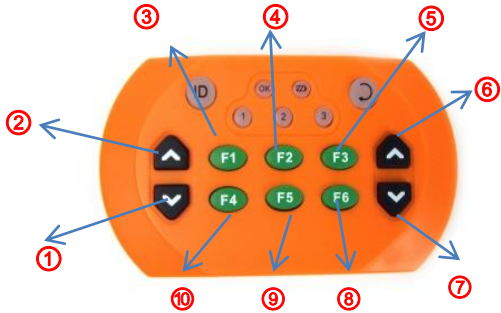


# EQ-ROBO Programming : Servo tank

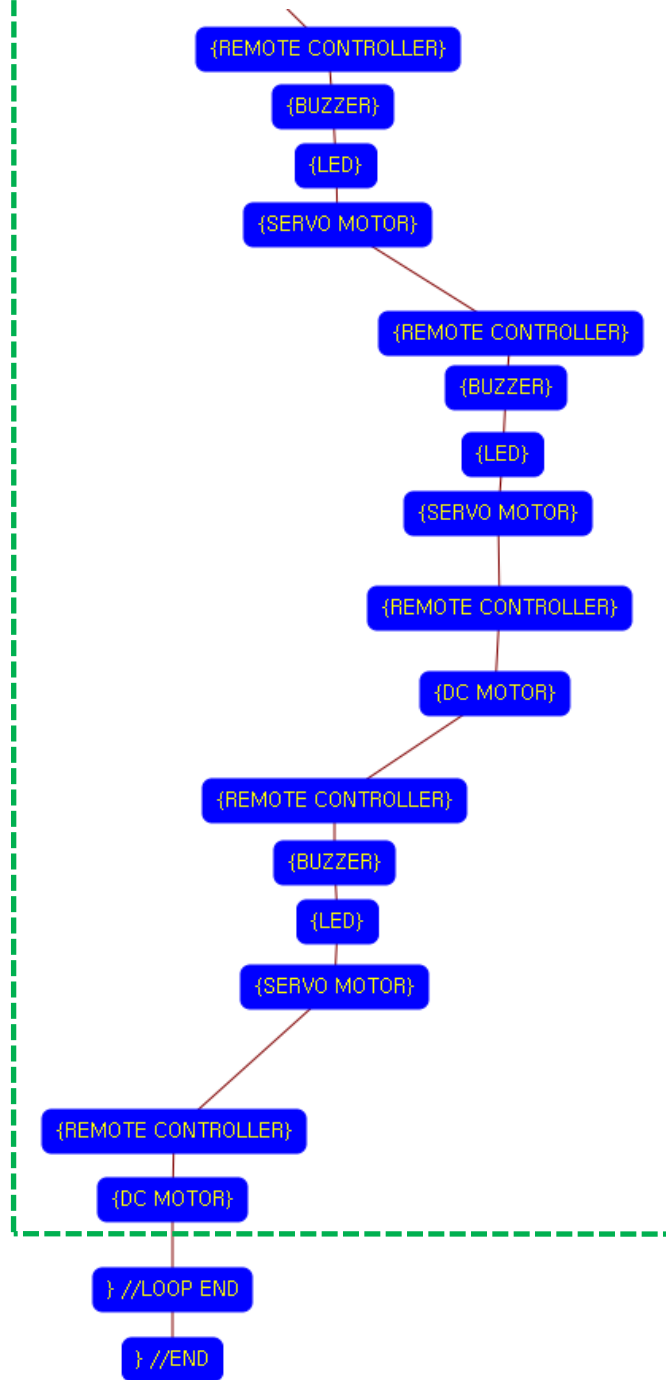


Input: Remote signal receiver  
 Output: DC motor, Servo motor  
 LED, Buzzer  
 Work: Driving, Moving the firearm





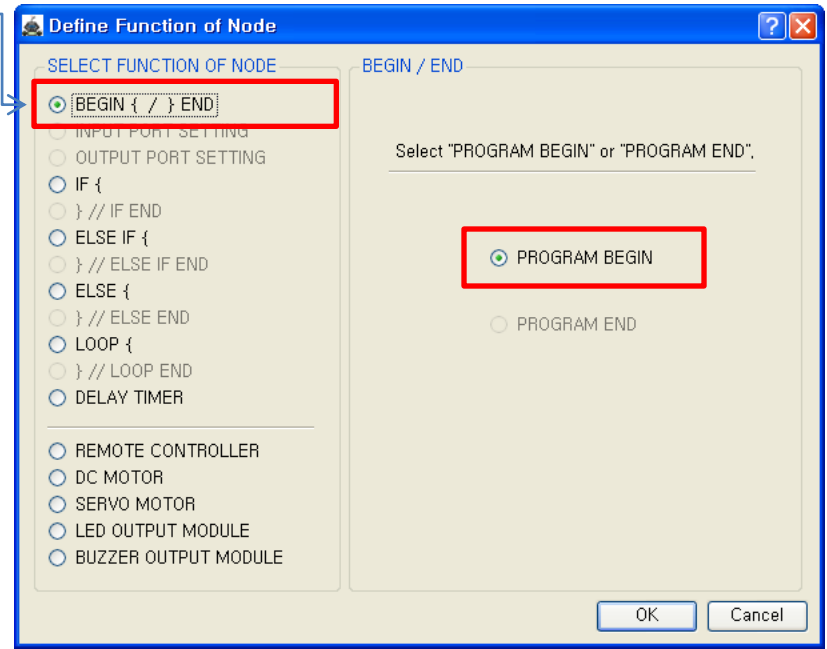
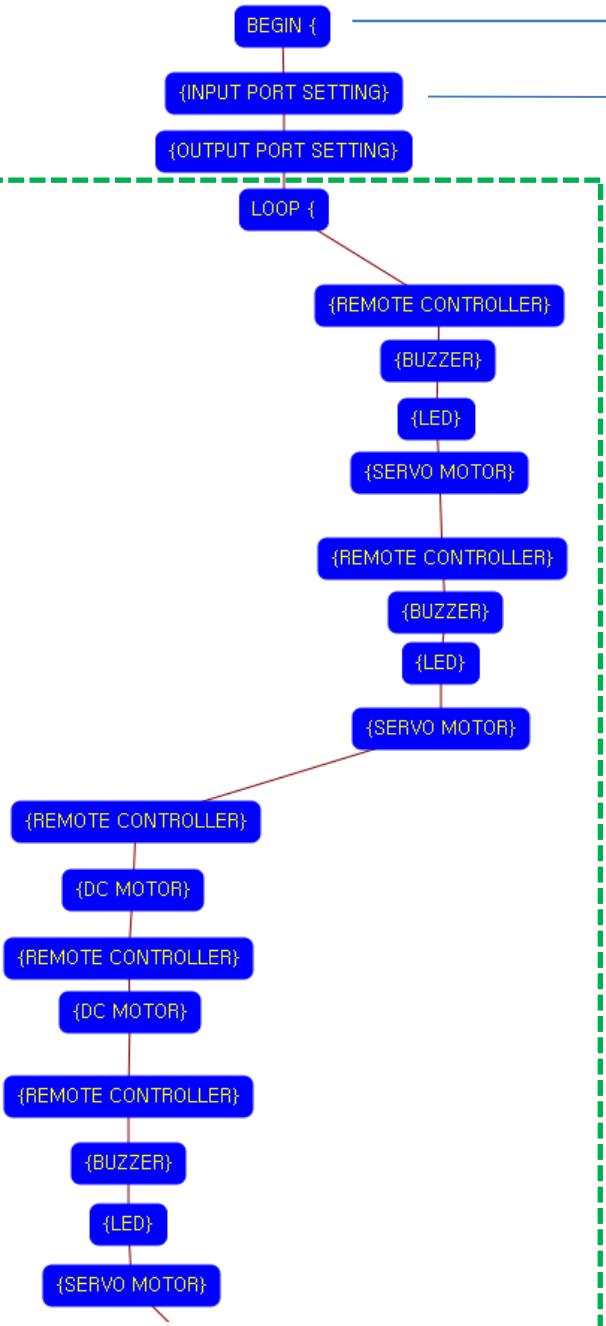
- ① Go backward
- ② Go forward
- ③ Beeping, Left LED flashing, Spin left firearm
- ④ Beeping, Both LED flashing, Set firearm center
- ⑤ Beeping, Right LED flashing, Spin right firearm
- ⑥ Beeping, Both LED flashing, Up firearm
- ⑦ Beeping, Both LED flashing, Down firearm
- ⑧ Tank turn right
- ⑨ Set the initial position
- ⑩ Tank turn left



- Case 6**  
Key of remote controller : F1  
Beeping, Both LED flashing,  
Firearm set the center
- Case 7**  
Key of remote controller : F3  
Beeping, Right LED flashing,  
Firearm spins right
- Case 8**  
Key of remote controller : F6  
Tank turns right
- Case 9**  
Key of remote controller : F5  
Beeping, Both LED flashing,  
Set the firearm at the initial position
- Case 10**  
Key of remote controller : F4  
Tank turns left

LOOP ending point

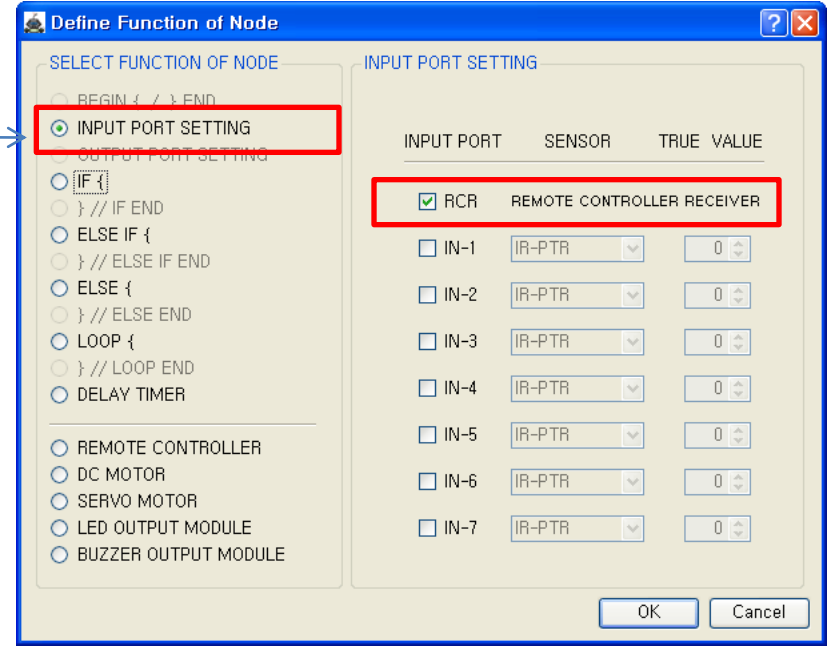
Program end



This means that program begins from here.

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

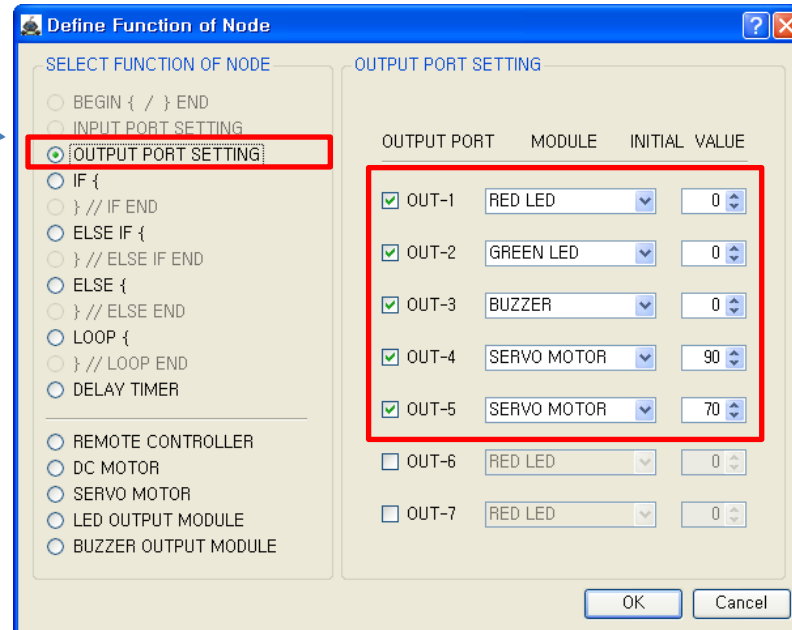
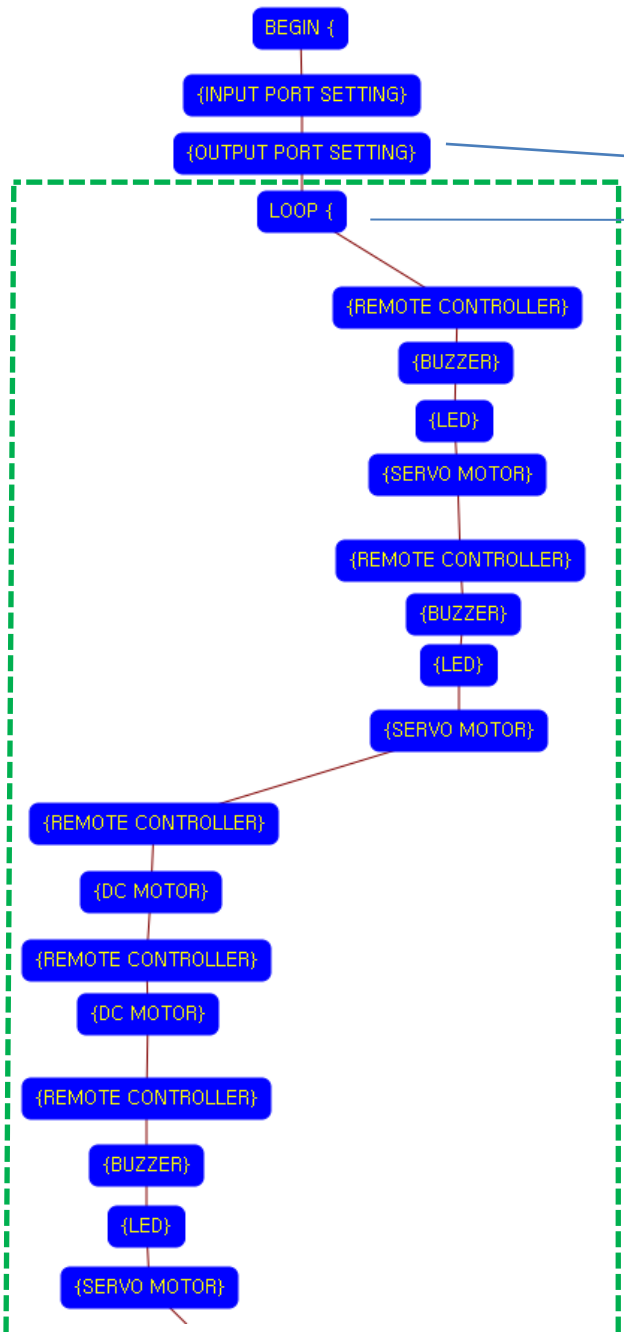
“PROGRAM END” is not active because you did not define “PROGRAM BEGIN” yet.



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

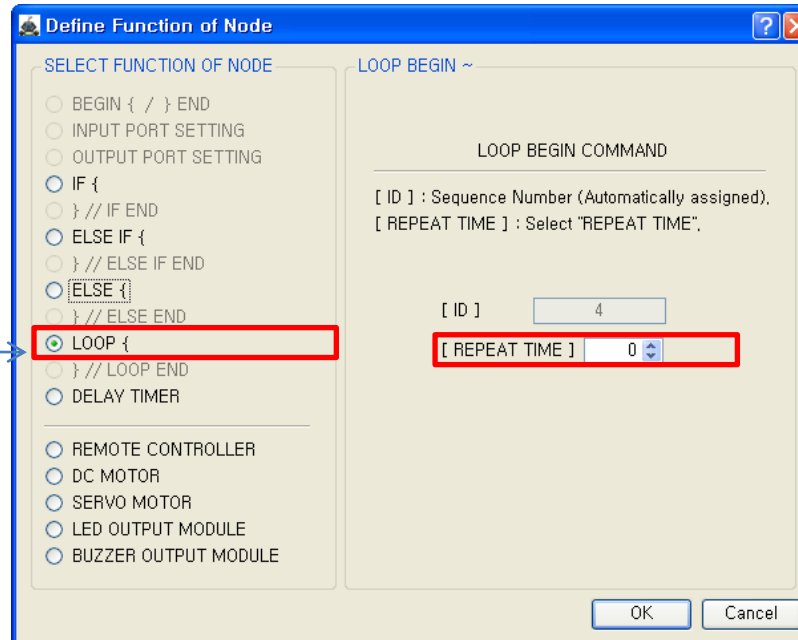
You have to connect the remote control receiver to the RCR input port of main board. And check the RCR in software to use.

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



You have to connect LEDs are to the OUT-1 and OUT2, buzzer is to the OUT-3, the Servo motors to the OUT-4 and OUT-5 output port of main board. The initial values of Servo motors are to be 90 and 70.

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

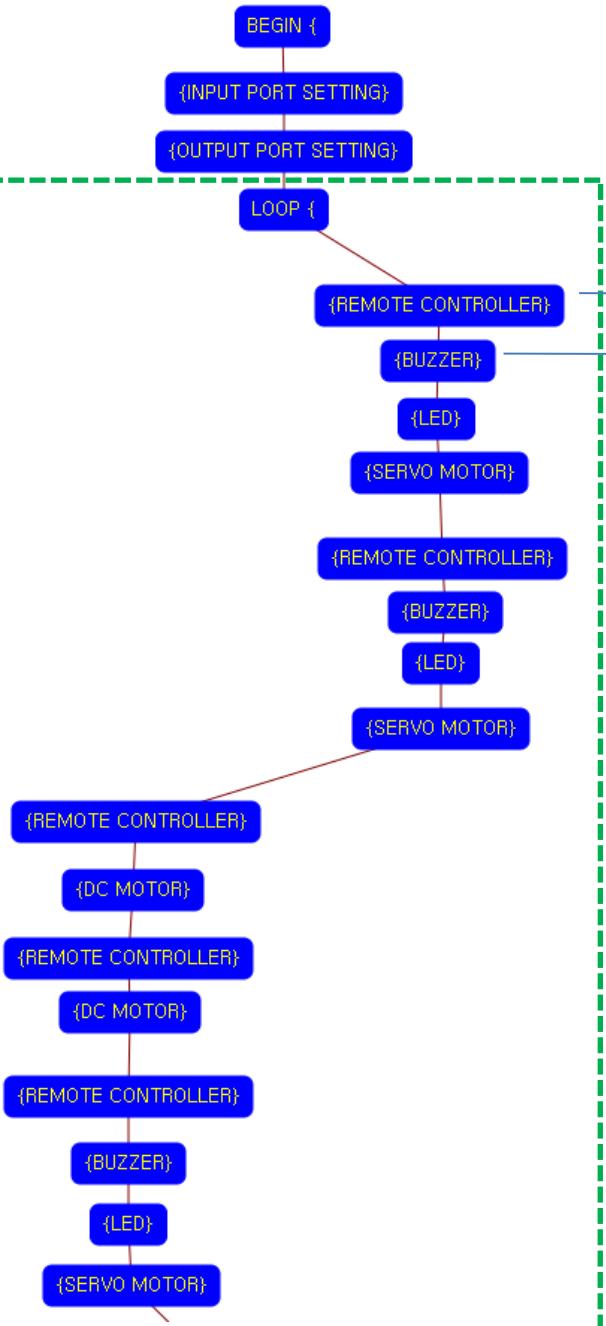


LOOP command is used to repeat the commands.

“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.



**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 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

BUZZER OUTPUT MODULE

OUTPUT PORT	On TIME	Off TIME	REPEAT
<input type="checkbox"/> OUT-1	5	5	1
<input type="checkbox"/> OUT-2			
<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

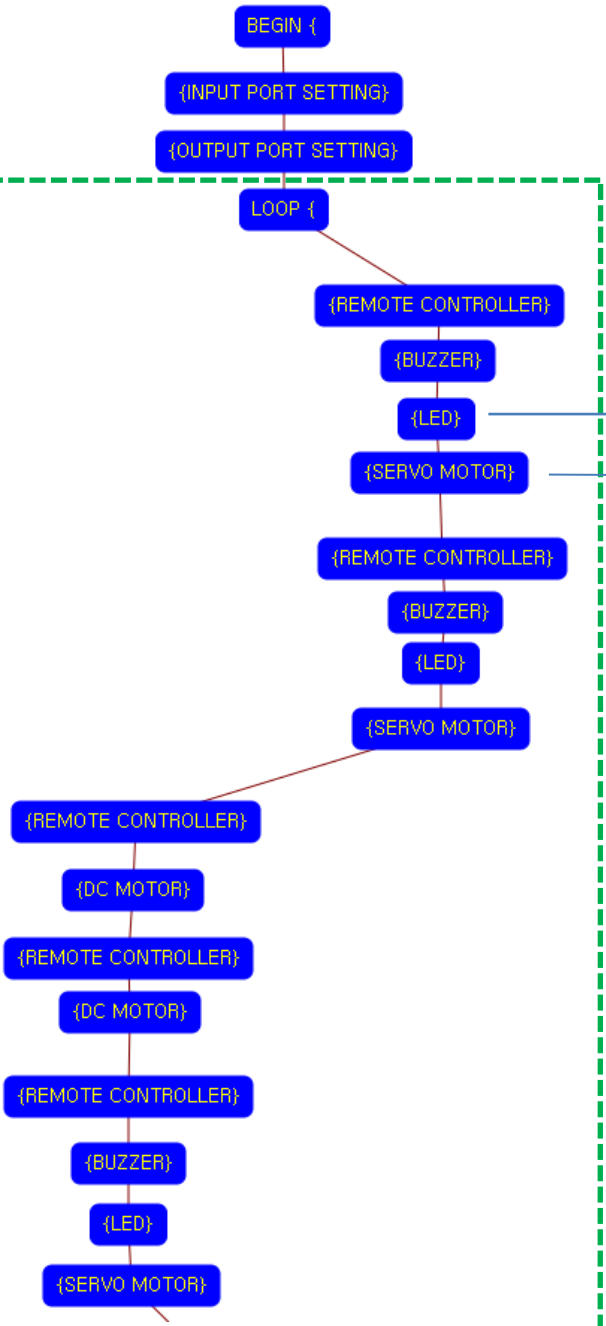
[ REPEAT ] : Select the REPEAT times  
 ( 0 ~ 10 )

OK    Cancel

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

The Buzzer module(OUT-3) 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

---

LED OUTPUT MODULE

OUTPUT PORT	On TIME	Off TIME	REPEAT
<input checked="" type="checkbox"/> OUT-1	5	5	1
<input checked="" type="checkbox"/> OUT-2	5	5	1
<input type="checkbox"/> OUT-3	5 : 0,5 seconds		
<input type="checkbox"/> OUT-4	10 : 1,0 seconds		
<input type="checkbox"/> OUT-5	15 : 1,5 seconds		
<input type="checkbox"/> OUT-6	20 : 2,0 seconds		
<input type="checkbox"/> OUT-7	[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )		

OK Cancel

If the "RIGHT UP" key is pressed, at first the Buzzer is beeping, and then the both LEDs are flashing like as followings.

LED modules (OUT-1 & OUT-2) are turning on 0.5 seconds and turning 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

---

SERVO MOTOR

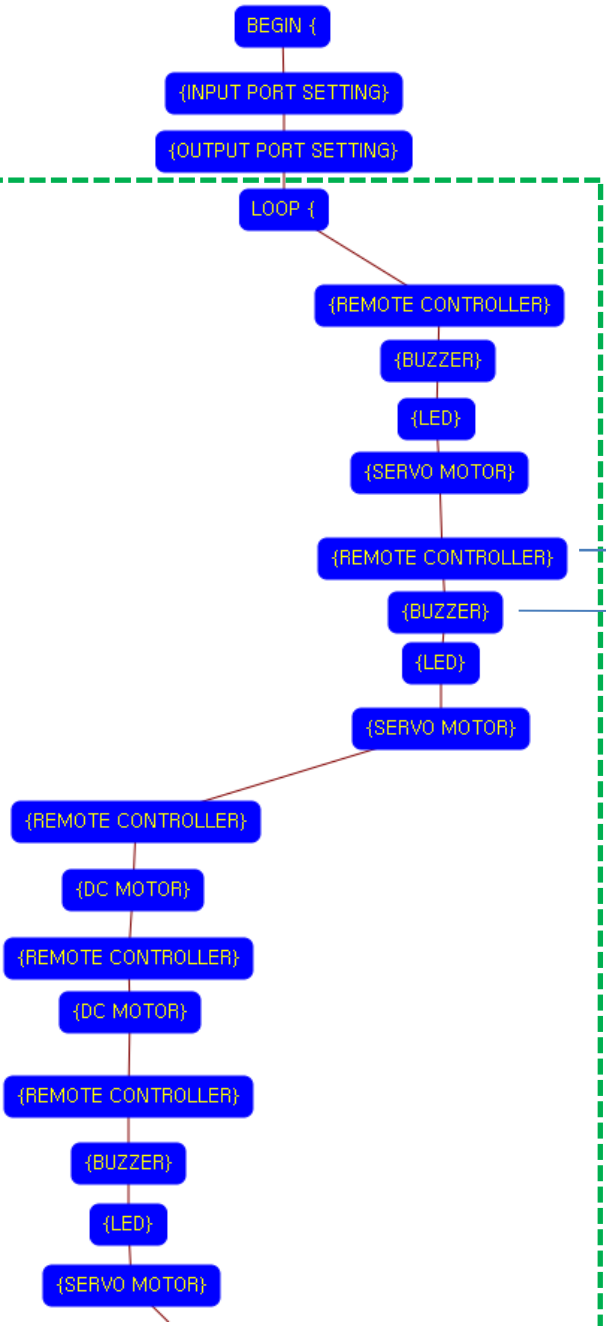
OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input type="checkbox"/> OUT-4	0
<input checked="" type="checkbox"/> OUT-5	30
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

OK Cancel

If the "RIGHT UP" key is pressed, the servo motor(OUT-5) sets to the 30 degree.

This make firearm is up.

(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

BUZZER OUTPUT MODULE

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

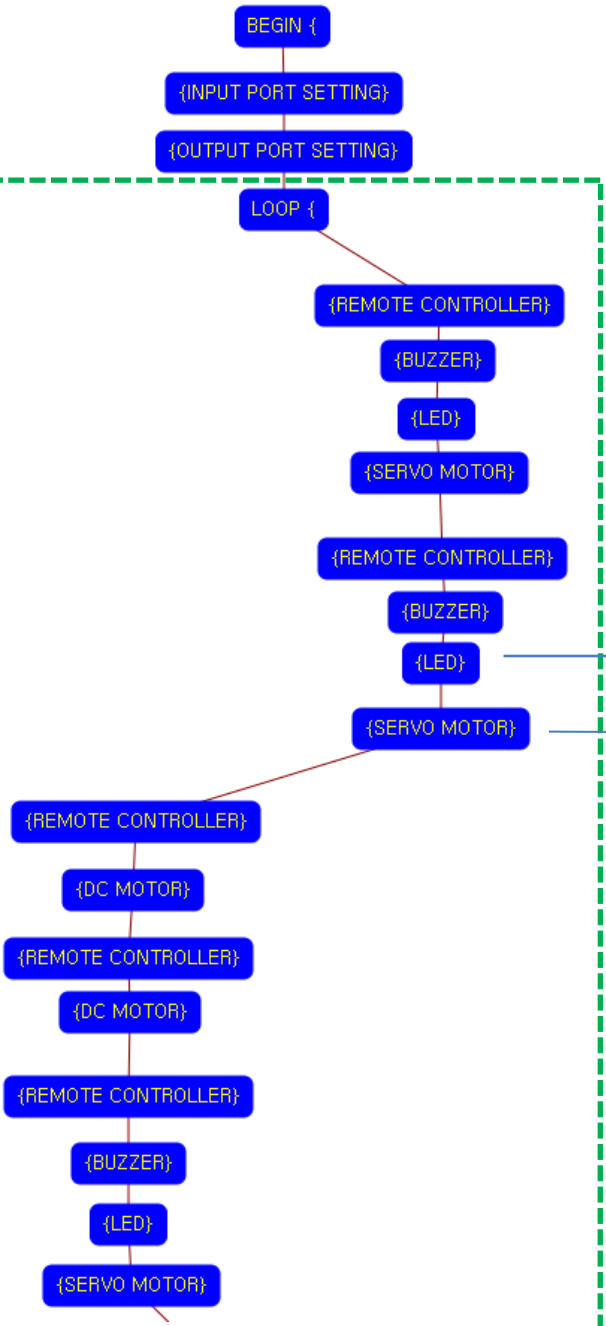
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK      Cancel

If the "RIGHT DOWN" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-3) 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



OUTPUT PORT	On TIME	Off TIME	REPEAT
<input checked="" type="checkbox"/> OUT-1	5	5	1
<input checked="" type="checkbox"/> OUT-2	5	5	1
<input type="checkbox"/> OUT-3	5 : 0,5 seconds		
<input type="checkbox"/> OUT-4	10 : 1,0 seconds		
<input type="checkbox"/> OUT-5	15 : 1,5 seconds		
<input type="checkbox"/> OUT-6	20 : 2,0 seconds		
<input type="checkbox"/> OUT-7			

If the "RIGHT DOWN" key is pressed, at first the Buzzer is beeping, and then the both LEDs are flashing like as followings.

LED modules (OUT-1 & OUT-2) are turning on 0.5 seconds and turning off 0.5 seconds for 1 times.

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

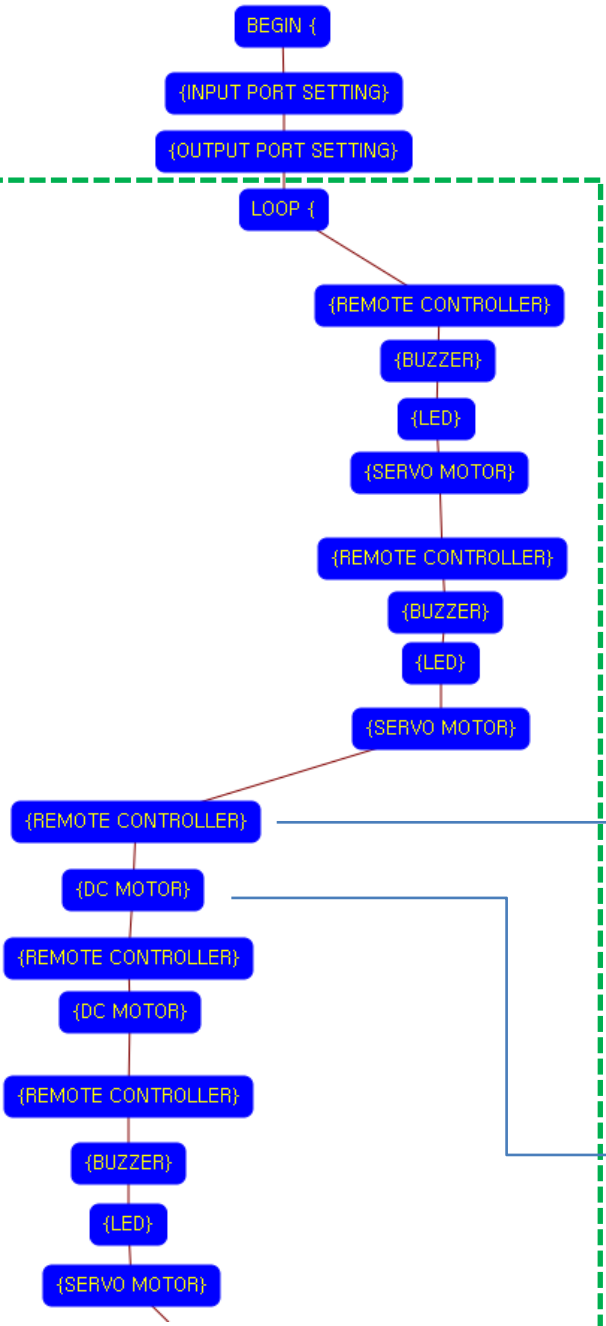
OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input type="checkbox"/> OUT-4	0
<input checked="" type="checkbox"/> OUT-5	70
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

If the "RIGHT DOWN" key is pressed, the servo motor(OUT-5) sets to the 70 degree.

This make firearm is down.

(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
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RREMOTE 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 UP" key of remote controller.



### Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- DC MOTOR
- REMOTE CONTROLLER
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[ DIRECTION ] : Select "FORWARD" or "BACKWARD".

[ SPEED ] : Select Rotational Speed ( 0 ~ 100 ).

[ RUNNING TIME ] : Select Time ( 0.1 ~ 80.0 sec. )

[ LEFT DC MOTOR ]      [ RIGHT DC MOTOR ]

[ DIRECTION ]      [ DIRECTION ]

FORWARD      FORWARD

[ SPEED ]      [ SPEED ]

100      100

[ RUNNING TIME ]

1

OK      Cancel

Left DC Motor

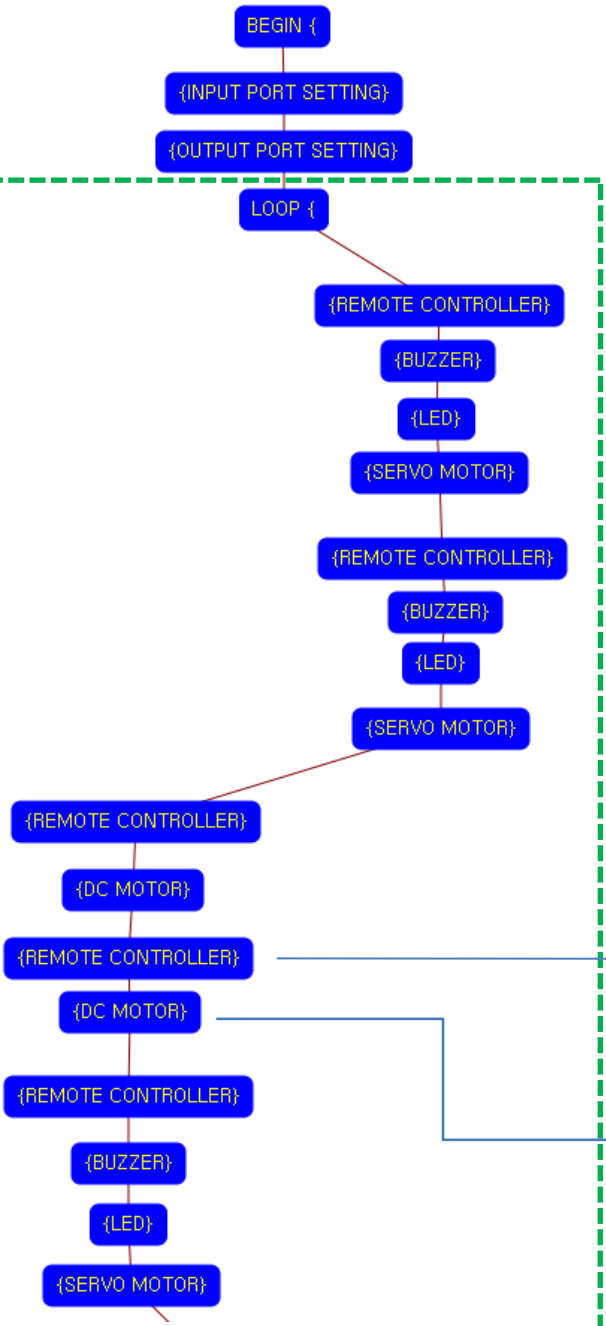
- Direction : Forward
- Speed : 100
- Running Time : 1

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 "LEFT UP" 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

**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

**DC MOTOR**

DC MOTOR CONTROL COMMAND

[ DIRECTION ] : Select "FORWARD" or "BACKWARD".

[ SPEED ] : Select Rotational Speed ( 0 ~ 100 ).

[ RUNNING TIME ] : Select Time ( 0.1 ~ 80.0 sec. )

[ LEFT DC MOTOR ]      [ RIGHT DC MOTOR ]

[ DIRECTION ]      [ DIRECTION ]

BACKWARD      BACKWARD

[ SPEED ]      [ SPEED ]

100      100

[ RUNNING TIME ]

1

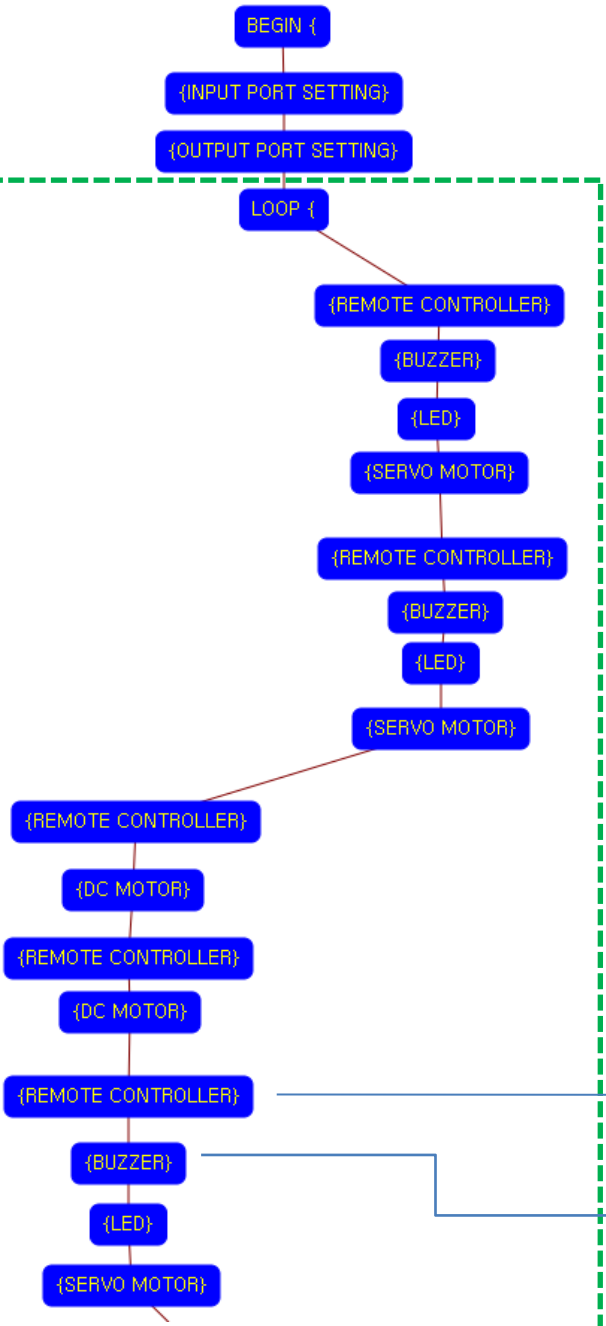
OK      Cancel

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 "LEFT DOWN" 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

[ 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 "F1" 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

BUZZER OUTPUT MODULE

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

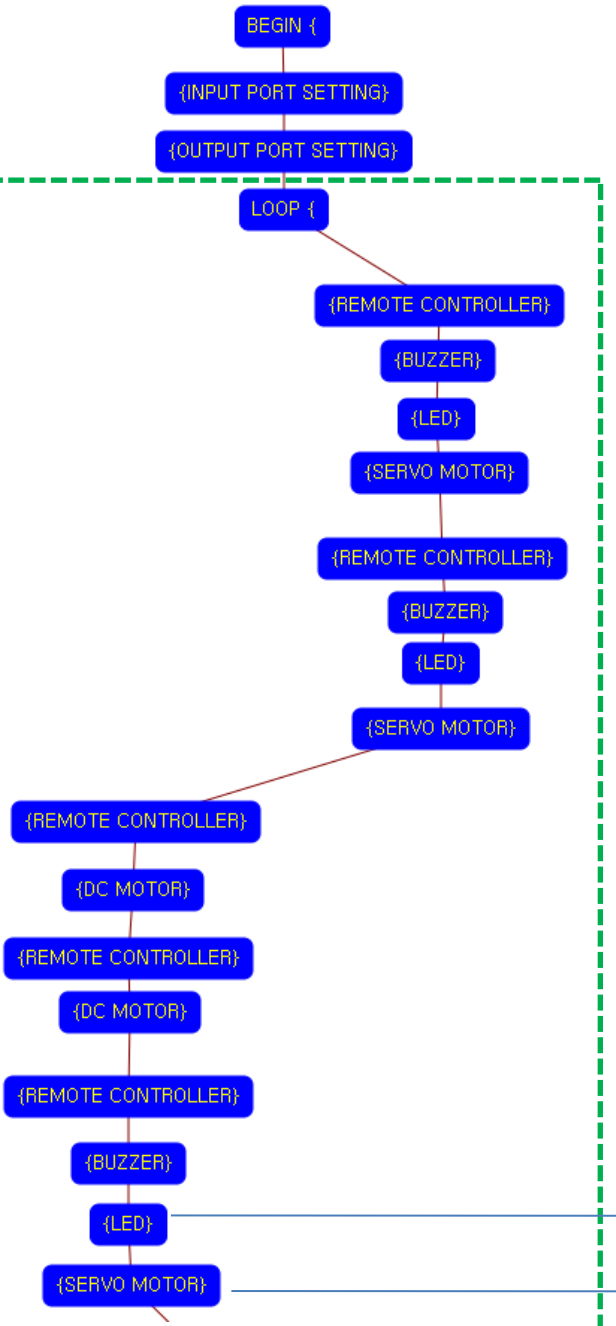
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK      Cancel

If the "F1" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-3) 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 checked="" type="checkbox"/> OUT-1	5	5	1
<input type="checkbox"/> OUT-2			
<input 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

If the "F1" key is pressed, at first the Buzzer is beeping and then the both LEDs are flashing like as followings.

LED module (OUT-1) is turning on 0.5 seconds and turning 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

SERVO MOTOR

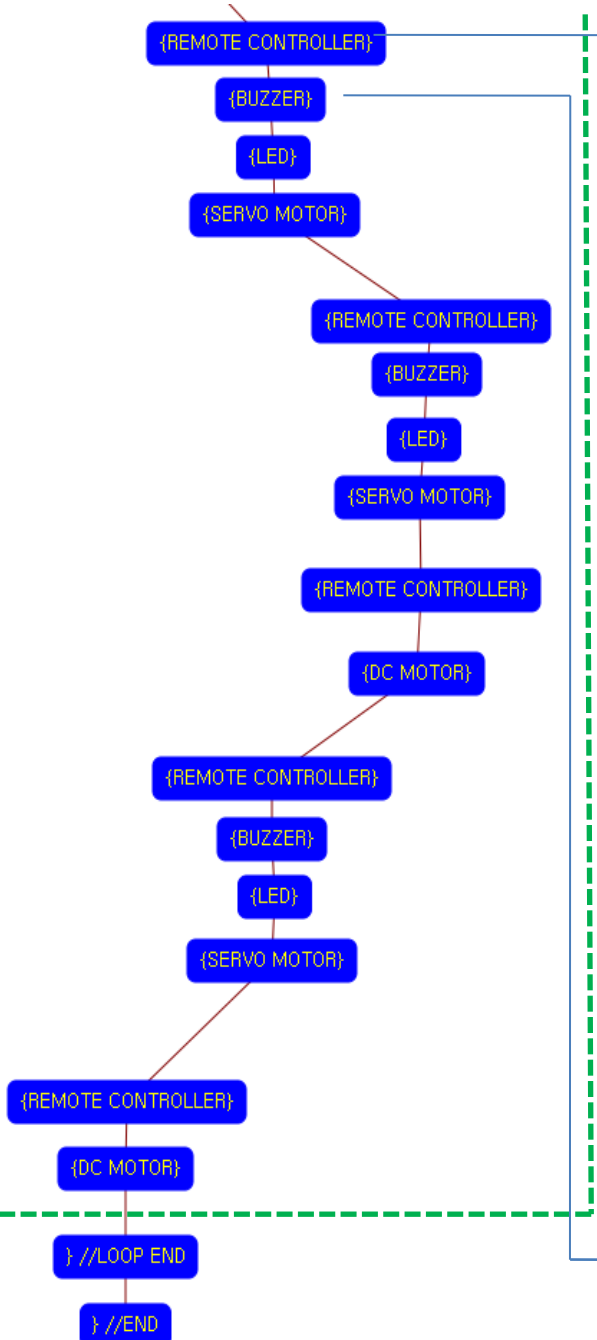
OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input checked="" type="checkbox"/> OUT-4	45
<input type="checkbox"/> OUT-5	0
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

OK Cancel

If the "F1" key is pressed, the servo motor(OUT-4) sets to the 45 degree.

This make firearm spins left side.

(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
- REMOTE CONTROLLER**
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

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 "F2" key of remote controller.



**Define Function of Node**

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- BUZZER OUTPUT MODULE**
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE

BUZZER OUTPUT MODULE

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

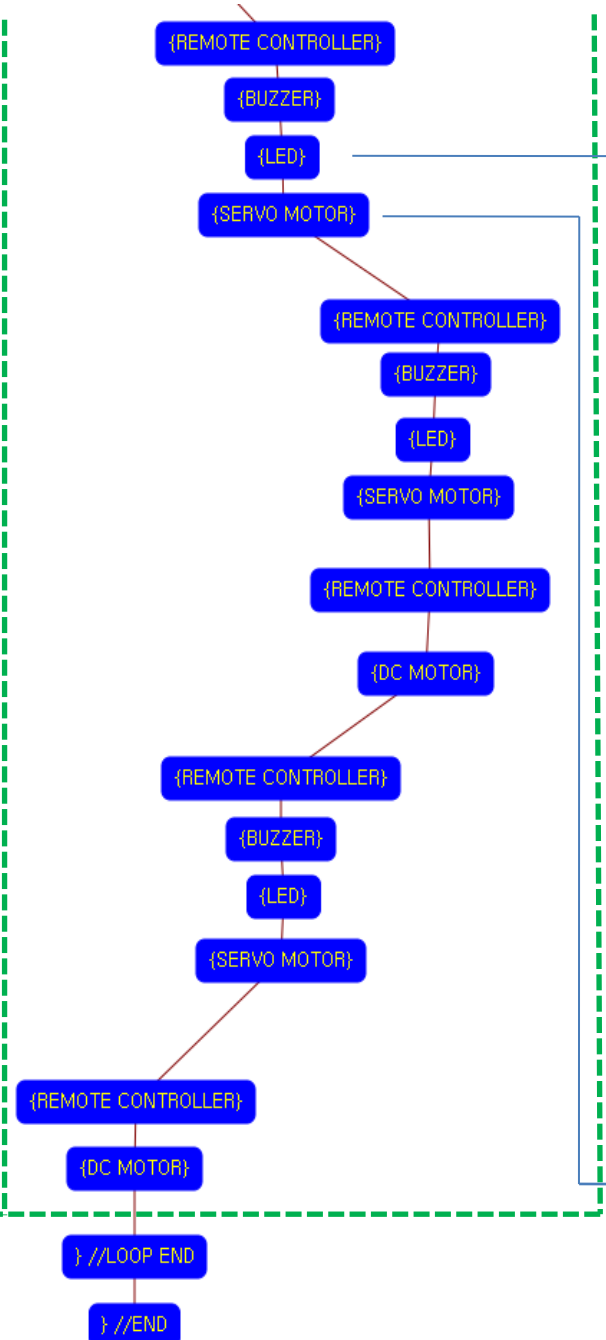
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK      Cancel

If the "F2" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-3) 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

LED OUTPUT MODULE

OUTPUT PORT	On TIME	Off TIME	REPEAT
<input checked="" type="checkbox"/> OUT-1	5	5	1
<input checked="" type="checkbox"/> OUT-2	5	5	1
<input type="checkbox"/> OUT-3	5	0.5 seconds	
<input type="checkbox"/> OUT-4	10	1.0 seconds	
<input type="checkbox"/> OUT-5	15	1.5 seconds	
<input type="checkbox"/> OUT-6	20	2.0 seconds	
<input type="checkbox"/> OUT-7			

[ On TIME ] : Select the LED ON time  
[ Off TIME ] : Select the LED OFF time  
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK Cancel

If the "F2" key is pressed, at first the Buzzer is beeping and then the both LEDs are flashing like as followings.

LED modules (OUT-1 & OUT-2) are turning on 0.5 seconds and turning 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

SERVO MOTOR

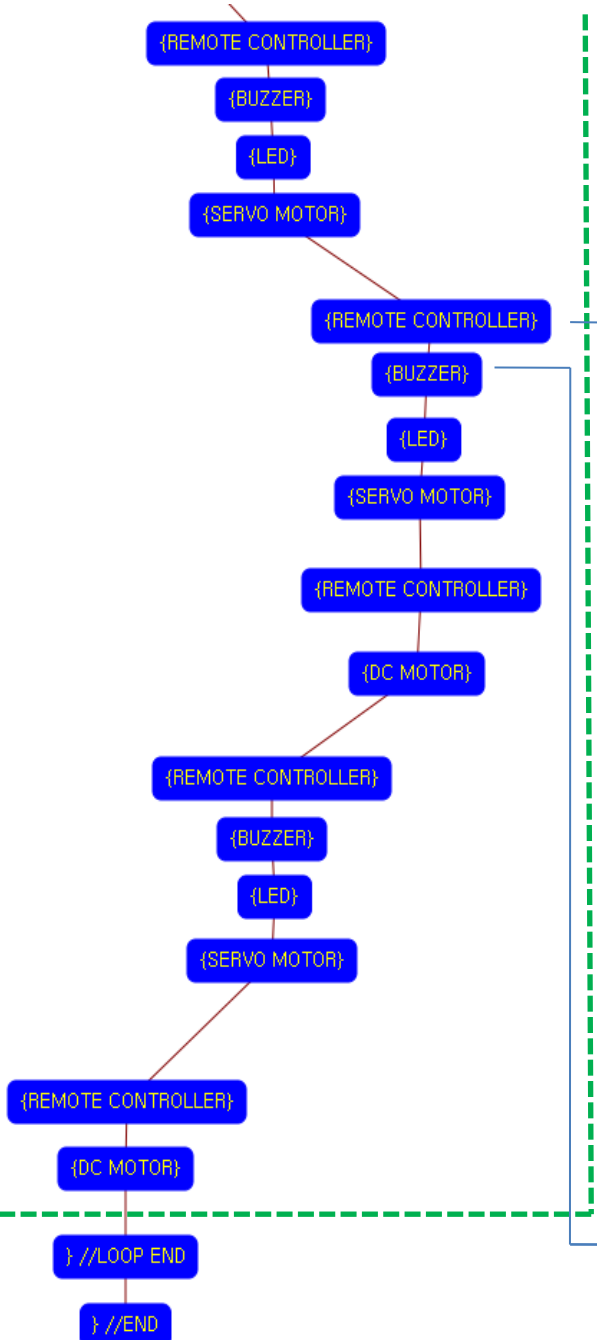
OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input checked="" type="checkbox"/> OUT-4	90
<input type="checkbox"/> OUT-5	0
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

OK Cancel

If the "F2" key is pressed, the servo motor(OUT-4) sets to the 90 degree.

This make firearm is positioned at center.

(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 ]

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 "F3" 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	5	5	1
<input type="checkbox"/> OUT-2			
<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

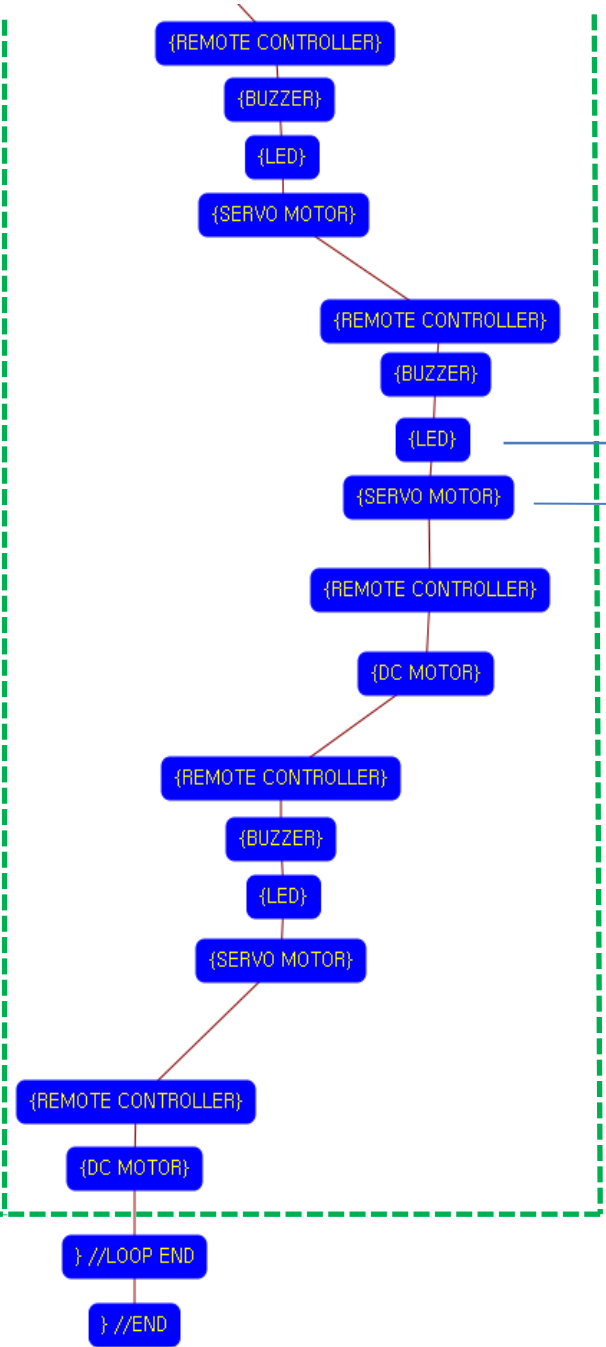
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK      Cancel

If the "F3" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-3) 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 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

If the "F3" key is pressed, at first the Buzzer is beeping and then the both LEDs are flashing like as followings.

LED module (OUT-2) is turning on 0.5 seconds and turning 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

SERVO MOTOR

OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input checked="" type="checkbox"/> OUT-4	135
<input type="checkbox"/> OUT-5	0
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

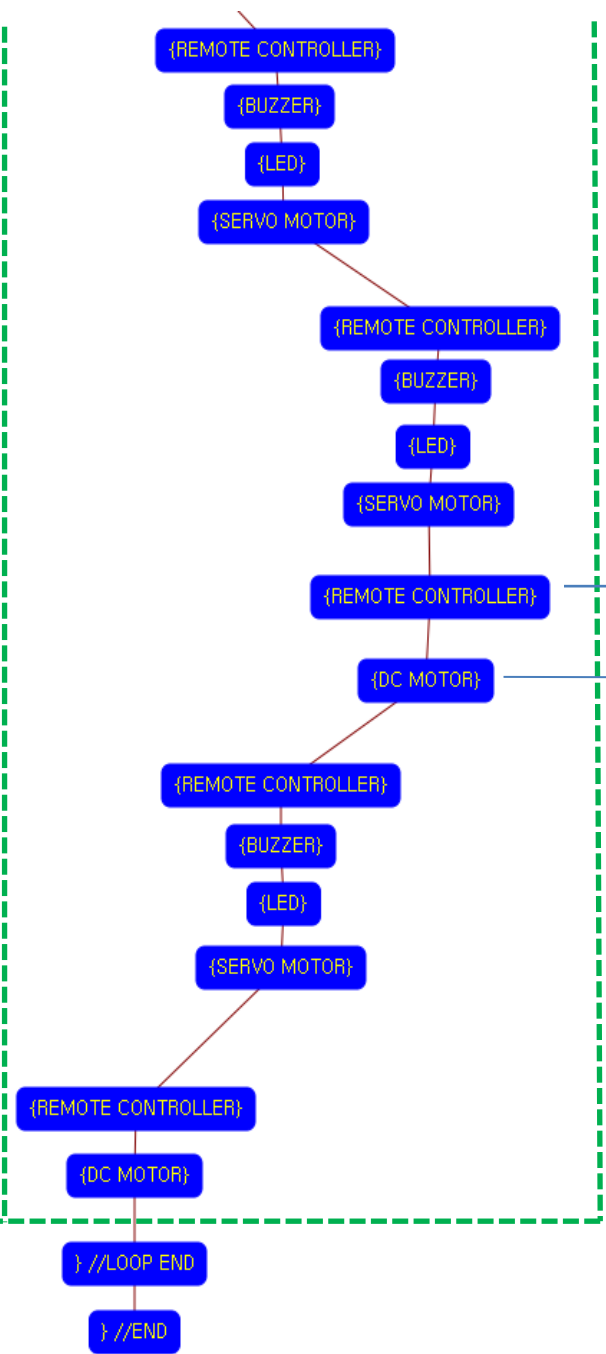
OK Cancel

If the "F3" key is pressed, the servo motor(OUT-4) sets to the 135 degree.

This make firearm spins right side.

(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
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RREMOTE 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 "F6" 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
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[ DIRECTION ] : Select "FORWARD" or "BACKWARD".

[ SPEED ] : Select Rotational Speed ( 0 ~ 100 ).

[ RUNNING TIME ] : Select Time ( 0.1 ~ 80.0 sec. )

[ LEFT DC MOTOR ] [ RIGHT DC MOTOR ]

[ DIRECTION ] [ DIRECTION ]

FORWARD BACKWARD

[ SPEED ] [ SPEED ]

100 100

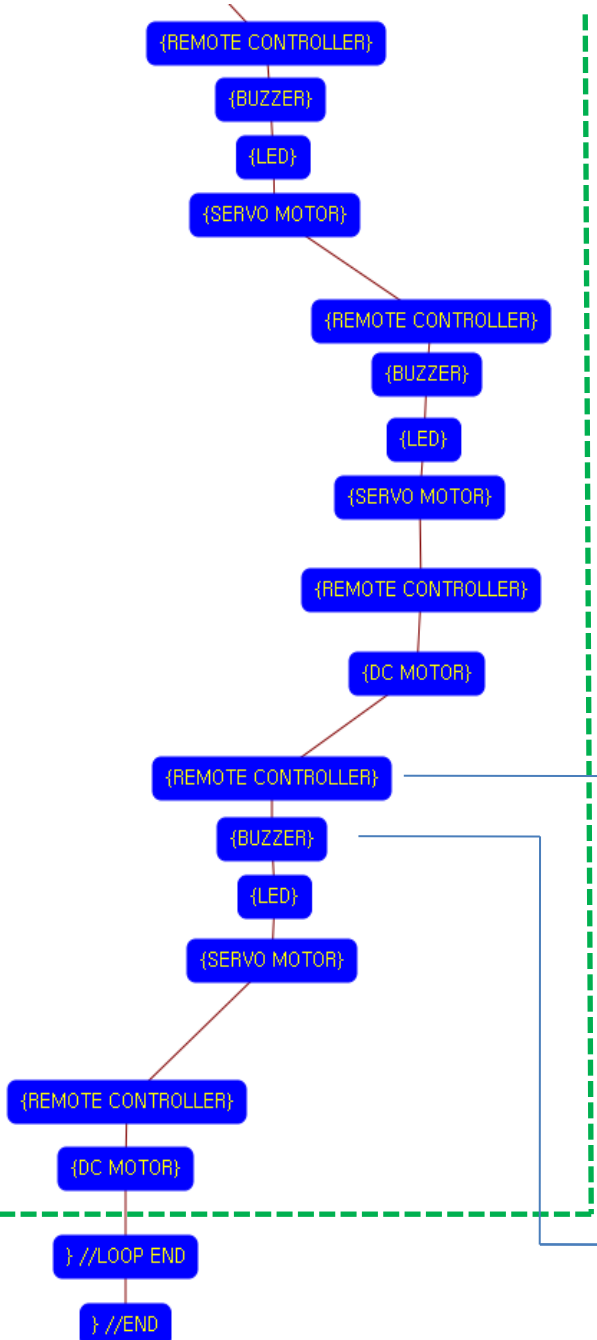
[ RUNNING TIME ]

1

OK Cancel

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

Although the setting value of running time is 0.1 seconds, the robot is turning right continuously during the "F6" 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

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 "F5" 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 checked="" type="checkbox"/> OUT-3	5	5	1
<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

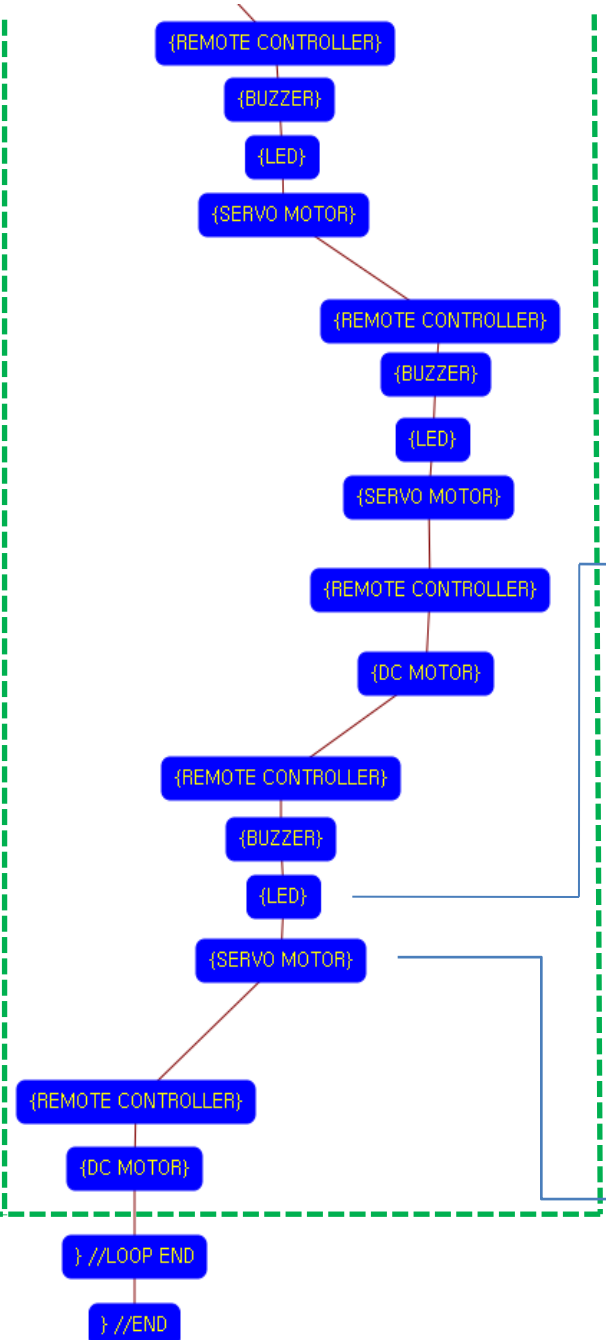
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK      Cancel

If the "F5" key is pressed, the buzzer is beeping like as followings.

The Buzzer module(OUT-3) 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 checked="" type="checkbox"/> OUT-1	5	5	1
<input checked="" type="checkbox"/> OUT-2	5	5	1
<input type="checkbox"/> OUT-3	5	0.5 seconds	
<input type="checkbox"/> OUT-4	10	1.0 seconds	
<input type="checkbox"/> OUT-5	15	1.5 seconds	
<input type="checkbox"/> OUT-6	20	2.0 seconds	
<input type="checkbox"/> OUT-7			

[ On TIME ] : Select the LED ON time  
[ Off TIME ] : Select the LED OFF time  
[ REPEAT ] : Select the REPEAT times ( 0 ~ 10 )

OK Cancel

If the "F5" key is pressed, at first the Buzzer is beeping and then the both LEDs are flashing like as followings.

LED modules (OUT1 & OUT-2) are turning on 0.5 seconds and turning 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

SERVO MOTOR

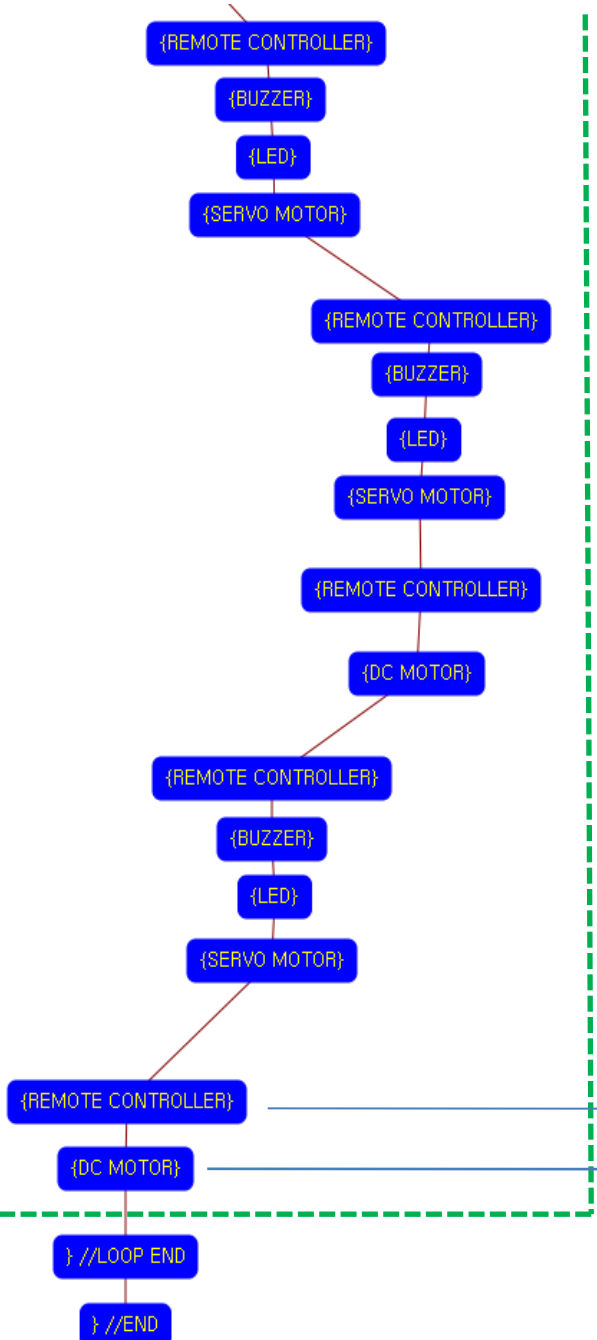
OUTPUT PORT	SERVO MOTOR ANGLE
<input type="checkbox"/> OUT-1	0
<input type="checkbox"/> OUT-2	0
<input type="checkbox"/> OUT-3	0
<input checked="" type="checkbox"/> OUT-4	90
<input checked="" type="checkbox"/> OUT-5	70
<input type="checkbox"/> OUT-6	0
<input type="checkbox"/> OUT-7	0

OK Cancel

If the "F5" key is pressed, the servo motors(OUT-4 & OUT-5) sets to the 90 & 70 degree.

This make firearm's position is initialized.

(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)



Set the "F4" key of remote controller.



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

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

