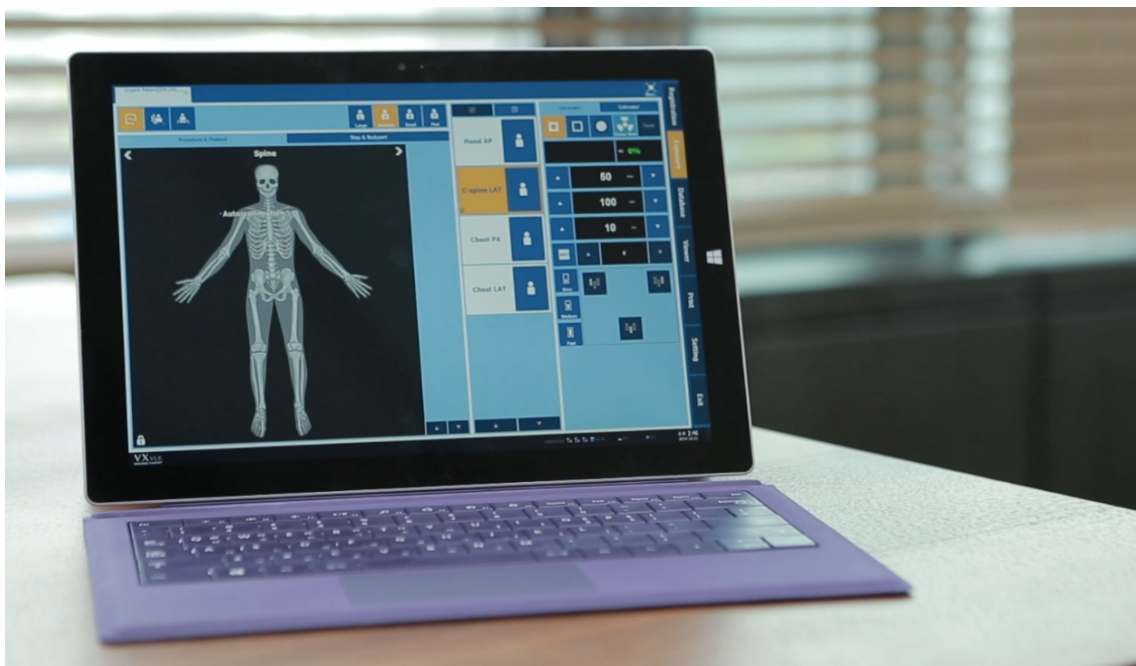


VXvue Service Manual



© Viewworks. 2018 All rights reserved.

Under copyright laws, this manual should not be reproduced, in whole or in part, without the written permission of Viewworks.

The specifications and related information in this manual may be changed without notice. Refer to Viewworks Download System (VDS) for the latest version of our manuals.

Contents

1. Information	5
1.1 Disclaimer	6
1.2 Document Guide	7
1.3 Document Convention	8
1.3.1 Symbols	8
1.3.2 Notations	8
1.4 Version Information	9
1.5 Revision History	10
2. Instruction	11
2.1 Overview	12
2.1.1 Main Features	12
2.1.2 Hierarchy Chart.....	12
2.1.3 Main Components.....	13
2.2 Recommended Specifications	14
2.2.1 Workstation	14
3. Installation.....	15
3.1 Installation Guide	16
3.2 Installing .NET Framework 3.5.....	18
3.2.1 Installation Option.....	18
3.2.2 How to Install	18
3.2.3 Installing VXvue	21
3.2.4 How to Configure the Firewall	28
3.3 Checking Installation Contents.....	31
3.3.1 Checking the Program	31
3.3.2 Checking the Folder and File.....	32
3.3.3 Checking Database and Platform	33
3.4 Setting Date and Time	35
3.5 Registering a License	36
3.5.1 Running VXvue	36
3.5.2 Getting a License	36
4. Settings	37
4.1 Overview	38
4.1.1 Getting Started	38

4.1.2	Saving the Settings	39
4.1.3	Exporting / Importing Settings	39
4.2	System Group.....	40
4.2.1	System Information Menu.....	40
4.2.2	Account Menu.....	42
4.2.3	Theme Menu.....	44
4.2.4	License Menu.....	45
4.3	Registration Group.....	46
4.3.1	General Menu.....	46
4.3.2	Unscheduled Menu.....	48
4.3.3	Scheduled Menu	49
4.3.4	Physician Menu.....	49
4.4	Display Group	52
4.4.1	General Menu.....	52
4.4.2	Information Overaly Menu	54
4.4.3	LUT Menu.....	56
4.4.4	Monitor Correction Menu.....	57
4.4.5	Layout Menu.....	58
4.5	Tool Group.....	60
4.5.1	General Menu.....	60
4.5.2	Pre-Defined Text Menu	61
4.5.3	Image Tool Menu.....	62
4.5.4	Quick Access Menu	63
4.5.5	Thumbnail Setting.....	65
4.5.6	Status Bar Menu.....	66
4.6	Study Group	67
4.6.1	General Menu.....	67
4.6.2	Study Delete Menu	69
4.6.3	External Save Menu	70
4.6.4	Rejected List Menu	73
4.6.5	Rejected Reason Menu	74
4.7	Procedure Manager	75
4.7.1	Tool Area.....	76
4.7.2	Category Tab.....	77
4.7.3	Procedure Tab.....	81
4.7.4	Stitch Protocol Tab	83
4.7.5	Step Tab.....	84
4.7.6	Body part / Projection Tabs.....	89

4.8	Integration Group	91
4.8.1	General Menu.....	91
4.8.2	Detector Menu.....	92
4.8.3	Generator Menu.....	95
4.8.4	Collimation Menu	96
4.8.5	Stand Table Menu.....	98
4.9	DICOM Group	99
4.9.1	General Menu.....	99
4.9.2	Queue Menu.....	101
4.9.3	Setting Common Items of DICOM Server	102
4.9.4	MWL Menu.....	104
4.9.5	MPPS Menu.....	106
4.9.6	Storage Menu.....	106
4.9.7	Storage Commitment Menu.....	109
4.9.8	Print Menu	110
4.9.9	Print Overlay Menu.....	114
4.9.10	Tag Mapping Menu	115
4.10	Backup Group	117
4.10.1	Backup Menu.....	117
4.10.2	Clean Menu	118
4.10.3	Restore Menu	119
4.11	Account Default Group	120
4.11.1	Image Tool Menu.....	120
4.11.2	Quick Access Menu	121
4.11.3	Thumbnail Menu.....	123
5.	Advanced Settings.....	124
5.1	Setting Date and Time	125
5.2	Setting a Language.....	126
5.2.1	Checking a Language to Use.....	126
5.2.2	Adding a Language to Use.....	126
5.3	VXvue Demo	128
5.3.1	Features.....	128
5.3.2	Starting VXvue Demo	128
5.3.3	Detector Icons of VXvue Demo	128
5.3.4	Making Virtual Exposure in VXvue Demo.....	129
5.3.5	Changing Demo Image.....	130
5.4	Log Viewer.....	131

1. Information

This section gives basic information of this manual and the product.

Disclaimer

Document Guide

Document Convention

Version Information

Revision History

1.1 Disclaimer

If the user is not fully acquainted with this manual the system can malfunction or cause otherwise unforeseen issues. To prevent any potential issues the user should fully understand the contents in this manual before operating the program and equipment.

When operating this software, take the following precautions or the product may not function correctly.

- 1 Roentgenography, image processing, reading of image, and data storage must be performed in accordance with the law of each country where the program is being used. Also, the user is responsible for protecting the privacy of image data.
- 2 In no event will Vieworks be liable for direct or indirect consequential damage arising out of the use of this program. Vieworks will not be liable for loss of image data for any reason.
- 3 Before using this software, be sure to read this manual thoroughly as well as the manuals for any equipment used in conjunction with this software. Keep this manual where it is easily accessible.
- 4 Other systems and product names in this manual are the trademarks from their manufacturer.



- The user is responsible for ensuring whether the detector calibration is performed correctly after the software installation. Do not try to use the software if the detector calibration has not been performed.

1.2 Document Guide

This manual explains how to install and configure **VXvue**, the image acquisition program developed by Vieworks Co., Ltd and is intended for service engineers who install and configure the **VIVIX-S** detector and **VXvue** software.

This Document covers:

This manual guides you how to install and set up VXvue, an image viewer program developed by Vieworks.

This Document provides to:

This manual is intended for service engineers who install and configure the VIVIX-S detector and VXvue.

Contact Us

For any comments or inquiries regarding this document, contact the customer support team in Vieworks.

Item	Contents
Department	Customer Support Team at Vieworks
E-mail	CustomerSupport@vieworks.com

Trademarks

The name "Vieworks" and the Vieworks logo are registered trademarks of Vieworks.

© Vieworks. 2018 All rights reserved.

1.3 Document Convention

This section describes the symbols and notations in this manual.

1.3.1 Symbols

Caution and Warning



- This symbol is used for indicating a potentially hazardous situation while operating this product. Users should be well acquainted with this symbol and the related contents.

Information



- This symbol is used for indicating product related references and supplementary information.

1.3.2 Notations

Bold Types

Words in bold indicate options seen directly within the GUI (graphical user interface) of the **VXvue** program.

1.4 Version Information

Software and Firmware compatible version (Recommended)

Software				Package (Firmware)										
VXvue	VIVIX Setup	VX Setup	VDD	FXRD (Detector)						VXTD		FXRS (SCU)		
				1717S	1417S	1417W	1012N	1717N	1417N	1717V	2532E	02A	03A	04A
1.0.0.86b21	1.0.4.23 p4	2.0.0.7	1.4	01.06	01.04	01.21								
				02.03	02.01	02.02	3.39	1.39	1.0.0.10	-	-	3.39	01.15	3.39
1.0.0.86b22	1.0.5	2.0.0.7	1.4	01.06	01.04	01.21								
				02.03	02.01	02.02	3.40	1.40	1.0.0.10	1.00	-	3.39	01.15	3.39
1.0.0.86b23	1.0.5	2.0.0.7	1.4	01.06	01.04	01.21								
				02.03	02.01	02.02	3.40	1.40	1.0.0.10	1.00	-	3.39	01.15	3.39
1.0.0.86b24	1.0.8	2.0.0.7	1.4	01.06	01.04	01.22								
				02.03	02.01	02.03	3.41	1.41	1.0.0.11	1.00	-	3.39	01.22	3.39
1.0.0.86b25	1.0.8	2.0.0.7	1.4	01.06	01.04	01.22								
				02.03	02.01	02.03	3.41	1.41	1.0.0.11	1.00	-	3.39	01.22	3.39
1.0.0.86b26	1.0.9	2.0.0.7	1.4	01.06	01.04	01.25								
				02.03	02.01	02.07	3.41	1.41	1.0.0.13	1.00	-	3.39	01.22	3.39
1.0.0.86b27	1.0.10	2.0.0.7	1.4	01.06	01.04	01.25								
				02.03	02.01	02.07	3.41	1.41	1.0.0.13	1.00	1.0.0.4	3.39	01.22	3.39



- The versions above are meant to be used for document revision only. They do not guarantee compatibility across all referenced models.

1.5 Revision History

Ver.	Date	Revision History
V86b21	2017-08-24	Newly created by separating contents from the existing operation manual
V86b22	2017-09-06	Added: FXRD-1717V version to chapter 1.4 Version Information Added: 4.11 Account Default Group
V86b23	2017-11-06	Added: Information about PureImpact™ image processing
V86b24	2018-03-09	Changed: PureImpact™ setting method Changed: The display method of generator value of the step
V86b25	2018-03-27	Added: 4.2.2 Account menu - Permission guidance for each group Added: 4.7.5 Step tab - Shutter shapes applied automatically when shooting images in Step.
V86b26	2018-05-28	Changed: 4.2.1 System Information Menu Changed: 4.9.6 Storage Menu
V86b27	2018-07-16	Changed: 1.4 Version Information Changed: 3.2.3 Installing VXvue

2. Instruction

This section provides basic concepts and recommended specifications of VXvue.

Overview

Recommended Specifications

2.1 Overview

VXvue is the image acquisition program for **VIVIX-S**, used for acquiring, adjusting and managing images generated from the **VIVIX-S** detector. **VXvue** is organized with several specialized modules and provides high quality medical images to users through various advanced functions and quick image processing between modules.

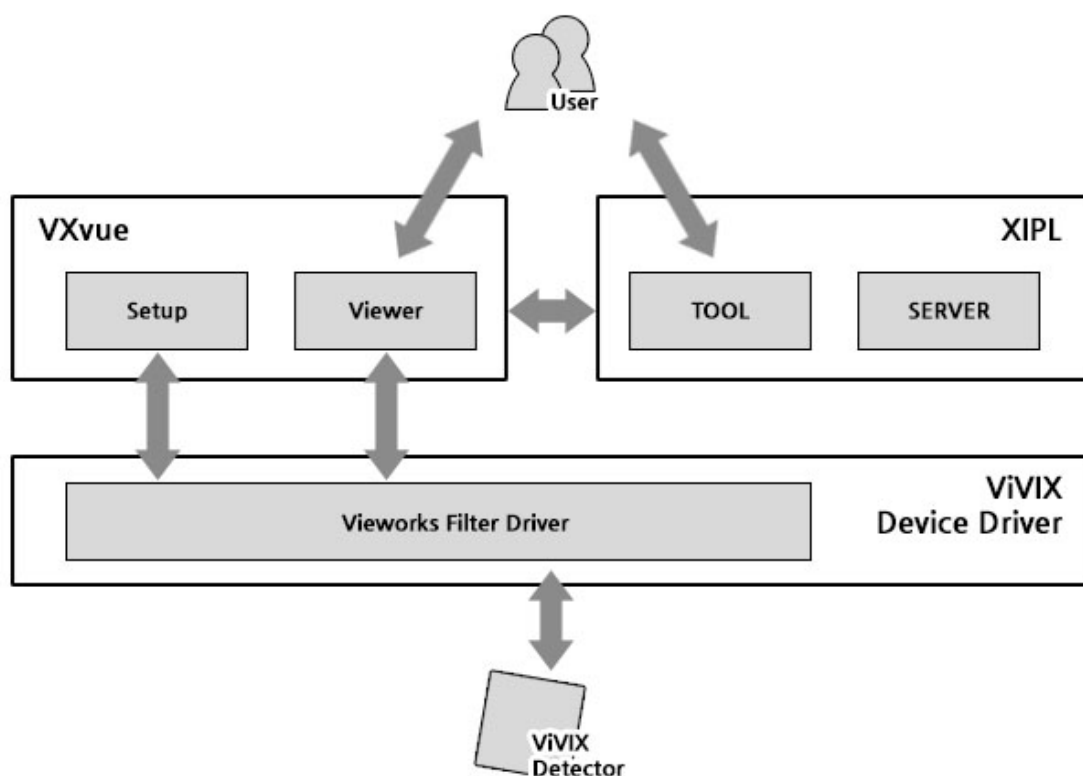
2.1.1 Main Features

- Acquire and search for images acquired with a VIVIX-S detector.
- Implement high-quality images by applying the image processing algorithm developed by Vieworks
- Skins for various GUIs (Graphic User Interfaces) suitable for both ordinary and touch screens.
- Store and manage images in the database.
- Adjust images using various processing tools.
- Export images using various media.
- View detector status and change settings.
- Chase and search the system status.
- **VXvue conforms to the standard of DICOM 3.0.**



- **HS8** and **PureImpact™** are the image processing algorithms developed by Vieworks.

2.1.2 Hierarchy Chart



2.1.3 Main Components

Components	Description
VXvue	The image acquisition software for VIVIX-S detectors.
Viewer	The image viewer program for viewing and managing images.
VIVIX Setup	The setup program for engineers who set VIVIX-S detectors.
VIVIX Device Driver	Vieworks network filter driver for acquiring images from the detector quickly.
XIPL	Vieworks image processing software for processing images acquired from VXvue.
(With HS8)	The existing image processing algorithm
(With PureImpact™)	New image processing algorithm
TOOL	The image processing program in XIPL for users.
SERVER	The image processing server program for image processing.
 Refer to the XIPL User Manual for detailed information regarding image processing functionality between VXvue and XIPL.	
 - PureImpact™ is the newest version of HS8, and will typically provide higher quality image processing results. It is recommended that PureImpact™ be used for all image processing. - HS8 parameters are provided for users with quality comparisons with HS8 and with established diagnostic protocols based on the existing HS8 protocol.	

2.2 Recommended Specifications

This section provides information about the recommended specifications for installing and using **VXvue**.



- Using equipment that does not at least meet the minimum required specifications may affect the functions and processing speed of **VXvue**.

2.2.1 Workstation

Components	Recommended Spec.
OS	Microsoft Windows 7 Professional 64bit (Service Pack 1)
	Microsoft Windows 7 Ultimate 64bit (Service Pack 1)
	Microsoft Windows 8 or 8.1 Professional 64bit
	Microsoft Windows 8 or 8.1 Ultimate 64bit
	Microsoft Windows 10 Professional 64bit
	Microsoft Windows 10 Ultimate 64bit
LAN Card	1000BASE-T Gigabit Ethernet card
	Intel® PRO 1000 Series (Gigabit LAN Card for network interface)
	Min. requirements: 1Gbps, Jumbo Frames: 9K
	Receive Descriptors: 2K (higher than 1024)
CPU	Intel Core i5 2600 or higher (or comparable CPU)
Memory	4GB or higher
HDD or SSD	1TB or higher
Monitor	1280 X 768 or higher
CD-ROM	CD or DVD R/W
	.NET Framework 3.5 is not pre-installed in Windows 8 / Windows 10. Be sure to install .NET Framework 3.5 before installing VXvue if using Windows 8 / Windows 10. Refer to <3.2 Installing .NET Framework 3.5> for detailed information about the manual installation of .NET Framework 3.5.

3. Installation

This section provides information about installing the VXvue image acquisition software.

- Installation Guide
- Installing .NET Framework 3.5
- Checking Installation Contents
- Setting Date and Time
- Registering a License

3.1 Installation Guide

Follow these instructions for the proper installation of **VXvue**. Failure to comply with these instructions may result in critical errors in installation or operation.



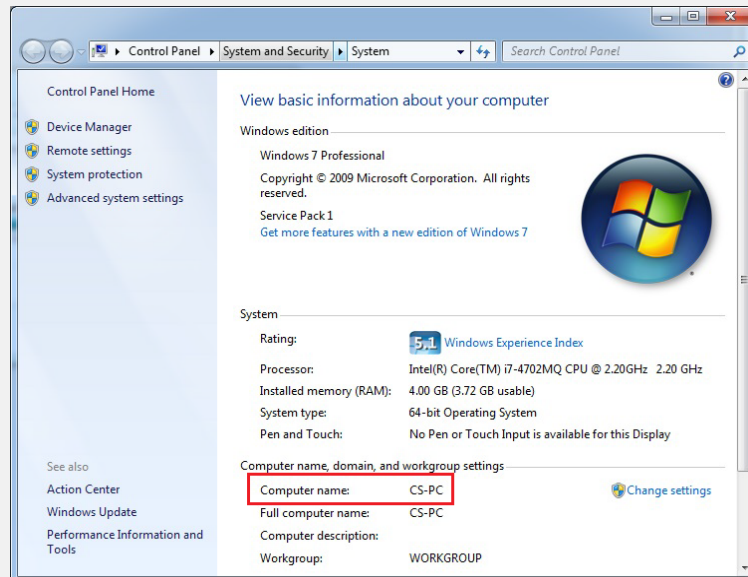
- Read and fully understand this manual before installing and/or using **VXvue**.
- It is recommended to use two hard drives as separate local disk drives, or a RAID 1 mirror with separate partitions.
- Do not install **VXvue** to an external HDD or network drive.
- In case of installing **VXvue** on a single hard disk, make create an addition partition.
- If you use Windows 8 or Windows 10 ensure that **.NET Framework 3.5** is installed.
- Be sure to install **VXvue** to the local drive. (C or D drive)
- Do not install **VXvue** to the root folder of C drive. It is recommended to install the program to the setup path guided by **VXvue**.
- Ensure there is enough free disk space before installing and/or using **VXvue**. Low disk space can cause severe performance issues.
- You should secure enough disk space for storing images and data.
- Log on to **VXvue** by the Windows account with administrative rights when installing or removing **VXvue**.
- Set the Windows date and time in advance.
- Ensure that the PC is free from any malware/adware/virus software, or any other issues that could have a negative impact on the installation or operation of **VXvue**. Please contact your local IT support staff for further instruction for further instruction.



- **VXvue** complies with the **UAC** (User Account Control) policy of Microsoft Windows. Therefore, the user should install and log on to **VXvue** using a Windows account with administrative privileges. You can use **VXvue** with the general user account after the installation.

- The computer name and the user account name must be different to avoid issues with database installation.

▫ Check the computer name as follows:



▫ Check the user account name as follows:



- Check the installation package provided by Vieworks before installing **VXvue**.

Name	File / Folder Name	Description
VXvue	BodypartCategory	Image folder of bodypart category
	ISSetupPrerequisites	Installation folder of components
	Language	Language folder
	Theme	Theme folder for executing VXvue
	Setup.exe	Execution folder for installing VXvue
.NET Framework 3.5	DotNetFx3.5.exe	Installation file of .NET Framework 3.5

3.2 Installing .NET Framework 3.5



- Before installing **VXvue** to Windows 8 or Windows 10, you should install **.NET Framework 3.5** first.

3.2.1 Installation Option

The following two options are provided for installation of **.NET Framework 3.5**.

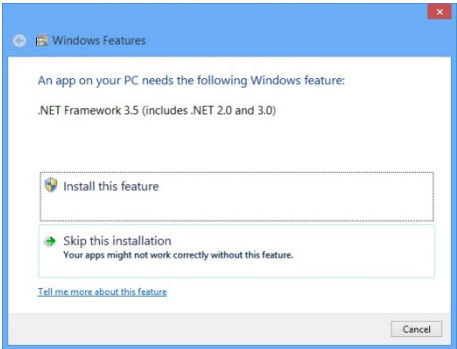
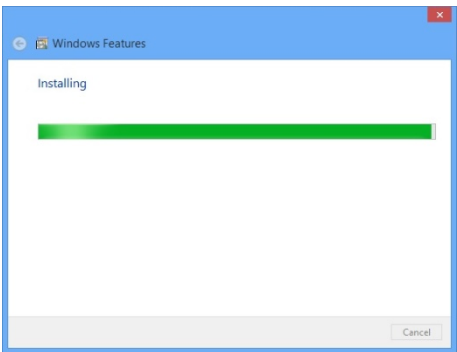
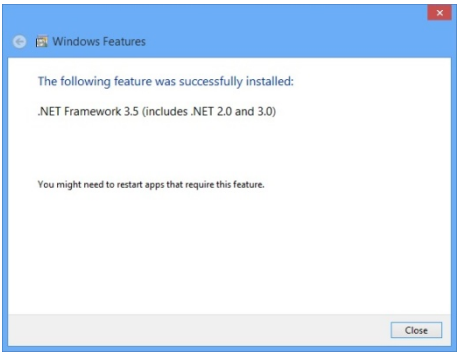
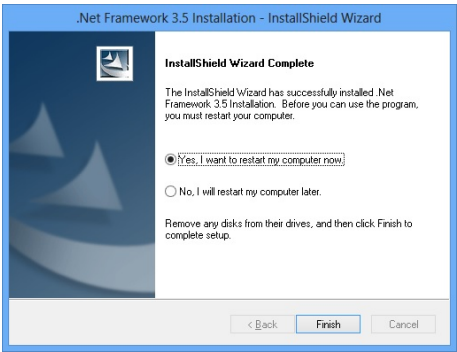
Option	Description	Precheck
Through Internet	Using internet.	Check the internet connection status.
Using Windows Disk	Using Windows installation disk.	Prepare Windows installation disk.

3.2.2 How to Install

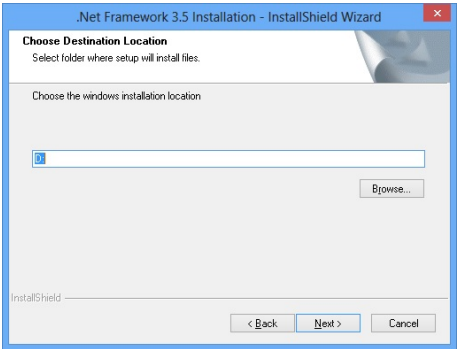
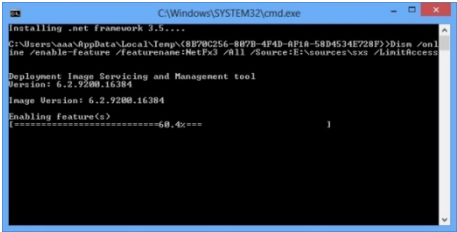
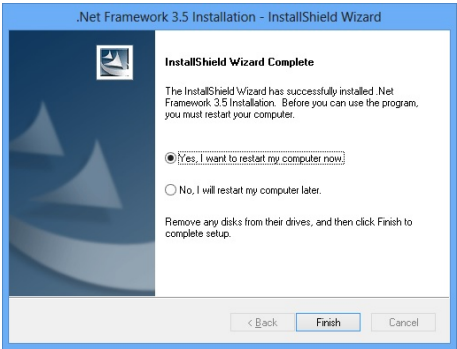
Start installation

Step	Screen Image
- Execute DotNetFx3.5.exe file. - Click on the Next button on the dialog box.	
- Choose the option. - Through Internet - Using Windows Disk	

Installing the Through Internet option

Step	Screen Image
1 Click Install this feature .	
2 The installation may take a few minutes. Wait until the next step is displayed.	
3 Click on the Close button when the installation is complete.	
4 Click on the Finish button. 5 Restart the computer.	

Installing the Using Windows Disk option

Step	Screen Image
1 Click on the Browse button and choose location where VXvue will be installed. 2 Click on the Next button.	
3 The installation is processing. It can take a few minutes. Wait until the next step is displayed.	
4 Click on the Finish button. 5 Restart the computer.	

3.2.3 Installing VXvue

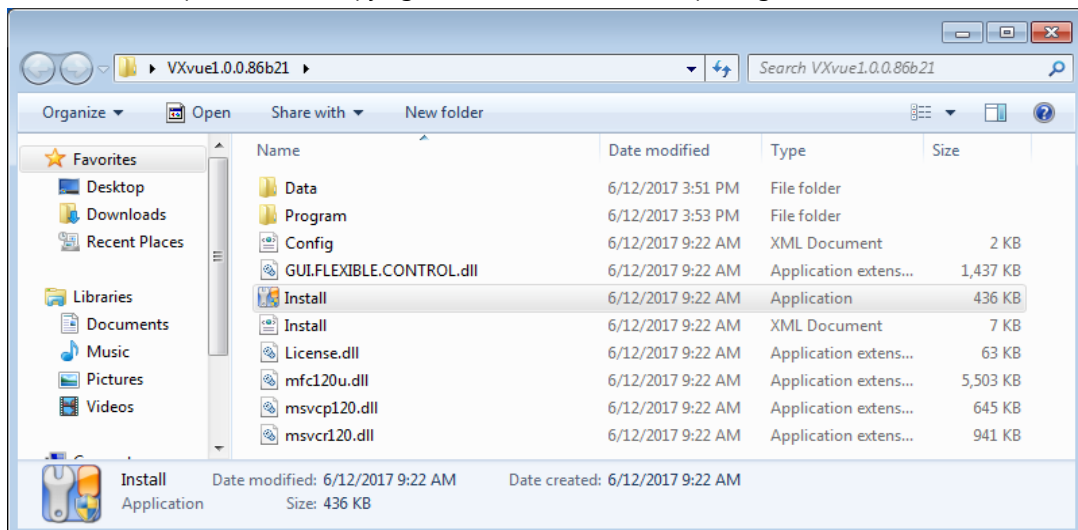


- Before installing, upgrading or deleting **VXvue**, check if you log on to the PC with a Windows administrator account. If you have no administrative rights, stop the task and log on with the administrator account.
- Before installing **VXvue** to Windows 8 or Windows 10, you should install **.NET Framework 3.5** first. Refer to <3.2 Installing .NET Framework 3.5> for the detailed information about the installation of **.NET Framework 3.5**.
- Before installing or upgrading VXvue on Windows 8 or Windows 10, you must disable the **Windows Smart Screen (Apps and Files)** feature.



- The installation procedures in this chapter are written based on **Windows 7 Service Pack 1**.

1 Check the file component after copying the folder of installation package files to the local drive.



- The built-in installation package files are as follows.
 - Data > Database > BodypartCategory : Collection of bodypart images
 - Data > Database > Language : Language file
 - Data > Skins: Skins of **VXvue** screen
 - Config.xml: The file to set the **viewer mode**. (Human, Vet, Equine, Vehicle)
 - Program: Pre-installer and installation files of **VXvue**



- If there are image files in the BodypartCategory folder, they will be copied automatically after installing **VXvue**.



- If there is 'Language.txt' file in the Language folder as the Unicode format, it will be overwritten after installing **VXvue**.



- If the width, height and format (bmp) of a logo image file in the Skin folder are same, you can use the desired image from the path below.

 ▶ VXvue1.0.0.86b21 ▶ Data ▶ Skins ▶ Logo ▶ Logo ▶ Image



- While installing VXvue, you can specify the **viewer mode** according to the usage purpose by manipulating the items under <ShowViewerMode> in the Config.xml file.

```

<ShowViewerMode>
  <Item Name="Human" />
  <Item Name="Vet" />
  <Item Name="Equine" />
  <Item Name="Vehicle" />
</ShowViewerMode>

```

- If the item exists, it is indicated in the Viewer mode selection window of **Register Options**. If you delete the corresponding line <Item Name ... />, the item is not indicated.
- When all items are installed, the default value appears
- Adding an item other than the default one does not appear.
- When all items are deleted, only 'Human' can be selected.

Viewer Mode :

☒ Human
 ☐ Vet
 ☐ Equine
 ☐ Vehicle



- It is not allowed you to add or delete any file in the 'Skins' folder except the logo. Failure to do so may cause problems with installation and operation.



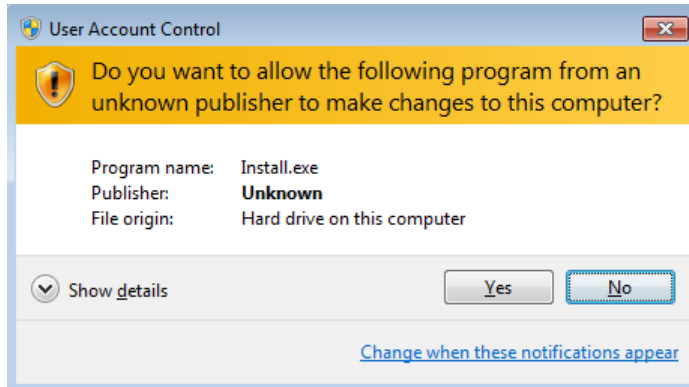
- Do not delete the 'Data' folder because it contains files required by **VXvue**. Deleting the Data folder may cause problems with installation and operation.
- Config.xml and Install.xml are installation-specific configuration files. Do not modify or delete anything except the <ShowViewerMode> item. There may be problems with installation and operation.
- If you want to randomly delete the pre-installed files in the 'Program' folder, you must install the pre-installation files separately before installing VXvue.

2 Right click the **Install.exe** file to start installing **VXvue** in administrator mode.

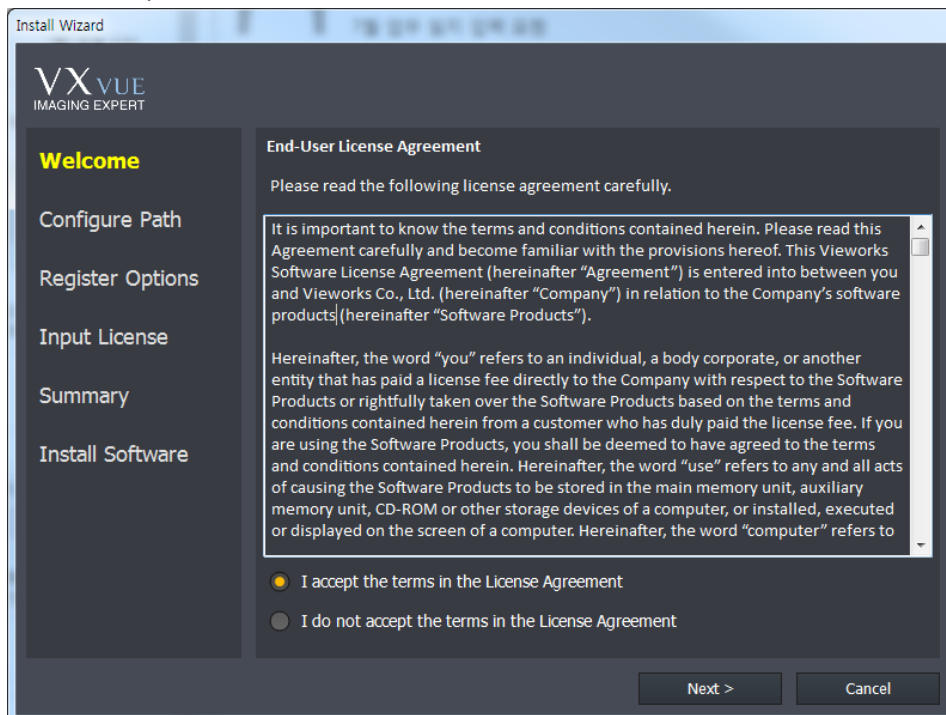


- With the 'Install.exe' file you can install VXvue or upgrade from a previous version of VXvue.
- Installation may not proceed in the following cases;
 - The current version is equal to or higher than the version being installed.
 - If another type of VXvue is installed.
 - The name of the Windows account used for the installation is the same as the network name of the PC.
 - If .Net Framework 3.5 is not installed.

- 3 Click on **Yes** when the **User Account Control** dialog box is displayed.
- The dialog box may not be displayed depending on the Windows environment settings.



- 4 Check the End-User License Agreement in the **Install Wizard** dialog box. If you agree with the content, click the 'I accept...' button and then click the **Next** button

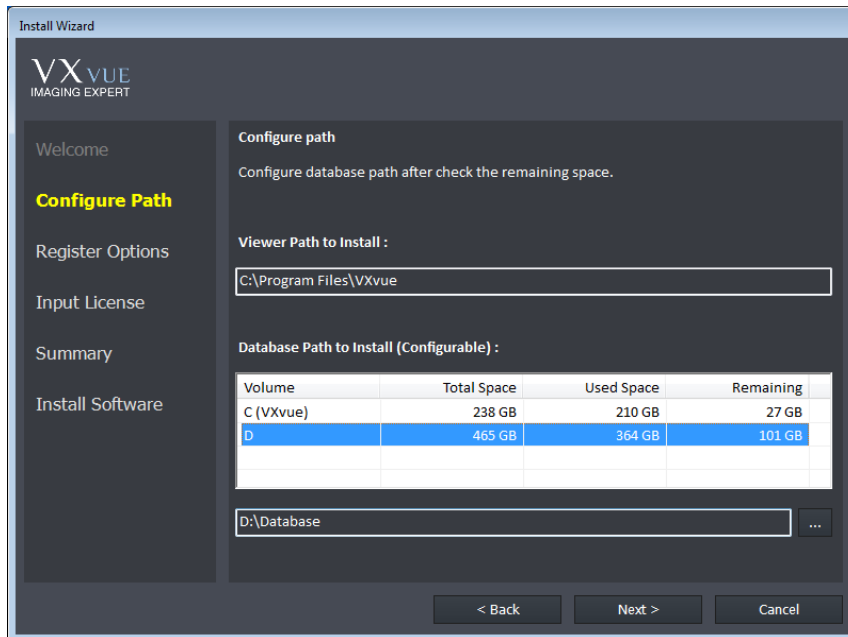


- If you are upgrading VXvue, you will only see **Welcome**, **Upgrade Options**, **Summary** and **Install Software** items in the list on the left side of the screen.
- In Upgrade Options, you can select the type of XIPL parameter to use.



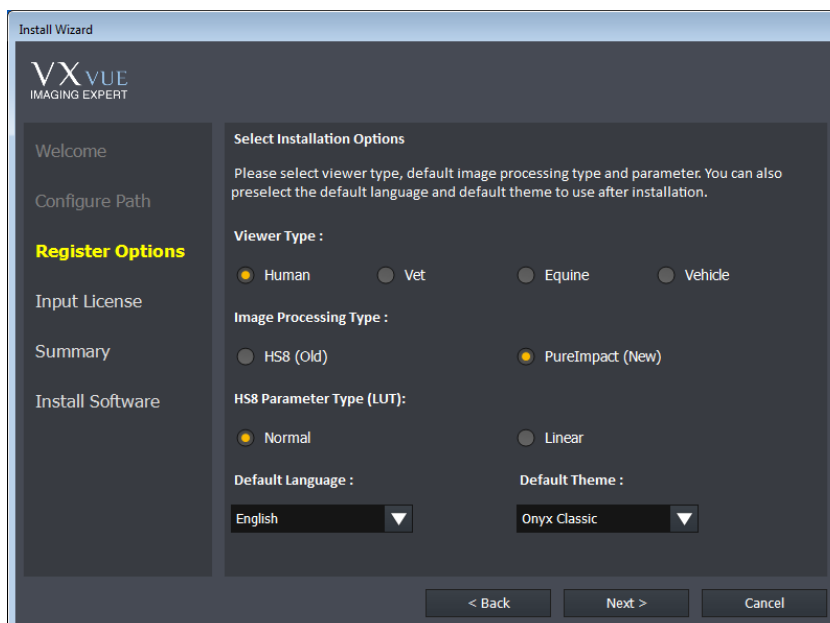
- After installing and upgrading VXvue, you can still use the existing customized HS8 parameters and PureImpact™. If you use the existing image processing parameter (HS8), you can get the same result as before upgrade.

- 5 Check the drive and folder where VXvue will be installed, and where images and data for Vxvue will be stored, then click the **Next** button.



- The default path for installing VXvue is Program Files\VXvue on the drive where Microsoft Windows is installed.
- The default path to the storage folder is D:\Database.
- If you want to change the drive in which the database will be installed, check the available free space of the drives.
- CDs, DVDs, NAS drives and external hard disks cannot be used as storage drives.
- Click the  button to specify the path to the Database folder.

- 6 Choose the **viewer mode**: and click on the **Next** button.





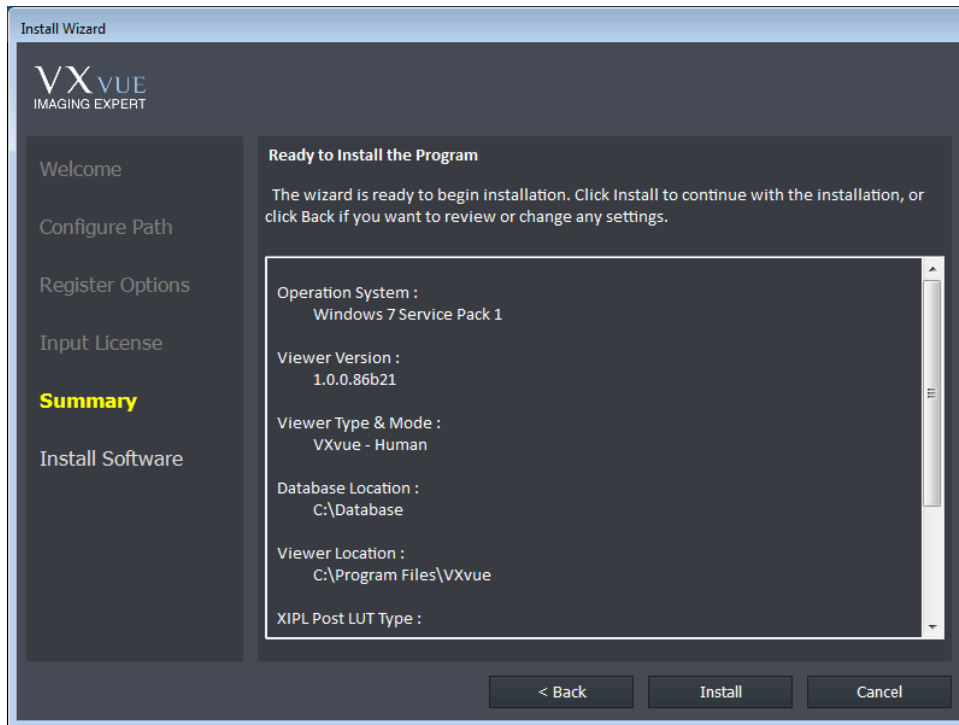
- Select the type of application you want to use.
 - Choose **Vet** or **Equine** to operate **VXvue** as a veterinary version.
 - Choose **Vehicle** to operate **VXvue** in a vehicle for examining patients.
 - If you already have a database and XIPL installed, the software will automatically choose the version for you.
- Select the default image processing type and parameter type to be used in XIPL.
 - Select the image processing type to be set as default.
 - If you select 'Linear', the Linear LUT is applied to the images shot with the HS8 image processing parameters as default.
 - We recommend you select 'Normal' for optimal images with recommended Post LUT.
 - If you already have XIPL installed, the parameter cannot be selected and the previously installed parameter is used.
- Select a language to be used in VXvue. You can change it after installing the program.
- Select a theme to be used in VXvue. You can change it after installing the program.

7 Enter the license which is issued by using the Hardware Key displayed in the License window and click the **Next** button.



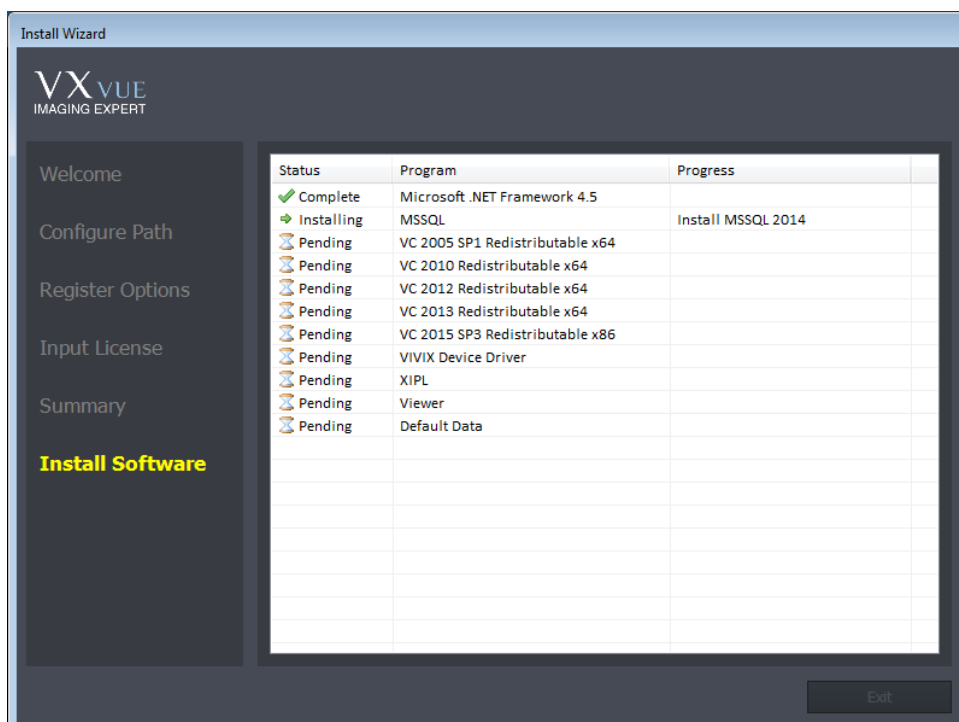
- You can change the license after installing VXvue.
- If the license registration is successful, the license input window does not appear after installing VXvue.
- For more information on how to issue a license, please contact the person in charge of Viewworks' product licensing for your company.

- 8 Check the installation information and click the **Install** button to start the installation. If you wish to change any of the listed options, click the Back button to reselect.



- After confirming the installation information, click the Install button to proceed with the installation. You cannot stop the installation until it completes.

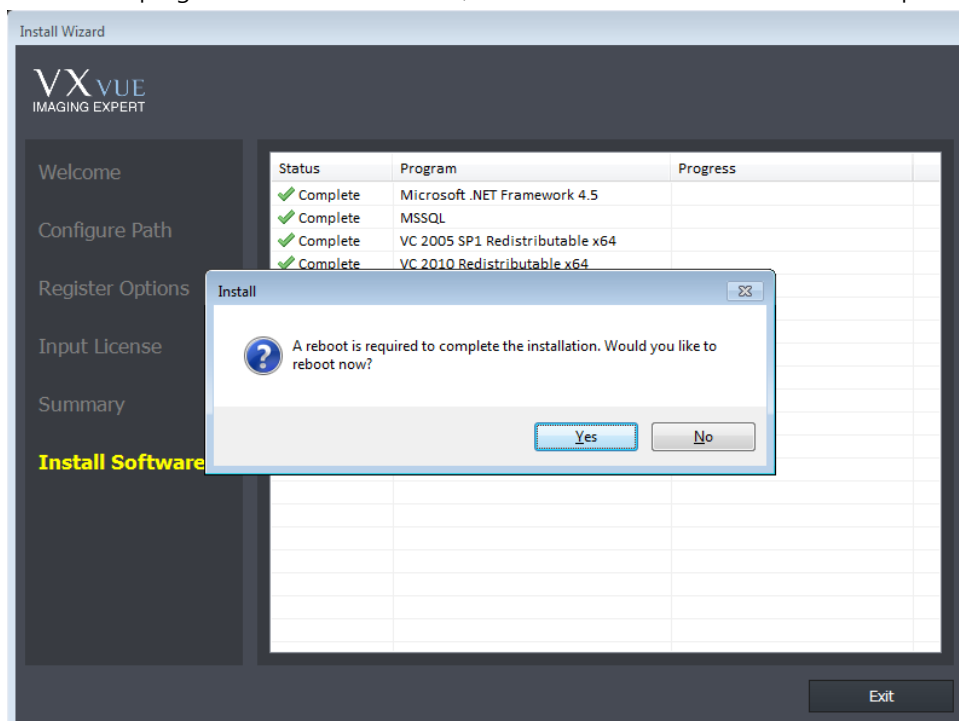
- 9 Click the **Install** button to start installing VXvue. It may take a few minutes depending on your system specifications.





- Check the status in progress.
 - **Pending:** Standby status before program installation
 - **Installed:** A state that the program is already installed and does not need to be installed.
 - **Installing:** The program is now being installed.
 - **Complete:** Installation complete
 - **Fail:** Installation failed
- In **Program** and **Progress**, check the name of each program and the installation process.
- You cannot stop the installation until the program installation in the displayed list is complete.

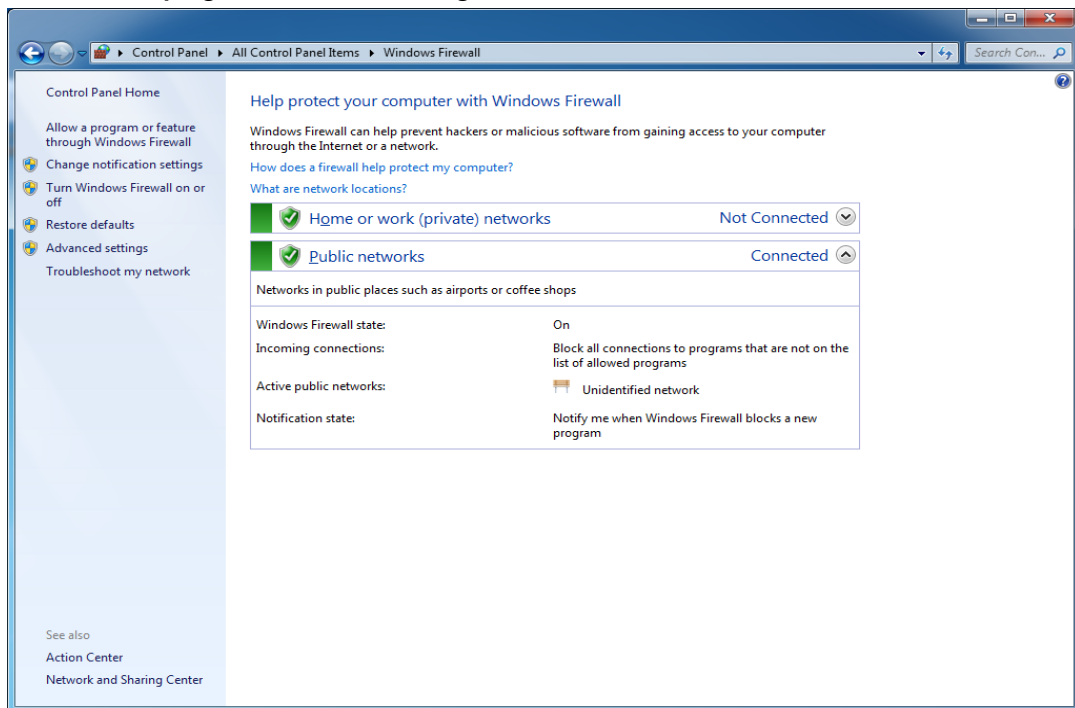
10 When all the programs have been installed, click the **Yes** button to restart the computer.



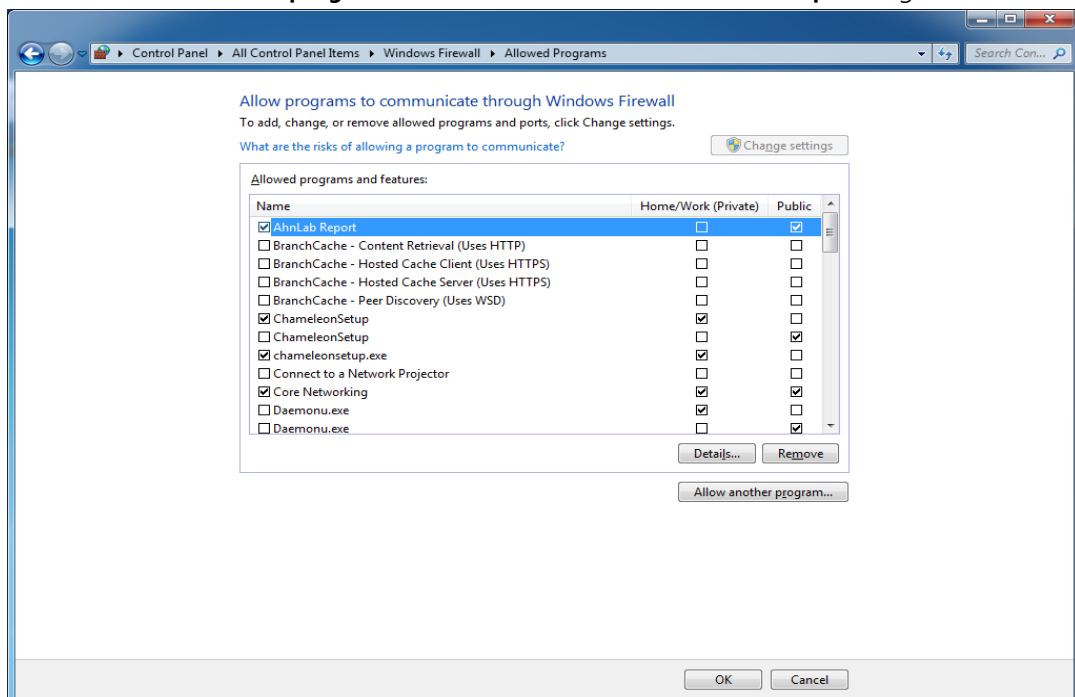
3.2.4 How to Configure the Firewall

After installing **VXvue**, be sure to make the following changes in your firewall/. If you failed to comply with the procedures, communication between **Viewer** and detector (or **SCU**) cannot be worked normally because of the firewall.

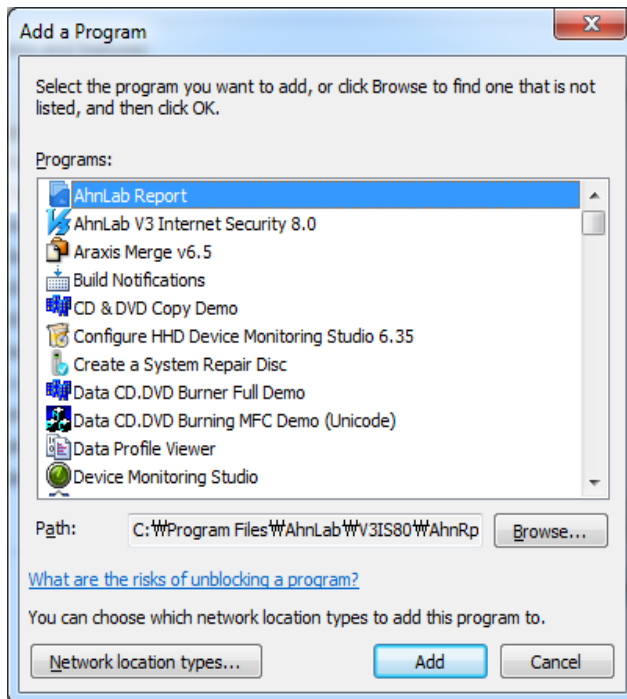
- 1 Go to **Start > Control Panel > Windows Firewall**.
- 2 Choose **Allow a program or feature through Windows Firewall** located on the left side.



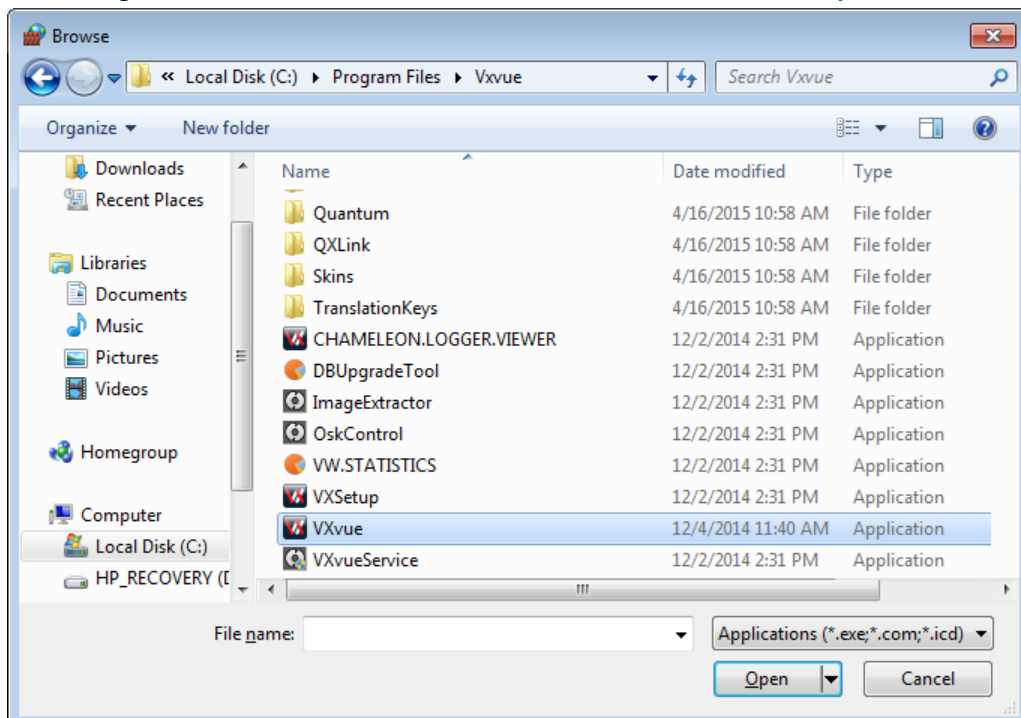
- 3 Click on the **Allow another program** button to check if **VXvue** and **VXSetup** are registered on the list.



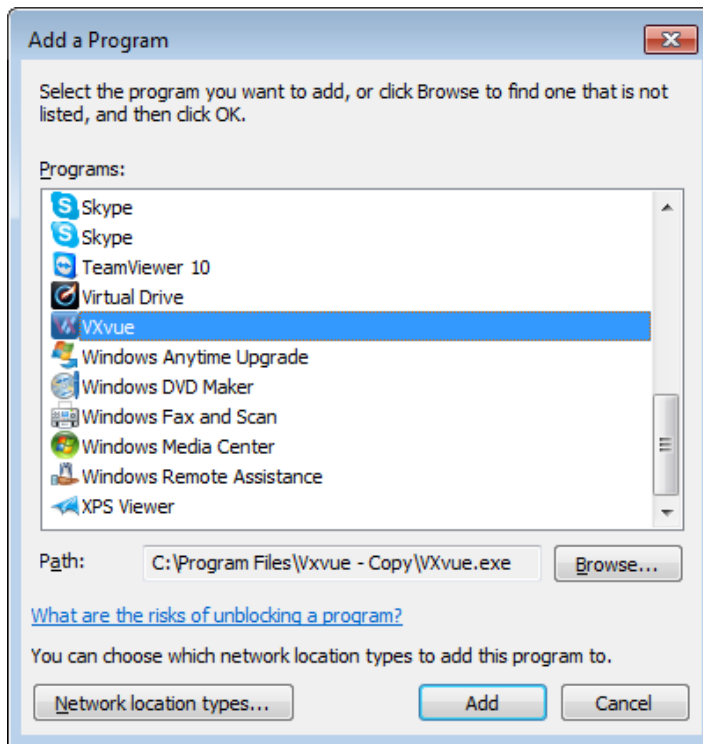
- 4 If **VXvue** and **VXSetup** are not added, click on the **Browse** button to add them manually.



- 5 Go to **C:\Program files\VXvue** and choose **VXvue.exe** file, then click on the **Open** button.



- 6 Choose **VXvue.exe** and click on the **Add** button.



- 7 Set the firewall for **VXSetup** and **XIPL** in the same manner as described above.

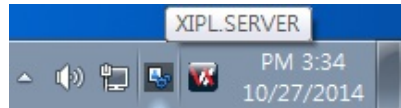
Name	Path
VXSetup	C:\Program files\VXvue\VXSetup.exe
XIPL	C:\XIPL\TOOL_X64\XIPL.TOOL.exe

3.3 Checking Installation Contents

This chapter shows how to verify that **VXvue** is properly installed before implementation.

3.3.1 Checking the Program

- 1 Check if the programs relevant to **VXvue** are installed correctly.
- 2 Check if the **Log Viewer** and **XIPL.SERVER** icons are visible and functional in the Windows tray.

Location	Program	Image
Starting Program	VIVIX Device Driver	
	VXvue	
	VXvue Demo	
	Procedure Manager	
	XIPL.TOOL	
Tray	Log Viewer	
	XIPL.SERVER	



- The above example images can vary depending on the installation environment and/or version.

3.3.2 Checking the Folder and File



- Make sure to check the main folder and files after installing **VXvue**.
- **VXvue** cannot be installed and/or operated correctly if any folder or file is omitted.

Folders

Category	Folder	Program
VXvue	[VXVUE ROOT]	C:\Program files\VXvue (Default), Root folder
	GENERATOR	Folder for the generator integration module
	QXLink	DICOM Viewer folder
	Skins	Folder of Viewer UI and icons
	ViVIX_Setup	Folder for VIVIX Setup
	STANDTABLE	Folder for the Mechanics integration module
XIPL	[XIPL ROOT]	C:\XIPL (Default), Root folder
	LICENSE	License storage folder
	PARAMETER	Folder for image processing parameters
	PLUGIN_X64	Folder for the image processing plug-in
	POSTLUT	Post Lookup Table folder
	SERVER_X64	Folder for the XIPL.SERVER execution module for Windows 64 bit
VDD	TOOL_X64	Folder for the XIPL.TOOL execution module for Windows 64 bit
	[VDD ROOT]	C:\Program files\ViVIX Device Driver v1 (Default)
	Document	VDD Document folder
	GenICam_v2_3	GenICam communication library folder
DATA	Tools	VDD driver folder
	[DATA_ROOT]	D:\Database (Default), Date storage root folder
	BodypartCategory	Bodypart background image folder
	Database	Database file folder
	DemoImage	Demo image folder
	Dmp	Storage folder for dumps files
	ExportTemp	Temporary storage folder for exported images
	Image	Storage folder for acquired images
	ImageTemp	Temporary storage folder for image processing
	Language	Storage folder for language files
	Log	Log folder
	PrintTemp	Temporary folder for storing printed images
	SecondMonitors	Image folder for the second monitor
	Theme	Folder for storing VXvue themes

Main files

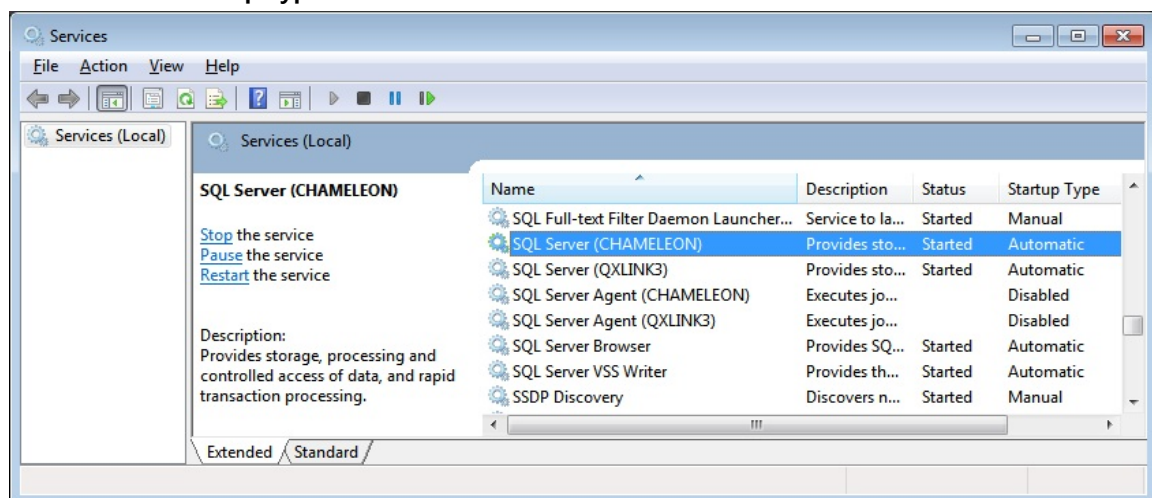
Category	File	File Name
VXvue	VXvue execution file	[VXVUE ROOT]\VXvue.exe
	VXSetup execution file	[VXVUE ROOT]\VXSetup.exe
	Log Viewer execution file	[VXVUE ROOT]\VX.LOGGER.VIEWER.exe
	Statistics Viewer execution file	[VXVUE ROOT]\VW.STATISTICS.exe
	Export Manager execution file	[VXVUE ROOT]\VX.EXPORT.MANAGER.exe
	Procedure Manager execution file	[VXVUE ROOT]\VX.PROCEDURE.MANAGER.exe
	DB Upgrade Tool execution file	[VXVUE ROOT]\VDBUpgradeTool.exe
XIPL	XIPL.TOOL execution file	[XIPL ROOT]\TOOL_X64\XIPL.TOOL.exe
	XIPL.SERVER execution file	[XIPL ROOT]\SERVER_X64\XIPL.SERVER.exe
VDD	VDD Driver Management file	[VDDROOT]\Tools\DriverManager\VwFilterDriverWizard.exe
DATA	Database data file	[DATA ROOT]\Database\DRF_dat.mdf
	Database log file	[DATA ROOT]\Database\DRF_log.mdf

3.3.3 Checking Database and Platform

- **VXvue** operates using a SQL Server database and .NET Framework platform. It is recommended to check the status of the database and platform after installing **VXvue**.

Check database (SQL Server)

- 1 Click **Start** → **Control Panel** → **Management Tool** → **Service** in order to enter **Services**.
- 2 Check if the **SQL Server (CHAMELEON)** is registered.
- 3 Check if the **Status** is set as **Started**.
- 4 Check if the **Startup Type** is set as **Automatic**.

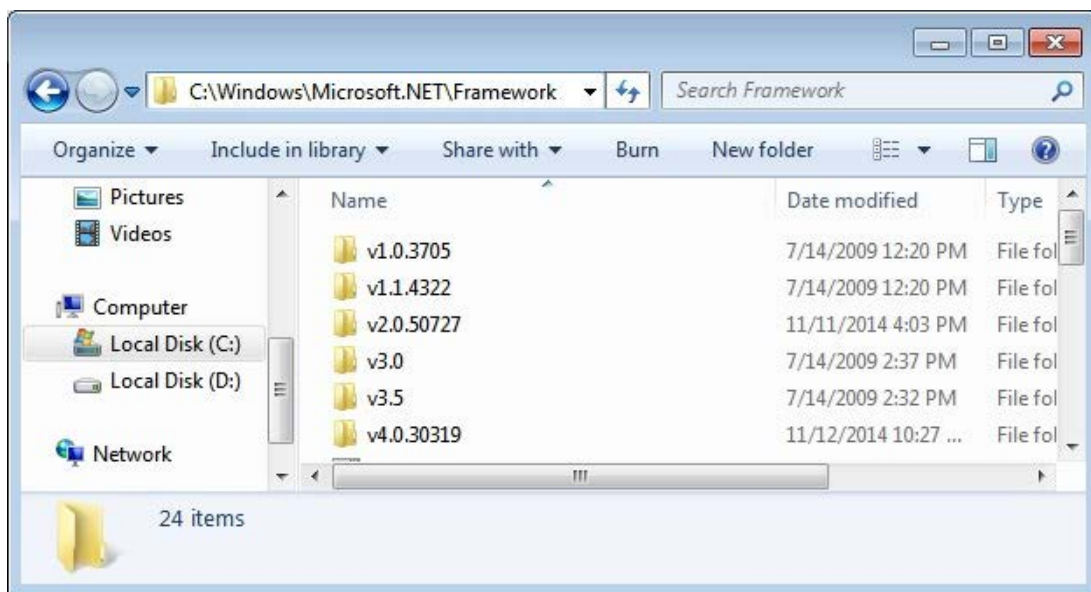




- If the PC belongs to a domain, the **SQL Server** may not be able to be installed successfully because of certain domain policies. It is highly recommended to remove the PC from the domain before re-installing **VXvue**.

Check the .NET Framework

- 1 Open Windows Explore.
- 2 Browse to **C:\Windows\Microsoft.NET\Framework** and check the folder name.
- 3 Check if **v3.5** folder exists in the path.
- 4 Check if **v4.0** folder exists in the path.



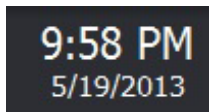
- **VXvue** needs both **.NET Framework 3.5** and **4.0**.
- The **VXvue** installation package includes **.NET Framework 4.0**.
- **.NET Framework 3.5** is built within the Windows 7 OS.



- Since **.NET Framework 3.5** is not included in Windows 8 and 10, it should be installed separately after installing **VXvue** in these environments.

3.4 Setting Date and Time

Check the present date and time

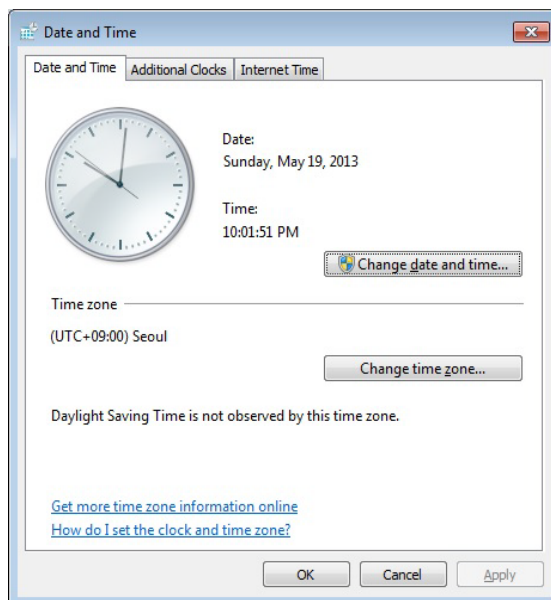


- The displayed date and time are controlled by Windows.

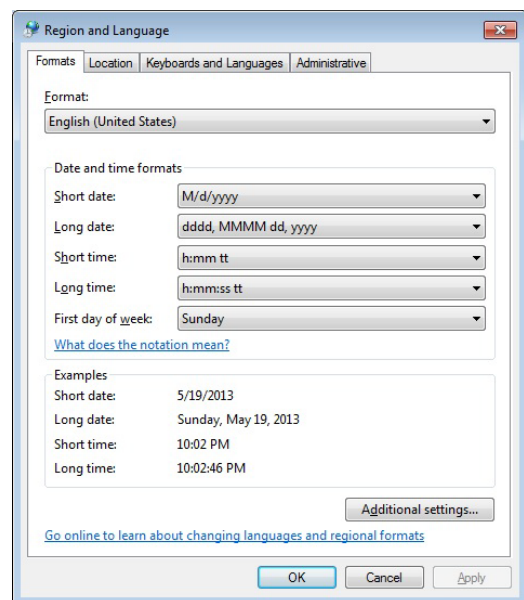
Set the present date and time

- Set the date and time in Control Panel of Windows to change the format.
 - Go to Control Panel and open Date and Time window to set the exact date and time.
 - Go to Control Panel and open Region and Language window to set the region and language.

Date and Time

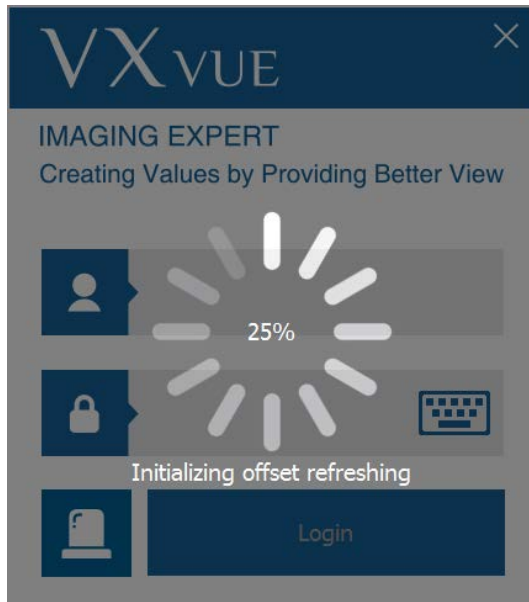


Region and Language



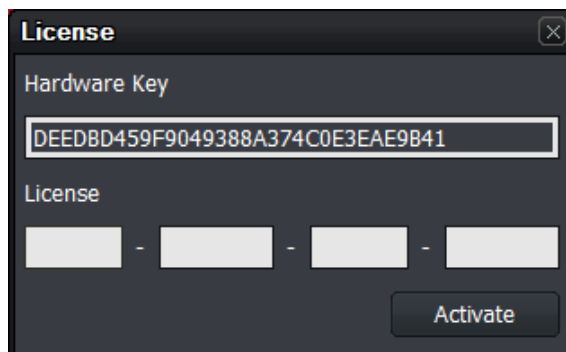
3.5 Registering a License

3.5.1 Running VXvue



- 1 Execute **VXvue**.
 - 2 Wait until **VXvue** loads completely.
- While running **VXvue**, the following points are processed.
 - Connecting to database.
 - Checking license registration status
 - Checking detector connection status
 - Checking detector calibration status
 - Checking resolution.
 - Initializing UI (User Interface)

3.5.2 Getting a License



- Get a license by using the **Hardware Key** indicated on the License window.
 - This window is not displayed again after the license is registered successfully.



- A new license window can be displayed if you change specifications of the PC where **VXvue** is installed.
- Contact the person in charge of Vieworks licensing for your company to acquire a valid license.

4. Settings

This section provides instruction for setting functions for VXvue.

Overview

System Group

Registration Group

Display Group

Tool Group

Procedure Group

Integration Group

DICOM Group

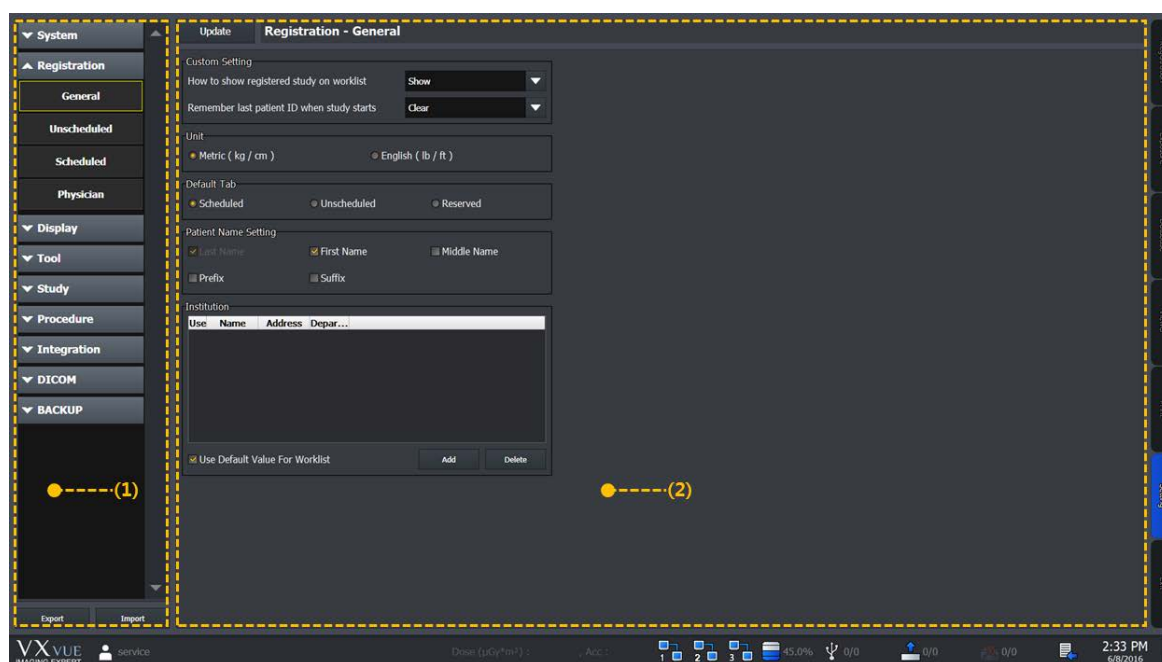
Backups Group

4.1 Overview

You can set various functions from the **Setting** mode depending on the environment. Any options that have been modified will be highlighted in red, and a pop-up window appears whenever you move to another tab to ask if you want to save your settings.

4.1.1 Getting Started

In **Setting** mode, you can set various values from the nine setting groups as follows:



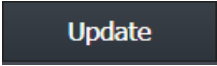
1 Group Area

Panel	Description
System	Configure general system information.
Registration	Configuration related to patient registration.
Display	Configuration related to the Viewer mode.
Tool	Configuration related to tools.
Study	Configuration for study management and tools.
Procedure	Access to the Procedure Manager .
Integration	Configuration related to detector integration and other equipment.
DICOM	Configuration related to DICOM functionality.
BACKUP	Checks and restores information of study backup and deletion.

2 Setting Area

The setting screen is converted to a specific format related to the panel you select.

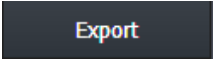
4.1.2 Saving the Settings

Update

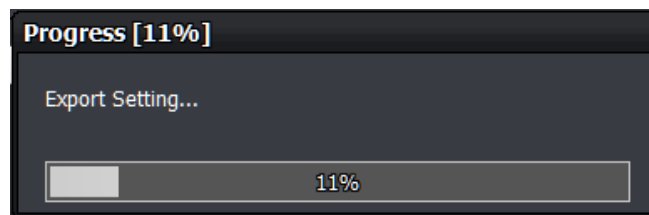
- The settings changed are indicated in red.
- Click on the **Update** button to save any changes.

4.1.3 Exporting / Importing Settings

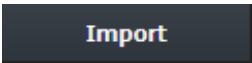
1 Exporting Settings

Export

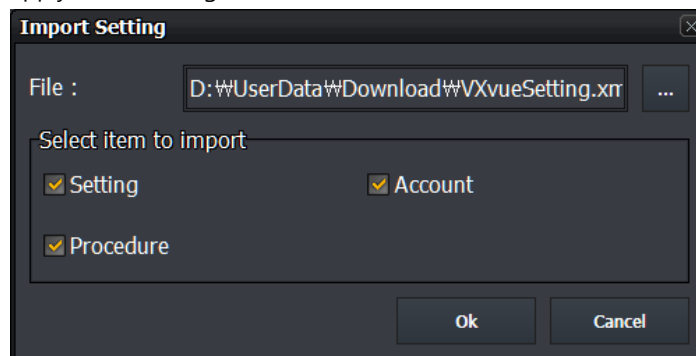
- Click on the **Export** button at the bottom of the group area to save the settings to your PC.
- Set the path to where you wish to save your exported settings and click the **OK** button.



2 Importing Settings

Import

- Click on the **Import** button at the bottom of the group area to import settings stored in the PC.
- Set the path and select items to import. Then click the **OK** button to import and apply these settings.



4.2 System Group

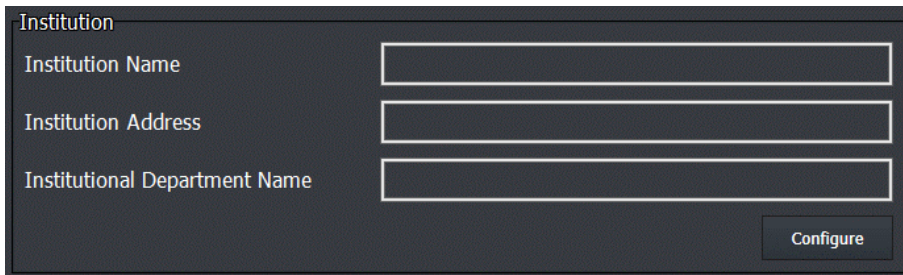
You can set system information, account, skin, and license from the **System** group.

4.2.1 System Information Menu

- You can input, change or check the information needed for the system.
- Click on the **Update** button after you input or change each option.

Institution

- You can modify information related to **Institution** here.



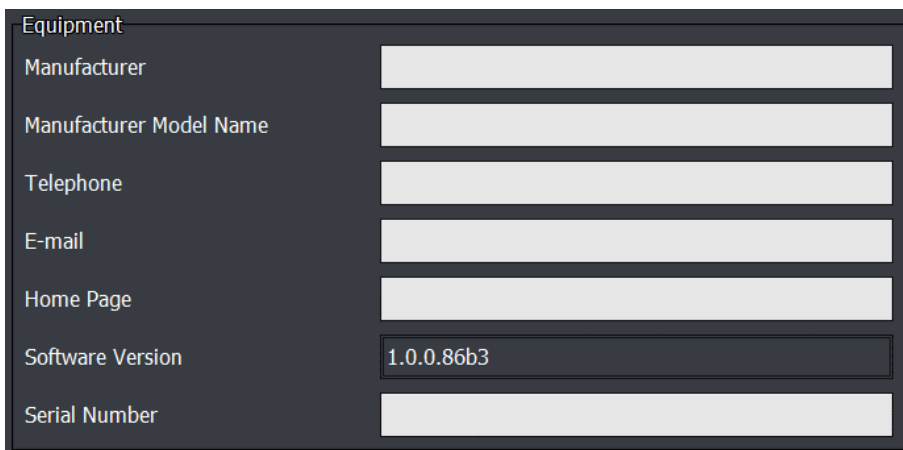
Item	Description
Institution Name	Name of hospital or institution.
Institution Address	Address of hospital or institution.
Institutional Department Name	Department name of hospital or institution.



- Click on the **Configure** button and move to the **General** sub-menu of the **Registration** group if you want to change the information for **Institution**.

Equipment

- Some information is used as the DICOM information.



Item	Description
Manufacturer	Manufacturer name.
Manufacturer Model Name	System or equipment model name.
Telephone	Telephone number of the manufacturer.
Email	E-mail address of the manufacturer.
Homepage	Homepage of the manufacturer.
Software Version	Software version of this system (automatically generated).
Serial Number	Serial number of the system or equipment.

Software

- Displays program name, version and manufacturer.

Software	
Name	VXvue
Version	1.0.0.86b26
Manufacturer	Vieworks Co., Ltd.

Language

- Choose the language you want to use.

Language	
Language	English ▼

- VXvue** supports English, Chinese, Japanese, German, Italian, Spanish, Russian and French.
- You can change the supported default languages or add another language.
- Restart the program after you change the language setting.



- Refer to <5.2 Setting a Language> for detailed information about adding a language or changing its setting.

4.2.2 Account Menu

You can manage the login account from the **Account** menu.



- Only the accounts in **Service** and **Admin** groups can modify these options.

Option

☐ Disable exit menu

☐ Disable setting menu

Account List

ID	Name	Group	System
service	service	Service	Y
admin	admin	Admin	Y
service1	service	User	N
service2	service	User	N
service3	service	User	N

Add Delete

Properties

User ID

User Name

Password

Check password

Group

Category	Item	Description
Account List	ID	Registered user ID
	Name	Registered user name
	Group	Registered user group
	System	Indicates the system management authority.
	Add	Adds an account.
	Delete	Deletes an account.
Properties	User ID	User login ID
	User Name	User name
	Password	User login password
	Check Password	Verify the previously entered password
Group	Service	System management group
	Admin	System operating group
	User	System use group

Add account

- Click on the **Add** button and verify that the account is added successfully.
- Modify the user ID, name, password and the affiliated group.
- Click on the **Update** button to store the account.

Delete account

- Select the account from **Account List** and click on the **Delete** button.
- Click on the **YES** button to delete the account.

Group policy

- The authorization of **Service**, **Admin** and **User** groups are provided, and all registered accounts belong to one of these group.
- The **Service** group account and the **Admin** group account are created automatically when you first install **VXvue**.
- At least one or more **Service** group and **Admin** group accounts should be registered.
- The login account being used cannot create a group account higher than the one it currently belongs to.
- You cannot delete the login account currently in use.

Authorization for each group

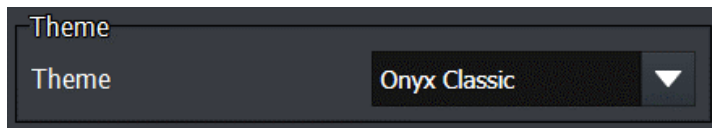
- **System** and **Admin** groups can manage the entire system and use all functions.
 - **Disable Exit Menu**: User group cannot be set. If checked, the user cannot end the program.
 - **Disable Setting Menu**: User group cannot be set. If checked, the user cannot see the setting screen (setting mode).
- The **User** group cannot use the **Statistics** function.
- The **User** group can access and use the limited tabs in the **Setting** mode as follows:
 - **System Info**, **Account**, **Theme** and **License** menu in the **System** group. (Unable to use the **Correction** button.)
 - **General**, **Unscheduled**, **Scheduled** and **Physician** menu in the **Registration** group.
 - **General**, **Pre-defined Text**, **Image**, **Tool Quick Access**, **Thumbnail**, **Status Bar** menus in **Tool** group.
 - **General**, **External Save**, **Rejected Reason** menus in the **Study** group.
 - **Procedure Manager** in the **Procedure** group.
 - **General**, **Queue** menu in the **DICOM** group.



- Group policies can be changed without notice due to functionality changes within **VXvue**.

4.2.3 Theme Menu

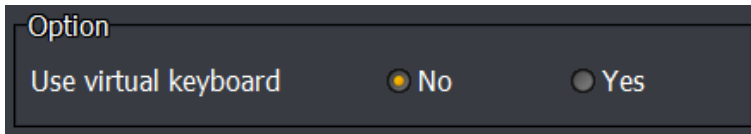
You can change the theme (skin) from the **Theme** menu.



Name	Image
Onyx Classics	A screenshot of the software interface in the 'Onyx Classics' theme. The interface has a dark grey background. On the left, there is a 'Body' panel with a skeletal overlay of a human torso. In the center, a large chest X-ray is displayed. On the right, there is a 'Step: T-spine LAT' panel with a smaller X-ray image. The bottom status bar shows 'VXvue' and the time '7:59 PM'.
Sapphire Blue-QHD	A screenshot of the software interface in the 'Sapphire Blue-QHD' theme. The interface has a blue background. On the left, there is a 'Body' panel with a skeletal overlay of a human torso. In the center, a large chest X-ray is displayed. On the right, there is a 'Step: T-spine LAT' panel with a smaller X-ray image. The bottom status bar shows 'VXvue' and the time '8:00 PM'.
Sapphire Blue	A screenshot of the software interface in the 'Sapphire Blue' theme. The interface has a blue background. On the left, there is a 'Body' panel with a skeletal overlay of a human torso. In the center, a large chest X-ray is displayed. On the right, there is a 'Step: T-spine LAT' panel with a smaller X-ray image. The bottom status bar shows 'VXvue' and the time '8:00 PM'.
	Refer to the VXvue Operation Manual for information about the Sapphire Blue skin.

Option

Choose whether you use the virtual keyboard or not.

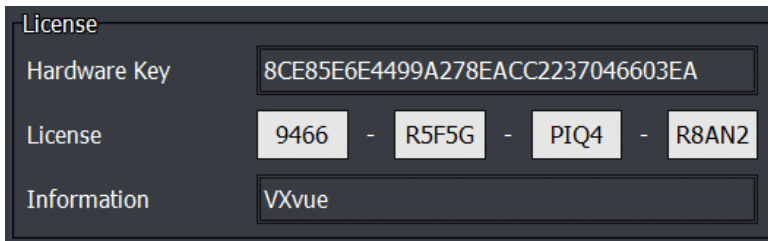


A dark gray dialog box titled "Option" in white text. Below the title, the text "Use virtual keyboard" is displayed in white. To the right of this text are two radio buttons. The first radio button is selected (indicated by a yellow dot) and is followed by the text "No" in white. The second radio button is unselected and is followed by the text "Yes" in white.

4.2.4 License Menu

You can manage the registered license.

- Input a new license and click on the **Update** button to change the existing license.



A dark gray dialog box titled "License" in white text. It contains three rows of input fields. The first row is labeled "Hardware Key" and contains a text box with the value "8CE85E6E4499A278EACC2237046603EA". The second row is labeled "License" and contains four text boxes with the values "9466", "R5F5G", "PIQ4", and "R8AN2", separated by hyphens. The third row is labeled "Information" and contains a text box with the value "VXvue".

4.3 Registration Group

In the **Registration** group you can change several options related to patient and physician information.

4.3.1 General Menu

You can registration settings here.

Custom Setting

Menu	Description
How to show registered study on worklist	- Changes the way a study is shown on the Scheduled and Reserved tabs. - Show: All patient information is displayed regardless of status. - Show with color: The patient information turns green when shooting an image. - Hide: The patient information a study in progress is not indicated on the list.
Remember last patient ID when study starts	- When a new study is started from the Registration mode in the Unscheduled panel, use this menu to set the way to utilize the previously used patient ID. Clear: Empty the edit box of a patient ID when a new study is started. Remember: Though a new study is started, leave the last patient ID in the edit box. Increase: When a new study is started, leave the last patient ID as adding '1' to it. Ex. 1) PatientID → PatientID1 Ex. 2) 123456 → 1234567
Use auto access number	- When a new study is generated from the Unscheduled panel of the Registration mode, accession numbers are made automatically. - Ex.) YYYYMMDDNNNNN - Generation rule - YYYY (Year) / MM (Month) / DD (Day) - NNNNN: Serial number (00001 ~ 99999)

Setting Height / Weight unit

- Select the unit of Height / Weight
- **English (lbs/ft)** is the British and U.S standard unit.

Unit

☒ Metric (kg / cm) ☐ English (lb / ft)

Setting Default tab

Set the default tab that you want to display when entering the **Registration** mode.

Default Tab

☒ Scheduled ☐ Unscheduled ☐ Reserved

Setting Patient name

- Select which patient name options are available under the registration options for an unscheduled study.
- "Last Name" is a required entry.

Patient Name Setting

☒ Last Name ☒ First Name ☐ Middle Name

☐ Prefix ☐ Suffix

Setting Institution

- You can set two or more different entries for **Institution**.

Institution

Use	Name	Address	Department
☒	Big Hospital	Seoul	Radiology
☐	Good Hospital	New York	RAD

☒ Use Default Value For Worklist

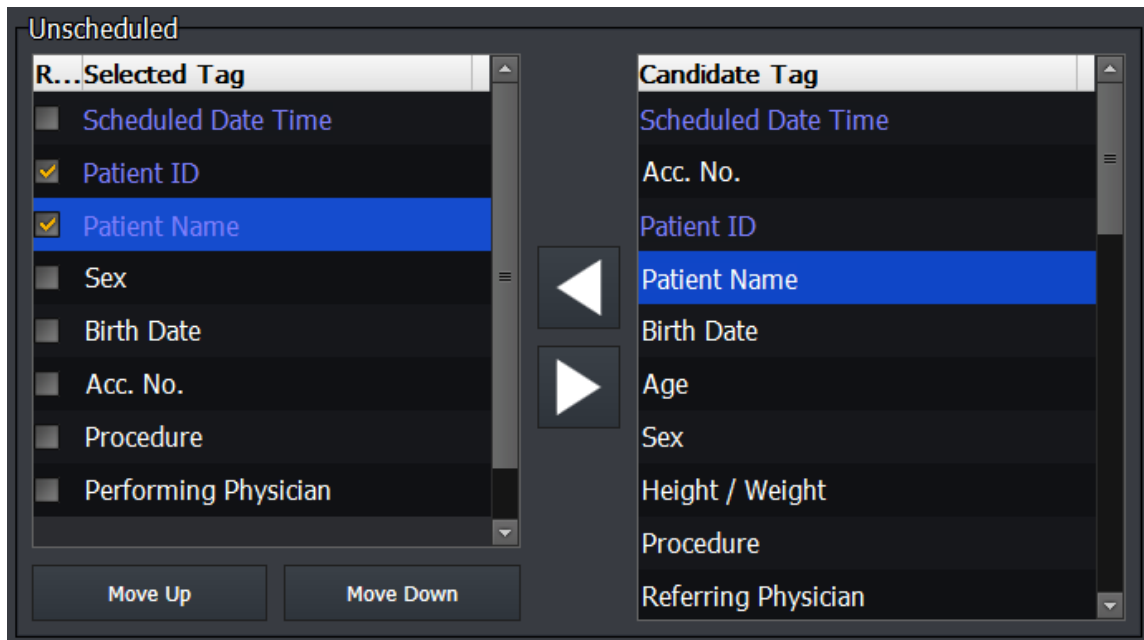
- 1 Click on the **Add** button to add items.
- 2 Double-click on the value of **Name**, **Address** and **Department** to correct information for an **Institution**.
- 3 Check the items to use (active selections).
- 4 Click on the **Delete** button to delete the selected items



- The checked items are registered in the **System Info.** tab and used as the **Institution** information.
- When you check **Use Default Value For Worklist**, the **Institution** information added from **Setting** is used instead of the **Institution** information of the study from the worklist.

4.3.2 Unscheduled Menu

You can set the entry options for patient information.



Registered item (Left list)

- You can find the registered items on the left list from the **Unscheduled** panel in the **Registration** mode.
 - The blue-colored items cannot be deleted.
 - If you check an item it becomes a required field.
- Select an item and click on  button to remove it from the list.
- Click on the **Move Up** or **Move Down** button to adjust order of a **Selected Tag**.

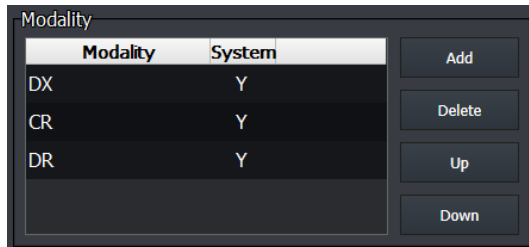
Collection of Items (Right list)

- You can find all items relevant to patient information on the list on the right.
- Select an item and click on  button to add the selected items.

4.3.3 Scheduled Menu

You can change the search criteria for querying patient information from the worklist in the **Scheduled** tab of the **Registration** mode.

Modality

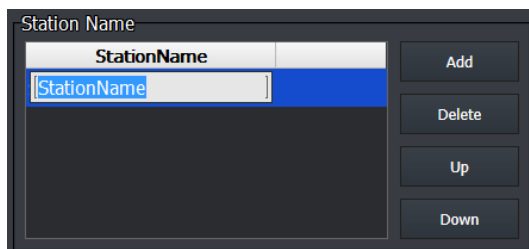


The Modality configuration window displays a table with two columns: Modality and System. The table contains three rows: DX, CR, and DR, all with a System value of Y. To the right of the table are four buttons: Add, Delete, Up, and Down.

Modality	System
DX	Y
CR	Y
DR	Y

- Configures which **Modality** to use as a search condition.
- You cannot delete or modify the built-in system modality (**DX/CR/DR**).
- Click on the **Add** button to add items.
- Select an item and click on the **Delete** button to delete an entry if it is not one of the default modalities.

Station Name

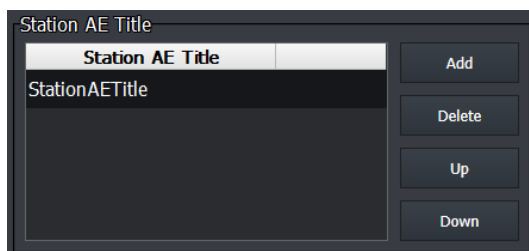


The Station Name configuration window displays a table with one column: StationName. The table contains one row: StationName. To the right of the table are four buttons: Add, Delete, Up, and Down.

StationName
StationName

- Configures **Station Name** to use as a search condition.
- 1 Click on the **Add** button to add items.
 - 2 Select an item and click on the **Delete** button to delete an entry.

Station AE Title



The Station AE Title configuration window displays a table with one column: Station AE Title. The table contains one row: StationAETitle. To the right of the table are four buttons: Add, Delete, Up, and Down.

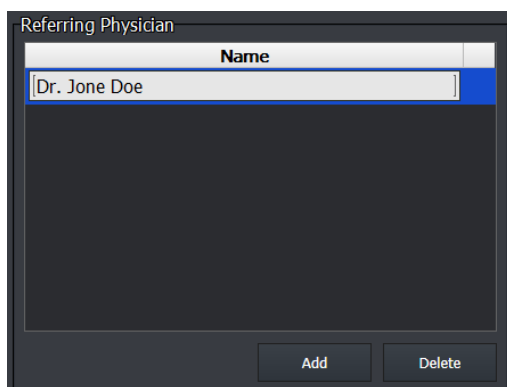
Station AE Title
StationAETitle

- Configures **Station AE Title** to use it as a search condition.
- 1 Click on the **Add** button to add items.
 - 2 Select an item and click on the **Delete** button to delete an entry.

4.3.4 Physician Menu

You can register or modify physician information.

Register Referring Physician



The Referring Physician configuration window displays a table with one column: Name. The table contains one row: Dr. Jone Doe. To the right of the table are two buttons: Add and Delete.

Name
Dr. Jone Doe

- You can register or modify the name of a referring physician.
- 1 Click on the **Add** button to add a name.
 - 2 Double click the name to modify it.
 - 3 Click on the **Delete** button to delete the selected name.

Register Reading Physician

- You can register or modify the name of a reading physician.

- 1 Click on the **Add** button to add a name.
- 2 Double click the name to modify it.
- 3 Click on the **Delete** button to delete the selected name.

Register Performing Physician

- You can register or modify the name of a performing physician.

- 1 Click on the **Add** button to add a name.
- 2 Double click on the name to modify it.
- 3 Click on the **Delete** button to delete the selected name.

Configure the order of Performing Physician

- You can select items of **Performing Physician** when you use a Worklist to acquire images.
 - Two Worklist entries and one user-configured item are provided.
- VXvue** searches the item information by the order of 1 → 2 → 3, and the next item is used if there is no information in the first one. If the information is searched, the information of other orders is not used.
- Check the **Performing Physician** item to use and arrange the order with **Down / Up** buttons.

1 Scheduled Performing Physician (Worklist)

- DICOM tag information (0040,0006)
- Name of a doctor or radiological technologist who is reserved for study/exposure.

2 Performing Physician (Worklist)

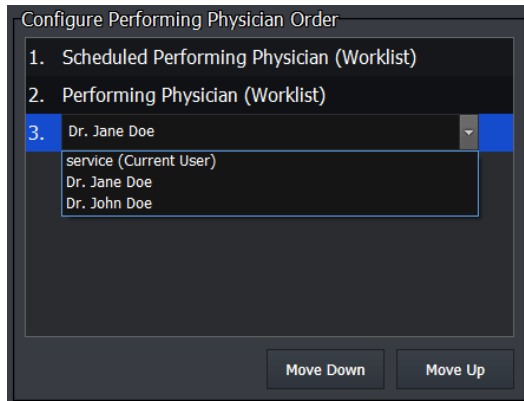
- DICOM tag information (0008,1050)
- Name of a doctor or radiological technologist who conducts the actual study/exposure.

3 viewworks (Current User)

- Refer to the user-configured items described below.

Use the name of Performing Physician as the user-registered name

- You can use the name of performing physician which the user registered in advance.
- Double click **Viewworks (Default User)** to add a specific name.



- Select **Current User** to use the logged-in user information as **Performing Physician**.
- If you select the specific registered name, it is used as the name of **Performing Physician**.

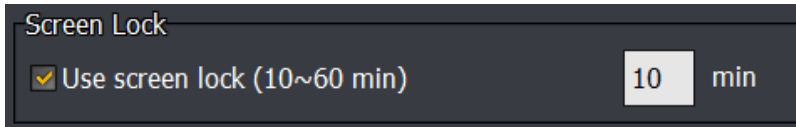
4.4 Display Group

4.4.1 General Menu

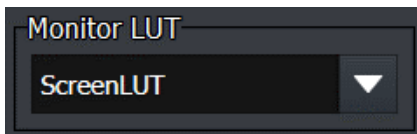
In this section, you can change settings for adjusting monitor values and/or display properties.

Screen Lock

- The screen is locked with a login window if the system is idle for the specified amount of time.
- The screen is unlocked by entering the same ID and password that you used to log in with.



MonitorLUT

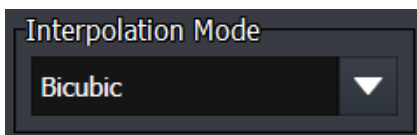


- Select the monitor LUT that is applied to the images in the **Exposure** and **Viewer** modes.



- Refer to <4.4.3 LUT Menu> for more information about the **LUT** setting.

Interpolation Mode

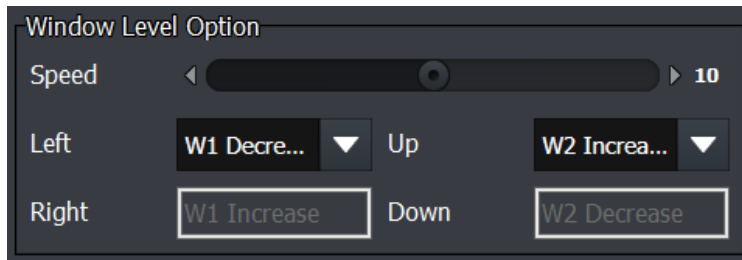


- Select the interpolation mode applied to the monitor.

Interpolation Mode items

Item	Description
Nearest Neighbor	Interpolates the nearest pixel
Bilinear	Bilinear interpolation
High Quality Bilinear	High quality bilinear
Bicubic	Bicubic interpolation
High Quality Bicubic	High quality bicubic
GDI	GDI library interpolation

Window Level Option



- You can set **W/L** movement according to the direction you move the mouse.
- **Speed** is the rate of change of **Window Leveling** as the mouse is moved. The default value is **10**.
- **Left** / **Right** are configured as a set.
- **Up** / **Down** are configured as a set.

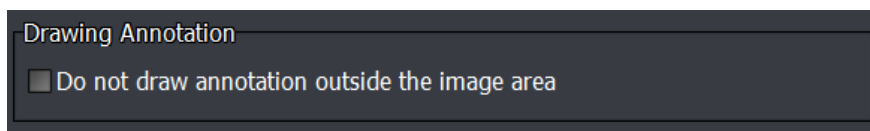
Operation method

Item	Description
W1 Increase / Decrease	Increase or decrease the W1 value.
W2 Increase / Decrease	Increase or decrease the W2 value.
Contrast Increase / Decrease	Increase or decrease the contrast of the image.
Brightness Increase / Decrease	Increase or decrease the brightness of the image.

Rational formula between Width / Level and W1 / W2

- The values of **Width** and **Level** are measured as **W1** and **W2** values as follows.
 - **W (Width)** = **W2** – **W1**
 - **L (Level)** = (**W1**+**W2**) / 2

Drawing Annotation



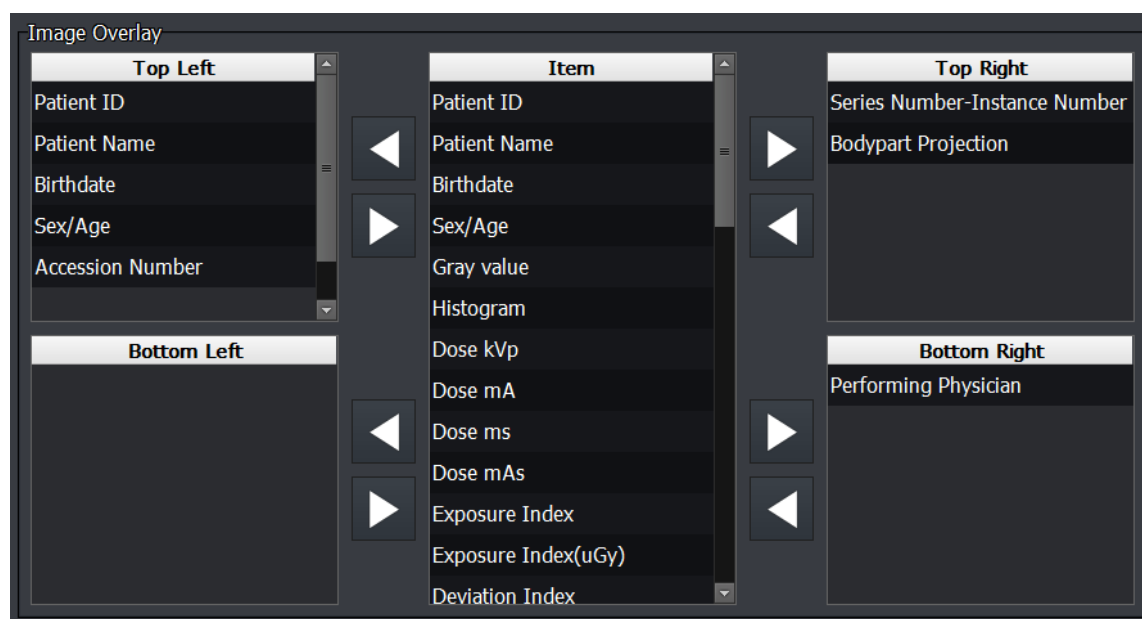
- When the check box is set, annotation cannot be inserted outside the image area, and the part that extends outside the image area is not displayed.

4.4.2 Information Overlay Menu

You can select which information is displayed over your images.

Set the position of Image Overlay items

- 1 Select an item to add or remove from the desired position by clicking on ◀ or ▶ button.
 - You can add items to the **Top Left**, **Bottom Left**, **Top Right**, and **Bottom Right** lists.
 - You can overlap items.
- 2 Click on the **Update** button to save your settings.



Items available to be added to the Image Overlay

- Patient ID, Patient Name, Birthdate, Sex/Age, Height, Weight
- Bodypart, Projection, Laterality
- Performing Physician, Referring Physician
- Study Date, Study Time, Accession number
- Series Number, Instance Number, Exposure Time
- Dose kVp, Dose mA, Dose ms, Dose mAs, DAP
- Exposure Index, Deviation Index, Target Exposure Index
- Pixel Value, Histogram, Zoom Ratio
- Institutional Name, Institutional Address, Institutional Department Name
- Manufacturer, Manufacturer Model Name, Station Name, Modality
- Other Patient ID
- Image Orientation
- User-Defined Field

How to set Font & Color

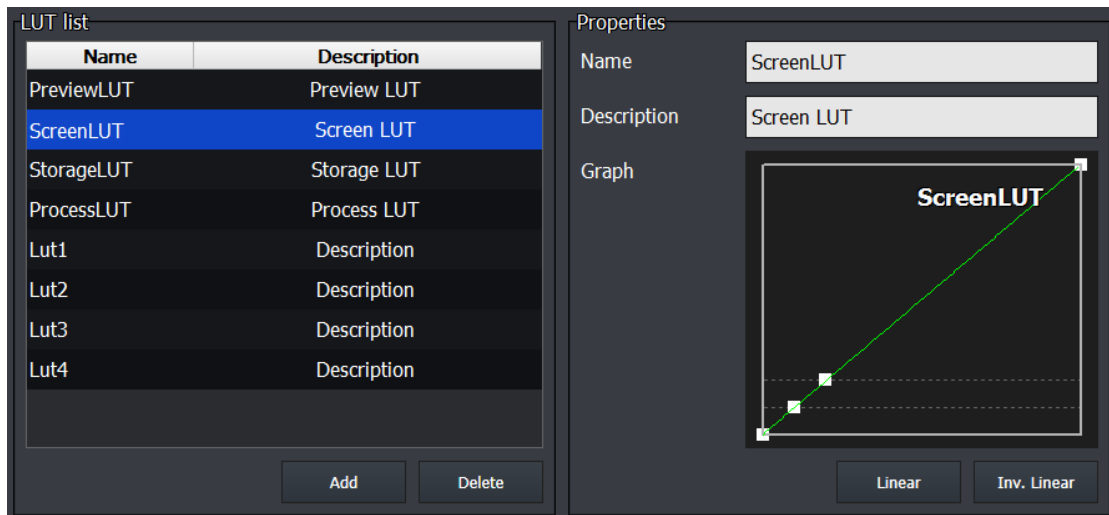
- **Absolute Font Size**
 - **Checked** – The characters are indicated as the same size regardless of the image view size.
 - **Unchecked** – The size of characters are adjusted in proportion to the image view size.
 - Only checked items are applied. (**Overlay, Annotation**)
- Set the Font and Color of the **Image Overlay** item.
 - Set colors and fonts. You can preview the font in **Select Other**.
 - Set the character size. The maximum value is 300.
- Set the Font and Color of the **Annotation Overlay** item.
 - Set colors and fonts. You can preview the font in **Select Other**.
 - Set the size of the annotation and the size of the label. The maximum value is 300.

Scale Position

- Select the scale position that is indicated on the **Image Overlay**.
- You can hide or indicate the scale on the left or right of the image

4.4.3 LUT Menu

You can make **LUT** (Lookup Table) by applying gamma value of the image at **LUT** panel. Select the configured **LUT** to display on the monitor, process image, send DICOM storage server and set DICOM print.



LUT List

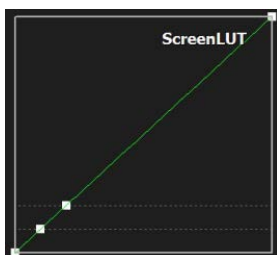
- Eight (8) **LUT** items are provided to the **LUT List**.
- You can also add new **LUT** options manually.

LUT	Description
Preview LUT	Used to preview the image.
Screen LUT	Used for checking the image on the monitor.
Storage LUT	Used for sending images to the DICOM storage server or the DICOM print server.
Process LUT	Used for image processing.
LUT1,2,3,4	You can set custom LUT selections.



- It is recommended to modify and use the eight (8) default LUTs instead of generating LUT directly.

Add LUT



- 1 Click on the **Add** button to add an item, and adjust a curve on the graph.
 - Use **Linear** or **Inverted Linear** button to adjust a curve.
 - Press and drag a LUT curve point to adjust a curve.
- 2 Click on the **Update** button to save after completing your adjustments.

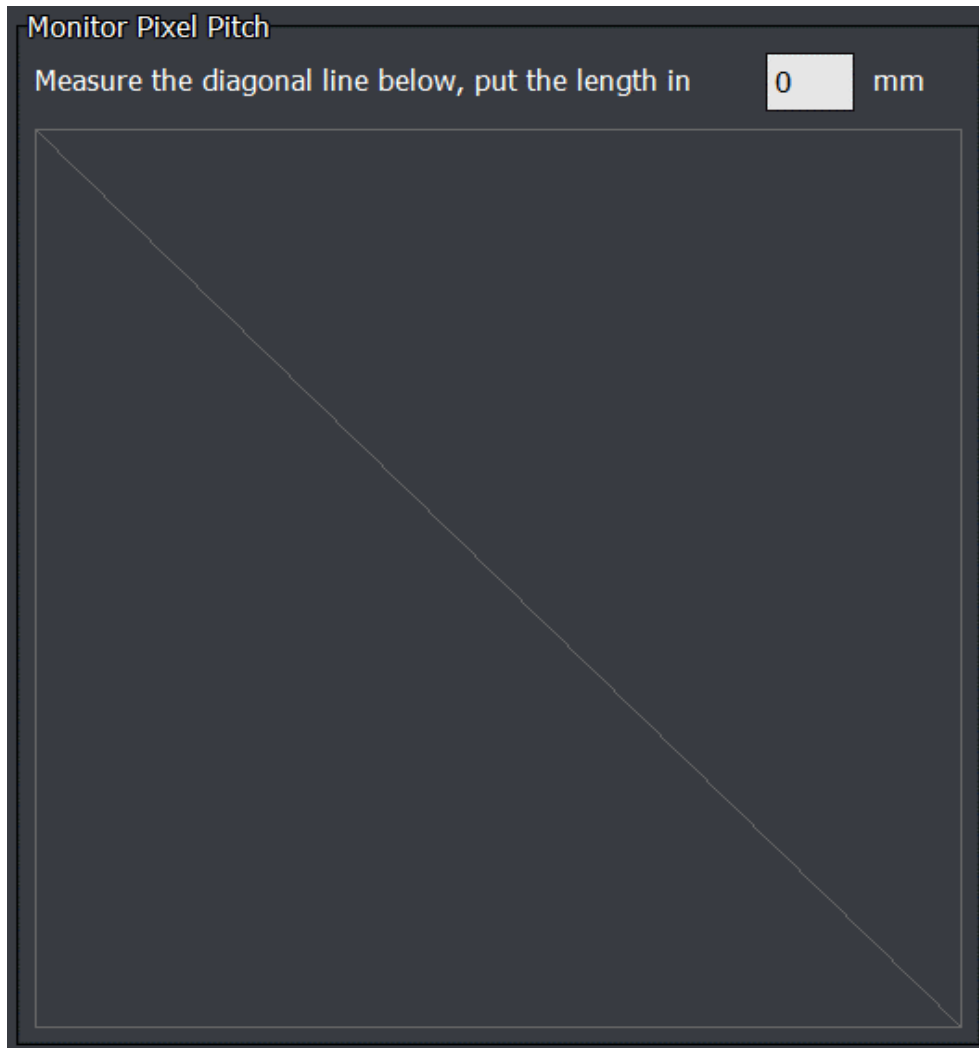
Delete LUT

- 1 Select the desired item to delete and click on the **Delete** button.

4.4.4 Monitor Correction Menu

You can set the actual pixel size of the monitor to display the relevant image in real size

Monitor Pixel Pitch



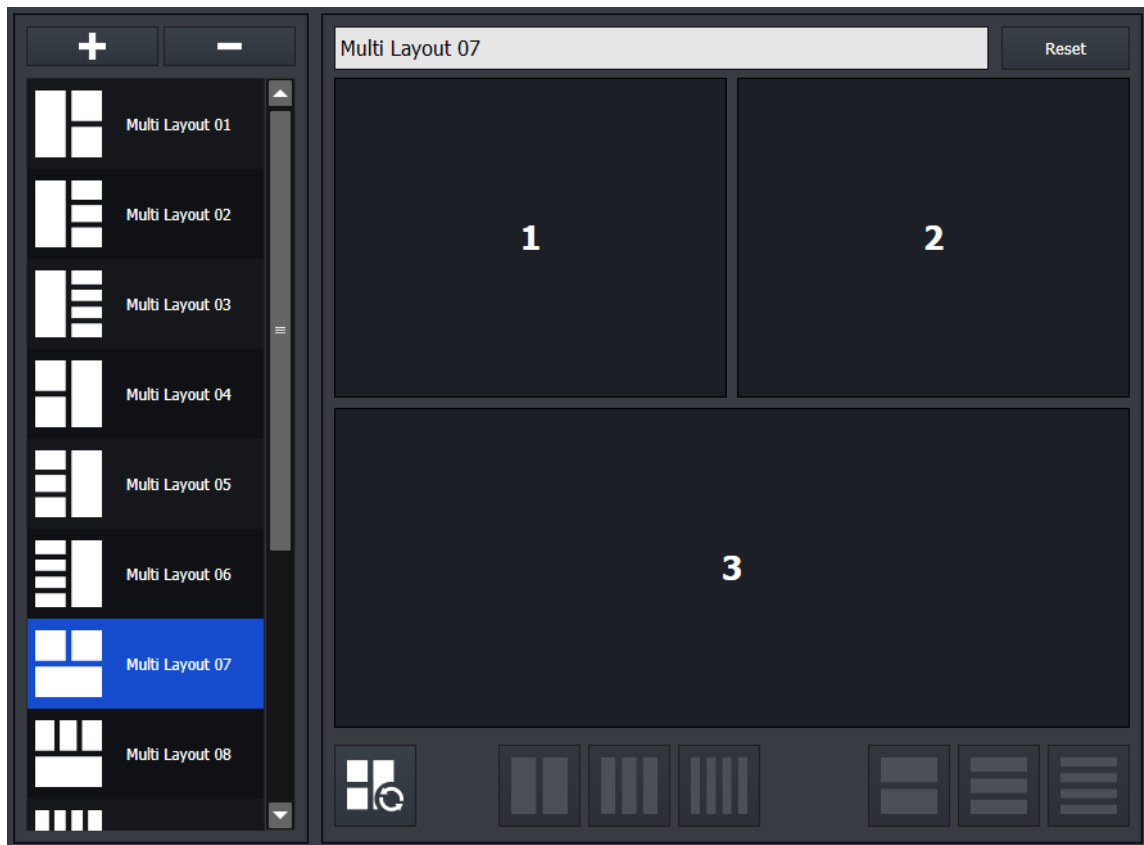
- 1 Measure the diagonal line on the screen with a ruler.
- 2 Input the measured value in **mm** and click on the **Update** button.



- The set value is used to view the image in actual size, so please measure it correctly.
 - Refer to the VXvue Operation Manual for information on the function (Real Size).
- Measure and set the pixel size again when the monitor is changed.

4.4.5 Layout Menu

You can add, delete or modify the multi-layout from the **Setting** mode → **Display** → **Layout** menu.



Layout	Description
	Turns the mode of layout reorder on or off.
	Splits rows of the selected area to 2, 3, 4.
	Splits columns of the selected area to 2, 3, 4.

Modify Multi-Layout

- 1 Choose a layout you want to modify from the left list.
- 2 Click the layout area and edit it by selecting one of the multi layout icons.
- 3 Click on the **Update** button.



- The available layout icons become activated when you click the layout area.
- Click on the **Reset** button to revert the area to a 1x1 layout.

Change the display order of multi-layout images

- 1 Click on the **Reorder** button to enter the Reorder mode.
- 2 Click the layout area from '1' to assign order.
- 3 Click on the **Update** button.



- The Reorder mode is deactivated automatically when you complete the assigning order.
- Click on the **Reorder** button again to release the Reorder mode in the middle of assigning a display order.

Add Multi-Layout

- 1 Click  button.
- 2 Input the layout name and edit the layout area.
- 3 Click on the **Update** button to save your settings.

Delete Multi-Layout

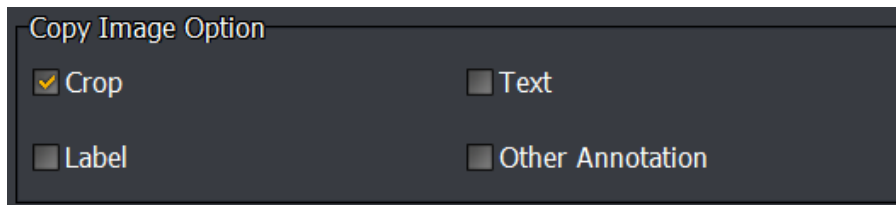
- 1 Choose a layout you want to delete from the left list.
- 2 Click  button.

4.5 Tool Group

4.5.1 General Menu

Crop Image Option

- You can set the options that are applied to a copied image.



Option	Description
Crop	Only the cropped image area is copied.
Text	Text annotation is copied with the image.
Label	Labels are copied with the image.
Other Annotation	Other annotations are copied with the image except text or labels.

Label Setting

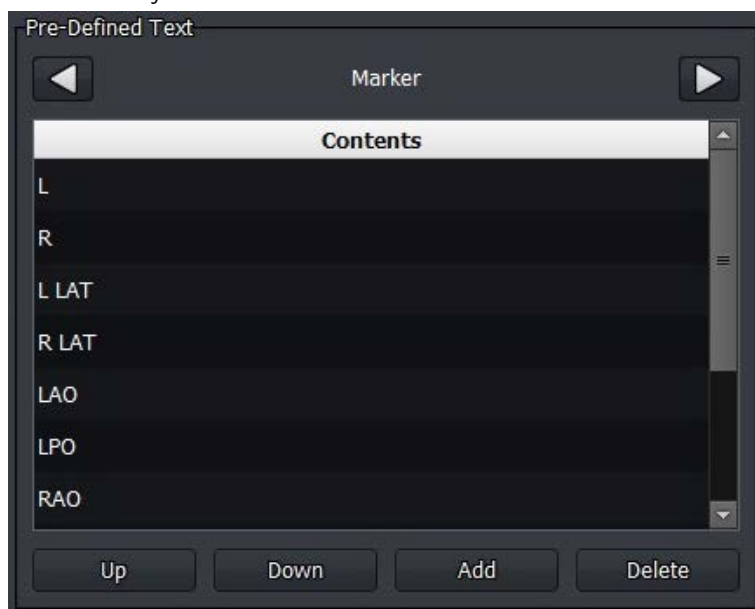
- Set alias and position of **L / R** labels.

Label setting	Label check

4.5.2 Pre-Defined Text Menu

You can set and manage text used for markers from the Macro Exposure mode and the Viewer mode.

- Add or delete text using **Add / Delete** buttons.
- You can adjust the order of **Pre-Defined Text** indicated on the **Label** tab by using **Up / Down** buttons.



Marker	Position	Projection	Measure	Time	Others
L	ERECT	AP	0° - 90°	15/30 SEC	PORTABLE
R	SUPINE	PA	(Every 5° interval)	1/2/3/5 MIN	CROSS-TABLE
L LAT	PRONE	LAT		10/15/20 MIN	WT BEARING
R LAT	R LAT	OBL		30/45/60 MIN	STRESS
LAO	DECUBITUS	AXIAL		2/3/4/5 HOUR	DISTAL
RAO	FLEXION	TANGENTIAL		12/24 HOUR	PROXIMAL
L DECUB	EXTENSION				INTERNAL
R DECUB	SETTING				EXTERNAL
	LATERAL				CRANIAL
	OBLIQUE				CAUDAL
					SCOUT
					POST CONTRAST
					POST VOIDING

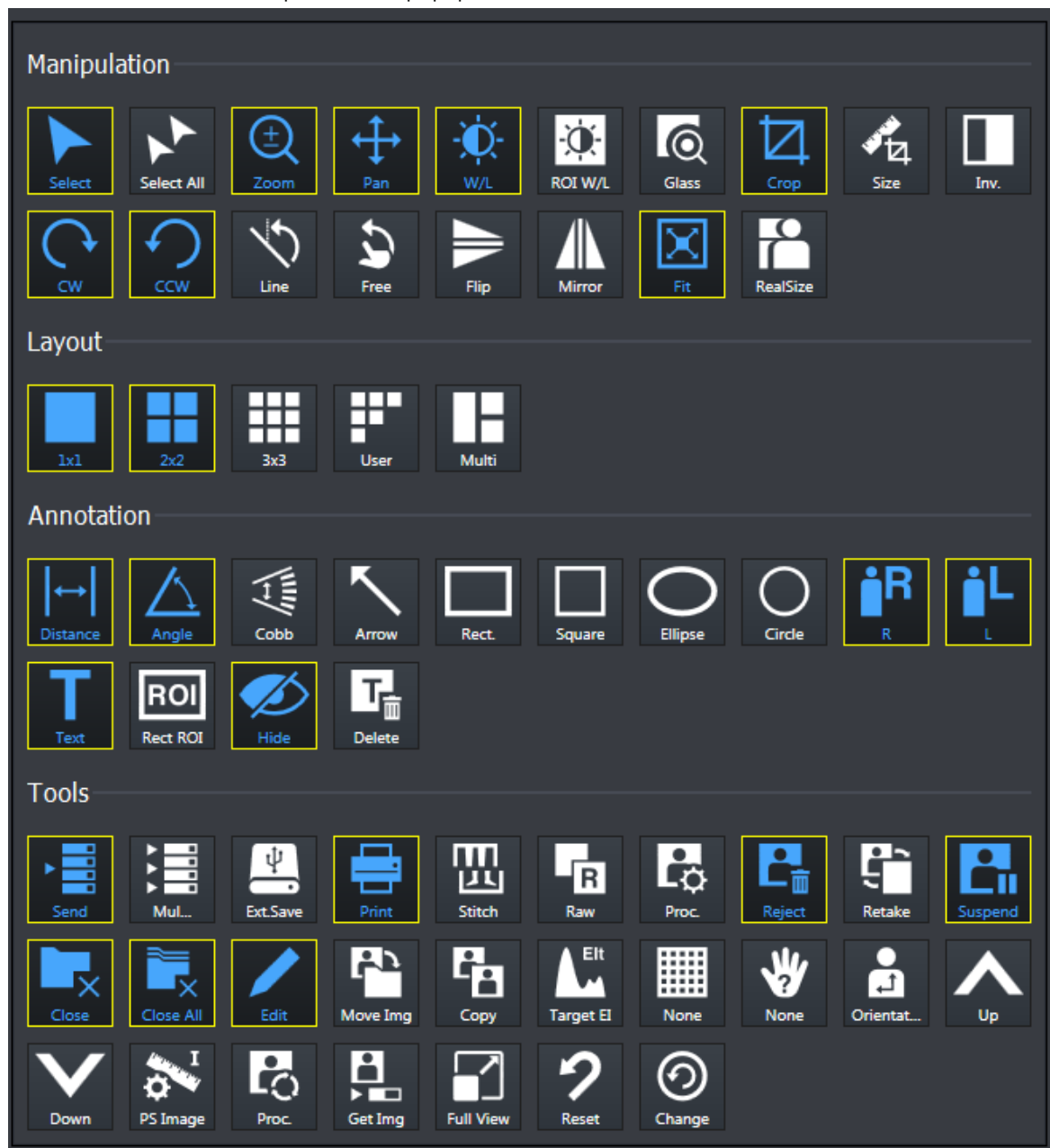


- The groups cannot be added, deleted or edited.

4.5.3 Image Tool Menu

You can assign icon buttons to be shown in the **Tool** panel in the **Viewer** mode and the macro exposure mode as basic tools.

- The color of selected icon becomes blue and will appear as a default tool.
- The unselected icons are provided as popup buttons.

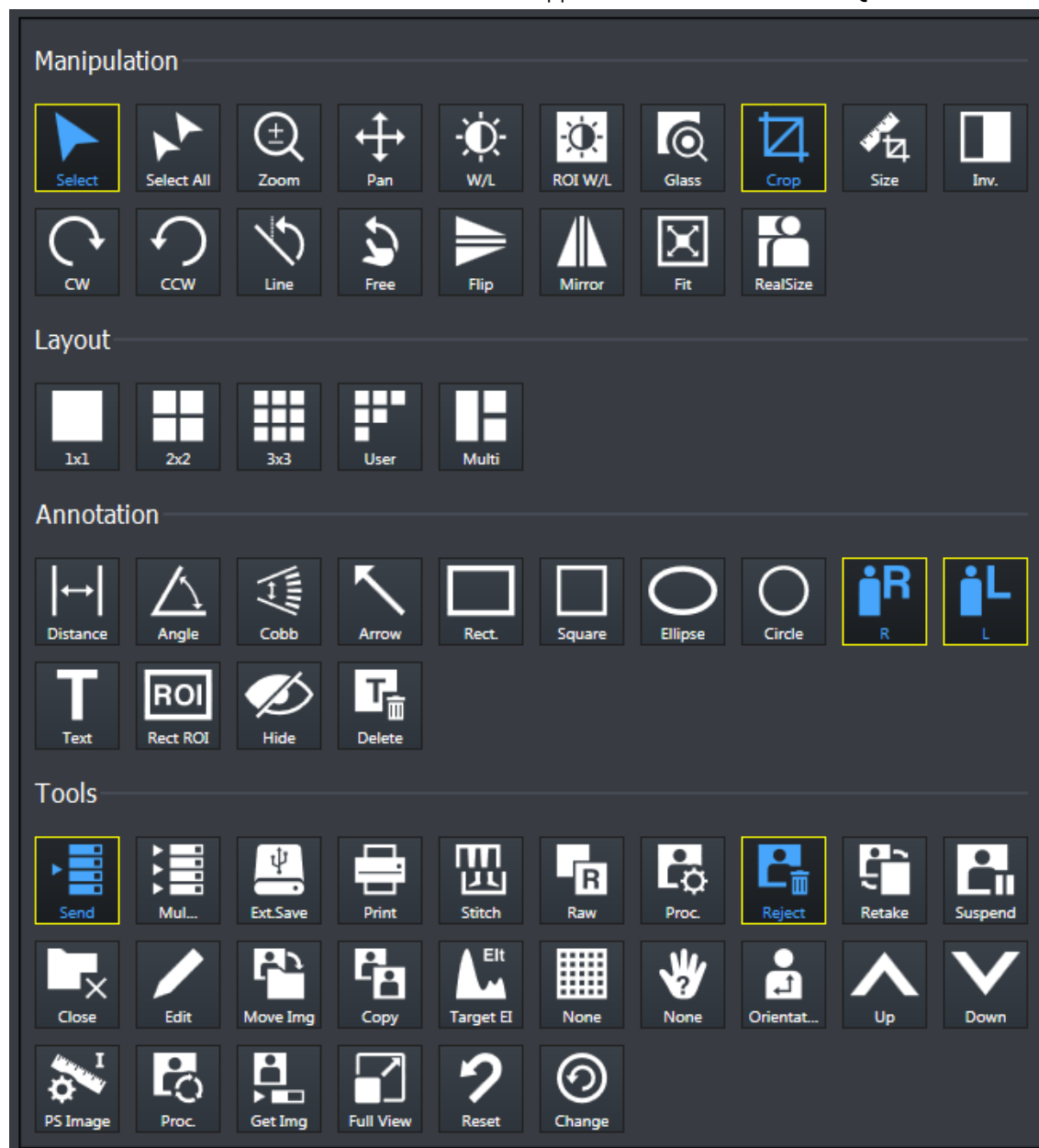


- The icon size is changed depending on the number of icons you chose.

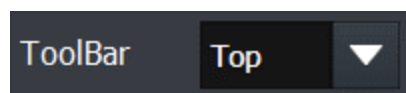
4.5.4 Quick Access Menu

You can assign icon buttons to be shown in the user-defined tools (**Quick Access**) area at the top of the **Exposure** mode (General exposure mode).

- The color of the selected icon becomes blue and appear as a default tool in the **Quick Access** area.



Change the location of selected icons



- Specify the location of selected icons.
 - **Top/ Left/ Right/ Bottom**
- The changed position is applied to the **Exposure** mode in real time.
- Use the shortcut key (**F7**) in the **Exposure** mode to do the same function.

Set the registration order

Button	Order	Default
Select	1	☒
Crop	2	☐
Right Label	3	☐
Left Label	4	☐
Reject Image	5	☐
Send	6	☐

- You can appoint the order of selected icons to be displayed.
- The icons display from left to right according to the registry order.
- Use  buttons to change order.

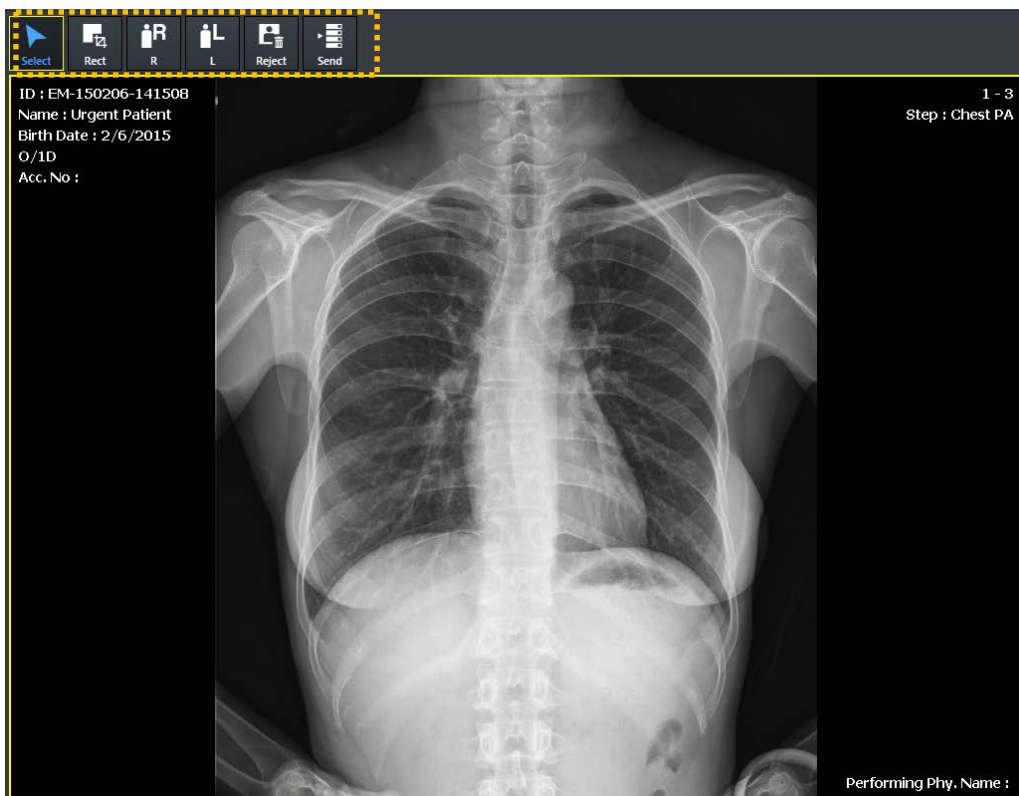
Set control functions as default

- You can set the control functions used frequently as the default ones among **Select/ Crop / W/L / Zoom / Pan** after acquiring image in the **Exposure** mode.
- Check the item to be used as a default one.



Check settings

- Registration order: **Select | Crop | Right | Label | Left Label | Reject Image | Send** (Example)
- Item to select default functions: **Select**



- The user default tools (Quick Access Tool) can be registered up to fifteen (15) ones.

4.5.5 Thumbnail Setting

You can set a thumbnail type as well as tools used in the thumbnail list.

Thumbnail Type

Thumbnail Type

☒ Standard ☐ Extended

Thumbnail Type	Sample Image
Standard	
Extended	

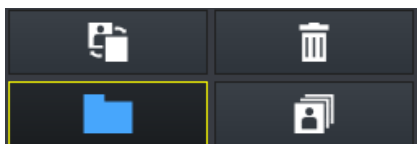
Exposure Tools Use Option

You can set the tools used in the thumbnail list of the **Exposure** mode.

Exposure Tools Use Option

☒ Retake ☒ Reject

☒ Group ☒ Multi-Select



- Retake
- Reject
- Group
- Multi-Select

Viewer Tools Use Option

You can appoint tools used in the thumbnail list of the **Viewer** mode.

Viewer Tools Use Option

☒ Reject ☒ Group

☒ Multi-Select

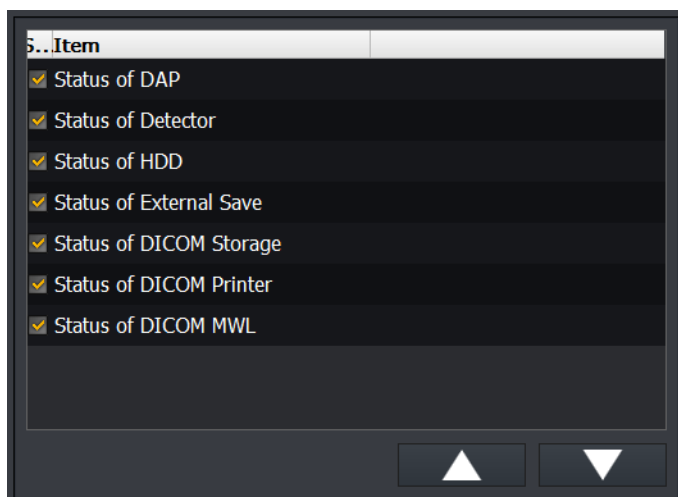


- Reject
- Group
- Multi-Select

4.5.6 Status Bar Menu

You can change settings or edit contents indicated on the status bar, located at the bottom of **VXvue** screen.

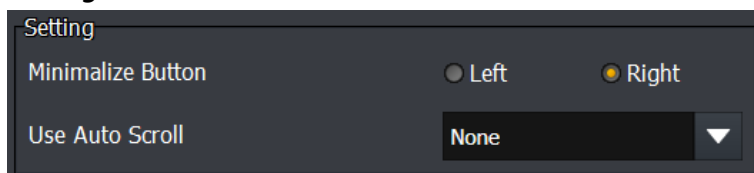
Edit Status Bar



- Check items that you want to show on the status bar.
- Use   buttons to change the order of items.

Item	Description
Status of DAP	Indicates DAP information.
Status of Detector	Detector status (Connection, WIFI strength, battery status)
Status of HDD	The amount of using HDD
Status of External Save	Status of external save
Status of Storage	Status of storage sending
Status of Printer	Status of print sending
Status of MWL	Connecting status of MWL server

Setting



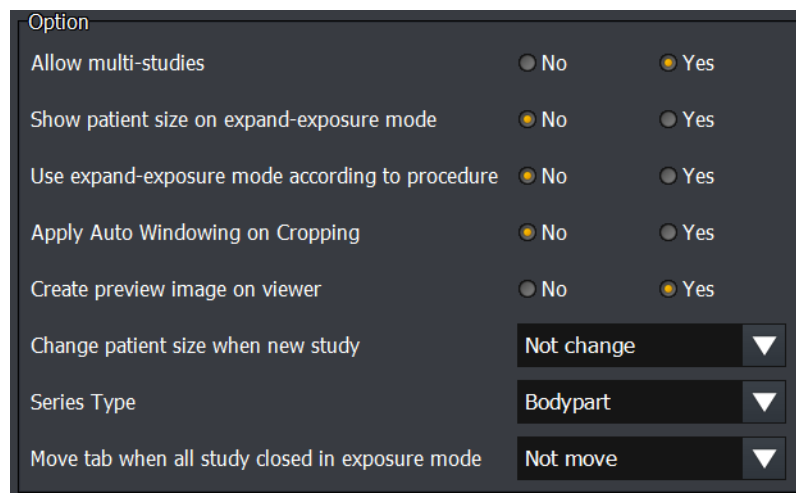
Item	Description
Minimalize Button	Choose a location of the minimalize button of VXvue .
Use Auto Scroll	Set the time of auto scroll.

4.6 Study Group

4.6.1 General Menu

Option

- You can set items used in studies.



Option	Value
Allow multi-studies	Yes
Show patient size on expand-exposure mode	No
Use expand-exposure mode according to procedure	No
Apply Auto Windowing on Cropping	No
Create preview image on viewer	Yes
Change patient size when new study	Not change
Series Type	Bodypart
Move tab when all study closed in exposure mode	Not move

Menu	Description
Allow multi-studies	Allows taking images for multiple studies by registering them simultaneously.
Show patient size on expand-exposure mode	Displays the patient size icon button when you select the macro exposure mode.
Use expand-exposure mode according to procedure	If you take images with the pre-registered procedure, the screen is switched to macro exposure mode automatically.
Apply Auto Windowing on Cropping	- Applies Auto W/L when the cropped area is changed. - Images with PureImpact™ image processing are not applied.
Create preview image on viewer	Sets whether to create a preview image in VXvue and displays it on the screen using a full image, when the preview image is not transmitted from the detector.
Change patient size when new study	- Configures the patient size to be selected automatically when you start a new study. - If you choose 'Not change', the lastly applied patient size will be maintained.
Series Type	- Bodypart: The series number is separated when bodyparts are divided in a study. - Single: When shooting a single study, it is composed of a single series only. (1-1~1-N). - Image: When shooting a single study, the series number is separated for each image.

	The series type of existing study is maintained as its initial state regardless of any changes from Setting.
Move tab when all study closed in exposure mode	- Choose a tab to move to one of the following options after taking images from the Exposure mode. ▫ Not move / Scheduled / Unscheduled / Reserved

Storage Free Space Alarm

Set warning or danger standard to get an alarm if the disk space is insufficient.

- Input the standard capacity for setting alarms and click on the **Update** button.
- Warning Alarm** message displays if the free space of the disk is less than the **Warning** setting value.
 - You can keep making an exposure regardless of the alarm.
- Critical Alarm** message displays if the free space of the disk is less than the **Critical** setting value.
 - You can keep making an exposure regardless of the alarm, but the message is displayed continuously.

Alarm	Message
Warning Alarm	
Critical Alarm	

4.6.2 Study Delete Menu

Set options to delete stored images in the storage medium (HDD, SSD, etc.) automatically or manually.

- If the configured condition is satisfied, the image will be deleted automatically at the appointed time while running **VXvue**.
- The image is deleted automatically when restarting **VXvue** if the configured condition is satisfied.

Manual delete

You can search and delete the images acquired in certain period from **Manual Delete**.

- 1 Set certain period from **Search Date** and click on the **Search** button.
- 2 Check the total number of exposed studies and images from **Search Result**.
- 3 Click on the **Delete** button to delete the selected images or click on the **Delete** button to delete all searched images.

Auto delete

You can set the conditions from **Auto Delete** to delete images automatically.

- 1 Check **Enable** to activate the **Auto Delete** function.
- 2 Select **Time (Over)** and set the period of image deletion.
 - Images stored before the setting period are deleted automatically.
 - Select the unit among **1 / 2** weeks, **1 / 2 / 3** (default), or **6 / 12** month.
- 3 Select **HDD (Lower)** and set the residual capacity of storage media.
 - If actual remaining capacity is less than the configured capacity, the images from older ones are deleted automatically.

- 4 Select the setting value option among **20 GB** (default) / **40** / **60** / **80** / **100 GB**.
 - According to the whole capacity, the number of selectable setting values of remaining capacity can be indicated differently.
- 5 Set the time for processing auto delete from the **Processing Time** menu.
 - The auto delete is processed at the selected hour from 0~23.
- 6 Select the range of images to be deleted from **Option**.
 - **Sent, Printed or Backed up Images** – DICOM sending, printing or backed up images
 - **All Images** – Delete all images
- 7 Click on the **Update** button to complete settings

4.6.3 External Save Menu

With the **External Save** function, you can save images to the specific path such as external devices manually or automatically. You can also check the number of saved images and their state as well as set the storage options.



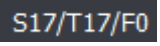
- Click on  button at the bottom of the **VXvue** screen to move to the setting dialog of **External Save** directly.

External Save Queue

This dialog indicates the current state of External Save.

State	Exam D...	Exam T...	Patient ID	Patient Name
Done	2016-06...	14:33:26	EM-1310...	Urgent Patient
Done	2013-11...	14:48:06	ID-1606...	John Doe
Done	2013-11...	14:48:39	ID-1606...	John Doe
Done	2013-11...	14:48:17	ID-1606...	John Doe
Done	2016-06...	14:33:26	ID-1606...	John Doe

Number of Image : S16/T16/F0

- **Number of Image**: Indicates the stored images (S), total images tried to be stored (T), and the images failed to be stored (F). 
- The meaning of messages for each state is as follows.
 - **Done**: Succeed in saving images.
 - **Failed**: Failed to convert images to files or errors in the storage path.
 - **Saving**: The images are being saved to the external device.
 - **Pending**: The images are added to the list for storing them in the external device.
 - **Stopped**: The **External Save** function operated background is stopped for errors in the storage path.
- Check the current state again from **External Save Queue** and click on the **Retry** button to save images, or click on the **Delete** button to delete images.
- If the images which have been stored to the external device are changed and replaced, they are not removed from the Queue list.

- If the image information is changed while the storage status is 'pending', the existing information is removed and replaced to the changed one.

Button	Description
Retry	• You can retry to save the 'Failed' image to the external device. • If the background system of External Save is deactivated, examine the storage path and save the images again from the failed one.
Delete	• Deletes the selected list of images only. (Cannot delete the images being stored.) • The stored images can be deleted from the Queue list only. The images and files in the External Save path cannot be deleted. The failed or pending images are deleted from the Queue list.
Delete Done	• Deletes whole list of images which are completed to be stored.
Delete All	• Deletes whole list of images regardless of the selected list.

External Save Option

You can change or set the options applied to each image when performing the **External Save** function. Be sure to click on the **Update** button after changing options to save the changed settings.

Item	Description
Use Auto External Save on Exposure Mode	Sets whether to save the images to specific path such as external devices automatically. • Yes ▪ VXvue Human, Vet, Equine: Applied when closing the study. ▪ VXvue Vehicle: Applied when closing location / selecting another study • No: Not use
Image Format	Selects the image format for the image to be performed External Save. • Include Portable Viewer ▪ Sets whether to include DICOM Portable Viewer or not. ▪ This function is activated when checking the DICOM option
Compression	Sets the way of JPEG2000 compression. If the DICOM server does not support JPEG2000, this function cannot be used. • No Compression: Not compressing JPEG2000 • JPEG2000 Lossless: Compressing JPEG2000 without a loss • JPEG2000 Lossy: Compressing JPEG2000 with a loss

Compression Quality	Sets JPEG2000 compressibility of DICOM images. It activates when checking the option JPEG2000 Lossy Compression. Sets compressibility by entering it manually or adjusting the slider.
Burned in Annotation	Sets whether or not to include annotation information in the image during an External Save. • Yes: Included / No: Not included
Burned in Information	Sets whether or not to include the Overlay information in the image during an External Save. • Yes: Included / No: Not included
Software Collimation	Sets the image crop status. • NONE: Original image without cropping • Cut: Cropped area of the image • Fill: The outside area of the cropped image is filled with black. • Fill & Center: The image cropped from the original image is displayed at the center, and the area other than the cropped image is filled with black.
Image Modality	Sets modality information. • Current: Uses the modality information without change. • DX / CR / DR: Uses the modality information by fixing it among DX/CR/DR.
Language	Sets the language for DICOM encoding.
DAP Unit Type	The DAP value to be transferred to the DICOM image is changed according to the set unit. • mg/cm² , ugy/m² , dgy/cm²



- The higher the compressibility, the image loss is happened severely. This may affect the image quality when performing loss image compression.

Selecting the folder (directory) to save images

1 Click on  in **Target Directory** to specify the path for storing image files.

- The files are stored in the 'External Save' folder generated under a user-defined path of User Directory.
- The default path is the **Database** folder.



- The writable and readable media (HDD, USB, SSD) can be used only as the external storage.
 - You cannot use an optical disk such as CD-ROM.

2 A folder for saving image files to the external media is generated in the user-defined path automatically.



- The format of external storage folder in **VXvue for Vehicle**
 - Selected path\ExternalSave\Location Name_Location Scheduled Date[YYYYMMDD]_Location Key\
- The format of external storage folder in **VXvue for Human, Vet, Equine**

- Selected path\ExternalSave\Study Date[YYYYMMDD]_Study Date[TTMMSS]_Patient ID_Patient Name

3 The file name of images is applied equally regardless of **VXvue** version or the file extension (dcm, jpg).



- If the DICOM option (**Include Portable Viewer**) is not checked:
 - Acquisition Date[YYYYMMDD]_ Acquisition Date[TTMMSS]_Patient ID_Patient Name.Extension (dcm or .jpg)
 - Ex.) 20150622_142503_230example.dcm
- If the DICOM option (**Include Portable Viewer**) is checked (In case of using DICOMDIR):
 - Acquisition Date[YYYYMMDD]_ Acquisition Date[TTMMSS]_Patient ID.dcm (or .jpg)



- If you change the DICOM option setting and save images externally, an error can occur since the file name is different.
 - Remove the files which have been stored in external media manually to search new stored files from the portable viewer.

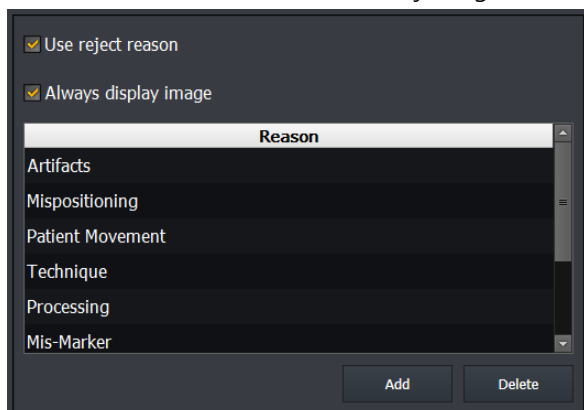
4.6.4 Rejected List Menu

You can search the rejected studies or images and remove them completely.

Patient Name	Patient ID	Acc. No.	Birth Date	Age	Sex	Study Date	Rejection
--------------	------------	----------	------------	-----	-----	------------	-----------

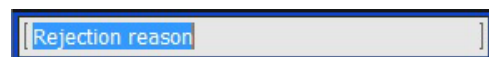
4.6.5 Rejected Reason Menu

You can set and select a reason of rejecting studies or images.



Option	Description
Use reject reason	Check this option to display a window to choose a reason for the rejected study. If not, the image will be rejected without opening the window.
Always display image	Check this option to display the rejected study and image by searching. If not, the rejected image is showed as a blank one in the study list and Thumbnail .

Register the rejection reason



- 1 Click on the **Add** button and add the **Rejection reason** item.
- 2 Double click the item and change its name to the desired name of reason.
- 3 Press the **Enter** key and click on the **Update** button to complete the update.



- The maximum number of rejection reasons to be added is 30.

Delete the rejection reason

- 1 Select an item and click on the **Delete** button.
- 2 Click on the **Update** button to complete the update.

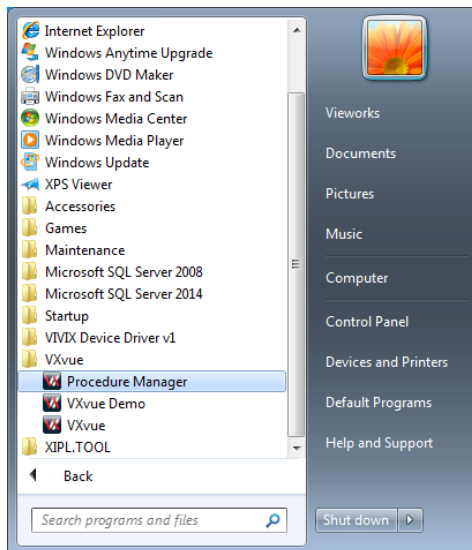
Default rejection reason

Reason	Description
Artifacts	Inferiority image
Mispositioning	Ill-posed patient
Patient Movement	Patient movement
Technique	Technical error
Processing	Poor image processing
Mis-Marker	Additional error of information
Others	Others

4.7 Procedure Manager

You can configure and manage the information of exposure procedure from **Procedure Manager**.

- The **Procedure** panel is organized with the **Category** tab, **Procedure** tab, **Stitch Protocol** tab, **Step** tab, and **Bodypart / Projection** tabs.
- You can start **Procedure Manager** even if **VXvue** is not executed.



- 1 Click on the **Start** button of Windows.
- 2 Move to **All programs** → **VXvue**.
- 3 Click on the **Procedure Manager** icon.

Setting order of Procedure or Stitch Protocol

- 1 Create a bodypart and projection from the **Bodypart/Projection** tab.
 - 2 Create a step by combining **Bodypart** and **Projection** from the **Step** tab.
 - 3 Create a procedure by selecting the step from the **Procedure** tab.
- Step for the image stitching can be created from the **Stitch Protocol** tab.
 - The created procedure and stitch protocol can be used at the **Exposure** mode by appointing their shortcuts from the **Category** tab.



- It is recommended to restart **VXvue** after you modified settings from **Procedure Manager**.

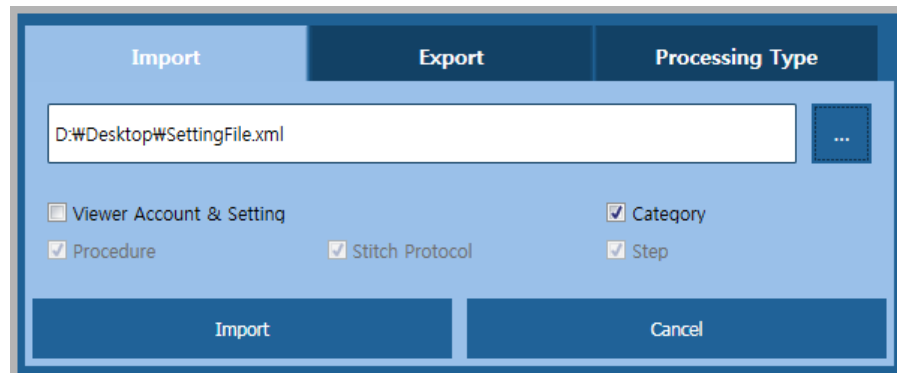
4.7.1 Tool Area

Setting

Icon	Function
------	----------

- 1 **Import:** You can import the settings stored in the PC.

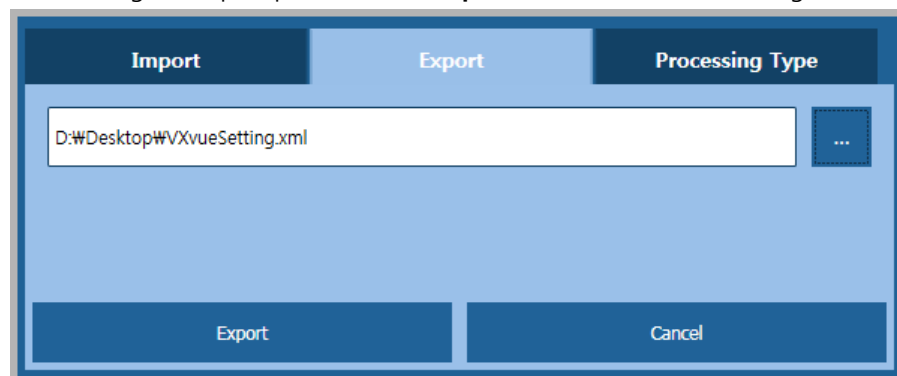
- Specify the setting path, select the item, and click the **Import** button to apply settings.



The screenshot shows the 'Import' tab of a settings dialog. At the top are three tabs: 'Import' (selected), 'Export', and 'Processing Type'. Below the tabs is a text field containing 'D:\Desktop\SettingFile.xml' and a browse button with three dots. Underneath are several checkboxes: 'Viewer Account & Setting' (unchecked), 'Procedure' (checked), 'Stitch Protocol' (checked), 'Category' (checked), and 'Step' (checked). At the bottom are two buttons: 'Import' and 'Cancel'.

- 2 **Export:** You can save the settings on your PC.

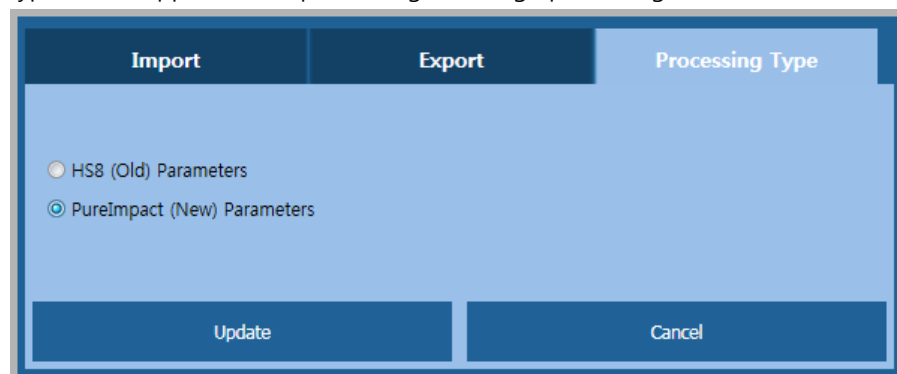
- After setting the Export path, click the **Export** button to save the settings.



The screenshot shows the 'Export' tab of the settings dialog. The tabs at the top are 'Import', 'Export' (selected), and 'Processing Type'. The text field contains 'D:\Desktop\VXvueSetting.xml' with a browse button. At the bottom are two buttons: 'Export' and 'Cancel'.

- 3 **Processing Type:** You can set the type to apply in image processing.

- If you click the **Update** button after selecting an item, the selected image processing type will be applied when performing the image processing.



The screenshot shows the 'Processing Type' tab of the settings dialog. The tabs at the top are 'Import', 'Export', and 'Processing Type' (selected). Below the tabs are two radio button options: 'HS8 (Old) Parameters' (unselected) and 'PureImpact (New) Parameters' (selected). At the bottom are two buttons: 'Update' and 'Cancel'.



- HS8 and PureImpact™ are image processing algorithms developed by Vieworks.
- As PureImpact™ is the next version of HS8, you can get higher quality image processing results. Therefore we recommend using PureImpact™.

Reset

Icon	Function
	• The changed settings in the tab area are displayed in red text. • Click the Reset button to return the changes to the previous settings.

Update

Icon	Function
	• The changed settings in the tab area are displayed in red text. • Click the Update button to save the changed settings.

Exit

Icon	Function
	• Exit Procedure Manager.

4.7.2 Category Tab

Display

- You can adjust the color, size and font size of **Shortcut** items indicated on the human body image at the left of **Exposure** mode screen.
- Click on the **Update** button and check the result after adjusting the items.

Display

Normal Color: White	Over Color: Gray	Selected Color: #FF0080C0	Display Type: Graphic
Text Font: Tahoma	Text Size: 15	Icon Size: Small	Projection pos: Left

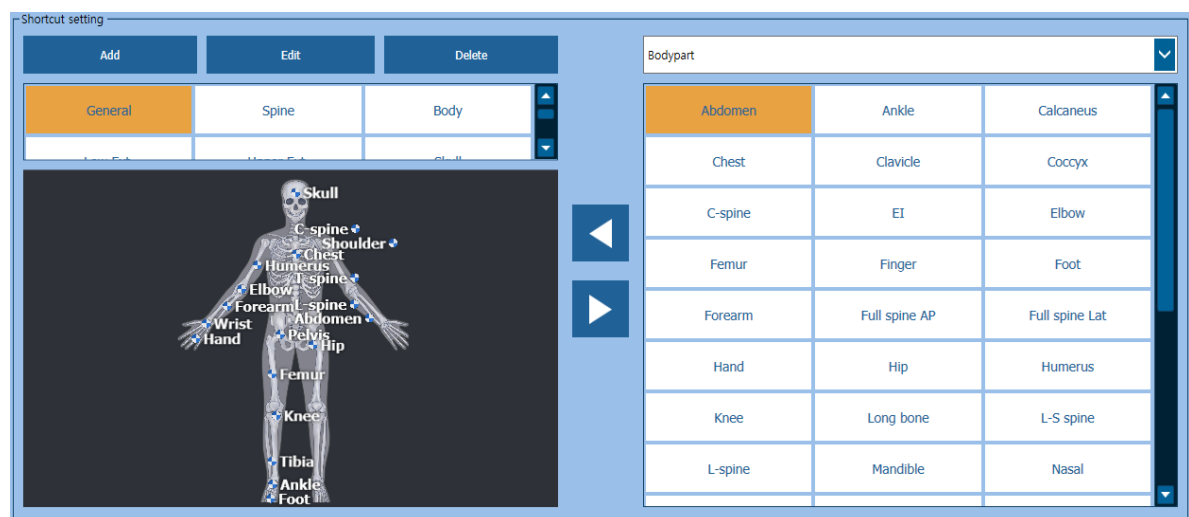
Item	Description
Normal Color	Without clicking shortcut
Over Color	A mouse pointer is on the shortcut
Selected Color	Clicking Shortcut
Text Font	Font shape
Text Size	Font size
Icon Size	Shortcut size
Display Type	The way to indicate a step (Graphic, Button)
Projection pos	The location of window for selecting projection (Left, Right)

Shortcut example

Shape	Select status	Size	Others (Text Size = 18)
	Selected (Blue Shortcut)	Normal	Selected Color = Blue
	Selected (Blue Shortcut)	Large	Selected Color = Blue
	Unselected (Gray Shortcut)	Large	No mouse cursor on (Normal Color)
	Unselected (Gray Shortcut)	Large	Mouse cursor on (Mouse-Over Color)
	Selected (Blue Shortcut)	Large	Selected Color = Red
	Selected (Blue Shortcut)	Large	Text Font = Vivaldi
	Selected (Blue Shortcut)	Small	-

Category

- Manage **Category** displayed at the **Exposure** mode.
- You can set other figures as categories plus the built-in human body image.



The default supplied value of Category (Based on the human version / HumanBody.bmp)

Spine	Body	Low Ext.	Upper Ext.	Skull	Stitch
Neck	Clavicle	Femur	Shoulder	Skull	Full spine AP (2)
C-spine	Scapula	Knee	Humerus	PNS	Full spine AP (3)
T-spine	Chest	Patella	Elbow	Nasal	Full spine AP (4)
T-L spine	Sternum	Tibia	Forearm	Mandible	Full spine LAT(2)
L-spine	Rib	Ankle	Wrist	Zygomatic arch	Full spine LAT(3)
L-S spine	Abdomen	Calcaneus	Hand	T-M joint	Full spine LAT(4)
Sacrum	Sacroiliac joint	Toe	Finger		Long bone (2)
Coccyx	Pelvis	Foot			Long bone (3)
	Hip				

Add the category

- 1 Create a decent-sized BMP format image.
- 2 Store this image to D:\Database\BodypartCategory.
- 3 Click on the **Add** button from **Setting** mode > **Procedure** panel > **Category** tab.
- 4 Open **Insert a Category** window and select the BMP image added to the **Image File** list.

- 5 Input the name and description of a category.
- 6 Click on the **OK** button to complete registering the category.



- You can register multiple categories with the same BMP image.
- Up to 20 categories can be registered including the 11 built-in ones.

Modify the registry item

- 1 Choose a category you want to modify.
- 2 Click on the **Edit** button from **Procedure Manager** → **Category** tab.
- 3 Modify the items.
- 4 Click on the **Update** button to complete modifying category.

Delete the registered item

- Select the item and click on the **Delete** button.

Shortcut

- You can set shortcuts of **Bodypart**, **Step**, **Procedure**, and **Stitch Protocol**.
 - The registered shortcuts can be checked and selected from the **Exposure** mode.
 - Select **Category** to manage shortcuts for each registered category.

Candidate list

Shortcut target	Prefix	Source
Bodypart	[B]	Procedure panel > Bodypart / Projection tab > Bodypart item
Step	[S]	Procedure panel > Procedure tab > Step item
Procedure	[P]	Procedure panel > Procedure tab > Procedure item
Stitch Protocol	[SP]	Procedure panel > Stitch Protocol tab > Stitch Protocol item

Shortcut list

- You can check the items registered as shortcuts.

Add and delete Shortcut

- 1 Check the desired items among Bodypart, Step, Procedure, and Stitch Protocol and the candidate items included in each item.

A screenshot of a software interface showing a dropdown menu. The dropdown is open, displaying a list of options: 'Bodypart', 'Step', 'Stitch Protocol', and 'Procedure'. The 'Bodypart' option is currently selected and highlighted in blue. The dropdown is triggered by a button with a downward arrow icon.

- 2 Select items in the **Candidate** list and click on  button. The selected item is added to the **Shortcut** list.
- 3 Select items in the **Shortcut** list and click on  button. The selected items are deleted from the **Shortcut** list.



- Refer to <4.7.3 Procedure Tab> for more information about **Bodypart**, **Step**, **Procedure** and **Stitch Protocol**.

4.7.3 Procedure Tab

You can add, delete or edit procedures organized with one or more shooting steps from the **Procedure** tab.

- When you register only one Procedure, a string of steps are registered to the shooting list in a lump.
- You can adjust the step order of shooting in Procedure by clicking on the **Edit** button.

Name	Code	Description	Hid...		Name	Type	Label	
Abdomen E/S		Abdomen E/S	N		Abdomen Erect	Step		
Ankle AP & Lat(Both)		Ankle AP & Lat(Both)	N		Abdomen Supine	Step		
Ankle AP & Lat(Lt)		Ankle AP & Lat(Lt)	N					
Ankle AP & Lat(Rt)		Ankle AP & Lat(Rt)	N					
C-Spine AP & Lat		C-Spine AP & Lat	N					
C-Spine AP Lat & Op...		C-Spine AP Lat & Open mouth	N					
C-Spine AP Lat F/E v...		C-Spine AP Lat F/E view	N					
C-Spine Series & E/F...		C-Spine Series & E/F Lat	N					
C-Spine Series		C-Spine Series	N					
C-spine Open mouth...		C-spine Open mouth view	N					
Calcaneus Axial & La...		Calcaneus Axial & Lat(Both)	N					
Calcaneus Axial & La...		Calcaneus Axial & Lat(Lt)	N					
Calcaneus Axial & La...		Calcaneus Axial & Lat(Rt)	N					

Buttons: Import, Template, Add, Delete, Copy, Edit

Add Procedure

Name
Abdomen E/S

- Click on the **Add** button to add a new procedure to the **Procedure** window.
- To change the procedure name, double click it and input a new name.



- You should input **Procedure Code** since it is used as a matching code to Worklist.

Import procedure

- Click on the **Import** button and bring Procedure in the **CSV** format file.
- The **CSV** file should comply with the following form.
 - Name1, Code1, Description1
 - Name2, Code2, Description2
 - ...
 - NameN, CodeN, DescriptionN

Template of Importing Procedure

- Click on the **Template** button to create a template file in CVS format which can import the procedure.

Edit Procedure

Bodypart/Stitch Prot	Candidate	Procedure Item	Label
Abdomen		Abdomen Erect	
Ankle		Abdomen Supine	
Calcaneus			
C-spine			
Chest			
Clavicle			
Coccyx			
Elbow			
Femur			
Finger			

Update Cancel

- 1 Click on the **Edit** button at the bottom of the **Step** list to open the **Step Editor** window.
- 2 Choose the desired items from **Bodypart / Stitch Protocol** list.
- 3 Choose the desired items from the **Candidate** list
- 4 Click on  button to add the selected items to **Procedure Item**.
- 5 Select the item from **Procedure Item** and click on  button to delete it.
- 6 Click on  or  button to change the order of procedure items.
- 7 Click on the **Update** button to save the edited procedures.



- You can select the added **Procedure** from the **Unscheduled** panel in the **Registration** mode.
 - Refer to the VXvue Operation Manual for the detailed information.

Check procedure code

Procedure code means an examination code used at the institution or at the hospital. This code can be received from DICOM worklist. You should match the examination code and **Procedure** code in case of using the hospital examination code.

- When the exam code is sent from Worklist, check if it is matched with the configured procedure code.
 - The steps registered in the relevant procedure will be added automatically if the exam code and the procedure code are matched together.
 - If not, the hospital exam code is unable to use.



- Refer to <4.9.4 MWL Menu> for the information about the matching tag of **Procedure** codes.

4.7.4 Stitch Protocol Tab

From the **Stitch Protocol** tab, you can set **Step** information of the images to be stitched.

- The **Stitch Protocol** tab provides same functions as those of the **Procedure** tab except several constraint conditions as follows.
 - You cannot use the **Import** function.
 - Up to 6 stitch steps can be registered in one **Stitch Protocol**.
 - If the stitch step is used for image processing, all stitch steps in Stitch Protocol cannot be deleted including the relevant stitch steps.



- The **Stitch** option cannot be used if you operate **VXvue** for a medical examination.
- Take images with **Stitch** steps registered in **Stitch Protocol** if you use the auto stitching function from **Physical Matching**.
- Refer to VXvue Operation Manual for the detailed information.

4.7.5 Step Tab

You can register **Step** and set the exposure conditions for each step.

- **Step** means the exposure condition unit composed of **Bodypart**, **Projection** and patient size.
- All steps include **HS8** or **PureImpact™** image processing parameters.
 - Depending on the default image processing type selected during VXvue installation or upgrade, the image processing parameter names mapped at every step are updated automatically.
 - The image processing parameters mapped according to the set basic image processing type are displayed on the screen.
- According to the standard of medical image, one step is categorized as one series.



- You can set the image processing parameter from **XIPL.TOOL**. Refer to **XIPL User Manual** for the detailed information.

How to set

- 1 Check the value of each parameter and change it to the desired setting value.
 - The changed item is indicated as a red color.
- 2 After changing the setting value, click on the **Update** button.
 - When the update is completed, the changed item is saved finally and the red color is disappeared.

Function

Item	Description
Select All / Unselect All	Selects or unselects all steps.
Copy From	Brings string value of steps from database.
Insert	Adds new steps.
Delete	Deletes steps.

Detector / Receptor Select

- You can configure a detector / receptor selected automatically when selecting steps.

Name	Patient...	Detector No	Default
Abdomen Erect	Large	None	Normal
Abdomen Erect	Medium	None	Normal
Abdomen Erect	Small	None	Normal
Abdomen Erect	Pediatric	CR Detector	Normal
Abdomen KUB	Large	Detector 1	Normal
Abdomen KUB	Medium	Detector 2	Normal
Abdomen KUB	Small	Detector 3	Normal
Abdomen KUB	Pediatric	Detector 4	Normal



- The detector name can be set in Setting > Integration > Detector.
- The use of the receptor can be set in Setting > Integration > Generator.

Image Process Parameter

- You can assign the path of image processing parameter applying to the exposed image.

Default	Normal Param	Soft Param	Hard Param
Normal	Abdomen Erect_normal ...	Abdomen Erect_soft ...	Abdomen Erect_hard ...

- Click on button to open the **Change Parameter** window.
- Select one of the parameters provided in advance, and click on the **Update** button.

Item	Description
Normal Param	A processing parameter for normal image.
Soft Param	A parameter defined as processing the image smoother than Normal.
Hard Param	A parameter defined as processing the image roughly than Normal.
Default	A basic parameter applied when the image is acquired.



- The image processing parameters are the optimal ones preset from **VXvue**. They are provided when you install **VXvue** for the first time. Though you can modify the parameter information, it is recommended to use the image processing parameter that **VXvue** provides.
- HS8** or **PureImpact™** image process algorithm is applied to the image processing parameters.

- Among the built-in parameters, parameters ending with PIH, PIV and PIE are applied to PureImpact™ image processing algorithm. Other parameters are applied to the HS8 image processing algorithm.
- You can change the parameter value from **XIPL.TOOL** directly.

Auto Label

- You can set the label to be displayed on the exposed image automatically.

Label	Label Pos	Text	Text Pos
L	TopLeft	Text	TopLeft

Item	Description
Label	Input text of L / R labels which are displayed automatically.
Label Pos	Defines position of labels.
Text	Input pre-defined texts.
Text Pos	Defines position of texts.

Rotation

- Use this function to display the image as being auto-rotated.
- This function is applied in the order of **Image Rotation** > **Display Rotation** > **Tool Rotation**.

Flip	Mirror	Display Rotation	Use Accel. val
N	N	None	N

• Image Rotation

Item	Description
Use Accel. Value	• Y: Rotate the acquired image by using acceleration sensor information of the detector. • N: Rotate the acquired image by using the rotation information configured from VXSetup.

• Display Rotation

Item	Description
Flip	Set whether inverting the image or not.
Mirror	Set whether applying symmetry to the image or not.
Rotation	Set the rotation magnitude. (None, CCW90, CCW180, CCW270, CW90, CW180, CW270)



- In case the acceleration sensor of detector is not activated, the image is rotated in the direction configured from **VXSetup** even if you choose 'Use Detector acceleration value'.
- Acceleration sensor is available for F/W V1.0.3.21 for FXRD-1012N detector, F/W V1.0.0.8 for FXRD-1417N detector and F/W V1.0.0.4 or higher for VXTD-2532E detector.



- If you change the orientation of displaying image from **VXSetup**, it is applied to the image showed in **Viewer**. Refer to VIVIX-S Setup Operation Manual for the detailed information about setting the image orientation.

Crop

Crop	Shutter Width	Shutter Height
Auto Crop		

- You can set the crop options to make the exposed image be cropped automatically.

Item	Description
Crop	Auto Crop: Uses Auto Crop function configured from XIPL .
	Shutter: Automatically applies a rectangular shutter with the width and height set for the shot image.
	Ellipse: Automatically applies an elliptical shutter with the width and height set for the shot image.
Shutter Width	Sets the width of shutter applied to the image automatically if the crop is set as 'Shutter'. • Allowed range to input: 8 ~ 17 (unit: inch)
Shutter Height	Sets the height of shutter applied to the image automatically if the crop is set as 'Shutter'. • Allowed range to input: 8 ~ 17 (unit: inch)



- Refer to **XIPL User Manual** for the detailed information about setting **Auto Crop**.

E.I. (Exposure Index)

- You can set the target exposure index for each step.
- The allowed range is **100 ~ 5000**, and the default value is **800**.

Target EI	Target EI(Gadox)
357	464



- Refer to VXvue Operation Manual for the detailed information about the exposure index.

Generator

You can set the dose condition of **Generator** for each step.

Dose Mode	kVp	mAs	mA	ms	Density	AEC_L	AEC_R	AEC_C
Current mode	50	1	100	10	0	N	N	N

- Set the suitable tube voltage (**kV**) / **mAs** / **Density**.
 - You can set the condition separately as **mA** and **ms**, instead of **mAs**.
 - If the connecting generator does not support the indicating values, they are changed to a gray color with strikethrough.
- You can set the Dose Mode (Current mode / mA, mA / ms, AEC).
 - When selecting a step, **Current mode** does not change the currently set Dose Mode.
 - When step is selected, **mA / ms, mAs, AEC** automatically changes the currently set dose mode to the selected item
- Select **AEC** in Dose Mode if the generator is integrated with **AEC** (Auto Exposure Control).
 - You can set the areas of **L** (Left) / **C** (Center) / **R** (Right).

Collimator

- You can set the operating condition of **Collimator** for each step if using the interoperable auto collimator.

Collimator Width	Collimator Height	Collimator SID	Collimator Filter
17	17	100	0

- You can select and set the **Collimator** size / **SID** / **Filter**.
- The relevant setting value is applied to image when clicking the exposure step in the **Exposure** mode.

U-Arm

- You can set the operating condition of U-arm for each step, in case of using the interoperable one.

Defined Position	UArm Pos	UArm Angle	Detector Pos	Detector Angle	UArm Tube Pos
None	1313	90	795	0	285

- You can use the default condition protocol of U-Arm location.
- The built-in protocols of U-Arm location are as follows.

Position Protocol	Arm Pos. (mm)	Arm Angle (°)	Det Pos (mm)	Det Angle (°)	Tube Pos (mm)
STAND 100	1445	90	610	0	390
STAND 180	1445	90	860	0	940
TABLE	1115	0	610	0	390
DECUBITUS	1050	90	860	0	390



- You cannot use this UI if U-Arm is not integrated with the viewer program.
- Refer to the engineer in Viewworks for the detailed information about the integration of equipment.

4.7.6 Body part / Projection Tabs

You can set a body part and projection from the **Bodypart / Projection** tab each.

Meaning	Alias	H..	Cod...	Desi...	V..	BodypartEx...
Abdomen		N	T-D4...	SRT		ABODOMEN
Abdom...		N	R-FA...	SRT		ABODOMEN...
Acromio...		N	T-15...	SRT		ACROMIOCL...
Ankle jo...	Ankle	N	T-15...	SRT		ANKLE
Apex of...	Apex	N	T-28...	SRT		APEX OF LU...
Arm		N	T-D8...	SRT		ARM
Bile duct		N	T-60...	SRT		BILE DUCT
Bladder		N	T-74...	SRT		BLADDER
Breast		N	T-04...	SRT		BREAST
Bronchus		N	T-26...	SRT		BRONCHUS
Calcaneus		N	T-12...	SRT		CALCANEUS
Cervical...	C-spine	N	T-11...	SRT		CSPINE
Cervico...	C-T sp...	N	T-D0...	SRT		CTSPINE

☒ Show All Add Hide

Meaning	Alias	H..	Cod...	Desi...	V..	ViewPosition
frontal		N	R-10...	SRT		FRONTAL
frontal...		N	R-10...	SRT		FRONTAL O...
antero...	AP	N	R-10...	SRT		AP
antero...	AP-Ob...	N	R-10...	SRT		ANTERO_PO...
right po...	RP-Ob...	N	R-10...	SRT		RIGHT POST...
left post...	LP-Ob...	N	R-10...	SRT		LEFT POSTE...
postero...	PA	N	R-10...	SRT		PA
postero...	PA-Ob...	N	R-10...	SRT		POSTERO_A...
right an...	RA-Ob...	N	R-10...	SRT		RIGHT ANTE...
left ant...	LA-Ob...	N	R-10...	SRT		LEFT ANTER...
sagittal		N	R-10...	SRT		SAGITTAL
medial-l...		N	R-10...	SRT		MEDIAL_LAT...
lateral o...		N	R-40...	SRT		LATERAL OB...

☒ Show All Add Hide

Item	Description
Meaning	Meaning (name) of Bodypart / Projection
Alias	Alias of Bodypart / Projection marked to the user.
Hide	Hidden (Y) or show
Value	Standard code value of Bodypart / Projection
Designator	Code system or the institution providing code.
Version	Code system version
Bodypart Examined	DICOM tag input value – BODYPART EXAMINED (0018,0015)
View Position	DICOM tag input value – VIEW POSITION (0018,5101)



- **Bodypart / Projection** The default value of **Bodypart / Projection** is complied with **SRT** (SNOMED-CT Reference Terminology).

- **Bodypart / Projection** items are divided into **SRT** and user registered item (**99VW**).



- You cannot delete the **SRT** item. Use **Hide** button to hide the item.
- You cannot delete the **99VW** item after registration. Use **Hide** button to hide the item.
- Check **Show All** checkbox to show all hidden items.



- You can only modify **Alias** among **SRT** items.
- You can modify **Meaning, Alias, Designator** among **99VW** items.



- Check the modified **Alias** from the shortcut icon in the **Exposure** mode.

Meaning	Alias	Hide	Value	Designa...
Chest	CHEST	N	T-D3000	SRT




- **Bodypart Examined** and **View Position** values are used as DICOM Tag.
 - BODYPART EXAMINED (0018,0015)
 - VIEW POSITION (0018,5101)



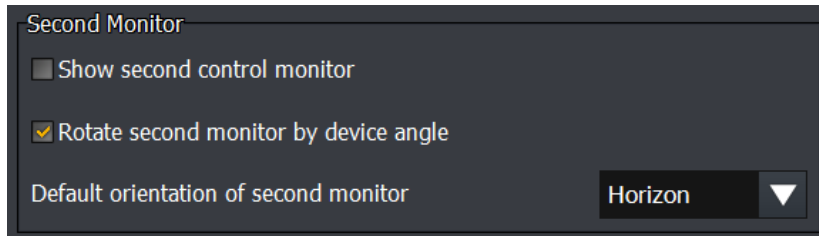
- If you install the Viewer for animals, certain Bodyparts in Equine will be preceded by an (E). If *the bodypart of an animal is not that of equine*, (E) is not displayed.
 - (E) Abdomen
 - (E) Pelvis
 - (E) Skull
 - (E) Spine
 - (E) Thorax

4.8 Integration Group

4.8.1 General Menu

Second Monitor

You can set the second monitor attached to the part of equipment.



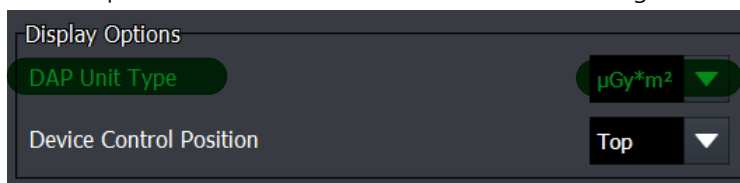
Option	Description
Show second control monitor	Indicates ' Second Monitor ' to the second monitor if there are more than two monitors.
Rotate second monitor by device angle	Sets whether to use the rotation of the mounted monitor according to the current angle of the mechanical part.
Default orientation of second monitor	Sets default orientation of the monitor attached to the part of equipment. • Horizon: The monitor is installed horizontally. • Vertical: The monitor is installed vertically.



- If you have more than one monitor, always connect them before you start VXvue. If you connect an additional monitor during VXvue operation, it may cause malfunction.

Display Options

Set the options indicated on the screen when VXvue integrated with devices.



Menu	Description
DAP Unit Type	• Sets the unit of DAP indicated on the status bar and the second monitor.
DAP Control Position	• Sets the location of virtual console on the screen, used for integrating devices in the Exposure mode.



- Second Monitor is not available for **VXvue Vehicle**.

4.8.2 Detector Menu

Option

Set the display options related to the detector.

Option		
Show Detector mode(AP) control in DetectorInfo	☐ No	☒ Yes
Show CR mode button on exposure mode	☒ No	☐ Yes
Show detector on expand-exposure mode	☐ No	☒ Yes

Menu	Description
Show Detector mode (AP) control in DetectorInfo	Displays On/Off setting of the detector AP from Detector Info.
Show CR mode button on exposure mode	Indicates the CR mode icon button in the Exposure mode.
Show detector on expand-exposure mode	Displays the detector icon button when you select the macro exposure mode.

Detector Setting

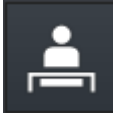
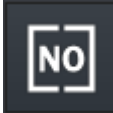
You can change the detector icon in the Exposure mode for each detector.

- To measure the real size of an object, this tab corrects the error of actual measurement value by correcting the pixel spacing (generated when magnifying image) depending on the exposure distance (SID) and the distance between an object and a detector (OID).

Changing Icons and Names

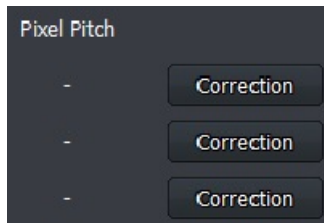
Icon	
Detector 1	Detector
Detector 2	Detector
Detector 3	Stand
	Table

- You can change the detector icon to display the position of bucky or the detector type.
 - Detector, Stand, Table, Table Top, No Bucky**
- You can change the name of each detector.

Icon for selecting a detector	Stand Icon	Table Icon	Table Top Icon	No Bucky Icon
  				
	Refer to VXvue Operation Manual for the detailed information of each detector icon.			

Pixel Spacing Correction

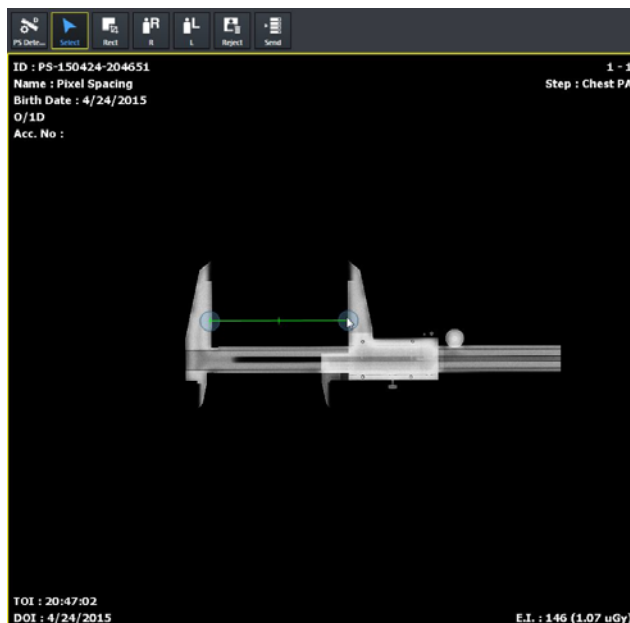
- When clicking on the **Correction** button of each detector, the screen is moved to the **Exposure** mode automatically and the study for pixel spacing correction is registered.
 - If multiple detectors are connected, other detector icons than the relevant one are deactivated on the screen and cannot be used.



- At the left end of **Quick Access Tools**, the **Detector Pixel Spacing** button is showed in deactivated state.



- The magnification is different depending on the changes of SID and OID. Put the object measured its real length on the position where it is to be fixed in a real OID, and then take images.
 - The object of the following sample image is a vernier calipers fixed as 100mm.
- After taking images, the **Detector Pixel Spacing** button is activated. Click on the button and then the mouse cursor is turned to a ruler shape. Click and drag a mouse button at the start point of OID to draw a line.



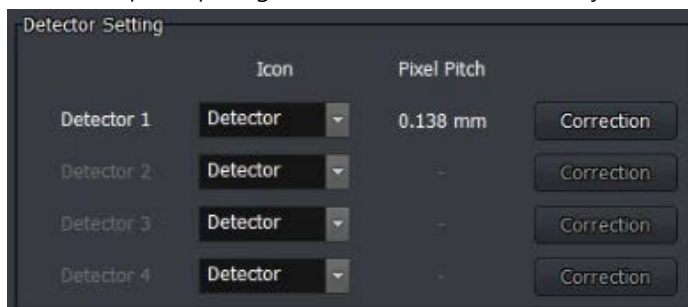
- This study is not affected by the option of automatic transmission since the study is used for correcting pixel spacing only. The database is not stored when closing the study.

- 5 Release the mouse button, and then the **Correction for Real Size Measurement (Image)** dialog appears. Enter the real length of the object to **Length** of the **New** menu, and click on the **Apply** button to complete the correction.



Name	Description
Current	Setting value of the current detector
Pixel Spacing	The pixel spacing set to the current detector already.
Length	A converted segment length in magnification by pixel spacing set to the current detector.
New	Setting value to be changed newly.
Pixel Spacing	- The pixel spacing applied to the current image. - The virtual distance between pixels according to the converted magnification by the number of pixels correspond to the segment of actual measurement.
Length	Input the length of actual measurement.

- 6 Check the information of changed pixel spacing.
- Correct the pixel spacing for each detector if necessary.



- 7 The result of corrected pixel spacing is applied to the next shooting.



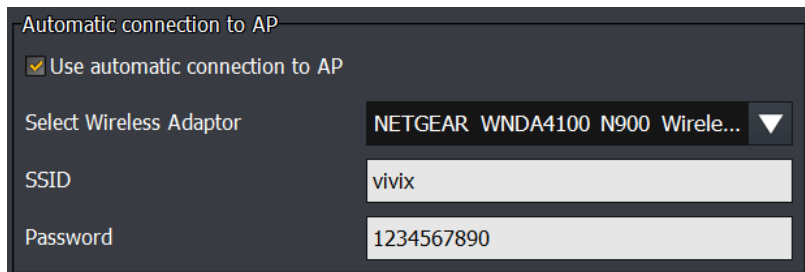
- The pixel pitch of a detector is used as a default one if the pixel spacing is not corrected.
- Correct the pixel spacing again if SID and OID are changed remarkably.



- Refer to VXvue Operation Manual if it is needed to correct pixel spacing of each image for the change of SID.

Automatic Connection to AP

The wireless network is automatically connected every 10 seconds between the AP (Access Point) using the SSID and the password entered by the user and the selected wireless network adapter.



Automatic connection to AP

☒ Use automatic connection to AP

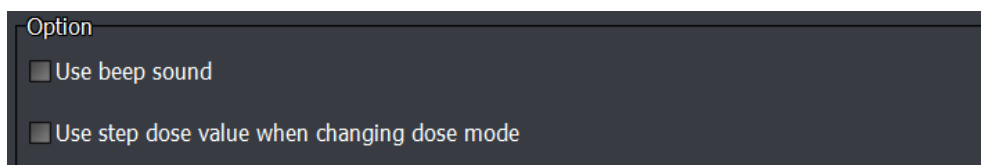
Select Wireless Adaptor: NETGEAR WNDA4100 N900 Wirele... ▼

SSID: vivix

Password: 1234567890

- If a wireless detector is connected, you can set up the AP mode to connect to a PC and a wireless network.
- If the entered settings are changed or the detector is reconnected, the connection will be tried automatically.
- If a network other than the network information you entered is connected, disconnect and try connecting again.

4.8.3 Generator Menu



Option

☐ Use beep sound

☐ Use step dose value when changing dose mode

Use beep sound

Check **Use beep sound** to make the generator beep when exposing X-ray.

- The output time of beep sound depends on mS configured to the generator.
- The output time of beep sound is mAs/100 (mS) under the mAs mode.

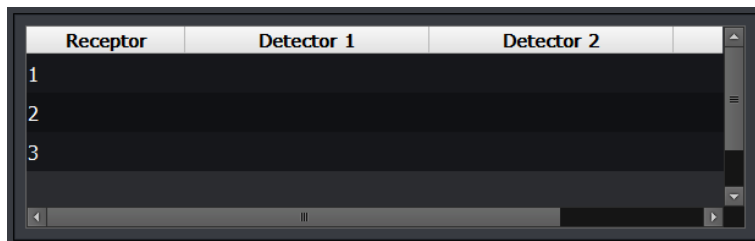
Use step dose value when changing dose mode

When the item is checked, dose value set in Step is applied when changing dose mode in Exposure mode.

- In AEC mode, all AEC-related values such as AEC field and AEC density are also applied.

Receptor

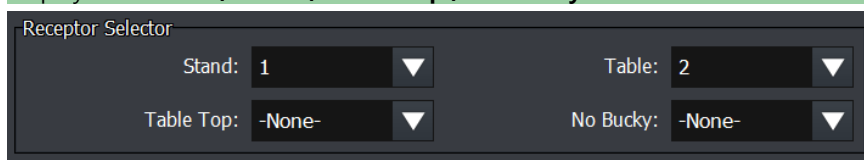
Map the detector and receptor of the generator.



- In case you map the detector with the receptor, the relevant receptor of the generator is selected if you choose the detector icon.
- On the other hand, if the receptor of the generator is changed, the first mapped detector is selected automatically.

Receptor Selector

Displays the **Stand / Table / Table Top / No Bucky** icons on the detector icon in the Exposure mode.



- Only the icon of the set Receptor that is not '-None-' is displayed on the screen.
- If you click the **Receptor** icon, the configured receptor and the detector mapped to the receptor are selected automatically.



- The receptor mapping is not supported depending on the generator model.
- This function is not indicated if the generator does not support receptor mapping.

4.8.4 Collimation Menu

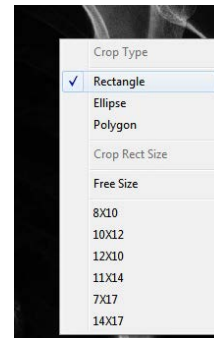
- You can set the crop size of image from **Collimation** in advance.

Set Collimation (Crop Option)

- Check the popup menu below when you crop an image from the **Exposure** mode and the **Viewer** mode.
 - The popup menu displays by clicking the right mouse button from the crop mode in the image view screen.

Crop Option Setting

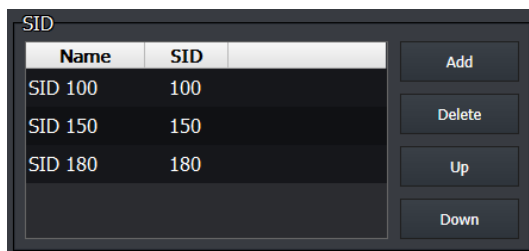
Using Crop Option



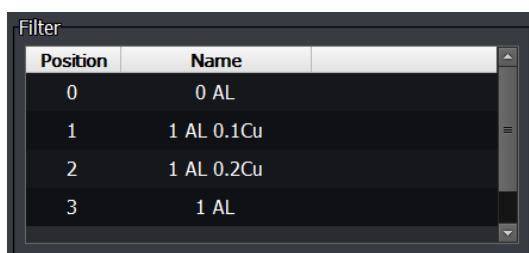
W	H
8	10
10	12
12	3
11	4
7	5
14	6
	7
	8
	9
	10
	11
	12
	13
	14
	15
	16
	17

- 1 Click on the **Add** button to register the cropping size.
 - The size is registered as **W** (Width) = 10 and **H** (Height) = 12.
- 2 Double-click on **W** or **H** options to change the desired size.
- 3 Click on the **Up** or **Down** button to adjust the order of items.
- 4 Select an item and click on the **Delete** button to delete.

SID Setting



Filter Setting



4.8.5 Stand Table Menu

If the program is generated with the U-ARM stand, you can set the pre-defined position as well as set the items of auto stitch.

APR

You can modify the value of pre-defined position of U-ARM stand.

APR					
Position	Stand Pos	Arm Angle	Det Pos	Det Angle	Tube Pos
STAND100	1445	90	610	0	390
STAND180	1445	90	860	0	940
TABLE	1115	0	610	0	390
DECUBITUS	1050	90	860	0	390

Auto Stitching Option

Auto Stitching Option	
☐ Use Auto-Stitching	
Fixed OID value	50 mm (10 ~ 200)
Default Nested Distance	30 mm (10 ~ 200)
Set auto stitching distance	250 mm (100 ~ 430)

Menu	Description
Use Auto Stitching	Turns on or off the Auto Stitching option.
Fixed OID Value	Inputs the fixed distance value from the detector sensor to the surface of the detector cover.
Default Nested Distance	Sets the overlapped size of images of each location when you take images for stitching.
Auto stitching Distance	Sets the moving distance of a detector.

4.9 DICOM Group

You can set and manage the information related to DICOM from the DICOM panel.

4.9.1 General Menu

Custom Setting

Set the use environment related to DICOM.

Custom Setting	
Study Close option on exposure mode	None ▼
Send urgent patient automatically	☐ No ☒ Yes
Validate study instance UID	☒ No ☐ Yes
Allow long accession number	☒ No ☐ Yes
Save all DICOM log files	None ▼

Menu	Description
Study Close option on exposure mode	- Sets behavior when the exam is finished in the Exposure mode. None: Closes the exam. Send after Close: When the exam is finished, it is sent to the storage automatically. Close after Send: When all images are sent to the storage, the exam is finished automatically. Use Both: Applies both behaviors of Send after Close and Close after Send.
Send urgent patient automatically	- In the case of urgent patient, it sets whether or not to send the study to Storage automatically after the study is finished. Yes: If Send after Close, Use Both options are set, the study is automatically transferred to Storage. No: In case of urgent patient, the study is not automatically transferred to Storage after it is finished.
Validate study instance UID	- Checks effectiveness of Study Instance UID brought from the DICOM Worklist server. - Study Instance UID is created automatically in case it does not exist or is against to the DICOM standard.
Allow long accession number	Allows the information of accession number up to 64 letters.
Save all DICOM log files	- Save the DICOM log as a file. - Storage path: Database\Log\DICOM All: Whenever a log occurs, save it as an individual file. - File format: [DICOM SERVICE NAME]_[ACTION]_[YYYYMMDD_hhmmss].dcm - Example: MWL_Send_20140101_121212.dcm

- **Only MWL:** Save each file as MWL and MPPS log. For the remaining services, follow the **None** option.
 - File type: [DICOM SERVICE NAME] _ [ACTION] _ [YYYYMMDD_hhmmss] .dcm
 - Example file: MWL_Send_20140101_121212.dcm
- **Only Storage:** Storage and Storage Commitment Save each file as a separate file. For the remaining services, follow the **None** option.
 - File type: [DICOM SERVICE NAME] _ [ACTION] _ [YYYYMMDD_hhmmss] .dcm
 - Example file: MWL_Send_20140101_121212.dcm
- **None:** Whenever a log occurs, overwrite it as a same log file name.
 - MWL_Send.dcm
 - MWL_Recv_[PATIENT ID]_[Index].dcm
 - DICOM_Send.dcm
 - DICOM_Print.dcm
 - DICOM_MPPS_NCreate.dcm



- Be careful in using **Allow long accession number** option. As the maximum number of letters implied in DICOM standards are 16, the image cannot be sent if you use this option depending on the PACS system.



- Set **Save all DICOM log files** to **YES** when the problem needs to be analyzed only. If not, the storage space becomes insufficient because the log files are created continuously.
- All logs which were generated more than 30 days ago are removed automatically.

Station Name, Station AE Title

The station name, station AE Title and station port are used as the DICOM information.

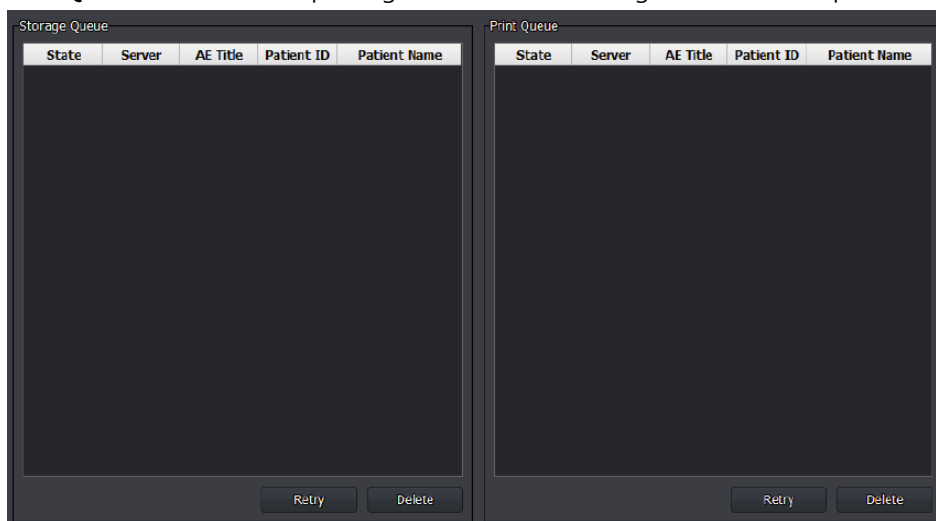
System	
Station Name	
Station AE Title	VXVUE
Station Port	9104

4.9.2 Queue Menu



- Click on  button at the bottom of **VXvue** screen to move to the dialog for checking **Queue**.

- When you start to send or print a DICOM image, it is registered in **Queue** automatically.
- You can check the sending or printing status of DICOM image.
 - Storage Queue** – Indicates the sending status of DICOM image to the DICOM storage server.
 - Print Queue** - Indicates the printing status of DICOM image to the DICOM print server.



Sending status

Status	Meaning
Pending	On standby
Failed	Failed to send the image
Sending	Being sent the image
Stopped	Stops sending the image
Done	Completes to send (Succeed)

How to use

- Select the item that has failed to send and click on the **Retry** button to send it again.
 - You can select multiple items by using the **Ctrl** or **Shift** key.
- Select the item and click on the **Delete** button to remove items.
 - You cannot delete the item being sending or stopped sending.
 - You can select multiple items by using the **Ctrl** or **Shift** key.



- VXvue** checks the transmission status of DICOM image when executing for the first time. If **VXvue** finds an image to be transmitted, it notices to the user to send the image.

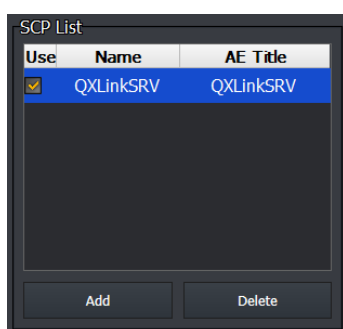
4.9.3 Setting Common Items of DICOM Server

Set the DICOM server information from each DICOM service tab to set the DIOCM information.

Among the setting items for each service, the setting ways of the following items are all the same.

Item	Description
SCP List	DICOM server list
Basic Information	Basic information of accessing DICOM server
Verification	Checking the DICOM connection status
Language	Setting DICOM Language Encoding

SCP List



- Click on the **Add** button to add the DICOM server.
 - Set the server information from **Basic Information** after adding DICOM server.
- Click on the **Delete** button to delete the DICOM server.
- Check **Use** to choose a server to use.
 - You can only select DICOM Storage to check multiple servers.

Basic Information

You can set information after selecting items from the **SCP List**.

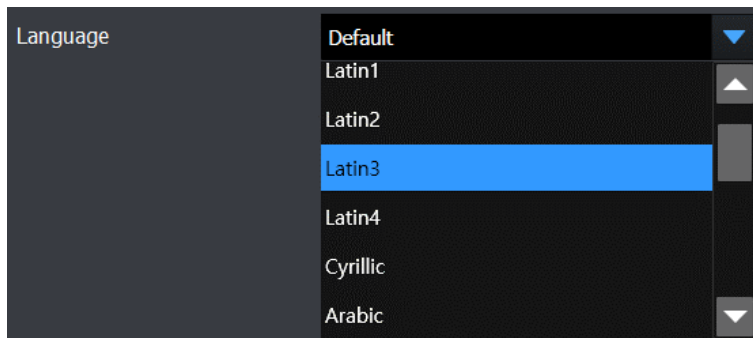
- Name** – SCP server name
- AE Title** – AE Title of the server (Called AE Title)
- IP Address** – IP address of the server
- Port** – Port number of the server
- Max PDU** – Maximum packet data unit
- Timeout** – Waiting time after connection (unit: sec.)



- You should configure **AE Title**.
- Check the **Max PDU** (Packet Data Unit) value.
 - Conform to the **Max PDU** value configured from the server if **Max PDU** is not used.
 - The communication speed is slowed or disconnected depending on **Max PDU** setting.
 - Check connection status by changing **Max PDU** value after checking server information.
- Check connection status by adjusting **Timeout** depending on the communication environment.
 - After trying to connect to the server, **VXvue** maintains connection during the setting time of **Timeout**. If there is no response during the waiting time, the system regards it as a communication failure and cuts off the connection.

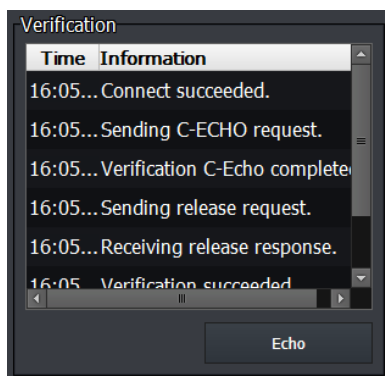
Language

You can choose **DICOM Language** encoding when sending images.



- 16 **Language** options are provided.
- If you select **Default**, the DICOM Encoding is not applied.

Verification



- You can check the connection state with the selected SCP server.

- 1 Select the SCP item and click on the **Echo** button.
- 2 Check the result of connection status.

Verification step

- **Verification** is progressed as followings.

Step	Action	Description
1	Connection	Attempts to connect network and check its status.
2	C-ECHO Request	Asks DICOM Verification service to check the DICOM connection status.
3	C-ECHO Response	Receives response from DICOM Verification.
4	Release Request	Asks to release DICOM connection.
5	Release Response	Receives response of releasing DICOM connection.
6	Close Connection	Disconnects the network connection.

4.9.4 MWL Menu

- You can use DICOM work list from the **MWL** menu by setting information of the DICOM Worklist sever.
 - Get the patient and study information by asking them to the DICOM Worklist server.

Setting procedure

- Click on the **Add** button on **SCP List** and add DICOM Worklist server.
- Input the relevant server information in **Basic Information** correctly.
 - Contact the person in charge of hospital or server about the server information.
- Select the tag information for searching and receiving from **Tag Selection**.
 - It is recommended to check all tags.
- Select a tag from **Procedure Tag Selection** to match with the procedure of the relevant system.
 - The received procedure information can use the tags different from each server.
 - Contact the person in charge of server for more information.
- Click on the **Echo** button in **Verification** and check connecting status between the system and DICOM.
 - Check the network and server condition if the connection is unstable.
- Click on the **Update** button to complete the update.

Auto Refresh

You can renew the patient information sent from the DICOM Worklist server in every setting time.

Refresh Cycle	30
---------------	----

- The input unit is second, and the default value is 30 sec. (30~600)
- It does not work while registering patient information or sending to the detector.

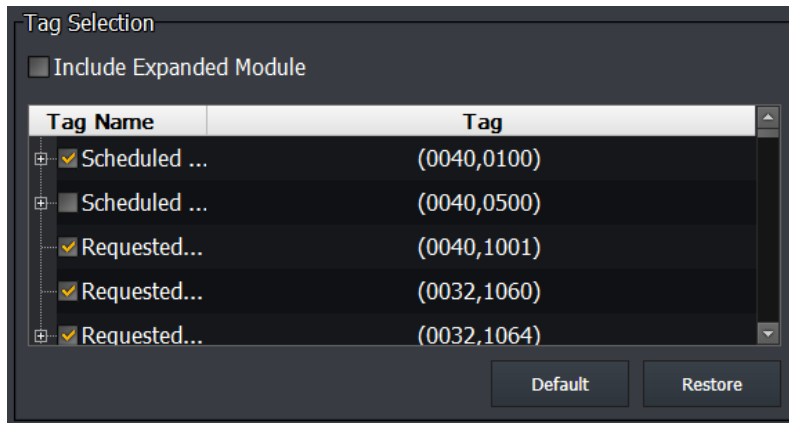
Procedure Tag Selection

- The exposure information codes are used from the different tag according to DICOM Worklist server. In this case, the user can set the codes by investigating tags which have the exposure information code of DICOM Worklist server.
- VXvue** provides six (6) tags as the exposure information codes.
- If you select **None**, the Code Mapping function is not used.

Code Mapping	Requested Procedure ID None Requested Procedure ID Requested Procedure Description Requested Procedure Code Sequence Scheduled Procedure Step Description Scheduled Procedure Step ID Scheduled Protocol Code Sequence
--------------	--

Tag Selection

Some DICOM Worklist servers can ask to add other tags rather than the default tag, or remove specific tags among the default ones provided by **VXvue**. In this case, the user can set the codes by investigating tags needed for integrating with DICOM Worklist server.



- 1 Check out tags for integrating with DICOM Worklist server and select the relevant tags.
- 2 Be sure to click on the **Update** button after selecting the tags.
 - You should check the SCP server information before connecting with DICOM Worklist server.
 - The operation error can be solved by checking / unchecking tags.

Tag Selection Buttons

Button	Description
Default	Selects the default tags. The default tags are appointed under the DICOM standard. Refer to VXvue DICOM Conformance Statement for further details.
Restore	Returned to the last status (status before updating).



- Ask DICOM compatibility guide (**DICOM Conformance Statement**) to the DICOM server company for checking the operation of the SCP server and for its correct connection.
- Refer to <4.7 Procedure Manager> for the information about selecting **Procedure Tag** and setting its code.

4.9.5 MPPS Menu

You can set the information of DICOM MPPS (Modality Performed Procedure Step) server from the **MPPS** menu.

- DICOM MPPS is the service that sending the exposure processing state to DICOM MPPS server.
- It also sends the information of study processing state when you register (start) or close the study.

Setting procedure

- 1 Click on the **Add** button on **SCP List** to add DICOM MPPS server.
- 2 Input the relevant server information to the **Basic Information** menu correctly.
 - Contact the person in charge of hospital or server about the server information.
- 3 Select a language to use in **Options**.
 - The information is sent as encoding to the selected language.
- 4 Click on the **Echo** button in **Verification** and check the DICOM connection status.
 - Check the network and server condition if the connection is unstable.
- 5 Click on the **Update** button to complete the update.

4.9.6 Storage Menu

- You can set the server information of DICOM storage from the **Storage** menu.
 - You can send the DICOM image to the DICOM storage server.

Setting procedure

- 1 Click on the **Add** button in SCP list and add the DICOM storage server (max.20 servers).
- 2 Input the relevant server information to the **Basic Information** menu correctly.
 - Contact the person in charge of hospital or server about the server information.
- 3 Set each option from **Options**.
- 4 Register and set the desired protocol from **Protocol List**.
- 5 Click on the **Echo** button in **Verification** and check the DICOM connection status.
 - Check the network and server condition if the connection is unstable.
- 6 Click on the **Update** button to complete the update.

Protocol List

You can configure two or more DICOM servers (SCP) for each protocol. The image is sent to the preset DICOM server for each protocol.

The Protocol List dialog box contains two main sections. The left section is a table with the following data:

Protocol
SRV1
Dog
Humam
ALL

The right section is a table with the following data:

Use	Server
☒	DICOMServer
☒	QXLinkSRV1
☒	QXLinkSRV2
☒	QXLinkSRV3

At the bottom right of the dialog are two buttons: 'Add' and 'Delete'.

- 1 Click on the **Add** button to register a new protocol.
- 2 Double click the new protocol to edit its name.
- 3 Check the **SCP Server** to be sent.
- 4 Select the protocol and click on the **Delete** button to delete



- Refer to VXvue Operation Manual for the detailed information about sending DICOM image using **Send Option** button.

Options

The Options dialog box contains the following settings:

- LUT:** Linear LUT (dropdown)
- Modality:** DX (dropdown)
- DAP Unit Type:** dGy*cm² (dropdown)
- Software Collimation:**
 - ☒ None
 - ☐ Cut
 - ☐ Fill
 - ☐ Fill & Center
- Burned in annotation:** No (dropdown)
- Burned in information:** No (dropdown)
- Transfer Syntax:** Implicit VR Little Endian (dropdown)
- Language:** Default (dropdown)
- ☒ Use Code Extensions
- Compression:** No compression (dropdown)
- QXLink Server:** No (dropdown) service (text input)

- 1 Set each item in **Options**.
- 2 Click on the **Update** button after completing the setting.

Item	Description
LUT	Sets LUT to be applied.
Modality	Sets Modality information.
Current modality	Uses the Modality information without a change.

DX / CR / DR	Uses one of three Modality information as a fixed value - DX, CR, DR.
DAP Unit Type	The DAP value to be transferred to the DICOM image is changed according to the set unit.
mgycm²	-
ugym²	-
dgy/cm²	-
Software Collimation	Sets the image crop status.
NONE	Original image without cropping
Cut	Cropped area of the image
Fill	The outside area of the cropped image is filled with black.
Fill & Center	The image cropped from the original image is displayed at the center, and the area outside the cropped image is filled with black.
Burned in Annotation	Sets whether or not to include annotation information.
YES	Included
NO	Not included
Burned in Information	Sets whether or not to include the Overlay information.
YES	Included
NO	Not included
Transfer Syntax	Sets the sending method of DICOM image.
Implicit VR Little Endian	-
Explicit VR Little Endian	-
Language	Sets the language for DICOM encoding.
Use Code Extensions	Determines whether to use the code extension or not.
Compression	Sets the way of JPEG2000 compression. If the DICOM server cannot support JPEG2000, this function cannot be used.
No Compression	Not compressing JPEG2000
JPEG2000 Lossless	Compressing JPEG2000 without a loss
QXLink Server	Checks if the configured DICOM storage is QXLink server or not.
YES	QXLink server
No	Not QXLink server
service	Enter the account name of QXLink used to login QXLink viewer. (Default: service) You must register the account name on the QXLink Server.



- For details on how to install and use QXLink 3, refer to the QXLink 3 User Manual.

Depending on whether 'Use Code Extensions' is checked or not, the value of Specific Character Set (0008, 0005) will change as shown below during storage transmission.

Extension Code	Check	Uncheck
Default	ISO 2022 IR 6	-
Latin1	ISO 2022 IR 100	ISO_IR 100
Latin2	ISO 2022 IR 101	ISO_IR 101
Latin3	ISO 2022 IR 109	ISO_IR 109
Latin4	ISO 2022 IR 110	ISO_IR 110
Cyrillic	ISO 2022 IR 144	ISO_IR 144
Arabic	ISO 2022 IR 127	ISO_IR 127
Greek	ISO 2022 IR 126	ISO_IR 126
Hebrew	ISO 2022 IR 138	ISO_IR 138
Latin5	ISO 2022 IR 148	ISO_IR 148
Japanese(Katakana)	ISO 2022 IR 13	ISO_IR 13
Thai	ISO 2022 IR 166	ISO_IR 166
Japanese(JIS)	ISO 2022 IR 13	ISO_IR 13
Japanese	ISO 2022 IR 87	ISO 2022 IR 87
Korean	ISO 2022 IR 149	ISO 2022 IR 149
Unicode UTF-8	ISO_IR 192	ISO_IR 192
Chinese GB18030	GB18030	GB18030

4.9.7 Storage Commitment Menu

- You can set server information of DICOM Storage Commitment from the **Storage Commitment** menu.
 - The information of DICOM Storage Commitment can be sent to the server after sending DICOM image.

Step procedure

- Click on the **Add** button in **SCP List** and add the DICOM Storage Commitment server.
- Input the relevant server information to the **Basic Information** menu correctly.
 - Contact the person in charge of hospital or server about the server information.
- Set each option from **Options**.
- Click on the **Echo** button in **Verification** and check the DICOM connection status.
 - Check the network and server condition if the connection is unstable.
- Click on the **Update** button to complete the update.

4.9.8 Print Menu

- You can set the information of print and DICOM Print server from the **Print** menu.
 - The DICOM image can be sent to the DICOM Print server for printing.
 - You can also set the information printed on the printout.



- Precheck the condition of print and film before setting the print.

Setting procedure of DICOM print

Basic Information	
Name	Viewworks
Type	DICOM ▼
AE Title	AE Title
IP Address	127.0.0.1
Port	0
☐ Max PDU	
Timeout	30
LUT	Linear LUT ▼
Verification Timeout	3
Overlay	None ▼

- 1 Click on the **Add** button in **SCP List** and add the print.
- 2 Input the **Name** item and choose DICOM from **Type**.
- 3 Input the relevant server information correctly.
 - Contact the person in charge of hospital or server about the server information.
- 4 Set the print and film format from **Print Format**.
 - Errors can occur depending on the print model.
 - Check the server information of print in advance.
- 5 Click on the **Echo** button in **Verification** and check the DICOM connection status.
 - Check the network and server condition if the connection is unstable.
- 6 Click on the **Update** button to complete the update.

DICOM Printer Format

You can set the print and film format items.



- Precheck the condition of print and film before using this menu.

Printer Format

☒ Size	14INX17IN
☒ Orientation	PORTRAIT
☒ Magnification Type	BILINEAR
☒ Medium Type	BLUE FILM
☒ Priority	MED
☒ Trim	NO
☒ Min Density	50
☒ Max Density	400
☒ Film Destination	MAGAZINE
☒ Request Resolution	STANDARD
Num of copy	1

Item	Meaning	Description
Size	Film print size	Set print size of the film. • 8IN X 10IN, 8.5IN X 11IN, 8.5IN X 12IN, 10IN X 12IN, 10IN X 14IN, 11IN X 14IN, 11IN X 17IN, 14IN X 14IN, 14IN X 17IN, 24CM X24CM, 24CM X30CM. A4. A3
Orientation	Film print orientation	Set orientation of the film. • Portrait / Landscape
Magnification Type	Interpolation of printing image	Set the interpolation type applied to the printing image. • Replicate • Bilinear • Cubic
Medium Type	Film medium type	Select a type of film medium. • Clear Film / Blue Film
Priority	Priority order of print	Set the priority order of printing. (HIGH / MED / LOW)
Trim	Apply trimming or not	Set applicability of trimming. (YES / NO)
Min Density	Minimum print density	Set minimum density of printing.
Max Density	Maximum print density	Set maximum density of printing.
Film Destination	Printout object	Set the object to be printed. • Magazine • Processor • BIN_i

Request Resolution	Requested resolution	Set the requested resolution. (STANDARD / HIGH)
Num of copy	Number of prints	Set the number of prints.

Setting procedure of Paper Print

The screenshot shows a 'Basic Information' dialog box with the following settings:

- Name:** Viewworks
- Type:** Paper
- Model:** SINDOH D410 Series PCL
- LUT:** Linear LUT
- Overlay:** None

- 1 Click on the **Add** button in **SCP List** and add the print.
- 2 Input the name and choose **Paper** from **Type**.
- 3 Choose the printer model from **Model**.
- 4 Set the printing information and format from **Print Format**.
 - Errors can occur depending on the print model.
- 5 Click on the **Update** button to complete the setting.

Paper Printer Format

You can set the print and film format items.

The screenshot shows a 'Printer Format' dialog box with the following settings:

- Size:** A4
- Background Color:** White
- Orientation:** PORTRAIT
- Num of copy:** 1
- Margin Left (mm):** 5
- Margin Right (mm):** 5
- Margin Top (mm):** 5
- Margin Bottom (mm):** 5

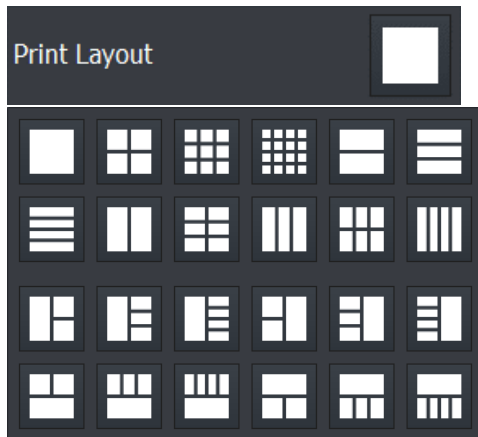
Item	Meaning	Description
Size	Film print size	Sets print size of the film. • A4, A3, B4, Letter, Legal, Tabloid
Background Color	Background Color	Sets the background color of printing. • Black / White
Orientation	Film print orientation	Set orientation of the film. • Portrait / Landscape
Num of copy	Number of prints	Set the number of prints.
Margin (Left/Right/Top/Bottom)	Size of the margins	Sets the size of margins (Unit: mm)



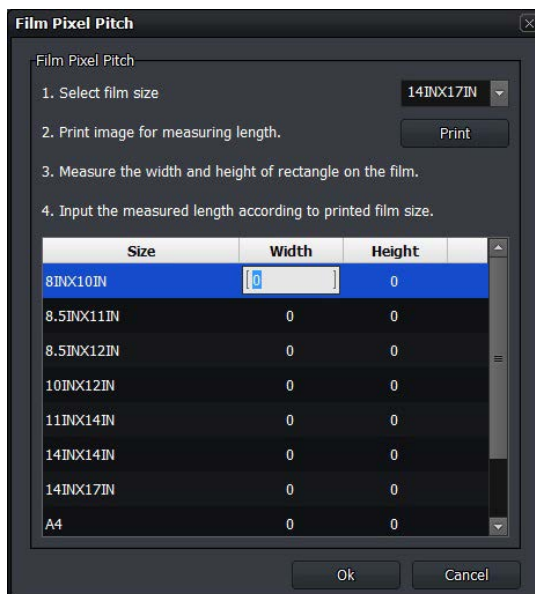
- For actual output, white is displayed when the background is black, and black when the background is white.
 - However, if you set the text color of the header part, it will be displayed in the user-defined color regardless of the background.

Set Print Layout

You can set the layout of printing images.



Film Pixel Pitch



- 1 Click on the **Setting** button in **Film Pixel Pitch**.
- 2 Set **Film Pixel Pitch** following the order from 1~4. You can set **Film Pixel Pitch** by inserting the value of **Width / Height** (Unit: mm) with the measured film size.
- 3 Click on the **Print Real Size** button in the **Print** mode to check if the image is printed according to the configured size value.



- You can set this menu after connecting the program to a real printer. Click on the **Print** button and check the printout.
- Refer to VXvue Operation Manual about the information of the **Print Real Size** icon.

4.9.9 Print Overlay Menu

You can set the printing information from the **Print Overlay** tab as follows.

- Study, patient, annotation information.
- Print position of each information
- Shape, size, color of the prints

Add and Use the Overlay Items

- 1 Click on the **Add** button in **SCP List** and add print overlay.
- 2 Set the name of overlay and layout items.
- 3 Click on the **Update** button to complete the setting.
- 4 Choose the added overlay from **Basic Information** of the **Print** tab.

Set Layout items

You can specify the position of items printed on the film.

- All items except **Histogram**, **Screen Zoom** and **Print Zoom** can be added to the film header area.
 - If the item value of each image indicated on the header area is different, it is displayed as N/A.
- You can add items to the image area (Top Left, Bottom Left, Top Right, Bottom Right).
 - You can add the duplicated items.

How to Set the Layout Items

- 1 Select an item and add to the desired position or delete it by clicking on ◀ or ▶ button.
- 2 Click on the **Update** button to complete the update.

Set the color and font of the printed item

- Set font, size, color of information and annotations printed on the header/image.

Item	Description
Logo Image	Sets the location of logo to be printed on the image. (None/ Top Left/ Top Center/ Top Right/ Bottom Left/ Bottom Center/ Bottom Right)
	Sets the logo image to be printed on the image. (BMP/ JPEG/ PNG) The supported size of an original logo image is up to 1MB. The height of logo is fixed as 50px, printed in black and white.
	Sets font, size, color of header information printed on the film.
	Sets the position of film header. Sets the film layout.
Image Overlay Font & Color	Sets font, size, color of information printed on the image.
Absolute Font Size	The font is printed as an absolute size regardless of the image layout.
Annotation Font & Color	Sets font, size, color of annotations and labels printed on the image.

4.9.10 Tag Mapping Menu

- You can map DICOM tag information with the other tag or add tags as necessary.

Internal Tag	Input Tag No.	Output Tag
Performing Physician Name	(0040,0006)	(0008,105C)
Institution Name	(0008,0080)	(0008,0080)
User-Defined Field1		
User-Defined Field2		
User-Defined Field3		
User-Defined Field4		
User-Defined Field5		
User-Defined Field6		

Internal Tag	Input Tag	Output Tag
Tag Name: Institution Name	Institution Name	Institution Name
Tag No.: (0008,0080)	(0008,0080) ... X	(0008,0080) ... X

Restore

Tag	Description
Internal Tag	Principal tag defined in VXvue. • Input Tag and Output Tag are mapped based on Internal Tag.
Input Tag	Received from the DICOM Worklist server.
Output Tag	Transmitted to the DICOM Storage server.

Mapping principle – receiving DICOM Worklist

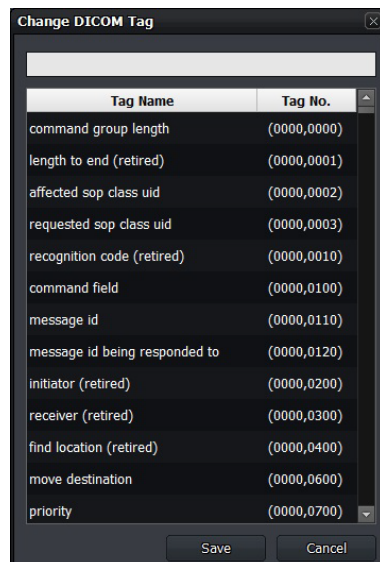
- 1 Receives Worklist Item from the DICOM Worklist server.
- 2 Connects **Input Tag** in Worklist Item to the mapped **Internal Tag**.
- 3 Sends the **Input Tag** value to the connected **Internal Tag**.

Mapping principle – sending DICOM image

- 1 Connects Internal Tag to the mapped **Output Tag**.
- 2 Sends the Internal Tag value to **Output Tag**.
- 3 Includes **Output Tag** to DICOM image and send the image.



- Be sure to process the DICOM mapping by the engineer who fully understands about **VXvue**, DICOM, and PACS system.

Tag Mapping

- 1 Select Internal Tag to map from the tag list.
- 2 Click on  button on the **Input Tag** or **Output Tag** item to display the **Change DICOM Tag** window.
- 3 Search a tag to find. You can search the desired tag by inputting a tag name or address to the search box at the top of the window.
- 4 Double-click the searched tag, or select the tag and click on the **Save** button.

Internal Tag List

- Accession Number, Modality, Referring physician Name, Study Description, Patient Name, Patient ID, Patient Birth Date, Patient Sex, Patient Age, Patient Height, Patient Weight, Patient Species Description, Patient Sex Neutered, Patient Breed Description, Breed Registration Number, Responsible Person, Responsible Person Role, Responsible Organization, Patient Comment, Bodypart Examined, Study Instance UID, Performing Physician Name, Study ID, Institution Name, Location Name, Bodypart, Projection, Bodypart Projection, Label, User-Defined Field1, User-Defined Field2, User-Defined Field3, User-Defined Field4, User-Defined Field5, User-Defined Field6, User-Defined Field7, User-Defined Field8, User-Defined Field9, User-Defined Field10



- All tag names and tag addresses provided in **Change DICOM Tag** cannot be changed.
- The changed tag information is indicated as a green color.
- Click on the **Restore** button to initialize the tag mapping information to the installed state of Viewer

4.10 Backup Group

- You can back up the study or manage the backed-up studies from the **Backup** group.

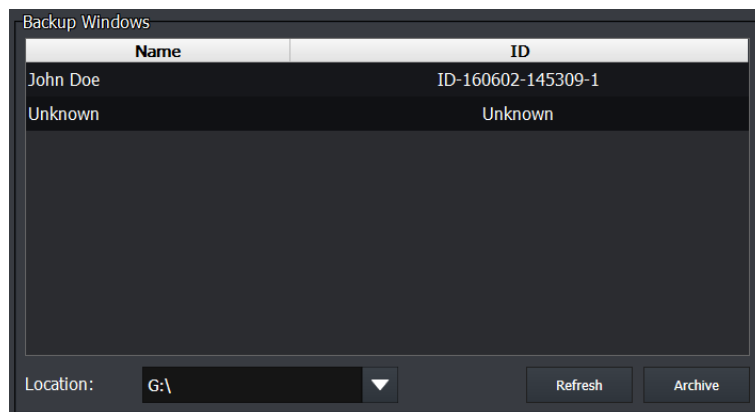


- We strongly place importance on the record management about studies and image information. Make sure to backup and keep the information safely to the storage device.



- In the **Setting** mode of **VXvue Vehicle**, the backup function is not provided.

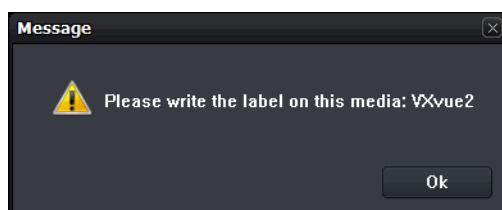
4.10.1 Backup Menu



How to Backup

- Prepare the writable optical storage media or the external storage device.
 - It is recommended to use CD or DVD as the optical storage media.
 - It is recommended to use USB memory or USB hard disk as the external storage device.
- Select the drive used for the study backup from **Location**.
 - Check if the storage media is connected normally to the drive.
- Click on the **Refresh** button to search the study items to backup.
 - The available capacity for backup is displayed on the list from the old studies.
- Click on the **Archive** button to start backup.
 - The process status window is displayed and the backup is started.

Complete backup



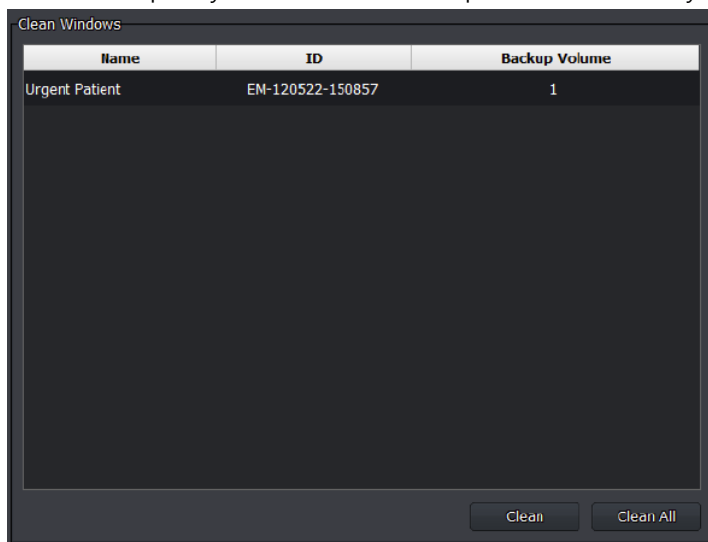
- Check the window for indicating the backup completion.
- Be sure to check the backup label.
- Take the backed-up storage media out and write the label information.



- The backup storage media is distinguished by a label name and serial number. Therefore, the system which processes backup can only detect the relevant backup media.
- You cannot backup the backed-up study again. However, the restored study which has been cleaned completely can be backed up.
- It is not available to process additional backup to the optical storage media even though there is a free space left after backup. You need to prepare the new optical storage media.
- The backup function cannot be used because the external storage medium whose property is 'Local Disk' is not recognized as an external storage medium by the system.
- In case of the external storage media, it is not available to change it to another storage media if there is free space left. You should consume up storage capacity of the media which is being backed up.

4.10.2 Clean Menu

You can completely remove the backed-up studies from the system.



How to Clean study

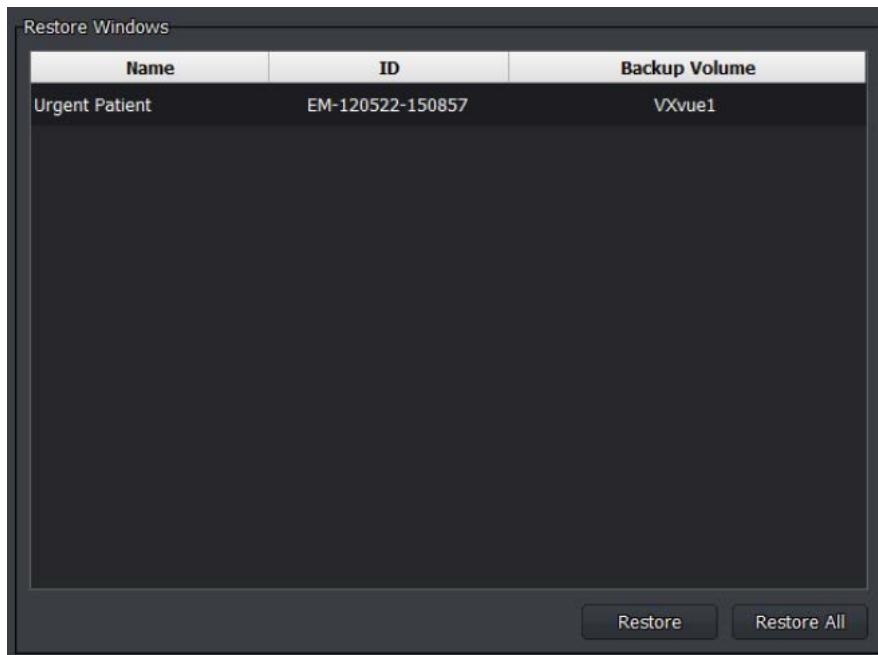
- 1 Click on the **Clean** tab. The backed-up study list is indicated automatically
- 2 Select desired items to remove completely.
 - You can select multiple items by using **Ctrl** or **Shift** key.
- 3 Click on the **Clean** button to remove the selected studies.
 - Click on the **Clean All** button to remove all studies at once.



- The study which has not been backed up cannot be removed completely.

4.10.3 Restore Menu

You can restore the removed study.



How to restore

- 1 Connect the backed-up storage media to the system.
 - Check the recognition of system drive and storage media before restoring the study.
- 2 Click on the **Restore** tab.
 - The completely removed (cleaned) study list is displayed automatically.
- 3 Select the item you want to be restored.
 - You can select multiple items by using the **Ctrl** or **Shift** key.
- 4 Click on the **Restore** button to restore the selected study items.
 - Click on the **Restore All** button to restore all studies at once.



- A backed-up storage media should be prepared for restoring the study.
- The restored study is returned to the pre-backup condition as it is copied to the system again.
- You can back up the restored study again.

4.11 Account Default Group

When you add an account in the Account Default group, you can set the default value that is created along with the account. All menus under the group are set up differently for each account.



- If you import the account and settings stored in the file by using the Import function, the account default values and the settings for each account will be changed to the settings for the files you are importing.

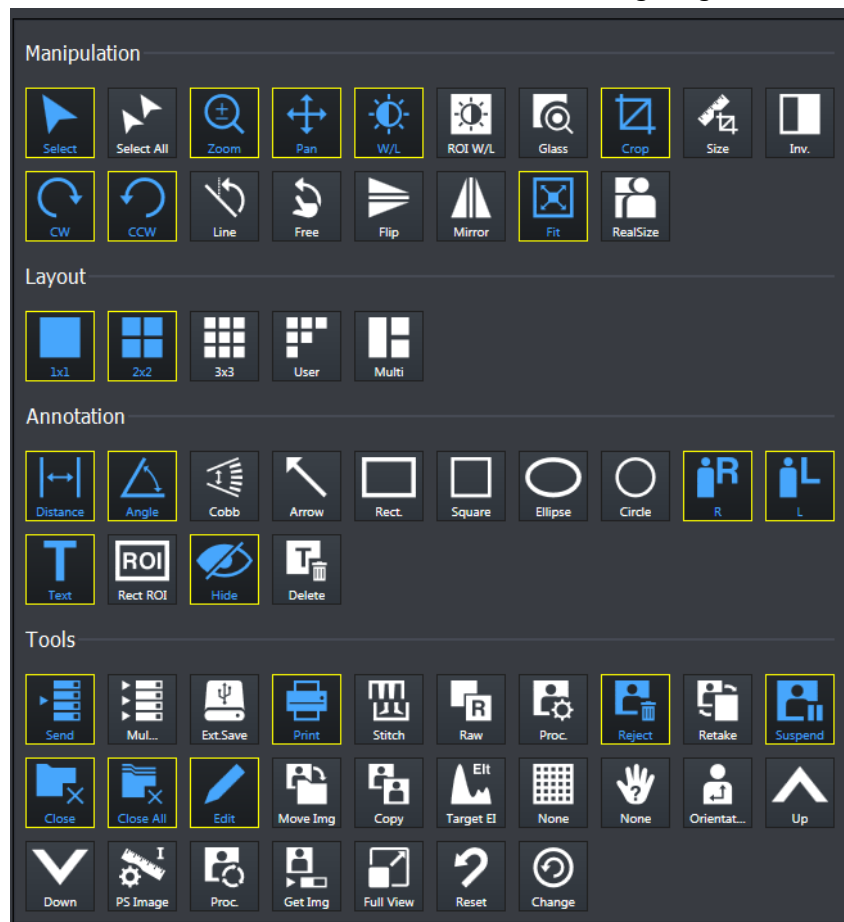


- For information on how to create and manage accounts, refer to <4.2.2Account Menu>.

4.11.1 Image Tool Menu

You can set the default value of the icon buttons to be registered as the default tool in the **Tool** menu of the close-up shooting mode and **Viewer** mode.

- Applies only to newly created accounts.
- When you select an icon, it changes to blue and it is registered as a basic tool.
- If no icon is selected, it will be provided as a pop-up button.
- If not set, the default value is the same as the following image.



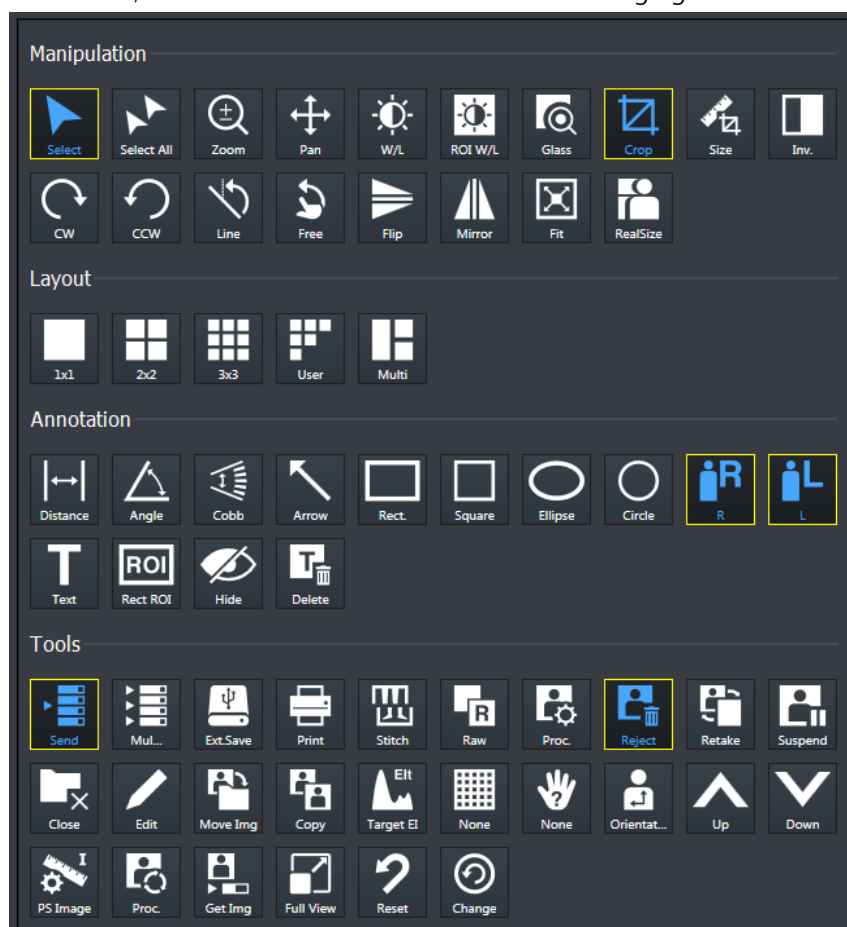


- The icons are resized based on the number of icons you have selected.

4.11.2 Quick Access Menu

You can set the default value of the icon button to be registered in the Quick Access area located at the top of Exposure mode (normal shooting mode).

- Applies only to newly created accounts.
- When you select the icon, it changes to blue and registered as a basic tool in the Quick Access area.
- If not set, the default value is the same as the following figure.



Setting Registration Order

Button	Order	Default
Select	1	☒
Crop	2	☐
Right Label	3	☐
Left Label	4	☐
Reject Image	5	☐
Send	6	☐

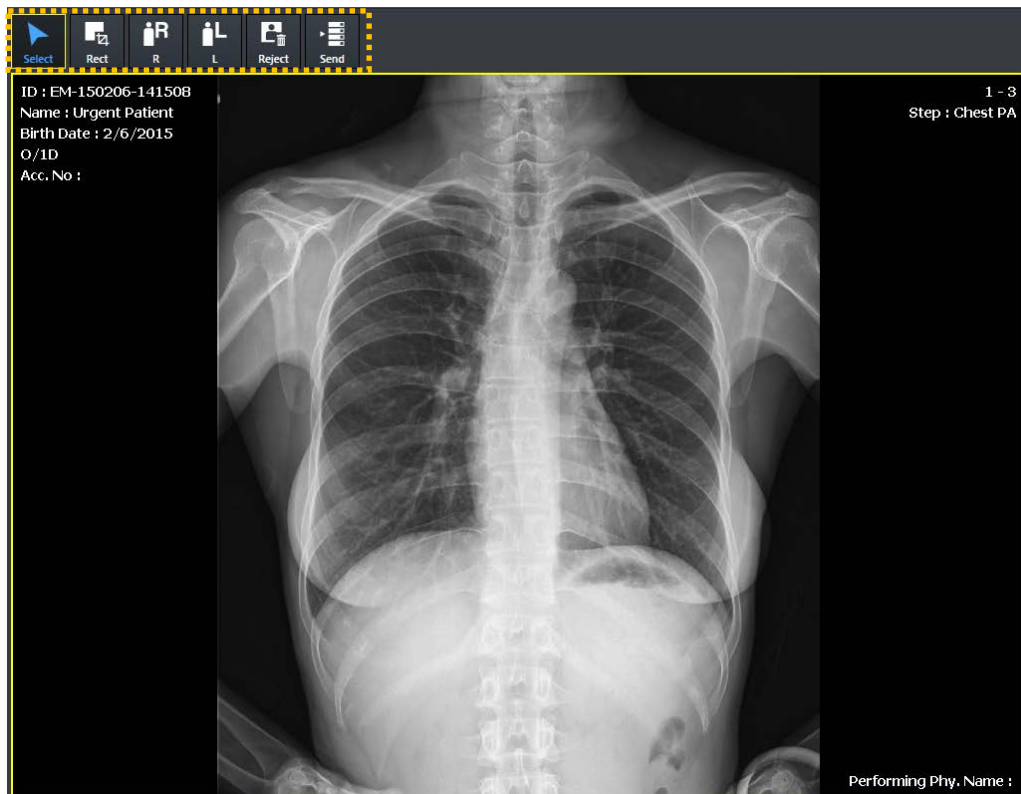
- Applies only to newly created accounts.
- You can specify the display order of the selected icons.
- The icon will be displayed from left to right in the registered order.
- You can adjust the order with   at the bottom.
- If not set, the default value is the same as the image on the left.

Specifying the operation function selected as Default

- Applies only to newly created accounts.
- After capturing in Exposure mode, you can set the frequently used operation function among Select / Crop / W / L / Zoom / Pan to Default.
- If not set, the default value is not selected.
- Check the items you want to use as Default.

Conforming Settings

- Registration order: **Select | Crop | Right | Label | Left Label | Reject Image | Send** (Example)
- Default selection function: **Select**



- Up to 15 Quick Access tools can be registered.

4.11.3 Thumbnail Menu

You can set the type of thumbnail and the tool to use in the thumbnail list. This applies only to newly created accounts. Otherwise, the default values are the same as those shown below.

Thumbnail Type

Thumbnail Type

☒ Standard ☐ Extended

Thumbnail Type	Image (Example)
Standard	
Extended	

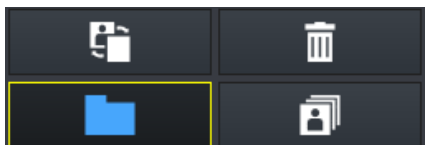
Exposure Tools Use Option

You can specify which tools to use in the Thumbnail list in Exposure mode.

Exposure Tools Use Option

☒ Retake ☒ Reject

☒ Group ☒ Multi-Select



- Retake
- Reject
- Group
- Multi-Select

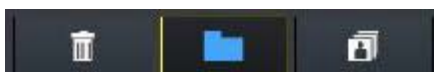
Viewer Tools Use Option

You can specify which tools to use in the Thumbnail list in Viewer mode.

Viewer Tools Use Option

☒ Reject ☒ Group

☒ Multi-Select



- Reject
- Group
- Multi-Select

5. Advanced Settings

This chapter provides information about advanced settings of VXvue.

Setting Date and Time

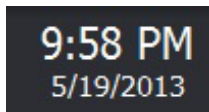
Setting a Language

VXvue Demo

Log Viewer

5.1 Setting Date and Time

Check the present date and time

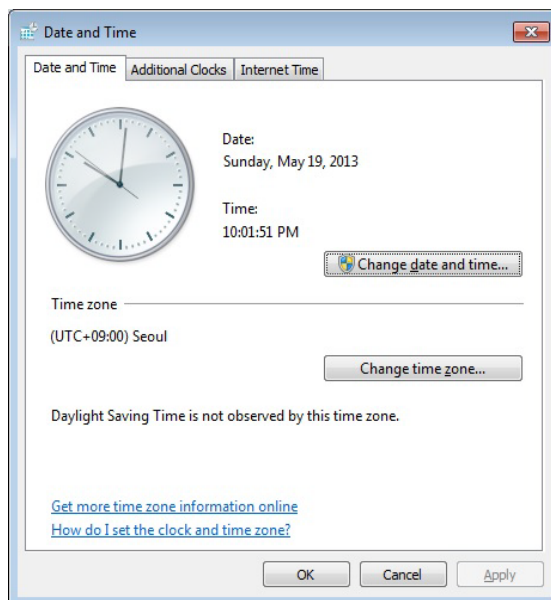


- The displayed date and time are complied with the Windows operating system.

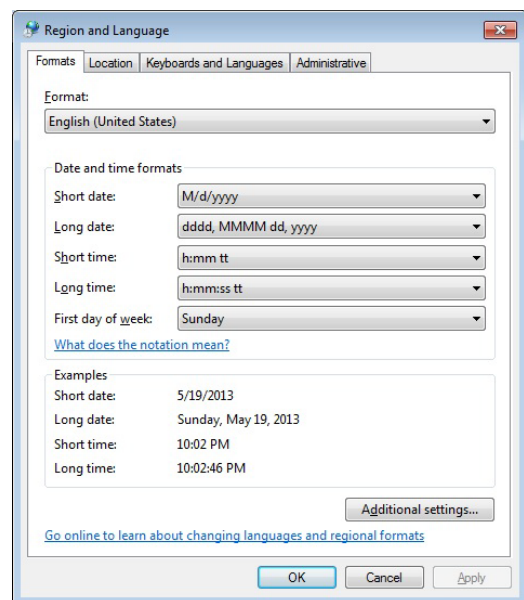
Set the present date and time

- Set the date and time in Control Panel of Windows OS to change their format.
 - Go to Control Panel and open Date and Time window to set the exact date and time.
 - Go to Control Panel and open Region and Language window to set the region and language.

Date and Time



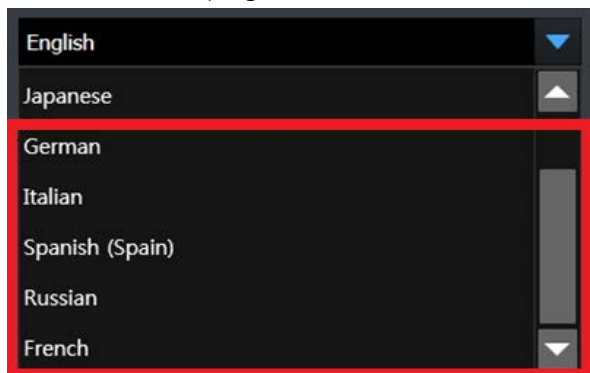
Region and Language



5.2 Setting a Language

5.2.1 Checking a Language to Use

- You can check the registered language used in the system from **Setting → System → System Information** tab.
- The basic language options are English, Chinese, Japanese, German, Italian, Spanish, Russian and French.
- If you want to change a language, select the desired language to use and click on the **Update** button, and then restart the program.



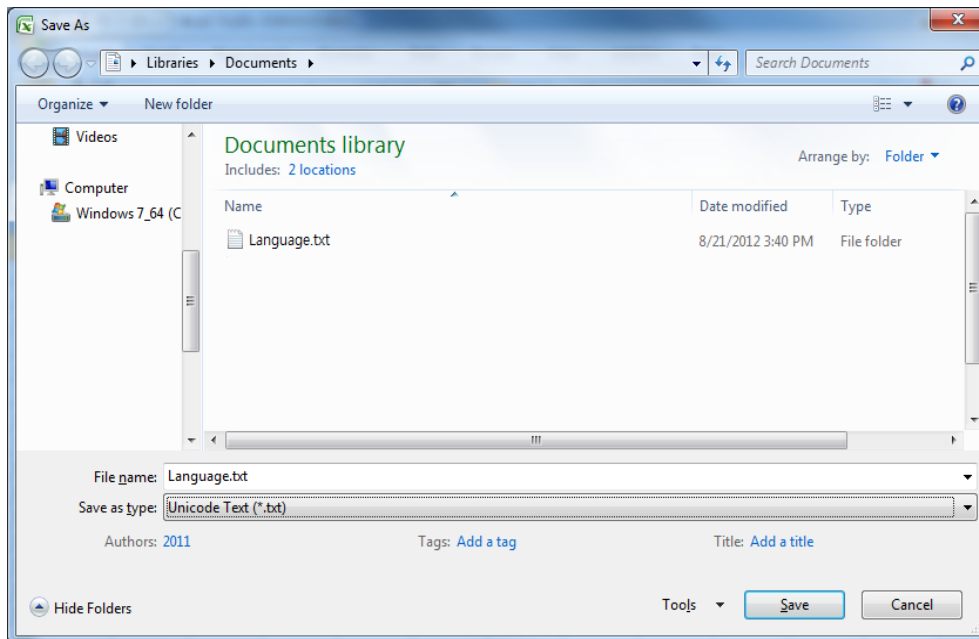
5.2.2 Adding a Language to Use

If you want to use another language except the default options, you can add a new one by the following steps.

- Run **Microsoft Office Excel** and open **Language.txt** file.
 - You can find the language file from **D:\Database\Language** (default path).
- Input the translated words and phrases of a new language at the next row of the previously setting language.

	J12				
	A	B	C	D	E
1	Index	English	Chinese	Japanese	New Language
2	// Last modified by R&D (15/03/26)				
3	'%s' is already in u:	'%s' is already in us	已经使用了%s'	%s'が既に使用中	Translate
4	&Left	&Left	&左	&左	Translate
5	&Right	&Right	&右	&右	Translate
6	<< New Exposure	<< New Exposure	<< 新曝光	<< 新しい撮影	Translate
7	<< Previewer	<< Previewer	<< 预览器	<< プレビュー	Translate
8	10INX12IN	10INX12IN	10X12英寸	10"×12"	Translate
9	11INX14IN	11INX14IN	11X14英寸	11"×14"	Translate
10	14INX14IN	14INX14IN	14X14英寸	14"×14"	Translate
11	14INX17IN	14INX17IN	14X17英寸	14"×17"	Translate
12	1x1	1x1	1x1	1x1	Translate
13	1x1 Layout	1x1 Layout	1x1 版面	1x1 レイアウト	Translate
14	2x2	2x2	2x2	2x2	Translate
15	2x2 Layout	2x2 Layout	2x2 版面	2x2 レイアウト	Translate
16	3x3	3x3	3x3	3x3	Translate
17	3x3 Layout	3x3 Layout	3x3 版面	3x3 レイアウト	Translate
18	4x4 Layout	4x4 Layout	4x4 版面	4x4 レイアウト	Translate
19	8.5INX11IN	8.5INX11IN	8.5X11英寸	8.5"×11"	Translate
20	8.5INX12IN	8.5INX12IN	8.5X12英寸	8.5"×12"	Translate

- 3 You should save the **Language.txt** file as Unicode text format (*.txt) after inputting words or phrases.



- 4 Restart **VXvue** and change the language to the added one from the **System Information**.



- You should maintain the form of '%s' (string) and '%d' (integer) among words or phase in **Language.txt**, because they are replaced to integer with other strings.
- Be sure to check '%s' and '%d' in all lines and rows.
- Be sure to maintain the correct marks are '%s', '%d' in small letters.
- Be careful not to write the marks in capital letters ('%S', '%D', etc.) or write them wrongly. ('%.s', '%z', etc.)

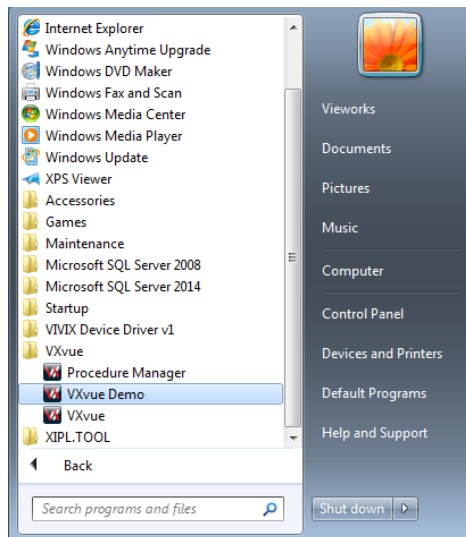
5.3 VXvue Demo

With **VXvue Demo**, you can use and check most functions of **VXvue** without connecting the program to the detector.

5.3.1 Features

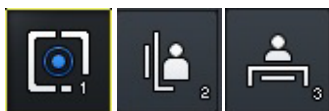
- You can acquire virtual images without connecting **VXvue Demo** with a detector.
- You cannot acquire real images though **VXvue Demo** is connected with a detector.
- Both **VXvue** and **VXvue Demo** share the same database, images and parameter setting values.
- Some functions of **VXvue** cannot be operated from **VXvue Demo**.
- Some GUI (Graphic User Interface) is displayed on the demo version only.
- **VXvue Demo** uses the same license of **VXvue**.

5.3.2 Starting VXvue Demo



- 1 Press **Start** button of **Windows**.
- 2 Move to All Programs → **VXvue**.
- 3 Click on the **VXvueDemo** icon to execute the program.

5.3.3 Detector Icons of VXvue Demo



- Find the detector icon in the **Exposure** mode (general exposure mode).
- Three icons are indicated regardless of connecting the real detector.
- You cannot take images though clicking on the icons.
- Use the official version of **VXvue** to acquire real images.



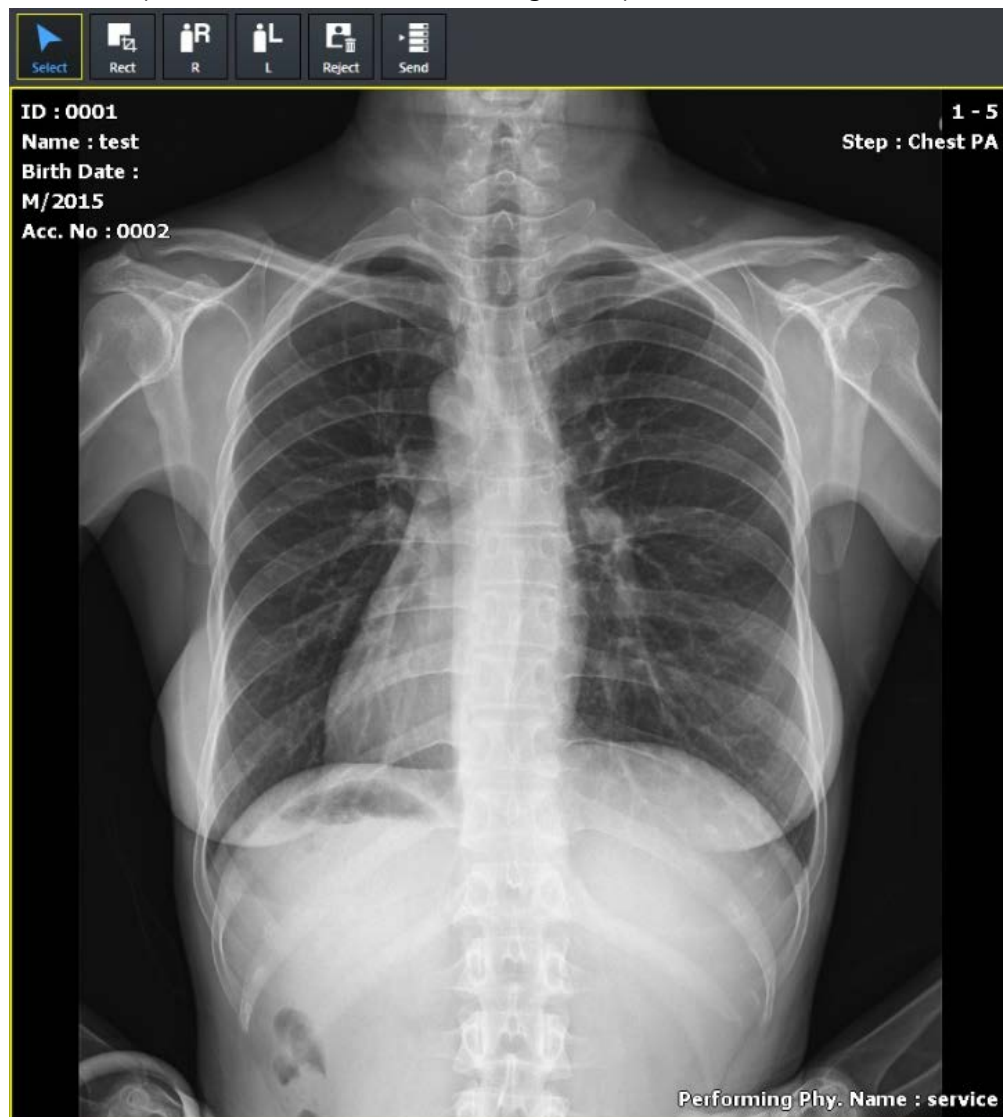
- You cannot make an exposure from the demo version. Execute **VXvue** for making the actual exposure.

5.3.4 Making Virtual Exposure in VXvue Demo



- You can make a virtual exposure from **VXvue Demo**.

- 1 Register the patient information and add a step for preparing the virtual exposure.
- 2 Click on the **Maximum** button in the general exposure mode to move to the macro exposure mode.
- 3 Click on the **Demo Shot** button on the right top of the macro exposure mode.
 - The virtual exposure is made, and the demo image is acquired.



- 4 After checking the virtual image, you can apply various functions such as image processing and storage.
 - Almost all functions except the device integration are operated same as the formal version.



- The selected step information and virtual images have no relation with each other.

5.3.5 Changing Demo Image

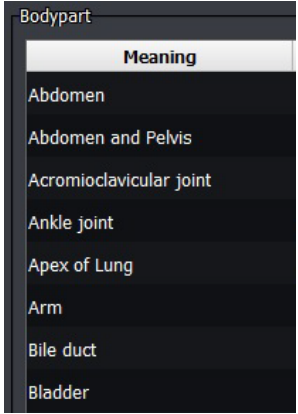
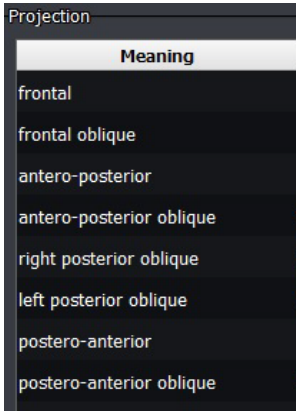
Add or change a basic demo image or demo images of each bodypart and projection in case of necessity.

Change the basic image

- Change the name of image to use as a basic demo image to **Default.img**.
- Move the **Default.img** file to **D:\Database\DemoImage**.

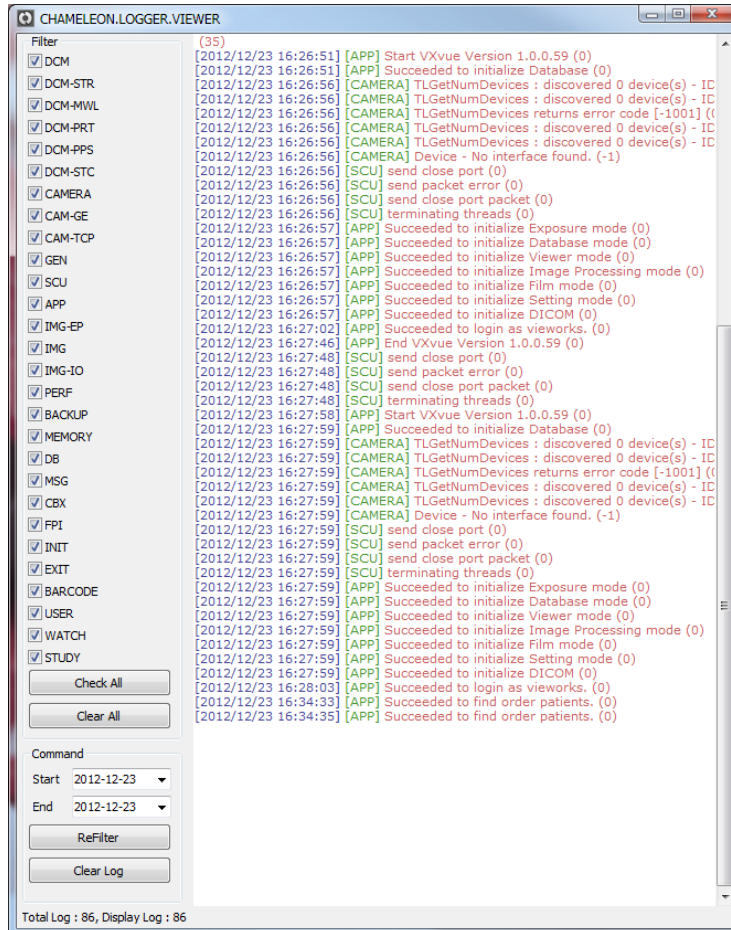
Change the demo image of each bodypart and projection

- Change the name of images to use for each bodypart and projection to **Bodypart.Projection. (Number)**.
 ▫ Ex) abdomen.erect.1 / chest.lateral.2 / hip joint.anterior-posterior.14
- Move the images changed their name to **D:\Database\DemoImage**.

Category	Description	Example
Bodypart	When you change the bodypart name, it should be matched with that of Meaning located in the Setting → Procedure Manager → Bodypart/Projection tab → Bodypart .	
Projection	When you change the projection name, it should be matched with that of Meaning located in the Setting → Procedure Manager → Bodypart/Projection tab → Projection	
Number	• Enter the natural number. The higher the number, the more demo images of the same bodypart and projection can be used in order. • When you take demo images of the same step, each number of image is indicated from the smaller one depending on the shooting sequence.	
 • The image format '.Img' from VXvue can be used for a demo image only.		

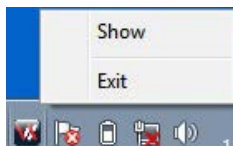
5.4 Log Viewer

VXvue records the actions and results as a log and stores it while using the system. You can check the records from the log viewer.



Execute log viewer

- The log viewer is operated automatically when you execute **VXvue**.
- The log viewer is registered in the Windows tray, run in the background and collects the operation record of **VXvue**.



- 1 Click the right mouse button on the tray.
- 2 Click on the **Show** menu to see the log viewer.
- 3 Click on the **Exit** menu to close the log viewer.



- Even though **VXvue** is closed, the log viewer is not closed automatically.

VIEWWORKS

**Viewworks Co., Ltd.**

(Gwanyang-dong) 41-3, Burim-ro 170beon-gil, Dongan-gu, Anyang-si,
Gyeonggi-do, 14055 Republic of Korea

Telephone: +82-70-7011-6161

Fax : +82-31-386-8631

Homepage: <http://www.viewworks.com>

European representative: Obelis s.a

Bd. Général Wahis 53

1030 Brussels, BELGIUM

Tel: +(32) 2. 732.59.54

Fax: +(32) 2.732.60.03

E-Mail : mail@obelis.net

