

Installation Guide:

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Materials

- Topcon TRC NW-400 or Centervue DRS Camera
- K2 Automated Height Adjustable Table (optional)
- Lenovo Computer (optional) – preconfigured by Welch Allyn
- RetinaVue Network Installation Kit
 - Eight (8) 4” black zip ties
 - Ethernet to USB adapter
 - Two (2) Welch Allyn RetinaVue Network Labels
 - Orange Cross-over cable (5’)
 - Blue Ethernet cord (10’)
 - Lens cleaning kit (spray and cloth)
 - RetinaVue Quick Start Guide – DRS or Topcon, as applicable
 - RetinaVue Network Installation Guide (this document)
 - One bottle 0.5% tropicamide
 - Dilation Procedure
 - One box of post-mydriatic spectacles
 - One RetinaVue poster
 - One 8 GB or greater USB Flash Drive (Topcon Only)

Installation Procedure

1	<input type="checkbox"/>	Contact Welch Allyn RetinaVue technical support (800/535.6663) and inform them that you have arrived on site. Ask the Welch Allyn RetinaVue tech support if the PC has already been preconfigured with the RetinaVue Network software.
2	<input type="checkbox"/>	Meet with the clinic contact to confirm the installation and training schedule (1.5 hours for installation; 2-3 hours of training with operators thereafter). This is important so that the clinic can plan accordingly.
3	<input type="checkbox"/>	<p>Locate the Camera, PC, Table, and Installation Kit boxes and confirm condition of the packages.</p> <ol style="list-style-type: none"> 1. Camera box condition <ul style="list-style-type: none"> • Good • Poor • Damaged • Missing • N/A 2. Table box condition <ul style="list-style-type: none"> • Good • Poor • Damaged • Missing • N/A 3. PC box condition <ul style="list-style-type: none"> • Good • Poor • Damaged • Missing • N/A 4. Installation Kit box condition <ul style="list-style-type: none"> • Good • Poor • Damaged • Missing • N/A
4	<input type="checkbox"/>	Move the equipment to the room where the camera is to be installed, as instructed by the clinic contact.
5	<input type="checkbox"/>	Talk with the clinic contact to determine the location and orientation in the room that the camera setup will be located.
6	<input type="checkbox"/>	Unbox and assemble the table so that the power outlet on the table is facing the wall, if possible. Mount the up/down switch on the operator side of the table furthest away from the wall. Plug the power cable from the base of the table into the wall. Confirm that the table is powered on and moves up and down.
7	<input type="checkbox"/>	Unpack the camera and place it on the table. Unpack and place the PC on the table next to the camera.
8	<input type="checkbox"/>	Next, use one of the L-shaped power cords that are provided with the table (not the camera)

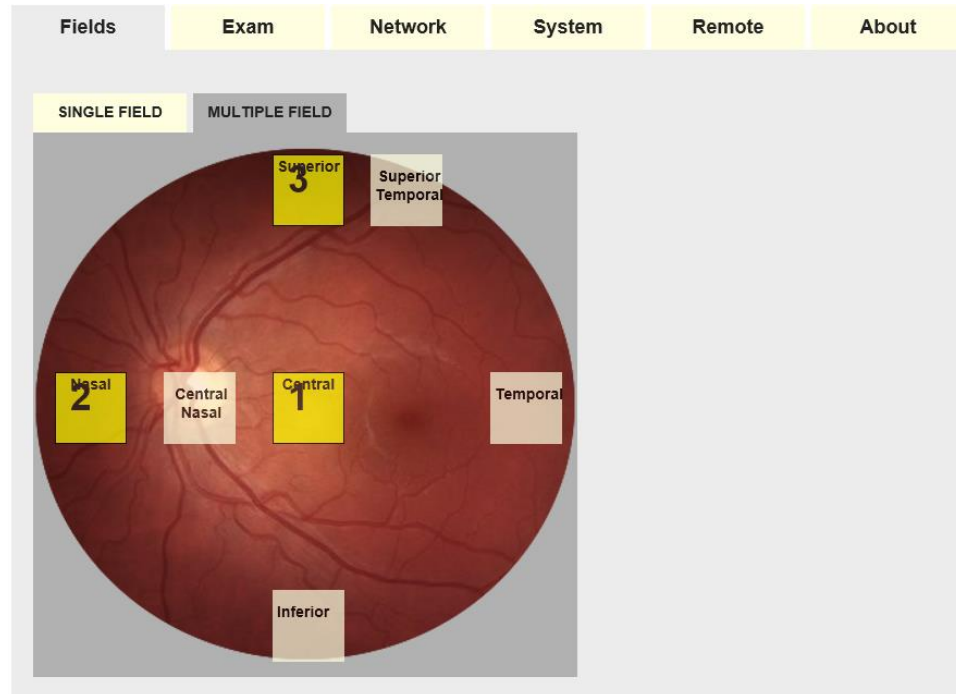
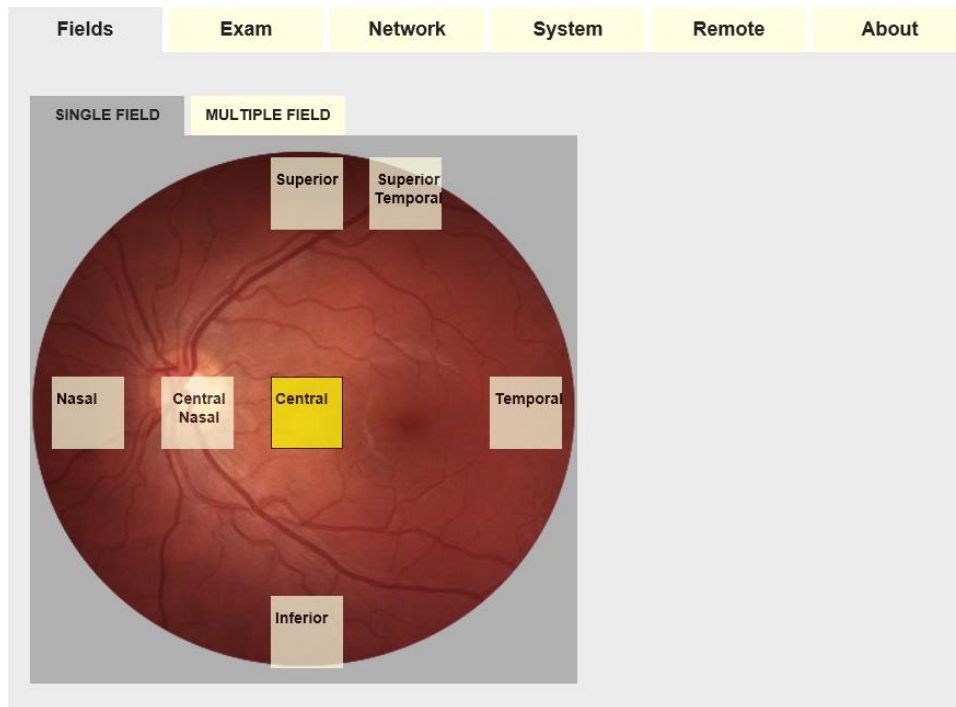
For assistance, please contact Welch Allyn Customer Support at 1.800.535.6663, or visit www.welchallyn.com/support.

		to connect the camera <i>to the table power outlet</i> . Run the power cord through the table access port. Use the power cord provided with the PC to connect the PC to the table power outlet using the adapter provided with the table.
9	<input type="checkbox"/>	For the <u>Topcon camera</u> , remove the plastic access cover (opposite side of the camera from the power switch). Locate the USB drive provided with the Installation Kit and plug it into the USB port. Plug the crossover cord provided with the Installation Kit into the Ethernet port on the camera. Slide the plastic access cover back on the camera. Connect the other end of the crossover cord into the Ethernet port on the PC.
10	<input type="checkbox"/>	For the <u>Centervue DRS</u> , plug the crossover cord provided with the Installation Kit into the Ethernet port on the camera next to the power switch. Connect the other end of the crossover cord into the Ethernet port on the PC.
11		Power the PC on and follow the install wizard to complete the PC set up.
12		Note: Skip this step if wireless connection is being used to reach the internet. Plug the USB-to-Ethernet adapter (Installation Kit) into an available USB port on the PC. The PC may direct you to install the drivers for the device – do so if prompted. If it does not automatically install the drivers, follow the instructions provided with the Ethernet-to-USB adapter to go to the website and download the drivers. Once the drivers are installed, connect the Ethernet cord (Installation Kit) to the USB-to-Ethernet adapter. Connect the other end of the Ethernet cord to an available Ethernet port in the room.
13	<input type="checkbox"/>	Power the camera on using the switch on the side of the camera.
14	<input type="checkbox"/>	Set the camera settings, as follows: <ul style="list-style-type: none"> - For the Centervue DRS camera, press the Tools icon in the top right corner of the touchscreen (looks like a screwdriver). This will open the Settings page. Ensure that all of the settings match those in the screen shots in Appendix A. - For the Topcon TRC NW-400 camera, press and hold the Setup button in the top right corner for 5-7 seconds. A screen will appear that prompts for a password. Enter the camera serial number, which is a 6 digit number found the sticker on the base of the camera next to the power switch. Press “Ok”. This will open the settings screen and 5 pages will be available. Ensure that all of the settings match those shown in the screen shots in Appendix B.
15	<input type="checkbox"/>	Note: If the PC has been preconfigured with the RetinaVue Network software (see Step 1), skip to Step 21. On the PC, open My Computer/C Drive. Right click and create a folder on the C drive and name it “RetinaVue Network”.
16	<input type="checkbox"/>	Open a web browser and go to www.welchallyn.com . Confirm that the page loads and that you have internet access. If the page does not load, you will need to work with the clinic contact to gain internet access on the PC.
17	<input type="checkbox"/>	Once you have confirmed internet access, enter the following URL address: https://www.retinavue.net/rn_web/installers/rn3_0.zip . Select “Save As” and download the Welch Allyn RetinaVue Network installation files into the folder “C:\RetinaVue Network”.
18	<input type="checkbox"/>	Right click the zip file that was saved in the RetinaVue Network folder and select “Extract To”. Save the installation files to “C:\RetinaVue Network\Installer”.
19	<input type="checkbox"/>	Open the “C:\RetinaVue Network\Installer” folder and double click the file “vcredist_x86.exe”. Press “Next” on all the prompts until the installation is complete.
20	<input type="checkbox"/>	In the “C:\RetinaVue Network\Installer” folder, double click the file “RetinaVueSetup.msi”.

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		Press “Next” on all the prompts until the installation is complete.																																			
21	<input type="checkbox"/>	Now, go to the desktop and double click the RetinaVue Network icon.																																			
22	<input type="checkbox"/>	Log in to the software. (username: hubble and password: retina).																																			
23	<input type="checkbox"/>	Contact Welch Allyn support to complete activation of the RetinaVue Network.																																			
24	<input type="checkbox"/>	<p>Confirm that the RetinaVue Network software is in test mode and perform a test exam.</p> <table border="0"> <tr> <td>1. Added Patient to Camera</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>2. Camera display works properly</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>3. Camera head zeroes X, Y, and Z locations</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>4. Camera successfully takes and OS and OD image</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>5. Images exported and received by RetinaVue software</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>6. Exam was able to save successfully</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> <tr> <td>7. Exam was able to be submitted successfully</td> <td><input type="checkbox"/></td> <td>Pass</td> <td><input type="checkbox"/></td> <td>Fail</td> </tr> </table>	1. Added Patient to Camera	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	2. Camera display works properly	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	3. Camera head zeroes X, Y, and Z locations	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	4. Camera successfully takes and OS and OD image	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	5. Images exported and received by RetinaVue software	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	6. Exam was able to save successfully	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail	7. Exam was able to be submitted successfully	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Fail
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25	<input type="checkbox"/>	Confirm that all wires are properly secured and neat using the zip ties included in the Installation Kit. Use the white plastic screws provided with the table to secure the zip ties and loose cords to the underside of the table.																																			
26	<input type="checkbox"/>	Identify where the clinic will store the camera box and move the box to the location. Location: _____																																			
27	<input type="checkbox"/>	Identify where the clinic dumpster is located and dispose of the table boxes.																																			
28	<input type="checkbox"/>	Remove the Welch Allyn RetinaVue Network labels from the Installation Kit. Clean the area where the labels will be placed on the camera with an alcohol wipe. Remove the wax paper from the back of the label. Place the label on the center of the camera head.																																			
29	<input type="checkbox"/>	Hang the RetinaVue poster provided in the Installation Kit on the wall using tape or thumb tacks, <u>as directed by the clinic contact</u> .																																			
30	<input type="checkbox"/>	Perform training using the RetinaVue Network Training Guide (Appendix C). Leave the Quick Start Guide provided with the Installation Kit on the table with the camera.																																			
31	<input type="checkbox"/>	Confirm primary camera operator contact: Name: _____ Phone: ____ - ____ - _____ Email: _____																																			
32	<input type="checkbox"/>	Once all training is complete, contact Welch Allyn Support to take the RetinaVue Network software off test mode.																																			
33	<input type="checkbox"/>	Complete the Customer Acceptance Form (Appendix D) and return it to the RetinaVue Operations Coordinator.																																			

Appendix A
CenterVue DRS Camera Settings



For assistance, please contact Welch Allyn Customer Support at 1.800.535.6663, or visit www.welchallyn.com/support.

Fields Exam Network System EKN About

EXAM SAVING ADVANCED

40 Seconds to wait between subsequent snapshots

0 Seconds to wait between two subsequent stereo snapshots

MEDIUM Blinking Fixation

Automatic chinrest

Image Processing Strategy

Fields Exam Network System EKN About

EXAM SAVING ADVANCED

Institution Name (added on printouts)

Automatically create a Folder for each Patient Name when saving on USB key

Automatically create a Folder for each Exam ID when saving on USB key

Enable DICOM export from Remote Viewer

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Fields Exam **Network** System EKN About

EXAM SAVING **ADVANCED**

DICOM Institution Dept. Name

DICOM Study Description

DICOM Series Description

Check lenscap presence at exam start


Exposure Value

Fields Exam **Network** System EKN About

Current network status **wired network working on ip 10.0.0.2, but internet not available**

GENERAL **WIRELESS** SHARED FOLDER LAN ACCESS


LAN ADDRESS CONFIGURATION



Configure the connection to an existing network.

IP address	10	0	0	2
Netmask	255	255	255	0
Gateway				
DNS				

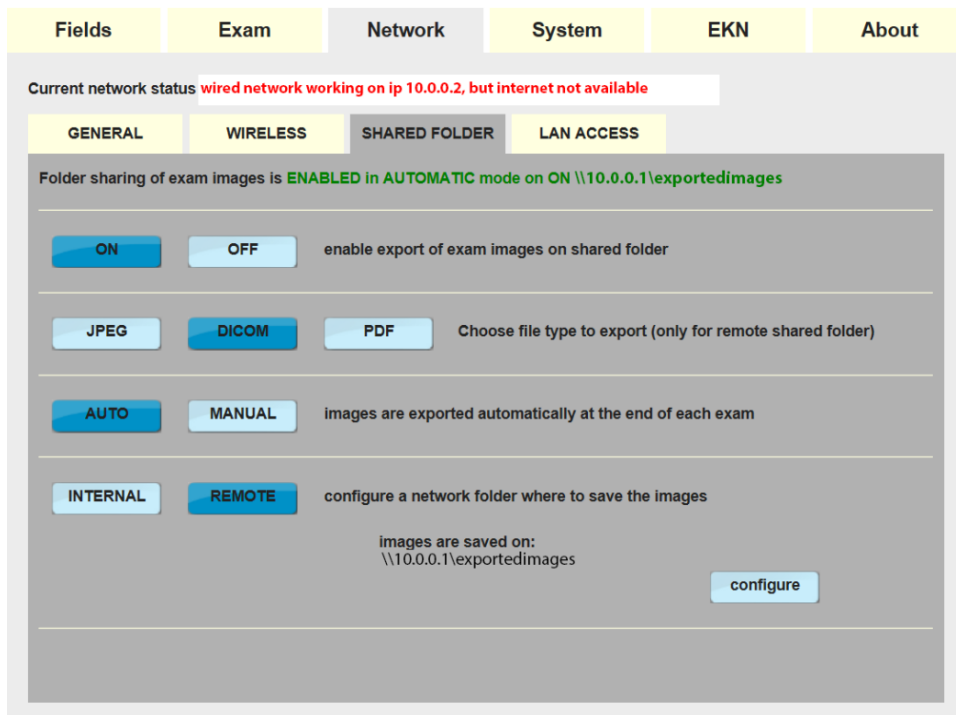
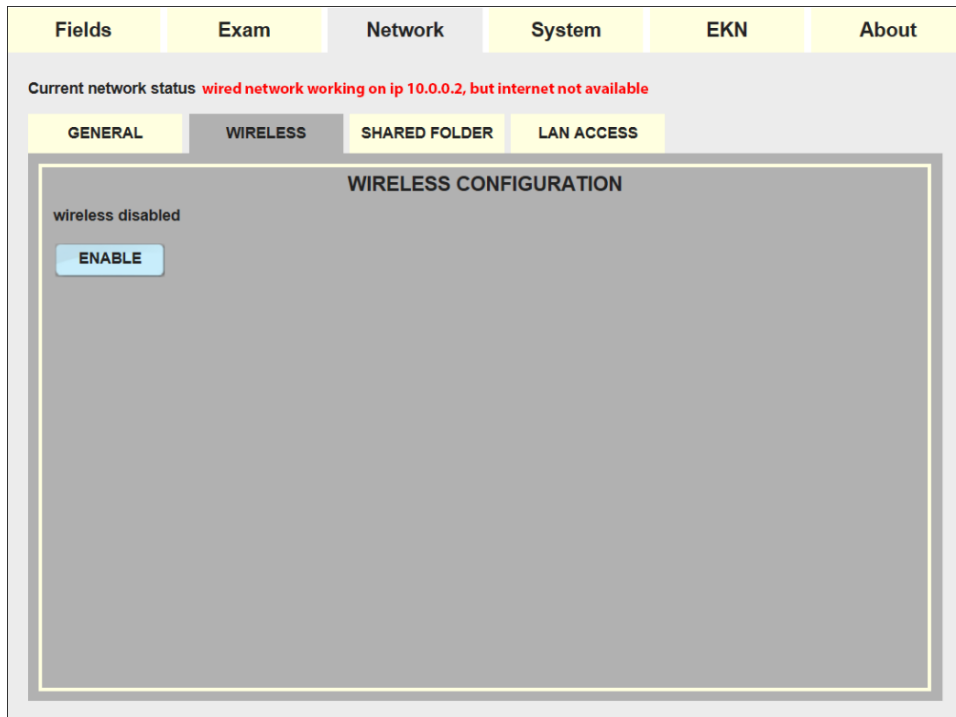
PRIVATE NETWORK



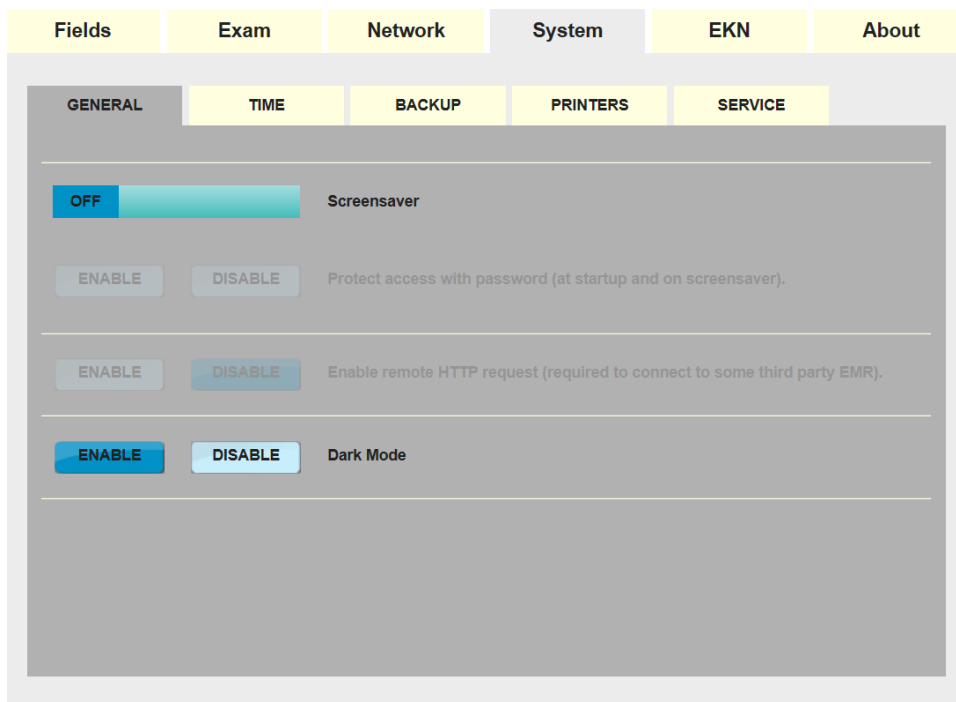
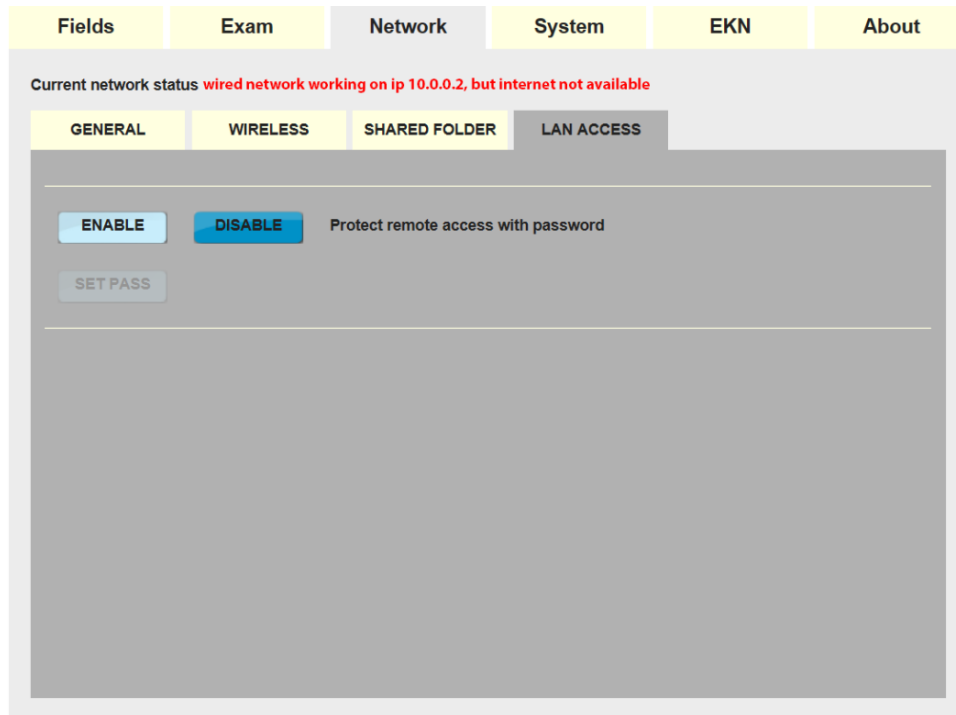
Create a new private network to connect directly to this DRS via cable or wireless.

Leave blank or enter a 5 or 13 characters password.

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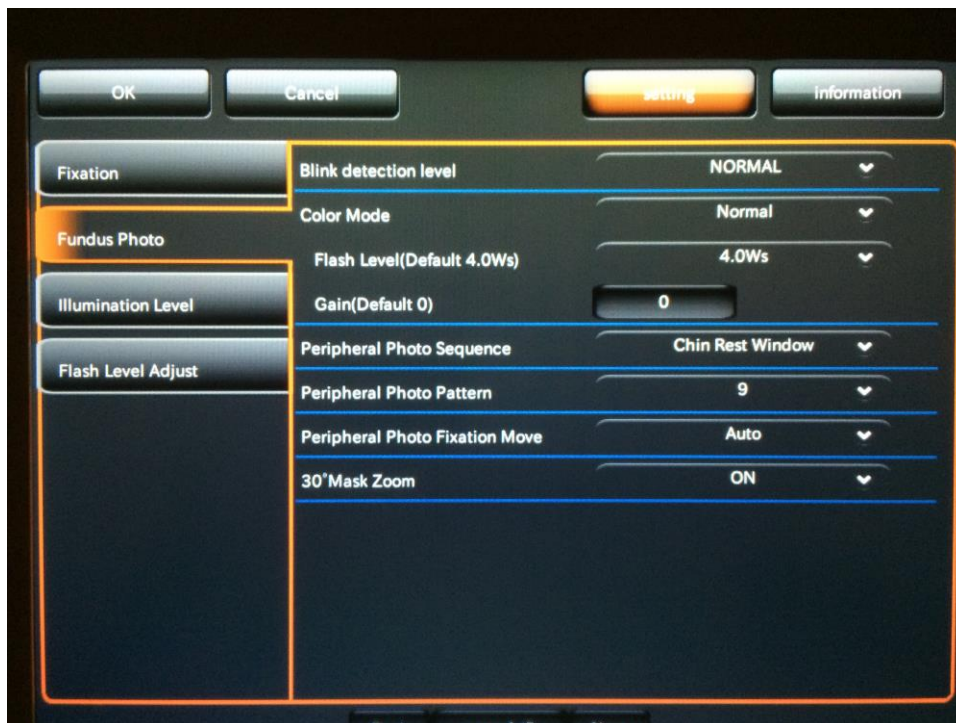
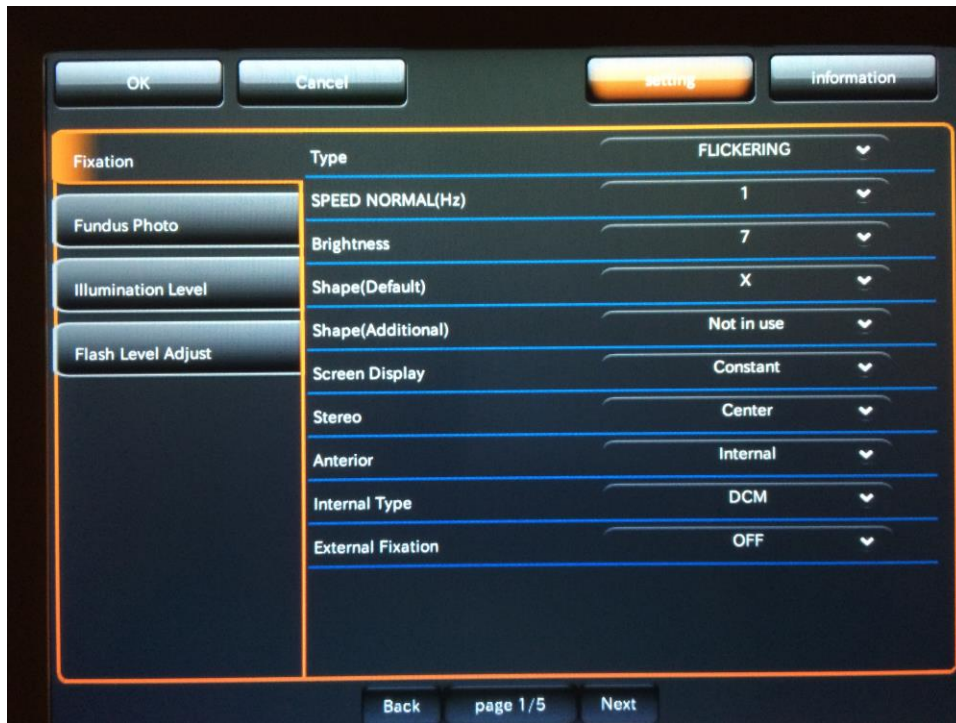
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Fields	Exam	Network	System	EKN	About					
<table border="1"> <thead> <tr> <th>GENERAL</th> <th>TIME</th> <th>BACKUP</th> <th>PRINTERS</th> <th>SERVICE</th> </tr> </thead> </table>						GENERAL	TIME	BACKUP	PRINTERS	SERVICE
GENERAL	TIME	BACKUP	PRINTERS	SERVICE						
<p>Date and Time <input type="button" value="AUTO"/> <input checked="" type="button" value="MANUAL"/></p> <p>Date <input type="text" value="2015"/> <input type="text" value="August"/> <input type="text" value="18"/></p> <p>Time <input type="text" value="11"/> <input type="text" value="40"/></p> <hr/> <p>Time Zone <input type="text" value="(GMT-05:00) Eastern Time (US and Canada)"/></p> <hr/> <p>Date Format <input checked="" type="button" value="YYYY-MM-DD"/> <input type="button" value="MM-DD-YYYY"/> <input type="button" value="DD-MM-YYYY"/></p> <p>Time Format <input checked="" type="button" value="24h"/> <input type="button" value="AM/PM"/></p>										

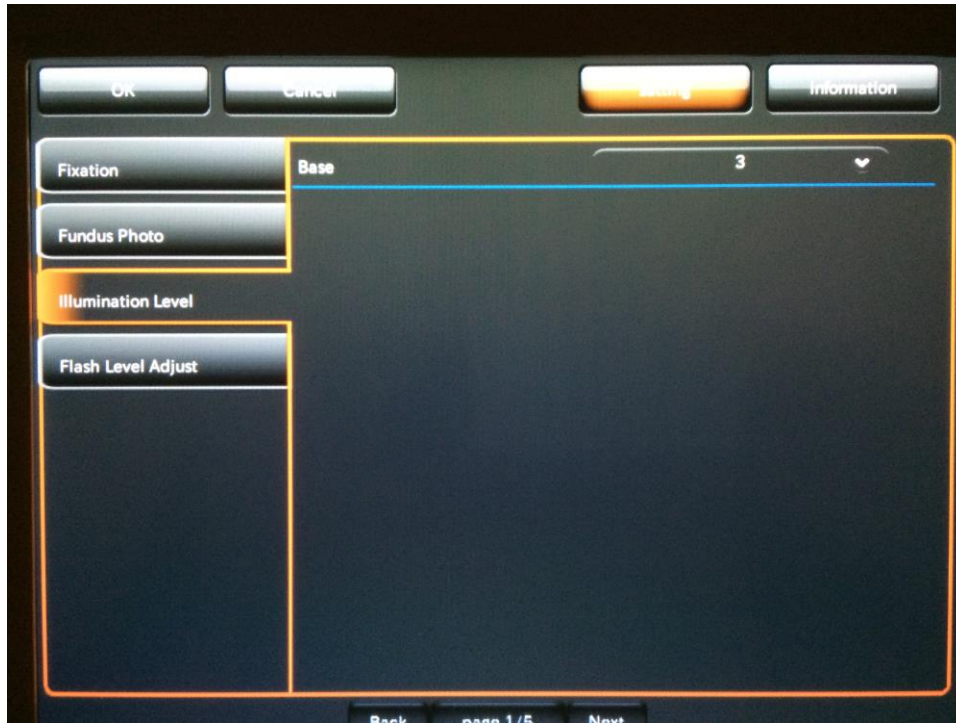
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<table border="1"> <tbody> <tr> <td><input type="button" value="Reset Head"/></td> <td>Reset head position</td> </tr> <tr> <td><input type="button" value="Service"/></td> <td>Access the HW Controls Panel</td> </tr> <tr> <td><input type="button" value="Remote Assistance"/></td> <td>Use this option to open a network connection for remote service assistance.</td> </tr> <tr> <td><input type="button" value="Image Rebuild"/></td> <td>Rebuilds all image thumbnails. Use this if thumbnails are not showed correctly. This operation can take some time.</td> </tr> <tr> <td><input type="button" value="Reset Parameters"/></td> <td>Reset all settings parameters to Factory Settings.</td> </tr> <tr> <td><input type="button" value="Reset Patients"/></td> <td>Remove all exam data on this DRS.</td> </tr> </tbody> </table>						<input type="button" value="Reset Head"/>	Reset head position	<input type="button" value="Service"/>	Access the HW Controls Panel	<input type="button" value="Remote Assistance"/>	Use this option to open a network connection for remote service assistance.	<input type="button" value="Image Rebuild"/>	Rebuilds all image thumbnails. Use this if thumbnails are not showed correctly. This operation can take some time.	<input type="button" value="Reset Parameters"/>	Reset all settings parameters to Factory Settings.	<input type="button" value="Reset Patients"/>	Remove all exam data on this DRS.
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Appendix B
Topcon TRC NW-400 Camera Settings



For assistance, please contact Welch Allyn Customer Support at 1.800.535.6663, or visit www.welchallyn.com/support.



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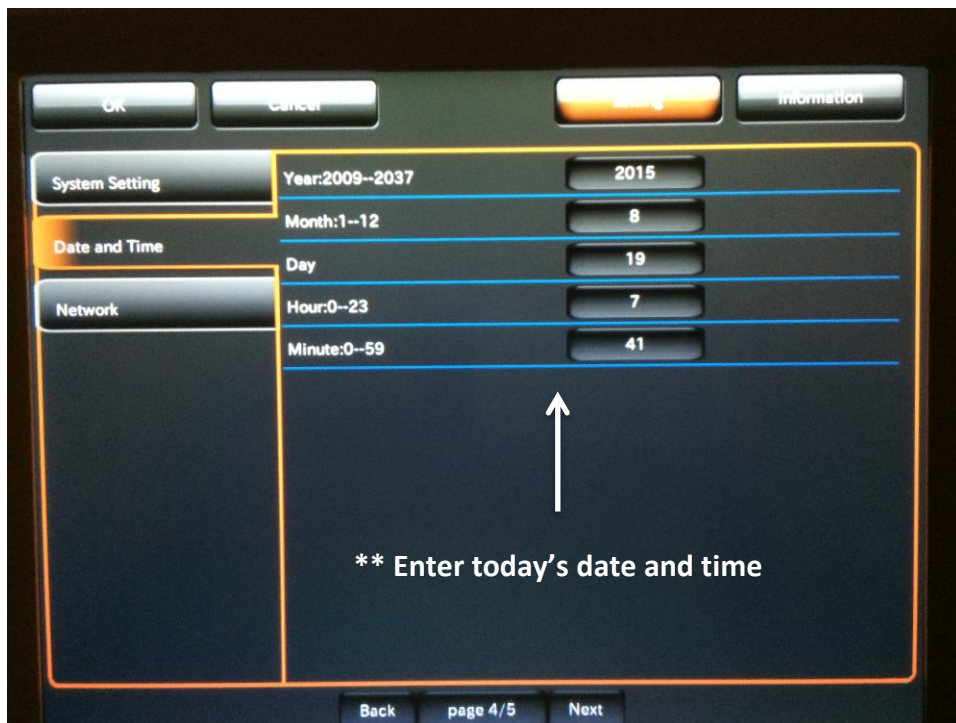
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This screenshot shows the 'WorkList Server' configuration screen. The interface includes a left-hand menu with options: Configuration, Standalone, DICOM, DICOM Server1, DICOM Server2, IMAGEnet, Patient ID Read, and Print. The 'Configuration' option is selected. The main area contains the following settings:

WorkList Server	10.0.0.1
WorkList Server PORT No.	104 Verification
WorkList Server AE Title	RETINACAM
MWMFilter-AETitle	OFF
MWMFilter-Modality	OFF
Query/Retrieve Server	Nothing
Query/Retrieve Server PORT No.	0 Verification
Query/Retrieve Server AE Title	Nothing

At the bottom, there are navigation buttons: Back, page 5/5, and Next.

This screenshot shows the 'MPPS Server' and 'Storage Server' configuration screen. The interface includes a left-hand menu with options: Configuration, Standalone, DICOM, DICOM Server1, DICOM Server2, IMAGEnet, Patient ID Read, and Print. The 'Configuration' option is selected. The main area contains the following settings:

MPPS Server	Nothing
MPPS Server PORT No.	0 Verification
MPPS Server AE Title	Nothing
Storage Server	10.0.0.1
Storage Server PORT No.	104 Verification
Storage Server AE Title	RETINACAM
Transfer syntax	ImplicitVR
Institution Name	Nothing
Station Name	Nothing
Institution Department Name	Nothing
Instance Number	123

At the bottom, there are navigation buttons: Back, page 5/5, and Next.



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Appendix C
RetinaVue Network Training Guide

1. Review the Purpose of the Program:

- Seeking to prevent vision and blindness from diabetic retinopathy
- Diabetes in an epidemic - ~35% of seniors have diabetes
- One of the most serious complications of diabetes is diabetic retinopathy -> the leading cause of preventable vision loss and blindness among adults
- Like many diseases, if it is detected early, vision loss can be completely eliminated
- Only 30-40% of diabetics get an annual eye exam - inconvenient, inaccessible
- We change that paradigm by enabling retinal screenings ***in the primary care setting***
- Process is very easy – uses a fully automated camera, simple software to acquire images
- From there, the images are transmitted securely to our team of board-certified, fellowship-trained retina experts, who do a complete review & generate a diagnostic report the same day

2. Basic Training:

1. Primary keys to success:

- ◇ Properly align the patient in the camera – chin on chinrest, forehead firmly against forehead rest, use your hand to press against the back of patient’s head
- ◇ Dilate the patient’s eyes
 - a. Turn off the lights and let the patient’s eyes dilate a **minimum** of 5 minutes in the dark. 5% of patients will not dilate in the dark. 10-12% of seniors will not dilate in the dark.
 - b. OPTIONAL: use a mild dilating drop (0.5%) in each eye, wait 10-15 minutes and image. The patient will be sensitive to light for 20-30 min. Refer to the RetinaVue Dilation Procedure.

2. Walk through one complete example, start to finish

- a. Step 1. Seat the patient; align the table and chair.
- b. Step 2. Turn off the lights.
- c. Step 3. Enter patient info into the RetinaVue Network software.
- d. Step 4. After at least 5 minutes in the dark, acquire images.
- e. Step 5. Submit the exam.

3. Identify the person who will be the primary camera operator, i.e. the operator expected to operate the camera the most. Have them run through the process start to finish at least twice. Once they have acquired and submitted at least twice, have them train the remaining operators.

4. Troubleshooting (bad images) – Refer to the attached Bad Image Guide:

- a. Small pupil (less than 2.6 mm). Resolution = wait longer in the dark or use dilating drop
- b. Discuss cleaning the lens (show example finger print) – DO NOT USE RUBBING ALCOHOL. Use the lens cap at all times when not acquiring images.
- c. Blink/eyelashes. Resolution = retake the image and ensure that the patient is properly aligned.

5. Maintenance

- a. How to power off the camera (every night)

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**Appendix D
Customer Acceptance Form**

This acknowledgement covers (check all that apply):

- Topcon TRC NW-400
- CenterVue DRS
- RetinaVue Network Software
- Automatic Height-Adjustable Table
- Lenovo Laptop

All system components, as noted above, have been installed and are in working order based upon the tests carried out as directed in this procedure.

The system has been installed and tested and found to function normally, but if a problem occurs that is caused by, or related to, customer supplied components, any service charges, including a return site visit and/or remote diagnostics fees due to the problem are not covered under the system warranty.

Table D1: Welch Allyn – System Validation Completed

Welch Allyn Authorized Representative has validated this system

Printed Name	Title	Signature	Date (yyyy-mm-dd)

Table D2: Customer accepts System Validation Completed

Printed Name	Title	Signature	Date (yyyy-mm-dd)

(Note: Customer signature signifies completion of installation)

Table D3: Welch Allyn Quality Representative (Final acknowledgements)

Printed Name	Title	Signature	Date (yyyy-mm-dd)

