

# ExamWRITER Equipment Integration User's Guide

September 2015



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# Using the CenterVue Interface

1

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- Setting Up the CenterVue DRS Interface, 1
- Capturing Images with CenterVue DRS, 2
- Reviewing CenterVue DRS Images, 5

## CenterVue Interface Overview

ExamWRITER interfaces with the CenterVue DRS software before the capture process when patient information is transferred from ExamWRITER into CenterVue DRS to create or update retinal images and during the review process when the newly created or existing CenterVue retinal images are available for on-screen review.

You do not need to install any CenterVue software on the computer on which you are using ExamWRITER. The CenterVue equipment interface saves equipment data to the CenterVue database and ExamWRITER reads that database through a wireless or wired network connection. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly. The CenterVue interface uses a wireless router or wired Ethernet cable to connect to the computer.

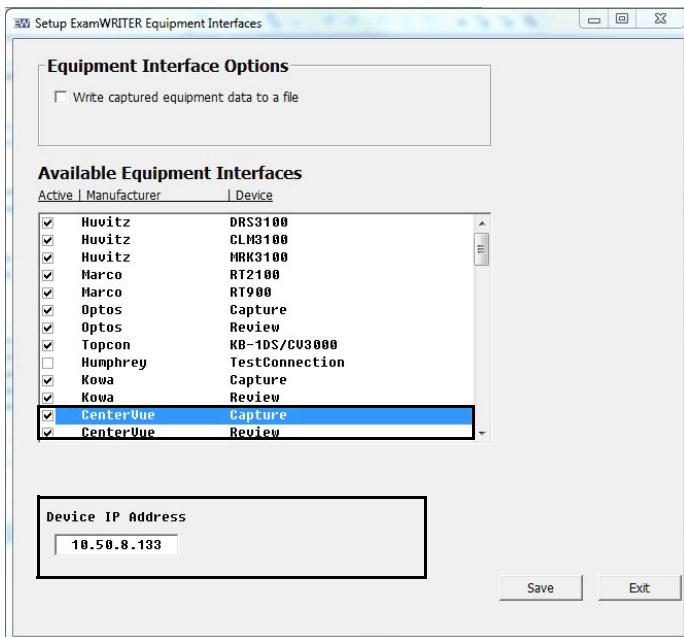
NOTES	<ul style="list-style-type: none"><li>• Back up your CenterVue DRS data. Contact CenterVue for recommended backup procedures.</li><li>• If you began using CenterVue DRS before ExamWRITER, your CenterVue Patient IDs will be different than your ExamWRITER patient numbers; therefore, your CenterVue and ExamWRITER patients will not be linked to each other. To automatically link your CenterVue and ExamWRITER patients, run the ExamWRITER/CenterVue Patient Synchronization Utility. To open this utility and view instructions on how to use the utility, go to <a href="http://www.officemate.net/omkb/Article.aspx?id=30730">www.officemate.net/omkb/Article.aspx?id=30730</a>.</li></ul>
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## Setting Up the CenterVue DRS Interface

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from CenterVue in a file for debugging purposes; otherwise, go to step 3.



3. Select the check box next to **CenterVue Capture**.



4. Type the network address in the **IP Address** text box.

**NOTE**

To find the device's network address, go to the CenterVue equipment, open the Settings panel and go to the Network tab.

5. Select the check box next to **CenterVue Review**.
6. Type the network address in the **IP Address** text box.
7. Click **Save**.
8. Click **Exit**.
9. Close and reopen ExamWRITER to activate your changes.

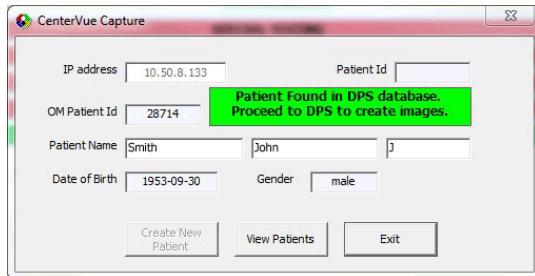
## Capturing Images with CenterVue DRS

To capture images from your CenterVue DRS equipment, perform the following steps:

1. Create a new blank exam or open a saved exam in ExamWRITER.
2. Click the **Interfaces** icon on the ExamWRITER chart window.

3. Select **CenterVue:Capture**.

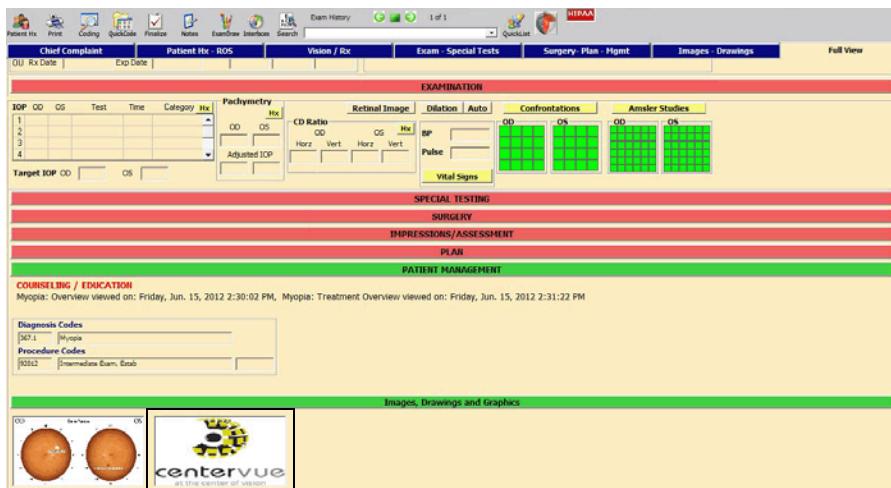
The CenterVue Capture window opens with the patient's last name, first name, middle initial, gender, date of birth, patient ID, preloaded from ExamWRITER.



4. Depending on whether the patient is found, perform one of the following steps.

If...	Then...
The patient is found on the CenterVue equipment	<ol style="list-style-type: none"><li>1. Go to the CenterVue equipment and capture the necessary images.</li><li>2. Come back to ExamWRITER and click <b>Exit</b> on the CenterVue Capture dialog box.</li></ol>
If the patient is not found, but you believe the patient has a record in the CenterVue equipment	<ol style="list-style-type: none"><li>1. Note the OM Patient ID. Select and copy it if needed.</li><li>2. Click <b>View Patients</b>. The DRS console opens.</li><li>3. Search for the patient and click the patient's name.</li><li>4. Click the <b>Edit</b> icon.</li><li>5. Type or past the OM Patient ID in the <b>Code</b> text box.</li><li>6. Click <b>Save</b>.</li><li>7. Go to the CenterVue equipment and capture the necessary images.</li><li>8. Come back to ExamWRITER and click <b>Exit</b> on the CenterVue Capture dialog box.</li></ol>
If the patient is not found	<ol style="list-style-type: none"><li>1. Click <b>Create New Patient</b>. The relevant demographic data is transferred to the CenterVue DRS equipment.</li><li>2. Go to the CenterVue equipment and capture the necessary images.</li><li>3. Come back to ExamWRITER and click <b>Exit</b> on the CenterVue Capture dialog box.</li></ol>

The CenterVue icon displays under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



4. Follow the instructions in “[Reviewing CenterVue DRS Images](#)” on page 5 to review the patient’s captured retinal images.
  
1. Open ExamWRITER.
2. Create a new blank exam or open a saved exam for patient for whom you have previously captured retinal images.

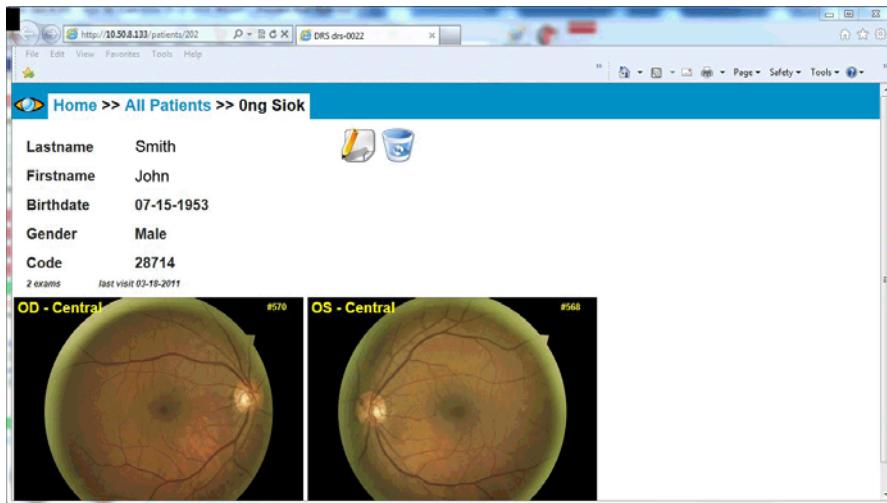
## Reviewing CenterVue DRS Images

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **CenterVue:Review**.

OR

Click the **CenterVue** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The DRS console opens and displays the patient's history.



4. Follow the CenterVue DRS instructions to use the application.
5. Close the DRS console to return to ExamWRITER.

# Using the Eagle Eye 3000 Interface

2

## In this chapter:

- [Eagle Eye 3000 Overview, 7](#)
- [Setting Up the Eagle Eye 3000 Interface, 7](#)
- [Using the Eagle Eye 3000 Interface, 8](#)

## Eagle Eye 3000 Overview

The Eagle Eye 3000 equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Eagle Eye 3000 interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server.

## Setting Up the Eagle Eye 3000 Interface

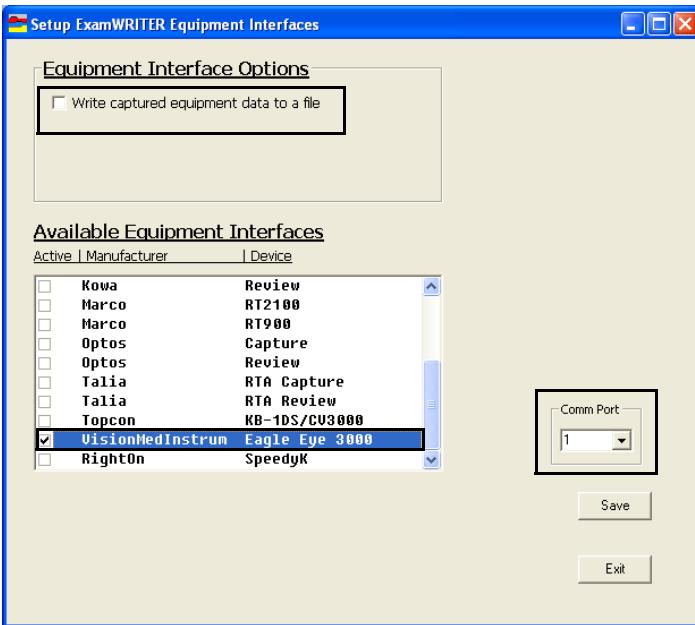
**NOTE**

You must set up the Eagle Eye 3000 interface from the computer connected to the Eagle Eye 3000 equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Eagle Eye 3000 in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.

4. Select a communication port number from the **Comm Port** drop-down menu; otherwise, go to step 5.

The Comm Port default is 1.

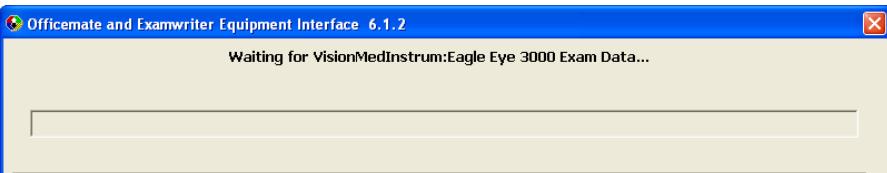


5. Click **Save**.
6. Click and reopen ExamWRITER to activate your changes.

## Using the Eagle Eye 3000 Interface

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.
4. Select **VisionMedInstrum:Eagle Eye 3000**.

The Officemate and Examwriter Equipment Interface window opens.

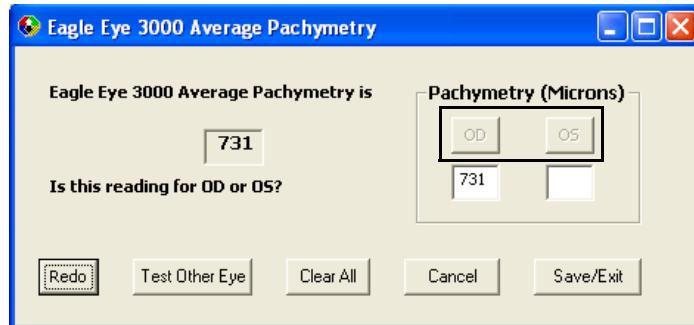


5. Capture a measurement on the Eagle Eye 3000 pachymeter by following the instructions in the *Eagle Eye 3000 Owner's Manual*.
6. Press **Print** on the Eagle Eye 3000 to transmit the average measurement of the four measurements displayed on the pachymeter to ExamWRITER.

7. Click **OD** or **OS** to accept the measurement and record it for the appropriate eye.

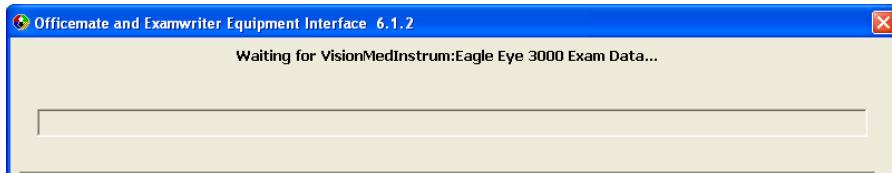
**NOTES**

- Click **Redo** to re-capture the measurement.
- Click **Cancel** to cancel the test.



8. Click **Test Other Eye** to instruct ExamWRITER to wait for additional measurement data from the Eagle Eye 3000.

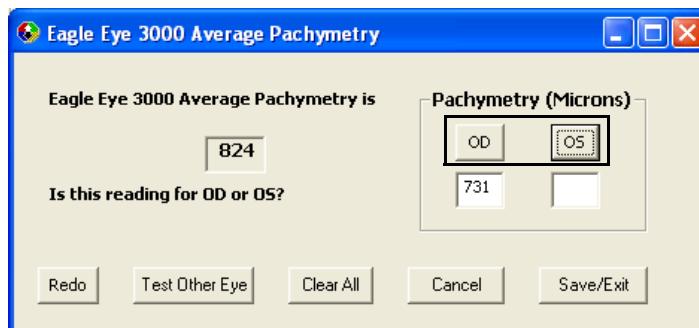
The Officemate and Examwriter Equipment Interface window opens.



9. Capture a measurement on the Eagle Eye 3000 pachymeter by following the instructions in the *Eagle Eye 3000 Owner's Manual*.
10. Press **Print** on the Eagle Eye 3000 to transmit the average measurement of the four measurements displayed on the pachymeter to ExamWRITER.
11. Click **OD** or **OS** to accept the measurement and record it for the appropriate eye.

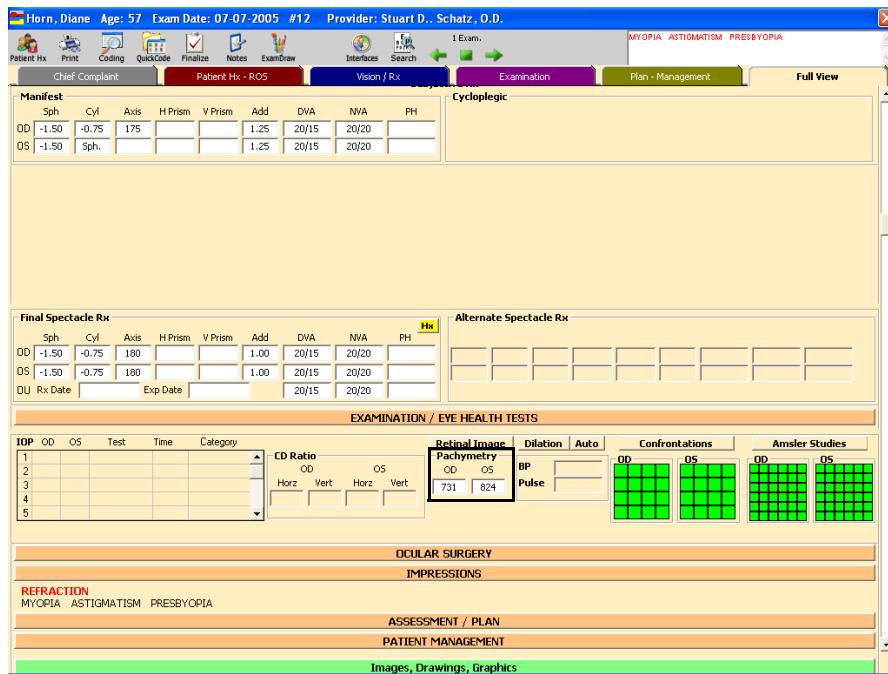
**NOTES**

- Click **Redo** to re-capture the measurement.
- Click **Cancel** to cancel the test.



12. Click **Save/Exit** to save the OD and OS measurements in the patient's ExamWRITER database.

The average pachymetry measurements will be displayed under the Examination / Special Eye Health Tests category bar in ExamWRITER.



# Using the EyeScape Interface

3

## In this chapter:

- EyeScape Interface Overview, 11
- Setting Up the EyeScape Interface, 11
- Capturing EyeScape Images, 13
- Reviewing EyeScape Images, 15

## EyeScape Interface Overview

ExamWRITER interfaces with Synemed EyeScape Digital Imaging Systems before the capture process when patient information is transferred from ExamWRITER into EyeScape to create or update retinal images and during the review process when the newly created or existing EyeScape retinal images are available for on-screen review.

The EyeScape equipment interface saves equipment data to the EyeScape database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The EyeScape interface uses a serial RS-232 cable or null modem to connect to the computer. The EyeScape interface can only use one camera per Terminal Server.

### NOTES

- You must install ExamWRITER and the EyeScape software on the computer to which the EyeScape equipment is connected; then you can install the EyeScape software on the server on which ExamWRITER is installed. Contact Synemed to determine if the EyeScape software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.
- Back up your EyeScape data! Contact Synemed for recommended backup procedures.

## Setting Up the EyeScape Interface

### NOTE

You must set up the EyeScape interface from the computer connected to the camera equipment.

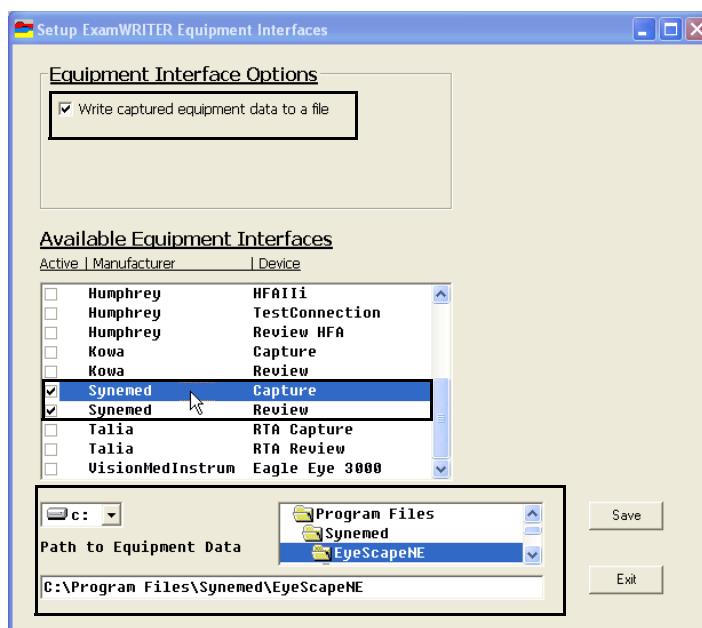
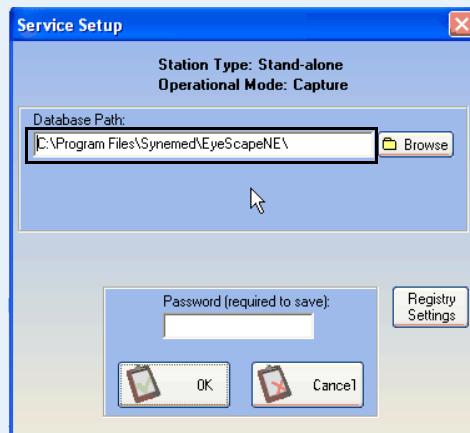
1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.



2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from EyeScape in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and shared folder where the EyeScape database is stored.

**NOTE**

Typically, the EyeScape database is stored in the Program Files\Synemed\EyeScapeNE directory on the computer acting as the Synemed “server.” To locate the exact database path, open Eyescape, click **Program**, and then select **Service Settings**. The Service Setup window opens and displays the database path that you must select in the Setup ExamWRITER Equipment Interfaces window.



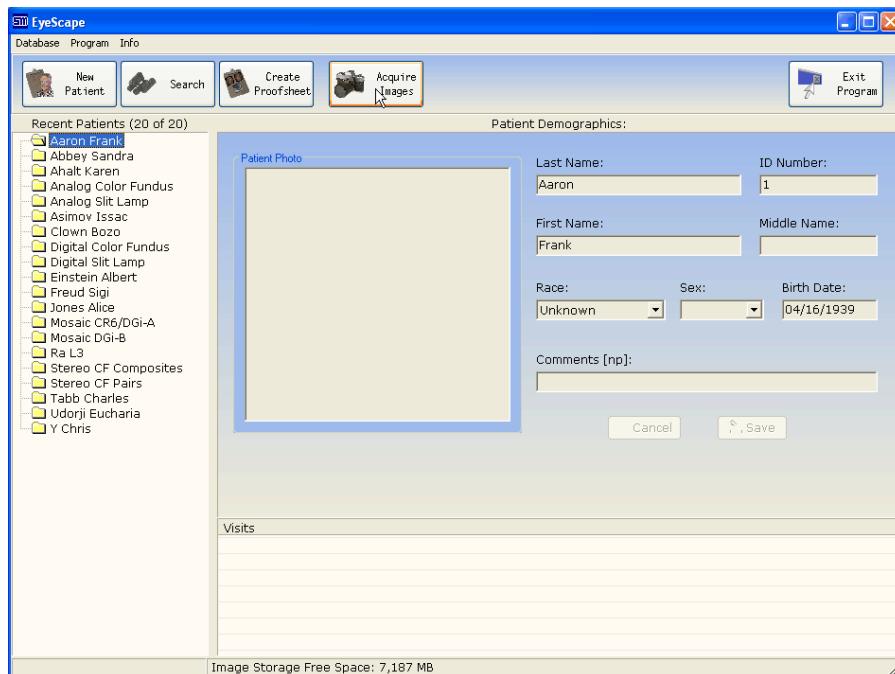
5. Click **Save**.

## Capturing EyeScape Images

6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

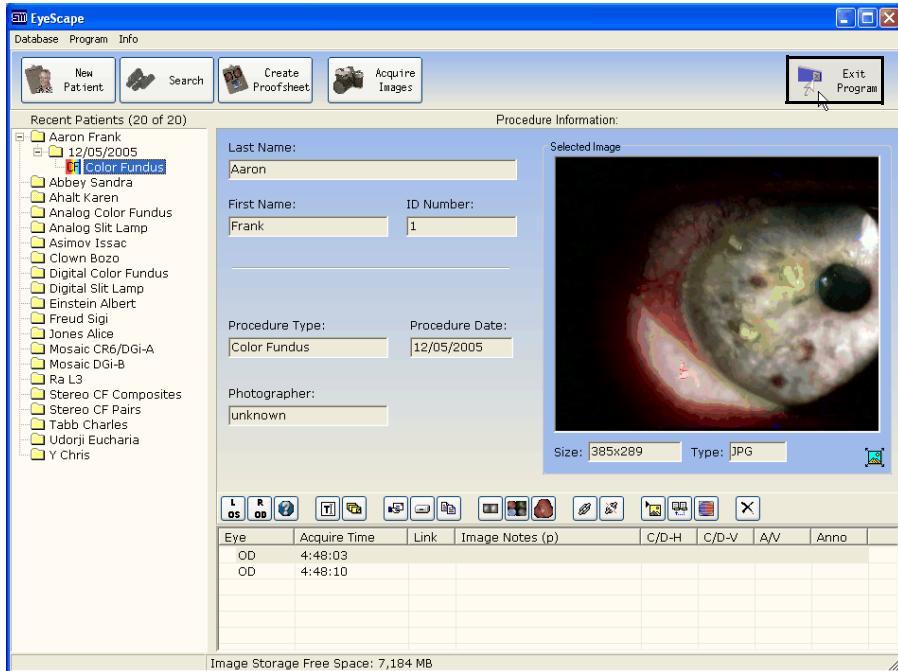
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.
4. Select **Synemed:Capture**.

The EyeScape window opens with the patient's name and date of birth pre-loaded from ExamWRITER.

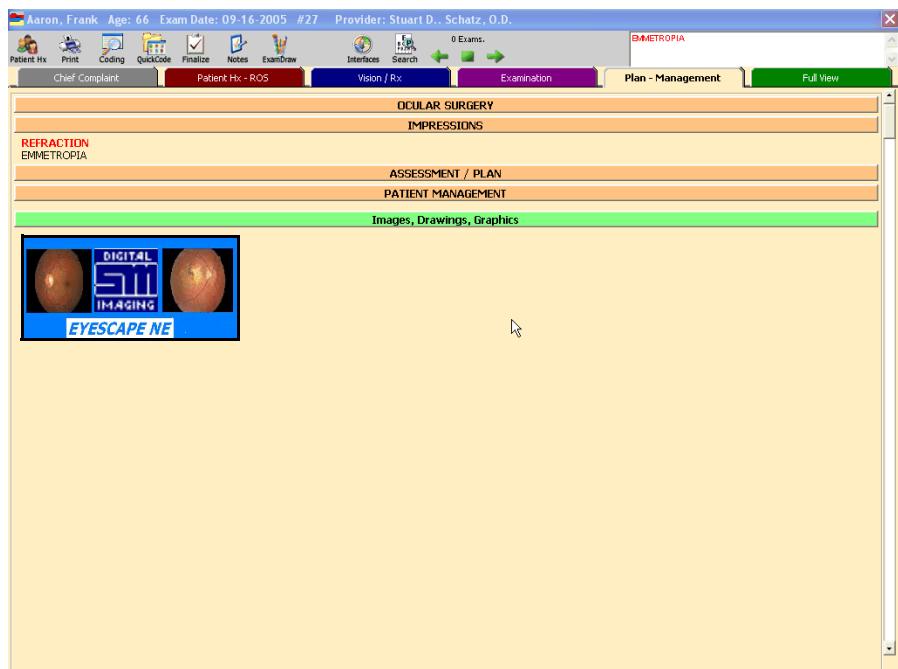


5. Follow the EyeScape capture instructions to capture the patient's retinal images.

- After you have completed capturing the images, click **Exit Program**.



The EyeScape NE icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



- Follow the instructions in "Reviewing EyeScape Images" on page 15 to review the patient's captured retinal images.

## Reviewing EyeScape Images

### NOTES

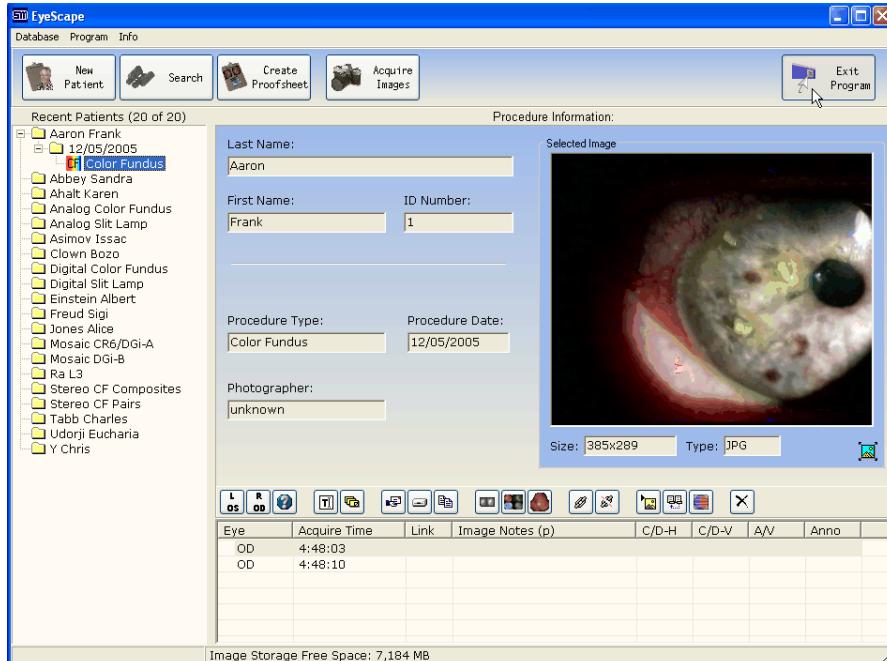
- The EyeScape review software can only be used from within ExamWRITER when a patient's retinal images have previously been captured using ExamWRITER and the EyeScape capture interface.
- Both the EyeScape review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. Also, a path to the location where the EyeScape database is located must be set up. For information on setting up the path to the EyeScape database in the ExamWRITER equipment interface, go to "["Setting Up the EyeScape Interface" on page 11](#)".

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Synmed:Review**.

OR

Click the **EyeScape NE** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The EyeScape window opens and displays the patient's history.



4. Follow the EyeScape review instructions to use the application.
5. Click **Exit Program** to close EyeScape to return to ExamWRITER.



# Using the EyeTel Interface

4

## In this chapter:

- [EyeTel Interface Overview, 17](#)
- [Setting Up the EyeTel Interface, 17](#)
- [Capturing Images with EyeTel, 18](#)
- [Reviewing Images from EyeTel, 20](#)

## EyeTel Interface Overview

ExamWRITER interfaces with the EyeTel Imaging software before the capture process when patient information is transferred from ExamWRITER into the EyeTel DigiScope to create or update retinal images and during the review process when the newly created or existing EyeTel DigiScope retinal images are available for on-screen review.

The EyeTel equipment interface saves equipment data to the EyeTel database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The EyeTel equipment interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The EyeTel equipment interface can use multiple serial ports per PC.

### NOTES

- You *must* install the EyeTel Imaging software on the same workstation as ExamWRITER.
- Before you begin using the EyeTel equipment interface, you must set up the EyeTel equipment. Refer to the *EyeTel DigiScope Instrument User's Guide* for detailed information on setting up the EyeTel equipment.

## Setting Up the EyeTel Interface

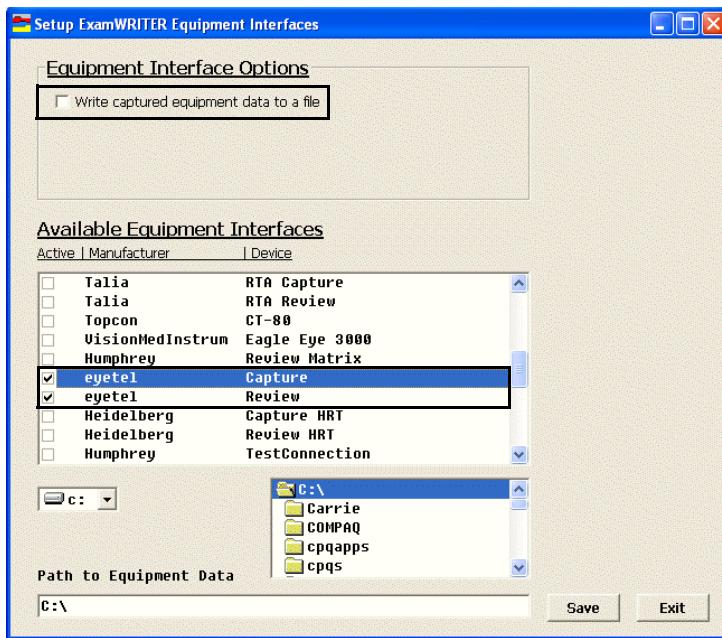
### NOTES

- You must set up the EyeTel interface from the computer connected to the EyeTel equipment.
- You must be using ExamWRITER version 7.3 or above to interface with the EyeTel equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.

The Setup ExamWRITER Equipment Interfaces window opens.

2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from EyeTel in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.



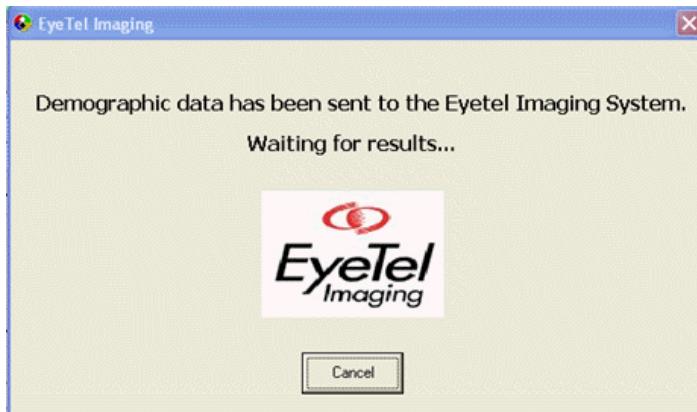
4. Select the drive and folder where the equipment data is stored.
5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Capturing Images with EyeTel

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

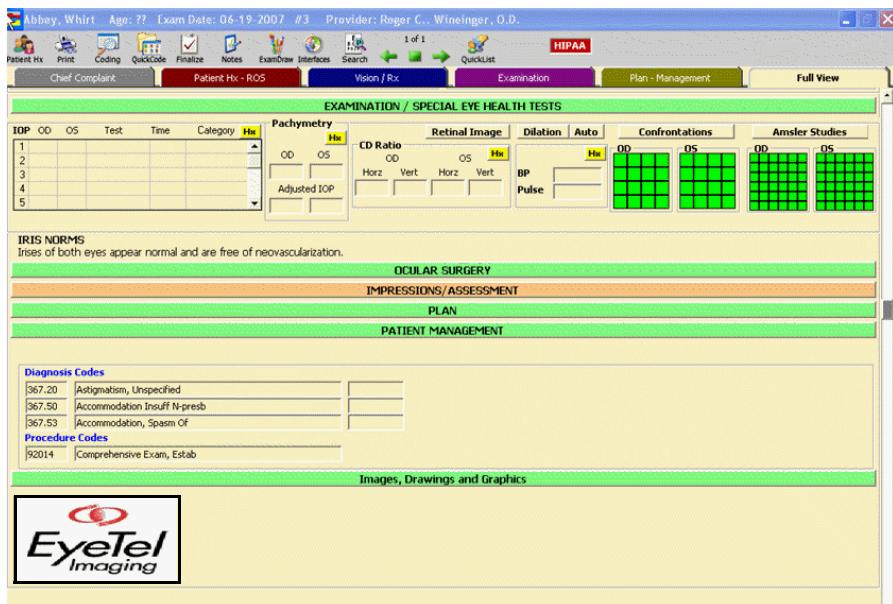
4. Select **EyeTel:Capture**.

The EyeTel Imaging window opens after the patient's first and last name, social security number, patient ID, date of birth, and gender are pre-loaded in EyeTel DigiScope from ExamWRITER.



5. Follow the EyeTel instructions to capture the patient's retinal images on the DigiScope.

The EyeTel Imaging icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



6. Follow the instructions in “[Reviewing Images from EyeTel](#)” on page 20 to review the patient's captured retinal images.

## Reviewing Images from EyeTel

**NOTE**

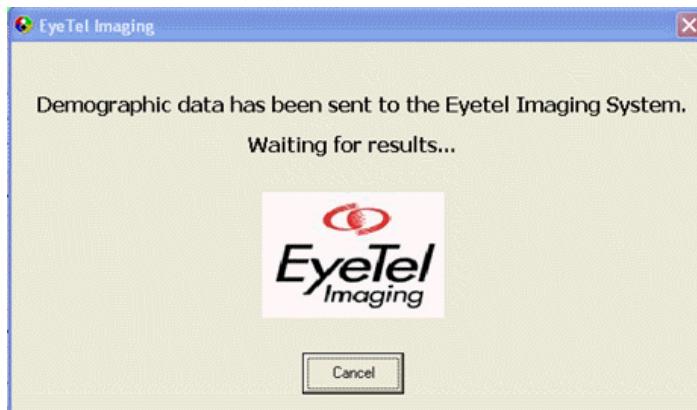
Both the EyeTel review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. Also, a path to the location where the EyeTel database is located must be set up. For information on setting up the path to the EyeTel database in the ExamWRITER equipment interface, go to “[Setting Up the EyeTel Interface](#)” on page 17.

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **EyeTel:Review**.

OR

Click the **EyeTel Imaging** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The EyeTel Imaging window opens and then the DigiScope displays the patient's images and reports.



# Using the Heidelberg Interface

5

## In this document:

- [Heidelberg Interface Overview, 21](#)
- [Setting Up the Heidelberg Interface, 22](#)
- [Capturing Heidelberg Images, 22](#)
- [Reviewing Heidelberg Images, 24](#)

## Heidelberg Interface Overview

ExamWRITER interfaces with the Heidelberg HRT2/HRT3 and Spectralis OCT before the capture process when patient information is transferred from ExamWRITER into Eye Explorer to create or update retinal images and during the review process when the newly created or existing Eye Explorer retinal images are available for on-screen review.

The Heidelberg equipment interface saves equipment data to the Heidelberg database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Heidelberg interface uses a serial RS-232 cable or null modem to connect to the computer. The Heidelberg interface can only use one camera per Terminal Server.

### NOTES

- You must install ExamWRITER and the Eye Explorer software on the computer to which the Heidelberg equipment is connected; then you can install the Eye Explorer software on the server on which ExamWRITER is installed. Contact Heidelberg Engineering to determine if the Eye Explorer software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.
- Back up your Heidelberg data! Contact Heidelberg Engineering for recommended backup procedures.

## Setting Up the Heidelberg Interface

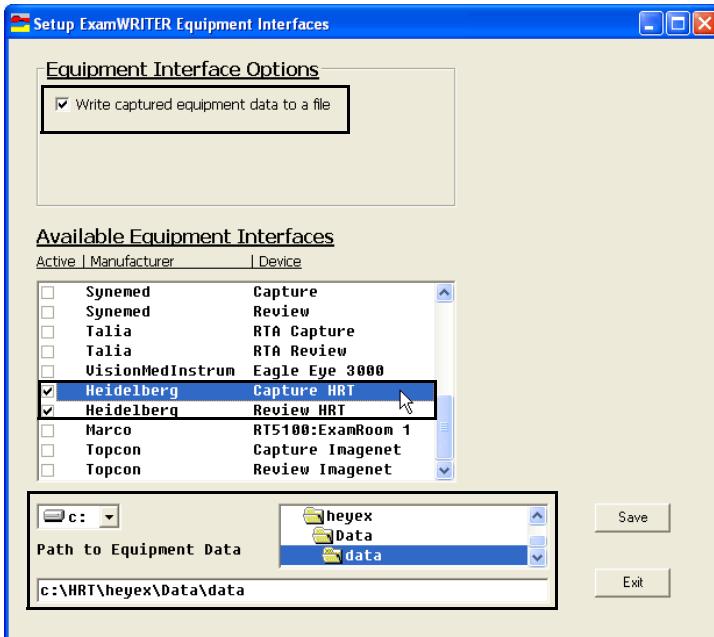
### NOTES

- You must set up the Heidelberg interface from the computer connected to the Heidelberg equipment.
- You must be using ExamWRITER version 7.3 or above to interface with the Heidelberg equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Heidelberg in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and shared folder where the Heidelberg data is written.

### NOTE

Typically, the shared folder where the Heidelberg HRT2/HRT3 data is written is HRT\heyex\Data\data on the computer acting as the Heidelberg server. See the Heidelberg setup documentation for more information on obtaining this path.



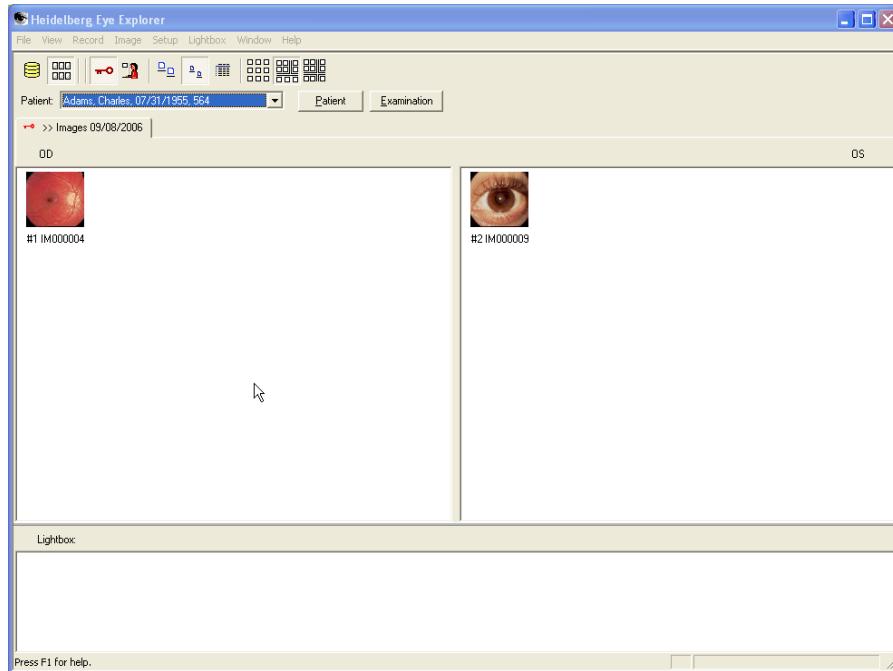
5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Capturing Heidelberg Images

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Heidelberg:Capture**.

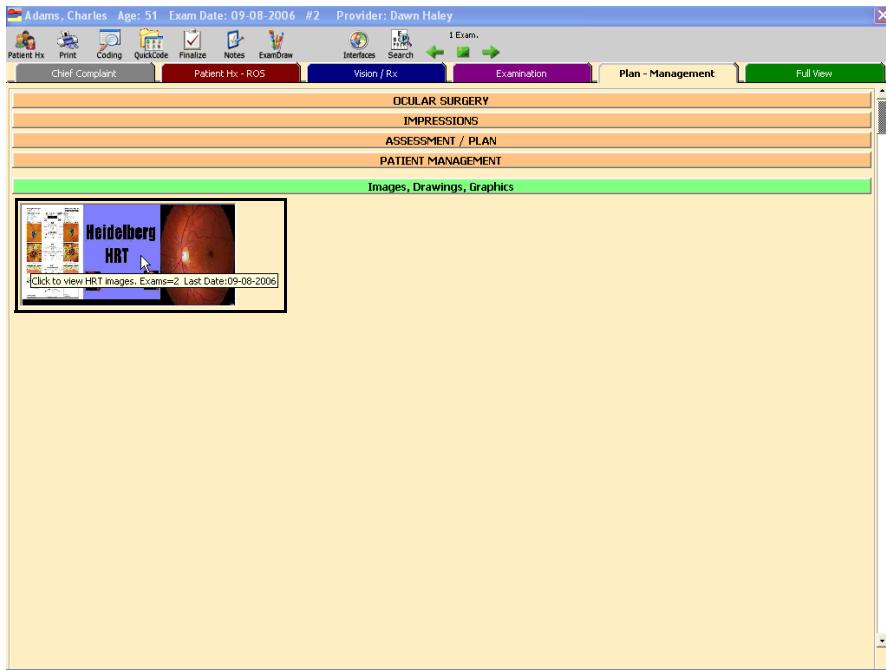
The Heidelberg Eye Explorer window opens with the patient's name and birth date pre-loaded from ExamWRITER.



5. Follow the Heidelberg instructions to capture the patient's retinal images.

6. Click **Exit Program** to return to ExamWRITER.

The Heidelberg HRT icon will be displayed under the Images, Drawing, Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



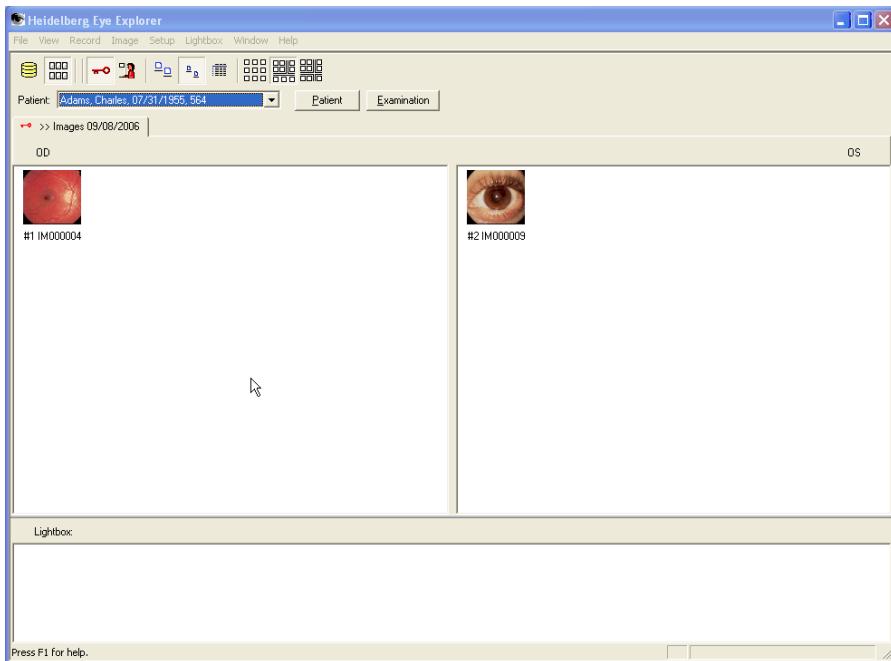
7. Follow the instructions in “[Reviewing Heidelberg Images](#)” on page 24 to review the patient’s captured retinal images.

## Reviewing Heidelberg Images

<b>NOTES</b>	<ul style="list-style-type: none"><li>The Heidelberg review software can only be used from within ExamWRITER when a patient’s retinal images have previously been captured using ExamWRITER and the Heidelberg Eye Explorer.</li><li>Both the Heidelberg review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. Also, a path to the location where the Heidelberg database is located must be set up. For information on setting up the path to the Heidelberg database in the ExamWRITER equipment interface, go to “<a href="#">Setting Up the Heidelberg Interface</a>” on page 22.</li></ul>
--------------	---

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Heidelberg:Review**.  
OR  
Click the **Heidelberg HRT** icon under the ExamWRITER **Images, Drawing, Graphics** category bar.  
The Heidelberg Eye Explorer window opens and displays the patient's images.



4. Follow the Heidelberg review instructions to review the images.
5. Click **Exit Program** to return to ExamWRITER.



# Using the Humphrey® HFA II-i Interface

6

## In this chapter:

- Humphrey Interface Overview, 27
- Setting Up the Humphrey Interface, 27
- Setting Up the Humphrey Equipment, 30
- Using the Humphrey Interface, 40
- Viewing Humphrey Analysis Reports, 47

## Humphrey Interface Overview

ExamWRITER receives data reports from the Humphrey Field Analyzer HFA II-i Series equipment and links the reports to the ExamWRITER exam record. ExamWRITER does *not* send clinical data to the Humphrey equipment.

The Humphrey equipment interface saves data reports to the DATA folder on the ExamWRITER server, which then can be accessed by all computers networked to look at that folder. The data reports can be shared and accessed at multiple computers, as long as the computers are networked properly and the folder is properly mapped and shared. The Humphrey interface uses a mapped network drive to connect to the computer or Terminal Server. Ensure that you have purchased the networking license from Carl Zeiss Meditech, Inc., so that you can properly network your Humphrey Field Analyzer and interface with ExamWRITER.

**NOTE**

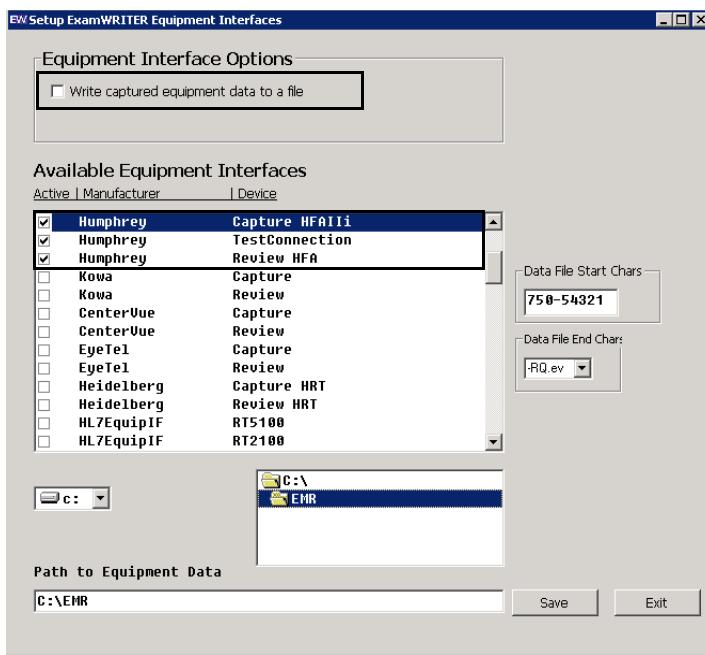
Even if you are familiar with using the Humphrey equipment, you will still need to follow the instructions in “[Using the Humphrey Interface](#)” [on page 40](#) so that you correctly recall patient data and transfer the tests.

## Setting Up the Humphrey Interface

Before you begin using the Humphrey equipment interface, set up the Humphrey interface in ExamWRITER.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Humphrey equipment in a file for debugging purposes; otherwise, go to step 3.

3. Select the check boxes next to the equipment interfaces that you are setting up.



4. Highlight the **Humphrey Capture HFAIIi** device.
5. Type the Humphrey equipment's serial number in the **Data File Start Chars** text box.

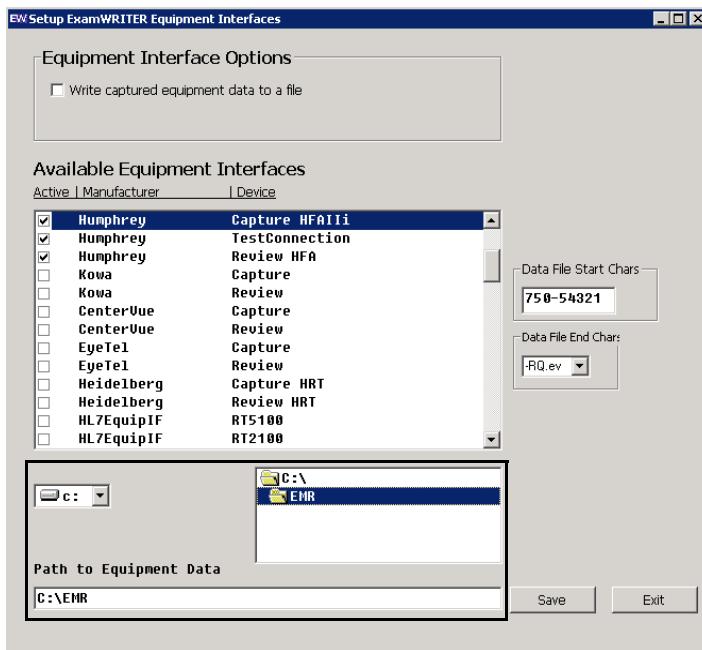
**NOTES**

- Your Humphrey equipment's serial number is listed in the OA Web License and on a sticker on the equipment.
- Omit the "I" in the serial number when you type it into the Data File Start Chars text box. For example, if your serial number is 123I-34432, type, 123-34432 in the **Data File Start Chars** text box.

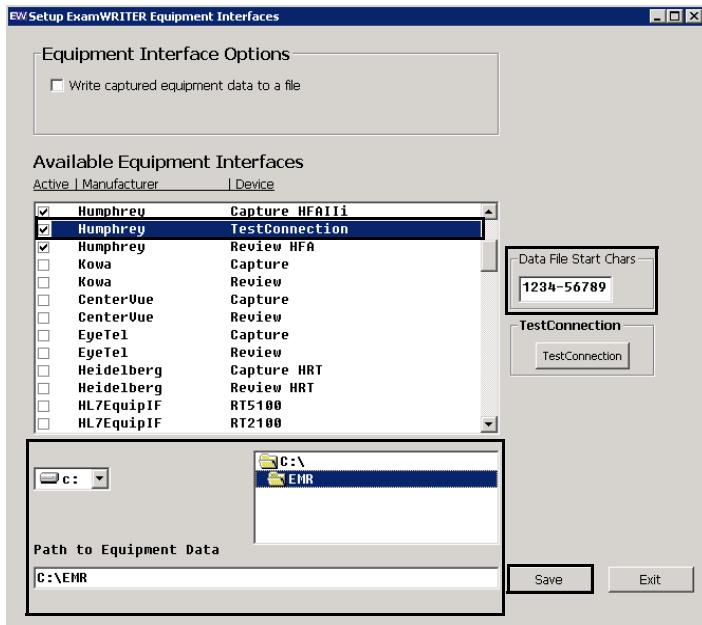
- Select the drive and shared folder (**EMR** or **EMR Export**) where the Humphrey equipment data is written.

**NOTE**

*Do not select the OfficeMate/DATA/HFAII\_Reports folder on the server. If you select this folder, all of your Humphrey analysis reports will be deleted.*



- Click **Save**.
- Highlight the **Humphrey TestConnection** device and repeat steps 5–7.



- Click **Exit**.
- Close and reopen ExamWRITER to activate your changes.

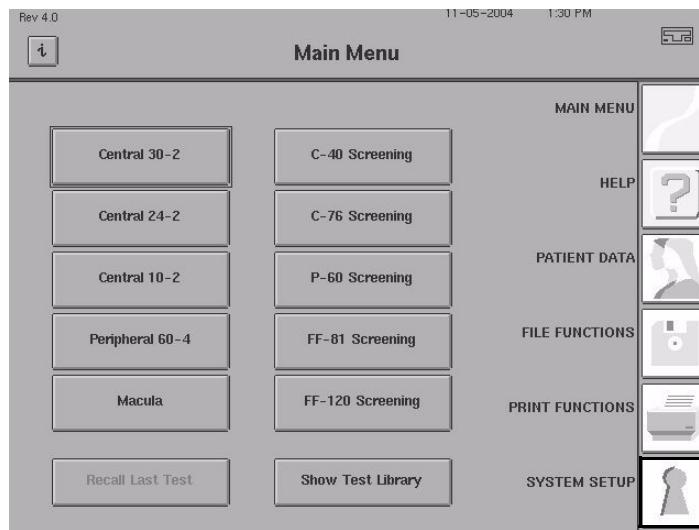
## Setting Up the Humphrey Equipment

Before you begin using the Humphrey equipment interface, set up the Humphrey Field Analyzer HFA II-i Series equipment.

**NOTE**

See the *Humphrey HFA II-i Series User Manual* for more information on setting up the Humphrey equipment.

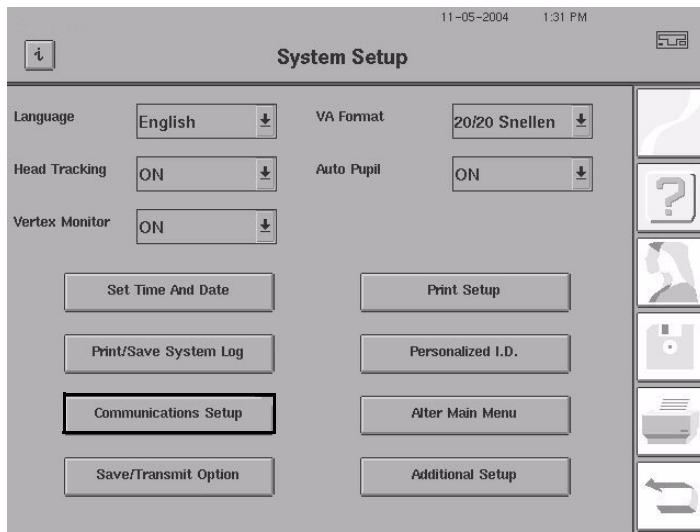
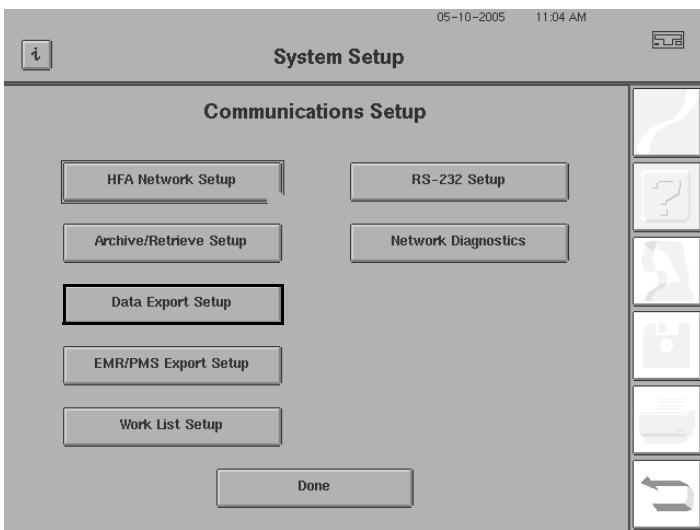
1. Ensure that the Humphrey Field Analyzer HFA II-i Series is connected to your network with a network cable.
2. Ensure that ExamWRITER is open.
3. Press the **System Setup** icon on the Humphrey Main Menu window.



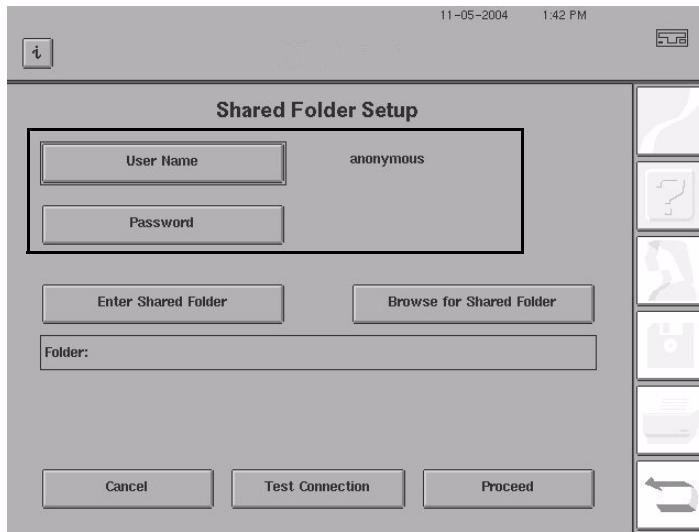
The System Setup window opens.

**NOTE**

In order to create and view the Overview, Change Analysis, and Three-in-One reports, you must press **Print Setup** on the System Setup window and then press **Print Destination**. Ensure that **Export Image Files** is selected from the first drop-down menu and **EMR/PMS Host** is selected from the **Export to** drop-down menu.

4. Press **Communications Setup**.5. Press **Data Export Setup**.

6. Select **Shared Folder** from the **File Server Access Protocol** drop-down menu and follow the instructions below:
  - a. Press **Shared Folder Setup**.
  - a. Press **User Name**.
  - b. Type your user name and press **Enter**.
  - c. Press **Password**.
  - d. Type your password and press **Enter**.



7. Press **Browse for Shared Folder**.

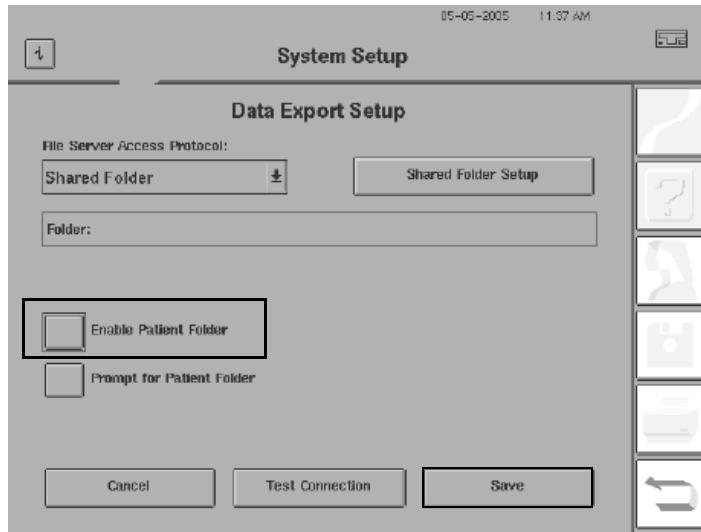
The Data Export – Select Shared Folder window opens.

**NOTE**

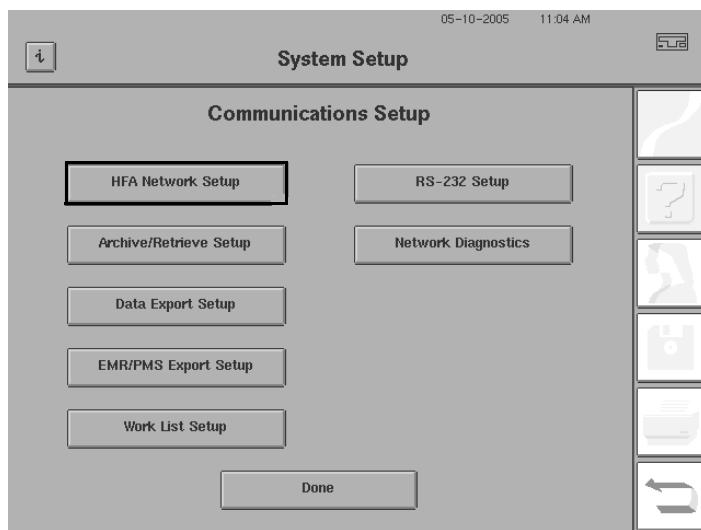
If you need help browsing to shared folders, call Zeiss Customer Care at 1.800.341.6968.

8. Navigate to and select the workgroup that you have shared.
9. Press **Proceed**.
10. Navigate to and select the computer that you have shared.
11. Press **Proceed**.
12. Navigate to and select the directory that you have shared (**DATA** or **DATA Export**).
13. Press **Select Folder**.

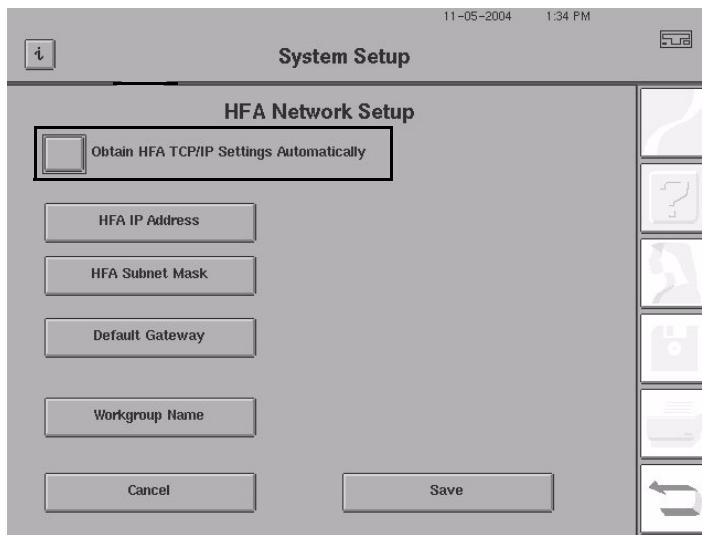
14. Deselect the **Enable Patient Folder** check box and press **Save**.



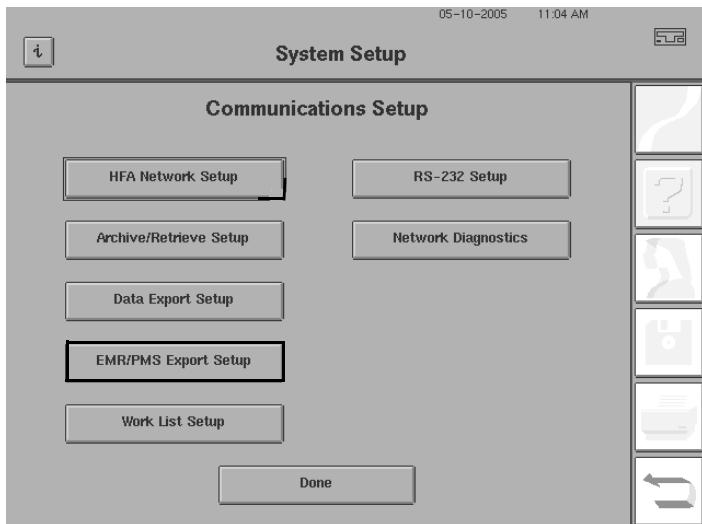
15. Press **HFA Network Setup**.



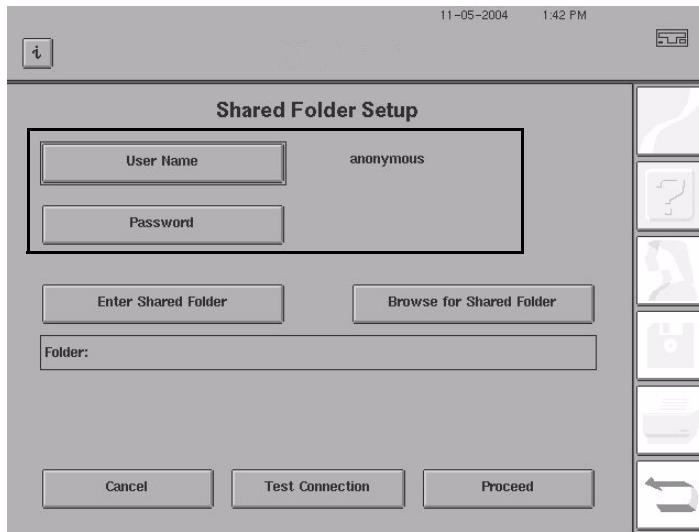
16. If there is *not* an “X” in the **Obtain HFA TCP/IP Settings Automatically** check box, press the empty check box to select it; otherwise, go to step 9.



17. Press **Workgroup Name**.
18. Type the workgroup or domain name of the computer with the shared drive and press **Enter**.
19. Press **Save**.
20. Press **EMR/PMS Export Setup**.



21. Select **Shared Folder** from the **File Server Access Protocol** drop-down menu and follow the instructions below:
  - a. Press **Shared Folder Setup**.
  - a. Press **User Name**.
  - b. Type your user name and press **Enter**.
  - c. Press **Password**.
  - d. Type your password and press **Enter**.



22. Press **Browse for Shared Folder**.

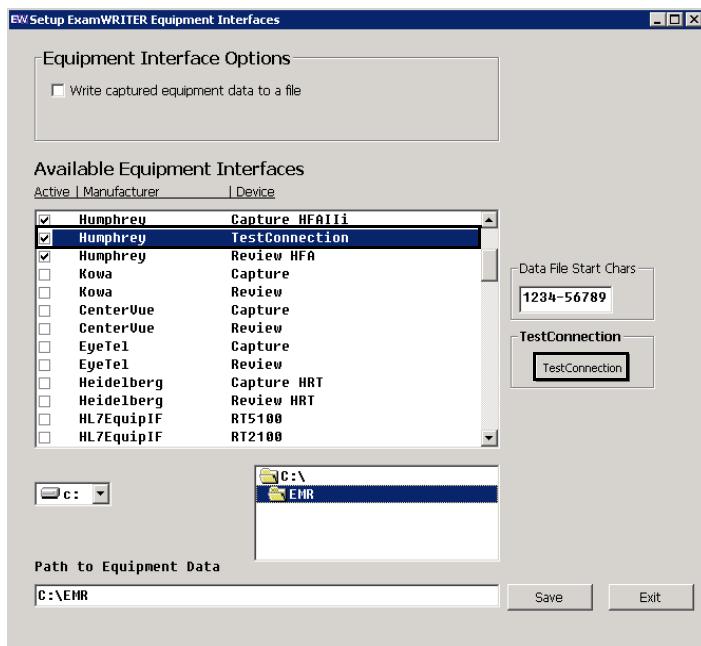
The EMR/PMS Export – Select Shared Folder window opens.

**NOTE**

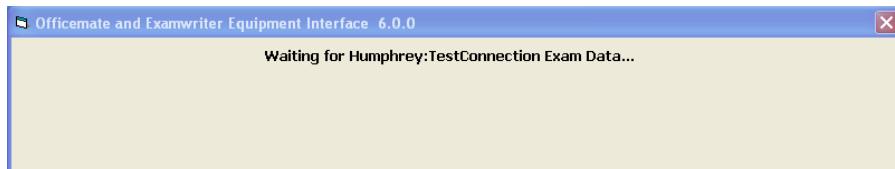
If you need help browsing to shared folders, call Zeiss Customer Care at 1.800.341.6968.

23. Navigate to and select the workgroup that you have shared.
24. Press **Proceed**.
25. Navigate to and select the computer that you have shared.
26. Press **Proceed**.
27. Navigate to and select the directory that you have shared (**EMR** or **EMR Export**).
28. Press **Select Folder**.
29. On the ExamWRITER main window, click **Tools**, and select **Equipment Integration Setup**.

30. Highlight the **Humphrey Test Connection** device and click **TestConnection**.



A connection test occurs in ExamWRITER.



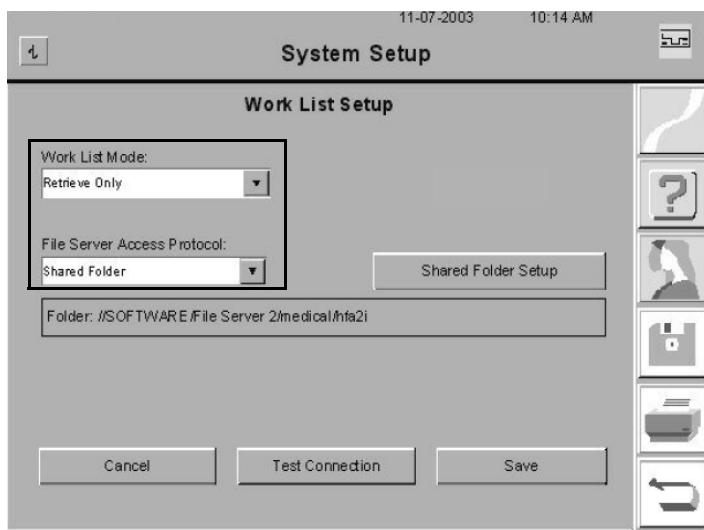
31. Press **Proceed**.

The "Connection test in progress, please wait..." message appears on the Humphrey equipment. This test can take up to a few minutes to perform.

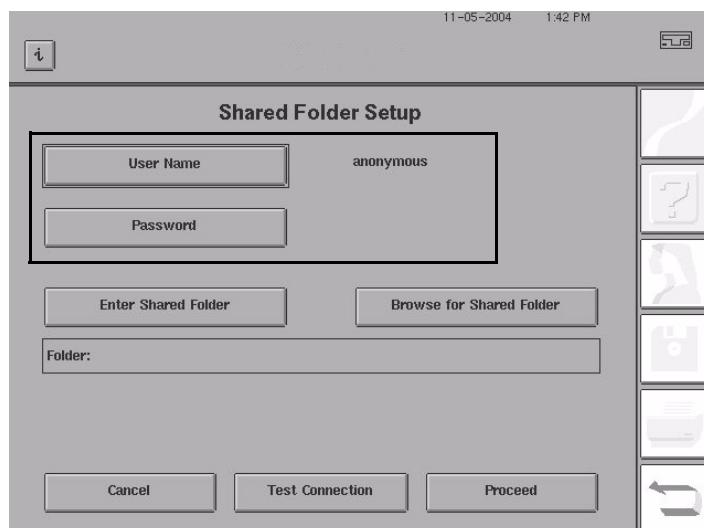
32. Press **Save**.

A second connection test may occur on the Humphrey equipment. This test can take up to a few minutes. The System Setup window opens after the connection test has completed.

33. Press **Work List Setup** and follow the instructions below:
  - a. Select **Retrieve Only** from the **Work List Mode** drop-down menu.
  - b. Select **Shared Folder** from the **File Server Access Protocol** drop-down menu.



34. Press **Shared Folder Setup** and follow the instructions below:
  - a. Press **User Name**.
  - b. Type your user name and press **Enter**.
  - c. Press **Password**.
  - d. Type your password and press **Enter**.



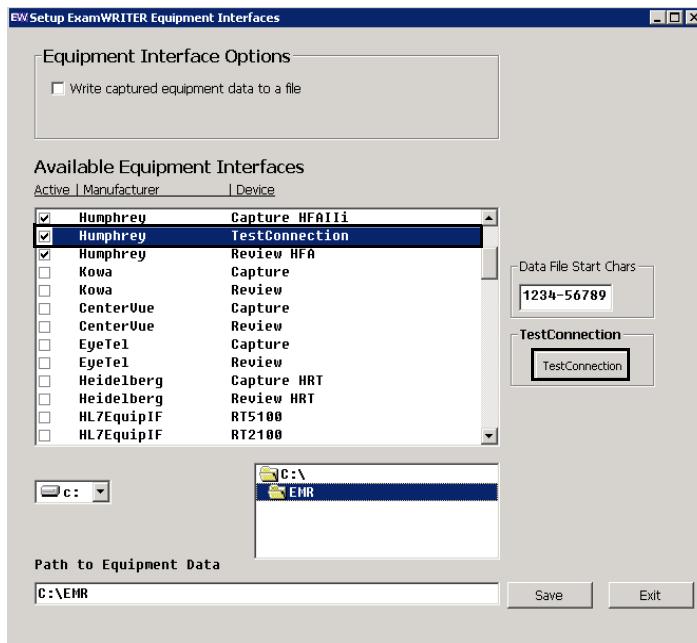
35. Press **Browse for Shared Folder**.

The Work List – Select Shared Folder window opens.

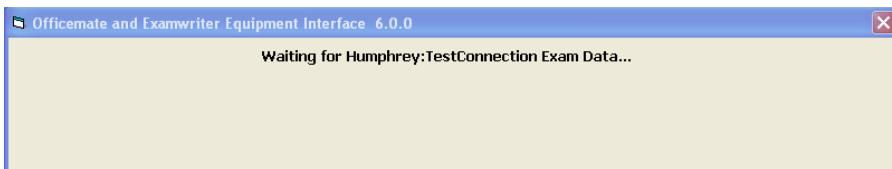
**NOTE**

If you need help browsing to shared folders, call Zeiss Customer Care at 1.800.341.6968.

36. Navigate to and select the workgroup that you have shared.
37. Press **Proceed**.
38. Navigate to and select the computer that you have shared.
39. Press **Proceed**.
40. Navigate to and select the directory that you have shared (**EMR** or **EMR Export**).
41. Press **Select Folder**.
42. Press **Save**.
43. On the ExamWRITER main window, click **Tools**, and select **Equipment Integration Setup**.
44. Highlight the **Humphrey Test Connection** device and click **TestConnection**.

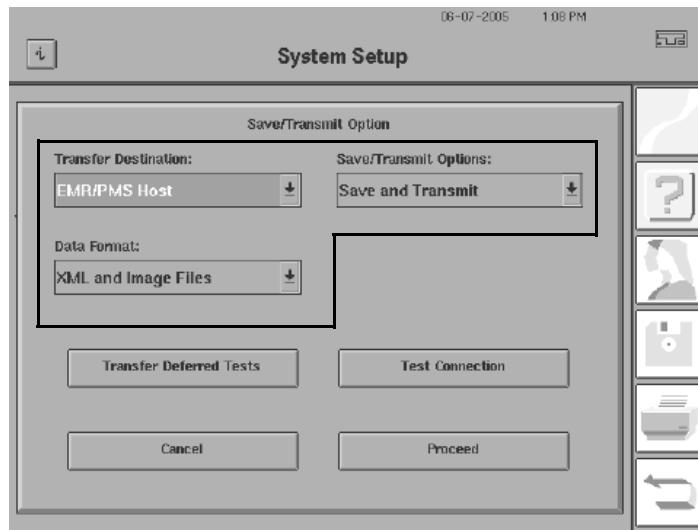


A connection test occurs on ExamWRITER.



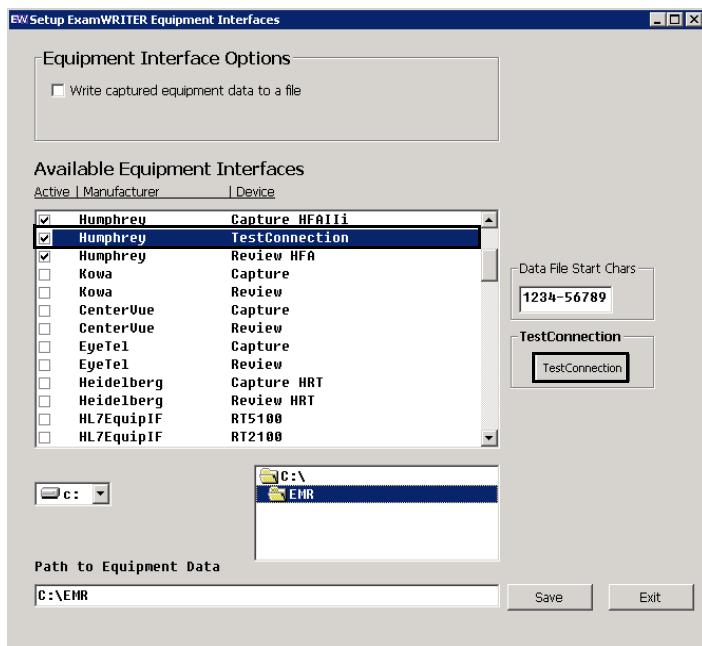
45. Press **Proceed** on the Humphrey System Setup window.  
 The “Connection test in progress, please wait...” message appears on the Humphrey equipment. This test can take up to a few minutes to perform.
46. Press **Done**.

47. Press **Save/Transmit Option** and follow the instructions below:
- Select **EMR/PMS Host** from the **Transfer Destination** drop-down menu.
  - Select **Save and Transmit** from the **Save/Transmit Options** drop-down menu.
  - Select **XML and Image Files** from the **Data Format** drop-down menu.

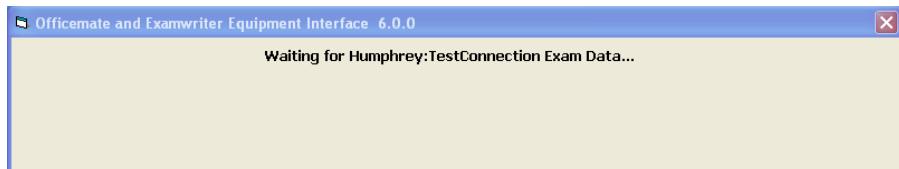


48. On the ExamWRITER main window, click **Tools**, and select **Equipment Integration Setup**.

49. Highlight the **Humphrey Test Connection** device and click **TestConnection**.



A connection test occurs on ExamWRITER.



50. Press **Proceed** on the Humphrey System Setup window.

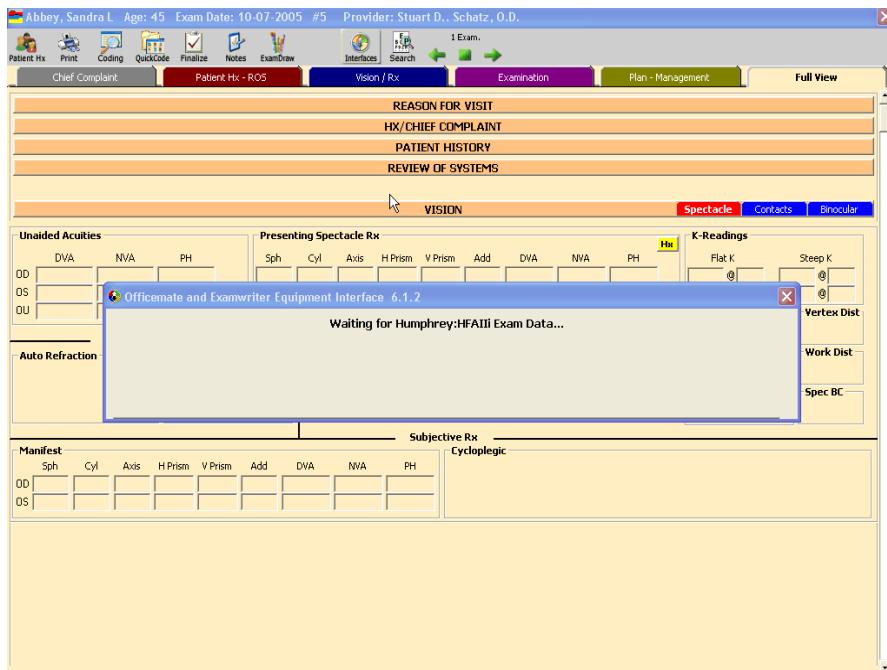
The “Connection test in progress, please wait...” message appears on the Humphrey equipment. This test can take up to a few minutes to perform.

## Using the Humphrey Interface

1. Ensure that the Humphrey Field Analyzer HFA II-i Series is connected to your network with a network cable.
2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Humphrey: Capture HFAlli**.

The Officemate/Examwriter Equipment Interface window opens and displays a “Waiting for Humphrey: Capture HFAlli Exam Data...” message.

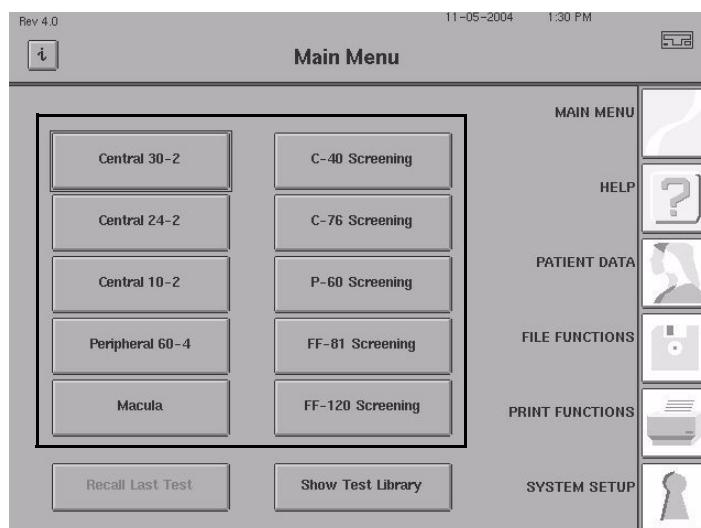
ExamWRITER sends patient demographic information to the Humphrey equipment.



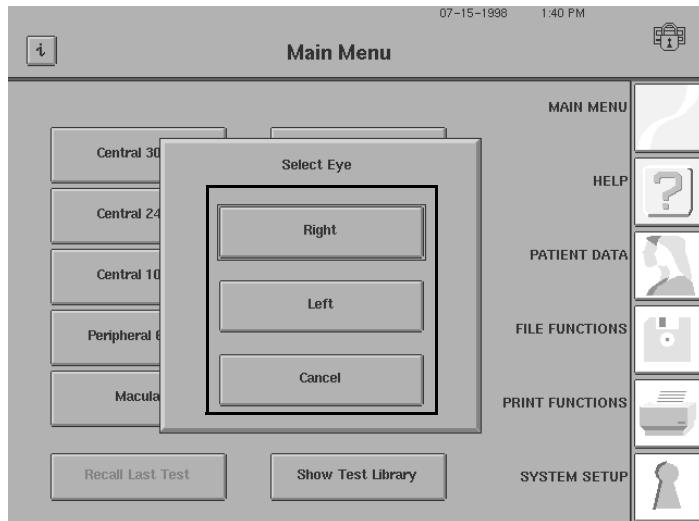
#### NOTE

If you used your Humphrey equipment prior to integrating it with ExamWRITER, you may need to change the patient's number in the Humphrey equipment to match the patient's number in ExamWRITER.

6. Insert a floppy disk into the floppy drive on the Humphrey equipment.
7. Press one of the ten test buttons on the Humphrey Main Menu window.

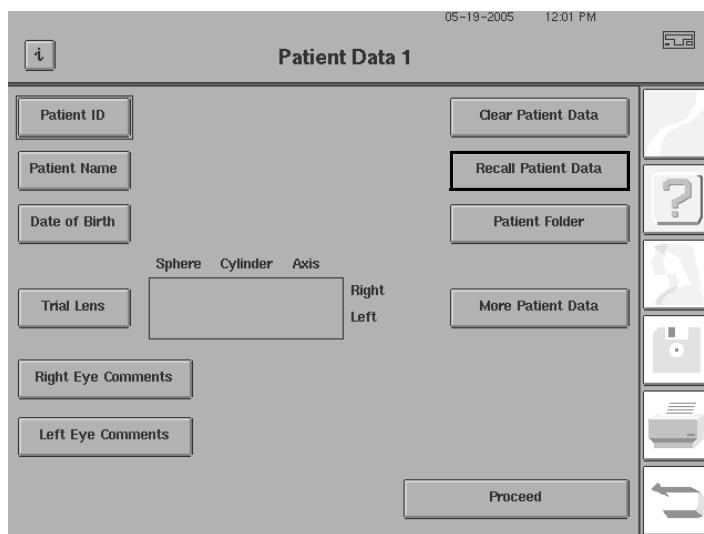


8. Select **Right** or **Left** from the Select Eye window.

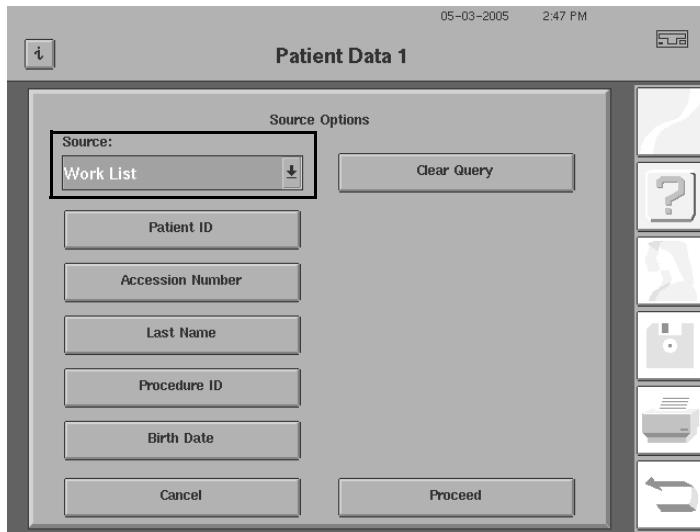


The Patient Data 1 window opens.

9. If the incorrect patient is displayed in the window, follow the instructions below; otherwise, go to step 10:
- Press **Clear Patient Data**.
  - Press **Clear Data**.
10. Press **Recall Patient Data**.



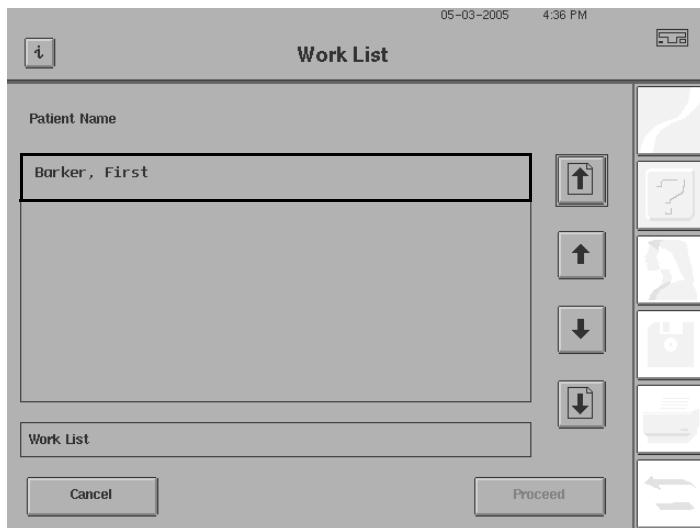
11. Select **Work List** from the **Source** drop-down menu.



12. Press **Proceed**.

The Work List window opens.

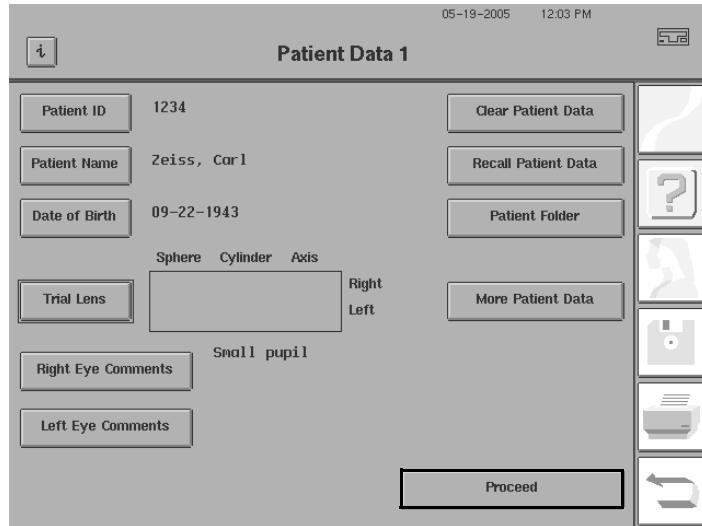
13. Highlight the current patient.



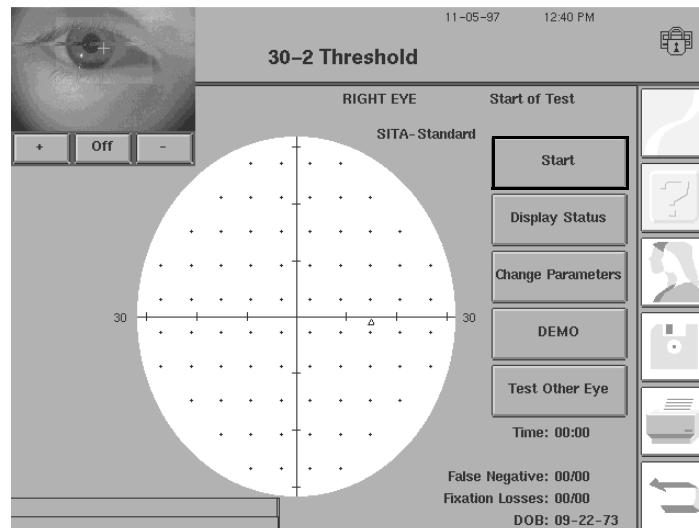
14. Press **Proceed**.

The Patient Data 1 window opens.

15. Verify that the patient demographic data is correctly displayed on the window.

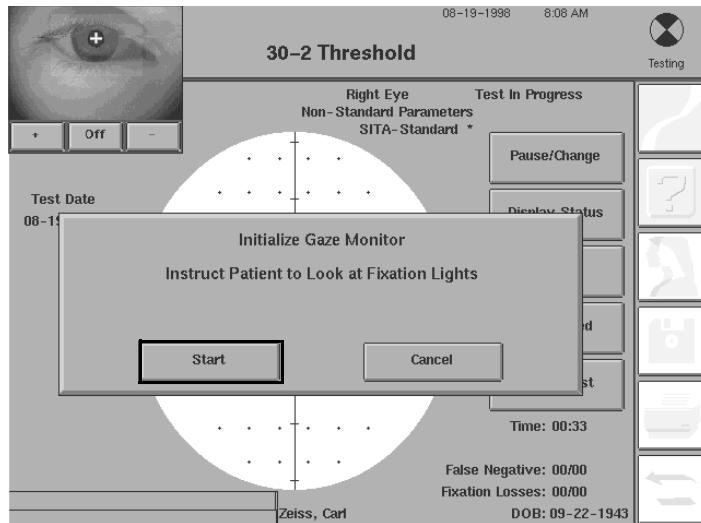
16. Press **Proceed**.

The Humphrey equipment checks for a floppy disk and ensures that you are able to write to the disk. The test screening window opens.

17. Press **Start** on the test screening window.

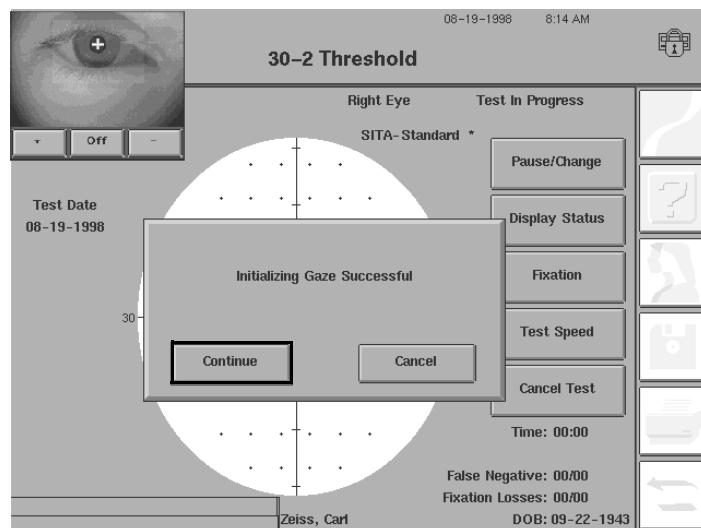
The "Initialize Gaze Monitor. Instruct Patient to Look at Fixation Lights" message appears.

18. Press **Start**.



The “Initializing Gaze Successful” message appears.

19. Press **Continue**.



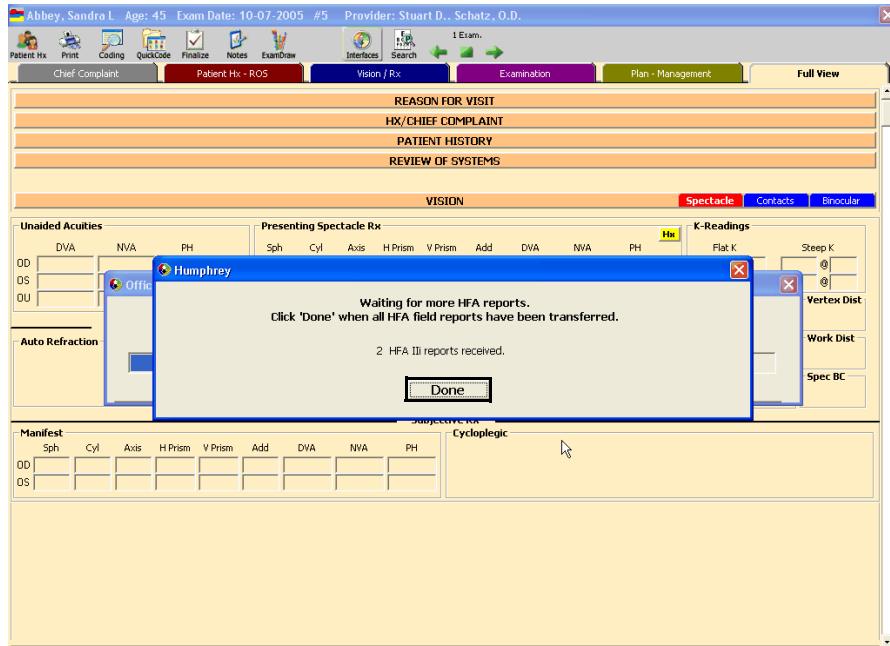
The test is performed and the “Do You Wish to Save This Test For: Patient?” message appears.

20. Press **Yes**.

The “Saving Test In Progress. Please Wait” message appears and the Humphrey data is transferred to ExamWRITER. ExamWRITER parses and saves the data and receives the reports.

<b>NOTE</b>	If you want to test another eye, press <b>Test Other Eye</b> and repeat steps 17–20; otherwise, go to step 21.
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21. Click **Done** after all of the reports have been received by ExamWRITER.

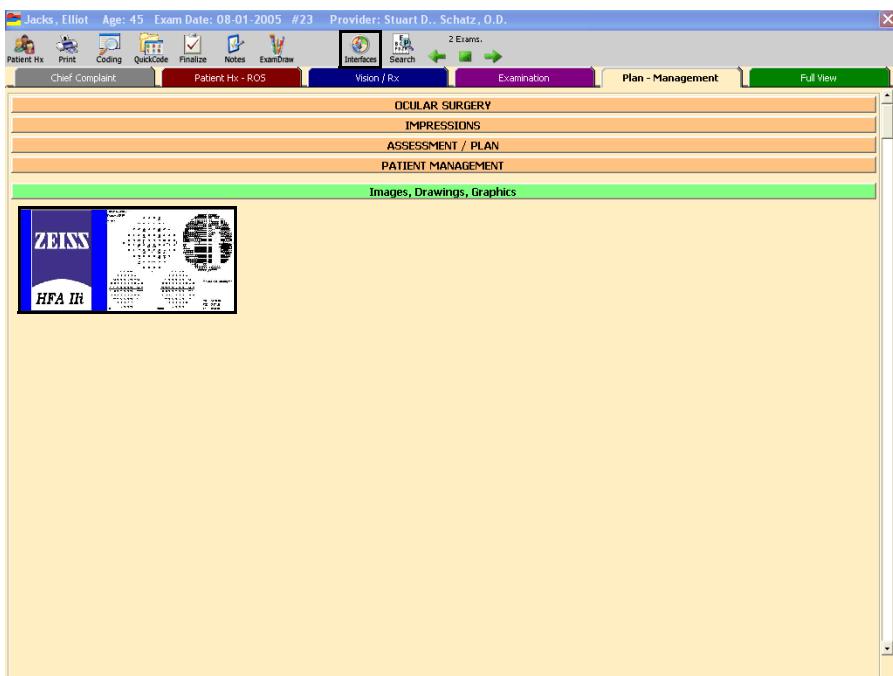


22. Press the **Main Menu** or **Return** icon on the Humphrey equipment.

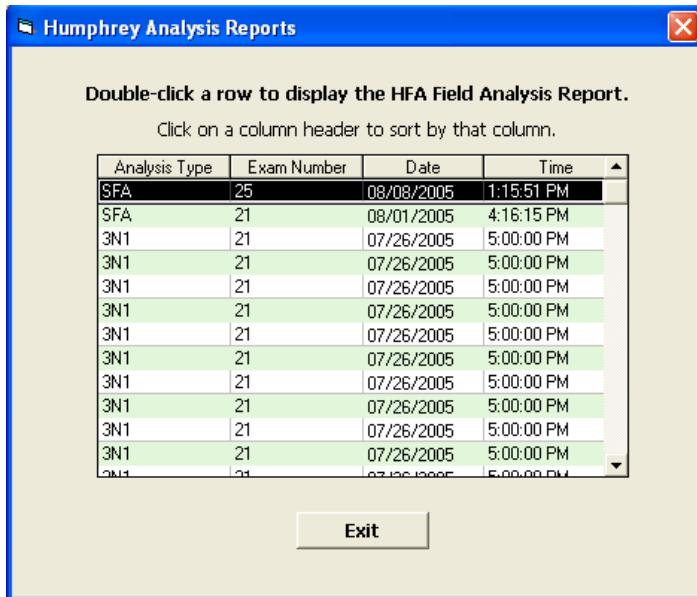
The Main Menu window opens.

# Viewing Humphrey Analysis Reports

1. Open the Humphrey Analysis Reports window using one of the following methods:
    - Click the **Interfaces** icon and select **Humphrey:Review HFA**.
    - Click on the **Plan - Management** tab and click the **Zeiss HFA III** icon.



2. Double-click on a report to open, view, and print it.





# Using the Humphrey® HFA3 Interface

7

## In this chapter:

- Humphrey Interface Overview, 49
- Setting Up the Humphrey Interface, 49
- Setting Up the Humphrey Equipment, 52
- Using the Humphrey Interface, 52
- Viewing Humphrey Analysis Reports, 55

## Humphrey Interface Overview

ExamWRITER receives data reports from the Humphrey Field Analyzer HFA3 Series equipment and links the reports to the ExamWRITER exam record. ExamWRITER does *not* send clinical data to the Humphrey equipment.

The Humphrey equipment interface saves data reports to the DATA folder on the ExamWRITER server, which then can be accessed by all computers networked to look at that folder. The data reports can be shared and accessed at multiple computers, as long as the computers are networked properly and the folder is properly mapped and shared. The Humphrey interface uses a mapped network drive to connect to the computer or Terminal Server. Ensure that you have purchased the networking license from Carl Zeiss Meditech, Inc., so that you can properly network your Humphrey Field Analyzer and interface with ExamWRITER.

**NOTE**

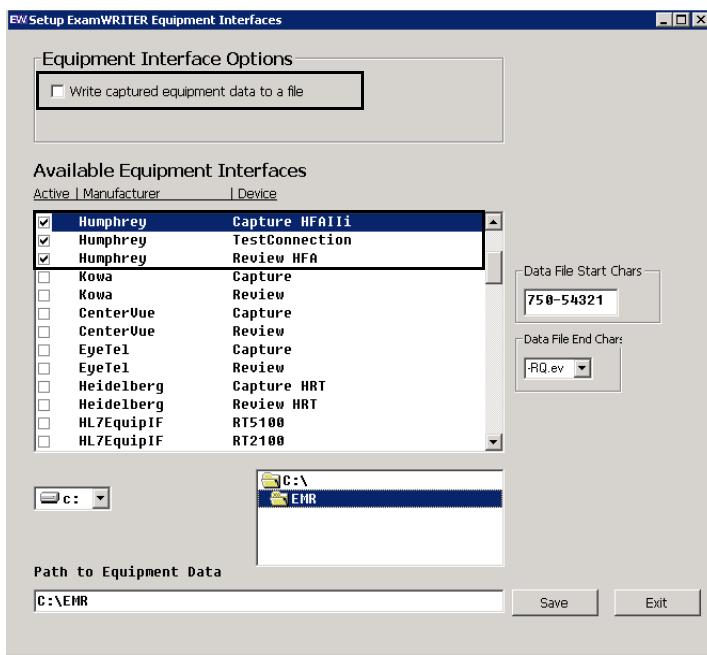
Even if you are familiar with using the Humphrey equipment, you will still need to follow the instructions in “[Using the Humphrey Interface](#)” [on page 52](#) so that you correctly recall patient data and transfer the tests.

## Setting Up the Humphrey Interface

Before you begin using the Humphrey equipment interface, set up the Humphrey interface in ExamWRITER.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Humphrey equipment in a file for debugging purposes; otherwise, go to step 3.

3. Select the check boxes next to the equipment interfaces that you are setting up.



4. Highlight the **Humphrey Capture HFAIII** device.
5. Type the Humphrey equipment's serial number in the **Data File Start Chars** text box.

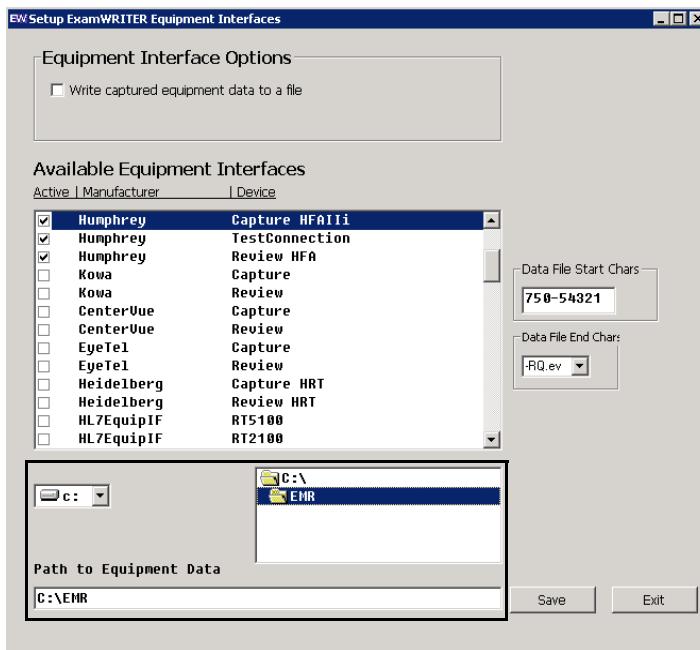
**NOTES**

- Your Humphrey equipment's serial number is listed in the OA Web License and on a sticker on the equipment.
- Omit the "I" in the serial number when you type it into the Data File Start Chars text box. For example, if your serial number is 123I-34432, type, 123-34432 in the **Data File Start Chars** text box.

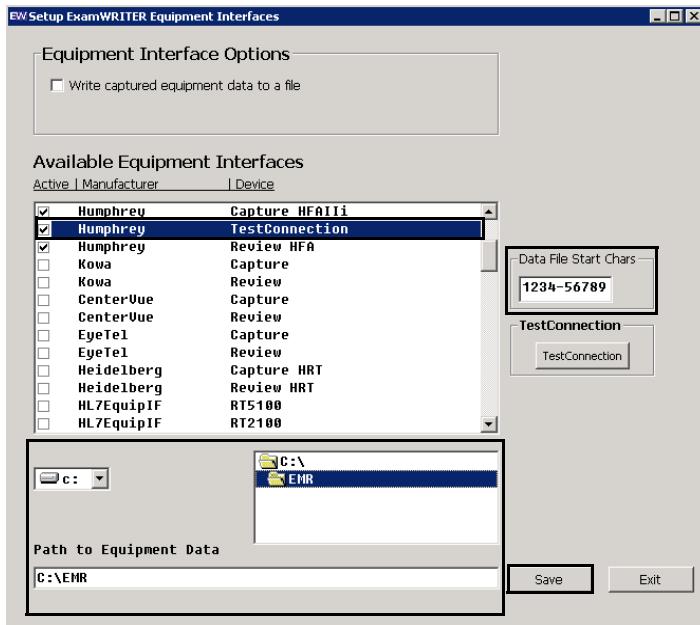
- Select the drive and shared folder (**EMR** or **EMR Export**) where the Humphrey equipment data is written.

**NOTE**

*Do not select the OfficeMate/DATA/HFAlli\_Reports folder on the server. If you select this folder, all of your Humphrey analysis reports will be deleted.*



- Click **Save**.
- Highlight the **Humphrey TestConnection** device and repeat steps 5–7.



- Click **Exit**.
- Close and reopen ExamWRITER to activate your changes.

## Setting Up the Humphrey Equipment

Before you begin using the Humphrey equipment interface on your network, instruct your IT technician to set up the Humphrey Field Analyzer HFA3 Series equipment on your network with help from Zeiss Customer Care. You can get setup help by contacting Zeiss Customer Care at 1.800.341.6968, ext. 7101.

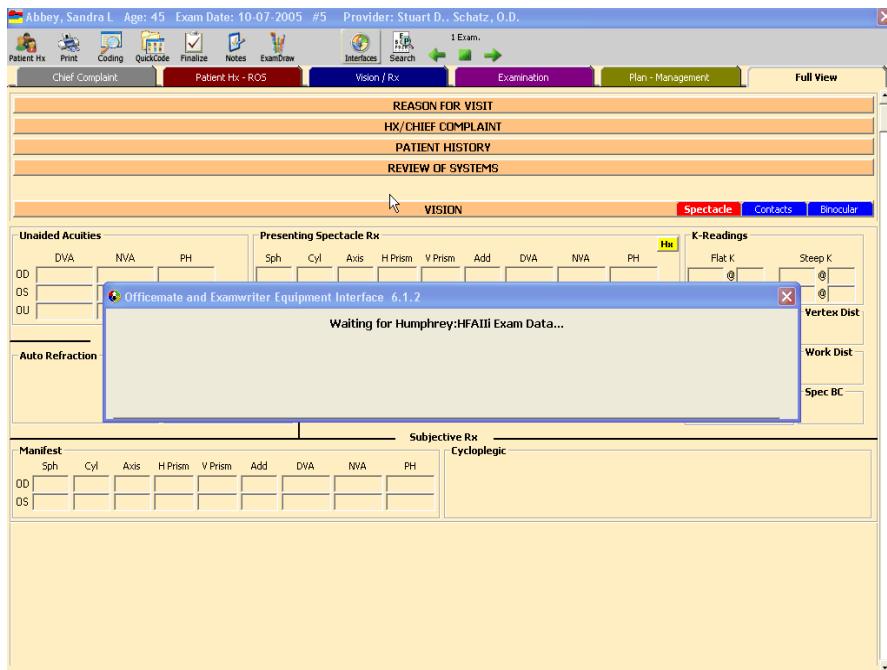
1. Ensure that the Humphrey Field Analyzer HFA3 Series is connected to your network with a network cable.
2. Ensure that ExamWRITER is open.
3. Follow the instructions on pages 5-1, 5-2, and 5-3 (through the “Remote Application Entities” section) in the “Networking” chapter in the *Humphrey HFA3 Series User Manual*.
4. Follow the “Connect to a Non-DICOM EMR” instructions on pages 5-5 and 5-6 in the “Networking” chapter in the *Humphrey HFA3 Series User Manual*.

## Using the Humphrey Interface

1. Ensure that the Humphrey Field Analyzer HFA3 Series is connected to your network with a network cable.
2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Humphrey: Capture HFAlli**.

The Officemate/Examwriter Equipment Interface window opens and displays a “Waiting for Humphrey: Capture HFAlli Exam Data...” message.

ExamWRITER sends patient demographic information to the Humphrey equipment.

**NOTE**

If you used your Humphrey equipment prior to integrating it with ExamWRITER, you may need to change the patient's number in the Humphrey equipment to match the patient's number in ExamWRITER.

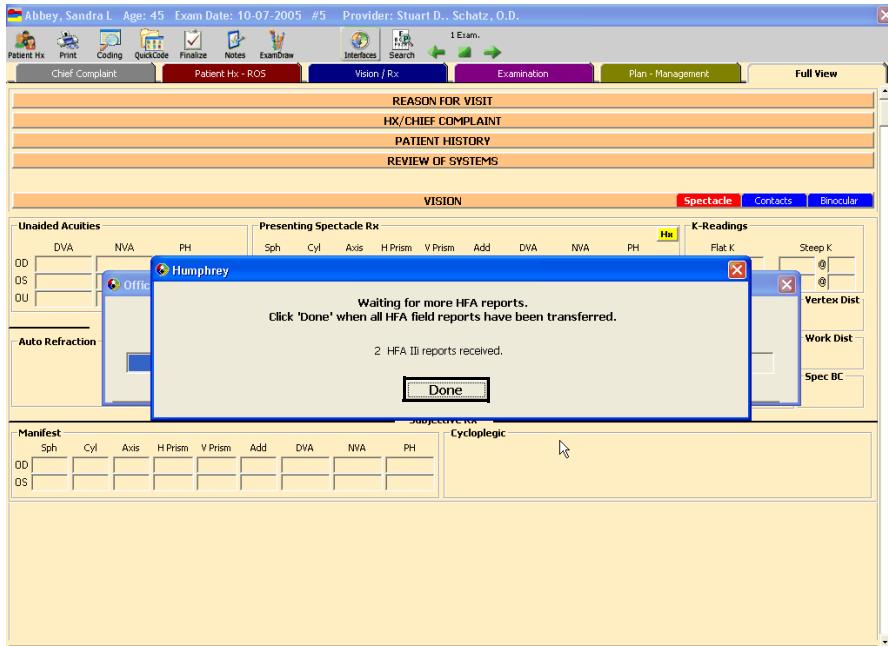
6. From the Patient window on the Humphrey equipment, click the refresh button to open the patient profile for the patient whose exam is open.

**NOTE**

If you do not see the refresh button under the Add button on the Patient window, call Zeiss Customer Care at 1.800.341.6968.

7. Follow the instructions that were given to you during your Zeiss training and perform the tests on the patient. Remember to save all tests after completing them so that they are transferred and linked to the patient exam.

8. Click **Done** after all of the reports have been received by ExamWRITER.

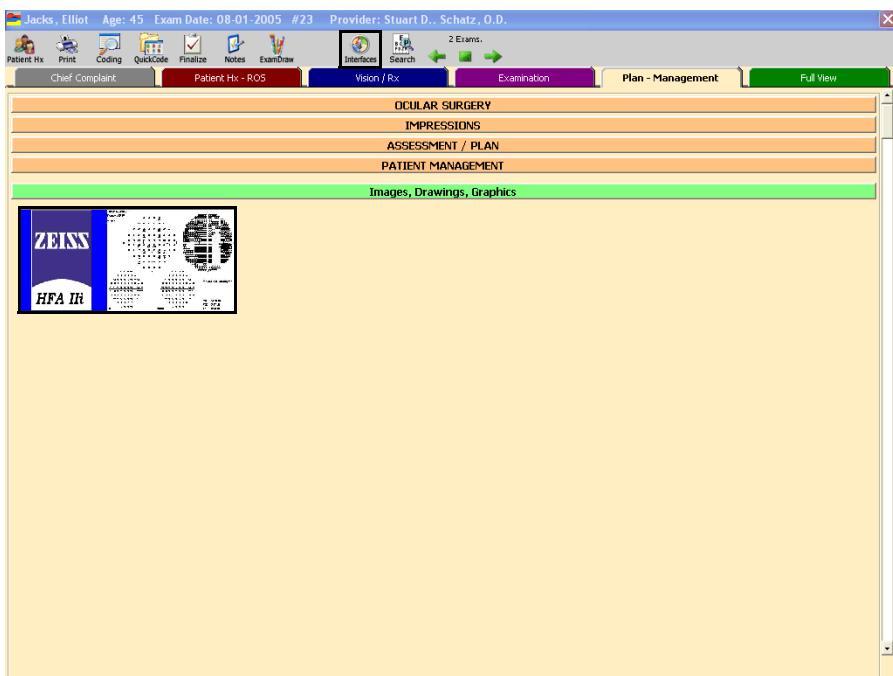


9. Press the **Main Menu** or **Return** icon on the Humphrey equipment.

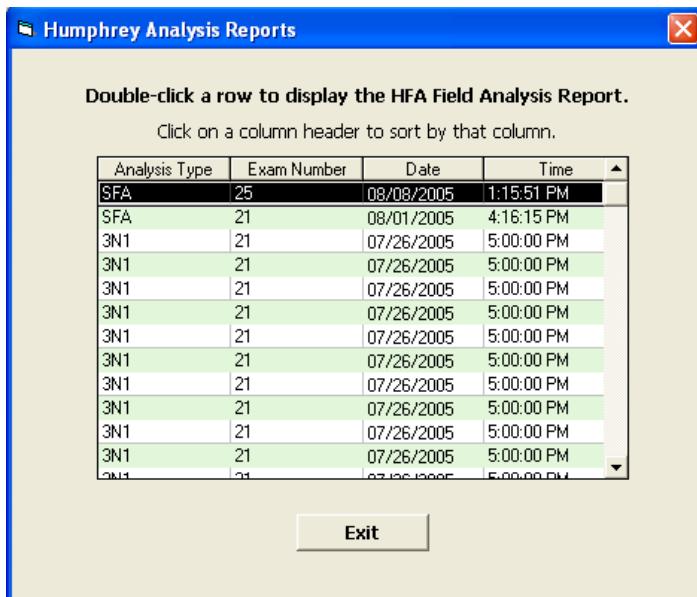
The Main Menu window opens.

## Viewing Humphrey Analysis Reports

1. Open the Humphrey Analysis Reports window using one of the following methods:
  - Click the **Interfaces** icon and select **Humphrey:Review HFA**.
  - Click on the **Plan - Management** tab and click the **Zeiss HFA III** icon.



2. Double-click on a report to open, view, and print it.





# Using the Humphrey® Matrix Interface

8

## In this chapter:

- Humphrey Matrix Overview, 57
- Setting Up the Humphrey Matrix Equipment, 57
- Setting Up the Humphrey Matrix Interface, 58
- Using the Humphrey Matrix Interface, 59
- Viewing Humphrey Matrix Reports, 61

## Humphrey Matrix Overview

ExamWRITER receives data reports from the Humphrey Matrix equipment and stores the reports in the ExamWRITER exam record. ExamWRITER does *not* send clinical data to the Humphrey Matrix equipment.

The Humphrey Matrix equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The Humphrey Matrix interface uses a RS-232 cable or null modem to connect to the computer. You must connect to the computer using COM 1 port. The Humphrey Matrix interface cannot connect to a Terminal Server.

## Setting Up the Humphrey Matrix Equipment

Before you begin using the Humphrey Matrix equipment interface, you must set up the Humphrey Matrix equipment. Refer to the *Humphrey Matrix Visual Field Instrument User's Guide* and the *Humphrey Matrix Connectivity Cable Instructions* for detailed information on setting up the Humphrey Matrix equipment.

You must be using the Humphrey Matrix 7.02 or above in order to interface with ExamWRITER. If you are unsure of your Humphrey Matrix version number, press the F6 key or click the F6 tab on the Matrix window to open the Matrix Help window. The SBC Software Version in the System Information frame must be 07.02.01[0] or above and the MCU Software Version must be 02.03.01[0] or above. If the software versions do not meet the requirements stated above, contact your Humphrey Matrix vendor for support.

## Setting Up the Humphrey Matrix Interface

Before you begin using the Humphrey equipment interface, set up the Humphrey Matrix interface in ExamWRITER.

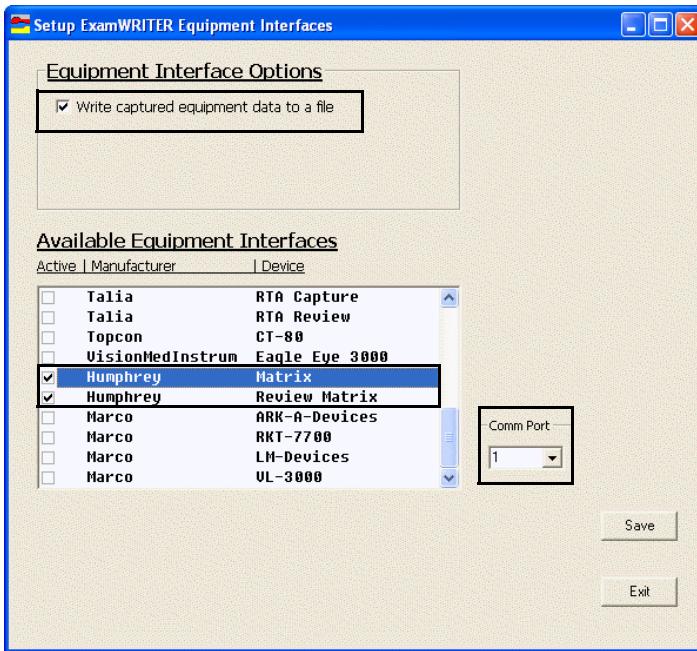
### NOTES

- You must set up the Humphrey Matrix interface from the computer connected to the Humphrey Matrix equipment.
- You must be using ExamWRITER version 7.3 or above to interface with the Humphrey Matrix equipment.
- You must have the .NET Framework version 2.0.50727 or above installed on the computer system running ExamWRITER and connected to the Humphrey Matrix equipment. You can download this .NET Framework version at <http://www.microsoft.com/downloads/details.aspx?FamilyID=0856EACB-4362-4B0D-8EDD-AAB15C5E04F5&displaylang=en>. The .NET Framework requires Windows Installer version 3 or above. You can download this Windows Installer version at <http://www.microsoft.com/downloads/details.aspx?familyid=889482fc-5f56-4a38-b838-de776fd4138c&displaylang=en>.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Humphrey Matrix equipment in a file for debugging purposes; otherwise, go to step 3.
3. Deselect the check boxes next to the equipment interfaces that you are *not* using.
4. Highlight the **Humphrey Matrix** device.

5. Select **1** from the **Comm Port** drop-down menu.

**NOTE** If you change the communication port after initially setting it up, you must restart the computer so that the OM Matrix Gateway is reset to the new communication port.



6. Click **Save**.
7. Click **Exit**.
8. Close and reopen ExamWRITER to activate your changes.

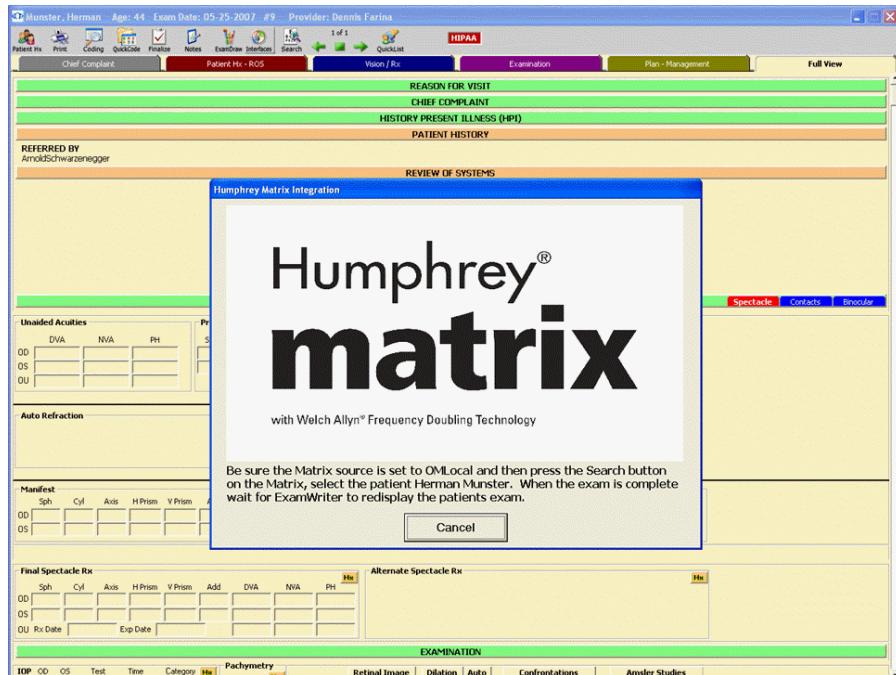
## Using the Humphrey Matrix Interface

**NOTE** Ensure that the OM Matrix Gateway installed and open on the computer on which ExamWRITER is installed and that is connected to the Humphrey Matrix equipment (go to [www.officemate.net/omkb/article.aspx?id=19629](http://www.officemate.net/omkb/article.aspx?id=19629) if you do not have the OM Matrix Gateway program and you need to download and install it). If the OfficeMate logo is visible in the Windows task bar at the bottom of the screen, then OM Matrix Gateway is open. If you right-click on the OfficeMate logo in the Windows task bar, select **Shutdown**, and select **Yes** when the prompt asks you to shutdown the OM Matrix Gateway application, you must restart the computer and the Humphrey Matrix equipment so that communication errors do not occur.

1. Ensure that the Humphrey Matrix equipment is connected to the computer that ExamWRITER is installed upon with a Humphrey Matrix Connectivity Cable. For instructions on using the cable, read the *Humphrey Matrix Connectivity Cable Instructions*.
2. Ensure that ExamWRITER is open.

3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Humphrey:Matrix Capture**.

The Humphrey Matrix Integration window opens.



6. On the Humphrey Matrix computer system's Main Menu window, click **Select Patient**.

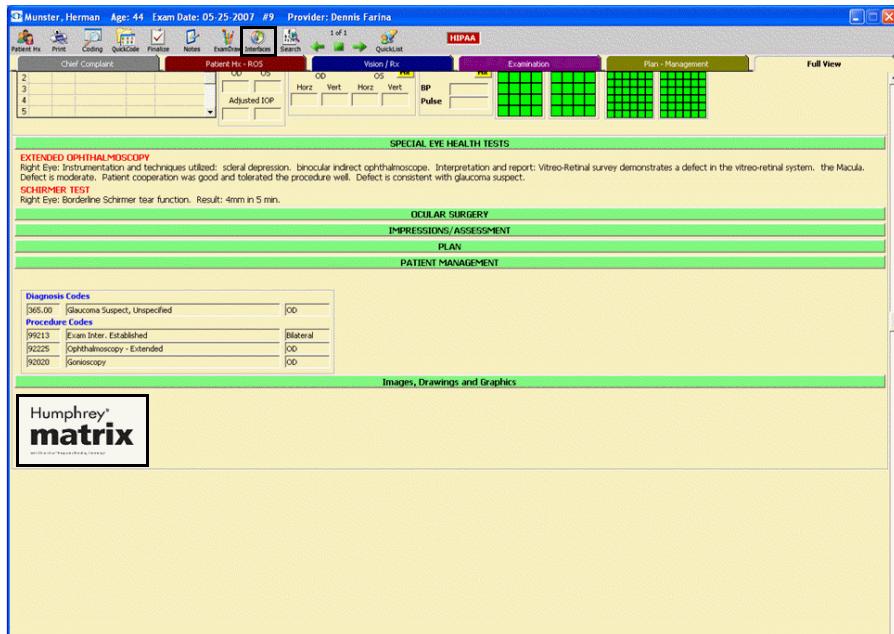
The View Patients window opens.

7. Select **OMLocal** from the **Source** drop-down menu.
8. Click **Search**.
9. Select the patient whose exam is open in ExamWRITER.
10. Perform the desired test on the Humphrey Matrix.

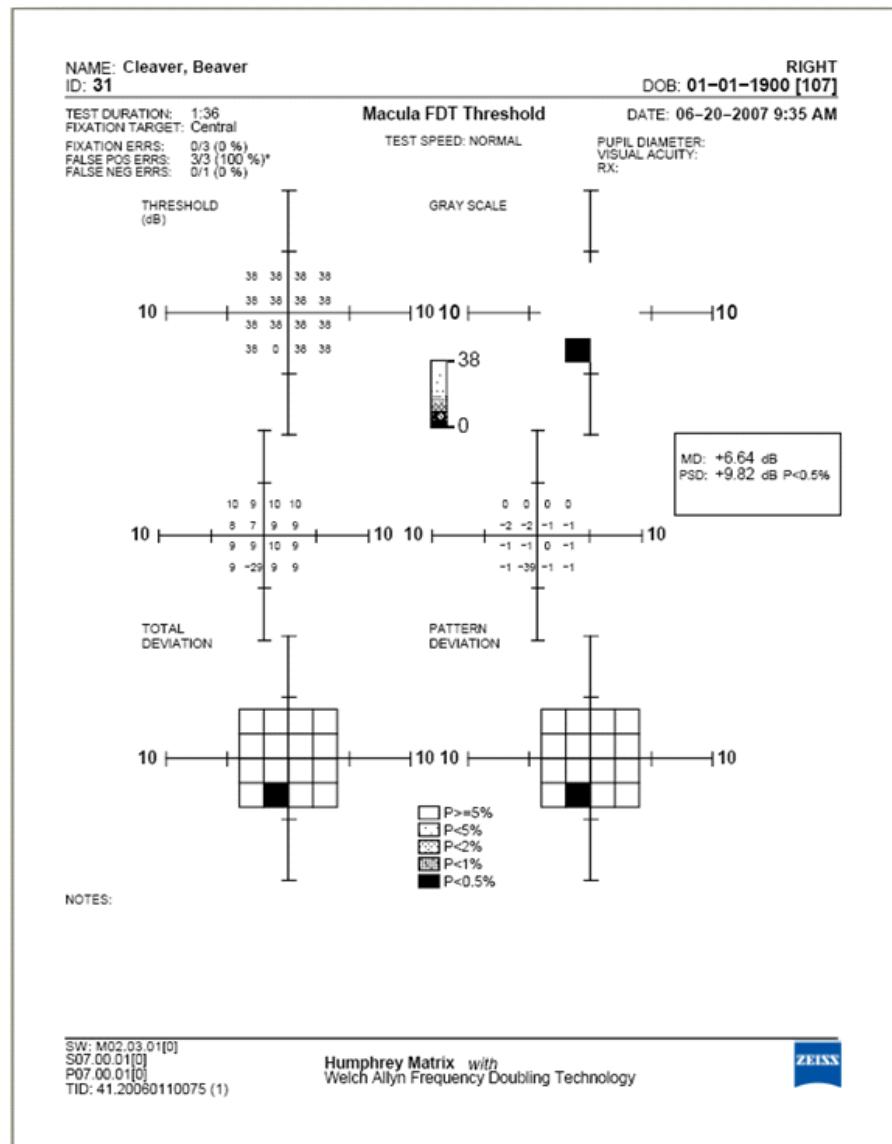
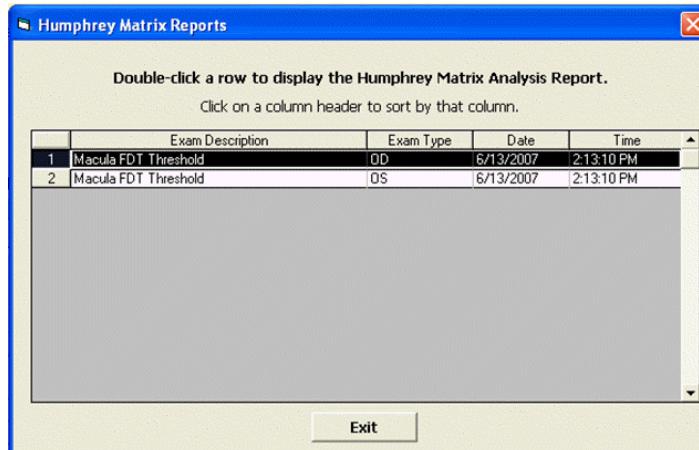
After the test is completed, the Humphrey Matrix icon will appear on the ExamWRITER chart window under the Images, Drawings and Graphics category bar on the Plan - Management tab.

## Viewing Humphrey Matrix Reports

1. Open the Humphrey Matrix Reports window using one of the following methods:
  - Click the **Interfaces** icon and select **Humphrey:Review Matrix**.
  - Click on the **Plan - Management** tab and click the **Humphrey Matrix** icon.



- Double-click on a report to open, view, and print it.



# Using the Huvitz Interface

9

## In this chapter:

- Huvitz Interface Overview, 63
- Setting Up the Huvitz Equipment, 64
- Setting Up the Huvitz Interface, 64
- Installing CDR-Mate, 66
- Setting Up CDR-Mate, 68
- Activating CDR-Mate to Receive Data From Huvitz, 72
- Using the Huvitz Interface, 72

## Huvitz Interface Overview

ExamWRITER receives data from the Huvitz equipment and displays the data on the ExamWRITER chart window. ExamWRITER does *not* send data to the Huvitz equipment.

**NOTE**

The HRK7000 and HRK8000 Wavefront Autorefractor/Keratometer only import autorefraction and keratometry data, and *not* waveform data, into ExamWRITER.

The Huvitz equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Huvitz interface uses a serial RS-232 cable

or null modem to connect to the computer or Terminal Server. The Huvitz equipment interface can use multiple serial ports per PC.

NOTES	<ul style="list-style-type: none"><li>• If you are using the Huvitz DRS3100 in a wireless environment, you must hard-wire a computer in the exam room to the Huvitz equipment by connecting the Huvitz DRS3100 PC translation box to the serial port on the computer and sharing your export directory. If you are using more than one Huvitz DRS3100 in a wireless environment, the export directory on the network must be accessible from the tablet PC or laptop. For more information on selecting your export directory, go to “<a href="#">Setting Up CDR-Mate</a>” on <a href="#">page 68</a>.</li><li>• If you are using multiple Huvitz pieces of equipment in multiple exam rooms, go to <a href="http://www.officemate.net/omkb/article.aspx?id=10868">www.officemate.net/omkb/article.aspx?id=10868</a> for instructions on how to properly set up your export directories.</li></ul>
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## Setting Up the Huvitz Equipment

Set up your Huvitz equipment using the following settings. If you need help setting up your Huvitz equipment, contact your equipment vendor.

Equipment	Settings
Huvitz MRK3100	Format: OLD Baud Rate: 9600
Huvitz CLM3100	Format: OLD Baud Rate: 9600
Huvitz HRK7000	BPS: 9600 RS232: V1 Mode: Topcon and Standard
Huvitz HRK8000	BPS: 9600 RS232: V1 Mode: Topcon and Standard

## Setting Up the Huvitz Interface

NOTE	You must set up the Huvitz interface from the computer connected to the Huvitz equipment.
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1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.

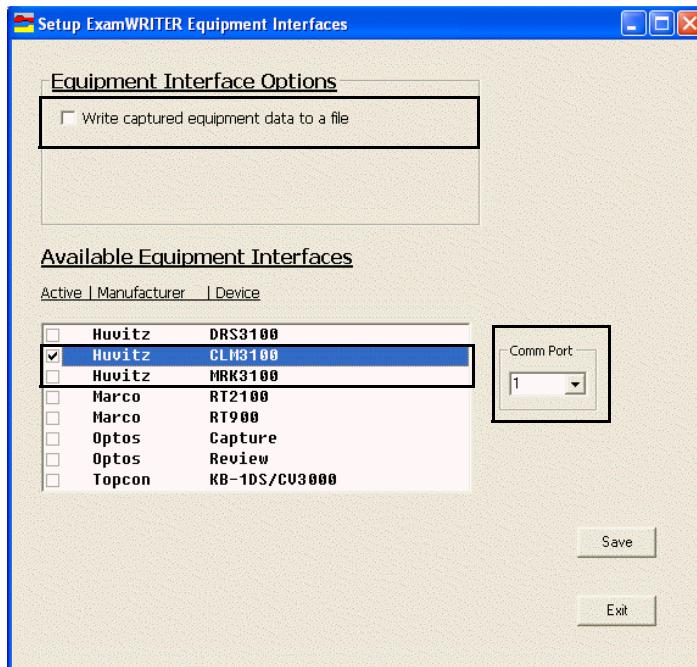
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Huvitz in a file for debugging purposes; otherwise, go to step 3.
3. If you are using the Huvitz DRS3100, select the **Verify Patient ID before data is imported** check box if you want ExamWRITER to verify the patient ID for debugging purposes; otherwise, go to step 4.
4. Select the check boxes next to the equipment interfaces that you are setting up.

**NOTE**

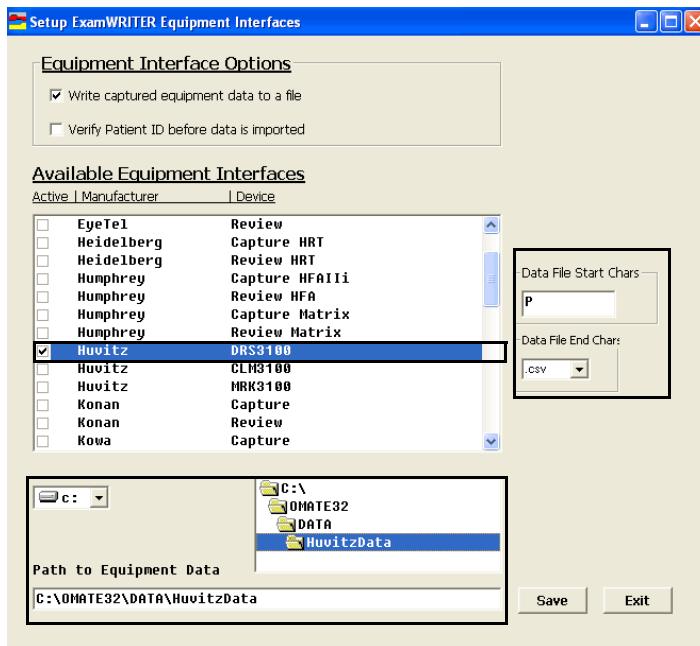
If you are using the Huvitz HRK7000 or HRK8000, select **Huvitz MRK3100**.

5. If you are using the Huvitz CLM3100 or Huvitz MRK3100, select a communication port number from the **Comm Port** drop-down menu; otherwise, go to step 6.

The Comm Port default for the Huvitz CLM3100 is 1. The Comm Port default for the Huvitz MRK3100 is 2.



6. If you are using the Huvitz DRS3100, CDR3100, or HDR7000, complete the following tasks:
  - a. Type the data file's beginning characters in the **Data File Start Chars** text box and select the data file's ending characters (extension) from the **Data File End Char** drop-down menu to specify the start and end characters of data source files and identify specific files from which the interface is importing data.
  - b. Select the drive and folder where the equipment data is stored; otherwise, go to step 7.



7. Click **Save**.
8. Click **Exit**.
9. Close and reopen ExamWRITER to activate your changes.

## Installing CDR-Mate

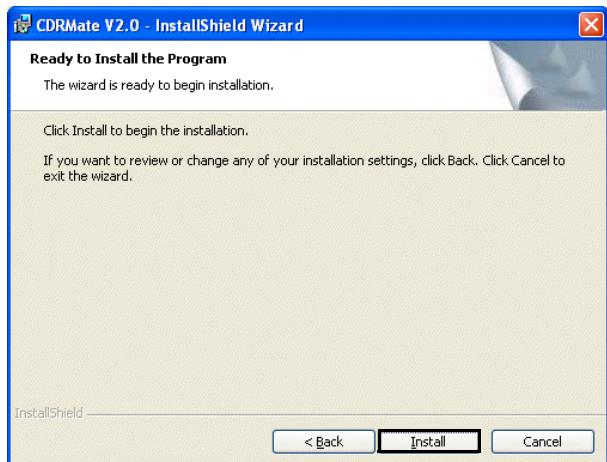
<b>NOTE</b>	If you are using a Huvitz autorefractor or autolensometer, you do not need to install CDR-Mate; instead, simply connect the autorefractor or autolensometer to your computer's serial port and go to " <a href="#">Using the Huvitz Interface</a> " on page 72.
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1. Insert the **CDR-Mate for Digital Refraction System CD-ROM**.
2. Navigate to the **Install** folder on the CD-ROM.
3. Double-click **setup.exe**.  
 The InstallShield Wizard opens.

4. Click **Next**.



5. Click **Install**.



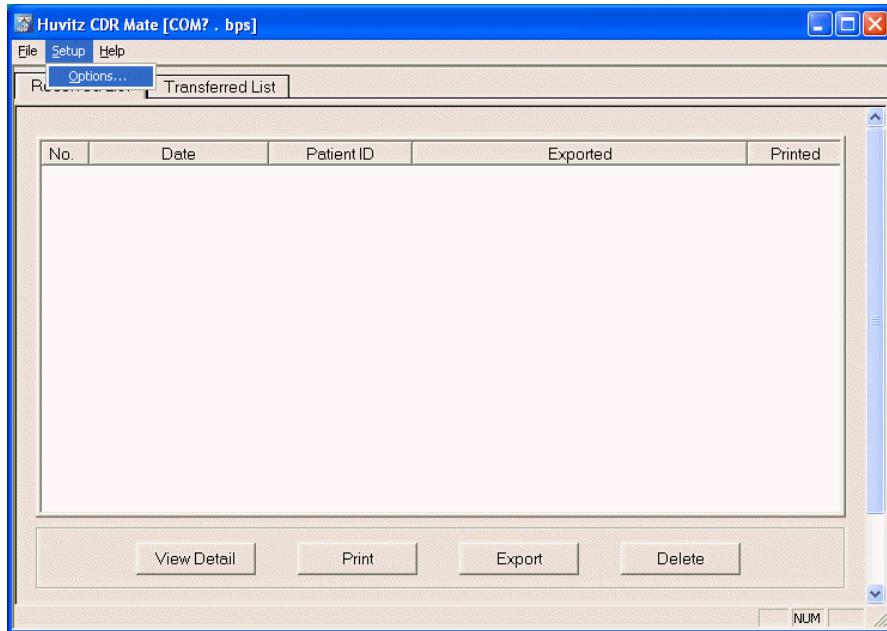
The installation begins.

6. Click **Finish** when the installation completes.



## Setting Up CDR-Mate

1. Double-click the **CDRMate** icon on your desktop.
2. Click **Setup**.
3. Select **Options**.



The Options window opens.

4. Click the **Connection** tab.
5. Select the **Digital Refraction** radio button in the Connection Target box.
6. Select **1.0** from the **Protocol Version** drop-down menu in the Connection Target box.
7. Select the appropriate system ID from the **System ID** drop-down menu in the Connection Target box. The system ID must be set to the same ID as the Huvitz control panel system ID connected to the computer.

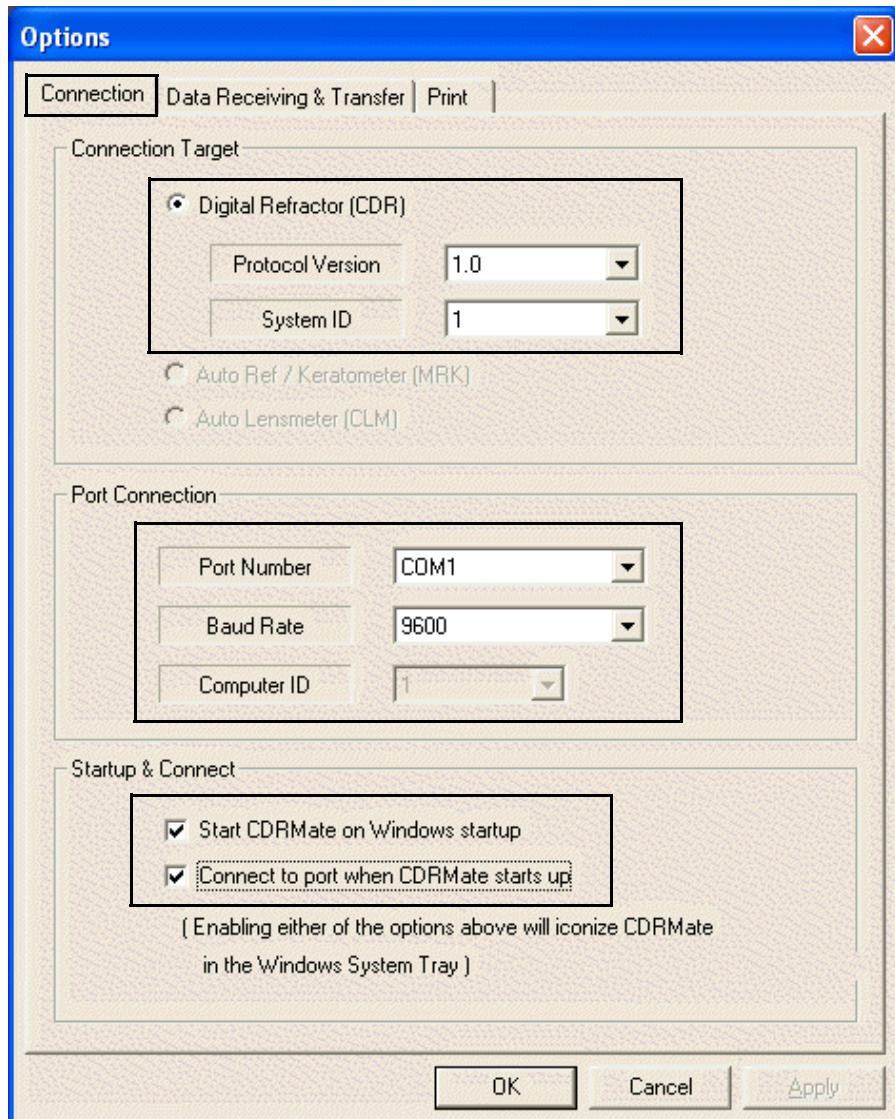
**NOTE**

To check the Huvitz control panel system ID, follow the instructions below:

1. Press and hold down the **Alt** key on the Huvitz control panel.
2. Press and release **Menu**.
3. Press and release **Start**.
4. Press and release **ID**.  
The lower left corner of the Huvitz control panel screen displays a box with the CDR System ID number.
5. Ensure that the ID number is the same as the system ID in the Connection Target box.

6. Select **COM1** from the **Port Number** drop-down menu in the Port Connection box.

7. Select **9600** from the **Baud Rate** drop-down menu in the Port Connection box.
8. Select **1** from the **Computer ID** drop-down menu in the Port Connection box.
9. Select the **Start CDRMate on Windows startup** check box in the Startup & Connect box.
10. Select the **Connect to port when CDRMate starts up** check box in the Startup & Connect box.



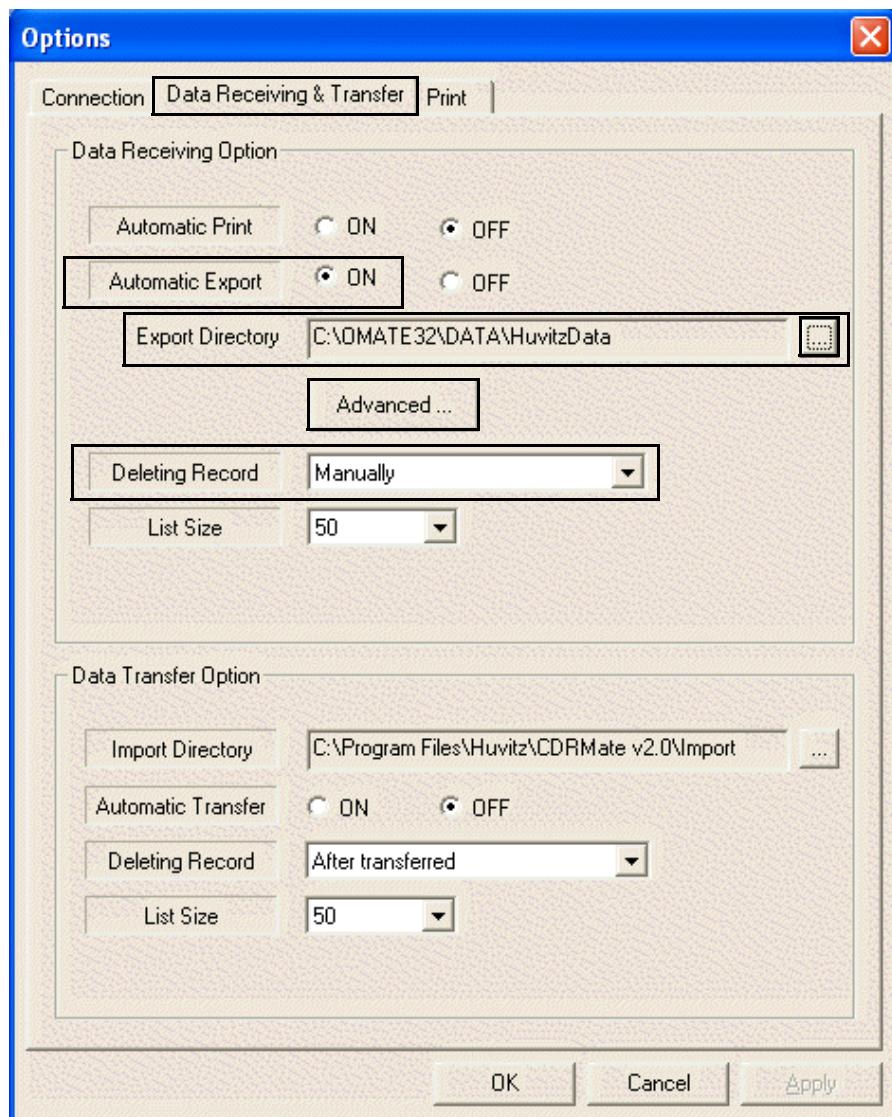
11. Click the **Data Receiving & Transfer** tab.
12. Select the **Automatic Export ON** radio button.

13. Click the ... (ellipses) located to the right of the Export Directory text box and browse to and select **OMATE32\DATA\HuvitzData** or **OfficeMate\DATA\HuvitzData** as the Export Directory.

**NOTES**

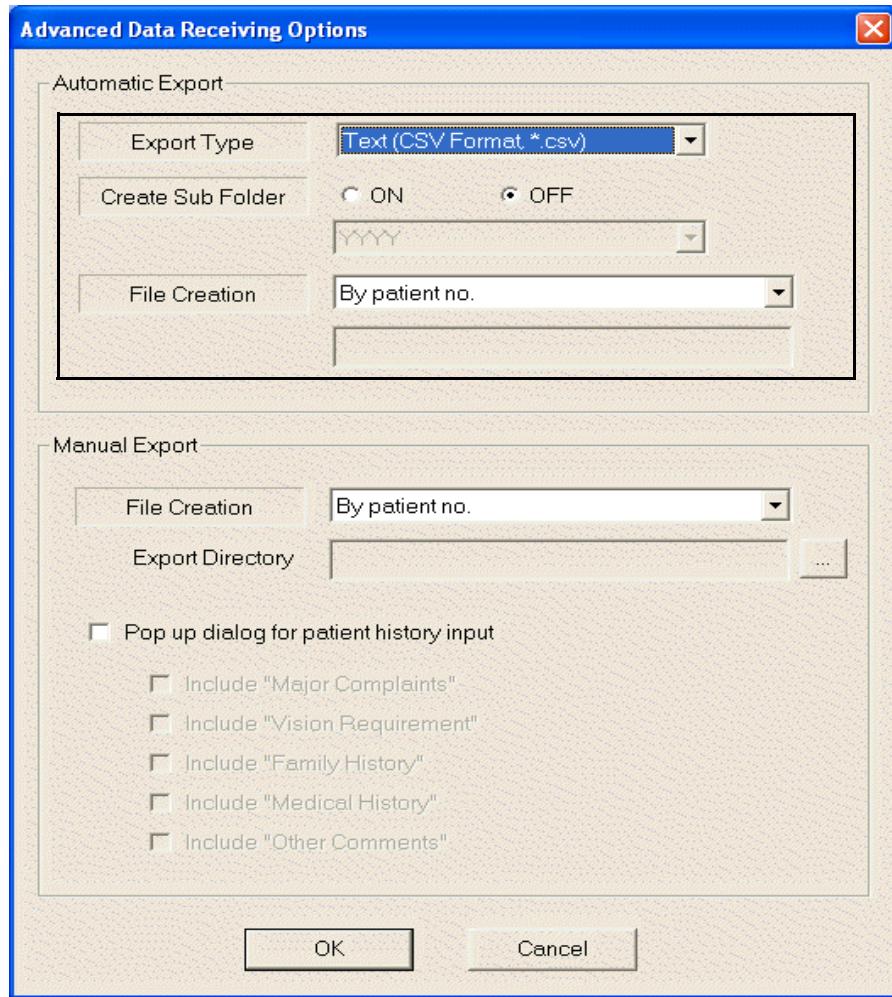
- If you do not have a HuvitzData folder in your OMATE32\DATA or OfficeMate\DATA\HuvitzData folder, create one now.
- If you are using the Huvitz DRS3100, the Export Directory must be the same drive and folder that you selected when you set up the Huvitz interface. For more information on setting up the Huvitz interface, go to “[Setting Up the Huvitz Interface](#)” on page 64.

14. Select **Manually** from the **Deleting Record** drop-down menu in the Data Receiving Option box.



15. Do *not* change any of the options in the Data Transfer Option box.

16. Click **Advanced**.  
The Advanced Data Receiving Options window opens.
17. Select **Text (CSV Format \*.csv)** from the **Export Type** drop-down menu.
18. Verify that the **Create Sub Folder OFF** radio button is selected.
19. Select **By patient no.** from the **File Creation** drop-down menu.



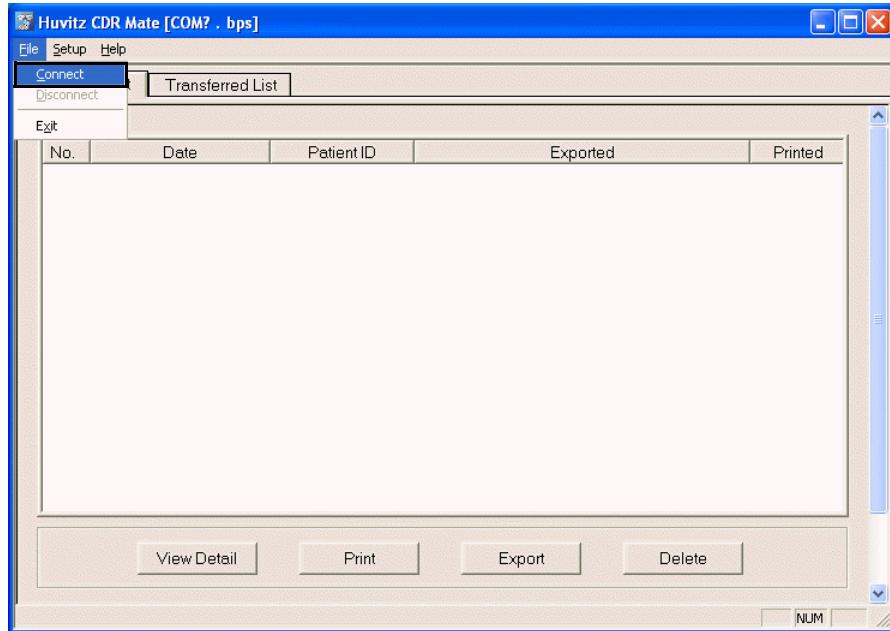
20. Do *not* change any of the options in the Manual Export box.
21. Click **OK** to close the Advanced Data Receiving Options window.
22. Click **OK** to close the Options window.

### Activating CDR-Mate to Receive Data From Huvitz

1. Click **File** on the Huvitz CDR Mate window.
2. Select **Connect** if it is enabled.

**NOTE**

To view the connection status of your system, locate the “Connected” or “Not Connected” message at the bottom left of the Huvitz CDR Mate window.



3. Minimize the Huvitz CDR Mate window.

### Using the Huvitz Interface

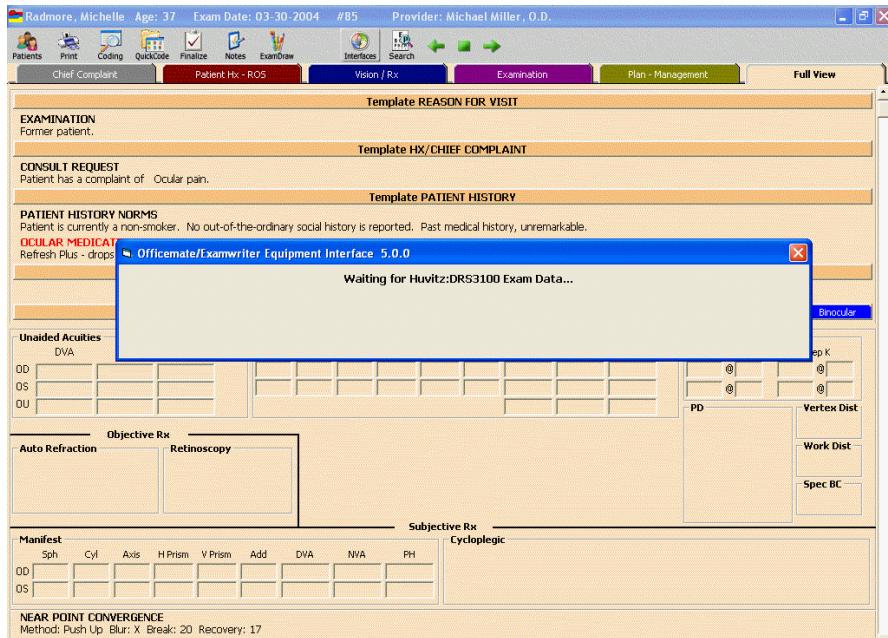
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Huvitz:DRS3100**, **Huvitz:MRK3100**, or **Huvitz:CLM3100**.

**NOTE**

If you are using the Huvitz HRK7000 or HRK8000, select **Huvitz:MRK3100**.

The Officemate/Examwriter Equipment Interface window opens and displays a "Waiting for Huvitz Exam Data..." message.

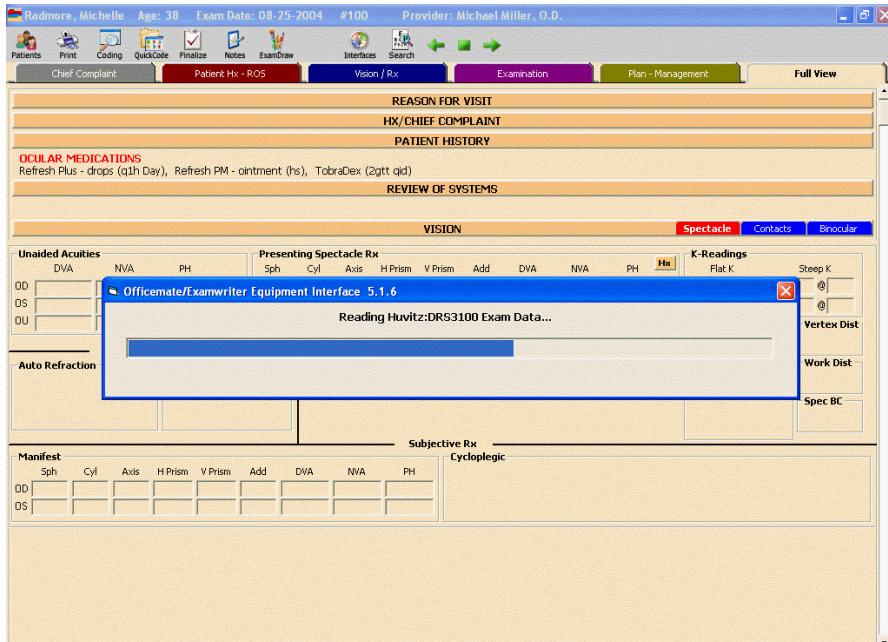


5. Press **Print** on the Huvitz CDR-3100 operation panel.

The operation panel displays all of the recorded data.

6. Press **Print** again on the Huvitz CDR-3100 operation panel.

The operation panel's built-in printer prints the recorded data and displays a "Printing result data" message. When the printing is complete, the operation panel displays a "Transmitting result data" message. After all of the data has been transmitted from the operation panel to the computer, a progress bar appears on the Officemate/Examwriter Equipment Interface window.



After all of the received data is processed and saved to the OfficeMate database, the ExamWRITER exam chart refreshes and all of the received data from the operation panel is displayed on the Vision/Rx Spectacle and Binocular tabs.

# Using the iMACAM Interface

10

## In this chapter:

- [iMACAM Interface Overview, 75](#)
- [Setting Up the iMACAM Interface, 75](#)
- [Using iMACAM Capture, 76](#)
- [Using iMACAM Review, 78](#)

## iMACAM Interface Overview

ExamWRITER interfaces with the iMACAM software before the capture process when patient information is transferred from ExamWRITER into iMACAM Capture to create or update retinal images and during the review process when the newly created or existing iMACAM retinal images are available for on-screen review.

The iMACAM equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The iMACAM equipment interface uses an iMACAM cable to connect to the computer.

<b>NOTES</b>	<ul style="list-style-type: none"><li>• iMACAM software <i>must</i> be installed on the same workstation as ExamWRITER.</li><li>• If you are installing iMACAM software on a workstation running Windows Vista, ensure that the User Account Control (UAC) check box in the Control Panel is <i>not</i> selected.</li><li>• Back up your iMACAM data! Contact the manufacturer for recommended backup procedures.</li><li>• When you upgrade your iMACAM software, you must select the correct data destination. Contact the manufacturer for upgrade instructions.</li></ul>
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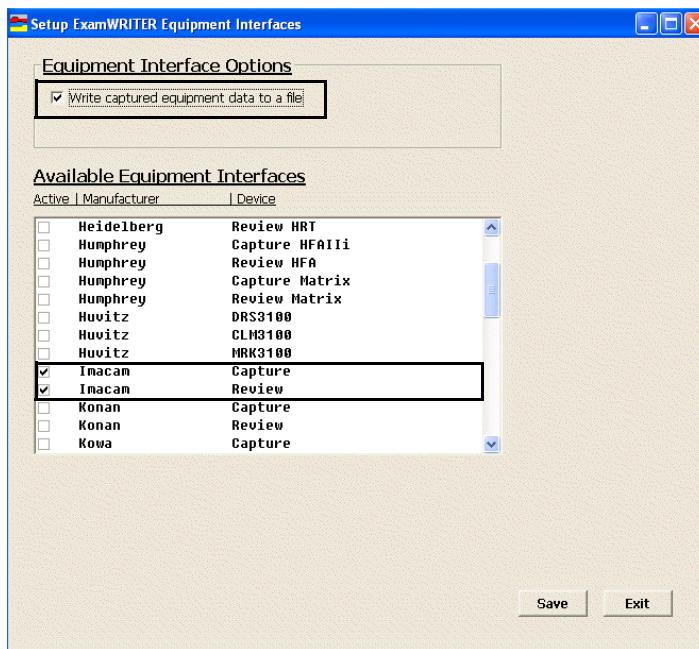
## Setting Up the iMACAM Interface

<b>NOTE</b>	You must set up the iMACAM interface from the computer connected to the iMACAM equipment.
-------------	---

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.

The Setup ExamWRITER Equipment Interfaces window opens.

2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from iMACAM in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.



4. Click **Save**.
5. Click **Exit**.
6. Close and reopen ExamWRITER to activate your changes.

## Using iMACAM Capture

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.

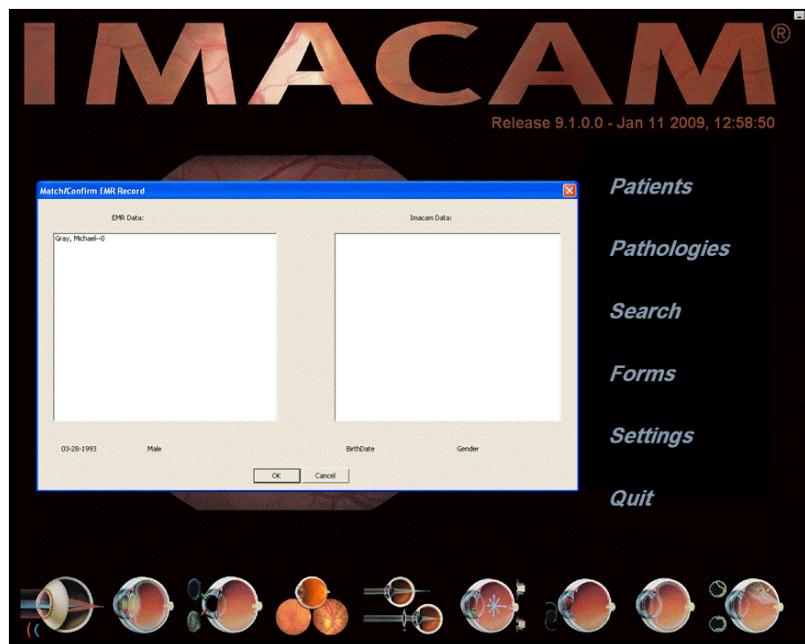
**NOTE**

Ensure that you have recorded the patient's date of birth in ExamWRITER before opening the iMACAM Capture program.

3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Imacam:Capture**.

The Match/Confirm EMR Record window opens. If the patient's information is not already stored within the iMACAM Capture program, the patient's name, gender, and date of birth are loaded into the program from ExamWRITER. If the patient's information is already stored within the iMACAM Capture program, the patient's information in the program's database is displayed.



5. Click **OK** and follow the iMACAM Capture instructions to capture the patient's retinal images.

6. Close iMACAM Capture to return to ExamWRITER.

The iMACAM Advanced icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



7. Follow the instructions in “[Using iMACAM Review](#)” on page 78 to review the patient's captured retinal images.

## Using iMACAM Review

- |              |   |
|--------------|---|
| <b>NOTES</b> | <ul style="list-style-type: none"><li>The iMACAM Review software can only be used from within ExamWRITER when a patient's retinal images have previously been captured using ExamWRITER and the iMACAM Capture interface.</li><li>Both the iMACAM Review software and ExamWRITER must be installed and set up on all workstations on which you want to review images.</li></ul> |
|--------------|---|

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.

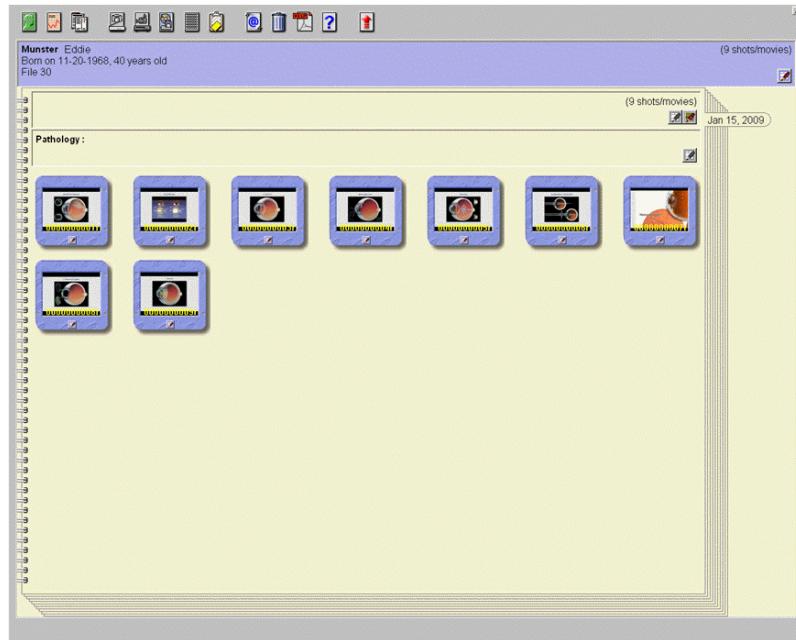
<b>NOTE</b>	Ensure that you have recorded the patient's date of birth in ExamWRITER before opening the iMACAM Review program.
-------------	---

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Imacam:Review**.

OR

Click the **iMACAM Advanced** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The iMACAM Review window opens and displays the patient's images.



4. Follow the iMACAM Review instructions to use the application.
5. Close iMACAM Review to return to ExamWRITER.

# Using the Konan Interface

11

## In this chapter:

- [Konan Interface Overview, 79](#)
- [Setting Up the Konan Equipment, 79](#)
- [Setting Up the Konan Interface, 83](#)
- [Capturing Images with Konan, 85](#)
- [Reviewing Images with Konan, 87](#)

## Konan Interface Overview

ExamWRITER interfaces with the Konan Specular Microscope software before the capture process when patient information is transferred from ExamWRITER to create or update retinal images and during the review process when the newly created or existing Konan retinal images are available for on-screen review.

The Konan equipment interface saves equipment data to the Konan database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Konan interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Konan interface can only use one camera per Terminal Server.

### NOTES

- You must install ExamWRITER and the Konan software on the computer to which the Konan equipment is connected; then you can install the Konan software on the server on which ExamWRITER is installed. Contact Konan Medical to determine if the Konan software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.
- Back up your Konan data! Contact Konan Medical for recommended backup procedures.

## Setting Up the Konan Equipment

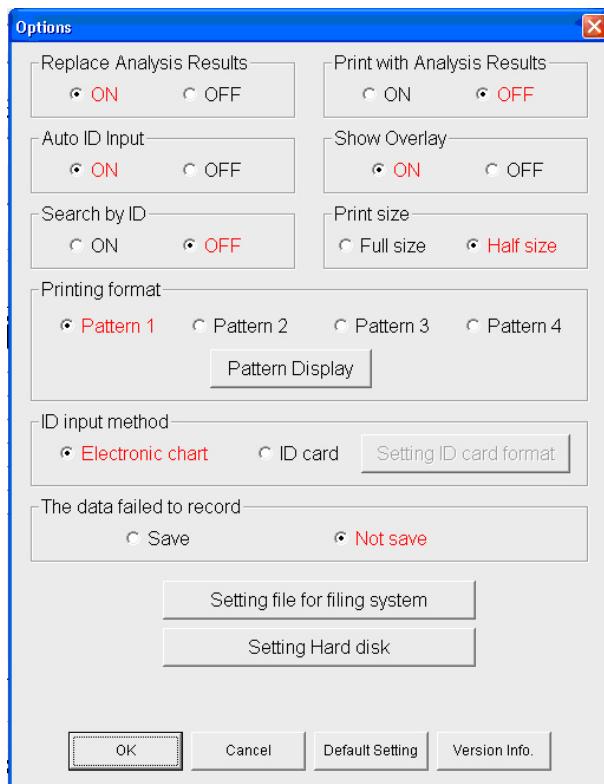
Before you begin using the Konan equipment interface, you must set up the Konan Specular Microscope equipment software to properly interface with ExamWRITER.

- [Setting Up the Non-CellChek Software, 80](#)
- [Setting Up the CellChek Software, 81](#)

## Setting Up the Non-CellChek Software

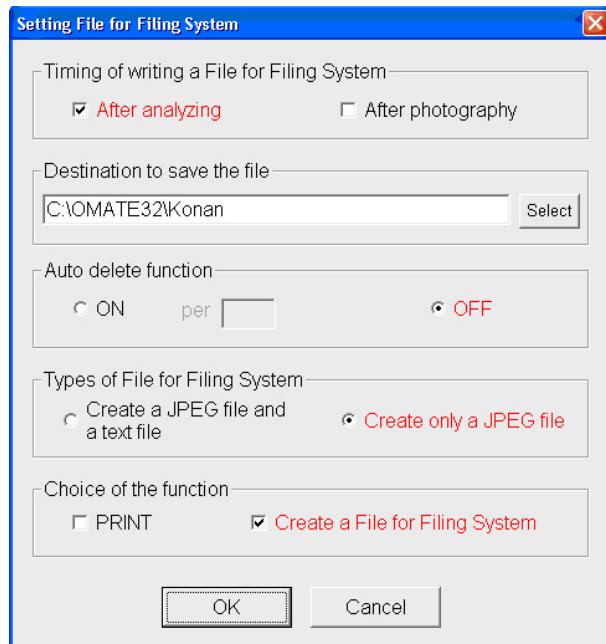
If you are *not* using the CellChek software, follow the instructions below:

1. Open the **Options** window in the Konan software.
2. Ensure that the following options are set:
  - Replace Analysis Results – **ON**
  - Print with Analysis Results – **OFF**
  - Auto ID Input – **ON**
  - Show Overlay – **ON**
  - Search by ID – **OFF**
  - Print size – **Half size**
  - Printing format – **Pattern 1**
  - ID input method – **Electronic chart**
  - The data failed to record – **Not save**



3. Click **Setting file for filing system**.  
The Setting File for Filing System window opens.
4. Ensure that the following options are set:
  - Timing of writing a File for Filing System – **After analyzing**
  - Auto delete function – **OFF**
  - Types of File for Filing System – **Create only a JPEG file**
  - Choice of the function – **Create a File for Filing System**

5. Type or select the drive and folder where the equipment data is stored in the **Destination to save the file** text box. The equipment data is stored in the OfficeMate\Konan or OMATE32\Konan folder.



6. Click **OK**.

## Setting Up the CellChek Software

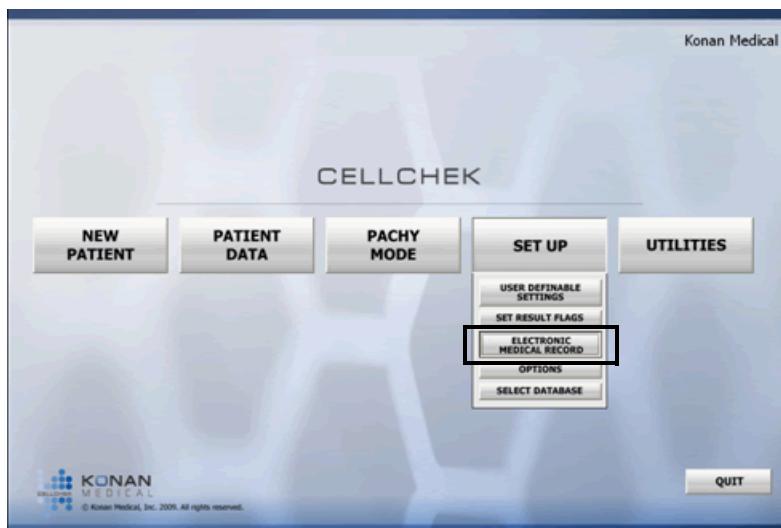
If you are using the CellChek software, follow the instructions below:

1. Double-click the **Konan Analysis Software** icon.
2. Click **CellChek**.



The CellChek window opens.

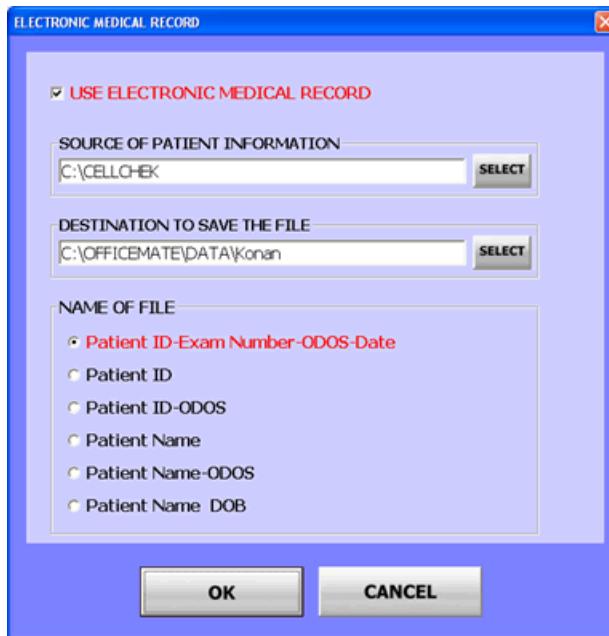
3. Click **Set Up** and select **Electronic Medical Record**.



The Electronic Medical Record window opens.

4. Set the Electronic Medical Record window options as shown here.

**NOTE** The equipment data is stored in the OfficeMate\DATA\Konan or OMATE32\DATA\Konan folder.



## Setting Up the Konan Interface

### NOTES

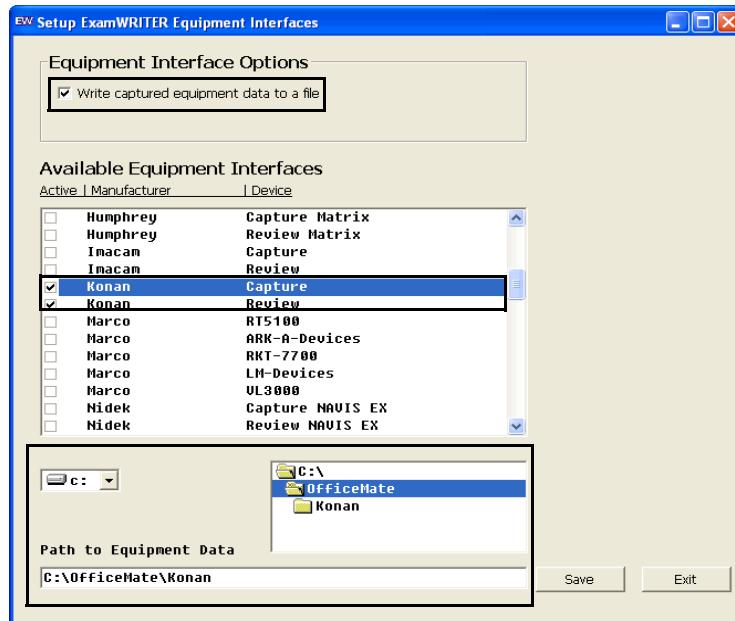
- You must set up the Konan interface from the computer connected to the Konan equipment.
- You must be using ExamWRITER version 7.3 or above to interface with the Konan equipment.

Follow one of these sets of instructions to set up the Konan interface, depending on whether or not you are using the CellChek software:

- [Setting Up the Konan Interface with the Non-CellChek Software, 83](#)
- [Setting Up the Konan Interface with the CellChek Software, 84](#)

### Setting Up the Konan Interface with the Non-CellChek Software

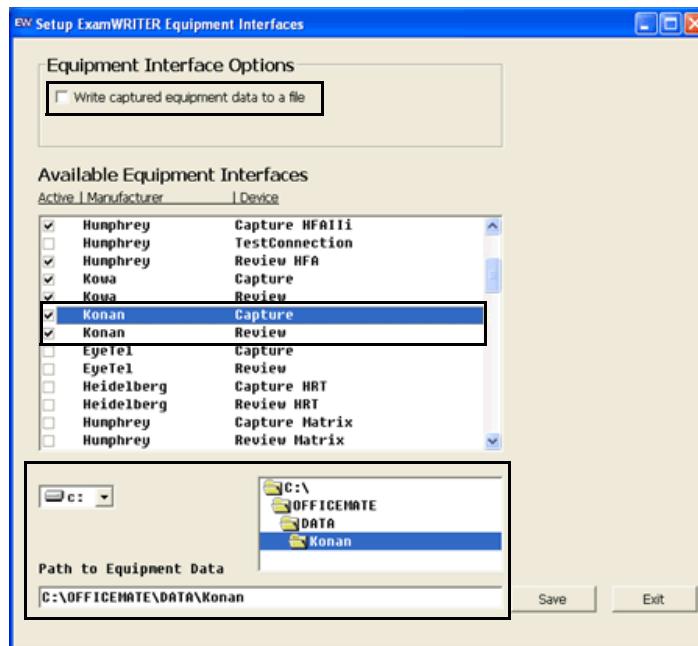
1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Konan in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and folder where the equipment data is stored in the **Path to Equipment Data** section. The capture and review equipment data is stored in the OfficeMate\Konan or OMATE32\Konan folder. Ensure that the location that you select is the same location that you selected in the Setting File for Filing System window in the Konan equipment software. For information on setting up the Konan equipment, go to ["Setting Up the Non-CellChek Software" on page 80](#).



5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

### Setting Up the Konan Interface with the CellChek Software

1. On the ExamWRITER main window, click **Tools**, and select **Equipment Integration Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Konan in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and folder where the equipment data is stored in the **Path to Equipment Data** section. The capture and review equipment data is stored in the OfficeMate\DATA\Konan or OMATE32\DATA\Konan folder. Ensure that the location you select is the same location that you selected in the Electronic Medical Record window in the Konan equipment software. For information on setting up the Konan equipment, go to “[Setting Up the CellChek Software](#)” on page 81.



5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

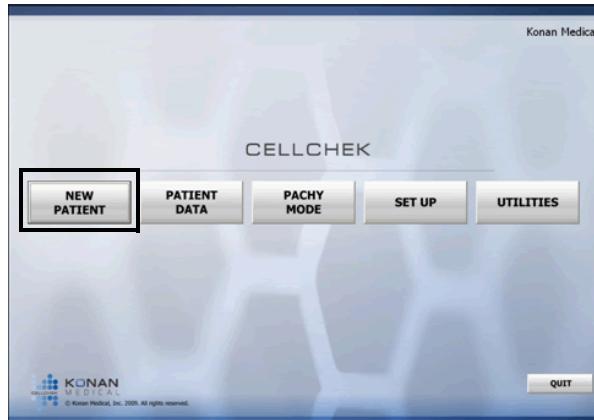
## Capturing Images with Konan

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.
4. Select **Konan:Capture**.  
The Konan analysis software opens.
5. If you are using the new Konan CellChek software, follow the instructions below; otherwise go to step 6.
  - a. Click **CellChek** on the main window.

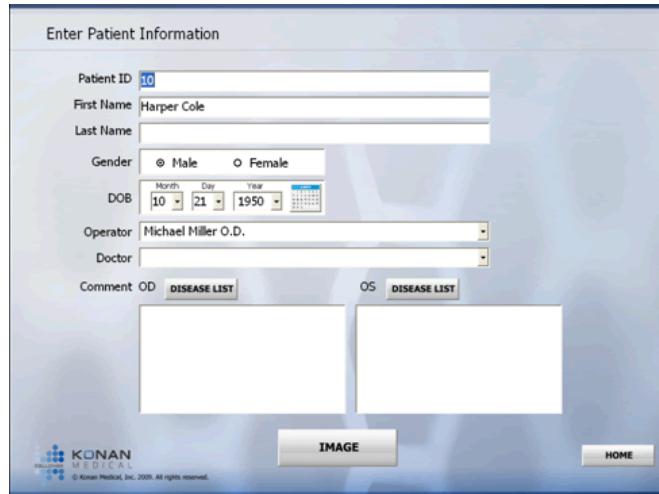


The CellChek window opens.

- b. Click **New Patient**.



The Enter Patient Information window opens with the patient demographic information that was transferred from ExamWRITER.



6. Follow the Konan software capture instructions to capture the patient's retinal images on the Specular Microscope.

7. Close the Konan capture software to return to ExamWRITER.

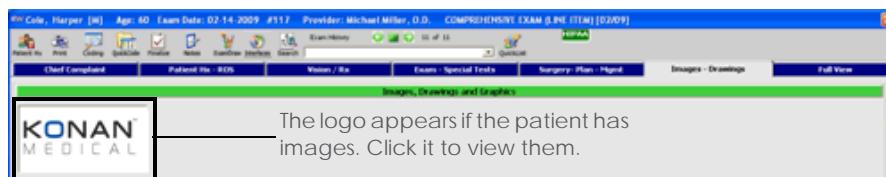
The Konan icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.

8. Follow the instructions in "[Reviewing Images with Konan](#)" on page 87 to review the patient's captured retinal images.

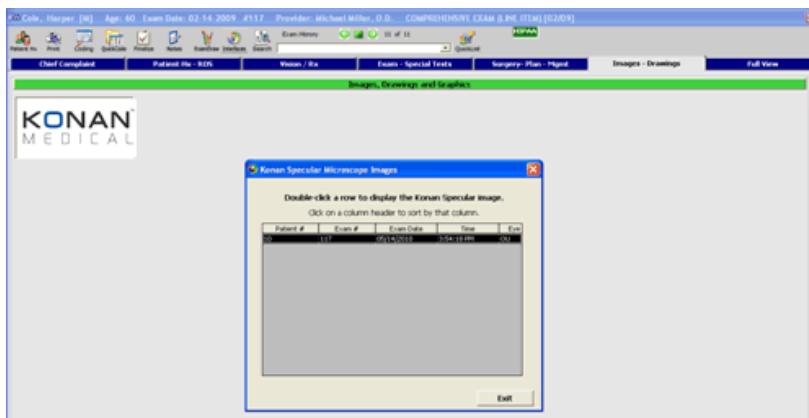
## Reviewing Images with Konan

**NOTE** Both the Konan review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. Also, a path to the location where the Konan database is located must be set up. For information on setting up the path to the Konan database in the Konan equipment software, go to “[Setting Up the Konan Equipment](#)” on page 79. For information on setting up the path to the Konan database in the ExamWRITER equipment interface, go to “[Setting Up the Konan Interface](#)” on page 83.

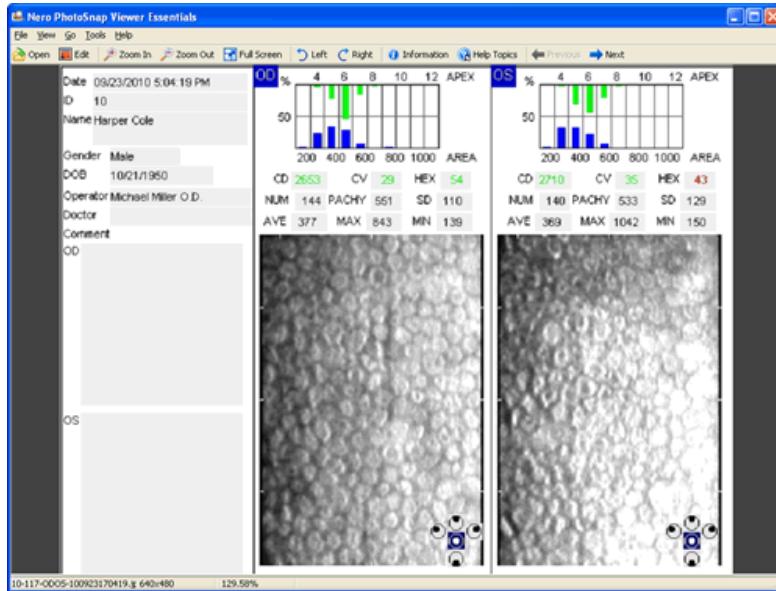
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Konan:Review**.  
**OR**  
Click the **Konan** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.



The Konan Specular Microscope Images window opens.



4. Double-click an image to view it.



5. Follow the Konan software review instructions to use the application.
6. Close the Konan review software to return to ExamWRITER.

# Using the Kowa Interface

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## In this chapter:

- [Kowa Interface Overview, 89](#)
- [Setting Up the Kowa Interface, 89](#)
- [Setting Up the Kowa Camera, 90](#)
- [Capturing Kowa Images, 91](#)
- [Reviewing Kowa Images, 93](#)

## Kowa Interface Overview

ExamWRITER interfaces with the Kowa Digital Fundus Camera before the capture process when patient information is transferred from ExamWRITER into Kowa Capture to create or update retinal images and during the review process when the newly created or existing Kowa retinal images are available for on-screen review.

The Kowa equipment interface saves equipment data to the Kowa database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Kowa interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Kowa interface can only use one camera per Terminal Server.

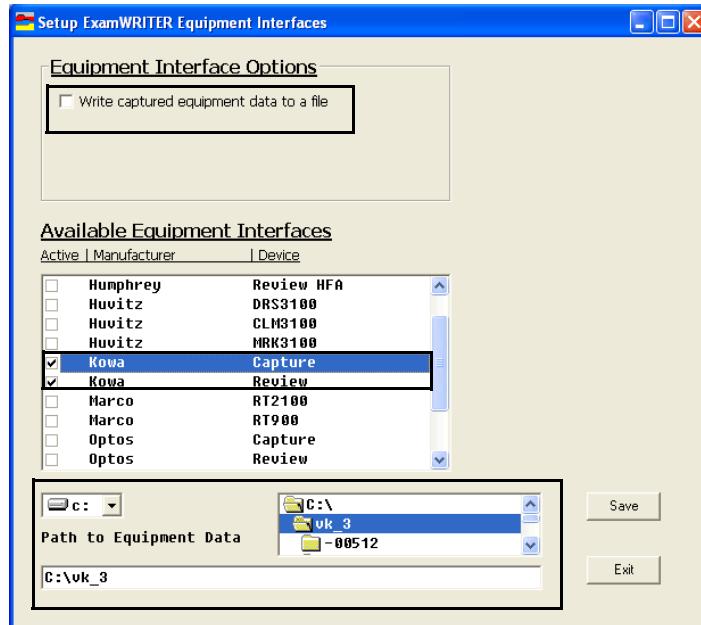
<b>NOTES</b>	<ul style="list-style-type: none"><li>• You must install ExamWRITER and the Kowa software on the computer to which the Kowa equipment is connected; then you can install the Kowa software on the server on which ExamWRITER is installed. Contact Kowa to determine if the Kowa software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.</li><li>• Back up your Kowa data! Contact Kowa Optimed for recommended backup procedures.</li></ul>
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## Setting Up the Kowa Interface

<b>NOTE</b>	You must set up the Kowa interface from the computer connected to the Kowa equipment.
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1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.

2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Kowa in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and shared folder where the Kowa camera data is written.

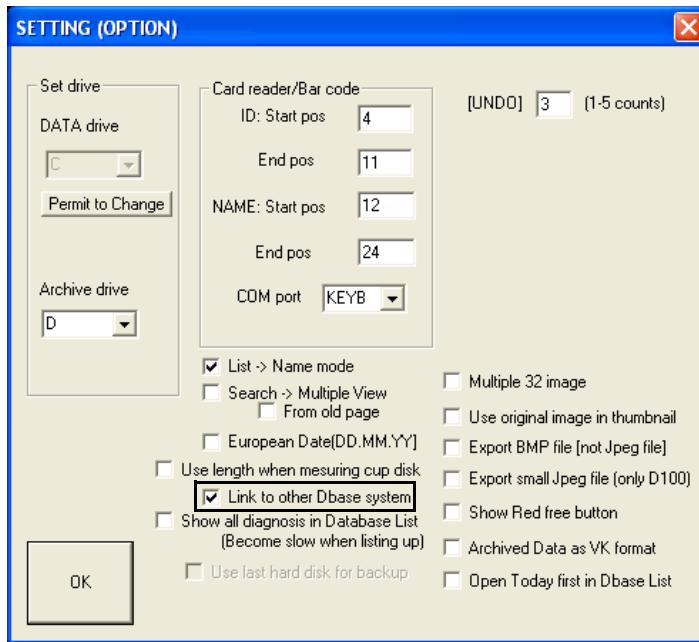


5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Setting Up the Kowa Camera

1. Ensure that Kowa Capture is open.
2. Click **Setting** and select **Option Setting**.  
The SETTING (OPTION) window opens.

3. Select the **Link to other Dbase System** check box.



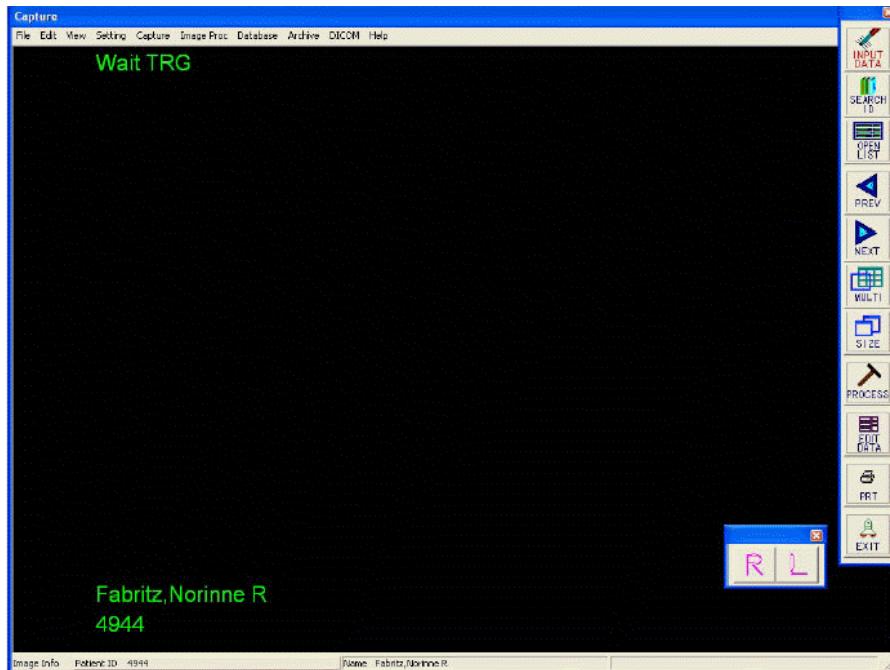
4. Click **OK**.

## Capturing Kowa Images

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Kowa:Capture**.

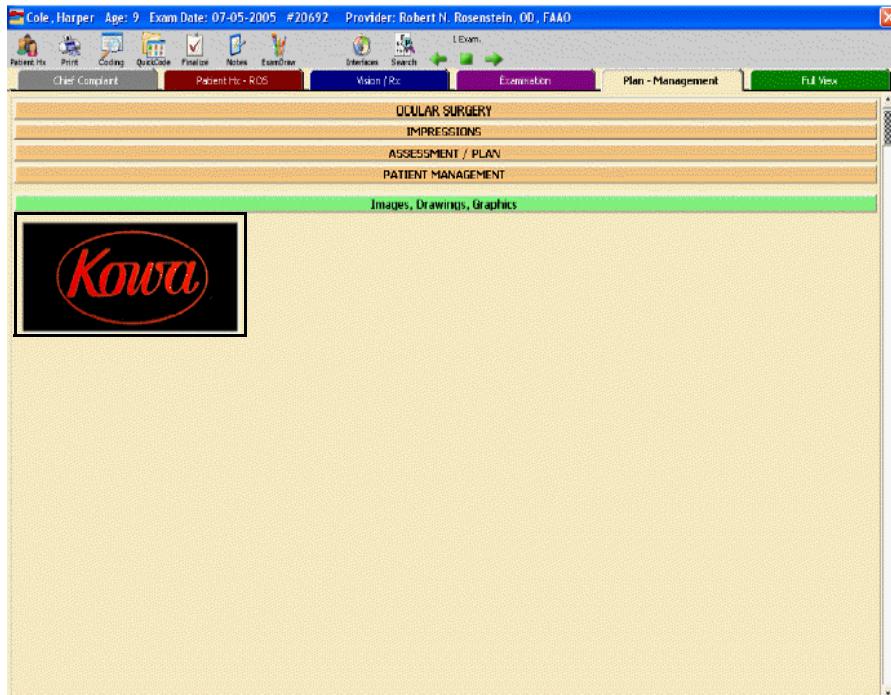
The Kowa Capture window opens with the patient's last name, first name, middle initials, gender, date of birth, and patient ID, pre-loaded from ExamWRITER.



5. Follow the Kowa Capture instructions to capture the patient's retinal images.

6. Close Kowa Capture to return to ExamWRITER.

The Kowa icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



7. Follow the instructions in “[Reviewing Kowa Images](#)” on page 93 to review the patient’s captured retinal images.

## Reviewing Kowa Images

NOTES	<ul style="list-style-type: none"><li>The Kowa review software can only be used from within ExamWRITER when a patient's retinal images have previously been captured using ExamWRITER and the Kowa Capture Interface.</li><li>Both the Kowa review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. Also, a path to the location where the Kowa database is located must be set up. For information on setting up the path to the Kowa database in the ExamWRITER equipment interface, go to “<a href="#">Setting Up the Kowa Interface</a>” on page 89.</li></ul>
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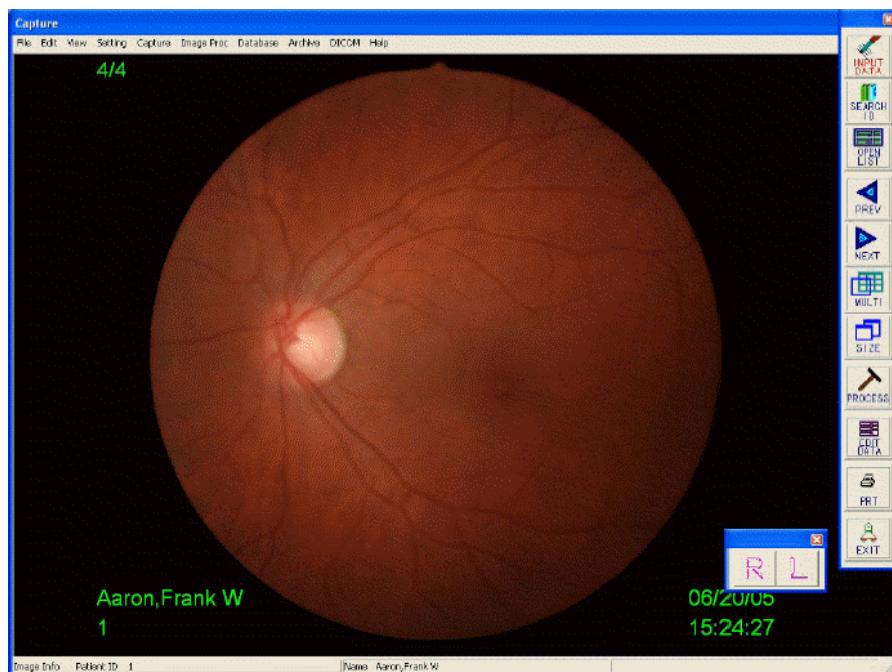
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Kowa:Review**.

OR

Click the **Kowa** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The Kowa Capture window opens and displays the patient's history.



4. Follow the Kowa review instructions to use the application.
5. Close Kowa to return to ExamWRITER.

## In this chapter:

- [Marco Interface Overview, 95](#)
- [Setting Up Marco RT & TRS Series Equipment, 96](#)
- [Setting Up Marco ARK, LM, RKT, & VL Series Equipment, 96](#)
- [Setting Up the Marco Interface, 98](#)
- [Using the Marco Interface, 99](#)

## Marco Interface Overview

ExamWRITER receives data from the Marco equipment and displays the data on the ExamWRITER chart window. ExamWRITER does *not* send data to the Marco equipment.

The Marco equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Marco interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Marco equipment interface can use multiple serial ports per PC.

## Setting Up Marco RT & TRS Series Equipment

The following digital refractor models interface with ExamWRITER and should be configured according to Marco's specifications:

- OPD-Scan III
- RT-900
- RT-2100
- RT-5100
- RTS-1200
- TRS-3100
- TRS-5100

### NOTES

- The Marco RT-900 (Evolution) requires that the control panel interface be correctly set up so that k-readings from the autorefractor are accepted by the Marco RT-900. If the control panel interface is not set up correctly, the Marco RT-900 will not be able to send the k-readings to ExamWRITER and they will not appear on the chart window. Contact your Marco representative for information on properly setting up the Marco RT-900.
- If you are using the Marco RT-5100 (EPIC 5100, TRS-5100), you must upgrade your firmware with fix #RB-1.04.
- If you have questions about setting up Marco equipment, contact your Marco representative.

## Setting Up Marco ARK, LM, RKT, & VL Series Equip- ment

The following models interface with ExamWRITER without a digital refraction system and are covered in this section:

- ARK-530A (referred to as ARK-A-Devices)
- ARK-700A (referred to as ARK-A-Devices)
- ARK-710A (referred to as ARK-A-Devices)
- ARK-730A (referred to as ARK-A-Devices)
- ARK-760A (referred to as ARK-A-Devices)
- ARK-1
- ARK-1A
- LM-600 (referred to as LM-Devices)
- LM-1000 (referred to as LM-Devices)
- LM-1200 (referred to as LM-Devices)
- LM-1800 (referred to as LM-Devices)
- RKT-7700
- M3 TonoRef II
- VL-3000

### NOTE

Daisy-chaining, or connecting lensometers to autorefractors, is not supported.

You must set several parameters on your Marco equipment in order for the device to transfer data to the ExamWRITER Equipment Interface.

1. Follow the instructions in your device manual to access the Parameter Set screen and set each of the parameters.
2. When you are finished setting your parameters, exit Parameter Set mode, turn off the device, and turn it back on.

The following table shows the parameter number and setting for each of the parameters on each device.

Device	KM Unit	I/F Mode	I/F Format	Baud Rate	Bit Length	CR Code	L DATA
ARK-530A		#71: NCP10	#72: All				
ARK-700A	#3: D	#31: NCP10	#32: All	#33: 9600	#34: 8	35: No	
ARK-710A	#11: D	#51: NCP10	#52: All	#53: 9600	#54: 8	55: No	
ARK-730A	#11: D	#51: NCP10	#52: All	#53: 9600	#54: 8	55: No	
ARK-760A	#3: D	#51: NCP10	#52: All	#53: 9600	#54: 8	55: No	
ARK-1	#3: D	#51: NCP10	#52: All	#53: 9600	#54: 8	55: No	No
ARK-1A	#3: D	#51: NCP10	#52: All	#53: 9600	#54: 8	55: No	No
LM-600		Menu Page 5: #32 NCP10		#33: 9600	8		OFF
LM-1000		Menu Page 5: NCP10		Menu Page 5: 9600	Menu Page 5: 8	Menu Page 5: No	
LM-1200		Menu Page 4: NCP10		Menu Page 4: 9600	Menu Page 4: 8	Menu Page 4: No	
LM-1800		Menu Page 5: #32 NCP10		#33: 9600	8		OFF
RKT-7700		#49: NCP10	#50: All				
M3 TonoRef II		#81: NCP10	#82: All				
VL-3000	PC	9600	8	ODD	1		VL-3000

## Setting Up the Marco Interface

- Follow the instructions provided by Marco to install the Marco Connect software.

**NOTE**

To obtain the Marco Connect software, contact Marco at 800.874.5274 or go to <http://www.marco.com>.

- On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
- Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Marco in a file for debugging purposes; otherwise, go to step 3.
- Select the check box next to the equipment interface that you are using.

**NOTES**

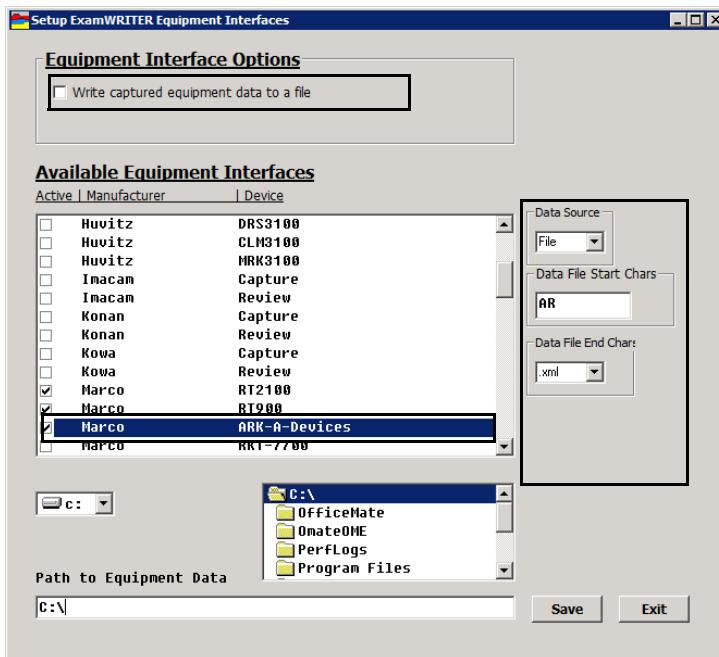
- If you are using the Marco M3 TonoRef II, select the **Marco RKT-7700** equipment interface.
- If you are using the Marco TRS-3100, select the **Marco RT-5100** equipment interface.

- Select a source from the **Data Source** drop-down menu.
  - Select **Port** if the equipment is connected directly to the workstation on which ExamWRITER is running.
  - Select **File** if you are using Marco Connect to interface with your equipment
- If you selected Port in step 5, select a communication port number from the **Comm Port** drop-down menu; otherwise, go to step 7.  
The Comm Port default is 1.
- If you selected File in step 5, type the first two characters of the device name in the **Data File Start Chars** field; otherwise, go to step 10.
- Select the file extension from the **Data File End Chars** drop-down menu. If you are using Marco Connect, select **.xml**.

9. Select the location on the network where Marco Connect saves the data file:
  - a. Select a drive from the drop-down menu.
  - b. Select the folder in which Marco Connect saves the data file.

**NOTE**

The Marco Connect application allows you to specify where you want to save the data files on the network.



10. Repeat steps 4–9 for each piece of Marco equipment you are using.
11. Click **Save**.
12. Click **Exit**.
13. Close ExamWRITER to activate your changes.

## Using the Marco Interface

1. Ensure that the Marco equipment is connected to the computer that ExamWRITER is installed upon with an EP21-10-0809 serial cable or null modem serial cable.

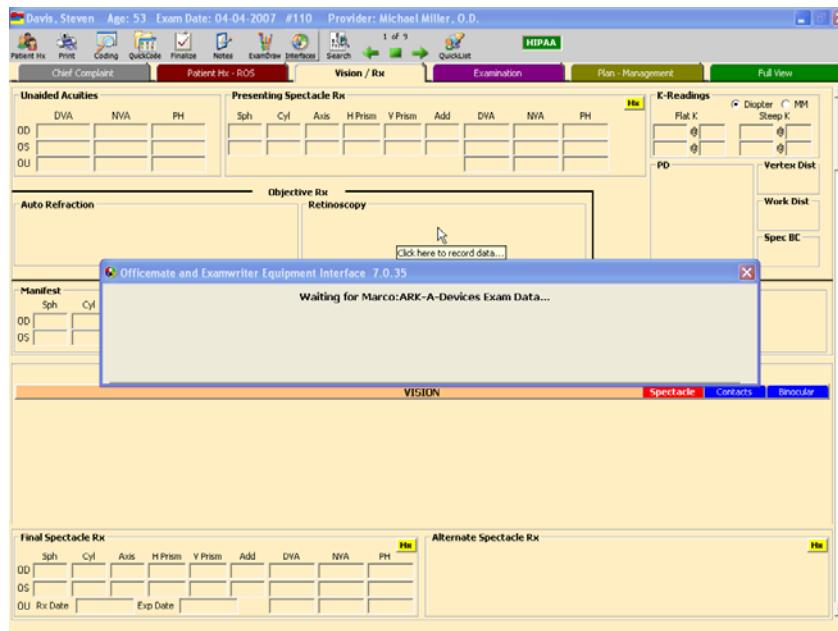
**NOTE**

Call Marco at 800.874.5274 to order an EP21-10-0809 serial cable or null modem serial cable.

2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.

5. Select the Marco device that corresponds to your Marco equipment.

The Officemate/Examwriter Equipment Interface window opens and displays a “Waiting for Marco Exam Data...” message.



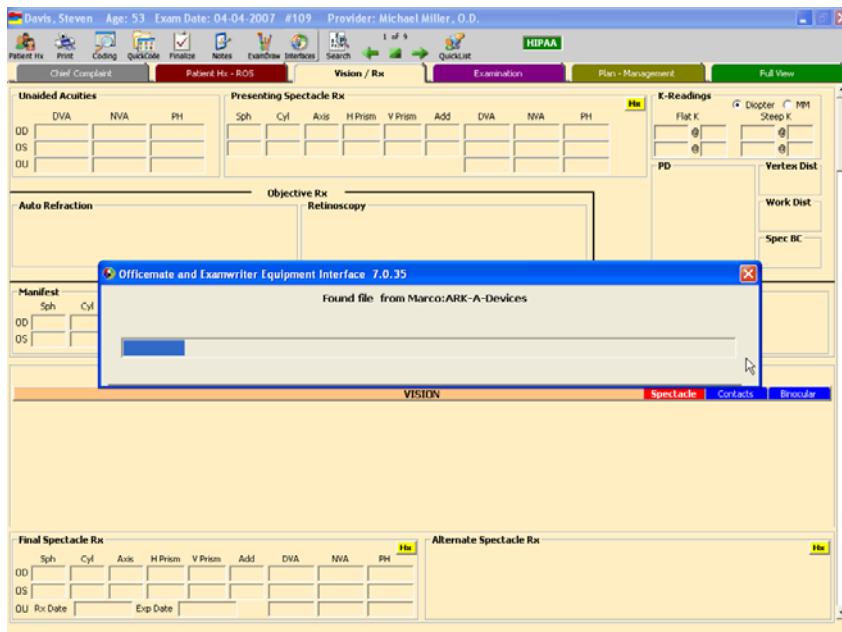
6. Press **Print** on the Marco equipment operation panel.

The operation panel displays all of the recorded data.

7. Press **Print** on the Marco equipment operation panel.

The operation panel's built-in thermal printer prints the recorded data and displays a “Printing result data” message. After all of the data has been

transmitted from the operation panel to the computer, a progress bar appears on the Officemate/Examwriter Equipment Interface window.



After all of the received data is processed and saved to the OfficeMate database, the ExamWRITER exam chart refreshes, and all of the received

data from the operation panel is displayed on the Vision/Rx Spectacle and Binocular tabs.

**NOTES**

- The manifest prism data is displayed as binocular phoria data.
- If the Phoria - Distance and Phoria - Near Test text boxes display “Von Graefe” and you want to change the name of the test, click in the Test text box and select a new test from the Test drop-down menu.
- NT (tonometry) data is *not* saved on the IC card when you use the Marco RT-5100 (EPIC 5100); therefore, if you are using the IC card to transfer data from the autorefractor/keratometer (ARK) equipment to the Marco RT-5100 (EPIC 5100), the data will not appear in the ExamWRITER IOP table.
- In order for the K radius values to appear in the K-Readings boxes in ExamWRITER, both the Marco RT-2100 (TRS-2100 or EPIC 2100), RT-5100 (EPIC 5100), TRS-3100, or RT-900 (Evolution) and the autorefractor/keratometer (ARK) equipment must be set for the K radius units to be either diopters or diopters *and* millimeters. If the Marco equipment is outputting the K radius values in millimeters only, then they will not appear in ExamWRITER.
- If there is subjective data, the standard Marco VD of 13.75 will be displayed in the ExamWRITER Vertex Dist box.
- The aniseikonia measurement is for distance only. The output of “00” is translated to “Absent”; otherwise, it is displayed as “Present” in the Aniseikonia boxes.
- The pupillary distances are extracted from subjective (far and near) measurements in Marco and recorded in the PD box in ExamWRITER.

# Using the NIDEK NAVIS-EX Interface

14

## In this chapter:

- [NIDEK NAVIS-EX Interface Overview, 103](#)
- [Setting Up NIDEK NAVIS-EX, 104](#)
- [Setting Up the NIDEK NAVIS-EX Interface, 108](#)
- [Using NIDEK NAVIS-EX Capture, 109](#)
- [Using NIDEK NAVIS-EX Review, 110](#)

## NIDEK NAVIS-EX Interface Overview

The NIDEK NAVIS-EX software can acquire images from these fundus photography devices and display them in ExamWRITER:

- AFC-230/AFC-210 Non-Mydriatic Autofocus Fundus Camera
- AFC-330 Non-Mydriatic Auto Fundus Camera
- F-10 Ophthalmoscope

Contact your Marco representative to set up the camera equipment and contact your NIDEK representative to set up the NAVIS-EX software.

ExamWRITER interfaces with the NIDEK NAVIS-EX software before the capture process when patient information is transferred from ExamWRITER into NIDEK NAVIS-EX Capture to create or update patient information and retinal images and during the review process when the newly created or existing NIDEK NAVIS-EX patient information and retinal images are available for review.

ExamWRITER and NAVIS-EX communicate with each other via a command line interface located at C:\NIDEK\EMR\Client\MiddlewareCLI.exe.

The NIDEK NAVIS-EX equipment interface saves equipment data to the NIDEK NAVIS-EX database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The NIDEK NAVIS-EX interface uses a serial RS-232 cable or null modem to connect to the computer. The NIDEK NAVIS-EX interface cannot connect to a Terminal Server.

## Setting Up NIDEK NAVIS-EX

Before you begin using the NIDEK NAVIS-EX equipment interface, you must set up the NAVIS-EX software to properly interface with ExamWRITER.

In order to use the NIDEK NAVIS-EX, you must:

- Configure the NIDEK AFC-230, AFC-330, AFC-210, or F-10 camera. Refer to the equipment manual for more information on configuring your camera.
- Install ExamWRITER v9.5 or above.
- Install NIDEK NAVIS-EX v1.2.1 or above. Refer to the *NIDEK NAVIS-EX Software Installation Manual* for more information on installing NAVIS-EX.
- Configure NAVIS-EX. For more information see “[Configuring NAVIS-EX](#)” on [page 105](#).

NOTES	<ul style="list-style-type: none"><li>• NIDEK NAVIS-EX software <i>must</i> be installed on the same workstation as ExamWRITER.</li><li>• If you are installing NIDEK NAVIS-EX software on a workstation running Windows Vista, ensure that the User Account Control (UAC) check box in the Control Panel is <i>not</i> selected.</li><li>• Back up your NIDEK NAVIS-EX data! Contact the manufacturer for recommended backup procedures.</li><li>• When you upgrade your NIDEK NAVIS-EX software, you must select the correct data destination. Contact NIDEK Client Services for upgrade instructions.</li><li>• Contact NIDEK or your certified networking technician if you have questions about networking the NAVIS-EX software.</li></ul>
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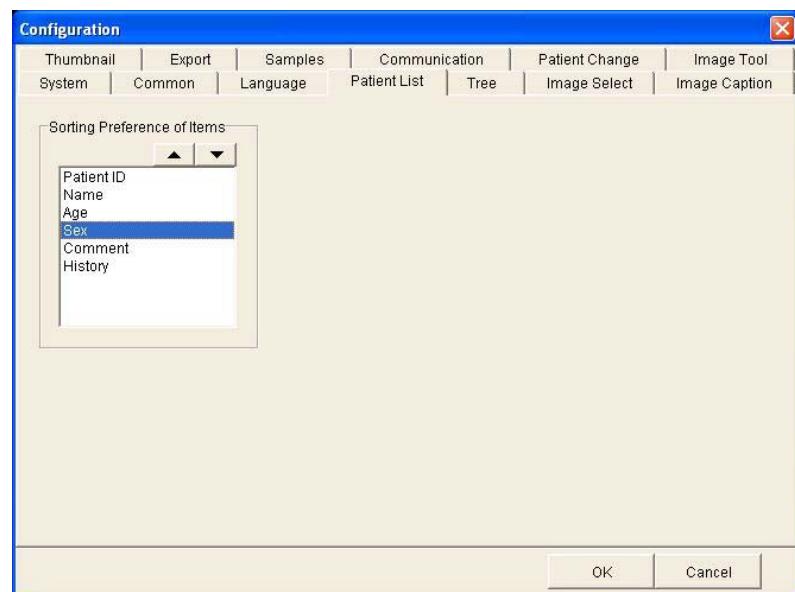
## Configuring NAVIS-EX

In order for NAVIS-EX and ExamWRITER to exchange data, NAVIS-EX must be configured to accept data from ExamWRITER in an expected format and order.

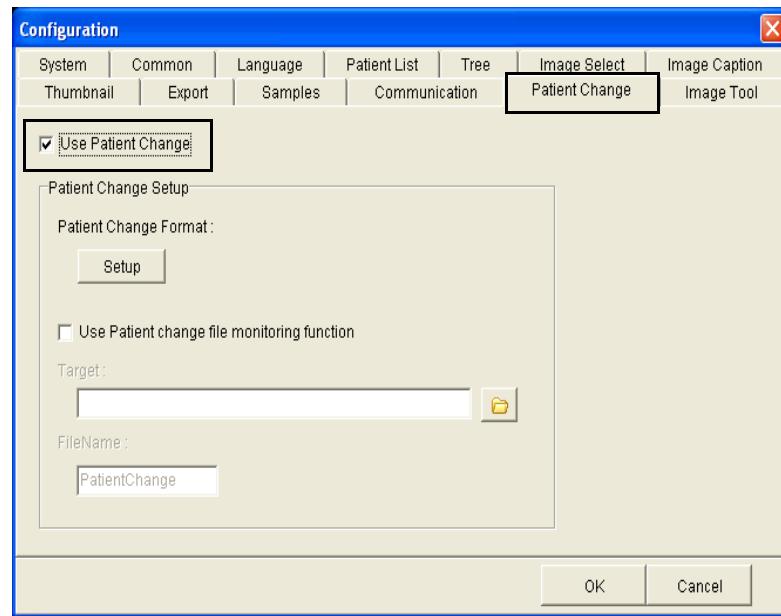
**NOTE**

Refer to the *NAVIS-EX Operator's Manual* for detailed information about configuring the NAVIS-EX software.

1. Configure the NAVIS-EX Configuration window as follows (if you have not already done so):
  - a. On the **Patient List** tab, set the sorting preference for the Patient List to (from top to bottom): **Patient ID, Name, Age, Sex, Comment, History**.



- b. On the **Patient Change** tab, select the **Use Patient Change** check box.

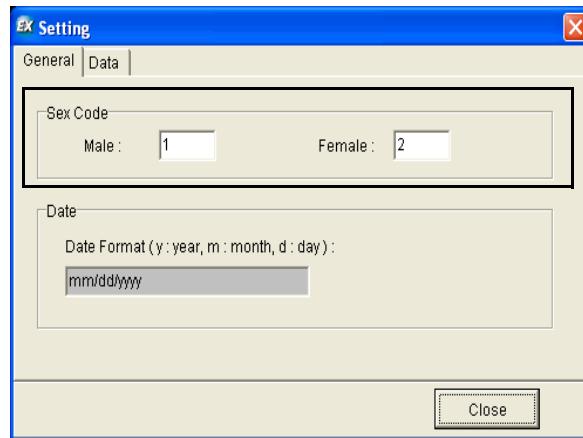


2. Click **Setup**.

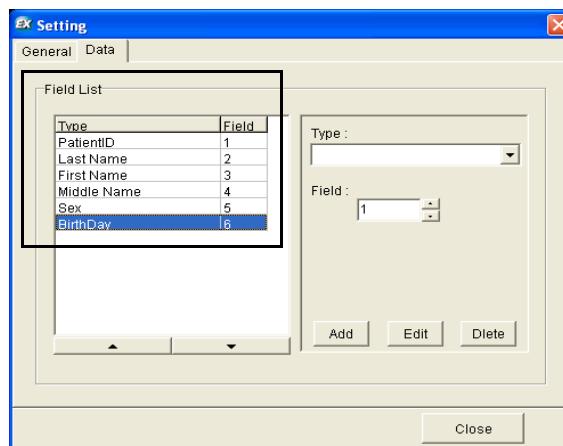
The Setting window opens.

3. Configure the NAVIS-EX Setting window as follows (if you have not already done so):

- a. On the **General** tab, set the **Sex Code** for **Male** to **1** and **Female** to **2**.



- b. On the **Data** tab, set the Field List order (from top to bottom) to:  
**PatientID 1, Last Name 2, First Name 3, Middle Name 4, Sex 5, BirthDay 6.**

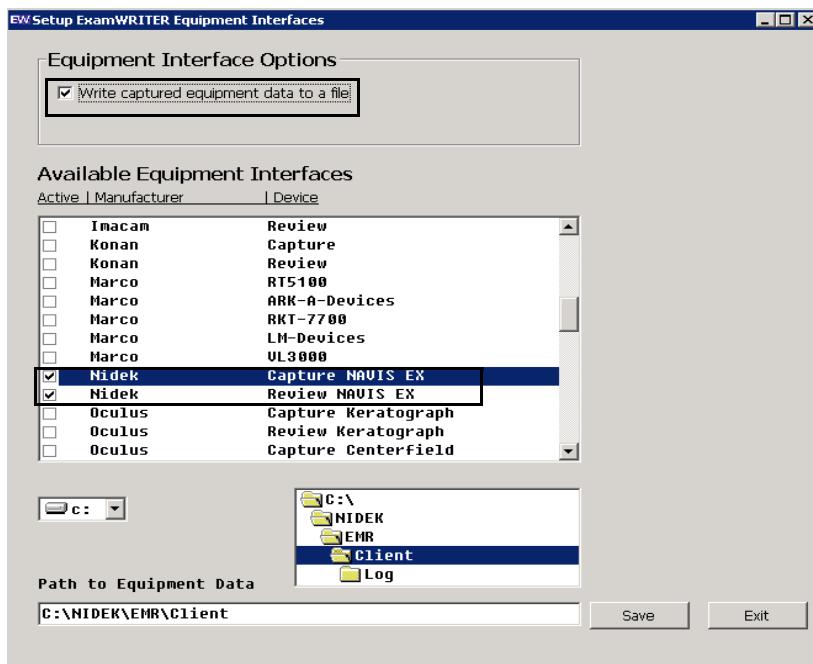


## Setting Up the NIDEK NAVIS-EX Interface

**NOTE**

You must set up the NIDEK NAVIS-EX interface from the computer connected to the camera equipment.

1. Read and follow the instructions in the knowledge base article at [www.officemate.net/omkb/article.aspx?id=31496](http://www.officemate.net/omkb/article.aspx?id=31496).
2. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
3. Select the check boxes next to the equipment interfaces that you are setting up.



4. Select the drive and folder where the NIDEK NAVIS-EX data files are stored: C:\NIDEK\EMR\Client\.
5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Using NIDEK NAVIS-EX Capture

**NOTE**

If you are using the AFC-330 Non-Mydriatic Auto Fundus Camera, you *not* need to complete the instructions in this section. Instead, simply open an exam in ExamWRITER for the patient whose image you captured and then, from the camera, find the patient and capture the image. If you have questions about capturing images using the camera, contact your Marco representative.

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.

**NOTE**

Ensure that you have recorded the patient's date of birth and gender in ExamWRITER before opening the NIDEK NAVIS-EX Capture program.

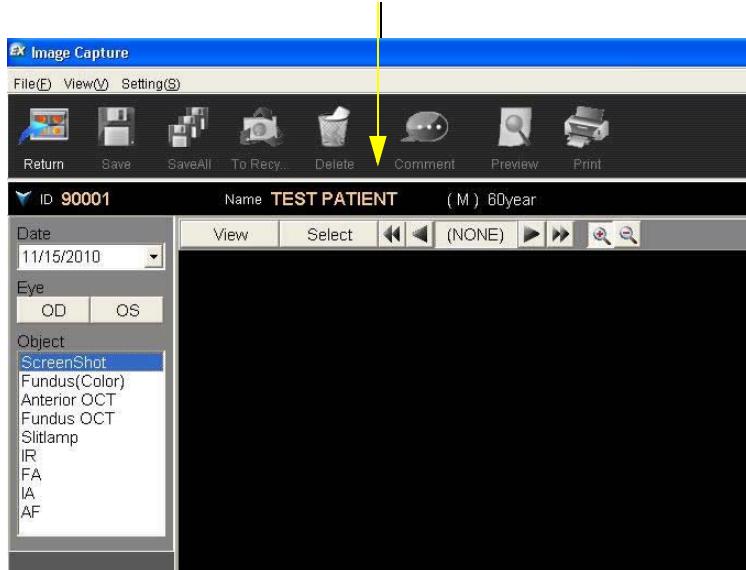
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **NIDEK NAVIS-EX:Capture**.

NIDEK NAVIS-EX launches, captures the NIDEK camera image, and stores it in NAVIS-EX. The NAVIS-EX Image Capture window opens with information about the selected patient.

If the patient's information is not already stored within the NIDEK NAVIS-EX Capture program, the patient's name, gender, and date of birth are loaded into the program from ExamWRITER. If the patient's information is already stored within the NIDEK NAVIS-EX Capture program, the patient's information in the program's database is displayed.

Data for current patient open in ExamWRITER is displayed.



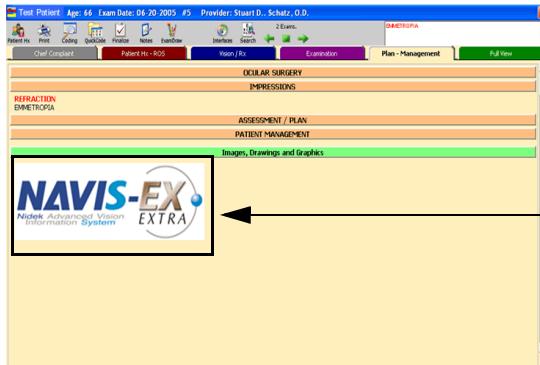
If the patient's demographic information is already stored in NAVIS-EX but has since changed in ExamWRITER, the information will also be changed in NAVIS-EX database.

5. If information changed, click **OK** in the confirmation box.

6. Click the **Capture** button on the toolbar to capture the patient's retinal images.

7. Close NIDEK NAVIS-EX Capture to return to ExamWRITER.

The NIDEK NAVIS-EX icon is displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



Click the icon to open the Review software for the patient.

**NOTE**

If you click the NAVIS-EX icon, the NAVIS-EX Review software opens with the current patient displayed.

8. Follow the instructions in "[Using NIDEK NAVIS-EX Review](#)" on page 110 to review the patient's captured retinal images.

## Using NIDEK NAVIS-EX Review

**NOTES**

- The NIDEK NAVIS-EX Review software can only be used from within ExamWRITER when a patient's retinal images have previously been captured using ExamWRITER and the NIDEK NAVIS-EX Capture interface.
- Both the NIDEK NAVIS-EX Review software and ExamWRITER must be installed and set up on all workstations (up to three) on which you want to review images.

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.

**NOTE**

Ensure that you have recorded the patient's date of birth and sex in ExamWRITER before opening the NIDEK NAVIS-EX Review program.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **NIDEK NAVIS-EX:Review**.

OR

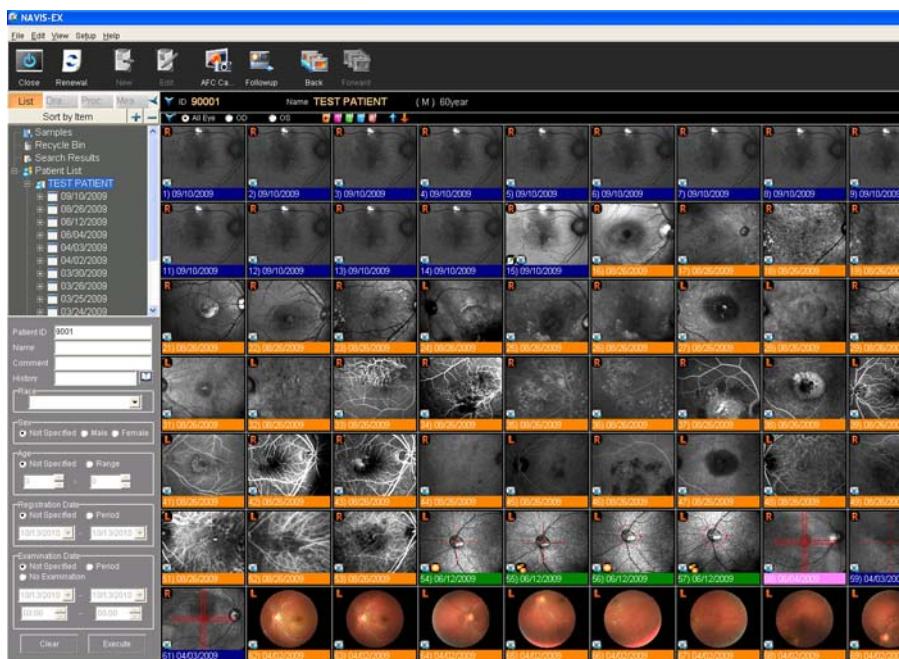
Click the **NAVIS-EX** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

**NOTES**

- The NAVIS-EX icon is only displayed when images exist for the selected patient.
- If you hover the mouse over the NAVIS-EX icon, the date in the format YYYY/MM/DD and a description of the latest image file is displayed. (The image description is not entered into the ExamWRITER record.)

The NIDEK NAVIS-EX Review window opens and displays the selected patient's detail information and images.

If the patient's information is not already stored within the NIDEK NAVIS-EX Review program, the patient's name, gender, and date of birth are loaded into the program from ExamWRITER.



4. Follow the NIDEK NAVIS-EX Review instructions in the *NAVIS-EX Operator's Manual* to use the application.
5. Close NIDEK NAVIS-EX Review to return to ExamWRITER.



## In this chapter:

- [Optos Interface Overview, 113](#)
- [Setting Up the Optos Interface, 114](#)
- [Using Optos Capture, 115](#)
- [Using Optos Review, 117](#)

## Optos Interface Overview

ExamWRITER interfaces with the Optos software before the capture process when patient information is transferred from ExamWRITER into Optos Capture to create or update retinal images and during the review process when the newly created or existing Optos retinal images are available for on-screen review.

You must install ExamWRITER and the Optos Capture and Optos Review applications on the computer to which the Optos equipment is connected; then you can install the Optos Capture and Optos Review applications on the server on which ExamWRITER is installed. Contact Optos at 800.854.3039 to determine if the Optos Capture and Optos Review applications will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server. Both applications can be used on the same workstation or on two separate workstations.

The Optos equipment interface saves equipment data to the Optos database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Optos equipment interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server.

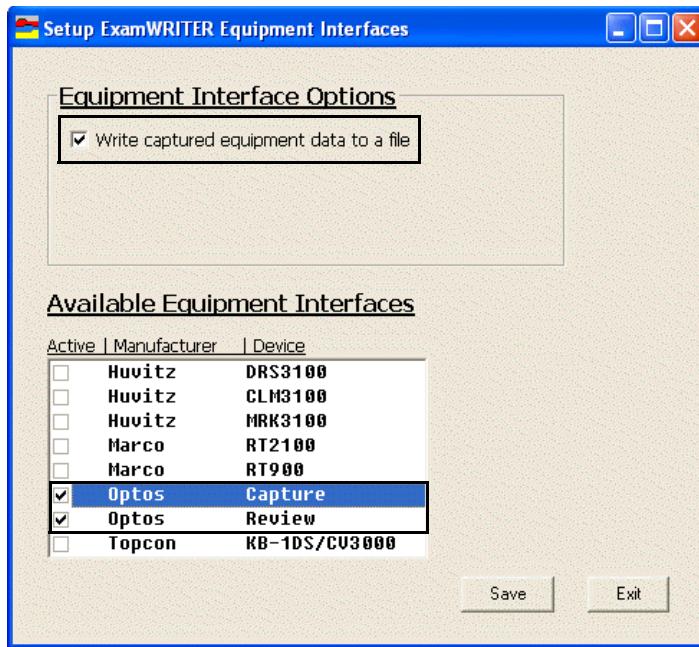
<b>NOTES</b>	<ul style="list-style-type: none"><li>• Back up your Optos data! Contact Optos at 800.854.3039 for recommended backup procedures.</li><li>• If you began using Optos before ExamWRITER, your Optos Patient IDs will be different than your ExamWRITER patient numbers; therefore, your Optos and ExamWRITER patients will not be linked to each other. To automatically link your Optos and ExamWRITER patients, run the ExamWRITER/Optos Patient Synchronization Utility. To open this utility and view instructions on how to use the utility, go to <a href="http://www.officemate.net/omkb/Article.aspx?id=10027">www.officemate.net/omkb/Article.aspx?id=10027</a>.</li><li>• Ensure that the <b>Optional Automatic ID (user can enter or change ID)</b> radio button is selected in the Admin - optos v<sup>2</sup> application's Application Usage Policy window. To open this window, click <b>Policy</b> on the Admin - optos v<sup>2</sup> main window toolbar, select <b>Manage Policies</b>, and click the <b>Patient ID</b> tab.</li><li>• When you upgrade your Optos software, you must select the correct data destination. Contact Optos at 800.854.3039 for upgrade instructions.</li><li>• If you are using Optos Daytona, you must rename the scheduler.exe file on your Optos server to capture.exe. Contact Optos at 800.854.3039 if you have questions about renaming this file.</li></ul>
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## Setting Up the Optos Interface

<b>NOTE</b>	You must set up the Optos interface from the computer connected to the Optos equipment.
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1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Optos in a file for debugging purposes; otherwise, go to step 3.

3. Select the check boxes next to the equipment interfaces that you are setting up.



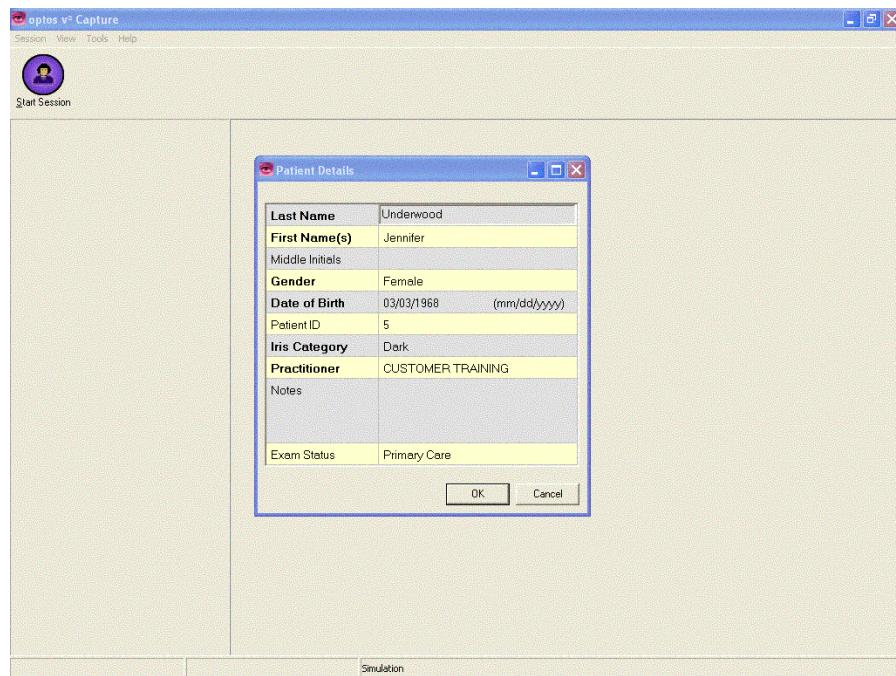
4. Click **Save**.
5. Click **Exit**.
6. Close and reopen ExamWRITER to activate your changes.

## Using Optos Capture

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Optos:Capture**.

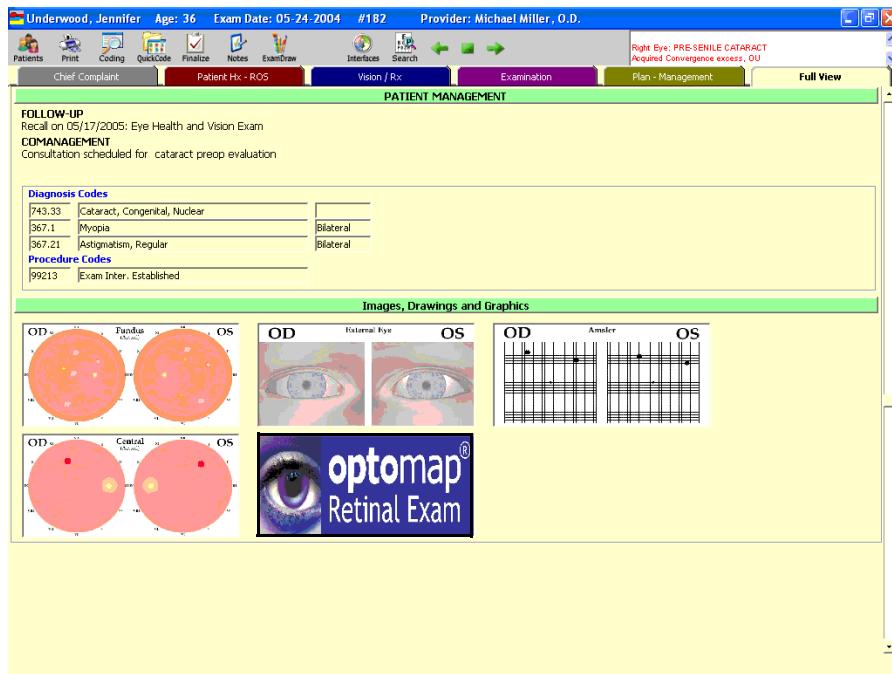
The optos v<sup>2</sup> Capture window opens with the patient's last name, first name, middle initials, gender, date of birth, patient ID, iris category, practitioner, notes, and exam status pre-loaded from ExamWRITER.



5. Follow the Optos Capture instructions to capture the patient's retinal images.

6. Close Optos Capture to return to ExamWRITER.

The optomap Retinal Exam icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



7. Follow the instructions in “[Using Optos Review](#)” on page 117 to review the patient’s captured retinal images.

## Using Optos Review

<b>NOTES</b> <ul style="list-style-type: none"> <li>The Optos Review software can only be used from within ExamWRITER when a patient’s retinal images have previously been captured using ExamWRITER and the Optos Capture interface.</li> <li>Both the Optos Review software and ExamWRITER must be installed and set up on all workstations on which you want to review images.</li> </ul>
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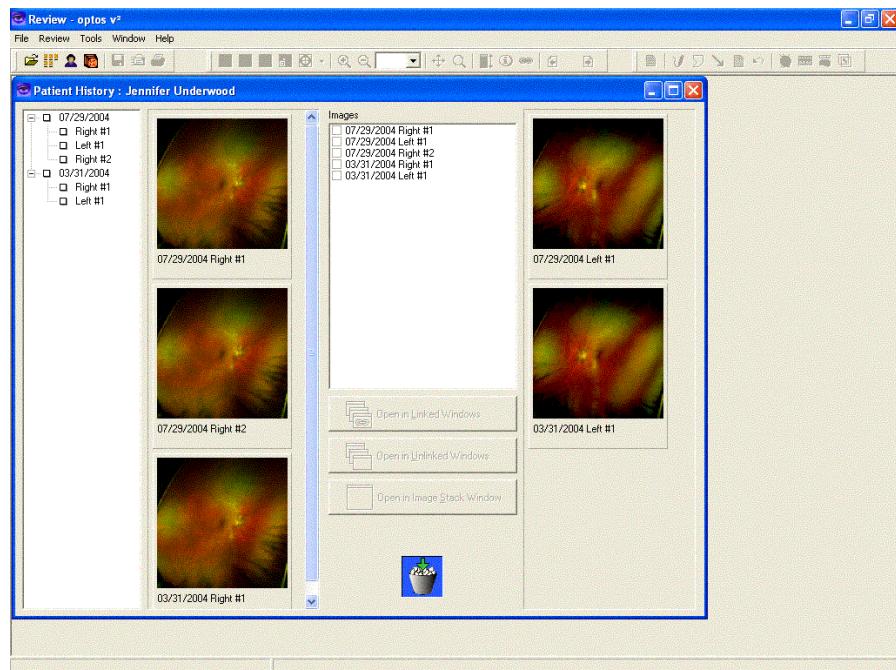
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Optos:Review**.

OR

Click the **optomap Retinal Exam** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

The Review – optos v<sup>2</sup> window opens and displays the patient's history.



4. Follow the Optos Review instructions to use the application.
5. Close Optos Review to return to ExamWRITER.

# Using the Reichert Equipment Interface

16

## In this chapter:

- Reichert Interface Overview, 119
- Setting Up the ReichertCapture Software, 120
- Setting Up the Reichert Interface, 120
- Using the AL-200, AL-500, AL-700, AT-555, PT-100, Reichert 7, & Reichert 7CR Devices, 124
- Using the RK-600 & RK-700 Devices, 126
- Using the iPac Pachymeter, 127
- Using the Auto Phoropter RS & Auto Phoropter Visutron900, 129
- Reviewing Reflex UBM & Foresee PHP Images, 132

## Reichert Interface Overview

ExamWRITER interfaces with all Reichert equipment by reading data or images obtained from the Reichert equipment and populating the patient's exam with that data or making the images available for on-screen review.

The Reichert Auto Phoropter RS and Auto Phoropter Visutron900 are the only Reichert devices that send data to *and* receive data from ExamWRITER. ExamWRITER first exports auto refraction or presenting spectacle data to the Auto Phoropter RS or Auto Phoropter Visutron900. The Auto Phoropter RS or Auto Phoropter Visutron900 then exports manifest Rx data to ExamWRITER.

The Reichert equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Reichert interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Reichert equipment interface can use multiple serial ports per PC.

## Setting Up the ReichertCapture Software

If you are setting up a Reichert AL-500, AL-700, PT-100, Reichert 7, Reichert 7CR, RK-700, iPac, Auto Phoropter RS, or Auto Phoropter Visutron900, you need to install the ReichertCapture software. For help on installing the ReichertCapture software, see the instructions from Reichert that came with the software, or contact a Reichert representative.

**NOTE** If you are using a Reichert AL-200, AT-555, or RK-600 device with ExamWRITER v10.0 or below, then you can only receive data from these devices using a serial cable. If you are using these devices with ExamWRITER v10.5 or above, you can choose to receive data using a serial cable *or* the ReichertCapture software.

## Setting Up the Reichert Interface

- NOTES**
- You must set up the Reichert interface from the computer connected to the Reichert equipment.
  - You must use ExamWRITER v7.3 or above to interface with the AI-200 Lensometer, AT-555 Tonometer, or RK-600 Autorefractor. You must use ExamWRITER v10.7 or above to interface with the Reflex UBM and Foresee PHP. For all other Reichert equipment, you must use ExamWRITER v10.5 or above.
  - If you are using the AT-555 Tonometer, ensure that the device's firmware is version 2.4 or later. Refer to the documentation that came with the device for information on checking the firmware version.
  - Ensure that you have the proper serial cable for your equipment.

For this device	Use this cable
AL-200 Lensometer	NULL Modem
RK-600 Autorefractor	Reichert custom cable
iPac Pachymeter	Wireless
All other Reichert devices	Standard serial cable

- Unless you are setting up the iPac, refer to the documentation that came with your device to set the RS232 data bus parameters listed in the table below. If you are setting up the iPac interface, go to step 3.

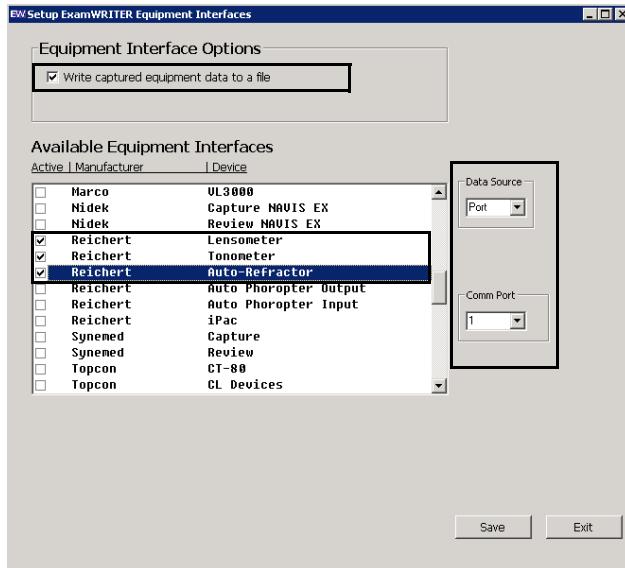
Model	Parameter	Setting	Notes
All	Character	8	Required
All	Parity	N	Required
All	Stop bits	1	Required
AL-200	PRSM	Base	Required to record the presenting horizontal and vertical prism data
RK-600	KERATO	Diopt	Required to record the kerotometry readings in ExamWRITER
RK-600	PRINT	Manual	Required
RK-600	REVIEW DATA	On	Required

- Refer to the documentation that came with your device to set the baud rate:

Model	Baud Rate
AL-200, PT-100, RK-600, Auto Phoropter RS, Auto Phoropter Visutron900	9600
AL-500	38400
AL-700	38400 (fixed at 921600 when USB is selected)
AT-555, Reichert 7, Reichert 7CR	19200
RK-700	115200 (fixed at 921600 when USB is selected)

- On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
- Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Reichert equipment in a file for debugging purposes; otherwise, go to step 5.

5. Select the check boxes next to the equipment interfaces that you are setting up.
  - If you are setting up an AL-200, AL-500, or AL-700 device, select the **Reichert:Lensometer** check box.
  - If you are setting up an AT-555, PT-100, Reichert 7, or Reichert 7CR device, select the **Reichert:Tonometer** check box.
  - If you are setting up an RK-600 or RK-700 device, select the **Reichert:Auto-Refractor** check box.
  - If you are setting up the iPac Pachymeter, select the **Reichert:iPac** check box.
  - If you are setting up an Auto Phoropter RS or Auto Phoropter Visutron900, select the **Reichert:Auto Phoropter Output** and the **Reichert:Auto Phoropter Input** check boxes.
  - If you are setting up the Reflex UBM, select the **UBM Image Review** check box.
  - If you are setting up the Foresee PHP, select the **PHP Image Review** check box.
6. If you are setting up a Reichert AL-200, AT-555, or RK-600 device, and are connecting to the computer using a serial cable, follow the instructions below; otherwise go to step 7.
  - a. Select **Port** from the **Data Source** drop-down menu.
  - b. Select a port number from the **Comm Port** drop-down menu. The default port is 1.
  - c. Go to step 11.

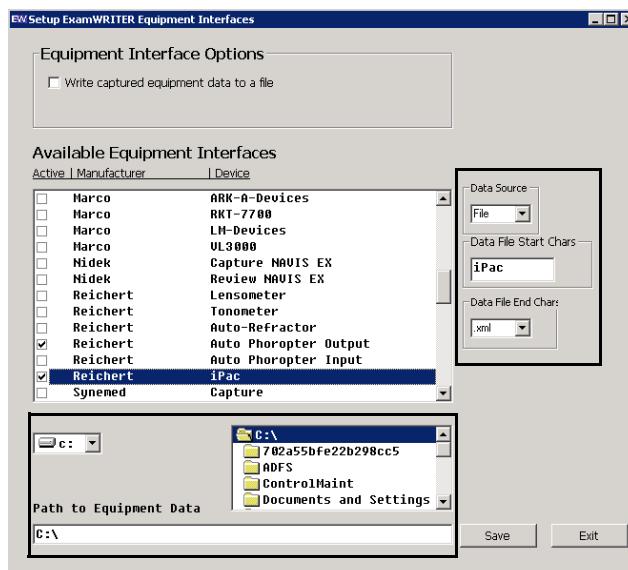


7. If you are setting up a Reichert device that does not require a serial connection, select **File** from the **Data Source** drop-down menu. If you selected Auto Phoropter Input in step 5, you do not enter this information.

8. Type the data file's beginning characters in the **Data File Start Chars** text box. If you selected Auto Phoropter Input, UBM Image Review, or PHP Image Review in step 5, you do not enter this information.

Reichert Model	Data File Start Chars
AL-200	AL-200
AL-500	AL-500
AL-700	AL-700
AT-555	AT-555
iPac Pachymeter	iPac
Reichert7	Reichert7
Reichert7CR	Reichert7CR
RK-600	RK-600
RK-700	RK-700
Auto Phoropter RS	Auto
Auto Phoropter Visutron 900	Auto

9. If you selected UBM Image Review or PHP Image Review Select in step 5, select **.jpg** from the **Data File End Char** drop-down menu. If you selected any other equipment interfaces, except the Auto Phoropter Input, in step 5, select **.xml** from the **Data File End Char** drop-down menu. If you selected Auto Phoropter Input in step 5, you do not enter this information.
10. Select the drive and folder where the equipment data is stored in the **Path to Equipment Data** section.



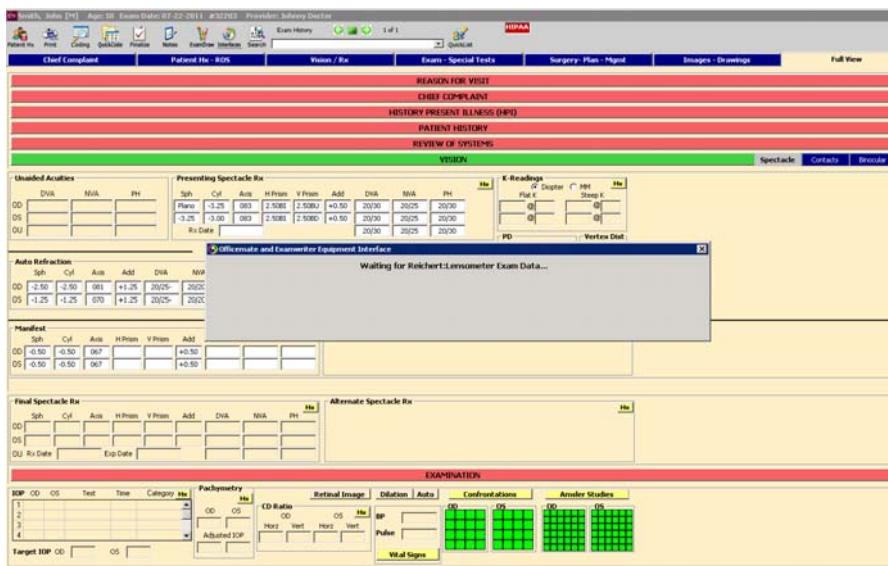
11. Click **Save**.
12. Click **Exit**.

## Using the AL-200, AL-500, AL-700, AT-555, PT-100, Reichert 7, & Reichert 7CR Devices

13. Close and reopen ExamWRITER to activate your changes.

1. Open ExamWRITER.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.
4. Select the device that corresponds with your Reichert equipment.

The Officemate and Examwriter Equipment Interface window opens and displays the following message: "Waiting for Reichert Data..."



5. Use the Reichert equipment to perform the examination or tests.
- The data captured by the Reichert equipment is transmitted automatically at the end of the test. A progress bar appears across the Officemate and Examwriter Equipment Interface window indicating that the information is being received.

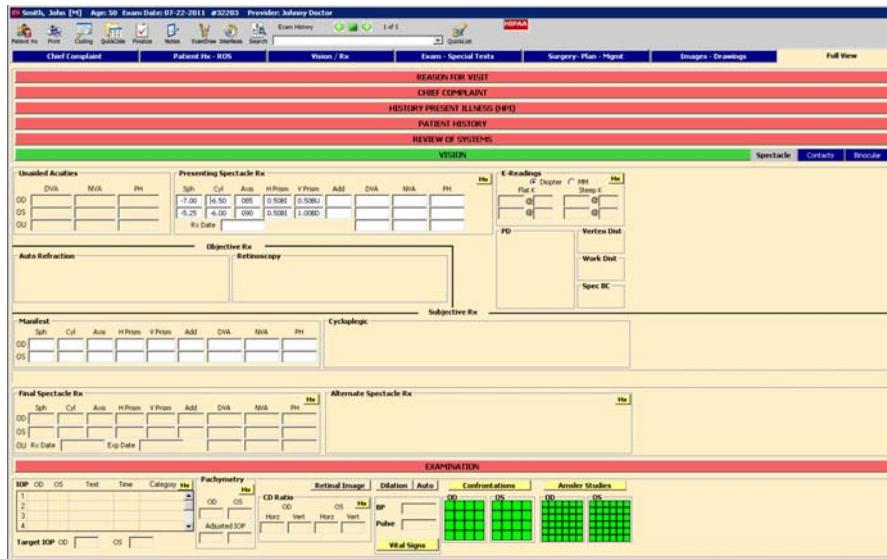
### NOTE

If the information does not transmit automatically at the end of the examination or tests, press the **Print** button on the Reichert equipment.

After all of the received data from the AL-200, AL-500, or AL-700 is processed and saved to the ExamWRITER database, the patient's ExamWRITER record refreshes, and the data received from the Reichert device is displayed on the Vision/Rx Spectacle tab.

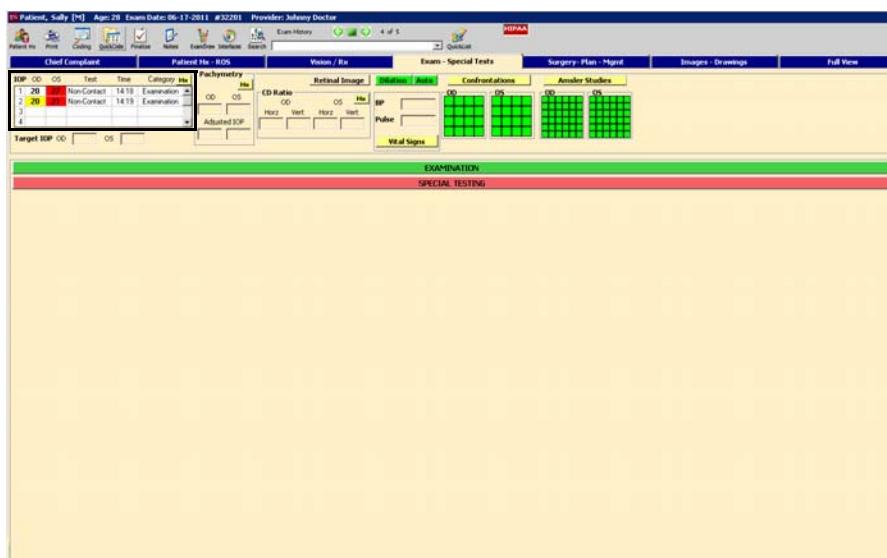
After all of the received data from the AT-555, PT-100, Reichert 7, or Reichert 7CR is processed and saved to the ExamWRITER database, the patient's ExamWRITER record refreshes, and the data received from the Reichert device is displayed in the IOP table on the Examination tab.

- Click the **Vision/Rx Spectacle** tab within the patient's exam record to view the Reichert AL-200, AL-500, or AL-700 data.



OR

- Click the **Exam - Special Tests** tab within the patient's exam record to view the AT-555, PT-100, Reichert 7, or Reichert 7CR data.



## Using the RK-600 & RK-700 Devices

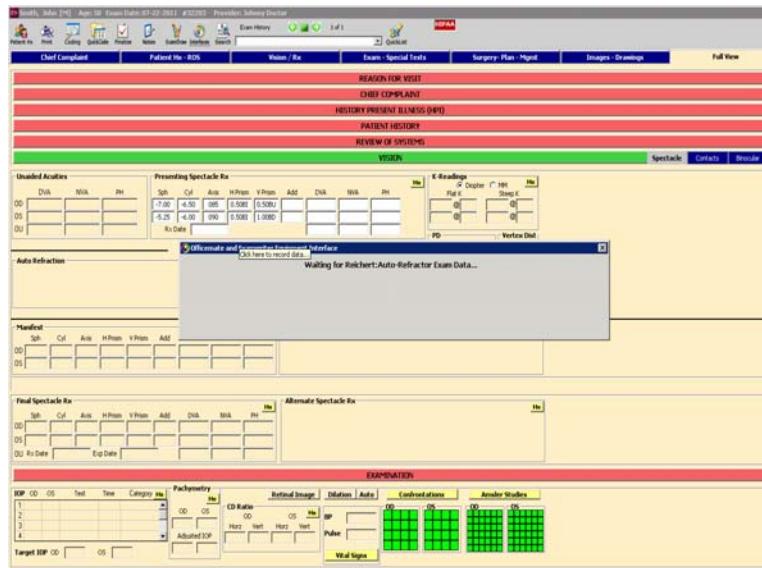
1. Open ExamWRITER.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Use the Reichert equipment to perform the examination or tests.

**NOTE**

After three readings for both refraction and kerotometry, the Reichert equipment displays the Review Data screen. Do *not* press the **Print** icon before completing steps 4–5 below.

4. After the tests using the Reichert equipment are completed, click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Reichert:Auto-Refractor**.

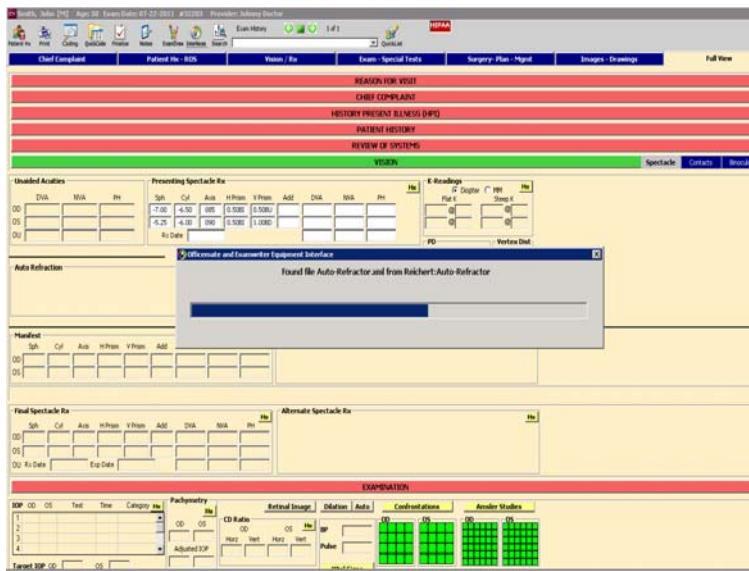
The Officemate and Examwriter Equipment Interface window opens and displays the following message: “Waiting for Reichert Data...”



6. Press the **Print** button on the Review Data screen on the Reichert equipment.

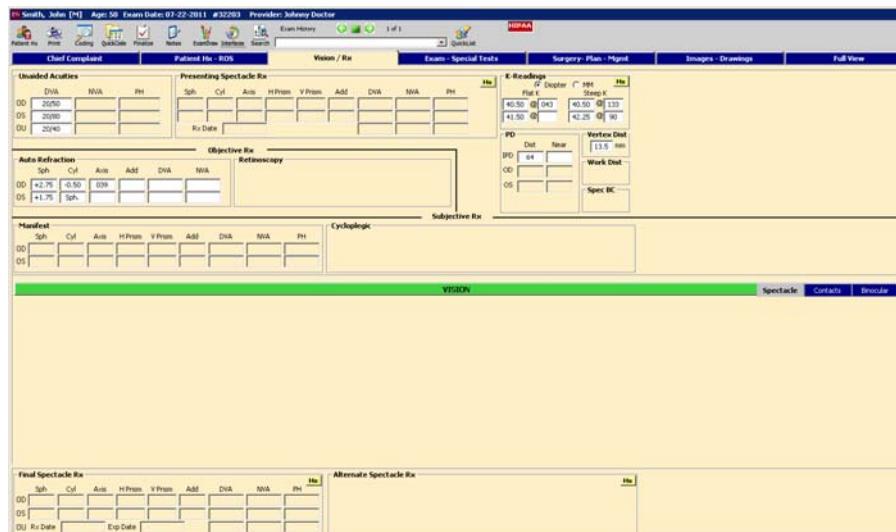
The Reichert device's internal thermal printer prints the captured data, and the Reichert equipment transmits the data to ExamWRITER. A progress bar

appears across the Officemate and Examwriter Equipment Interface window indicating that the information is being received.



After all of the data is received and saved to the OfficeMate database, the patient's ExamWRITER record refreshes, and the data received from the Reichert equipment is displayed on the Vision/Rx Spectacle tab.

- Click the **Vision/Rx Spectacle** tab within the patient's exam record to view the Reichert data.

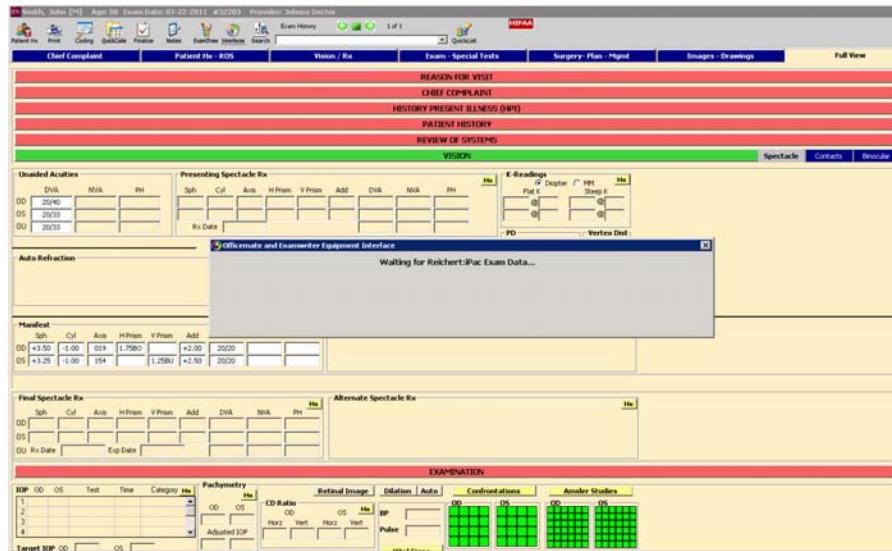


## Using the iPac Pachymeter

- Open ExamWRITER.
- Create a new blank exam or open a saved exam for an existing patient.
- Click the **Interfaces** icon on the ExamWRITER chart window.

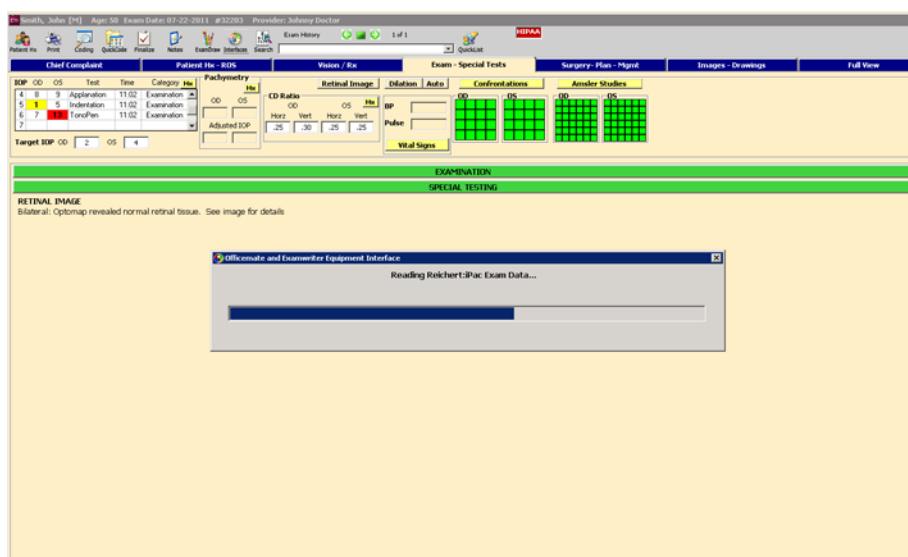
**4. Select **Reichert:iPac**.**

The Officemate and Examwriter Equipment Interface window opens and displays the following message: "Waiting for Reichert:iPac Exam Data..."



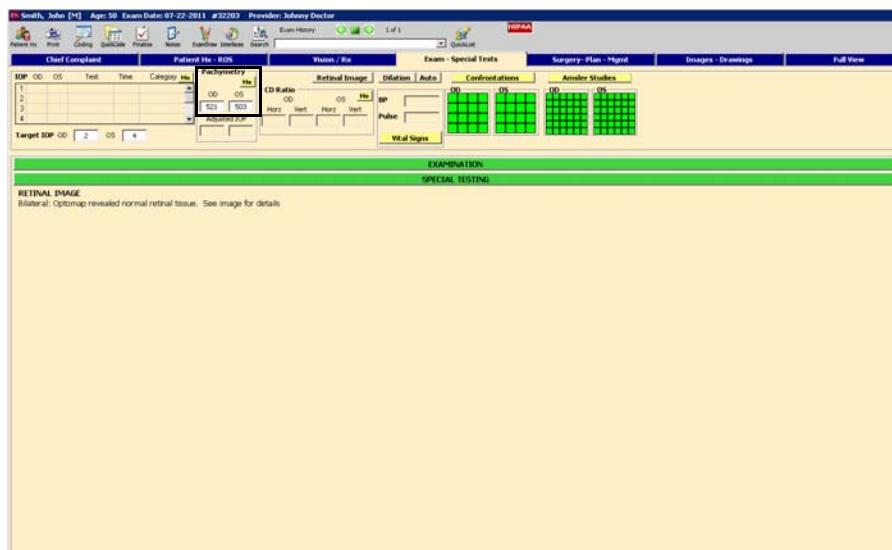
5. Use the Reichert iPac to perform the examination or tests.
6. To send the data from the iPac to ExamWRITER, tilt the multi-function switch on the iPac in the downward direction.

The iPac transmits the data to ExamWRITER. A progress bar appears across the Officemate and Examwriter Equipment Interface window indicating that the information is being received.



The data received from the Reichert iPac is displayed in the Pachymetry box on the Exam - Special Tests tab.

- Click the **Exam - Special Tests** tab within the patient's exam chart to view the Reichert iPac data.

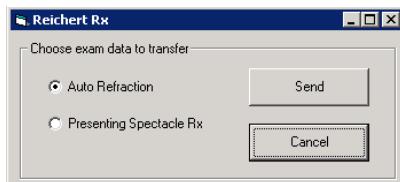


**NOTE**

The iPac only provides data for the corneal thickness, and does not calculate the adjusted IOP. ExamWRITER automatically calculates the adjusted IOP after the corneal thickness and IOP data fields are populated.

## Using the Auto Phoropter RS & Auto Phoropter Visutron900

- Open ExamWRITER.
  - Create a new blank exam or open a saved exam for an existing patient.
  - Click the **Interfaces** icon on the ExamWRITER chart window.
  - Select **Reichert:Auto Phoropter Input**.
- The Reichert Rx window opens.
- Select either the **Auto-Refraction** or **Presenting Spectacle Rx** radio button to send the data you want to the Reichert equipment.



6. Click **Send**.

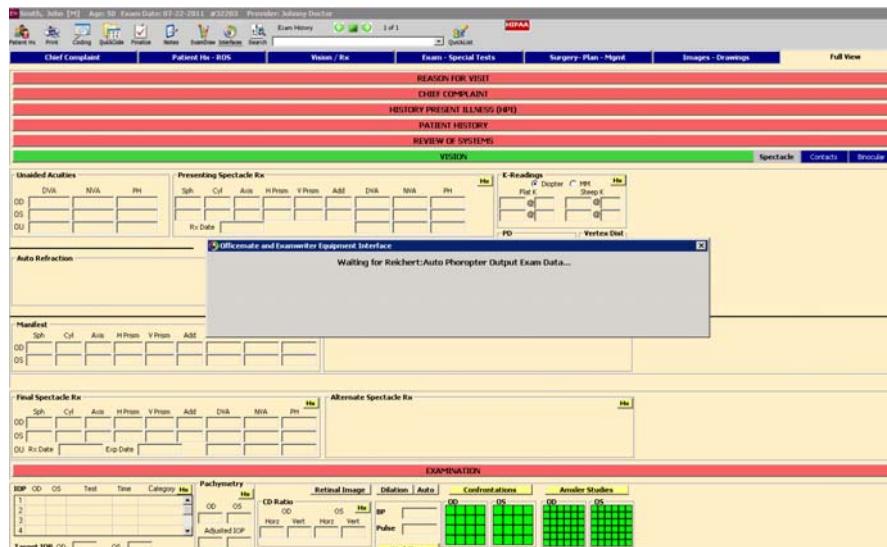
The selected data is sent to the Reichert equipment and the Reichert Launch file status dialog box informs you that the Reichert Input file was successfully created.



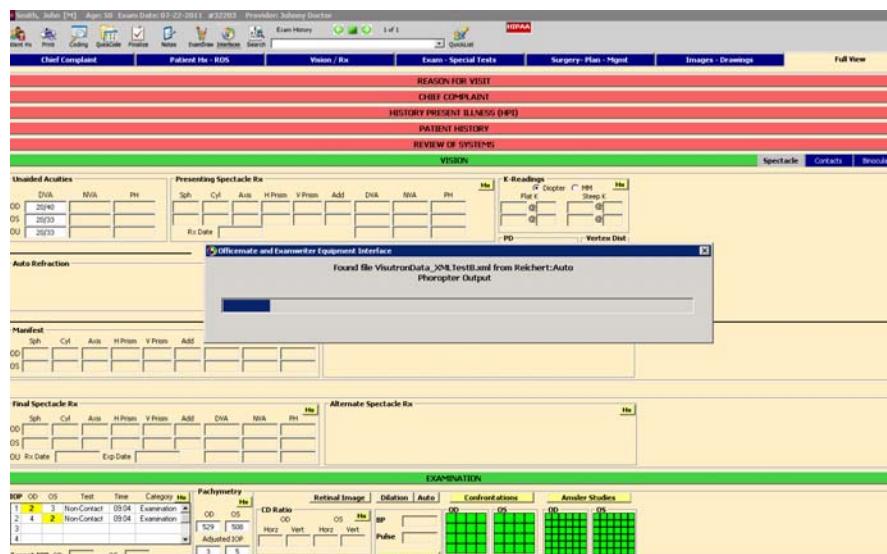
7. Click **OK** to close the Reichert Launch file status dialog box.
8. Use the Reichert equipment to perform the examination or tests.
9. To send the data from the Reichert equipment to ExamWRITER, press the **COM** button on the Reichert equipment.
10. Click the **Interfaces** icon on the ExamWRITER chart window.

### 11. Select **Reichert:Auto Phoropter Output**.

The Officemate and Examwriter Equipment Interface window opens and displays the following message: "Waiting for Reichert:Auto Phoropter Output Exam Data..."

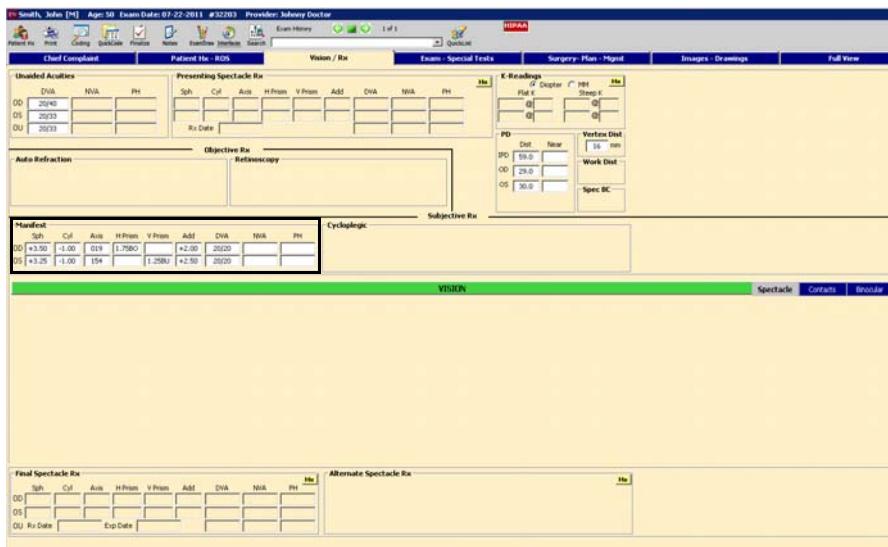


ExamWRITER opens the XML file created by the Reichert equipment. A progress bar appears across the Officemate and Examwriter Equipment Interface window indicating that the information is being received.



The data received from the Reichert equipment is displayed in the Manifest box on the Vision/Rx tab.

12. Click the **Vision/Rx** tab within the patient's exam chart to view the Reichert equipment data.



### Reviewing Reflex UBM & Foresee PHP Images

**NOTE**

All Reflex UBM and Foresee PHP image file names must contain the patient's ExamWRITER ID number. Reflex UBM image file names must use the Last,First YYMMDD-HHMMSS RecordNum-#.xxx naming convention. Foresee PHP image file names must use the Last\_First\_IDNum\_EyeSide--V.4.0.1-YYYY.MM.DD-HH.MM.SS.jpg naming convention.

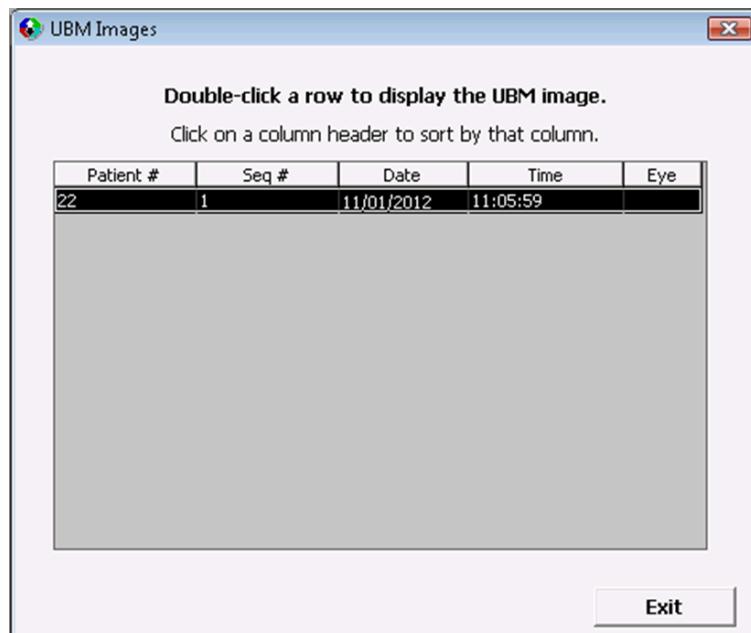
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured images.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Reichert:UBM Image Review**.

OR

- Click the **Interfaces** icon on the ExamWRITER chart window and select **Reichert:PHP Image Review**.

The UBM Images or PHP Images window opens and displays a list of images.



4. Double-click on a row to display and review an image.



## In this chapter:

- [ReSeeVit Interface Overview, 135](#)
- [Setting Up the ReSeeVit Interface, 136](#)
- [Using ReSeeVit Capture, 138](#)

## ReSeeVit Interface Overview

ExamWRITER interfaces with the Veatch ReSeeVit software before the capture process when patient information is transferred from ExamWRITER into the ReSeeVit software to create or update retinal images and during the review process when the newly created or existing ReSeeVit retinal images are available for on-screen review.

The ReSeeVit equipment interface saves equipment data to the ReSeeVit database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The ReSeeVit interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The ReSeeVit interface can only use one camera per Terminal Server.

### NOTES

- ReSeeVit equipment cannot be interfaced with the multilocation version of ExamWRITER.
- You must install ExamWRITER and the ReSeeVit software on the computer to which the ReSeeVit equipment is connected; then you can install the ReSeeVit software on the server on which ExamWRITER is installed. Contact Veatch Ophthalmic Instruments to determine if the ReSeeVit software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.
- Back up your ReSeeVit data! Contact Veatch Ophthalmic Instruments for recommended backup procedures or visit the Veatch Web site at <http://www.veatchinstruments.com>.

## Setting Up the ReSeeVit Interface

To view your ReSeeVit images within ExamWRITER, you will need to adjust some settings on each computer on which you want to view the images. This section includes the following topics:

- To set up the computer connected to the ReSeeVit equipment, 136
- To set up other computers on the network, 137

### ► To set up the computer connected to the ReSeeVit equipment

**NOTE**

You must set up the ReSeeVit interface from the computer connected to the ReSeeVit equipment.

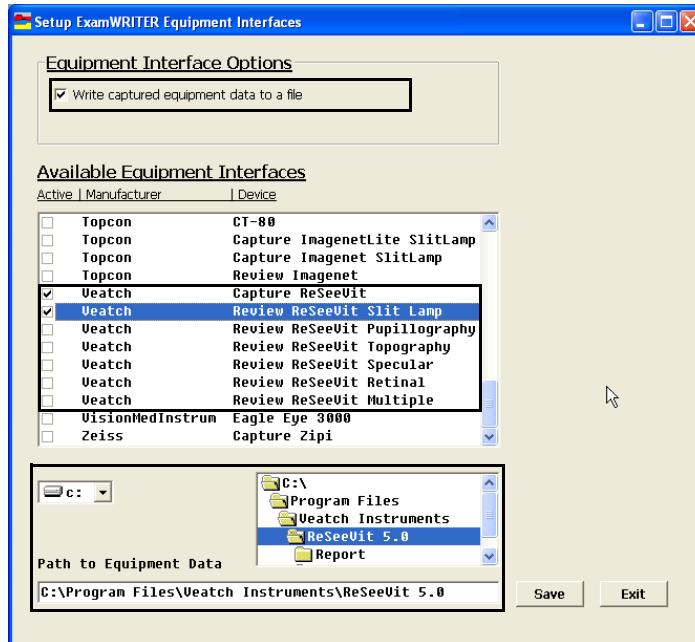
1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from ReSeeVit in a file for debugging purposes; otherwise, go to step 3.
3. Deselect the check boxes next to any equipment you are *not* using as needed.
4. Select the **Veatch: Capture ReSeeVit** check box.
5. Select one **Veatch Review** check box based on your setup:

If you are using...	Select this Veatch Review check box...
A single ReSeeVit camera	The <b>Veatch: Review ReSeeVit</b> check box that corresponds with your camera.
Multiple ReSeeVit cameras	The <b>Veatch Review ReSeeVit Multiple</b> check box.

- Select the drive and folder where the ReSeeVit software is installed.

**NOTE**

The ReSeeVit software is typically installed in the C:\Program Files\Veatch Instruments\ReSeeVit 5.0 directory.



- Click **Save**.
- Click **Exit**.
- Close ExamWRITER to save your changes.
- Ensure that the CSODB.dll file is installed in the Program Files\Veatch Instruments\ReSeeVit 5.0 folder.

**NOTE**

If the CSODB.dll is not installed, contact your Veatch representative or Veatch support to obtain the CSODB.dll file.

### ► To set up other computers on the network

**NOTE**

These steps are only required if you need to be able to review ReSeeVit images on computers other than the computer connected to the equipment. These steps must be performed on each computer on which you will review ReSeeVit images.

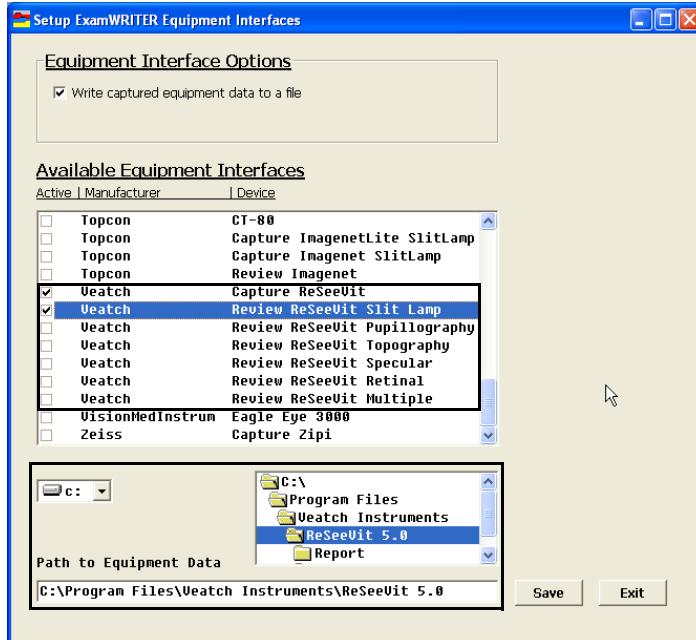
- On the ExamWRITER main window, click **Tools**, and select **Equipment Integration Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
- Deselect the check boxes next to any equipment you are *not* using as needed.

3. Select one Veatch Review check box based on your setup:

If you are using...	Select this Veatch Review check box...
A single ReSeeVit camera	The <b>Veatch: Review ReSeeVit</b> check box that corresponds with your camera.
Multiple ReSeeVit cameras	The <b>Veatch Review ReSeeVit Multiple</b> check box.

4. Select the drive and folder where the ReSeeVit software is installed.

**NOTE** The ReSeeVit software is typically installed in the Program Files\Veatch Instruments\ReSeeVit 5.0 directory on the computer connected to the equipment.

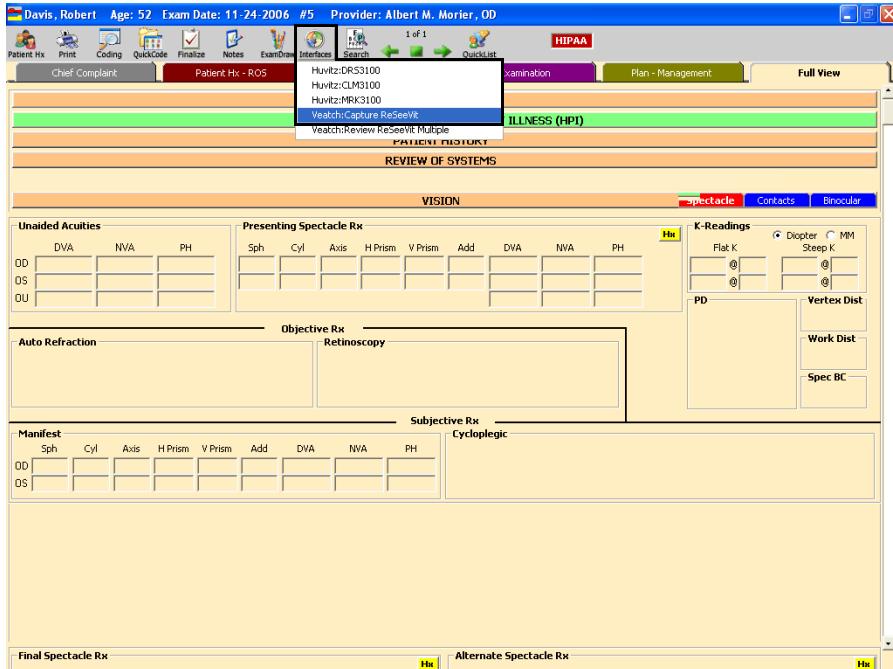


5. Click **Save**.  
 6. Click **Exit**.  
 7. Close and restart ExamWRITER to activate your changes.

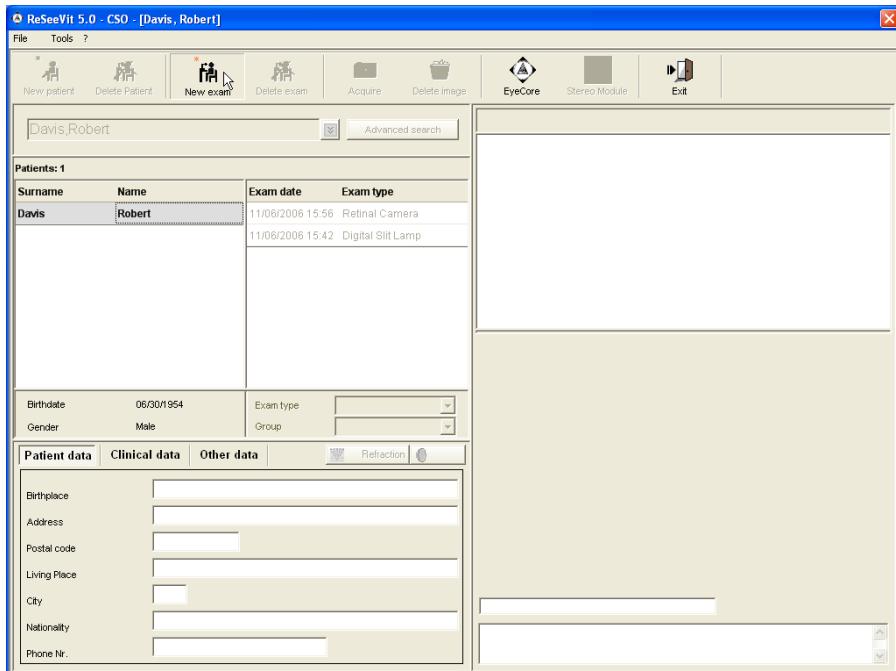
## Using ReSeeVit Capture

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Veatch:Capture ReSeeVit**.



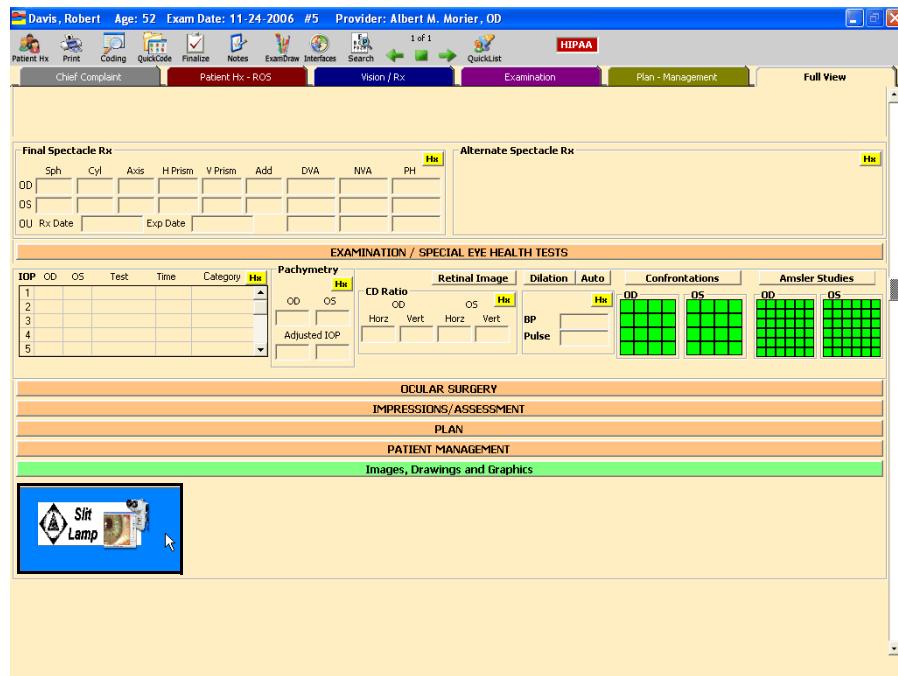
The ReSeeVit 5.0 window opens with the patient's last name, first name, gender, date of birth, and prior exams ExamWRITER.



5. Follow the ReSeeVit capture instructions provided by Veatch to capture the patient's retinal images.

6. Close the ReSeeVit software to return to ExamWRITER.

The ReSeeVit Exam icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen the patient's exam.



7. Click the ReSeeVit Exam icon to review the patient's captured image(s).

# Using the Topcon IMAGEnet Interface

18

## In this chapter:

- Topcon IMAGEnet Interface Overview, 141
- Setting Up the Topcon IMAGEnet Interface, 142
- Using the Topcon IMAGEnet Interface, 145
- Reviewing Topcon IMAGEnet Images, 145

These instructions cover the following Topcon products:

- Topcon IMAGEnet 2000
- Topcon IMAGEnet Lite

**NOTE**

Topcon IMAGEnet Lite is not supported on Microsoft Windows 8.

## Topcon IMAGEnet Interface Overview

ExamWRITER interfaces with the Topcon IMAGEnet 2000 and IMAGEnet Lite by transferring information to the IMAGEnet capture software and by providing a quick link from the patient's exam in ExamWRITER to the captured images in IMAGEnet's capture software. ExamWRITER does *not* send data to the Topcon IMAGEnet 2000 or IMAGEnet Lite equipment.

The Topcon IMAGEnet equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Topcon IMAGEnet interface uses a serial RS-232 cable or null modem to connect to the computer. The Topcon IMAGEnet interface cannot connect to a Terminal Server.

## Setting Up the Topcon IMAGEnet Interface

<b>NOTES</b>	<ul style="list-style-type: none"><li>• You must install ExamWRITER and the Topcon IMAGEnet software on the computer to which the Topcon IMAGEnet equipment is connected; then you can install the Topcon IMAGEnet software on the server on which ExamWRITER is installed. Contact Topcon Medical Systems to determine if the Topcon IMAGEnet software will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server.</li><li>• Back up your Topcon IMAGEnet data! Contact Topcon Medical Systems for recommended backup procedures.</li></ul>
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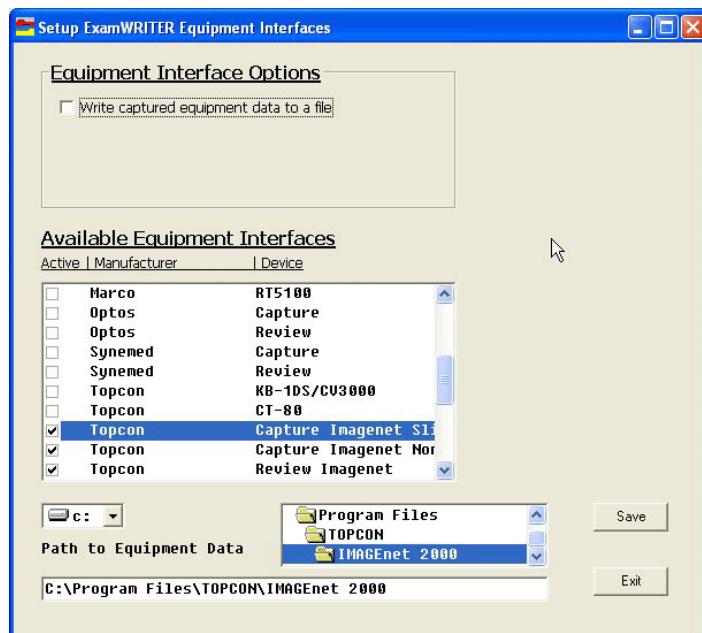
<b>NOTES</b>	<ul style="list-style-type: none"><li>• You must set up the Topcon IMAGEnet 2000 or IMAGEnet Lite interface from the computer with the Topcon IMAGEnet software installed and connected to the Topcon IMAGEnet equipment.</li><li>• Even if you are using Terminal Services, you must install the IMAGEnet software on each computer from which you plan to use the software and you must set up a path on each computer to the location where the Topcon IMAGEnet database is located.</li><li>• You must install the Topcon IMAGEnet interface on each computer you want to view images captured with the Topcon IMAGEnet software.</li><li>• Back up your IMAGEnet data. Contact Topcon for recommended backup procedures.</li><li>• The CheckPatientInfo.dll file must be installed in the C:\Program Files\TOPCON\IMAGEnet 2000 directory. If the CheckPatientInfo.dll file is not there, contact Topcon support for help.</li></ul>
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1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the check boxes next to the equipment interfaces that you are setting up.

3. Select the drive and folder where the Topcon IMAGENet software is installed on each computer that you want to view images captured with the Topcon IMAGENet software.

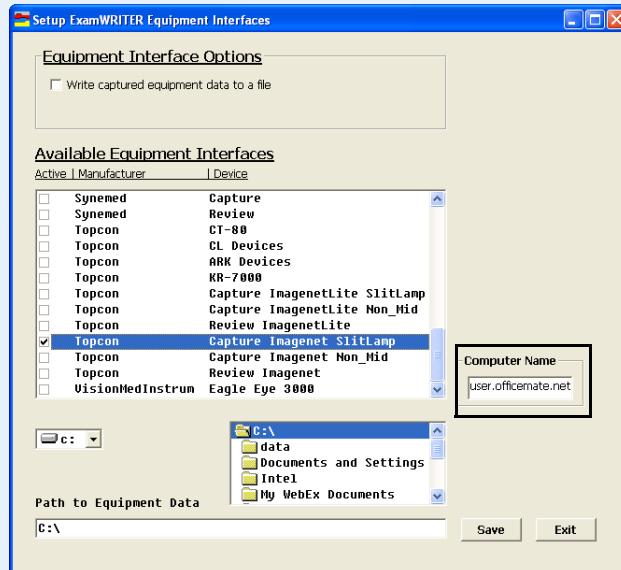
**NOTE**

Typically, the path to the IMAGENet software on the local computer is C:\Program Files\TOPCON\IMAGENet 2000. When setting up the Topcon IMAGENet 2000 or IMAGENet Lite interface on other computers on your network, select the drive and folder of the computer that is connected to the Topcon IMAGENet equipment.

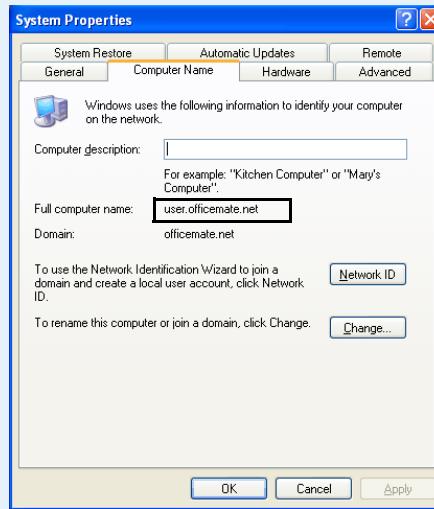


**NOTE**

If you are using ExamWRITER through terminal services, you will also need to type your computer's network name in the Computer Name field.



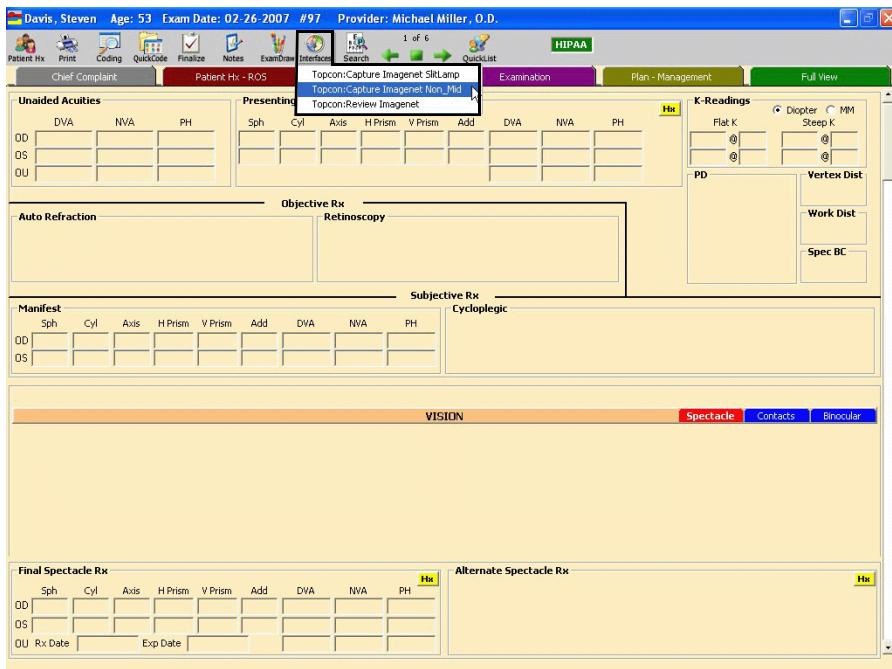
To locate your computer in Windows, open the System Properties window. Click the **Computer Name** tab and locate the name in the **Full computer name** field.



4. Click **Save**.
5. Click **Exit**.
6. Close and reopen ExamWRITER to activate your changes.

## Using the Topcon IMAGEnet Interface

1. Open ExamWRITER.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.
4. Select your camera from the Interfaces menu.



The Topcon IMAGEnet application opens in capture mode with the patient's name and ID populated. The patient's birth date and gender are also added to the IMAGEnet patient record.

5. Capture images using the Topcon IMAGEnet application.
6. When you are finished capturing images, close the Topcon IMAGEnet application and follow the instructions in “[Reviewing Topcon IMAGEnet Images](#)” on page 145 to review the patient's captured retinal images.

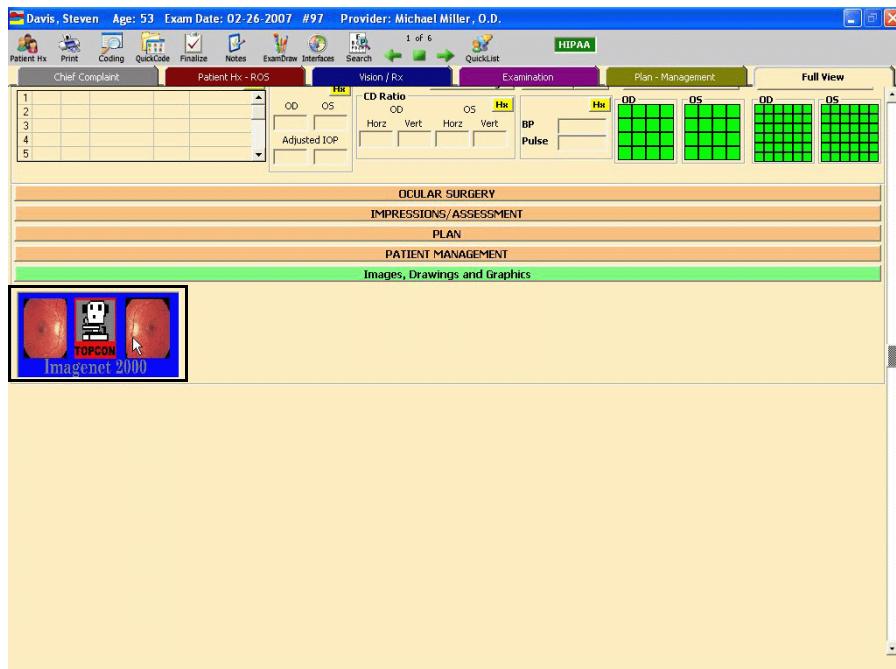
## Reviewing Topcon IMAGEnet Images

<b>NOTE</b>	Both the Topcon IMAGEnet review software and ExamWRITER must be installed and set up on all workstations on which you want to review images. The Topcon IMAGEnet review software must be installed on all workstations, even if you are using Terminal Services. Also, a path to the location where the Topcon IMAGEnet database is located must be set up. For information on setting up the path to the Topcon IMAGEnet database in the ExamWRITER equipment interface, go to “ <a href="#">Setting Up the Topcon IMAGEnet Interface</a> ” on page 142.
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After you have captured images for a patient, the images are linked to the patient's ExamWRITER record. To review the patient's captured images, perform the following steps:

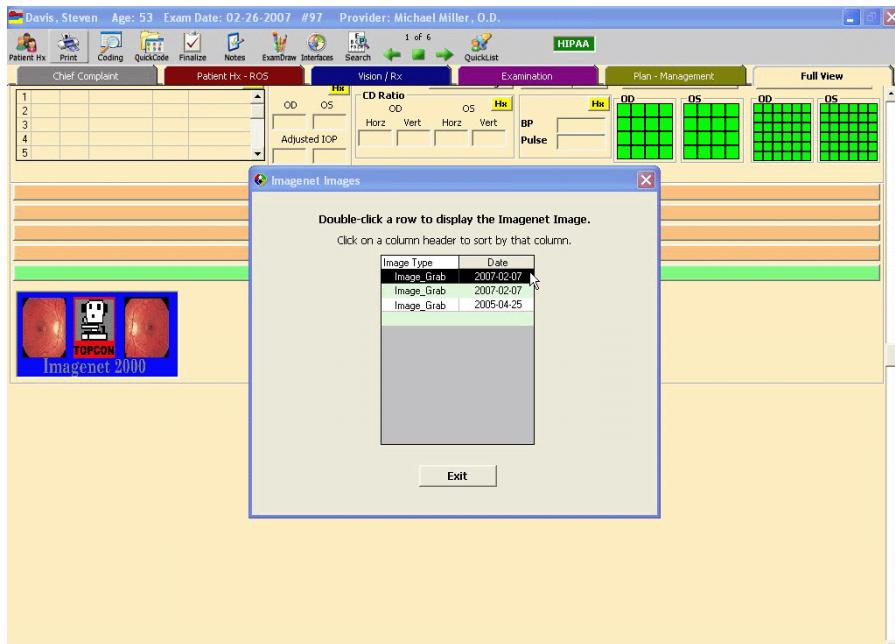
1. Open the patient's exam for whom you have previously captured retinal images in ExamWRITER.

The Topcon IMAGEnet logo appears on the exam under the Images, Drawings and Graphics category bar. If you hold your cursor over the IMAGEnet logo, the tooltip shows you the number of Topcon IMAGEnet exams for that patient and the date of the last exam.



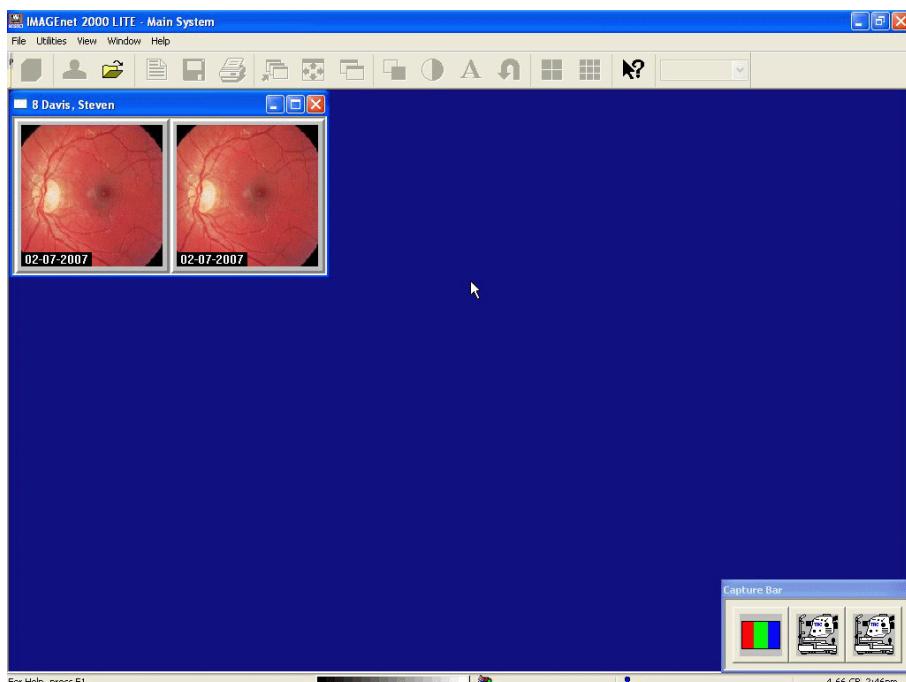
2. Click the **Topcon IMAGEnet** icon.

The IMAGEnet Images windows opens, displaying a list of images for the patient and the dates those images were captured.



3. Double-click the image you want to view.

The Topcon IMAGEnet application opens, displaying the patient's images.



4. When your review is complete, close the Topcon IMAGEnet application.



# Using the Topcon CL, KR, & RM Interface

19

## In this chapter:

- Topcon Interface Overview, 149
- Setting Up the Topcon CL Equipment, 150
- Setting Up the Topcon KR & RM Equipment, 150
- Setting Up the Topcon Interface, 153
- Using the Topcon Interface, 155

## Topcon Interface Overview

ExamWRITER receives data from the Topcon computerized lensmeter (CL devices), autorefractor/keratometer (KR devices), and autorefractor (RM devices) equipment and displays the data on the ExamWRITER chart window. ExamWRITER does *not* send data to the Topcon equipment.

**NOTE** The KR-8000, KR-8900, KR-8000PA, and KR-1 Autorefractor/Keratometer only import autorefraction and keratometry data, and *not* topography images, into ExamWRITER.

The Topcon equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Topcon interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Topcon equipment interface can use multiple serial ports per PC.

**NOTE** If you are using a digital refraction system with the KR-8000PA or KR-7000P Autorefractor/Keratometer, it *cannot* be connected to the computer that is running the ExamWRITER Topcon equipment interface; instead, the KR-8000PA and KR-7000P Autorefractor/Keratometer must be connected to a *separate* computer so that the topographic data correctly transfers to the digital refractor.

## Setting Up the Topcon CL Equipment

**NOTE**

If you have questions about the RS232C communication format or setting up any of your Topcon equipment, contact your Topcon dealer or Topcon Medical Systems using the address information on the back cover of your Topcon equipment documentation. You can also contact Topcon support at 1.866.922.6278.

Before you begin using the Topcon CL equipment interface, set up the Topcon CL equipment. This section tells you how to set up your Topcon CL equipment, including how

- To select the output data for the CL devices, 150
- To set the communication format for the CL devices, 150

### ► To select the output data for the CL devices

1. Press the **MODE** button.
2. Select **MENU**.
3. Choose **RS-232C**.
4. Choose **STD1**.
5. Press the **Print** switch to output the data.

RS232C DATA OUT is displayed on the Topcon CL equipment monitor. When the transmission is complete, RS232C SUCCESS is displayed on the monitor.

### ► To set the communication format for the CL devices

1. When you are in the INITIAL MENU screen, press the **Measurement** switch and move the cursor to **ON-LINE**.
2. Choose **ON-LINE**.  
In the ON-LINE screen you can modify the computer lensmeter data receiving format, communication format, and communication speed.
3. Press the **Measurement** switch and move the cursor to **DATA FORMAT**.
4. Press the **Print** switch and choose **STD1 (Topcon STD1 format)**.
5. Press the **Measurement** switch.

## Setting Up the Topcon KR & RM Equipment

**NOTE**

If you have questions about the RS232C communication format, the KR-8900 output data type, or setting up any of your Topcon equipment, contact your Topcon dealer or Topcon Medical Systems using the address information on the back cover of your Topcon equipment documentation. You can also contact Topcon support at 1.866.922.6278.

In the ON-LINE screen you can modify the computer lensmeter data receiving format, communication format, and communication speed. In the SETTINGS

screen you can modify the output data type. This section tells you how to set up your Topcon KR and RM equipment, including how

- To set the communication format for the KR & RM devices, 151
- To set the communication format and speed and select the output data information for the KR-1 only, 151
- To set the RS232C communication speed, 152
- To select the RS232C output data type for the KR-7000 only, 152
- To select the output data type for the KR-8900 only, 152
- To change the settings for the KR-800 only, 152

### ► To set the communication format for the KR & RM devices

NOTES	<ul style="list-style-type: none"><li>• For information about setting up the KR-7000, go to “To select the RS232C output data type for the KR-7000 only” on page 152.</li><li>• For information about setting up the KR-1, go to “To set the communication format and speed and select the output data information for the KR-1 only” on page 151.</li></ul>
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1. When you are in the INITIAL MENU screen, press the **Measurement** switch and move the cursor to **ON-LINE**.
2. Choose **ON-LINE**.
3. Press the **Measurement** switch and move the cursor to **DATA FORMAT**.
4. Press the **Print** switch and choose **STD1 (Topcon STD1 format)**.
5. Press the **Measurement** switch.

### ► To set the communication format and speed and select the output data information for the KR-1 only

1. Tap **Settings** on the touch-screen monitor.
2. Tap **Index**.
3. Tap **Comm**.
4. Set the Format to **STD1**.
5. Set the Baud Rate to **2400**.
6. Set the Output Data to **ALL**.
7. Set the Output Port to **ON**.

► To set the RS232C communication speed

<b>NOTE</b>	If you are using the Topcon color mapping software and topographer and the KR-8000PA autorefractor/keratometer, you must set the RS232C communication speed baud rate to the appropriate rate to import your topography images into the color mapping software and then reset it to 2400, as instructed below, to import measurements from the KR-8000PA into ExamWRITER. You cannot import topography images into ExamWRITER.
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1. When you are in the INITIAL MENU screen, press the **Measurement** switch and move the cursor to **ON-LINE**.
2. Choose **ON-LINE**.
3. Press the **Measurement** switch and move the cursor to **DATA FORMAT**.
4. Press the **Print** switch and choose **2400 (baud rate 2400)**.
5. Press the **Measurement** switch.

► To select the RS232C output data type for the KR-7000 only

1. When you are in the INITIAL MENU screen, press the **Measurement** switch and move the cursor to **ON-LINE**.
2. Choose **ON-LINE**.
3. Set the RS232C format to **OLD FORMAT**.
4. Press the **Print** switch and choose **9600 (baud rate 9600)**.
5. Press the **Measurement Switch**.

► To select the output data type for the KR-8900 only

1. Press the **Menu Switch**.
1. When you are in the SETTINGS MENU screen, press the **Measurement Switch**.
2. Set the Output Data Type to **Yes**.

► To change the settings for the KR-800 only

1. Press the button with the wrench symbol.
2. Press the **Comm** button.
3. Set the Output to **ON**.
4. Set the Baud Rate to **2400**.
5. Set the Serial Connection to **STD1**.

## Setting Up the Topcon Interface

**NOTES**

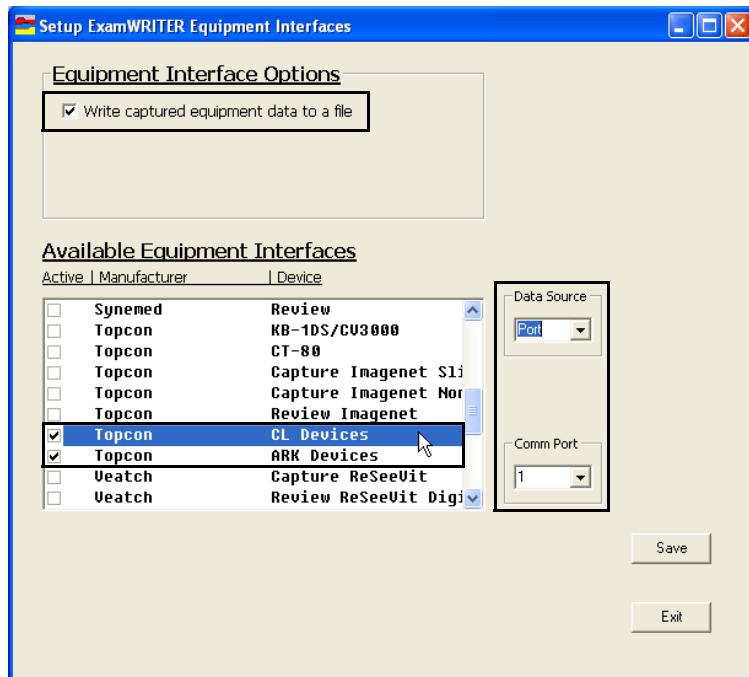
- You must set up the Topcon CL, KR, and RM interface from the computer connected to the Topcon equipment.
- You must be using ExamWRITER version 7.3 or above to interface with the Topcon CL equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Topcon in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
  - If you are setting up a Topcon CL equipment interface, select the **Topcon CL Devices** check box.
  - If you are setting up a Topcon KR equipment interface, select the **Topcon ARK Devices** check box.

**NOTE**

At this time, you must use a Topcon digital refraction system to interface a Topcon RM device with ExamWRITER.

4. Select one of the following options from the **Data Source** drop-down menu:
  - If you are connecting this computer to the Topcon equipment with a serial cable, select **Port** and then select a communication port number from the **Comm Port** drop-down menu. The Comm Port default is 1.
  - If you are *not* connecting this computer to the Topcon equipment with a serial cable, select **File** and then type the data file's beginning characters in the **Data File Start Chars** text box and select the data file's ending characters (extension) from the **Data File End Char** drop-down menu to specify the start and end characters of data source files and identify specific files from which the interface is importing data.

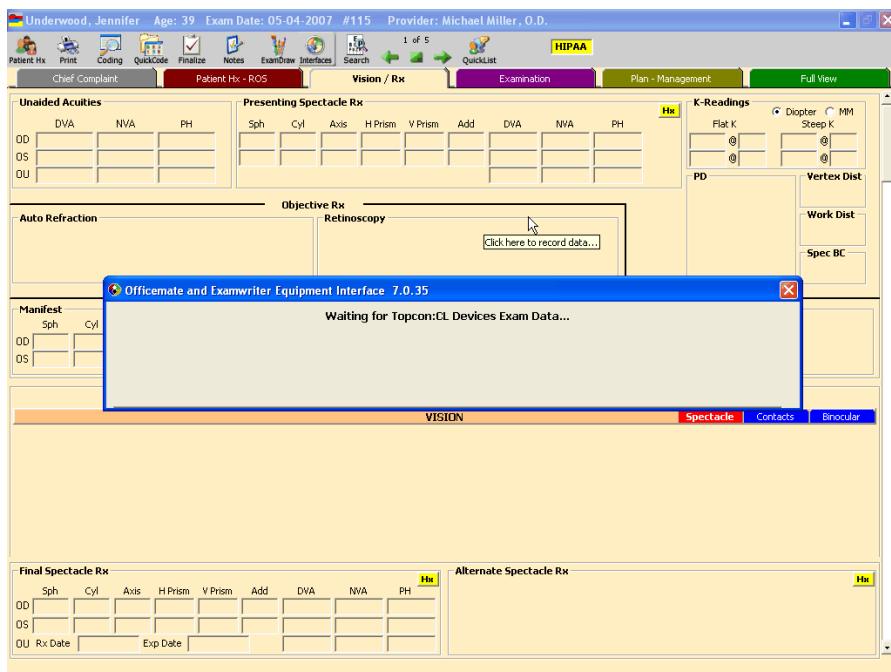


5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Using the Topcon Interface

1. Ensure that the Topcon CL, KR, or RM device is connected to the computer that ExamWRITER is installed upon with a null modem serial cable.
2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select the Topcon device that corresponds to your Topcon equipment.

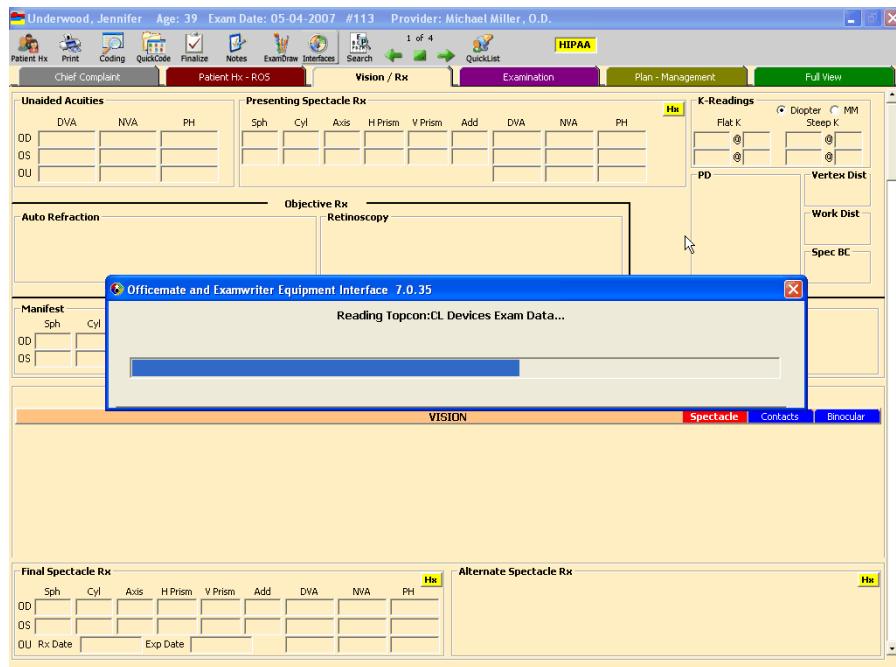
The Officemate/Examwriter Equipment Interface window opens and displays a "Waiting for Topcon Exam Data..." message.



6. Use the Topcon device to perform the exam tests

The test data is automatically transmitted to the computer at the end of the test. You can also press Print on the Topcon device's operation panel to transmit the data to the computer.

The device's built-in thermal printer prints the recorded data and displays a "Printing result data" message. After all of the data has been transmitted from the operation panel to the computer, a progress bar appears on the Officemate/Examwriter Equipment Interface window.



After all of the received data is processed and saved to the OfficeMate database, the ExamWRITER exam chart refreshes and all of the received data from the Topcon device is displayed on the Vision/Rx Spectacle tab.

# Using the Topcon CT-80 Interface

20

## In this chapter:

- [Topcon CT-80 Interface Overview, 157](#)
- [Setting Up the Topcon CT-80 Equipment, 157](#)
- [Setting Up the Topcon CT-80 Interface, 158](#)
- [Using the Topcon CT-80 Interface, 159](#)

## Topcon CT-80 Interface Overview

ExamWRITER receives data from the Topcon CT-80 equipment and displays the data on the ExamWRITER chart window. ExamWRITER does *not* send data to the Topcon CT-80 equipment.

The Topcon CT-80 equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Topcon CT-80 interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Topcon CT-80 equipment interface can use multiple serial ports per PC.

## Setting Up the Topcon CT-80 Equipment

Before you begin using the Topcon equipment interface, set up the Topcon CT-80 equipment.

1. Press **Menu** on the Topcon CT-80 monitor.
2. Highlight **RS-232C Mode**.
3. Press the button on the joystick.
4. Press the measurement switch.
5. Ensure that the **FORMAT** is set to **MODE 2**; if it is not set to MODE 2, use the cursor buttons to highlight FORMAT, press the measurement switch to select FORMAT, and press the measurement switch to select MODE 2.

Selecting MODE 2 will ensure that data is transmitted to ExamWRITER after each measurement is made.

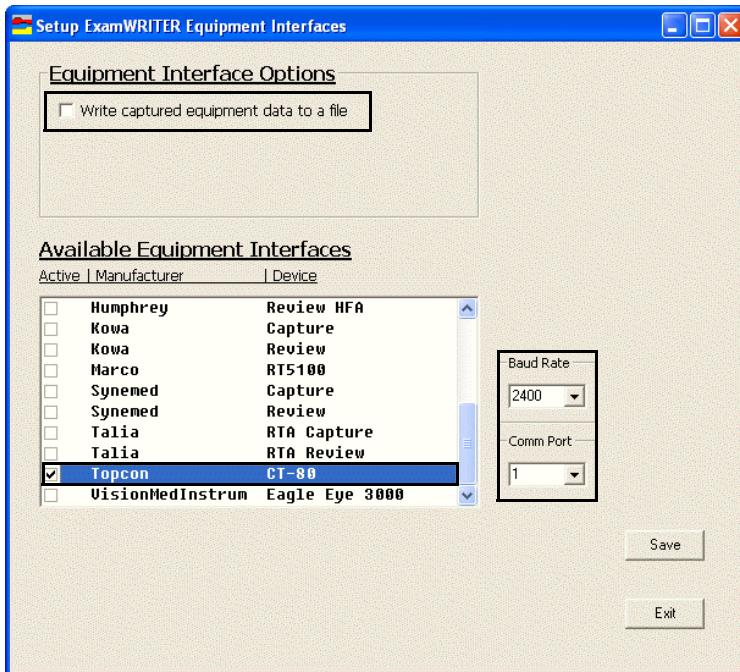
6. Ensure that **SPEED [BPS]** is set to **2400**; if it is not set to 2400, use the cursor buttons to highlight SPEED [BPS], press the measurement switch to select SPEED [BPS], and press the measurement switch to select 2400.

## Setting Up the Topcon CT-80 Interface

**NOTE** You must set up the Topcon CT-80 interface from the computer connected to the Topcon CT-80 equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the Topcon CT-80 in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select **2400** from the **Baud Rate** drop-down menu.
5. Select a communication port number from the **Comm Port** drop-down menu.

The Comm Port default is 1.



6. Click **Save**.
7. Click **Exit**.
8. Close and reopen ExamWRITER to activate your changes.

## Using the Topcon CT-80 Interface

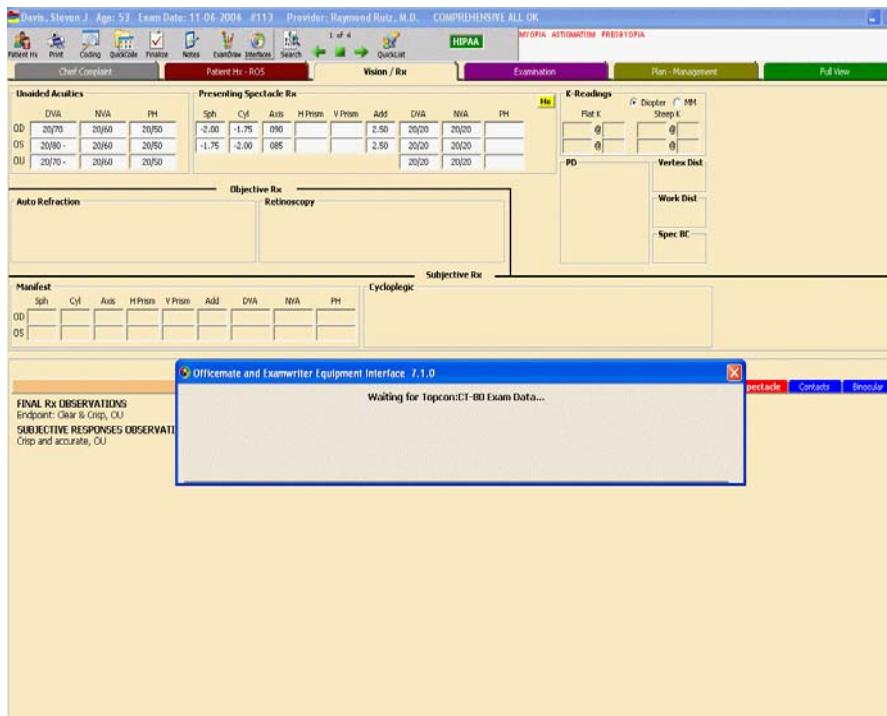
1. Ensure that the Topcon CT-80 is connected to the computer that ExamWRITER is installed upon with a serial cable or serial-to-USB adapter cable.

**NOTE**

You can purchase serial cables and serial-to-USB adapter cables from Topcon at 1.800.223.1130.

2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Topcon:CT-80**.

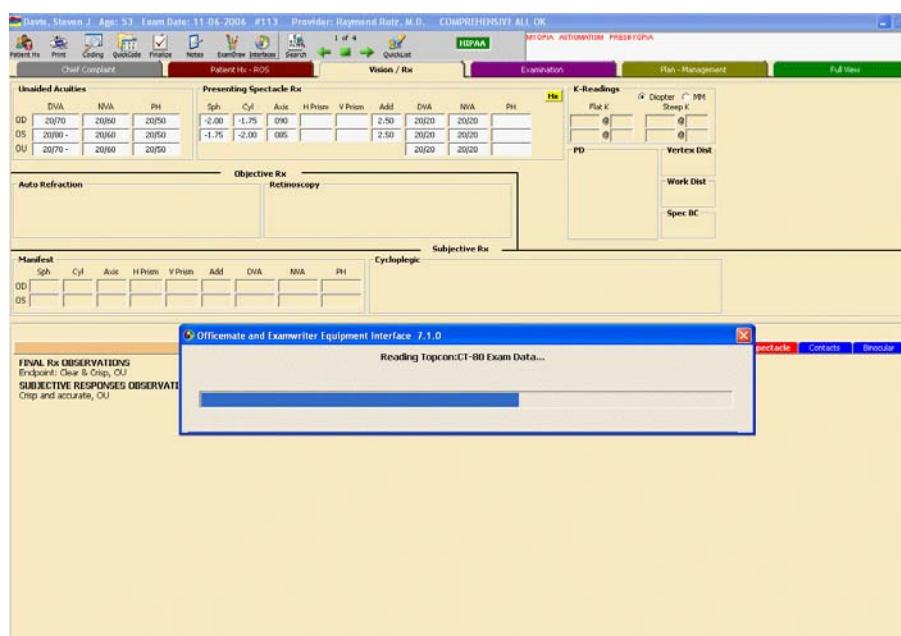
The Officemate/Examwriter Equipment Interface window opens and displays a “Waiting for Topcon:CT-80 Exam Data...” message.



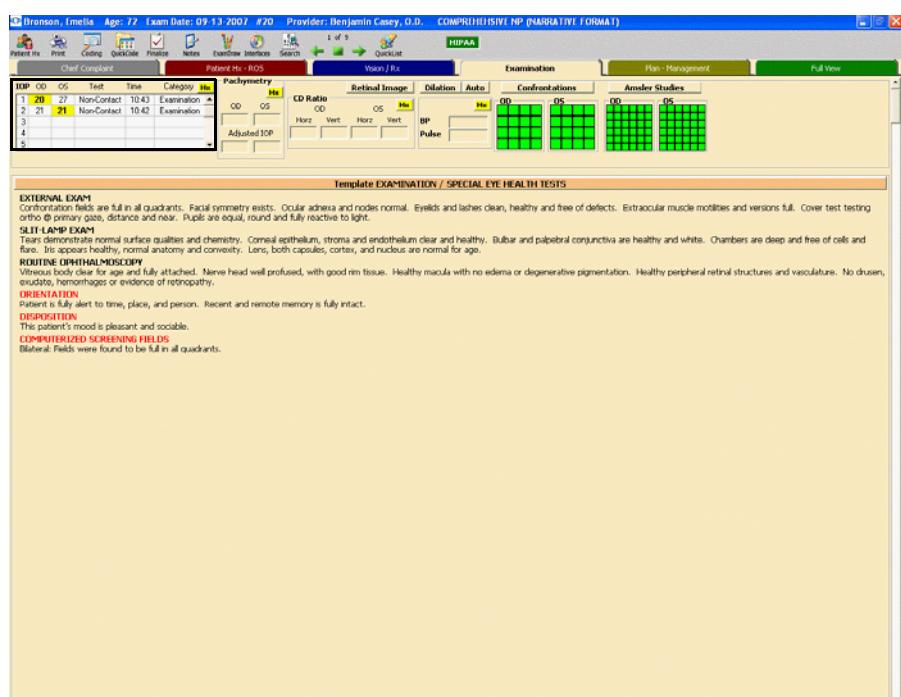
6. Perform the measurements on the Topcon CT-80. For information on performing these measurements, see the *Topcon CT-80 Owner's Manual*.

7. Press **Print** on the Topcon CT-80 operation panel.

The average of the measurements that you performed is transmitted to ExamWRITER. After all of the data has been transmitted from the operation panel to the computer, a progress bar appears on the Officemate/Examwriter Equipment Interface window.



After all of the received data is processed and saved to the OfficeMate database, the ExamWRITER exam chart refreshes and all of the received data from the operation panel is displayed in the IOP table on the Examination tab.



# Using the Topcon CV-5000, CV-5000S, CV-3000, & CV-2500 Interface

21

## In this chapter:

- [Topcon Interface Overview, 161](#)
- [Setting Up the Topcon Equipment, 161](#)
- [Setting Up the Topcon Interface, 162](#)
- [Using the Topcon Interface, 163](#)

## Topcon Inter- face Over- view

ExamWRITER receives data from the Topcon KB-50/CV-5000 (EXAM-5000), CV-5000S, KB-IDS/CV-3000, and CV-2500 equipment and displays the data on the ExamWRITER chart window. ExamWRITER does *not* send data to the Topcon equipment.

The Topcon equipment interface saves equipment data to the ExamWRITER database, which then can be accessed by all computers networked to look at that database. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Topcon interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Topcon equipment interface can use multiple serial ports per PC.

## Setting Up the Topcon Equipment

Before you begin using the Topcon equipment interface, you must set up the Topcon equipment. This section tells you how to set up the equipment, including how

- [To set up the Topcon KB-50/CV-5000 \(EXAM-5000\) or CV-5000S equipment, 161](#)
- [To set up the Topcon KB-IDS/CV-3000 or CV-2500 equipment, 162](#)

### ► **To set up the Topcon KB-50/CV-5000 (EXAM-5000) or CV-5000S equipment**

Eyefinity requires that you set DIP switch 2 for the KB-50/CV-5000 and CV-5000S equipment to connect to a computer to No. 1=ON and No. 2=OFF.

In addition to setting the DIP switches, follow the instructions below to set up the KB-50/CV-5000 or CV-5000S controller:

1. Hold down the **Shift** key and press the **Menu** key on the KB-50/CV-5000 or CV-5000S controller.  
The Settings window opens.
2. Press **Other**.  
The Other window opens.
3. In the KB section, set the Print Switch item to **Print** and **Export**.

See the *Topcon Instruction Manual CV 1DIAL Controller KB-50* for more information on setting up the Topcon KB-50/CV-5000 and CV-5000S equipment.

► **To set up the Topcon KB-IDS/CV-3000 or CV-2500 equipment**

Eyefinity requires that you set DIP switch 2 for the KB-IDS/CV-3000 and CV-2500 equipment to connect to a computer to No. 1=ON and No. 2=OFF.

See the *Topcon Instruction Manual CV 1DIAL Controller KB-1DS* for more information on setting up the Topcon KB-IDS/CV-3000 and CV-2500 equipment.

## Setting Up the Topcon Interface

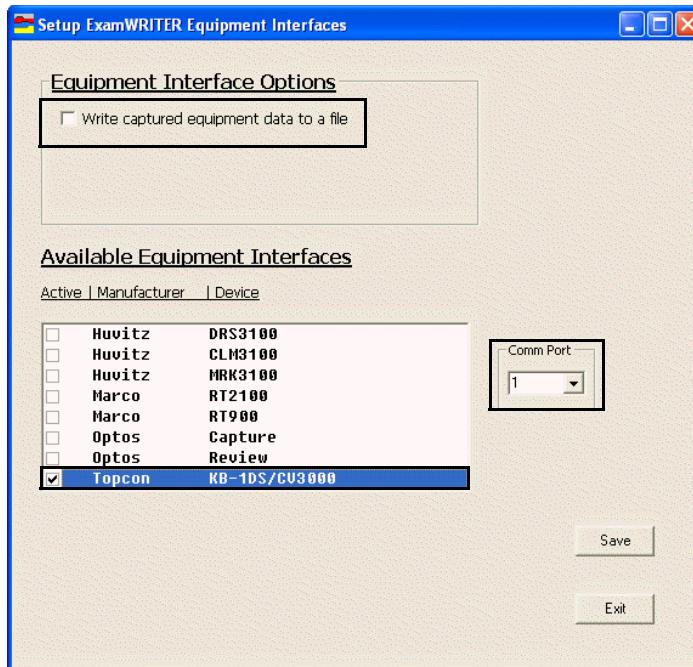
**NOTE**

You must set up the Topcon interface from the computer connected to the Topcon equipment.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Topcon in a file for debugging purposes; otherwise, go to step 3.
3. Select the **Topcon:KB-1DS/CV3000** check box.

4. Select a communication port number from the **Comm Port** drop-down menu.

The Comm Port default is 1.



5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Using the Topcon Interface

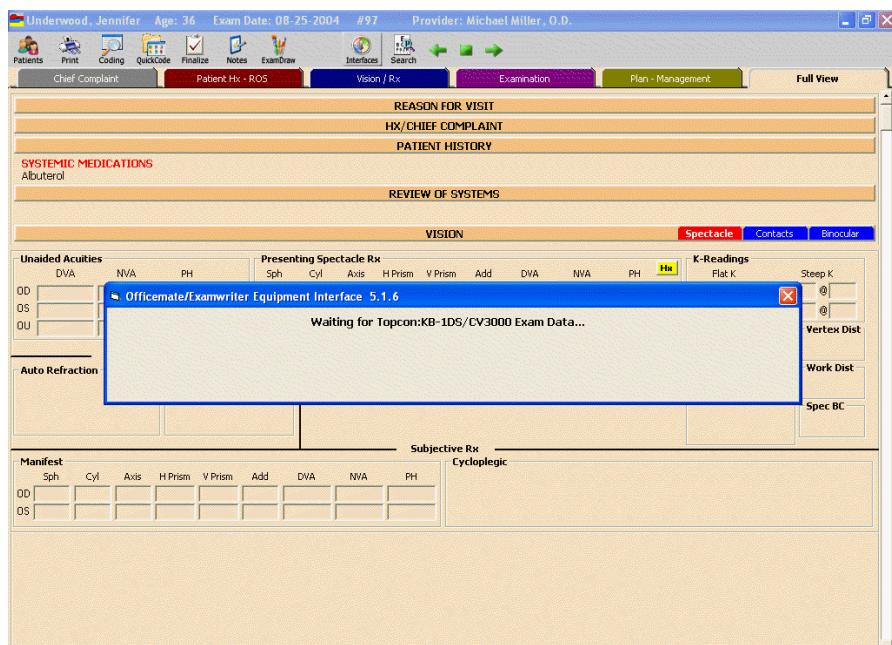
1. Ensure that the Topcon KB-50/CV-5000 (EXAM-5000), CV-5000S, KB-IDS/CV-3000, or CV-2500 is connected to the computer that ExamWRITER is installed upon with a serial cable or serial-to-USB adapter cable.

**NOTE** You can purchase serial cables and serial-to-USB adapter cables from Topcon at 1.800.223.1130.

2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.

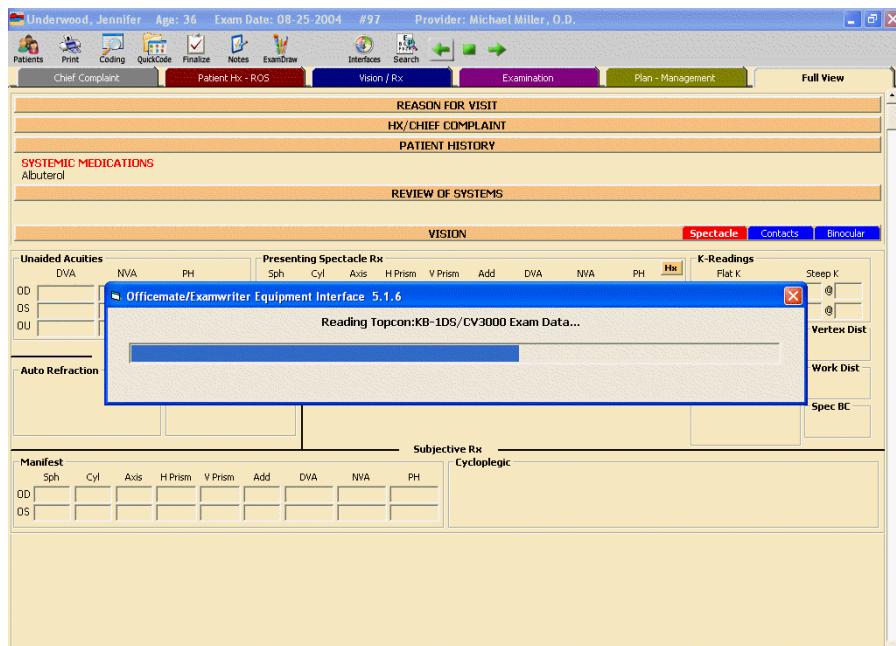
5. Select **Topcon:KB-1DS/CV3000**.

The Officemate/Examwriter Equipment Interface window opens and displays a "Waiting for Topcon:KB-1DS/CV3000 Exam Data..." message.



6. Press **Print** on the Topcon KB-50/CV-5000 (EXAM-5000), CV-5000S, KB-IDS/CV-3000, or CV-2500 operation panel.

The operation panel's built-in thermal printer prints the recorded data and displays an "RS-232C" message and then a "Printing" message. After all of the data has been transmitted from the operation panel to the computer, a progress bar appears on the Officemate/Examwriter Equipment Interface window.



After all of the received data is processed and saved to the OfficeMate database, the ExamWRITER exam chart refreshes and all of the received data from the operation panel is displayed on the Vision/Rx Spectacle and Binocular tabs.

**NOTE**

In order to obtain a reading that stereopsis is present when using the Topcon KB-50/CV-5000 (EXAM-5000), CV-5000S, KB-IDS/CV-3000, or CV-2500, the patient must respond to the first orientation (OD 45°/OS 135°) with [F1] (Diffrerup) and the second orientation with [F2] (DiffrerDepth). This combination of responses is the only combination that will transfer "PRES" into the ExamWRITER Stereopsis Dist box. Any other combinations of patient test responses will transfer "ABS" into the ExamWRITER Stereopsis Dist box.



# Using the Vmax Vision PSF Refractor Interface

22

## In this chapter:

- [Vmax Vision PSF Refractor Interface Overview, 167](#)
- [Setting Up the Vmax Vision PSF Refractor, 168](#)
- [Setting Up Shared Folders, 168](#)
- [Setting Up the Vmax Vision PSF Refractor Interface, 168](#)
- [Using the Vmax Vision PSF Refractor Interface, 169](#)

## Vmax Vision PSF Refractor Interface Overview

ExamWRITER exports auto refraction, presenting spectacle Rx, or manifest Rx data to the Vmax Vision PSF Refractor. The PSF Refractor then exports final Rx data to ExamWRITER.

The Vmax equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Zeiss VISUPAC interface uses a mapped network drive to connect to the computer or Terminal Server.

## Setting Up the Vmax Vision PSF Refractor

Set up the Vmax Vision PSF Refractor on the same network on which ExamWRITER is installed. The PSF Refractor does not need to be set up on the same computer as ExamWRITER. For help with installing the PSF Refractor, see the instructions from Vmax Vision that came with the device.

### Setting Up Shared Folders

You must have specific shared files set up on your computer so that the Vmax Vision PSF Refractor and OfficeMate can share data.

1. Check your computer to see if the following folders exist:
  - **C:\Officemate\VMaxShare\Data\Vmax Capture**
  - **C:\Officemate\VMaxShare\Data\Vmax Launch**
2. If the folders listed in step 1 do not exist, create the folders.
3. Right-click the **VMaxShare** folder.
4. Select **Properties**.
5. Click the **Sharing** tab.
6. Click **Permissions**.
7. Ensure that the **Allow Full Control** check box is selected.
8. Click **OK**.

## Setting Up the Vmax Vision PSF Refractor Interface

**NOTE**

You must be using ExamWRITER v10.5 or above to interface with the Vmax Vision PSF Refractor.

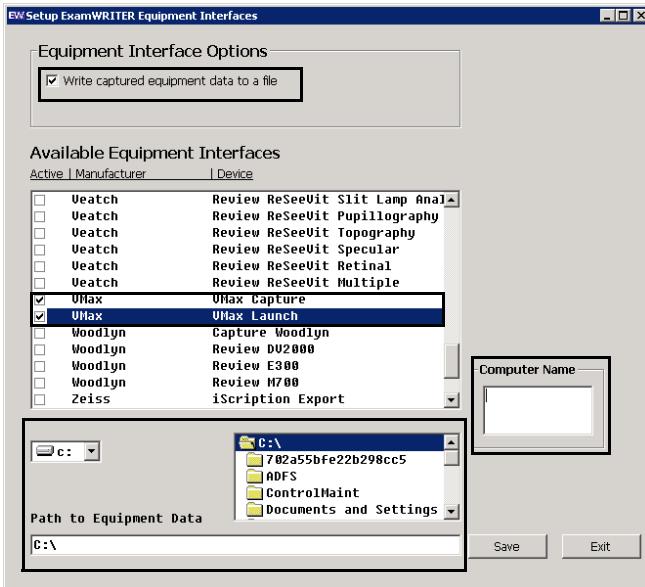
1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from the PSF Refractor in a file for debugging purposes; otherwise, go to step 3.
3. Select the **VMax Launch** check box.
4. Type the name of the computer on which the PSF Refractor resides in the **Computer Name** text box.

**NOTES**

- Press **Enter** to type multiple computer names.
- To find the name of your computer on Windows, open the System Properties window. Click the **Computer Name** tab and locate the name in the **Full computer name** field.

5. Select **C:\Officemate\VMaxShare\Data\Vmax Launch** as the location where equipment data is stored in the **Path to Equipment Data** section.
6. Select the **VMax Capture** check box.

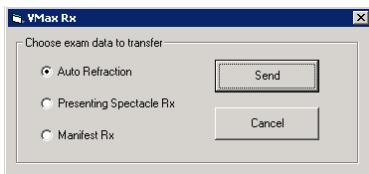
- Select **C:\Officemate\VMMaxShare\Data\Vmax Capture** as the location where equipment data is stored in the **Path to Equipment Data** section.



- Click **Save**.
- Click **Exit**.
- Close ExamWRITER to activate your changes.

## Using the Vmax Vision PSF Refractor Interface

- Open ExamWRITER.
  - Create a new blank exam or open a saved exam for an existing patient.
  - Click the **Interfaces** icon on the ExamWRITER chart window.
  - Select **VMax:VMax Launch**.
- The VMax Rx window opens.
- Select the **Auto Refraction**, **Presenting Spectacle Rx**, or **Manifest Rx** radio button and click **Send**.



The selected data, the patient name, and patient ID are sent to the Vmax Vision PSF Refractor and the VMax Launch file status dialog box informs you that the patient file was successfully created.



6. Click **OK** to close the VMax Launch file status dialog box.
7. Use the PSF Refractor to perform the examination or tests.
8. Click the **Store** button on the interface of the PSF Refractor.

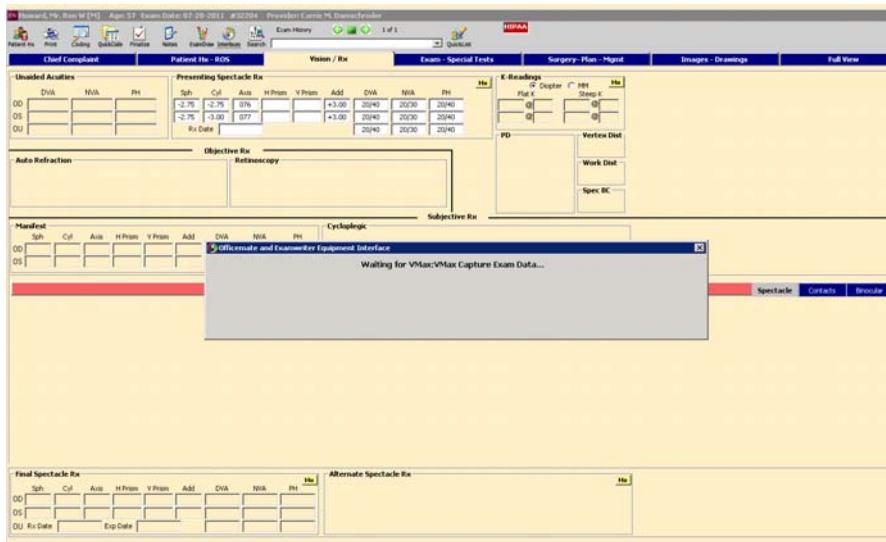
The PSF Refractor exports the data to an XML file.



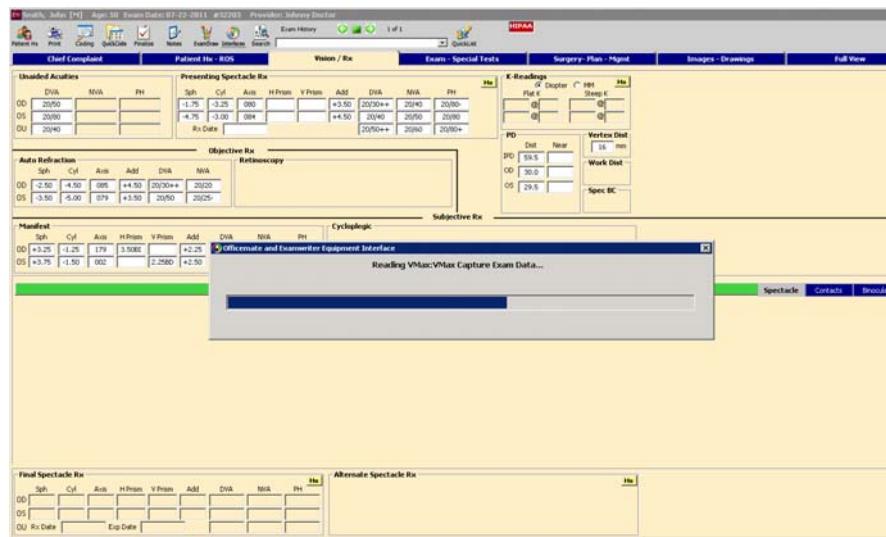
9. Click the **Interfaces** icon on the ExamWRITER chart window.

## 10. Select **VMax:VMax Capture**.

The Officemate and Examwriter Equipment Interface window opens and displays the following message: "Waiting for VMax:VMax Capture Exam Data..."



ExamWRITER opens the XML file created by the PSF Refractor. A progress bar appears across the Officemate and Examwriter Equipment Interface window indicating that the information is being received.



The data received from the PSF Refractor is displayed in the Final Spectacle Rx box on the Vision/Rx tab. The same data is displayed in the XML file format in the Notes box on the Vision/Rx tab.

### NOTE

To view the full XML data, double-click the **Notes** box.

- Click the **Vision/Rx** tab within the patient's exam record to view the data from the PSF Refractor.

The screenshot shows the Vmax Vision PSF Refractor software interface. The top menu bar includes Patient, Tools, Exam, Options, File, and Help. The title bar displays "Smith, John (M) Age: 30 Exam Date: 07-22-2011 #32203 Provider: Johnny Doctor". The main window has several tabs: Chief Complaint, Patient No - RDS, Vision / Rx (selected), Exam - Special Tests, Surgery - Plan - History, Images - Drawings, and Full View. The Vision / Rx tab contains sections for Presenting Spectacle Rx, Auto Refraction, Objective Rx (Retinoscopy), Manifest, Cycloplegic, and Final Spectacle Rx. The Cycloplegic section is currently active, showing prescription data for both eyes. The right side of the screen shows E-Readings, PD, and Vertex Dist. A large green button labeled "VISION" is at the bottom center. The bottom of the screen has tabs for Spectacle, Contacts, and Bioclar.

Eye	Sph	Cyl	Axis	H Prism	V Prism	Add	DVA	NVA	Ph
OD	+3.25	-1.25	179	3.50/+		+2.25	20/25		
OS	+3.25	-1.25	179	3.50/+		+2.25	20/25		
OU	Exp Date:								

## In this chapter:

- [Woodlyn Interface Overview, 173](#)
- [Setting Up the Woodlyn Interface, 174](#)
- [Configuring the Woodlyn Interface, 176](#)
- [Using Woodlyn Capture, 180](#)
- [Using Woodlyn Review, 181](#)

## Woodlyn Interface Overview

ExamWRITER interfaces with the Woodlyn Medmont software before the capture process when patient information is transferred from ExamWRITER into Woodlyn Capture to create or update retinal images and during the review process when the newly created or existing Woodlyn retinal images are available for on-screen review.

You must install ExamWRITER and the Woodlyn Capture and Woodlyn Review applications on the computer to which the Woodlyn equipment is connected; then you can install the Woodlyn Capture and Woodlyn Review applications on the server on which ExamWRITER is installed. Contact Woodlyn to determine if the Woodlyn Capture and Woodlyn Review applications will run on an OS server and if any additional licensing needs to be purchased when using it with Terminal Server. Both applications can be used on the same workstation or on two separate workstations.

The Woodlyn equipment interface saves equipment data to the EyeTel database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Woodlyn equipment interface uses a serial RS-232 cable or null modem to connect to the computer or Terminal Server. The Woodlyn interface can only use one camera per Terminal Server.

### NOTES

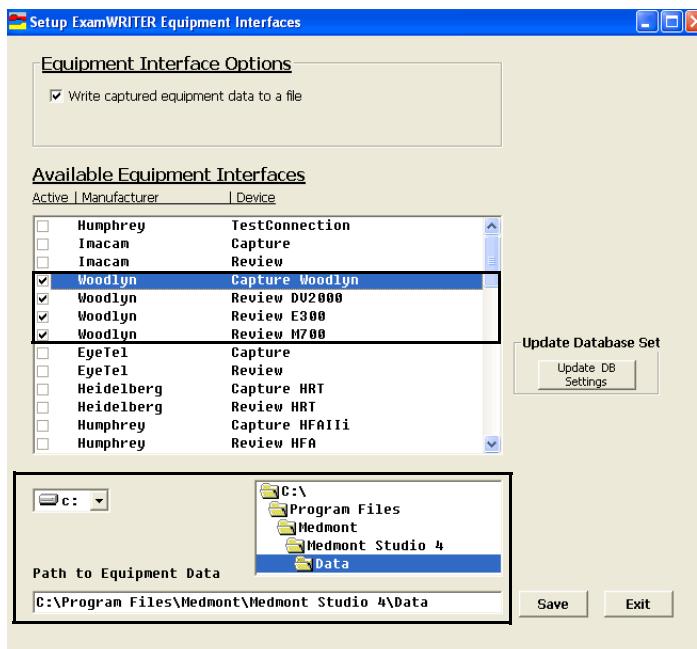
- Back up your Woodlyn data! Contact Woodlyn for recommended backup procedures.
- You may need to use a dongle, provided by Woodlyn, to use the Woodlyn Medmont software.

## Setting Up the Woodlyn Interface

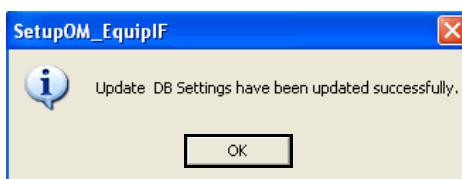
**NOTE**

Follow the instructions below only on the OfficeMate server. You can then enable the Woodlyn Capture and Woodlyn Review options in ExamWRITER on the Setup ExamWRITER Equipment Interfaces window on the computer where the Woodlyn equipment is connected.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Woodlyn in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.
4. Select the drive and folder where the equipment data is stored.



5. Click **Update DB Settings** to update your database settings.  
The SetupOM\_EquipIF window opens.
6. Click **OK**.



7. Click **Save**.
8. Click **Exit**.

9. Close and reopen ExamWRITER to activate your changes.

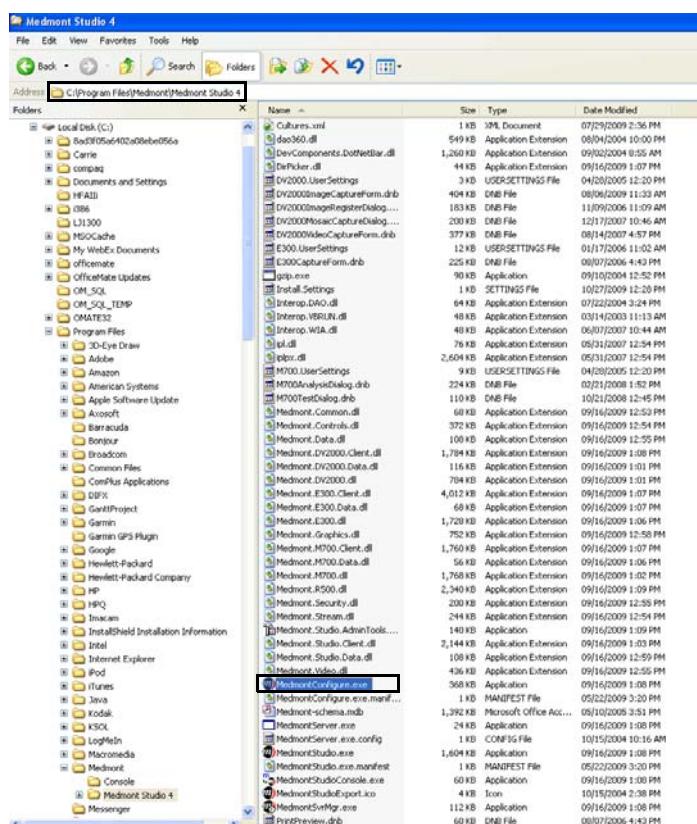
## Configuring the Woodlyn Interface

Configuring the Woodlyn interface allows you to create patients in the Woodlyn Medmont software and transfer the new patient's information to ExamWRITER.

### NOTE

You must set up the Woodlyn interface before you configure the Woodlyn Medmont software! For information about setting up the Woodlyn interface, go to ["Setting Up the Woodlyn Interface" on page 174](#).

1. Open Windows Explorer.
2. Navigate to the **Program Files\Medmont\Medmont Studio 4** directory (most likely on your C drive).
3. Double-click **MedmontConfigure.exe**.



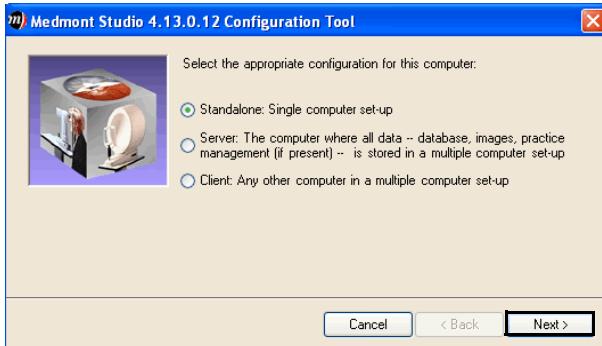
The Select Language window opens.

4. Select the language in which you want the Medmont Studio to run and click **OK**.

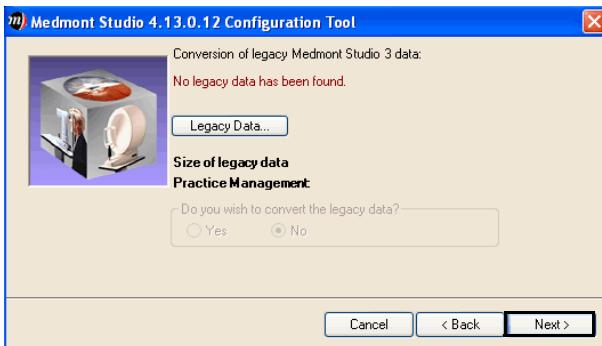


The Medmont Studio Configuration Tool window opens.

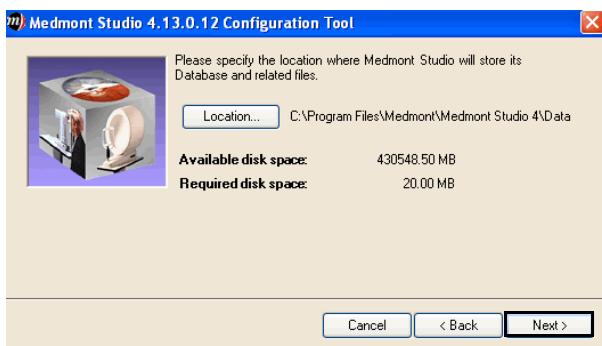
5. Select the appropriate configuration for the computer and click **Next**.



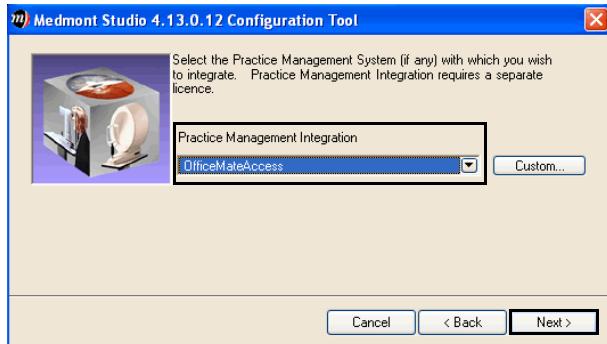
6. Select appropriate legacy data information and click **Next**.



7. Specify the location where Medmont Studio will store its database and related files and click **Next**.

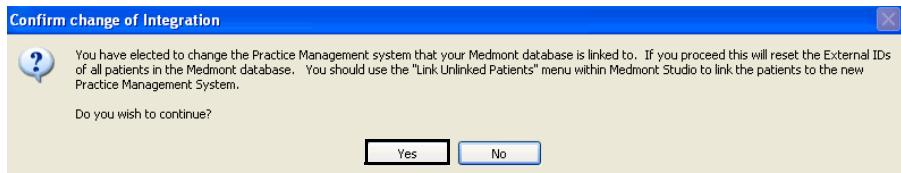


8. Select **OfficeMateSQL** (if you are using a Microsoft SQL database) or **OfficeMateAccess** (if you are using a Microsoft Access database) from the **Practice Management Integration** drop-down menu and click **Next**.

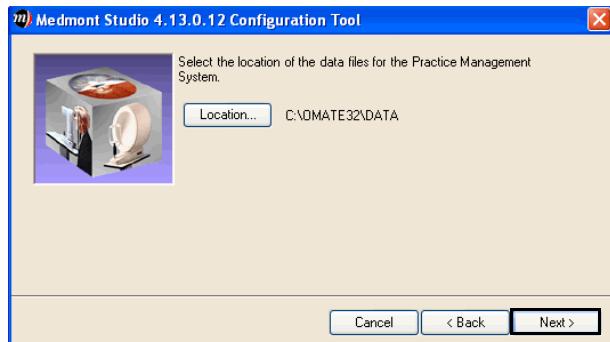


The Confirm change of Integration window opens.

9. Click **Yes** to confirm the change of integration.



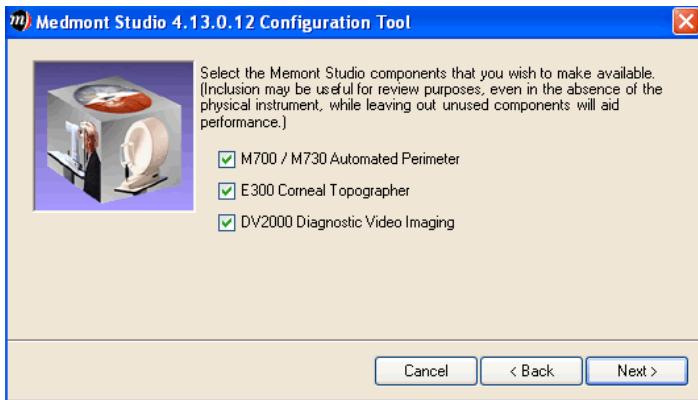
10. Select the location of the ExamWRITER data files and click **Next**.



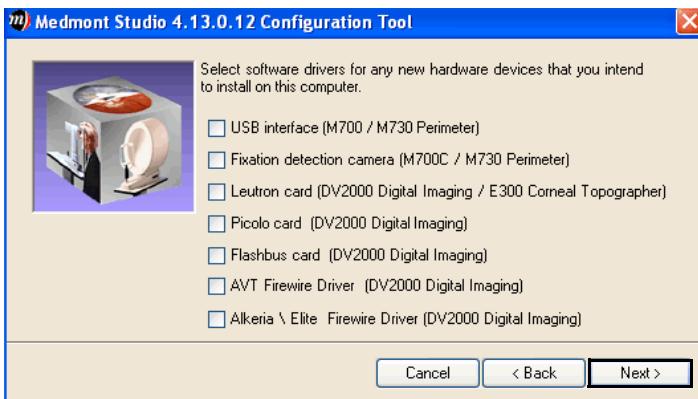
11. If an existing Medmont Studio database has been detected, select to add new or reset the system settings and click **Next**.



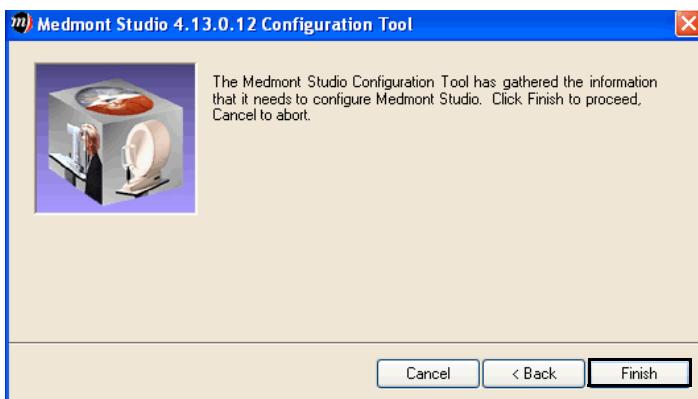
12. Select the Medmont Studio components that you want to make available and click **Next**.



13. Select the software drivers, if necessary, for any new hardware devices that you intend to install on this computer and click **Next**.



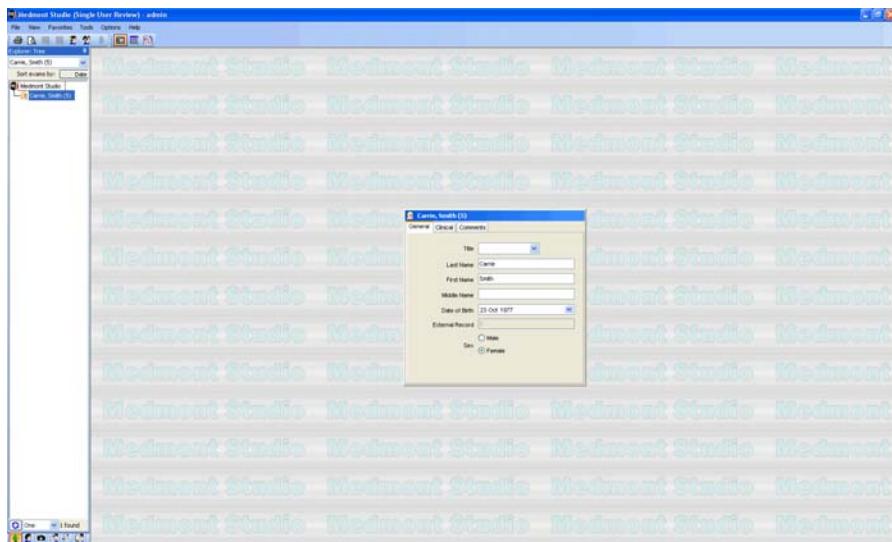
14. Click **Finish**.



# Using Woodlyn Capture

1. Ensure that ExamWRITER is open.
  2. Create a new blank exam or open a saved exam for an existing patient.
  3. Click the **Interfaces** icon on the ExamWRITER chart window.
  4. Select **Woodlyn:Capture Woodlyn**.

The Medmont Studio window opens with the patient's last name, first name, middle initial, gender, date of birth, and patient ID pre-loaded from ExamWRITER.



5. Follow the Woodlyn Capture instructions to capture the patient's retinal images.
  6. Close Woodlyn Capture to return to ExamWRITER.

The Woodlyn icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.
  7. Follow the instructions in [“Using Woodlyn Review”](#) on page 181 to review the patient's captured retinal images.

## Using Woodlyn Review

NOTES	<ul style="list-style-type: none"><li>The Woodlyn Review software can only be used from within ExamWRITER when a patient's retinal images have previously been captured using ExamWRITER and the Woodlyn Capture interface.</li><li>Both the Woodlyn Review software and ExamWRITER must be installed and set up on all workstations on which you want to review images.</li></ul>
-------	--

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured retinal images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Woodlyn:Review DV2000**, **Woodlyn:ReviewE300**, or **Woodlyn:Review M500**.  
OR  
Click the **Woodlyn** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.  
The Medmont Studio window opens and displays the patient's history.
4. Follow the Woodlyn Review instructions to use the application.
5. Close Woodlyn Review to return to ExamWRITER.



# Using the Zeiss VISUPAC Interface

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## In this chapter:

- [Zeiss VISUPAC Interface Overview, 183](#)
- [Setting Up the Zeiss VISUPAC Equipment, 183](#)
- [Setting Up the Zeiss VISUPAC Interface, 184](#)
- [Capturing Images with Zeiss VISUPAC, 184](#)
- [Reviewing Images with Zeiss VISUPAC, 185](#)

## Zeiss VISUPAC Interface Overview

ExamWRITER interfaces with the Zeiss VISUPAC software before the capture process when patient information is transferred from ExamWRITER to create or update images and during the review process when the newly created or existing images are available for on-screen review.

ExamWRITER interfaces with the Zeiss VISUPAC capture application, but uses the ExamWRITER File Viewer window to review images. The Zeiss VISUPAC software must be installed on the same computers as ExamWRITER.

The Zeiss VISUPAC equipment interface saves equipment data to the Zeiss VISUPAC database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The Zeiss VISUPAC interface uses a mapped network drive to connect to the computer or Terminal Server.

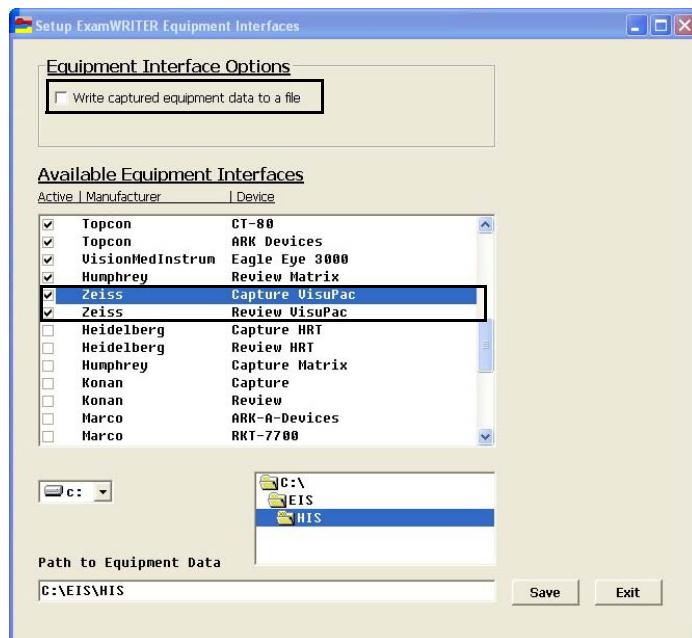
## Setting Up the Zeiss VISUPAC Equipment

Before you begin using the Zeiss VISUPAC equipment interface, you must set up the Zeiss VISUPAC equipment and software to properly interface with ExamWRITER. Contact your Zeiss representative to set up the Zeiss VISUPAC equipment and software.

## Setting Up the Zeiss VISUPAC Interface

**NOTE** You must be using ExamWRITER version 8.0 or above to interface with the Zeiss VISUPAC.

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the check boxes next to the equipment interfaces that you are setting up.



3. Select the drive and folder where the equipment data is stored. Ensure that the location you select is the same location that you selected in the Zeiss VISUPAC software settings. For information on setting up the Zeiss VISUPAC equipment, contact your Zeiss representative.

**NOTES**

- The file path to the Zeiss Capture VisuPac equipment data is typically the EIS/HIS folder on your network drive.
- The file path to the Zeiss Review VisuPac equipment data is typically the OMATE32/DATA/HIS or OfficeMate/DATA/HIS folder on your network drive.

4. Click **Save**.
5. Click **Exit**.
6. Close and reopen ExamWRITER to activate your changes.

## Capturing Images with Zeiss VISUPAC

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient.
3. Click the **Interfaces** icon on the ExamWRITER chart window.

4. Select **Zeiss:Capture VisuPac**.
  5. Follow the Zeiss VISUPAC software capture instructions to capture the patient's images.
  6. Close the Zeiss VISUPAC capture software to return to ExamWRITER.
- The Zeiss icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



7. Click **Process Images**.
8. Follow the instructions in "[Reviewing Images with Zeiss VISUPAC](#)" on page [185](#) to review the patient's captured images.

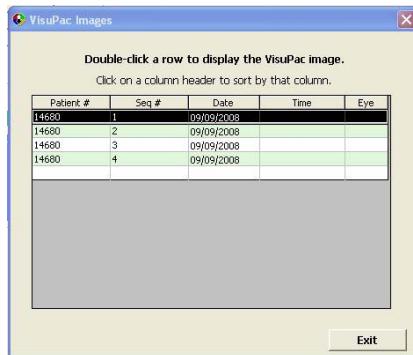
## Reviewing Images with Zeiss VISUPAC

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Zeiss:Review VisuPac**.  
OR  
Click the **Zeiss** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.

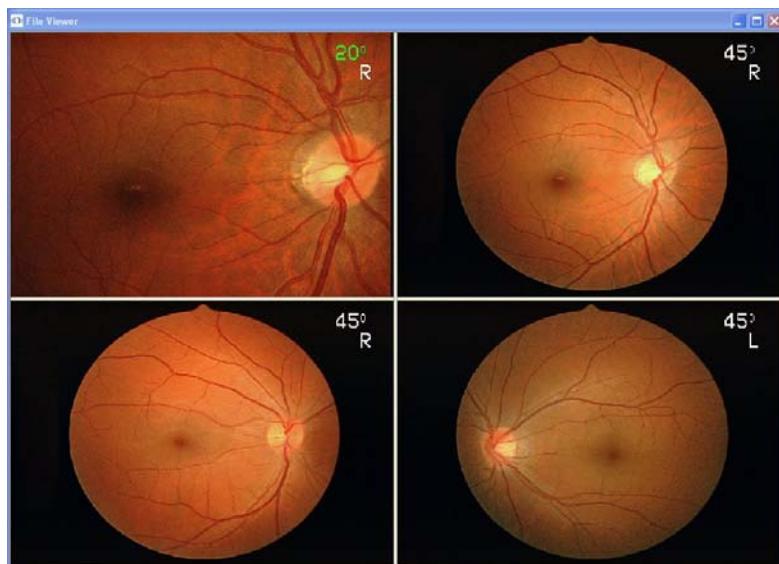


The VisuPac Images window opens

4. Double-click the image you want to review.



The image opens in the File Viewer window.



5. When you are finished reviewing the images, close the File Viewer window to return to ExamWRITER.

# Using the Zeiss i.Profiler & i.Scription Interface

25

## In this chapter:

- [Zeiss i.Profiers & i.Scription Interface Overview, 187](#)
- [Setting Up the Zeiss i.Profiler Equipment & i.Scription Software, 188](#)
- [Setting Up the Zeiss i.Profiler & i.Scription Interface, 188](#)
- [Using the Zeiss i.Profiler & i.Scription Interface, 189](#)

## Zeiss i.Profiers & i.Scription Interface Overview

The Zeiss i.Profiler and i.Scription interface process is described below:

1. ExamWRITER exports patient demographic data to the Zeiss i.Profiler equipment.
2. The Zeiss i.Profiler equipment exports auto refraction data to ExamWRITER; the data is displayed in the Auto Refraction box on the Vision/Rx tab on the ExamWRITER chart window.
3. ExamWRITER exports the auto refraction Rx and manifest Rx, if recorded, to the Zeiss i.Scription software.
4. The Zeiss i.Scription software calculates the Rx to the one-hundredth decimal point and exports the final Rx or the manifest Rx to ExamWRITER; the data is displayed in the Final Spectacle Rx box on the Vision/Rx tab on the ExamWRITER chart window.

## Setting Up the Zeiss i.Profiler Equipment & i.Scription Software

- ❖ Set up the Zeiss i.Profiler equipment on the same network on which ExamWRITER is installed. The equipment does not need to be set up on the same computer as ExamWRITER. For help on installing the equipment, see the instructions from Zeiss that came with the equipment.
- ❖ Install the Zeiss i.Scription software on the same network on which ExamWRITER is installed. The software does not need to be installed on the same computer as ExamWRITER. For help on installing the software, see the instructions from Zeiss that came with the software.

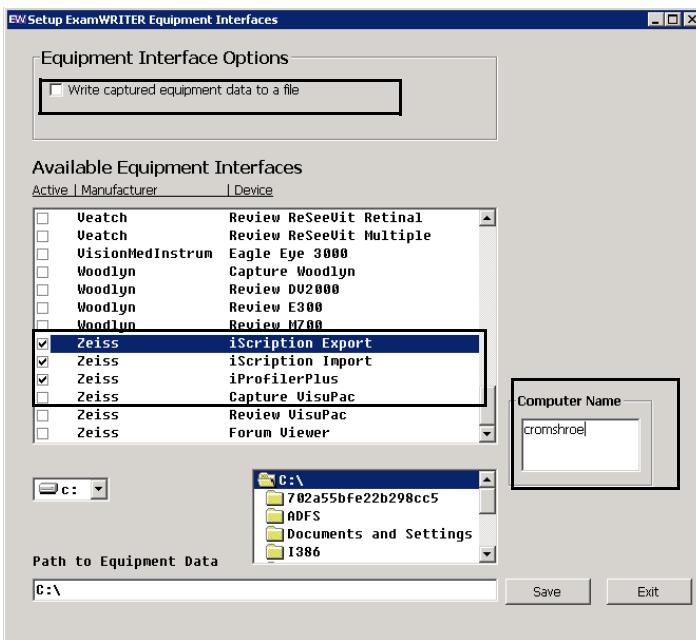
**NOTE**

Although you can use the Zeiss i.Profiler equipment without the i.Scription software, you cannot use the i.Scription software without the i.Profiler equipment.

## Setting Up the Zeiss i.Profiler & i.Scription Interface

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Write captured equipment data to a file** check box if you want ExamWRITER to record data received from Zeiss in a file for debugging purposes; otherwise, go to step 3.
3. Select the check box (**Zeiss iScription Export**, **Zeiss iScription Import**, or **Zeiss iProfilerPlus**) next to the equipment interface that you are using.
4. Select the location on the network where Zeiss saves the data file:
  - a. Select a drive from the drop-down menu.
  - b. Select the folder in which Zeiss saves the data file.
5. If you selected the **Zeiss iScription Export** or **Zeiss iProfilerPlus** check boxes in step 3, type the name of the i.Profiler Plus in the **Computer Name**

text box. For example, type **IPROFPXXXXXX**, where XXXXXX is the i.Profiler Plus serial number.



6. Repeat steps 3–5 for each piece of Zeiss equipment or software (Zeiss iScription Export, Zeiss iScription Import, and Zeiss iProfilerPlus) that you are using.
7. Click **Save**.
8. Click **Exit**.
9. Close ExamWRITER to activate your changes.

## Using the Zeiss i.Profiler & i.Scription Interface

1. Ensure that the Zeiss IP2.MatheTray program is running.

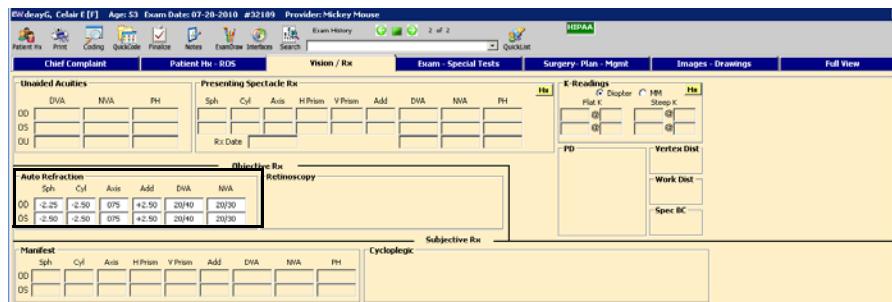
**NOTE**

The IP2.MatheTray.exe is located in the Program Files\CVZ folder. This program is running if you see a Zeiss icon in your Windows taskbar.

2. Ensure that ExamWRITER is open.
3. Create a new blank exam or open a saved exam for an existing patient.
4. Click the **Interfaces** icon on the ExamWRITER chart window.
5. Select **Zeiss:iProfilerPlus**.

ExamWRITER exports patient demographic data to the Zeiss i.Profiler equipment, imports auto refraction data from the Zeiss i.Profiler equipment,

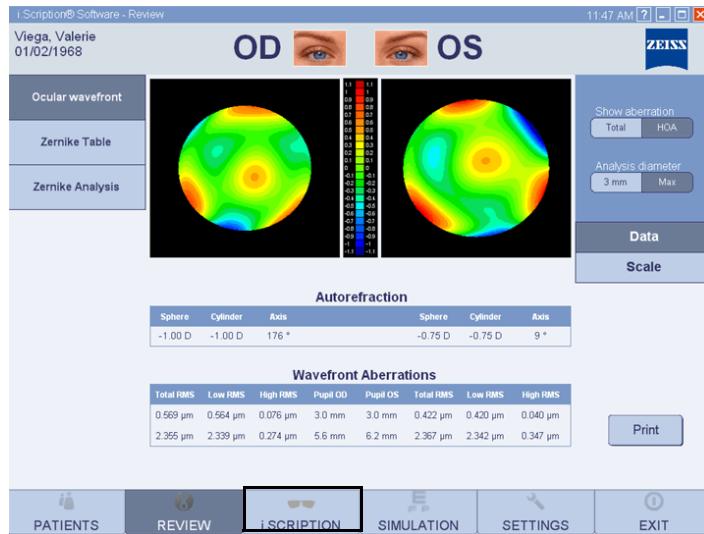
and displays the data in the Auto Refraction box on the Vision/Rx tab on the ExamWRITER chart window.



6. If you want to export the manifest Rx to the Zeiss i.Scription software, complete the instructions below; otherwise, go to step 7.
  - a. Click your cursor in the **Auto Refraction** box on the Vision/Rx tab on the ExamWRITER chart window.
  - b. Click **Copy to Manifest** to copy the auto refraction Rx to the manifest Rx; otherwise, skip to step 7.



- c. If you want to create a prismatic Rx in the Zeiss i.Scription software, ensure that the **H Prism** and **V Prism** values are recorded for the patient.
- d. Click **Save/Exit**.
7. Click the **Interfaces** icon on the ExamWRITER chart window.
8. Select **Zeiss:iScription Export**.  
The auto refraction Rx and manifest Rx, if recorded, is exported from ExamWRITER and imported into the Zeiss i.Scription software.
9. Open the i.Scription software from the task bar.  
The i.Scription Software - Review window opens.

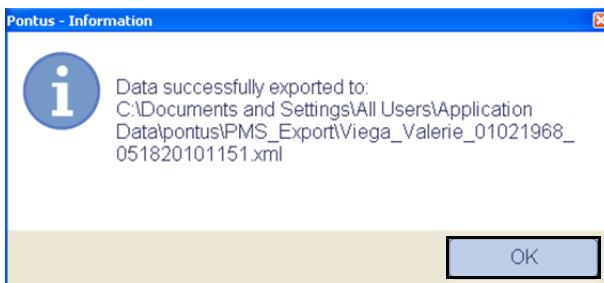
10. Click **i.Scription**.

The i.Scription Software - iScription window opens.

11. If you recorded H prism and V prism values in the patient's manifest Rx in ExamWRITER and you want to create a prismatic Rx for the patient, click **Prismatic prescription**.
12. Click **Calculate i.Scription**.  
The Rx is calculated to the one-hundredth decimal point and displayed in the i.Scription table.
13. Click one of the following buttons:
  - **i.Scription to Final Rx** to use the calculated i.Scription Rx as the patient's final Rx.
  - **Manifest to Final Rx** to use the calculated i.Scription Rx as the patient's manifest Rx.

14. Click **Export**.

The final Rx or manifest Rx is exported to ExamWRITER and the Pontus Information window opens.

15. Click **OK**.

## 16. Close the i.Scription software.

17. Click the **Interfaces** icon on the ExamWRITER chart window.

**18. Select **Zeiss:iScription Import.****

The Rx exported from the i.Scription software is imported into the Final Spectacle Rx box on the Vision/Rx tab on the ExamWRITER chart window.

The screenshot displays the ExamWRITER software interface with the following details:

- Top Bar:** Includes patient information (Erdosy G, Celair E [F], Age: 53, Exam Date: 07-28-2010, #32109, Provider: Mickey Mouse), exam history, and search functions.
- Tab Bar:** Shows tabs for Patient Rx, Vision, Exam / Special Tests, Surgery Plan / Mgmt, Images / Drawings, and Full View.
- Presenting Spectacle Rx Section:** Contains fields for Sph, Cyl, Axis, H Prism, V Prism, Add, DVA, NVA, PH, and Rx Date. The data is as follows:

OD	-2.25	-2.50	075	+2.50	20/40	20/30	
OS	-2.50	-2.50	075	+2.50	20/40	20/30	
OI	Rx Date	Exp Date					
- Other Sections:** Includes Auto Refraction, Retinoscopy, Manifest, Cycloplegic, and Final Spectacle Rx. The Final Spectacle Rx section also contains the same data as the Presenting Spectacle Rx section.
- Right Panel:** Features K Readings, PD, Vertex Dist, Work Dist, Spec BC, and Alternate Spectacle Rx sections.



# Using the Zeiss FORUM Interface

26

## In this chapter:

- [Zeiss FORUM Interface Overview, 195](#)
- [Setting Up Zeiss FORUM, 195](#)
- [Setting Up the Zeiss FORUM Viewer Interface, 196](#)
- [Viewing Data and Images with Zeiss FORUM, 198](#)

## Zeiss FORUM Interface Overview

The Zeiss FORUM Viewer is a Web-based application used to remotely archive, view, and manage diagnostic data and images from any computer within the local area network (LAN) for all Carl Zeiss Meditec diagnostic instruments.

ExamWRITER interfaces with the Zeiss FORUM Viewer to review patient exam data and images. When ExamWRITER patient information is linked with Zeiss data and images, exam data and images are available for review. The Zeiss FORUM Viewer interface uses a mapped network drive to connect to the computer or Terminal Server.

**NOTE**

Data and images can be viewed on any Windows workstation at the main office or at other practice locations, at home, or with any Internet connection. Refer to the Zeiss FORUM documentation for more information on Internet connection setup requirements.

## Setting Up Zeiss FORUM

Before you begin using the Zeiss FORUM equipment interface, you must set up the Zeiss FORUM equipment and software to properly interface with ExamWRITER.

Contact your Zeiss representative to set up the Zeiss FORUM equipment and software.

In order to use the Zeiss FORUM Viewer, you must:

- Install ExamWRITER v9.5.3 or above.
- If you are using ExamWRITER v10.6, v10.7, or v10.8, download and install the latest Zeiss.dll file at <http://www.officemate.net/omkb/Article.aspx?id=32403>.
- Install the Zeiss FORUM Viewer 3.1 on your workstations. Refer to the Zeiss documentation or Carl Zeiss Meditec Customer Care for more information and help on installing Zeiss FORUM.

**NOTE**

The Zeiss FORUM Viewer 2.6 and below is no longer supported.

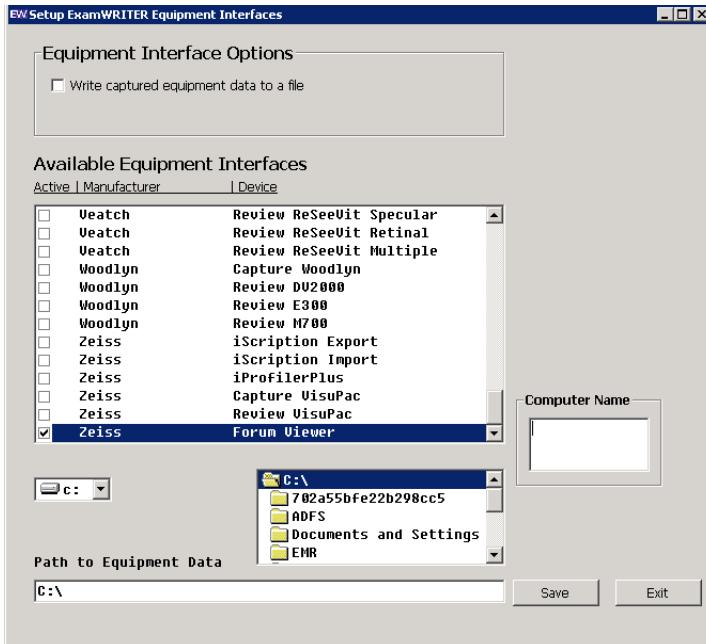
- Configure the following parts of the Zeiss FORUM in the Zeiss Configuration Administration:
  - IDs in the Patient ID Configuration window. IDs in the Zeiss Configuration Administration must match the IDs in ExamWRITER.
  - The HIS folder. This folder must exist on the Zeiss FORUM server in the root directory (C:\HIS).
  - The DICOM import folder.
  - The latest license files. Ensure that these files are in the correct FORUM folder (C:\Program Files\CZM\Forum).
- Set up a mapped drive on your workstations to the HIS folder on the Zeiss FORUM server.

## Setting Up the Zeiss FORUM Viewer Interface

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.

The Setup ExamWRITER Equipment Interfaces window opens.

2. Select the check box next to **Zeiss Forum Viewer**.



3. Type the name of the Zeiss FORUM server where the Zeiss FORUM software is installed in the **Computer Name** box.

**NOTE**

- If you are running ExamWRITER locally on multiple workstations and you want to set up the Zeiss FORUM Viewer interface on each of those computers, type the name of the Zeiss FORUM server where the Zeiss FORUM software is installed.
- To find the name of the Zeiss FORUM server in Windows, open the System Properties window. Click the **Computer Name** tab and locate the name in the **Full computer name** field.

4. Select the drive and folder where the Viewer data files are stored. Ensure that the location that you select is the same location that you selected in the Zeiss FORUM software settings. For information on setting up the Zeiss FORUM equipment, contact your Zeiss representative.

**NOTE**

The file path to the Zeiss FORUM data is in the HIS folder on your network drive.

5. Click **Save**.
6. Click **Exit**.
7. Close and reopen ExamWRITER to activate your changes.

## Viewing Data and Images with Zeiss FORUM

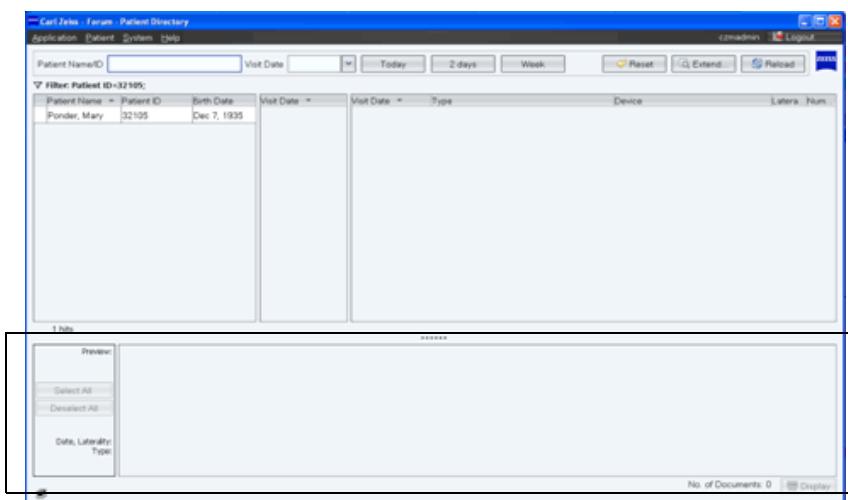
1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured images.
3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Zeiss:Forum Viewer**.

The Zeiss FORUM Viewer prompts you for the password.

4. Type the Zeiss FORUM password.

The Carl Zeiss Forum Patient Directory window opens displaying patient names, IDs, and birth dates.

5. Double-click the name of the patient whose data you want to review.



The patient data and any images open in the Carl Zeiss Forum Patient Directory window. Images open in a preview gallery at the bottom of the window.

**NOTE**

If not all of the equipment is present, image file names are displayed instead of the images.

6. When you are finished reviewing the data and images, close the Carl Zeiss Forum Patient Directory window to return to ExamWRITER.

## In this chapter:

- OCULUS Interface Overview, 199
- Setting Up the OCULUS Interface, 199
- Capturing OCULUS Visual Fields Data, 200
- Reviewing OCULUS Visual Fields Data, 201

## OCULUS Interface Overview

ExamWRITER interfaces with the OCULUS Easyfield C Perimeter and Binoptometer 4P application before the capture process when patient information (name and date of birth) is transferred from ExamWRITER into OCULUS and during the review process when the OCULUS visual fields data is available for on-screen review.

The OCULUS equipment interface saves equipment data to the OCULUS database and ExamWRITER reads that database through a mapped drive. The equipment data can be shared and accessed at multiple computers, as long as the computers are networked properly and the databases are properly mapped and shared. The OCULUS equipment interface uses a USB cable to connect to the computer.

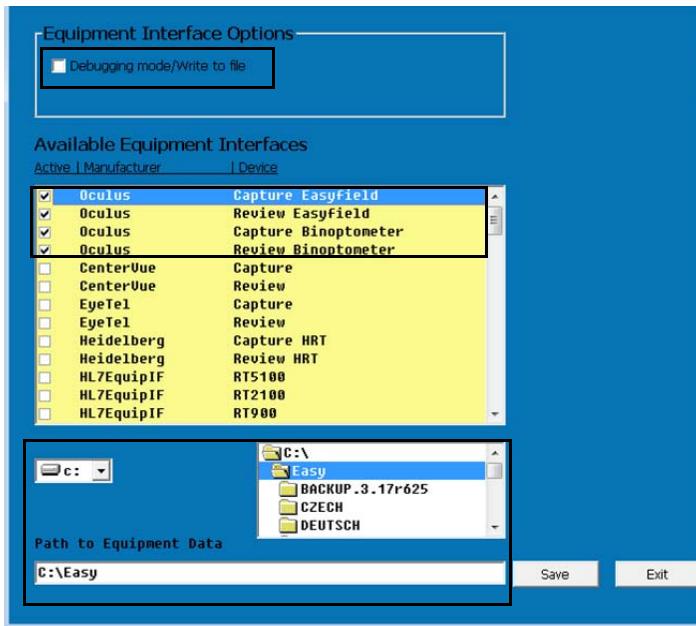
<b>NOTES</b>	<ul style="list-style-type: none"><li>• You must install ExamWRITER, the OCULUS application, and the OCULUS driver on the computer to which the OCULUS equipment is connected.</li><li>• Back up your OCULUS data! Contact OCULUS for recommended backup procedures.</li></ul>
--------------	--

## Setting Up the OCULUS Interface

<b>NOTE</b>	You must set up the OCULUS interface from the computer connected to the OCULUS equipment.
-------------	---

1. On the ExamWRITER main window, click **Tools**, select **Equipment Integration Setup**, and select **Equipment Interface Setup**.  
The Setup ExamWRITER Equipment Interfaces window opens.
2. Select the **Debugging mode/Write to file** check box if you want ExamWRITER to record data received from OCULUS in a file for debugging purposes; otherwise, go to step 3.
3. Select the check boxes next to the equipment interfaces that you are setting up.

- Select the drive and folder where the equipment data is stored (for example, C:\Easy or C:\Bino4).



- Click **Save**.
- Click **Exit**.
- Close and reopen ExamWRITER to activate your changes.

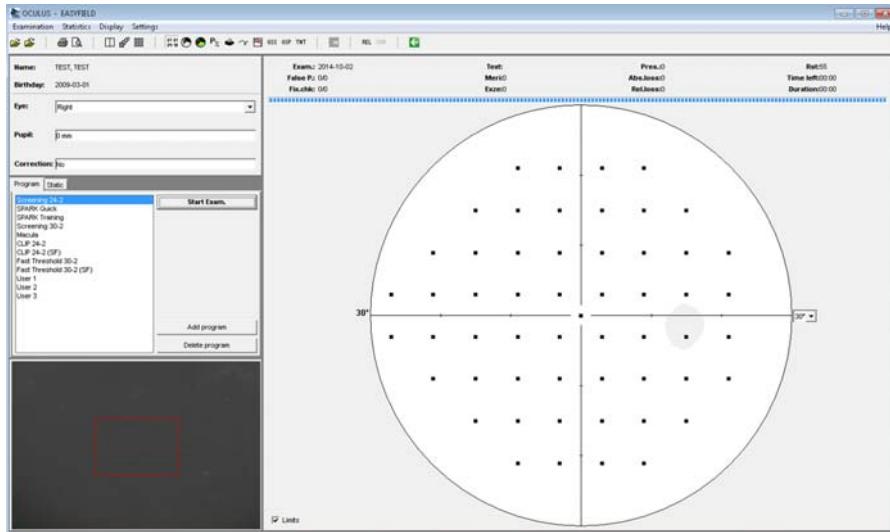
## Capturing OCULUS Visual Fields Data

- Ensure that ExamWRITER is open.
- Create a new blank exam or open a saved exam for an existing patient.
- Click the **Interfaces** icon on the ExamWRITER chart window.
- Select **Oculus: Capture Easyfield** or **Oculus: Capture Binoptometer**.



The OCULUS application opens with the patient's name and date of birth pre-loaded from ExamWRITER.

5. Follow the OCULUS instructions to capture the patient's visual fields data.



6. Close the OCULUS application to return to ExamWRITER.

The OCULUS icon will be displayed under the Images, Drawings and Graphics category bar in ExamWRITER after you close and reopen ExamWRITER.



7. Follow the instructions in "Reviewing OCULUS Visual Fields Data" on page 201 to review the patient's captured visual fields data.

## Reviewing OCULUS Visual Fields Data

1. Ensure that ExamWRITER is open.
2. Create a new blank exam or open a saved exam for an existing patient for whom you have previously captured OCULUS visual fields data.

3. Click the **Interfaces** icon on the ExamWRITER chart window and select **Oculus: Review Easyfield** or **Oculus: Review Binoptometer**.



OR

Click the **OCULUS** icon under the ExamWRITER **Images, Drawings and Graphics** category bar.



The OCULUS application opens with the patient's visual fields data.

4. Follow the OCULUS instructions to use the application.
5. Close the OCULUS application to return to ExamWRITER.

# Setting Up Serial Cable Interfaces with Terminal Services

A

If you are using ExamWRITER with Terminal Services, you can connect your serial cable-based equipment to your local computer even though your ExamWRITER software is running on a remote computer. In order to use serial cable-based ExamWRITER equipment interfaces with Terminal Services, you must allow your local serial port to be available during a terminal server session.

NOTES	<ul style="list-style-type: none"><li>Depending on the policies of your network, local serial port mapping might be disabled for some or all remote connections.</li><li>You might see a security warning message asking if you want to connect your local disk drives, local ports, or smart card to the remote computer. To enable one or more of these connections, select the appropriate check boxes. If you choose not to enable these connections, a remote connection is still established, but these resources are not available to the remote computer.</li><li>The following instructions require that you have Microsoft Remote Desktop Connection 6 (or later) installed on the local computer. Information about Remote Desktop Connection can be found on Microsoft's Web site at <a href="http://support.microsoft.com/default.aspx/kb/925876">http://support.microsoft.com/default.aspx/kb/925876</a>.</li></ul>
-------	---

► **To allow your local serial port to be available during a terminal server session**

1. Click **Start**.
2. Select **Programs** or **All Programs**.
3. Select **Accessories**.
4. Select **Remote Desktop Connection**.

The Remote Desktop Connection window opens.

5. Click **Options**.



The Remote Desktop Connection window expands to show you more options.

6. Click the **Local Resources** tab.
7. Click **More** in the Local devices and resources box.



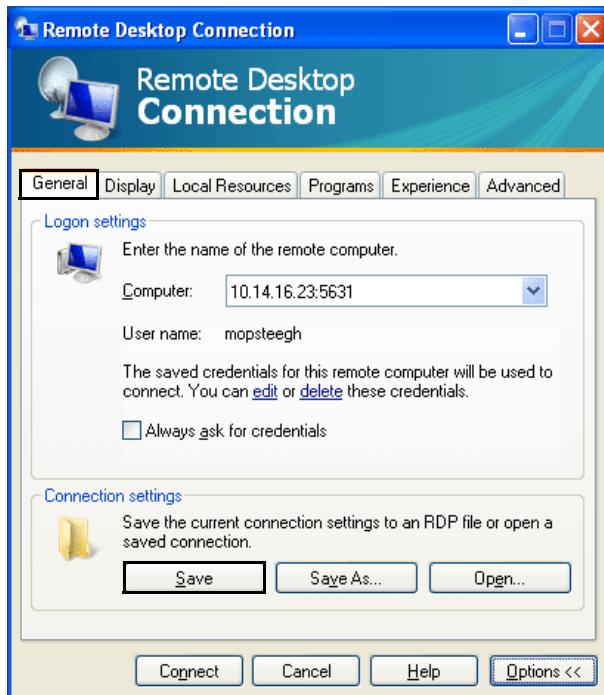
8. Select the **Serial ports** check box.

9. Click **OK**.



10. Click the **General** tab.  
11. Click **Save** in the Connection settings box.

**NOTE** The serial port information that you set up becomes the default setting for all Remote Desktop connections on this computer and is saved in a file called Default.rdp.



12. Follow the instructions in the appropriate chapter in the *ExamWRITER Equipment Integration User's Guide* to set up and use your ExamWRITER equipment interface.

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