

BT Link Manual

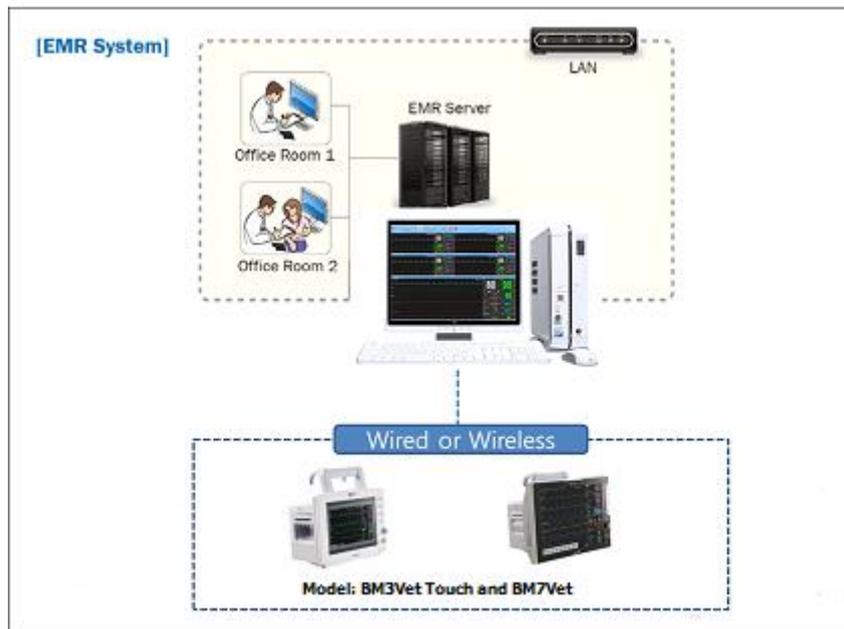
Patient Monitor Central System

Ver. 1.2 – 05/24/2020



Bionet America, Inc.





This manual only includes the basic use of BT Link. For a detailed list of accessories or instruction on how to set up your patient monitor, please refer to your device's user manual.

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NOTE

The terms and functions described in this instruction manual can be modified without notice because of product improvement.
 Copying the whole or the part of the manual is strictly prohibited unless authorized.

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 BT Link

Main functions of BT Link

1.3 Product components

Main features of the product

Program Composition

Hardware Preference

System Requirement

1.1 Checkpoints before use

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- BM7Vet is a trademark of Bionet America Inc.
- BM7LP is a trademark of Bionet America Inc.
- BT Link and BT Link Review are trademarks of Bionet.
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How to reach us

A/S and Technical	Bionet America, Inc. – Customer Service Department
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Support

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E-mail : support@BionetUS.com

Internet

URL : <http://www.BionetUS.com>

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

Warranty Information

- THE PRODUCT IS PROVIDED "AS IS, WHERE IS" AND WITH ALLFAULTS. Bionet America MAKES NO WARRANTIES OF ANY KIND WHATSOEVER, EXPRESS, IMPLIED, ORAL, WRITTEN OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO NON-INFRINGEMENT, TITLE, PATENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTIES ARISING BY CUSTOM, TRADE USAGE, PROMISE, EXAMPLE OR DESCRIPTION; ALL OF WHICH WARRANTIES ARE EXPRESSLY DISCLAIMED BY Bionet America AND WAIVED BY CUSTOMER. Bionet America's representatives are not authorized to enter into agreements outside these Terms or to make any warranties or representations of any kind.

Warning, Caution, Note

For special emphasis on agreement, terms are defined as listed below in this manual.

I. Users should operate the equipment according to all the warnings and cautions.

Warning
To inform that it may cause serious injury or death to the patient, property damage, or material losses

Caution
To inform that it may cause no harm in life but lead to injury

Note
To inform that it is not dangerous but important “note” sign for proper installation, operation, and maintenance of the equipment.

General Precaution on Environment

Be sure to keep at room temperature

1.2 Outline

Introduction to BT Link

BT Link is software for use only with patient monitors which are manufactured by BIONET Co.,Ltd. BT Link (Full Version) can be connected up to 64 patient monitors. This system is able to track and save parameters as well as waveforms. The software will allow you to retrieve as well as register patient information.

Specification

Functions	Description
Monitoring units	Max. 64 units(Full Version) or Max 4 units(Lite Version)
Supported devices	BM3Vet Touch, BM7Vet, BM7LP
View Mode	2 and 4 Channel View Mode (Lite Version) 2,4,8,16 and 32 Channel View Mode (Full Version) (Supported Dual Monitor)
Data Save	Max 10 days
Alarm	Sound and Display
Communication type	Bidirectional communication with patient monitor
Reviewer	Alarm View, Wave View, Graphic Trend View, Tabular Trend View, ECG View
Print and Report	Supported Preview and Print (5 kinds of Report Forms)
Supported Languages	English, Italian, French, Spanish, German, Chinese, Russian, Polish, Czech, Turkish, Romanian, Portuguese, Bulgarian, Korean

1.3 Product Component

Main features of the product

BT Link is software developed by Bionet America Inc in order to provide a centralized way of viewing data from multiple Bionet monitors.

Program Composition

BT Link consists of two different programs:

- 1) BT Link, which implements the server functionality.
- 2) BT Link Review, which provides access to the local patient database for easy evaluation of data post monitoring.

System Requirement

The minimum system requirements to run BT Link are below.:

	Minimum Requirement	Recommended Requirement
OS	Windows XP	Windows XP (32bit) or Windows 7, 8 ,10(32/64bit)
CPU	Core2Duo 1.86GHz	Core2Duo 3.0 GHz or more
RAM	2GB	3GB or more
Monitor	19 inches	24 inches or more
Graphic Card	VGA RAM 256 MB 1600 x 900	VGA RAM 512MB or more 1920 x 1080
HDD	500 GB	1 TB or more
LAN	10 Mbps	100 Mbps or more
USB	2 ports	3 ports or more

Installation

1. Installation of BT Link

1.1 Installation in Windows 7,8,10

2. Uninstallation of BT Link

2.1 Uninstallation in Window XP & Windows 7

3. Execute / Close BT Link

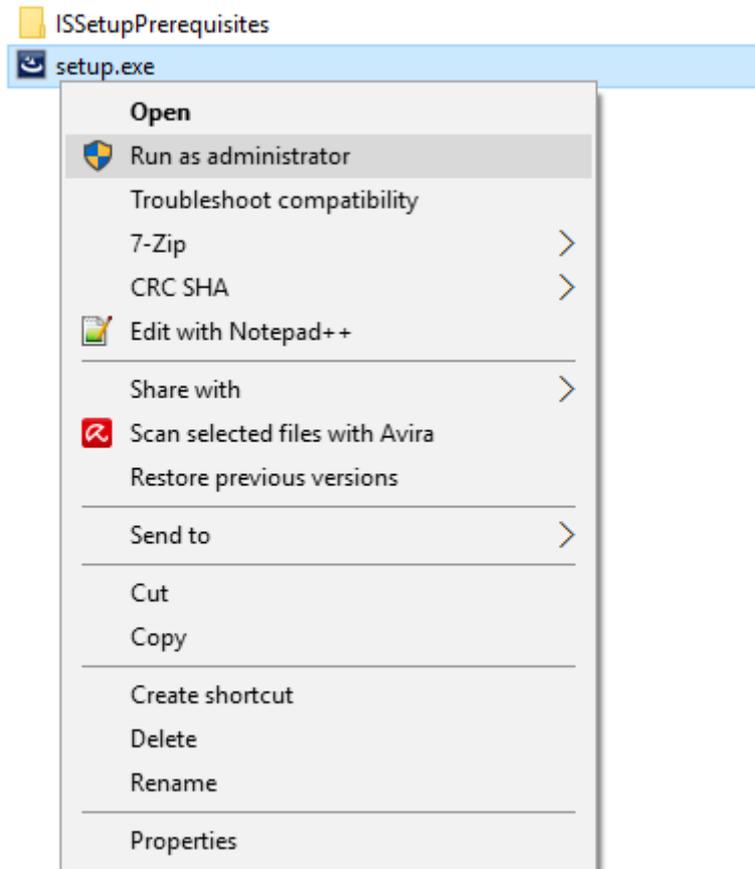
3.1 Execute BT Link Program

3.2 Close BT Link Program

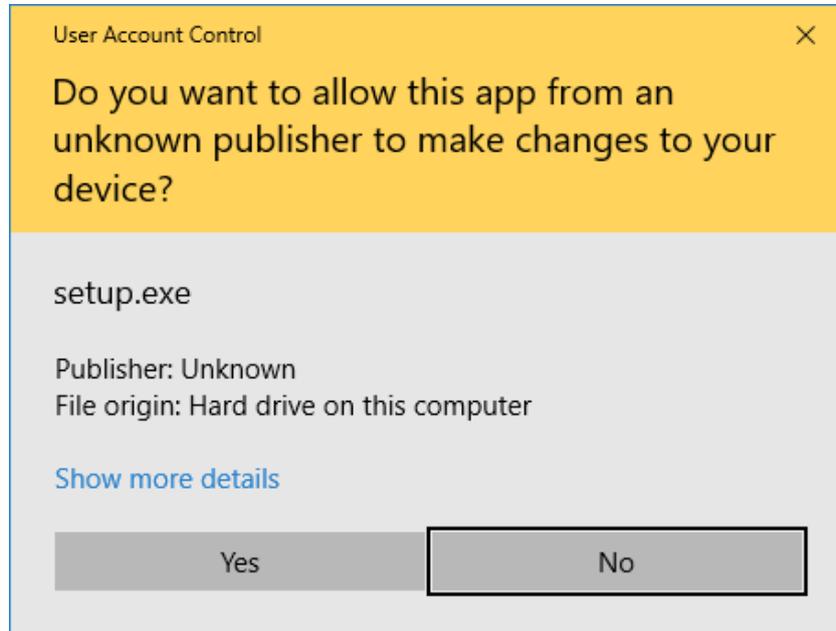
1. Installation of BT Link

1.1. Installing on Windows 7, 8, 10

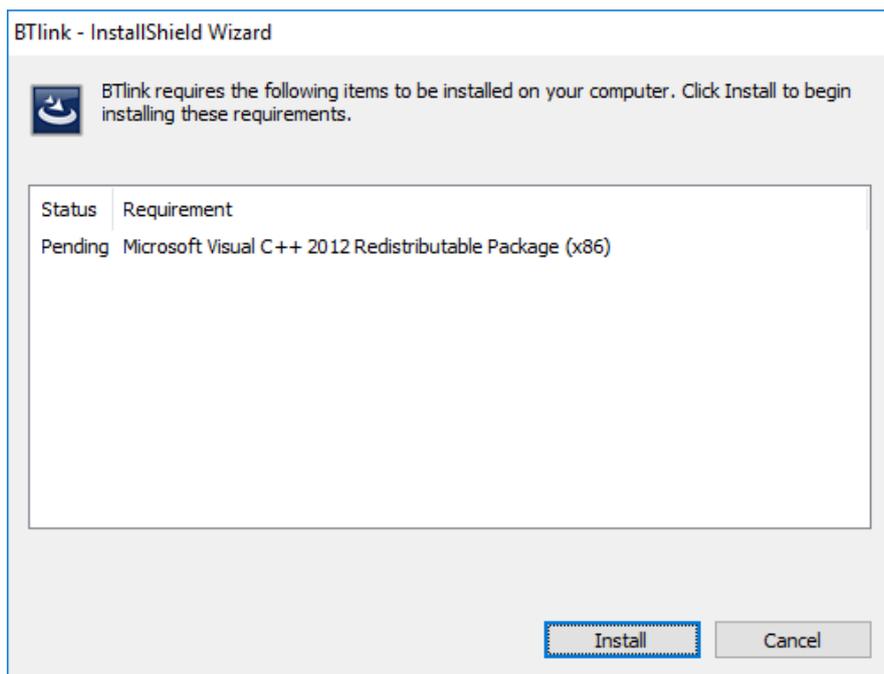
- 1) Run " Setup.exe" as administrator (Right click on setup.exe will show the menu).



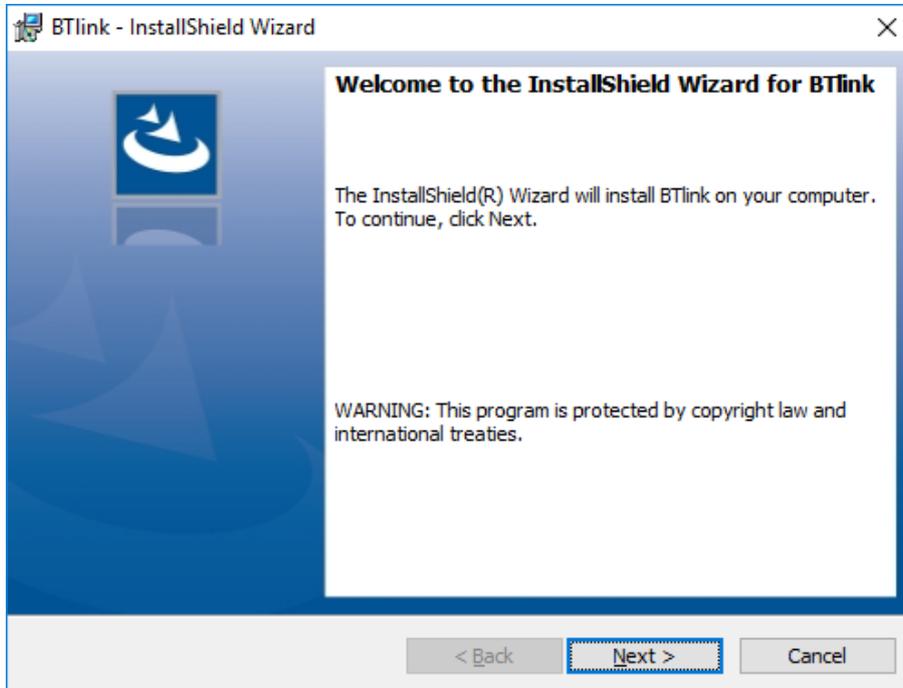
- 2) If window-browser pops up as follows, click “Yes”



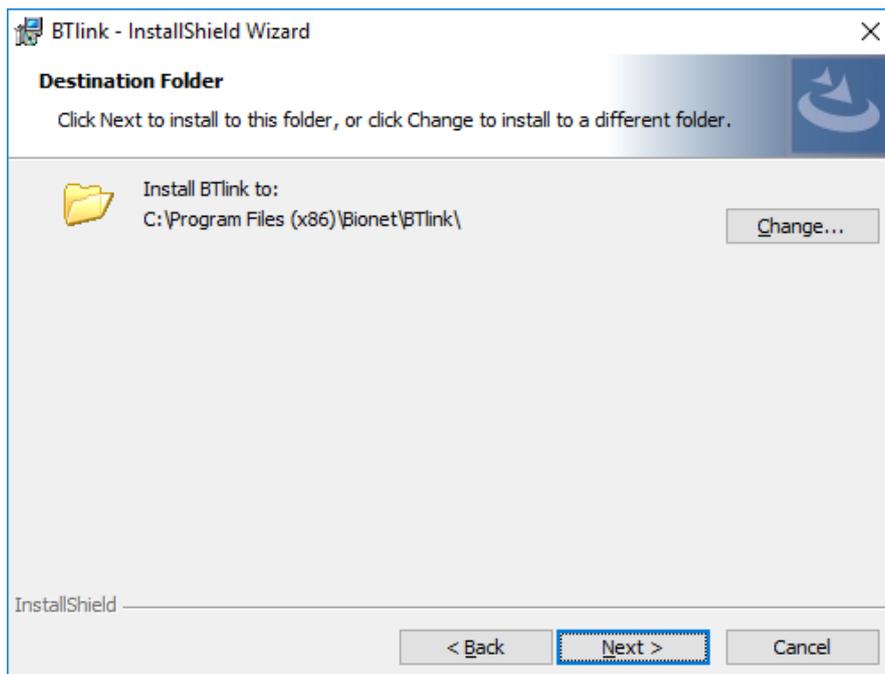
- 3) BT Link installer will look for a Microsoft Visual Studio Packet and if not found, it will prompt the user to install it by pressing “Install”. If the packet is already installed, installer will skip to step 4.



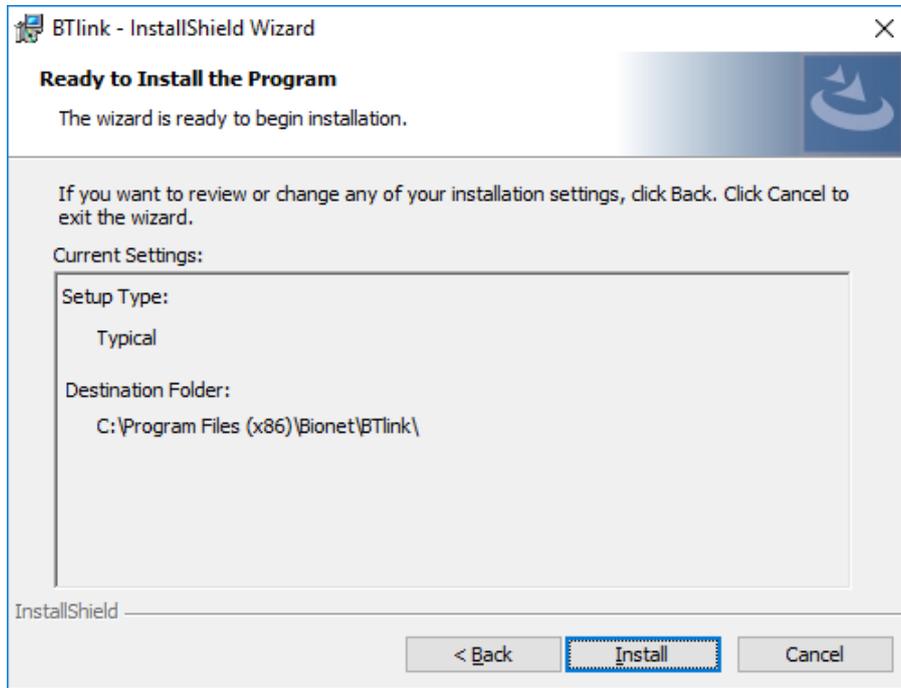
- 4) Once the Install Wizard appears, click “Next” to start the installation setup.



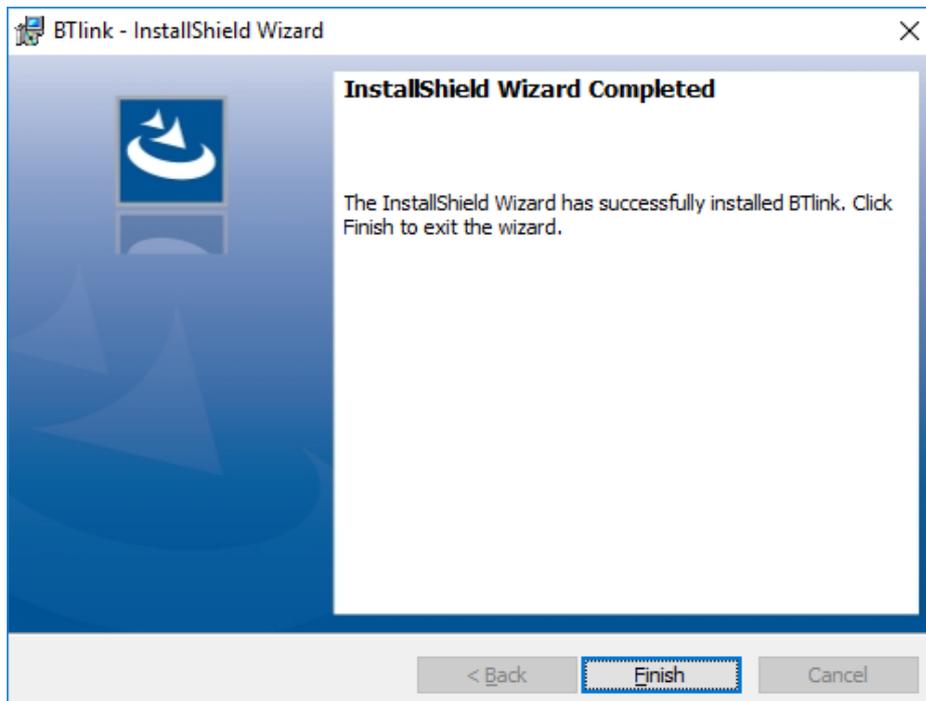
- 5) If a new installation location is not needed click on “Next”, otherwise select a new path where to install BTLINK by pressing the “Change...” button



6) Review installation setup and if correct click on "Install"



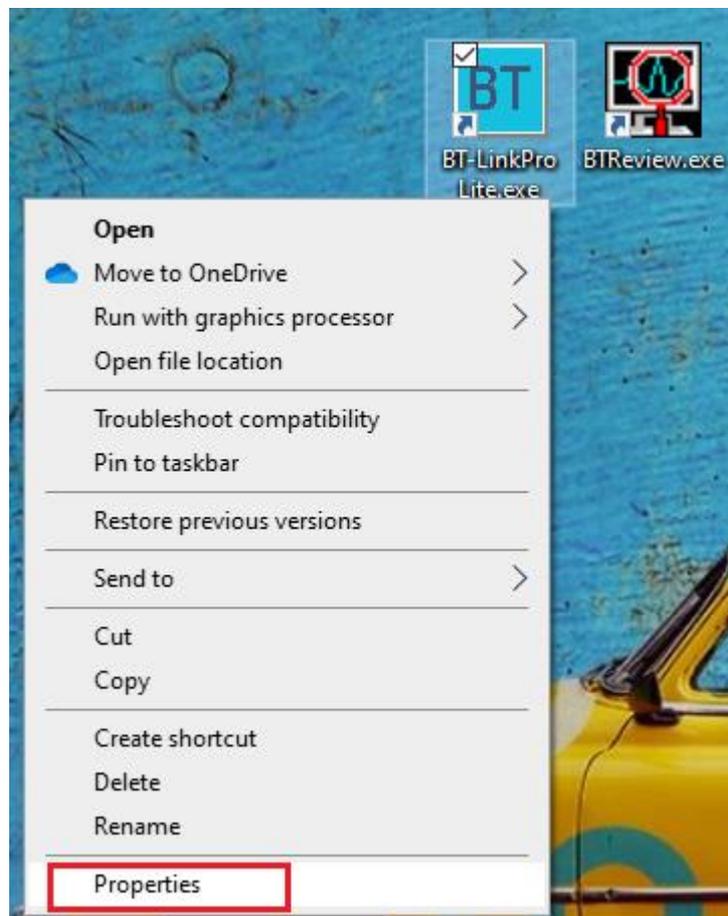
7) Once the installation is complete, click on "Finish" button.



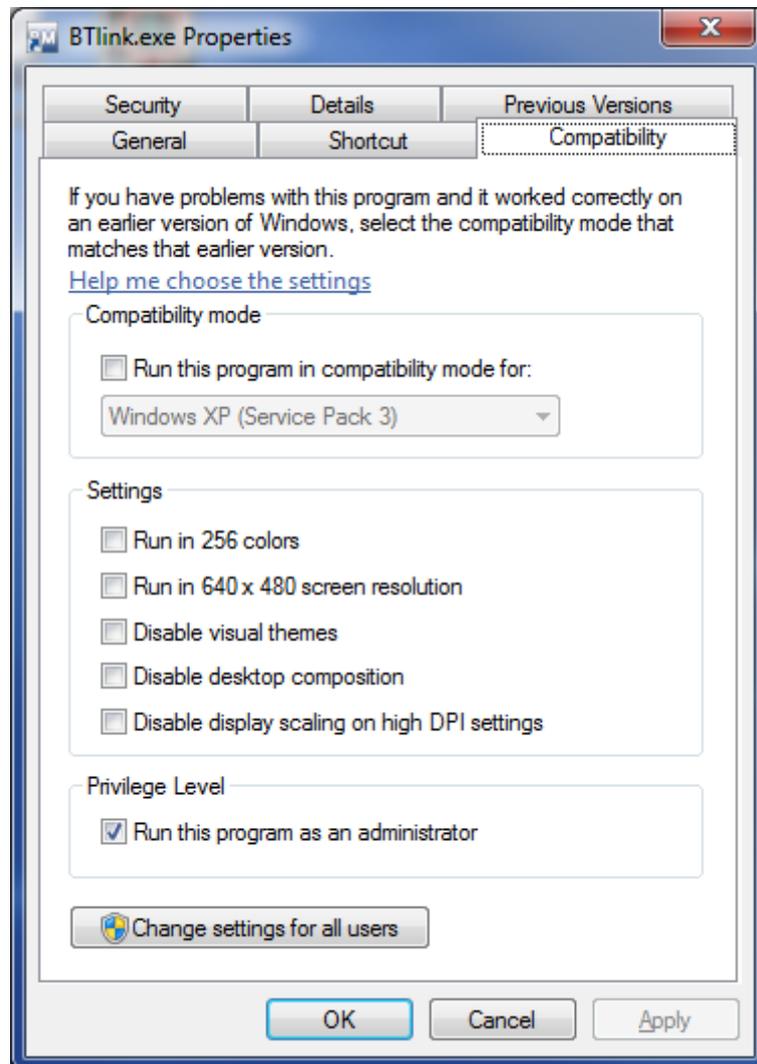
- 8) If installation is successful, you will see the “BT-LinkPro(Lite)” and “BT Link Review” Icons on your desktop.



- 9) Before we can run either software, we have to set them up to "Run as an administrator." Right click on each icon and select "Properties".



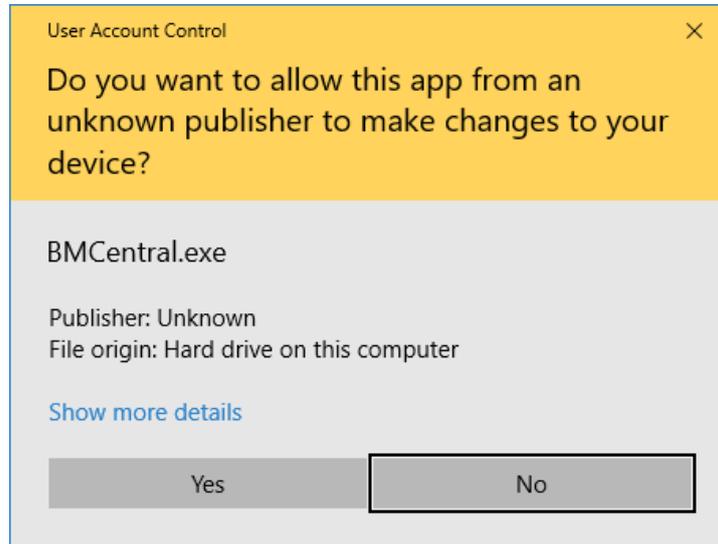
Then check "Run this program as an administrator" as seen in the picture below, after which press "Ok"



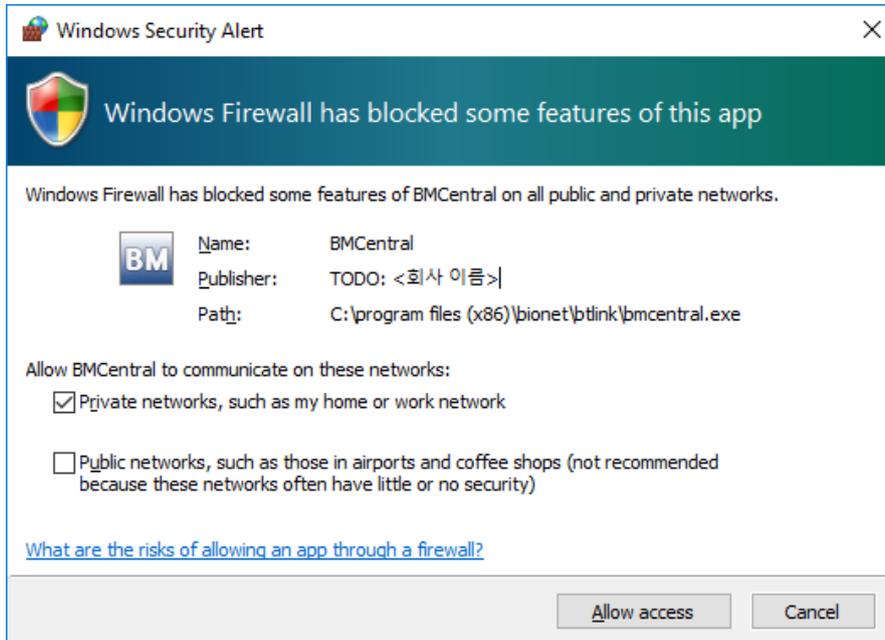
10) Double click on the BT-LinkPro(Lite) ico



11) When the User Account Control window shows up for BTCentral, click "Yes"

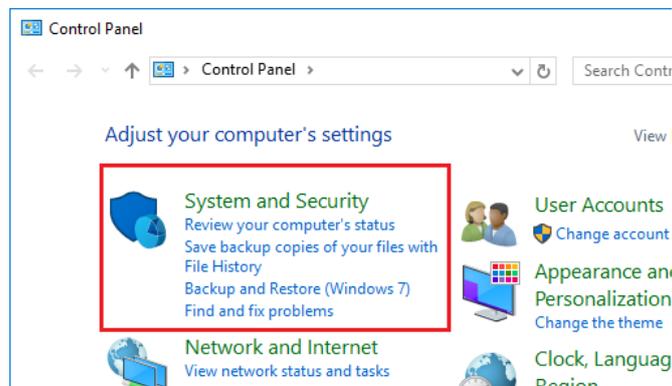


- 12) If this is the first time BT Link is installed, the Windows Security Alert window will be displayed on the screen. Make sure to check the "Private networks, such as my home or work network" option then click on "Allow access". If for some reason this window does not show up or Access was not granted during installation, follow Steps 13 to 18 otherwise you are done.

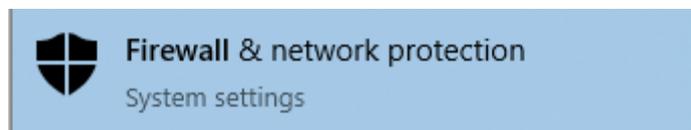


13) Click on “System and Security” in Control Panel (Firewall & Network protection for Windows 10)

Windows 7



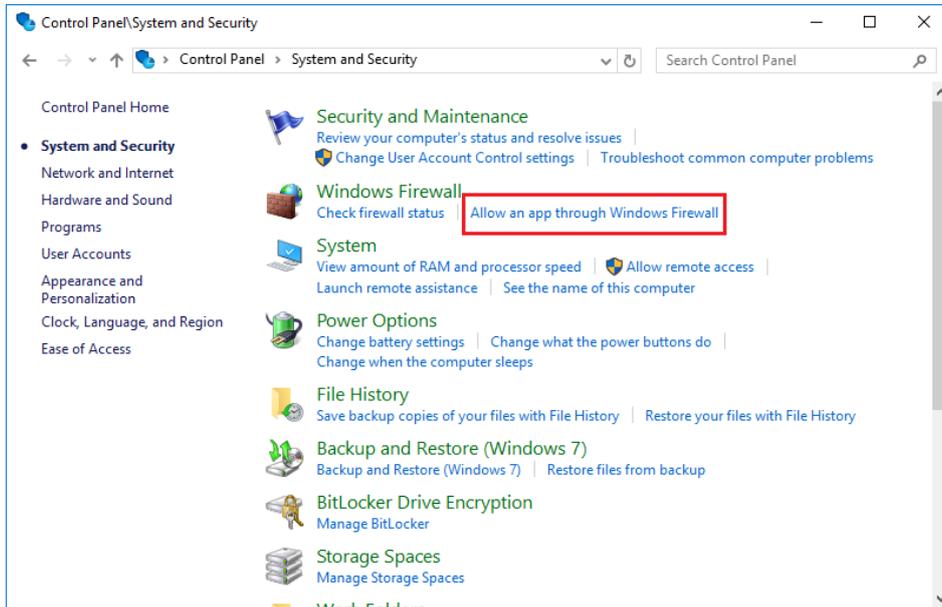
Windows 10



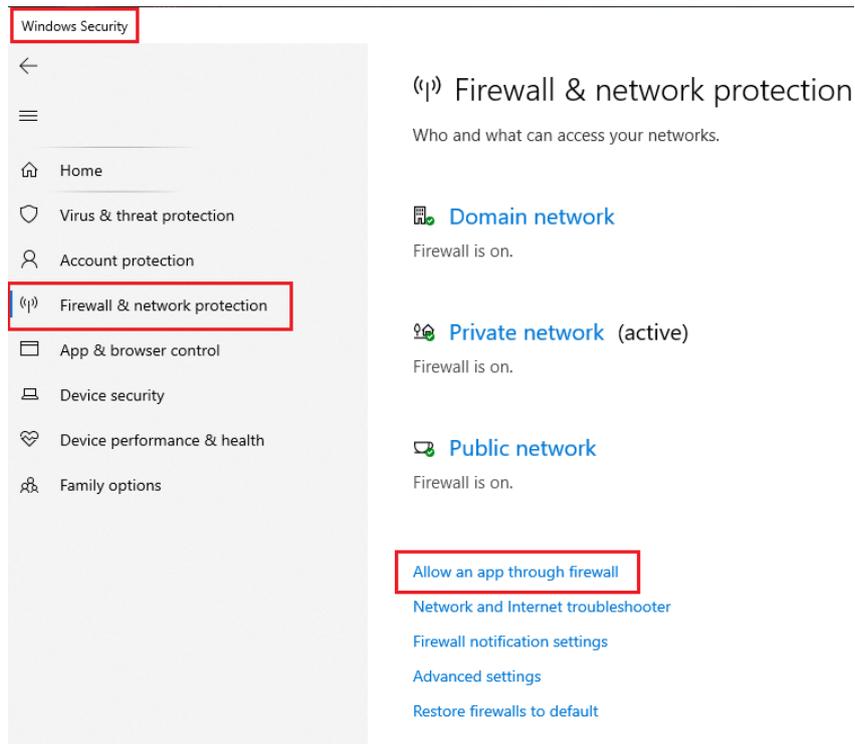
14) Under the Windows Firewall option, click on “Allow an app through Windows Firewall”

Windows 7

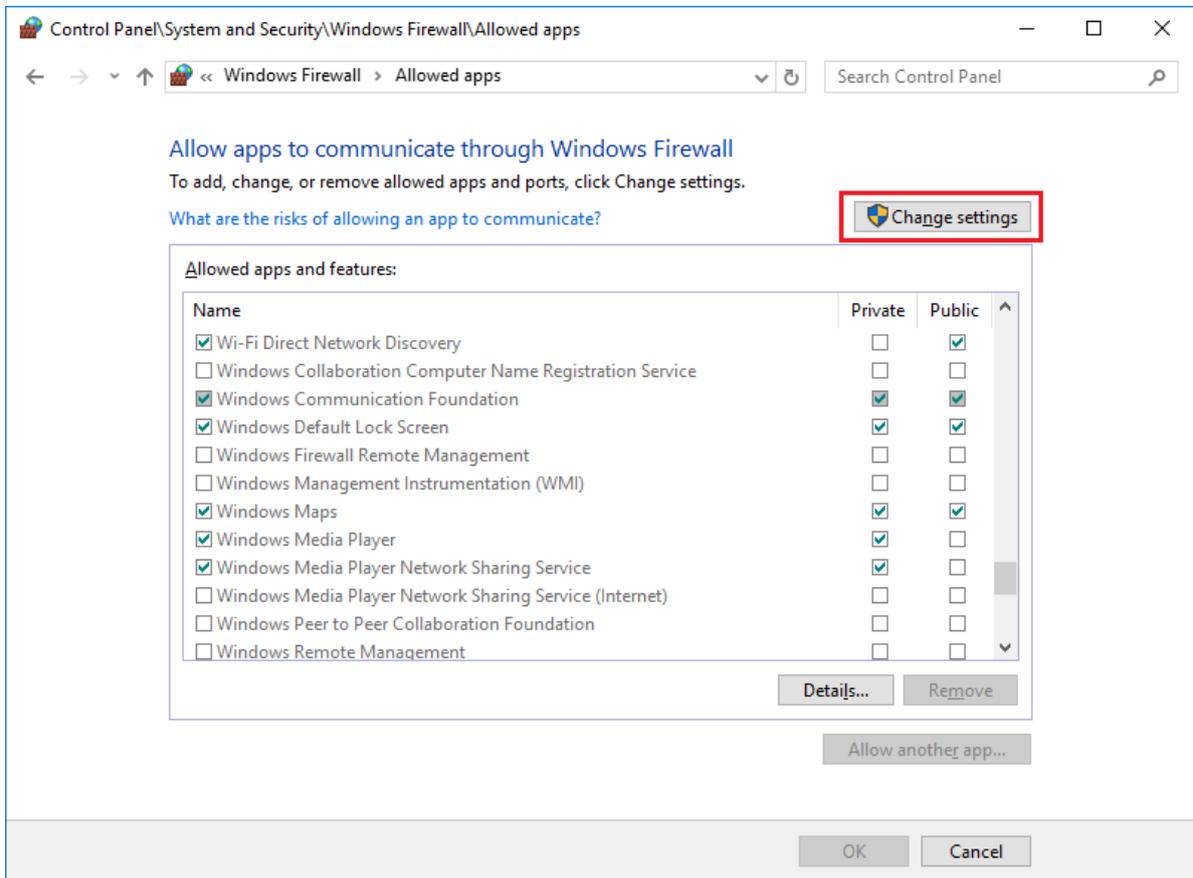
BT Link Manual



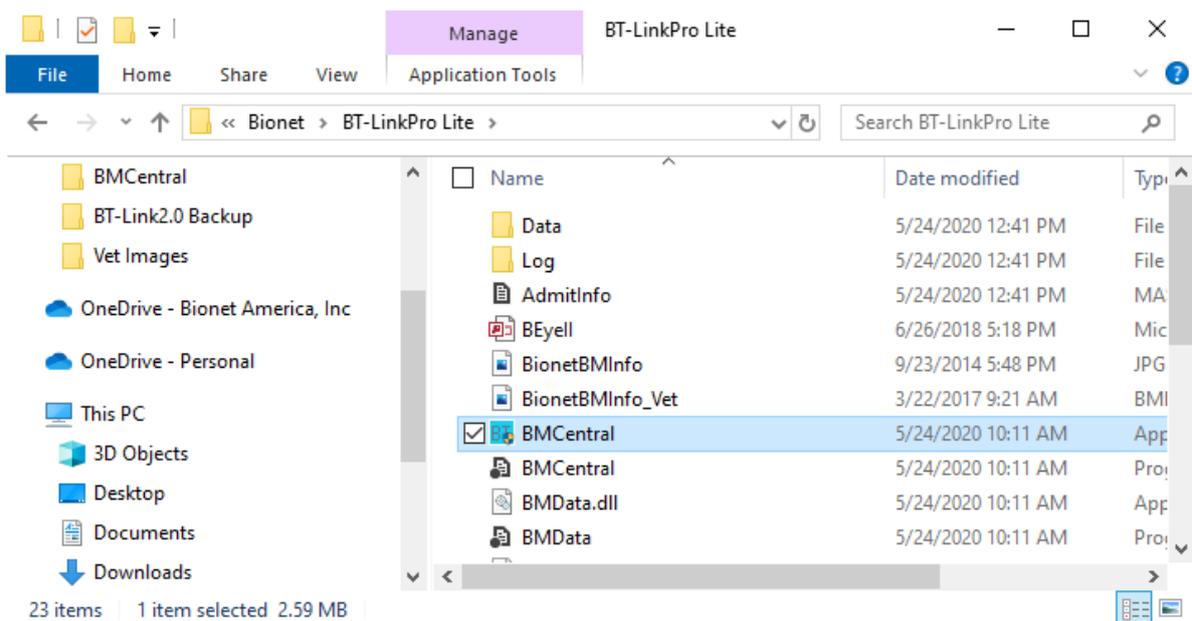
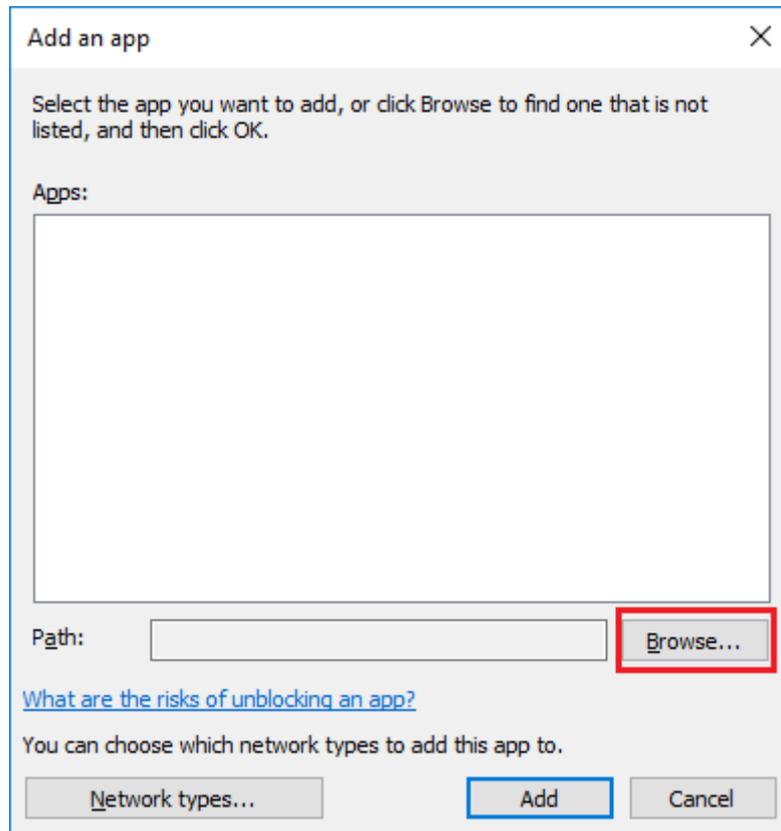
Windows 10



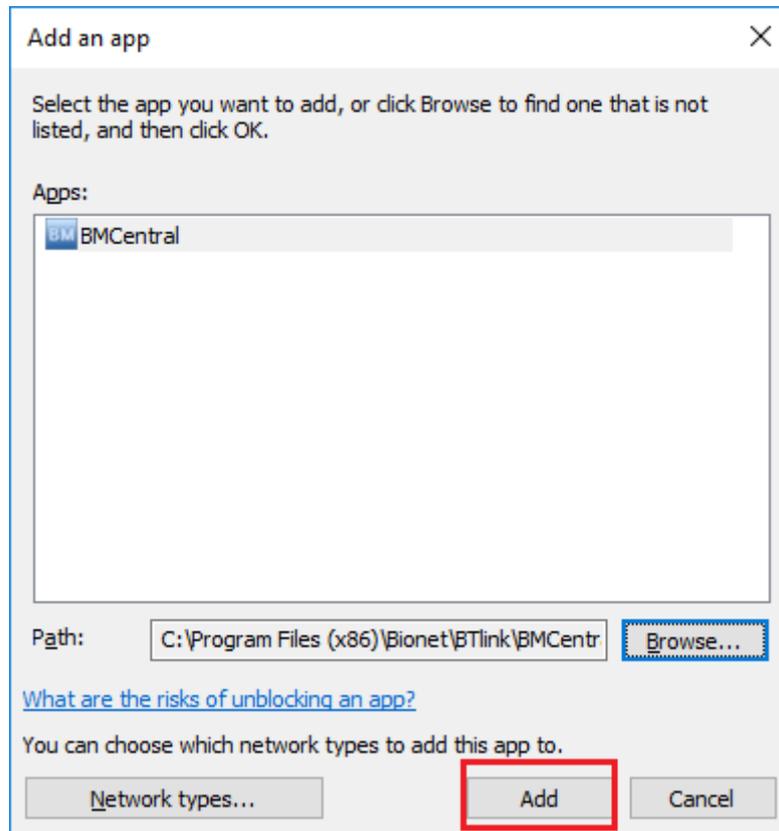
- 15) In the Allowed apps window, first click on “Change settings” button. Once done, the “Allow another app” button will become available and now you can click on it.



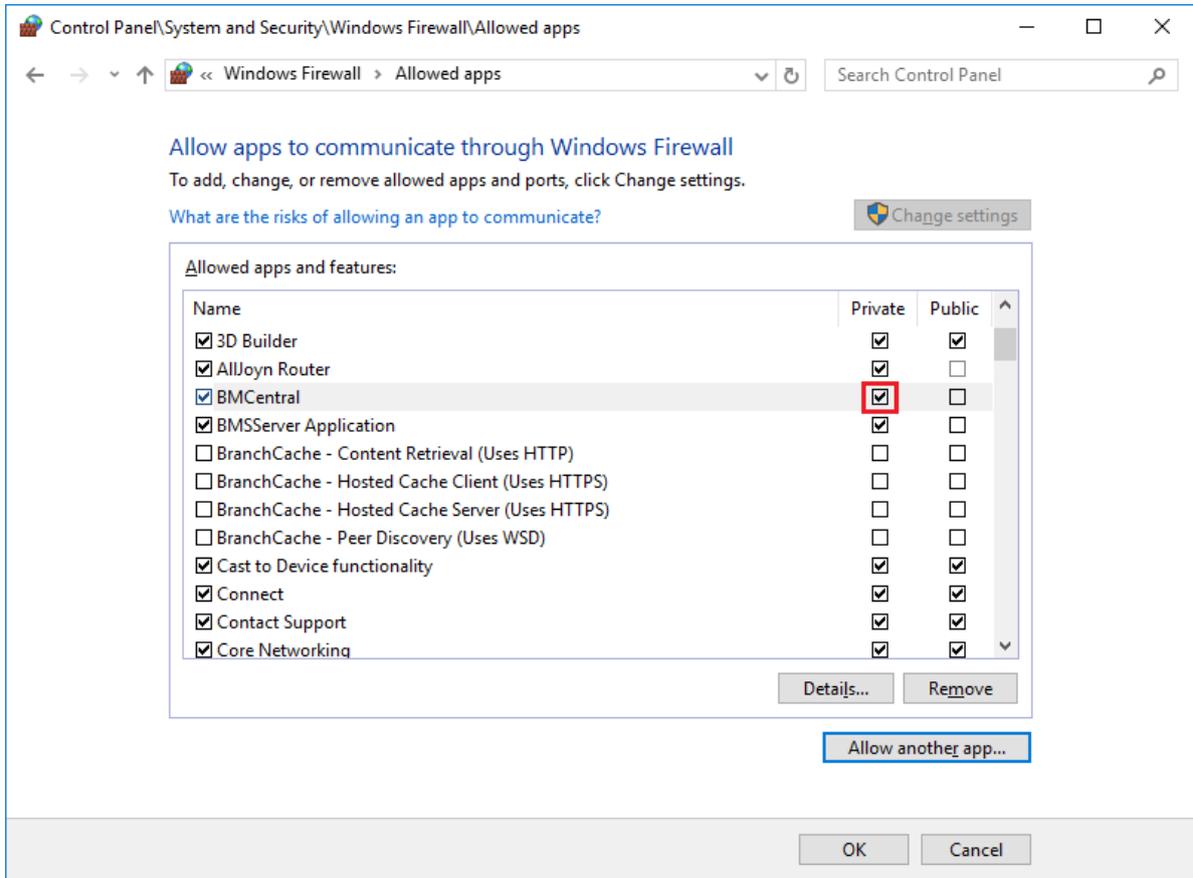
- 16) The “Add an app” window will now be displayed. Press on the “Browse” button and navigate to the folder where BT Link was installed. If the path was not changed during installation, the default is: **“C:\Program Files (x86)\Bionet\BTLink”**. Select **“BMCentral.exe”** and press **“Open”**



17) Make sure BMCentral is selected and click on “Add”



- 18) Before pressing “OK” in the Allowed Apps window, please make sure that BMCentral was added to the list as well as the Private Checkbox is selected and in the picture below. We do not recommend allowing access to public networks.



Caution

Please make sure that there is enough free space on your computer such that BT Link can successfully save patient data. When running BTLINK user can select the location where all the

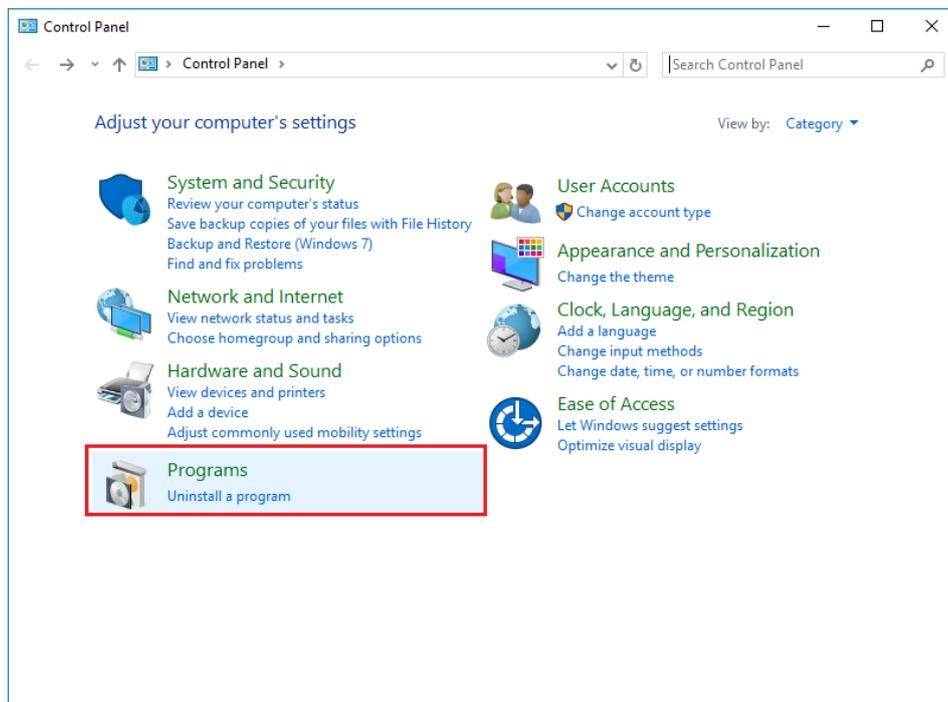


data can be saved by clicking on the settings icon then go to System -> System Settings

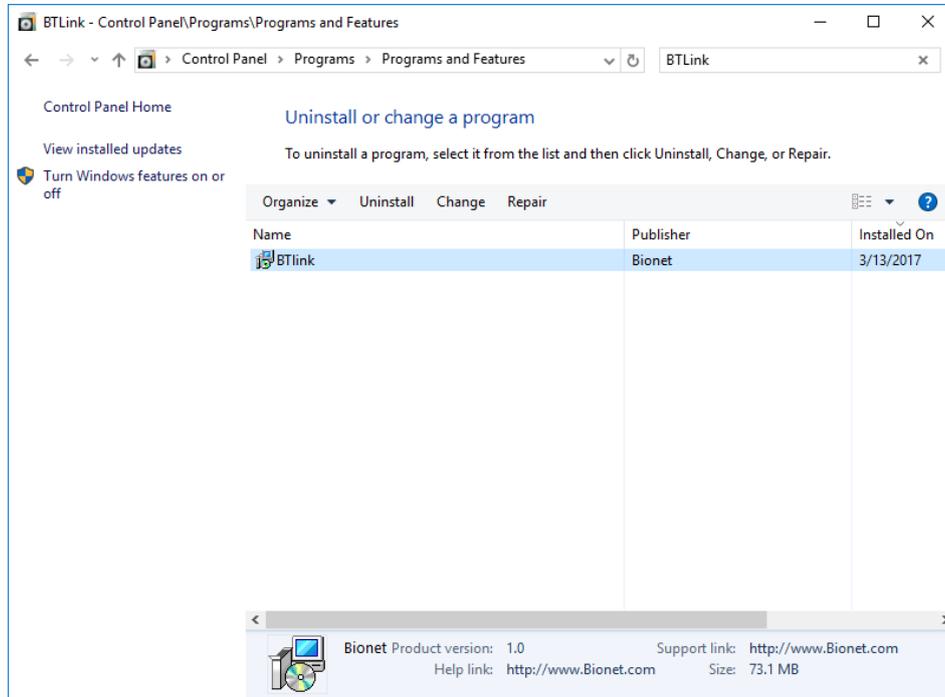
2. Uninstallation of BT Link

2.1. Uninstallation in Window XP & Windows 7, 8 and 10

- 1) Back up the Data Base file, named "BEyeII.mdb", located in "C:\Program Files(x86)\Bionet\BTLink\Data"
- 2) Open up Control Panel and click on "Uninstall a program" from under Programs category



3) Then, select “BT Link”. Click “Remove/Modify” or “Uninstall” button.



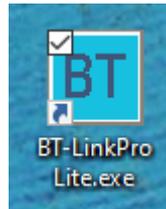
Caution

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

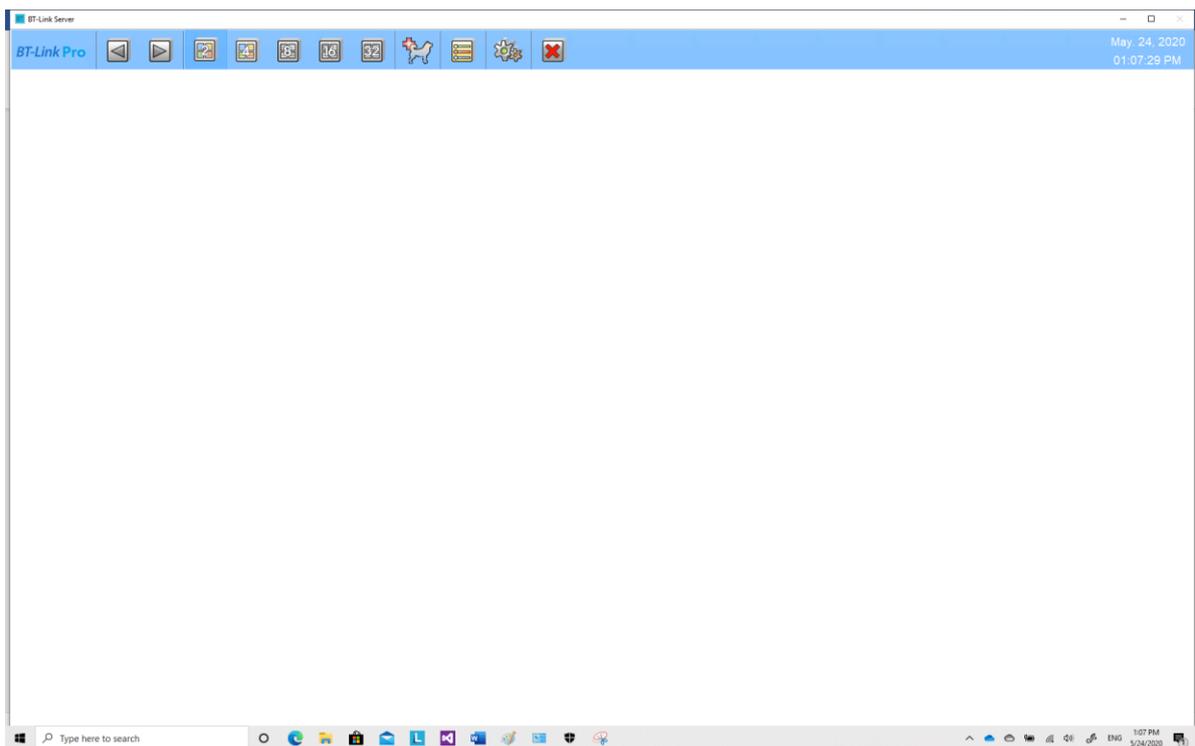
3. Execute / Close BT Link

3.1. Execute BT Link

- 1) Double-click "BT LinkPro (Lite)" Icon on Desktop.



- 2) This is basic design of BT Link.

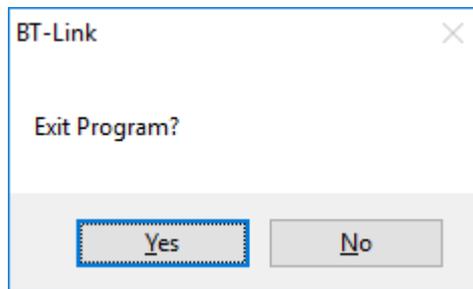


3.2. Close BT Link

- 1) If you want to close BT Link program, click the close button indicated below.



- 2) When the dialogue for closing the program appears, click "Yes" button.



Caution!

Before closing BT Link program, it is recommended that you should stop real time data recording. Data might be deleted.

How to use

1. Basic functions of the program

1.1 BT Link Structure

1.2 Main Menu

1.3 Client Window

2. Operation of Program

2.1 Minimization/Maximization of Program Window

2.2 Channel layout and display

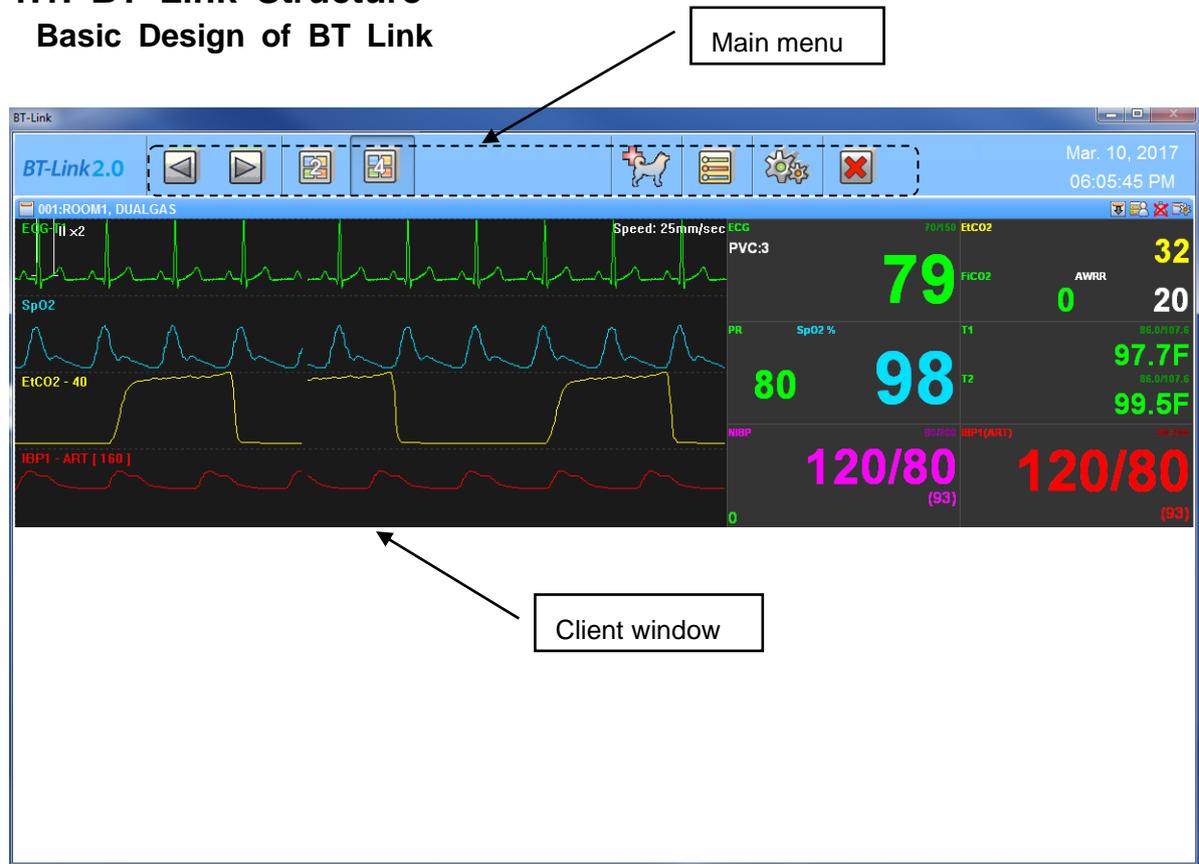
2.3 To manage patient information

2.4 Preference Setting

2.5 Client Window Menu

1. Basic functions of the program

1.1. BT Link Structure Basic Design of BT Link

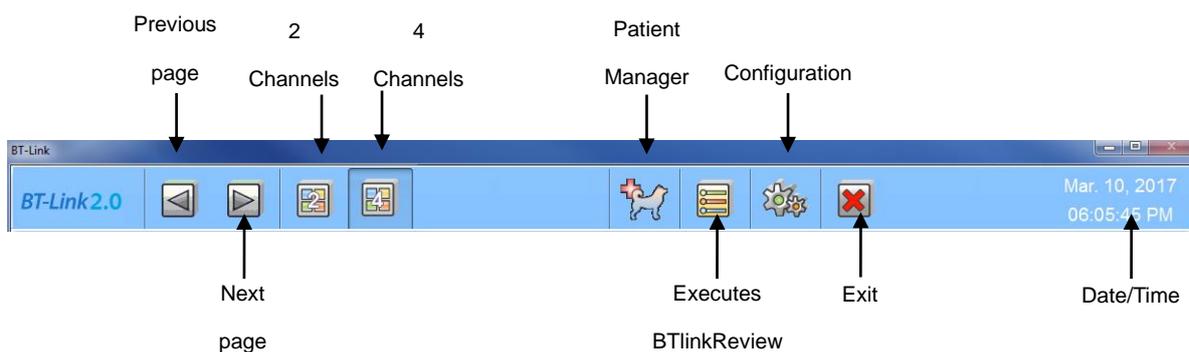


Main Menu

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 a patient monitor is connected to BT Link. Each individual patient monitor will have their own dedicated client window. You can check the monitor's parameters and waveforms in real time and remotely control the monitor settings. 1.2. Main Menu



Previous / Next Page

To shift page back and forth.

(If the end of data is reached in either direction, the respective button will be disabled.)

2 Channels

To select the number of patient monitor's data being displayed on the screen.

Patient Manager

Register patient information.

Executes BTLINKReview

Opens up BT Link Review in order to access saved patient data from local database.

Configuration

Manage BT Link software settings.

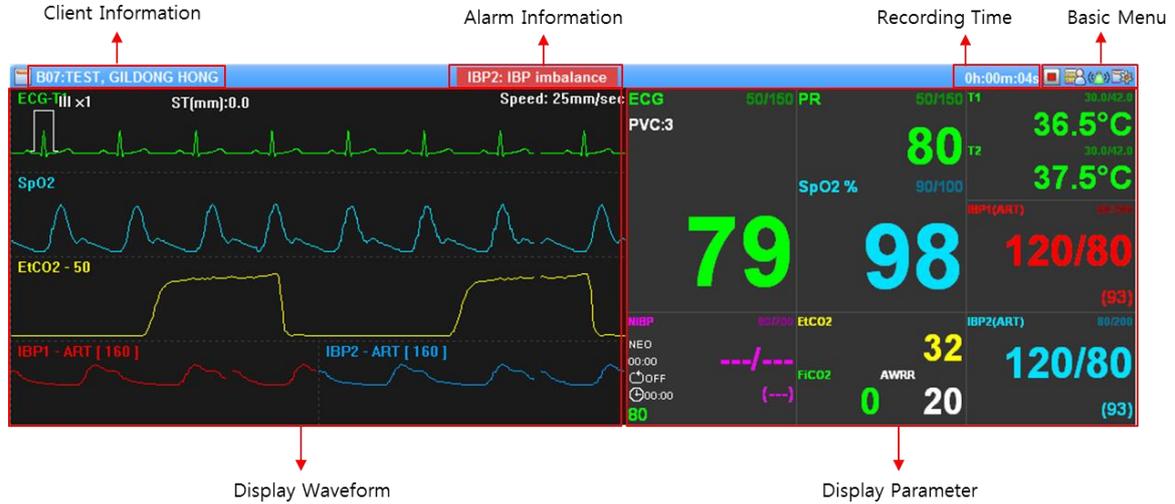
Exit

Quits BT Link software.

Date/Time

Displays current date and time.

1.3. Client Window



✓ **Client Information**

This displays patient information from the monitor.

The message format is as follows : “Bed number: Unit name, Patient name”

✓ **Alarm Alert**

This displays any type of alarm information from the monitor.

✓ **Recording Time**

This displays the total time spent on recording real time data from patient monitor.

✓ **Basic Menu**



: Admit/Discharge patient to each patient monitor and to the dedicated BT-Link client window of the monitor. Manage patient information from BT-Link patient database.

(After admitting a patient, record button will appear on the client window bar.)



: Click this button to start recording (This button means that currently BT-Link is not recording any data)..



: Click this button to stop recording (This button means that currently BT-Link is recording

data)..



: Alarm sound is "ON". Click this button to deactivate alarm..)



: Alarm sound is "OFF". Click this button to activate alarm.



: Settings for client environment.



: Closes client window. If connection with monitor is lost, this button will be enabled.

✓ **Display Waveform**

This section of the client window displays the waveforms /bio-signals from patient monitor in real time.

✓ **Display Parameter**

This section of the client window displays the numerical data obtained from each patient monitor.

2. Operation of Program

2.1. Minimization/Maximization of Program Window

When the BT Link window mode is set as a window mode, the maximization/minimization function can be used.

Screen Return

If BT Link is minimized, the icon will be automatically hidden in Start menu bar. In order to display BT Link on the screen again, left click on "Show hidden icons" from Start menu bar and right click on the BT Link icon and select show.



Register a new patient

- 1) Click "Patient Manager" from Main Menu.
- 2) Click "Add New" button.

The screenshot shows the 'Patient Manager' window. It has a search section with fields for Patient ID, First Name, Last Name, Gender, and Registration Date. The 'Add New' button is highlighted with a red box. Below the search section is a table with columns: ID, Name, Registration Date, Gender, Birthday, Age, Height, Weight, and Comment. The first row contains the data: P01, PARK SUNGJIN, 2015-05-14, Male.

ID	Name	Registration Date	Gender	Birthday	Age	Height	Weight	Comment
P01	PARK SUNGJIN	2015-05-14	Male					

Input patient information and press "Ok".

The screenshot shows the 'Add Patient' dialog box. It contains input fields for Patient ID (P10), First Name (GILDONG), Last Name (HONG), Gender (Male), Registration Date (2015-05-13), Status (Admit), Birthday (2015-05-13), Height, and Weight. The 'Ok' button is highlighted with a red box.

Deleting patient information

- 1) Click "Patient Manager" from Main Menu.
- 2) Search for patient in question.
- 3) Select patient information from list.
- 4) Click "Delete" button.

The screenshot shows the 'Patient Manager' window. It features a search section with fields for Patient ID, First Name, Last Name, and Gender. There are also buttons for 'Add New', 'Modify', and 'Delete' (highlighted with a red box). Below the search section is a table with columns: ID, Name, Registration Date, Gender, Birthday, Age, Height, Weight, and Com. The first row of the table is highlighted with a red box and contains the following data:

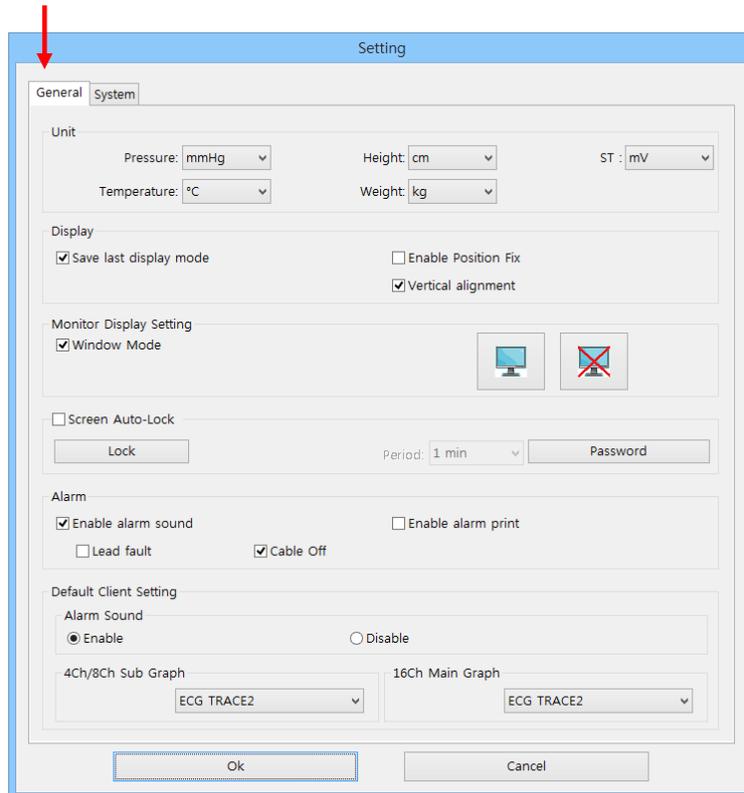
ID	Name	Registration Date	Gender	Birthday	Age	Height	Weight	Com
P01	PARK SUNGJIN	2015-05-14	Male					

2.3. Software Settings

In order to access the “Settings Window”, please click on the “Configuration” button



General Tab



✓ Unit

In this section, the user can select different units of measurement.



✓ **Display**

In this section, the user can select to enable or disable different options for the client window display.

Display

Save last display mode Enable Position Fix

Vertical alignment

✓ **Monitor Display Setting**

In this section, the user can chose to run BT Link in window mode or full screen mode. There is also the possibility to display information on two different computer monitors. Each monitor will display a full screen version of a client window.

Monitor Display Setting

Window Mode

✓ **Screen Auto-Lock**

This provides a screen lock function to inhibit users from making changes in the program without a password. The lock function has a one-time lock mode and cycle lock mode. The cycle lock function blocks the screen, if there is no movement detected from the mouse or no keyboard input for a duration of time designated by the user. There is no initial password so we **HIGHLY** recommend setting up a new password if you plan on using this feature.

Screen Auto-Lock

Lock Period: 1 min Password

✓ **Alarm**

In this section, the user can chose to enable or disable audible alarms from the software. If alarms are disabled here, there will be no audible sound even if alarms are enabled in the client window. The user can also select which types of alarms will be displayed on the screen.

Alarm

Enable alarm sound Enable alarm print

Lead fault Cable Off

✓ **Default Client Setting**

These are the default settings for when a new client window is created.

Default Client Setting

Alarm Sound

Enable Disable

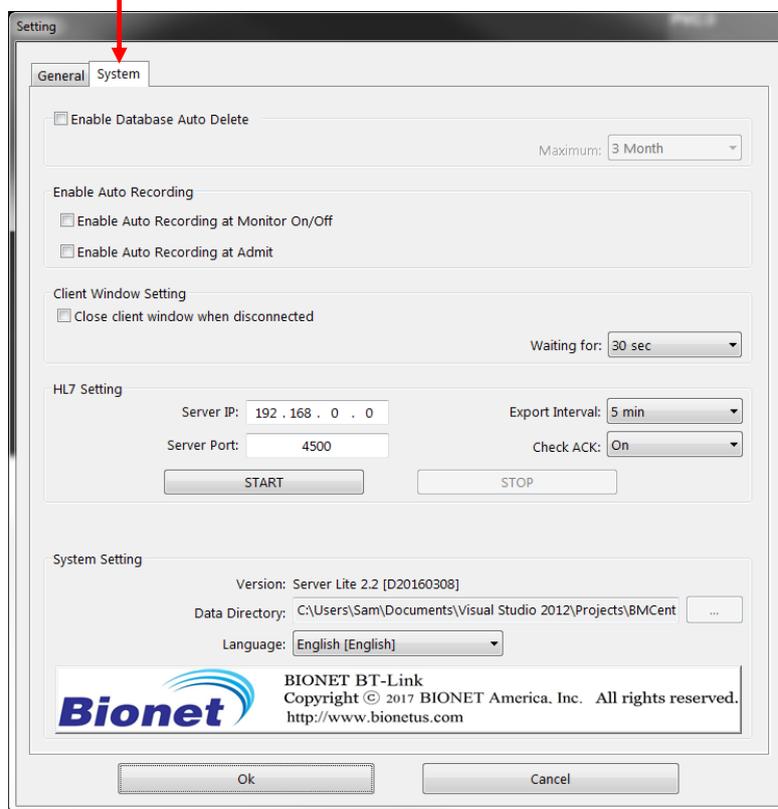
4Ch/8Ch Sub Graph

ECG TRACE2

16Ch Main Graph

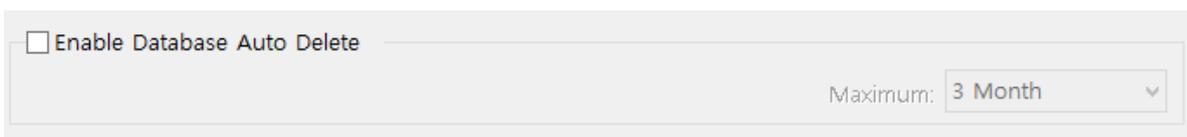
ECG TRACE2

System Tab



✓ Enable Database Auto Delete

If enabled, the local database will be cleared of any information that is outside of the user selected range (I.E. If 1 month is selected, any data older than 1 month will be discarded)



Enable Auto Recording

- **Enable Auto Recording at Monitor On/Off:** If this feature is enabled, the patient monitor will automatically start recording data when powered on and stop data recording when it is powered off. Because of “Admit” of the patient is done automatically, the patient ID will be saved in the form of “Unknown_” + “Bed Number”.
- **Enable Auto Recording at Admit:** If this feature is enabled, data recording will start as soon as a patient is admitted.

Enable Auto Recording

Enable Auto Recording at Monitor On/Off

Enable Auto Recording at Admit

Client Window Setting

If this feature is enabled, the client window will be close after a given period of time if connection to the patient monitor is lost.

Client Window Setting

Close client window when disconnected

Waiting for: 60 sec

HL7 Setting This allows the software to send out data in the HL7 format to an external EMR server at a user defined time interval. The user must input the “Server IP” and “Port” number of the EMR server as well as select if acknowledgment message confirmation is enabled “Check ACK”.

HL7 Setting

Server IP: 192 . 168 . 0 . 0

Server Port: 4500

Export Interval: 5 min

Check ACK: On

START STOP

System Setting

The user can designate a custom path for storing the database as well as select a preferred language.

System Setting

Version: Server Lite 2.2 [D20160308]

Data Directory: C:\Users\Sam\Documents\Visual Studio 2012\Projects\BMCent

Language: English [English]

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Record Start/Stop

Click “Start Recording” Icon  from “client window”. This button will be displayed only after the patient has been admitted.

Once data recording has started, the icon will change to  and by clicking on it again, the data recording will end.



<Data not being recorded>



<Data being recorded>

Alarm Sound On/Off

BT Link is able to receive alarms from the patient monitors that are connected to it and display them on the screen accompanied by audible alarms as well.

By default, the audible alarms will be disabled. By clicking on the Sound Alarm icon , the user will activate audible alarms and the icon will change to . Click again to turn off alarms.



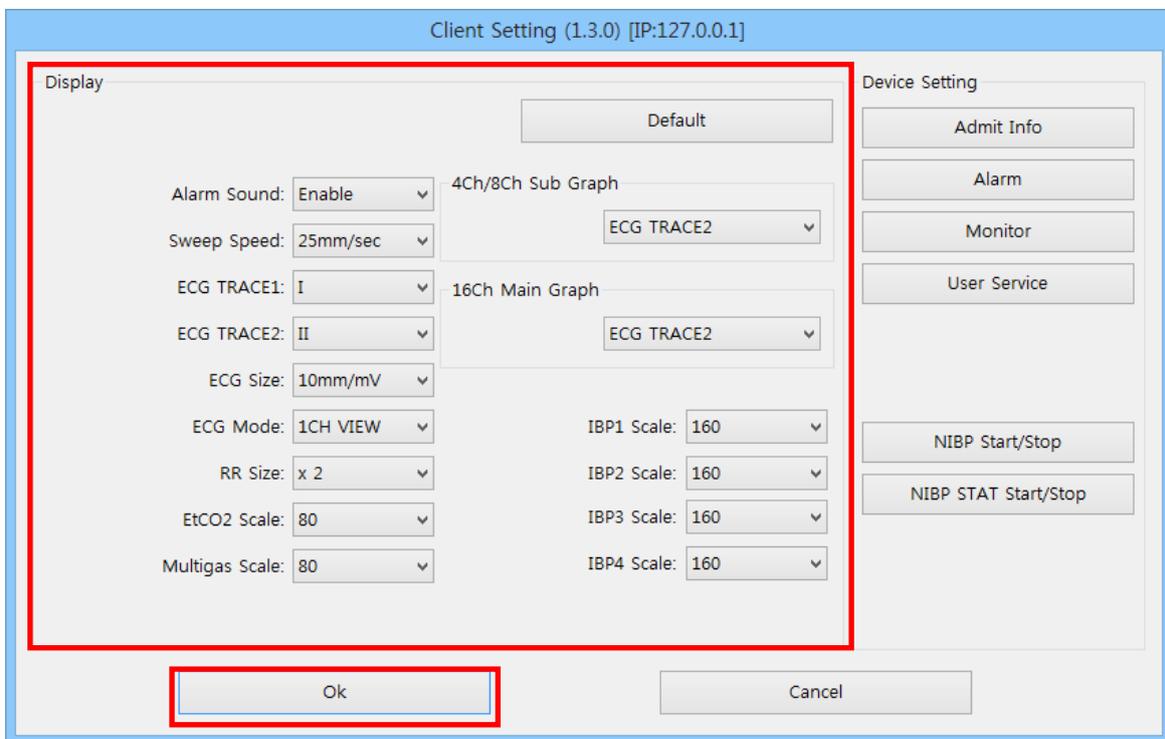
<Audible alarms are turned off>



< Audible alarms are turned on>

Display Setting

- 1) The user can access the client window settings by clicking on the Client Setting Icon .
- 2) The "Client Setting" will be displayed and the user will be able to select what waveforms they will want to be displayed on the client window.
Click "OK" button once done.



Client Setting (1.3.0) [IP:127.0.0.1]

Display

Default

Alarm Sound: Enable ▾ 4Ch/8Ch Sub Graph

Sweep Speed: 25mm/sec ▾ ECG TRACE2 ▾

ECG TRACE1: I ▾ 16Ch Main Graph

ECG TRACE2: II ▾ ECG TRACE2 ▾

ECG Size: 10mm/mV ▾

ECG Mode: 1CH VIEW ▾ IBP1 Scale: 160 ▾

RR Size: x 2 ▾ IBP2 Scale: 160 ▾

EtCO2 Scale: 80 ▾ IBP3 Scale: 160 ▾

Multigas Scale: 80 ▾ IBP4 Scale: 160 ▾

Device Setting

Admit Info

Alarm

Monitor

User Service

NIBP Start/Stop

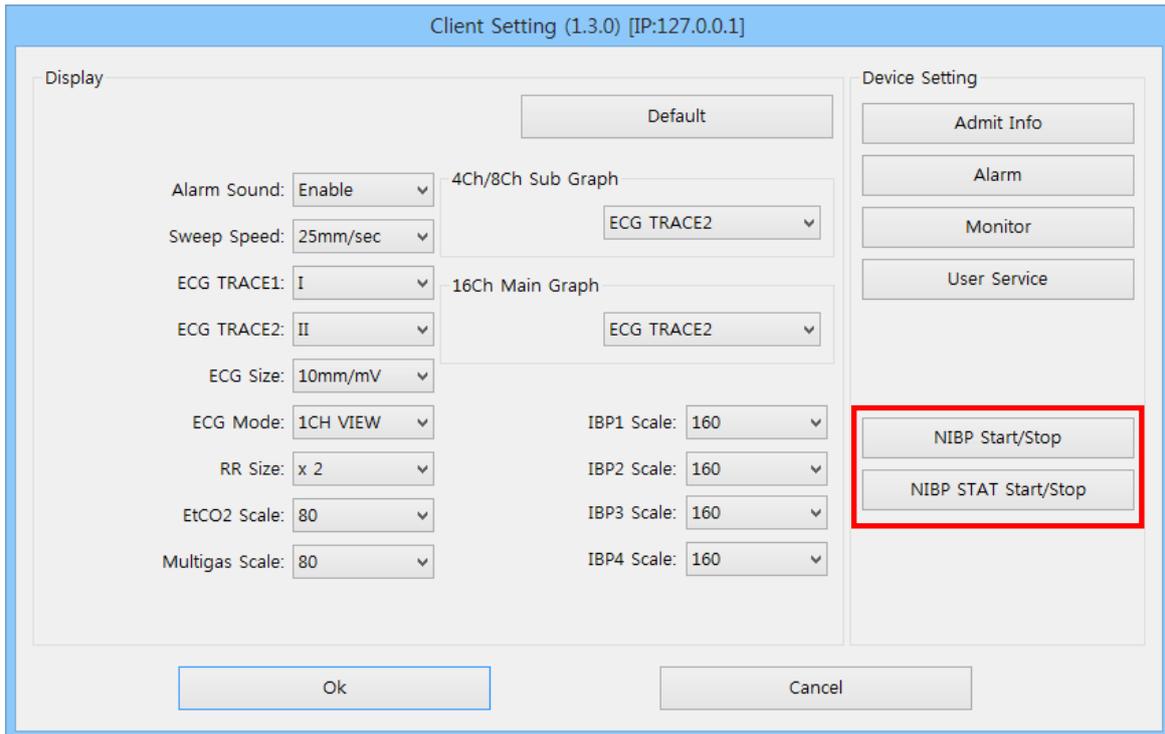
NIBP STAT Start/Stop

Ok Cancel

NIBP Start/Stop

(It only supports Protocol version 1.2.0 and higher.)

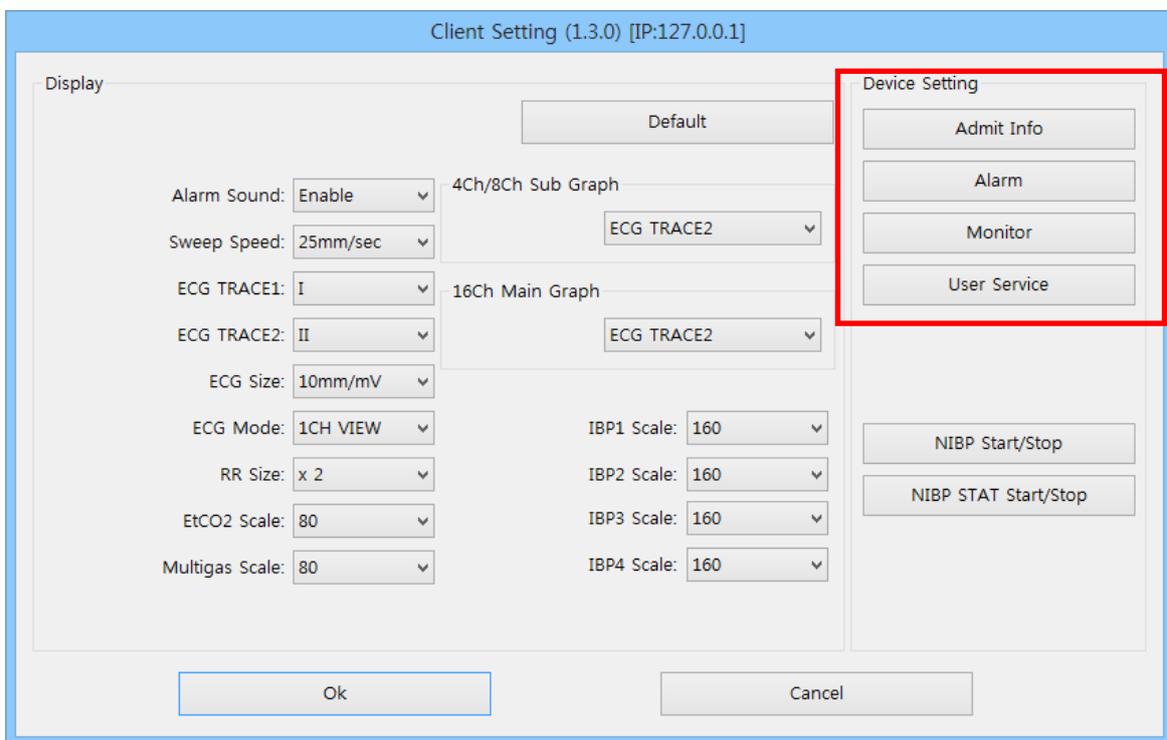
- 1) The user can access the client window settings by clicking on the Client Setting Icon .
- 2) Click "NIBP GO/STOP" button.



Synchronization of Equipment Settings

This function sets or checks the setting information of the equipment remotely.

- 1) The user can access the client window settings by clicking on the Client Setting Icon .
- 2) Once the “Client Setting” window is displayed, in the “Device Setting” section, the user can select which monitor settings they want to change.
- 3) After changing information, click on the “Send” button to complete the changes..



The screenshot shows a 'User Service' dialog box with the following fields and values:

- Model Name: BM5
- Version: 0, 00
- Unit Name: ICU
- Bed Number: 001
- Ac Filter: 50 Hz
- Date: 2000, 1, 1
- Time: 0, 0

Buttons: Send (highlighted), Close

The items that can be changed and checked for each button are as follows.
 (Due to the characteristics of each equipment, some functions can be deactivated.)

A. Admit Info

- Patient ID, Name, Gender, Birthday, Age, Height, Weight

B. Alarm

- Alarm Level, Alarm Range

C. Monitor

- Parameter On/Off, Parameter Display Info.

D. User Service

- Device Type, Device Version, Date/Time, Unit name, Bed number, Filter

BT Link Review

1. Execute / Close BT Link Review

1.1 Execute BT Link Review

1.2 Close BT Link Review

2. BT Link Review Program structure

2.1 BT Link Review Program structure

3. How to use BT Link Review Menu

3.1 BT Link Review Menu

3.2 BT Link Review File Control

3.3 BT Link Review 5 Views

3.4 BT Link Review Print & Preview

3.5 BT Link Review Preferences

1. Execute and Close BT Link Review

1.1. Execute BT Link Review

Use of BT Link Review

BT Link Review is the program for reviewing and analyzing of patient data measured through BT Link. BT Link Review provides multiple different methods for displaying the data stored in BT Link data base for a maximum of 10 days. It also provides the possibility of printing the stored data according to various options.

Execute BT Link Review

There are two ways in which BT Link Review:

- 1) Double clicking on the BT Link Review Icon from the desktop

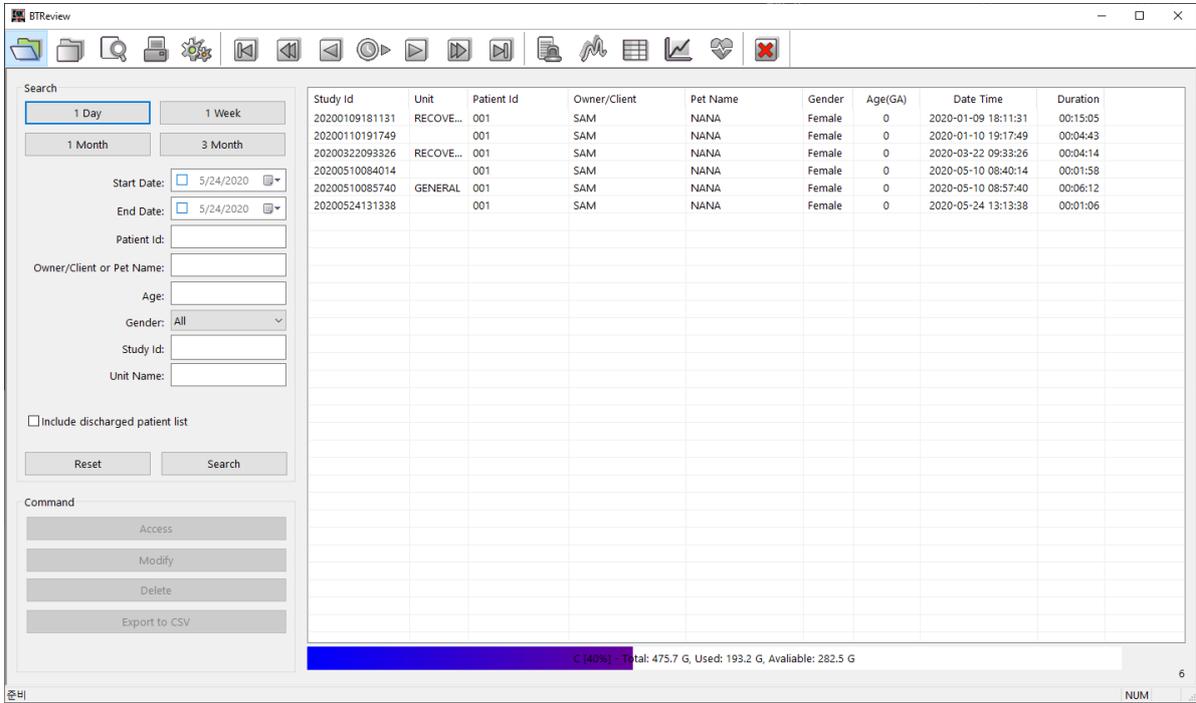


- 2) Pressing on the "BT Link Review" button from within BT Link.



BT Link Manual

Once the program is executed, the window below will appear.

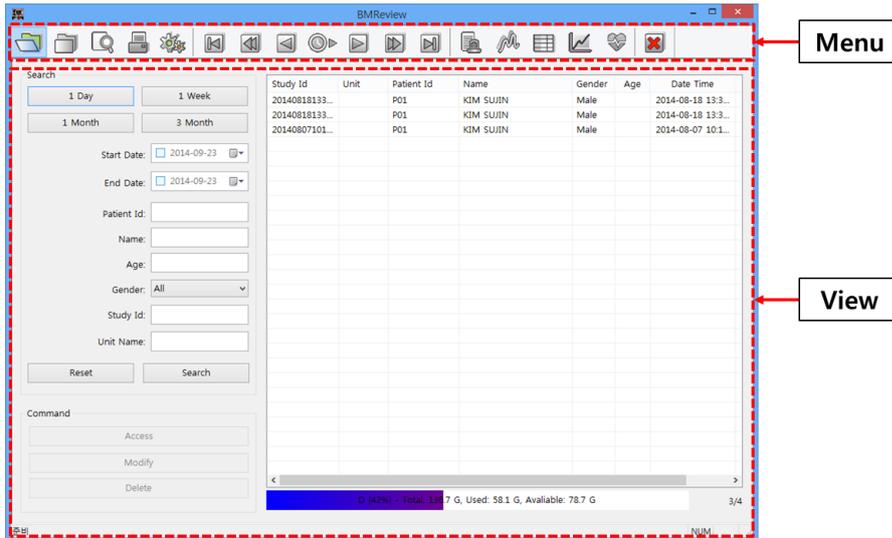


1.2. Closing BT Link Review

To close BT Link Review program, click “Exit” icon marked on the image below, and the program will terminate.



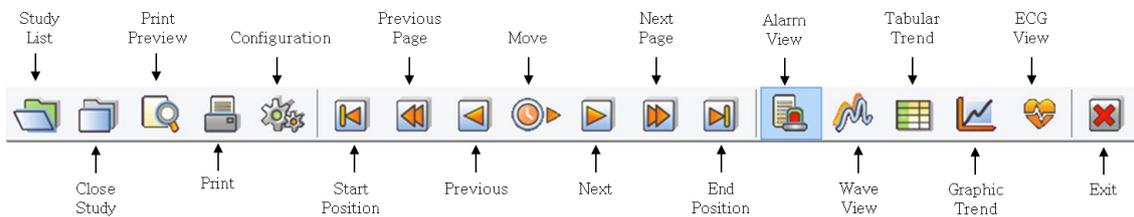
2. BT Link Review Program Structure



3. How to use BT Link Review Menu

3.1. BT Link Review Menu

BT Link Review Menu



✓ Study List

Calls save list from database.

- ✓ **Close Study**
Closes current loaded study.
- ✓ **Print Preview**
Provides a preview for current layout before printing.
- ✓ **Print**
Print out desired files.
- ✓ **Configuration**
Provides access to BT Link Review settings.
- ✓ **Start/End Position, Previous/Next Page, Previous/Next, Move**
Navigates through loaded data.
- ✓ **Alarm View**
Track alarm, graphs and parameters when an alarm is detected / triggered.
- ✓ **Wave View**
Display graphs and parameters.
- ✓ **Tabular Trend**
Display parameters and alarms in a tabular trend.
- ✓ **Graphic Trend**
Display the trends of parameters as graphs.
- ✓ **ECG View**
Display ECG waveform and HR Trend.
- ✓ **Exit**
Quit application.

3.2. BT Link Review File Control

Open File

- 1) Click on "Study List" button.
- 2) In the "Search" section fill out the patient information to search the data base for data or if interested in seeing an entire list, leave all fields unpopulated and search.
- 3) Select a file from the list and press on "Access" to open it.

The screenshot shows the BTReview application window. On the left is a search panel with the following fields:

- Time range: 1 Day (selected), 1 Week, 1 Month, 3 Month
- Start Date: 5/24/2020
- End Date: 5/24/2020
- Patient Id: [Empty]
- Owner/Client or Pet Name: [Empty]
- Age: [Empty]
- Gender: All
- Study Id: [Empty]
- Unit Name: [Empty]
- Include discharged patient list
- Buttons: Reset, Search

Below the search panel is a Command section with buttons: Access, Modify, Delete, Export to CSV.

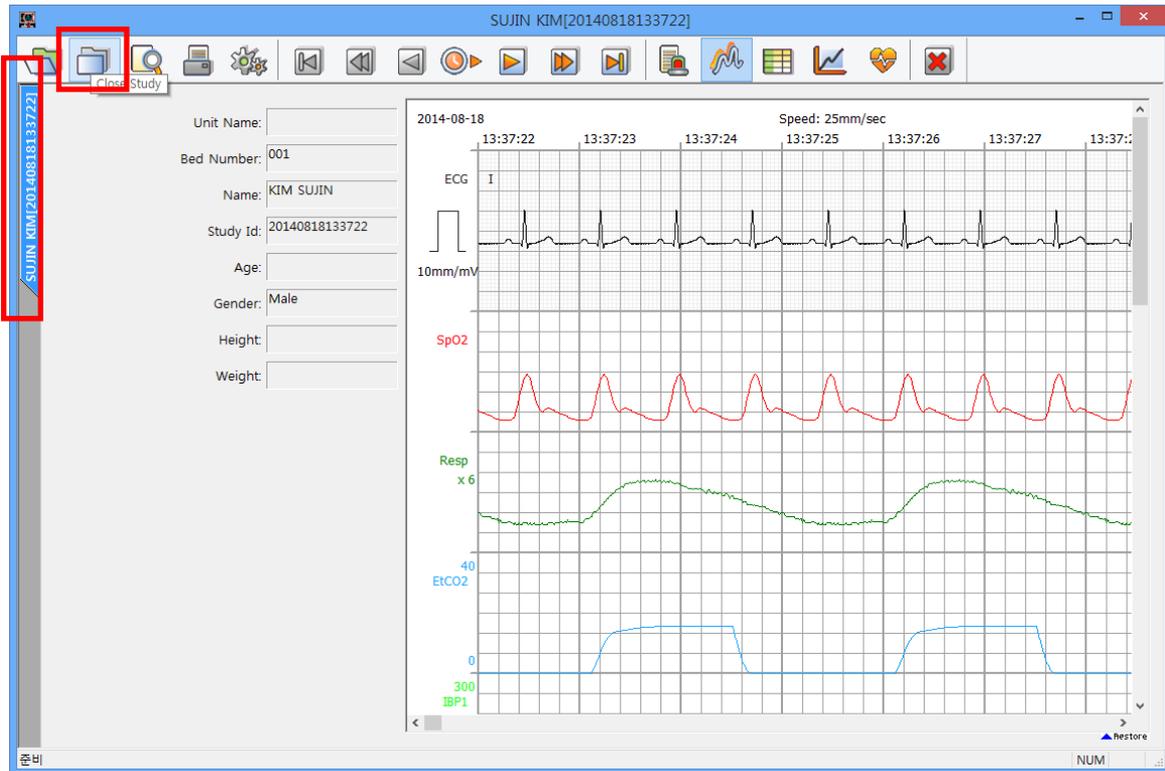
The main data table has the following columns: Study Id, Unit, Patient Id, Owner/Client, Pet Name, Gender, Age(GA), Date Time, Duration.

Study Id	Unit	Patient Id	Owner/Client	Pet Name	Gender	Age(GA)	Date Time	Duration
20200109181131	RECOVER	001	SAM	NANA	Female	0	2020-01-09 18:11:31	00:15:05
20200110191749	RECOVER	001	SAM	NANA	Female	0	2020-01-10 19:17:49	00:04:43
20200505085320	RECOVER	001	SAM	NANA	Female	0	2020-05-05 08:53:20	00:01:14
20200510084014	GENERAL	001	SAM	NANA	Female	0	2020-05-10 08:40:14	00:01:58
20200510085740	GENERAL	001	SAM	NANA	Female	0	2020-05-10 08:57:40	00:06:12
20200524131338	GENERAL	001	SAM	NANA	Female	0	2020-05-24 13:13:38	00:01:06

At the bottom of the window, a status bar shows: C [40%] - Total: 475.7 G, Used: 193.2 G, Available: 282.5 G. The page number 6 is visible in the bottom right corner.

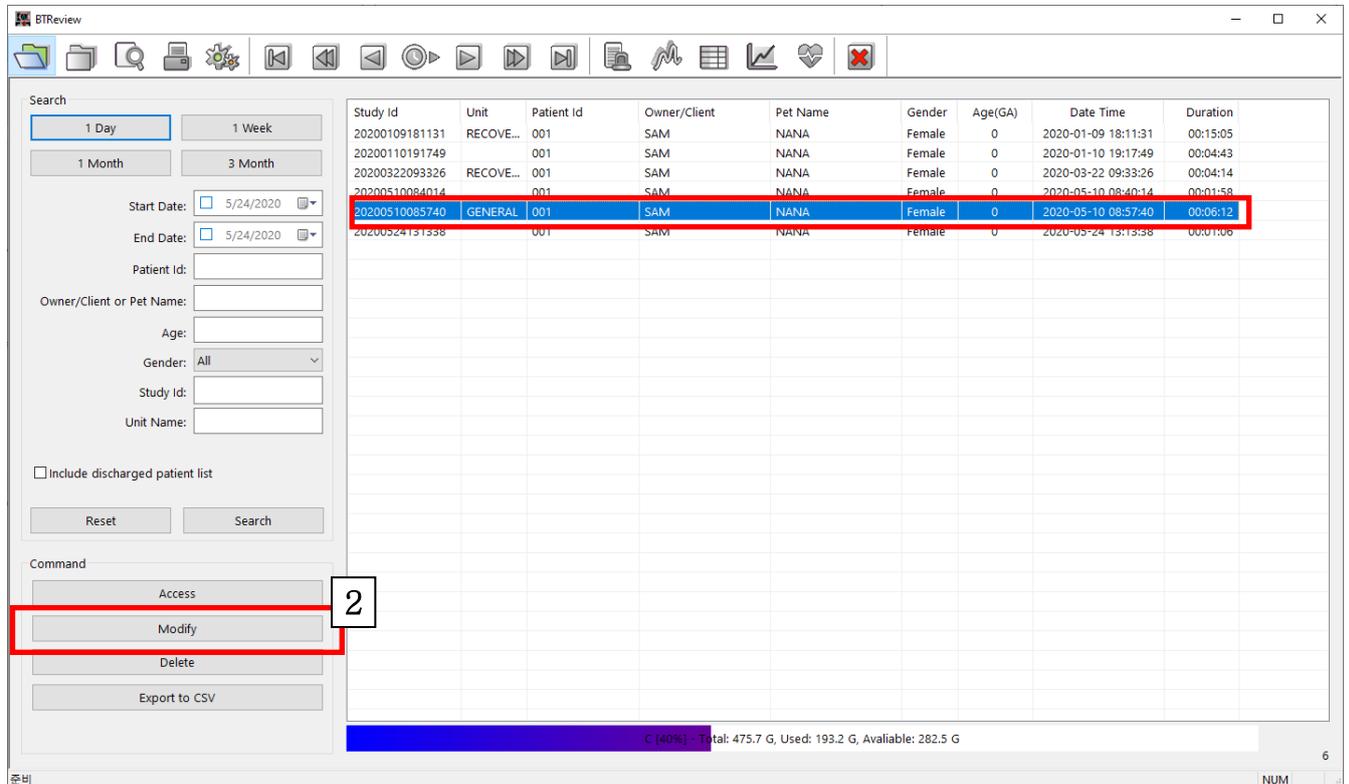
Closing File

- 1) Select the tab from the left side which you want to close.
- 2) Click "Close Study" button.

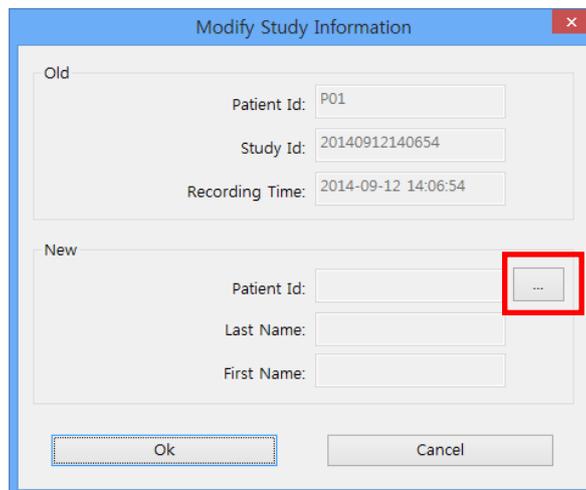


File Modify

- 1) In order to modify a file's information, follow the steps from "Opening a File" and at the end, click on "Modify button"



- 2) "When the "Modify Study Information" dialog box is displayed, click on the "..." button.



- 3) When the “Select Patient” window is displayed, select the patient information you want to change and click “Ok” . .

Patient Id	Name	Gender	Age	Registration Date
P02	KIM SUJIN	Male	115	2014-09-15 11:21:19

- 4) Once the “Modify Study Information” window is displayed, complete the change by clicking on the “OK” button.

Old

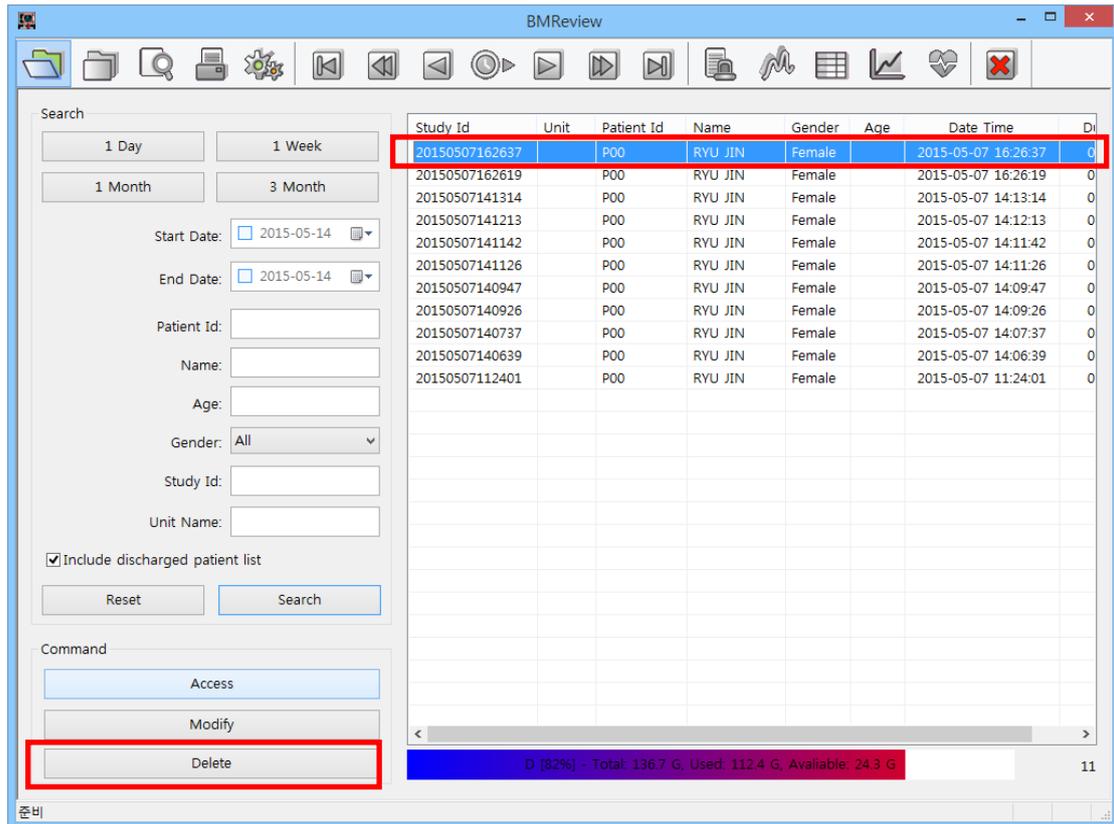
Patient Id: P01
Study Id: 20140912140654
Recording Time: 2014-09-12 14:06:54

New

Patient Id: P02
Last Name: KIM
First Name: SUJIN

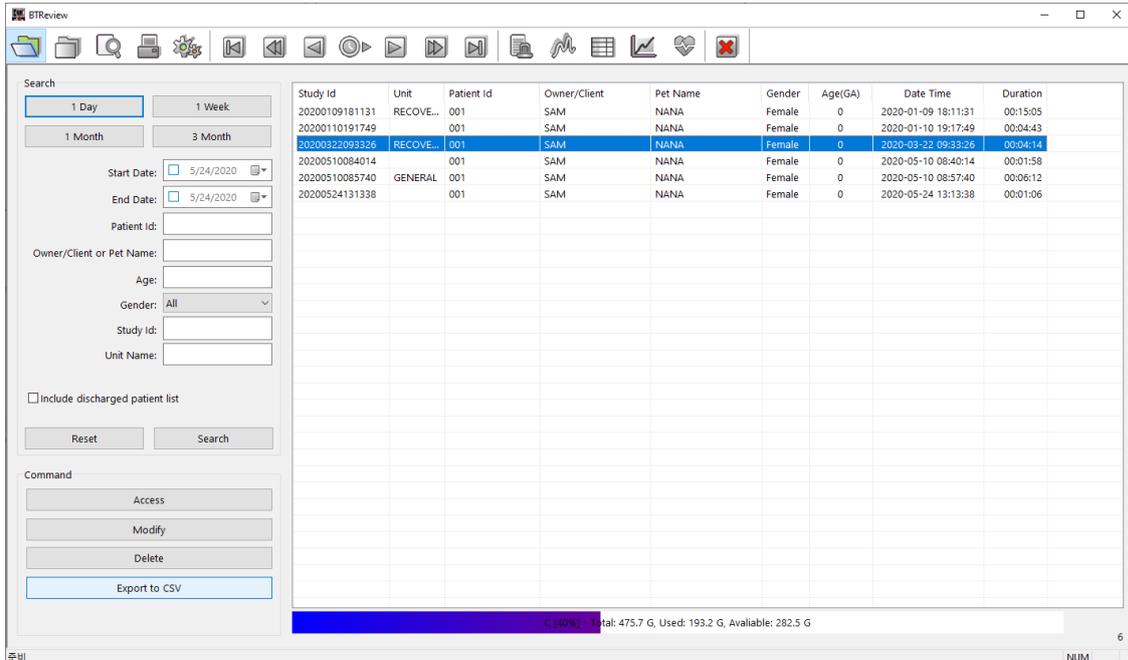
Deleting a File

- 1) Make sure you select the correct file. There is no turning back once the “Delete” button is pressed.
- 2) Click “Delete” button.

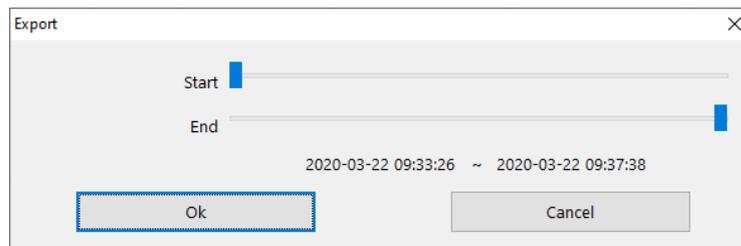


Export to CSV

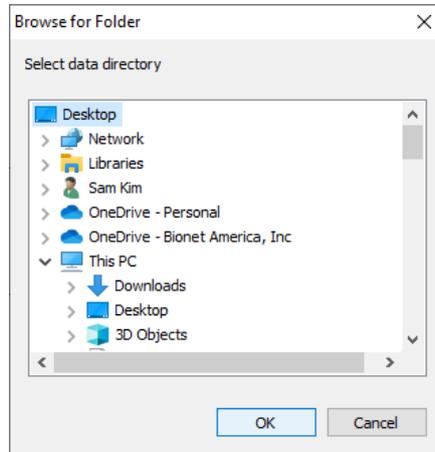
- 1) Make sure you select the correct file. There is no turning back once the “Delete” button is pressed.
- 2) Click “Export to CSV” button.



- 3) Select the conversion period of the recorded data and then press “OK”



- 4) Select the saving location and then press “OK”

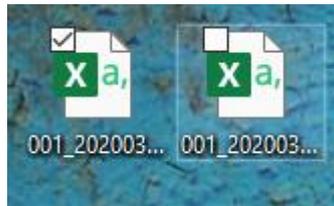


5) Two CSV files will be created as below

a. Filename convention:

PatientID_StudyID_PRM.CSV (Parameter CSV)

PatientID_StudyID_WAV.CSV (WAVEFORM CSV)



001_20200322093326_PRM.CSV

001_20200322_093326_WAV.CSV

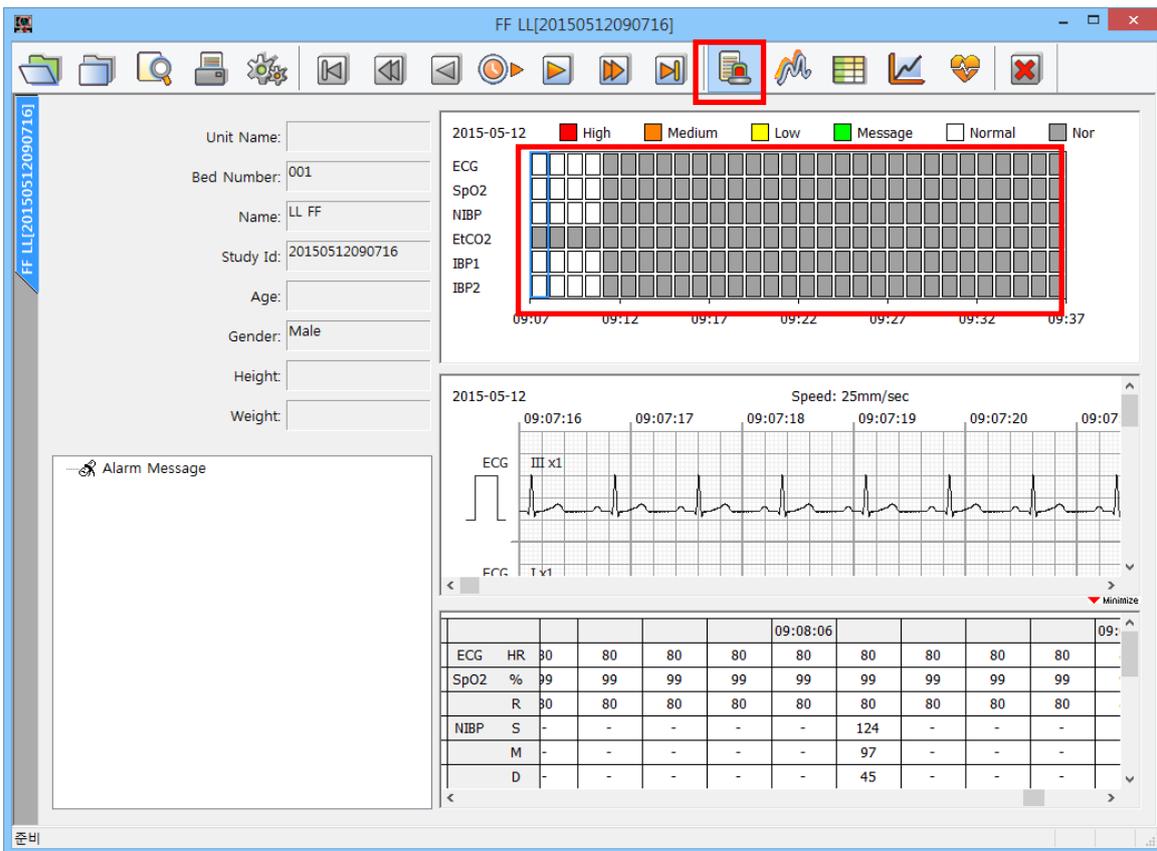
3.3. BT Link Review 5 Different ViewModes

1. Alarm View

This mode shows the stored data analyzed by alarm.

The screen is composed of alarm, waveform, and parameter information.

Click "Alarm view" button.



It can show alarm state of each parameter. Click "square", highlighted with red in the picture. The color of the square will be changed accordingly by the alarm level setting of each parameter, then you can track and shift the alarm state every minute. (Please see above figure.)

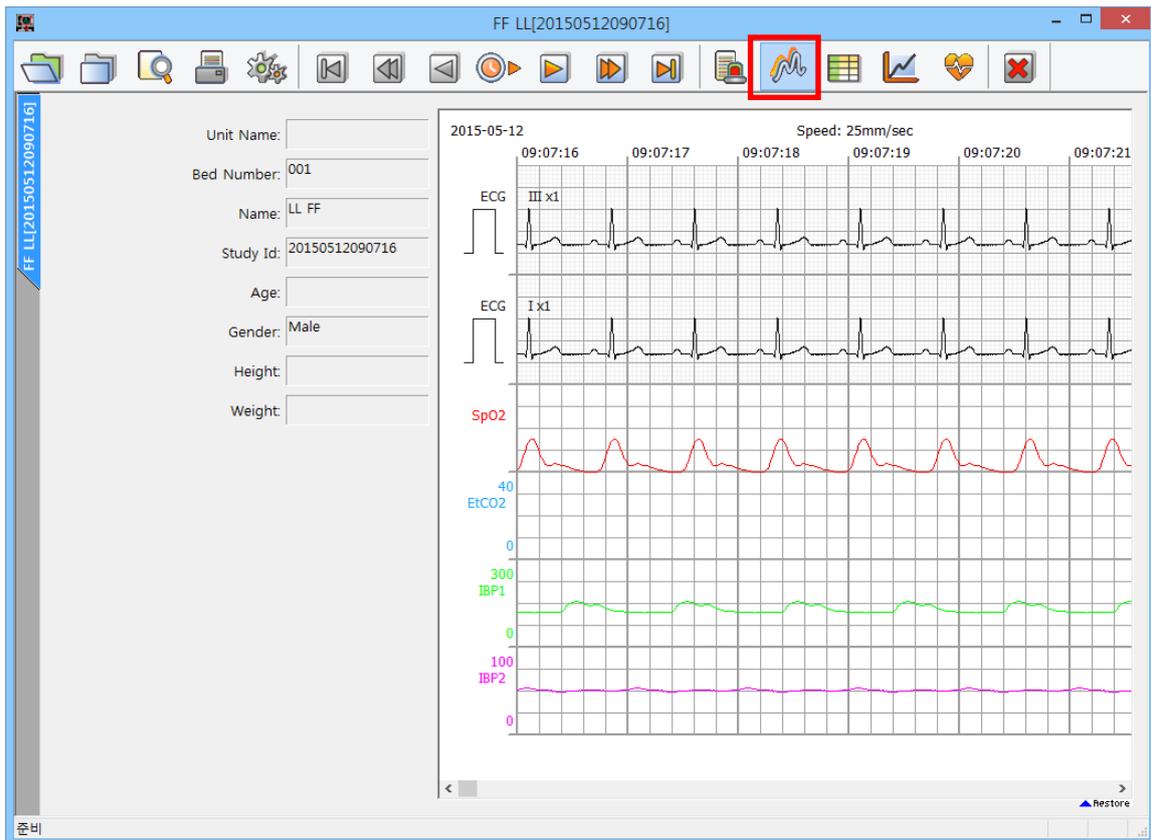
In the first section of the "Alarm Review", highlighted with red in the picture above, displays the overall alarms for each specific parameter.

2. Wave View

This mode shows the stored data analyzed by waveform.

The screen is composed of only waveform information.

Click "Wave view" button.



3. Tabular Trend View

The mode shows the stored data analyzed by parameter.

The screen is composed of parameter and alarm information in a table form.

Click "Tabular Trend" button.

Time	ECG	SpO2		NIBP			EtCO2			IBP1 [ART]		
		%	R	S	M	D	AWRR	CO2	FICO2	S	M	D
2015-05-12												
09:07:16	80	99	80	-	-	-	-	-	-	128	92	41
09:07:17	80	99	80	-	-	-	-	-	-	142	89	47
09:07:18	80	99	80	-	-	-	-	-	-	146	82	43
09:07:19	80	99	80	-	-	-	-	-	-	153	80	79
09:07:20	80	99	80	-	-	-	-	-	-	147	113	70
09:07:21	80	99	80	-	-	-	-	-	-	120	92	60
09:07:22	80	99	80	-	-	-	-	-	-	148	117	70
09:07:23	80	99	80	-	-	-	-	-	-	138	89	51
09:07:24	80	99	80	-	-	-	-	-	-	136	83	47
09:07:25	80	99	80	-	-	-	-	-	-	155	112	71
09:07:26	80	99	80	-	-	-	-	-	-	144	108	50
09:07:27	80	99	80	-	-	-	-	-	-	134	112	40
09:07:28	80	99	80	-	-	-	-	-	-	141	100	48
09:07:29	80	99	80	-	-	-	-	-	-	157	94	53
09:07:30	80	99	80	-	-	-	-	-	-	132	92	77
09:07:31	80	99	80	-	-	-	-	-	-	134	87	47
09:07:32	80	99	80	-	-	-	-	-	-	151	114	75
09:07:33	80	99	80	-	-	-	-	-	-	151	95	57
09:07:34	80	99	80	155	111	70	-	-	-	135	111	40
09:07:35	80	99	80	-	-	-	-	-	-	156	90	50
09:07:36	80	99	80	-	-	-	-	-	-	121	100	55
09:07:37	80	99	80	-	-	-	-	-	-	132	83	72
09:07:38	80	99	80	-	-	-	-	-	-	145	85	63
09:07:39	80	99	80	-	-	-	-	-	-	121	112	56
09:07:40	80	99	80	-	-	-	-	-	-	142	91	79
09:07:41	80	99	80	-	-	-	-	-	-	133	115	64

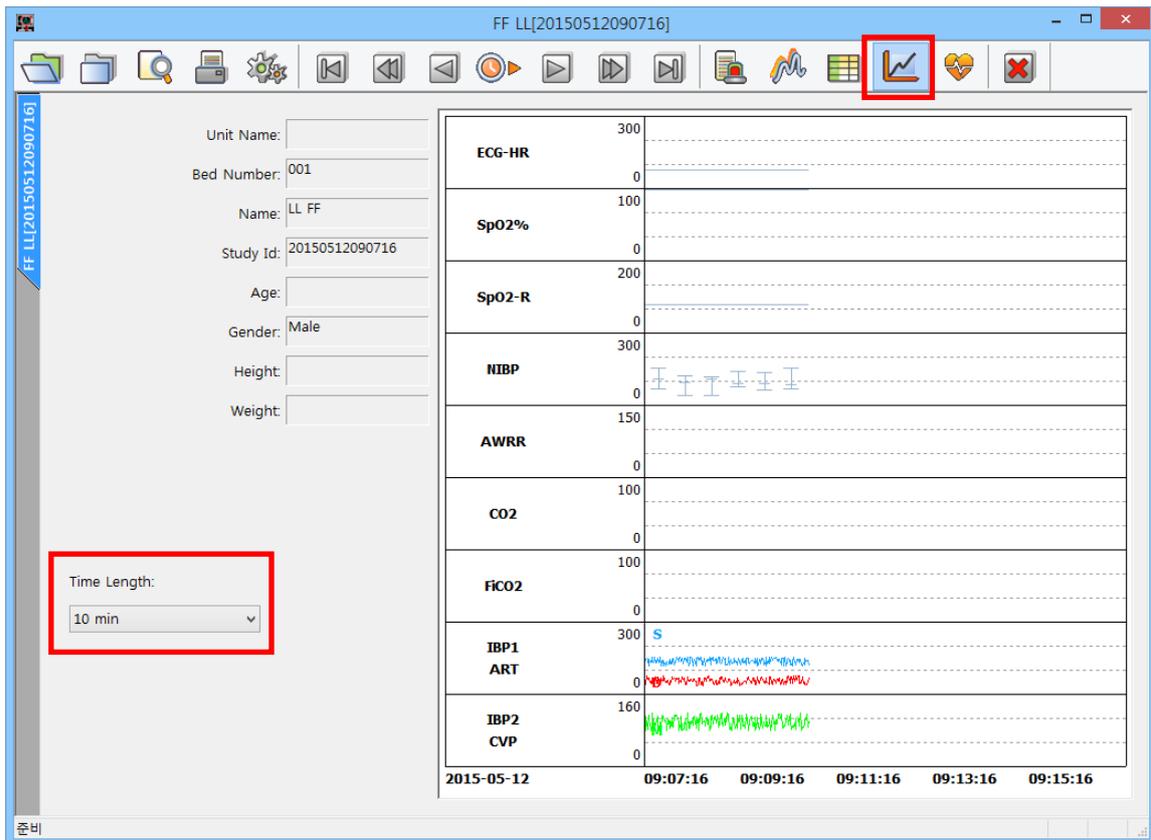
In the "Time Period" drop down menu, the user can select the time difference between each data point.

4. Graphic Trend View

This mode shows the stored data analyzed by graphical trend of the parameters.

The screen is composed of parameter information in a graph form.

Click "Graphic Trend" button.

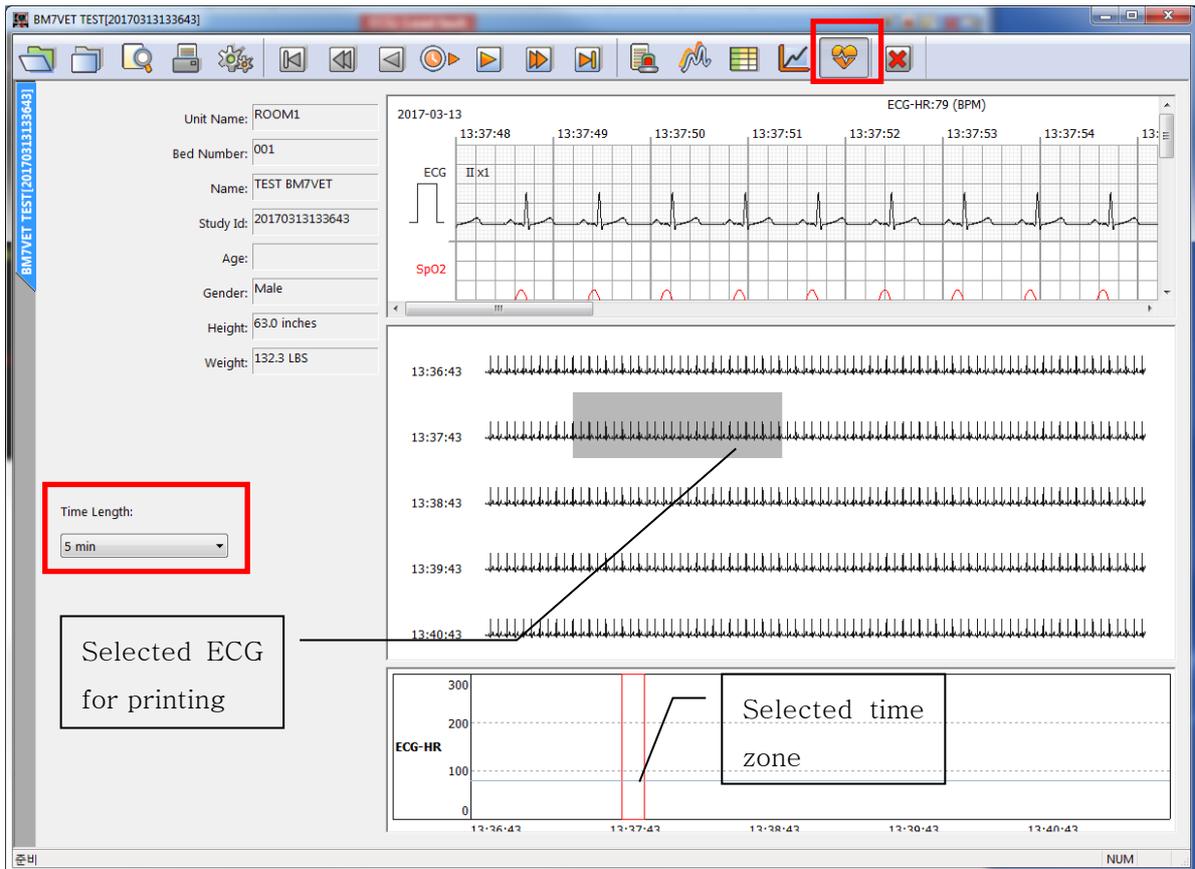


In the "Time Period" drop down menu, the user can select the time difference between each data point.

5. ECG View

This mode shows the stored data analyzed by ECG waveform.
The screen is composed of waveform and HR Trend information.

(1) Click "ECG View" button.



** The user can see the waveform and HR information in the selected time zone by clicking on the ECG and HR Trend area.

** The user can print ECG waveform of specific time zone by dragging the area with mouse then click print button

In the "Time Period" drop down menu, the user can select the time length on the selected time zone

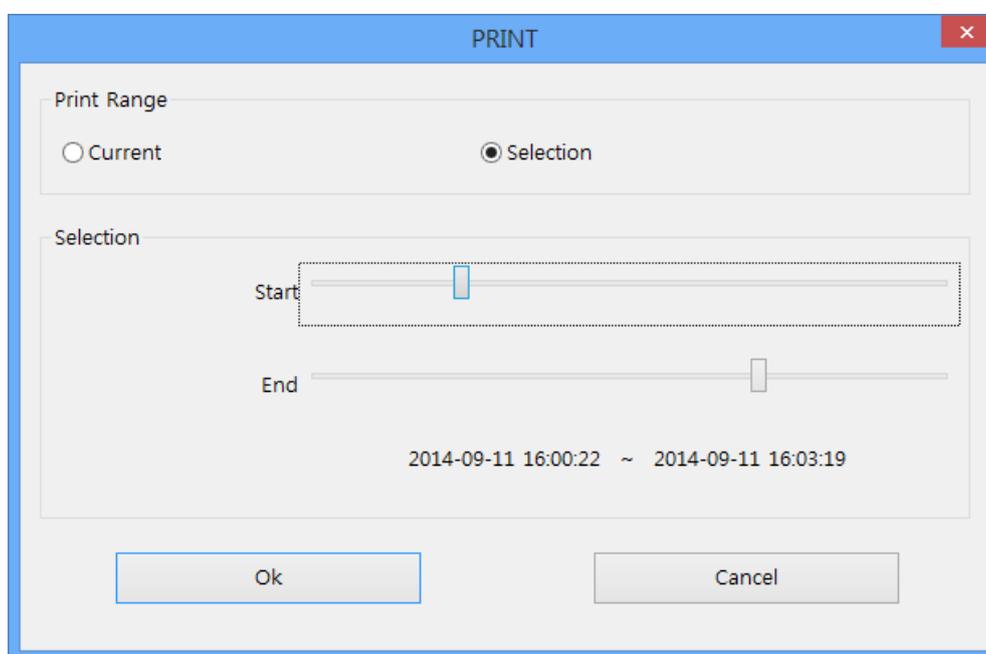
3.4. BT Link Review Print preview

BT Link Review, Preview settings

It provides the function for previewing measurement data with a current view mode such as alarm view, trend view, wave view, etc, .



The image below is the window for print preview. (The bottom area of the selection dialog box is displayed only in “Wave View” and “Tabular Trend.”)



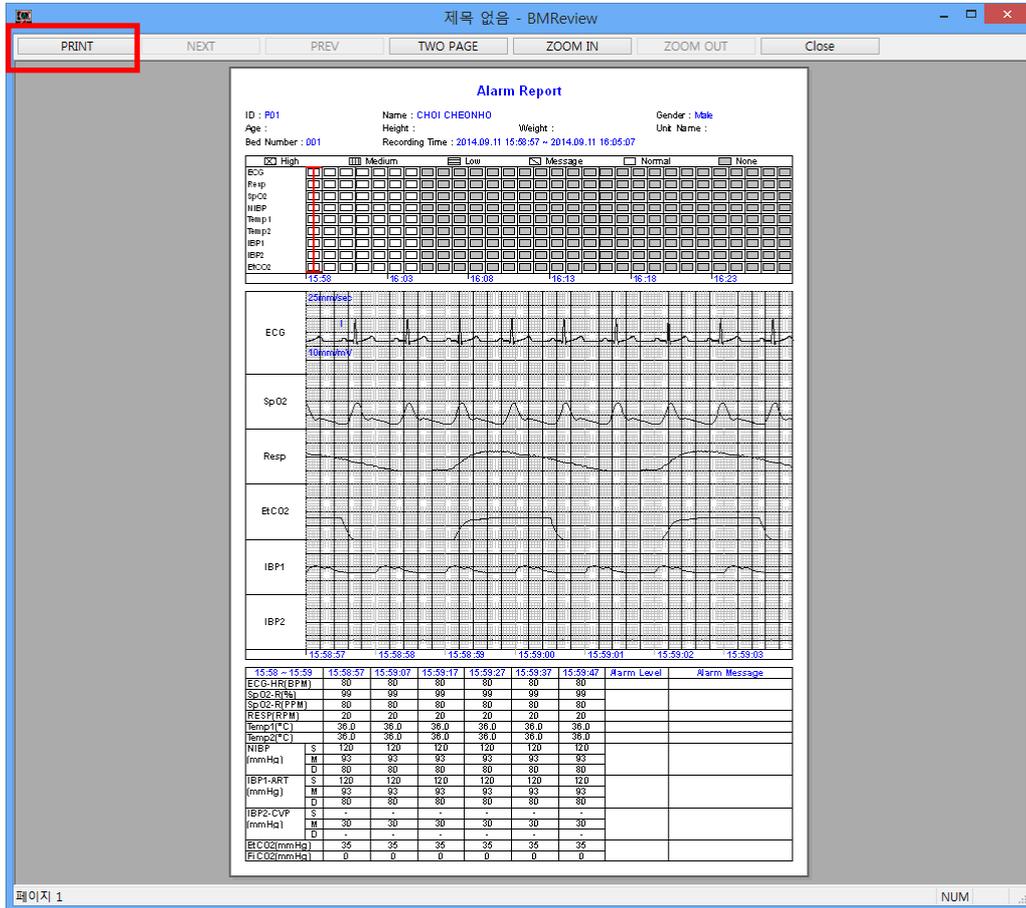
Option details of print dialog box

- ✓ Current: It shows the data area currently displayed on the screen.
- ✓ Selection: It provides the function of selecting the print range for the user. The print area can be selected by the second unit.

BT Link Review Preview result

The below image is the preview screen of the “Alarm View.”

If you click on the “Print” button in the preview screen, you can print.



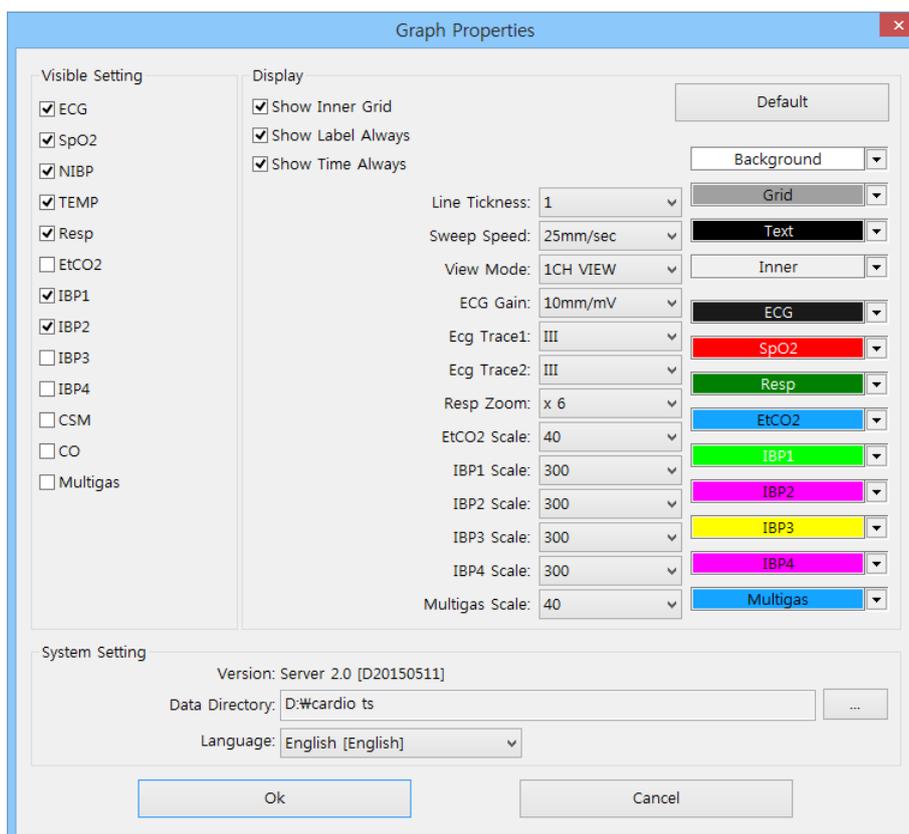
BT Link Review Print

This provides the function of printing the alarm, parameter, waveform, and patient information from the current screen according to the selected option. If you click on the “Print” icon marked in the menu below, the dialog box is printed out. The setting area is the same as the preview screen.



3.5. BT Link Review Preference

BT Link Review Preference



- ✓ Display: In this section, the user can change colors and scales for each parameter's waveform as well as select some graph settings as well.
- ✓ Visible Setting: In this section, the user can select which parameters they want displayed on the screen.
- ✓ System: In this section, the user can select the location of the data base as well select the preferred language for BT Link Reviewer.

Caution

In the "System" of "preference" in BT Link Program, please select a folder with a sufficient amount of remaining space. If the space is not sufficient, the data may be lost or the program may not operate properly.

Appendix

1. BT Link Menu Tree

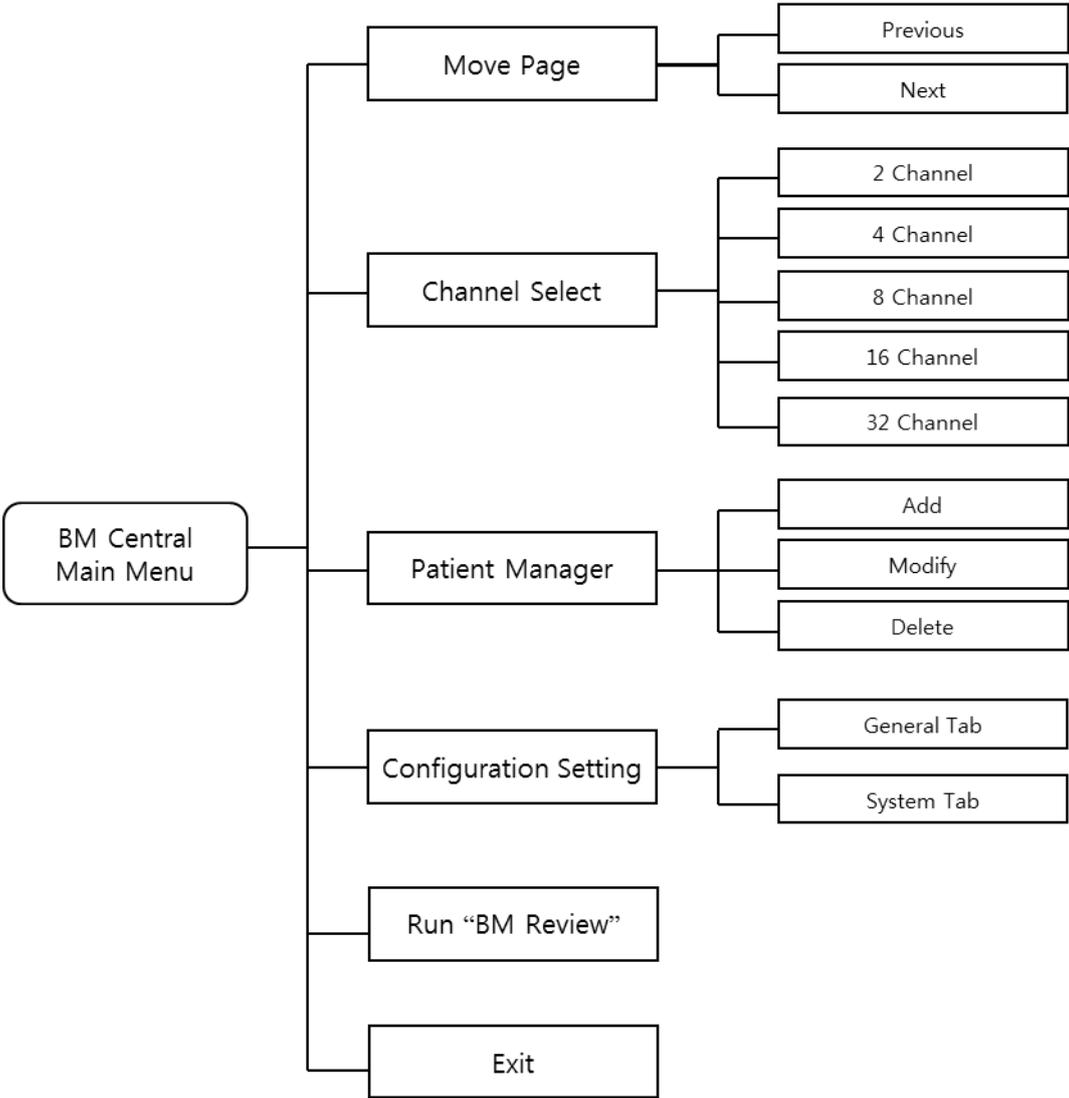
1.1 BT Link Main Menu Tree

1.2 BT Link Client Window Menu Tree

1.3 BT Link Review Menu Tree

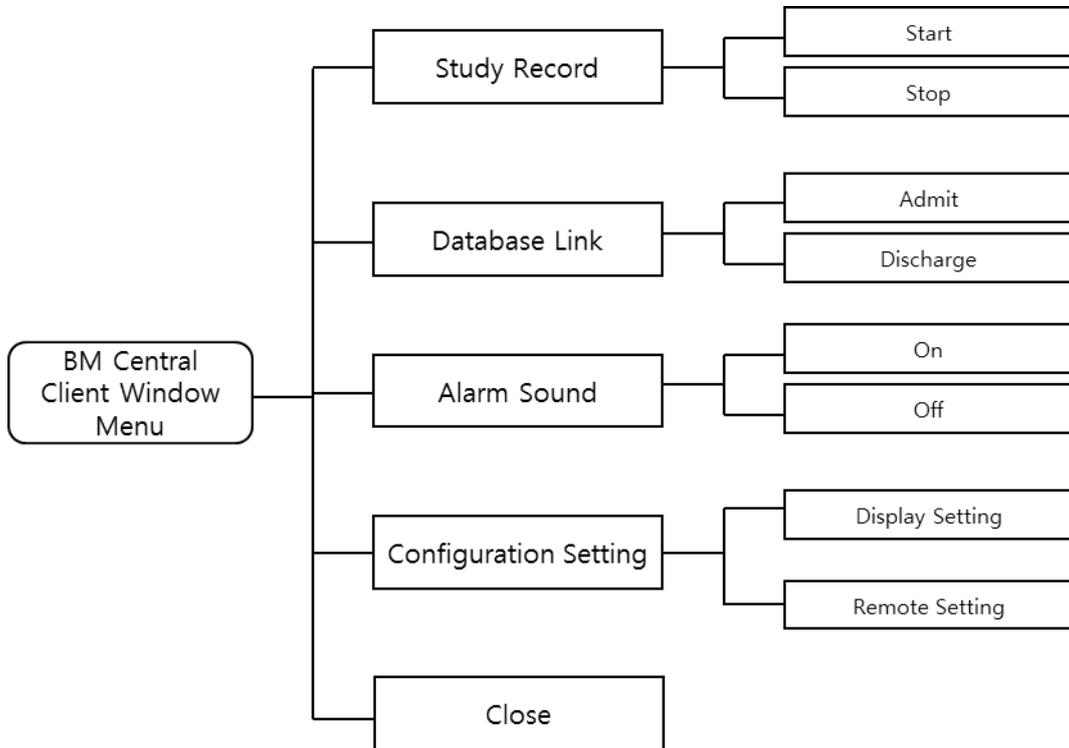
1. BT Link Menu Tree

1.1. BT Link Main Menu Tree



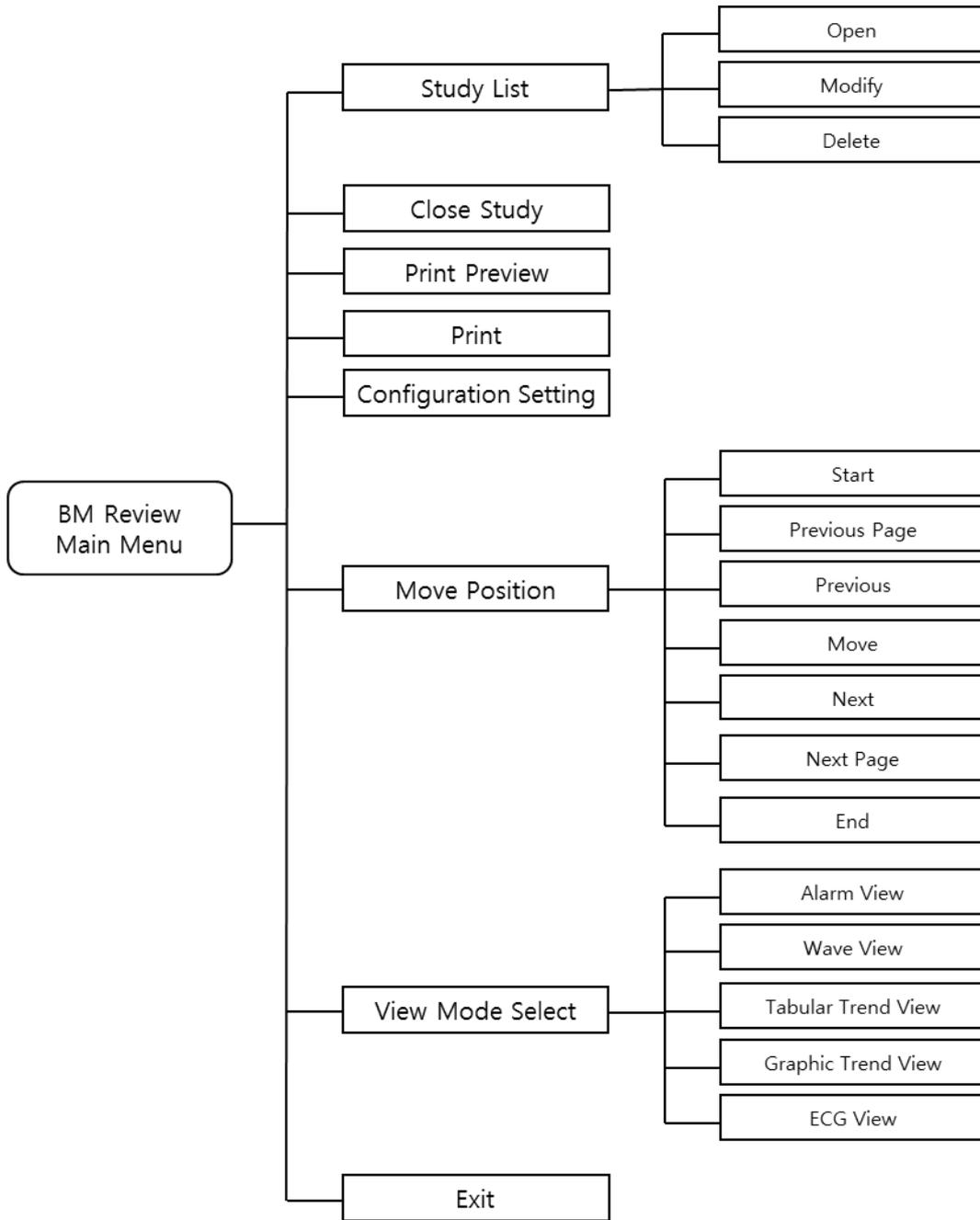
< BT Link Main Menu Tree >

1.2. BT Link Client Menu Tree



< BT Link Client Window Menu Tree >

1.3. BT Link Review Menu Tree



< BT Link Review Menu Tree >

Bionet America, Inc.

