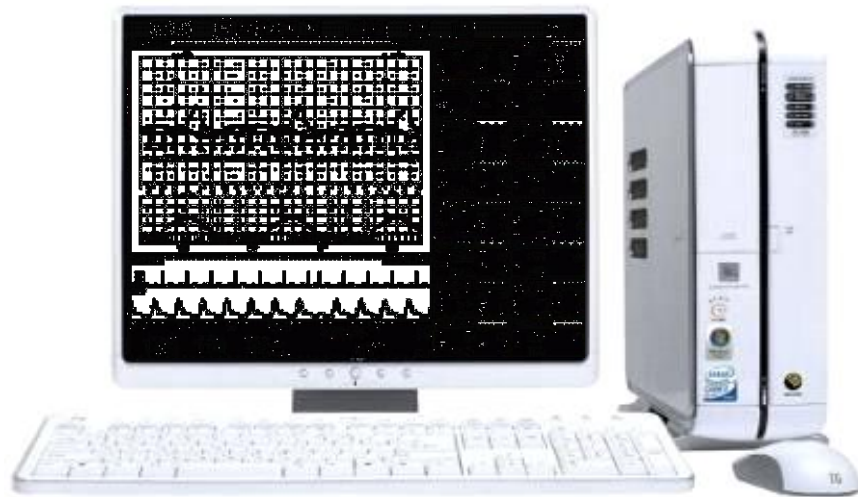


FC Central II Manual

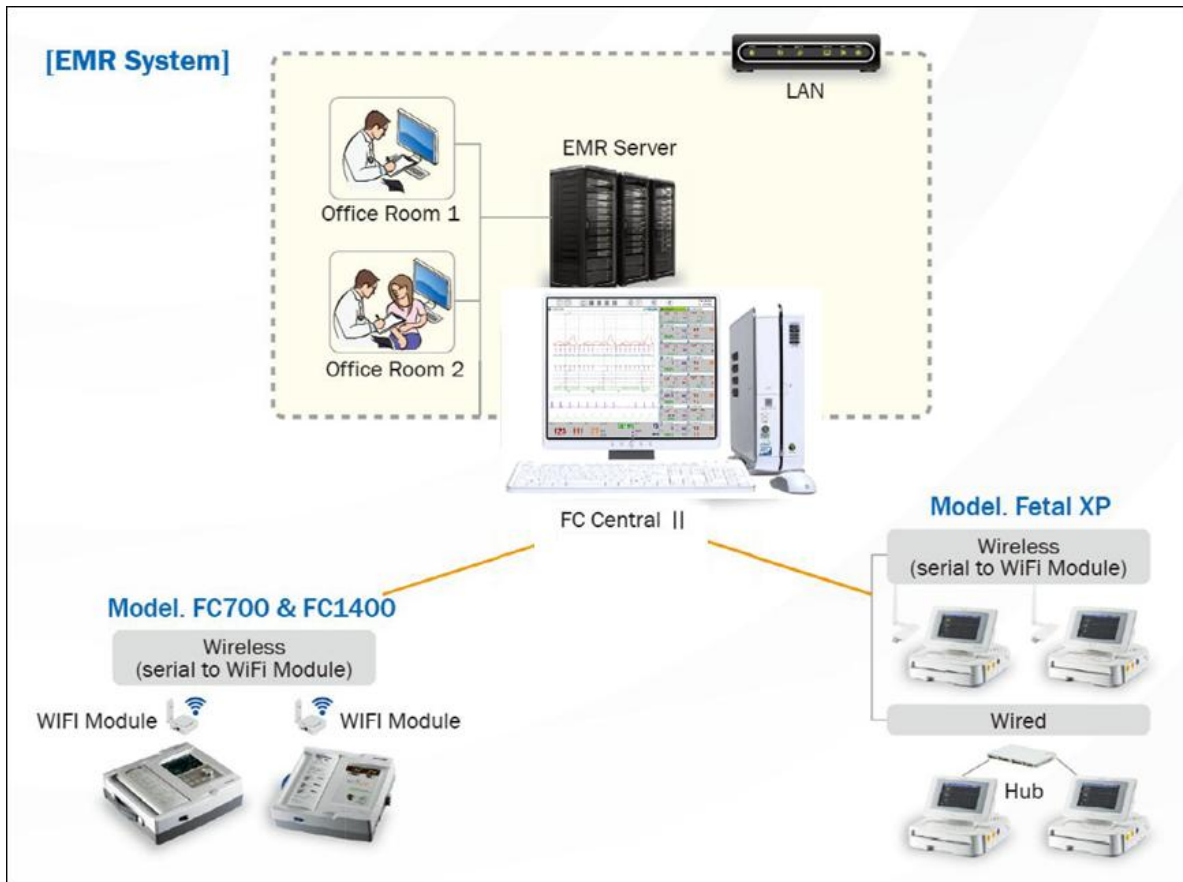
# FC Central II Manual

Fetal Central System – Maternal  
Ver. 1.2 – 2013. 9. 6



Bionet Co.,LTD





This manual includes the basic use of FC Central II. For proper use and maintenance, please read the guide and use it accurately. For the equipment included in the manual, please refer to the manual provided with the equipment.

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**NOTE**

The specifications and functions described in this instruction manual can be modified without notice for product improvement.



# General

## 1.1 Checkpoints before use

Registered Trademark

How to reach us

Warranty Period

Warning, Caution, Note

General Precaution for service environment

General Precaution on Electrical Safety

Equipment connection, Maintaining and cleaning equipment connection

## 1.2 Outline

Introduction of FC Central II

Main functions of FC Central II

## 1.3 Product components

Product components and Optional products

Main product components

## 1.4 System composition

Wired Environment LAN composition

Wired Environment (Wi-Fi) LAN composition

Wireless Bluetooth composition

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## 1.1 Checkpoints before use

### Registered Trademarks

- Microsoft Windows and Windows Logo are trademarks of Microsoft Corporation.
- Mac is a trademark of Apple Corporation.
- HDMI, HDMI Logo and High Definition Multimedia Interface are trademarks of HDMI Licensing LLC.
- Wi-Fi and Wi-Fi logo are trademarks of Wi-Fi association.
- Fetal Monitor in the manual is a Bionet product(FC700, FC1400, FetalXP, etc.)
- FC700 is a trademark of Bionet.
- FC1400 is a trademark of Bionet.
- FetalXP is a trademark of Bionet.
- FC Central is a trademark of Bionet.
- Trademarks and product names indicated in the manual are the trademarks of each company.

- Product standard or the contents of the manual may be modified without notice, due to the product improvements.
- Copying the whole or the part of the manual is prohibited unless authorized.
- Use the product in the country where you purchased.
- For Wi-Fi Module, use the product provided by our company.
- For Central System, use the product provided by our company or the one with recommended specification.

## How to reach us

BIONET services are always available to you.

The followings are address and phone number for contacting information, services, and product supplies.

However, the service is limited for genuine products only. Service may not be provided for other cases.

---

**Product Supply Information    Bionet Co., Ltd. – Sales Department**

Address #1101 11F E&C Venture Dream Tower3, 38-21, Digital-Ro, 30-Gil,  
Guro-Gu, Seoul, REPUBLIC OF KOREA (ZIP 152-719)  
Overseas sales dept. TEL : 82-2-6300-6418 (International)  
82-2-6300-6477 (Domestic)  
FAX : 82-2-6499-7789  
E-mail : [sales@ebionet.com](mailto:sales@ebionet.com)  
URL : <http://www.ebionet.com>

---

**Consumables Order    Bionet Co., Ltd. – Sales Department**

TEL : 82-2-6300-6418 (International)  
82-2-6300-6477 (Domestic)  
FAX : 82-2-6499-7789  
E-mail : [sales@ebionet.com](mailto:sales@ebionet.com)  
URL : <http://www.ebionet.com>  
Any Authorized Bionet Distributor  
<http://www.bionetus.com/locate-a-dealer>

---

**A/S and Technical Support    Bionet Co., Ltd. – Customer Service Department**

TEL : 82-80-801-6410  
FAX : 82-2-6499-7789  
E-mail : [service@ebionet.com](mailto:service@ebionet.com)

---

**Internet**

URL : <http://www.bio2net.com>  
<http://www.ebionet.com>

\* In the event of malfunction or failure, contact us along with the model name, serial number, and product name of the product.

## Warranty Period

- This product is manufactured and passed through strict quality control and through inspection.
- Main System Warranty period is 1 year and accessory warranty period is 6 months.
- Other than the product of our company, the product provided by cooperative company is under the service policy and warranty period of the corporate company.
- We will repair or replace any part of the product that fails due to manufacturer defects.
- This warranty does not apply to any defect caused by improper abuse, misuse or exposure to poor management.

## Warning, Caution, Note

For special emphasis on agreement, terms are defined as listed below in user's manual. Users should operate the equipment according to all the warnings and cautions.

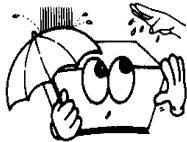
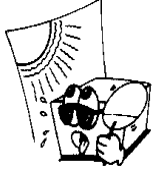
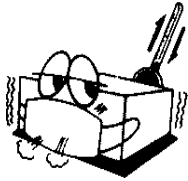
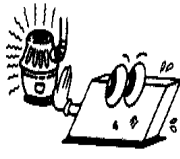
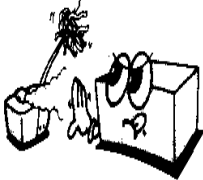
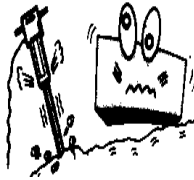
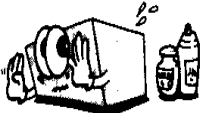
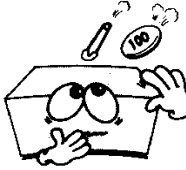
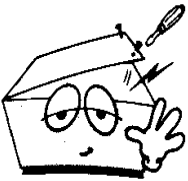

<b>Warning</b>
To inform that it may cause serious injury or death to the patient, property damage, material losses against the "warning" sign

<b>Caution</b>
To inform that it may cause no harm in life but lead to injury against the "caution" sign

<b>Note</b>
To inform that it is not dangerous but important "note" sign for proper installation, operation, and maintenance of the equipment.

## General Precaution on Environment

Do not keep or operate the equipment in the environment listed below.

	<p>Avoid placing in an area exposed to moist. Do not touch the equipment with wet hand.</p>		<p>Avoid exposure to direct sunlight</p>
	<p>Avoid placing in an area where there is a high variation of temperature. Operating temperature ranges from 10(C to 40(C. Operating humidity ranges from 30% to 85%.</p>		<p>Avoid in the vicinity of Electric heater.</p>
	<p>Avoid placing in an area where there is an excessive humidity rise or ventilation problem.</p>		<p>Avoid placing in an area where there is an excessive shock or vibration.</p>
	<p>Avoid placing in an area where chemicals are stored or where there is danger of gas leakage.</p>		<p>Avoid being inserted dust and especially metal material into the equipment</p>
	<p>Do not disjoint or disassemble the equipment. We take no responsibility for it.</p>		<p>Power off when the equipment is not fully installed. Otherwise, equipment could be damaged.</p>

**Warning**

For the equipment other than FC Central System, please refer to the manual provided and make sure to be informed of relevant details. This document explains the details related to FC Central.

## Equipment connection

**Warning**

FC Central System uses fixed IP band. When using Router or firewall, Wi-Fi, the connection status and monitoring function cannot be guaranteed if the relevant AP has a lack of security or the network system is operated with DHCP. In this case, let the technician for medical equipment or the administrator make a security setting for the relevant device and separate the network area used by the device from other devices.

**Caution**

In hospitals, doctors and patients are exposed to the danger of uncontrollable electric currents. These electric currents are generated by potential differences between the equipment and conductive objects that may come into contact with the equipment. Please make sure that the auxiliary equipment connected to the equipment to solve this problem satisfies EN60601-1-1:1996.

## 1.2 Outline

### Introduction of FC Central II

FCCentral is a software only for fetal monitors which are manufactured by BIONET Co.,Ltd. FCCentral can be connected to up to 16 units of fetal monitors. This system is able to monitor and save parameters and waveforms. You can retrieve and register patient information, you can have various data by using this system also.

\* **Note : FC Central lite version is limited to connect up to 2 units of fetal monitors.**

### Specification

Functions	Description
Monitoring units (max : 16 units)	Serial : 1~8 units Lan : 1~16 units
Supported Device Model	FC700, FC1400 , Fetal XP
Network	Wired : Serial, LAN Wireless : Bluetooth, Wireless LAN
View Mode	1, 2, 4, 8 and 16 Channel View Mode
Data Storage	Max 72 hours
Alarm	Sound and Display
Communication type	Bidirectional communication with patient monitor
Reviewer	Parameter Trend, 10sec Wave
Print and Report	Parameter Trend



## 1.3 Product Component

### Main features of the product

FC Central II Program is software produced by Bionet, and it is used as fetal monitor, providing 16 fetal monitors maximum. For Maternal version, it provides not only fetal monitoring but also monitoring mother's condition. Also, it provides a variety of functions other than monitoring, such as saving files and images, and review functions such as measurement data.

### Program composition








FC Central II Program is consisted of three programs. They are, FC Central II, which implements server function, FC Reviewer II, which can analyze and make a judgment on measurement data, and FC Central II Client(Broker), in which the measurement data of server may be checked in each work area.

FC Central II Client(Broker) is an optional product.

#### Warning

When using Central System which is not provided by our company and the accessory that is not standardized, the system performance cannot be guaranteed. In this case, Central System may not function properly. Please use the system we have provided and the recommended product. For accessories that are not standardized, they can be a reason for signal distortion or noise. Make sure to use genuine accessory provided by us.

## Hardware Preference

Type	Central system	Description
Common		PC with FC Central II installed.
Common		FC Central II Software CD
Common		Access Point(AP)
FetalXP		Wireless Network USB Adaptor
FC700 FC1400		Serial to WLAN Converter
FC700 FC1400		Serial to WLAN Converter Power Supply Wired Environment
FC700 FC1400		Serial to WLAN Converter Bracket * 2 screws required ( BWH 3X12 Tapping Screw )

### Hardware Preference

Type	Central System	Description
FC700 FC1400		<b>Serial To WLAN Adaptor</b> * Setup for Serial to WLAN converter
FC700 FC1400		<b>Serial Wired Environment</b> * Setup for Serial to WLAN converter
Common use		<b>USB Lock Key</b>

#### Caution

For product composition, the components may be different according to the direction of construction for FC Central II System. According to Wired Environment LAN and wireless Wi-Fi, Bluetooth environment, components may vary as mentioned. Final composition of the product should be purchased and constructed from the list above, according to the system construction.

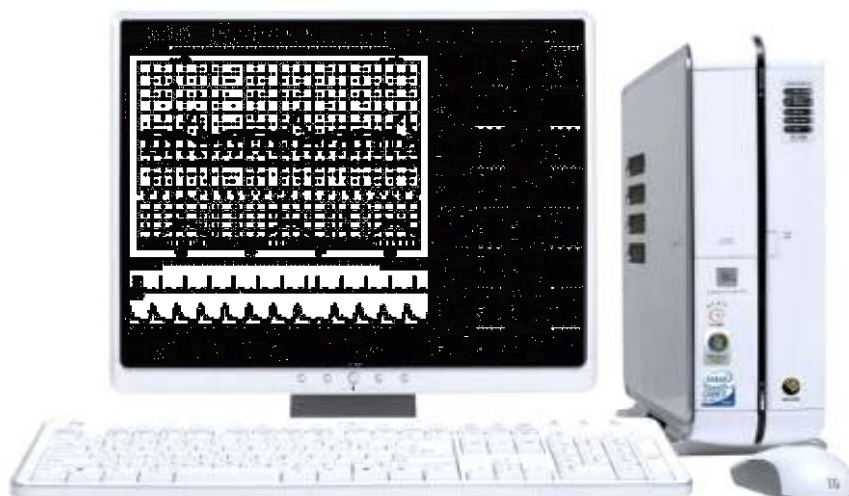
## System Requirement

Minimum requirement for FCCentral is Windows XP

Installation is available for FCCentral CD or USB memory.

The minimum requirements of installation of FCCentral are as below.

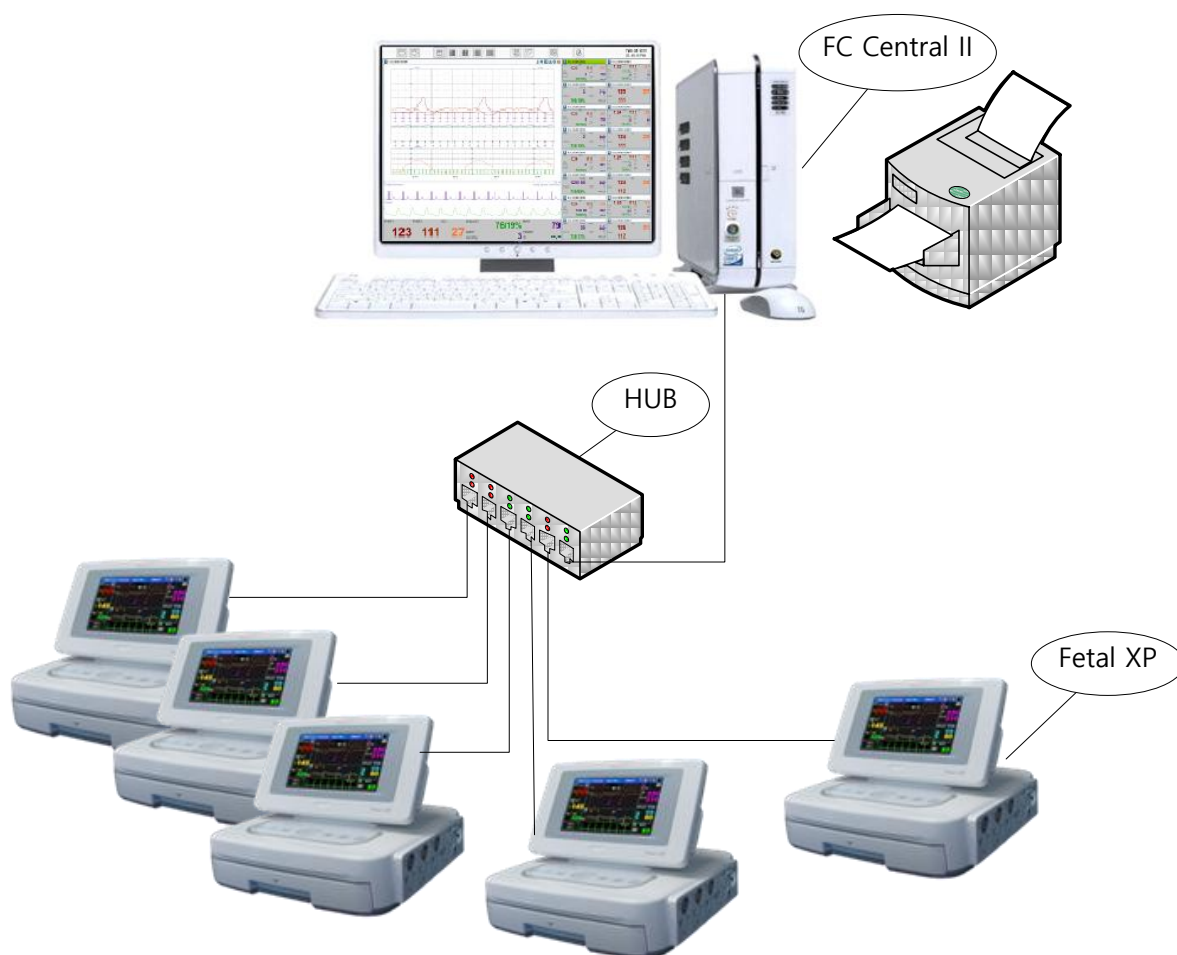
	Minimum Requirement	Recommended Requirement
<b>OS</b>	Windows XP	Windows XP (32bit) or Windows 7 (32/64bit)
<b>CPU</b>	Core2Duo 1.86GHz	Core2Duo 3.0 GHz or more
<b>RAM</b>	2GB	3GB or more
<b>Monitor</b>	19 inches	24 inches or more
<b>Graph Card (VGA Card)</b>	VGA RAM 256 MB 1280 x 1024	VGA RAM 512MB or more 1920 x 1080
<b>CD-ROM drive</b>	24X	48X
<b>HDD</b>	320 GB	640 GB more
<b>LAN Speed</b>	10Mbps	100Mbps
<b>USB Port</b>	3	3 or more



## 1.4 System Preference

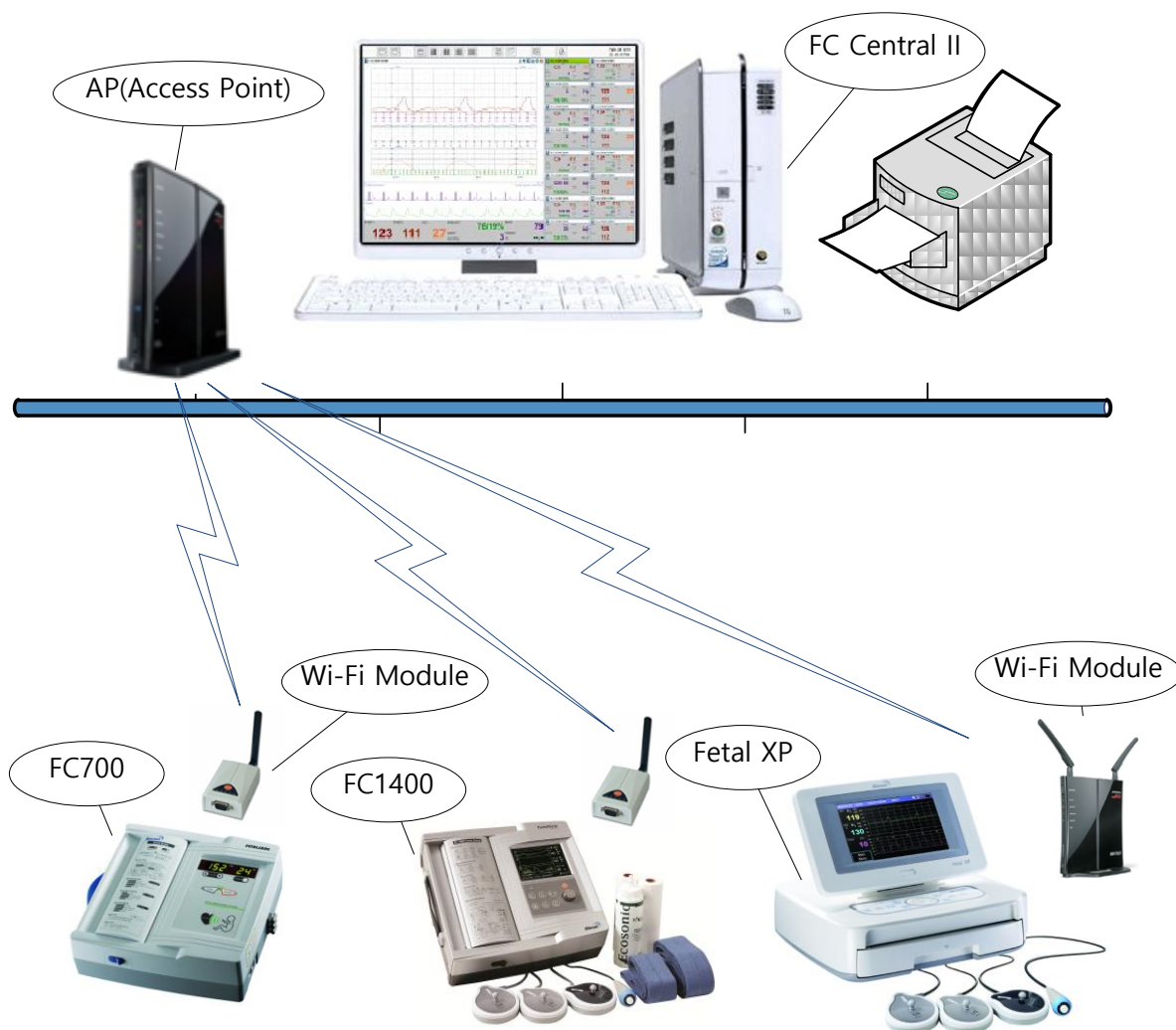
### Wired Environment(LAN)

For Wired Environment LAN, it is supported only in FetalXP equipment. For FC700 and FC1400, Wired LAN is not supported.



## Wireless Environment (Wi-fi)

For wireless LAN Environment, FC700, FC1400 and FetalXP are all supported.



# Installation

## 1. Installation of FC Central II

1.1 Installation in Window XP & Windows 7

1.2 Installation in Windows 8

## 2. Uninstallation of FC Central II

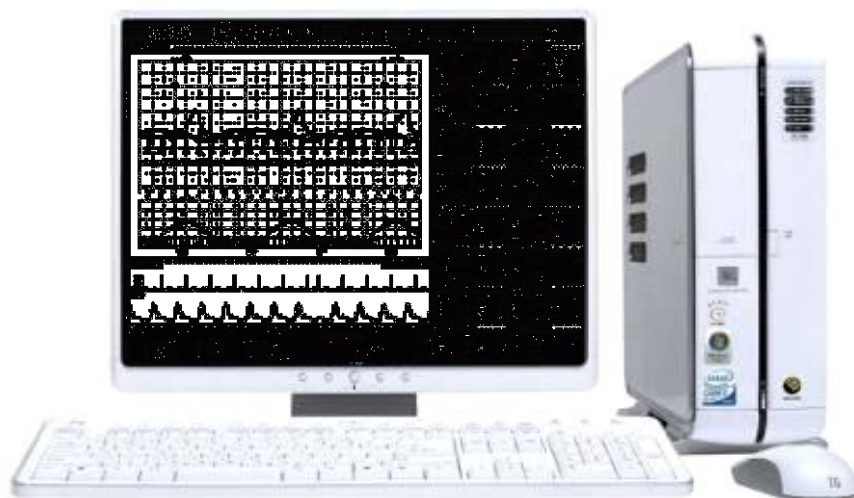
2.1 Uninstallation in Window XP & Windows 7

2.2 Uninstallation in Windows 8

## 3. Execute / Close FC Central II

3.1 Execute FC Central II Program

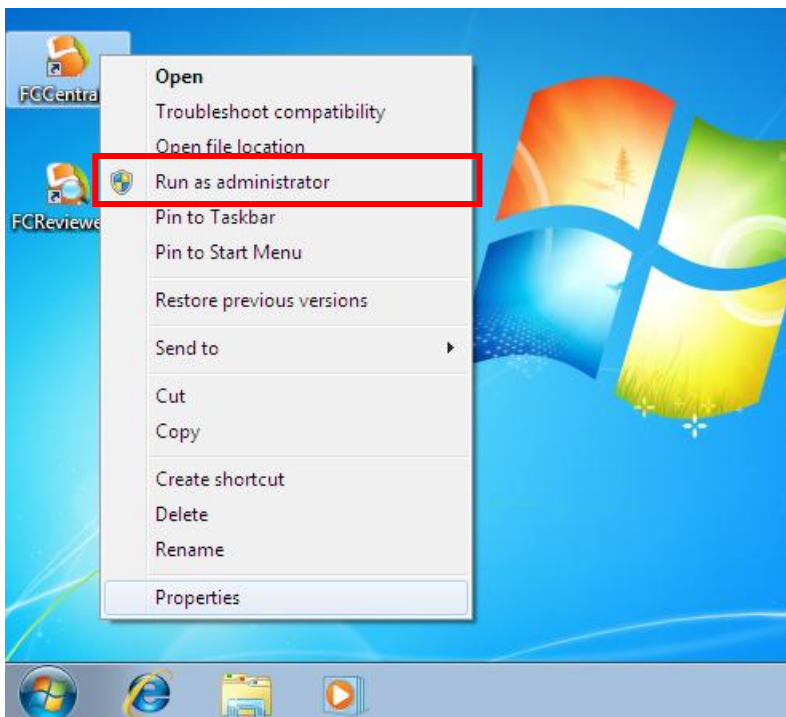
3.2 Close FC Central II Program



# 1. Installation of FC Central II

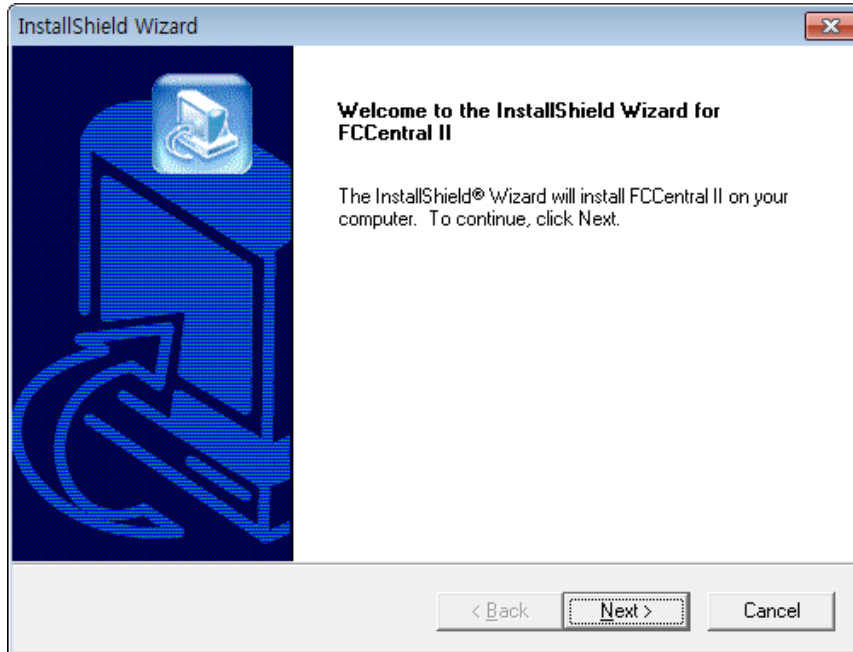
## 1.1. Installation in Window XP & Windows 7

- 1) If you were using FC Central, you should back up measurement data and DB data files which manage the data in order to secure the safety of data. After that, start the installation
- 2) The folder where DB files managing the measurement data are located is in “C:\Program Files\WBIONET\FC Central II”. Find “FCCentral.mdb” here in this folder or in the subfolder and back it up.
- 3) For patient measurement data, it is located in the folder designated in user settings. Check the relevant location and back up the folder where data is saved. This backup files and DB files can be placed back to their relevant location, after reinstallation.
- 4) Insert FCCentral Installation CD to the CD Drive.
- 5) Open CD-ROM drive and run “FCCentral II Install.msi”.
- 6) **You should use the management mode when you install or operate the software in Windows 7.**

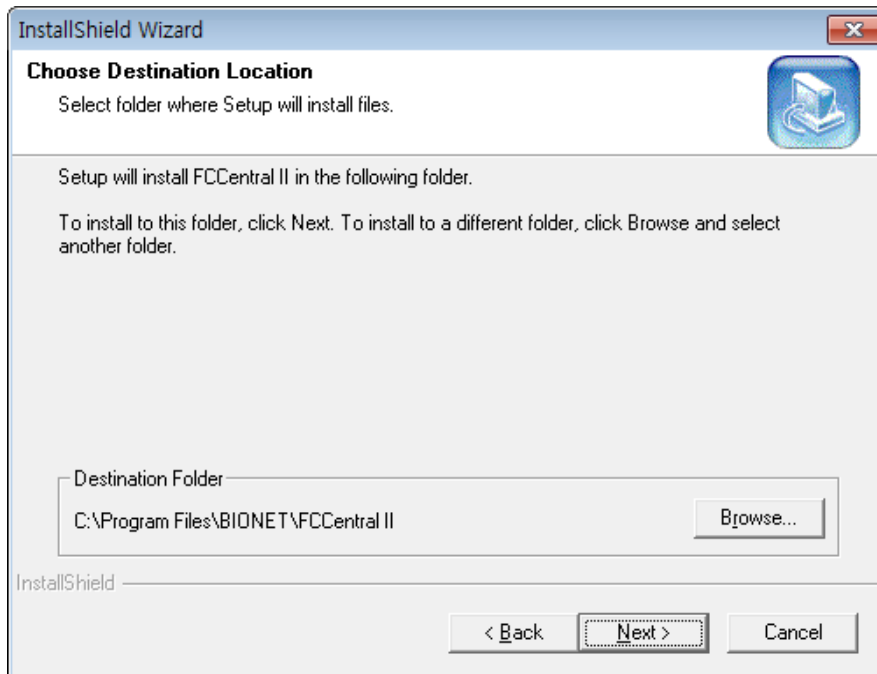


- 7) If window-browser pops up as follows, click “Next”

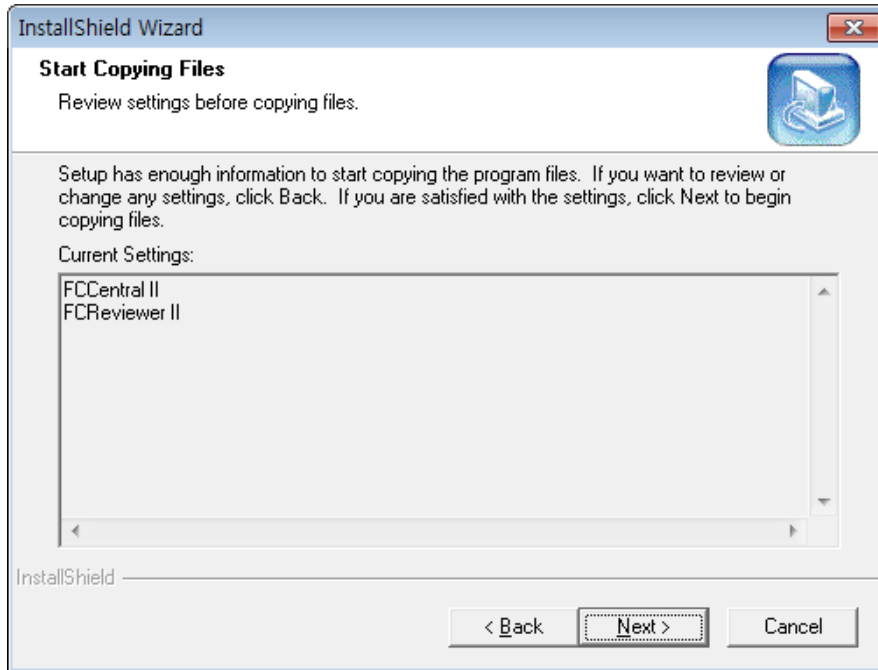




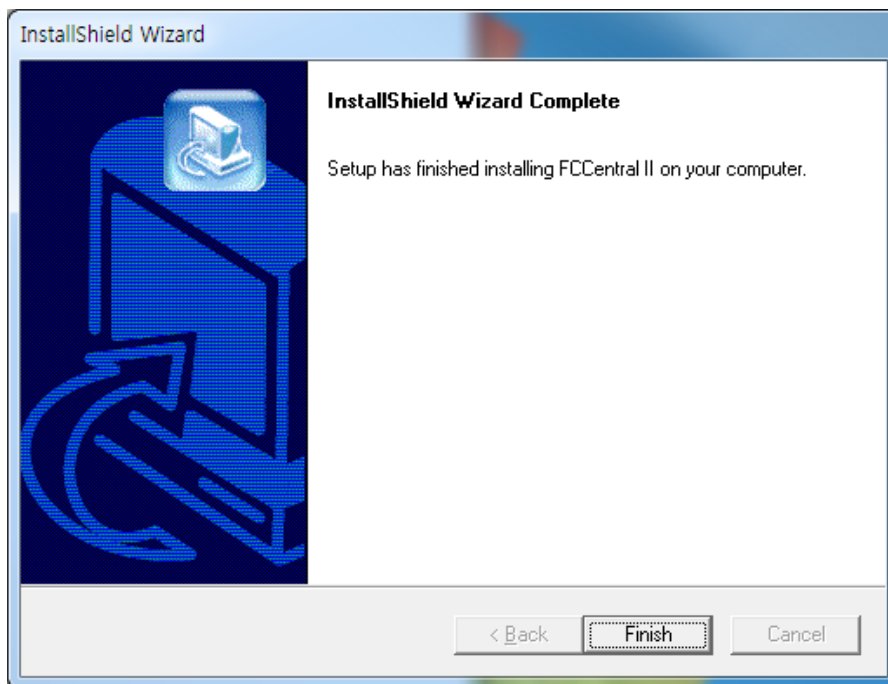
- 8) Select 'folder' where you want to install FCCentral. If you want to install the program to another folder, click "Browse" and select folder.



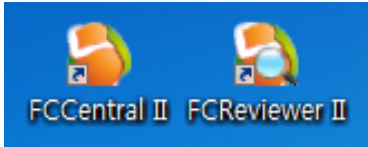
- 9) Install the relevant program in the folder which is set above. Click "Next" button.



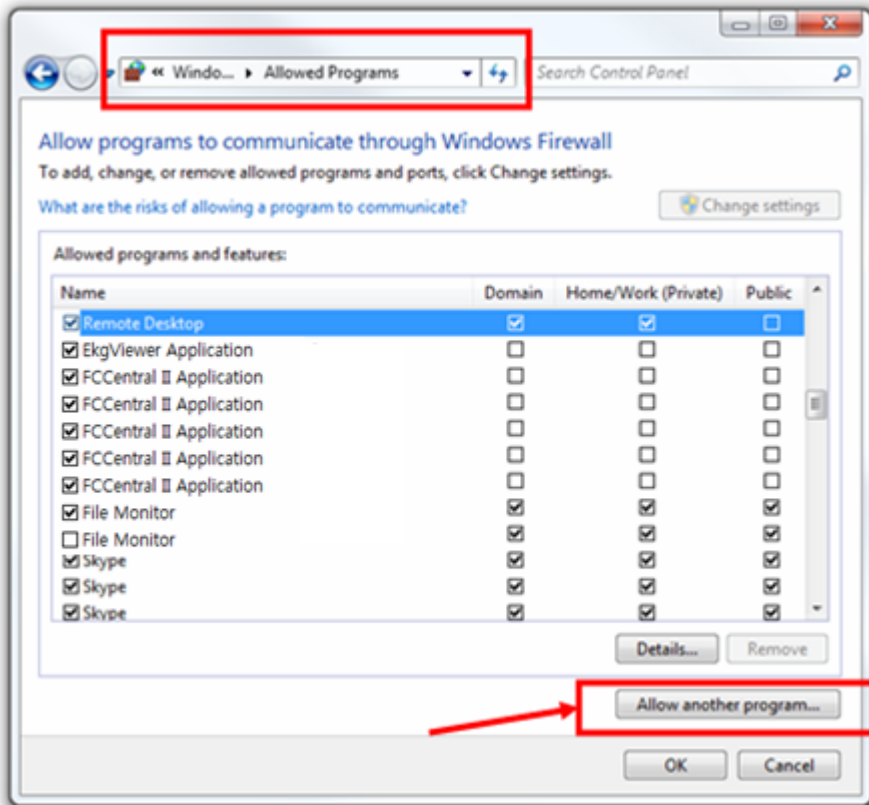
10) If installation is completed, click “Finish”.



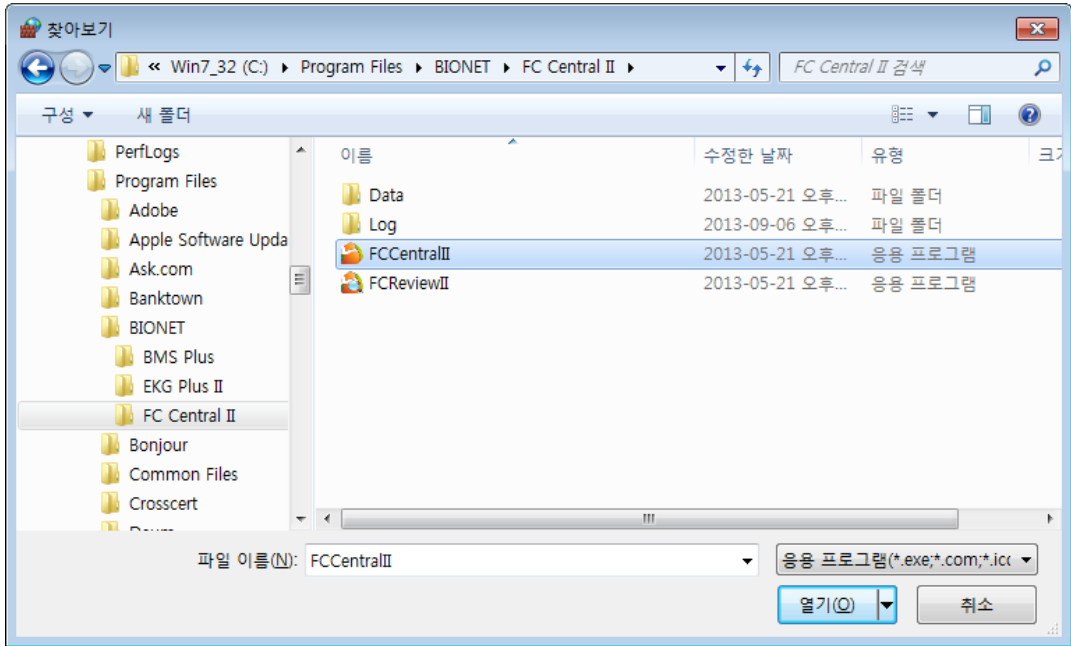
11) If installation is successful, you may see the “FCCentral” and “FCReviewer II” Icon.



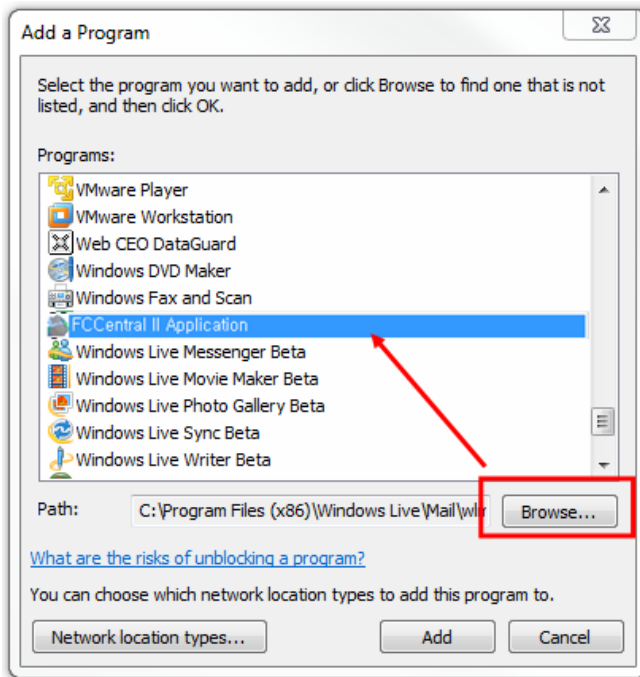
- 12) After finishing the installation, access right should be given in order to make network communication work in Windows 7 and Windows 8. You can register the program to be allowed in Windows Firewall.
- 13) Enter "System and security in Control Panel.
- 14) Select 'Windows Firewall in system and security.
- 15) Select "Allowed programs" in Windows Firewall.
- 16) Click "Allow other programs" in allowed programs.



- 17) In 'Allow other programs' dialogue, select 'search'
- 18) Move to the folder "C:\Program Files\WBIONET\FC Central II" where program is located, and select "FCCentralII"



19) Select the program and click “add”




20) If “FCCentral II Application” is on the allowed program list, it is properly registered. If it is not properly registered, wave may not be seen even if the program is executed and equipment is interlocked.

- 21) Register installed program in allowed program list. If you have backup files before installation, copy it to the same folder and use the system.

**Caution**

Please check for the remaining space, for the data generated while executing the program. While executing FC Central II program, measured data and image saving process for interlocking with EMR will occur. In “preference”, “system” of FC Central II program, select the hard disk folder which has a sufficient amount of remaining space.

## 1.2. Install in Window 8

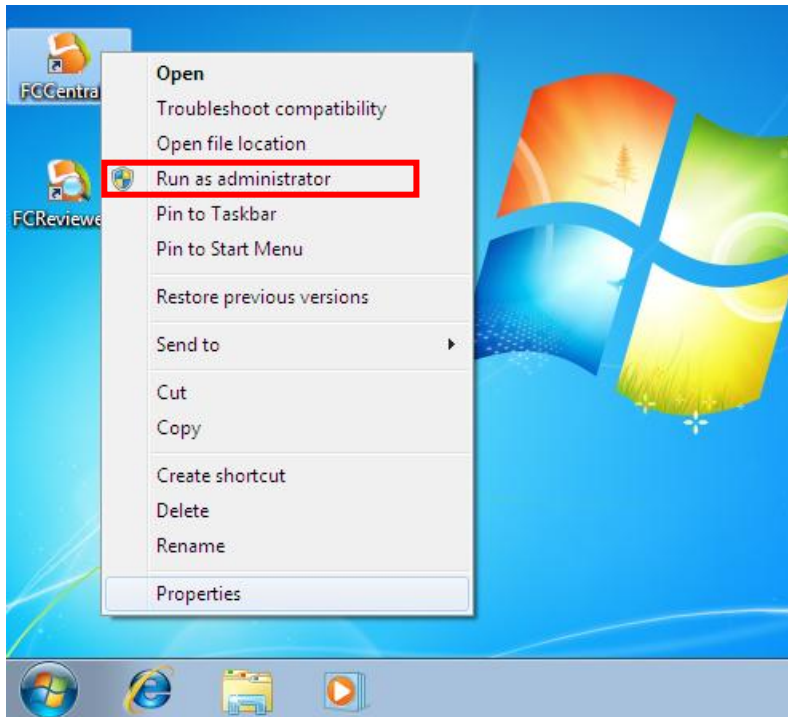
- 1) If you were using FC Central, you should back up measurement data and DB data files which manage the data in order to secure the safety of data. After that, start the installation
- 2) The folder where DB files managing the measurement data are located is in “C:\Program Files\WBIONET\FC Central II”. Find “FCCentralII.mdb” here in this folder or in the subfolder and back it up.
- 3) For patient measurement data, it is located in the folder designated in user settings. Check the relevant location and back up the folder where data is saved. This backup files and DB files can be placed back to their relevant location, after reinstallation.
- 4) Insert FCCentral Installation CD to the CD Drive.
- 5) When the screen below is shown, click the marked “desktop” area or press “Window key() + D” and convert the screen into the main screen(wallpaper).



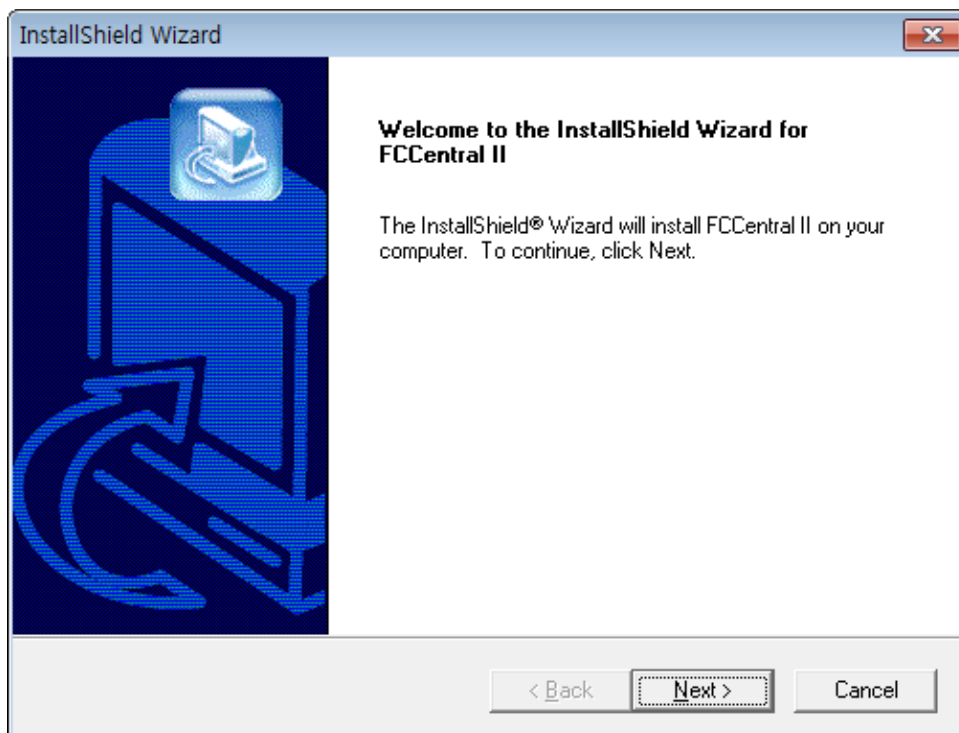
- 6) When the screen is converted into Desktop screen, click “Windows Explorer” marked in the picture below.



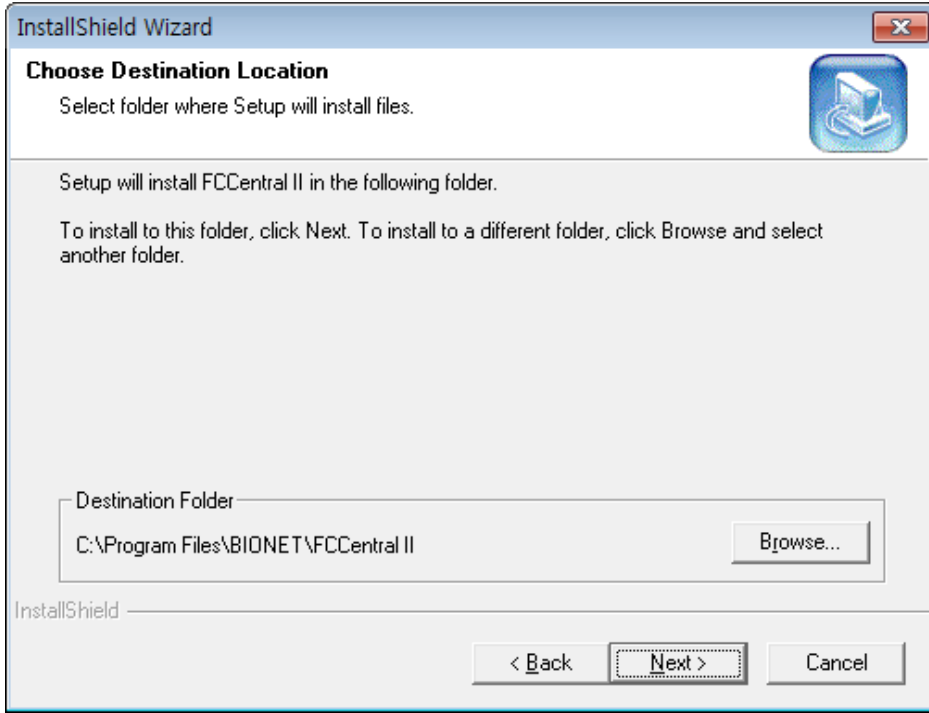
- 7) Open CD-ROM drive and run “FCCentral Install.msi”.
- 8) You should use the management mode when you install or operate the software in Windows 8.



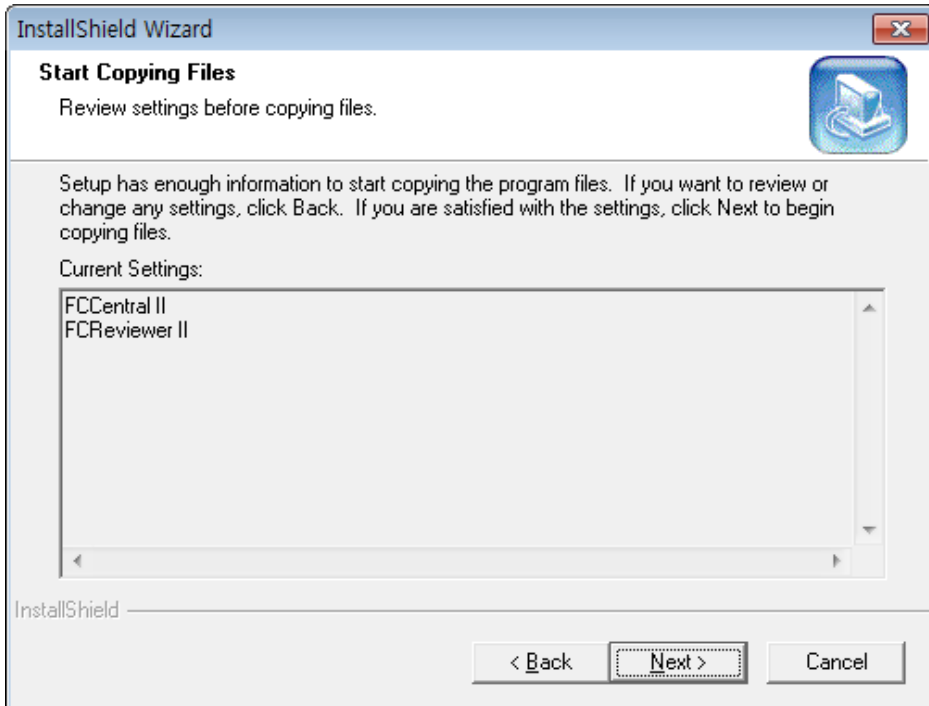
9) If window-browser pops up as follows, click “Next”.



10) Select 'folder' where you want to install FCCentral. If you want to install the program to another folder, click "Browse" and select folder .

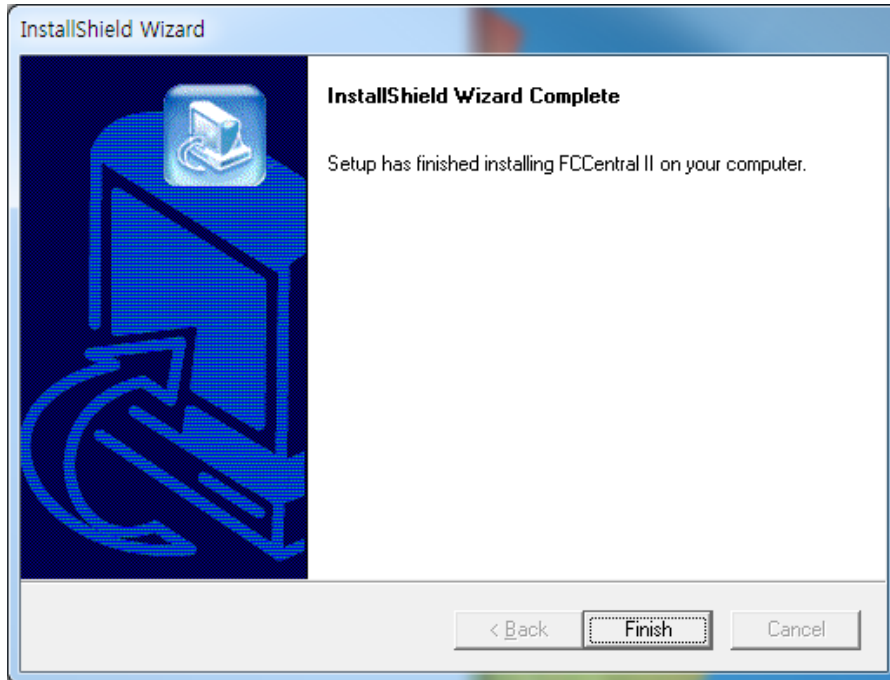


11) Click "Next", then installation will start.

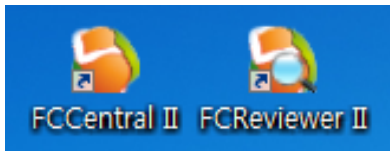




12) If installation is completed, click “Finish”.



13) If installation is successful, you may see the “FCCentral” and “FCReviewer II” Icon.



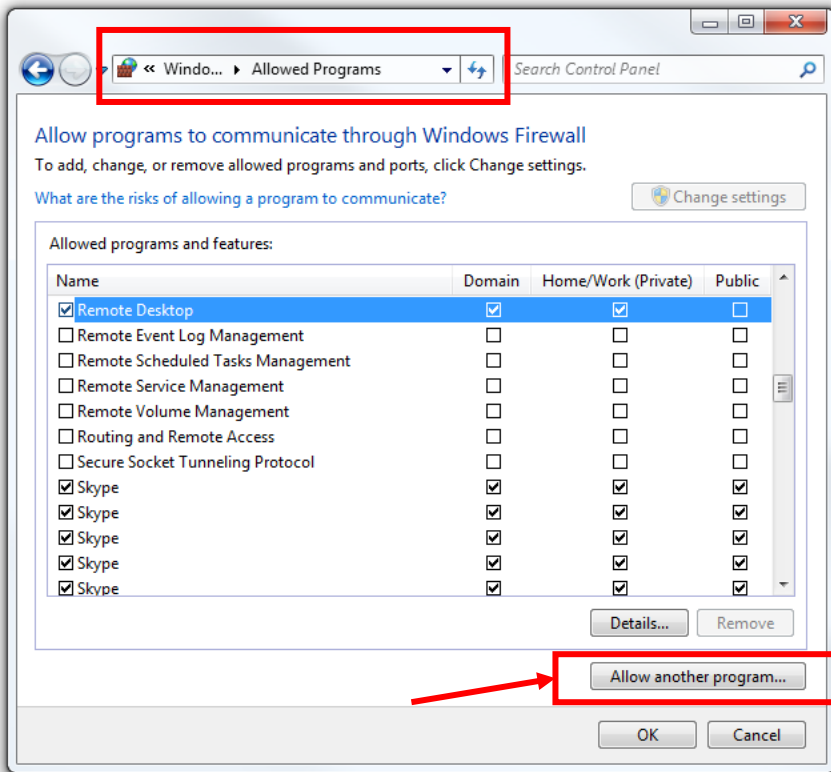
14) After finishing the installation, access right should be given in order to make network communication work in Windows 7 and Windows 8. You can register the program to be allowed in Windows Firewall.

15) Enter “System and security in Control Panel.

16) Select ‘Windows Firewall in system and security.

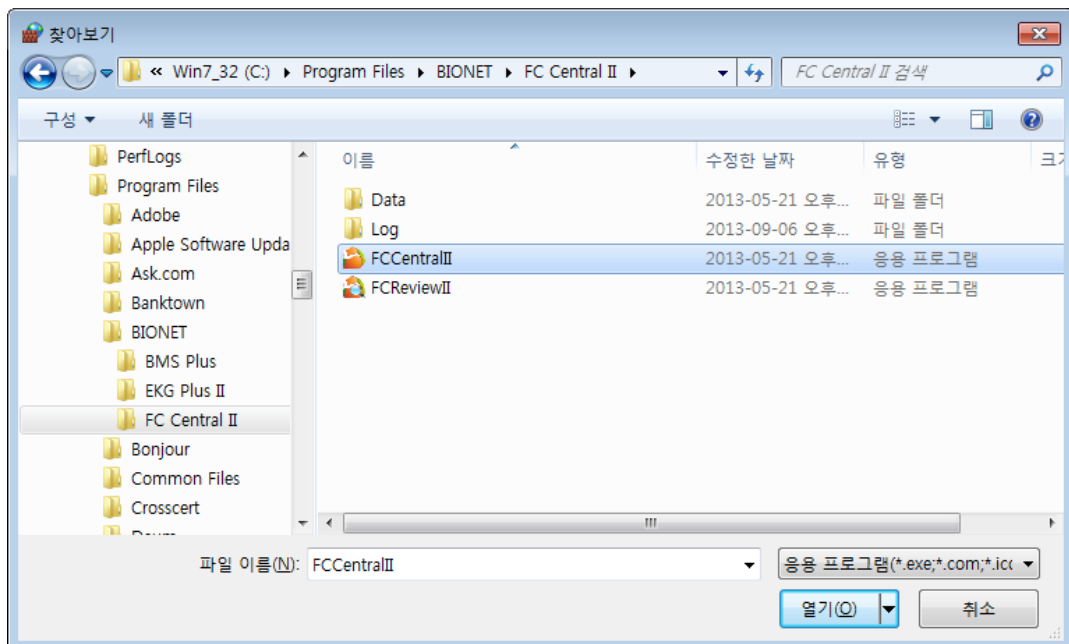
17) Select “Allowed programs” in Windows Firewall.

18) Click “Allow other programs” in allowed programs.

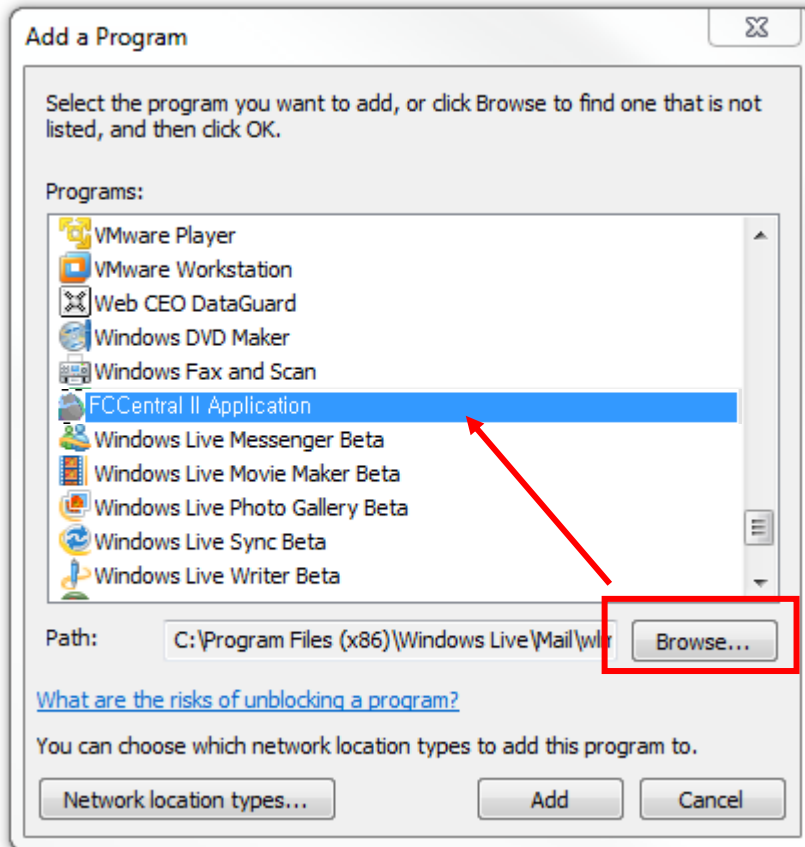


19) In 'Allow other programs' dialogue, select 'search'

20) Move to the folder "C:\Program Files\BIONET\FC Central II" where program is located, and select "FCCentralII"



21) Select the program and click “add”



22) If “FCCentral II Application” is on the allowed program list, it is properly registered. If it is not properly registered, wave may not be seen even if the program is executed and equipment is interlocked.

23) Register installed program in allowed program list. If you have backup files before installation, copy it to the same folder and use the system.

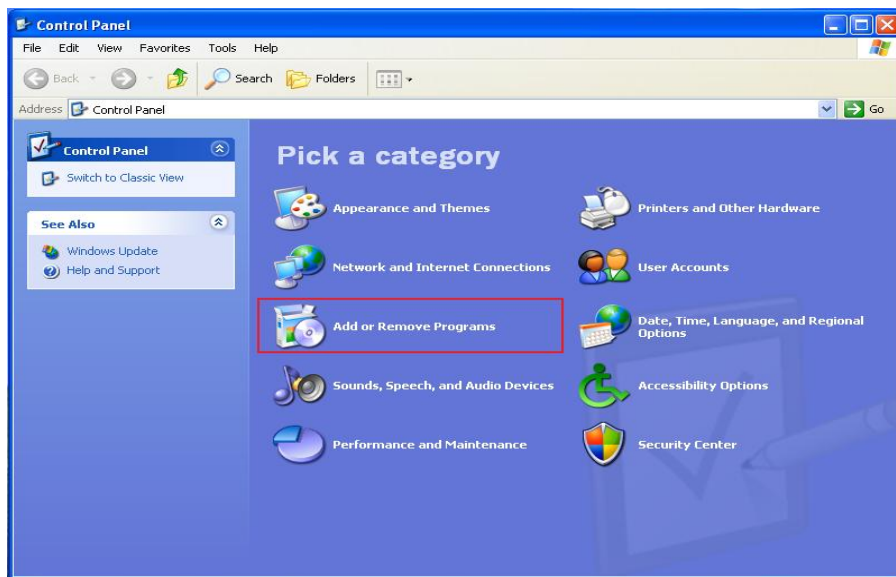
**Caution**

Please check for the remaining space, for the data generated while executing the program. While executing FC Central II program, measured data and image saving process for interlocking with EMR will occur. In “preference”, “system” of FC Central II program, select the hard disk folder which has a sufficient amount of remaining space.

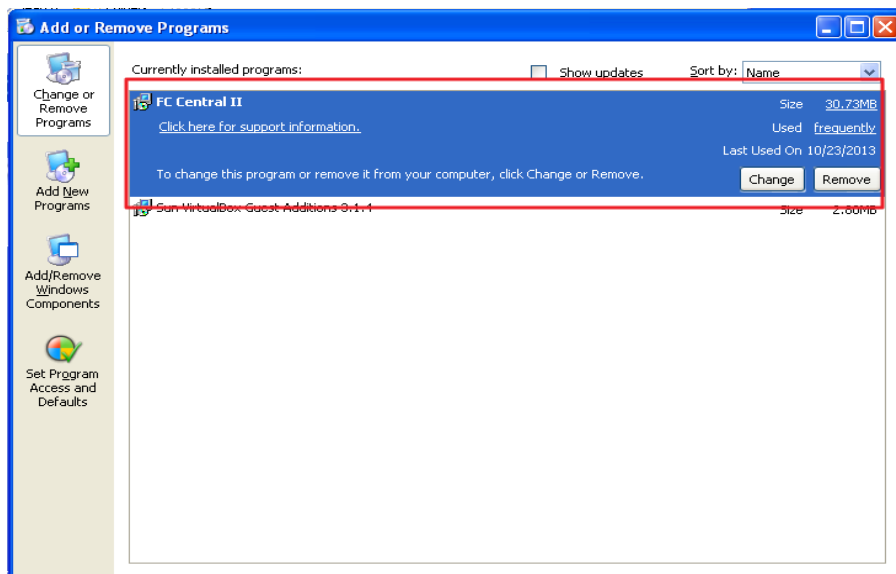
## 2. Uninstallation of FC Central II

### 2.1. Uninstallation in Window XP & Windows 7

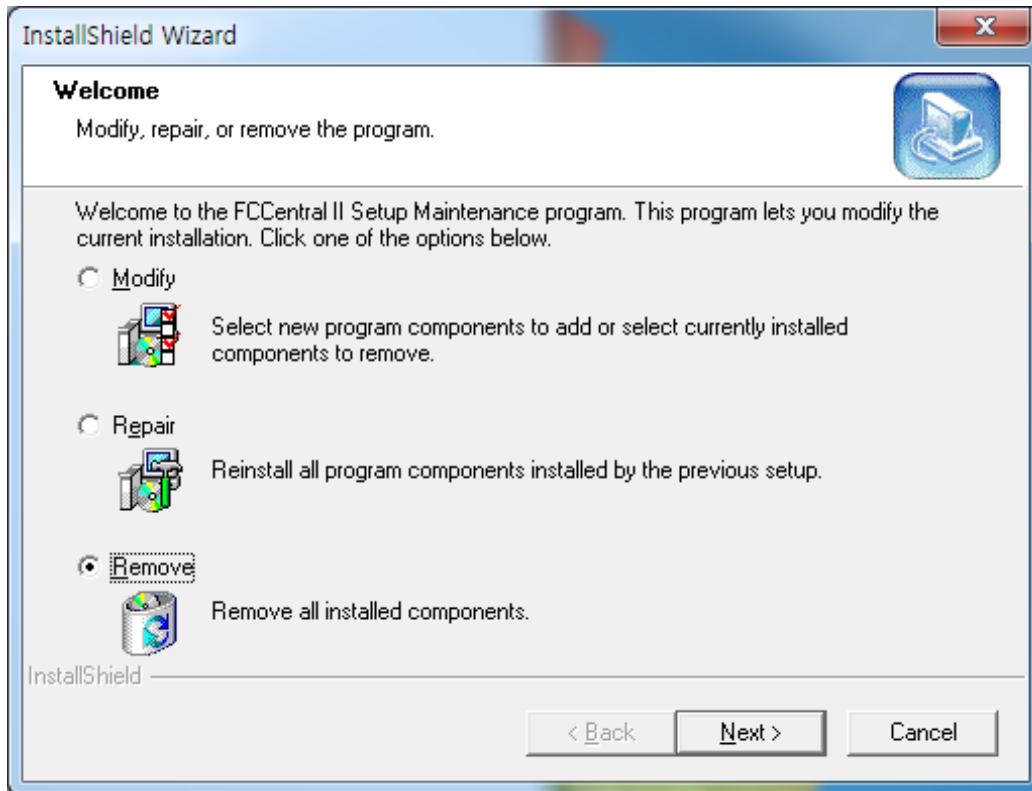
1) Move to Start->Control Panel->Program addition/deletion



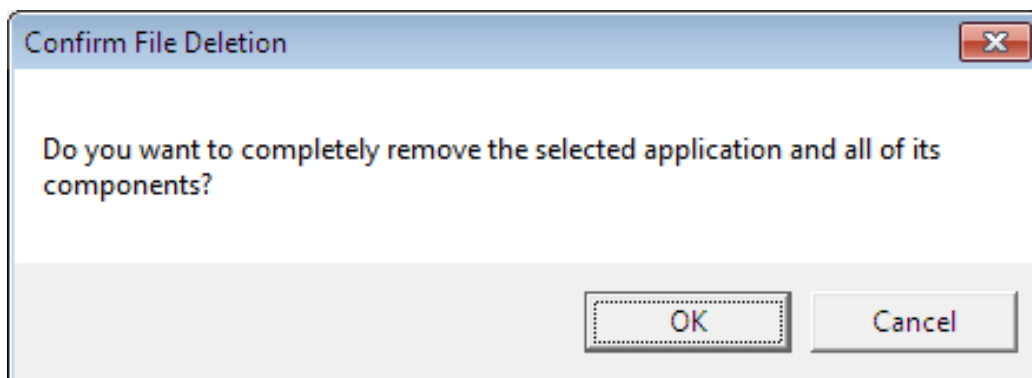
2) Then, select “FCcentral II”.



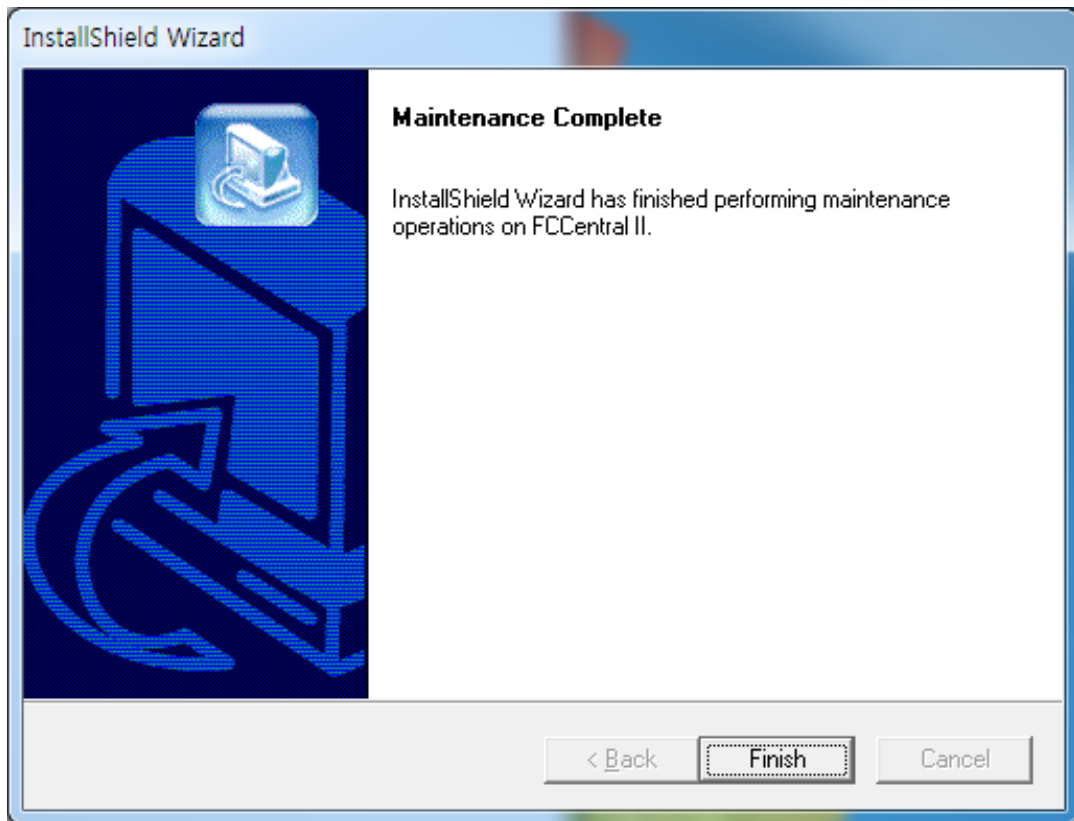
3) Then, select “Remove” from “installShield Wizard”.



4) Click “OK” to delete program completely.




5) Click “Finish”.

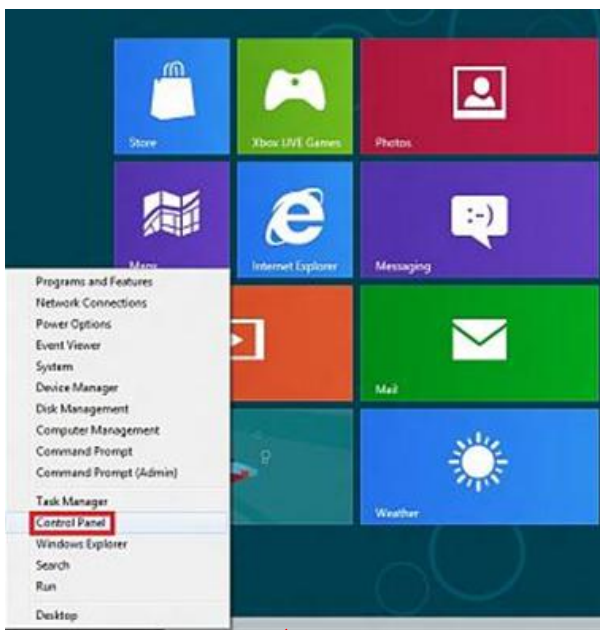


**Caution**

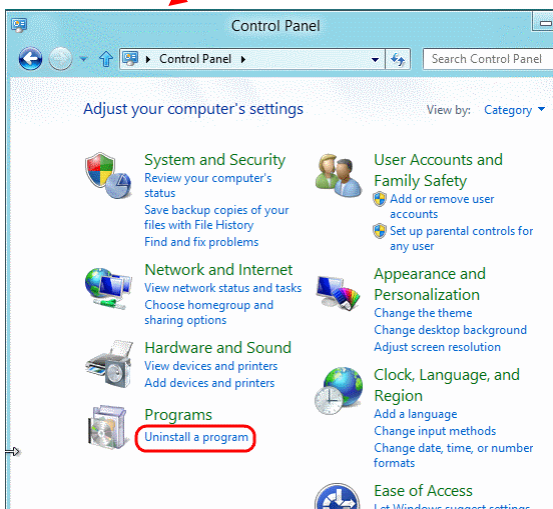
Measured data and images saved for interlocking with EMR, which are occurred while executing FC Central II program, are not deleted. Decide whether you are going to use the data and remove it manually.

## 2.2. Uninstallation in Window 8

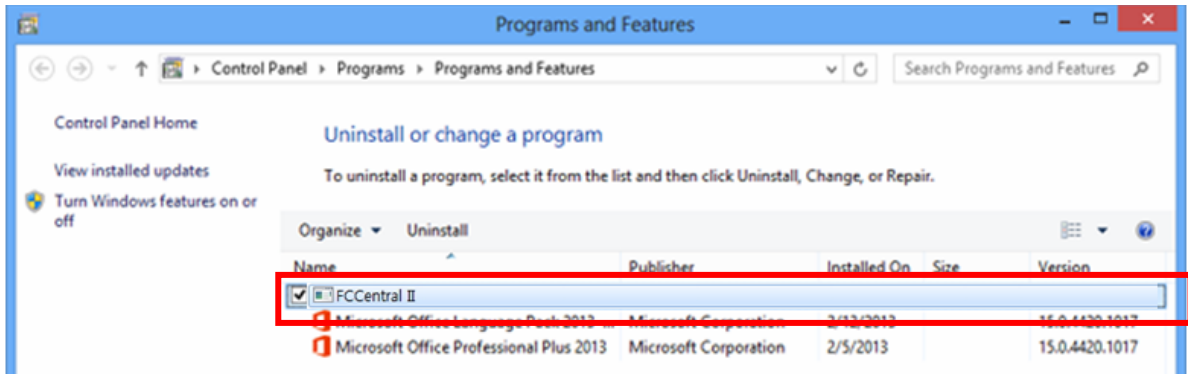
- 1) For uninstalling the program, press “Window key(  ) + X” to convert into the menu screen. When the screen below is shown, select “control panel”



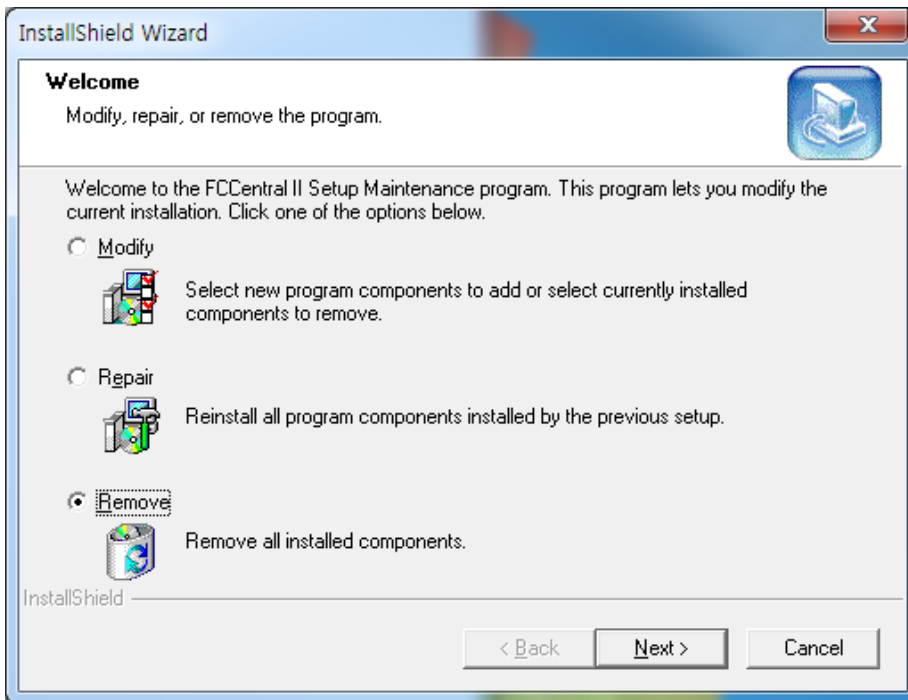
- 2) Move to Start→Control Panel→Program addition/deletion.



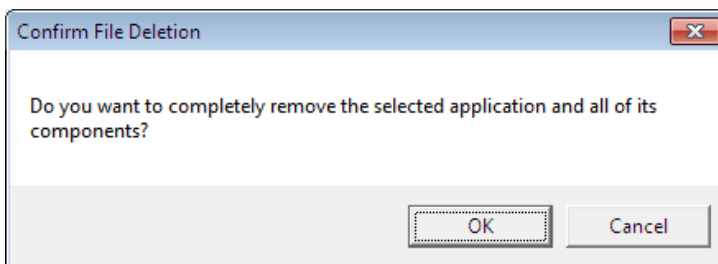
- 3) Select “Uninstall program”
- 4) Then, select “FCcentral II”. Click “Remove/Modify” button.



- 5) Then, select “Remove” from “installShield Wizard”.

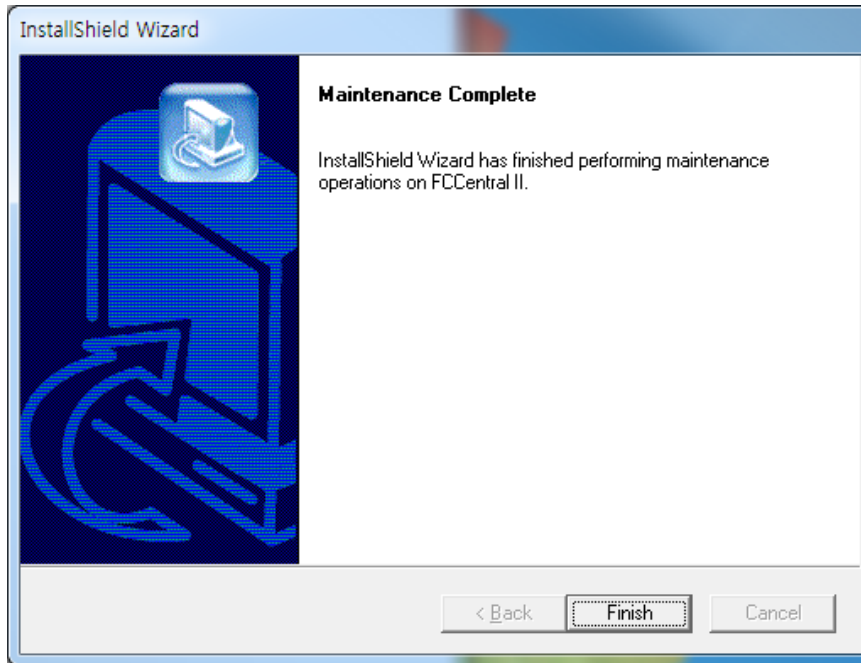


- 6) Click “OK” to delete program completely.





7) Click “Finish”.



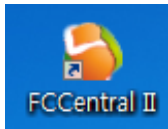
**Caution**

Measured data and images saved for interlocking with EMR, which are occurred while executing FC Central II program, are not deleted. Decide whether you are going to use the data and remove it manually.

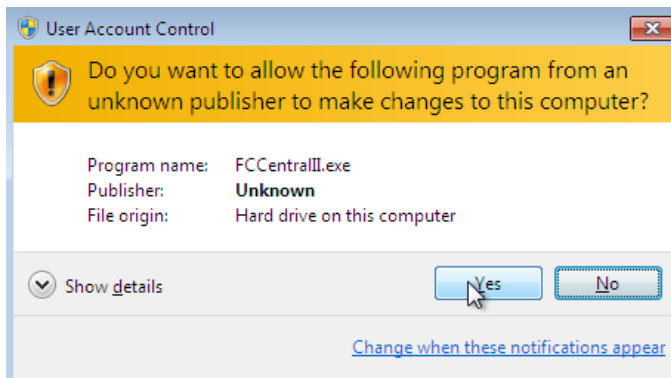
## 3. Execute / Close FC Central II

### 3.1. Execute FC central II

- 1) Double-click “FC Central II” Icon on Desktop.



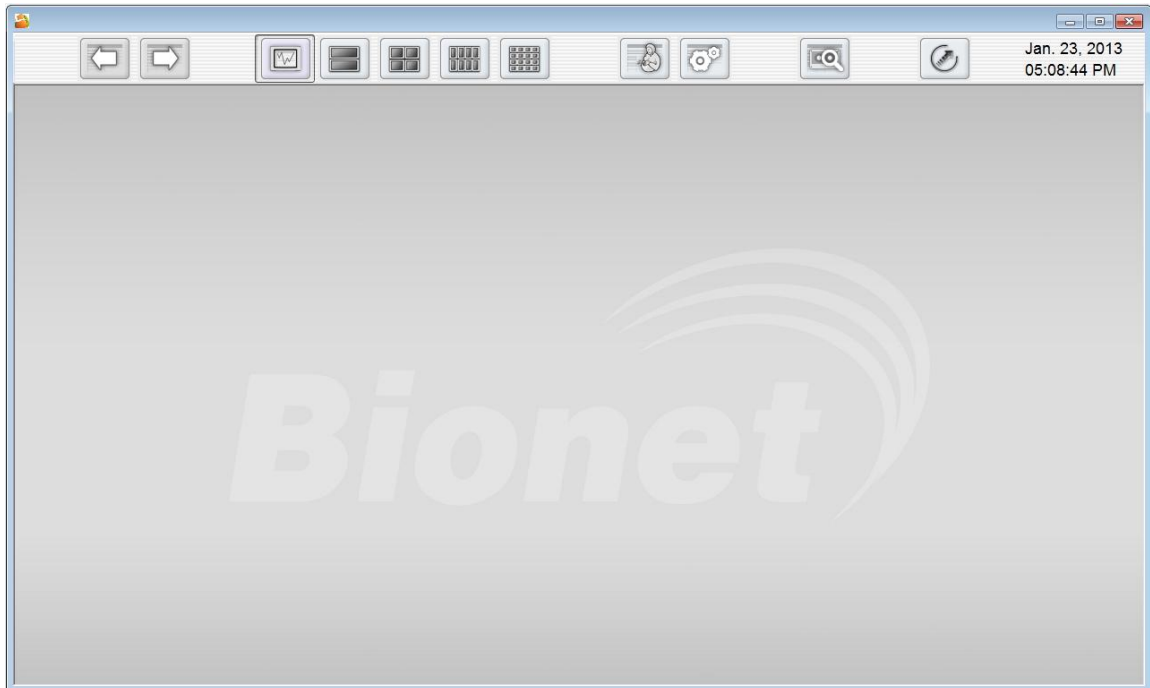
- 2) When starting the program for the first time, the dialogue below might appear due to the authority problem. Click “Yes”, or “Confirm”



- 3) When starting the program for the first time, the dialogue might appear with a message that blocks some features in the firewall for security purposes. Click “Allow access” button to acquire the authority.



4) This is basic design of FC Central II.



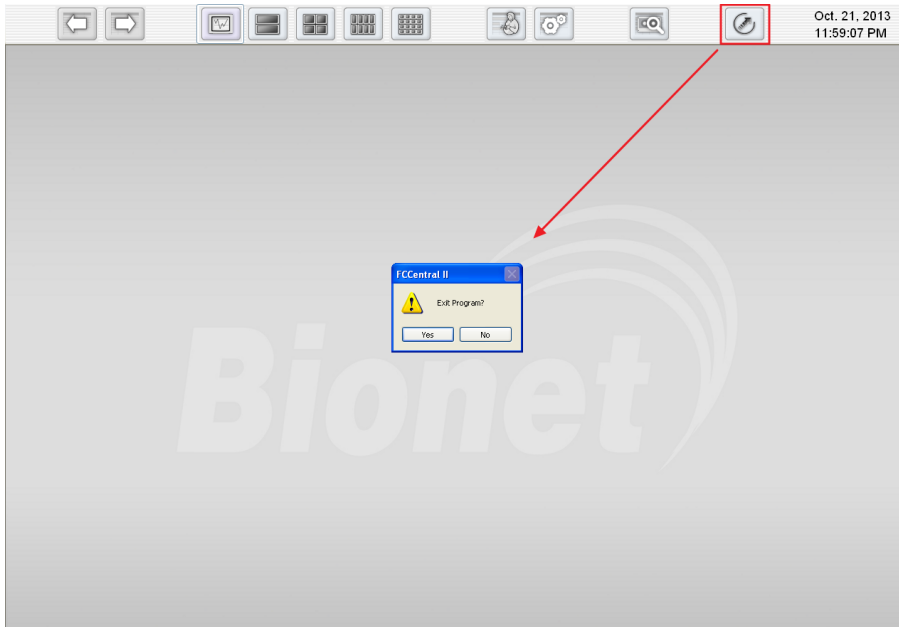
**Note**

FC Central II provides two types of connecting method, Fetal Monitor, and LAN & Serial. Make a setting for FC Central II and Fetal Monitor by referring to the manual. If the preference is properly set, the connection will be automatically made and ClientWindow will be formed.

When FC Central II and Fetal Monitor are connected, you can monitor the patient data in real time. When you want to save data, set the patient information and you should admit it.

### 3.2. Close FC Central II

1) If you want to close FC Central II program, click the close button indicated below.



2) When the dialogue for closing the program appears, click “Yes(Y)” button.



3) Program is then closed.

#### Caution

Before closing FC Central II program, it is recommended that you should close the data of real-time measurement for the patient. Data being measured might be deleted.

# How to use

## 1. Basic functions of the program

- 1.1 Client Window structure
- 1.2 How to use Main Menu
- 1.3 Channel layout and channel scrolling
- 1.4 Explanation of Client Window Structure

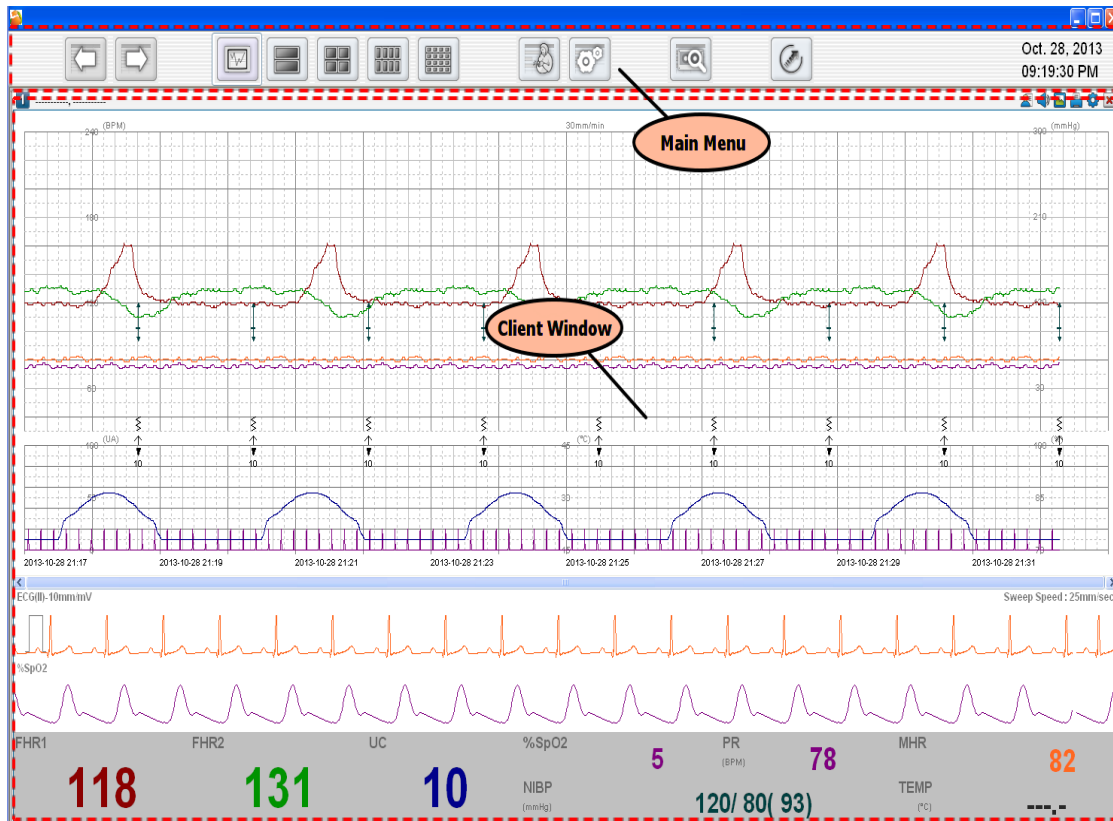
## 2. How to use Program

- 2.1 Patient Manager
- 2.2 Preference
- 2.3 Patient information measurement management
- 2.4 Review Program

# 1. Basic functions of the program

## 1.1. Client Window Structure

### Basic Design of FC Central II



### Main Menu

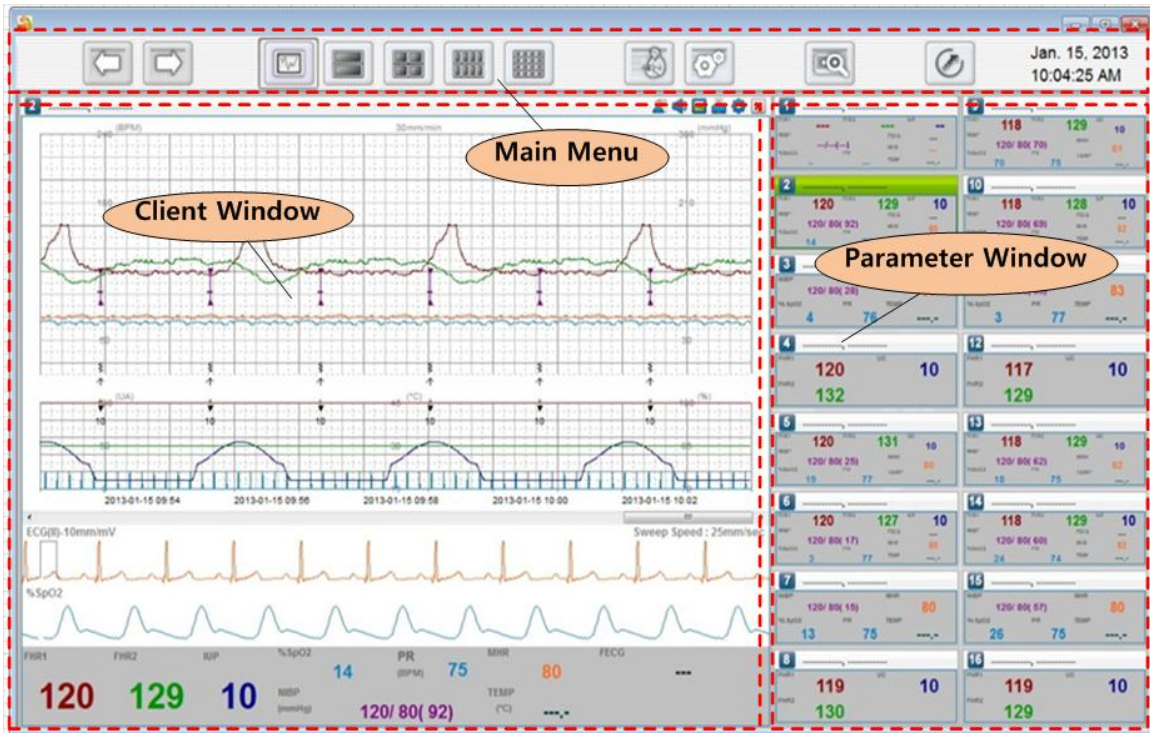
The main menu consists of Patient Manager, User Manager, Channel Display for connected clients, Client Window Setting, and Run “Review Program”.

### Client Window

The client window automatically opens when the fetal monitor is connected to FCCentral . One client window displays one fetal monitor. You can check the monitor’s parameter and waveform in real time, remotely control the monitor settings, and print the information in real time

## 1.2. Client & Parameter Window Structure

### Layout and Display

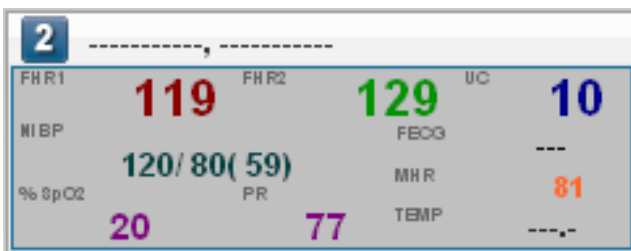


#### Main Menu & Client Window

This indicates the window presented when the connection between the menu of FC Central and Fetal Monitor is set. For details, refer to “1.1 Client Window structure”

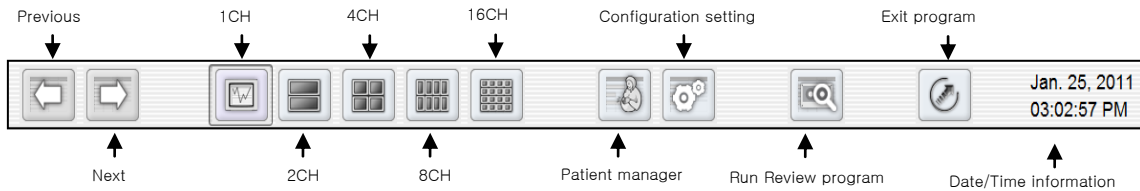
#### Parameter Window.

When FC Central and Fetal Monitor equipment is connected more than one in 1Ch window structure, Parameter Window will be presented as many as the number of connected equipment, providing the function that can monitor connected equipment. When you double-click each parameter window, relevant window will be opened in Client Window and details can be seen.



## 1.3. Operation of Main Menu

### Names of Menu



#### Previous / Next

When more than 2 of equipment are connected in Client Window, it provides the function that shows you the window indicating each device. In the case of 1ch window, it gives a function of switching to the window of next equipment. In 2ch window, more than 2 devices should be connected to use the function. That is, the first window shows the screen of two devices, and the next window shows the other two. It is the same in 4ch and 8ch.

#### 1, 2, 4, 8, 16 Channel window

To select number of clients (patient monitor) on screen

#### Patient Manager

To register “patient information”.

#### Preference Setting

To set up the environment of system.

#### Run “Review Program”

To call up and open the saved file regarding patient information.

Main View of FC Central II can store data which is an hour after the measurement time, and can analyze the status of the patient. When you saved the measurement data, the data before 1 hour can be analyzed by opening the saved data through Review Program.

#### Exit

To quit the program.



## Date/Time Information

Jan. 25, 2011  
03:02:57 PM

To show the present date and time.

## 1.4. Channel layout and display

### 1 CH

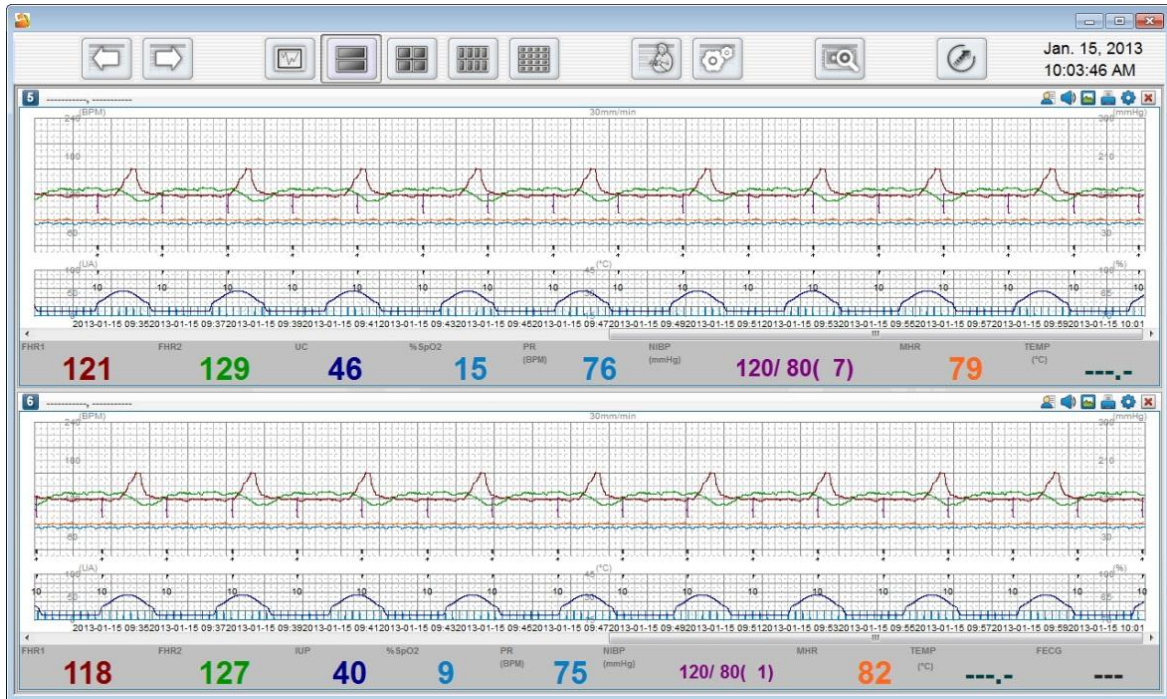
The 1-channel view displays up to 16 monitors simultaneously. To check the details (parameter, waveform, and parameter trend) of one of the monitors, select the client window of the monitor by double-clicking

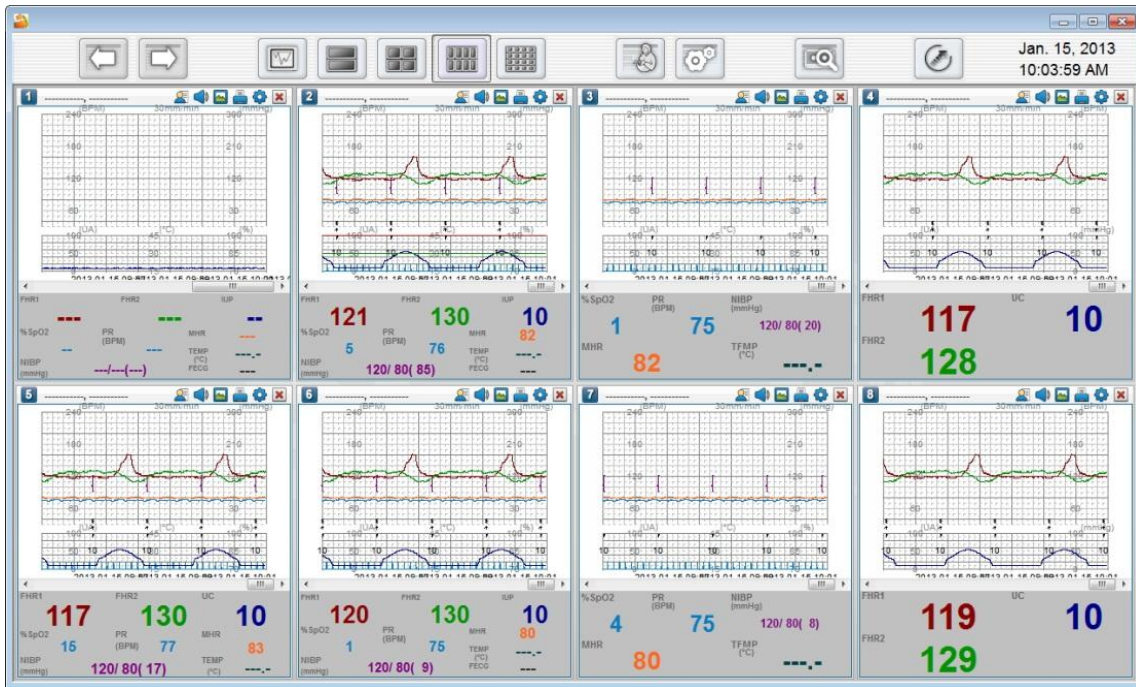


### 2, 4, 8 CH

The 2-channel, 4-channel, and 8-channel views display 2, 4, and 8 monitors, respectively. The information displayed includes the parameter and parameter trend but excludes the waveform

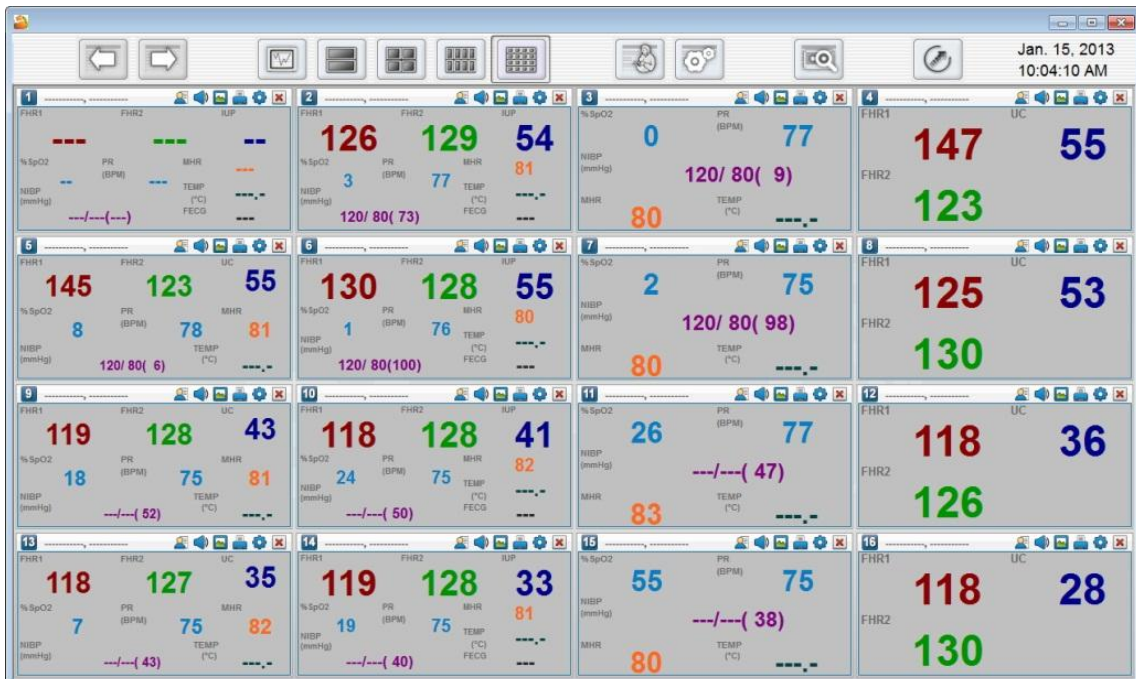
# FC Central II Manual





## 16 CH

The 16-channel view displays up to 16 monitors. The information displayed includes the parameter but excludes the waveform and parameter trend .



**Previous / Next** 

The Previous and Next buttons appear only when the number of fetal monitors connected to FCCentral exceeds the number of available client windows. By clicking these buttons, you can check the information of the monitors that are not displayed on the client window.

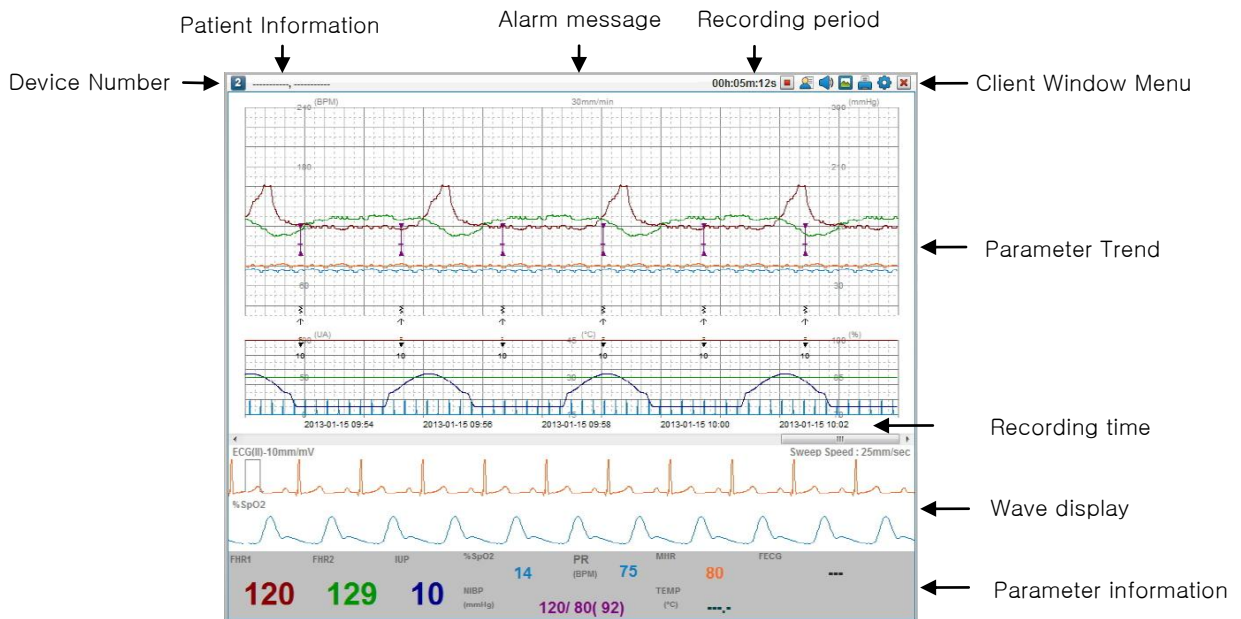


[Example : 8 monitors connected in 4-CH display]

## 1.5. Client Window Structure

### Basic structure of Client Window


Client Window is formed one by one, when equipment is connected to FC Central II. The basic structure of connected window is divided into 4 parts. They are the caption bar area which indicates equipment number, patient information, alarm message and Client menu, the area indicating the parameter trend as graphs, the wave graph area which indicates ECG and SpO2, and the parameter area which shows the figures of parameter.



## Device Number

In the upper part of Client Window, “Device Number” is presented on the top left side of the image below. Device Number is an equipment number (or patient’s Bed information) set in the Fetal Monitor. For equipment number, use 1~16( **1** ~ **16** ) so that it is identical with Bed number. If the equipment number is not set or out of the range, it is indicated as question mark. (**?**)

## Patient information

On the top of Client Window, “Patient information” is presented on the top left side of the image below. When it is connected for the first time, patient information is presented as underlined blanks (-----), as indicated in the first image. Set the patient information and connect through Admit(  ) button, then the patient information will be indicated.

## Alarm Message

The alarm message is indicated after receiving the message from Fetal Monitor. It helps us to check the current status of patients as well as equipment.

## **Record Time**

When saving connected data of Client Window, it records the time it is saved, that is the elapsed time.

## **Client Window Menu**

It is the set of menus used in Client Window. It provides various functions such as connection between equipment and patient, sound volume, image saving, printing and Client Window preferences.

## **Parameter Trend**

The parameter data received from Fetal Monitor is indicated as graphs and symbols in real time.

## **Measured Time**

It indicates the measured time of parameter data received from Fetal Monitor.

## **Graph**

The data of ECG and SpO2 received from Fetal Monitor is indicated as graphs in real time.

## **Parameter**

The parameter data received from Fetal Monitor is indicated as figures in real time.

## 2. How to use program

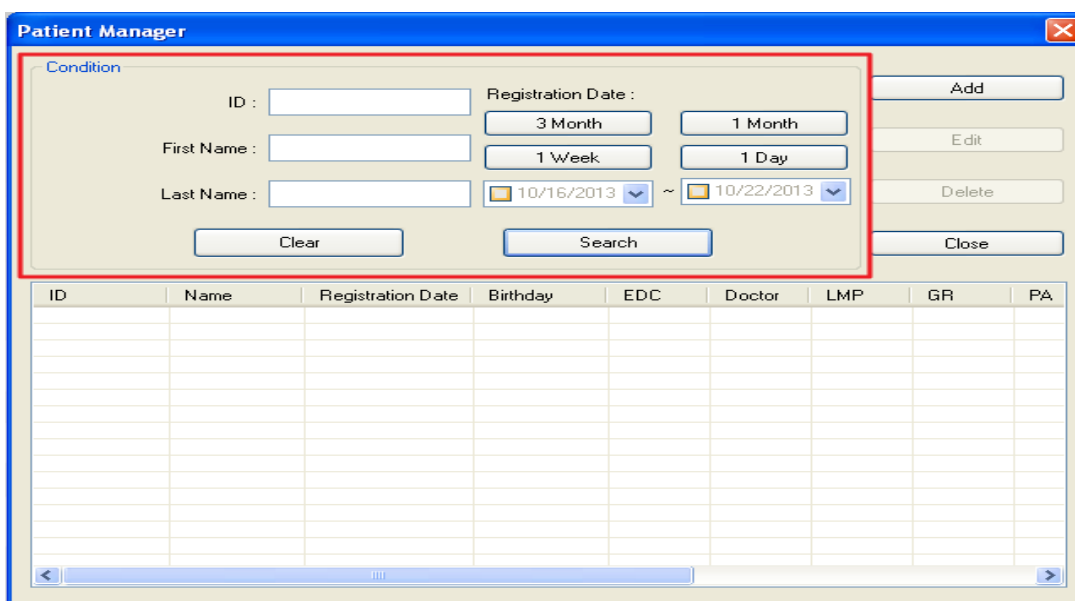
### 2.1. Patient Manager

#### Patient Manager structure

When you click “Patient Manager” icon on the Main Menu, a relevant dialogue will appear. The dialogue for Patient Manager is consisted of searching and releasing conditions for existing patients in order to manage patients, registering new patients, modifying patient information and deleting patient information.

#### Search Condition

The search condition fields include the registered patient’s ID, name, or registration date and you can search the registered patients using them. (Click the “Clear” button to clear all search conditions.)



The screenshot shows the 'Patient Manager' dialog box. A red box highlights the search condition area, which includes:

- ID :** [Text Input Field]
- Registration Date :** [3 Month] [1 Month] [1 Week] [1 Day]
- First Name :** [Text Input Field]
- Last Name :** [Text Input Field]
- Registration Range:** [10/16/2013] ~ [10/22/2013]
- Buttons:** [Clear] [Search]

Below the search form is a table with the following columns:

ID	Name	Registration Date	Birthday	EDC	Doctor	LMP	GR	PA

#### Registering patients

It is used for registering new patient information and managing patients by interlocking with equipment. Registered information is activated when the patient is called to the hospital and the measured information is gathered together and managed. You can register patient

information by clicking “Add” in the “Patient Manager” dialogue.

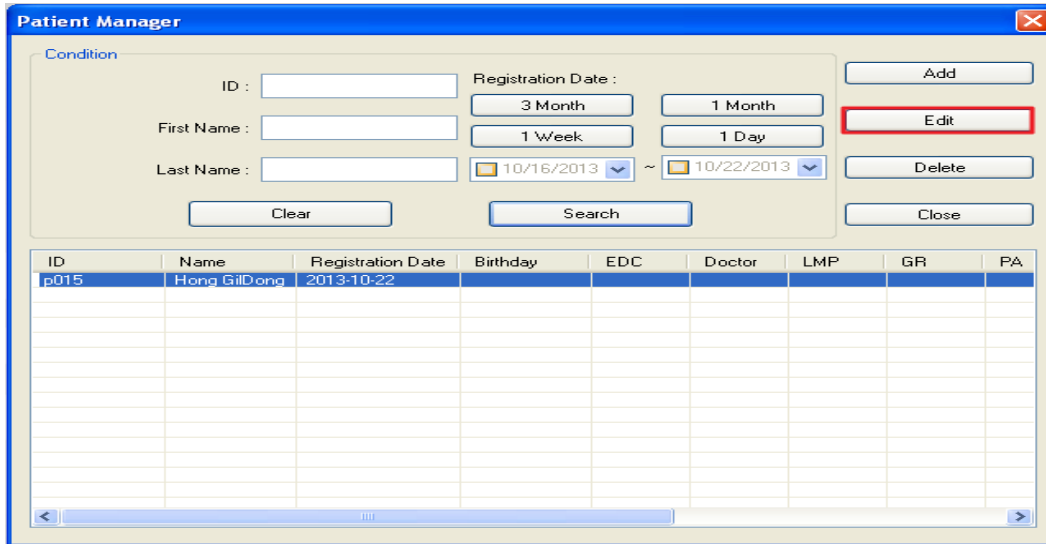
ID	Name	Registration Date	Birthday	EDC	Doctor	LMP	GR	PA

If you click add button, “Add patient information” dialogue will appear as indicated in the image below. You can insert patient’s ID, name, gender, birthday, menstruation date, the number of pregnancy, the number of childbirth, height, and weight. ID and name are compulsory, so they must be inserted. Then, click “save” button to register patient information.

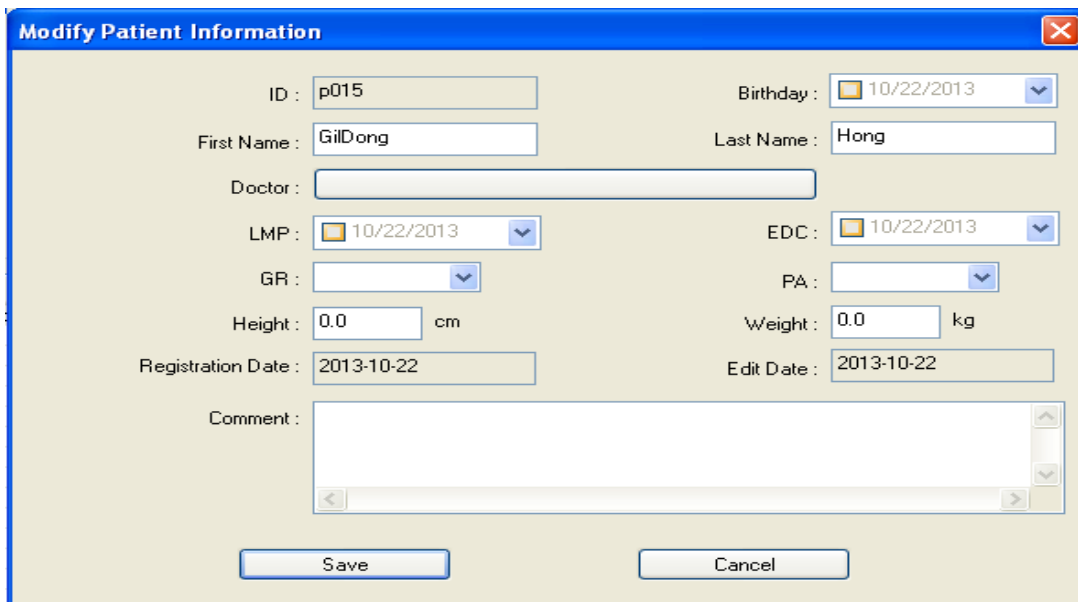


### Modifying patient information

Select the patient you want to modify the patient information in the Patient Manager and click the Edit button.



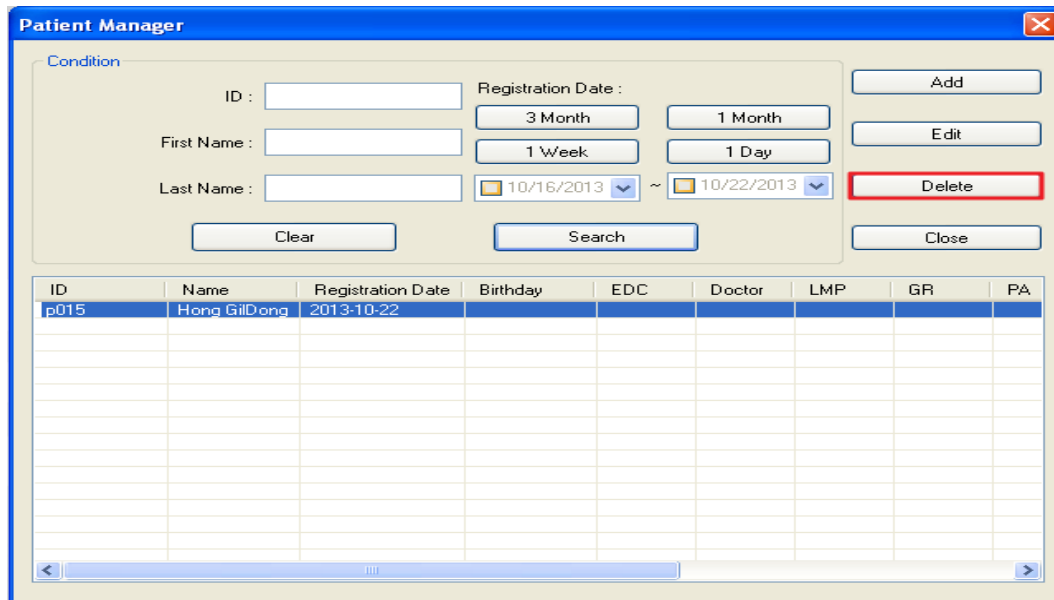
In “Modify patient information” dialogue, select what you want to modify and apply addition or change. But, the ID cannot be modified. Click “save” button and apply the modification.



### Deleting a registered patient

It deletes the information in the patient information list when there is unnecessary information

or a need to delete it. You can select which patient you want to delete, and click “delete”. It will delete all of the patient information. Deleted patient information cannot be restored, so be careful in deleting it.



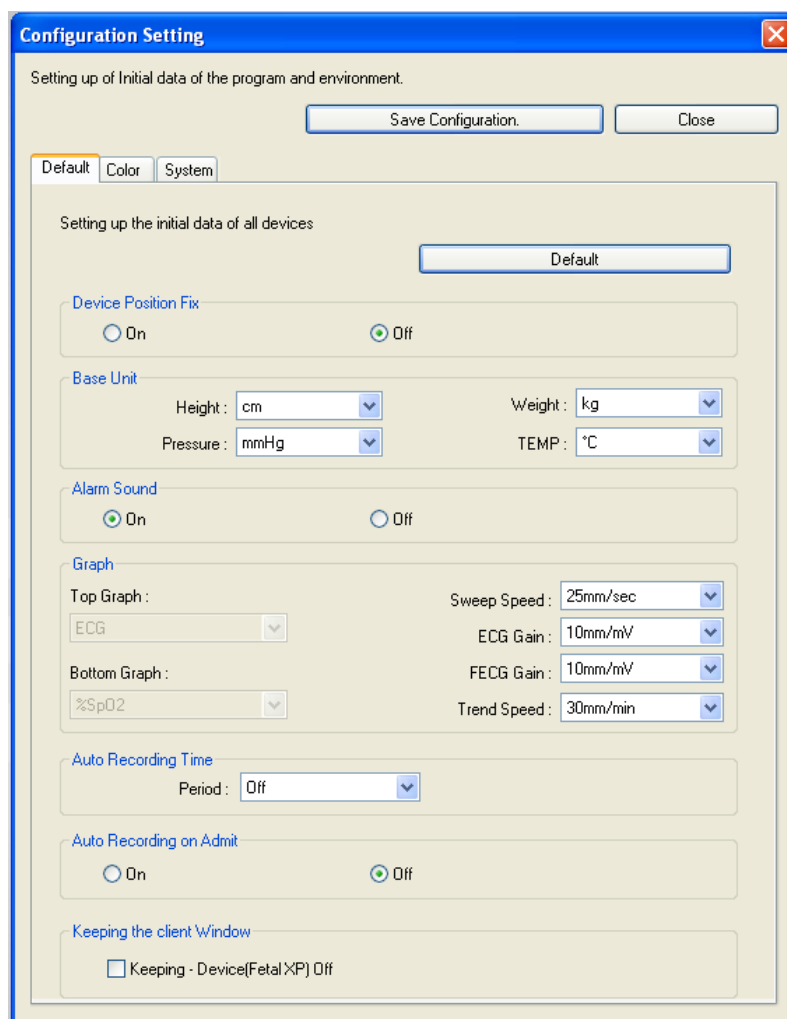
## 2.2. Preference setting

### Preference setting

Preference setting consists of default, color and system.

#### Default Tab

It is the function where you can set basic units (height, weight, pressure, temperature) used in the program, alarm sound, how to indicate graphs, and printed area.



- Fixing the location of equipment : It is a function that fixes the printed area from number 1 to 16, for 16 equipment connected to the Central system. Generally, this function is not used quite often and since it follows the normally connected order. In order to use this function, you have to set a BED number for each device, and then you can have a proper operation.
- Basic units setting: It sets up the basic units of height, weight, pressure and temperature that are used by each country.
- Alarm sound: It is a function that controls Alarm sound that rings out according to the status of patient as well as equipment. It is used when the Alarm sound function for the whole system is not used.
- Graph printing control: It controls the location and type of Wave graphs for ECG, FECG, SpO2. General location is set in this function, but if it is interlocked with equipment, the window of each patient will be changed according to the measured

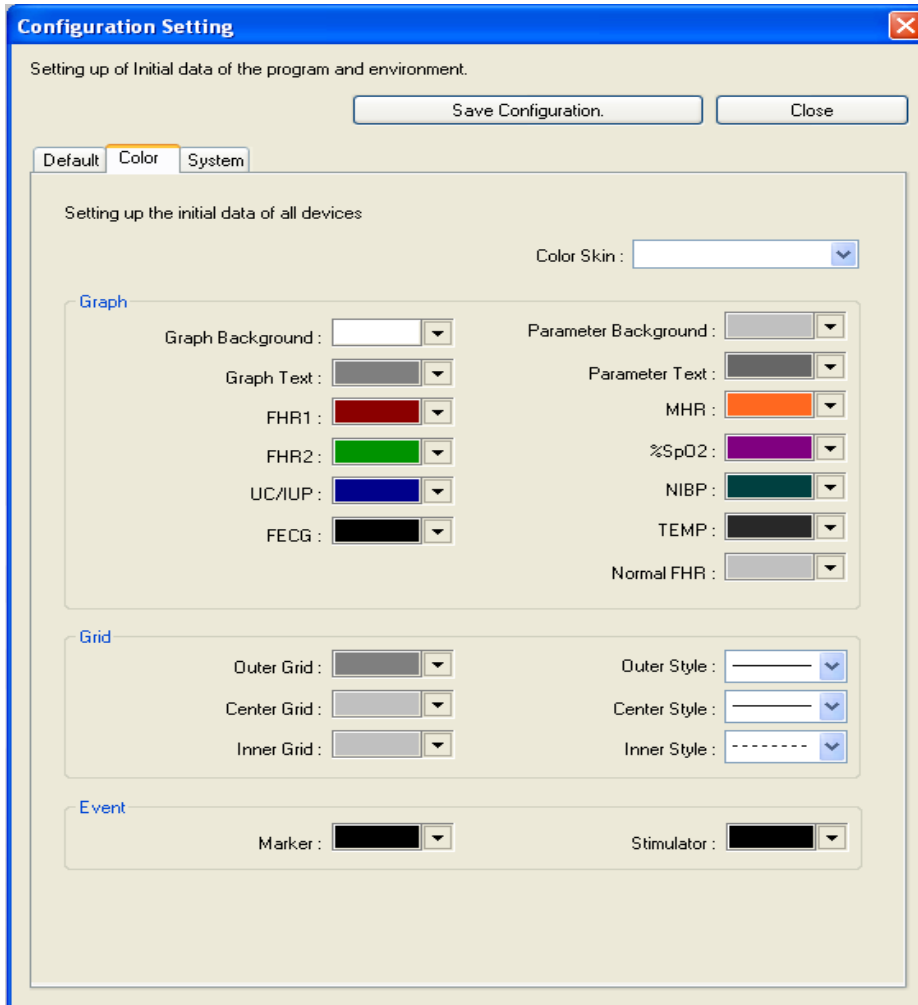
data from the equipment.

- Automatic recording: If you want to save measured data of patients, the basic function registers the patient information in Central system patient management dialogue and you have to select Admit patient information icon, select the patient, and click “Admit” button. Then you have to click save button in order to save. Automatic recording function allows you to save the information by clicking Admit patient information icon in patient measurement data window, selecting the patient, and clicking “Admit” again.
- Measurement window maintenance: Other than FC700 and FC1400, FetalXP is designed to share the signal for window management with Central. If you close FetalXP, Central closes the window of the relevant equipment. If you want to maintain the measurement window even if you stop the equipment, this option can be used. If you check on it, it would not close but maintain the window.

If you click “Save changes” button after setting each area, relevant settings will be applied.

## **Color Tab**

Specify the color for display including parameter and waveform screen.

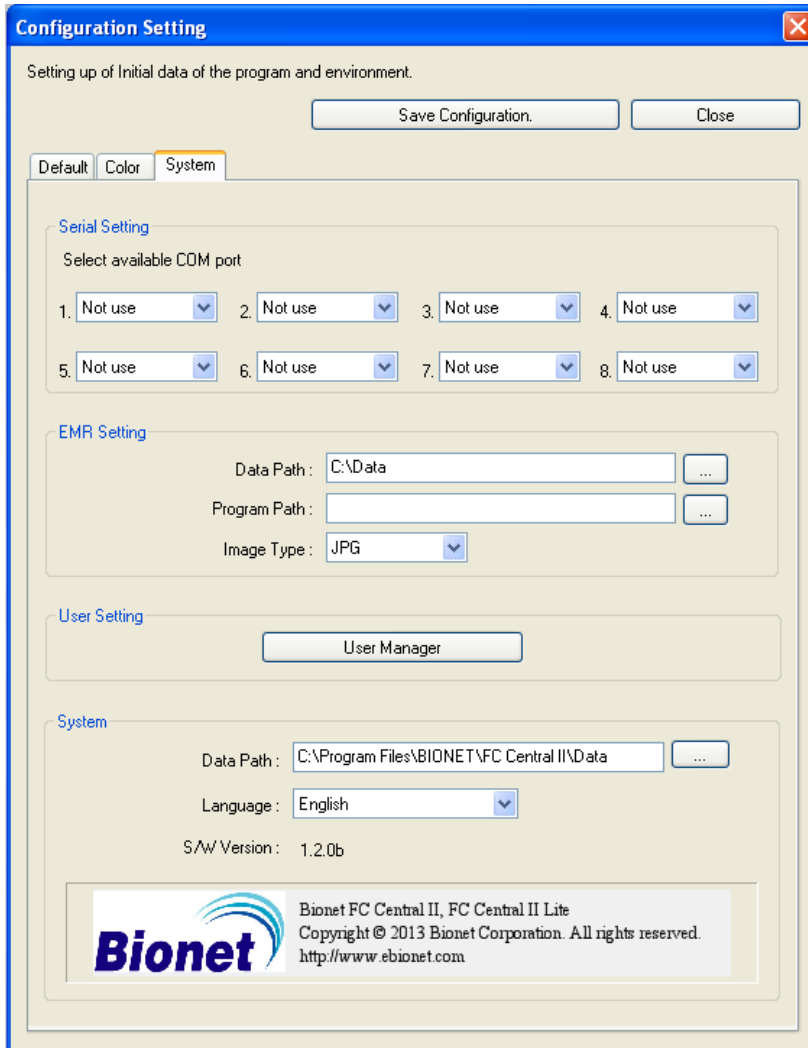


- Color Skin : This function allows you to set all the color settings applied in graphs, grid and events. For user-defined mode, there are “basic colors” and “paper colors”. For basic colors, it provides the color for basic window appeared first on the screen, and for paper colors, it provides an identical color with the paper color printed from the equipment.
- Graph: It provides you to set each color for parameter, wave and background that are indicated on the Client Window.
- Grid: It sets up the shape and color of grid that is indicated on the Client Window
- Event: It sets up the color of marker and stimulator that are indicated on the Client Window.

If you click “Save changes” button after setting each area, relevant settings will be applied.

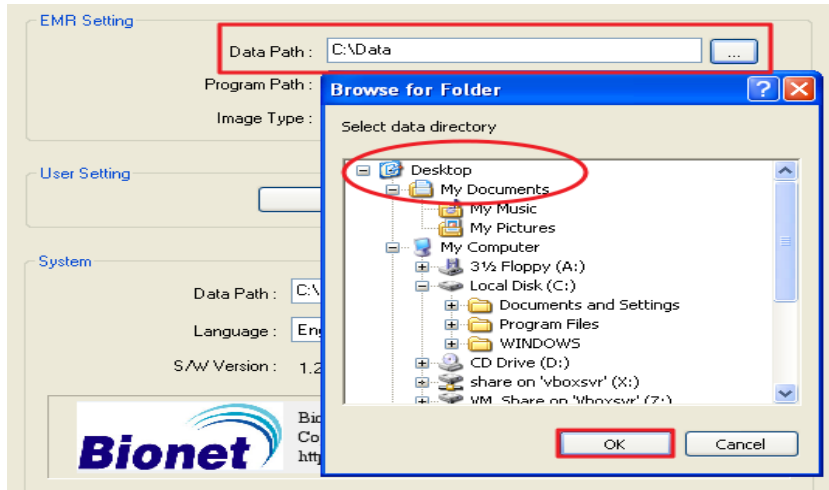
## System Tab

Specify the system information including COM port, EMR options, language, and data storage path.



- 1) Serial setting: If the connection method of FC Central II and Fetal Monitor is Serial, select relevant COM Port. For Serial, it only provides support for 8 devices. If you click “Save changes” button after setting each area, relevant settings will be applied.
- 2) EMR setting: It sets up the data path interlocked with EMR, path for executing the program, and the type of image. When you save images in Client Window, a Main program in FC Central II, and in Review Program, they are saved here. Please select the data path where there is a sufficient amount of remaining space in the hard disk.

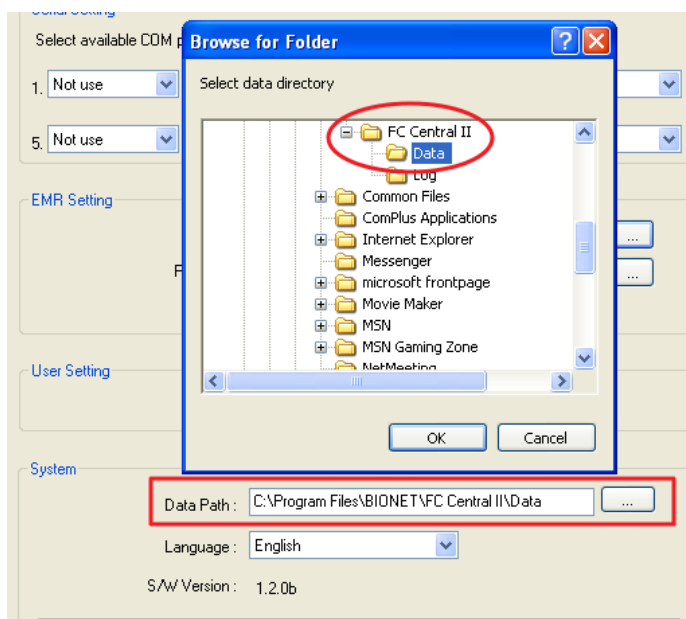
- 3) If you click “Save changes” button after setting each area, relevant settings will be applied..



- 4) User setting: It provides a function for adding and editing the user information (doctor, nurse) used in the program. <Details on the next page>

- 5) System: It sets up where the data measured in the program and patient information DB are to be saved. When the dialogue appears as indicated on the image below, select the folder in the hard disk where there is an enough space.

Data path sets up the folder that patient information and datas are saved. If this Setting is changed, FC Central II program can't get the patient information and data files. Please set up "Data path" only once at the time that FC Central II is installed. If this setting will be changed, please copy all data in the old folder into new folder



System group provides a function for setting languages presented in the Program UI. Select your language in the “Language”. For the languages not provided, the additional work will be needed.

The settings of System group will be applied after restarting the program.

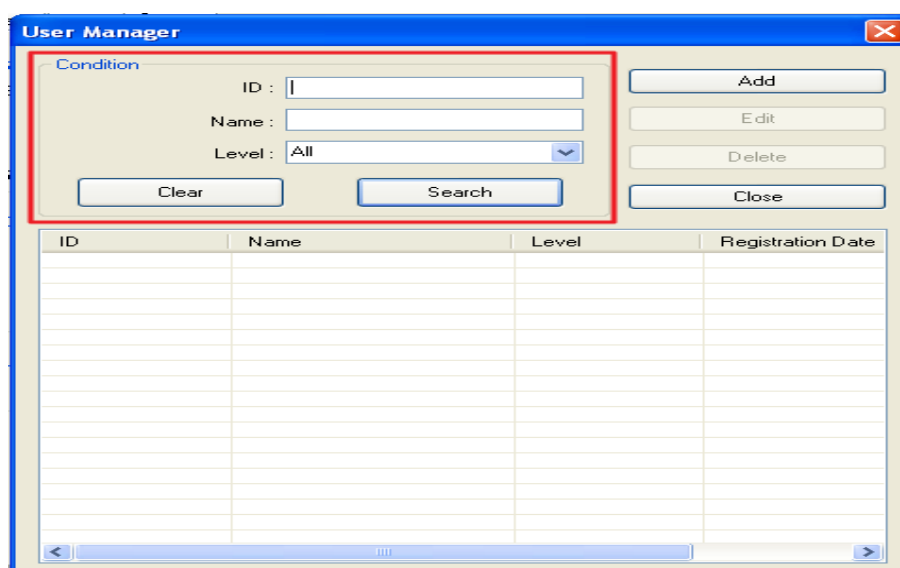
**Caution**

While operating FC Central II program, saving images for measured data and interlocking with EMR will occur. In the “System” of “preference” in FC Central II Program, please select the folder with a sufficient amount of remaining space. If the space is not sufficient, the data may be lost or the program may not be operated properly.

**User Setting**

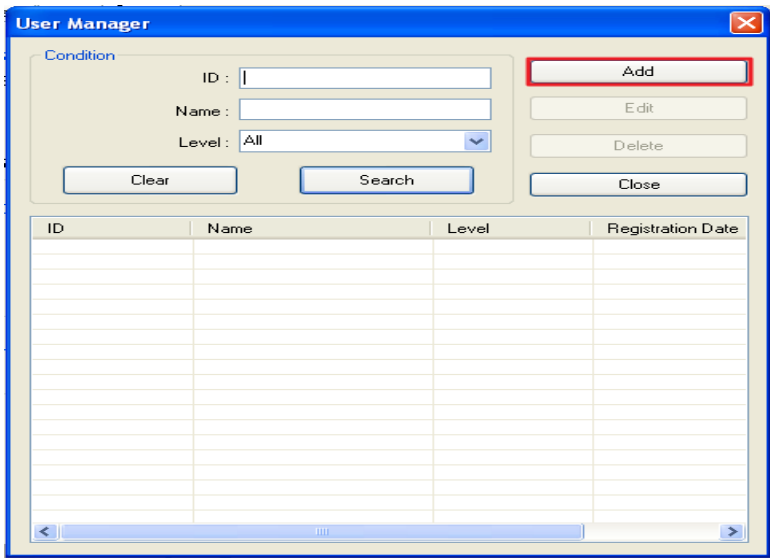
“User setting”, one of the items in the system tab, provides a function for adding and editing the user information (doctor, nurse) used in the program.

- 1) Search condition: It provides a function for searching for registered users with ID and name. Insert the relevant information and click “search”, then the result will be presented on the list below. If you click “Release condition”, it will be initialized to the default.

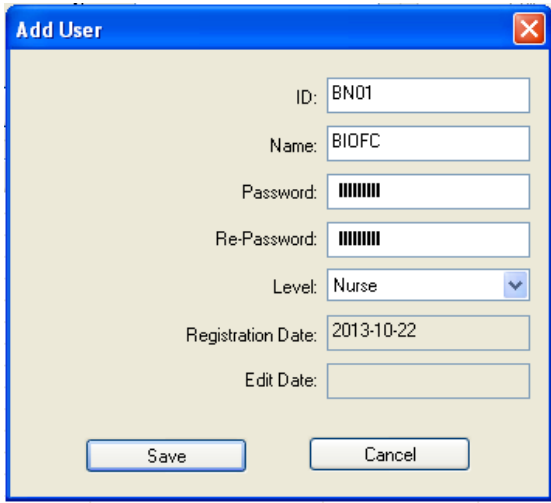


- 2) Register user(addition) : Click “Add” in the dialogue.

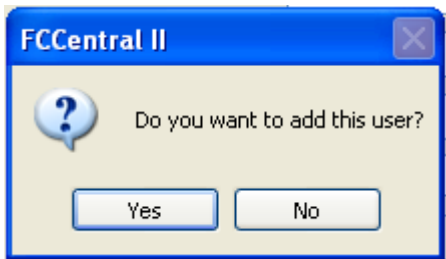




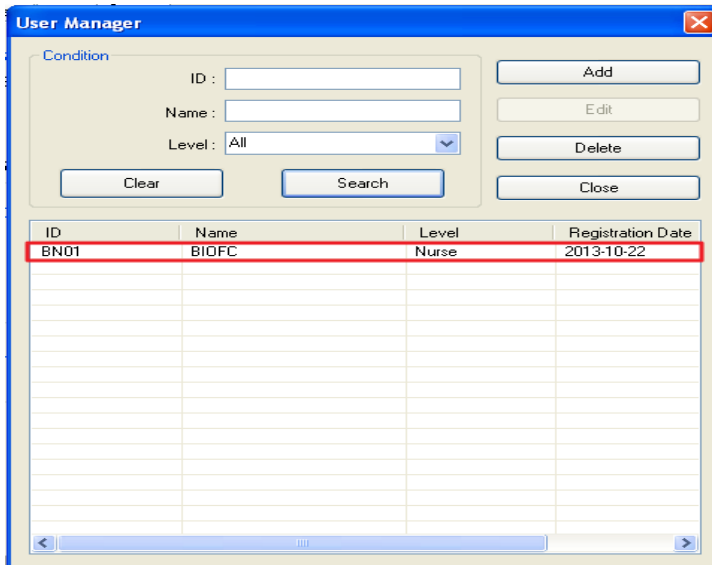
Insert the information you want to add. The ID cannot be modified, so be careful in inserting it. Then, click “Save” button.



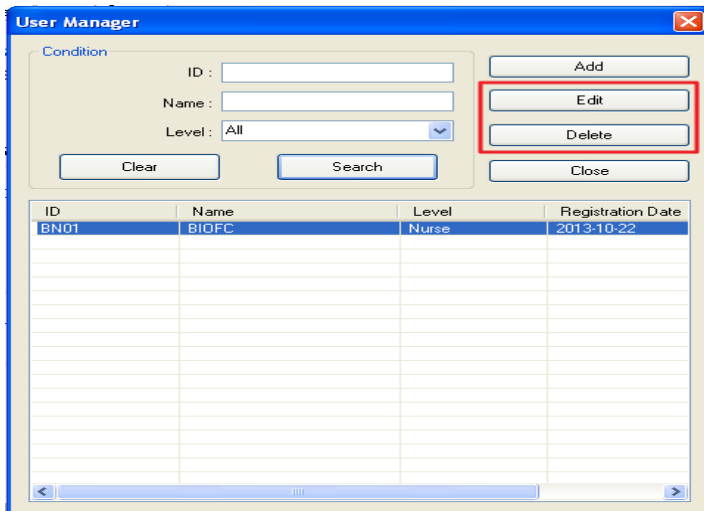
If you are asked to add user information, click “Yes”



You can see that the user information is added on the list.

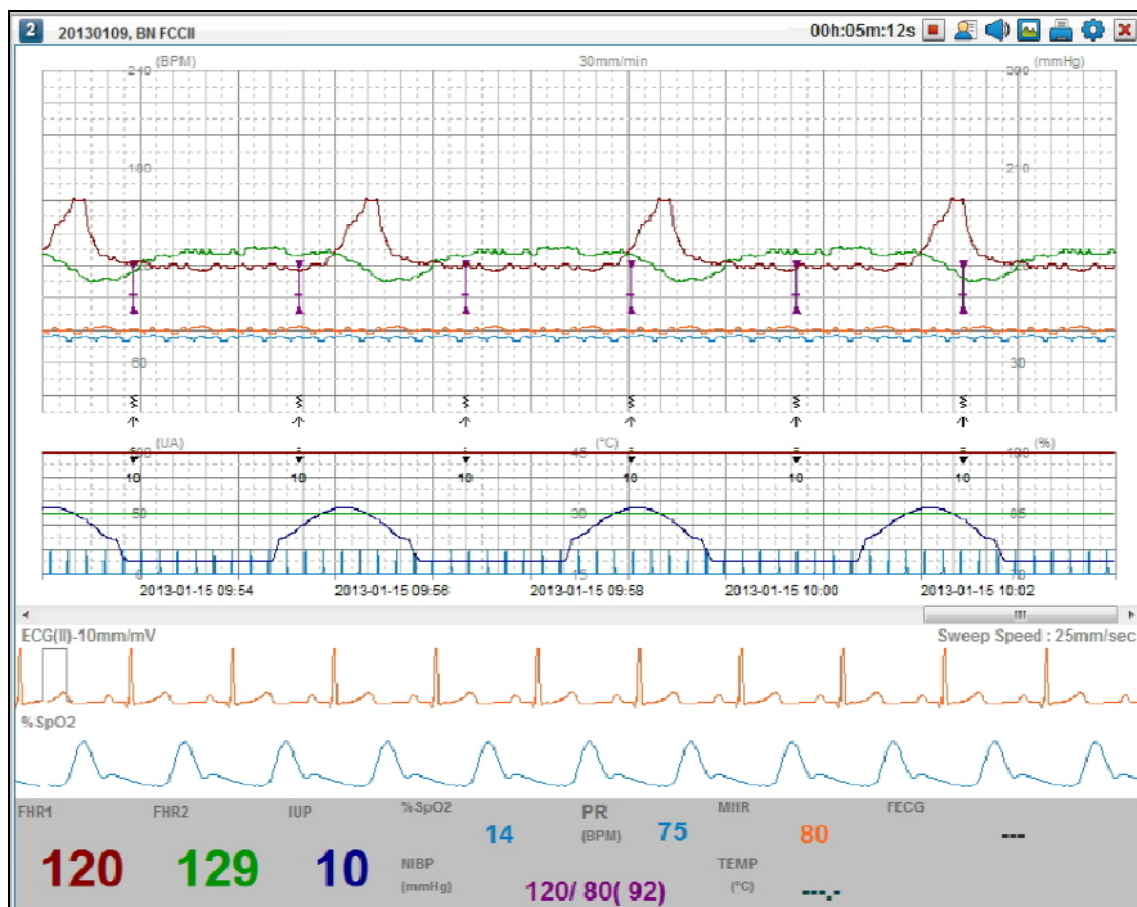


- 3) Modifying & deleting User information: It provides a function for modifying or deleting registered user information. As indicated in the image below, select the user and click “modify” or “delete”. But, when you modify, the ID cannot be changed.




## 2.3. How to use Client Window

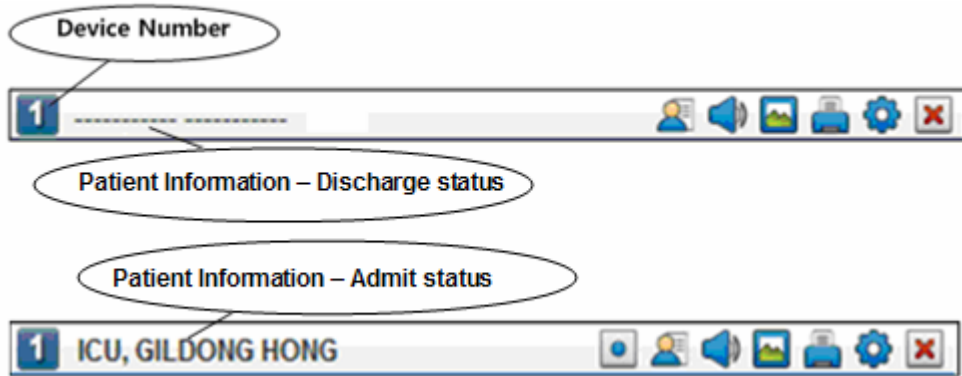
### Client Window



### Device Number & Patient Information

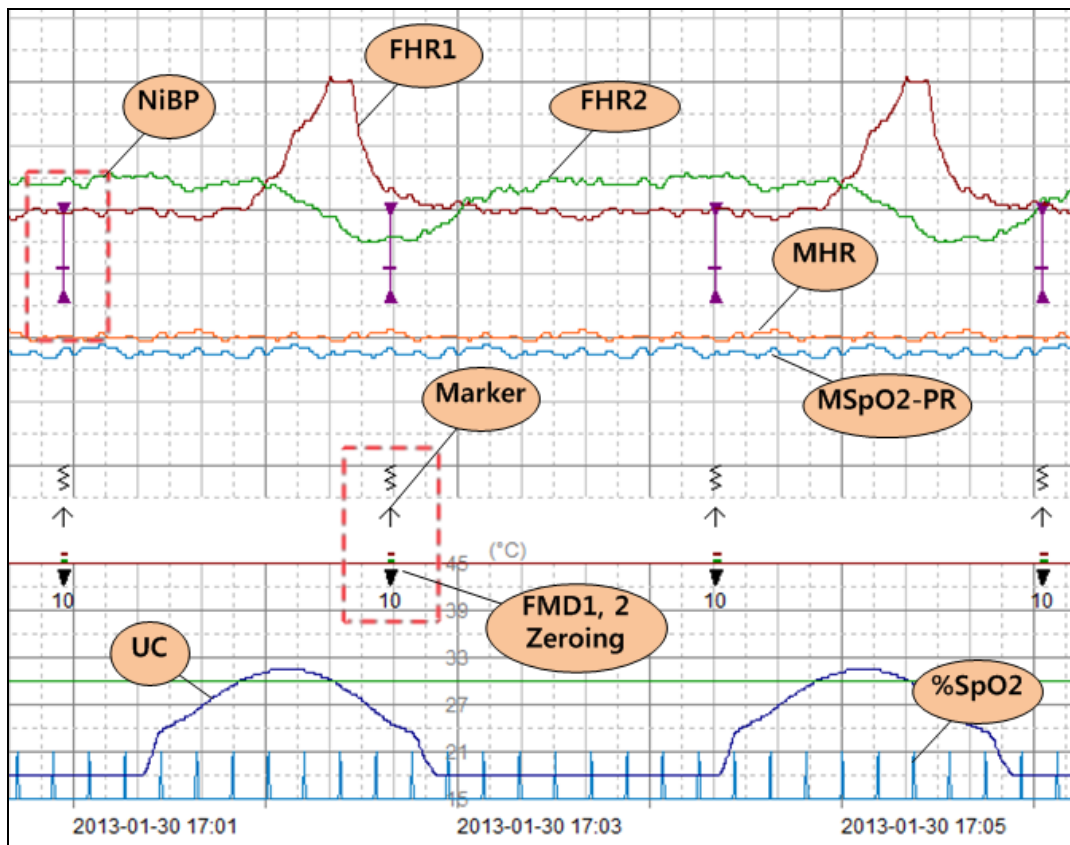
In the upper part of Client Window, “Device Number” is presented on the top left side of the image below. Device Number is an equipment number (or patient’s Bed information) set in the Fetal Monitor. For equipment number, use 1~16( **1** ~ **16** ) so that it is identical with Bed number. If the equipment number is not set or out of the range, it is indicated as question mark.( **?** ) When it is connected for the first time, patient information is presented as underlined blanks (-----), as indicated in the first image. Set the patient information and connect through Admit(  ) button, then the patient information will be indicated.

### Client Window Parameter



### Trend Classification

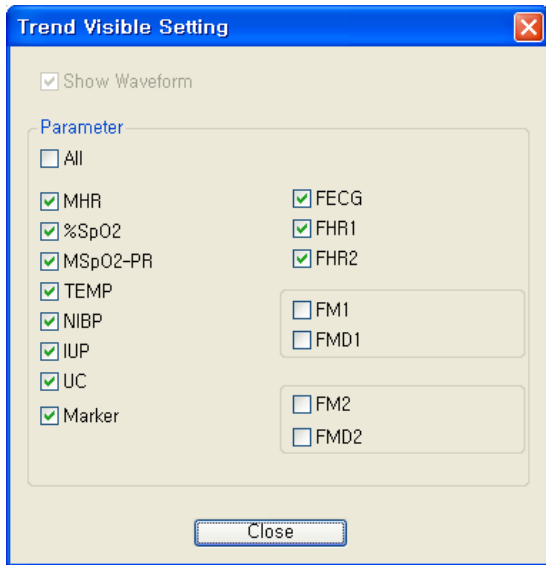
For Trend classification of Client Window, it is classified as indicated in the first image. These graphs are drawn with the same colors of the parameter area in the second image.



FHR1	FHR2	UC	%SpO2	PR (BPM)	MHR
<b>119</b>	<b>129</b>	<b>10</b>	<b>13</b>	<b>75</b>	<b>81</b>
NIBP (mmHg)	TEMP (°C)		---		
120/ 80( 17)	---		---		

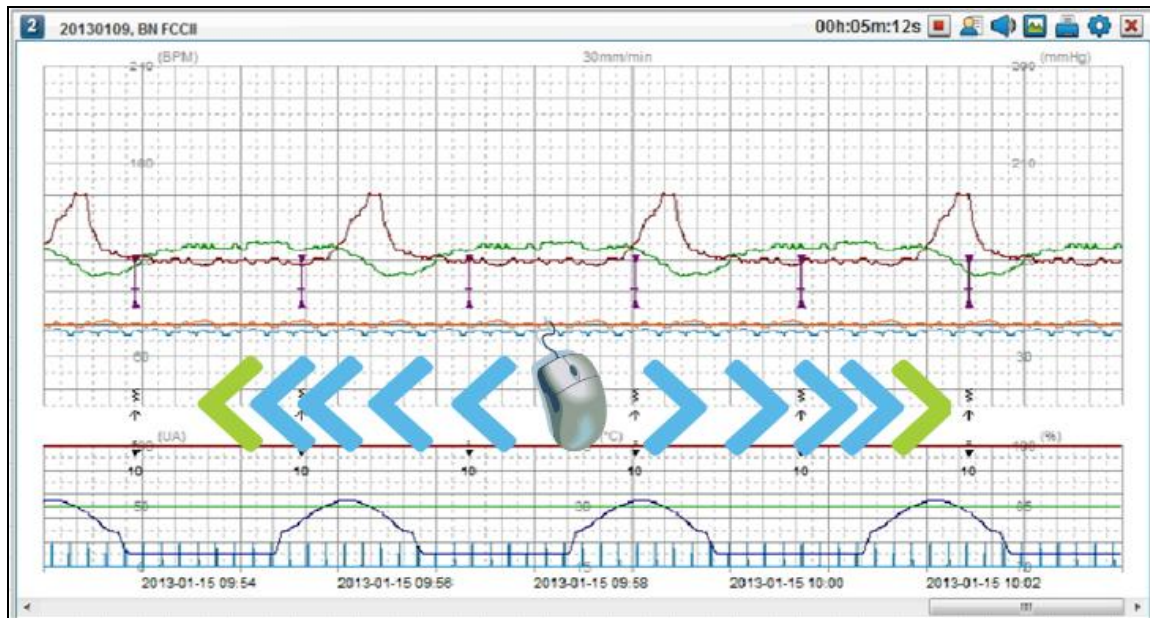
### View settings of Client Window Parameter trend

If you double-click parameter trend area in Client Window, the dialogue box below appears. You can check or remove parameters you want to see on the window.



### Previous data of Client Window Parameter

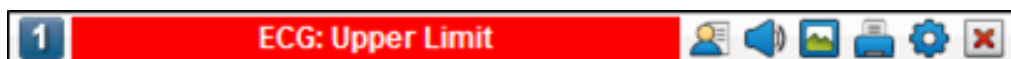
If you drag Client Window area with your mouse, the screen presented in real time will stop. You can drag and check the previous data in this situation.



The mode for checking previous data of parameter trend will be changed into a real time mode, if the user does not use it for 10 seconds.

## Alarm Message










It receives the alarm occurred in Fetal Monitor, and indicates the relevant data as shown in the image below. For details, please refer to the equipment manual.



## Client Window Menu configuration

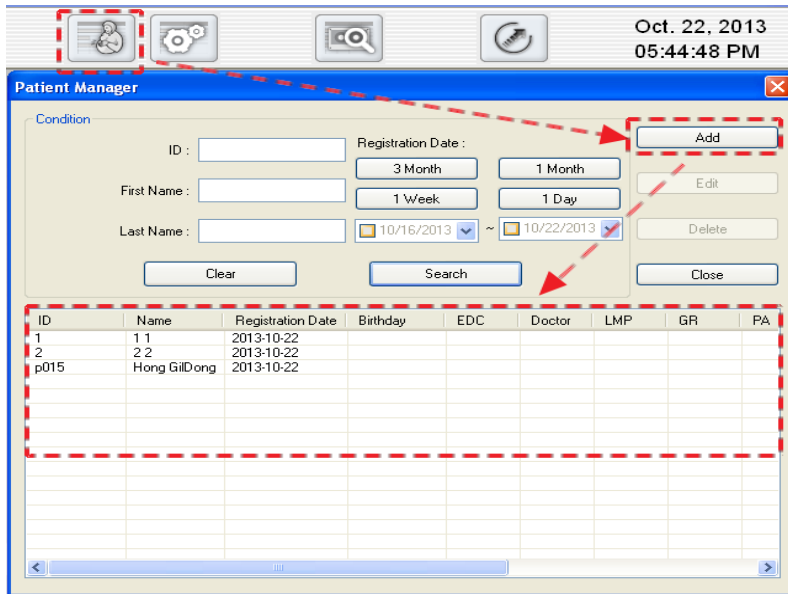
Menu of Client Window performs the functions in the following menu. Please refer to the description below.



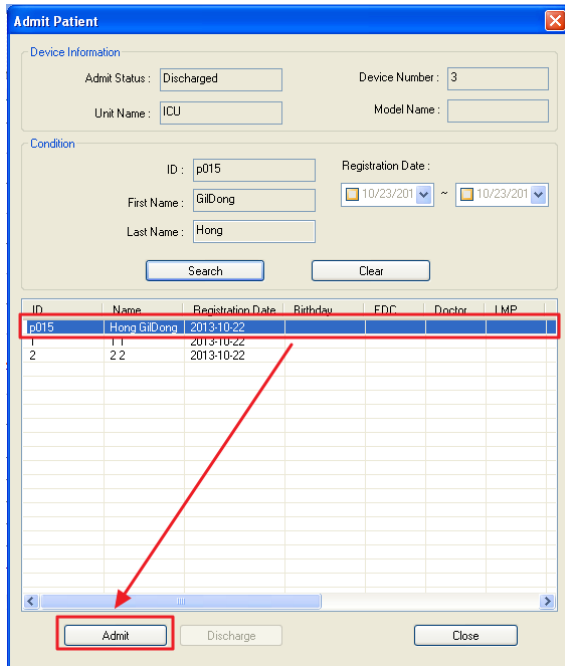
Icon	Description
	File saving is OFF. (Click the button to turn it ON.)
	File saving is ON. (Click the button to turn it OFF.)
	Admit/Discharge button
	Alarm is ON. (Click the button to turn it OFF.)
	Alarm is OFF. (Click the button to turn it ON.)
	Button to create image file
	Print button
	Preference setting/Synchronize button
	Exit button (Activated only when the device is disconnected)

## Admit Client Window Patient information

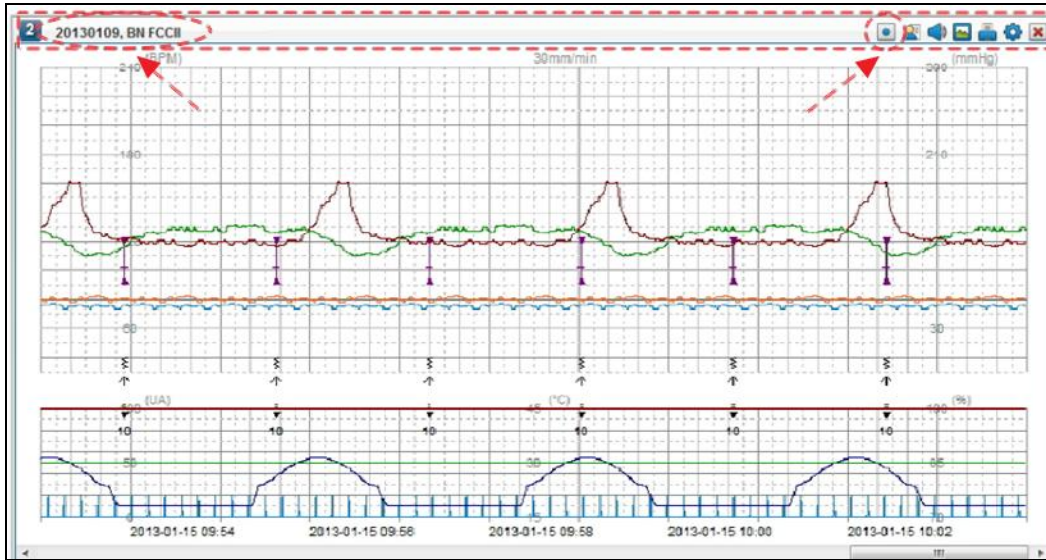
If you want to manage the data you are going to measure after the connection is made between FC Central and Fetal Monitor, you have to admit with the database. In order to make DB connection, patient information should exist in DB. If not, click “Patient information” icon as indicated in the image below, and click “add” to register patient information.



Select the patient you want to admit with real time measurement data, and click “Admit” button.



Once it is admitted with the database, Client Window will be changed as the following. On the top left, the patient information will be printed, and in the Client Window menu on the top right, “save” button will be made.



### Discharge Client Window Patient information

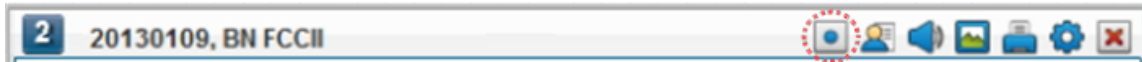
If you want to discharge the connection with real time measurement data, select the patient and click “Discharge” button. Connection with DB will be disconnected, “Save” button will disappear and only monitoring function will be performed.

ID	Name	Registration Date	Birth day	FDC	Doctor	LMP
p015	Hong GiDong	2013-10-22				
1	11	2013-10-22				
2	22	2013-10-22				



### Client Window Measurement data saving On / Off

If you want to save real time measurement data of Client Window, click “Save” button, which is marked on the image below. In order to save real time measurement data, you have to register patient information first and admit it. Once it is admitted, “Save” button will be activated.



Once you click “save” button, data will be saved and the saving time will be indicated, as shown on the image below. Next to the saving time, the save button is changed into “quit” button. If you want to stop saving, click the button. The saving will be finished and turned into the previous mode.



#### Caution

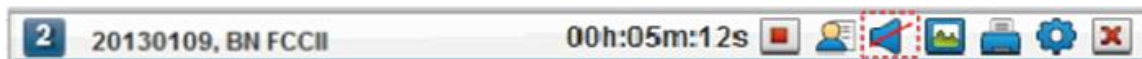
When the real time measurement data of Client Window is saved, it will be saved in the “data path” of system group. Sufficient amount of remaining space in the path is necessary. If the space is not sufficient, the data may be lost or the program may not be operated properly.

### Client Window Alarm sound On / Off

If the alarm figure is received from Fetal Monitor, the relevant data is presented on the caption bar, and FC Central rings the alarm sound. The function of turning the alarm on and off is performed by the speaker button, which is marked on the image below. If you click speaker image button, Alarm sound is turned off.



If you click the speaker button, Alarm sound is turned on.



## Save Client Window Image

It provides a function for saving the measurement data of parameter and trend information on the current window, and patient information in a JPG form, and it allows you to interlock it with EMR. If you click the save button marked on the image below, the current window will be saved.



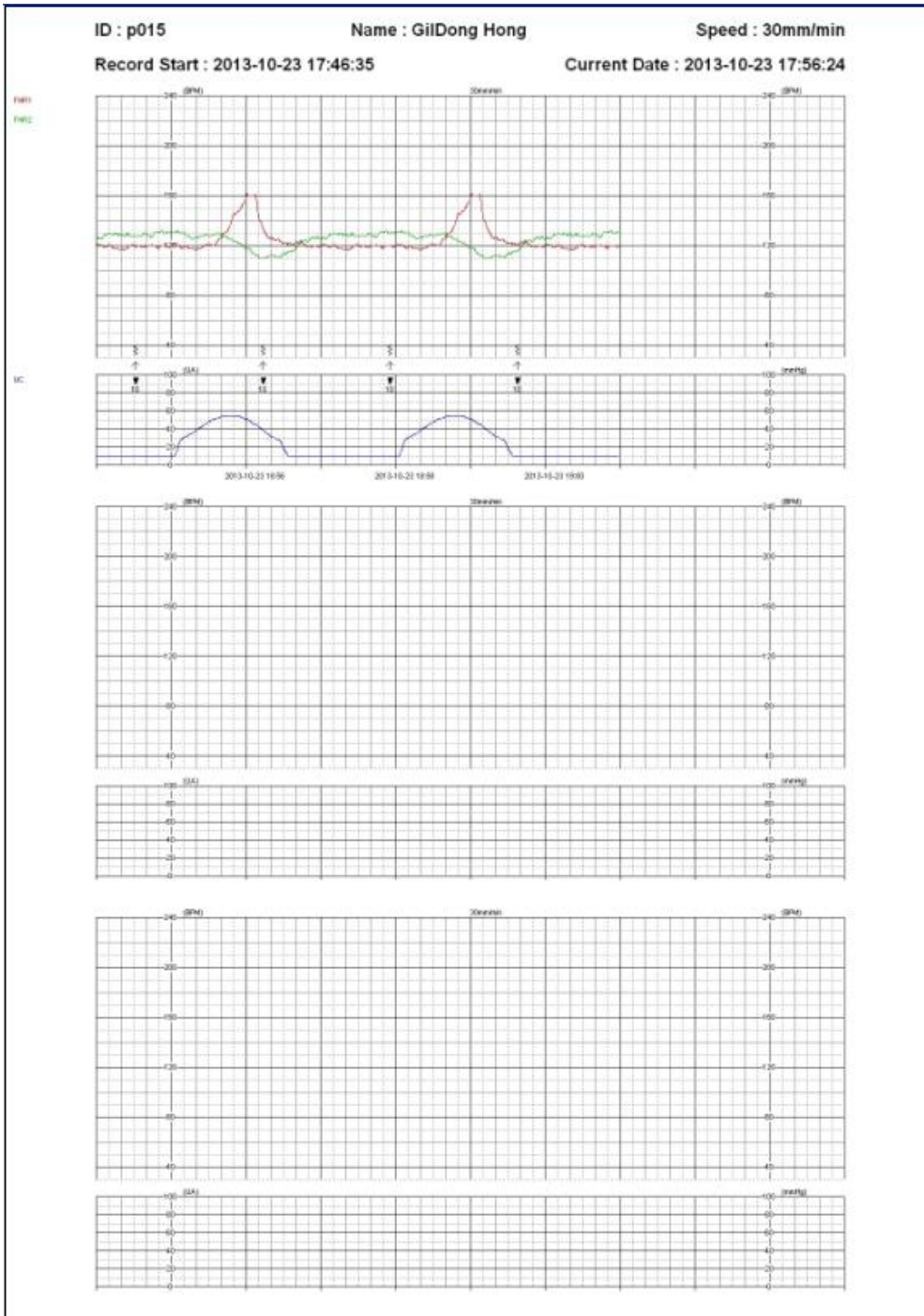
After it is saved, the dialogue indicates the path where the JPG file is saved.

The file name is formed the patient's ID and the time when it is saved.



### Note

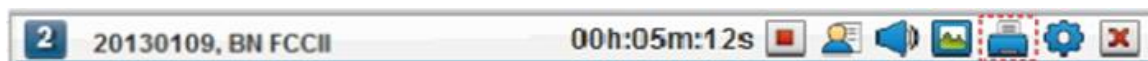
JPG image saved for interlocking with EMR is saved in the designated folder in "Preference → System → EMR settings → Data Path" EMR interlock is provided to the relevant business in a JPG form. If the storage is not enough, data may be lost or program may cause malfunction.



< The file saved in a JPG form >

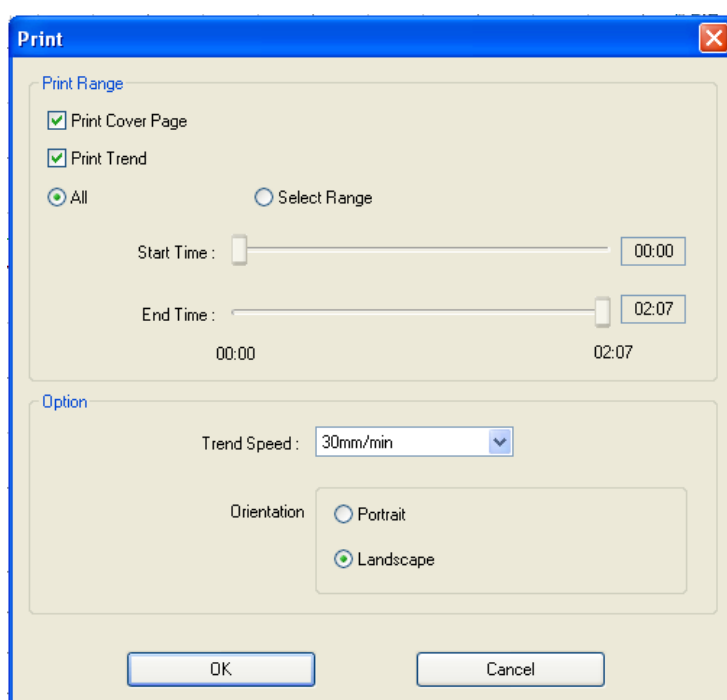
## Print Client Window

It provides a function for printing measurement data of parameter and trend information on the current window, and patient information. If you click printer button marked on the image below, dialogue for printing will appear. According to the selected option, the current window will be printed.



Options in the printing dialogue

- Cover printing: It decides whether the cover including measurement information and patient information will be printed.
- Trend graph printing: It decides whether the parameter trend information will be printed.
- Whole: All measured data(1 hour buffering data) will be printed.
- Range setting: It allows users to set a range of printing. Printing range may be set to the minute.
- Trend speed: The speed of trend data is set and the degree of precision and amount of data can be adjusted. The trend speed is set with 10, 20, 30mm/minute.
- Printed direction: You can choose to print either in horizontal or vertical direction.



2013-10-25, 17:52:47

**Patient Information**

ID	P000052
Name	JANE DOE
Birthday	
Registration Date	2013-10-25
LMP	
EDC	
GR/PA	/
GA	

Comment :

**Record Information**

Record Start	2013-10-25, 16:11:25
Length	04:09:32
Doctor	
Nurse	
Printed Interval	00:00:00~00:23:00

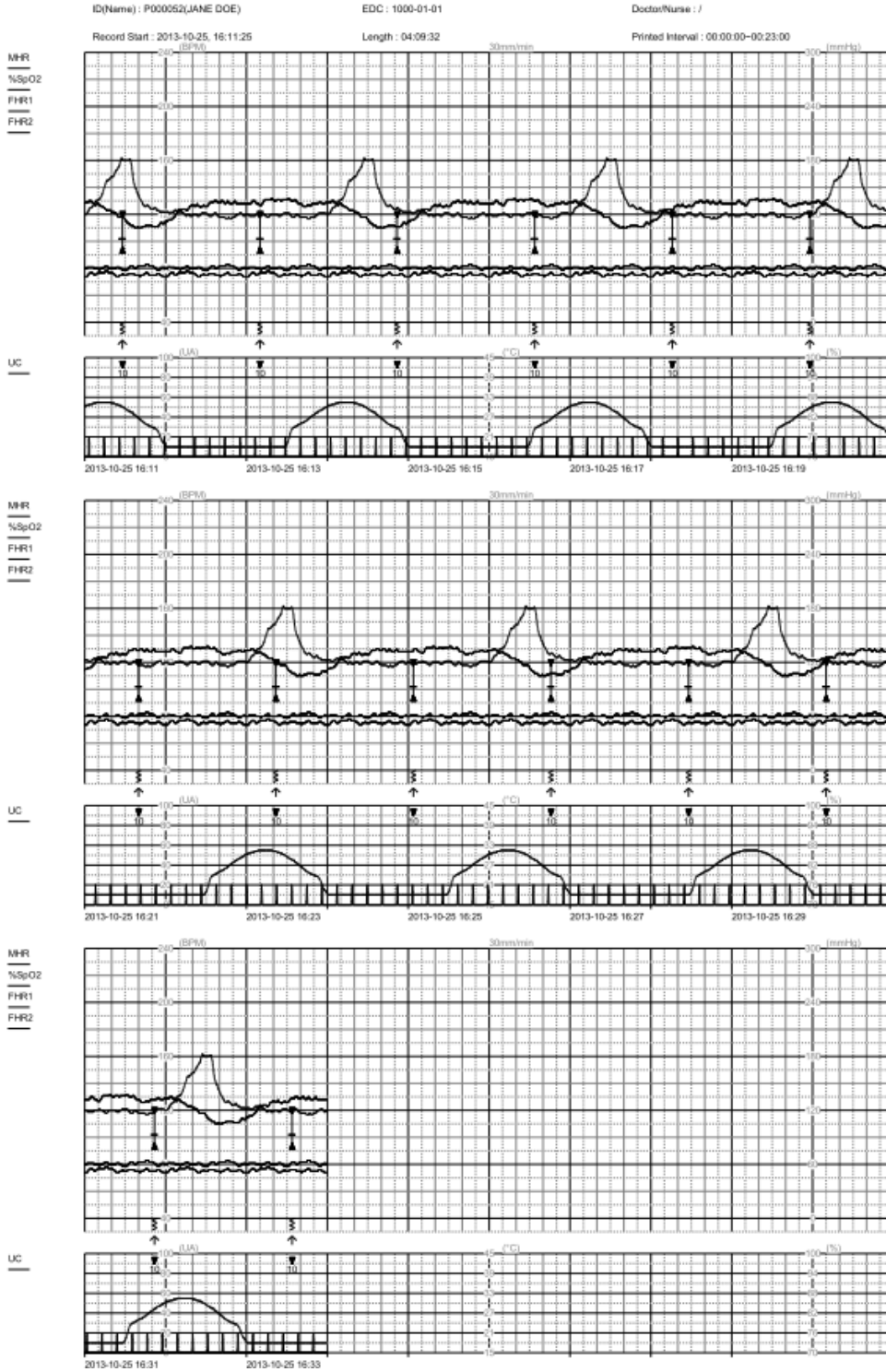
Loss of signal(%) : 0.0

FCCentral II 1.1.9b3

Bionet Co., Ltd

< Cover printing >

# FC Central II Manual



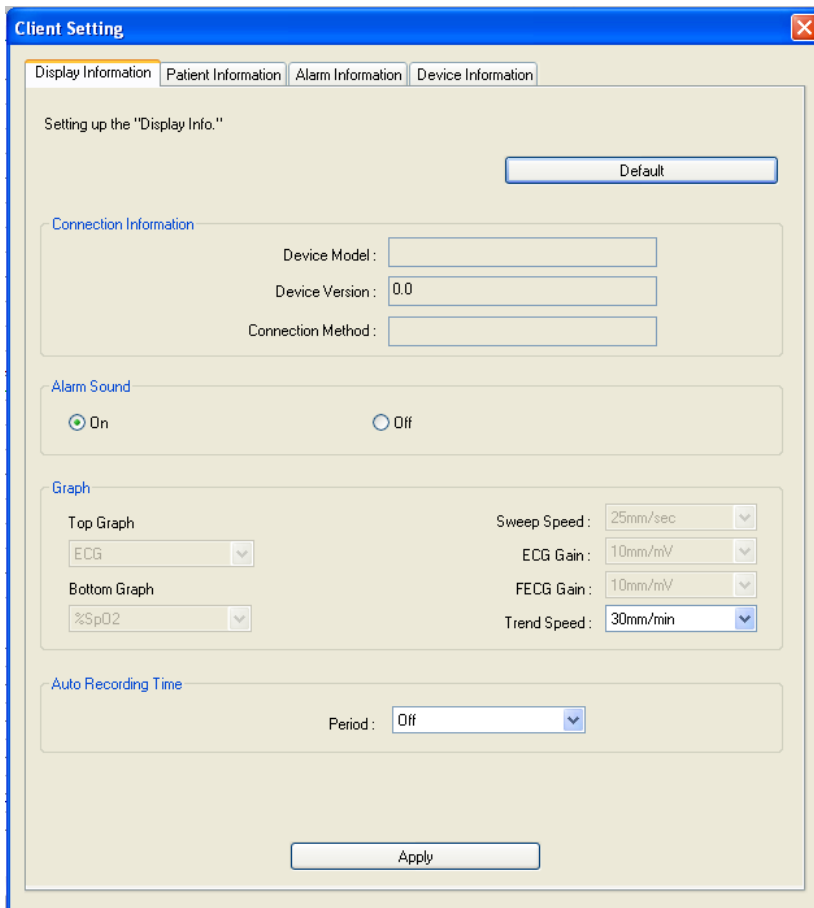
< Trend graph printing >

## Client Window Preference and synchronization

It provides a function for adjusting preference as well as synchronizing patient information, alarm information and equipment information with connected Fetal Monitor. You can use this by clicking “Client preference” icon marked on the image below.



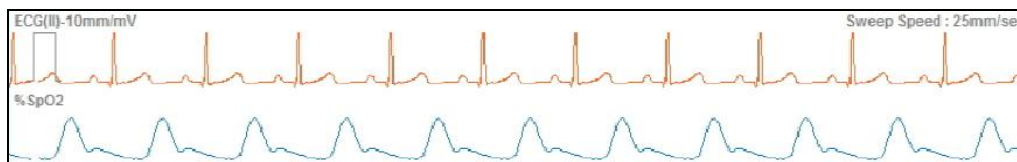
The dialogue is consisted of “Display information”, “Patient information”, and “Alarm information” tab.



## Client Window Display information

- Connecting information: It indicates the type, version and connection method of connected equipment.

- Alarm sound: It turns the alarm sound On / Off in Client Window.
- Graph: It sets up the wave selection, Gain and trend speed that are to be indicated on the graph area on the lower part of Client Window.



- Automatic recording time: It reserves the recording time and controls the saving time. It selects the time range between 5~120 minutes then it is saved until its relevant time range. This option is initialized to default after reconnection or restart.
- After clicking “Apply”, changes will be applied.

### Client Window Patient information

- Patient information: It presents the patient information of Client Window. For this patient information, the figures will be presented if it is connected with DB through “Admit patient information” icon. Patient information cannot be modified. It can only be changed in “Patient Manager” But, the modified items are applied after disconnecting with Client Window and reconnecting it again.
- User information: Select user information (doctor and nurse) used for saving measurement data. Please refer to “Preference → System → User preference” for registering users.



Client Setting

Display Information Patient Information Alarm Information Device Information

Setting up the "Patient Info." of connected device

Patient Information

ID : p015

Last Name : Hong

First Name : GiDong

Birthday : [ ] . [ ] . [ ]

Age : [ ]

Height : 0 cm

Weight : 0 kg

User Information

Doctor : [ ]

Nurse : [ ]

Apply

### Client Window Alarm information

It provides a function for setting whether you are going to use the alarm for each parameter. It also sets up the range and level of the alarm. As indicated in the image below, you can check on parameters you are going to use. It activates the limit and the level which were deactivated.

Client Setting

Display Information Patient Information Alarm Information Device Information

Setting up the "Alarm Info." of connected device

FHR1 Limit : 100 ~ 160 Level : High

FHR2 Limit : 100 ~ 160 Level : High

FECC Limit : 0 ~ 0 Level : [ ]

UC Limit : 0 ~ 0 Dur Limit : 0 ~ 0 Level : Low

%SpO2 %MSpO2 Limit : 90 ~ 100 %MSpO2 Level : Low MSpO2-PR Limit : 50 ~ 110 MSpO2-PR Level : Low

ECG Limit : 50 ~ 110 Level : Low

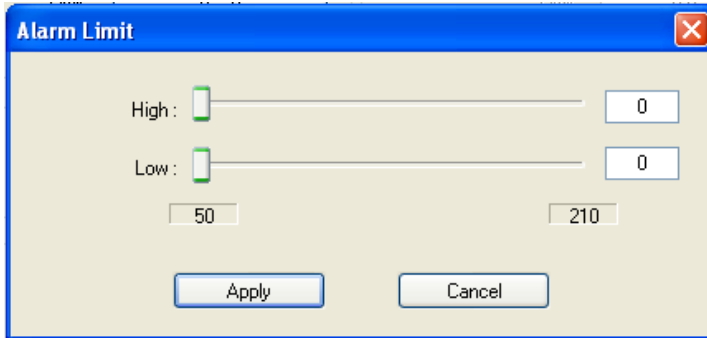
TEMP Limit : 35.1 ~ 37.4 Level : Low

NIBP Source : Systolic Limit : 70 ~ 150 Level : Low

IUP Limit : 0 ~ 0 Dur Limit : 0 ~ 0 Level : [ ]

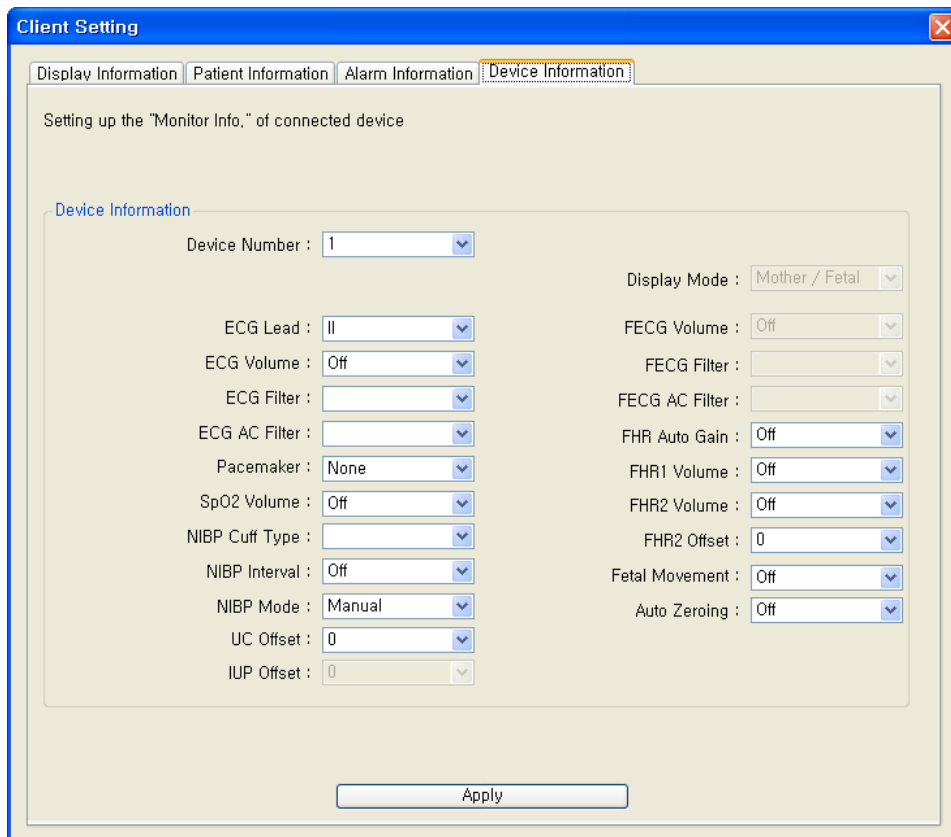
Apply

Adjust the limiting and level of the alarm, click “Apply” and the figures will be applied.



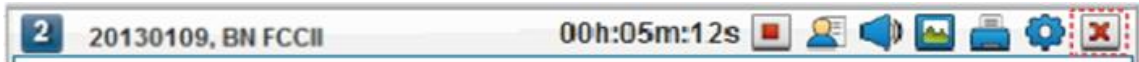
### Client Window Equipment information

It provides a function for numbering equipment used for Fetal Monitor, as well as setting sound volume information, parameter filter and Gain information. Apply changes according to the patient’s status and click “Apply”, then changes will be applied.



## Close Client Window

This function is used for closing connection with Fetal Monitor equipment. Equipment and FC Central automatically sets up the connection, so Fetal Monitor should be ended before this function is used. Close Fetal Monitor, and click the close button marked on the image below.



### Caution

If you intend to close Client Window, Fetal Monitor equipment should be closed in advance. If you close the equipment, all the real time measurement data for patients is no longer saved. If you close equipment and Client Window, please be careful to do so.

## 2.4. Parameter Trend Screen structure & how to use.

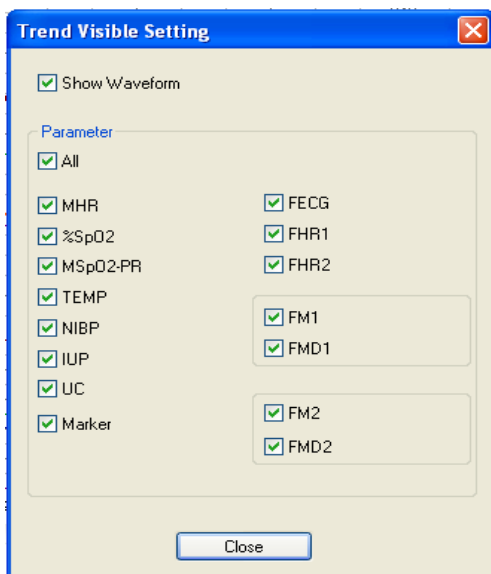
### Adjusting screen output of Parameter Trend

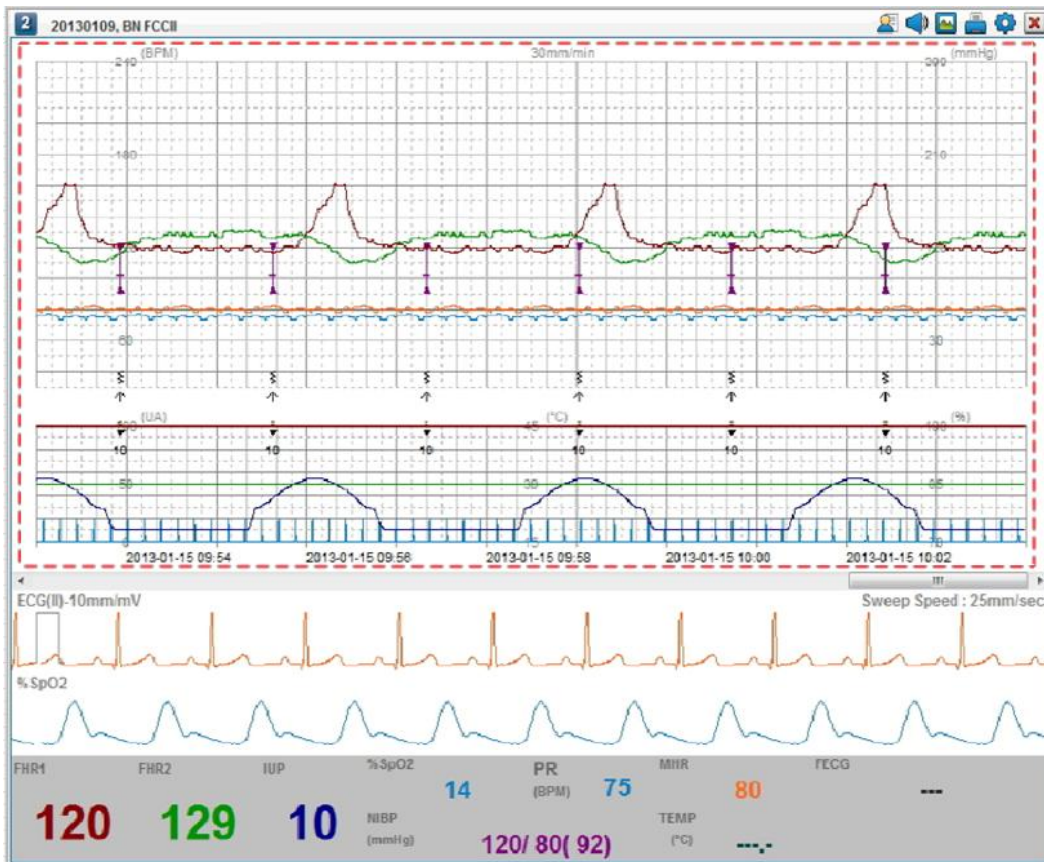
Client Window indicates many types of parameter trend. If you want to see carefully by classifying specific parameters, FC Central provides a function for limiting an indication of other parameters. You can use this function by double-clicking parameter trend area.



### Indicating the whole Parameter Trend

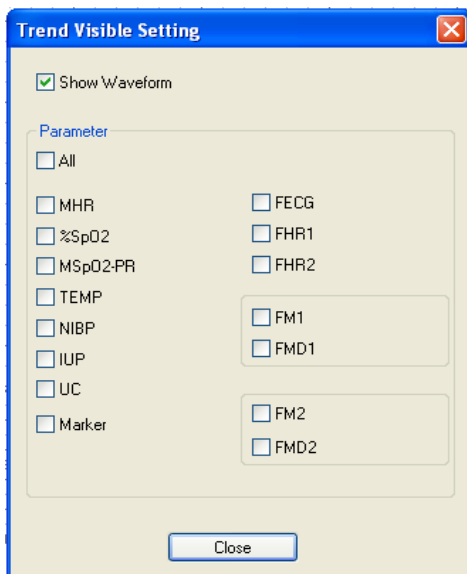
When you double click on the status above, the “Trend view settings” will appear. The whole contents shown on the screen indicate that everything is checked.

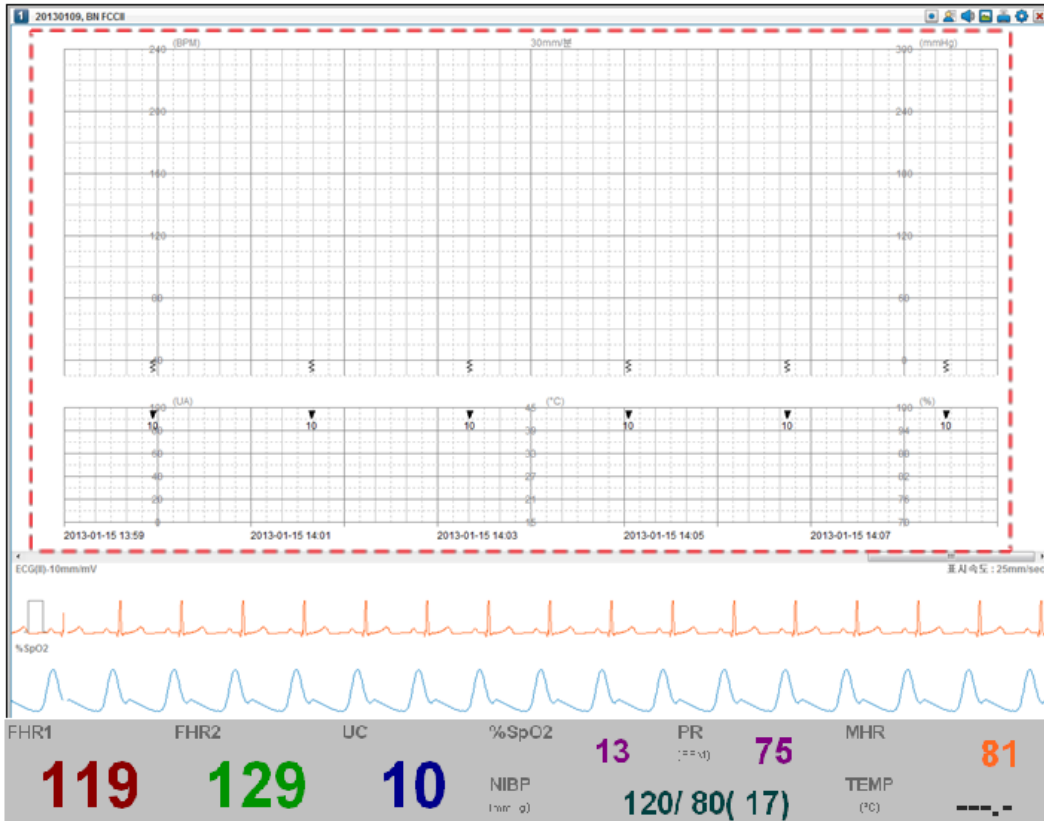




### Hide the indication of Parameter Trend Data

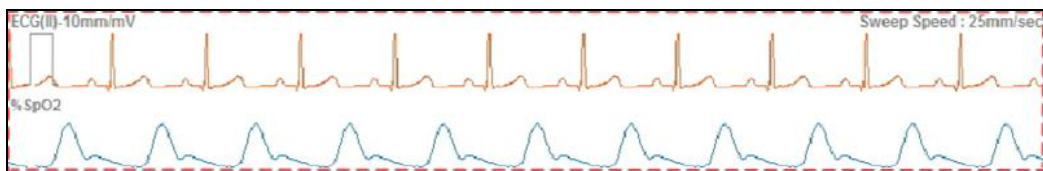
In “Trend view settings”, remove all checked items in parameter. If you click “Everything”, all parameters will be selected and removed again. The images below indicate that selected items area applied.



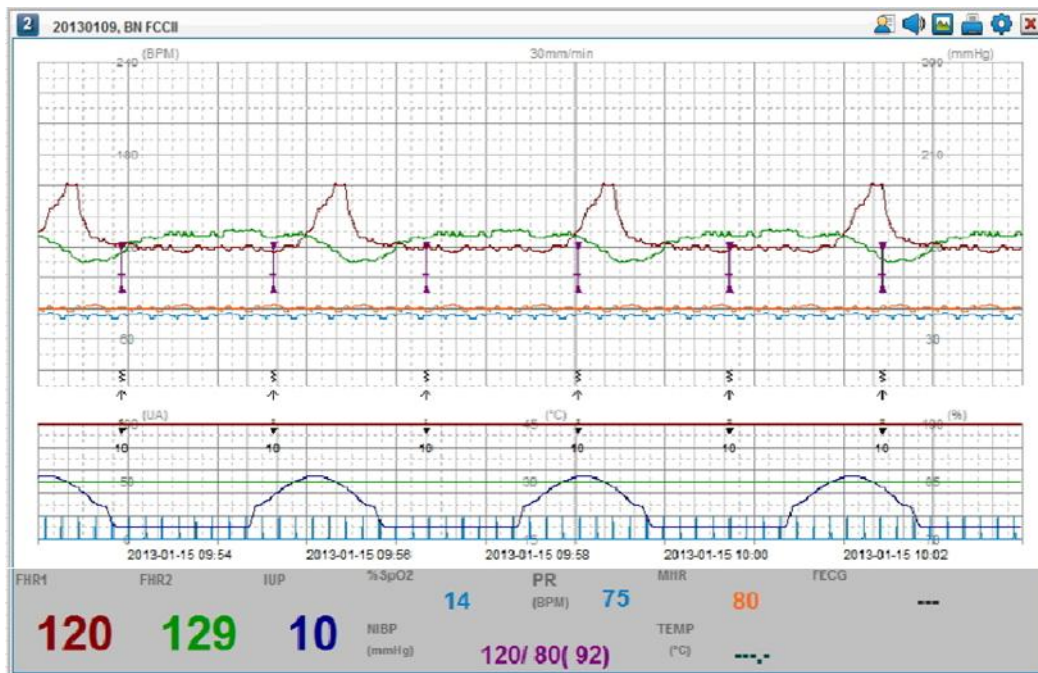
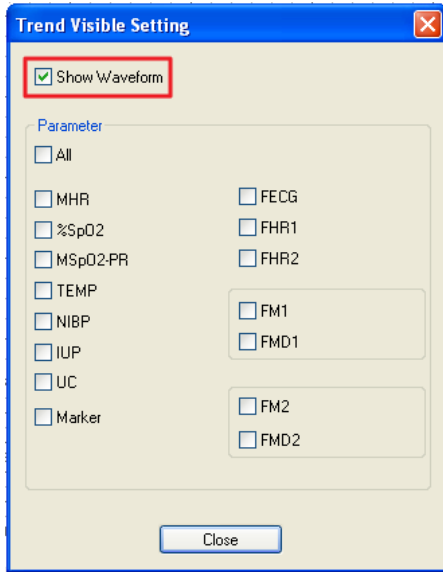


### Indicating Parameter Trend wave

In FC Central Maternal version, ECG and SpO2 waves are measured and indicated.

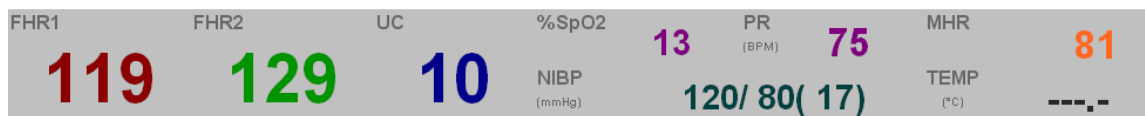


By turning On/Off the “Show waves”, it provides a function for controlling what is shown in the window.



### Parameter Value Screen area

This is an area where the figures of Trend wave indicated in Client Window area are actually presented. Indicate the figures of real time measurement for each parameter.

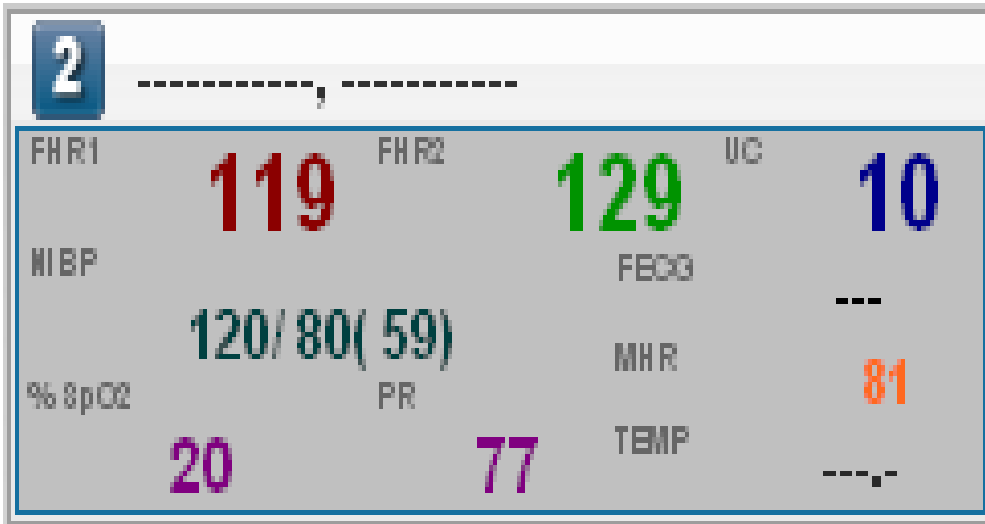


**Note**

The color of Parameter Value and the color of Parameter Trend graph are identical. If you want to look at the changes of relevant Parameter figure, you can refer to trend graphs of relevant color.

**Client Window - Parameter Value**

When more than 8 devices are connected with FC Central and if you want to have a look at the data in the Client Window at a time, 16ch Window mode should be selected. 16h window mode does not indicate waves due to the problem in presenting them, and it only indicates parameter figures.



**Note**

For detailed implications for Parameter Value, please refer to Fetal Monitor equipment manual. The meanings of parameter figures and trend graphs are explained in detail.



# FC Reviewer II

## 1. Execute / Close FC Reviewer II

1.1 Execute FC Reviewer II

1.2 Close FC Reviewer II

## 2. FC Reviewer II Program structure

2.1 FC Reviewer II Program structure

## 3. How to use FC Reviewer II Menu

3.1 FC Reviewer II Menu

3.2 FC Reviewer II Print preview

3.3 FC Reviewer II Print

3.4 FC Reviewer II Export images

3.5 FC Reviewer II Preferences

3.6 Close FC Reviewer II

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# 1. Execute and Close FC Reviewer II

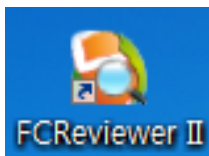
## 1.1. Execute FC Reviewer II

### Use of FC Reviewer II

FC Reviewer is a program used for reexamining and analyzing the patient data measured by FC Central. In FC Central, data of only 1 hour can be buffered and the previous status of patient may be analyzed. However, FC Reviewer provides a function for analyzing saved data in FC Central, which is measured more than an hour. Also, it can save images or print analyzed data in various options and file them in a chart.

### Execute FC Reviewer II

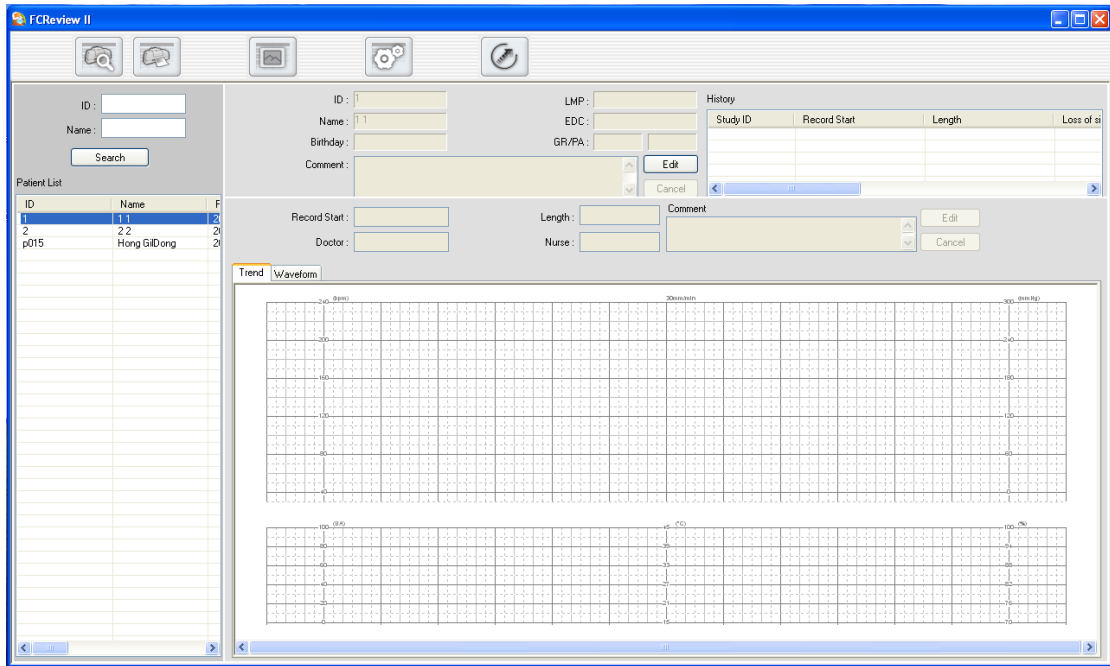
FC Reviewer can be executed in two ways. First is to double-click the image con on Desktop.



Second is to click "Reviewer" Icon in Main Menu of FC Central II. You can click the icon marked on the image below.



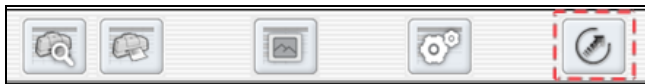
Once the program is executed, the window below appears.



## 1.2. Close FC Reviewer II

### Close FC Reviewer II

To close FC Reviewer II program, click “Close” icon marked on the image below, and the program will be closed.

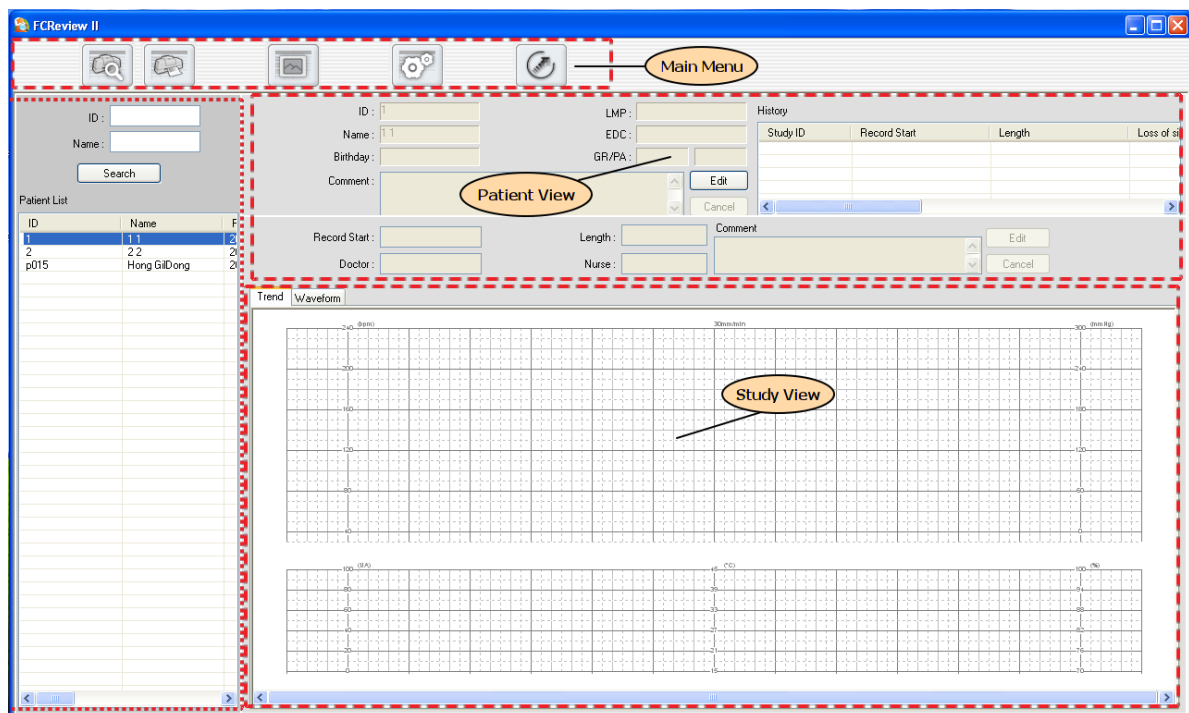


## 2. FC Reviewer II Program Structure

### 2.1. FC Reviewer II Program Structure

#### FC Reviewer II Structure

FC Reviewer II consists of 4 main parts, as indicated in the image below.

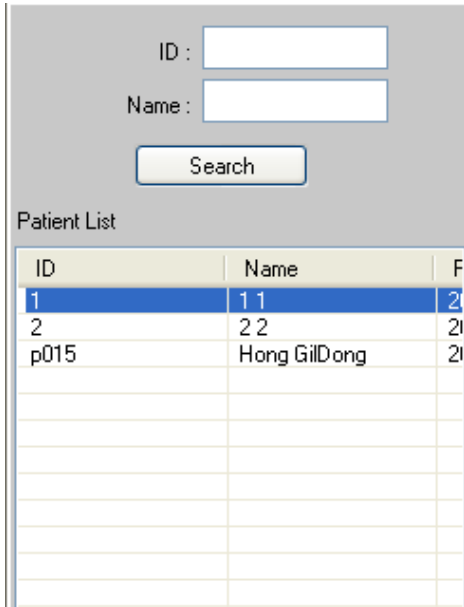


#### Main Menu

Main Menu is a major menu in FC Reviewer II, and it provides various functions such as print preview, image export, preference, and program closing.

#### Search View

It presents the database list of patient saved by FC Central II. You can search for the patient by inserting ID and name into the space indicated in the image below and clicking “Search” button.

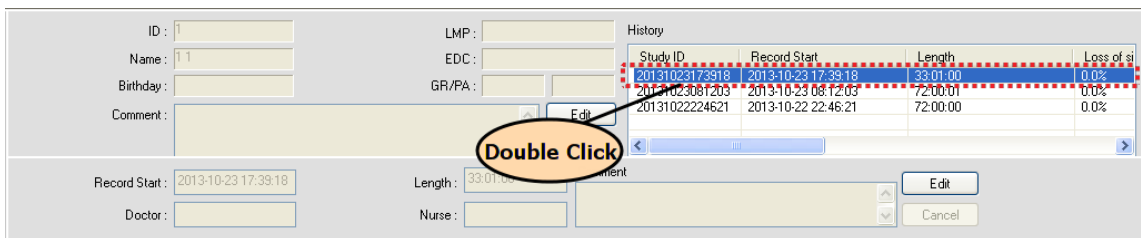


In Search View list, if you select the patient and double-click, Patient information and History information will appear on “Patient View”, which is located on the right side of the image below.



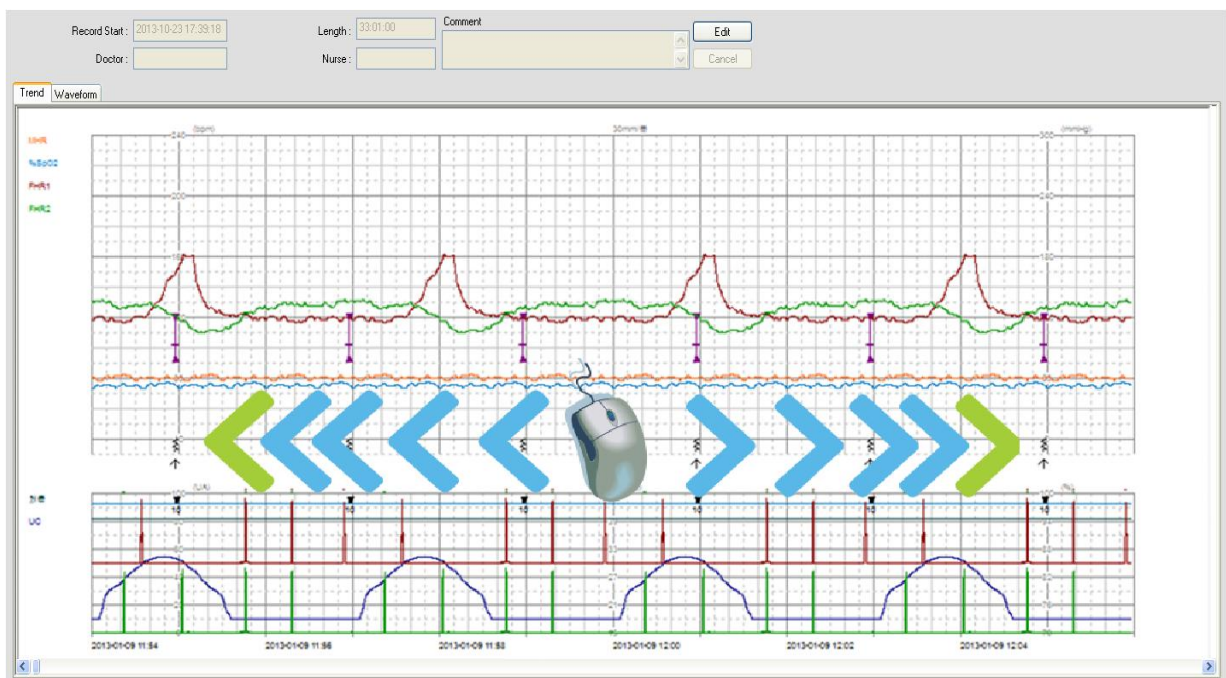
## Patient View

It is an area where the database information for the patient selected in Search View is presented. It indicates patient's ID, name, birthday, last menstruation date, birth due date, and the number of pregnancy. If there is a need for modifying the information, you can make some changes and click the "Modify" button to apply. If you want to know the measured result for the patient, double-click the list of designated date in the History list indicated on the image below. Selected list will show its trend data and wave information in Study View area below.

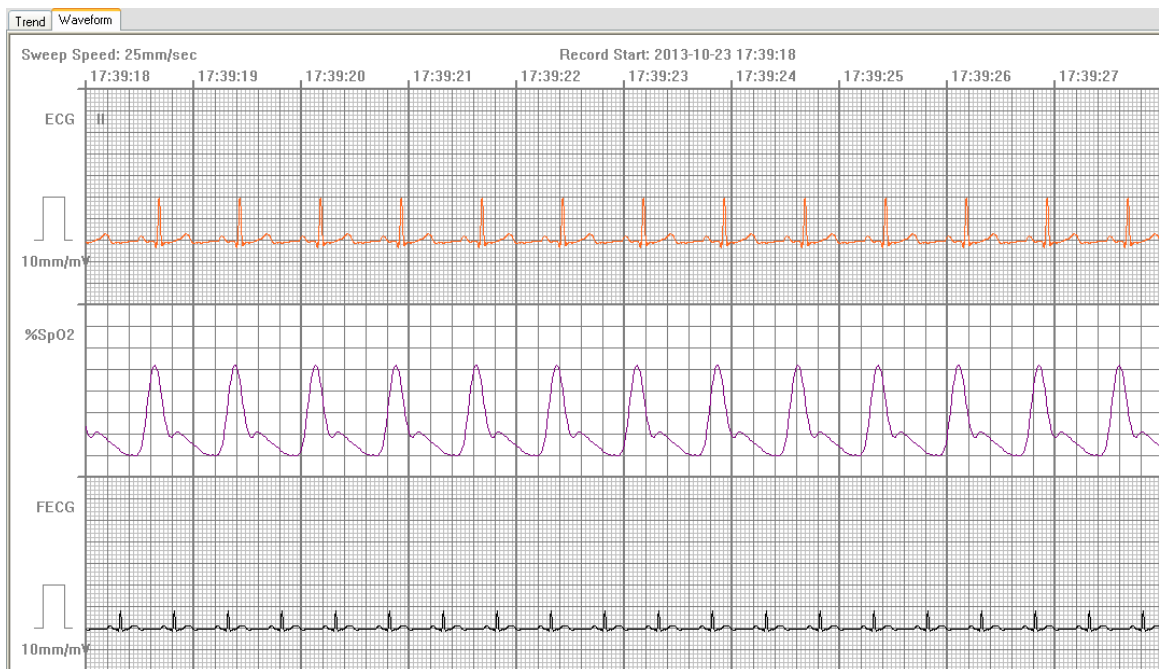


## Study View

Study View indicates the record time for selected items in the History list of Patient View, as well as the information of doctor and nurse. If necessary, it also provides a function for taking a memo and the trend data information and wave information will be indicated below. If you drag from left to right while left-clicking the mouse in Trend information, it allows you to move from previous data to present data, providing a function for you to analyze.



The image below is about the wave information. It indicates ECG and SpO2.

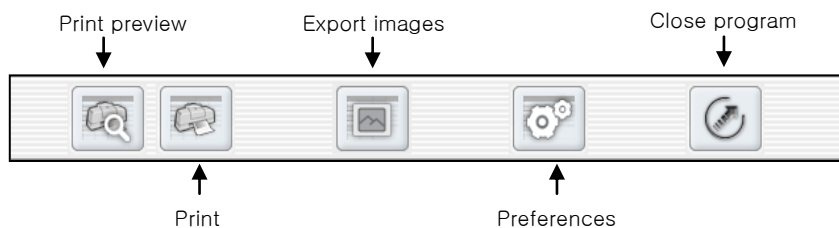


## 3. How to use FC Reviewer II Menu

### 3.1. FC Reviewer II Menu

#### Menu of FC Reviewer II

Main Menu is a major menu in FC Reviewer II, and it provides various functions such as print preview, image export, preference, and program closing.



#### Print preview

It provides a function for previewing various conditions on printing and setting options on them.

#### Print

It provides a function for setting various options on printing and printing documents.

#### Export images

It provides a function for turning Study information into images and exporting them in a JPG form, according to the selected options.

#### Preference

It makes a setting for system preference. You can set various options such as view settings, language, options and colors for waves of measured data and saving folder for measured data.

#### Close FC Reviewer II

It closes the FC Reviewer II program.



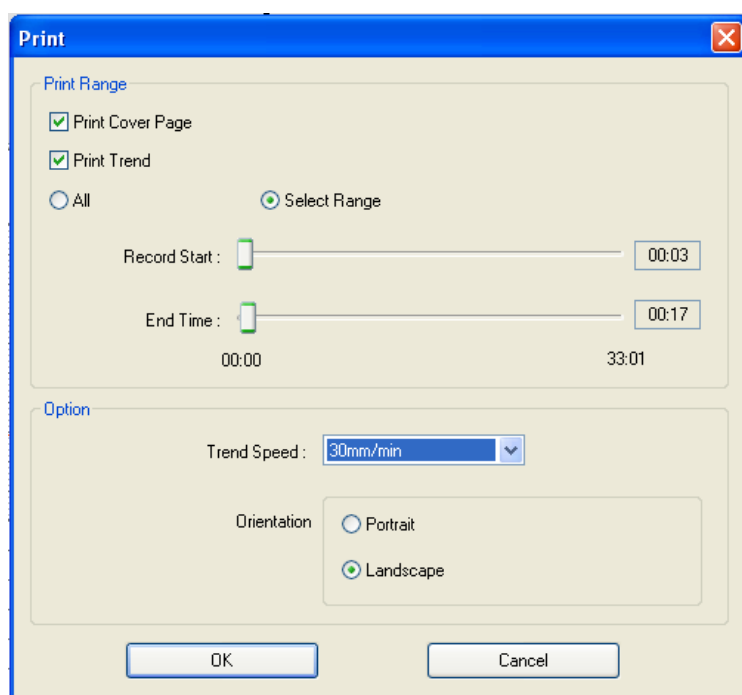
## 3.2. FC Reviewer II Print preview

### FC Reviewer II Preview settings

It provides a function for previewing measurement data of parameter and trend information on the current window, and patient information. If you click “print preview” button marked on the image below, dialogue will appear.



The image below is a dialogue for print preview. Each option can be used as followings.



Options in the printing dialogue

- Cover printing: It decides whether the cover including measurement information and patient information will be printed.
- Trend graph printing: It decides whether the parameter trend information will be printed.
- Whole: All loaded data of the patient will be printed.

- Range setting: It allows users to set a range of printing. Printing range may be set to the minute.
- Trend speed: The speed of trend data is set and the degree of precision and amount of data can be adjusted. The trend speed is set with 10, 20, 30mm/minute.
- Printed direction: You can choose to print either in horizontal or vertical direction.

## FC Reviewer II Preview result

The image below is an indication when the printing direction is set as horizontal. The cover page is printed first and the pages related with Trend will be printed in the next pages. For vertical direction, only the printing direction is different and the printed content is the same. In the following section, there is a sample of vertical printing. Please refer to the relevant part.

2013-10-25, 18:01:39

**Patient Information**

ID	Name	Birthday	Registration Date	LMP	EDC	GR/PA	GA
P000052	JANE DOE		2013-10-25			/	

Comment:

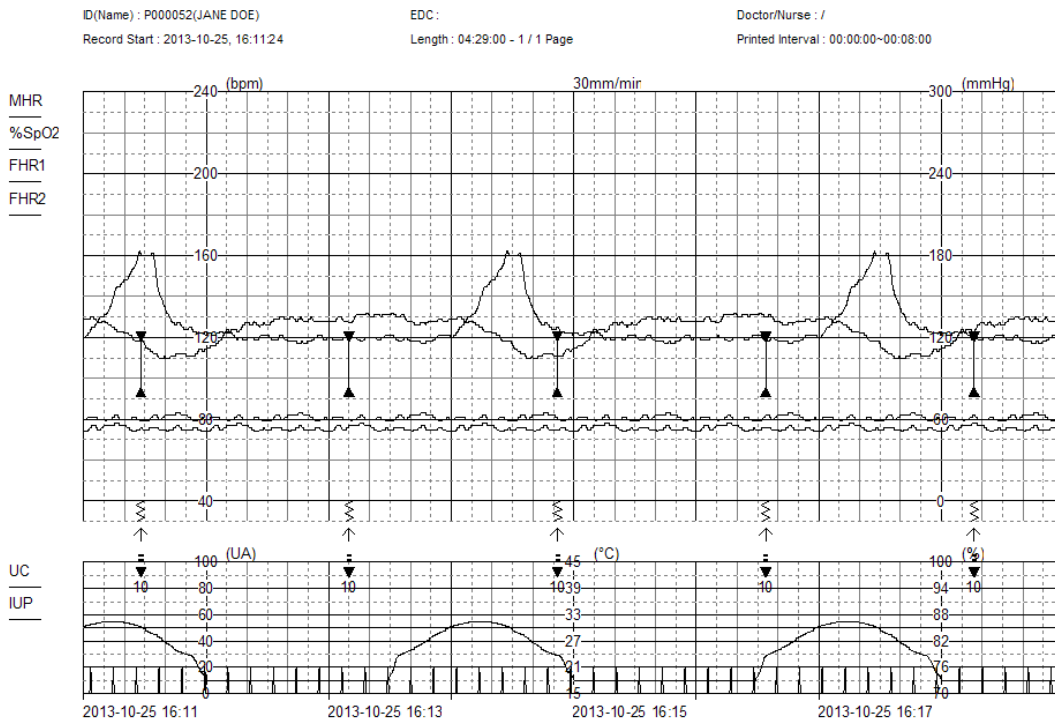
**Record Information**

Record Start	Length	Doctor	Nurse	Printed Interval
2013-10-25, 18:11:24	04:29:00			00:00:00~00:08:00

Loss of signal(%) : 0.0

FCCentral II 1.1.9b3
Bionet Co., Ltd

< Cover printing >



< Trend graph printing >

### 3.3. Print FC Reviewer II

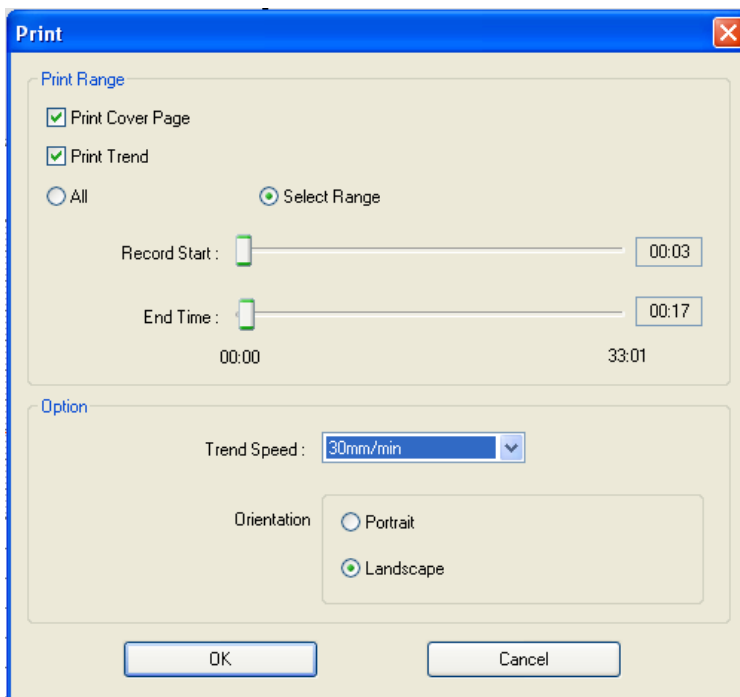
#### FC Reviewer II Print settings

It provides a function for printing measurement data of parameter and trend information on the current window, and patient information. If you click printer button marked on the image below, dialogue for printing will appear. According to the selected option, the current window will be printed.



Options in the printing dialogue

- Cover printing: It decides whether the cover including measurement information and patient information will be printed.
- Trend graph printing: It decides whether the parameter trend information will be printed.
- Whole: All loaded data of the patient will be printed.
- Range setting: It allows users to set a range of printing. Printing range may be set to the minute.
- Trend speed: The speed of trend data is set and the degree of precision and amount of data can be adjusted. The trend speed is set with 10, 20, 30mm/minute.
- Printed direction: You can choose to print either in horizontal or vertical direction.



## FC Reviewer II Print result

The image below is an indication when the printing direction is set as vertical. The cover page is printed first and the pages related with Trend will be printed in the next pages. For horizontal direction, only the printing direction is different and the printed content is the same. In the above section, there is a sample of horizontal printing. Please refer to the relevant part.

2013-10-25, 18:03:20

**Patient Information**

ID	P000052
Name	JANE DOE
Birthday	
Registration Date	2013-10-25
LMP	
EDC	
GR/PA	/
GA	

Comment :

**Record Information**

Record Start	2013-10-25, 16:11:24
Length	04:29:00
Doctor	
Nurse	
Printed Interval	00:00:00~00:14:00

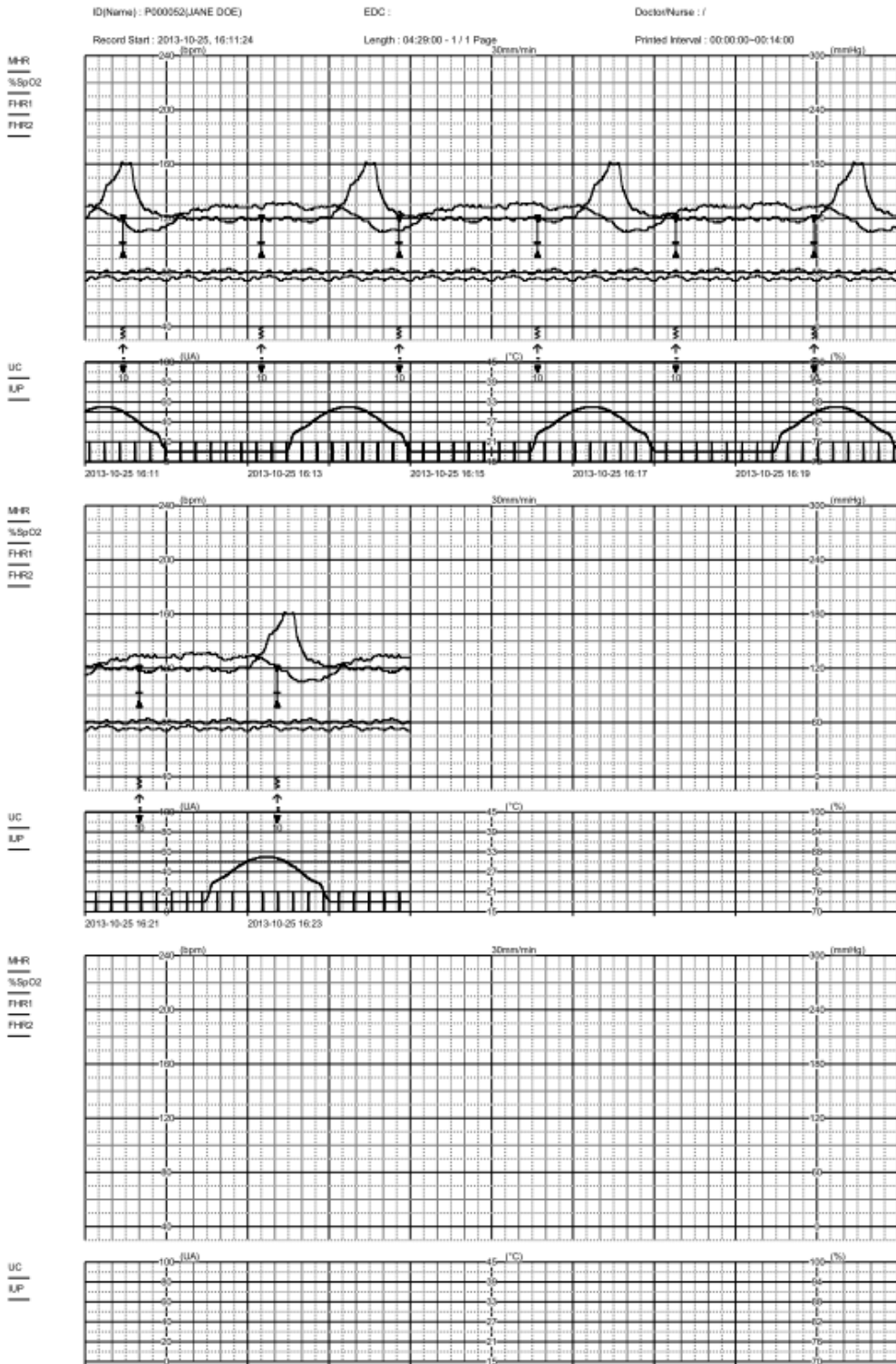
Loss of signal(%) : 0.0

FCCentral II 1.1.9b3

Bionet Co., Ltd

< Cover printing >

# FC Central II Manual



< Trend graph printing >

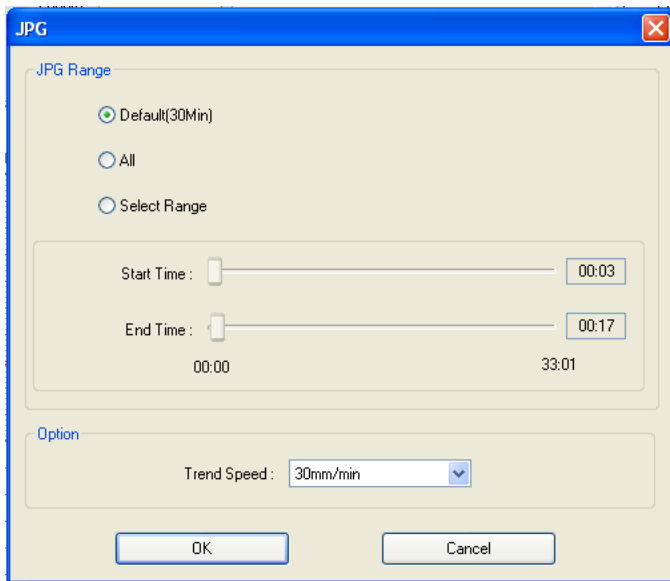
### 3.4. Export FC Reviewer II image

#### FC Reviewer II image

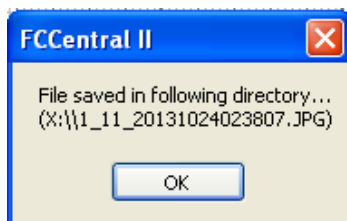
This provides a function for saving measurement data of parameter and trend information on the current window, and patient information in a JPG form, and interlocking with EMR. If you click “Save image” button marked on the image below, dialogue on JPG image saving will appear.



Dialogue for JPG consists of “JPG conversion range” and “Option”. JPG conversion range is separated into Normal(30 min), All, Range settings. For Normal, it saves the data of 30 minutes from the current screen in the designated path. For All, all loaded patient data is saved in the path, and for Range settings, only set range is converted into a JPG form.



Once the saving is finished, the information of path where JPG file is saved is indicated in the dialogue, as shown in the image below.



File contents of FC Reviewer II image



**Note**

JPG image saved for interlocking with EMR is saved in the designated folder in “Preference → System → EMR settings → Data Path” EMR interlock is provided to the relevant business in a JPG form. If the storage is not enough, data may be lost or program may cause malfunction.



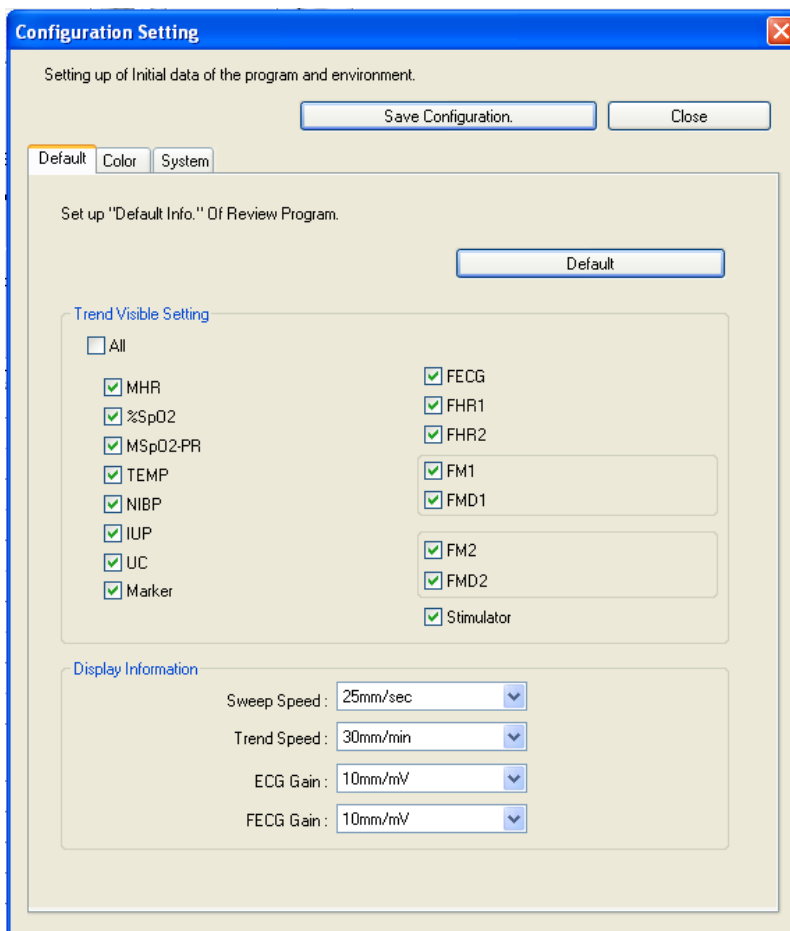
### 3.5. FC Reviewer II Preference

#### FC Reviewer II Preference

To load the dialogue for setting screen output, color and system of FC Reviewer II, click the icon marked in the image below.



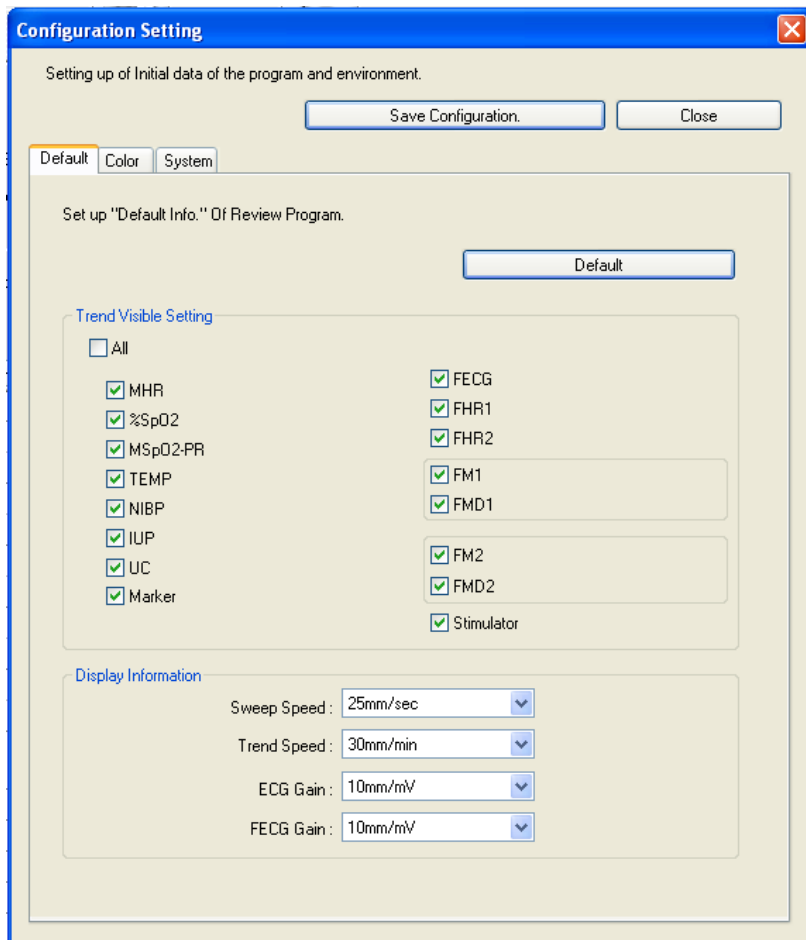
The preference dialogue for FC Reviewer II is separated into “Default Tab”, “Color Tab”, and “System Tab”



- Default Tab: It sets up whether parameter trend is indicated or not, and the way of indicating the wave.
- Color Tab: It sets up the color and shape of parameter trend.
- System Tab: it sets up the saving path of EMR data and Study data.

## Default Tab

It sets up the basic configuration for data processing of FC Reviewer II

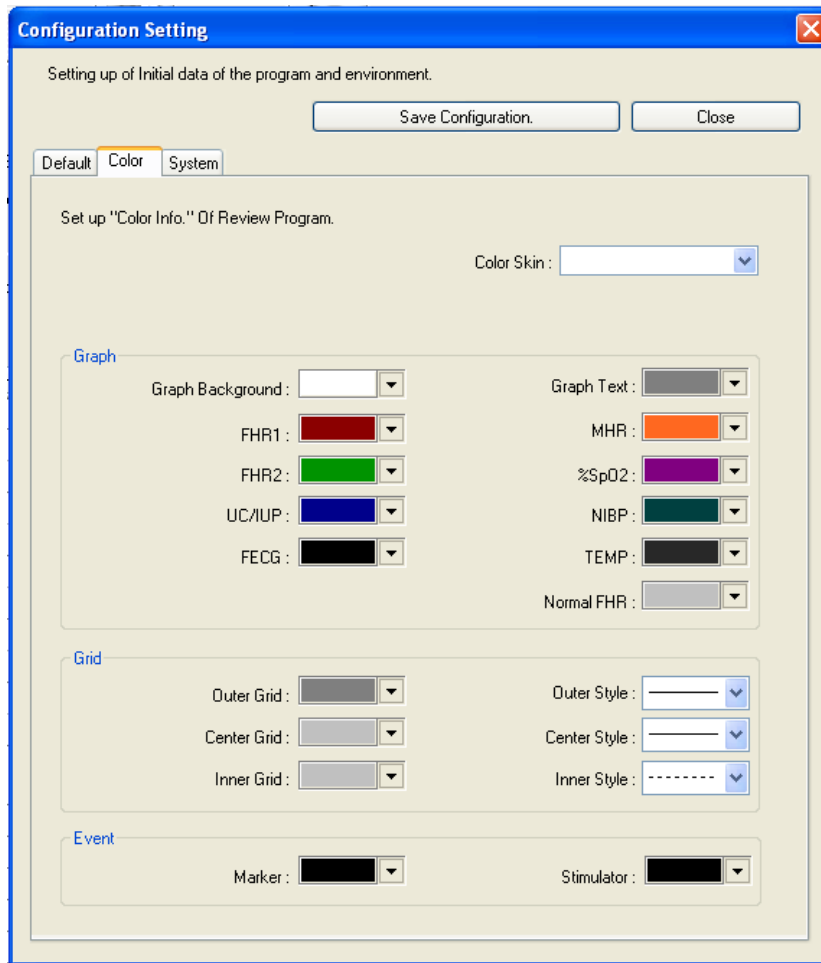


- Default figure: It sets up all figures of the program as default figure.
- Trend view setting: It sets up what you want to see in Study View. Set On/Off in designated parameter checkbox to control the output.
- Display information: It controls the indicating information (Data power density, size) of parameter trend.

After setting, click “Save changes” button and changes will be applied.

## Color Tab

It is a tab where you can set colors of parameter figures and graphs, grid for papers, and events that are indicated in Client Window area.

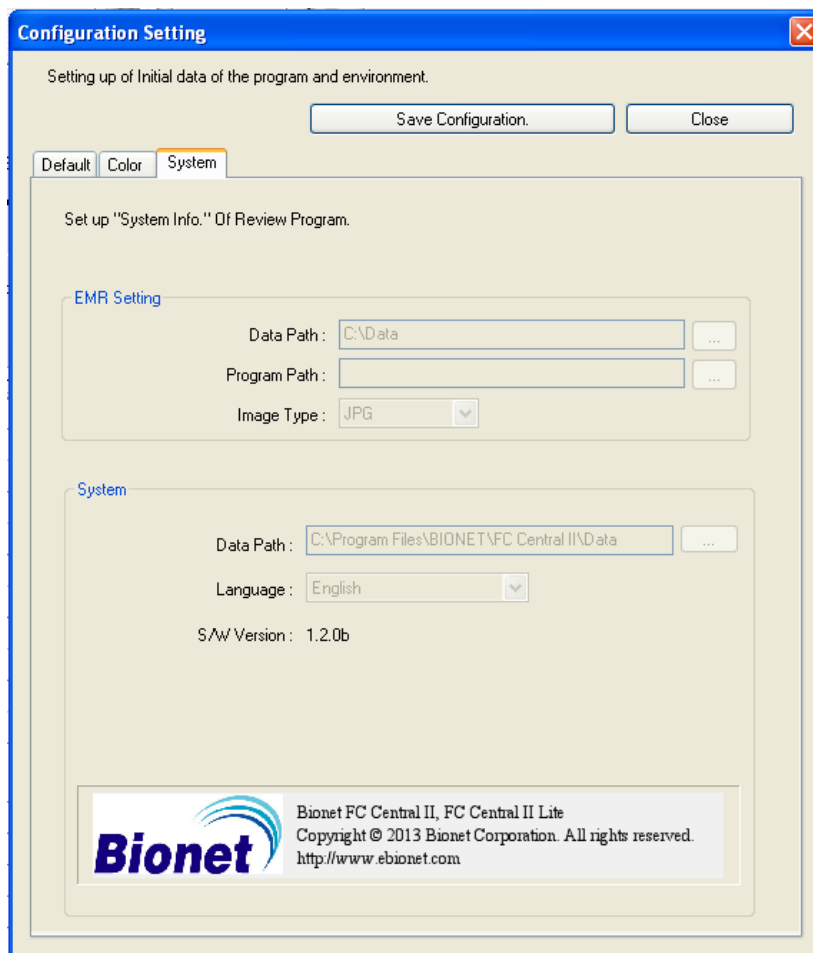


- Color Skin: This function allows you to set all the color settings applied in graphs, grid and events. For user-defined mode, there are “basic colors” and “paper colors”. For basic colors, it provides the color for basic window appeared first on the screen, and for paper colors, it provides an identical color with the paper color printed from the equipment.
- Graph: It provides you to set each color for parameter, wave and background that are indicated on the Study View.
- Grid: It sets up the shape and color of grid that is indicated on the Study View
- Event: It sets up the color of marker and stimulator that are indicated on the Study View

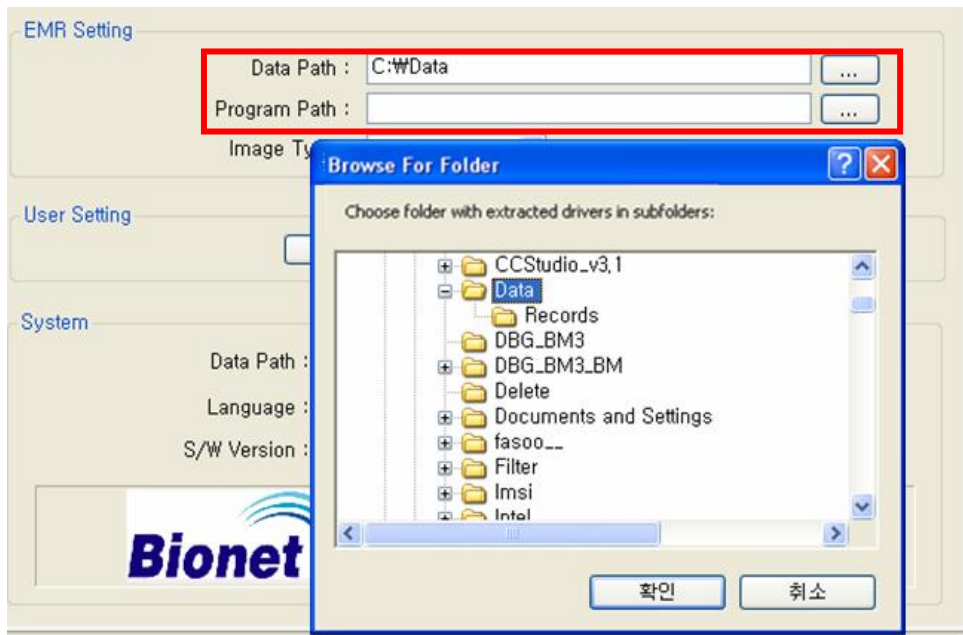
After setting, click “Save changes” button and changes will be applied.

## System tab

It sets up data storage path, other programs interlocked with EMR, EMR options, user settings, and language, which are related to program system.

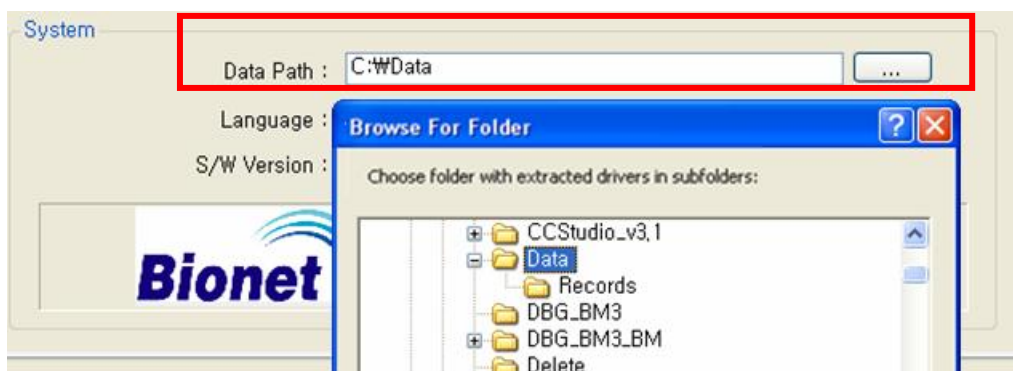


- EMR setting: It sets up the data path interlocked with EMR, path for executing the program, and the type of image. Please select the data path where there is a sufficient amount of remaining space in the hard disk.
- Data path sets up the folder that patient information and datas are saved. If this Setting is changed, FC Central II program can't get the patient information and data files. Please set up "Data path" only once at the time that FC Central II is installed. If this setting will be changed, please copy all data in the old folder into new folder

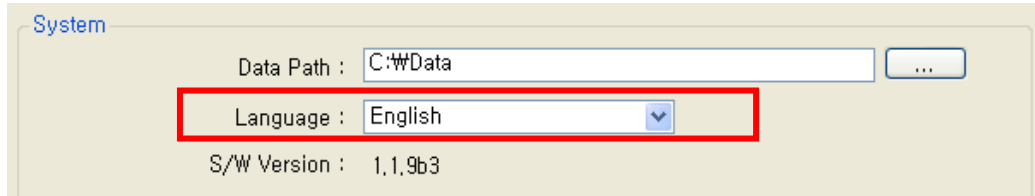


In the selected folder, images are saved when you save images in Client Window, a Main program in FC Central II, and in FC Reviewer II, After setting, click “Save changes” button and changes will be applied.

- System: It sets up where the data measured in the program and patient information DB are to be saved. When the dialogue appears as indicated on the image below, select the folder in the hard disk where there is an enough space.



System group provides a function for setting languages presented in the Program UI. Select your language in the “Language”. For the languages not provided, the additional work will be needed.



Changes in the System Group will be applied after closing and restarting FC Central II and FC Reviewer II.

**Caution**

While operating FC Central II program, saving images for measured data and interlocking with EMR will occur. In the “System” of “preference” in FC Central II Program, please select the folder with a sufficient amount of remaining space. If the space is not sufficient, the data may be lost or the program may not be operated properly.

### 3.6. Close FC Reviewer II

#### Execute FC Reviewer II

Once you click the button marked on the image below, FC Reviewer II Program will end.



# Broker System(Optional product)

## 1. Broker System

1.1 What is a Broker system?

1.2 Broker System Structure

## 2. How to use Broker System

2.1 Installation / Uninstallation of FC Central II Client

2.2 How to use FC Central II Client

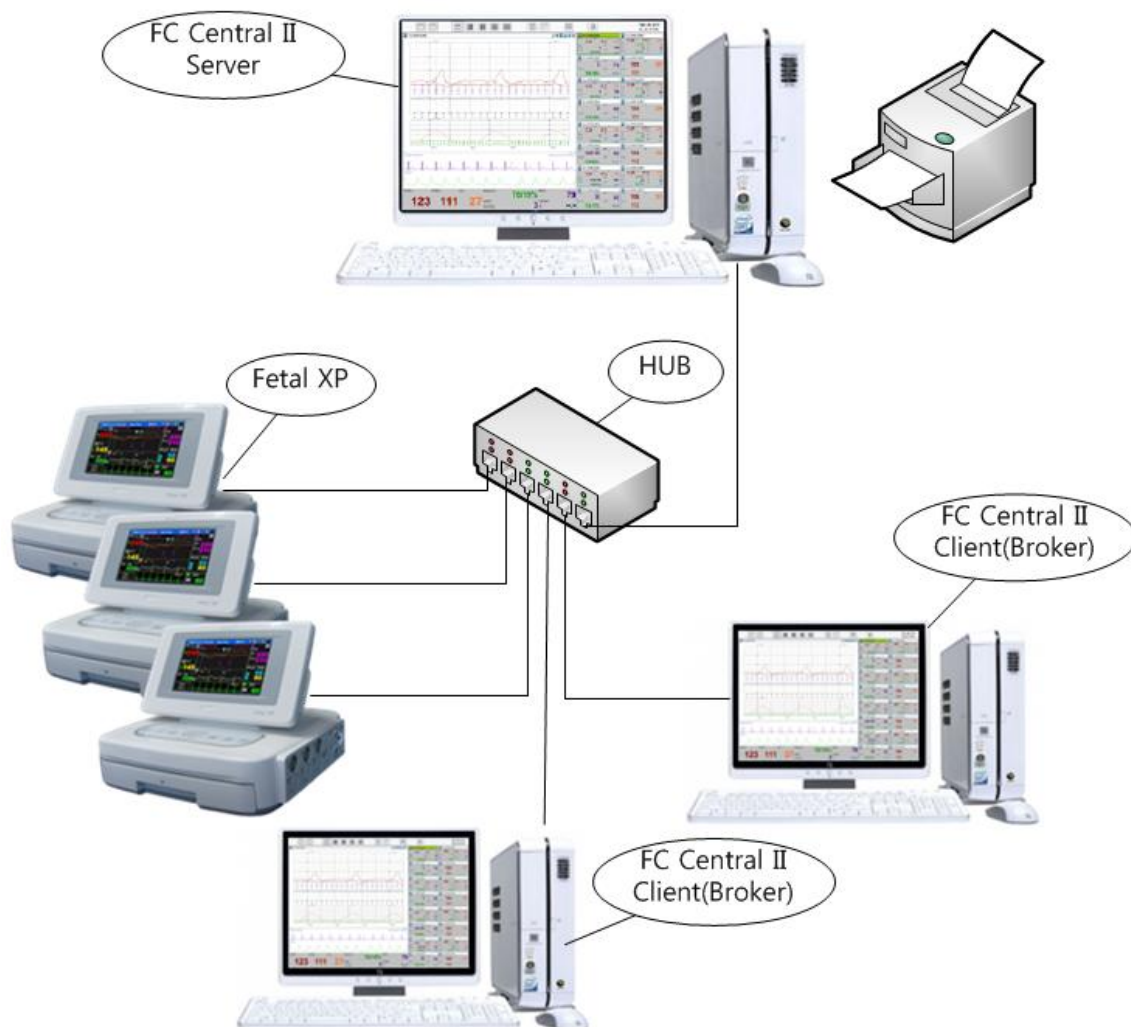
2.3 Difference between FC Central II Server and FC Central II Client

# 1. Broker System

## 1.1. What is a Broker system?

The real time measurement data of FC Central II can be seen in the server system, and Broker System provides a function that allows you to see them in other wards or office. This means that FC Central II Client program is possible to be installed and the real time measurement data can be seen, without coming into the server system in which FC Central II is installed. This program is an optional product.

## 1.2. Broker System Structure





## FC Central Server

It is a package with server function among FC Central II Programs, and it provides a real time and remote controlled monitoring function for parameter data up to 10 devices.

## FC Central Client(Broker)

It is a package with client function among FC Central II Programs, and it provides a real time monitoring after connecting FC Central II Server with IP address. But, it only gives a receiving function from the server. Wave data of ECF/SpO2 is not transmitted, and only the data from Parameter is received and monitored.

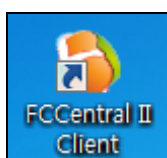
# 2. How to use Broker System

## 2.1. Installation / Uninstallation of FC Central II Client

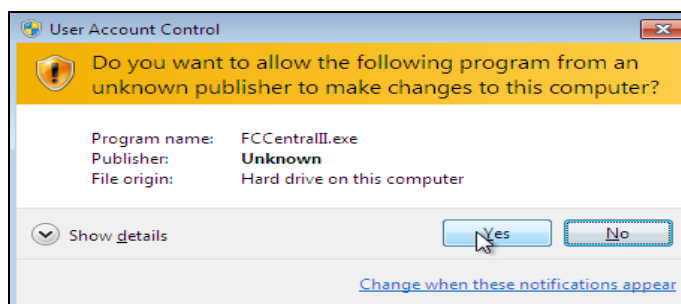
Installation and uninstallation of FC Central II Client is the same as that of FC Central II Program. Please refer to Installation and uninstallation of FC Central II Program.

## 2.2. How to use FC Central II Client

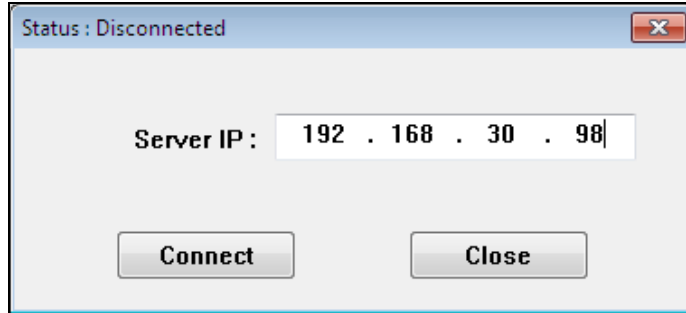
1) Double-click "FC Central II Client" icon on the desktop, which is indicated in the image below.



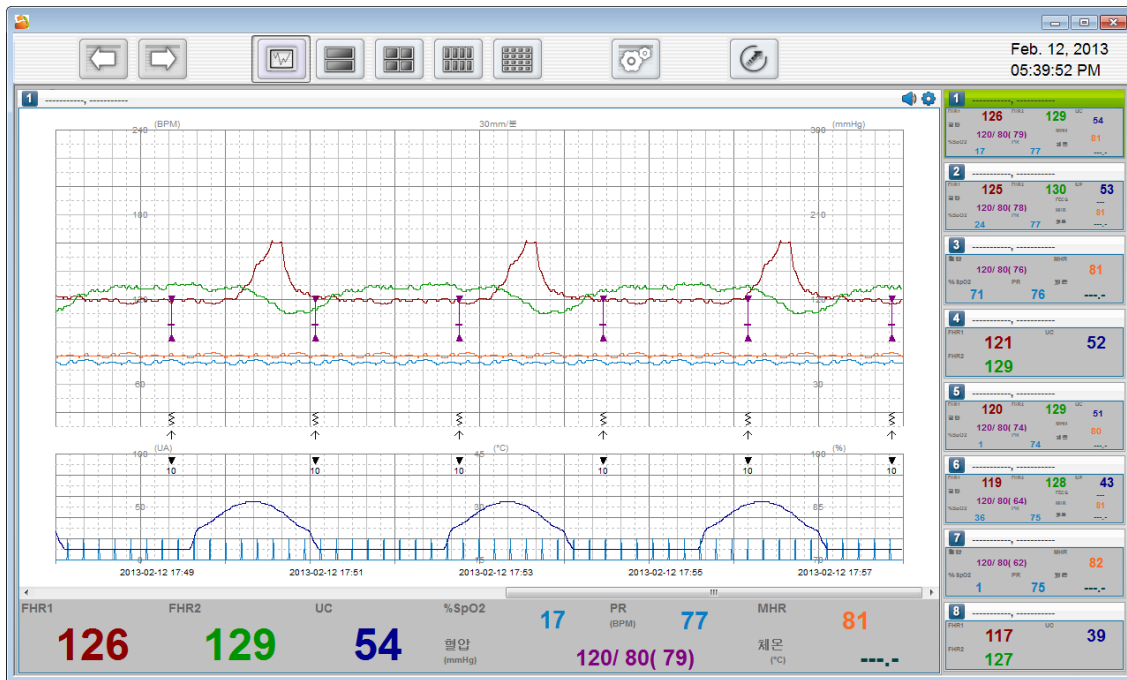
2) When the following message appears, click "Yes" and allow the program to execute.



3) Insert IP address of the PC in which the server version is installed, and click “Connect” button.

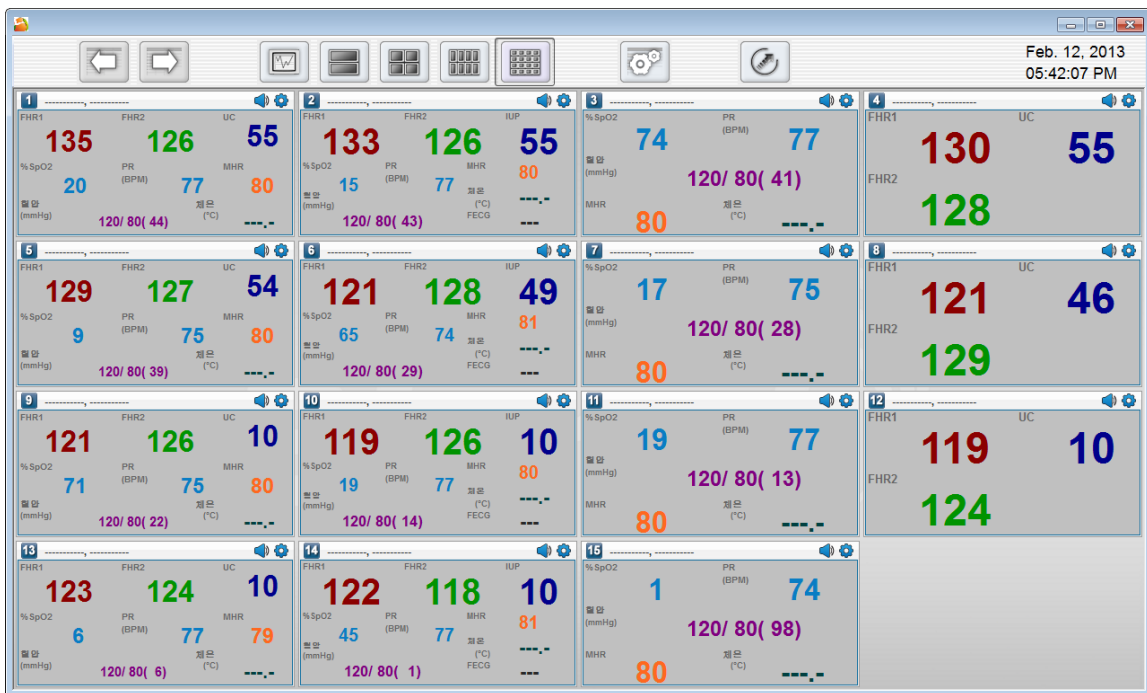


4) Insert IP address of the PC in which the server version is installed, and click “Connect” button. If it is connected successfully, you can monitor the data in FC Central II, as shown in the image below.



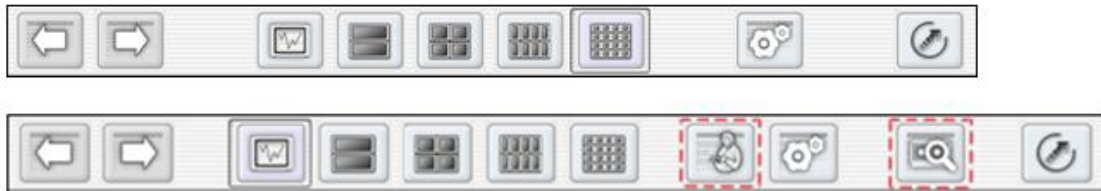
# FC Central II Manual

FC Central II Client has similar window structure and functions as FC Central II.

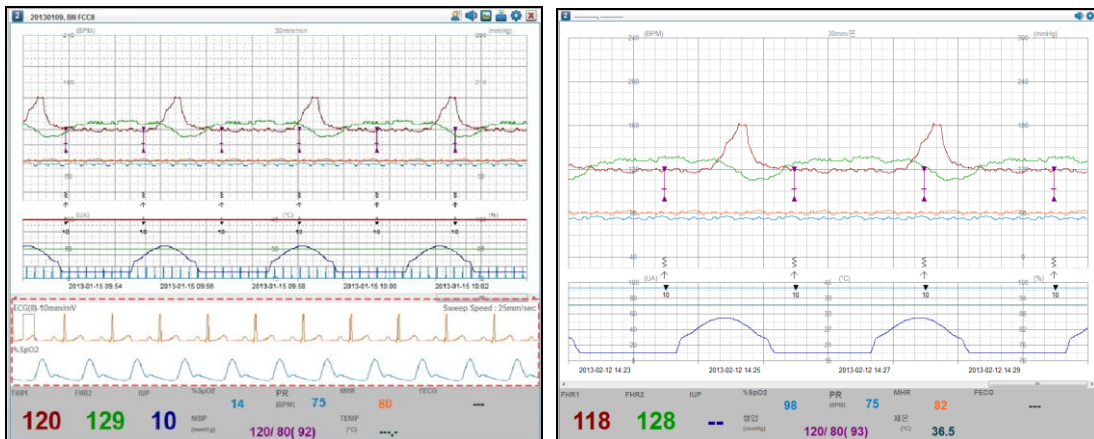


### 2.3. Difference between FC Central II Server and FC Central II Client

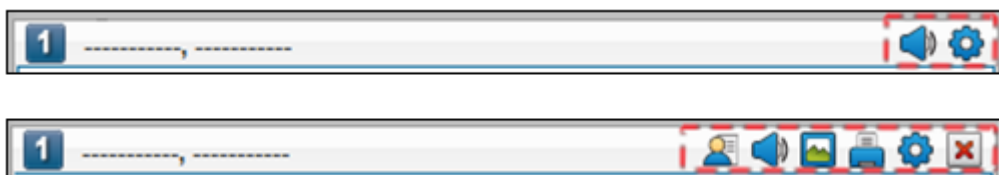
- 1) Functional difference in Main Menu: The image above is FC Central II Client and the image below is FC Central II Server. The number of icons is different.



- A. Window change function: It supports the windows of previous, after, 1Ch, 2Ch, 4Ch, 8Ch, 16Ch for both windows.
  - B. Patient Manager: As indicated in the image above, it is only supported in FC Central II Server. FC Central II Client does not support this function.
  - C. Preference management: As indicated in the image above, it is supported in both programs, but FC Central II Client only supports on Client window.
- 2) The difference of functional support in parameter window: As indicated in the image below, the function of parameter window of FC Central II Server (the left image) and FC Central II Client (the right image) has a different range. If you see the icons in the top caption bar, you can see the difference.



The followings are the differences when the caption bar is magnified.



- A. Alarm sound setting: supported in FC Central II Client.
- B. Parameter window preference: supported in FC Central II Client. However, it is only supported in Client setting.
- C. Connection settings for patient information: Not supported in FC Central II Client. Only FC Central II Server supports the function for connecting patient information and saving.
- D. Image saving: Not supported in FC Central II Client. It can only be seen through the screen. This function is only supported in FC Central II Server.
- E. Print: Not supported in FC Central II Client. This function is only supported in FC Central II Server

**Note**

FC Central II Client obtains patient and environment information when it is connected to FC Central II Server for the first time. FC Central II Client and FC Central II Server does not support bidirectional communication. When new patient and Fetal Monitor is connected, FC Central II Client should be restarted to get the proper data.

# Appendix

## 1. FC Central II Menu Tree

1.1 FC Central II Main Menu Tree

1.2 FC Central II Client Menu Tree

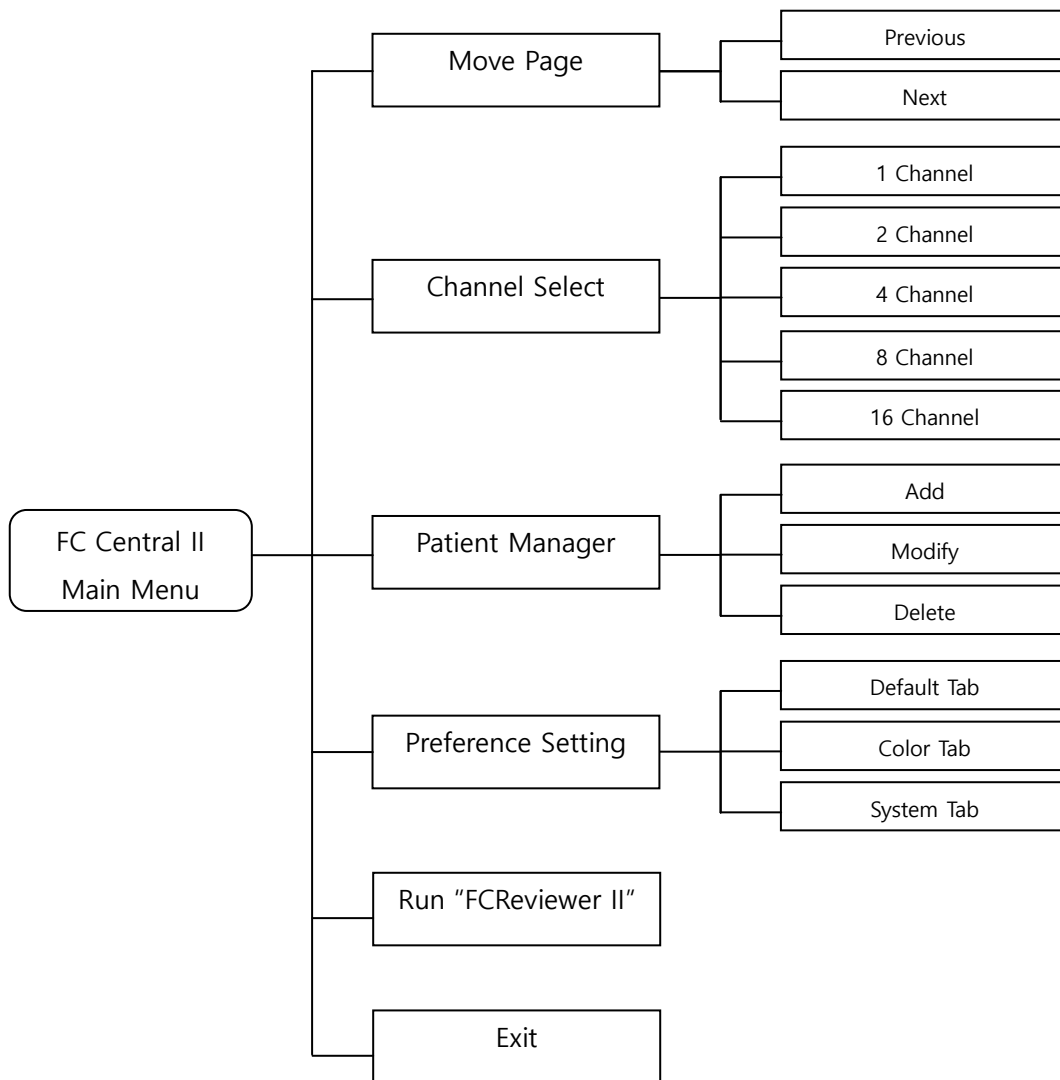
1.3 FC Reviewer II Menu Tree

## 2. Administrator authority settings in Windows 7 & 8

## 3. Q & A

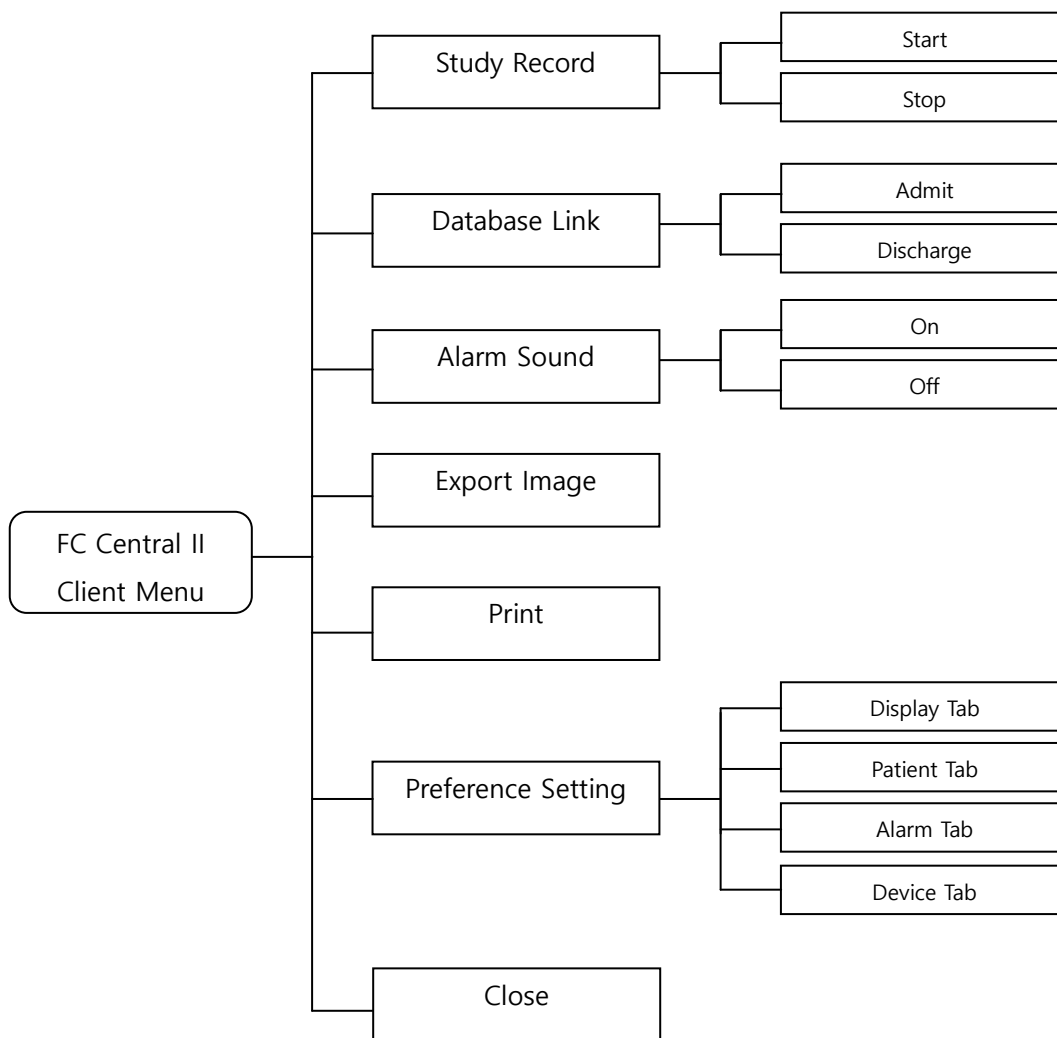
# 1. FC Central II Menu Tree

## 1.1. FC Central II Main Menu Tree



< FC Central II Main Menu Tree >

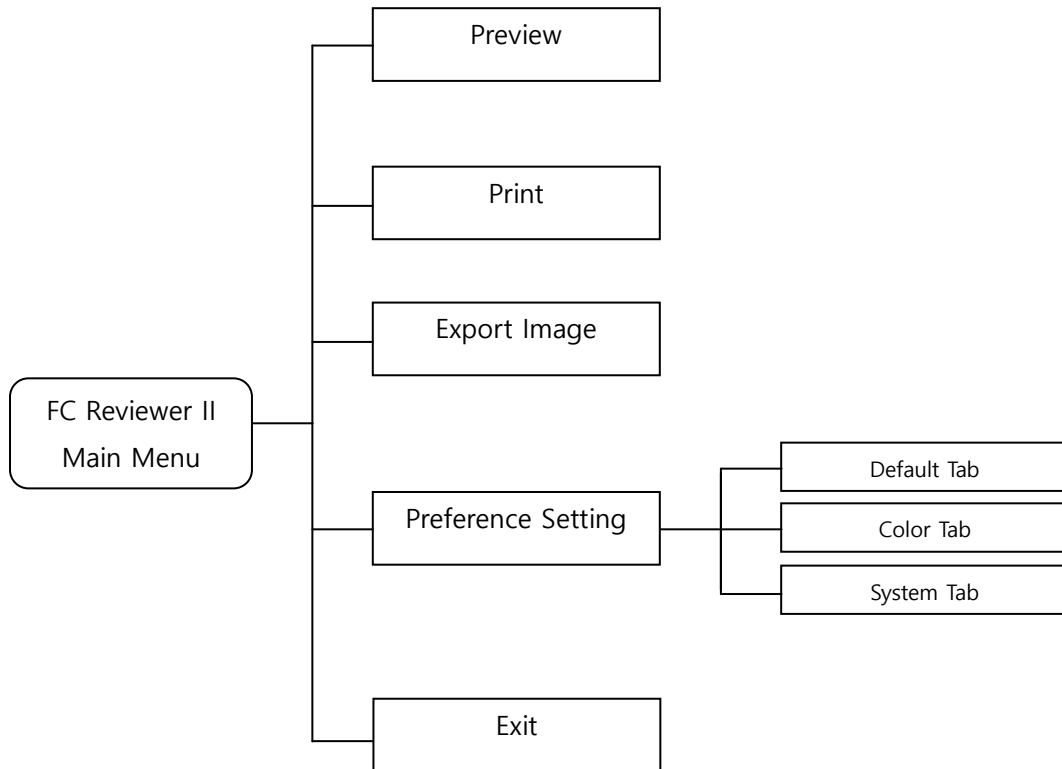
## 1.2. FC Central II Client Menu Tree



< FC Central II Client Menu Tree >



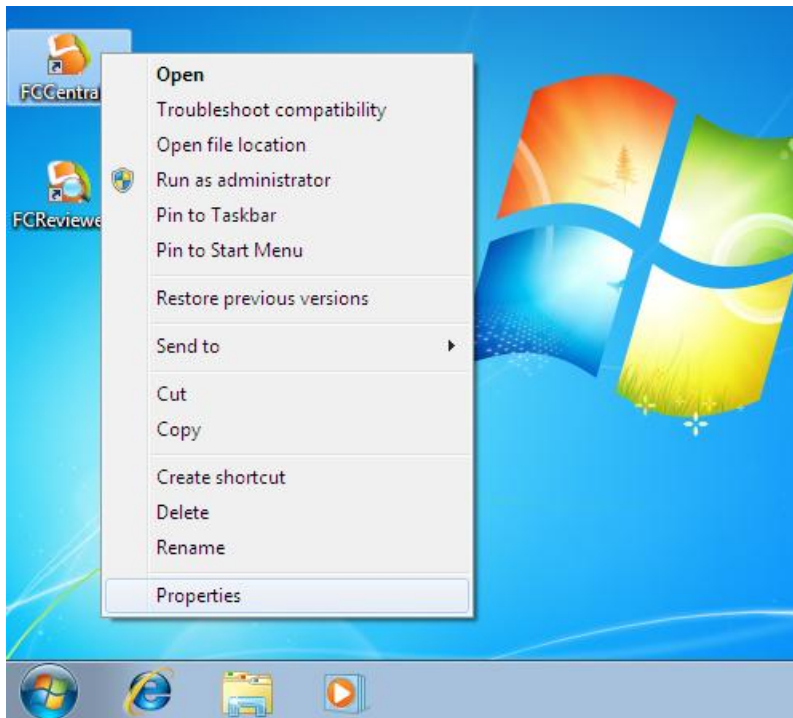
### 1.3. FC Reviewer II Menu Tree



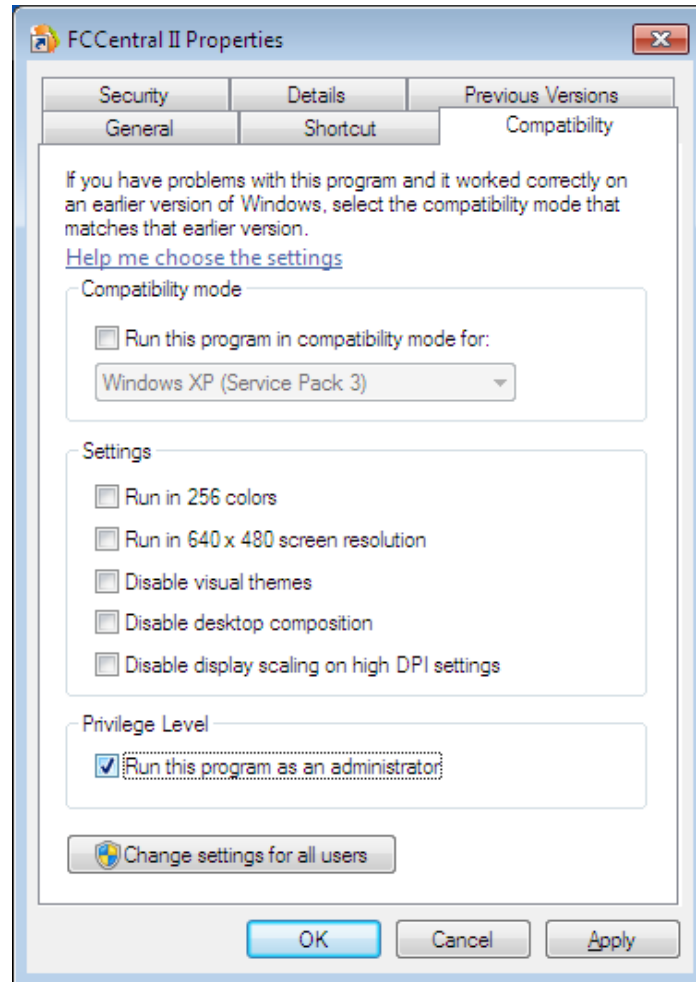
< FC Reviewer II Menu Tree >

## 2. Administrator authority settings in Windows 7 & 8

1) In the desktop, place the mouse pointer on the icon which you want to change authority, right-click the icon and the pop-up menu will appear. Click "Properties" and switch to setting window.



2) If you can see the setting window as follows, click "Compatibility" tab, check "Run this program as an administrator" in "Privilege Level", and click "OK" button to apply changes. Then it will be executed with administrator authority when you click the icon.



## 3. Q & A

### **1) Things to check when the connection with FC Central II Program is failed or instable.**

- Check whether LAN or Bluetooth device is connected.
- Check whether IP address and related functions are activated.
- Check fetal monitor and the version of PC S/W
- Check whether Firewall is being used.

### **2) Things to check when the message of lacking memory occurs.**

- Check whether the amount of space is sufficient.

(If the space is insufficient, delete after backup, or delete old study information to secure the space.)

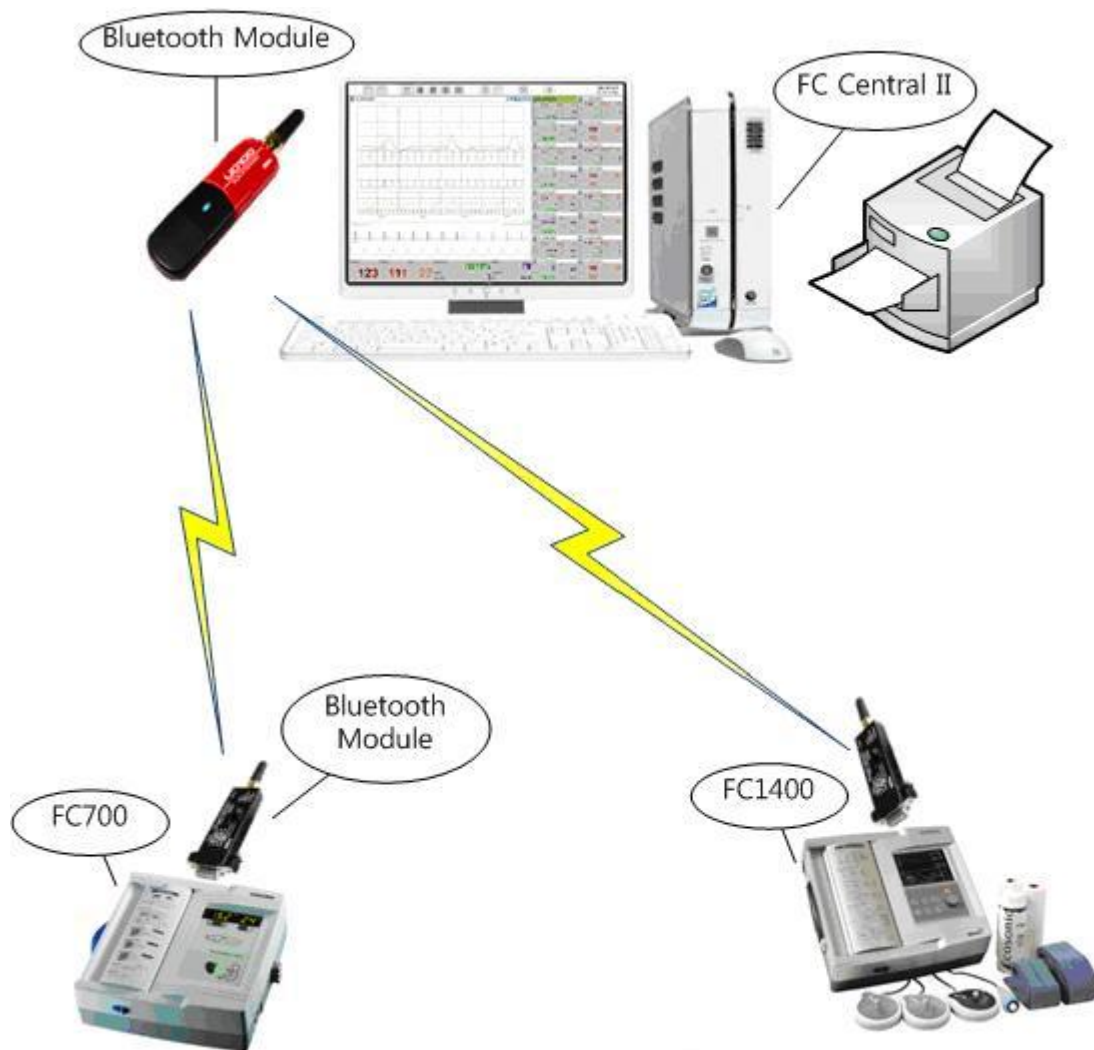
### **3) Things to check when the save button is not seen.**

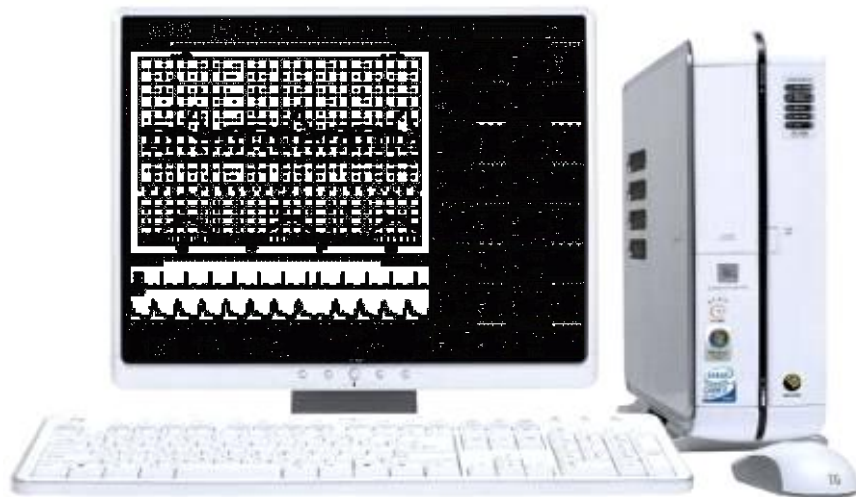
- Check whether the client is in Admit status.

(If it is "Discharge", proceed the Admit process.)

#### 4) Things to check when the save button is not seen.

Bluetooth is only supported in FC700 and FC1400.





Product Name : FC Central II

Bionet Co.,LTD

