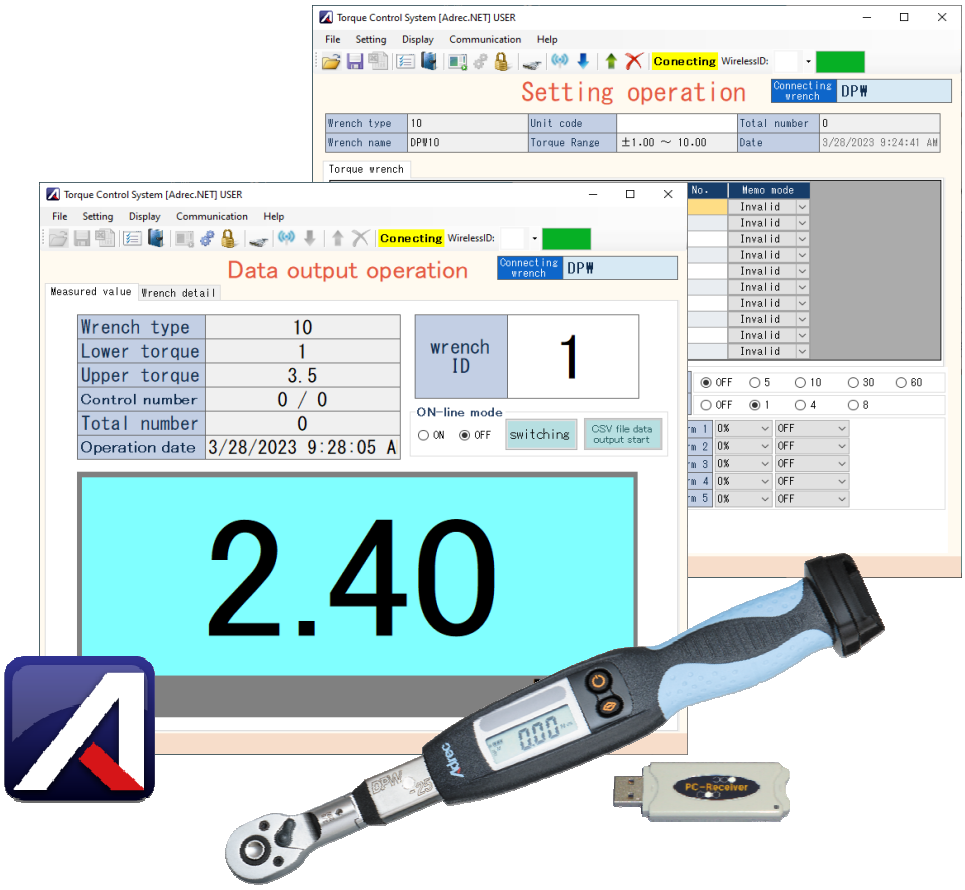
standard software [Adrec.Net]

Instruction Manual



Adrec Corp.

Rev.0

Table of Contents

1 . Introduction

■ Introduction

Thank you for purchasing our "Digital Torque Wrench".
This software can make various settings for our "Digital Torque Wrench"
and can retrieve and save the work records recorded in the torque wrench.

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2 Installation Procedure

2-1 Supported OS

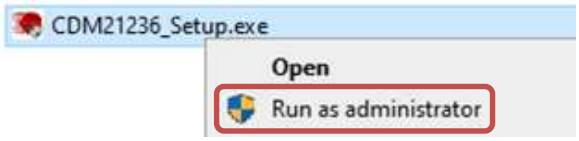
Microsoft Windows 7, 7x64, 8, 8x64, 8.1, 10, 11

*NET Framework 4.5 or higher must be installed.

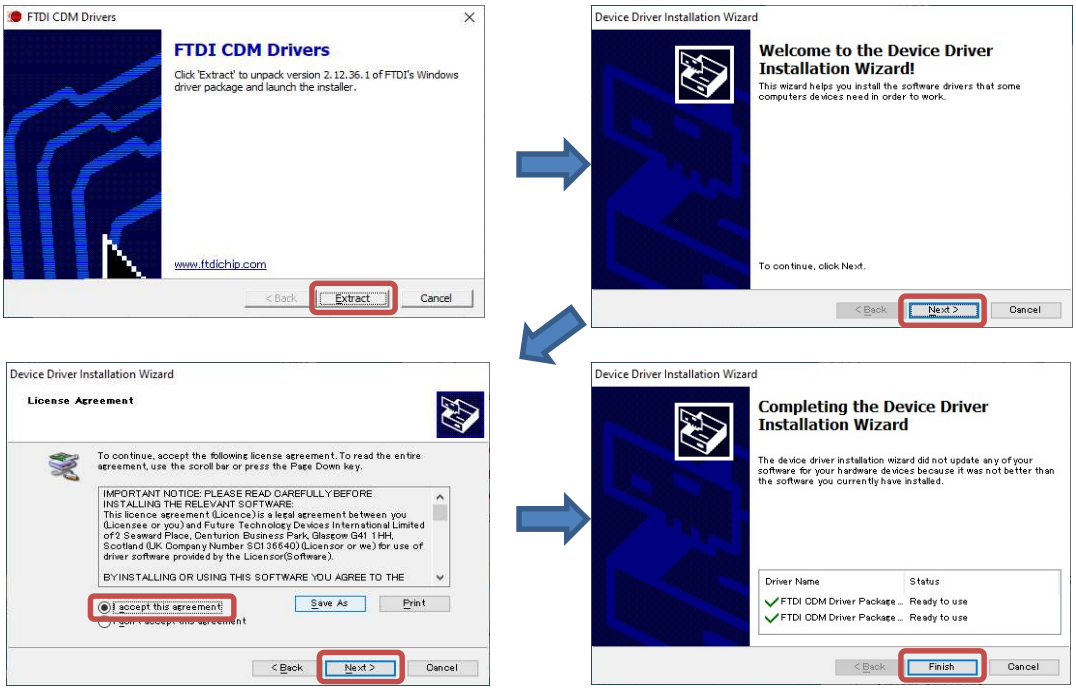
2-2 Software Installation

1) Install USB driver

Right-click the following file in the [1-USB Driver] folder and select "Run as Administrator" and click it.



Follow the on-screen instructions to install.



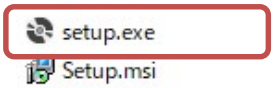
2) Installation of standard software "Adrec.Net

Note

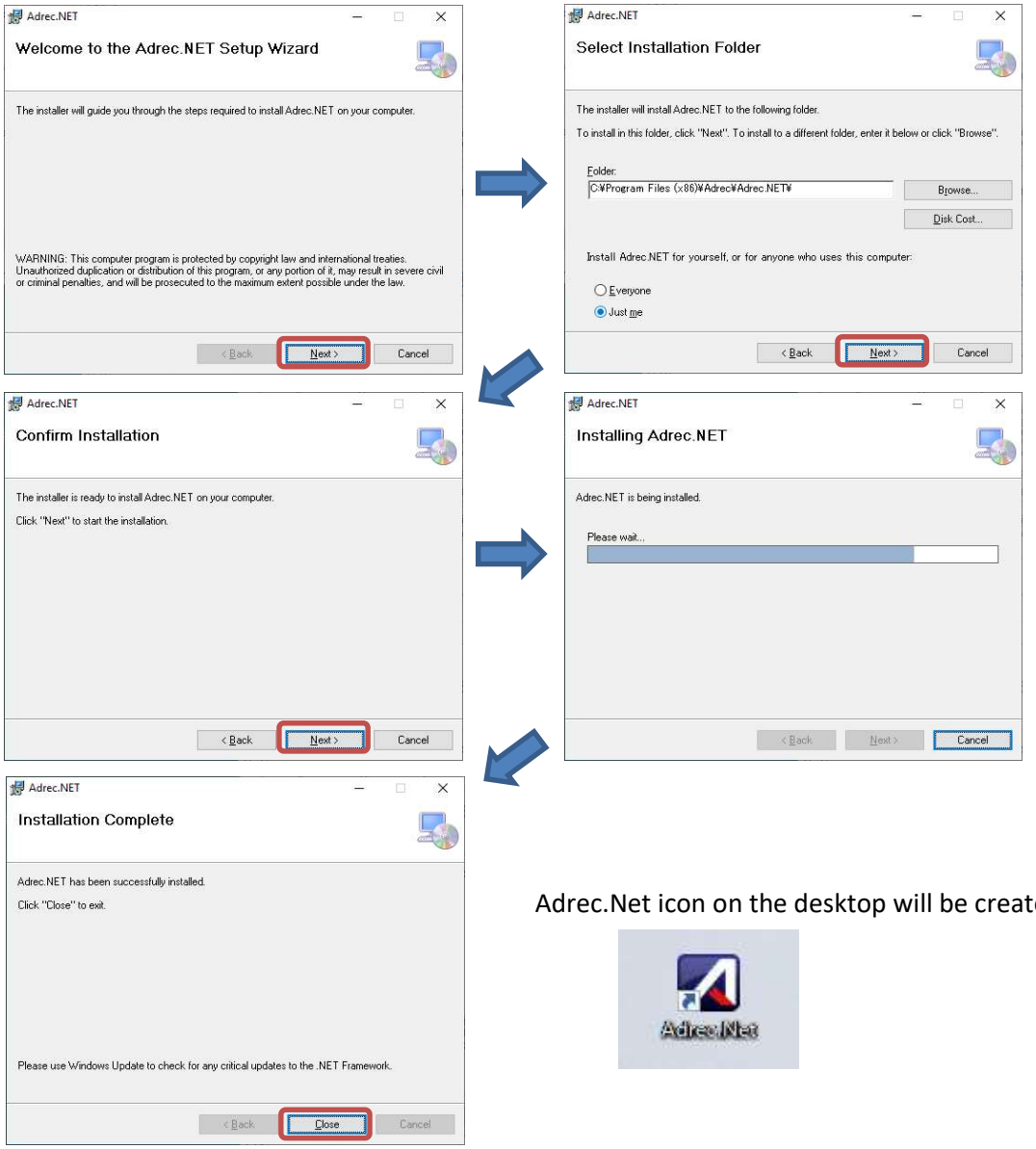
If you have installed a version prior to Ver. 12.9, **be sure to uninstall it** before following the procedure below.

The version can be checked from "Version information" in the Help tab.

Double-click the [setup.exe] file in the [2-Standard Software [Adrec.Net]] folder.



Follow the on-screen instructions to install.



Adrec.Net icon on the desktop will be created.

3 Overview

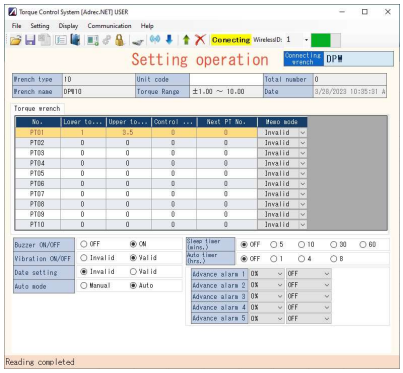
3-1 What the standard software [Adrec.Net] can do

Adrec.Net is software that allows you to check and change torque wrench settings, display tightening values in real time, and retrieve and save tightening results.

1) Setting operation screen

Checks and changes torque wrench settings, such as upper and lower limits, control frequency, etc., which are mainly related to the work being performed.

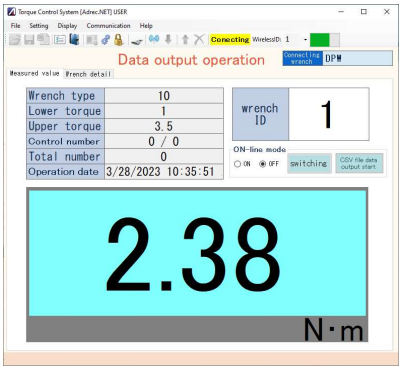
Setting operation icon



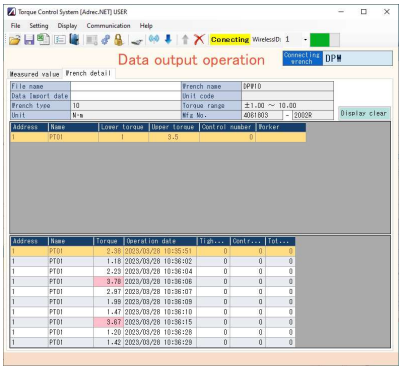
2) Data output operation screen

It mainly operates tightening results, such as displaying tightening values, extracting data from tightening results, and saving data.

Data output operation



Real-time display of fastening results

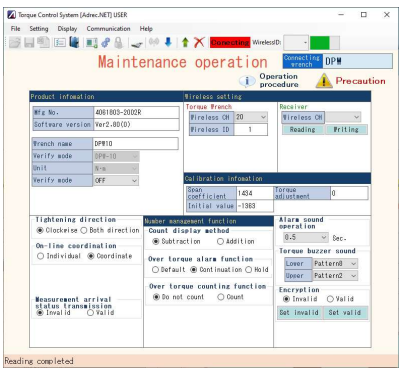


List of fastening results

3) Maintenance operation screen

Set up basic information about the torque wrench, such as radio channel and wireless ID.

Maintenance operation icon



3-2 Basic flow for using a torque wrench and Adrec.Net

To use Adrec.Net, the connection operation with the torque wrench is required.

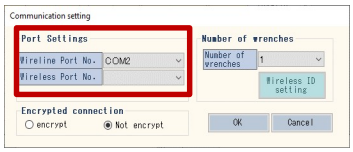
(1) First, set the port number from the Communication settings screen.

Port number (COM number) settings are required for both wired and wireless connections.

The port number (COM number) means automatically assigned number when connected to PC via USB.

It can be found in the device manager.

Communication Settings



(2) Make wired or wireless connections.

Wired Connection

OR

Wireless Connection

Wireless ID Selection

The output operation screen is operated up to this point to start the tightening operation.

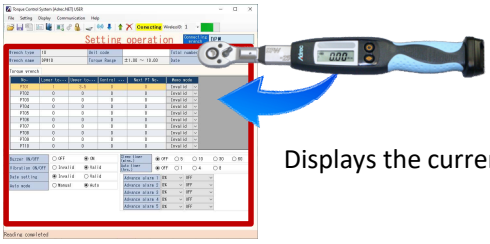
The setup operation screen and maintenance operation screen follow the next operation.

(3) To change the setting, read the current setting from the torque wrench.

"Read out setting data" is performed.

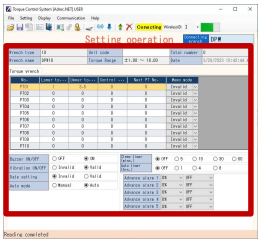
(For wired connections, automatically performed when the [Wired Connection] is made.)

Read Data



Displays the current settings.

(4) Change to the contents to be written to the torque wrench by screen operation.

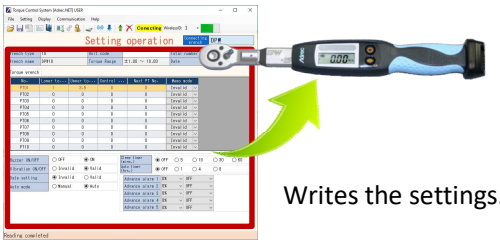


←Change contents

(5) Write the changed contents on the torque wrench.

"Write Data" is performed.

Write Data



Writes the settings.

3-3 Method of recording tightening value

There are two ways to record tightening values.

[Method 1]

Prepare a PC and use the "Output Operation Screen" to accumulate tightening values.

This method is mainly used for wireless torque wrenches.

Tightening values are skipped each time and the results are stored in the output operation screen.
MEMO mode = Disable and no tightening value is recorded in the torque wrench body.

The above usage is possible with a wired torque wrench as long as cable is connected.

[Method 2]

The tightening value is stored in the main body of the torque wrench
and later retrieved on the "output operation screen".
This method is used for wired torque wrenches where a PC is not available nearby.

MEMO mode = Enable and record the tightening value in the torque wrench body.

After connecting to a PC, the tightening value recorded on the torque wrench body is retrieved on the output operation screen.

The above usage is also possible with a wireless torque wrench.
However, in the case of a wireless torque wrench, it will be in a state of receiving confirmation (waiting for a reply from the PC) in order to prevent leakage of reception.
If there is no PC connected to the receiver nearby, the tightening value will blink and work will not be smooth.
To cancel this setting, it is necessary to change the setting to
"Online system linkage function = stand-alone" from the maintenance setting screen.
(Refer to the maintenance operation screen for how to change the setting.)

3-4 How to switch torque wrench settings (angle wrench, double-tightening prevention, screw tightening inspection)

By switching the settings of the torque wrench, four different uses are possible with a single torque wrench.

*However, the "-Ang" angle option is required for angle wrenches, and the "-Dch" angle option is required for twice tightening prevention and screw tightening inspection.

Torque wrenches with angle option are supplied with the angle specification [Adrec.Net]
Torque wrenches without angle option are supplied with standard [Adrec.Net]

In [Adrec.Net] with angle specifications,
a wrench selection button appears on the [Setting Operation Screen].

By toggling this button, the item to be set will change.
By setting the required items and writing them into the torque wrench,
the type of torque wrench can be changed.

Torque wrench

No.	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	1	3.5	0	0	Invalid

Angle wrench

No.	Snug torque	Lower Angle	Upper Angle	Control number	Next PT No.	Memo mode
PT01	1.5	20	60	0	0	Invalid

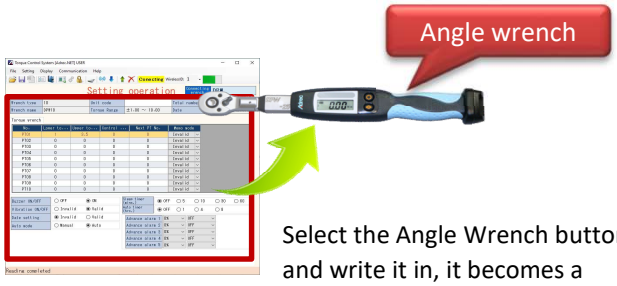
Poka-yoke

No.	Specified angle	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	20	1	3.5	0	0	Invalid

Screw Tightening Inspection

No.	Tolerance angle	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	30	1	3.5	0	0	Invalid

Select the Torque Wrench button and write it in, it becomes a **"torque wrench!"**



Select the Angle Wrench button and write it in, it becomes a **"Angle Wrench!"**

3-5 About pattern settings

The torque wrench can register 10 patterns of settings.

Torque wrench

No.	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	1	3.5	0	0	Invalid
PT02	1.8	4.2	0	0	Invalid
PT03	0	0	0	0	Invalid
PT04	0	0	0	0	Invalid
PT05	0	0	0	0	Invalid
PT06	0	0	0	0	Invalid
PT07	0	0	0	0	Invalid
PT08	0	0	0	0	Invalid
PT09	0	0	0	0	Invalid
PT10	0	0	0	0	Invalid

There are two ways to switch patterns.

[Method 1]

How to set the Next PT No. and automatically switch to the next pattern

No.	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	1	3.5	4	2	Invalid
PT02	1.8	4.2	3	1	Invalid

In this case, the number of management times must be set.

When tightening is completed for a controlled number of times,

the machine automatically switches to the set next pattern.

[Method 2]

How to switch the patterns by operation of the torque wrench body

In this case, the operation method differs between HTW and DPW.

<DPW Series>

After pressing [Power]+[◇] simultaneously, press [◇] to switch PT and press[Power] to confirm.

<HTW Series>

After pressing [SET]+[SHIFT] simultaneously, press [S/C] to switch PT and press [SET] to confirm.

4 Functional Details

4-1 Starting Adrec.Net

Click the icon on the desktop to launch Adrec.Net.

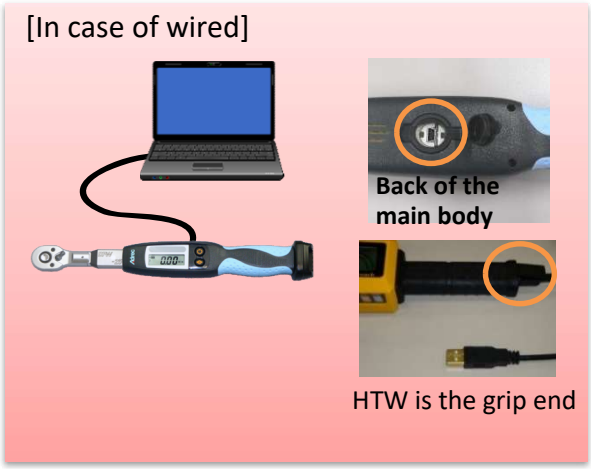
4-2 Connection of torque wrench

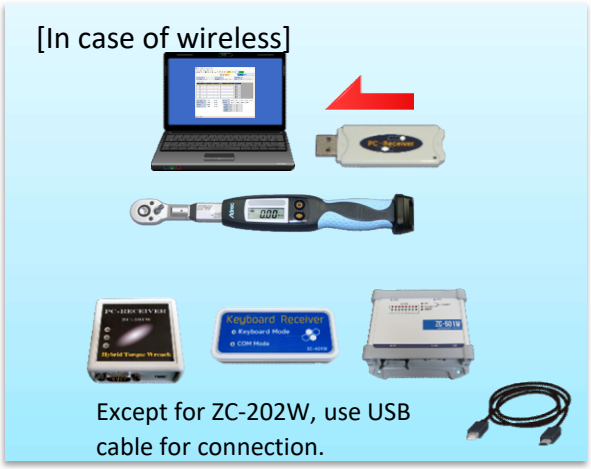
1) Port number setting

(1) Place the torque wrench on a level surface, such as a desk top, and turn on the power with no load applied.
If the power is turned on with a load applied, the measurement will not be correct.

*If the display does not show "0" when the power is turned on, a load may have been applied.
Turn the power back on with no load.

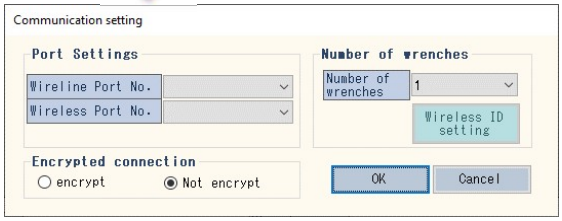
(2) In case of wired connection, connect the attached USB cable to the USB terminal of the torque wrench, and connect the other end to the USB terminal of the PC.
In case of wireless connection, connect the wireless receiver to the USB port of the PC.



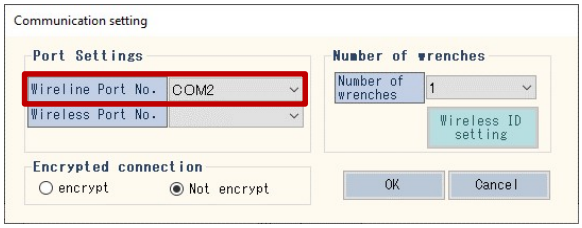


(3) Click the Communication Settings icon to open the Communication settings screen.

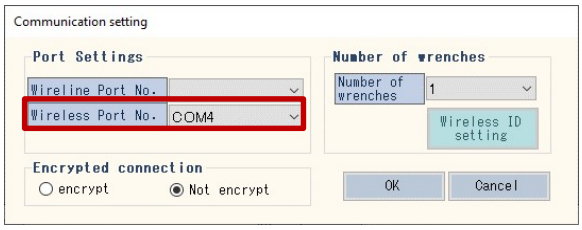
Communication Settings



(4) For wired connections, set the "Wireline Port No.".



For wireless connections, set the "Wireless Port No.".

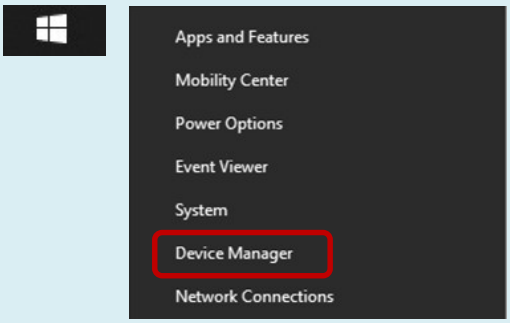


[How to check the connection port (COM number)]

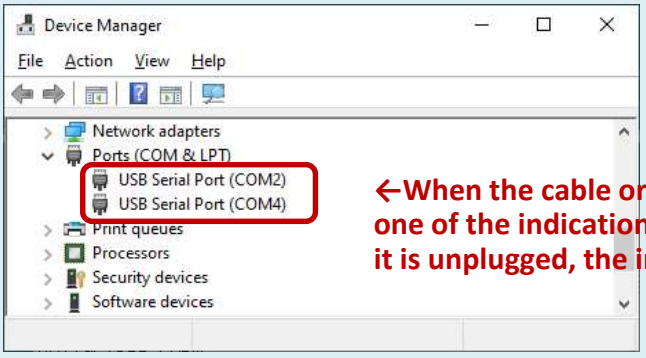
Right-click on the Windows Start button and click on Device Manager.

↓ Right-click

*The screen is Windows 10.



Open the Device Manager screen and open "Ports (COM and LPT)".
When the cable or receiver is unplugged or plugged in, the COM number will appear or disappear, and that COM number will be the COM number of the connected device.

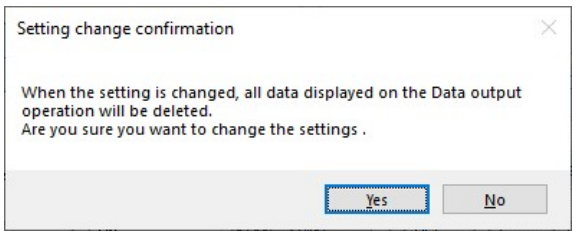


←When the cable or receiver is plugged in, one of the indications will be displayed, and when it is unplugged, the indication will disappear.

*If the COM number is not displayed after unplugging and plugging in the receiver, the USB driver may not be installed.
Please install the "USB driver" in the installation procedure.

(5) Press the Set button to exit the Communication Settings screen.

When closing, the following message screen is displayed.



When the port number is changed, all information displayed on the output operation screen, etc., is cleared, so please save the necessary data before closing.

If saving data is not required, press "Yes" to exit.

Once set, the port number is saved and does not need to be reset. However, if multiple torque wrenches are used, the port number will change for each torque wrench and must be re-set.

2) Torque wrench connection

Torque wrenches make either wired or wireless connections.

2-1) For wired connections

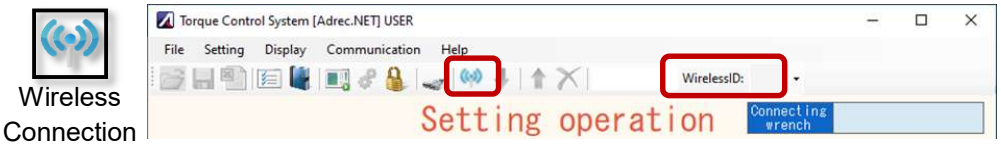
Click the wired connection icon to connect to the torque wrench.

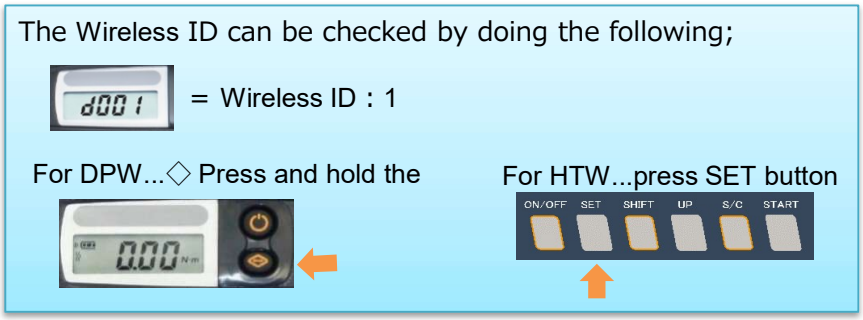
Wired Connection

If the connection is successfully made, an audible tone is heard from the torque wrench (setting data is read out) and the display indicates that the connection is in progress (red).

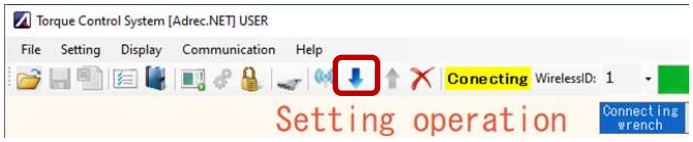
2-2) For wireless connection

Click on the wireless connection icon and select the wireless ID of the torque wrench.





Blue arrows are enabled for Wireless IDs that allow wireless communication.

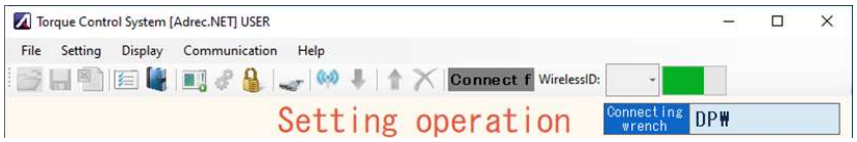


If it is not enabled, please check the following information.

- Torque wrench is not turned on.
- Wireless ID id wrong.
- Torque wrench and receiver channels do not match.
- The torque wrench is wired to the computer with a cable.

2-3) If the connection fails

If the connection with the torque wrench fails, "Connection f (failed)" will be displayed.



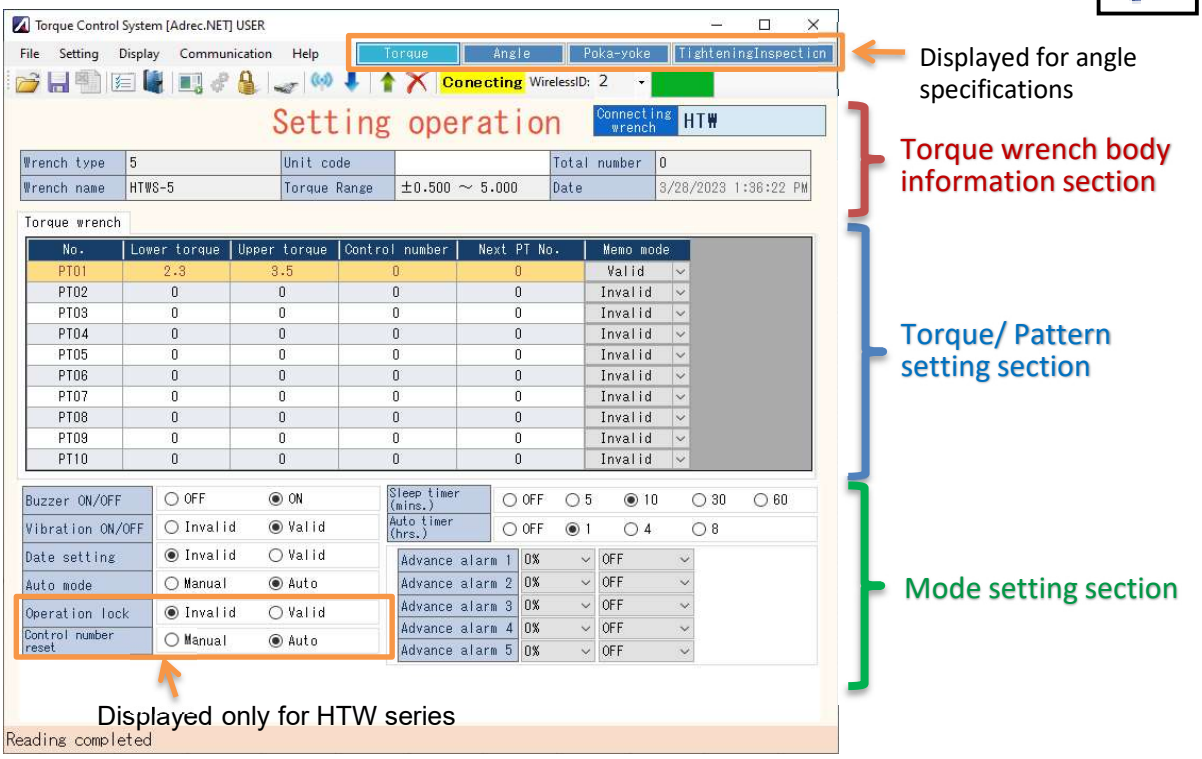
Please review the following information.

- Torque wrench is not turned on.
- COM port number is not correct.
- Torque wrench or receiver is not connected to PC.
- Connecting with other software such as a real-time monitor.

4-3 Setting Operation Screen

Here you can change the settings of the torque wrench.

1) Screen Item Description

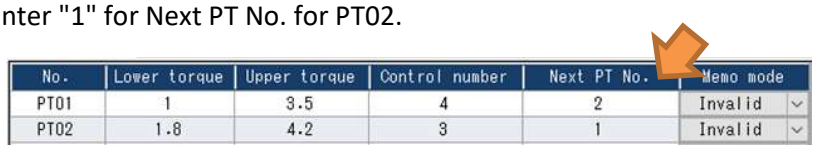


■Torque Wrench Body Information Section

Connection wrench	Display the type of torque wrench connected. "HTW" or "DPW" + "Angle wrench" or "Double-tightening prevention" or "Screw tightening inspection"
Wrench type	The wrench size is displayed. Example: "25" for DPW25
Wrench Name	The wrench name is displayed. The name can be freely changed on the maintenance operation screen.
Unit Code	A unique name can be set for each setting condition (within 8 single-byte alphanumeric characters).
Tightening range	The torque wrench's torque setting range is displayed.
Total number	The number of tightening cycles recorded is displayed. Only recorded when MEMO mode is enabled.
Date and Time	Display the date and time set on the torque wrench body. This is the date and time when the tightening is finalized.

■Torque/ Pattern setting section

Up to 10 different setting information can be recorded on the torque wrench.

No.	Pattern No. No1 must be set.
Lower torque/ Upper torque	Enter the lower and upper torque limit values. For left rotation (CCW), enter a minus value.
Control number	Enter the control number. (0 is no count, and it can be set from 1 to 999 times.) Control number refers to the number of tightening cycles.
Next PT No.	Set this parameter if you want to automatically shift to the next pattern when the number of tightening operations has been completed. For example, if you want to go back and forth between PT01 and PT02, set the Control number, and enter "2" for Next PT No. for PT01, enter "1" for Next PT No. for PT02. 
Memo mode	When enabled, the torque wrench body records the tightening value. This can be used when a PC is not available at hand. If disabled, the torque wrench will not record the data.
For Angle wrenches	
Snag torque value	Set the torque value at which angle measurement starts.
Lower limit angle/ Upper limit angle	Enter the lower and upper angle limits.
For Double-tightening prevention	
Specified angle	Sets the rotation angle to be NG when the bolt is tightened twice. If the rotation is greater than or equal to the set angle, it is OK.
For Screw tightening inspection	
Allowable Angle	Set the rotation angle that is OK when tightening bolt that has already been tightened. If the rotation exceeds the set angle, it will be NG.

■Mode setting section

Buzzer state	Turn the buzzer sound ON/OFF.
Vibration motor condition	Turn the vibration motor ON/OFF.
Date and Time Setting	Reset or set the date and time of the torque wrench. When enabled and data is written, those of the computer is set.
AUTO mode	Automatically resets the LCD display and functions after tightening. Auto...Automatically reset (display 0). Manual...The peak torque value is still displayed. Operate the main unit button to reset (display 0).
Wrench Body Operation lock	*Only HTW series can be set. Set whether the setting operation can be performed on the body. Valid...You can change the upper and lower limits, MEMO mode, buzzer, and vibration motor on the torque wrench itself. *However, if two or more patterns are set, they can't be changed. Invalid…It does not allow changes in the torque wrench itself.
Reset number of tightening cucles	*Only HTW series can be set. DPW is fixed to "Auto". When the number of tightening cycles is set, this setting determines whether or not the number of times is automatically reset (displayed as 0) after the number of times is completed. Auto...Automatically reset (display 0). Manual... ＜C000> will remain displayed. Reset by pressing [S/C] and [START] simultaneously.
Sleep timer	When tightening is not performed within the set time, the torque wrench automatically switches to the idle mode (LCD display off). Just move the torque wrench and it will restart. Settable time: OFF/ 5 minutes / 10 minutes / 30 minutes / 60 minutes
Auto-Off timer	When tightening is not performed within the set time, the power of the torque wrench is turned off. (Sleep timer minutes will be added.) Settable time: OFF / 1 hour / 4 hours / 8 hours
Advance warning 1-5	Buzzer sound and vibration motor can be sounded at any rate up to the lower limit torque value. This is a function to notify operators. Settable %: 10 to 90% Warning tone: Pattern 0 (high tone) to 10 (low tone) *Please set them in order from 1.
Interval time	*Settable only for angle wrenches, double-tightening prevention, and screw tightening inspection Set the time to hold the angle value when the wrench is loosened. The angle value is held for the time set here, and the angle is accumulated when the wrench is tightened again. The angle is reset to 0 after this time has elapsed while the wrench is loosened. *To use it for double-tightening prevention, turn the inspection mode OFF and set the tightening direction to single direction. Both settings are made on the maintenance operation screen.

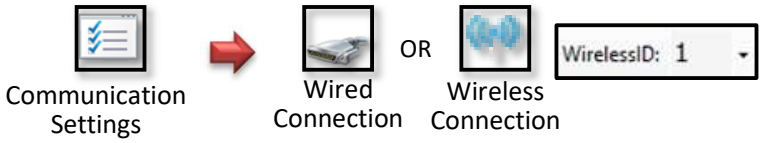
2) Check torque wrench settings

Torque wrench settings can be read and confirmed.

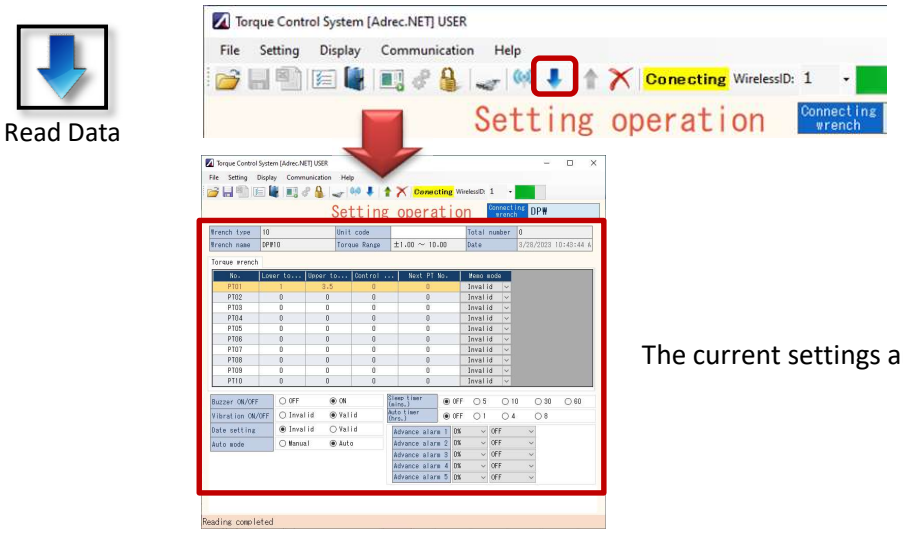
Torque wrench, angle wrench, double-tightening prevention,

and screw tightening inspection all operate the same.

(1) Connect the torque wrench from "4-2 Connection of Torque Wrench".



(2) From the [Read Data] icon, read the settings of the torque wrench.

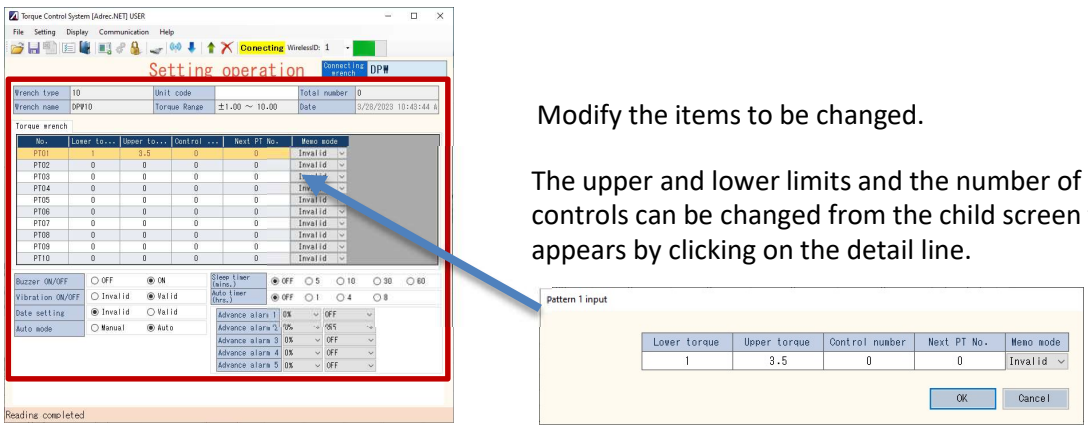


The current settings are displayed.

3) How to rewrite torque wrench settings

(1) Perform "2) Check torque wrench settings" to display the torque wrench settings.

(2) Change the contents to be written to the torque wrench by operating the screen.

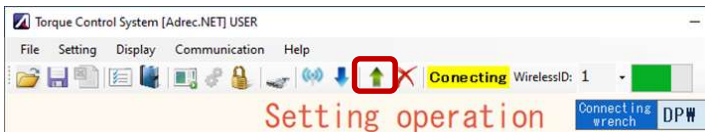


Modify the items to be changed.

The upper and lower limits and the number of controls can be changed from the child screen that appears by clicking on the detail line.

(3) Click the [Write Data] icon to write the settings to the torque wrench.

Write Data



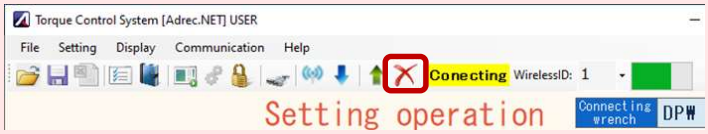
Note

If the tightening value is recorded in the main body of the torque wrench,
the following warning will be displayed and writing cannot be performed.
(This occurs when MEMO mode is enabled.)

Writing settings to the torque wrench should be done after deleting the record in it from the [Erase Memory Data] icon.

*Deleted data will not be restored. Please save the necessary data before doing so.

Erase Memory Data



4) How to save and load torque wrench settings

Torque wrench settings can be saved and the saved settings can be called up and written to the torque wrench.

Settings file
(.setting)

Settings file
(.setting)

*In the case of inspections such as angle, twice-tightening, and screw, the file will be a setting file for angle (.rnd).

Note

It is not possible to write on torque wrenches of different models and sizes.

⭕ configurable	DPW10 → DPW10, HTW25 → HTW25
✖ cannot be set	DPW10 → DPW25, DPW → HTW, HTW → DPW

・Configuration files with different versions of Adrec.Net may not be readable

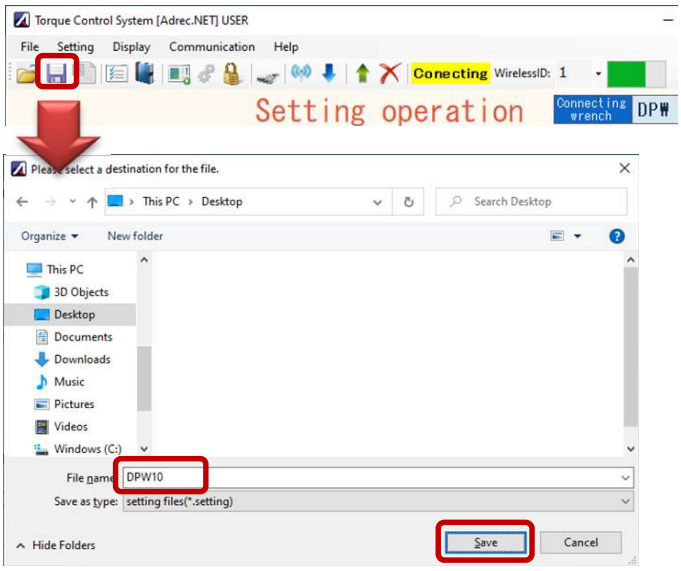
・The setting file for angle (.rnd) cannot be used for torque wrenches that do not have an angle option.

[How to save settings]

(1) Perform "2) Check torque wrench settings" to display the torque wrench settings.

(2) Click the "Save As" icon to save the settings file.

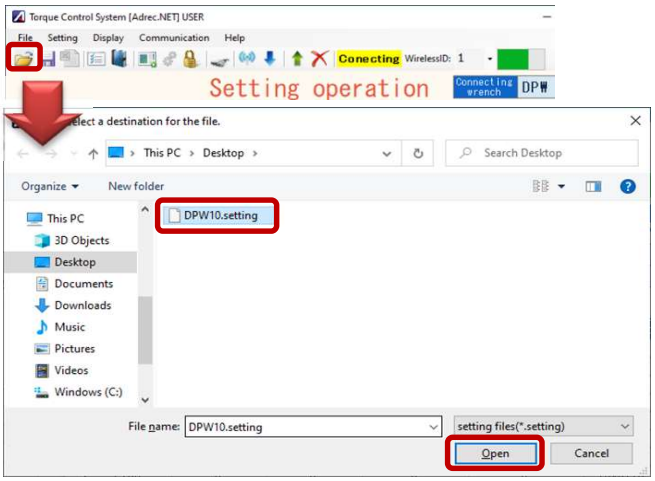
Select a destination and save the file with a name of your choice.



[How to read settings]

(1) Perform "2) Check torque wrench settings" to display the torque wrench settings.

(2) From the "Open" icon, select and open the settings file.



The saved settings are displayed and can be written directly into the torque wrench.

5) Optional functions

5-1) How to change the upper limit of set torque

The upper limit torque setting limit can be freely changed.

Settable range : 10 to 150% of maximum torque

Default setting value: 100%.

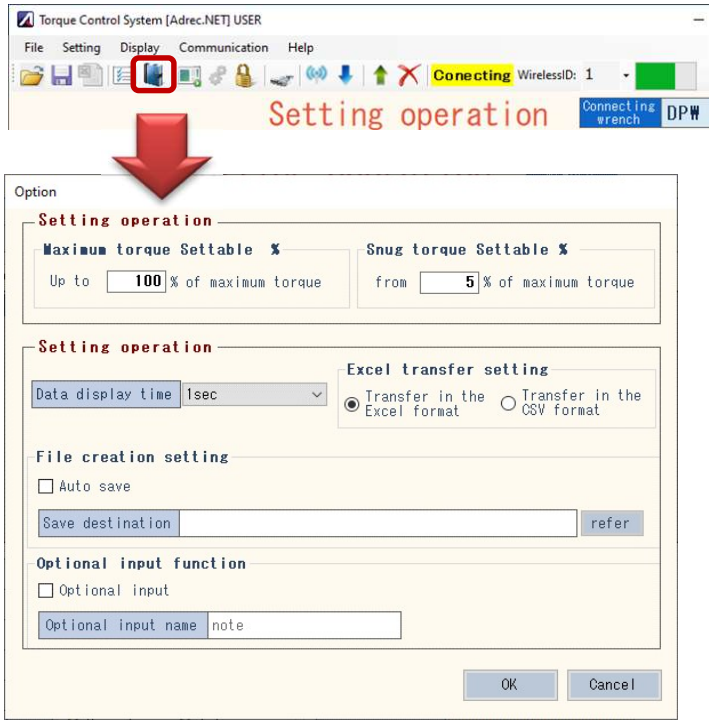
For example, in the case of DPW10 the maximum torque is "10",
so the upper limit torque that can be set normally (100% setting) is up to "10" N-m.
When 150% is set, it is possible to set the upper torque limit to "15" N-m.

Note

・Please be careful when handling the torque wrench, as the wrench itself may be damaged if significantly exceeding the proper range is applied. Use of proper size is recommended.

(1) Open the options screen from the [Options Settings] icon.

Options Settings



(2) Change the [Maximum torque settable %] and press the OK button.

Specifiable range: 10 to 150%.

5-2) How to change snag torque setting %.

*This is used when an angle wrench is used.

The setting range of the snag torque value can be freely changed.

Setting range : 1 to 100% of maximum torque

Default setting: 5%.

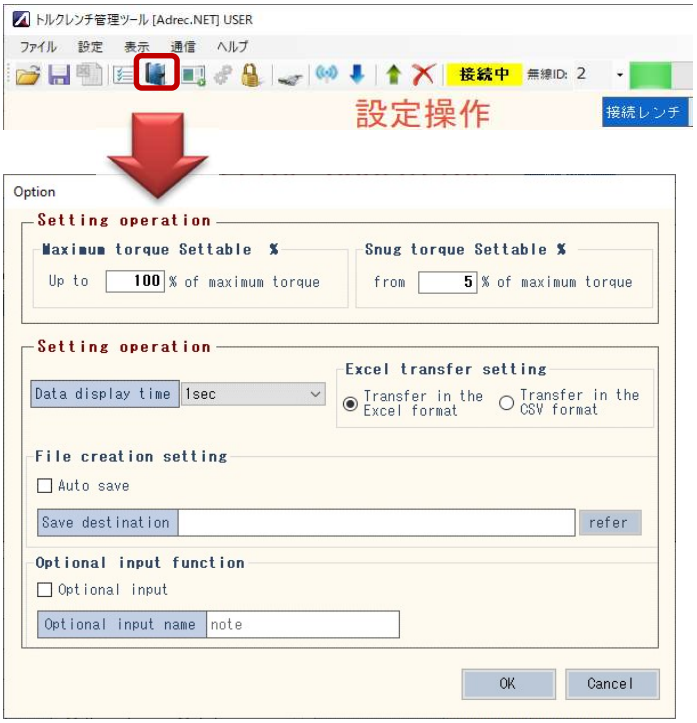
For example, in the case of DPW10 the maximum torque is "10",
so the snag torque value that can be set normally (5% setting) is from "0.5 to 10" N-m.

Note

・If the snag torque value is too small, angle measurement starts immediately.

(1) Open the options screen from the [Options Settings] icon.

Options Settings



(2) Change [Snag torque settable %] and press the OK button.

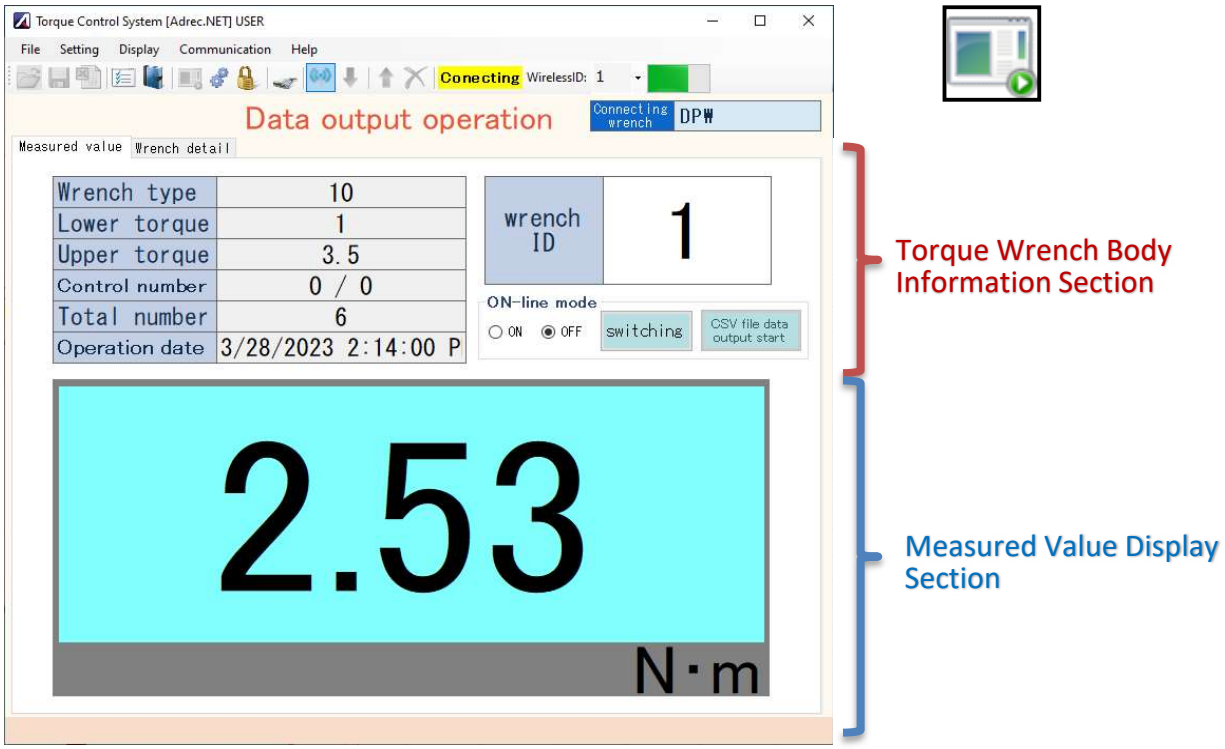
Specifiable range: 1 to 100%.

4-4 About the output operation screen

Here, you can display tightening values, extract data from tightening results, save data, and perform other operations on tightening results.

1) Screen Item Description

1-1)[Measured Value Display] tab



■Torque Wrench Body Information Section

Wrench type	The wrench size is displayed.
Lower torque/ Upper torque	The currently set lower and upper torque limit values are displayed.
Control number	Display "Current number of tightening / Number of control times set". If not set, it is 0/0 and does not count.
Total number	Counted when MEMO mode is enabled. Count the number of tightening cycles from the time the memory data is erased until it is erased again. 0 is displayed when MEMO mode is invalid.
Fixed date and time	Display the date and time of tightening. *Use the time and date timer time set on the torque wrench itself.
Wrench ID	Display the wrench ID (wireless ID) of the torque wrench that was tightened. If wired, 0 is displayed.
Online mode	Switch to online mode. See also: 2-3) Real-time display in online mode

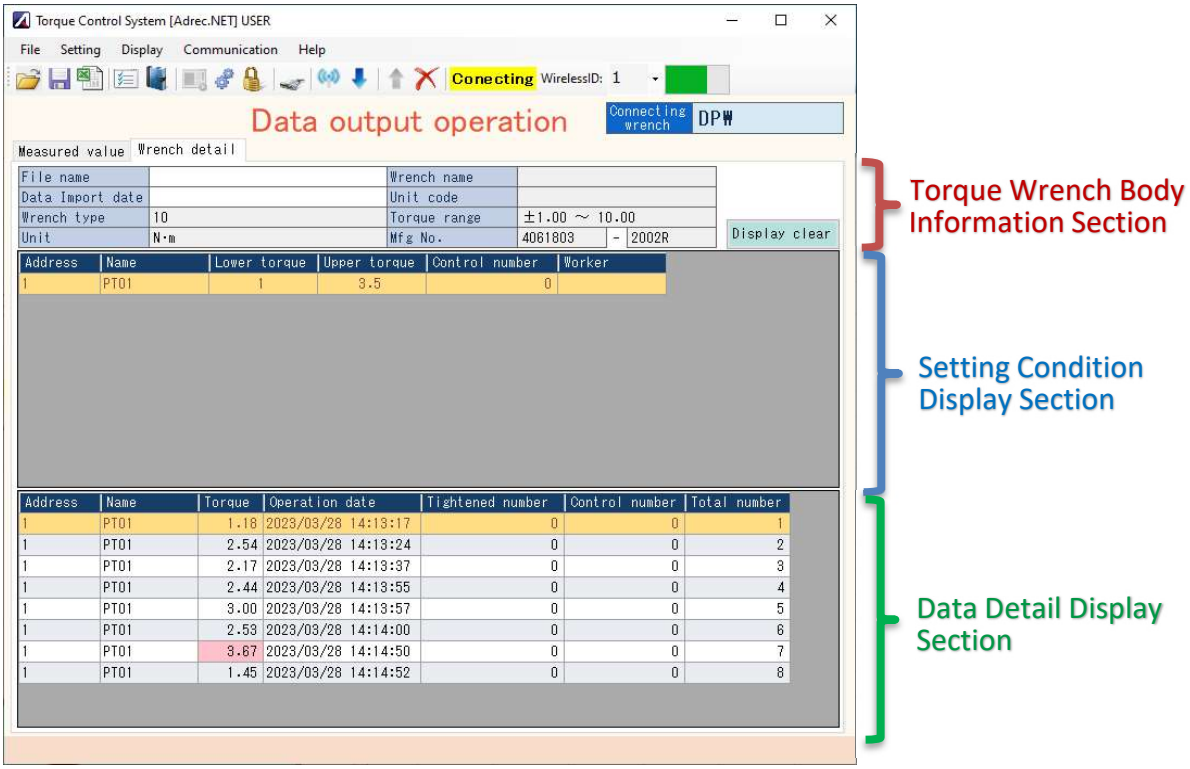
■Measured Value Display Section

It displays the measured value.

For angle wrenches, double tightening prevention, and screw inspection, angle values are also displayed.

Display torque & angle

1-2)[Wrench Details] tab



■ Torque Wrench Body Information Section

File name	The file name is displayed when the saved file is opened.
Date import date	The date and time when data was read from the torque wrench is displayed.
Wrench type	The wrench size is displayed.
Unit	The currently set units are displayed.
Wrench name	The currently set wrench name is displayed.
Unit code	The currently set unit code is displayed.
Torque range	The torque wrench's torque setting range is displayed.
Mfg No.	The serial number of the torque wrench is displayed.
Display clear	Clears the setting condition display section and the data details display section.

■ Setting Condition Display Section

Address	This is the number to link to the statement. If the control count is 0, it is fixed at "1". If the number of management times is 1 or more, a sequential number is assigned for each management time.
Name	The pattern number is displayed by default, but can be changed freely.
Lower torque	Display the set lower torque limit.
Upper torque	Display the set upper torque limit.
Control number	Display the number of management times that were set.
Worker	You can enter freely.

■ Data Detail Display Section

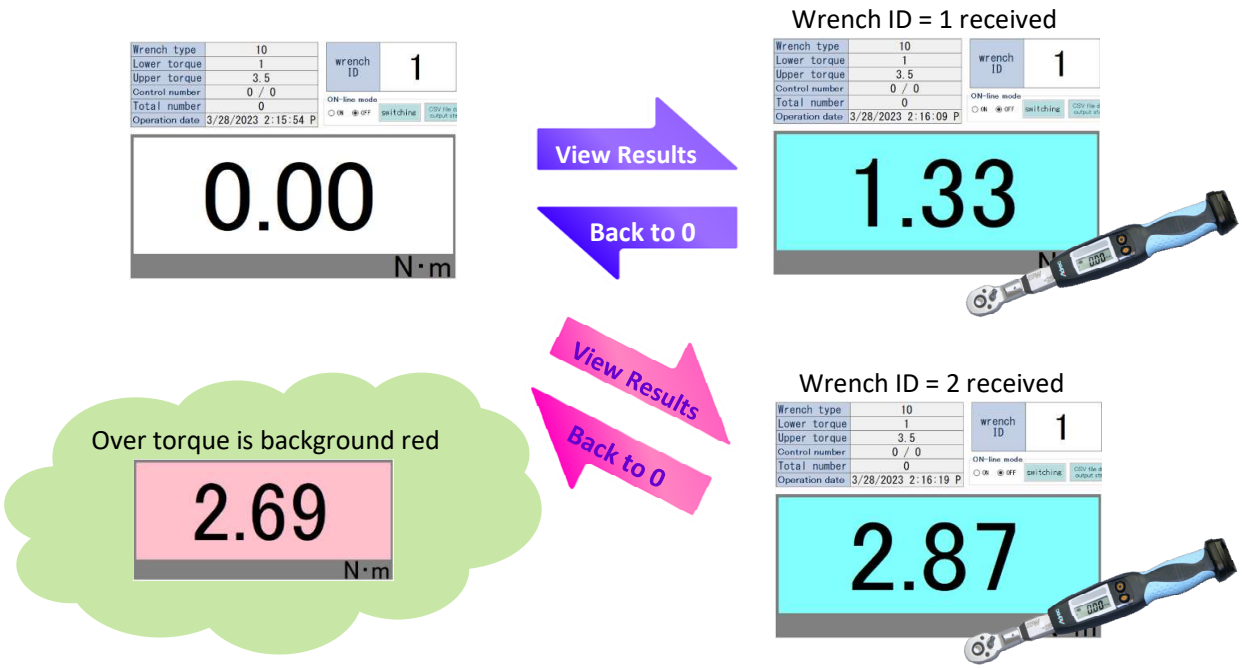
Address	Same as setting condition display section
Name	Same as setting condition display section
Torque	Display peak torque value.
Peak angle	Display peak angle values. Only shown for angle wrenches, double-tightening prevention, and screw inspection.
Operation date	Display the date and time the tightening was performed. *Use the time and date timer time set on the torque wrench itself.
Tightened number	Display the number of times counted in the management frequency unit. If the management frequency is 0, it is fixed at "0".
Control number	Same as setting condition display section
Total number	Counted when MEMO mode is enabled. Counts the number of tightening cycles from the time the memory data is erased until it is erased again. 0 is displayed when MEMO mode is disabled.
Remarks	This is displayed when the optional input function is used. You can enter freely. Reference: 4-4 About Output Operation Screen 4-4) Arbitrary Input Function

2) Display of tightening fixed value

It displays the result of tightening with a torque wrench.

2-1)[Measured Value Display] tab

The [Measured Value Display] tab displays the result of the measurement at that time.
When a tightening result is received from the "0" state,
the result is displayed and the display returns to "0" again.
Even if multiple wrenches are used, they will be switched and displayed.
The display time of measured values can be changed by option setting.
(Standard setting: 1 second)



2-1-1) How to change the number of wrenches displayed

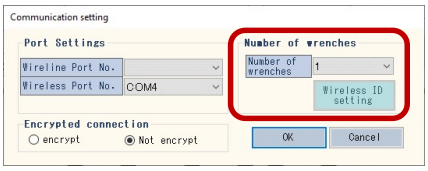
The number of wrenches displayed can be changed to 1, 4, 8, or 16 by setting.

*However, it is only for wireless connection.

Wired connections will always be displayed as a single line.

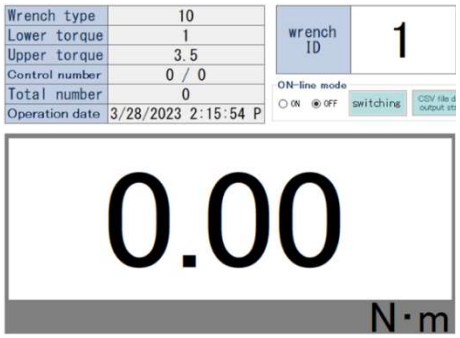
The number of displays is changed from the communication settings screen.

Communication Settings

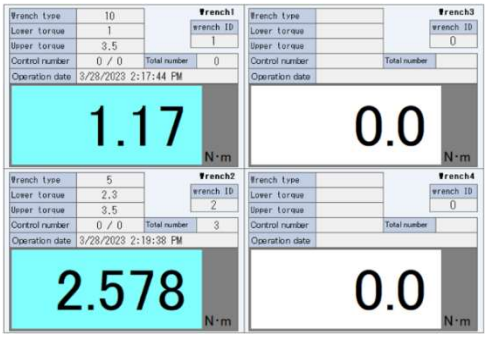


Simultaneous reception and display are possible.

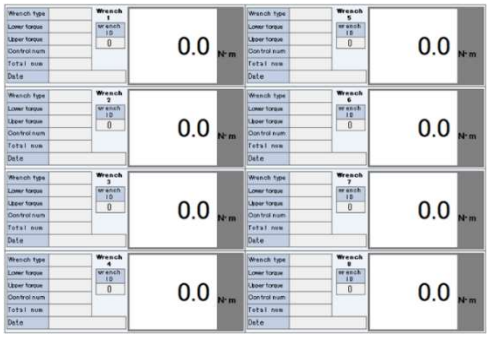
Number of wrenches = 1



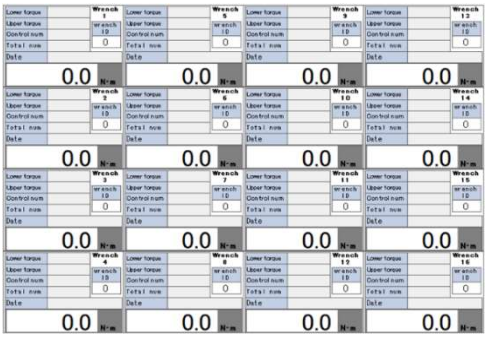
Number of wrenches = 4



Number of wrenches = 8

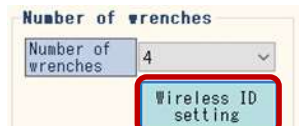


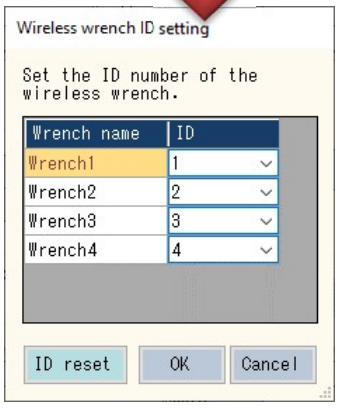
Number of wrenches = 16

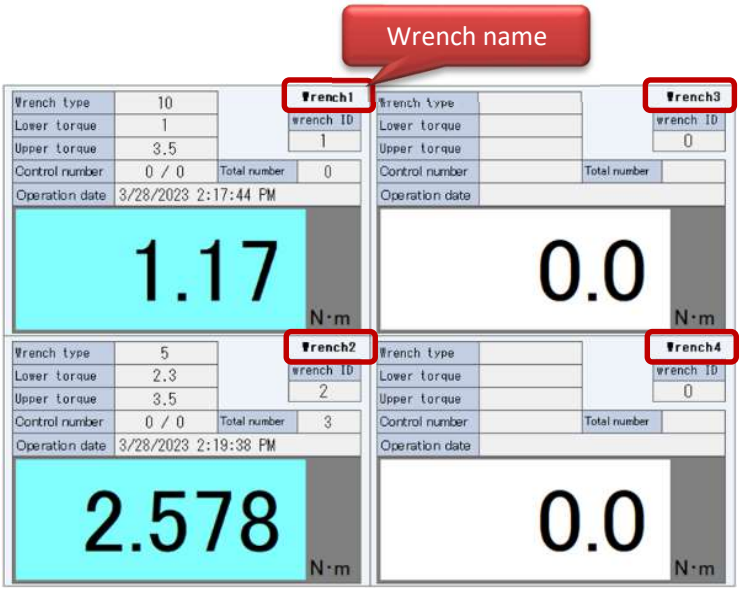


The wrench to be displayed can be changed from the Wireless wrench ID Settings screen.

Set the wrench ID you want to display.

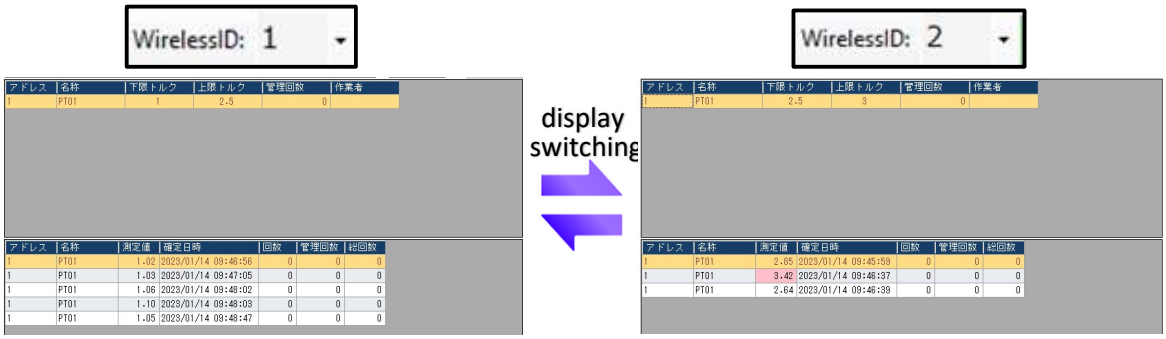






2-2)[Wrench Details] tab

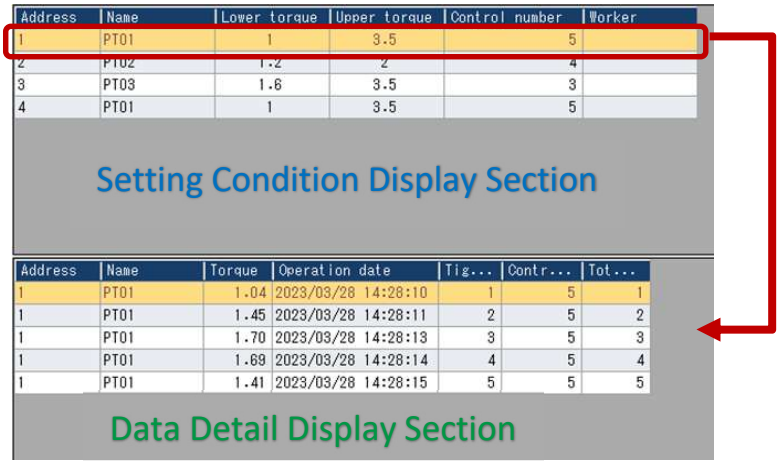
The [Wrench Details] tab displays the results of tightening in a list format.
Since it is stored in units of Wrench ID (Wireless ID),
the display switches when the Wireless ID is switched.



For wired connections, there is no switching.
Only results from wired torque wrenches are listed.

←Only display results of wired torque wrench

In the setting condition display section, a line is added when the torque setting value changes, and the respective measurement results are displayed in the data detail display section. In the case of pattern setting, the following is displayed.



Display the measurement results for the selected setting value.

2-2-1) Readout of measurement data

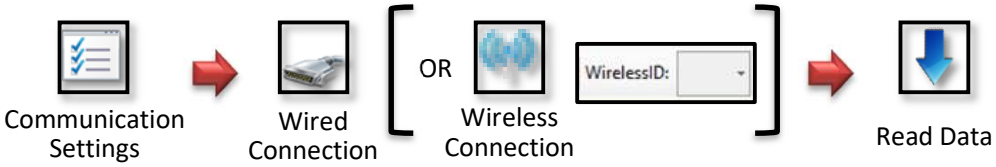
When measurement is performed with MEMO mode enabled, the measurement results are stored in the torque wrench's memory.

It reads out the recorded results.

Recommended

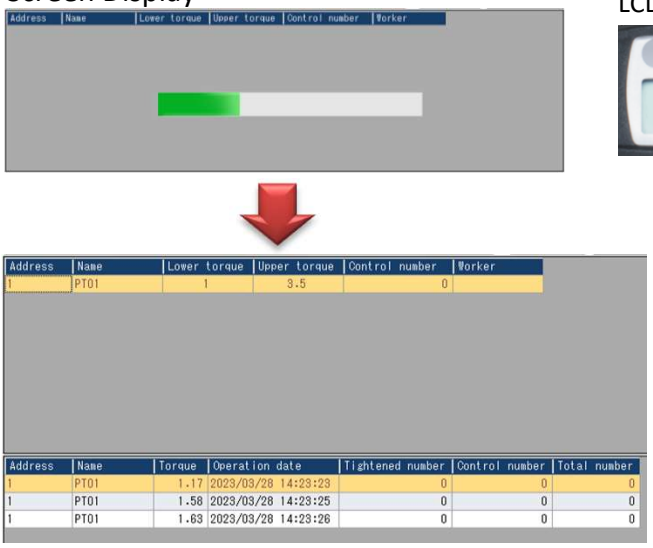
・It is recommended to use "**wired connection**" for reading out measurement data.
Wireless connections can also be used, but communication problems may cause missing data or increasing the time required.

(1) With the [Wrench Details] tab open, read out the data.



(2) Data readout starts and the measurement results are displayed.

Screen Display



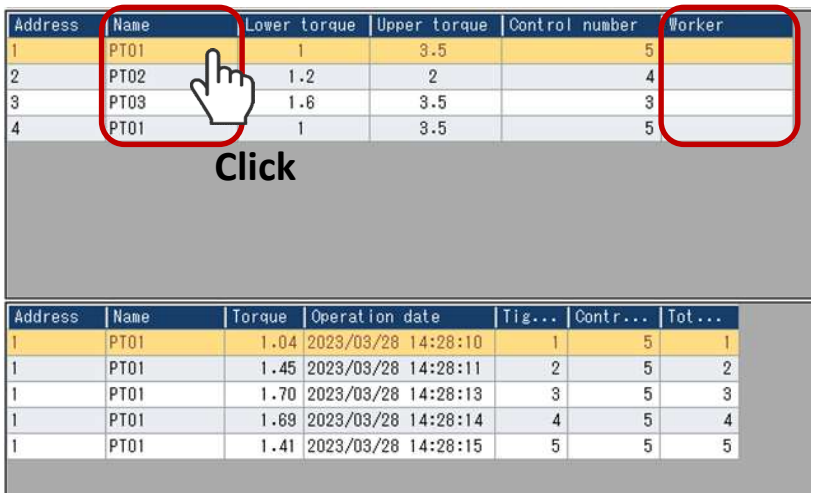
LCD display of torque wrench

(3) To delete the main unit memory data, use [Memory Data Erase].

Memory Data Erase

2-2-2) Data Editing (Change of Name and Worker)

The "Name" and "Worker" can be changed freely.

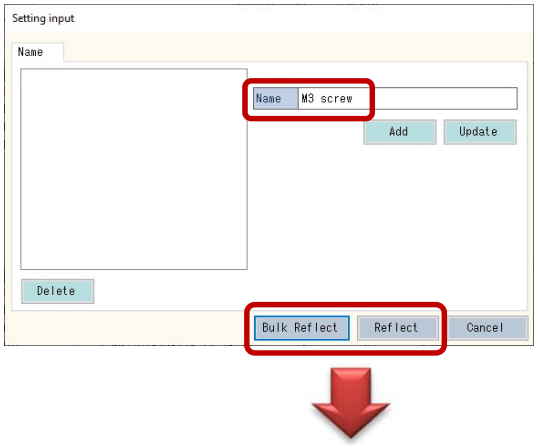


■Change of Name

Click on the "Name" you want to change, and the entry screen will appear.

Enter the name to be changed and press the Bulk Reflect button

or the Reflect button.

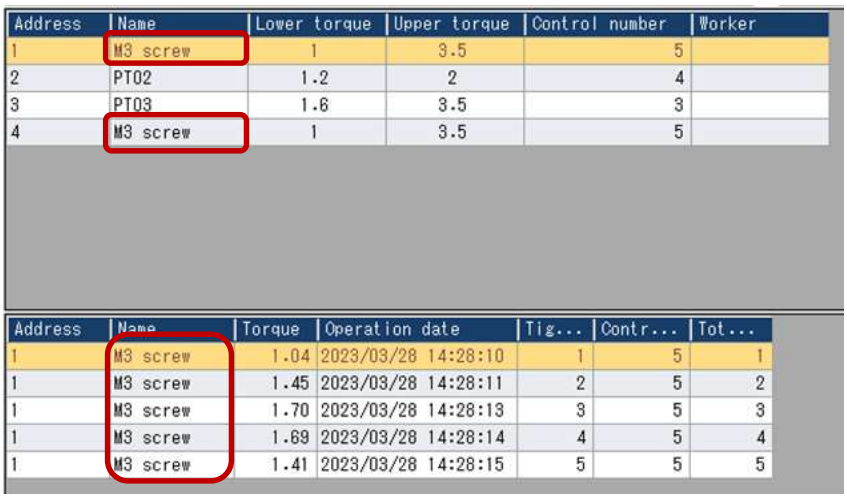


Bulk Reflect...Converts all selected wording

Reflect...only the selected data will be converted

If you press the Bulk Reflect button, all "PT01" will be converted to "M3 screw".

The statement data is also converted together.

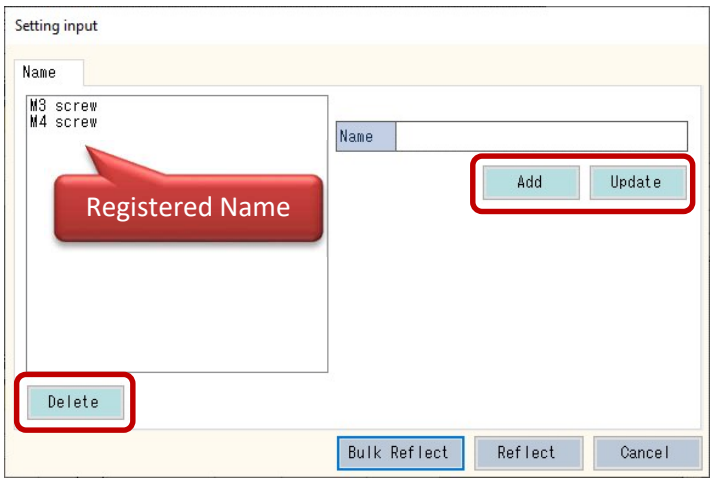


It is convenient to register frequently used names.

Enter a name and click the Add button to register.

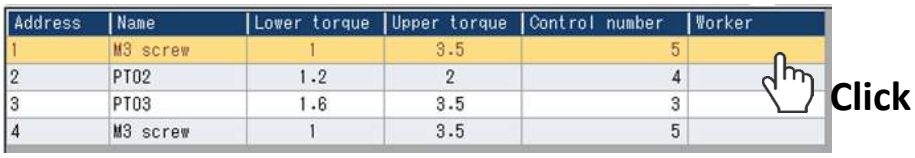
To change the registered name, click the Update button to register the change.

Unnecessary names are deleted with the Delete button.

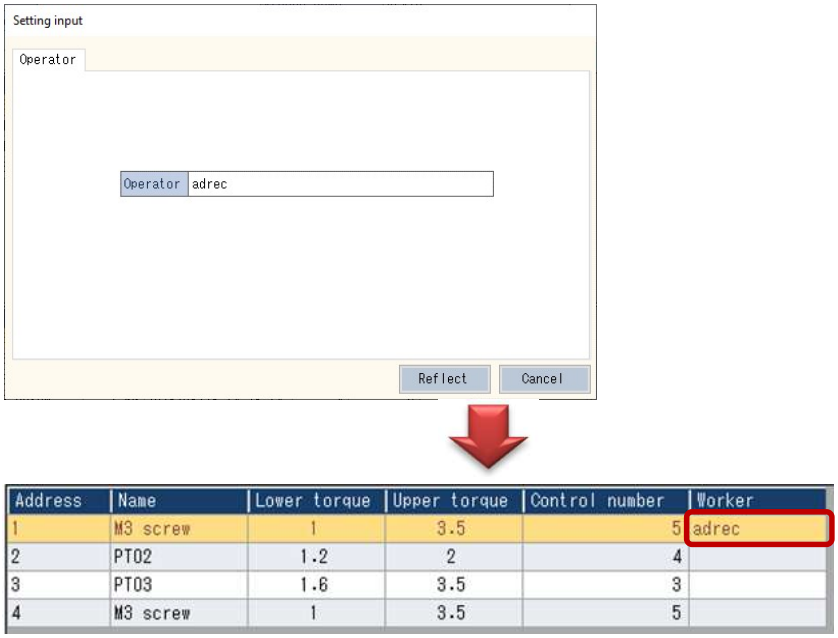


■ Change of worker

Click on the "Worker" you want to change, and the entry screen will appear.

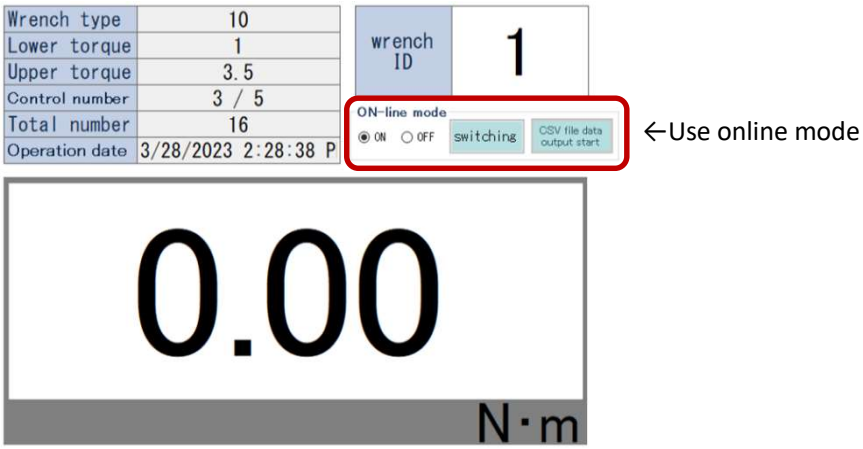


The worker can be changed by entering the worker and pressing the Reflect button.



2-3) Real-time display in online mode

The measured value is normally displayed only as a definite value, but by using the ON-line mode, real-time values up to the definite value can be displayed.

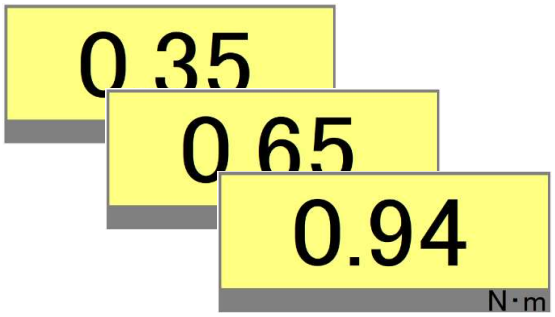


←Use online mode

Select "ON" and switch to ON-line mode with the "Switching" button.

When tightening, the background turns yellow and the real-time value is displayed until the lower limit is reached, and after the lower torque limit is reached, the background turns light blue and the peak is held.

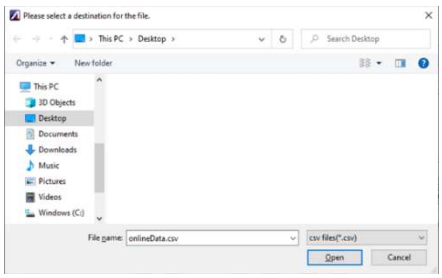
Real-time values are displayed up to the lower torque limit



Peak hold is always applied after the lower torque limit is reached.

Tightening results in On-line mode can be output to CSV file including real-time values.

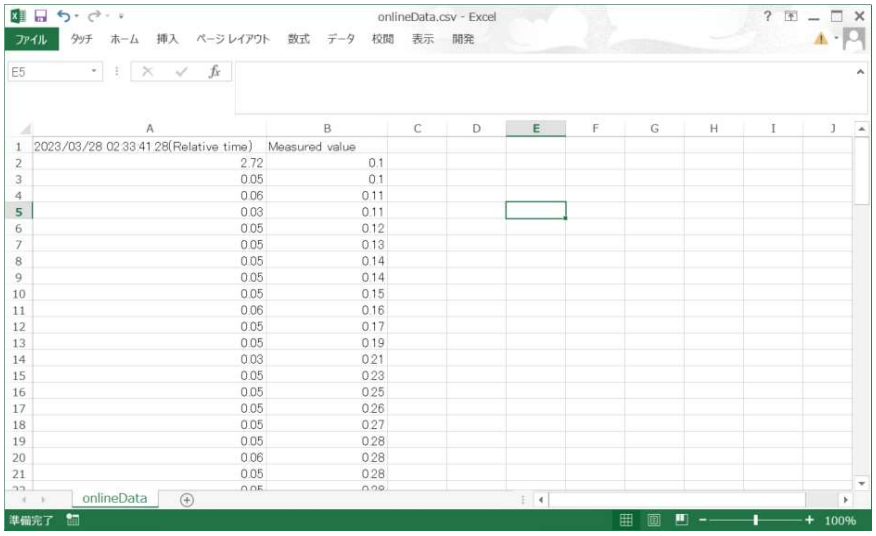
Click the "CSV file data output start" button and specify the destination for the CSV file.



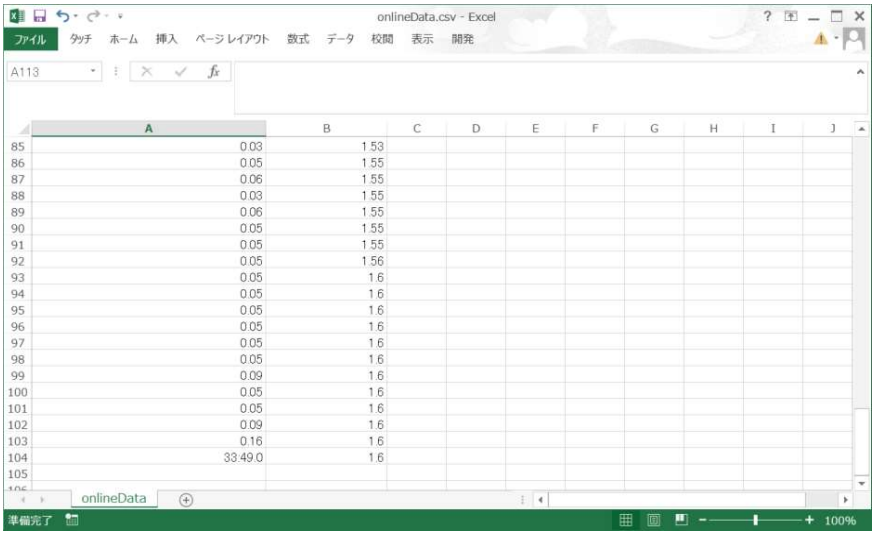
By tightening with a torque wrench, a CSV file can be created at the specified location.

While "Start CSV file output" is being performed, the measured values are written to a CSV file.

The CSV file outputs the "Relative time" and "Measured value" of the tightening start date and time.



The final line outputs the fixed time and the fixed value (peak hold value).



To terminate CSV output, press the "Stop CSV file output" button.

Note

Once output of a CSV file has been stopped, even if the same CSV file name is used to start the file again, it will not be appended to the CSV file and its contents will be overwritten. When outputting a CSV file again, please be careful not to overwrite the file by renaming it or otherwise.

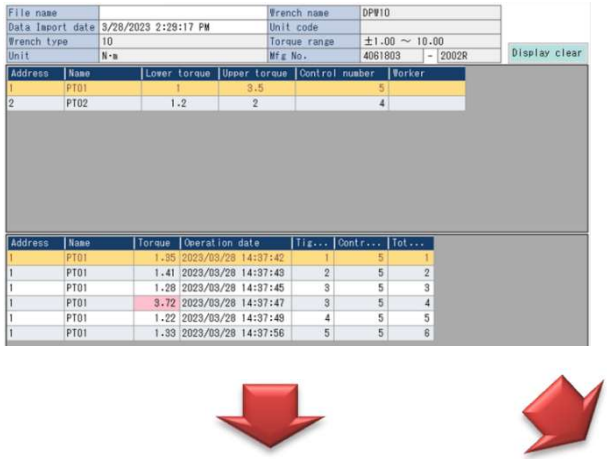
3) Method of exporting tightening values (Excel output, CSV output)

There are two ways to export measurement results.

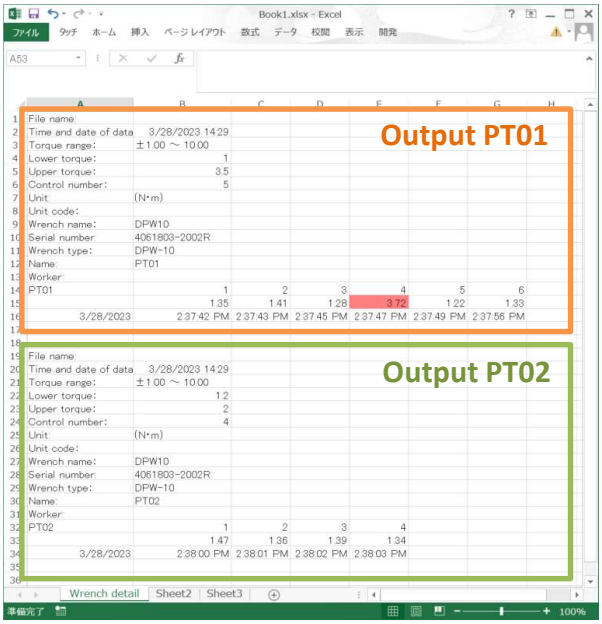
EXCEL data transfer	Output to EXCEL format or CSV format. Output in this format cannot be read back by Adrec.Net.
Save as	Data storage file for Adrec.Net, output in DAT file format (data file). If output in this format, it can be read by Adrec.Net. *it may not be possible to read out due to different versions.

3-1) EXCEL data transfer

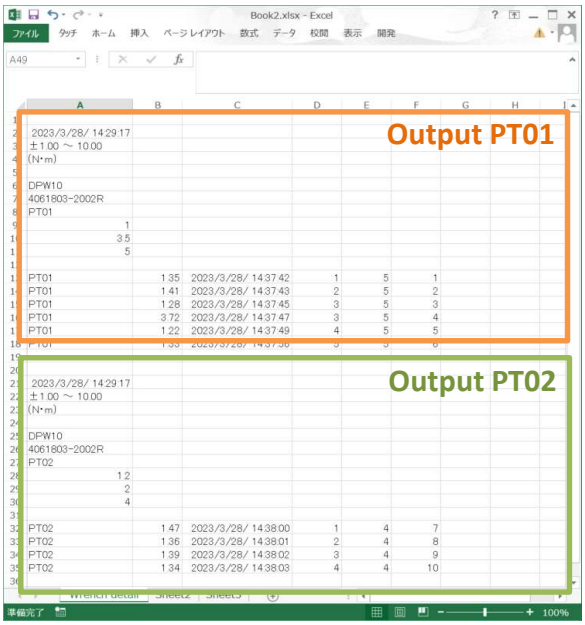
Select either EXCEL format or CSV format for output.



EXCEL format



CSV format



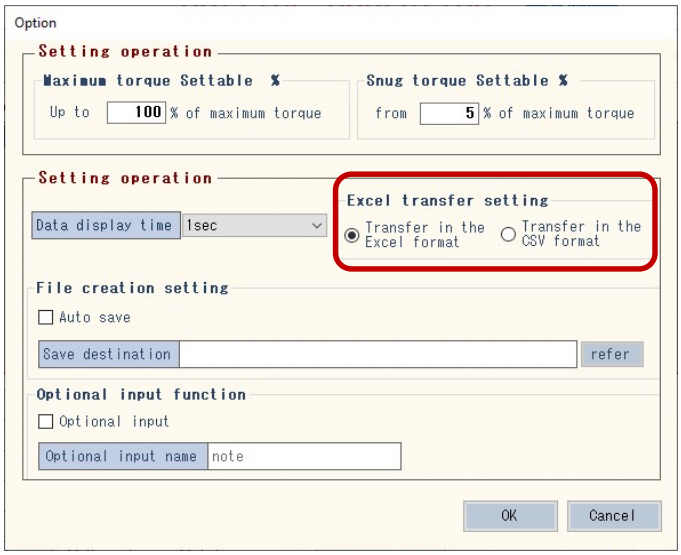
Measurement values are output in the right direction.　Measured values are output downward.

The overtorque value will be red.

(1)From the options screen, select the output format.

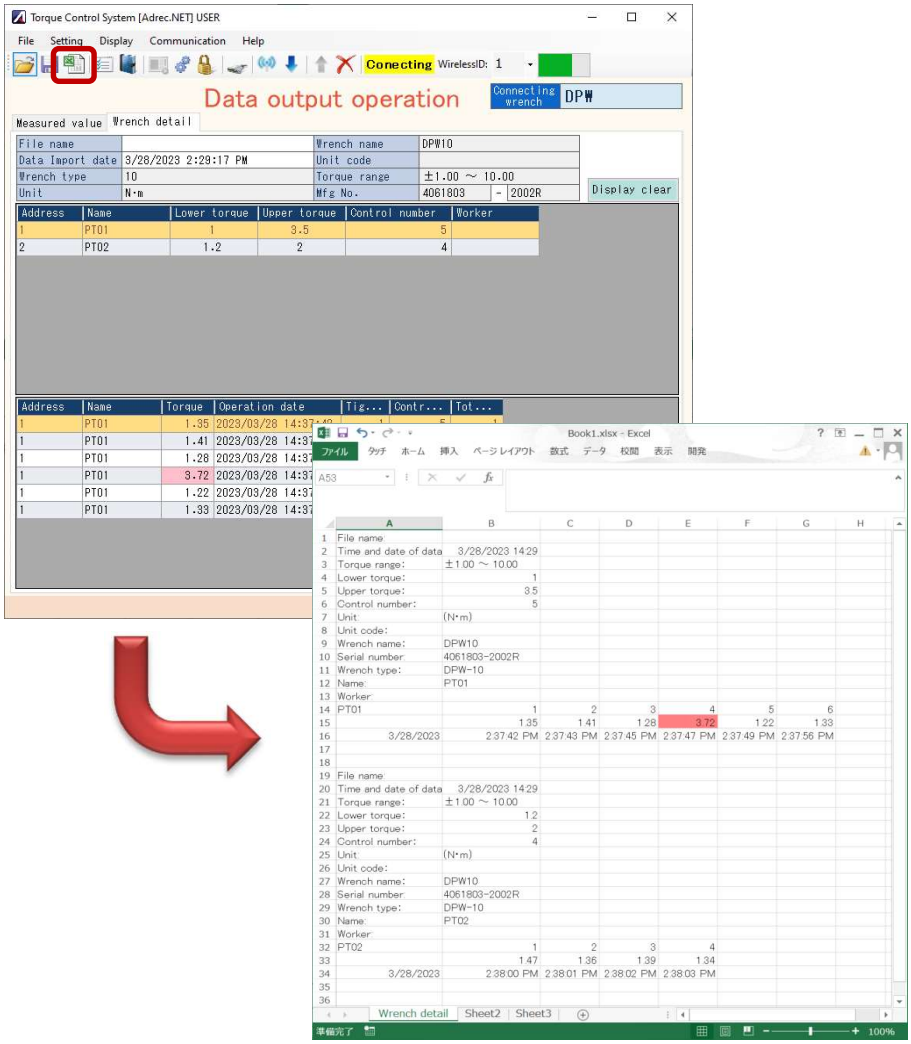
Once set, the setting is saved and does not need to be set again.

Option Setting



(2) Open [Wrench Detail] tab, and while the measured values are being output, click [EXCEL Data Transfer] icon to output the data.

EXCEL Data Transfer

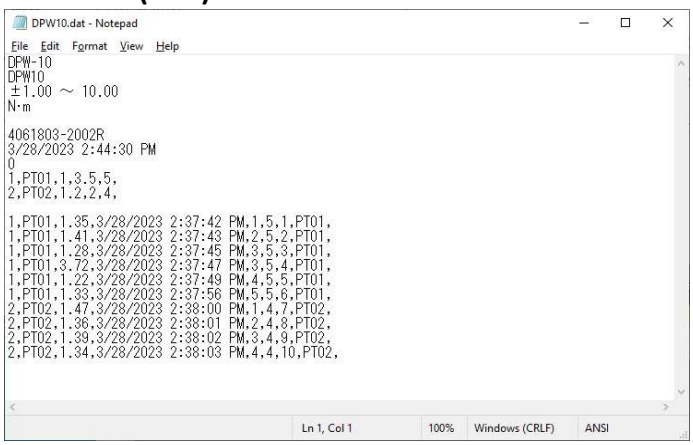


3-2) About Save As

This is a data storage file for Adrec.Net.

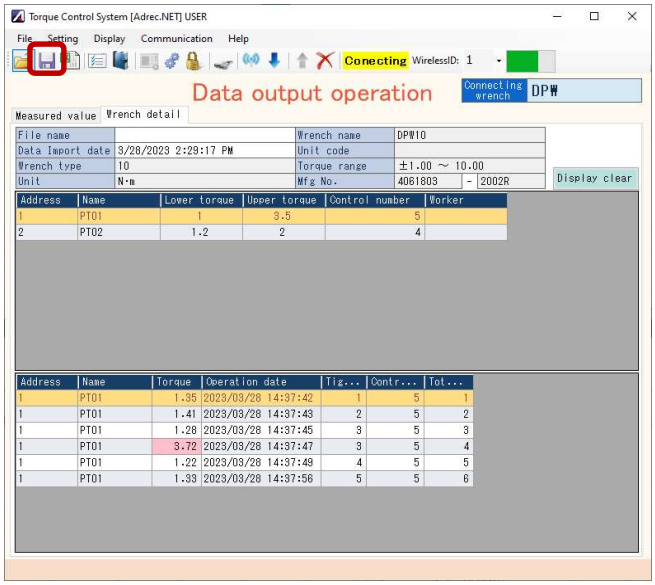
Please note that if the data content is changed, it will not be read correctly.

Data-file(.dat)

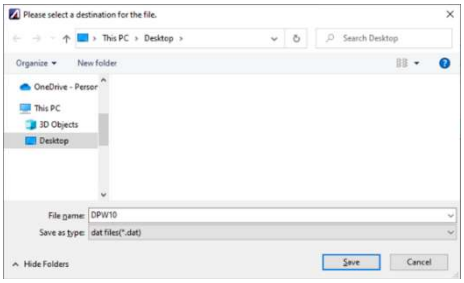


(1) Open the [Wrench Detail] tab, and while the measured values are being output, click the [Save As] icon.

Save As



(2) You will be asked where to save the data file. Please select the destination and give it a name of your choice.

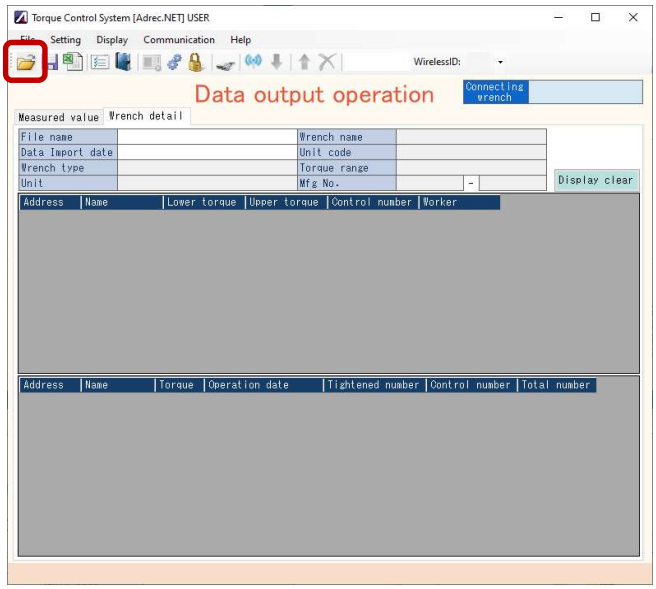


data-file(.dat)

(3) The saved data file can be displayed on the output operation screen.

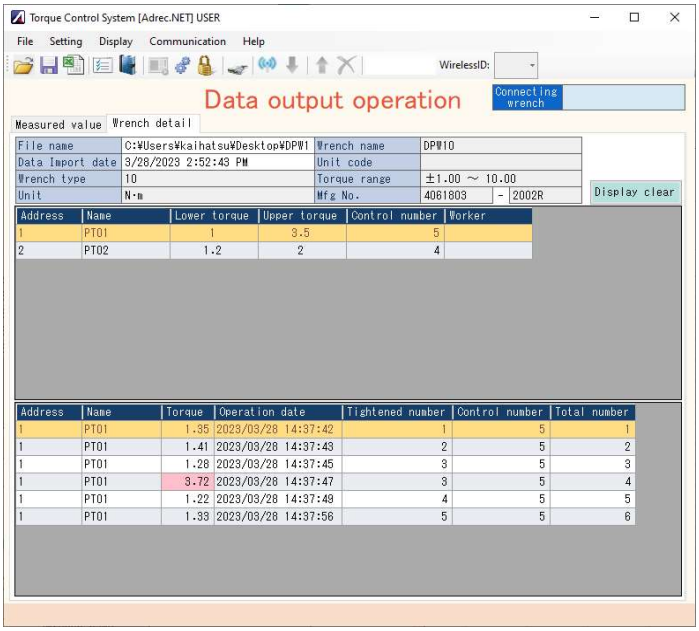
Press the "Open" icon with the "Wrench Detail" tab displayed on the output operation screen.
Since the contents of the data file cannot be written to the torque wrench,
connection of the torque wrench is not required.

Open



The data file is called.

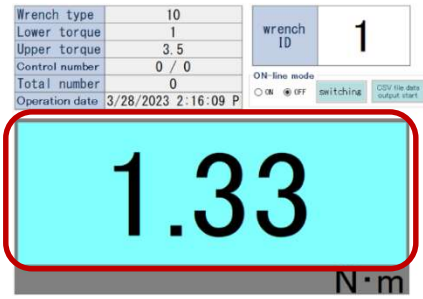
[EXCEL data transfer] is also possible from here.



4) Optional functions

4-1) Changing the display time of measured values

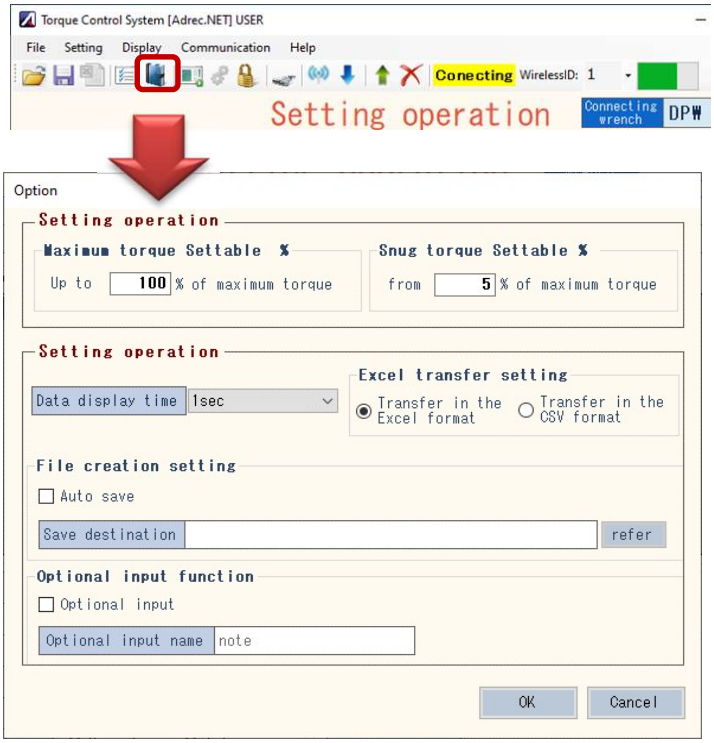
You can change the display time of the measured values in the [Measured Value] tab.



←Display time can be changed.
Default setting is 1 sec.

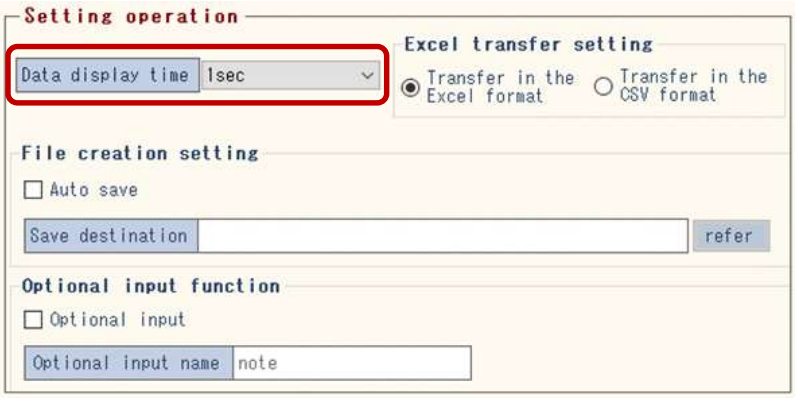
(1) Open the options screen from the [Options Settings] icon.

Option Setting



(2) Change "Data displat time" and press the OK button.

Specifiable range: 1 to 10 seconds

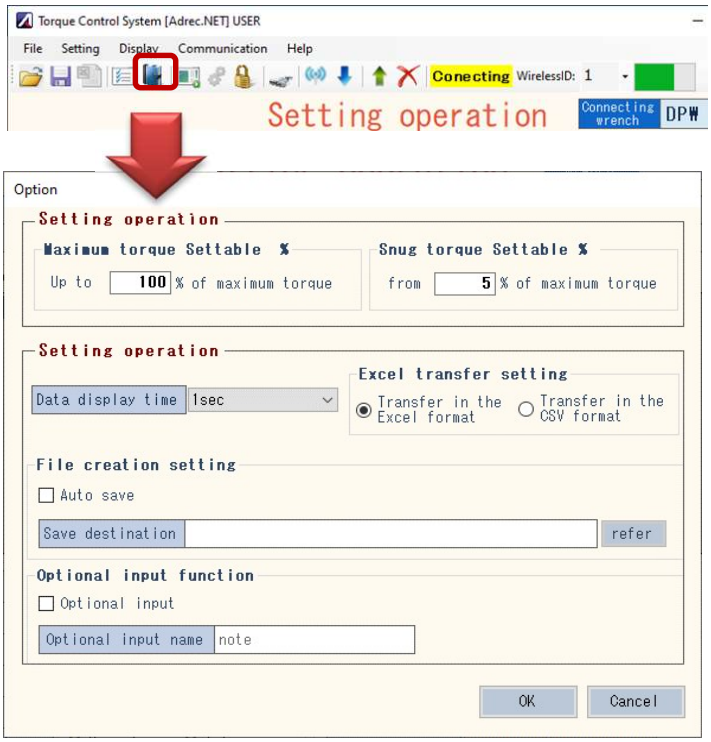


4-2) Switching export format

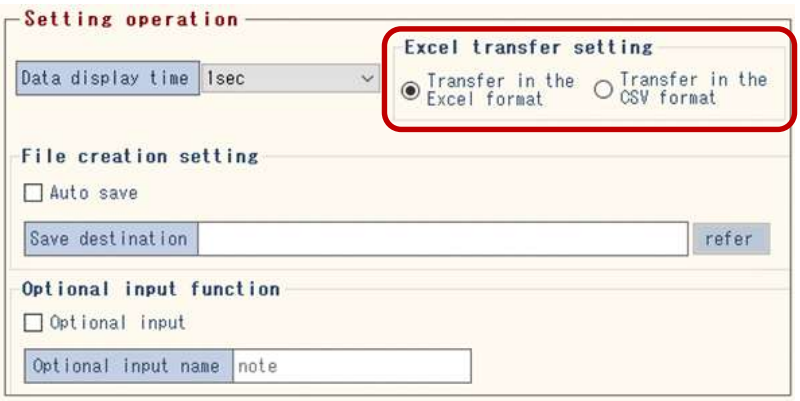
Switches the output format of [EXCEL Data Export].

(1) Open the options screen from the [Options Setting] icon.

Option Setting



(2) Change [Excel Transfer Setting] and press the OK button.

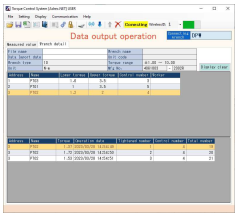


4-3) Auto save function

This function automatically saves the results of tightening.

Only data that has been tightened with [Adrec.Net] open will be saved.

Both wired and wireless can be used.



Received tightening values
are stored on the screen.

Simultaneous
auto save

CSV file

The output is in CSV file format.

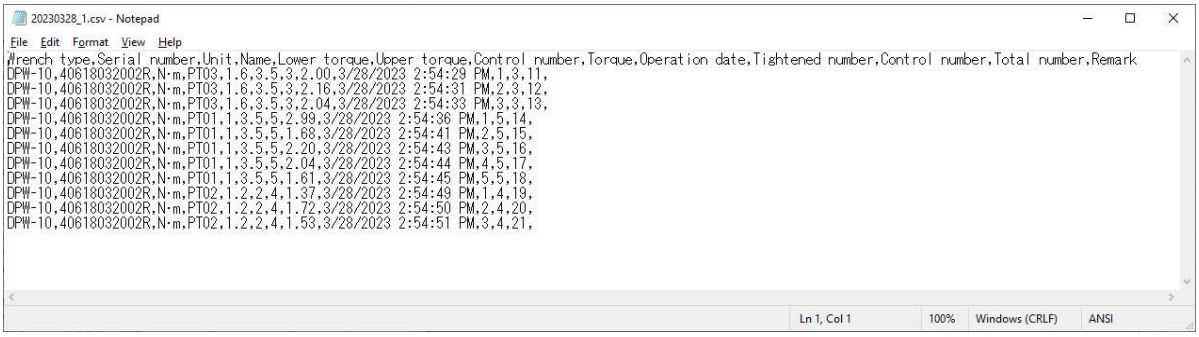
This file cannot be opened in [Adrec.Net].

The output is as follows:

Each time a tightening is performed, it is added to the last line.

For angle wrench, double-tightening prevention, and screw tightening inspection,

peak angle values are also output.



A CSV file is created for each tightening date and wrench type.

The file name is as follows:

Tightening date(YYYYYMMDD)_☐☐☐_Wrench ID.csv

*☐☐☐ will be changed depending on the type of wrench.

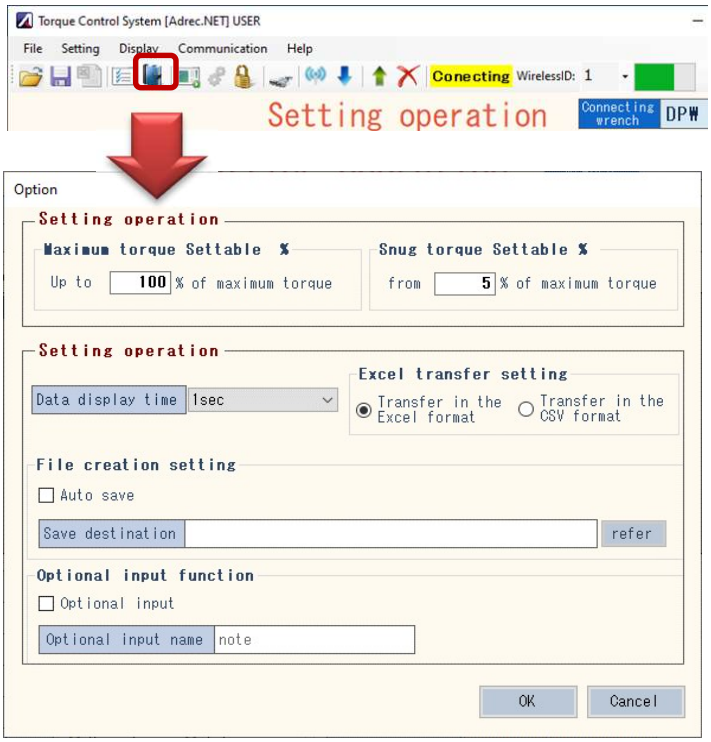
Torque wrench	nothing
Angle wrench	angle
Prevention of double-tightening	double-tightening
Screw tightening inspection	Screw inspection

Example: 20230116_1.csv

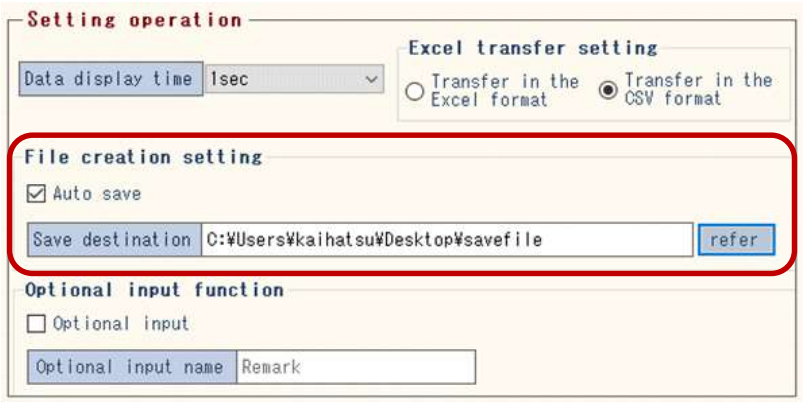
20230116_angle_2.csv

(1) Open the options screen from the [Options Setting] icon.

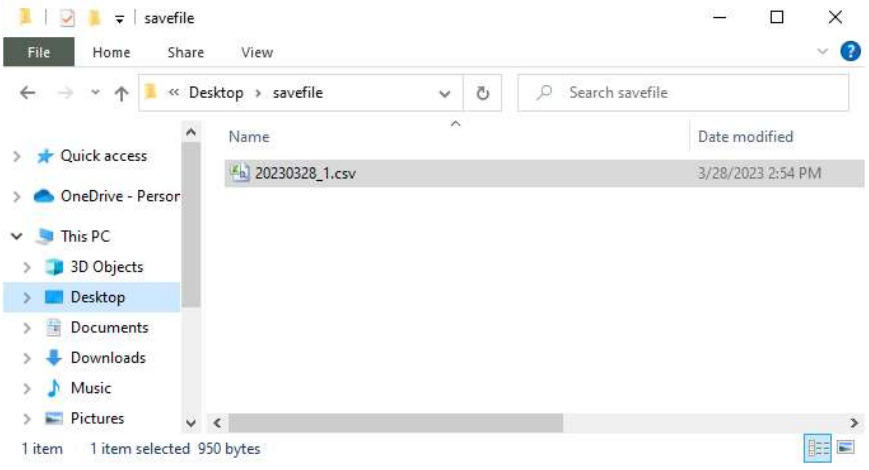
Option Setting



(2) Check the "Auto Save" checkbox, specify the destination folder, and press the OK button.

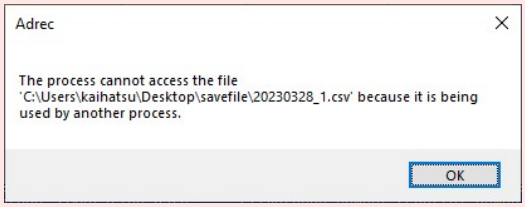


(3)When tightening is performed on the output operation screen,
a CSV file is output to the specified location.



Note

・If you perform tightening with a CSV file open, the following message will appear and you will not be able to save the results. Do not open the auto-save file while working.

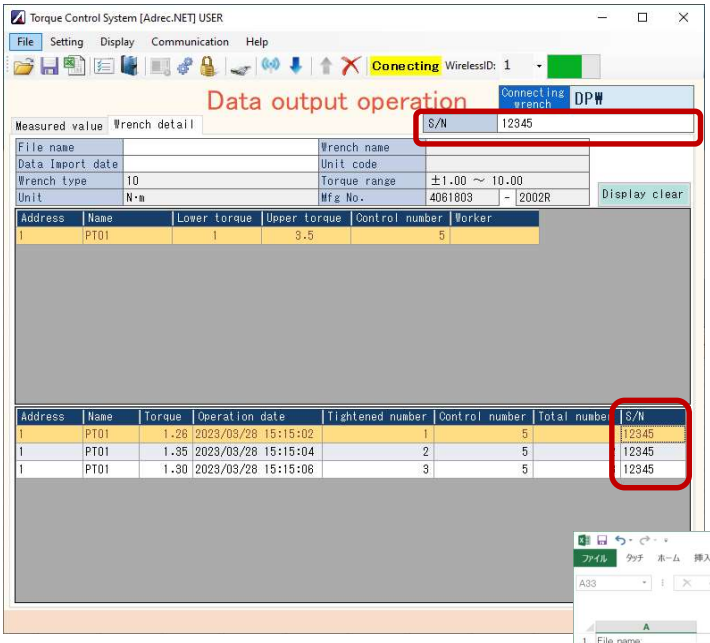


・If an automatic save destination cannot be found, a message will appear at the bottom of the Adrec.Net screen.In this case, the results will not be saved, so be sure to check the destination before proceeding.

Results cannot be saved because the auto-save destination folder cannot be found.

4-4) Optional input function

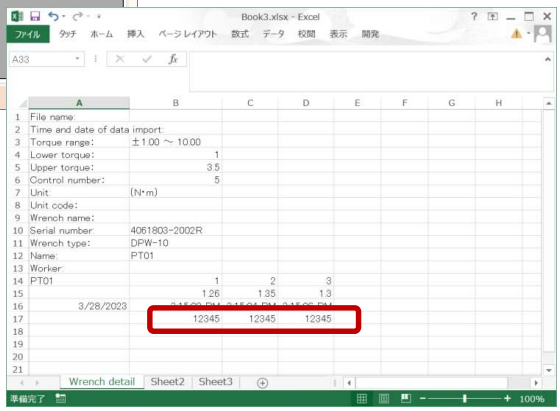
This function allows you to link any wording to the closing statement data.
When the optional entry function is enabled, a text entry field appears and an item is added at the end of the statement section.
When tightening is performed after entering the text input column, the text that was entered in the tightening result is set.



←Wording input column

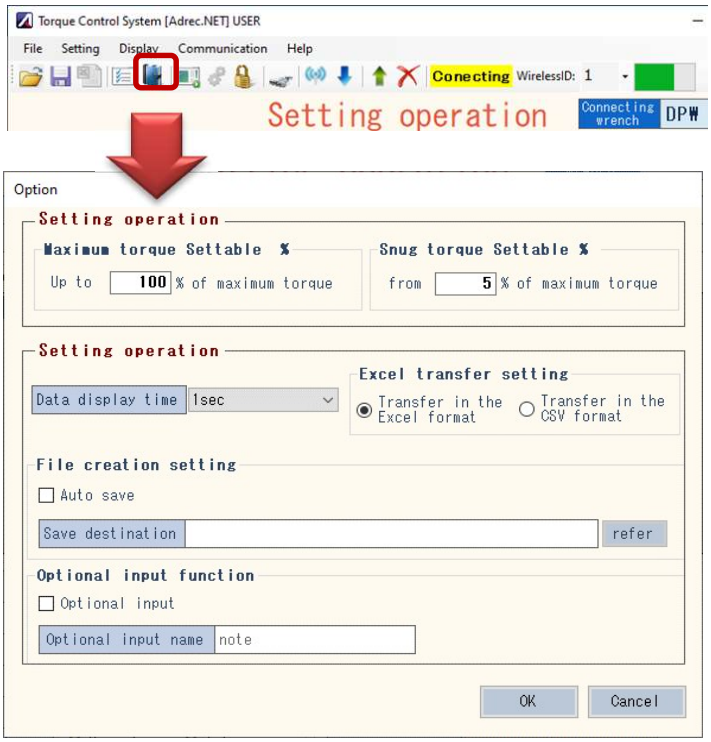
← Tightening is performed, the wording entered in the wording input field is automatically set.

The set wording will be output together in the output results.→



(1) Open the options screen from the [Options Setting] icon.

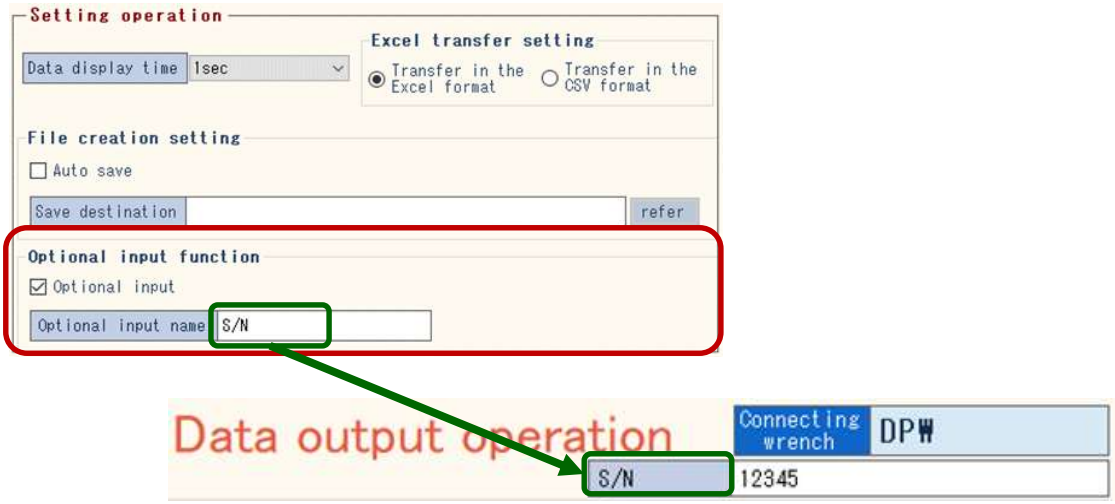
Option Setting



(2) Check the "Optional input" check box and press the OK button.

Optional input name can be chaneged freely.

The optional input name will be used as the name of the item in the text input field.



Note

・Adrec. Net is always active when using the optional input function.
It is recommended that this be performed independently,
as it will be difficult to work in parallel with other tasks.

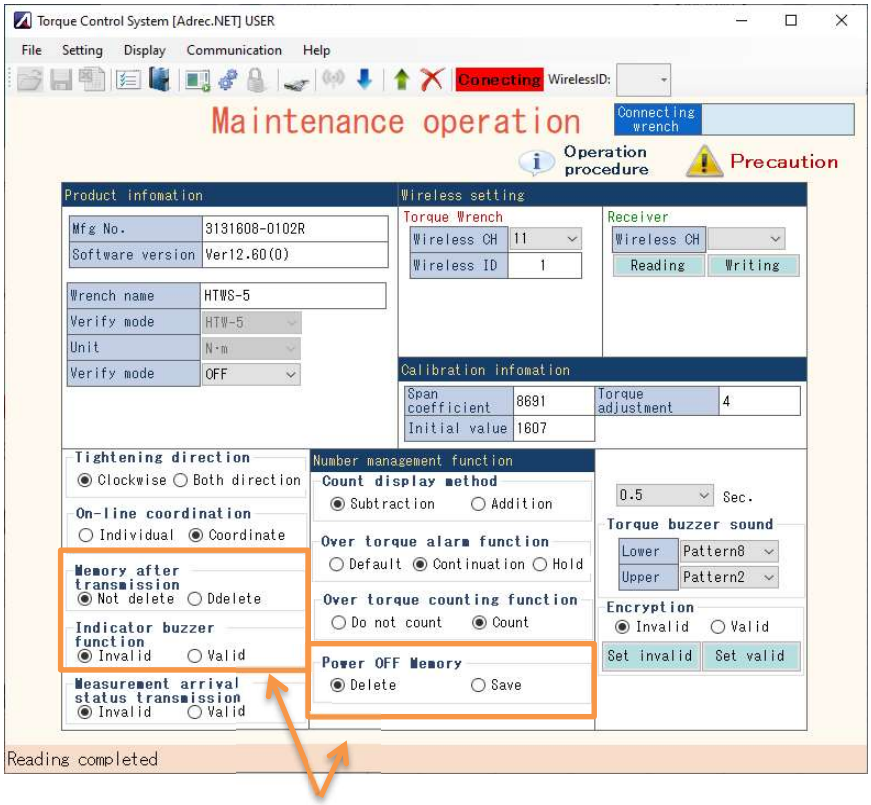
・The optional input function does not have a save function.
Please note that the following operations will clear the input value.
When turning on/off the optional input function / when reconnecting the torque wrench /
when reading output data / when clearing the table

4-5 Maintenance Operation Screen

Here you can change the basic settings of the torque wrench.

The maintenance operation screen is always operated via a **wired connection**.

1) Screen Item Description



Displayed only for HTW series

■Product Information

Mfg No.	The serial number of the torque wrench is displayed.
Software version	The software version of the torque wrench itself is displayed.
Wrench Name	A unique name can be set. (8 single-byte alphanumeric characters)
Wrench type	The wrench type of the torque wrench is displayed.
Unit	The unit of the torque wrench is displayed.
Verify mode	Used when measuring below the lower torque limit. Refer to: "4-6 Other Functions 1) About Inspection Mode".

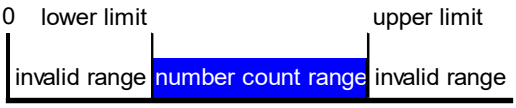
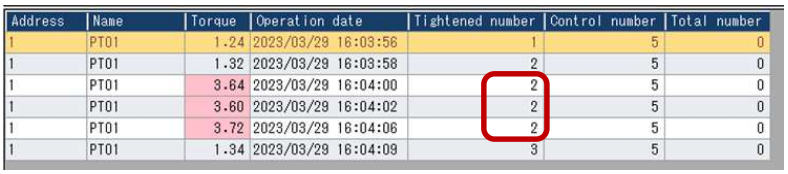
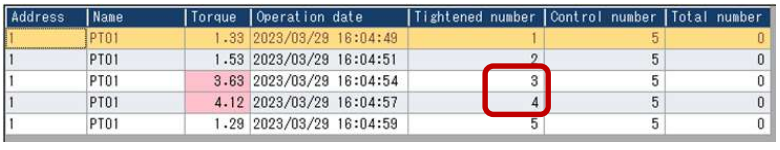
■Wireless Setting

Torque Wrench	It is a Torque wrench.
Wireless CH	The Wireless channel of the torque wrench is displayed.
Wireless ID	The Wireless ID (wrench ID) of the torque wrench is displayed.
Receiver	It is a wireless receiver.
Wireless CH	The receiver's wireless channel is displayed. *Some receivers cannot be displayed.

■Calibration Information

Span coefficient	These are parameters related to calibration.
Initial value	
Torque adjustment	

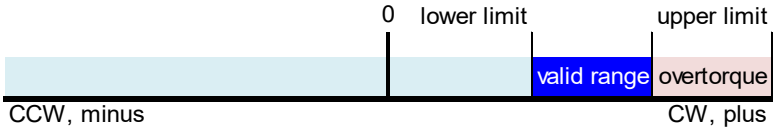
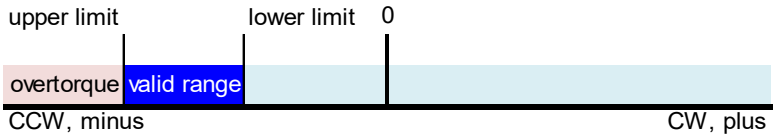
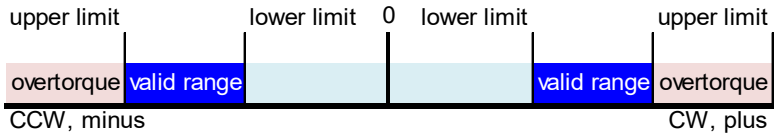
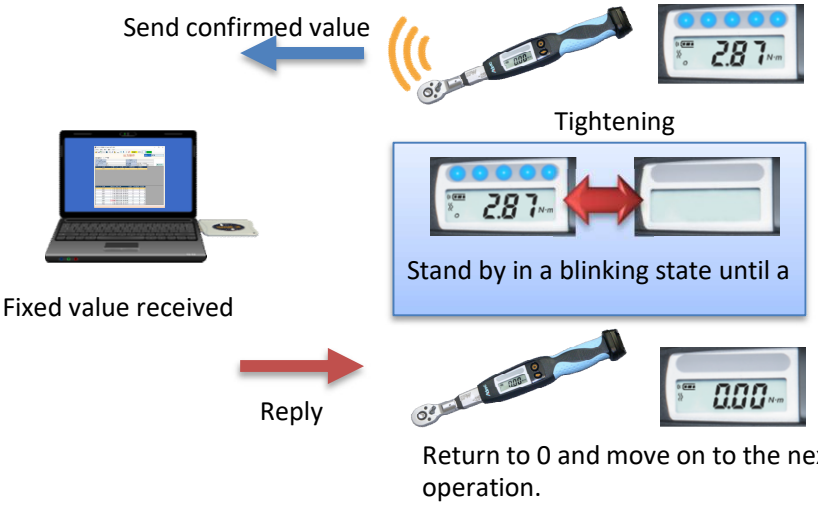
■Number management function　This is a setting related to the number of control cycles.

Count display method	Sets the method for counting the number of administrations. In case of subtraction  In case of addition 
Over torque alarm fuction	Sets the buzzer sound and vibration motor behavior when the measured torque exceeds the [upper torque limit] (overtorque). Default value...Operates for a fixed time (2 seconds). Continue ... Operates until the load is released. Hold ... Operates until canceled by manual operation.
Over torque counting fuction	Sets the counting method for the control function when the measured torque exceeds the [Upper Torque Limit]. Do not count...If the upper torque limit is exceeded, the number of management times will not be counted.  The number of times it will record when overtorque occurs, but the number of times will not change.  Counting …It counts the number of management times even if the upper torque limit is exceeded.  The number of times is also counted during overtorque. 
Power OFF memory	*Configurable only for the HTW series. Set how data up to the present is retained if the power is turned off in the middle of the number of control cycles. Discard...Discarded and starts from 0 when reworked. Save...Saved and start from the number of times after interruption.

Address	Name	Torque	Operation date	Tightened number	Control number	Total number
1	PT01	1.24	2023/03/29 16:03:56	1	5	0
1	PT01	1.32	2023/03/29 16:03:58	2	5	0
1	PT01	3.64	2023/03/29 16:04:00	2	5	0
1	PT01	3.60	2023/03/29 16:04:02	2	5	0
1	PT01	3.72	2023/03/29 16:04:06	2	5	0
1	PT01	1.34	2023/03/29 16:04:09	3	5	0

Address	Name	Torque	Operation date	Tightened number	Control number	Total number
1	PT01	1.33	2023/03/29 16:04:49	1	5	0
1	PT01	1.53	2023/03/29 16:04:51	2	5	0
1	PT01	3.63	2023/03/29 16:04:54	3	5	0
1	PT01	4.12	2023/03/29 16:04:57	4	5	0
1	PT01	1.29	2023/03/29 16:04:59	5	5	0

■Other Functions

Tightening direction function	Set the direction of torque detection. Single direction...Detected only the set "plus/minus" direction. ■For plus setting, only the positive direction is detected.  ■For minus setting, only the minus direction is detected.  Bidirectional...Detected both right rotation (CW, plus) and left rotation (CCW, minus), regardless of the set direction. 
Online System Interfacing Functions	After sending the finalized data, you can set whether to wait for a reply from the computer. Alone…The system will not waite for a reply from the PC, so you can immediately move on to the next task. Torque wrenches with wired specifications are set up this setting. Linked...The system will be in standby mode until a reply is received from the PC. (The standby state is the state in which the fixed value is blinking.) Wireless torque wrench are set up this setting. *Not used for wired specifications. 

Memory erase after data transmission	*Configurable only for the HTW series. Determines whether measurement results stored in internal memory with "MEMO mode enabled" are deleted after being read back by Adrec. Net, etc. Erase ... Erase internal memory after data transmission. Do not erase...After sending data, the internal memory is retained without erasing.
Indicator buzzer function	*Configurable only for the HTW series. Enable or disable the indicator.
Transmission of measurement arrival status function	Set the function to send a command when the lower or upper limit is reached. Enable...Send command. Disable...No command is sent.
Display warning sound operation time	Set the start-up time of the peak torque valuedisplay, buzzer sound, and vibration motor. Settable time: 0.3 to 1.2 seconds (default setting: 0.5 seconds)
Torque buzzer sound	The buzzer sound when the lower or upper torque limit is reached can be selected. Possible values: Pattern 0 (high tone) to Pattern 10 (low tone) (Default value: Lower limit = pattern 8, Upper limit = pattern 2)
Encryption function	Wireless communication with the torque wrench is performed with encryption. When communication with the torque wrench cannot be established due to a communication failure caused by communication with the torque wrench. *Do not use the encryption function normally. See also: [4-6 Other functions 2) Encryption function].

2) How to check maintenance items

The basic settings of the torque wrench can be read and confirmed.

The maintenance operation screen is always operated via a **wired connection**.

(1) Connect a torque wrench to a PC with a USB cable.

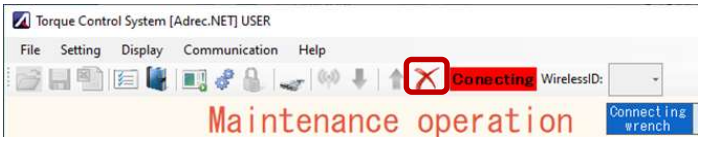
(2) Connect the torque wrench from "4-2 Connection of Torque Wrench".

Communication Settings → Wired Connection

(3) Delete the records in the torque wrench from the [Memory Data Erase] icon.

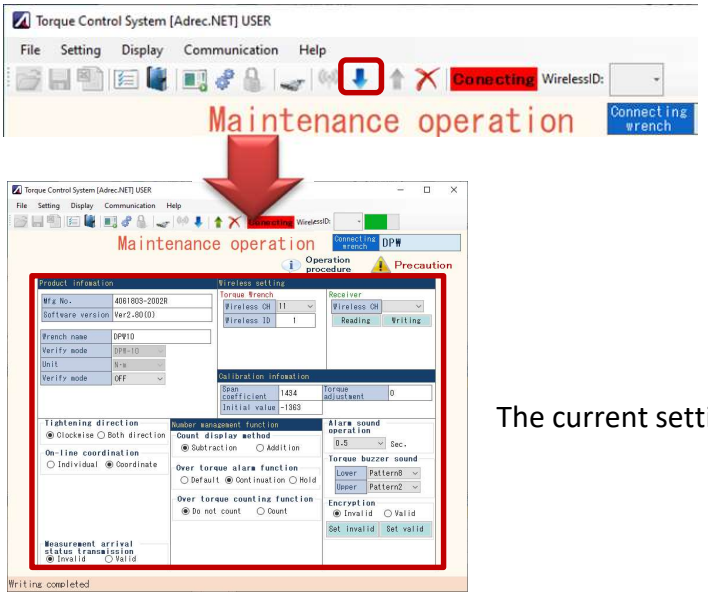
*Deleted data will not be restored. Please save the necessary data before doing so.

Memory Data Erase



(4) Read the settings of the torque wrench from the [Read Data] icon.

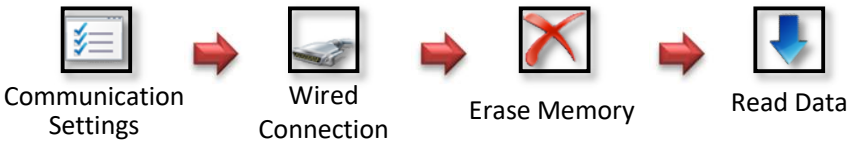
Read Data



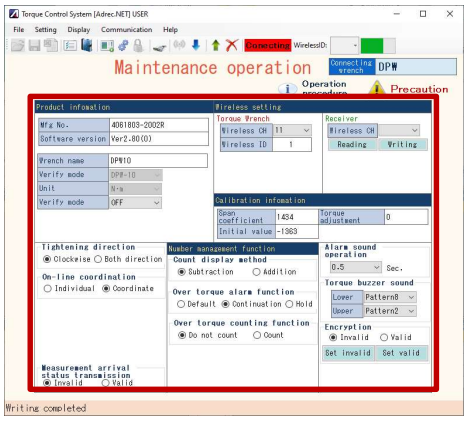
The current settings are displayed.

3) How to rewrite maintenance items

(1) Perform "2) How to check maintenance items" to display the basic settings of the torque wrench.



(2) Change the contents to be written to the torque wrench by operating the screen.



(3) Click the [Write Data] icon to write the settings to the torque wrench.


Write Data

Note

When maintenance operation is performed, the torque wrench enters the maintenance mode, and the display changes to "CAL2".

To return to the measurement mode (0 display), turn the power back on or read data from the [Setting Operation Screen].

3-1) How to change the wireless channel

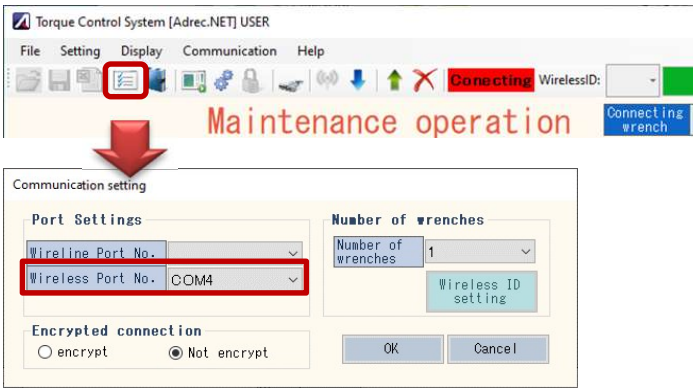
Change the wireless channel of the wireless receiver.

To change the channel and ID of the torque wrench main unit, perform the operations described in "3) How to rewrite maintenance items".

(1) Connect the wireless receiver to the PC.

(2) Click the [Communication Settings] icon to open the communication settings screen, and set the [Wireless Port No.].

Communication Settings



(3) Press the Read button under [Parent Unit] in the upper right corner of the screen to read the current settings.

←The current settings are

(4) Change the Wireless CH and write the changes to the wireless receiver with the Writing button. If it is successful, a completion message is displayed.

←Change CH

Note

Wireless receivers that can read out (3) are those with an "R" in the serial number.

If reading cannot be performed, a "connection failure" message is output at the lower left of the screen.

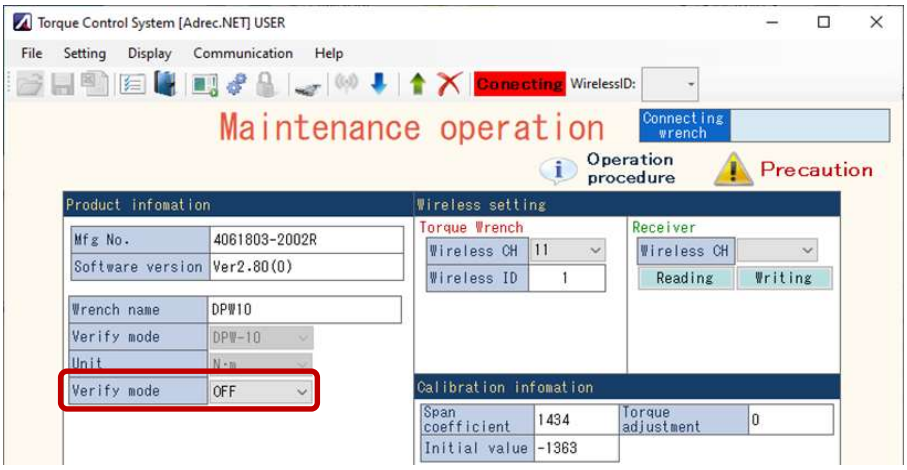
Read cannot be performed, but (4) can be written, it is possible to change the CH.

4-6 Other functions

1) About the inspection mode

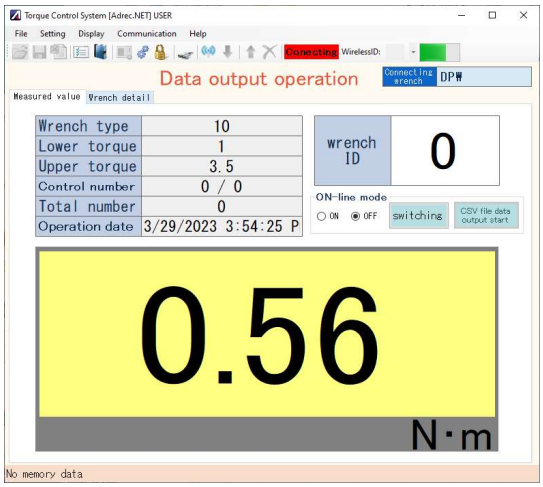
Normally, the measurement is above the lower torque limit, but the inspection mode enables measurement below the lower torque limit.

The inspection mode is set from the [Maintenance Operation Screen].
For details on how to change the maintenance items, please refer to
4-5 Maintenance Operation Screen 3) How to rewrite maintenance items.



The measurable range is 10 to 90% of the [lower torque limit].
For example, if the lower torque limit = 1.0 Nm and inspection mode = 10%,
the definite value will be recorded from "0.1 Nm", 10% of 1.0 Nm.

Torque values less than the lower torque limit will have a yellow background.



Address	Name	Torque	Operation date	Tightened number	Control number	Total number
1	PT01	0.27	2023/03/29 15:54:14	0	0	0
1	PT01	0.36	2023/03/29 15:54:17	0	0	0
1	PT01	0.43	2023/03/29 15:54:19	0	0	0
1	PT01	0.48	2023/03/29 15:54:20	0	0	0
1	PT01	0.59	2023/03/29 15:54:22	0	0	0
1	PT01	0.56	2023/03/29 15:54:25	0	0	0

2) Encryption function

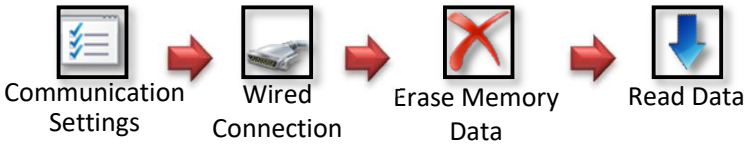
Wireless communication with the torque wrench will be performed with encryption.
This function is used when communication with the torque wrench cannot be established due to a communication failure caused by a busy line, etc.
*Do not use the encryption function normally.

For encryption, the encryption settings of the torque wrench and [Adrec.Net] must be matched.

Communication is not possible with only one of the encryption settings.

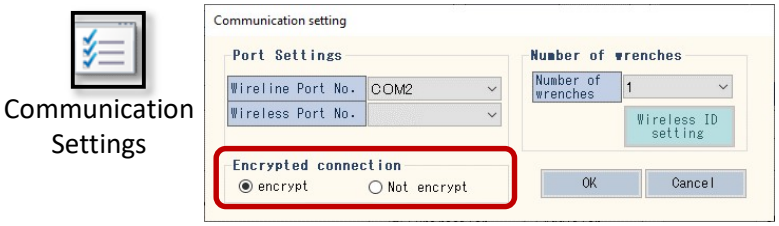
When encrypting, encrypt in the order of Torque Wrench, [Adrec. Net].
Torque wrench encryption settings are made on the [Maintenance Operation Screen].

(1) Perform "4-5 Maintenance Operation Screen 2) How to check maintenance items" to display the basic settings of the torque wrench.



(2) Select "Valid" in "Encryption function" and write the data to the torque wrench in "Write data".
Adrec.Net cannot be used because the torque wrench is set to encrypted settings at the time of writing.

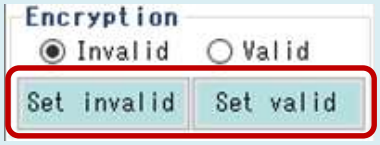
(3) Next, set [Adrec.Net] to the encryption setting.
[Click the "Communication Setting" icon to open the communication settings screen, and select "encrypt" for Encrypted connection.



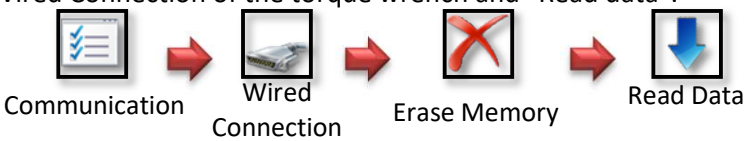
If encryption is set, a key symbol is displayed.

◆ Point ◆

Torque wrench may be set to encryption, but it is not visually apparent. If you are not sure whether encryption is set or not, you can force that setting.
Open the maintenance operation screen, and after wired connection, press the button you want to set. It can be set without data loading.

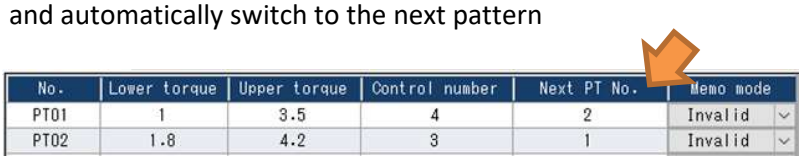


5 Q&A

Torque wrench connection related	
I don't know the port number (COM number).	It can be checked from "Ports (COM and LPT)" in Device Manager. Refer to: [4-2 Connecting a torque wrench 1) Setting the port number].
COM port is not found. Torque wrench is not recognized.	You may not have installed a USB driver. Install the USB driver. Refer to: [2-2 Software Installation 1) USB driver installation]
No wired/wireless connection Failure to connect	Please review the following information. ・Torque wrench may not be turned on. ・COM port number may not be correct. ・Torque wrench or receiver may not be connected to a PC. ・It may be connecting with other software such as a monitor.
Selecting the Wireless ID does not activate the data readout (blue arrow) icon.	Please review the following information. ・Torque wrench may not be turned on. ・Wirelss ID mey not be correct. ・Torque wrench and receiver channels may not match. ・Torque wrench and PC may be wired together with a cable.
How do I check the Wireless CH and Wireless ID?	It can be checked by operating a button on the main body. HTW…Press the [SET] button. DPW…Press ◇Mark button (long press depending on version) CH…Wireless CD, d…Wireless ID In Adrec.Net, it can be checked on [Maintenance Settings Screen].
Wireless CH and ID are matched, but the connetcion has failed.	This occurs when the writing of the channel or wireless ID is not working. Set a different channel and wireless ID once, and then change back to the original wireless ID. <Operation Procedure> (1) On the "Maintenance Operation Screen", Wired Connection of the torque wrench and "Read data".  (2) Set the child unit [wireless CH][wireless ID] to a completely different number and [write data]. (3) Return the child unit [wireless CH][wireless ID] to the CH and ID you want to set, and then [Write Data].

Torque wrench operation related	
Torque wrench is not set to 0 when turned on.	This problem occurs when the power is turned on with a load applied. When turning on the power, place it on a desk and turn on the power with no load on it. *Please be careful with small sizes such as HTWS.
Torque remains at peak hold and does not return to 0.	Two patterns are possible. ・"AUTO mode" is set to "Confirm". In this case, button operation of the wrench body is required to return to 0. When set to "Auto", it will automatically return to 0. Reference: [4-3 About the setting operation screen]. ・The wrench was turned on with a load applied to it. This is especially likely to occur with small sizes such as HTWS. Please turn on the power supply when there is no load on it, such as by placing it on a desk.
Torque remains at peak hold, torque does not return to 0. Tightening value is blinking.	This occurs when the wireless receiver is not capable of receiving the data in a wireless connection. In the case of wireless, the system will be in a state of receiving confirmation (waiting for a reply from the PC) in order to prevent leakage of reception. There are three ways to cancel. ・Connect the receiver to a PC and start Adrec.Net → wireless connection to receive the tightening value. ・The blink state is released by operating the button. *In this case, tightening value is not received by Adrec. ・Set the "Waiting for reply" status to be disabled in the first place.Set [Online System Linkage Function] to Standalone in the [Maintenance Operation Screen] to to prevent waiting for replies. This will prevent the system from waiting for a reply. *In this case, receipt of tightening values cannot be guaranteed.
Torque does not go above 0 when force is applied.	This occurs when the set value is outside the corresponding torque range. For example, for DPW10, 12Nm over the configurable 1-10Nm, and so on. This is likely to occur, for example, when configured from a proprietary system in a class library.

I want to use a wireless torque wrench with wired specifications, but it blinks everytime I tighten it.	In the case of wireless specifications, the "Online system linkage function" is set to "Linkage" as the default setting at the time of shipment, so if the tightening value cannot be received by the PC side, the machine enters a state of waiting for a reply (the tightening value blinks). To use it as if it were a wired specification, change the following settings. ・In the "Maintenance Settings" screen, change "Online System Linkage" to "Standalone" (Alone...No waiting for reply from PC) ・Change "MEMO Mode" to "Enable" on the "Setup Operation Screen"
"TErr" is displayed and the power turns off.	This problem occurs when the power is turned on when the battery is nearly empty. Please recharge or replace the battery. Once "TErr" occurs, the calendar setting held in the torque wrench is also erased and the date and time are initialized. Please set the date.
"CAL2" is displayed.	"CAL2" is in the maintenance mode and is displayed when data readout is performed on the maintenance operation screen. To return to the normal measurement mode(0 displayed), perform data readout on the setting operation screen or turn the power back on.
"Err2" is displayed.	This message is displayed when a signal cannot be obtained from the sensor that measures the torque value. Please contact us for repair.
What time is used as the definite date and time of tightening?	The torque wrench body has a date/time timer, and the date/time when the timer is used is the fixed date/time.The timer of the main unit that has a completely different date and time is not set correctly. Please reset the date and time on the body. See also: [QA] How do I change the date on a torque wrench?
The date and time of confirmation are not correct. It's a completely different date.	The date on the torque wrench body is not set correctly. After the battery runs out, the date will be reset if it is not operated for a while. In addition, long-term use of the system may cause a slight time discrepancy. Please reset the date. See also: [QA] How do I change the date on a torque wrench?

Related to setting changes	
I don't know how to change the Wireless CH or wireless ID.	Change from the "Maintenance Setup Screen". The "Maintenance Setup Screen" can only be changed via a wired connection. Reference: [4-5 About Maintenance Operation Screen 3-1) How to change the wireless channel]
How do I change the date on a torque wrench?	Change from the "Setup Operation Screen". Read data on the "Setting Operation Screen," set "Date/Time Setting" on the lower left of the screen to Valid, and then write data.  Read Data Write Data Write the date and time on the computer to the torque wrench. You cannot change the date and time to anything other than the date and time of your computer. If you must change the date to a specific date, please change the date and time on your computer, then start Adrec.Net, and write to TorqueWrench.
How do you switch patterns?	There are two ways to do this. 1) How to set the destination pattern No. and automatically switch to the next pattern  In this case, the number of management times must be set. When the number of tightening operations has been completed for a controlled number of times, the system automatically shifts to the destination pattern that has been set. 2) How to switch by operation of the torque wrench itself Operation methods differ between HTW and DPW. <HTW> After pressing [SET] + [SHIFT] simultaneously, press [S/C] to switch PT and [SET] to confirm. <DPW> After pressing [Power]+[◇] simultaneously, use [◇] to switch PT and [Power] to confirm.

No.	Lower torque	Upper torque	Control number	Next PT No.	Memo mode
PT01	1	3.5	4	2	Invalid
PT02	1.8	4.2	3	1	Invalid