

BT-Link Next Quick Manual

BIONET	BT-Link Next Server	2023-07-05 20:01 🤇 🕥 4 🗸 🖓 😫 🔅 🗶
001:DEMO, MAX HJLEE		 Q⁺ (4) 🛆 G X
	Speed: 25mm/sec E	CG 00/200 PR Sp02 % NIBP 0,00 120/80 (93)
spoz M	AX	BP1(Art) 70/190
M. M. M. M. M. M.		80 80 99 120/80 (03)
002:DEMO, ADF		Q ⁺ (4) 🛆 G X
		CG 80/200 (PR Sp02 % state MBP 00150 Pr 0.00 120/80 (93)
spoz A	DF	
M. M. M. M. M. M.	M M M M M	80 80 99 120/80
003:ICU, Bella	Spandt Temple of	💽 🐼 🐫 🖄 🕞 🖸
		rca (93)
spo2 B	ella	
M.M.M.M.M.M.		80 80 99 120/80
004:ICU, Lucy		• Q ⁺ (4) 🛆 G X
	Speed: 25mm/sec E	са 60/200 ря sp02 % эмня NIBP 0.00 гса
Sp02	ucv	(93) BP1(Art) 70/180
M.M.M.M.M.M.	MMMMM	80 80 99 120/80 (KS)

Ver. 1.01 09. 09. 2024



Table of Contents

Chapter 1. General	5
1. Checkpoints Before Use	5
• 1.1. Registered Trademarks	5
1.2. Warnings, Cautions, and Notes	6
Chapter 2. BT-Link Next PC	7
2. Installation of BT-Link Next	7
2.1. Installation in Windows 10	7
2.1.1. Backup	7
2.1.2. Install BT-Link Next Server	7
2.2 Uninstallation of BT-Link Next	
2.2.1. How to uninstall in a Windows 10 Environment	11
2.3. Execute / Close BT-Link Next	
2.3.1. Execute BT-Link Next	12
2.3.2. Close BT-Link Next	14
2.4. How to connect	
2.4.1. AccuWave System Setup	15
3. Basic Functions of the Program	
3.1. BT-Link Next Structure	17
3.1.1. Basic Design of BT-Link Next	17
3.1.2. Main Menu	17
3.1.3. Client Window	17
3.2. Main Menu	
3.2.1. Previous / Next Page	
3.2.2. 2 ~ 32 Channels	
3.2.3. Patient Manager	
3.2.4. Configuration	
3.2.5. Executes BT-Link Next Review	
3.2.6. Exit	
3.2.7. Date/Time	



3.3. Client Window	19
3.3.1. Client Information	19
3.3.2. Alarm Alert	19
3.3.3. Recording Time	19
3.3.4. Basic Menu	19
3.3.5. Display Waveform	20
3.3.6. Display Parameter	21
3.3.7. Time & Patient status	21
4. Execute and Close BT-Link Next Review	22
4.1. Execute BT-Link Next Review	22
4.1.1. Use of BT-Link Next Review	22
4.1.2. Execute BT-Link Next Review	22
4.2. Close BT-Link Next Review	23
4.2.1. Close BT-Link Next Review	23
5. BT-Link Next Review Program Structure	24
5.1. BT-Link Next Review Program Structure	24
5.1.1. Review Structure	24
6.1.2. Menu	24
6.1.3. View	24
6. How to use BT-Link Next Review Menu	25
6.1. BT-Link Next Review Menu	25
6.1.1. BT-Link Next Review Menu	25
6.1.2. Study List	25
6.1.3. Close Study	25
6.1.4. Print Preview	25
6.1.5. Print	25
6.1.6. Configuration	25
6.1.7. Start/End Position, Previous/Next Page, Previous/Next, Move	25
6.1.8. EMR Report	25
6.1.9. Wave View	26
6.1.10. Tabular Trend	26
6.1.11. Graphic Trend	26



6.1.12. ECG View	26
6.1.13. Exit	26
7. Q & A	27
Chapter 3. BT-Link Next Mobile App	30
8. BT-Link Next Mobile App for iOS/Android	30
8.1. BT-Link Next Mobile	
8.1.1. BT-Link Next Mobile iOS Installation	31

8.1.2. Starting the BT-Link Next iOS Mobile App	31
8.1.3. BT-Link Next Mobile Android Installation	32
8.1.4. Starting the BT-Link Next Android Mobile App	32
8.2. Function Keys	
8.3. Setting Preferences	
8.4. Connection	

Note

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



Chapter 1. General

1. Checkpoints Before Use

1.1. 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.

- AccuWave Series is a trademark of Patterson Veterinary.
- BT-Link Next and BT-Link Next Review are trademarks of Bionet.
- Trademarks and product names indicated in the manual are the trademarks of each company.

- Veterinary multiparameter monitor in the manual means AccuWave veterinary multiparameter monitoring devices.

Â	Caution:		Safety Sign:	
	Consult accompanying		To signify that the	
	documents		instruction	
	Manufacturer	\sim	Date of Manufacture	
<u></u>	This way up	MD	Medical device	
	Recycle	Ť	Keep dry	

- Mark marked on the product

- 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 it.
- BT-Link Next should be used with products provided by our company or those that meet the recommended specifications.



1.2. Warnings, Cautions, and Notes

• The following terms are used throughout this manual to emphasize important and critical information. You must read these statements to help ensure safety and to prevent product damage.

• The manufacturer or the product distributor is not liable for any loss or damage to the product caused by incorrect use or negligence in product maintenance.

Warning

"Warning" Failure to follow this message may cause severe injuries, casualty or physical damage to patients.

Caution

"Caution" Failure to follow this message may cause in non-life-threatening injury or damage to the equipment.

Note

"**Note**" indicates some important information and tips, which are not dangerous, about installation, operations and maintenance.



Chapter 2. BT-Link Next PC

2. Installation of BT-Link Next

2.1. Installation in Windows 10

Caution

Installation and execution must be done with "administrator rights" or an account with administrator rights.

2.1.1. Backup

- (1) If you are using BT-Link Next, you should back up the measurement data and DB data files that manage the data to ensure its safety. After that, start the installation.
- (2) The Data folder is in the Folders folder within User Preferences. Make sure to check this location and back up the Data folder. After reinstalling, restore this backup copy and the DB file by copying them back to the same location.
 (default acts: CMU location acts: WDecentre WDecen

(default path: C₩Users₩user name₩AppData₩Roaming₩BIONET₩BMCentral₩Data)

2.1.2. Install BT-Link Next Server

- (3) Close all software in use before installation.(Depending on the OS environment, automatic reboot may occur after installation.)
- (4) Open downloaded folder.
- (5) Run "setup.exe" included in the from the folder.(Depending on the OS environment, the installation process may be skipped for already installed s/w packages.)
- (6) When installing in Windows 10 version environment, proceed with installation in administrator mode. (Right-click on the installation icon > Run as administrator) When the installation screen appears, click the "Next>" button to proceed with the installation.

(NET Framework and MICROSOFT VISUAL C++ 2015-2022 RunTime are automatically installed depending on the PC environment.)

(7) If you encounter an error, it could mean you are an existing user who has previously installed the BT-Link Next software, or your computer already contains the necessary files.



- A. Users who encounter an error during the installation of "Full installation.exe" must use the file named "**BT-Link Next Server v4.03.msi**" for reinstallation.
- B. Note: Depending on your OS environment, the installation process may skip already installed software packages.
- (8) When the screen below appears, click the "Accept" button to proceed with installation.

🗟 BT-Link Next Server Setup	X
For the following components:	
SQL Server 2019 Express LocalDB	
Please read the following license agreement. Press the page down key to see the r of the agreement.	est
MICROSOFT SOFTWARE LICENSE TERMS	^
MICROSOFT SQL SERVER 2019 LOCALDB	
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft	*
View EULA for printing	
Do you accept the terms of the pending License Agreement?	
If you choose Don't Accept, install will close. To install you must accept this agreement.	
Accept Don't Accept	

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





When the next screen appears, click "Browse..." button with the mouse to select the folder where the program will be installed. The recommendation is to select "Everyone" and then click the "Next>" button to proceed with the installation.

🔀 BT-Link Next Server	—		×
Select Installation Folder			
The installer will install BT-Link Next Server to the following folder.			
To install in this folder, click "Next". To install to a different folder, enter it be	low or	click "Brov	vse".
Eolder:			
C.WProgram Files (xoo) WDIONE I WD I -Link Next Serverw		Browse	
		<u>D</u> isk Cost.	
Install BT-Link Next Server for yourself, or for anyone who uses this comp	uter:		
< <u>B</u> ack <u>N</u> ext >		Cano	cel

- (10) Once installation is complete, click "Finish".
- (11) If installation is successful, you may see the "BT-Link Next" and "BT-Link Next Review" Icon.



- (12) After finishing the installation, access rights 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 app" in allowed programs.



P Control Panel\All Control Panel Items\Windows Firewall\Allowed apps	ø	-		\times
← → ∽ ↑ 🔐 « Windows Firewall > Allowed apps 🗸 ⊘ Sea	rch Control Pane	el		ρ,
Allow apps to communicate through Windows Firewall				
What are the risks of allowing an app to communicate?	🛛 🌍 Chaj	nge setting	gs	
Allowed apps and features:				
Name	Private	Public	^	
Delivery Optimization				
Deluge Bittorrent Client	\checkmark			
✓ DIAL protocol server	$\mathbf{\Sigma}$			
Distributed Transaction Coordinator				
✓ Dropbox				
✓ dropbox.exe				
Email and accounts				
	V			
✓ f5.vpn.client	Y			
File and Printer Sharing				
✓ FileZilla FTP Client				
Firefox (C:\Program Files (x86)\Mozilla Firefox)	Ø		¥	
	Detai <u>l</u> s	Re <u>m</u> ove		
	Allow an	othe <u>r</u> app		
-	OK	Cance	4	

- (17) In 'Add an app' dialogue, select 'Browse'.
- (18) Move to "C:₩Users₩user₩AppData₩Roaming₩BIONET₩BMCentral₩" folder where the program exists and select "BMCentral".
- (19) Select the program and click "add".

Add an a	app	9	×
Select th listed, an	e app you want to add, or clk nd then click OK.	ik Browse to find one th	at is not
Agos:			
Erle	Zila FTP Client		
BN BN	/Central		
-			
Pathi	C.#Program Files (x8	6)#BIONET#BMC	Browse
Path:	C:#Program Files (x8	6)#BIONET#BMC	growse
Path: What are ou can c	C:#Program Files (x8 the risks of unbicking an app boose which network types to	6)₩BIONET₩BMC	growse

- (20) If "BMCentral Application" is on the allowed program list, it is properly registered. If it is not properly registered, waves 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 the BT-Link Next program, measured data and image saving process for interlocking with EMR will occur. In "preference", "system" of BT-Link Next program, select the hard disk folder which has a sufficient amount of remaining space.

All connections, including PC peripherals and USB Key Lock, should be checked periodically. It should also be used in places where power supply is smooth and stable.

When Audio Pause or Audio Off mode is enabled, audible alarms may not occur on the veterinary multiparameter monitor or the BT-Link Next.

If you enable screen locking, you need to manage your password thoroughly. Patient information may be leaked in case of an external leak, and if the password is lost, system initialization is lost.

2.2 Uninstallation of BT-Link Next

2.2.1. How to uninstall in a Windows 10 Environment

- (1) Move to Start -> Control Panel -> "Add or remove programs" or "Program and Features"
- (2) Select "BT-Link Next" from the program list, right-click and click "Uninstall/Change" or "Uninstall" button.
- (3) Click "OK" or "Yes" to delete program.

Warning

Disinfect and decontaminate PC equipment to prevent infection before disposal. Patient information must also be deleted, and disk formatting must be performed after deletion.

Caution

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



2.3. Execute / Close BT-Link Next

2.3.1. Execute BT-Link Next

- (1) Double-click "BT-Link Next Server" 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) Run the program and the window will appear as shown below.



BIONET	BT-Link Next Server	2023-07-05 19:26 🛛 🛛 🛛 🛛 🤇 🔀

Warning

If the connection between the BT-Link Next and the veterinary multiparameter monitor is lost, it is handled in accordance with the hospital's network management policy. If it is not resolved, contact your administrator to resolve the problem.

If the program fails to run due to a license error, verify that the USB Lock Key is properly installed and recognized.

If you re-run the BT-Link Next due to a PC error or power failure, check the system settings for this device.

In the event of a system failure, patient data may be lost. According to hospital policy, patient information must be sent to the hospital server or must be backed up.

Always check that the alarm settings are appropriate for each patient before starting monitoring. Alarm values should be set appropriately according to changes in patient status.

The alarm setting value should not use extreme limit values that prevent the alarm from operating correctly.

Note

BT-Link Next can be connected to veterinary multiparameter monitors via LAN or WI-FI.

Make a setting for BT-Link Next and veterinary multiparameter monitors by referring to the manual. If the preference is properly set, the connection will be automatically made, and Client Window will be formed.



When BT-Link Next and a veterinary multiparameter 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.

The user cannot arbitrarily change the arrangement or view order of the displayed parameters.

Even if the alarm sound is enabled, the sound may not come out if the PC status is set to silent. Pay attention to your PC settings.

Depending on the screen view mode, the client window can be resized, waveforms and measurements hidden, and can be viewed through clicks.

Before starting the output, make sure that the printer is on and that it is functioning properly with paper and toner.

Printer settings are not handled separately. For printer operation and printer errors, contact the accompanying documentation or system administrator.

2.3.2. Close BT-Link Next

- (1) To exit the program BT-Link Next, click the "Exit" button (
- (2) When the dialogue for closing the program appears, click "Yes(Y)" button.
- (3) Program is then closed.

Caution

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



2.4. How to connect

2.4.1. AccuWave System Setup

- (1) Click "Menu" button on the AccuWave unit.
- (2) Click "System Setup".

		hand	~			
						PVCs
		Menu		×		0
Change Layout	Wavef	orm Demo		-	98	PI 0.00
Display Setup	Print Setup	Popup Trend Setup	System Setup	System Information	100 94 Art1 mmHg 140	60 79 (94)
Screen Lock	Calibration	Maker Service			32	Fi 3 Awar 12
Alarm On	\∆] <mark>Alarm</mark> Setup	© NIBP ≫ Measure	→0← ^{Zero} IBP	Print	97.9 2 Review	97.7 ≈ ₀ .

- (3) Click "Network" tab.
- (4) Click "AP Search" if you are using Wireless LAN to connect.

	System Setup X									
General		Date Time	Network	Communication	Alarm					
Wireless	_	_								
Dental		AP Search								
DHCP										
IP										
Subnet Mas	k 2									
Gateway										
Mac Addres	is 00:0									
		Ap	ply							
Alarm On On	∆] Alarn Setup	n ONIE P Me	3P asure	→0← ^{Zero} IBP	Print					



(5) Choose the identical network that the laptop is connected to. Ensure both the laptop and AccuWave unit are on the same network. Select the network, press "Connect", input the password, and enable DHCP for automatic IP addressing. Click "Apply" and then "Close" when the Windows prompt appears.

	System Setup X										
General		Date Time	Netwo	ork	Communicatio	on Alarm					
Wireless		_									
Dental		AP Search									
DHCP											
IP											
Subnet Ma	sk										
Gateway											
Mac Addre	ss 0										
			Apply								
Alarm		arm 🖉	NIBP	-	on _€ Zero	🛱 Print					

(5) Click Communication tab -> Turn BT-Link Next slider "on" and input your laptop's IPv4 address. Click "X" to close the System setup.

		System	Setup				×
	Units	Date Time		rk Comm	nunication	Alarm	
	BT-Link		HL7				
Protocol V	ersion	1.4.0	HL7				
BT-Link Ne	ext	-	Server IF	>	192.16	68.0.99	
BT-Link Ne	ext IP	192.168.1.104	Port		44	000	
BT-Link Me	obile		Period		30	sec	
BT-Link Me	obile IP	192.168.1.66	Check R	esponse			
	B2B		Labels		E	dit	
B2B							
△ Alarm On	∆∫ ^{Alar} Setu	m O NI Ip Ma	BP basure	→0← Zero IBP		🕞 Print	

(6) Go to the computer and launch "BT-Link Next Server". Allow or run if Windows ask you for permission. Note: Defender or Firewall needs access to BT-Link Server software so please give permission or just simply turn off the Defender or Firewall.



Main Menu

3. Basic Functions of the Program

3.1. BT-Link Next Structure

3.1.1. Basic Design of BT-Link Next

BIONET BT-Link Next Server	2023-07-05 19:30	< 🔉 ଥ ୍ୟ ର୍ବ 🔒 🗘 🗵
001:DEMO, MAX HJLEE ECG-TI Speed: 25mm/sec EC	CG 60/200	
	^{rcs:3}	120/80
	80 999	пет(м) 70/181 120/80 (93)
Client Menu		

3.1.2. Main Menu

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

3.1.3. Client Window

The client window automatically opens when the veterinary multiparameter monitor is connected to BT-Link Next. One client window displays one veterinary multiparameter 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. Client Window is displayed by dividing the area into 2Ch \sim 32Ch (2Ch, 4Ch, 6Ch, 8Ch, 10Ch, 12Ch, 16Ch, 32Ch) screens according to the number of connected devices.



3.2. Main Menu



3.2.1. Previous / Next Page

Provides the function to move to the next/previous screen when multiple devices are connected and exceed the display capacity of the monitor. (The button will be disabled when further navigation is not possible.)

3.2.2. 2 ~ 32 Channels

To select number of clients (veterinary multiparameter monitor) on screen.

3.2.3. Patient Manager

To register "patient information".

3.2.4. Configuration

To set up the environment of system.

3.2.5. Executes BT-Link Next Review

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

3.2.6. Exit

To quit the program.

3.2.7. Date/Time

To show the present date/time.



3.3. Client Window



3.3.1. Client Information

To show patient information from client (veterinary multiparameter monitor).

(Message format: "Bed number: Unit name, Patient name")

3.3.2. Alarm Alert

When an alarm occurs, it is expressed in four ways depending on the setting.

- Display

Alarm Information is displayed on the top bar of the Client Window, and it is classified by color as shown below, and the corresponding numerical value blinks on the screen.

ECG: HR alarm	ECG: HR alarm	ECG : Cable Off
(High)	(Medium / Low)	(Technical)

- Sound

A sound alarm is generated through the speaker when an alarm occurs, regardless of the

alarm level, when the setting of the set client is activated (). If it is not activated in the configuration settings, no sound is heard. (Setting -> General1 -> Alarm -> Enable alarm sound)

3.3.3. Recording Time

To show how long the patient information is being saved.

3.3.4. Basic Menu

Displays the menu of the Client Window. The characteristics of each icon are as follows.

: To Admit/Discharge patient information from each veterinary multiparameter monitor.



: Recording function is not being used. Click this button, Recording will start. (However, the recording icon is shown only when a patient is admitted.)



Recording function is being used.(Click this button to stop recording.)



Alarm sound is "ON". Click this button and the alarm sound function will be deactivated.



Alarm sound is "OFF". Click this button and the alarm sound function will be activated.

: Indicates that the alarm of the veterinary multiparameter monitoring device is currently activated.

Click to disable the alarm sound or alarm.



: Indicates that the alarm sound of the veterinary multiparameter monitor is currently disabled.

Click to activate the alarm.

(Setting->General1->Alarm Mode-> Audio Paused)



: Indicates that the alarm of the veterinary multiparameter monitor is currently disabled.

Click to activate the alarm.

(Setting->General1->Alarm Mode-> Alarm Paused)



🔤: To set up the client environment.



: To close the client window.

(If the connection with the veterinary multiparameter monitor is lost, it is displayed.)

3.3.5. Display Waveform

Displays the waveform received from the veterinary multiparameter monitor.

(For 4ch or higher, you can view the corresponding waveform by double-clicking the parameter with the mouse.)



3.3.6. Display Parameter

Displays parameters received from the veterinary multiparameter monitor. (When an alarm occurs, the corresponding parameter blinks in red)

3.3.7. Time & Patient status

00:25:14 U () : Displays spindle information and time.

The time information is retrieved and conveyed from the time settings configured on the spindle monitoring device.

(The time information is automatically synchronized and will not be displayed if the time function is not activated on the bed.)



4. Execute and Close BT-Link Next Review

4.1. Execute BT-Link Next Review

4.1.1. Use of BT-Link Next Review

BT-Link Next Review is the program for the review and analysis of patient's data measured through BT-Link Next. BT-Link Next Review provides methods for analyzing the data stored in BT-Link Next in various ways for a maximum of 10 days. Also, it provides the function of printing the analyzed data according to various options.

4.1.2. Execute BT-Link Next Review

BT-Link Next Review can be executed in two ways. First is to double-click the image con on Desktop.



The second method is to run by clicking the "BT-Link Next Review" icon () in the Main Menu of BT-Link Next.

Once the program is executed, the window below appears.



1	BT-Lin	nk Next	Review				-	. 🗆 🗙
	Image: A transmission of the second secon				M 🗐	\swarrow	💝 🔀	
Search								
1 Day	Study Id	Unit	Patient Id	Name	Gender	Age	Date Time	D
I Day I Week	20150507162637		P00	RYU JIN	Female		2015-05-07 16:20	5:37 0
1 Month 1 Year	20150507162619		P00	RYU JIN	Female		2015-05-07 16:26	5:19 0
	20150507141314		P00	RYU JIN	Female		2015-05-07 14:13	3:14 0
Start Date: 2015-05-14	20150507141213		P00	RYU JIN	Female		2015-05-07 14:12	2:13 0
Start Date.	20150507141142		P00	RYU JIN	Female		2015-05-07 14:11	.:42 0
End Date: 2015-05-14	20150507141126		P00	RYU JIN	Female		2015-05-07 14:11	.:26 0
	20150507140947		P00	RYU JIN	Female		2015-05-07 14:09	9:47 0
Patient ID:	20150507140926		P00	RYU JIN	Female		2015-05-07 14:09	9:26 0
	20150507140737		P00	RYU JIN	Female		2015-05-07 14:07	7:37 0
Patient Name:	20150507140639		P00	RYU JIN	Female		2015-05-07 14:06	5:39 0
Client Name:	20150507112401		P00	RYU JIN	Female		2015-05-07 11:24	1:01 0
Age:								
Gender: All ~								
Study ID:								
Unit Name:								
✓Include discharged patient list Reset Search								
index dealers								
Command								
Access								
Modify	<							>
Delete		D [82%]	- Total: 136.7 G	6, Used: 112	2.4 G, Avaliable:	24.3 G		- 11
HI								

4.2. Close BT-Link Next Review

4.2.1. Close BT-Link Next Review

To close BT-Link Next Review program, click "Exit" icon marked on the image below, and the program will be closed.





5. BT-Link Next Review Program Structure

5.1. BT-Link Next Review Program Structure

5.1.1. Review Structure

BT-Link Next Review consists of 2 main parts, as indicated in the image below.

					BT-Lir	nk Next	Review									×		
	- 🍇				ØÞ		\square	M		M		\swarrow	\otimes	×				Menu
Search	===	===			==:	= = :			= = =	= = =			= = =	:==	= =			
1 Day	1 V	Veek		Study I	a 074.00007	Unit	Patie	nt Id	Name	Ger	nder	Age	Da	te Time	C-27	D		
,				201505	07162637		P00		RYU JIN	Fen	nale		2015-05	07 16:20	0:37	0		
1 Month	1 \	/ear		201505	07141214		P00		RYU JIN	Fen	nale		2015-05	07 14:1	2.14	0		
				201505	07141314		P00		RVU IIN	Fen	nale		2015-05	-07 14:1	2.14	0		
Start Date	2015	-05-14 (201505	07141213		P00		RVU IIN	Fen	nale		2015-05	-07 14:1	1.42	0		
				201505	07141126		P00		RYU IIN	Fen	nale		2015-05	-07 14:1	1.42	0		
End Date	e: 🗌 2015-	-05-14 (201505	07140947		P00		RYU JIN	Fen	nale		2015-05	-07 14:0	9.47	ő		
				201505	07140926		P00		RYU JIN	Fen	nale		2015-05	-07 14:0	9.26	0		
Patient	ID:			201505	07140737		P00		RYU JIN	Fen	nale		2015-05	-07 14:0	7:37	0		
Patient Na	me:			201505	07140639		POO		RYU JIN	Fen	nale		2015-05	-07 14:0	6:39	0		
				201505	07112401		POO		RYU JIN	Fen	nale		2015-05	-07 11:2	4:01	0		
Client Na	me:		_															
F	ige:																	View
																	<	01000
Gene	der: All																	
Study	ID:																•	
Lipit Na																		
Office Nat																		
Include discharged pat	ient list																i –	
Reset	Se	arch		-														
Command																_		
Acc	BSS																	
Mod	dify			<												>		
Dela	ete					D [82%]	- Total:	136.7 G	, Used: 112	2.4 G, Ava	liable: 1	24.3 G				11		

6.1.2. Menu

Menu is a major menu in BT-Link Next Review, and it provides various functions such as file open/close, print preview, print, navigator, select view, preference, and program closing.

6.1.3. View

The view area is composed of 6 types. (Study Search, Alarm, Wave, Tabular Trend, Graphic Trend, and ECG View).



6. How to use BT-Link Next Review Menu

6.1. BT-Link Next Review Menu

6.1.1. BT-Link Next Review Menu

Main Menu is a major menu in BT-Link Next Review, and it provides various functions such as file open/close, print, print preview, navigator, select view, preference, and program closing.



6.1.2. Study List

To call up the save list from DB.

6.1.3. Close Study

To close the called-up-files.

6.1.4. Print Preview

To check out the layout before printing out.

6.1.5. Print

To print out the files.

6.1.6. Configuration

To set up the environment of Reviewer.

6.1.7. Start/End Position, Previous/Next Page, Previous/Next, Move

To shift the present record data to back and forth.

6.1.8. EMR Report

To track alarm, graphs and parameters when alarm sounds happens.



6.1.9. Wave View

To track graphs and parameters.

6.1.10. Tabular Trend

To track parameters and alarms on the tabular trend.

6.1.11. Graphic Trend

To track the trend of parameters as graphs

6.1.12. ECG View

To track ECG waveform, and HR Trend.

6.1.13. Exit

Quit reviewer.



7. Q & A

1) In case that connection of BT-Link Next is unstable or, failed,

- Check the IP address and related function activation status.
- Check the version of the veterinary multiparameter monitoring device and PC S/W
- Check out "Firewall or Anti-virus software".

2) In case that error message about short memory space,

Check if the save data space is insufficient.
 (Date backup or remove some files with "Reviewer" Or, set up the automatic data deletion.)

3) In case that recording button disappears,

- Check out whether the present client is the state of "Admit" or not. (In the case of Discharge, proceed with the Admit process.)
- 4) When the program is executed, a message saying that the program is blocked appears or there is no response.
- Turn off firewall and anti-virus programs and register exclusion programs.

Example 1) Location - C:\Users\Bionet\AppData\Roaming\BIONET\BMCentral Executable files to be registered - BMCentralLogin.exe, BMCentral.exe, BMReview.exe Example 2) Location - C:\Users\Bionet\AppData\Roaming\BIONET\BMCentral Client Executable files to be registered - BMCentral.exe, BMReview.exe

- 5) When running the program, BT-Link Next is visible in the task manager, but it closes after a while or runs repeatedly.
- Execute BMReview.exe and check if "0xc00007b" error occurs.
- If "0xc00007b" error occurs, delete vc_redist.x64.exe and vc_redist.x86.exe and reinstall them.
- If that doesn't work, reboot and keep the Windows update status up to date.

6) If the program runs, but ends after a while or does nothing.

- It is a DB error and reset as follows.



1. Type "cmd" in Windows Finder and right-click to run as administrator.



2. In the terminal window, type the following command. sqllocaldb delete MSSQLLocalDB sqllocaldb create MSSQLLocalDB -s





- 7) When a special character (Δ) is broken during program execution
- Control Panel/Clock and Country/Country or Region/Administrator Options (tab)/Change System Locale/Uncheck Use Unicode UTF-8 for World Language Support.
- 8) When the Client View screen changes or alternates with different bed information
- Please avoid duplicating bed numbers. If the same bed number is assigned to the equipment, it may be displayed repeatedly.
- This problem occurs when network instability or IP conflicts occur. (Check the network environment and use a fixed IP allocation.)
- 9) Data transmission to external server (HL7) is not transmitted or is interrupted.
- This may occur frequently in a wireless environment and may occur when the network is unstable or when IPs are duplicated.

(Check the wireless AP and use it by assigning a fixed IP.)



Chapter 3. BT-Link Next Mobile App 8. BT-Link Next Mobile App for iOS/Android

8.1. BT-Link Next Mobile



BT-Link Next Mobile is a smartphone application that allows you to monitor one of the multiple Patterson patient monitors directly from an iOS smartphone or tablet on the same network. It enables you to receive alarms from the selected Patterson veterinary monitors, including the AccuWave Series. The app receives all numeric parameters and waveforms while capturing the patient's numeric data and waveforms as images. Additionally, the app can record and save numeric data to a PDF file.





8.1.1. BT-Link Next Mobile iOS Installation.

BT-Link Next Mobile can be installed from the Apple App Store.

Please follow the procedure below:

- 1. In the App Store, type "bt link next" in the search window.
- 2. Select Bionet BT-Link Next Mobile and install the app.

bic	onet	BT-I Bionet	Link No t CO., LTD	ext Mob	ile
		¢			
	AGE	CATE	GORY	DEVELOPE	R
1	2+	ę	ls.		
Yea	ars Old	Med	dical	Bionet CO.,I	TD
		ie vez	♥ 48% ●>	5:24PM Min Apr 29	Preferenc
5-23PM Mon Apr 29	BT-Link	NEX I			
6-23PM Men Apr 29 BD047 04/29/2024 17:23:58 Drvc2/19	BT-Link I	NEP Mean NEP Dia IBP Sys TEMP Dro x3VET/	11 TEMP2 CO2 MAG	WIFI Server	
6-23PM Mon Apr 29 (40001) 04/28/2024 (7/2356 (20146770) HR/min	BT-Link PRESponse Networks	NEP Mean NEP Dia BP Sys TEM Bre X3VET/ CO2 roc %	11 TEMP2 CO2 MAC 20240421065102 -	WIFI Server	OFF
623PM Mex Apr 29 (0007) 04/24/2024 17/2156 (000777) 588/min	BT-Link 1 For sports rate by	132 ESC+2	17 TEMP2 CO2 MAR 192464471045102 •	WIFI Server Server SETTINGS Put Number	OFF
623PM Men Apr 29 (0000) 04290024 192354 (2000670) HB/rdin BP02%	BT-Link ELECTORECLIGHT 60 s 	Image: Section of the sectio	1110/2001/113 193444/193533 * 82 4.6	WB1 Server Server SETTINGS Patharian Unit Setting Dis Pesant Unit	OFF

8.1.2. Starting the BT-Link Next iOS Mobile App.

1. Connect your phone or tablet to the same Wi-Fi network as the AccuWave patient monitor or BT-Link Next.

CAUTION BT-Link Next Mobile only works when the phone or tablet is connected to a Wi-Fi network.

2. Touch the BT-Link Next Mobile icon on your phone or tablet screen.





8.1.3. BT-Link Next Mobile Android Installation.

BT-Link Next Mobile can be installed from the Google Play Store.

Please follow the procedure below:

- 1. In the Google Play store, type "bt link next" in the search window.
- 2. Select Bionet BT-Link Next Mobile and install the app.



8.1.4. Starting the BT-Link Next Android Mobile App.

1. Connect your phone or tablet to the same Wi-Fi network as the AccuWave patient monitor or BT-Link Next.

CAUTION BT-Link Next Mobile only works when the phone or tablet is connected to a Wi-Fi network.

2. Touch the BT-Link Next Mobile icon on your phone or tablet screen.



8.2. Function Keys 2 BT-Link **NEXT** 192.168.89.22 024 / 16:04:49 DEVICE / ID 4 3 9 6 8 ঞ্চ Capture ≡, 5 7

- 1. REPORT: Switch to PDF report list window.
- 2. Mode:
 - Server Mode (S): Receiving patient data directly from AccuWave monitors through the network.
 - Client Mode (C): Receiving patient data from the BT-Link Next software through the network.



- 3. Message Window: Display the phone's IP address, tablet's IP address, or the alarm message received from the patient monitor.
- 4. ID: Display the patient ID or a list of connected monitors when touched.
- 5. Setting: Switch to Preferences window.
- 6. Alarm On/Pause/Off switch.
- 7. Screen Capture.
- 8. Start Recording: Start parameter recording.
- 9. Numeric Parameter Window: Display numeric value or switch to Waveform mode if the window is touched.

8.3. Setting Preferences

$\left(\begin{array}{c}1\end{array}\right)$	<	Preference			
Ċ	WIFI Server		Toggle the state of th	e WIFI server	
	Server	OFF	Client		2
3	SETTINGS				
\bigcirc	Port Number			4100	
\frown	Unit Setting Gas Pressure Unit		mmHg kPa	vol.%	
4	Temp Unit		• • • • • • • • • • • • • • • • • • •		
	Parameter Setting(Max. 6 Parameters)				
5	Sp02 ON		RESP	ON	
Ľ,	NIBP ON		EtCO2	OFF	
			gas		

- 1. Switch to the parameter window.
- 2. WIFI Server: Mode Switch / S Server Mode, C Client Mode.
- 3. SETTINGS: The port number can be checked.
- 4. Unit Setting: Unit Selection for Gas pressure and Temp.
- 5. Parameter Setting: Parameter Window Setup.



- * Users can select a maximum of six parameters.
- * Resp, EtCo2, and A.gas work exclusively.
- Ex) If user selects EtCo2, Resp and A.gas parameters are turned off automatically.

6	IP Setting Phone IP	192.168.89.22
\smile	Recording Setup	
	Recording interval	1min 5min
	Preventing screen turns off during recording	
\bigcap	Recording Para. Optional Setup	
$\left(\begin{array}{c} 7 \end{array} \right)$	ECG	St recording VC recording
\smile	SP02	SPo2-R recording
	NIBP	NIBP-R recording
	IBP	IBP-R recording
	ТЕМР	Temp2 recording
8	Hospital name	

- 6. IP Setting: The IP address of the phone or tablet.
- 7. Recording Setup: Recording settings.
 - Recording interval: 1 minute or 5 minutes.
 - Record selected parameters.

8. Hospital name

CAUTION The alarm level setting in the app does not affect the patient monitor setting. The alarm level setting on the app is independent from the patient monitor's alarm level setting.



<	Preference
Alarm Tone Setting	
LOW	SOUND V
MEDIUM	Sound 🗸 V
нідн	Sound V
HR	НІСН
SP02	НІБН
RESP	НІБН
RESP-A	НІБН
NIBP	нісн
TEMP	HIGH
IBP	HIGH
EtCO2	HIGH
Arrhithmia	нідн
Lead Fault	НСН
Cable Off	НІБН
Check Probe	нюн
Lost Pulse	нідн
Poor Signal	нідн
Artifact	нібн
Extra	Bionet Supp

- 9. Alarm Tone Setting: This setting defines how the app notifies each alarm level to the user (High, Medium, Low).
 - Sound Tone Option: Users can set different sounding tones for each alarm level.
 - Vibration Option: Users can activate the vibration for each alarm level.
 - Low. The alarm repeats every 55 sec if there is an alarm from the patient monitor.
 - Medium: The alarm repeats every 20 sec if there is an alarm from the patient monitor.
 - High: The alarm repeats every 6 sec if there is an alarm from the patient monitor.
 - Setting alarm notification levels for each parameter.



8.4. Connection

8.4.1. Server Mode

The app receives patient data from the patient monitor on the same network. In this mode, the patient monitor sends data to the app directly through the network.

1. Check the phone or tablet's IP address as follows. Go to the parameter window. The phone or tablet's IP address will be displayed in the message window. The user can also check the phone or tablet's IP address from the app's setting (Preference) window.

REPORT	BT-Link NEXT	S OFF C	ID Catting	
04/23/2024 / 16:04:49	* WiFi Connected	192.168.89.22	ir setting	
DEVICE / ID	1	1*	Phone IP	192.168.89.22
			Recording Setup	
			Recording interval	1 Tmin 5min
			Preventing screen turns off during recording	
			Recording Para. Optional Setup	
			ECG	St recording VVC recording
			SP02	SPo2-R recording
			NISP	VIBP-R recording
			BP	IBP-R recording
			ТЕМР	Temp2 recording
			Hospital name	
	PART			



Figure 3.1

The phone or tablet's IP address is displayed in the parameter window

The phone or tablet's IP address is displayed in
the parameter window

2. Set the IP address of your phone or tablet on the patient monitor by following the steps outlined below.



- - Menu
 X

 Change Layout
 Waveform
 Demo

 Display
 Print
 Popup

 Setup
 Print
 System

 Setup
 Setup
 System

 Screen
 Calibration
 Maker

 Lock
 Calibration
 Maker
 - 1) From the AccuWave screen, select Menu/System Setup.

2) In System Setup, select the Communication tab.

System Setup							×
				Commu	nication		
	BT-Link			HL7			
Protocol V	ersion		HL7				
BT-Link Ne	ext		Server IP		192.16	8.0.99	
BT-Link Ne	ext IP	192.168.89.11	Port		440	000	
BT-Link M	obile		Period		30 s	sec	
BT-Link M	obile IP	192.168.89.13	Check Respon	se			
	B2B		Labels		Ed	lit	
B2B							

3) Activate BT-Link Next Mobile and enter the IP address of your phone or tablet in the BT-Link Next Mobile IP field.



NOTE When the app is set to Client Mode, the user must enter the BT-Link Next IP address.



- 4) Once the setup is complete, press the X button to exit the menu.
- 3. Connecting a Patient Monitor to the App.
 - 1) Turn on BT-Link Next Mobile server 1 first.

Wait about 10 ~ 20sec and touch "ID" (2) in the picture below.

3:31 PM Mon Sep 9	BT-Link NEXT	1 S OFF C	
09/09/2024 / 15:31:40		192.168.1.179	\sim
DEVICE / ID		AccuWave Premier / 🔻	(2

A device list window ③ will pop up under ID.
 Select a monitor in the list to connect.





REPORT		BT-Link NEXT				S OFF C
09/09/2024 / 15	:32:18		중 WiFi Connected			192.168.1.179
DEVICE / ID					A	ccuWave Pro / 🔻
HR/min		Ş	NIBP mmHg	ĩ	CO2mmHg	2A
	60		S	118	EtCo2	35
SPO2 %		Z	Μ	93	FiCo2	0
	98		D	80		
PR /min	1	60	PR/min	79	RR /min	20
Gasmm	Hg	ĘĮ	IBP1 mmHg	ũ	TEMP °C	₿°
	DES	02	S	119	T1	36.2
Ex	27		Μ	94	Т2	36.3
In	19		D	79		
MAC		2.69	PR/min	60	delta	0.1
		ş	Alarm_off	ō =	•	

* Once the selected monitor connects to the app successfully, the Patient ID (if it was entered in the patient monitor) and parameter values will be displayed.

8.4.2. Client Mode

In Client Mode, the app receives the patient data from BT-Link Next (computer software). BT-Link Next is computer software which receives patient data from the connected patient monitors and sends the same data to BT-Link Next Mobile (if it is in Client Mode).

- 1. Connecting the App to BT-Link Next (computer software).
 - 1) Select or add a new computer's IP address where BT-Link Next is installed and connect to BT-Link Next.



04/23/2024 18:19:06	♥ WFI Connected		192,168,89,22	Ϳ
DEVICE / ID			/	
4R/min ♀	Server Connecting Server Connecting Free P Direct Input	INBP mmHg S M T T T2	* *	

- 1 1 Turn on the Client Mode.
- ② Saved list of server lps.
 - * Click the down arrow button to display the server IP list.

Server	Connecting		192.168.1.98
Server IP	Direct Input	\odot	192.168.1.99
		+ –	192.168.1.100

- ③ Add a new server to the server list.
 - \ast Enter the computer's IP address where BT-Link Next is installed.
 - * Click"+" to save the IP address.

Server IP	Direct Input	Save Co	mplete
192.168	3.1.100 + -	Cancel	OK



④ Select a server from the IP list mentioned in #2.

Select the target server IP you want to connect to, then click "OK".

* The picture below shows multiple BT-Link Next devices existing on the same network.

	Server Connecting			
192.168.1.98	Server IP	192.168.1.98	~	
192.168.1.99			+ -	
192.168.1.100	с	ancel	ОК	

2) Connecting a Patient Monitor (After connecting to BT-Link Next).



1 A monitor list window will pop up if the Client Mode connection is successful.

* This window displays the unit names of the AccuWave patient monitors connected to BT-Link Next.

* If the monitor doesn't have a unit name, it will not be connected to BT-Link Next Mobile.

② Select the target monitor.