



User's Manual

V 2.4

PGZ1E3004 REV12 08/2017

SmartLog User's Manual

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1. Before You Start

Welcome

Welcome to SmartLog Diabetes Management Software. SmartLog is a measured glucose data management program for user to easily and conveniently manage their blood glucose level. By downloading the data from blood glucose meter developed by i-SENS, SmartLog expresses your blood glucose level trend in statistical values and graph. SmartLog helps you to manage your blood glucose level easily by recording and managing their diet, exercise, relaxation and insulin injection.

About SmartLog

SmartLog is a blood glucose management software for the user to easily observe individual blood glucose values by using various graphs and statistical data.

1.1 User's Manual Introduction

This manual is published to provide easy solution to the user's curiosity while using the program. This program is a software for the diabetics to download the data to the SmartLog blood glucose management program. In order to download the data, i-SENS blood glucose meter and data cable is needed.(refer to 3.4.1 Download Data). To know how to use the blood glucose meter, refer to each meter's user manual. The purpose of this program is to help the user to observe and analysis the blood glucose values and health related data by providing the graphs and other software tool to the diabetics.

1.2 View User's Manual Guide

This User's Manual is written in PDF files. To view the file in PDF format or print out the file, over Adobe® Acrobat® Reader 6.0 version is needed which is a free application program distributed by Adobe Systems. For the user convenience, it is available to print out the whole user's manual or user-selected item.

1.3 System Requirements





- CPU: 500 MHz Intel Pentium III or higher
- RAM: 512 MB or higher
- Minimum free hard disk space: 200 MB
- Windows® XP Home, Professional (SP2 or above), Windows® Vista (32-bit/64-bit), Windows® 7 (32-bit/64-bit) or Windows® 8 (32-bit/64-bit)
- Mac OS 10.8 or later
- USB port
- SmartLog USB cable
- Video monitor and adapter with at least 1024x768 pixel screen resolution
- Printer to print report
- Internet connection for emailing, synchronization services






Note

In this manual, "PC" stands for a computer operates on Microsoft Windows OS. "Mac" stands for a computer operates on Mac OS.

Description of Symbol

	This product fulfills the requirements for Directive 98/79/EC/ on <i>in vitro</i> diagnostic medical devices.
	Consult instruction for use
	Manufacturer
	Authorized representative

Symbols used in the manual

	Important Information Indicates that there is a possibility of death, injury or a serious adverse event may occur to the user if the instructions provided are not followed with proper medical guidance of a physician.
	What you need to know Indicates that there is a possibility of injury to the user or damage to the device if the instructions provided are not followed without proper medical guidance.
	Note Indicates additional or background information that may be helpful to the user.

Important Information

Do not decide on your treatment method using the data provided by SmartLog alone. Any course of medical treatment should be pursued only after a diagnosis by a healthcare provider. Before a treatment method is selected, both the user and their healthcare provider should understand how the statistical data is made by SmartLog.

What you need to know

This SmartLog software saves health-related data on your computer. It is recommended to ensure that you have up-to-date security software on your computer.

2. Program Install & Uninstall

2.1 Install SmartLog

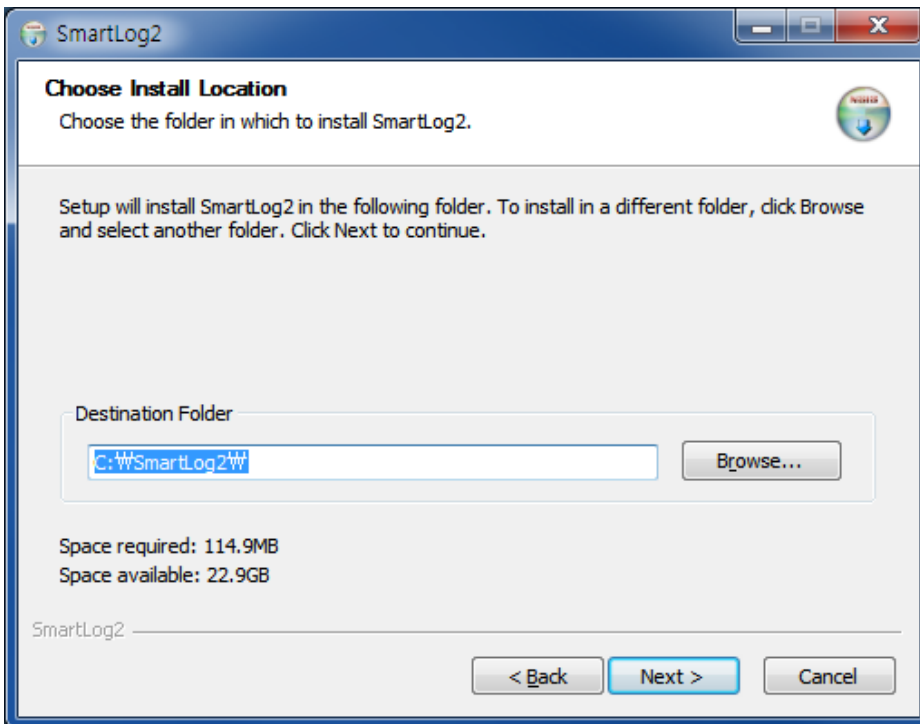
2.1.1 PC(Windows) Version



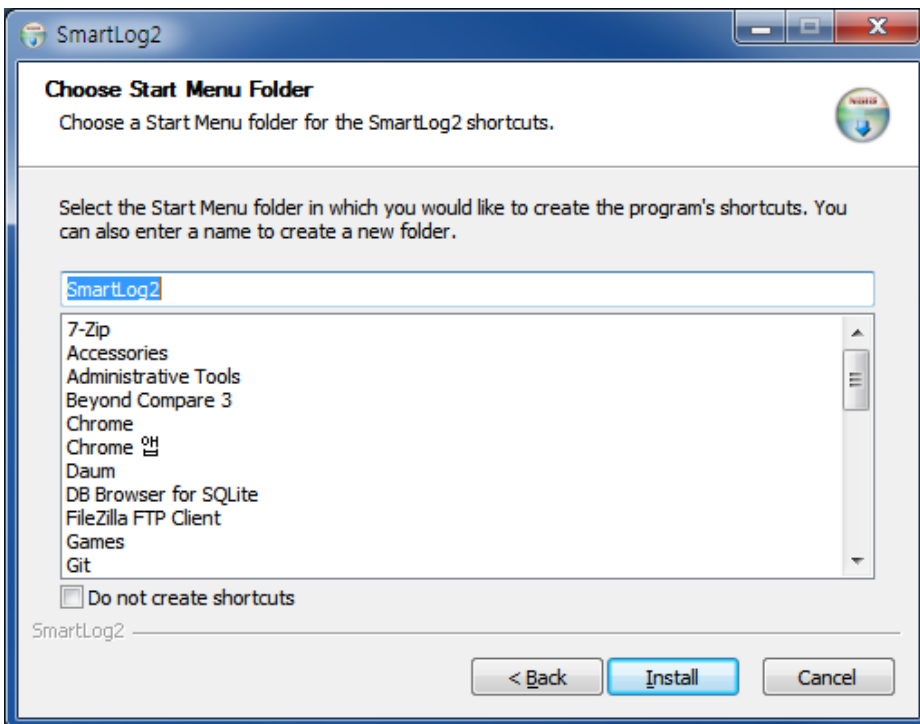
Double click the setup file (Install_SmartLog_2.x.x.exe) and proceed to the installation page.



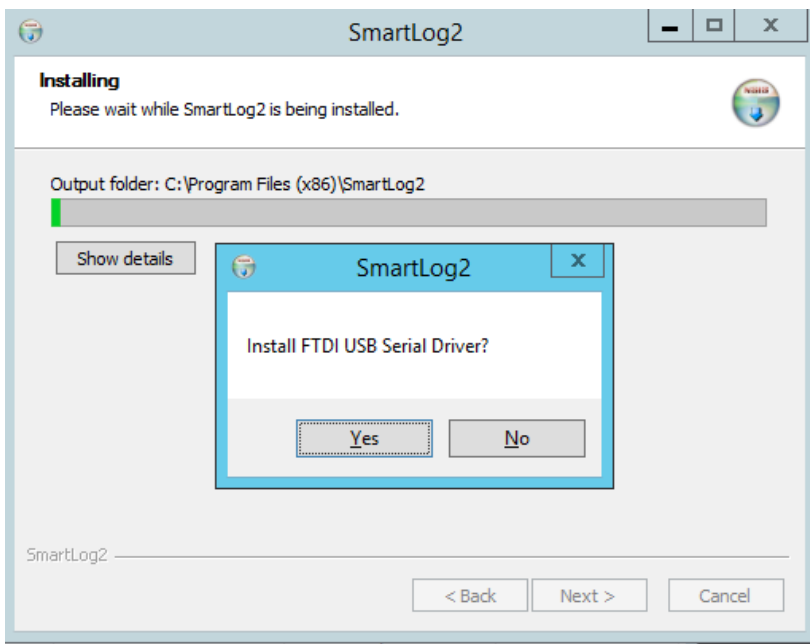
Click "Next" on the installation page to proceed.



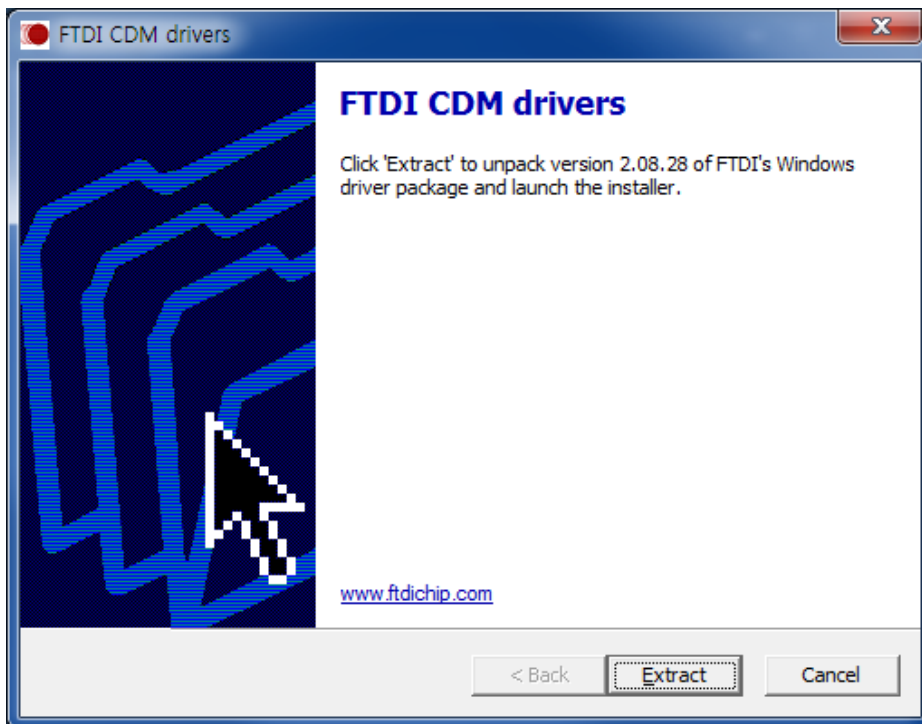
Choose the appropriate folder to install SmartLog and press "Next."



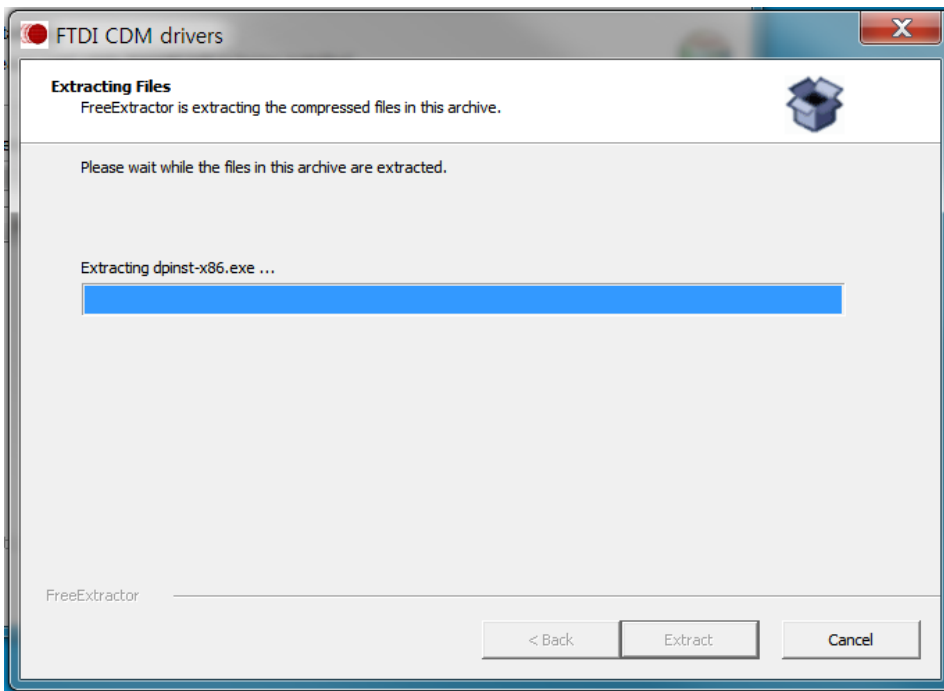
Choose or enter the name of the folder that will appear on the Start menu. Then click "Install" to start installation (File shortcut is not created when "Do not create shortcuts" box at the bottom of the page is checked.)



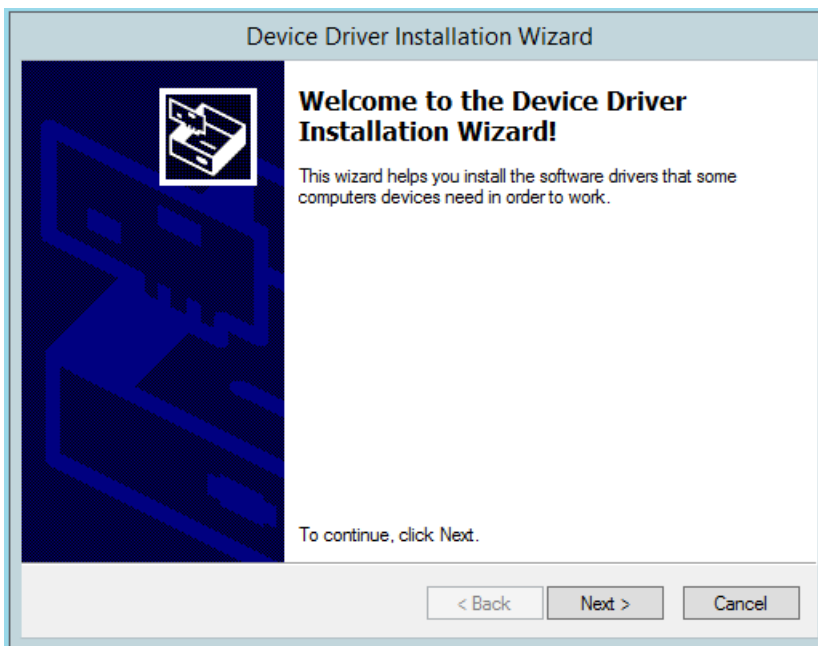
Click "Yes" to install FTDI USB Serial Drivers.



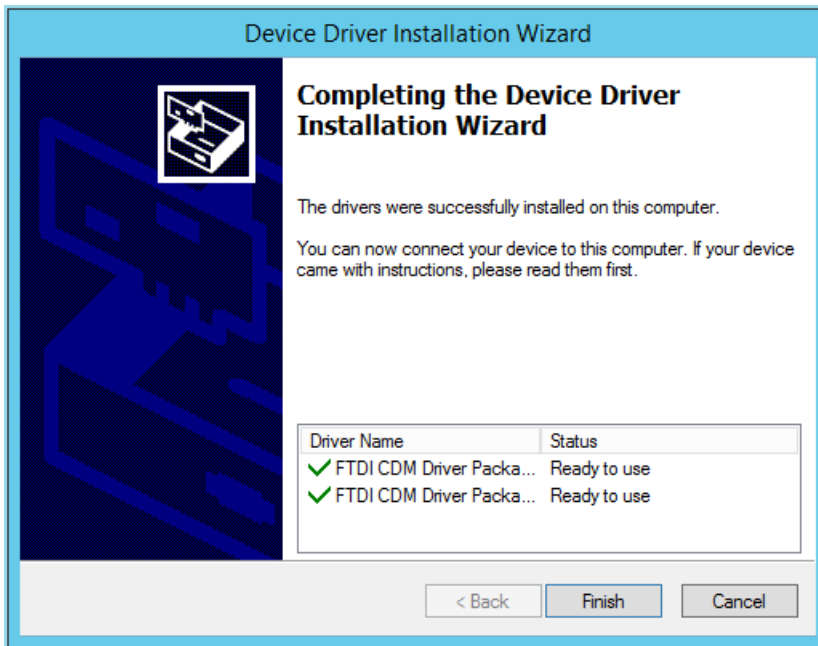
Click "Extract" on the FTDI Drivers installation page.



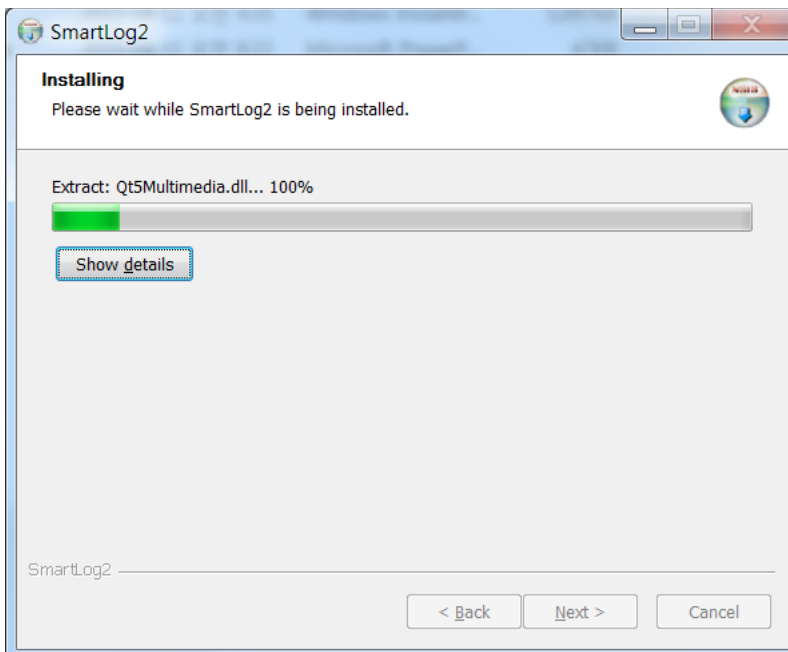
The screen above appears and FTDI Drivers installation is proceeded.



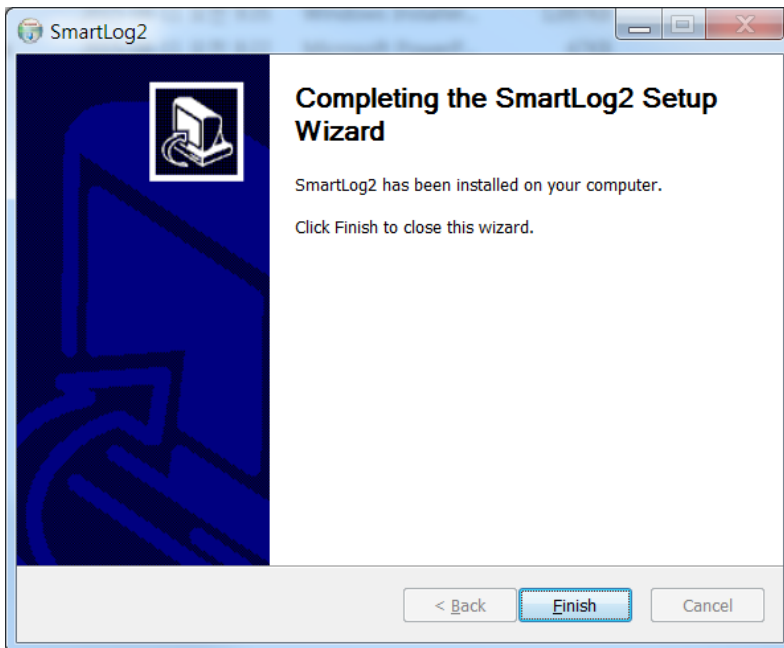
Click "Next" to proceed.



After FTDI Drivers installation is finished, click 'Finish' to complete the installation.



The installation page as above appears and SmartLog installation will start.

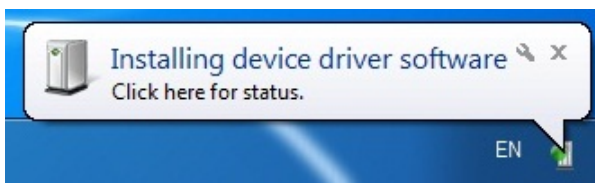


Click "Finish" to complete SmartLog installation.

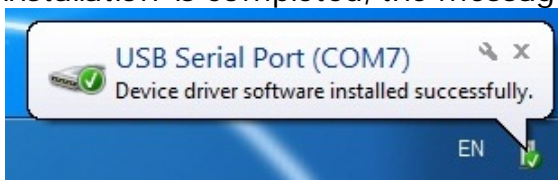


Note

When SmartLog cable is initially connected to the USB port of the user's PC after installing the driver, the message shown below will appear in the bottom right corner of the screen.

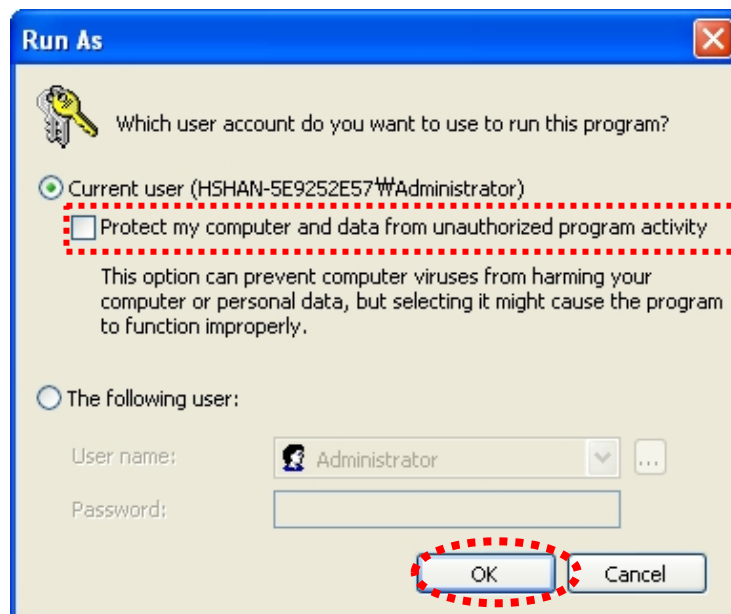


Please wait until this message appears to connect to SmartLog properly. When the installation is completed, the message will display as below.



**Note**

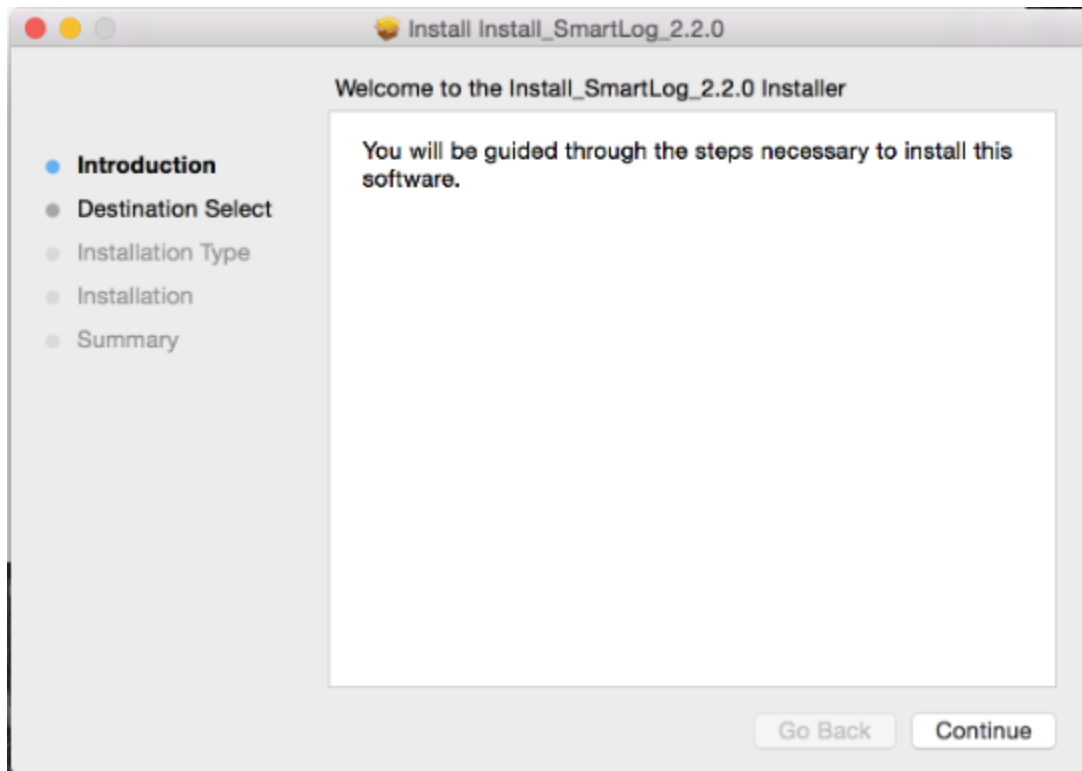
When SmartLog is completely installed on Windows® XP, the following pop-up window will run. Uncheck the current user's "Protect my computer and data from unauthorized program activity" and click "OK" to proceed to SmartLog driver installation.



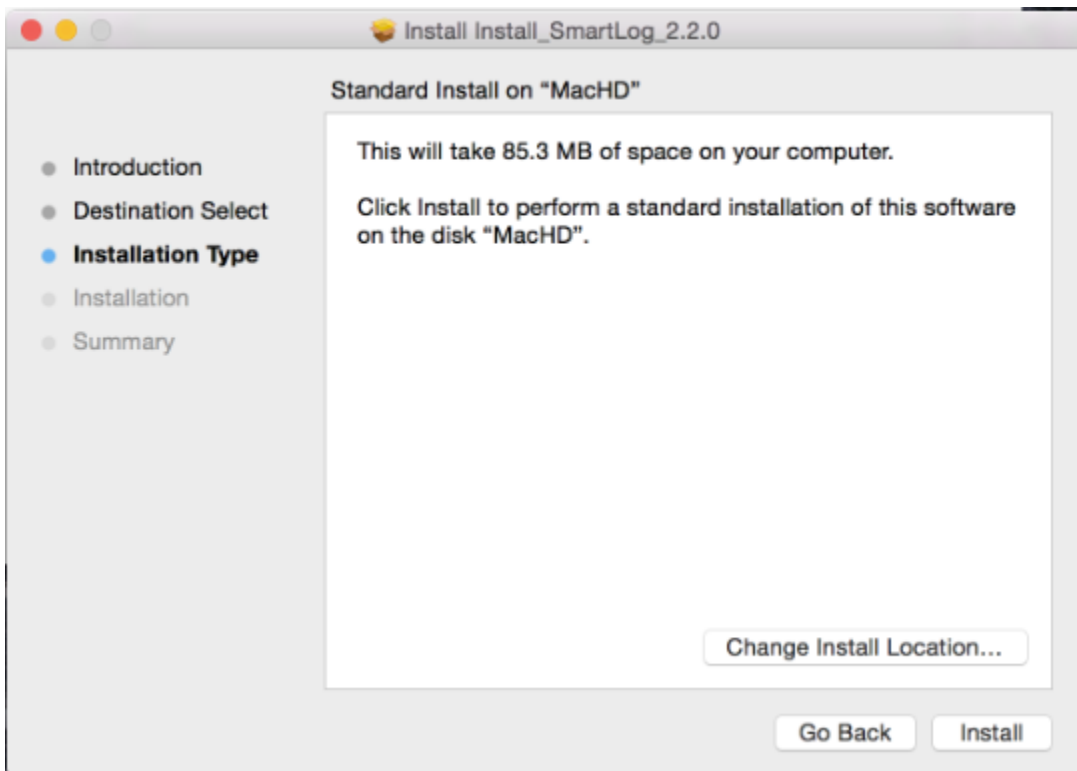
* Pop-up window will run twice. Uncheck and click "OK" twice to install the driver.

2.1.2 Mac Version

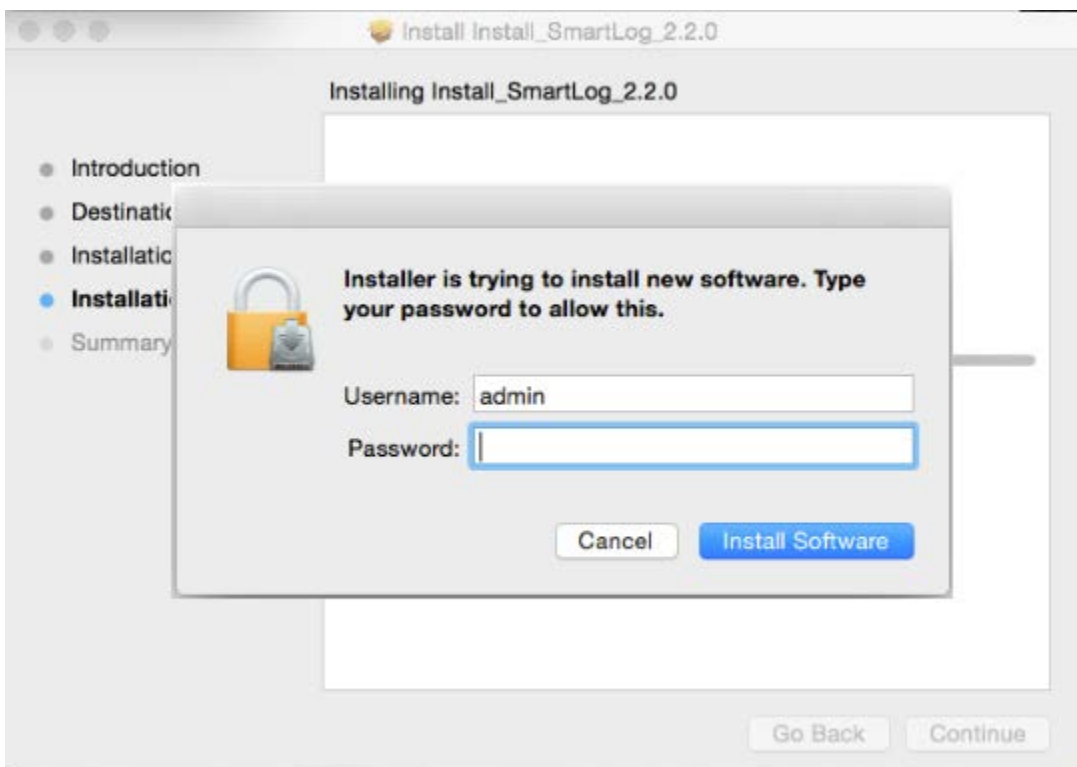
Double click the Install_Smartlog_2.x.x.pkg file and the screen will appear as below.



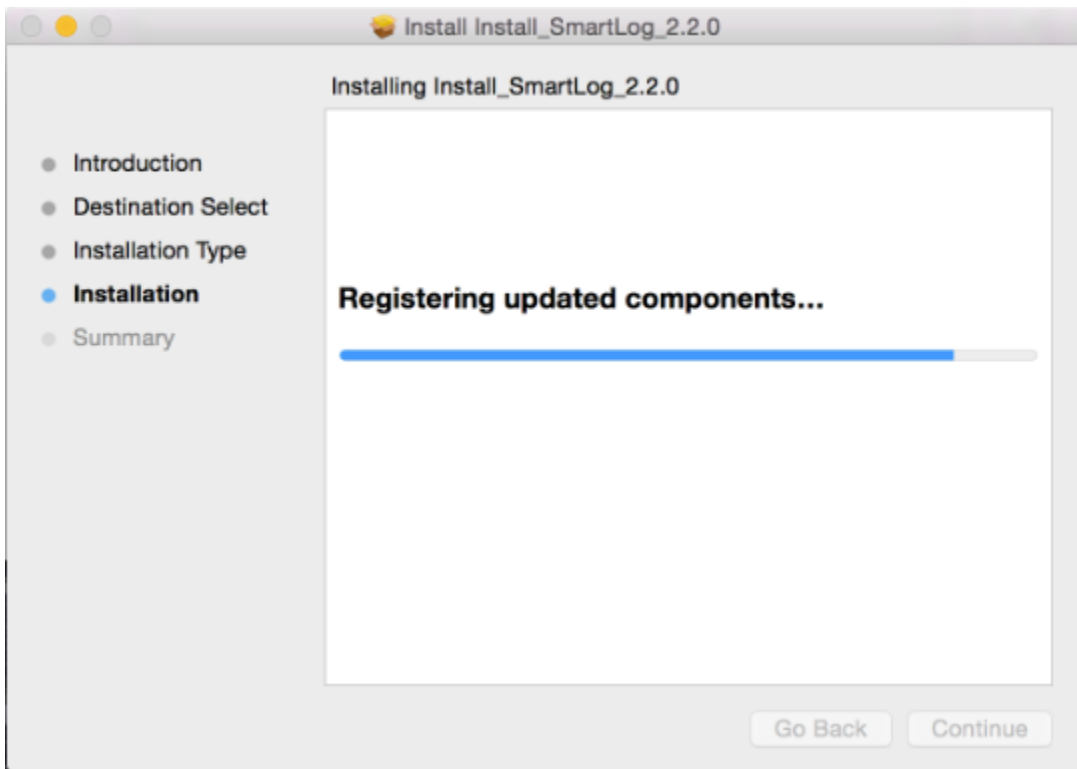
Click "Continue."



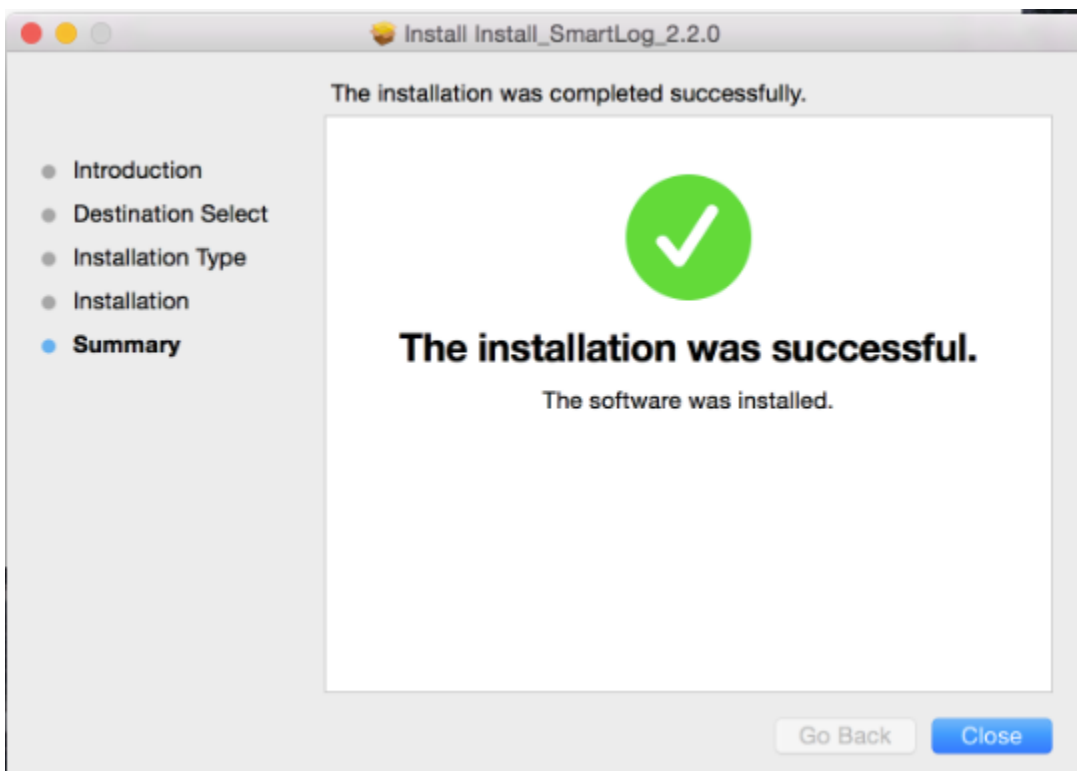
Change install location or click "Install."



Enter the password and click "Install Software" to start installation.



The installation page as above appears and SmartLog will be installed.

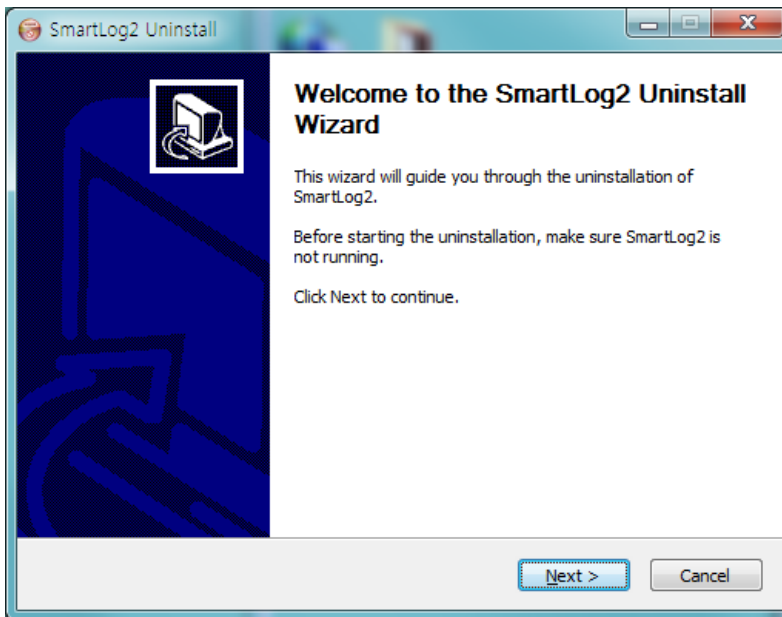


The installation of SmartLog on Mac is completed.

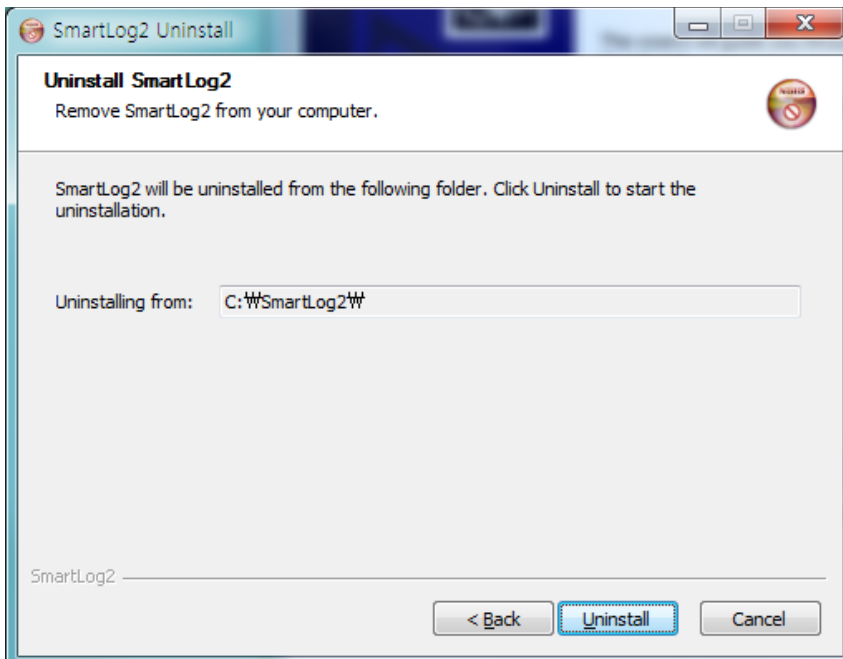
2.2 Uninstall SmartLog

2.2.1 PC(Windows)

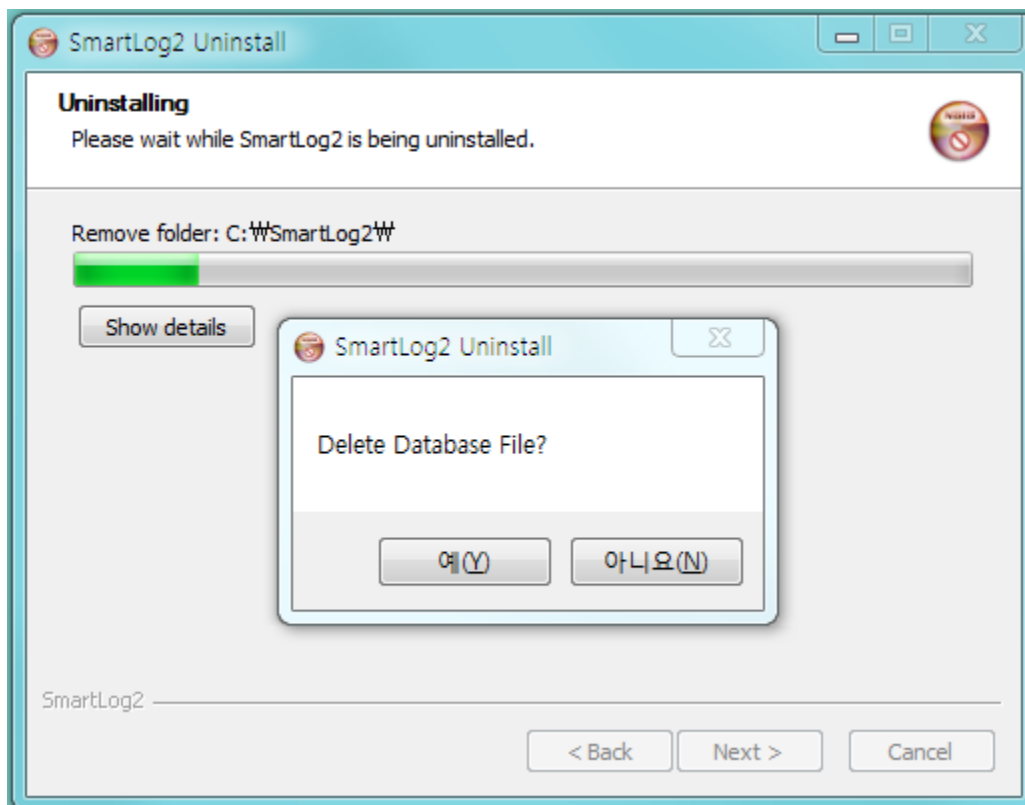
To uninstall SmartLog, run Control Panel and Add/Remove Program. From the program list, double click on "SmartLog2" and run the uninstall file.



On the uninstall screen, click "Next" button to continue.



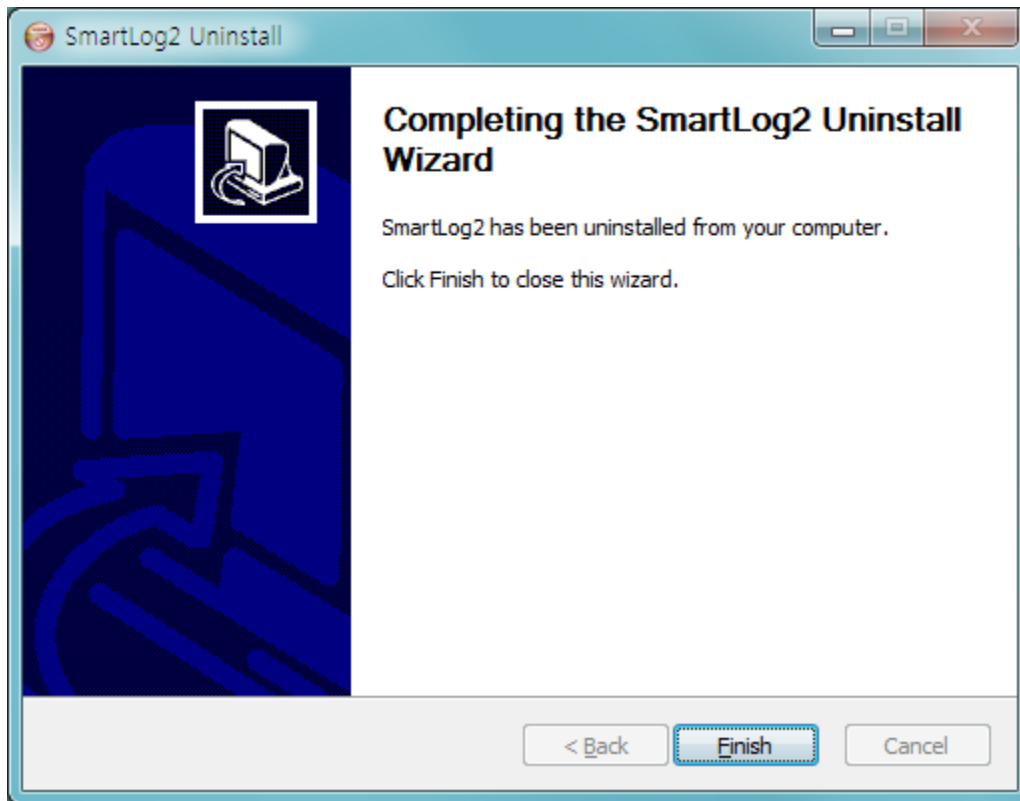
After confirming uninstallation path, click "Uninstall" button to start the uninstallation.



To delete database file of the program together, click "Yes" button to proceed. If you click "No" button, the database file will not be deleted.

**Note**

If you want to restore your database file, you can restore it from the Recycle Bin.



On the uninstall complete screen, click "Finish" button to end the process.



Note

The methods to run Control Panel, and Add/Remove program are different depending on the Windows version. Please refer to the method of the appropriate Windows version in use.

2.2.1 Mac

To uninstall SmartLog, remove SmartLog in the Application folder by clicking the right mouse button and select "Move to Trash."



3. SmartLog User's Manual

3.1 Run SmartLog

Double click the SmartLog shortcut icon from the screen.



To run SmartLog on Mac, double click the SmartLog icon on the Application Programs menu.

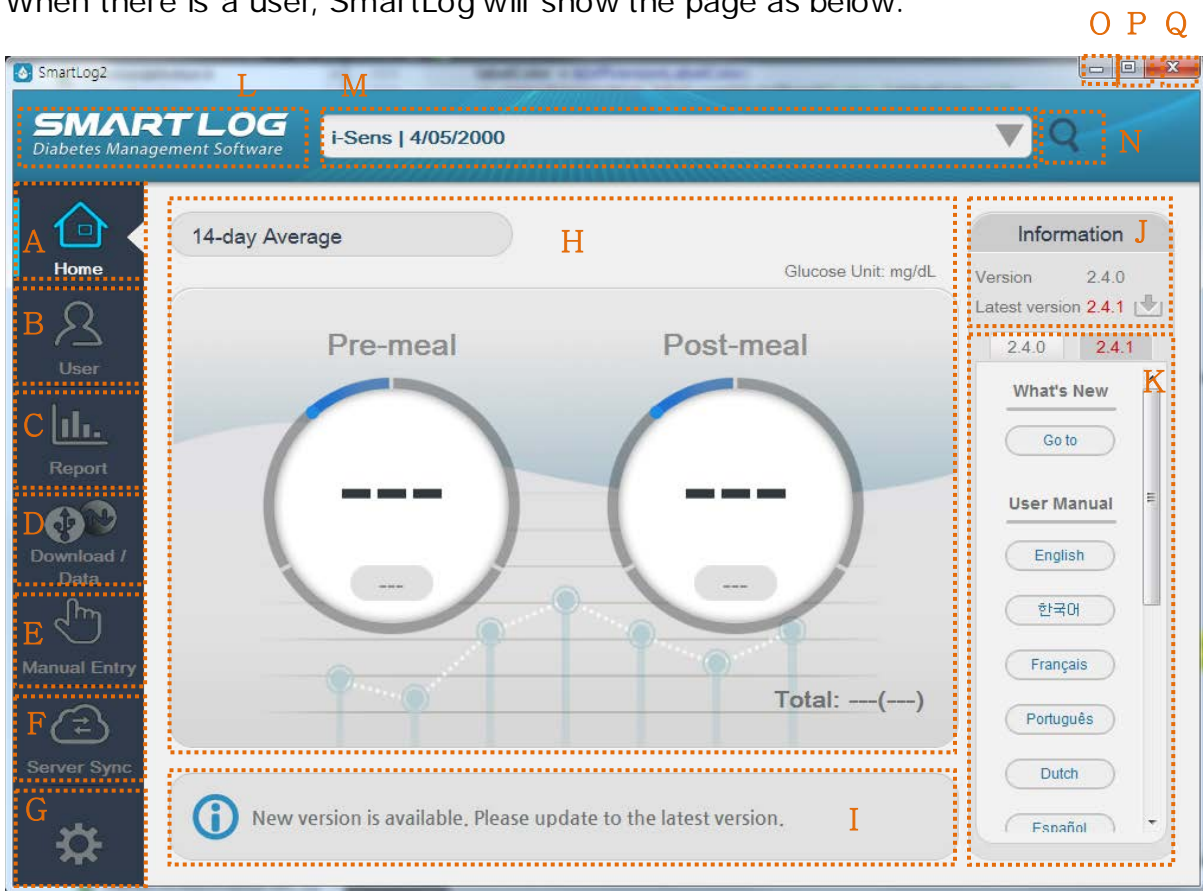


When SmartLog is run for the first time, User addition page as below will appear. (Refer to '3.2 User' on adding user.)

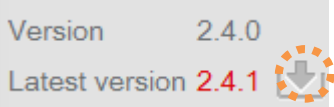
 A screenshot of the SmartLog2 software interface. The window title is 'SmartLog2'. The header includes the 'SMART LOG Diabetes Management Software' logo and a search bar labeled 'F'. A navigation menu on the left contains icons for Home, User, Report (labeled 'A'), Download / Data, Manual Entry (labeled 'B'), Server Sync (labeled 'C'), and a gear icon. The main content area has tabs for 'Basic Information' and 'Medical Information'. The 'Basic Information' tab is active, showing fields for *Name (with a dropdown 'Add user account'), Date of Birth (1/01/1900), Gender (Male/Female), and Email. The 'Medical Information' tab shows fields for Name of Doctor, Email, Name of Hospital, and Insurance Number. On the right, there is a 'Track Health Information' section with a document icon and a 'Meter Serial Number' field. A toolbar at the bottom right contains a checkmark and a refresh icon. Labels 'D' and 'E' are placed above the 'Health Management' and 'Test Schedule' menu items respectively.

* When there is no user, A, B, C, D and E buttons are disabled and F Combo Box will appear empty.

When there is a user, SmartLog will show the page as below.



Displayed Item	Description
A. Home	Use the Home menu to move to the home screen.
B. User	Use the User menu to register a new user or manage an existing user's information.
C. Report	Use the Report menu to view, print, and share various reports.
D. Download / Data	Use the Download / Data menu to download data from blood glucose meter, make reports from the data saved in SmartLog in pdf, jpg, xls, csv formats, and browse xls, csv files to save the data in SmartLog. (pdf and jpg files are not browsed.)
E. Manual Entry	Use the Manual Entry menu to input data manually.

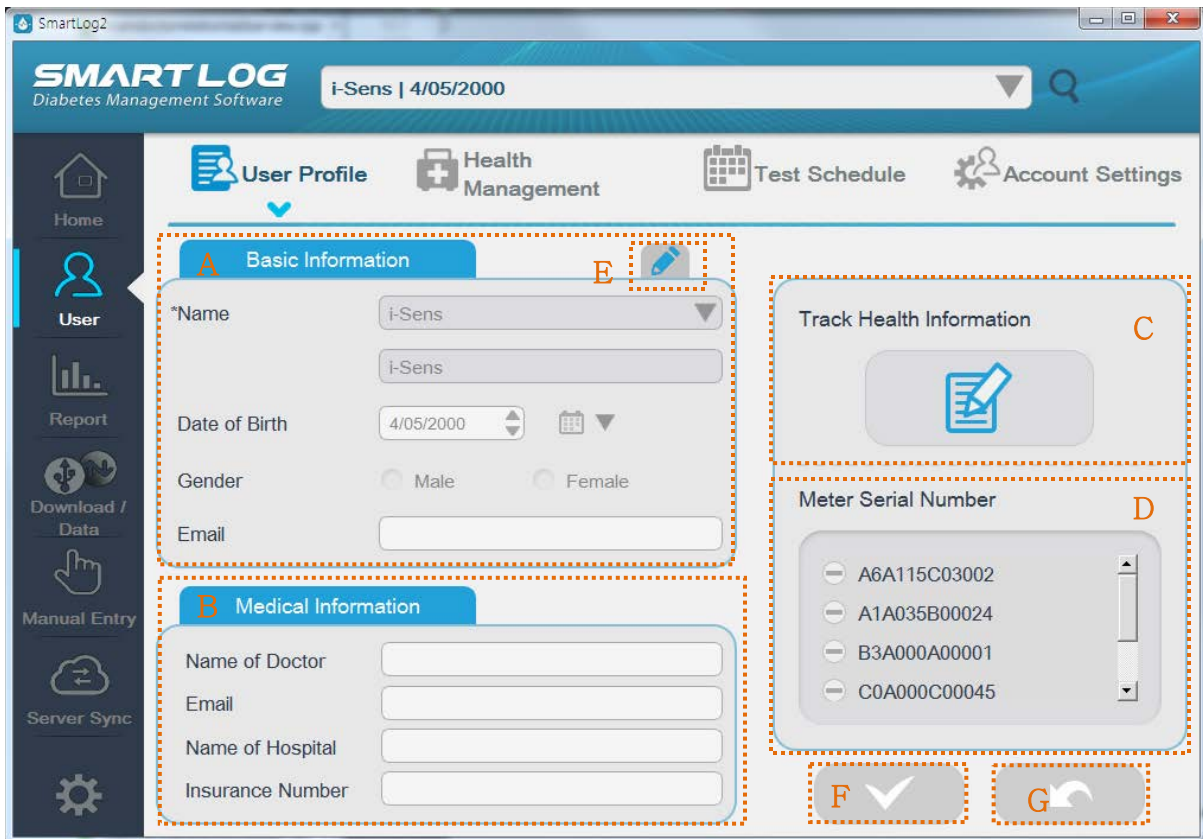
F. Server Sync	Use the Server Sync menu to send the data to the server or receive the data from the server and save it.
G. Settings	Use Settings menu to change the setting value of the program.
H. Average 14-Day	Use the Average 14-Day menu to show an average value of the previous 14 days.
I. Version Information	Use the Version Information menu to check the current and the latest versions of SmartLog. Click Download icon on the right to download the latest version. 
J. SmartLog Information Screen	Use the SmartLog Information Screen menu to go to what's new and check the user manual, installation file and related website information. Information on the current version can be checked when it is not the latest version.
K. Version Update	The latest version will be displayed only when the latest version is different from the current version.
L. Refresh	Use the Refresh menu to renew the users list.
M. Users List	Use the User List menu to show list of users with name, gender, date of birth and to choose another user by clicking on the down arrow next to the user information.
N. User Search	Use the User Search menu to search registered users.
O. Minimize	Use the Minimize menu to minimize the program screen.
P. Maximize	Use the Maximize menu to maximize the program screen.
Q. Exit	Use the Exit menu to exit the program.

3.2 User

User menu has total of 4 options including User Profile, Health Management, Test Schedule and Account Settings.

3.2.1 User Profile

In the User menu, User Profile is initially selected and the screen shown below will appear.


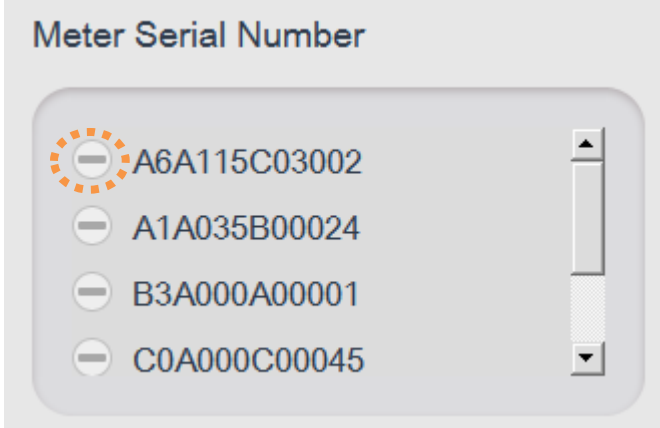


User information can be entered or modified to register a user.

Name is mandatory. If you do not enter one of the above, you cannot register.

There are two ways to register a user; registering after receiving data from a new glucose meter, and registering manually by clicking “Add User Account” on the User Profile menu.


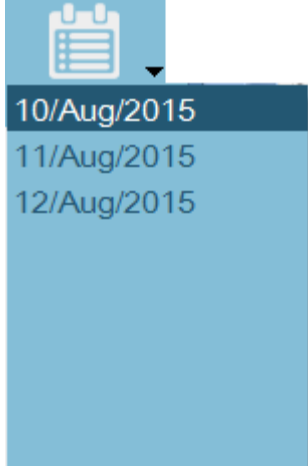
Displayed Item	Description
A. Basic Information	Basic information of the user. Name is mandatory. Enter or edit the name, date of birth, gender, or email. Click E button to modify.
B. Medical Information	Enter or modify Name of Doctor, Email, Name of Hospital and NHI number.

<p>C. Track Health Information</p>	<p>Record, modify, and save physical examination results by date. Click "Track Health Information" button to record the results.</p>  <p><<Track Health Information button</p>
<p>D. Meter Serial Number</p>	<p>Manage the serial number of the meter. Click the Minus icon to delete the registered serial number.</p> 
<p>E. Mandatory Information Modification Button</p>	<p>Modify mandatory information.</p>
<p>F. Save Button</p>	<p>Save entered or modified data. Active only when edited.</p>
<p>G. Cancel Button</p>	<p>Cancel entered or modified data. Active only when edited.</p>

3.2.1.1 Track Health Information

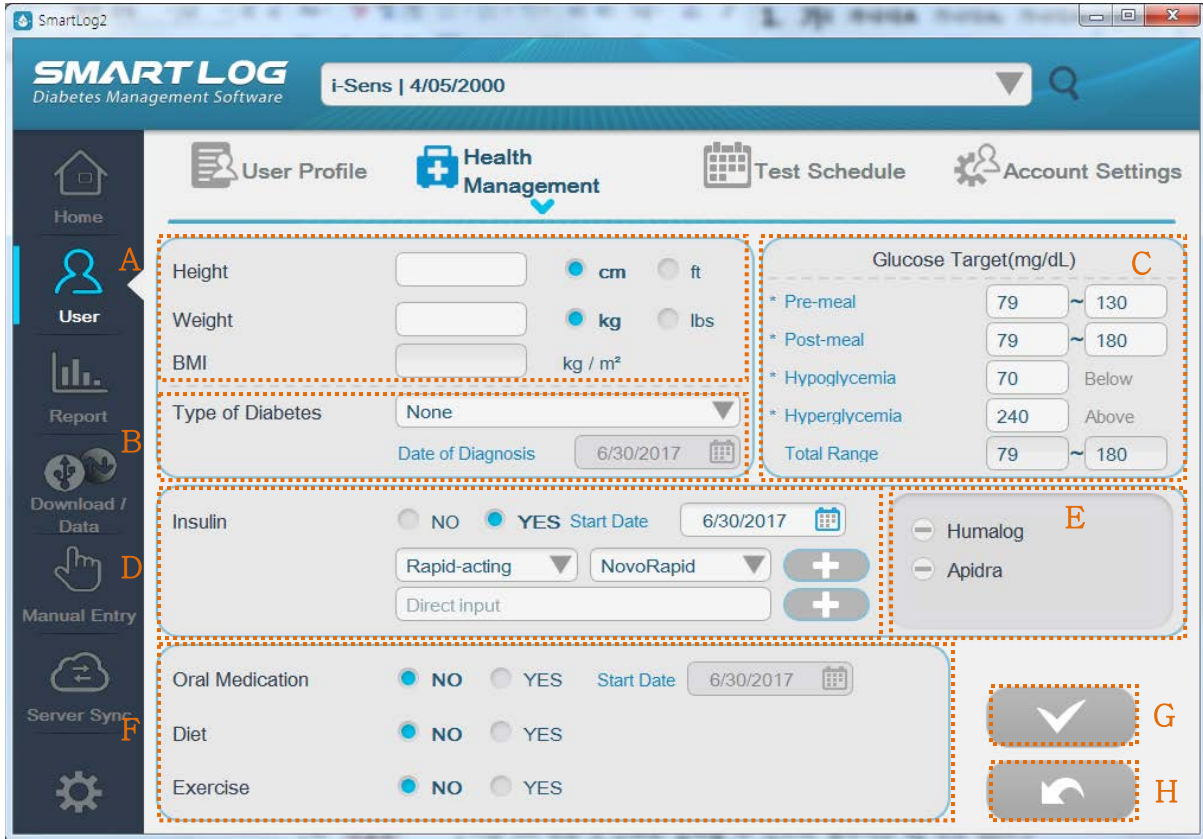
View, record, modify, and save physical examination results by date.

Displayed Item	Description
A. Selected Date	Displays the selected date to be viewed, modified or saved.
B. Calendar Button	Shows a calendar dialog to select a date.

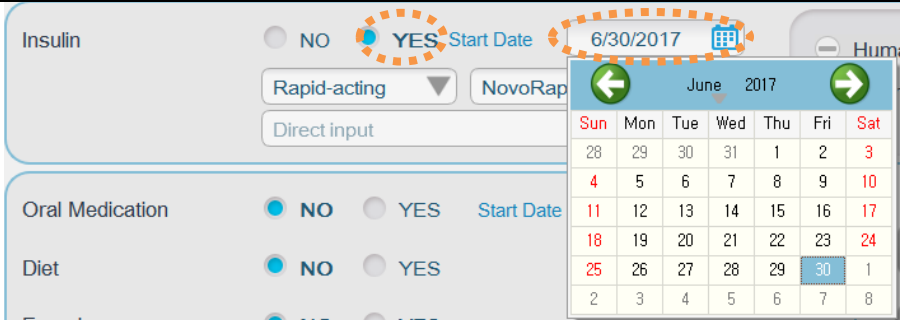
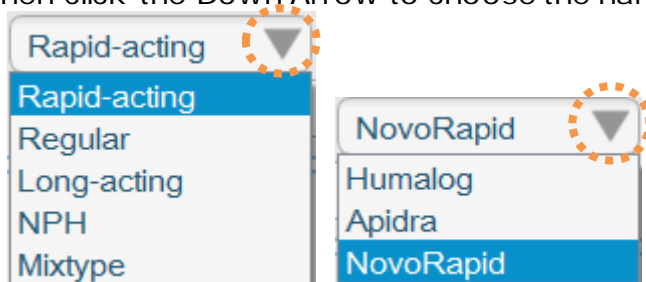
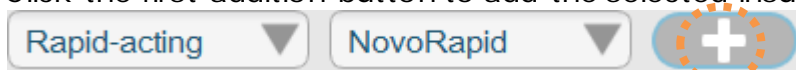

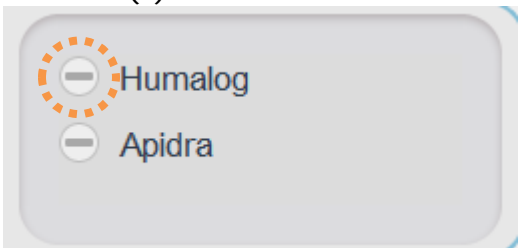
	
<p>C. List of saved Health Information</p>	<p>Lists the dates in which the Health Information is already stored.</p> 
<p>D. Fields of Health Information</p>	<p>BMI is automatically calculated by height & weight. Glucose unit can be changed in the Settings menu.</p>
<p>E. Save Button</p>	<p>Save entered or modified data. Active only when edited.</p>

3.2.2 Health Management

Click the “Health Management” and the following screen will appear.

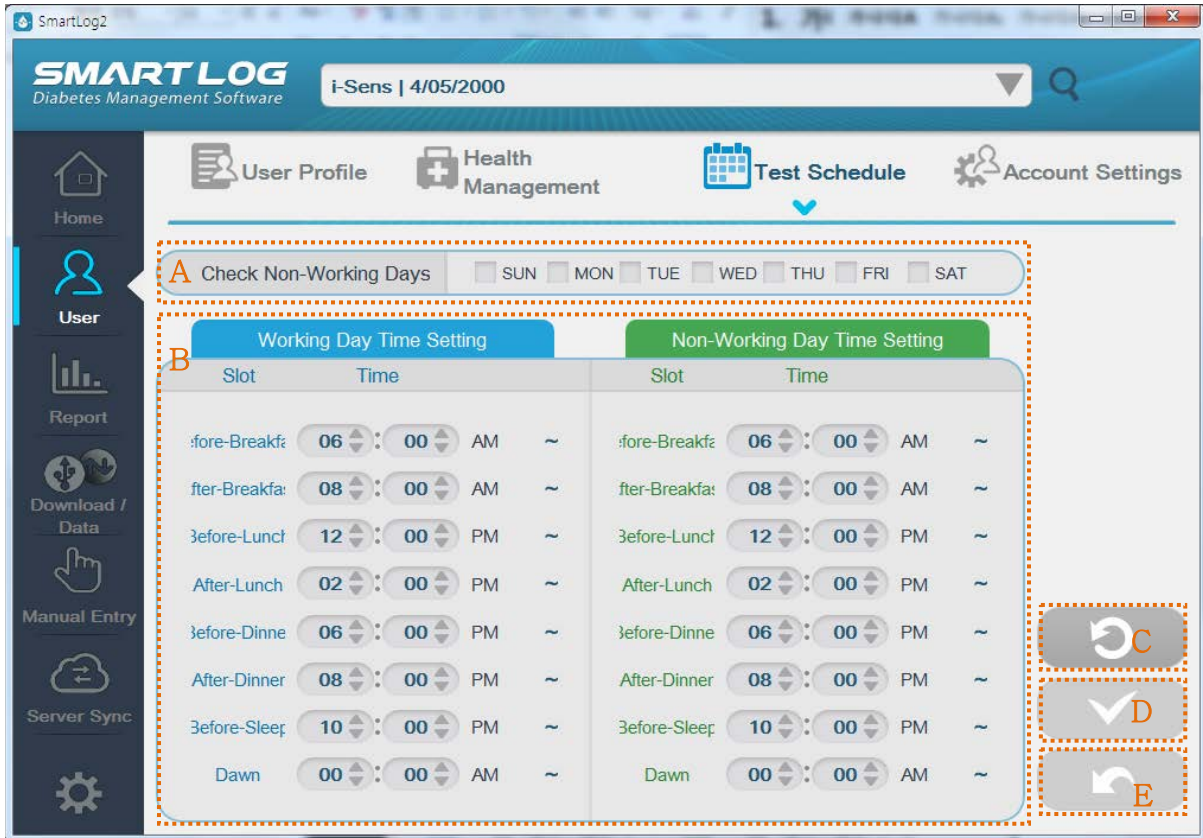


Displayed Item	Description
A. BMI	Height can be entered in cm or ft and Weight can be entered in kg or lbs. Data will be automatically converted if you change the unit. BMI will be automatically calculated when you enter your Height and Weight.
B. Diabetes Types	You can select the Diabetes Types and enter the Time of Diagnosis.
C. Glucose Target	Set up glucose target range before or after meal. Ranges before and after meal can overlap. Set target range appears as light green area on graphs of some reports. All ranges are automatically calculated and displayed.
D. Insulin	Insulin the user is using can be added. Check “Yes” on insulin status to add insulin. Click the date button as below to choose the insulin start date.

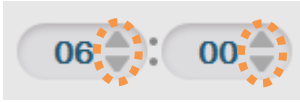
	 <p>Click the Down Arrow to choose the insulin type from the list, then click the Down Arrow to choose the name of insulin</p>  <p>Click the first addition button to add the selected insulin.</p>  <p>Click Direct Input field to enter insulin medication and click the second addition button to select the name of insulin not on the list. Use Shift+^lw key to enter multiple numbers at once.</p>  <p>Up to five insulin medications are saved.</p>
<p>E. Insulins List</p>	<p>Added insulin name is displayed. The displayed insulin name is used to enter the insulin dosage information when entered manually.</p> <p>Click the (-) icon as below to delete insulin.</p> 
<p>F. Additional Information</p>	<p>You can select the Oral Medication, Diet and Exercise options.</p>
<p>G. Save Button</p>	<p>Save entered or modified data. Active only when edited.</p>
<p>H. Cancel Button</p>	<p>Cancel entered or modified data. Active only when edited.</p>

3.2.3 Test Schedule

Click the "Test Schedule" and the following screen below will appear.



SmartLog manages the data using the meal and sleep time. Time schedule for meal and sleep can be selected for both Working and Non-working days.

Displayed Items	Description
A. Select Non-Working Days	You can differentiate working days from nonworking days by clicking the check box next to each date.
B. Working Day Time Setting/ Non-Working Day Time Setting	Modify meal and sleep time. Click Up and Down Arrows next to the hour and minute values as below to modify. Minute values are modified only in ten minute unit. 
C. Initialize	Change Days & Time for both Working and Non-working days into default values.
D. Save Button	Save entered or modified data. Active only when edited.
E. Cancel Button	Cancel entered or modified data. Active only when edited.



Important Information

Make sure to set the time in your meter to match the current time on your PC. If the time setting is wrong, the data can be erroneously analyzed.



What you need to know

If any of the schedule doesn't match, the blood glucose data in SmartLog may be displayed in an inappropriate meal slot and cause a production of a report based on erroneous data information. If data appears in an inappropriate meal slot and falls out of the target range, you may misinterpret the information when tracking and organizing data. All data in the before-breakfast through bedtime meal slots will be displayed sequentially with the date of the before-breakfast start time. This includes data that may be recorded after midnight.

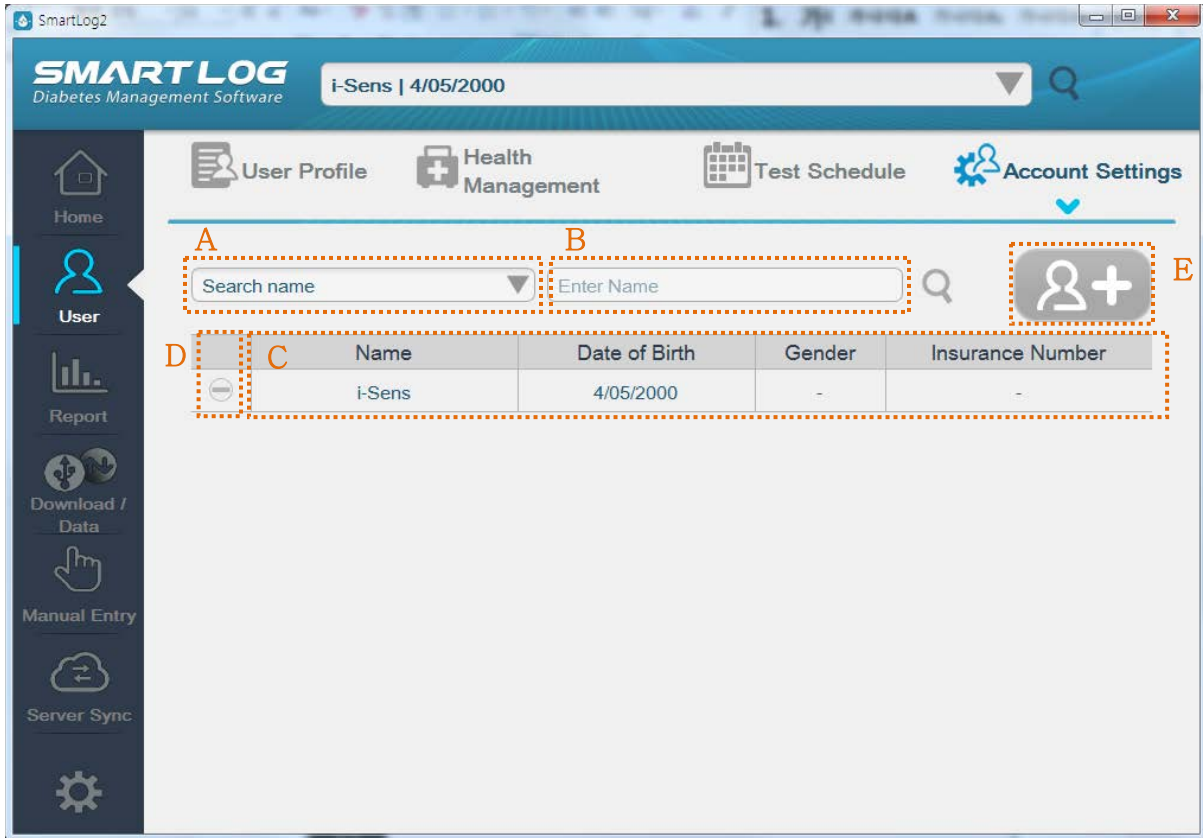


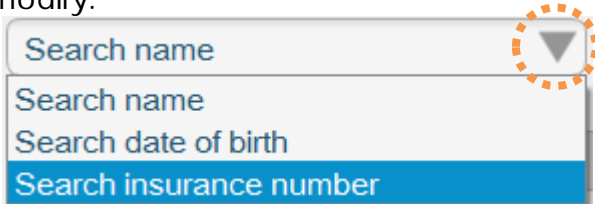
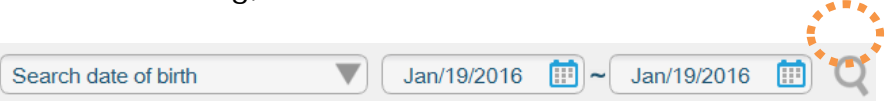
Note


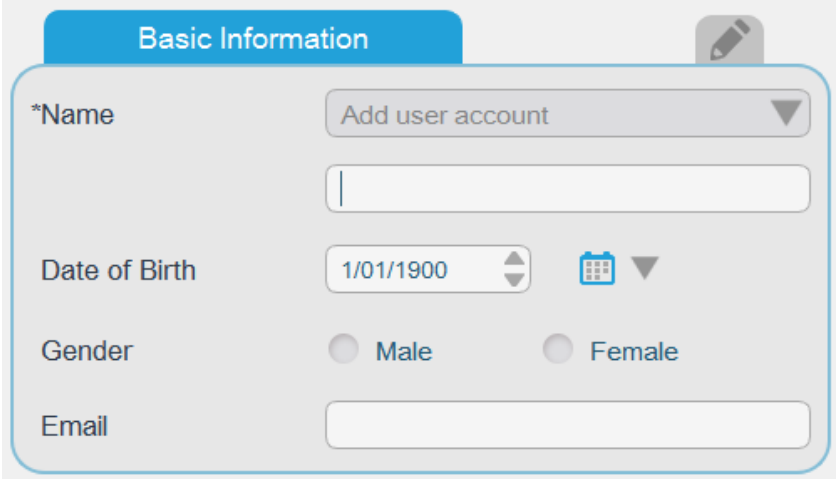
If there is a pre/post meal flag in the blood glucose data, the pre/post meal flag of the blood glucose meter is applied first rather than the pre/post meal flag set in the test schedule.

3.2.4 Account Settings

In "Account Setting", you can register a new user and delete/search for a user. Click the "Account Setting" and the following screen below will appear.



Displayed Item	Description
A. Search Option	Currently set user search option. The basic search option is name, and can be modified to date of birth and NHI number. Click the Down Arrow and choose the search option to modify. 
B. Entry Field	Enter information to search. If the "Search" button is pressed with nothing in the Entry Field, then all users are displayed. If the Search Option is changed to Date of Birth, this field changes to Date Selection menu To start searching, click the "Search" button. 
C. User List	Registered user list will appear. When the Search tool is run

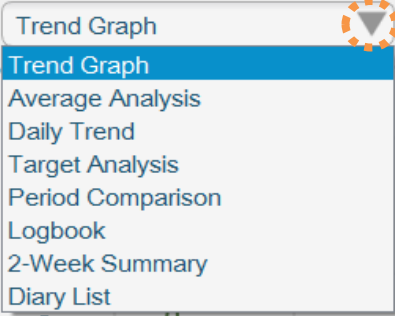
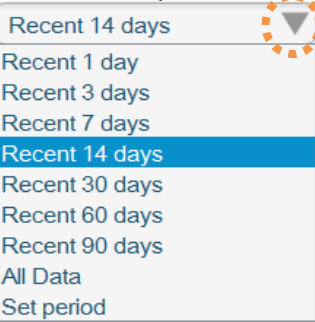

	<p>only the searched user is displayed. Click the User List to see the User Profile screen.</p>
<p>D. Remove User</p>	<p>Delete the registered user information and data records. Click the delete button to delete.</p>  <p><< Delete button</p>
<p>E. Add User</p>	<p>User information screen is displayed and new user information can be entered. Registration is possible after entering all the mandatory information.</p> 

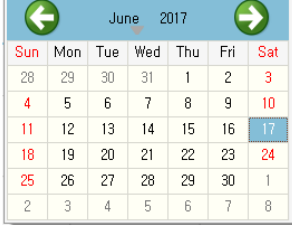
3.3 Report

Click "Report" and the following screen will appear.



While viewing the current report, different types of report can be viewed. You can also view the same report on a different range of days and you may print and send the reports by email.

Displayed Item	Description
A. Type of Reports	<p>It displays the selected type of Reports. Click the bottom arrow button and choose the type of a different Report to view.</p> 
B. Range of Days	<p>Range of days of currently displayed report. Click the Down Arrow and select one from the list, or choose "Set period" to modify the range. Start and end dates can be modified using the calendar when "Set period" is selected.</p>  <p>(selecting a defined range)</p> 

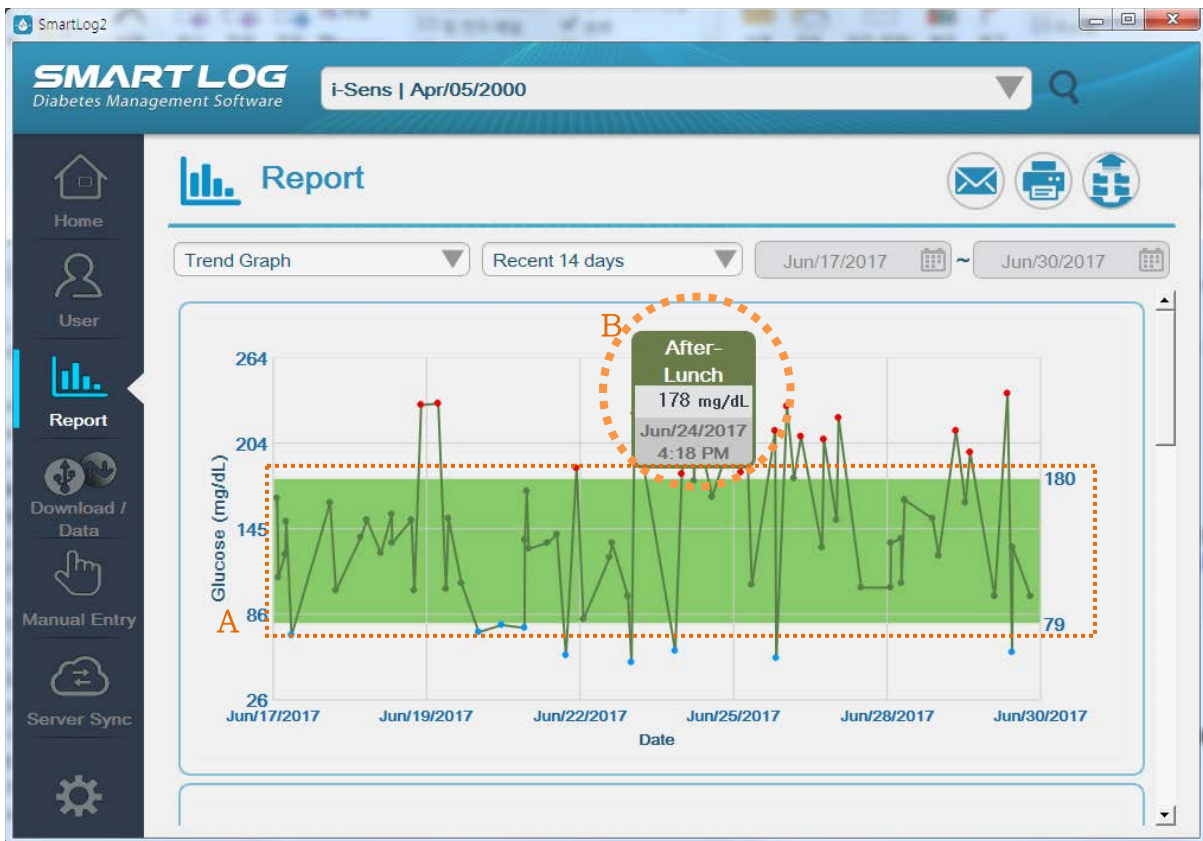
	<div style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;"> Trend Graph ▼ Set period ▼ 6/17/2017 ~ 6/30/2017 </div>  <p>(Selecting "Set period")</p> <p>The report will be automatically re-displayed after selecting dates.</p>
C. Send Email	You can send the report shown on the screen via email.
D. Print Report	You can print the report shown on the screen.
E. Export Data	You can export all the reports in designated file format.

3.3.1 Trend Graph

Trend Graph displays blood glucose test results for a selected time ranges. This graph shows the blood glucose values, insulin, carbohydrate and exercise graphs. Each graph reveals the daily changes of the blood glucose values, insulin, carbohydrate and exercise. The insulin, carbohydrate and exercise graphs are only displayed when there is a data in a selected day.

Blood glucose graph are shown as dots on an X-Y graph. Each data is connected to the next with a solid line.

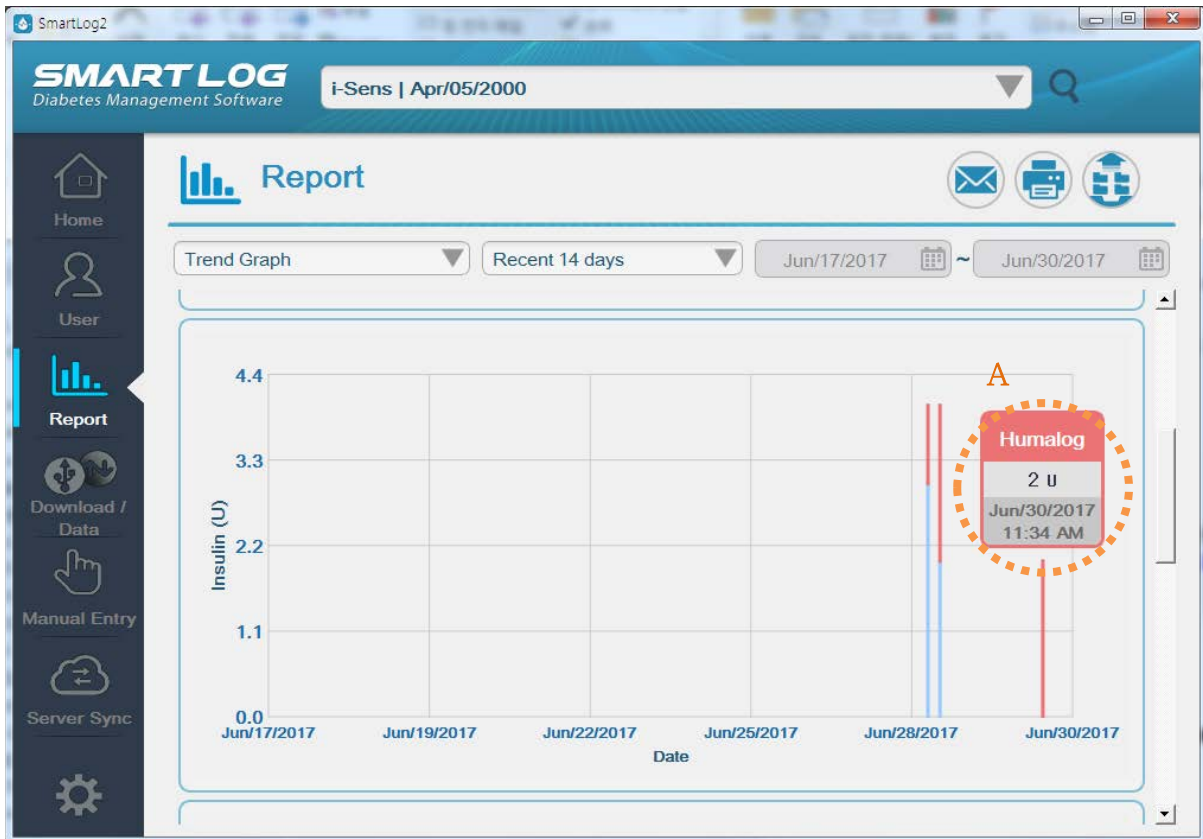
Glucose data will appear in chronological order, from the oldest to the most recent. The X-axis represents the date and time of the measurement. The Y-axis represents the actual glucose level.



Displayed Item	Description
A. Target Value Range	Target Value range is shown in light green region from the graph. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range.)
B. Detailed Information	Move your cursor on each dots to show the corresponding details including Date, Time, Glucose Value, Time Range, and etc.

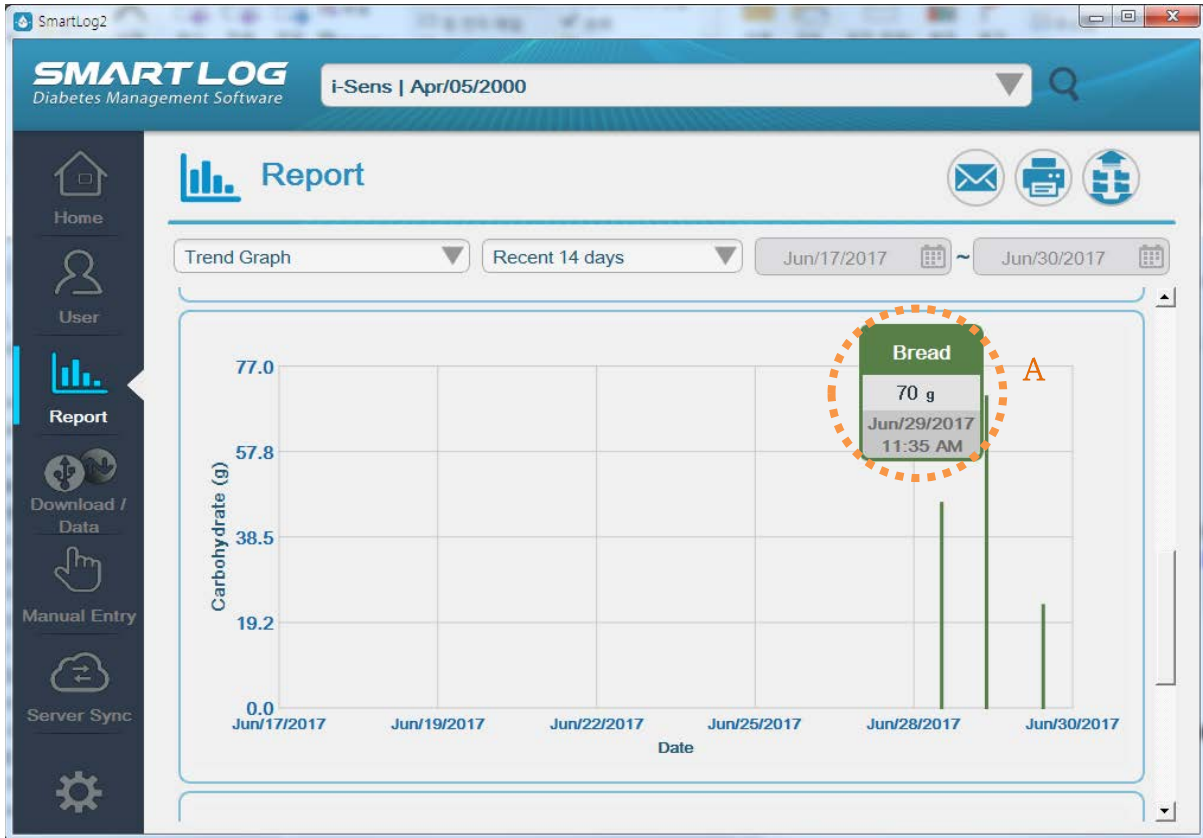
Insulin graph are shown as bars on an X-Y graph. When a number of insulin is stored at a time, it is displayed cumulatively.

Insulin data will appear in chronological order, from the oldest to the most recent. The X-axis represents the date and time of the measurement. The Y-axis represents the actual insulin level.



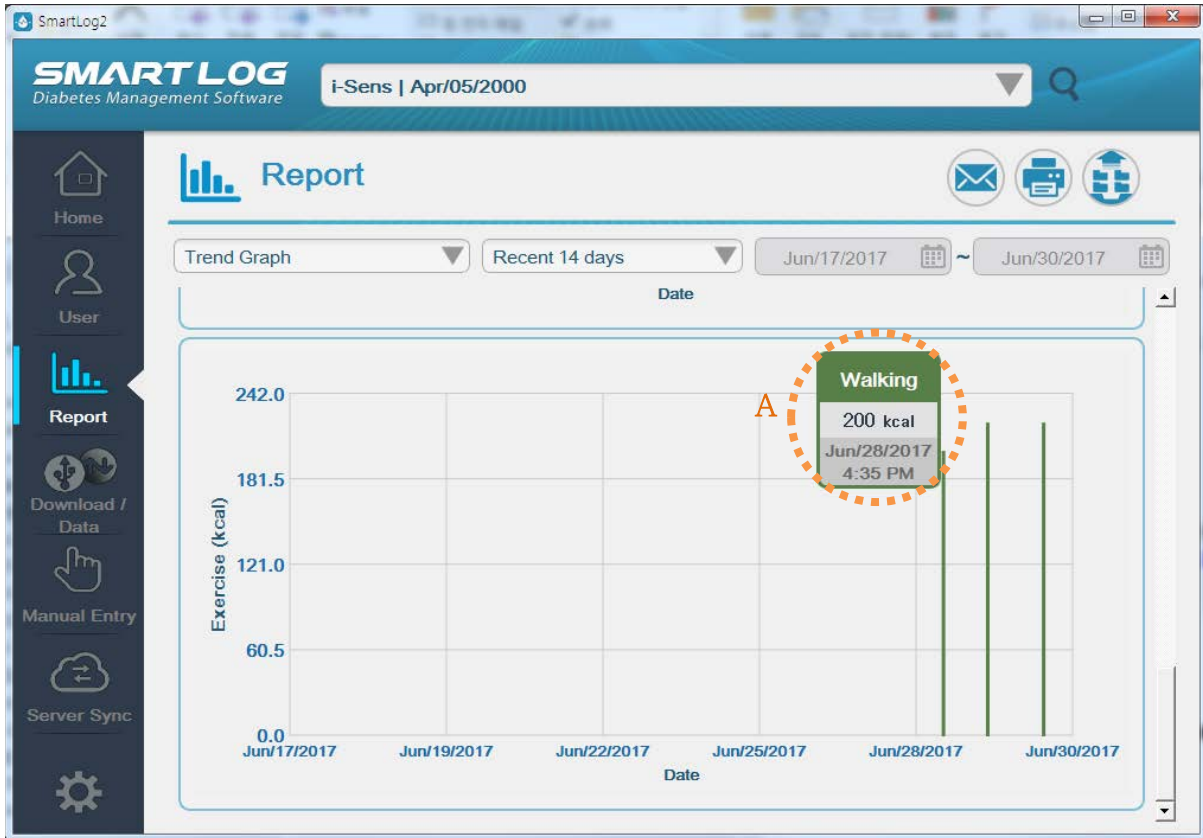
Displayed Item	Description
A. Detailed Information	Move your cursor on each bar to show the corresponding details including the name of Insulin, Insulin Value, Date, Time and etc.

Carbohydrate graph are shown as bars on an X-Y graph. Carbohydrate data will appear in chronological order, from the oldest to the most recent. The X-axis represents the date and time of the measurement. The Y-axis represents the actual carbohydrate level.



Displayed Item	Description
A. Detailed Information	Move your cursor on each bar to show the corresponding details including the type of Carbohydrate, Carbohydrate Value, Date, Time and etc. When there is no type of carbohydrate, "-" is displayed.

Exercise graph are shown as bars on an X-Y graph. Exercise data will appear in chronological order, from the oldest to the most recent. The X-axis represents the date and time of the measurement. The Y-axis represents the actual exercise level.



Displayed Item	Description
A. Detailed Information	Move your cursor on each bar to show the corresponding details including the type of Exercise, Exercise Value, Date, Time and etc. When there is no type of exercise, "-" is displayed.

3.3.2 Average Analysis

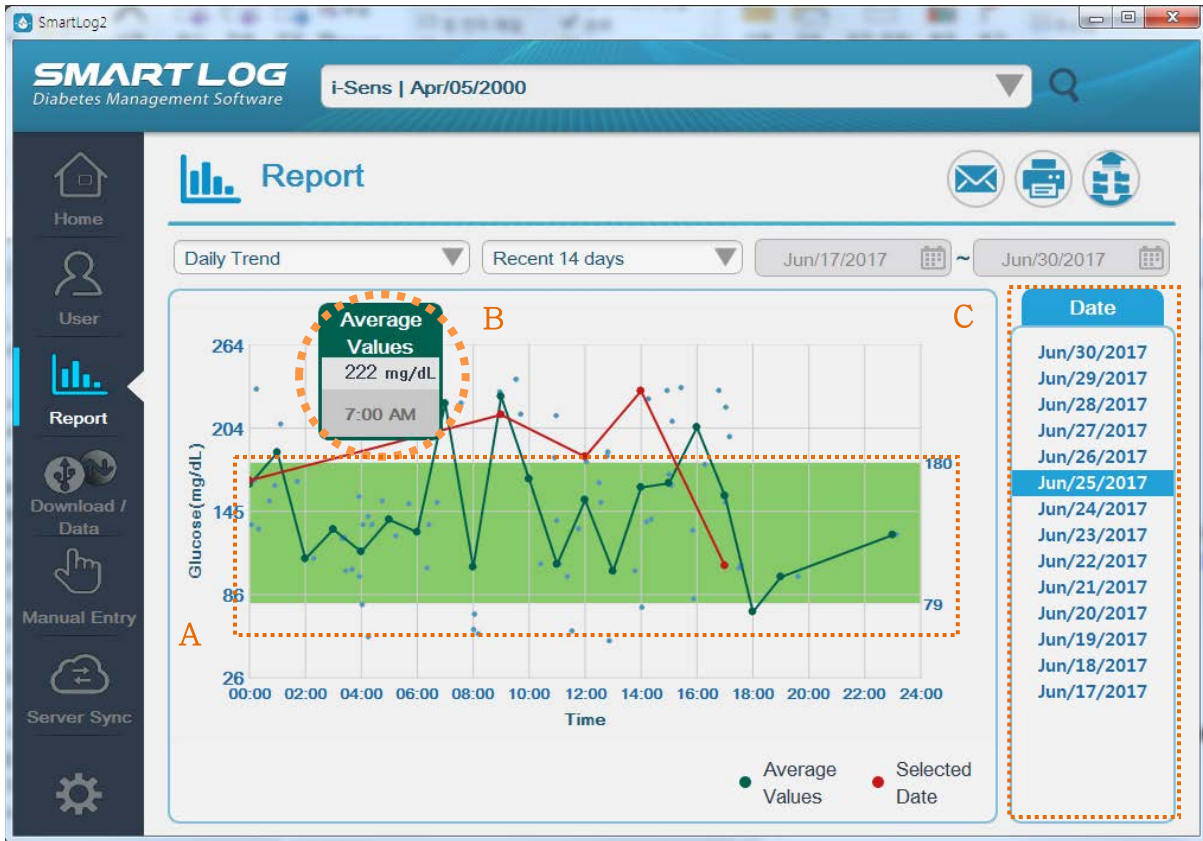
The Average Analysis shows glucose averages by meal slots and day of the week. This analysis allows you to monitor how glucose data are influenced by meals and by day.



Displayed Item	Description
A. Pre/Post Meal Average Values	It will show the average values by hours. The X-axis represents the meal and sleep time, while the Y-axis represents the average values. Average values in each Pre/Post Meal and Before/After Sleep are shown in the bar graph.
B. Daily Average Values	It will show the Daily Average Values. The X-axis represents the day while the Y-axis represents the Average Values.
C. Detailed Information	Move your cursor to each bar to see the corresponding details including Counts, Total counts and Glucose Averages.

3.3.3 Daily Trend Graph

The Daily Trend Graph will show the glucose values in 24 hours period. This report allows you to easily track changes in blood glucose data on an hourly basis.

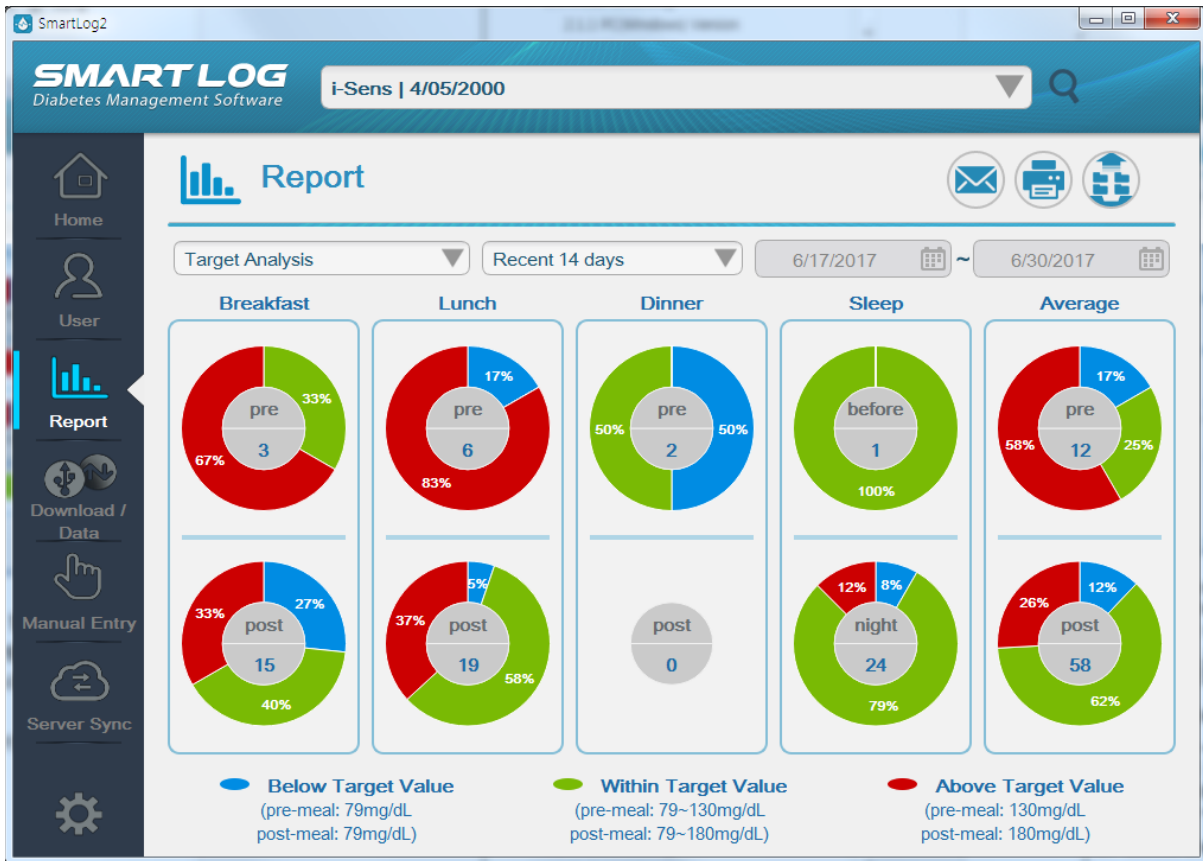


All the glucose measurement values are shown as dots in the X-Y graph. The X-axis shows the measurement time and the Y-axis shows the actual glucose measurement value.

Displayed Item	Description
A. Target Value	Target Value range is shown in light green region from the graph. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range.)
B. Detailed Information	Move your cursor on each dots to show the corresponding details including Time, Glucose Values, Time Ranges and etc.
C. Select Date	Select a specific date to see the average data in red lines of the relevant date. Click the date to select.

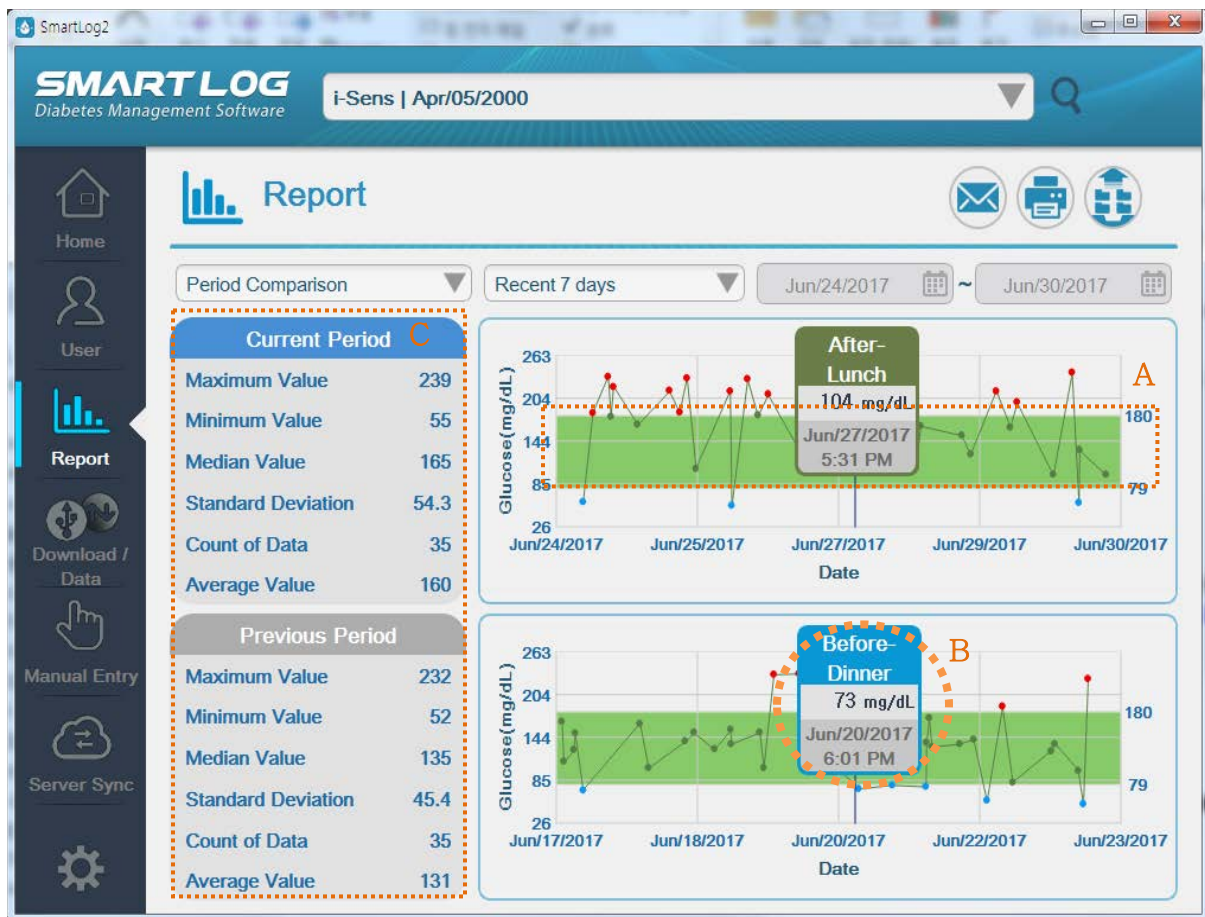
3.3.4 Target Analysis

Target Analysis Report displays the percentage of glucose data above and below each pre- and post-meal target range.



Target Analysis Report displays total of 10 different pie charts. It uses applicable pre- and post-meal and night/bedtime target ranges to display an overall target range. Pie chart will show the percentage breakdowns using glucose data as well as the frequencies of measurements for all meals and sleep time. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range.)

3.3.5 Period Comparison Graph



The Period Comparison Graph allows you to compare glucose value trends between a selected date period and a previous date period.

Current blood glucose data are shown as dots on the upper part of an X-Y graph while previous date period is shown in the bottom, each piece of data is connected to the next with a solid line.

Glucose data will appear in a chronological order, from the oldest to the most recent. The X-axis represents the date of the data and the Y-axis represents the glucose level.

Displayed Item	Description
A. Target Value	Target Value range is shown in light green region from the graph. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range.)
B. Detailed Information	Move your cursor on each dots to show the corresponding details including Dates, Time, Glucose Values, Time Ranges and etc.
C. Statistics	It will show the Highest, Lowest, Median, Standard Deviation, Frequency of Measurements and Average Values.

3.3.6 Logbook

3.3.6.1 View Glucose Record

View Glucose Record Report shows daily glucose data by the time ranges. Glucose values displays in a sequential list distinguished by meal/sleep time ranges.

View Glucose Record Report

Logbook | Recent 7 days | Jun/24/2017 ~ Jun/30/2017

View Glucose Record | Glucose Statistics | Glucose Unit:mg/dL

Legend: Non-Working Day, High Glucose, Low Glucose, Ketone, Control Solution, Manual Entry, Pre-meal, Post-meal, Fasting, Carbohydrate, Exercise, Insulin, Memo

Date	Before Breakfast	After Breakfast	Before Lunch	After Lunch	Before Dinner	After Dinner	Before Sleep	Dawn
Jun/30/2017		132 11:47 AM			98 7:38 PM			98 3:57 AM
		- 11:35 AM						
		- 11:34 AM						
		59 11:33 AM						
		239						

Manual Entry

* Date: 6/30/2017 | Insulin: Humalog

* Time: 19 : 38


Glucose: 98 mg/dL | Ketone:

Meal: None

Carbohydrate: g | Direct input

Exercise: kcal | Direct input

Memo: Please enter less than 500 characters.

Displayed Item	Description
A. Legend	<p>High blood glucose level is displayed red and low blood glucose level is displayed blue. Dates set as holidays are displayed green. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range. Refer to '3.2.3 Test Schedule' on setting holidays.)</p> <p>Data entered from Manual Entry displays manual entry icon at the bottom. Data that memo has been entered from Manual Entry displays memo icon.</p> <p>Ketone icon is displayed when the data is a ketone value, CS (Standard Solution measurement value) icon is displayed when the data is a CS value and Insulin icon is displayed if the data contains insulin dosage.</p> <p>Icons are displayed according to pre-meal, post-meal and fasting, and when there are carbohydrates or exercise data, they are displayed together.</p>
B. Copy	The blood glucose record which is currently displayed is copied and checked by pasting it into an excel file.
C. Manual Entry Icon	You can instantly use the Manual Entry. (Refer to '3.7 Manual Entry' on manually entering data.)
D. Detailed Information in Manual Entry	Click on each value to edit or delete information. However Date, Time, and Glucose Values downloaded from the meter cannot be edited nor deleted.
E. Time Display Button	 Click Time Display button on the left to check start and end times of each time range. Weekday time (dark blue), weekend time (green), time range (original status) are displayed with each click. (Refer to 3.2.3 Test Schedule' on setting start and end times of each time range.)



Note

If there is a pre/post meal flag in the blood glucose data, the pre/post meal flag of the blood glucose meter is applied first rather than the pre/post meal flag set in the test schedule.

3.3.6.2 Glucose Statistics

The screenshot shows the SMART LOG Diabetes Management Software interface. The main window displays the 'Report' section for 'i-Sens | 4/05/2000'. The 'Glucose Statistics' report is selected, showing data for the period from 6/24/2017 to 6/30/2017. The table below provides a detailed breakdown of glucose levels across different times of the day.

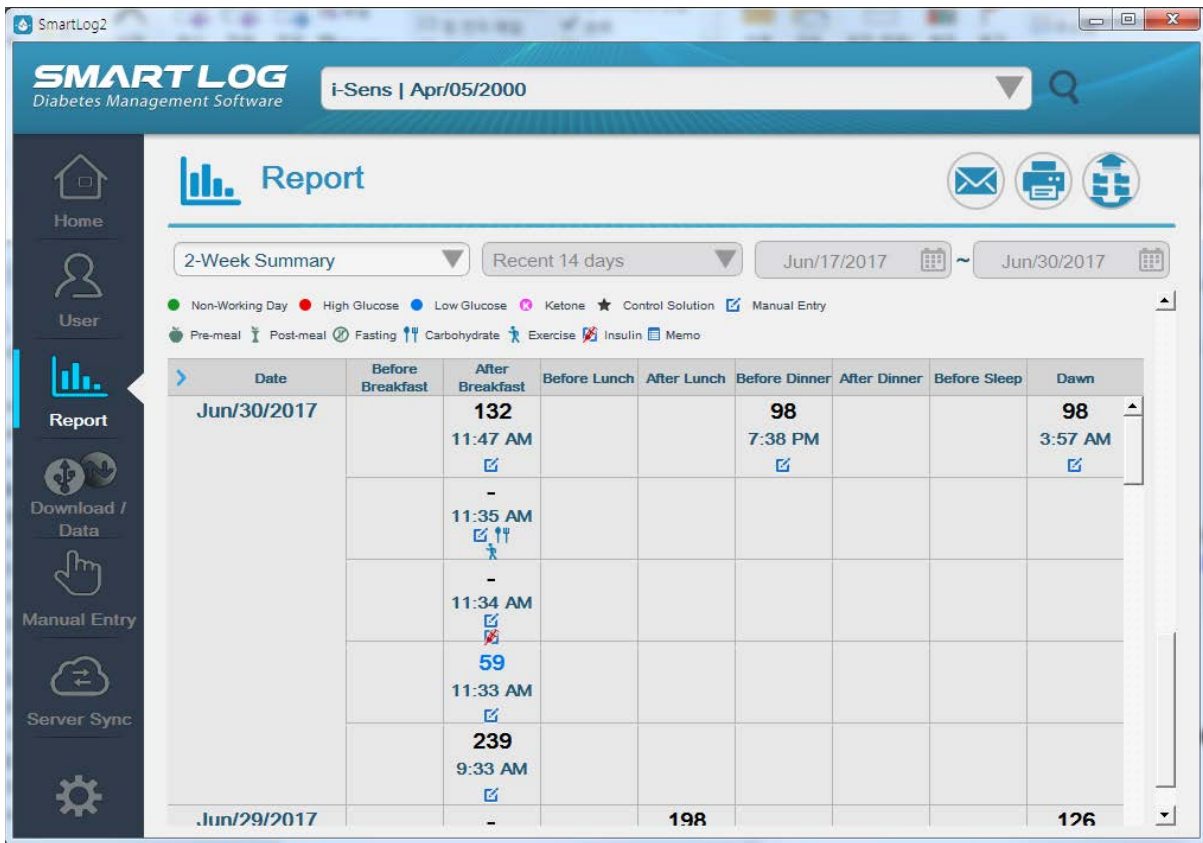
Division	Before Breakfast	After Breakfast	Before Lunch	After Lunch	Before Dinner	After Dinner	Before Sleep	Dawn	All
Count of Data	3	11	3	9	1	0	0	8	35
Average	159	155	176	182	98	0	0	144	160
Maximum Value	222	239	184	233	98	0	0	213	239
Minimum Value	104	59	165	104	98	0	0	55	55
Hyperglycemia Count	0	0	0	0	0	0	0	0	0
Hypoglycemia Count	0	2	0	0	0	0	0	1	3
Standard Deviation	59	65	10	49	—	—	—	53	54
Median Value	151	138	180	198	98	0	0	142	165

Glucose Level Statistics will display statistical data including Number of Readings, Average, Highest, Lowest, Number of Hyper/Hypo Readings, Standard Deviation, Median in each meal/sleep time ranges. You can use 'copy' and 'manual input' functions in glucose measurement statistics.

3.3.7 Two-Week Summary Graph



Division	Before Breakfast	After Breakfast	Before Lunch	After Lunch	Before Dinner	After Dinner	Before Sleep	Dawn	All
Count of Data	3	15	6	19	2	0	1	24	70
Average	159	136	153	162	86	0	128	140	145
Maximum Value	222	239	187	233	98	0	128	232	239
Minimum Value	104	57	52	76	73	0	128	55	52
Hyperglycemia Count	0	0	0	0	0	0	0	0	0
Hypoglycemia Count	0	3	1	0	0	0	0	1	5
Standard Deviation	59	65	51	54	18	—	—	41	52
Median Value	151	132	173	163	86	0	128	135	139



2-Week Summary graph shows all data within the 2-week date range in trend graph and logbook (glucose level statistics, glucose level record) report. Refer to '3.3.1 Trend Graph' and '3.3.6 Logbook' on detailed explanations on each report.

3.3.8 Diary List

Measurement History List shows all data including date, time, measurement value and memo within a selected range.

SMART LOG
Diabetes Management Software

i-Sens | Apr/05/2000

Report

Diary List | Recent 14 days | Jun/17/2017 ~ Jun/30/2017

High Glucose
 Low Glucose
 Ketone
 Control Solution
 Manual Entry
 Pre-meal
 Post-meal
 Fasting
 Carbohydrate
 Exercise
 Insulin

Glucose Unit: mg/dL

Date	Time	Glucose	Memo
Jun/30/2017	7:38 PM	98	<input checked="" type="checkbox"/>
Jun/30/2017	11:47 AM	132	<input checked="" type="checkbox"/>
Jun/30/2017	11:35 AM	-	<input checked="" type="checkbox"/> ↑ ↑ ↑
Jun/30/2017	11:34 AM	-	<input checked="" type="checkbox"/> ↓ ↓ ↓
Jun/30/2017	11:33 AM	59	<input checked="" type="checkbox"/>
Jun/30/2017	9:33 AM	239	<input checked="" type="checkbox"/>
Jun/30/2017	3:57 AM	98	<input checked="" type="checkbox"/>
Jun/29/2017	5:11 PM	198	<input checked="" type="checkbox"/>
Jun/29/2017	3:07 PM	163	<input checked="" type="checkbox"/> ↓
Jun/29/2017	11:35 AM	-	<input checked="" type="checkbox"/> ↑ ↑ ↑

Manual Entry

* Date: 6/30/2017

* Time: 11 : 35

Glucose: | mg/dL Ketone

Meal: None

Carbohydrate: 23 g 1 slice of bread

Exercise: 220 kcal a 20-minute run

Insulin: Humalog

Memo: Please enter less than 500 characters.

Displayed Item	Description
A. Legend	High blood glucose level is displayed red and low blood glucose level is displayed blue. Dates set as holidays are displayed orange. (Refer to '3.2.2 Health Management' and '3.9 Settings' on selecting the Target Value Range. Refer to '3.2.3 Test Schedule' on setting holidays.) Ketone icon is displayed when the data is a ketone value, CS (Control Solution measurement value) icon is displayed when the data is a CS value and Insulin icon is displayed if the data contains insulin dosage. Icons are displayed according to pre-meal, post-meal and fasting, and when there are carbohydrates or exercise data, they are displayed together.
B. Detailed Information	Click each line to modify or delete data. However, the date, time, and glucose level downloaded from the meter cannot be modified or deleted. (Refer to '3.7 Manual Entry' on manually entering data.)
C. Copy	The blood glucose record which is currently displayed is copied and checked by pasting it into an excel file.



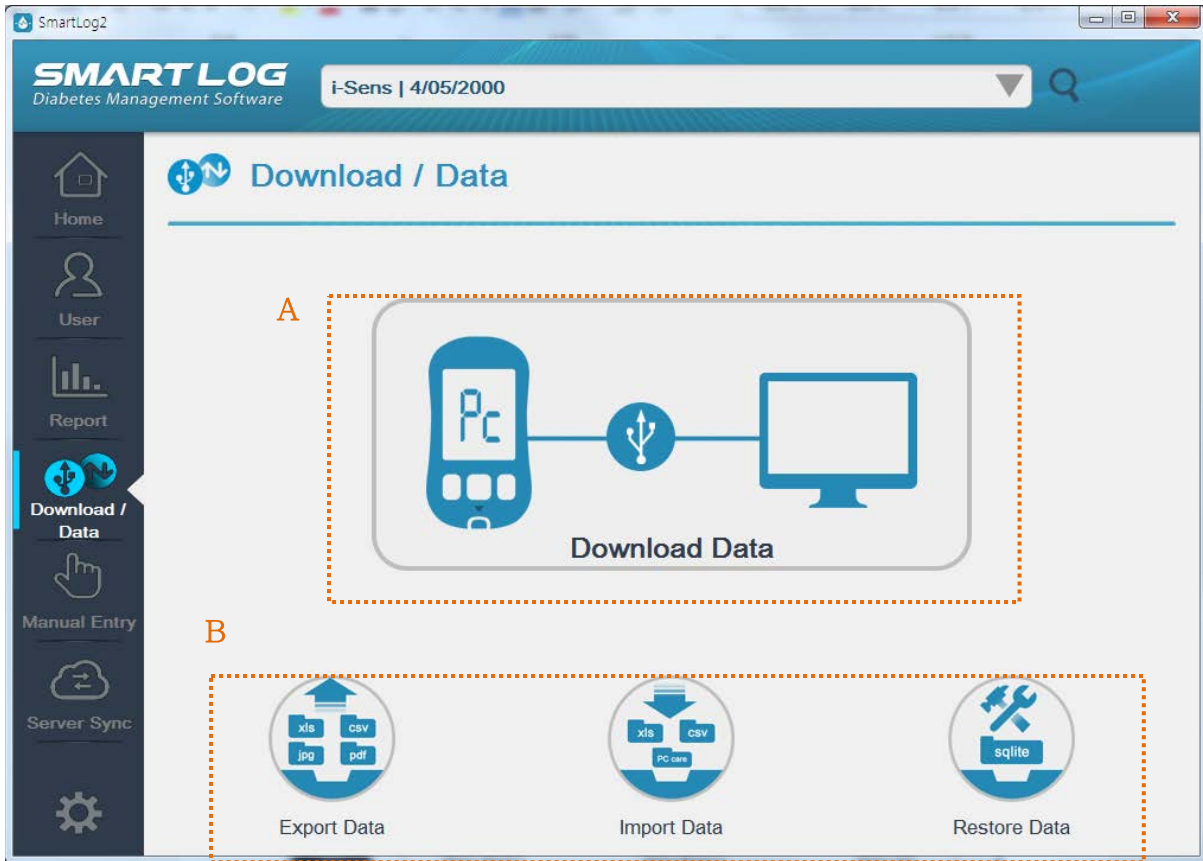
What you need to know

Some reports show the percentage of glucose values in the Target Glucose Values. In some cases, the sum of the percentage might not be 100% because of rounding error or because the precision of SmartLog might not have been reflected.

3.4 Download / Data

"Download / Data" allows you to Download Data and Import/Export the data to/from SmartLog in various file formats.

Click the "Download / Data" and the following screen will appear.



Displayed Item	Description
A. Download Data	You can download the glucose data from the meter to PC or Mac.
B. Data Management	You can export the stored data to various file formats, and import from the exported files.

3.4.1 Download Data

You can download the glucose data from the meter to PC or Mac



What you need to know

You need to use the Data Cable to connect the i-SENS meter to PC. Depending on the user's meter, SmartLog cable may be required. Connect the end of the cable to the (A) USB port of PC and the other end of the cable to (B) the meter's communication port.



A. Connect to USB port



B. Connect to meter's communication port

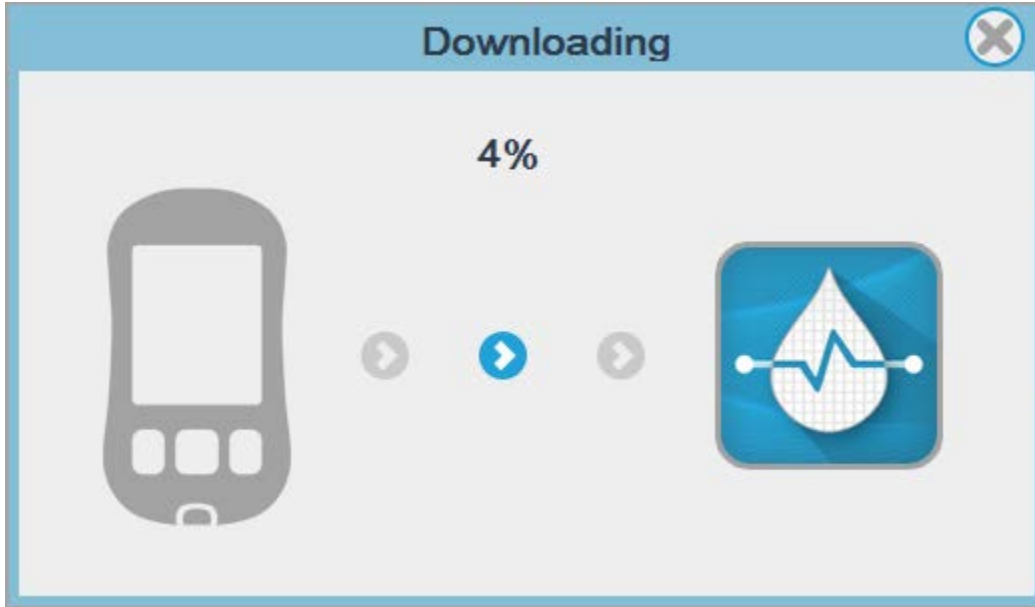
Connect the meter to PC with the USB cable and turn on the meter. Click the "Download Data" button when the meter shows "Pc" on the screen.



Important Information

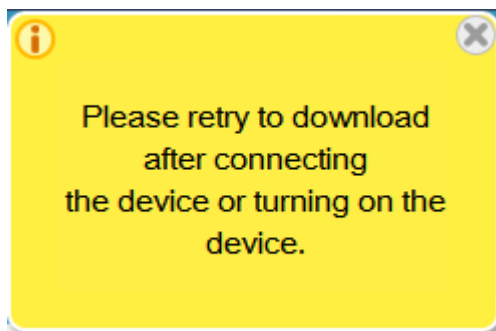
You cannot test or use the memory function of the meter while it is connected to PC. Do not test the meter while the meter is connected to PC.

When the meter is successfully connected, Data Download will start. Data Download screen will show the progress from 0 to 100% as shown below.



Note

When the meter is not properly connected to PC or the meter is not turned on, "Pc" is not displayed on the meter screen. Then, a speech balloon as below will appear on the top right of the screen.



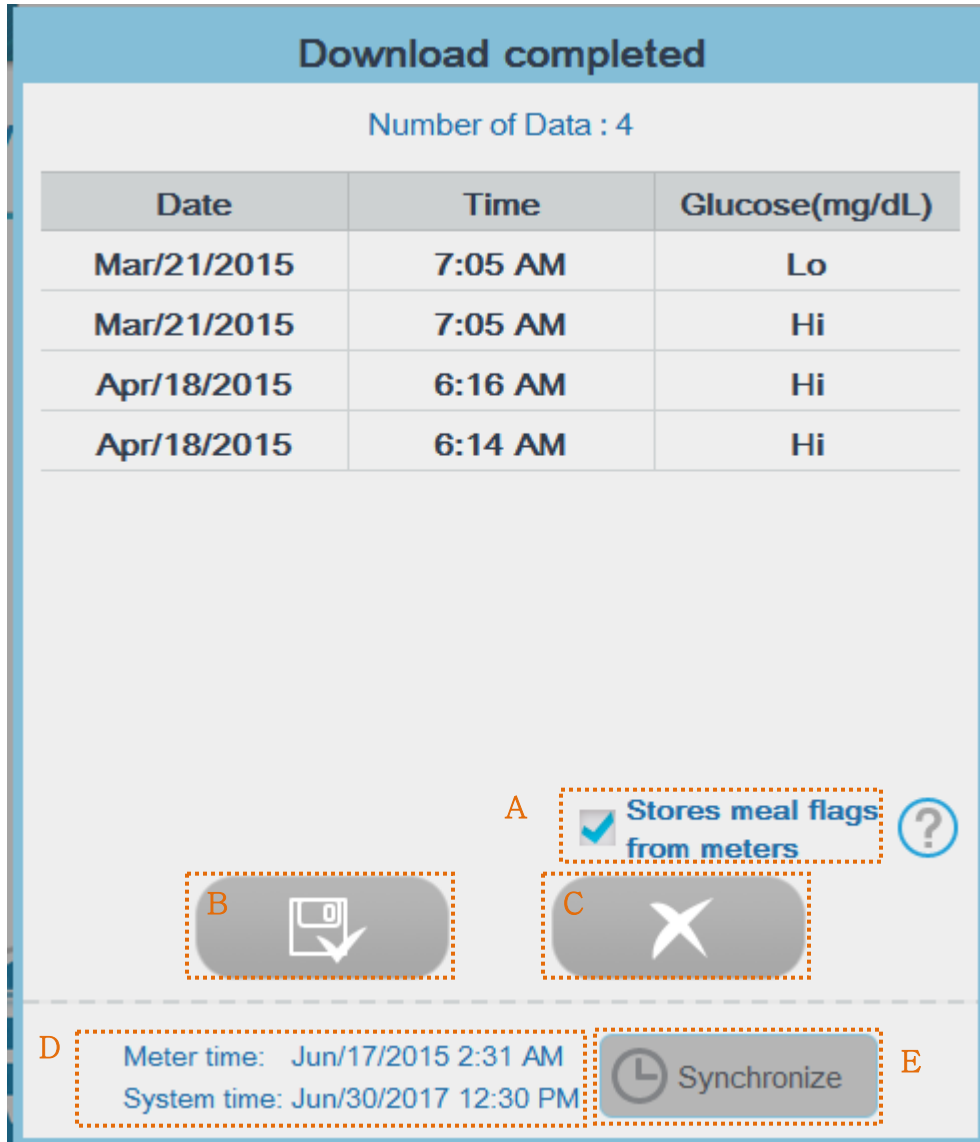
If the speech balloon is displayed, connect the meter or turn on the connected meter, check if 'Pc' is displayed, and rerun the data receiving process.



What you need to know

While you are downloading the meter data, do not remove the SmartLog USB cable from your PC or your meter.

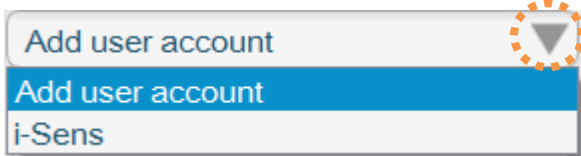
When the progress shows 100%, the screen will show the number of downloads and the list of the data.



Displayed Item	Description
A. Stores meal flags from the meters	When saving the downloaded data from the blood glucose meter, check whether the meal flag set in the meter is also stored. If unchecked, the meal flag value is not stored.
B. Save button	The procedure to go to the user profile screen and save the downloaded data will start.
C. Cancel button	Close the completion window without storing downloaded data.
D. Meter/System time	Display meter/system time when the download is completed. The meter time may not be supported depending on the blood glucose meter.

E. Synchronize	The time of the meter is set to the time of the system. It may not be supported depending on the blood glucose meter.
----------------	---

Refer to '3.2.1. User Profile' about registering a new user. When adding a meter serial number to a registered user, click the Down Arrow next to 'Add User Account' button as below and select user name.



If a meter that has been connected before, user profile is inactive as the screen below.

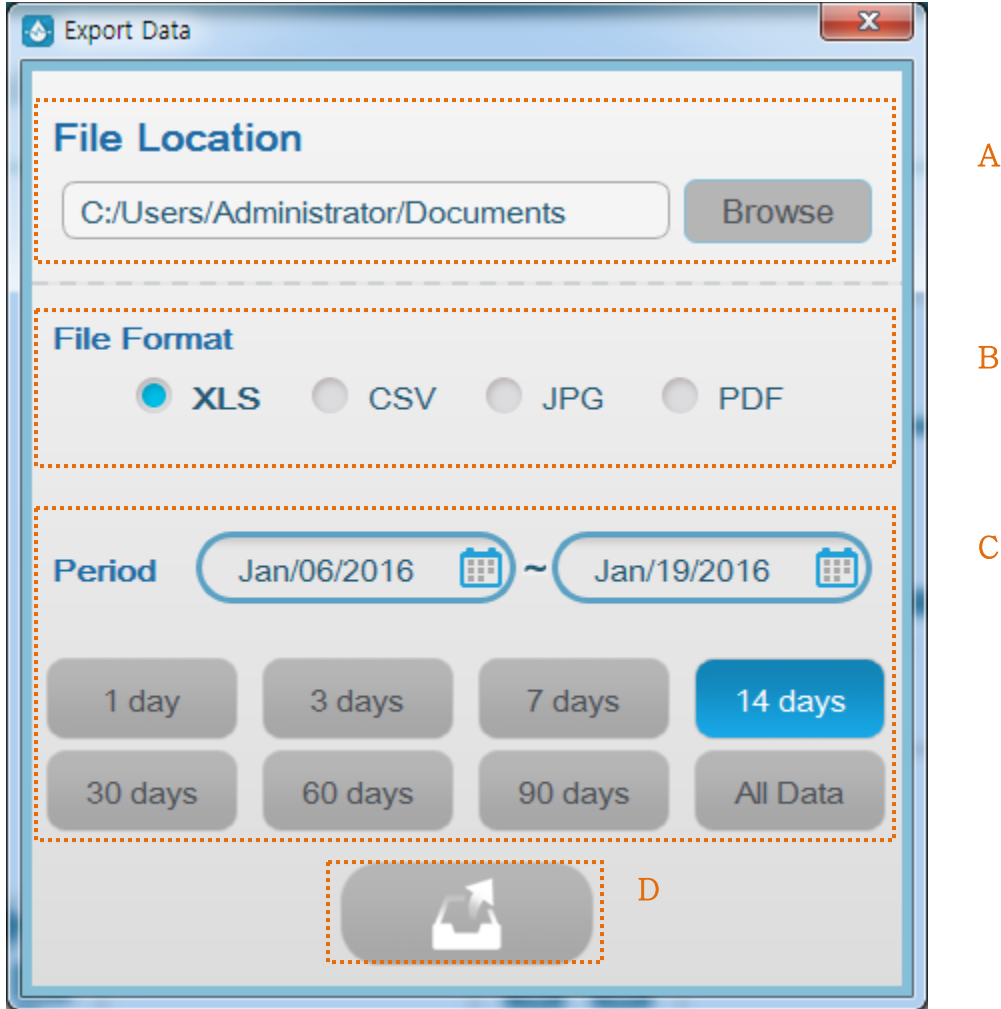
A screenshot of a 'Basic Information' user profile form. The form has a blue header with the text 'Basic Information' and a pencil icon on the right. The form contains the following fields: '*Name' (a dropdown menu with 'i-Sens' selected), a text input field with 'i-Sens', 'Date of Birth' (a date picker with 'Apr/05/2000' and a calendar icon), 'Gender' (radio buttons for 'Male' and 'Female'), and 'Email' (an empty text input field).

What you need to know

If a new user is not registered or serial number of the meter is not added, the downloaded data will not be saved.

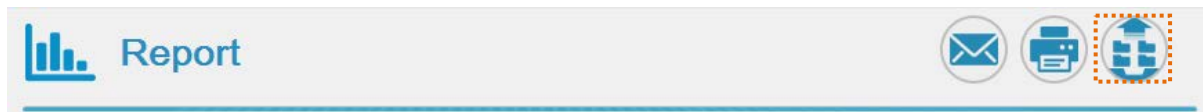
3.4.2 Export Data

Click the “Export Data” and the following screen will appear.



Displayed Item	Description
A. File Location	Click 'Browse' button to designate the location the exported data will be saved.
B. File Format	Choose the type of file format when exporting data.
C. Period	Designate the date range of exported data record. Use the calendar to designate the start and end date. Select 1 day, 3 days, 7 days, 14 days, 30 days, 60 days, 90 days, all data button to choose period based on the end date.
D. Export Data Button	Set each item and click 'Export Data' to start exporting data.

Exporting files is also possible in the Report menu.



Clicking the export button on the right side of "Report" will show export dialog. The default duration will be set as the same with current duration of report.

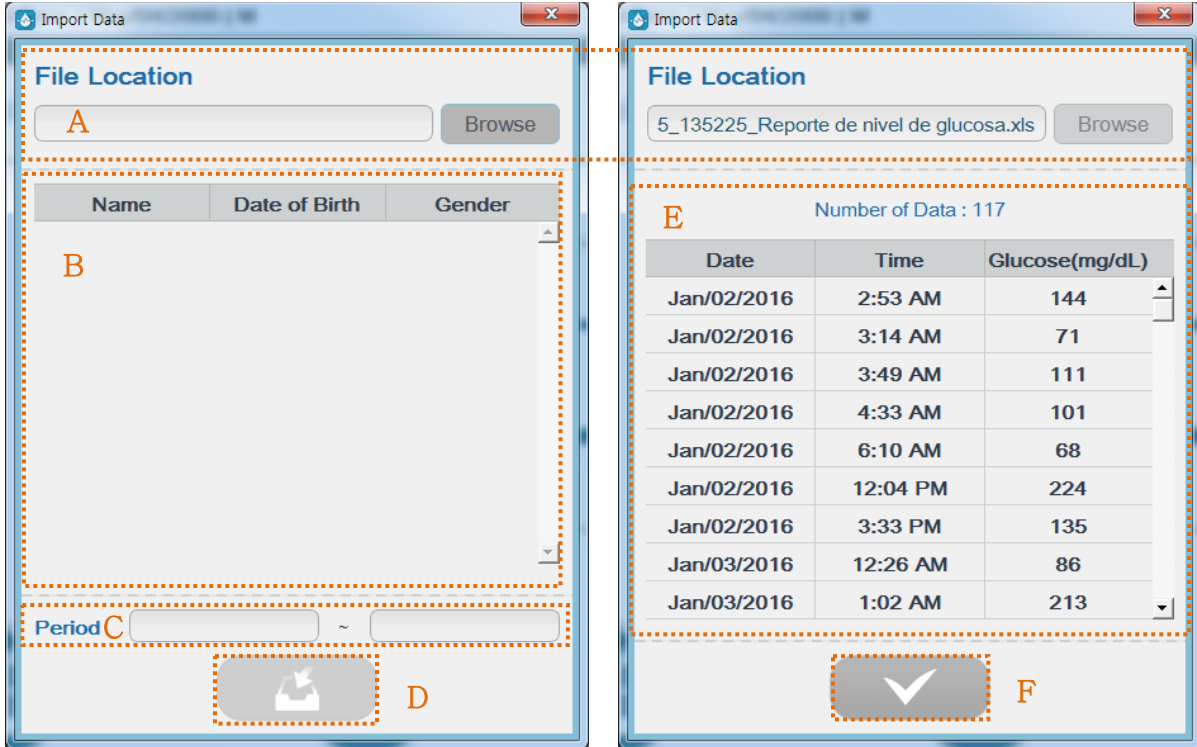


What you need to know

Information of the current user is exported when data is exported. Change the current user to change the exported user. (Refer to '3.1 Run SmartLog' on changing the current user.)

3.4.3 Import Data

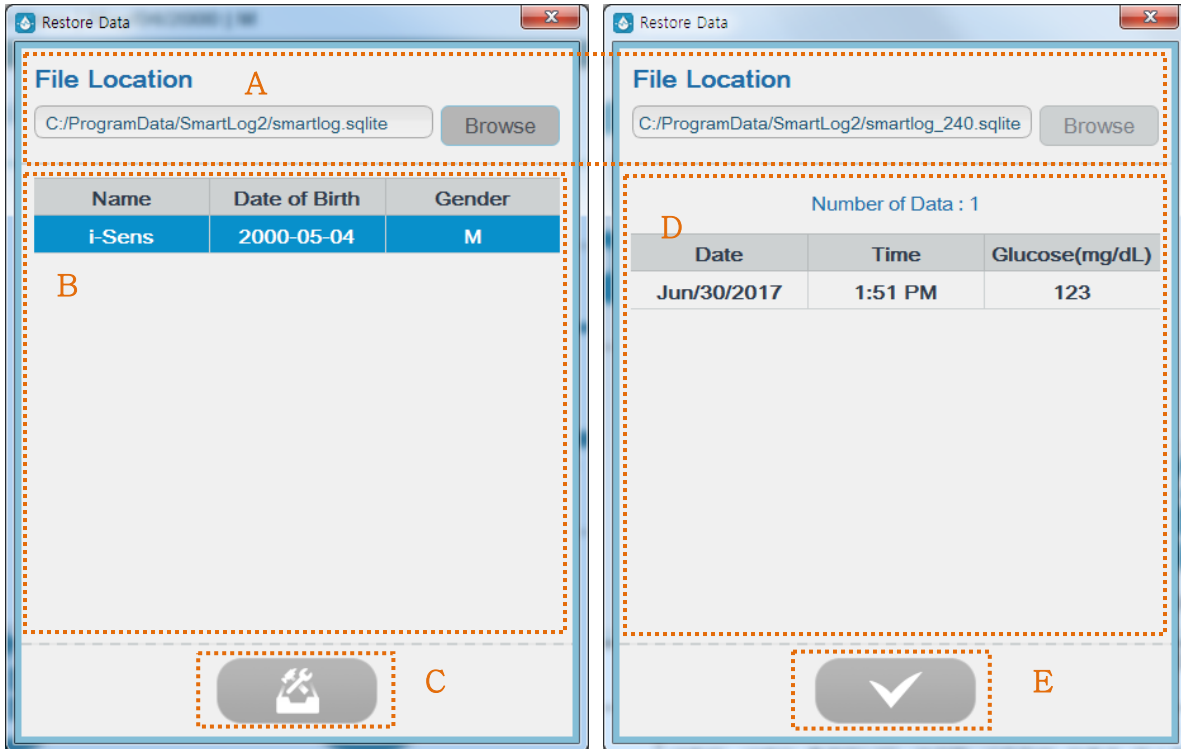
Click the "Import Data" and the following screen will appear.



Displayed Item	Description
A. File Location	Click 'Browse' button to select data file from saved location. Only xls and csv files and PC care files can be selected.
B. User List	Username, date of birth, and gender are displayed when the browsed file is selected.
C. Period	Data record time range of the browsed file is automatically designated.
D. Import Button	Set each item and click 'Import Data' button to start importing data. Browsed data is displayed on E. Click the button one more time to add the data to the current user.
E. Downloaded Data List	Designate the location and click 'Import Data' to see the date, time, and blood glucose level items of the relevant file.
F. Confirm Button	Finish importing the data and close the restore window.

3.4.4 Restore Data

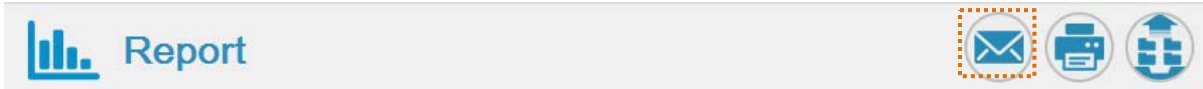
Click the "Restore Data" and screen will show as below.



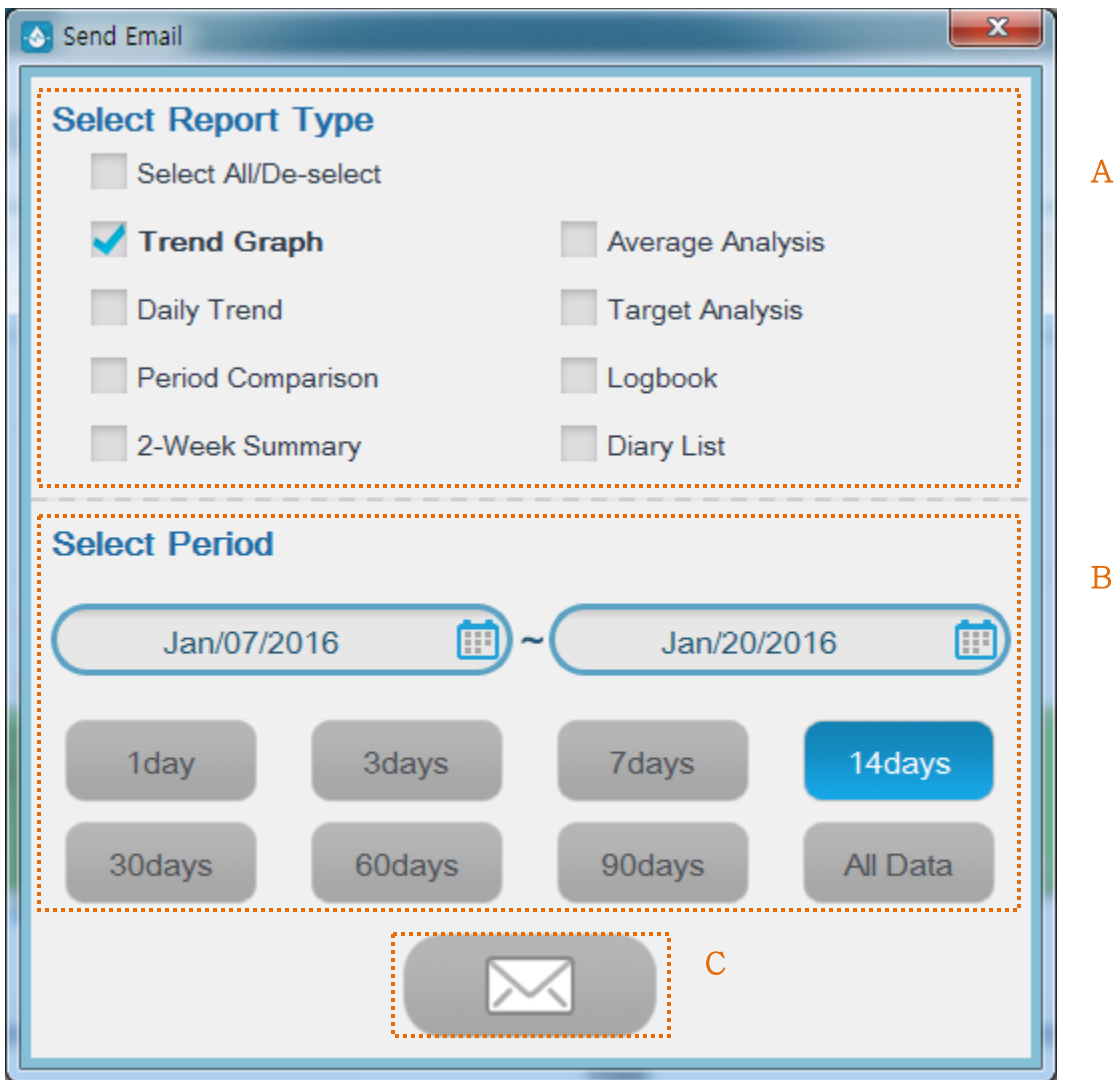
Displayed Item	Description
A. File Location	Click 'Browse' button to select data file from the saved location.
B. User List	Choose a file to backup to display username, date of birth, and gender of the relevant data record. Select the name of user from the list to restore.
C. Restore Data Button	When the "Restore Data" button is activated by selecting the user to restore from 'B', data can be restored by clicking "Restore Data" button.
D. Data List	Display restored data list.
E. Confirm Button	Finish restoring the data and close the restore window.

3.5 Send Email

All reports can be sent through email through 'Send Email.'



Click 'Send Email' button at the top right of 'Report' menu. The page as below will appear.



Displayed items	Explanation
A. Report Type Selection	The report type set in 'View Report' menu is set as default. Select check boxes in front of each report type to modify the report types.
B. Period	The report date range set in 'View Report' menu is set as default. Use calendar to designate the start and end dates, or select 1 day, 3 days, 7 days, 14 days, 30 days, 60 days, 90 days, all data button to choose period based

	on the end date.
C. Send Email Button	Click 'Send Email' button to output data.

You can use this function if you have the email client program installed and have the internet connection.

When you start the "Send Email", email client program installed in OS will run. Please refer to your email client program user's manual to learn how to send emails.

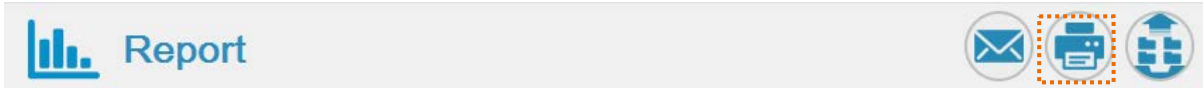


What you need to know

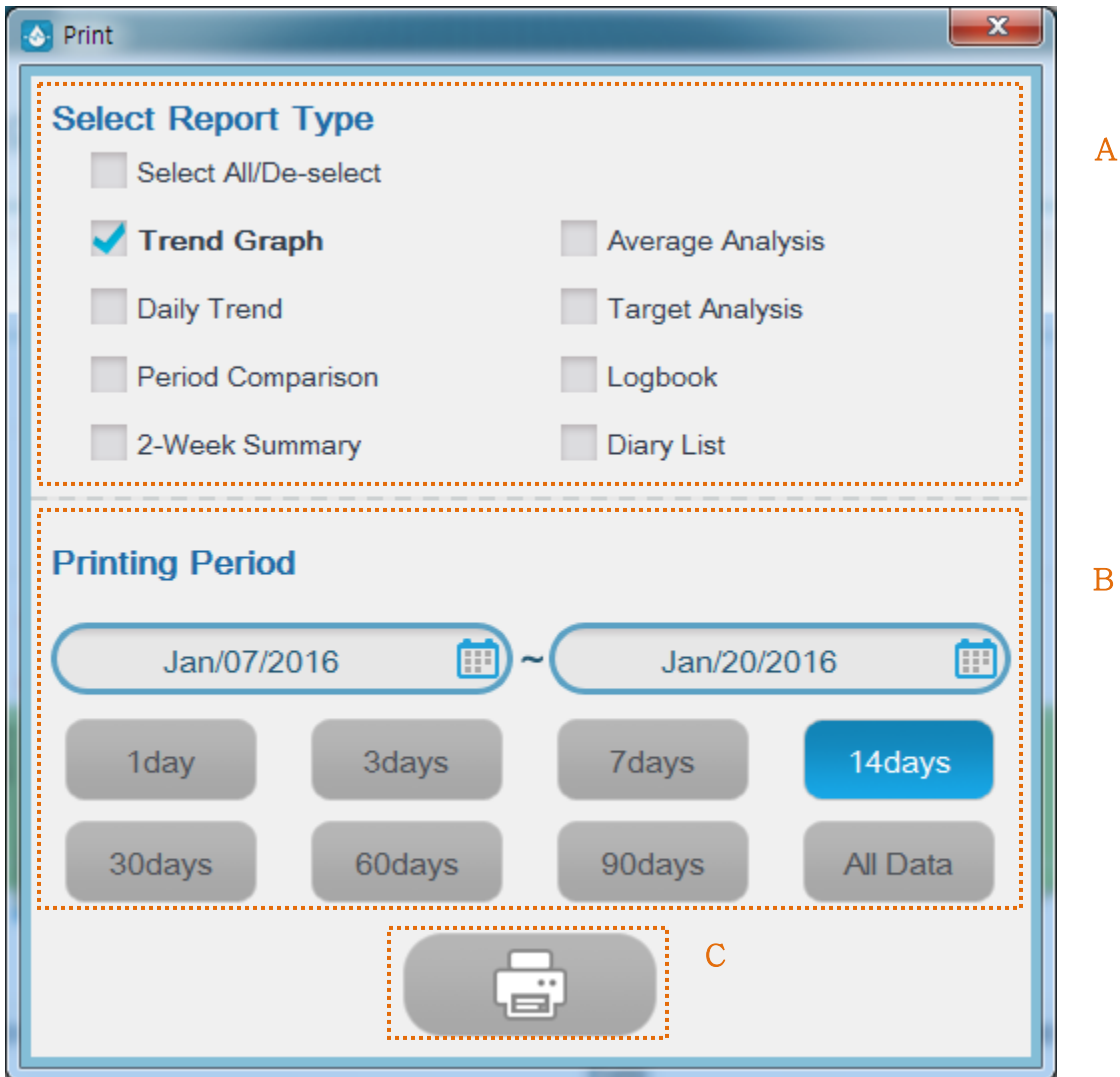
Once you start the "Send Email", you will not be able to use SmartLog's other functions until the email has been sent or cancelled. All functions will run properly after the email has been sent or cancelled.

3.6 Print Report

You can print all types of the reports.



Click the "Print Report" and the screen will show as below.



Displayed items	Explanation
A. Report Type Selection	The report type set in 'View Report' menu is set as default. Select check boxes in front of each report type to modify the report types.
B. Period	The report date range set in 'View Report' menu is set as default. Use calendar to designate the start and end dates, or select 1 day, 3 days, 7 days, 14 days, 30 days, 60 days, 90 days, all data button to choose period based on the end date.

C. Print Button	Click Print button to print.
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On the top of the printed report, the type, designated period, username, date of birth, gender, and NHI number of the relevant report are printed. Username, number of page, date and time of print are shown at the bottom of the page.



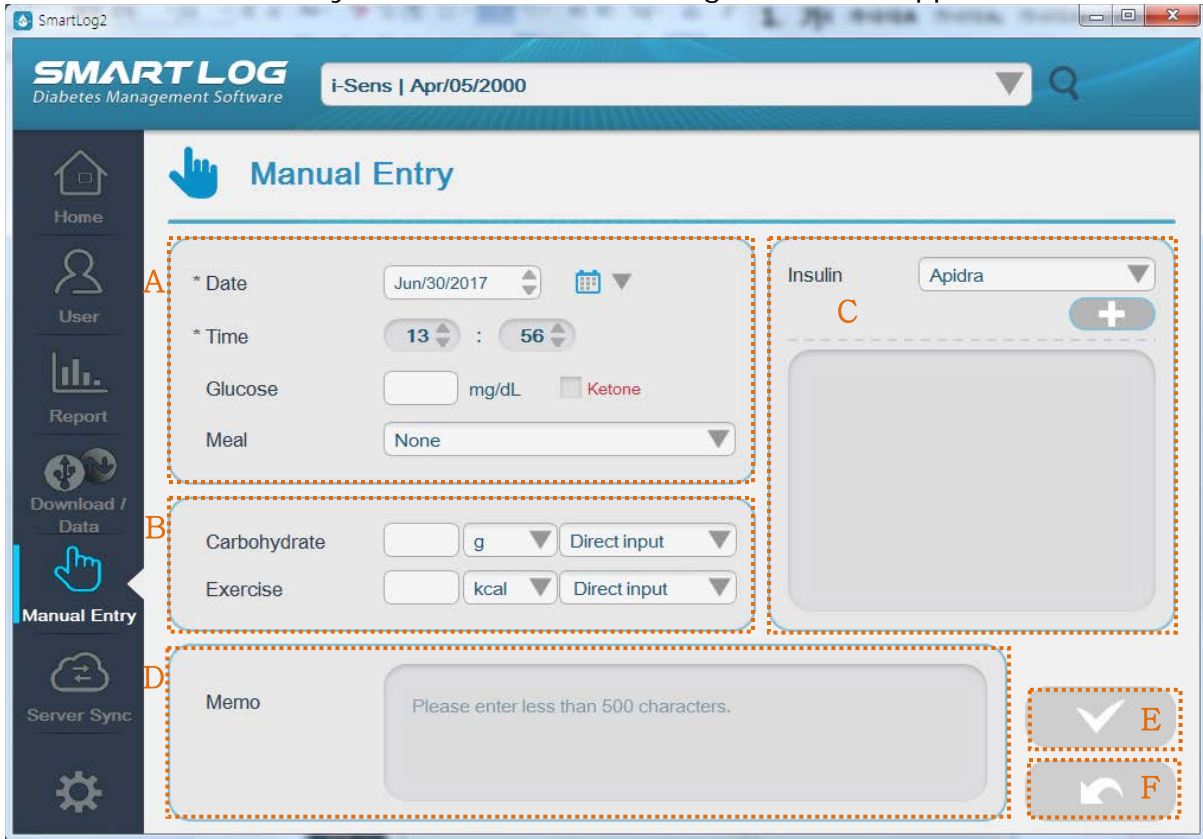
What you need to know

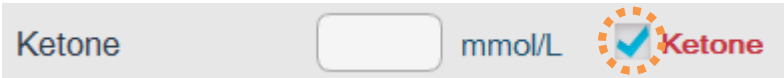
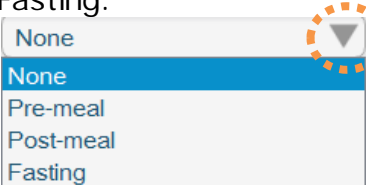
When practicing the print of report, the SmartLog's other functions are not operated until the print job is completed or canceled. However, after completing or canceling the print job, all of the functions are operated normally.

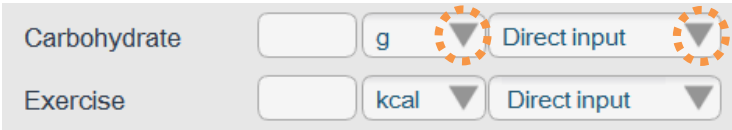
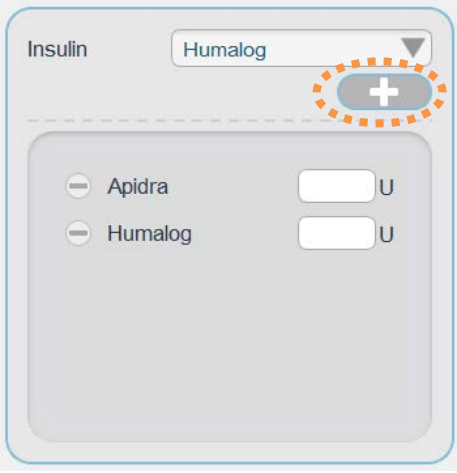

3.7 Manual Entry

Manual Entry is allowed to record glucose values manually.

Click the “Manual Entry” menu and the following screen will appear.

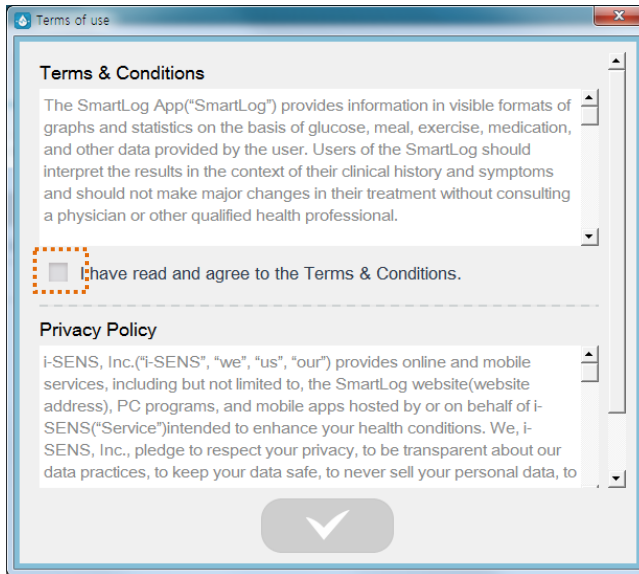


Displayed Item	Description
A. Blood Glucose Data	<p>Enter or modify date and time of measurement and blood glucose level. To enter ketone values, mark 'Ketone' and enter the values.</p>  <p>When there is no input of data, “-” is displayed in the Logbook and Diary List. Select the meal information of blood glucose values together. Click Down Arrow to select Pre-meal, Post-meal and Fasting.</p> 
B. Carbohydrate /	Enter the information of carbohydrate and exercise.

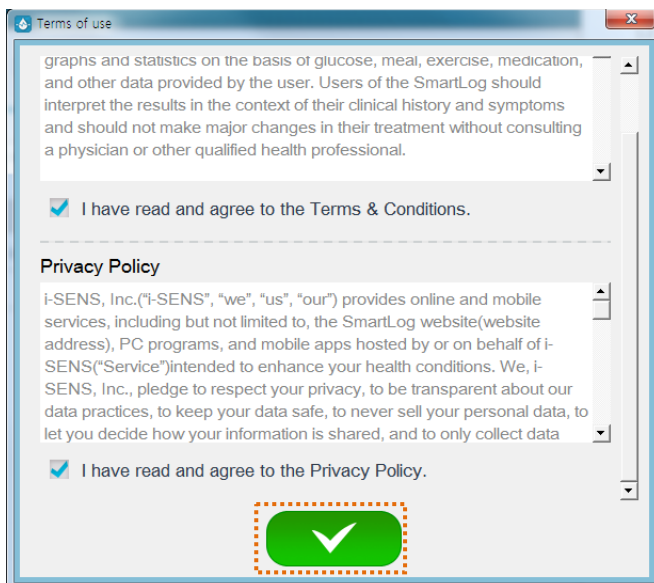
<p>Exercise Information</p>	<p>Input directly or select the designated types of carbohydrate and exercise by pressing the Arrow as below.</p>  <p>Not allowed to input the values when selecting the designated types. Select "Direct input" and input the values when you want to input the values directly. The types of carbohydrate and exercise are displayed as "-" in the report when "Direct input" is selected and saved.</p>
<p>C. Insulin</p>	<p>Select the type of insulin and click add button to add insulin to the list as below.</p>  <p>User – Select insulin types that are added in the Health Management menu. (Refer to 3.2.2 Health Management on adding or deleting insulin types.) Enter dosage on the insulin list as below. Click (-) icon to delete.</p> 
<p>D. Memo</p>	<p>Enter or modify information below 500 characters on recorded data.</p>
<p>E. Save Button</p>	<p>Save entered or modified data. Active only when edited.</p>
<p>F. Cancel Button</p>	<p>Cancel entered or modified data. Active only when edited.</p>

3.8 Server Sync

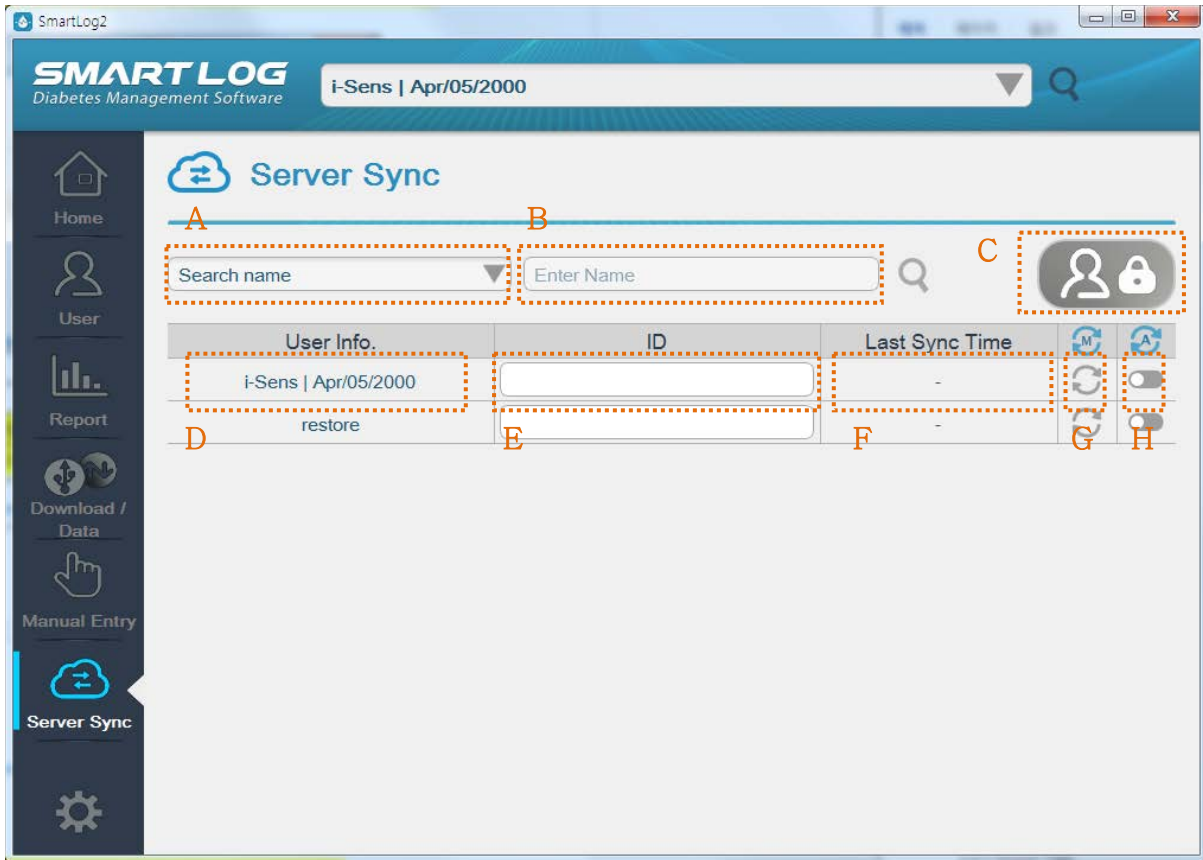
In Server Sync menu, you can send the glucose data to server or receive the data from the server and save it. The first time you use the server sync menu, the Terms of use screen is displayed as below.

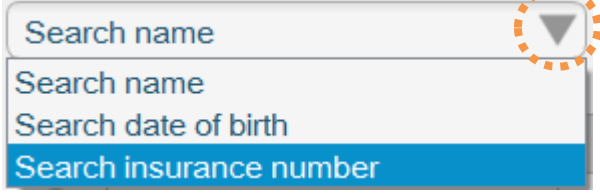
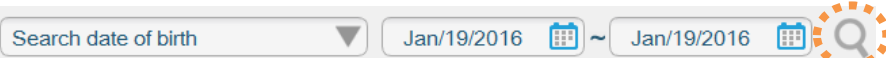


If you agree to all the terms, confirm button is activated and you will be able to use the sync service only if you click the button.



If you agree to all the terms, the following screen is displayed. Click the login button to login in first and then proceed with sync.

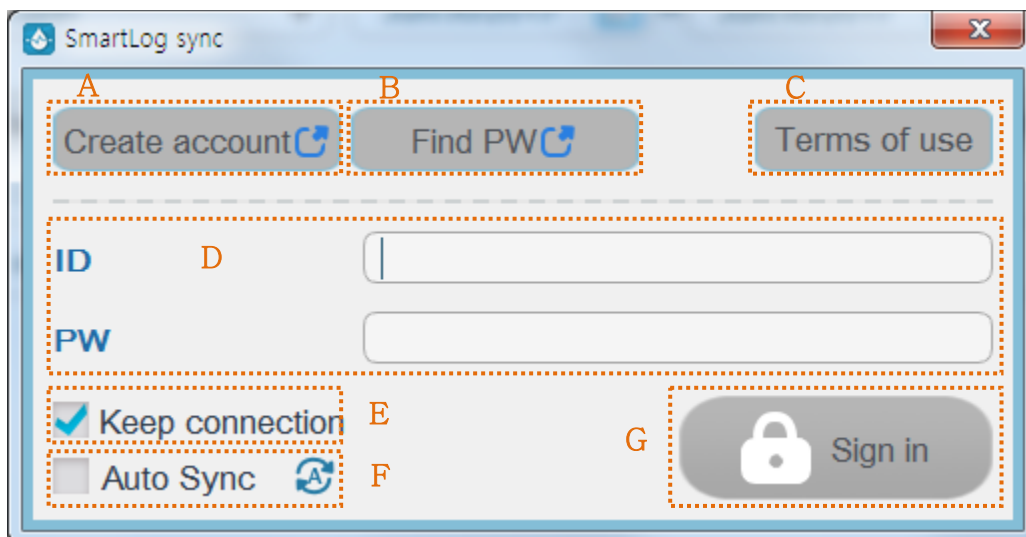


Displayed Item	Description
A. Search Option	<p>Currently set user search option. The basic search option is name, and can be modified to date of birth and NHI number. Click the Down Arrow and choose the search option to modify.</p> 
B. Entry Field	<p>Enter information to search. If the "Search" button is pressed with nothing in the Entry Field, then all users are displayed. If the Search Option is changed to Date of Birth, this field changes to Date Selection menu To start searching, click the "Search" button.</p> 
C. Sign in/out Button	Display login/logout dialog.

D. User Information	User name, the date of birth and gender are displayed.
E. ID Field	Enter the ID of the server to be synchronized. It must be the same ID as account you are signed in or shared ID.
F. Last Sync time	Display the time the user last synchronized.
G. Manual Sync button	Proceed with synchronization manually.
H. Auto-sync switch	Set up auto sync for this user. Only the user with switch on will auto sync.

If you click the login button without logging in, the following login dialog appears.

The sync service is available only if you have a SmartLog server account. If you do not have an account, you can use it after registering on the membership registration page.



Displayed Item	Description
A. Create account Button	Go to the external web link for membership registration.
B. Find PW Button	Go to the external web link to find PW.
C. Terms of use	Confirm the terms of use.
D. ID/PW Field	Enter the ID and PW of the server account.
E. Keep Connection	Your login will remain on check.
F. Auto Sync	The auto sync is activated on check. The data of the user whose auto synchronization switch is on in the user list is automatically synchronized.

G. Sign in Button	Proceed to login.
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If the login succeeds, the login account ID appears at the top and login button turns green.



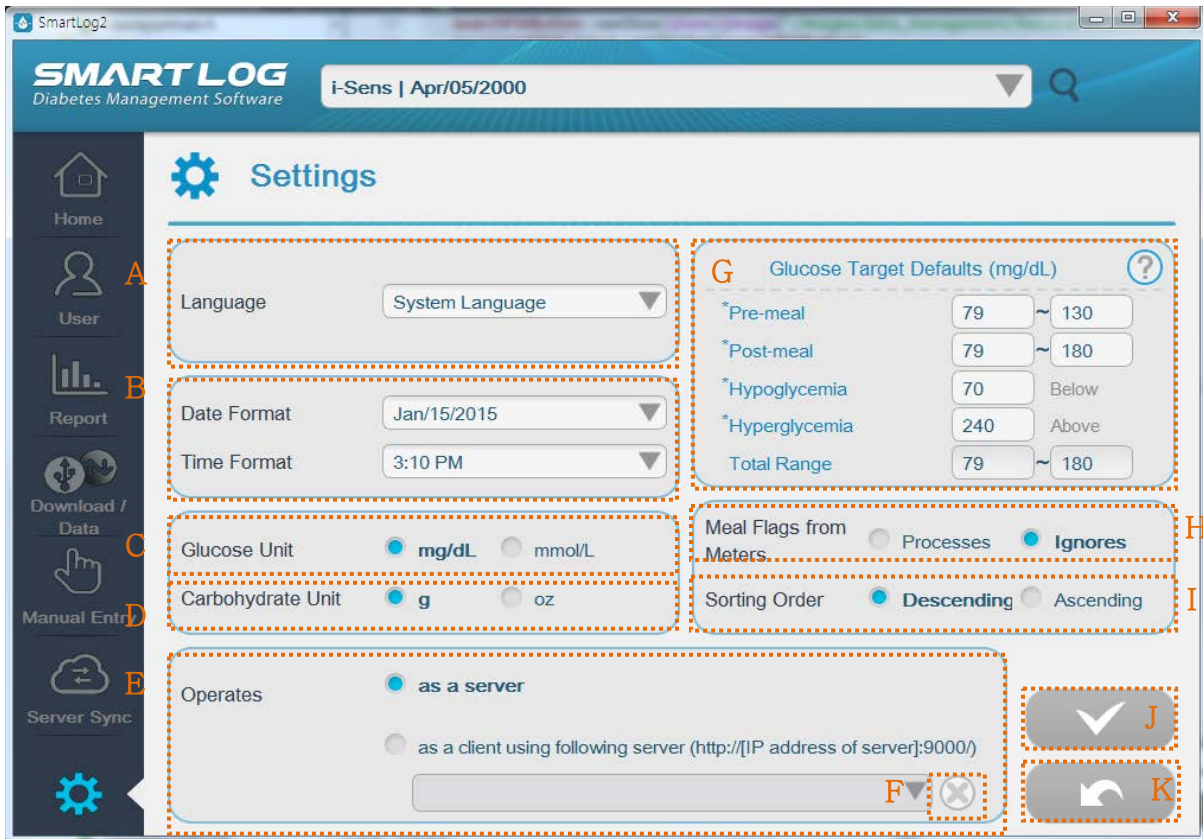
If you click the logout button while logged in, the following logout dialog appears.



Displayed Item	Description
A. Close account Button	Go to the external web link to close the account.
B. Sign out Button	Proceed with logout.

3.9 Settings

In Settings menu, you can change the setting values of SmartLog program. Run Settings menu and the Settings screen will appear as below.



Displayed Item	Description
A. Language	Select language. Select 'System Language' to set as the language of the setting of user PC. When modifying language, blood glucose unit, date and time formats are modified to the standard settings of the country speaking the language.
B. Date/Time Format	Select date and time format.
C. Glucose Unit	Select glucose unit.
D. Carbohydrate Unit	Select the carbohydrate unit displayed on the carbohydrate graph in the blood glucose value trend graph.

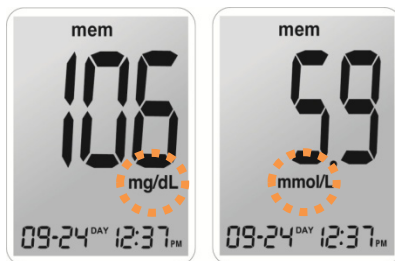
E. Server Setting	Select the location of server. Select 'as a server' when the server is in the PC. Select 'as a client using following server' and enter address when the server is outside. Once an address is registered as external server, it is saved in the list to be set more easily.
F. Server Delete button	Delete address from external server list.
G. Glucose Target Defaults	Set glucose target defaults. Glucose Target value set here is automatically saved as a target value of a newly registered user. (Set glucose target value on Health management category of the user menu.)
H. Meal Flags from Meters	Select whether to show the meal flag value of blood glucose meter. If you ignore the flag value of the meter, it will not be shown in the report.
I. Sorting Order	Set sorting order of the blood glucose value in Log Book, Diary List and exporting the data (XLS, CSV).
J. Save Button	Save entered or modified data. Active only when edited.
K. Cancel Button	Cancel entered or modified data. Active only when edited.



What you need to know

Important Information about Glucose Unit

- Standard Glucose Unit differs by countries and regions. For example, mg/dL is used in U.S.A while mmol/L is used in UK. mmol/L unit displays below decimal point while mg/dL unit does not.
- Glucose Unit differs the measurement information significantly and use of the wrong unit of measure may cause incorrect treatment.



Note

Major health organizations recommend the following target ranges in their clinical practice guidelines.

[A] American Diabetes Association "Standards of Medical Care in Diabetes – 2012." Diabetes Care. January 2016; 39(1): S15-S100.

In mg/dL

Pre-meal targets*	70-99 mg/dL
Post-meal targets*	140 mg/dL or less

In mmol/L

Pre-meal targets*	3.9-5.5 mmol/L
Post-meal targets*	7.8 mmol/L or less

[B] American Association of Clinical Endocrinologists Guidelines for Intensive Diabetes Self-management

In mg/dL

Pre-meal targets*	90-110 mg/dL
Post-meal targets*	90-140 mg/dL

In mmol/L

Pre-meal targets*	5.0-6.1 mmol/L
Post-meal targets*	5.0-7.8 mmol/L

[C] Canadian Diabetes Association

Pre-meal targets* 4.0-7.0 mmol/L
Post-meal targets* 5.0-11.8 mmol/L

* These values are applicable to pre- post-meal targets for user-specific and diabetes-type specific targets for Types 1 and 2.

**Important Information**

Always consult with your healthcare provider to set the Glucose Target Level.

4. Appendices

4.1 Appendix A Glossary

This appendix describes terms used in the SmartLog User's Manual.

Oral Meds

Medication that is swallowed as a pill or liquid.

Hyperglycemic values

An abnormally high level of glucose in the blood.

Meal slot

A slot that allows you to manage the day into eight separate time ranges.

Dietary treatment

Supplementary medical treatment to control diet in order to cure diseases.

Exercise treatment

Supplementary medical treatment to cure diseases through physical exercise.

Insulin

A hormone secreted by the pancreas that stimulates the uptake of glucose by body cells

Median

Average of maximum and minimum glucose values.

Glucose average

The arithmetic mean calculated on a set of glucose data.

Standard Deviation

A measure of the spread of a set of glucose values from the mean value in the Period Comparison Graph.

Field

An area of a computer's memory or a program where data (number, name, and texts) can be entered, edited, or stored.

Blood glucose level

Measurement of glucose levels in the bloodstream

4.2 Troubleshooting

The appendix will help you solve problems that you may have when using SmartLog. If it is still not solved, please contact the Customer Service.

Problem	Solution
SmartLog does not start.	<ol style="list-style-type: none"> 1. SmartLog Diabetes Management Software may already be running. If this is the case, click the SmartLog Diabetes Management Software icon. 2. Close all running programs and re-open them. 3. Restart your computer and then run the program. 4. If the above do not work, uninstall and reinstall the program.
SmartLog is unable to communicate with meter.	<ol style="list-style-type: none"> 1. Close SmartLog and re-open it. 2. Check whether the cable is properly connected. 3. Another program other than SmartLog may be using the communication port. Close all programs and run SmartLog. 4. Check the battery of the meter. If the battery symbol blinks on the meter, change the battery. 5. Reboot your PC and try again.
You cannot print from SmartLog.	<ol style="list-style-type: none"> 1. Check whether the printer is turned on. 2. If using a network printer, make sure it is ONLINE. 3. Make sure the printer cable is properly connected.
Manually input data is not displayed.	<ol style="list-style-type: none"> 1. Make sure the selected date and the date of the input data match. If not, change the date.

4.3 Technical Support

If you have any difficulty using SmartLog, please refer to SmartLog User's Manual. For further technical support, please contact i-SENS customer service or visit our website: www.i-sens.com.

■ i-SENS Headquarters

Country	Republic of Korea
Department	Customer Service
Email	iOS: smartlog.ios@i-sens.com Android: smartlog.android@i-sens.com PC: smartlog.pc@i-sens.com web: smartlog.web@i-sens.com
Website	www.i-sens.com

■ Others

If you need help, please contact i-SENS representatives and visit www.i-sens.com for more detailed information.



i -SENS, Inc.
43, Banpo-daero 28-gil,
Seocho-gu, Seoul 06646,
Korea
www.i-sens.com

EC	REP	Medical Technology Promedt Consulting GmbH, Altenhofstrasse 80, D-66386 St. Ingbert, Germany
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