

POKAYOKE TRANSMITTER

【TWF - 600T】

Users Manual

V1.10

HERUTU

Safety concerns (Be sure to read)

To prevent human injury of user or damage in property from occurring, be sure to observe the precautions shown below.

- The degree in safety hazard and damage generated by the wrong usage while ignoring the descriptions is classified by the following displays.



Warning

Using in an improper way while ignoring this pictorial symbol might cause a death or serious human injury.



Caution

Using in an improper way while ignoring this pictorial symbol might cause a human injury or property damage.

- The type of descriptions you should observe is classified by the following pictorial symbols.



This pictorial symbol indicates a “Reminder” to attract an attention.



This pictorial symbol indicates a “Prohibition” to prohibit a certain action.



- For the usage to be commonly applied in all the models:

- Avoid using in a place with a plenty of humidity or dust. Otherwise, absorbing a dust or water contents may cause machine trouble, fire or electrical shock.



- For handling this machine:

- This is the electronic devise or wireless radios composed of the precision parts. Do not overhaul/remodel. It may cause accident or machine trouble.



Warning

- For handling this machine:

- Do not use this product for the application needing the high reliability related to human lives.



- Do not use this product in a place where it is uncertain about whether or not radio waves reach.





■ For handling the power source:

Be sure to observe the following precautions to prevent the AC adapter and Power cord from being heated, damaged, or ignited.

● Do not approximate the AC adapter and Power cord to a fire, or do not put them into a fire. The AC adapter and Power cord can be broken or ignited, resulting in an accident.	
● You can use the AC adapter and main body only with the specified power voltage to protect them from the damage and fire accident.	
● Do not use the AC adapter and main body in a wettable atmosphere. It may cause accidents or troubles such as heating, igniting or electrical shock.	
● Do not touch the AC adapter, main body, Power cord and Plug outlet with wet hands. It may cause an accident such as electrical shock, etc.	
● Do not damage the Power cord. A short-circuit or heating may cause a fire or electrical shock.	
● Do not use the Power plug with dust being adhered. A short-circuit or heating may cause a fire or electrical shock.	
● Do not give a strong impact onto the AC adapter. It may cause an accident or machine failure.	
● If you find out deformed AC adapter, do not use it. It may cause an accident or machine failure.	
● Do not charge this equipment in a place where flammable gas can be generated. It may cause a fire accident.	
● Never overhaul the AC adapter. It may cause an accident or machine failure.	

■ When trouble happens during use:

Since it may cause a fire or electrical shock, disconnect a power plug, and immediately ask outlet store or our company to repair.

● When smoke or abnormal odors are generated, stop using, immediately disconnect a power plug, and ask outlet store or our company to repair.	
● Once the Power cord is damaged, do not use it. Using it as is may cause a fire or electrical shock.	

CAUTION

INFORMATION ABOUT FCC STANDARD

FCC WARNING!

CHANGE OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TOOPERATE THE EQUIPMENT

THE FOLLOWNG APPLIES ONLY IN THE U.S.A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interface, and**
- (2) This device must accept any interface received, including interface that may cause undesired operation:**

TO REDUCE THE ELECTRIC SHOCK, DO NOT REMOVE SCREWS.

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

THAILAND

This telecommunication equipment conforms to NTC technical requirement

INDONESIA

This telecommunication equipment conforms to DGPT technical requirement

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1.General descriptions

This operation manual contains the instructions necessary for using the “POKAYOKE Transmitter TWF-600T” (hereinafter specified as “TWF-600T”). Thoroughly read through this manual before use to correctly operate.

Once the TWF-600T is mounted on the Torque wrench a tool of others with Limit switch (LS), the tightening completion signal of Torque wrench can be transmitted to each series of our TWF-600R.

<Features>

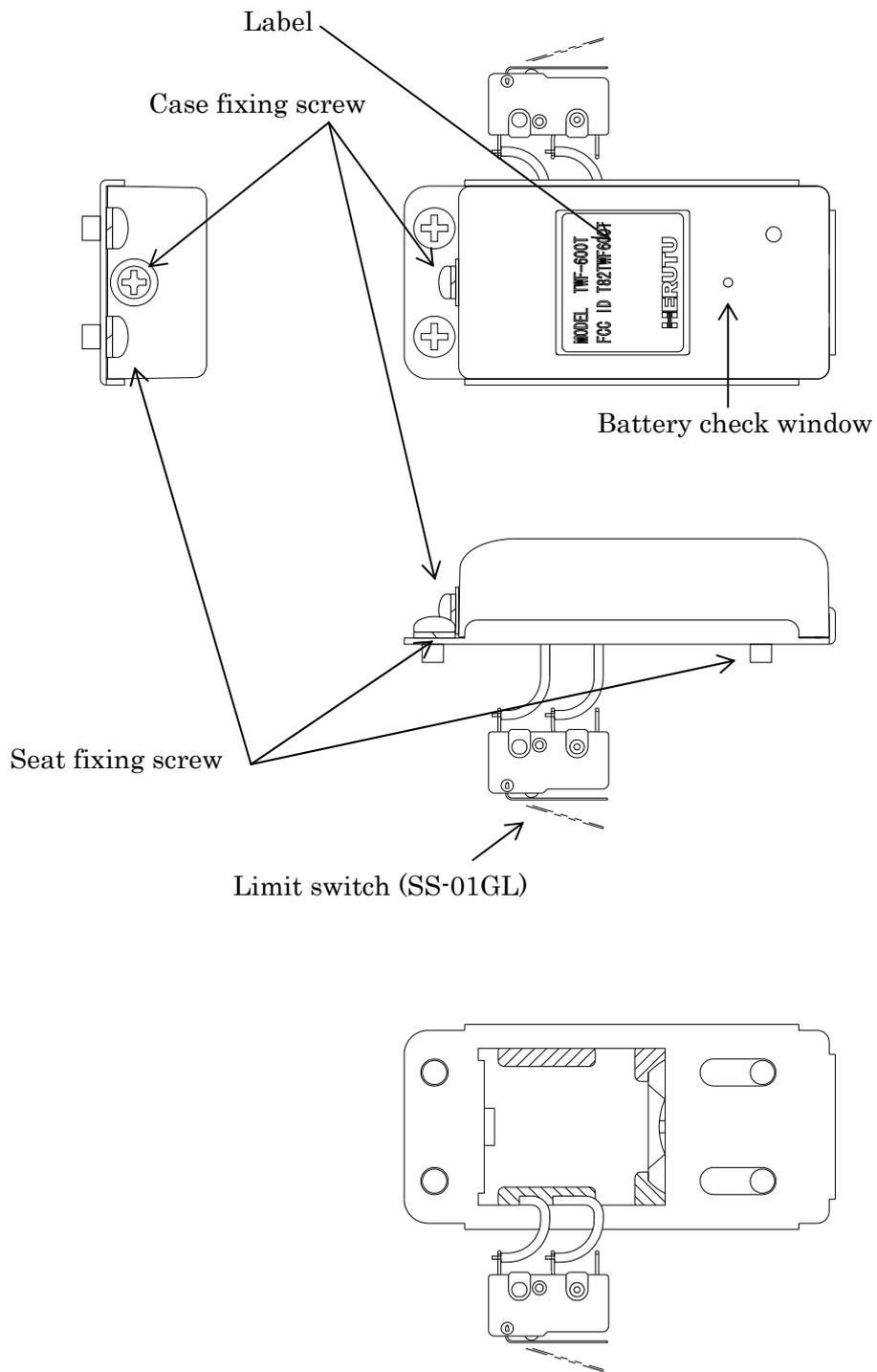
- This Transmitter consists of compact design using the coin battery type power supply.
- Noiseless weak radio wave of 426MHz-band is used.
- The antenna-built-in type is superior in handling (controllability).
- The Polycarbonate resin case mounted enables the dust & oil mist proof.

2.Specifications

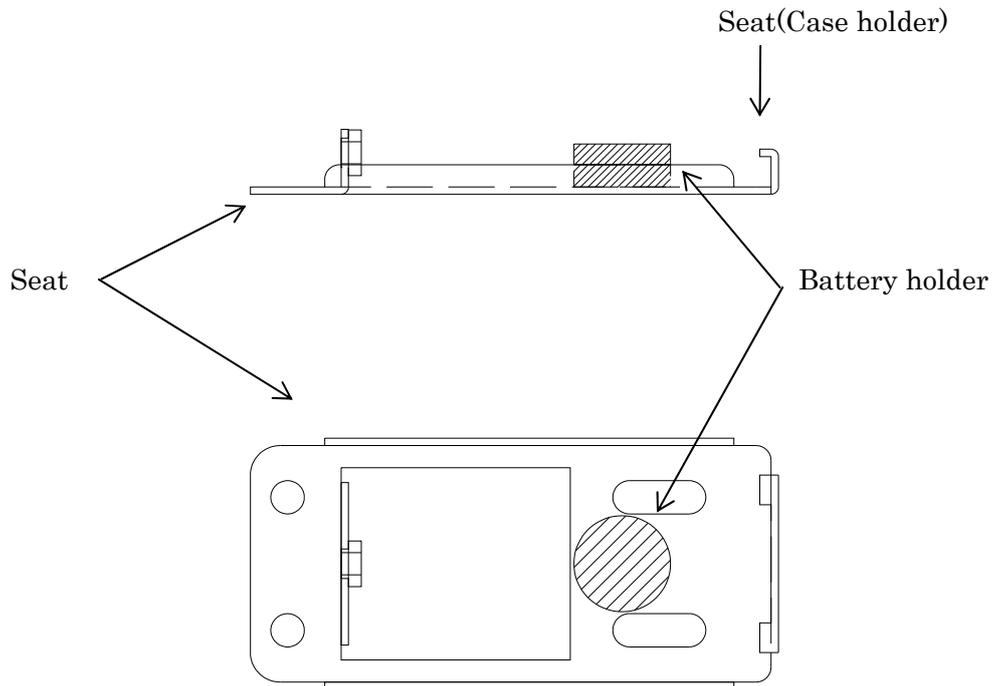
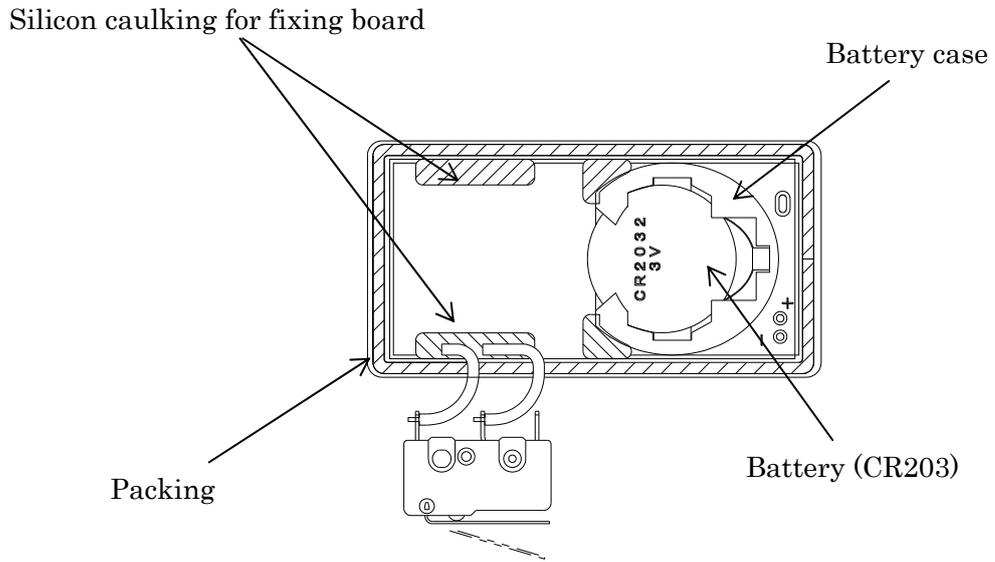
Items	Specifications	Remarks
Reference standard	FCC Part15.231	
Mode of operation	Simplex	
Transmit frequency	426.1MHz	
Emission designation	F1D	
Type of modulation	FSK	
Transmission data rate	1000bps	
Transmit system	Crystal oscillation frequency multiply system	
Antenna type	Built to the foundation	
ID	65526(16bit) exclusive, unique ID	Assigned before shipment
Comm.distance	Approx. 30m radial	※1
Indicator	Power voltage reduction alert LED	
Power source	Coin-type lithium battery	CR2032(3V 220mh)
Battery life	Approx. 150,000 times or more	As measured at one second interval
Power consumption	12mA or less	Ta25°C
Operating temperature range	0°C to 50°C	
Outside dimensions	W32.0×D71.0×H17.5mm	
Weight	40g	Including base and battery

※1 Communication may be disabled in a place with large radiant noise such as noise from electric welding machines

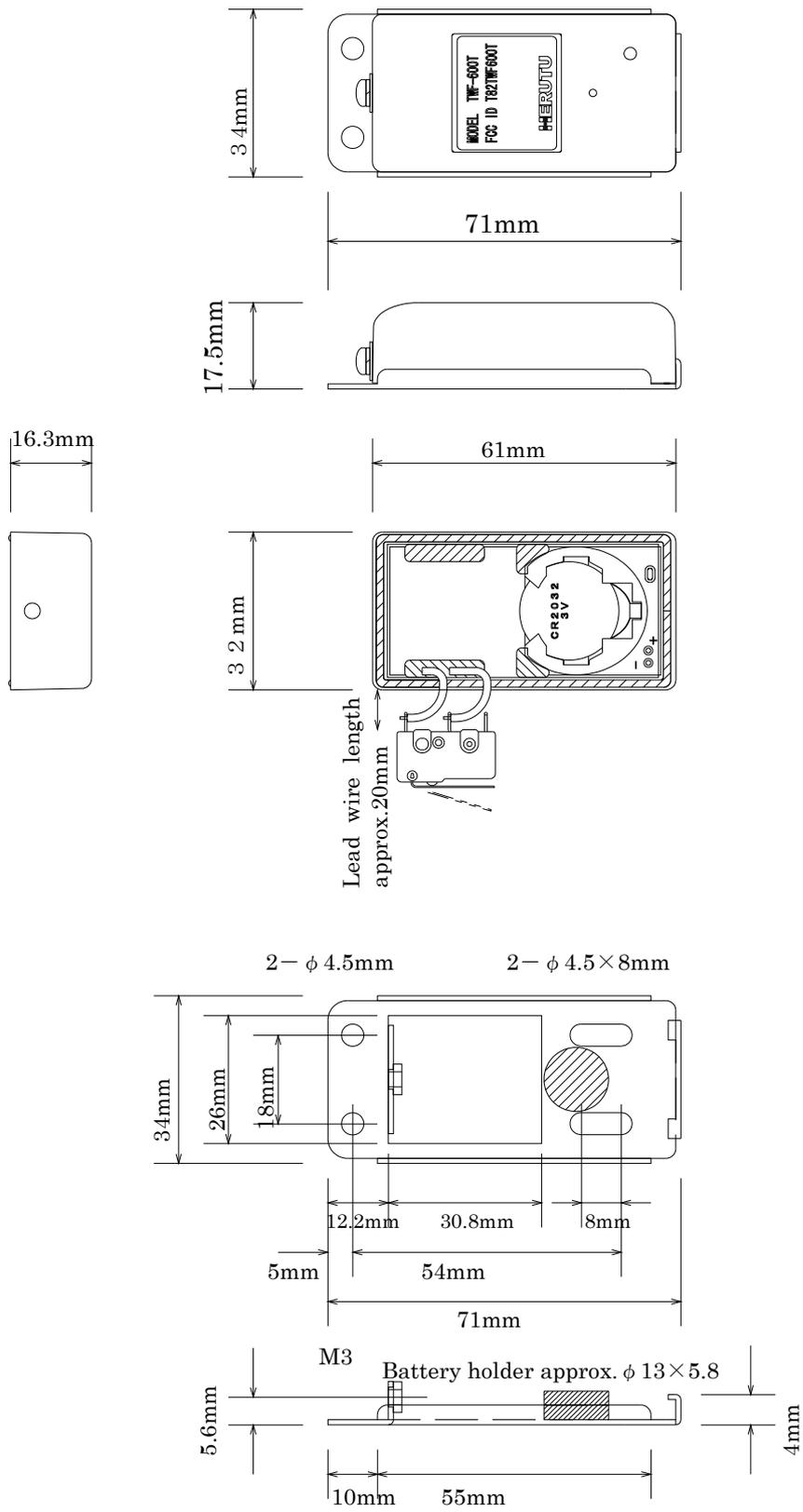
3. Dimensional drawing



3. Dimensional drawing



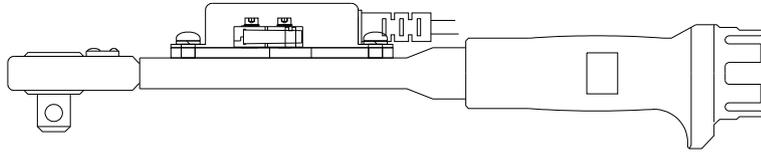
3. Dimensional drawing



4.To install on the Torque wrench

4-1.Preparation for installation

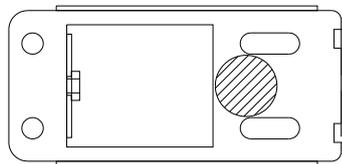
- 1) Check the parts necessary for installation.



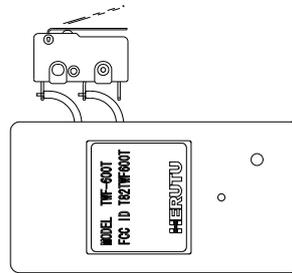
Torque wrench with Limit SW(LS) (User shall prepare)

Note) Depending on the type of Torque wrench, transmitter may not be installed. Contact our sales office.

Transmitter and a set of accessories



Seat × 1
(with Battery holder)



Transmitter body × 1
(with Limit SW)



Battery × 1
CR 2 0 3 2 (3 V)



Fixing screw × 4
(M 4 × L 5)



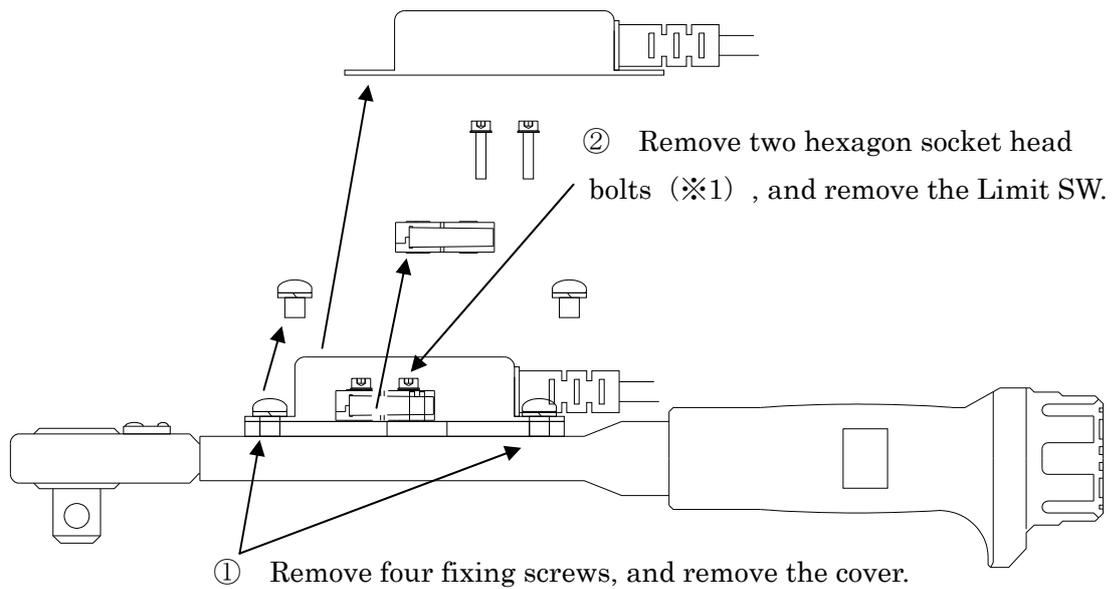
Set screw × 1
(M 3 × L 7)

- 2) Tools necessary for installation

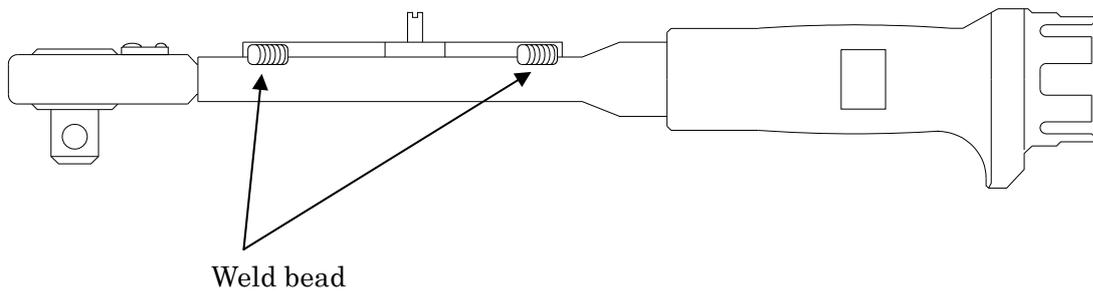
- Allen wrench : Size 1.5 mm
- Phillips screwdriver : Size # 2
- Screw locking agent
- Prick punch (sharp edge)

4.To install on the Torque wrench

3) Remove the Cover and Limit SW.



※1 Since two hexagon socket head bolts(with washer) should be used later, do not lose them. Because the limit SW mounted with Torque wrench as standard has the different current capacity, do not use it.



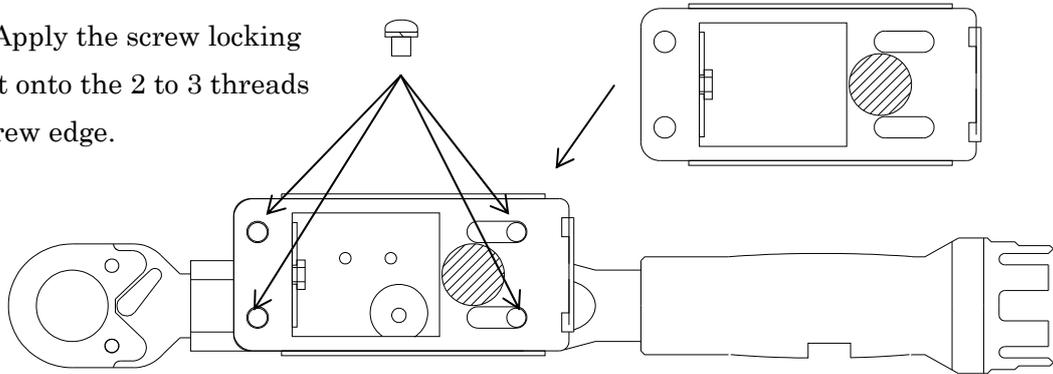
③ Verify that the Seat of Torque wrench is flat.
If the weld bead is protruded from the Seat, grind it.

4.To install on the Torque wrench

4-2.Installation

- 1) To install the Seat
 - Fix the Seat with four fixing screws.
 - For the application with heavy oil mist, fill up the caulking agent between Wrench seat and Seat and also between Wrench shaft and Wrench seat to protect the internal board.

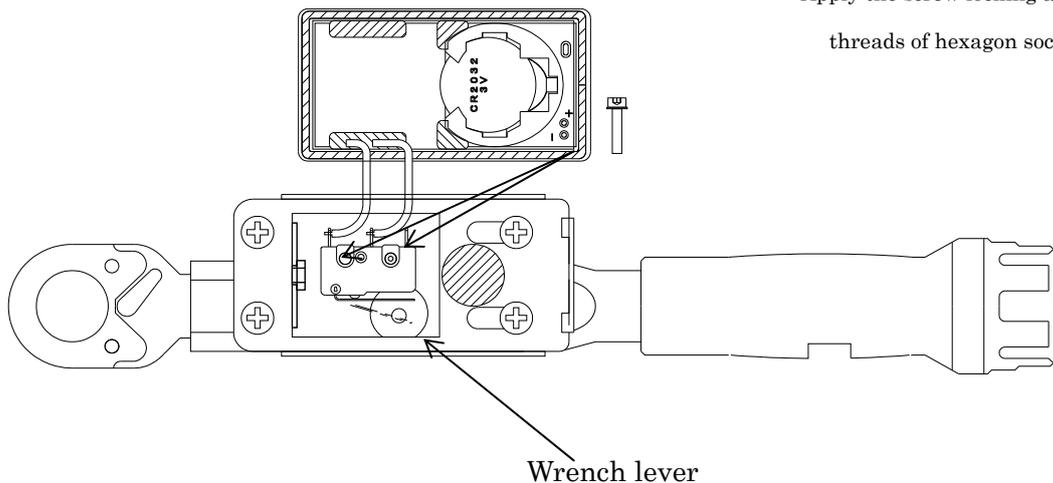
Apply the screw locking agent onto the 2 to 3 threads of screw edge.



- 2) Fix the Transmitter Limit SW with two hexagon socket head bolts(which was removed).
 - Verify that the moving range of wrench lever is well suited for the movement range of switch during the wrench in movement.

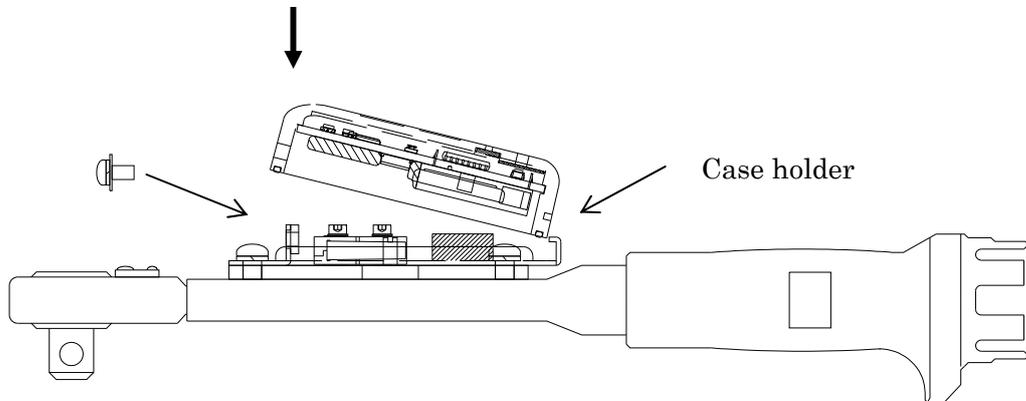
The hexagon socket head bolt requires a washer.

Apply the screw locking agent on 2 to 3 threads of hexagon socket head bolt.



4.To install on the Torque wrench

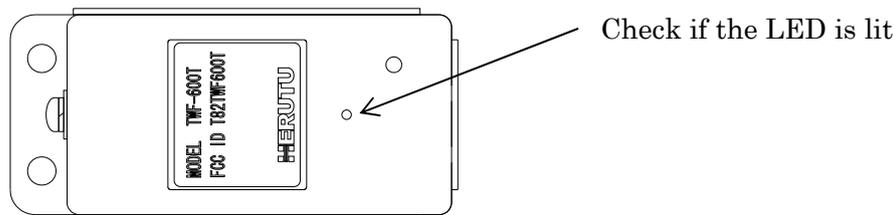
- 4) Hook the Transmitter on the Case holder of Seat, set it with an attention being paid not to bite the cord, and fix it with the set screw as firmly pushing the case.



5.How to use Radio Transmitter

5-1.Checking the battery

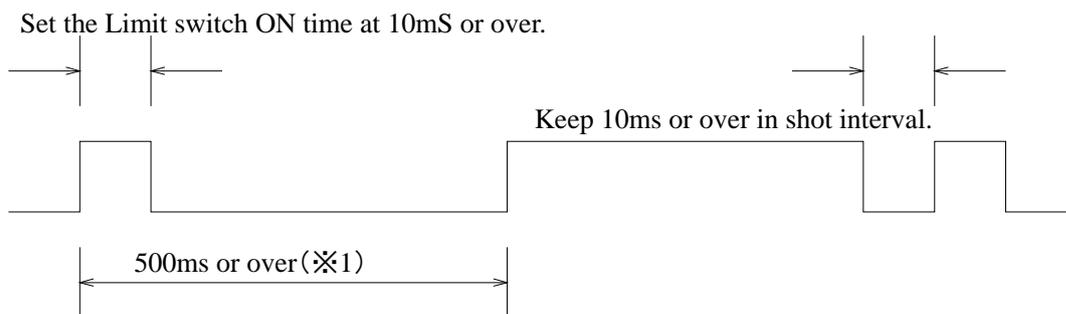
The transmitter has a battery voltage checking LED. It lights up when the voltage of the battery in use is running low to alert the battery replacing time. The LED lights up when the battery voltage lowers below 2.3V(but does not light up during transmission)



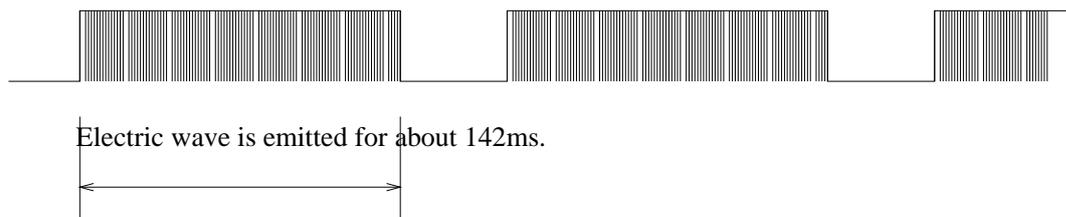
5-2.Operating timing

•The following figure shows the operating timing of Limit switch/Transmitter.

<Limit switch>



<Transmitter>

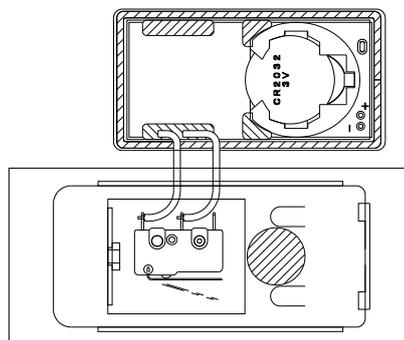


※1 This interval time should be more than the double counting prevention time of Receiver.
The Receiver has the double count prevention function to avoid the double counting.
For detail of double counting prevention time, see the operation manual of each receiver.

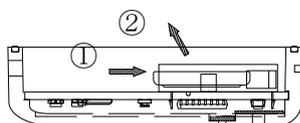
5.How to use Radio Transmitter

5-3. Replacing the battery

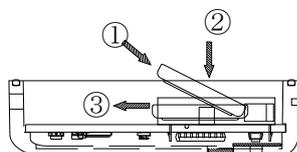
Pull out the fixing screw from Transmitter, and disassemble it from the Seat.



Take out the battery in the direction of ② while pushing it in the direction of ①.



Insert the battery from the direction of ①,
push it in the direction of ②,
return it in the direction of ③, and then mount it.



It is no need to remove the Limit switch.

Use a care not to break the cord.

※When new battery is fixed, radio wave may be emitted by one shot.

6.Registering ID

An exclusive, unique ID is assigned to each device before shipment.

The data sent from this device is composed of 2 Frames, each frame having the fixed length equivalent to 8 blocks and 66 bits.

For an ID, 24 bits in one data frame are used. Normally, 16bits out of 24 bit are used to assign 65536 different Ids.

Confirm the ID of your receiver and set the ID on the receiver(TWF-600R) accordingly.

When you want to know the details about TWF-600R, please read instruction manual [TWF-600R].

7. Precautions during use

- This machine is the precision equipment covered with plastic frame. Do not give an excessive impact.
- Use a care during setting as the Dip Switch for setting ID can be easily damaged.
Carefully make setting using the edged tool like Prick punch.
- Shift the battery to the arrow mark side before disconnecting the battery.
- Do not use the edged tool like prick punch when pressing the Test switch.
(Use an extreme care not to damage the Pawl of Battery holder during replacement of battery.)
- Use a care not to bite the cable of Limit switch when replacing a battery or changing the ID setting.

8. Troubleshooting

[Normal communication does not run]

- Is the battery used up?
→ Check if battery check LED lights on.

- Are “Radio frequency and ID” different from those of Receiver?
→ Check the Receiver for its channel and ID.

- Is this machine used outside the radio wave access range?
→ Use this machine within the radio wave access range.

- Is the moving range of wrench lever is out of the movable range of limit switch during operation of wrench?
→ Verify the Limit switch for its installation.

- Is a noise generated?
→ If communication does not run during a given time zone or due to the operation of the specific device, noise might be generated.

9. Guarantee

■ Provisions of warranty

The provisions of warranty are set forth by us for warranty of the product after shipment so that the product can be used with a sense of security after purchased. In case our product is out of order, we will provide repair or replacement under the provisions of warranty.

■ Scope of warranty

If the product should get out of order under the normal conditions of use by the customer, we will repair the failed section(s) free of charge subject to the provisions of warranty. Please contact the outlet store through which you purchased the product or our Sales Office. Note, however, that free-of-charge repair under this warranty is limited to the hardware components of the product.

Even during the warranty period, the customer shall be responsible for repair cost if any of the following applies:

1. Troubles or damages occurring due to improper handling by the customer, such as a fall, a shock, etc. during transportation or movement of the product by the customer.
2. Troubles caused by overhaul or remodeling of the main body by the customer.
3. Troubles or damages caused by fire, earthquake, flood damage, or other natural disasters, as well as by abnormal voltage.
4. Troubles resulting from any trouble of devices connected to the product, which devices are other than those designated by us.
5. Troubles with the accessories (AC adapter, antenna, connection cables, or the like) except the main body.
6. Replacement of consumables and/or limited-life items (including batteries).
Consumables and limited-life items include, but not limited to:
 - (1) Switches (limit switches, pushbutton switches, or the like)
 - (2) Battery cells or batteries (dry batteries, button batteries, or the like)
 - (3) Other items subject to consumption or limitation of life caused by use.
7. Troubles occurring due to handling against the use instructions or precautions specified in this operation manual.

■ Warranty period

In principle, the warranty period shall last one (1) year from the date of purchase.

During the warranty period, we will provide free-of-charge repair subject to the provisions of warranty set forth in the warranty certificate.

If you have anything unclear about the repair or follow-up service during the warranty period, please contact the outlet store through which you purchased the product or our Sales Office.

■ Initial defects

The period within two (2) weeks from the date of purchase is defined as the initial defect period for the product. The product will be replaced with a new one or repaired free of charge provided that it is returned to the outlet store through which you purchased the product or our Sales Office, checked, and recognized as having initial defects.

For initial defects, we shall be responsible for the shipping cost.

■ Disclaimer

We will assume no liability for any damages or monetary losses, direct or indirect, arising out of troubles, failures, or use of the product.

■ Repair service period

The repair service for the product will be available for eight (8) years from the date of purchase.

However, we reserve the right to use substitute parts or devices for repairing purposes if there are unavoidable reasons such as unavailability of service parts.

■ Others

- Independent of the warranty period, the product to be repaired shall in principle be brought into our site because of the necessity of using measuring instruments or the like for adjustments etc., and the shipping cost etc. incurred in bringing the product into our site shall be borne by the customer.

In such cases where you request a trip to your place for repair or need substitute devices during the warranty period, please contact the outlet store through which you purchased the product or our Sales Office.

We reserve the right to refuse replacement or repair if we are unable to reproduce the concerned failure at our engineering department after receipt of a request for repair. In addition, an additional charge may be made to the customer for the technical examination cost incurred in reproducing the failure.

- The provisions of warranty are effective in Japan only.
- For repair service after the expiration of the warranty period, please contact the outlet store through which you purchased the product or our Sales Office.

If the functionality can be maintained by means of repair, repair will be provided on a fee basis upon the customer's request.

The information in this manual is subject to change without prior notice.
All possible measures are taken to ensure the accuracy of information in this manual. If you should find any doubtful points herein, please contact the outlet store through which you purchased the product or our Sales Office.
The specifications and appearance of the product are subject to change without notice for improvements.

<CONTACT US>



HERUTU ELECTRONICS CORPORATION

62-1 Toyooka-cho, Kita-ku, Hamamatsu-shi, Shizuoka-ken, 433-8103 Japan

Tel.81-53-438-3555

Fax.81-53-438-3411

URL: <http://www.herutu.co.jp> Mail: webmaster@herutu.co.jp