

# Test instructions for the Radio Law

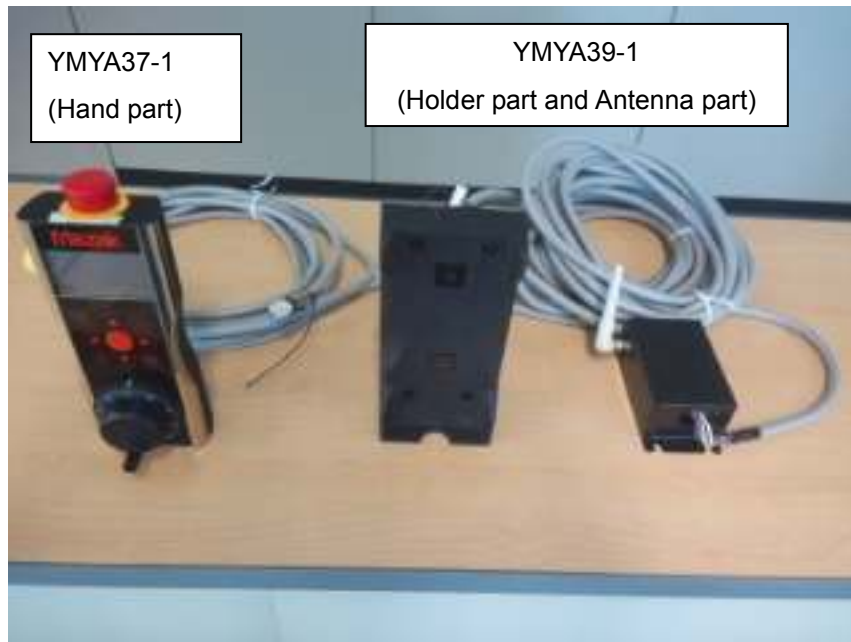
Model Name: Radio-type hand-operated pulse generator

## 1. Construction

YMYA37-1 (hand part): 195 mm x 80 mm x 35 mm

Holder part: 208 mm x 95 mm x 63 mm \* The length of harness is not include.

YMYA39-1 (Antenna part) : 130 mm x 100 mm x 50 mm \* The length of harness is not include.



Picture 1

## 2. YMYA37-1 (hand part) testing

There is the DIP Switch in a case for the test program is starting.

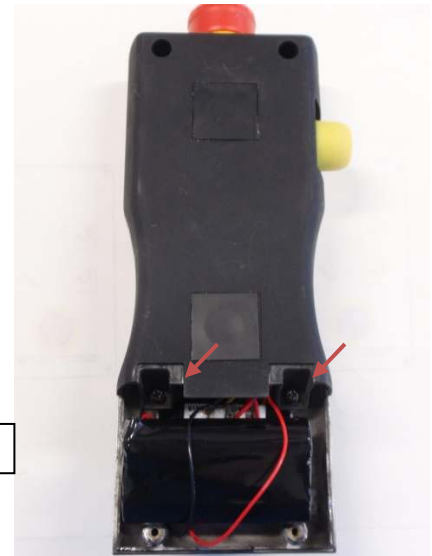
Please remove the case with following instruction.



Cover Case (Picture 2)



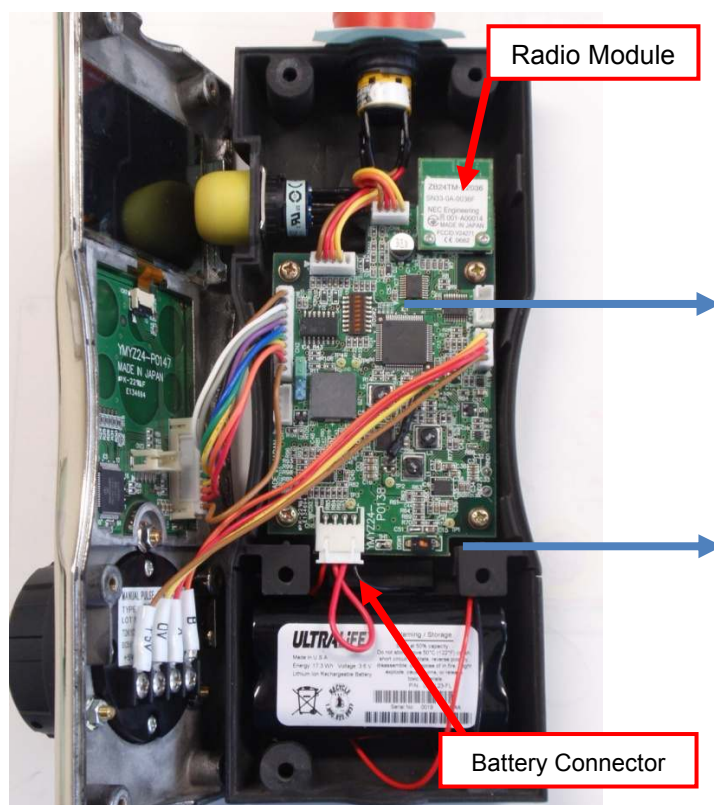
Battery Cover (Picture 3)



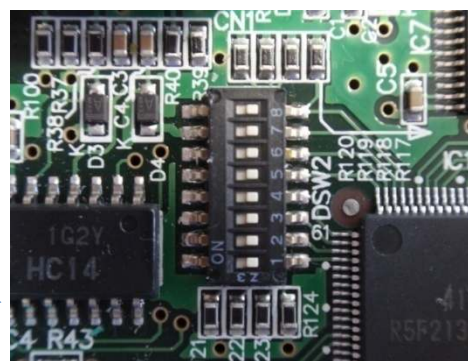
Rear Case (Picture 4)

## 2-1 DIP Switch set up for testing

Please select the DIP Switch of picture 6 before the testing and select ON at the Power Switch of picture 7.



Inside (Picture 5)



DIP SW (Picture 6)



Power SW (Picture 7)

## 2-2. Test mode set up

The test mode is able to select with the following DIP SW set up. (The DIP SW from 5 to 8 is not use.)

The reading of DIP SW cans the Power ON only. It can not select while the turn on.

Transmitting Power: \* Fixed 4.8 dBm of the module maximum setting

Modulation system: Fixed DSSS

DIP SW				Operation mode	Transmit stopping function by other communication has detect.
1	2	3	4		
OFF	OFF	OFF	OFF	FCC/IC measurement mode (Product mode)	Available
ON	OFF	OFF	OFF	Continuous Transmit mode at 7ch (2405 MHz) PRBS9	Unavailable
OFF	ON	OFF	OFF	Continuous Transmit mode at 0ch (2440 MHz) PRBS9	Unavailable
ON	ON	OFF	OFF	Continuous Transmit mode at 15ch (2480 MHz) PRBS9	Unavailable
OFF	OFF	ON	OFF	Continuous Receive mode at 7ch (2405 MHz)	---
ON	OFF	ON	OFF	Continuous Receive mode at 0ch (2440 MHz)	---
OFF	ON	ON	OFF	Continuous Receive mode at 15ch (2480 MHz)	---
ON	ON	ON	OFF	Continuous Receive mode at 0ch (2440 MHz)	Available
OFF	OFF	OFF	ON	Continuous Receive mode at 15ch (2480 MHz)	Available

Timing of a radio wave transmit for the 0ch/15ch continuous transmit mode

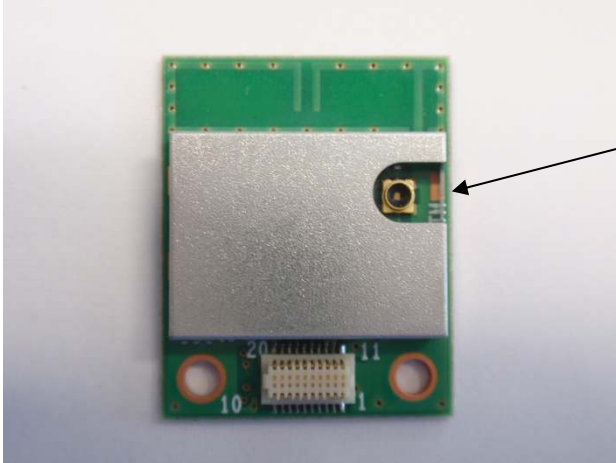
- The transmit command have per 100ms from micro to radio module.
- The radio module transmits a telegraphic message.

If the response is not, it perform re-transmits the maximum two times.

### 2-3 RF Cable testing

The radio module of picture 5 has following a chip connector for antenna connection.

We provide the extension cable of SMA connector and please testing connection after (Picture 9).



Radio module (Picture 8)



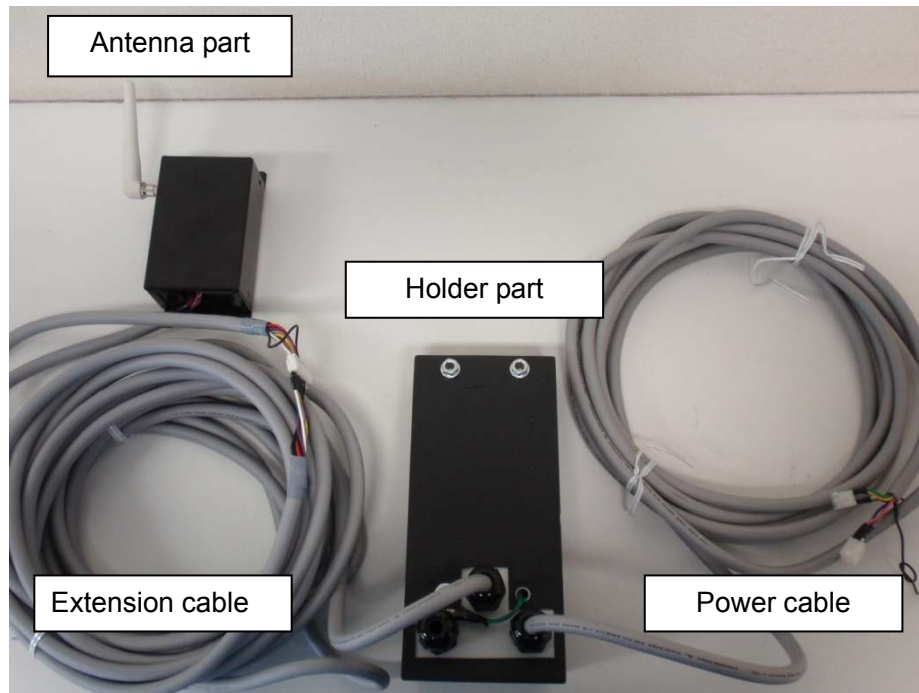
(Picture 9)

### 2-4 DC power source testing

We provide the 2 m cable with connector for DC connection.

### 3. YMYA39-1 (Holder part and Antenna part) testing

The power source is less than DC 24V / 0.5 A. (We provide the power connector.)



Construction (Picture 10)

#### 3-1 DIP Switch set up for testing



DIP SW (Picture 11)

The test mode is able to select with the following DIP SW set up. (The DIP SW from 5 to 8 is not use.)

The reading of DIP SW cans the Power ON only. It can not select while the turn on.

Transmitting Power: \* Fixed 4.8 dBm of the module maximum setting

Modulation system: Fixed DSSS

DIP SW				Operation mode	Transmit stopping function by other communication has detect.
1	2	3	4		
OFF	OFF	OFF	OFF	FCC/IC measurement mode (Product mode)	Available
ON	OFF	OFF	OFF	Continuous Transmit mode at 7ch (2405 MHz) PRBS9	Unavailable
OFF	ON	OFF	OFF	Continuous Transmit mode at 0ch (2440 MHz) PRBS9	Unavailable
ON	ON	OFF	OFF	Continuous Transmit mode at 15ch (2480 MHz) PRBS9	Unavailable
OFF	OFF	ON	OFF	Continuous Receive mode at 7ch (2405 MHz)	---
ON	OFF	ON	OFF	Continuous Receive mode at 0ch (2440 MHz)	---
OFF	ON	ON	OFF	Continuous Receive mode at 15ch (2480 MHz)	---
ON	ON	ON	OFF	Continuous Receive mode at 0ch (2440 MHz)	Available
OFF	OFF	OFF	ON	Continuous Receive mode at 15ch (2480 MHz)	Available

Timing of a radio wave transmit for the 0ch/15ch continuous transmit mode

- The transmit command have per 100ms from micro to radio module.
- The radio module transmits a telegraphic message.

If the response is not, it perform re-transmits the maximum two times.

### 3-3 RF Cable testing

Please remove the case of antenna part (Picture 11). The radio module has the following chip connector for antenna connection.

We provide the extension cable of SMA connector and please testing connection after.

When you perform testing the pattern antenna, please remove the connector.



Antenna part (Picture 11)



Inside (Picture 12)



## Measurements mode for FCC and IC

It is mode that radio connect between the YMYA37-1 (Hand part) and the YMYA39-1 (Holder part)

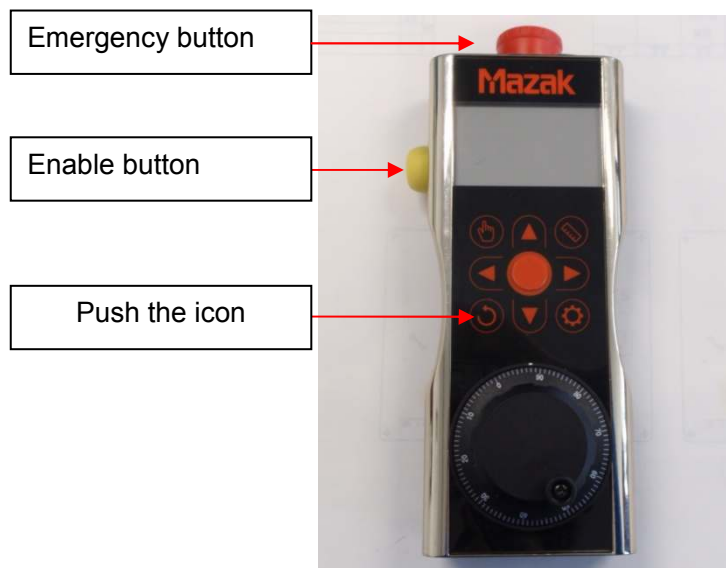
The following is the connection procedure.

- When the first power ON

Please check the canceling the emergency button at the YMYA37-1 (Hand part).

Please power ON the YMYA37-1 (Hand part) and YMYA39-1 (Holder part).

Please remove the lock of emergency button and the following the icon push more than 1 sec with a half pushing the enable button (Picture 13).



Picture 13

When you complete the above procedure, it has change to the display of the Picture 14

You have completed the connection.



Picture 14 (Not connecting)



Picture 14 (Connecting)