User Manual

RI WITNESS™

WorkArea Software
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SECTION 1 - PREFACE

Thank you for choosing RI Witness.

This manual provides all necessary information to use RI Witness WorkArea Software and should be read in conjunction with any manuals provided with other RI Witness hardware or software components that you are using. The system should be operated by trained personnel only. All sections of this manual should be read and understood fully before any operation of the system.

If the operator is unsure of any of the information contained in this manual they should contact Research Instruments or an appointed representative before attempting to use this equipment.

In no event does Research Instruments Ltd (RI) assume the liability for any technical or editorial errors of commission, or omission; nor is RI liable for direct, indirect, incidental, or consequential damages arising out of the use or inability to use this manual.

The information in this manual is current at the time of publication. Our commitment to product improvement requires that we reserve the right to change equipment, procedures and specifications at any time. The latest version of the User Manual can be downloaded from software.research-instruments.com. This RI Witness manual belongs with the RI Witness WorkArea Software and should be passed on with the system if relocated to another clinic.

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⚠️ This indicates cautionary text which should be followed to avoid injury to users or damage to samples.

⚠️ The system should be operated by qualified and trained personnel only.
SECTION 2 - INTRODUCTION TO RI WITNESS

RI Witness offers a number of features that are designed to help you save time, allow for increased capture of cycle information and speed up the auditing process.

Indication For Use For RI Witness System

To identify and track human samples, using RFID technology, through the assisted reproduction (AR) cycle, including cryopreservation.

Related Documents

- 6-70-122UM RI Witness Manager Software User Manual
- 6-70-121IT RI Witness IT Requirements
- 6-70-807UM RI Witness Embryology Heated Plate User Manual
- 6-70-808UM RI Witness Sperm Preparation Reader User Manual
- 6-70-812UM RI Witness Admin & Card Reader User Manual

User Interface Icons

<table>
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<th>Icon</th>
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<td>✔ ✔</td>
<td>Confirm</td>
<td>☑</td>
<td>WorkArea Status</td>
</tr>
<tr>
<td>✗ ✗</td>
<td>Close Window / Cancel</td>
<td>☐</td>
<td>Scan Barcode</td>
</tr>
<tr>
<td>🔄❓</td>
<td>Patient Unknown Choose Patient</td>
<td>📄</td>
<td>Onscreen Keyboard</td>
</tr>
<tr>
<td>🔄</td>
<td>Patient Identity Can be Changed</td>
<td>📹</td>
<td>Take Image</td>
</tr>
<tr>
<td>🕒</td>
<td>Patient Details Locked</td>
<td>🎥</td>
<td>Record Video</td>
</tr>
<tr>
<td>🕒❓</td>
<td>Unassigned Tag</td>
<td>✨</td>
<td>Stop Video Recording</td>
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Data Capture

Hand written notes are often taken whilst performing laboratory procedures. For example embryo scores and sperm volumes might be written down on a data sheet and later manually transcribed into a clinic fertility database.

The features of Data Capture allow data sheets to be designed in RI Witness Manager and data entry to be performed in the laboratory using the work area touch screen. See Figure 2-1.

Data entry may also be performed in RI Witness Manager.

Imaging

With the imaging feature, you are able to capture images and videos from every microscope equipped with a camera, at every stage of the patient cycle, in real time. All the latest information on a cycle can be accessed immediately from any networked PC. Images can also be sent to the embryo room to show the patient prior to embryo transfer.

The Imaging feature is compatible with RI Integra and Saturn lasers.
Traceability

Traceability is a software product that links patient treatment cycles with the batches of materials that are in use.

A barcode reader may be used to scan batches as they are delivered or made ready for use.

The links between treatment cycles and material batches may be explored to generate various reports, for example a report showing all patients that have been exposed to a particular material batch.

Cryo

The Cryo feature extends the RI Witness security system, allowing patient samples to be tracked as they enter and leave cryo storage, creating a complete record of the patient cycle.

A barcode reader is placed at the work area and used to scan a sample in or out of the cryo storage.

RI Witness Work Area

A typical RI Witness work area includes a PC, touchscreen, one or more tag readers and an RF control unit. The work area PC runs RI Witness WorkArea software to present an operator interface on the touchscreen. See Figure 2-3.

The data presented on the touchscreen is generated from the shared RI Witness database, all work area events are logged to the shared RI Witness database.
RI Witness Manager For Traceability, Data Capture and Imaging

RI Witness Manager runs on any Windows PC and provides RI Witness, Data Capture, Cryo, Traceability and Imaging functionality.

The “Patient” RI Witness Manager page is used by all operators, the “Materials” RI Witness Manager page is unique to Traceability operators and the “Witness Points” page is unique to RI Witness operators. See Figure 2-4.

Figure 2-4 RI Witness Manager is Used by RI Witness, Data Capture, Traceability, Imaging and Cryo
SECTION 3 - RI WITNESS WORKAREA BASIC OPERATION

RI Witness uses one or more readers to monitor RFID tagged containers in a work area. The WorkArea interface is presented on a touch screen. See Figure 3-1. The operator touches screen buttons to log in and select Witness Points.

How to Switch On

RI suggests that you keep the RI Witness computers and work areas switched on. This means that the heating and monitoring is constant.

If you have switched off a heated RI Witness work area, please allow 45 minutes for the work area to return to the required temperature. Please check there is power at the wall socket, the PC and touch screen (or tablet) and control tower.

You may want to check the work area temperature calibration before commencing work. See the RI Witness Embryology Heated Plate User Manual (6-70-807UM).
Logging In

It is important to ensure that all RI Witness hardware is switched on before the WorkArea software is opened.

The RI Witness software may be opened automatically when the computer is started. If not, double click the RI Witness WorkArea desktop icon.

To login either press Login then your name, or scan your operator ID tag and enter your 4 digit PIN if requested.

Initially the user is presented with a list of all operators, with a Filter option available, to help when there are a large number of operators on offer.

Please choose your user name

Admin  Ahmed  Aline
An  An DC  Anick DV
Annick DB  Ariane  Baba
Balie  Bart  Bart I
Britt  Carla  Carolien
Carolien V  Caroline  Charazad

Filter  Next

Figure 3-2 Choose Your User Name

Pressing the Filter button will present the user with a list of filters, which is based on the first letter of the all the operators.
Pressing any of the Filters, will then display all operators associated with that filter, pressing the name will then continue the user with the normal login/PIN process.

Where available, pressing the “All” button will return the user to the full list of all operators, where the “Filter” button will be available again.
To change your PIN, press Login then your name. Before entering your PIN press the Change PIN button. The Enter PIN window will appear, see Figure 3-5. Enter your current PIN in the PIN box. Next enter your new PIN into the first New PIN box, then re-enter it in the second New PIN box to confirm it. Press OK. If your PIN has successfully changed you will be logged into WorkArea.

![Figure 3-5 Change Pin](image)

To assign an ID tag to yourself, press Login then your name. Before entering your PIN press the Assign ID Tag button. The Assign ID Tag window will appear, see Figure 3-6. Enter your PIN into the PIN box then place the ID tag you wish to use onto/against the RFID reader. A message will appear to confirm that the tag has been scanned. The tag can then be removed. Press OK. If the tag has been assigned successfully you will be logged into WorkArea.

**Note:** If the tag you assigned to yourself was previously assigned to another operator, it will be unassigned from them and assigned to you only once the OK button is pressed.

![Figure 3-6 Assign ID Tag](image)

To login to WorkArea using your assigned ID tag, simply place it onto/against the RFID reader.

**Note:** No other operator should be logged in when doing this.

As soon as the tag is read you will be logged in automatically and the tag can then be removed.

It is possible, through Witness Manager, to also require Operators to enter their PIN after scanning their ID tag in order to login to WorkArea. This is controlled by ticking or unticking the ‘Require PIN on login with ID tag’ setting on the General Settings page, see Figure 3-7.

![Figure 3-7 Require PIN Setting](image)
Section 3
RI Witness WorkArea Basic Operation

AutoLogon

RI Witness WorkArea can be used to make the work area computer automatically log in to windows when it is turned on. From the WorkArea status screen press WorkArea Settings then AutoLogon. There you can set up the username and password (of the machine) for RI Witness to automatically log on to the PC.

1. Click the WorkArea Status icon.
2. Click WorkArea Settings.
3. Click AutoLogon.
4. Click Yes to the user Account Control message.
5. Enter the details required (contact IT department if unsure).
6. Click Save to Registry.
7. Tick AutoLogon.
8. Click the close window icon.

On installation of the application, the application shortcut is placed in the start-up menu, this causes the WorkArea to automatically start with windows.

RF Calibration (For reader systems that support Auto Tuning)

Calibration of the RI Witness Sperm Preparation Reader and Embryology Heated Plate is made a lot simpler by having an automatic tuning system. The procedure for this is as follows:

1. Open RI Witness WorkArea. Make sure the connected devices are detected.
2. Click the Workarea Settings button on the bottom right of this window.
3. From this you will see the WorkArea Settings window. Click on the Connected Devices tab to bring up the Connected Devices Configuration Window.
4. Click Sperm Preparation Reader/ Embryology Heated Plate, to open it. The next thing to do is to click on Autotune. This process adjusts the tuning value so that the SWR value is as close to zero as possible. The actual value reached will depend on various factors, including the position of the device. Every time the device is moved this will need to be repeated. If there are any RI tags in the work area they will be displayed in the grey box. You are now ready to use the RI Witness Reader.
Logging Out

Log out of the work area when you have finished your procedures by pressing your username in the top right corner, then the cancel icon \(\times\).

An automatic logout may be programmed after a period of inactivity. This is set for all work areas in RI Witness Manager General Settings or can be set for just the current work area through the WorkArea Admin Settings.

1. In RI Witness WorkArea click the WorkArea Status icon \(\text{i}\).
2. Click WorkArea Settings.
3. Click Admin Settings.
4. Select number of seconds, using the up and down arrow keys. See Figure 3-10.
5. Click the close icon \(\times\) to save and close the window.

How to Shut Down a Work Area

Do not switch off any RI hardware whilst the WorkArea software is running. To log out, select the user name, and then select Quit in the user name window. The system will then shut down.
SECTION 4 - RI WITNESS WORKAREA SETTINGS

WorkArea Status

The WorkArea status screen is displayed when the system first starts up, the information icon is pressed or the warning triangle is pressed.

WorkArea status not only shows the current state and information about the system it is also the screen that has access to the WorkArea Settings. WorkArea Settings also has access to an onscreen keyboard (press the keyboard icon bottom right) to make interaction with touch screens easier.

To change the various setting that relate to the RI Witness Work area press the WorkArea Settings button.

1. **WorkArea Location**
   On initial setup a WorkArea location must be chosen, this may be altered by Admin users. Press ‘Rename’ to rename the current location or ‘Change Location’ to change the location of the work area to a name that is already in existence.

2. **Witness Database**
   Allows the user to view or alter database settings.

3. **Connected Devices**
   Shows the RI devices currently connected to the RI Witness system and allows the device settings to be altered and device details, such as Serial Number and Firmware Version, to be viewed. 
   **Note:** some devices do not store Serial Number and/or Firmware Version electronically, in which case “---” will be shown.

4. **Camera**
   Shows the currently connected camera and allows the user to choose another image device. Also allows the image to be flipped horizontally and vertically.

5. **Simulator**
   Allows the user to turn the Saturn 5 simulator on and off.

6. **Screen Configuration**
   Allows configuration of the touch screen and also the selection of display modes for multiple monitor Witness Work Area set ups.

7. **Keyboard**
   Allows the user to set up and amend the various keyboard and foot pedal configurations that can be achieved.

8. **Language**
   Allows the displayed language and also the on screen keyboard configuration to be altered.

9. **Admin Settings**
   These settings require an Admin to be logged in at the work area, they control data privacy, operator timed log out and also give the ability to place the system in Training Mode.

10. **AutoLogon**
    Allows the setting of AutoLogon for the system enabling RI Witness to start when the computer is switched on.
Record Location of Tags

At each work area, a location name can be set through the WorkArea Settings window that uniquely identifies that work area. In RI Witness Manager a list of all the configured locations can be viewed.

When a tag is placed into a work area, the location will be stored with the tag details; then when the tags associated with a patient are displayed, their last known location will also be displayed. See Figure 4-3.

The name of each work area can be configured initially by any user. An administrator can modify any location name. A list of locations can be seen in RI Witness Manager from where they can be disabled and enabled. Disabling a location will cause the related work area’s name to be reset to Unknown so it can then be renamed by a user. Any disabled location can be re-enabled. This will set its name back to the previous value.

How to Name a Work Area

When the work area is started initially you will be required to give the work area location a name. Any user can initially set the name of a work area. A red cross icon will appear as well as the System Information icon as a warning triangle.

1. Click the Warning Triangle to open WorkArea Status.
2. Click WorkArea Settings.
3. Click WorkArea Location.
4. Enter a location description/name.
5. Click the Confirm icon.

When a witness point is completed, the location at which it took place will be recorded.

Note: PCs connected to the RI database must have unique computer names. Please check with your IT department.
Section 4
RI Witness WorkArea Settings

To Rename the Work Area
1. Log in as an Admin user
2. Open WorkArea Status
3. Click WorkArea Settings
4. Click WorkArea Location
5. Click Rename
6. Type the name of the work area using the on-screen keyboard
7. Click the Confirm Icon

To Change the Location of a Work Area
If a computer/tablet has to be replaced or moved to a different location that has already been configured, then the change location function should be used.
1. Log in as an Admin user
2. Open WorkArea Status
3. Click WorkArea Settings
4. Click WorkArea Location
5. Click Change Location
6. Choose the location required from the list or click Create New Location to set another location name
7. Click the Confirm Icon to accept the change
Windowed Work Area

For admin stations with admin readers, the WorkArea application can be windowed to allow easy access to the tag reading functionality.

1. Open WorkArea Status.
2. Click WorkArea Setting.
3. Click Screen Configuration.
4. Tick Windowed WorkArea.
5. Click the confirm icon.
6. If you have multiple screens set up, the work area will now revert to one single work area screen.

Language and Keyboard Layout

RI Witness offers a range of languages and onscreen keyboard styles.

1. Open WorkArea Status.
2. Click WorkArea Setting.
3. Click Language.
4. Select language and keyboard format from the drop down lists. See Figure 4-6.
5. Click the close icon to save and close the window.

![Figure 4-6 Language Selection](image-url)
SECTION 5 - WITNESSING IN RI WITNESS WORKAREA

The WorkArea Interface

The WorkArea interface screen is divided into 7 regions. See Figure 5-1.

1. **Current patient**
   This region shows the current patient name, date of birth and ID. When tags from both partners are present the name shown will be the female patient. The partner’s name will appear in brackets.

2. **Recent history**
   The recent history region presents the four most recent actions that have been recorded against the current patient, eg witness points (action/protocol step), operator mismatches, etc. A timestamp and operator name are also shown. Actions older than 7 days will not be displayed.

3. **Work area**
   The work area region displays an icon for each RFID tag detected by the work area. As tags progress through the witness points of a procedure they are assigned and reassigned appropriately. A question mark icon will be shown for any tags that have yet to be assigned an identity by the RI Witness system.

4. **Status**
   The status region summarises the work area contents. It is recommended that the number of tags displayed in the status area is visually confirmed at each stage of a procedure to verify that each tag has been detected.

5. **Temperature**
   For heated systems this region displays the temperature of the work area. Click the temperature readout to show a Temperature Control window from where the temperature may be set.
6. **Witness Points**  
The witness points region displays options available for the next step as specified by the lab defined protocol. The top one is the preceding action and the current contents of the work area determine what next steps are possible. An administrator will also see an Admin Assign option to assign or reassign dishes outside of the prescribed protocol.

7. **Current operator**  
The current operator region shows who is logged on. A suffix (Admin) is added for operators who belong to the administrator group. All witness points performed will be attributed to the operator who is logged in at that time.

### Performing A Procedure In RI Witness

Bring the dish or tube you wish to work on into the work area. If the tag has been identified by RI Witness the patient and the history will be shown on the screen. The options for the next actions will be shown in yellow on the witness point region.

In the example shown below, a “Sperm Wash Tube” and an “Egg Culture Dish” have been placed into the work area and RI Witness has determined that the only appropriate procedure is represented by the IVF Insemination witness point. See Figure 5-2.

![Figure 5-2 The IVF Insemination Witness Point is the Only Match for the Contents of this Work area](image)

### Beginning a New Cycle In RI Witness

The first step in the RI Witness procedure is when the identity card for the patient is assigned. This is the most important step in the protocol. At this point the correct assignment of the patient identity to the identity card means the security of the cycle is assured.

### Starting a New Procedure

1. To start a new procedure, log in then place one or more unassigned, tagged items into the work area (usually a patient ID card, egg collection dish or sperm pot). A yellow question mark will show that the tag has been detected and is unassigned. See Figure 5-3. Press anywhere in the Patient area to open the choose patient window.

2. In the All Patients tab type the patient name or ID number to locate the correct patient in the database. See Figure 5-4.
3. Alternatively, the Daily Lists tab shows all Egg Collections and Embryo Transfers scheduled for the day. Click the patient cycle for either Egg Collection or Embryo Transfer, this will display the chosen patients details in the work area.

4. Choose which action you intend to register/perform and then click the Confirm Icon.

5. If a double check by another person has been set at this point, a second Witness window will appear. This requires a colleague to verify the action by inputting their name and PIN. See “Double Witness Points” on page 20.

---

**Figure 5-3** Unassigned Tag Has Been Detected

**Figure 5-4** Choose Patient/All Patients Window to Assign ID
**Witness Point Confirmation**

At every step in the procedure, a witness point (action) must be registered in the system. Therefore when an action is performed, select the relevant witness point and confirm by checking the details in the confirmation window before clicking the Confirm icon.

![Figure 5-5 Confirming a Witness Point](image)

**Double Witness Points**

Critical points, as defined by the administrator, must be witnessed by a second operator. The second witness must enter their PIN or use their RI Witness ID fob to verify their ID and the double witnessing step. See Figure 5-6

![Figure 5-6 A Double Witness Point](image)
Question Witness Points

Question Witness Points, as defined by the administrator, require a response from the operator. Examples of text and numeric questions are shown in Figure 5-7, Figure 5-8 and Figure 5-9.

The Witness Point question and the operator response is displayed during the final witness point confirmation window. The question and response also form part of the history logged for this event.

Figure 5-7 Witness Point Questions

Figure 5-8 Witness Point Questions

Figure 5-9 Witness Point Questions
Perform a Procedure

⚠️ Before starting a new procedure which involves bringing another patients’ samples into the work area, ensure the work area is cleared of all previous patient samples.

On starting a procedure, gather all the (tagged) plasticware that are required and place them in the work area.

A window representing the work area will display all the tags and show the identity of any tags already known to the system.

An active patient is selected either manually or automatically; manually by clicking on the Patient Details section of the work area and choosing a patient from the list, or by the system automatically selecting the patient identified by the tags in the work area:

- If there is one patient in the work area then this is the current patient.
- If there are two patients in the work area who are male/female partners then the female patient is the current patient.
- If there are two or more patients after a donation where the patients are donor / recipient(s) then the donor is the current patient.

A list of possible witness points is shown, determined by the selected patient and visible tags. Choose the appropriate witness point.

If the witness point is a tagged donation type, then the recipient will need to be chosen from a list at this point.

If the witness point requires further information to be entered by the operator, then this will be requested.

If the witness point requires a second witness, then another operator will need to choose their name and enter their PIN.

A confirmation window summarises all the details relating to the witness point that will be recorded. If all the details are correct, then selecting the tick will record the witness point.

If any new tags are added to the work area during the processing of a witness point (or admin assign) then the witness point will be cancelled, also, if during the processing of a witness point one of the tags in the work area drops out of range of the reader(s) then the Witness point can still be completed and the tag(s) will be reassigned successfully.

Unassigned Tags

The tags on unused plasticware are unassigned and are shown as a question mark icon in the work area display. See Figure 5-10. When selecting a witness point, unassigned tags are automatically assigned to the patient ID that is currently displayed on the screen.

![Figure 5-10 The Question Mark Icon Represents an Unassigned Tag](image)
Section 5
Witnessing in RI Witness™ WorkArea

Unassigned Tag Removal

A STOP warning is displayed when an unassigned tag is removed from the work area. See Figure 5-11. This message informs the operator that an unassigned tag entered and exited the work area without being registered in the current procedure. If that is correct select Close and continue. If not, replace the sample/labware in the work area and perform a witness point.

![Figure 5-11 Unassigned Tag Removal](image)

Tag Mismatch

The RI Witness system will only allow one patient (with donor) or a couple’s samples to be placed in a work area at any time. If an unlinked sample is placed in the work area, a continuous alarm will sound and a mismatch window will appear immediately. The STOP message is displayed. See Figure 5-12.

![Figure 5-12 Tag Mismatch](image)

1. Remove the samples in order to stop the alarm and select Close to close the window.
2. A mismatch reason window is displayed. The operator must enter an explanation for the mismatch before work can continue. The explanation will appear in both patients’ cycle histories and will be visible in the RI Witness Manager software.

**Note**: If the mismatch occurred while no operator was logged in, an explanation for the mismatch is associated with the operator entering the explanation but the mismatch will not be associated with them.
Admin Assign

Designated operators may use the Admin Assign button, see Figure 5-13, to assign any tag type (sperm pot, inseminated dish, sperm wash tube, etc) to an unassigned tag at any point.

**Note:** Admin Assign should only be used under exceptional circumstances and by trained personnel only.

**Note:** With Admin Assign you can also change the type of dish already assigned to a patient.

![Figure 5-13 Admin Assign](image)

Discards

To prevent confusion between active and discarded containers RI Witness allows the system to visually differentiate between them. Single tags and multiple tags of different types can be discarded in cases where the containers are no longer being used for any procedures. Once discarded these tags can no longer be used in electronic witnessing.

When the Discard button is enabled, see Figure 5-14, pressing it will display a confirmation screen. The Close Icon will cancel the discard and close the confirmation window, whilst the the Confirm Icon will mark the tags as discarded - changing how they are displayed in the work area and preventing any witness points taking place whilst they are in the work area.

There is also the option from within RI Witness Manager to enable Discards to require a second witness. Once enabled, a second witness will be prompted to log in on the screen, following the operator selecting the Discard button. After a successful login the confirmation window will be displayed as usual.
Cycle Summary

The cycle summary is available in the work area at all times; data is taken from a selected data sheet that is created in RI Witness Manager. If a patient is not selected, or there is no cycle summary for a selected patient, the cycle summary display will say <No Details Available>. If the selected patient contains a cycle summary sheet, this sheet will be displayed in the Cycle Summary area.

Daily Lists

On the patient select window, you can select the daily list which shows the current day’s patients. The selected date is displayed top left of the window. To choose another date and view its related procedures, click on the left and right arrows at the top of the window. (The left arrow moves the date back one day and the right arrow advances the date by one day). To select a patient, click on the patient ID number.

Training Mode

Any RI Witness work area may be set to Training Mode, if training and testing is required.

1. Log in as an Admin user.
2. Open WorkArea Status.
3. Click WorkArea Settings.
4. Click Admin Settings.
5. Tick Training Mode. See Figure 5-15.

In Training Mode, the normal work area screen is replaced with an orange background. See Figure 5-16. When logging out of Training Mode, the training work area events will automatically be deleted.
Clear Demo Tables (legacy work areas for pre software version 2.3 only)

Training work area events are stored in a demonstration database which may be cleared using RI Witness Manager. An admin operator may click Clear Demo Tables on the General Settings page of RI Witness Manager. Figure 5-17.
SECTION 6 - CRYO WITNESSING

An Introduction to Cryo Witnessing

Many embryology labs wish to extend witnessing and reporting to include samples stored in cryo storage. The Cryo feature is a barcode labelling solution for cryo straws.

Clinics have the option to scan barcodes that have already been attached to samples, or scan RI barcodes that have been printed from RI Witness Manager and are assigned to a particular patient.

For a clinic only wishing to scan barcodes printed from the RI Witness Manager application:

1. Open RI Witness Manager.
2. Click Settings.
3. Click General Settings.
4. Tick the checkbox under the Barcode section, Only use RI Barcodes. See Figure 6-1.

Scanning Barcodes

In the work area a patient can be chosen by scanning a sample barcode that has previously been assigned to the patient.

When completing a witness point that includes a barcoding step, the barcode (either a brand new barcode or a barcode previously assigned to the current patient) must be scanned prior to the Witness Point Confirmation screen. See Figure 6-2.
If the barcode has not been seen by the system before, it will be assigned to the patient after the witness point is confirmed.

If the barcode has already been assigned to a different patient, the mismatch alarm is activated. The barcoded straw/sample should be removed from the work area, then press to close the mismatch warning and remove the barcode from the WorkArea. The Mismatch Reason will then be shown, as it is shown following an RFID tag mismatch. See Figure 6-3.
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How to View Live Images
A camera needs to be connected to the PC running RI Witness WorkArea and the drivers must be installed correctly to view live images. The Imaging security dongle must also be fitted to a USB port and a valid Imaging license issued.

RI Witness software will automatically recognise both analogue and compatible digital camera devices connected to the PC. If there is only one camera device detected, it will show the live image for that device. If multiple camera devices are connected, it will use the camera that was last selected from the video source drop down box.

If there are multiple cameras attached to the PC, the device you want the live image to be viewed from may be selected.

To do this, select the Camera from the dropdown list on the Settings panel.

How to Take a Picture
This is available on both the work area screen and secondary Imaging screen.
1. Log in using your operator name and PIN.
2. Ensure there is a patient with an active / open cycle in the work area.
3. Press the Camera icon 📷.

How to Record Video
This is available on both the work area screen and secondary Imaging screen.
1. Login using your operator name and PIN.
2. Ensure there is a patient with an active / open cycle in the work area.
3. Click the Film icon 🎥.
4. Each video recording can last for a maximum of one hour. This eliminates the problem of accidentally leaving the software recording and possibly rendering the computer unusable.
5. When freeze frame is set as keyboard shortcut, the live image recording can be paused. A second press of the shortcut key will restart the live image recording.
6. Press or click Pause 🎥 to stop recording.

How to Zoom & Pan the Image
Available on the Imaging screen, there are three ways to zoom into an area on the screen.
1. Move the mouse to a point on the screen. Click and hold the right mouse button, then release. This will zoom to the preset zoom level to the spot where the mouse is placed. To zoom out, click and hold the right mouse button.
2. Place the mouse at a point on the screen and use the scroll wheel on the mouse (if available). This will give the user control over how much digital zoom is given.
3. Using the tool bar at the bottom of the screen, click the + icon to zoom in incrementally. To zoom out by the same amount, click on the - icon on the tool bar. The magnifying glass icon will zoom in and out by the preset zoom.

Whilst using digital zoom, a thumbnail image of the screen will appear in the top left of the screen. At the top of this panel is the amount of magnification you are using. When zoomed out fully, this panel will not appear on the screen.

Zooming in and out can also be achieved using the foot pedal.
How to Perform Measurements

1. Click Measure icon ☑️ on the tool bar.
2. Click on the screen to select a start point for the measurement.
3. Click on the screen a second time to select an end point for the measurement.

The ends of the line can be dragged to change the measurement.

Lines can be removed by clicking the cross in the context window.

Lines and measurements are shown on an image when images are taken in Line Mode.

How to Select Cameras
Available on both the work area screen and secondary Imaging screen.

1. Open WorkArea Status.
2. Click WorkArea Settings.
3. Press camera option.
4. Click on the drop down box to allow the selection of cameras. Clicking on the required camera in the list will change the live image to that of the selected camera.

Camera Flipping
Available on both the work area screen and secondary Imaging screen.

1. Open WorkArea Status.
2. Click WorkArea Settings.
3. Press Camera. See Figure 7-1.
4. Tick Flip Video Horizontal (for camera devices that support these options).
5. Tick Flip Video Vertical (for camera devices that support these options).

![Workarea Settings](image)

Figure 7-1 Camera Settings
Section 7
Imaging

How to Set the Preset Zoom
1. Click the Image Settings icon from the Imaging screen.
2. Drag the Preset Zoom slider to the required zoom.

How to Configure the Foot Pedal/Keyboard
Available on both the work area screen and secondary Imaging screen.
1. Open WorkArea Status.
2. Click WorkArea Settings.
4. Click the corresponding edit button to assign a shortcut.
5. Hold down the key or press the foot pedal to assign.
6. Click or press the Confirm Icon to save the shortcut.

Once the shortcuts are set up, press the shortcut keys or the corresponding foot pedal to activate the command.

How to Select Objectives
1. Click the Magnification on the tool bar.
2. Click the required objective magnification.

How to Add Objectives
1. Click on the tool bar.
2. Click the Objective Calibration button.
3. Click New Objective. The magnification will be the same as the current magnification.
4. Click the required objective to edit objective magnification and fine adjustment values.

How to Remove Objectives
1. Click on the tool bar.
2. Click the Objective Calibration button.
3. Click X next to an objective.

How to Check Objective Calibration
1. Click on the tool bar.
2. Click the Objective Calibration button to open the Objective Calibration panel.
3. Place an object of known dimensions (a stage micrometer is supplied with each system for this purpose) in the field of view.
4. Ensure that the objective selected in Imaging matches that being used on the microscope.
5. The stage micrometer supplied measures 100μm between the longer lines. For best accuracy, position each end point of the line at exactly the same relative position on the scale, for example at the right hand edge of each vertical line.

6. Drag the rulers to the point where the stage micrometer is going to be measured from and use the fine adjustment up and down, until the ruler scale matches the stage micrometer.

**Patient Display**

1. To configure a screen as a Patient Display simply select the Patient Display Configuration for the desired screen. The screen will display the RI logo until the display is turned on.

2. To turn the patient display on/off so that it shows the video from the camera, click the On or Off button either on the work area or on the patient display panel on the Imaging display. The Imaging display shows a preview of what the patient display will show. See Figure 7-2.

3. To take a snapshot of the video to use on the Patient Display, press the Pause button on the work area or patient display panel.

4. To re-enable live streaming of the video, press Play.

   **Note:** When a current patient is activated via the work area, the patient name and ID will appear on the Patient Display. It will only be visible if the Patient Display is turned on. See Figure 7-3.

5. Closing the main window will also close the patient display.
Use of Saturn Laser Systems with RI Witness

RI Witness can be run alongside and in conjunction with Saturn Laser Systems. Please refer to the Saturn Laser System user manual for full instructions.

How to Access Saturn Laser System Information from a Work Area

To access settings and information from the work area.

1. Open WorkArea Status panel.
2. Press WorkArea Settings.
4. Press the Saturn device.
5. Press Settings. See Figure 7-4.

Figure 7-4 Saturn™ Laser System Information
SECTION 8 - CONTACT DETAILS AND FEEDBACK

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Feedback

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