



**Manual for Multi-purpose
Measurement Software,
Beans**

• Please note that the contents of the manual are subject to change without notice.



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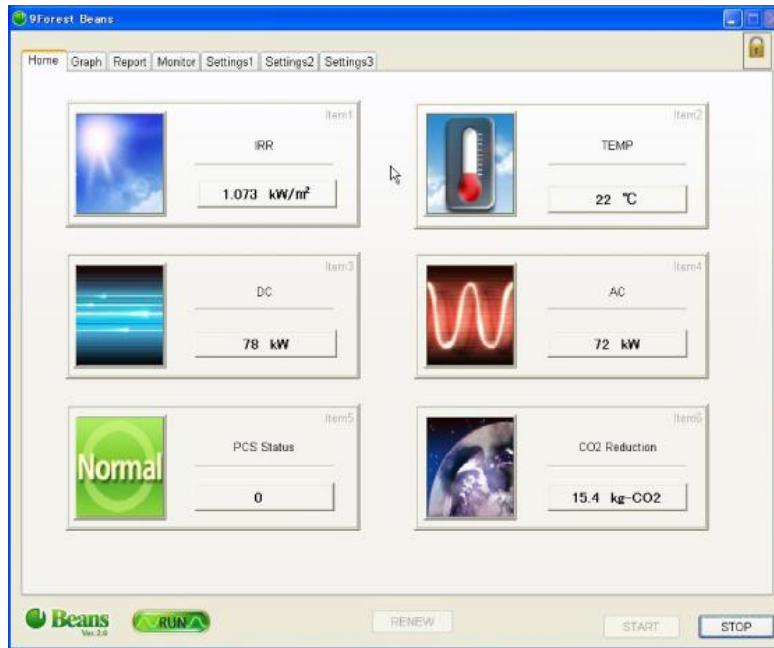
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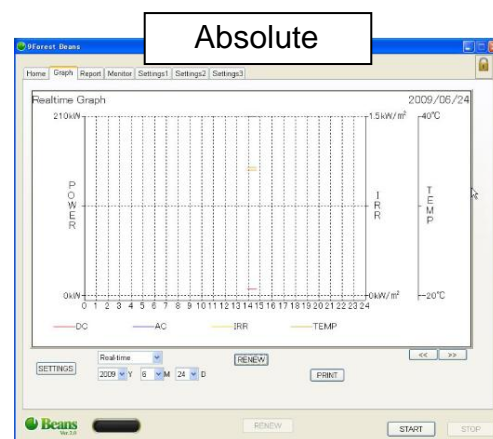
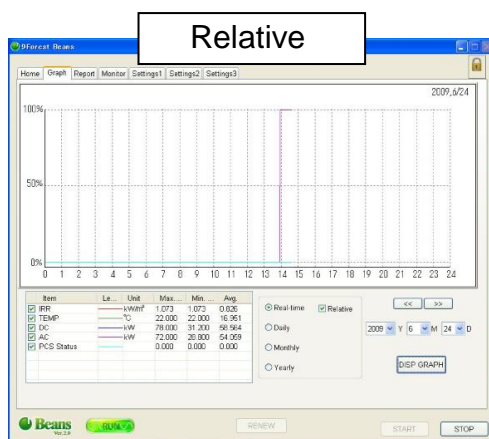
Chapter1: Structure of Beans

1-1 Home Screen



Shows measurement items and values.
Such converted values as amount of CO2 reduced can be displayed as well.

1-2 Graph Screen



Shows graphs of items displayed on Home.
Possible to choose either a relative or an absolute graph.

1-3 Report Screen

	Irr. [kWh/m ²]	Temp. [°C]	DC Pwr [kWh]	AC Pwr [kWh]	Amount of CO2...
0'	1.07	22.0	649.4	442.6	139.2
1'	1.07	22.0	649.4	442.6	139.2
2'	1.07	22.0	649.4	442.6	139.2
3'	1.07	22.0	649.4	442.6	139.2
4'	1.07	22.0	649.4	442.6	139.2
5'	1.07	22.0	649.4	442.6	139.2
6'	1.07	22.0	649.4	442.6	139.2
7'	1.07	22.0	649.4	442.6	139.2
8'	1.07	22.0	649.4	442.6	139.2
9'	1.07	22.0	649.4	442.6	139.2
10'	1.07	22.0	649.4	442.6	139.2
11'	1.07	22.0	649.4	442.6	139.2
12'	1.07	22.0	649.4	442.6	139.2
13'	1.07	22.0	649.4	442.6	139.2
14'	1.07	22.0	649.4	442.6	139.2
15'	1.07	22.0	649.4	442.6	139.2
16'	1.07	22.0	649.4	442.6	139.2
17'	0.57	22.0	346.3	236.1	74.2
18'	0.00	0.0	0.0	0.0	0.0
19'	0.00	0.0	0.0	0.0	0.0
20'	0.00	0.0	0.0	0.0	0.0
21'	0.00	0.0	0.0	0.0	0.0
22'	0.00	0.0	0.0	0.0	0.0
23'	0.00	0.0	0.0	0.0	0.0
Sum	18.81	16.5	11395.8	7760.3	2440.6

Designed for print-outs of reports, and save as CSV.
 Report items can be added or deleted either manually or automatically.

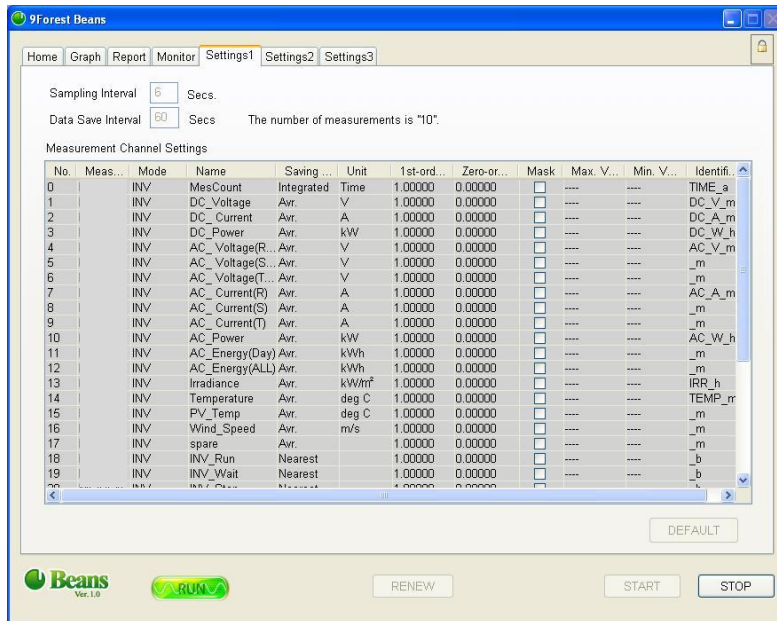
1-4 Monitor Screen

No.	Name	Raw Data	Meas...
6	AC_Voltage...	420.000	420.000
7	AC_Current(R)	2.000	2.000
8	AC_Current(S)	2.000	2.000
9	AC_Current(T)	2.000	2.000
10	AC_Power	7.300	7.300
11	AC_Energy(...)	1188.000	1188.000
12	AC_Energy(...)	12345678.000	12345...
13	Irradiance	4.000	4.000
14	Temperature	18.499	18.499
15	PV_Temp	4.196	4.196
16	Wind_Speed	20.000	20.000
17	spare	4.000	4.000
18	INV_Run	1.000	1.000
19	INV_Wait	1.000	1.000
20	INV_Stop	1.000	1.000
21	INV_Trouble	1.000	1.000
22	INV_GridTro...	1.000	1.000
23	MesCount	1.000	1.000
24	Latitude(N/S)	0.000	0.000
25	Latitude(X/Y)	35.000	35.000
26	Latitude(Y/...	45.824	45.824
27	Longitude(E/W)	0.000	0.000
28	Longitude(X/Y)	129.000	129.000
29	Longitude(Y/...	48.782	48.782
30	Vessel_Speed	20.200	20.200
31	BowDirection	120.000	120.000

No.	Name	Formula	Value	Unit
P0	Reduced_CO2	ch010*0.3145	2.296	kg-CO2
P1	Reduced_OIL	ch010*0.227	1.657	l

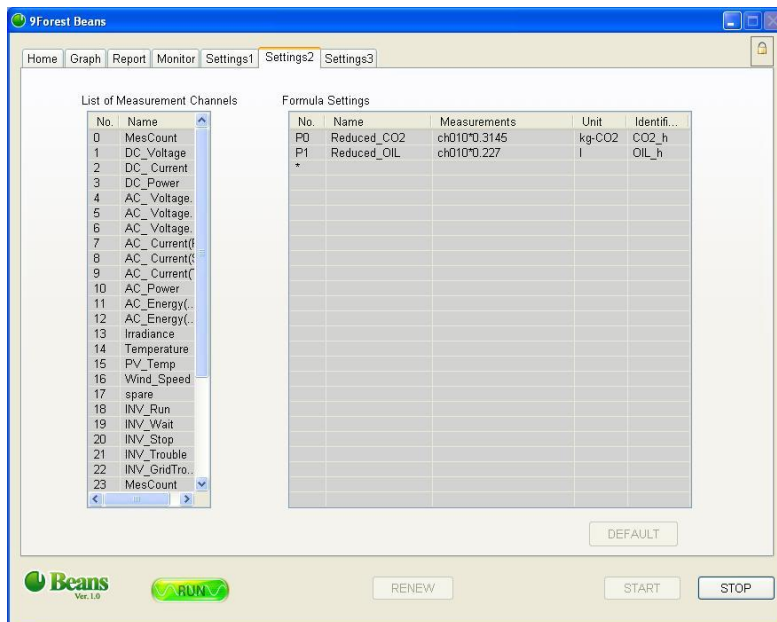
Shows all real-time values of both measured and calculated.

1-5 Settings1 Screen



Shows settings of all measurement items.

1-6 Settings2 Screen



Shows settings of formulas.

1-7 Settings3 Screen

Forest Beans

Home | Graph | Report | Monitor | Settings1 | Settings2 | Settings3

* Type in half-size alphanumeric.

Site ID

DB IPAddress

DB COM Port

Alarm ON

Minimize and display on the task tray

Measuring Target

Photovoltaic Generation

Password Setting

* Type in half-size alphanumeric.

Beans Var. 3.0 RUN RENEW START STOP

Shows network-related settings,measuring target setting,
and password settings.

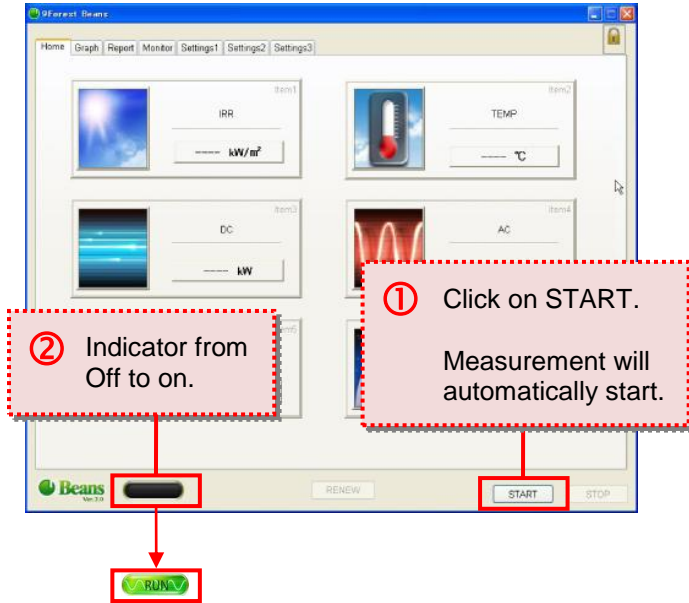
Chapter2: Basic Usage

2-1 START/STOP

2-1-1 START

Click on START button. (①)

Once measurement starts, the indicator on the left bottom turns on as it is shown on the right. (②)



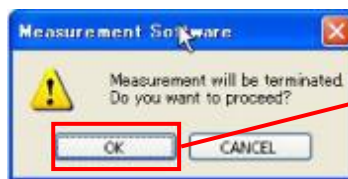
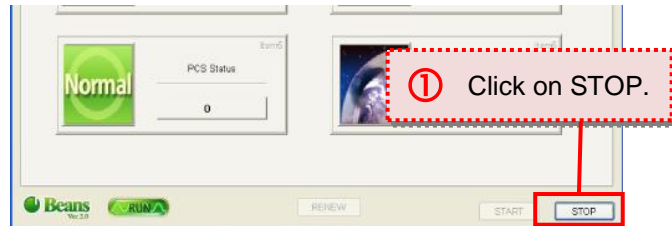
2-1-2 STOP

Click on STOP. (①)

A confirmation dialog will pop up, and click OK. (②)

Type in password. (③)

✘ Password is required only when launched from startup.



2-2 Screen Changeover

Click on one of the tabs to change over to the other screens.

✘ It will switch back to Home when there is more than a hour of no mouse control.

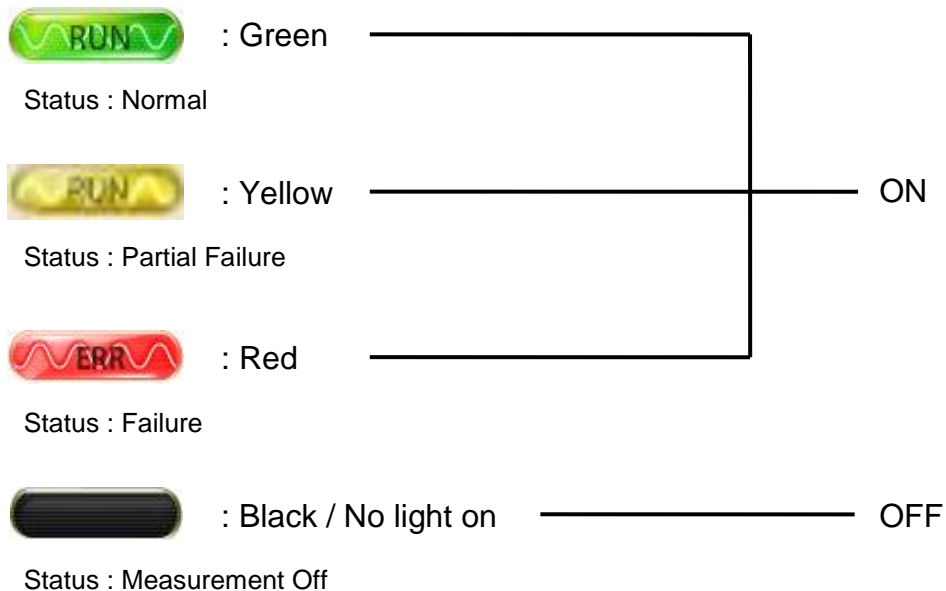


2-3 Check Measurement Status

Indicators:

Shows measurement status.

Different status are shown as follows:



*Examples of Possible Failure

*Error signals from measurement instrument

*Connection error with measurement instrument

Home:

Such Measured values as Irradiance and Alternative Current Power are shown on Home.

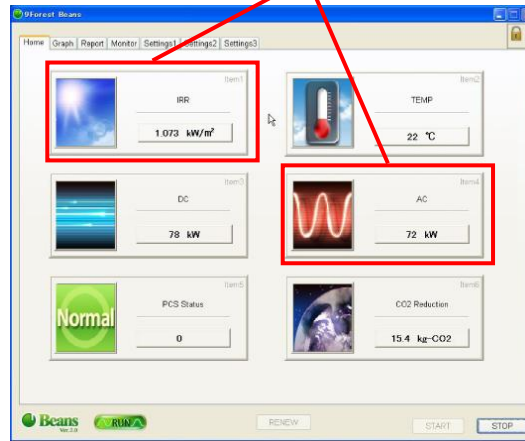
Check if all measurements are taken, and none of the values is either too high or low.

On the right is when measurement is normal.

✘ Such measurement values as DC/AC Generated Power vary depending on rated output of PV system.

Examples of real-time values

*Displayed contents may vary depending on each setting.



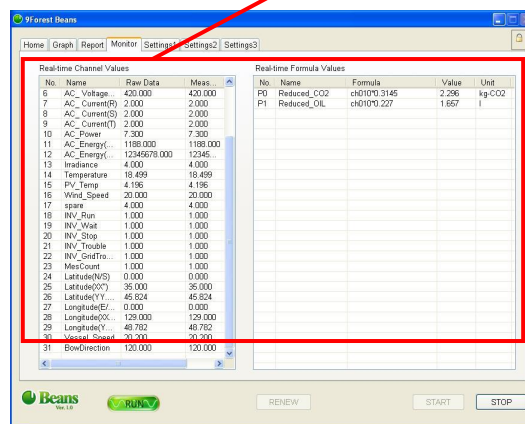
Monitor:

Shows all real-time measurements as well as operation values.

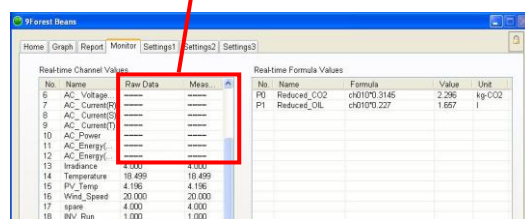
Designed for morning measurements real-time.

If measurements are not normally displayed, there is possibility for a glitch in system.

Real-time values



Possibility in measurement fault



Graphs:

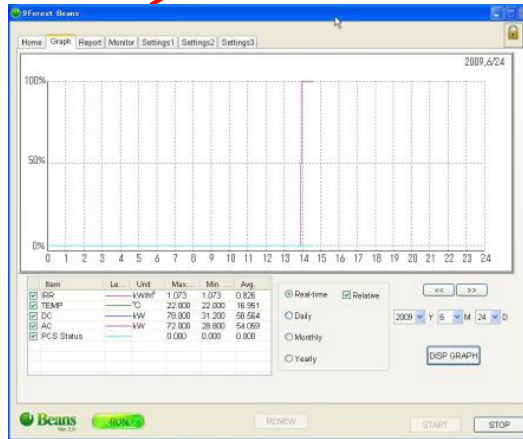
Visually shows real-time measurements in graphs.

Users can choose to show measurements either in relative or absolute graph.

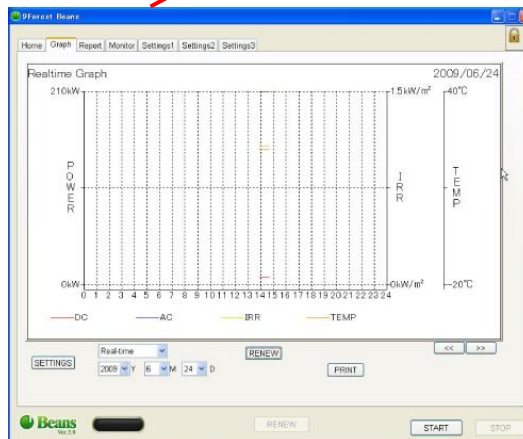
✘ If graphs are not normally displayed, there is possibility for a glitch.

(e.g. There is an abnormally rapid fall(s) in data graphs; Max./ Min. values are both zero.)

Relative graph



Absolute graph



2-4 CSV Save

Click on CSV on Report screen.

(①)

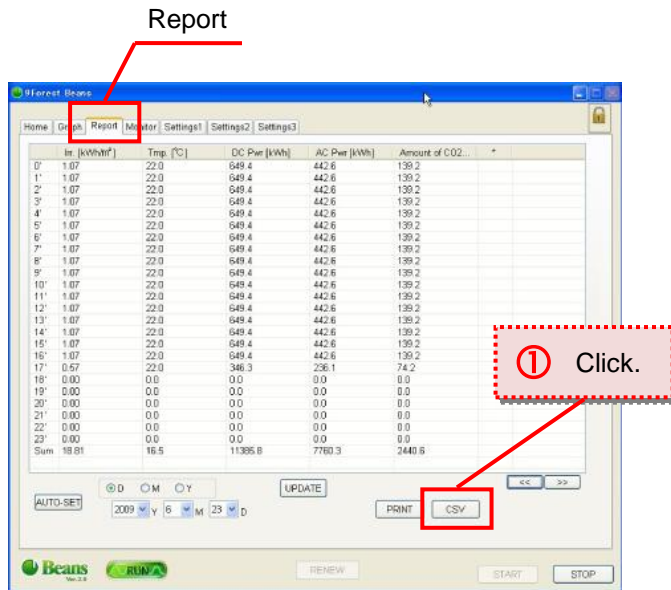
CSV Output dialog will pop up.

Select Measurement Items on report to save data for the selected report items or all measurement items. Select time format from Y for yearly, M for monthly and D for daily (②).

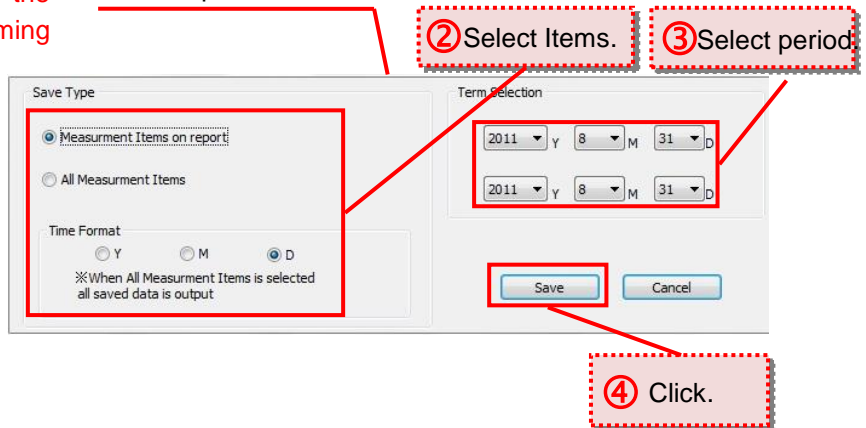
Choose save period from Term Selection (③).

Click Save (④), and choose where to save the file.

✘ In default setting, a file name contains a date on which the file is created. After naming it, click Save.



CSV output window

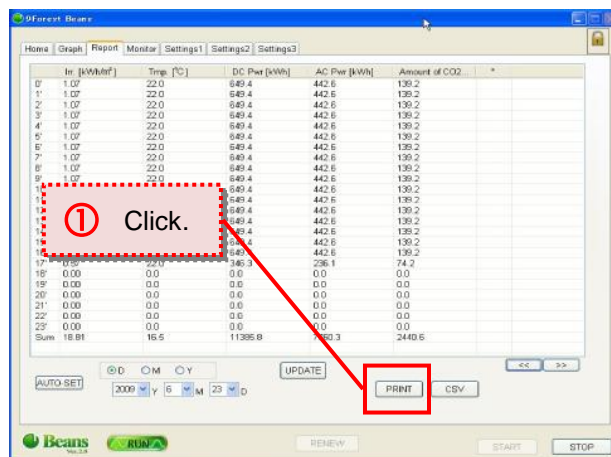


2-5 Report Print-outs

Click on PRINT. ()

Select a printer and execute it.

✘ Set a printer before using the print-out function.



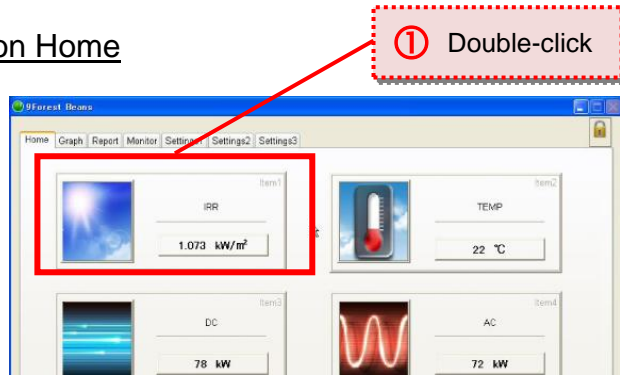
Chapter3: Make Simple Changes in Basic Settings

3-1 Home

3-1-1 Change a Channel Item on Home

Double-click on one of the item boxes on Home. (①)

Home Tab Display Settings dialog will pop up.

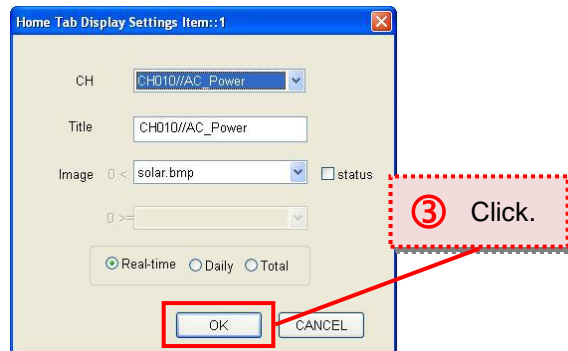
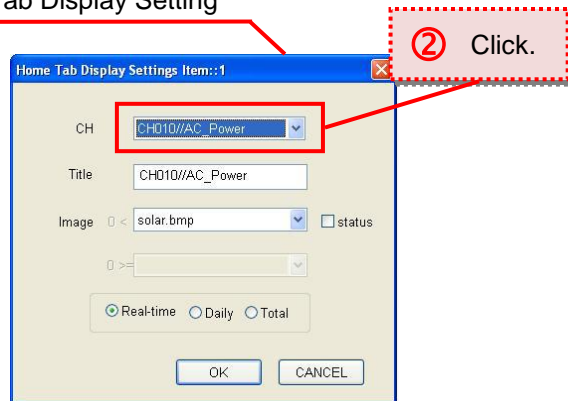


Click on CH and select one of items from drop-down listbox. (②)

Click OK.(③)

✘When the change is made to CH,so is to the Title. However, the imege will not change.

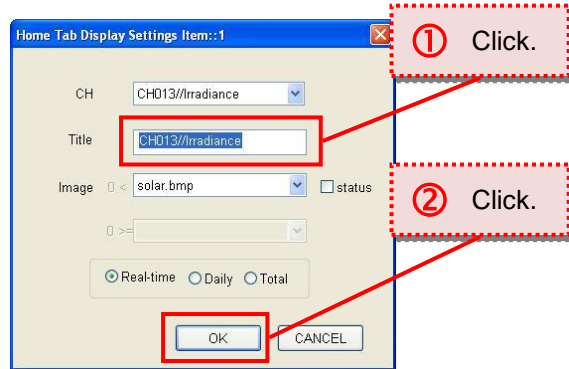
Home Tab Display Setting



3-1-2 Change a Display Title

Double-click on one of the item boxes on Home.
Home Tab Display Settings dialog will pop up.

Click on input area of Title, and type in a name (①).
Click OK to end. (②)

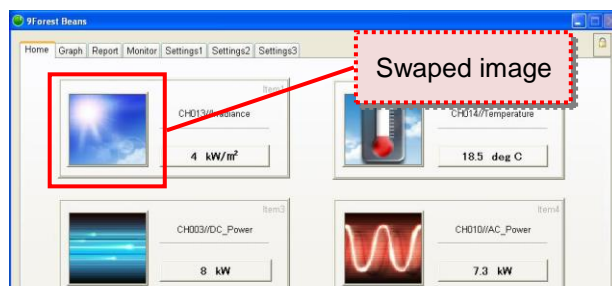
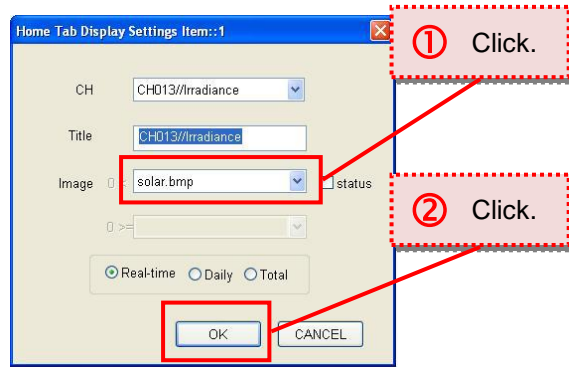


3-1-3 Change Display Image

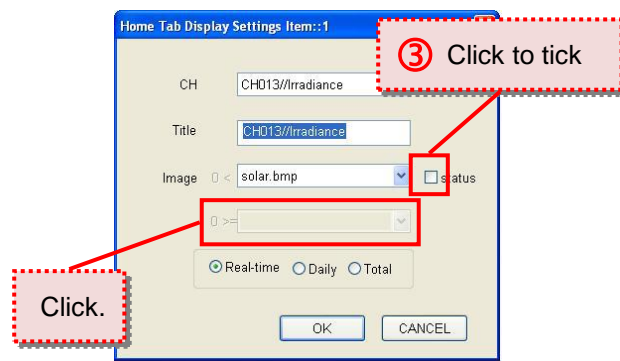
Double-click on one of the item boxes on Home.
Home Tab Display Settings dialog will pop up.

Click on Image (①), and select one of images from drop-down listbox.

Click OK. (②)
As a result, the original image has been replaced with the selected image.
(Refer to the right)



✘ Clicking on “status” box (③) enables you to show an image when a chosen item is above or below zero.
Without checking the box, the image will not change in accordance with the value.

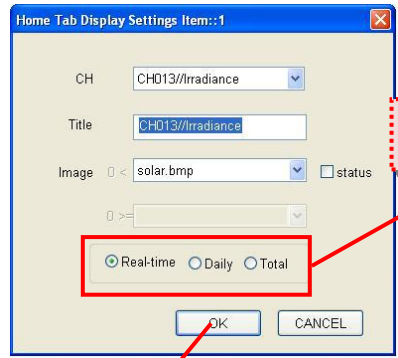


3-1-4 Change a Data Format

Click on Data Format radio button on Home Tab Display Settings (①), and choose one of the formats.

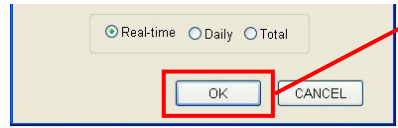
Click OK.(②)

✘As for channels such as Fault ch, data format is fixed, and not to be changed.



① Click.

Radio buttons



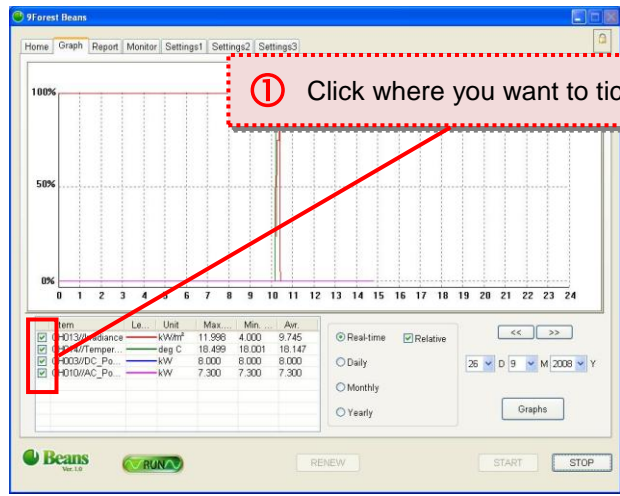
② Click.

3-2 Graphs

3-2-1 Relative Graph

3-2-1-1 On/Off Relative Graphs

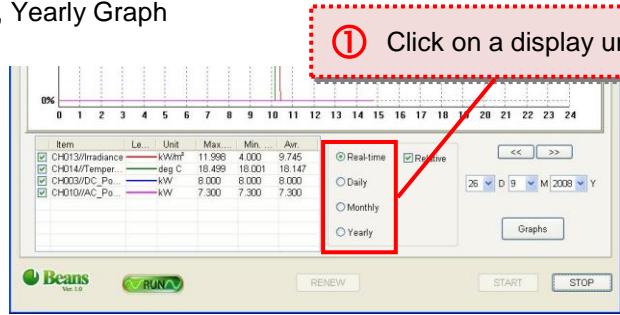
By ticking on / off the check boxes (①), it is possible to turn graphs on / off.



① Click where you want to tick.

3-2-1-2 Changeover to Daily, Monthly, Yearly Graph

Click on one of the radio buttons to chage over to the other type of graphs(①).

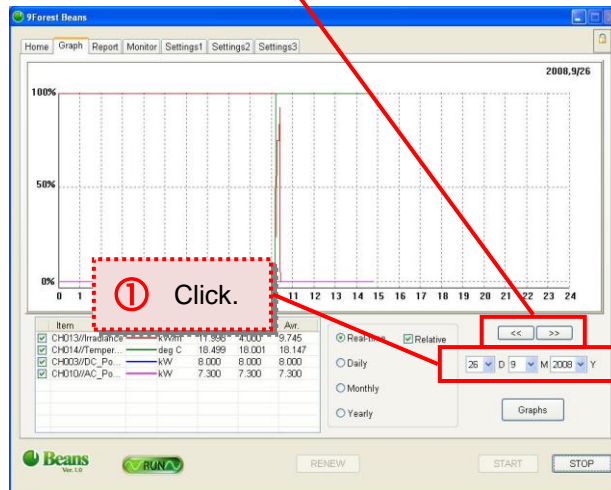


① Click on a display unit.

3-2-1-3 Change Date on Graph for Checking Past and Present Data

Click on an arrow (①) to change D for date/ M for month/Y for year. Date can also be changed by clicking<<>>.

<<Back >>Forward

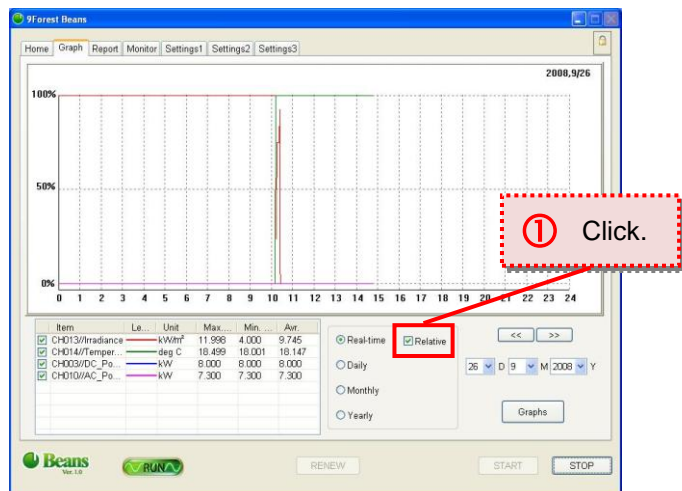


3-2-1-4 Relative Graph Display Applied/ Unapplied

Tick/ untick the Relative checkbox to apply/ unapply the display method.(①)

✘Ticked: Shows relative display graphs, using maximum and minimum values of data on a certain date. Suitable for tracking moves in data values.

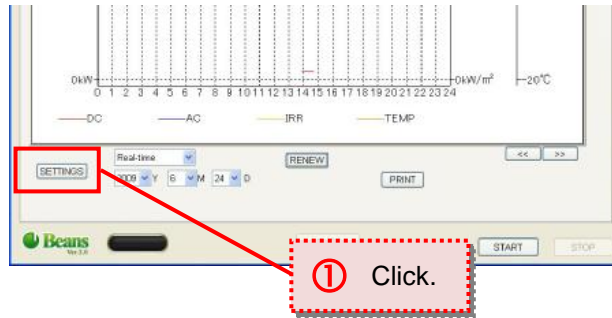
✘Unticked:Shows relative display graphs, using data collected a month previously and after from start date. Suitable for tracking every-day moves in data values.



3-2-2 Absolute Graph

3-2-2-1 Absolute Graph Settings

Click on SETTINGS (①) to show Graph Settings window.



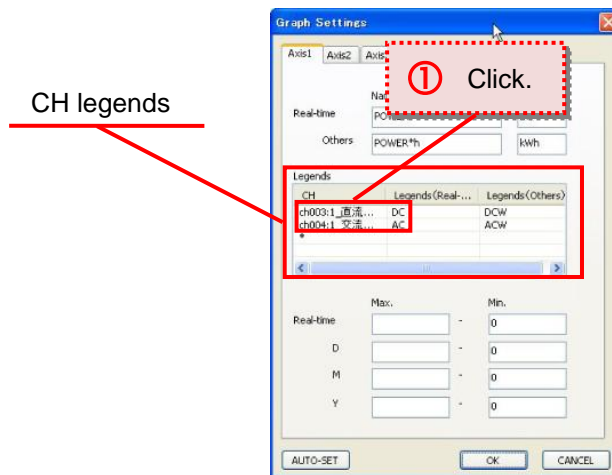
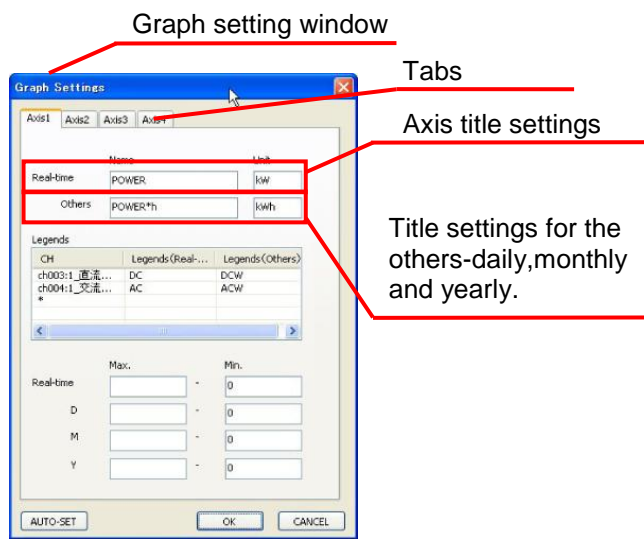
On absolute graph, it is possible to show graphs up to four.

On the setting window, click on tabs to change from one axis to another.

Change axis title and unit, if necessary. Set axis title and unit for a real-time value where it says "Real-time", and another title and unit for accumulative value where it says "Others".

Make settings on graph channels in Legend area.

Click on a CH list box (①), and select a channel to be displayed from the drop-down list.

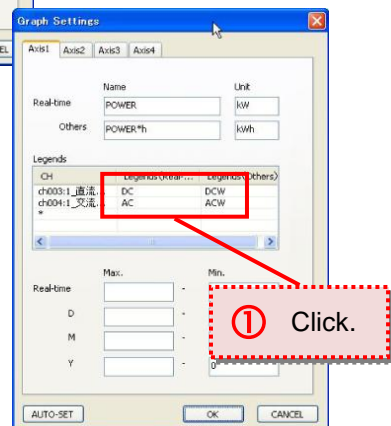


If more than one channel has already been set, only channels, of which unit is same as the existing channel, are displayed on the list.

✘ One the right is where DCW has been set, and the only item left to choose is ACW.

Click an item either on Legends (Real-time) or Legends (Others) (①), and change graph description(s).

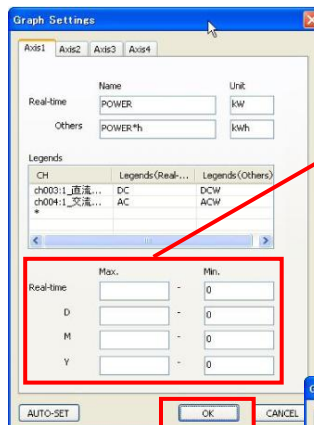
Set a legend for a real-time value where it says "Real-time", and another one for a cumulative value where it says "Others".



Set max. and min. value for each graph.

✘ If not set at all, both values will automatically be set.

Click on OK (①) to reflect the settings.

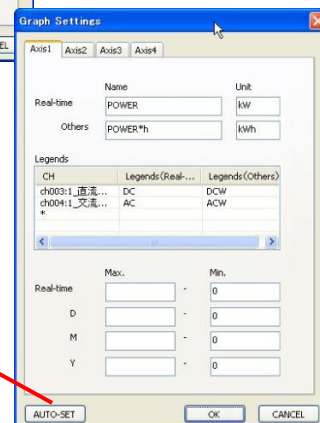


Max. and min. values setting

Clicking on AUTO-SET clears all settings that have been made, and reflect default settings.

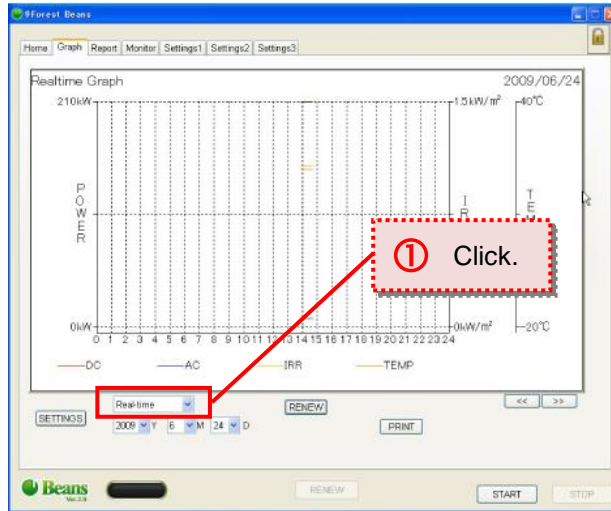


Auto-setting button



3-2-2-2 Changeover to Daily , Monthly , Yearly Graph

Click on the list box (①), and choose Real-time, D (Daily), M (Monthly), or Y (Yearly).

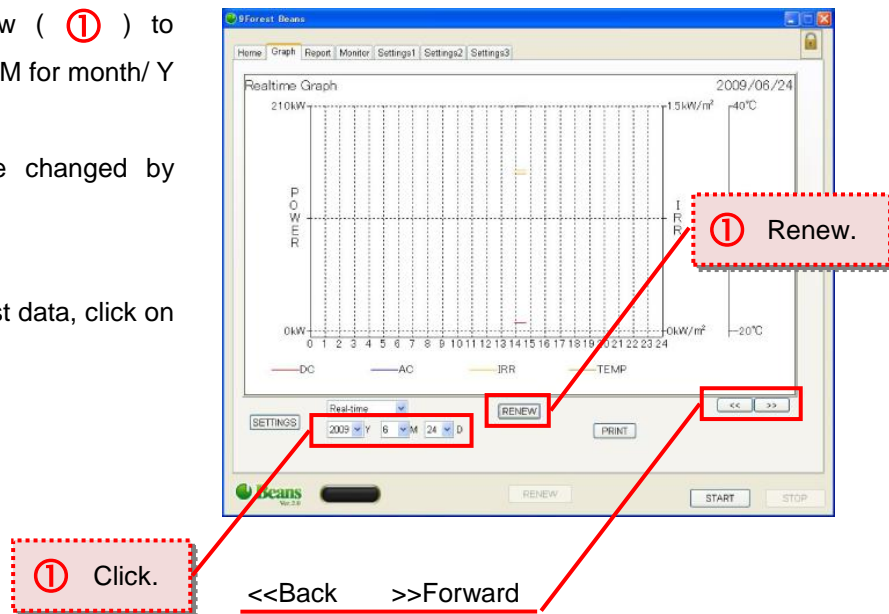


3-2-2-3 Change Date on Graph for Checking Past and Present Data

Click on an arrow (①) to change D for date/ M for month/ Y for year.

Date can also be changed by clicking <<>>.

To display the latest data, click on RENEW (②).



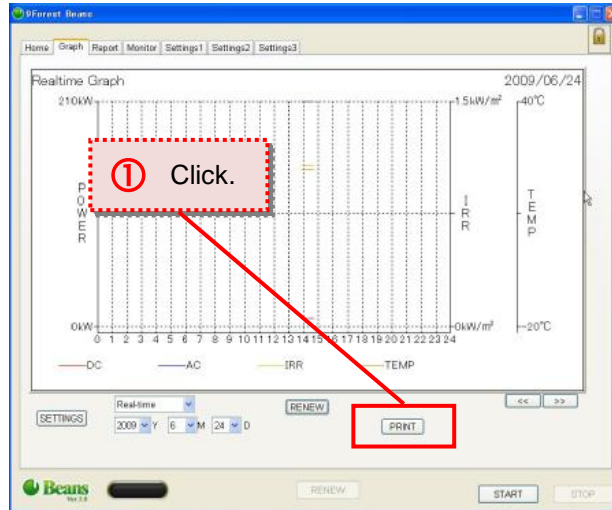
3-2-2-4 Print-Out

Click on PRINT (①).

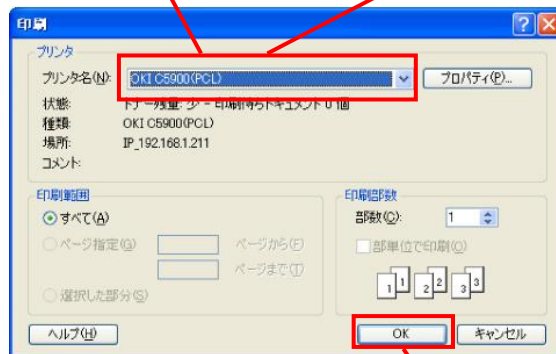
Select your printer (②) and print graphs (③).

※ Make sure that at last a printer is connected to your PC.

※ Relative graphs can not be printed.



Your printer (② Click.)

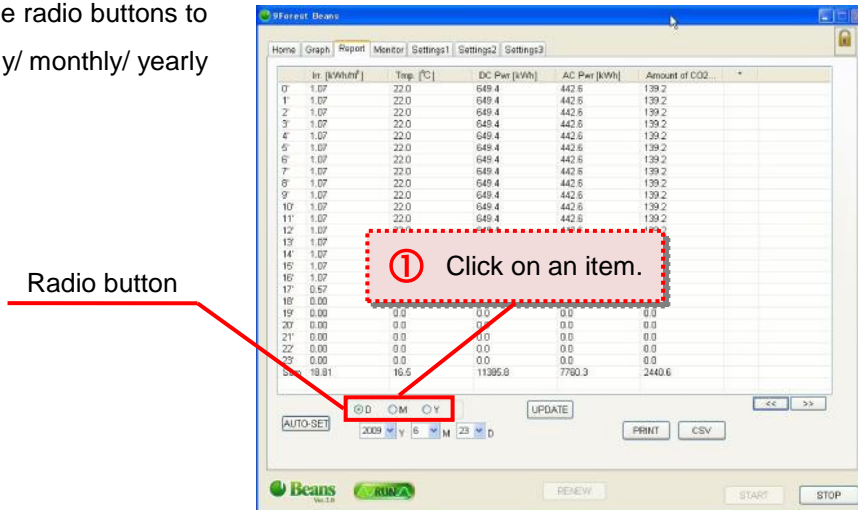


③ Click to print out.

3-3 Report

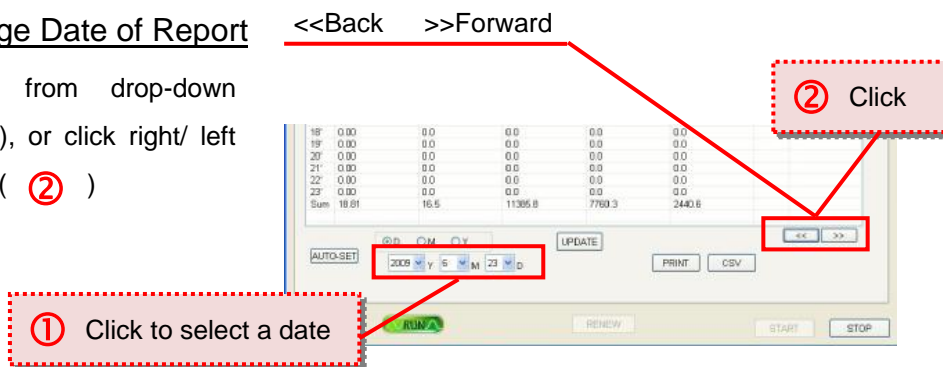
3-3-1 Changeover to Daily/ Monthly/ Yearly Report

Click one of three radio buttons to choose from daily/ monthly/ yearly report. (①)



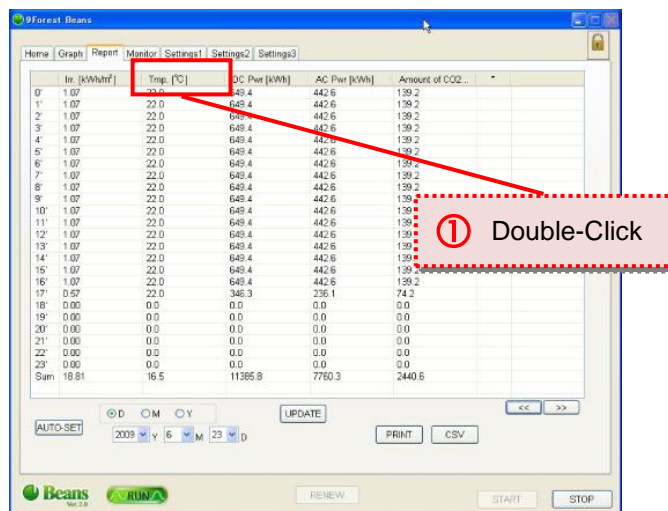
3-3-2 Change Date of Report

Select date from drop-down listbox (①), or click right/ left arrow button. (②)



3-3-3 Change/ Add/ Delete

To Change an Item: Double-click on an item. (①)
(In this case, temperature is chosen.)



Report Item Settings dialog will pop up.

Select an item from Channel No.

(②)

In this case, Irr. is selected.

Click OK. (③)

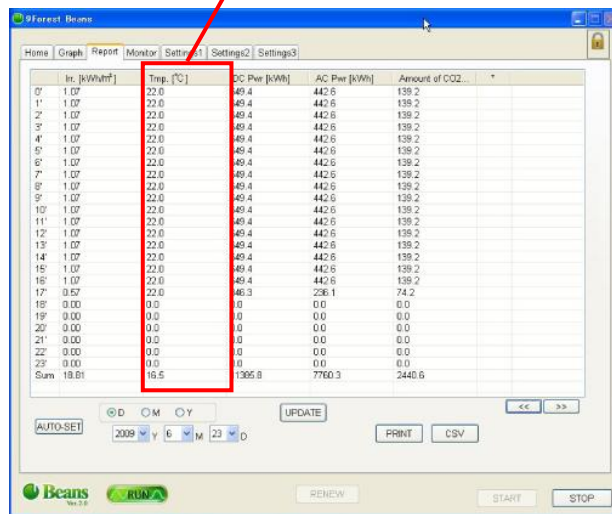


Check that an item selected is on Report.

Click on RENEW button if the change was made correctly.

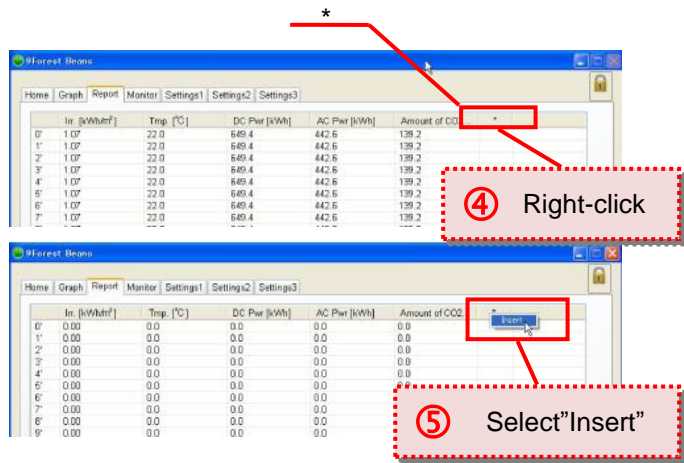


An Item changed



To Add an Item:

Right-click on * mark (④) and select 'Insert'. (⑤)



Report Item Settings dialog will pop up.

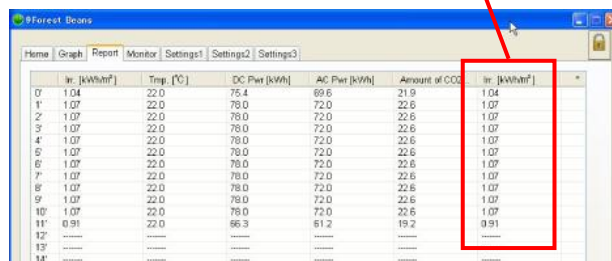
Click on Channel No. and select an item on the list. (⑥)
e.g. In this case, IRR is chosen.

Finally, click on RENEW to reflect the settings.

Report Item Setting



An Item added



Right-click on an existing item (7) to insert a new item into records. The new item will be inserted next to the existing item just selected.

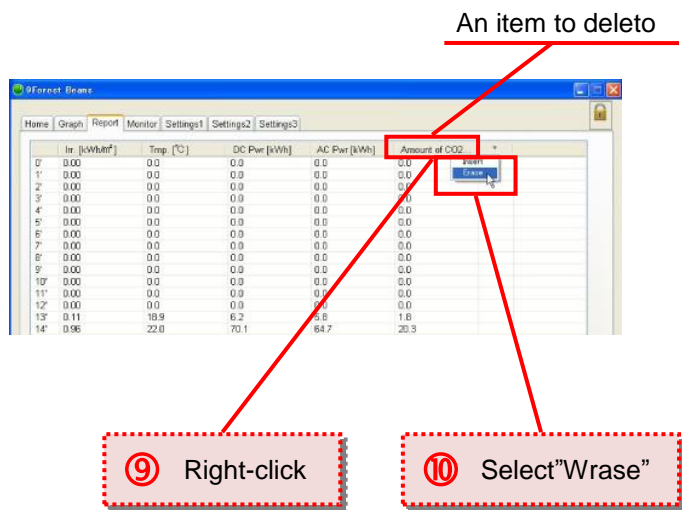
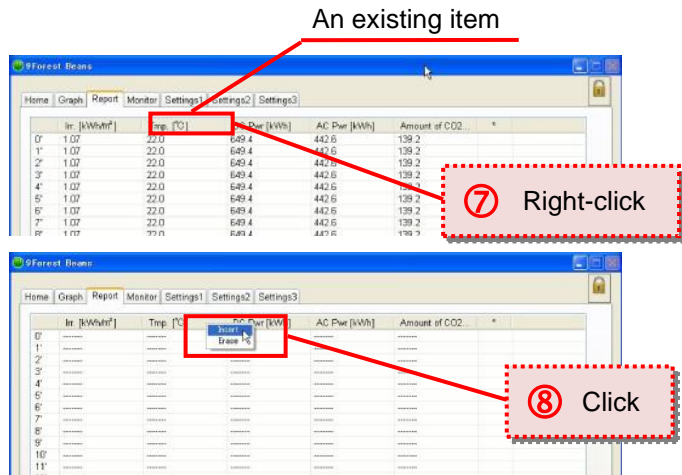
Select "Insert". (8)

Choose one of channel numbers , and click on RENEW button.

To Delete an Item:

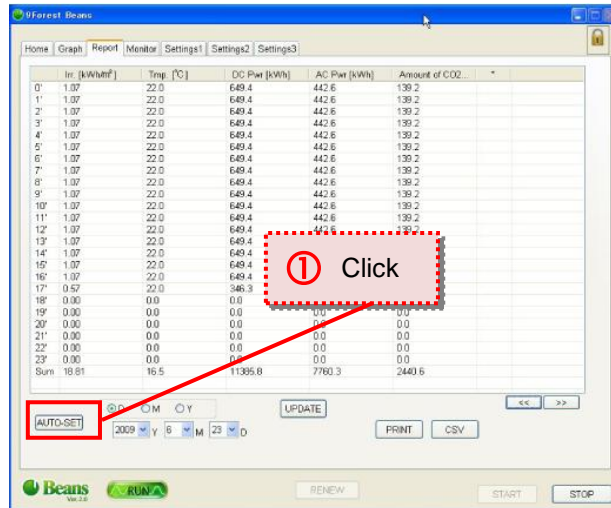
Right-click on an item (9), and select "Erase". (10)

Finally click RENEW button.



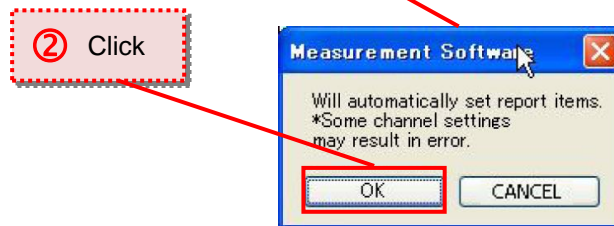
3-3-4 Default Display of Report Item

Click on AUTO-SET button. (①)



Confirmation message will pop up, and click on OK button. (②)
Finally, click on RENEW button.

Confirmation Window



Chapter4: Change Measurement Settings

4-1 Lock/ Unlock Protection

4-1-1 Unlock Protection

Click on STOP button to terminate measurement.

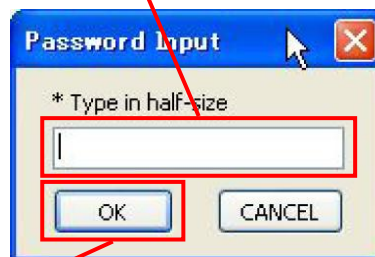
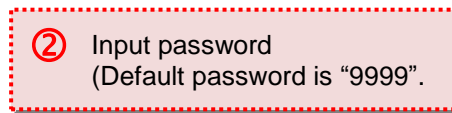
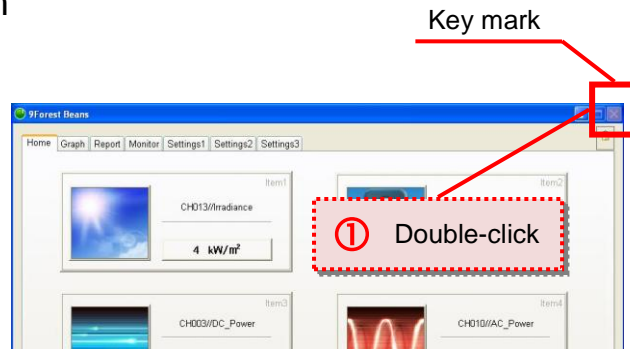
※ Not possible to unlock protection while measuring.

Double-click on the key mark

(①), and type in password

(②), and click OK. (③)

Once it is done, the key will be open. (Refer to the right)

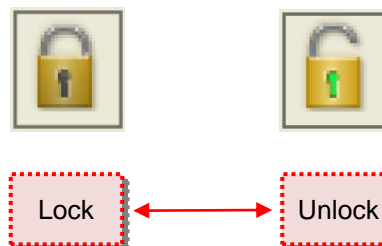


4-1-2 Unlock Protection

Double-click on the open key mark.(①)

The key will be closed.

(Refer to the right)



4-2 Settings1 Settings

4-2-1 Change Sampling Interval/ Data Save Interval

※ In order to change settings, protection needs to be unlocked.
(Rfr: 4-1-1 Unlock Protection)

Click on an edit box of sampling interval/ data save interval (①), change the existing number in the box (①), and click on RENEW button. (②)

The number of measurements will change automatically.

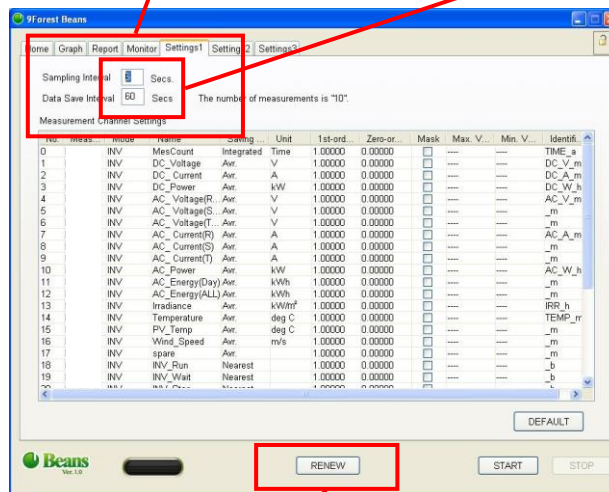
※ Data save interval has to be multiples of sampling interval.
If not, an error message will pop up, and settings will be reloaded.

※ Click on NO button to load previously saved settings (④).

※ The number of measurement is automatically set.
※ Data save interval needs to be the integral multiple of sampling interval.
※ Default Settings:
※ Sampling Interval; 6 secs
※ Data Save Interval; 60 secs
※ The smaller the data save interval, the lower the performance of data display and calculation it may become.

Sampling interval, data save interval and the number of measurements

① Double-click to input



② Click



③ Click

④ Click

4-2-2 Measurement Channel Settings

Unlock protection.

Mode:

Double-click on a mode (①), and select a mode from drop-down listbox.

Name:

Double-click on a name, and type a new name in. (②)

✘The new name will be reflected on the same names on the other tabs.

① Double-click

Mode

No.	Meas.	Mode	Name	Saving	Unit	1st-ord.	Zero-or.	Mask	Max. V.	Min. V.	Identif.
1	INV	DC_Voltage	Aver	V	1.00000	0.00000					DC_V_m
2	INV	DC_Current	Aver	A	1.00000	0.00000					DC_A_m
3	INV	DC_Power	Aver	kW	1.00000	0.00000					DC_W_h
4	INV	AC_Voltage(R)	Aver	V	1.00000	0.00000					AC_V_m
5	INV	AC_Voltage(S)	Aver	V	1.00000	0.00000					_m
6	INV	AC_Voltage(T)	Aver	V	1.00000	0.00000					_m
7	INV	AC_Voltage	Aver	V	1.00000	0.00000					_m
8	INV	AC_Current(S)	Aver	A	1.00000	0.00000					AC_A_m
9	INV	AC_Current(T)	Aver	A	1.00000	0.00000					_m
10	INV	AC_Power	Aver	kW	1.00000	0.00000					AC_W_h
11	INV	AC_Energy(Day)	Aver	kWh	1.00000	0.00000					_m
12	INV	AC_Energy(ALL)	Aver	kWh	1.00000	0.00000					_m
13	INV	Irradiance	Aver	kW/m ²	1.00000	0.00000					IRR_h
14	INV	Temperature	Aver	deg C	1.00000	0.00000					TEMP_rr
15	INV	PV_Temp	Aver	deg C	1.00000	0.00000					_m
16	INV	Wind_Speed	Aver	m/s	1.00000	0.00000					_m
17	INV	spare	Aver		1.00000	0.00000					_m
18	INV	INV_Run	Nearest		1.00000	0.00000					_b
19	INV	INV_Wait	Nearest		1.00000	0.00000					_b

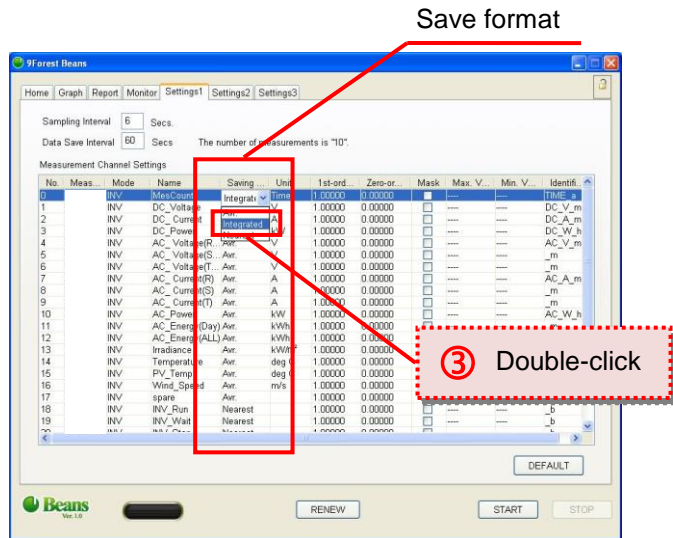
② Double-click to input

Name

No.	Meas.	Mode	Name	Saving	Unit	1st-ord.	Zero-or.	Mask	Max. V.	Min. V.	Identif.
1	INV	DC_Voltage	Aver	V	1.00000	0.00000					DC_V_m
2	INV	DC_Current	Aver	A	1.00000	0.00000					DC_A_m
3	INV	DC_Power	Aver	kW	1.00000	0.00000					DC_W_h
4	INV	AC_Voltage(R)	Aver	V	1.00000	0.00000					AC_V_m
5	INV	AC_Voltage(S)	Aver	V	1.00000	0.00000					_m
6	INV	AC_Voltage(T)	Aver	V	1.00000	0.00000					_m
7	INV	AC_Voltage	Aver	V	1.00000	0.00000					_m
8	INV	AC_Current(S)	Aver	A	1.00000	0.00000					AC_A_m
9	INV	AC_Current(T)	Aver	A	1.00000	0.00000					_m
10	INV	AC_Power	Aver	kW	1.00000	0.00000					AC_W_h
11	INV	AC_Energy(Day)	Aver	kWh	1.00000	0.00000					_m
12	INV	AC_Energy(ALL)	Aver	kWh	1.00000	0.00000					_m
13	INV	Irradiance	Aver	kW/m ²	1.00000	0.00000					IRR_h
14	INV	Temperature	Aver	deg C	1.00000	0.00000					TEMP_rr
15	INV	PV_Temp	Aver	deg C	1.00000	0.00000					_m
16	INV	Wind_Speed	Aver	m/s	1.00000	0.00000					_m
17	INV	spare	Aver		1.00000	0.00000					_m
18	INV	INV_Run	Nearest		1.00000	0.00000					_b
19	INV	INV_Wait	Nearest		1.00000	0.00000					_b

Saving Format:

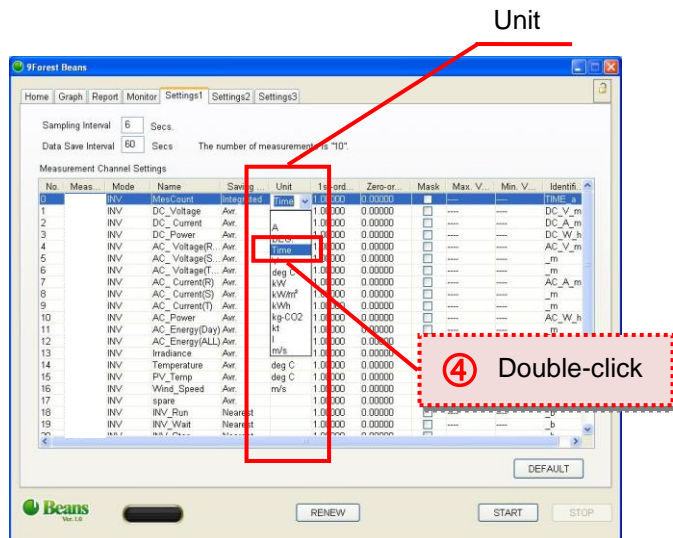
Double-click on a saving format item (③), and select a format from drop-down listbox.



Unit:

Double-click on a unit item (④), and select a unit from drop-down listbox.

If there is no unit to choose in the listbox, type a new unit in. The new unit will automatically be saved.

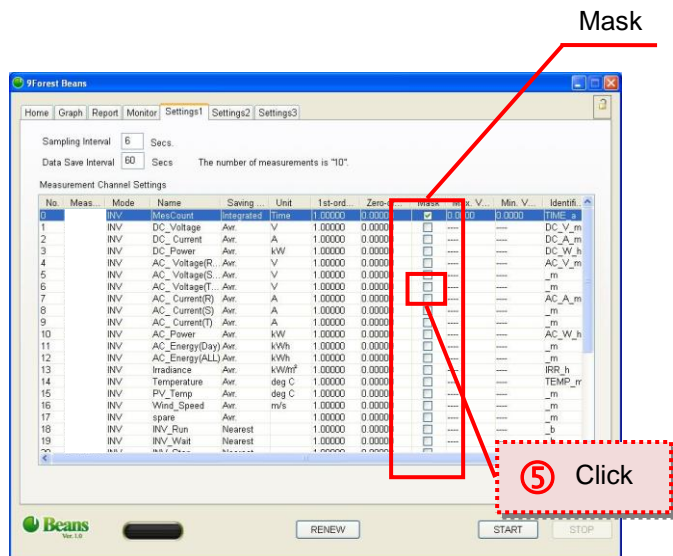


Mask:

Tick/ untick a mask checkbox.

(⑤)

✗ If max. and min. values have to be set, you need to tick it.

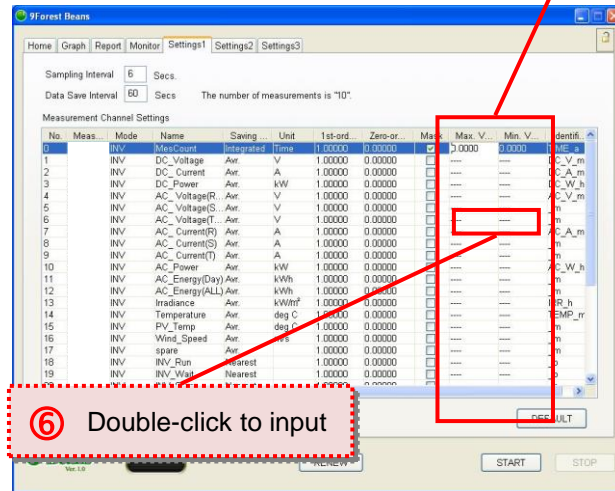


Max. and Min. Values:

Double-click on Max/ Min Value of masked item, and type a new value in. (⑥)

✕ Mainly used for analogue measurements.

Max value, Min value



Identification Value:

Double-click on an ID Value item, and select a new item from dropdown listbox. (⑦)

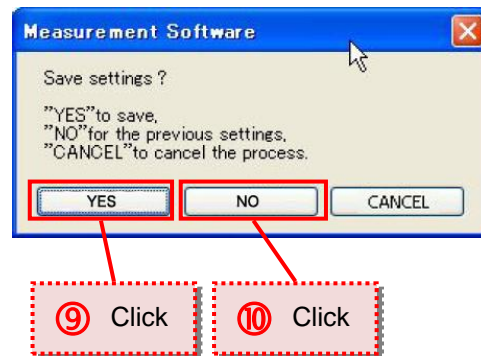
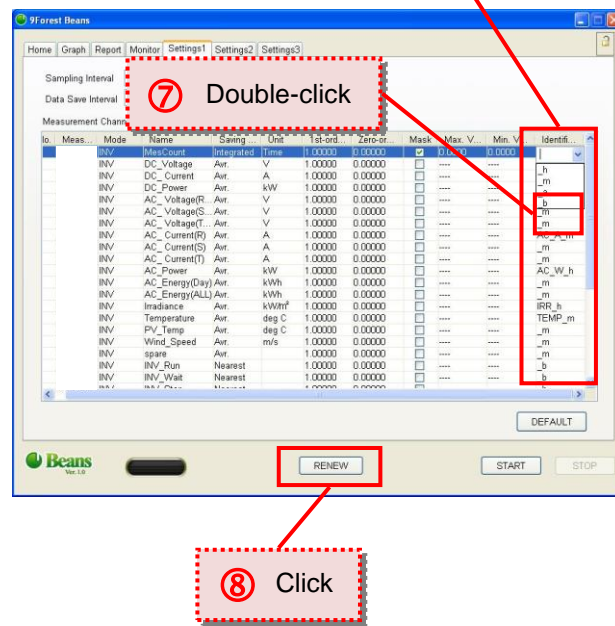
Renew:

Click on RENEW button (⑧) and OK button. (⑨)

Undo Settings:

Click on NO button to undo settings. (⑩)

ID Value



4-3 Settings2

4-3-1 Add/ Delete Formula

Add a Formula Pattern1:

✘ In order to change settings, protection needs to be unlocked.
(Rfr: 4-1-1 Unlock Protection)

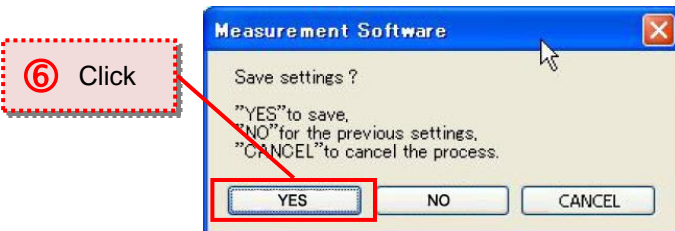
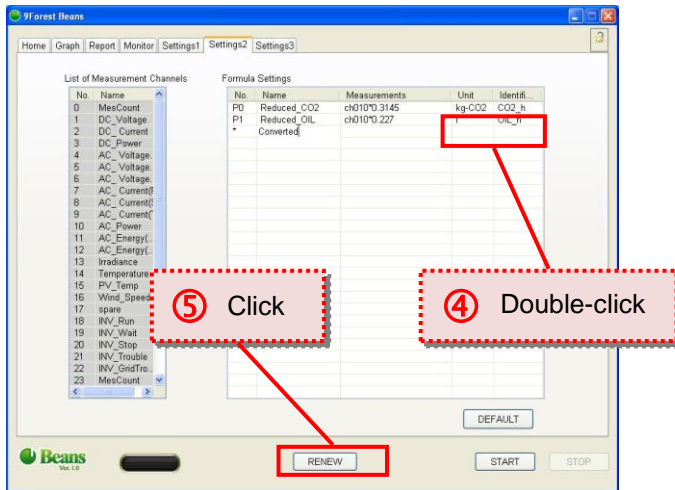
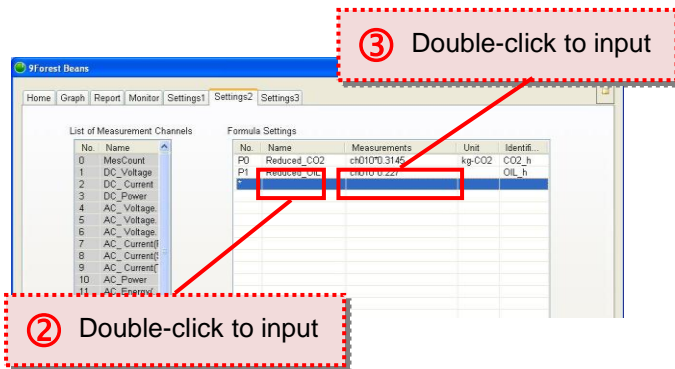
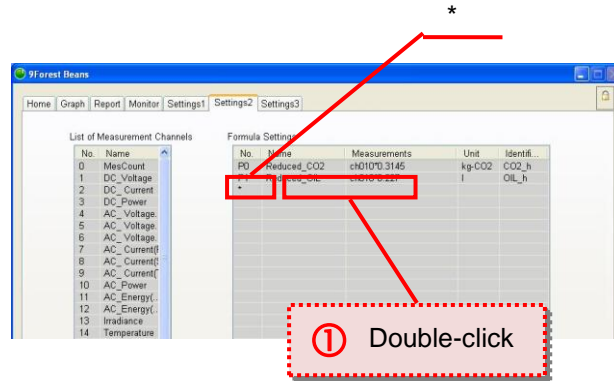
To insert a formula, or add a new one, double-click on the name item of *mark (①), and type a new name in (②).

✘ Refer to Appendix for available arithmetic operators and functions.

Next, double-click on Measurements item, (③) and type a new formula in. Double-click unit and identification value, and select one from drop-down listbox. (④)

Click on RENEW button. (⑤)

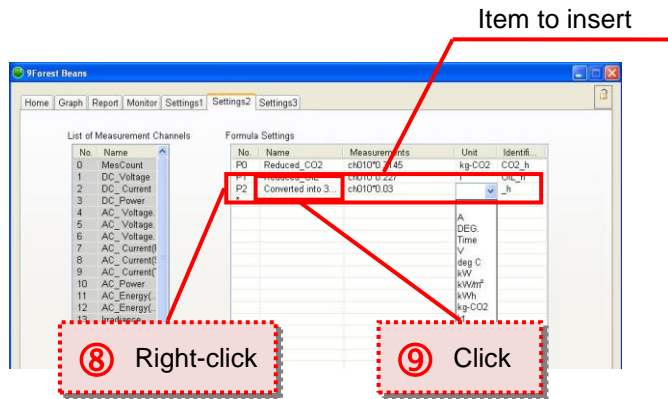
Click on OK. (⑥)



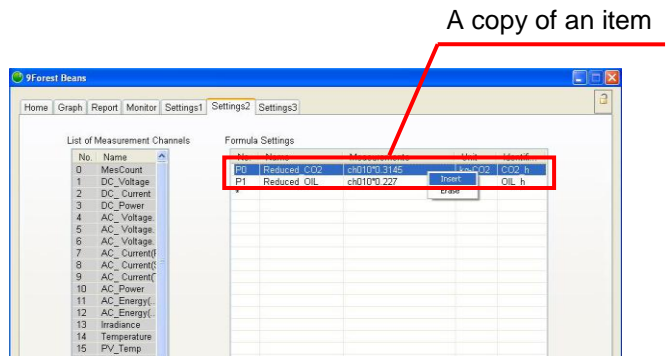
Add a Formula Pattern 2:

To insert a new item in between existing items, put the pointer on an item, onto which to insert a new one.

Then, right-click (⑧) and select Insert. (⑨)



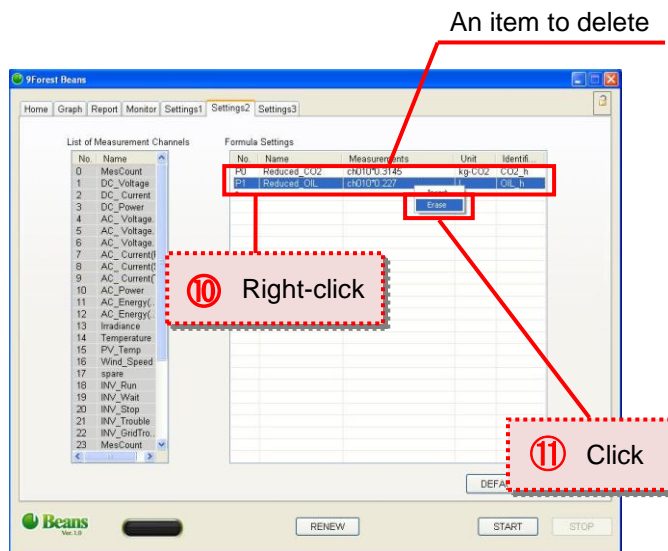
The selected item will be copied and inserted.



Delete an Item:

To delete an item, put the pointer onto an item to delete, (⑩) right-click and select Erase. (⑪)

Click RENEW.



4-3-2 Change Formula

✘ In order to change settings, protection needs to be unlocked.
(Rfr: 4-1-1 Unlock Protection)

Unlock protection.

(Refer to 4-1-1)

Double-click where to make changes at. (①)

If it is Name, double-click on Name and type a new name in.

If it is Measurements, double-click on Measurements and type a new formula in.

If it is Unit, double-click on Unit and select one from drop-down listbox.

If it is Identification Value, doubleclick on IDV and select one from dropdown listbox.

Finally, click on RENEW button.

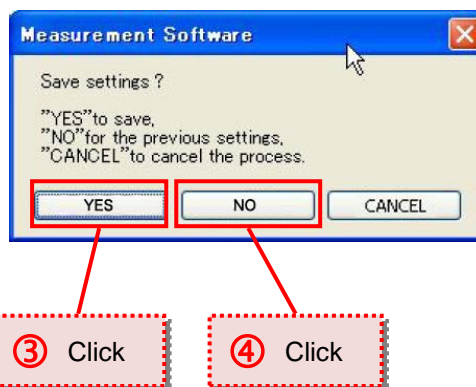
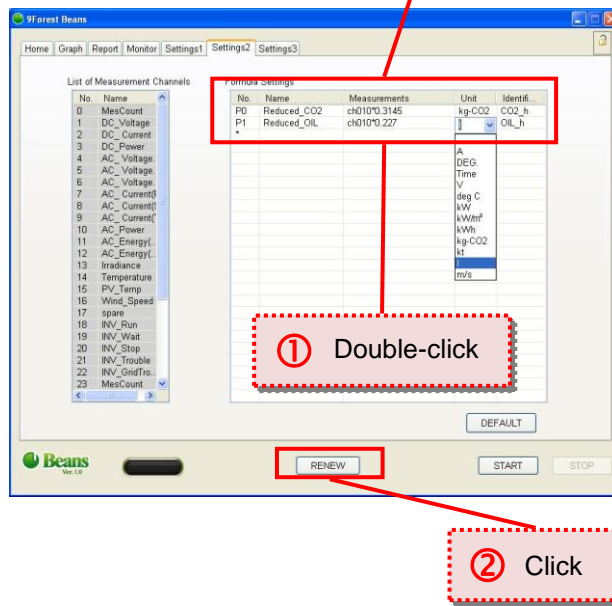
(②)

Message of "Settings saved" will pop up, and click OK. (③)

✘Click NO button to undo previously saved settings. (④)

✘It may take a few seconds to save settings.

An item to change



4-4 Settings3

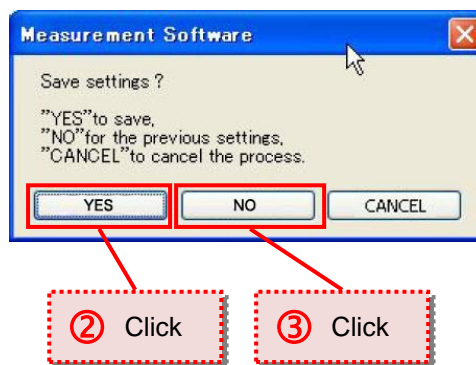
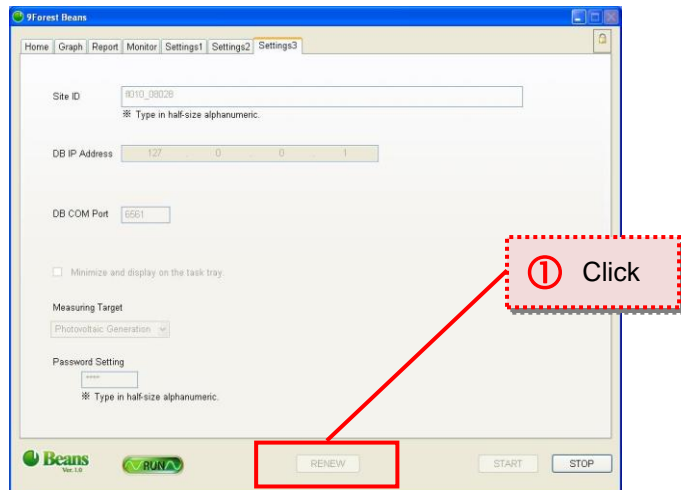
4-4-1 Change Communication System Information

※In order to change settings,
protection needs to be unlocked.
(Rfr: 4-1-1 Unlock Protection)

There are settings for Site ID/
Database Communication Port/
Data-base Server.

※Changes to the settings are not
recommended.

After making changes, click
RENEW button (①). Message
of "Settings saved" will pop up,
and click OK. (②)



4-4-2 Start-up Settings

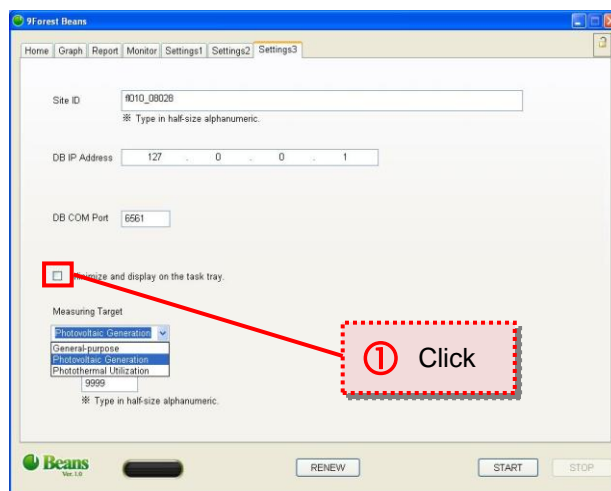
※ In order to change settings,
protection needs to be unlocked.
(Rfr: 4-1-1 Unlock Protection)

Tick/ untick "Minimize and display
on the task tray"checkbox. ()

Click RENEW button.

Lock protection.

(Refer to 4-1-2)



4-4-3 Change Measuring Target

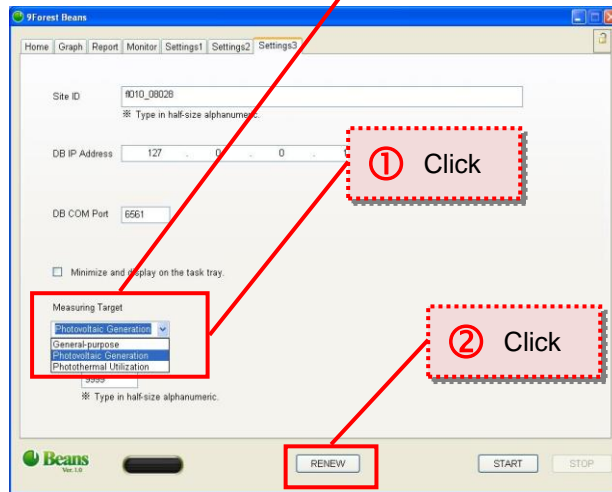
Measurement target

※ In order to change settings, protection needs to be unlocked. (Rfr: 4-1-1 Unlock Protection)

Select a target from General-purpose, Photovoltaic Generation, or Photothermal Utilization. (①)

Click RENEW button. (②)

Message of "Settings saved" will pop up, and click OK (③) or click CANCEL (④) to go back to previously saved settings.

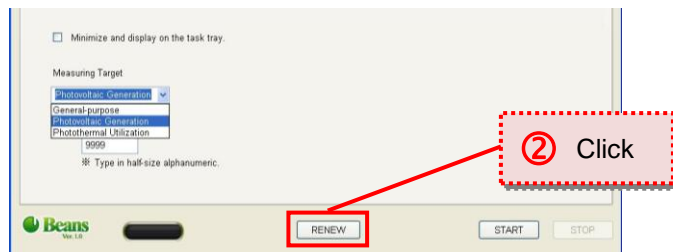


4-4-4 Start-up Settings

※ In order to change settings, protection needs to be unlocked. (Rfr: 4-1-1 Unlock Protection)

Click on Password Setting box and type a new one in. (①)

Click RENEW button (②).



Chapter5: Appendix

5-1 Tables

5-1-1 Settings1 Items

<Item>	<Subitem>	<Overview>
Saving Format	Integrated	Obtains integrated value out of data within Data Save Interval time.
	Avg.	Obtains average value out of data within Data Save Interval time.
	Nearest	Obtains nearest value out of data within Data Save Interval time.
Unit	A	Direct/ Current Ampere
	V	Direct/ Current Voltage
	KW	Direct/ Current Power
	KW/m ²	Irradeance
	Kg-CO2	CO2-Coverted Value
	°C	Temperature
	Times	The Number of Measuremunts
Mask	Mask	Switch on/ off setting for max,/ min. value.
Identification Value	TIME_a	The Number of Measurements
	IRR_h	Irradiance
	TEMP_m	Temperature(Avr.)
	DC_V_mS	Direct Current Voltage(Avr.)
	DC_A_m	Direct Current Ampere(Avr.)
	DC_W_h	Direct Current Power
	AC_V_m	Alternative Current Voltage(Avr.)
	AC_A_m	Alternative Current Ampere(Avr.)
	AC_W_h	Alternative Current Power
	CO2_h	CO2 Reduced
_h	Quantity(Avr. Value per hour)	
_m	Avr.	
_a	Integrated	
_b	Status	

5-1-2 Arithmetic Operator

<Operator>	<Overview>	<E.G.>	<Answer>
+	Sum	2+3	5
-	Difference	2-3	-1
*	Multiplication	2*3	6
/	Division	4/2	2
%	Residue	5%4	1
^	Power	2.0^3.0	8
/	Square Root	/25.0	5
/	Cube Root	/27.0	3
!	Factorial	5!	120
!!	Factorial(Prefix Operator)	!!5	120
@	Absolute Figure	@-5.0	5
&	Binary AND	91 & 15	11
	Binary OR	31 3	35
#	Binary XOR(Exclusive OR)	17 # 5	20
~	Binary NOT	~1	-2
<<	Binary Left Shift	1<<4	16
>>	Binary Right Shift	8>>2	2

5-1-3 Functions

<Function>	<Overview>	<E.G.>	<Answer>
abs(z)	Absolute Value	abs(-17.4)	17.4
cbrt(d)	Cube Root	cbrt(27)	3
ceil(x)	Roundup(The smallest Integer larger than argument)	ceil(42.2)	43
degrees(d)	Radian against d Degree	degrees(0.5)	28.6478897565412
exp(x)	Exponent	exp(1.0)	2.7182818284590452
floor(x)	Cut-down(The largest integer smaller than argument)	floor(42.2)	42
ln(x)	Natural Logarithm	ln(2.0)	0.6931471805599453
log(x)	Natural Logarithm larger than 10	log(100.0)	2.0000000000000000
log(y,x)	Logarithm of X larger than y	log(2.0,64.0)	6.0000000000000000
mod(l,j)	Residue of i/j	mod(9.2,4)	1.2
pi()	Circle Ratiorr	pi()	3.14159265358979
pow(y,x)	y to the x Power	pow(2,4)	16
radians(d)	Degree against x Radian	radians(45)	0.785398163397448
random()	Random Digits between 0.0_1.0		
round(x)	Round-off	round(42.2)	42
round(x,i)	Round off to i	round(42.2765,2)	42.28
setseed(d)	Set Seed of Random Digit		
sign(x)	Code for Argument x (-1,0,1))	sign(-8,4)	-1
sqrt(x)	Square Root	sqrt(2.0)	1.414213562373095
trunc(x)	Truncation	trunc(42.2)	42
trunx(x,i)	Round down to l decimal place	trunc(42.2765,2)	42.27