

# Kapture v1.2.x

## USER MANUAL

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## Introduction

The Kapture system has been developed to aid the acquisition and management of patient data and images. Produced in conjunction with ophthalmologists, Kapture allows the capture of patient images and notation of these images while a **database** stores demographics and more detailed information. All data and images are entered via easy to use screens with a simple but thorough structure.

We are continually working to improve this application and therefore reserve the right to amend or change the Kapture software or this manual without prior notice.



## Software installation

Kapture software is supplied on a CD. Insert the CD and follow the onscreen instructions to install the software and the camera drivers.

Your licence key and serial number will be provided on a separate document / label. Follow the licencing instructions included in the latter part of this manual or refer to the Keeler YouTube channel for software installation and use help

<https://www.youtube.com/user/keelerinstruments/videos>

## KAPTURE Lite Video

This is a low cost version of Kapture shipped with Keeler Digital Slit Lamp system including video capture. A stand-alone system working to a fixed database so cannot be networked. This does not have the Multiup facility.

## KAPTURE DIGITAL

This version includes networking and the Multi Up saving and printing facility. You can upgrade from the Lite video version to include Video, networking and Multiup.

## KAPTURE View

As the name suggests this is purely a viewing station with no capture facility at all and does not have the Multiup facility. The capture station must have network capabilities for viewing station to function.

## KAPTURE View +

Same as Viewing Standard but has the added ability for the measurement facility and also the Multiup facility and the file import. The capture station must have network capabilities for viewing station to function.

## General Notes About Kapture

*The program is protected by a licensing system which prevents illegal copying and running of the software. When starting the program the system checks to see if a valid licence is held. If there is no valid licence then the program is assumed to be a time-limited trial system. After any trial period has ceased you will be required to fully licence the equipment or request an extension to the trial period*

## Warnings

- Always have correct patient record open when capturing images
- When selecting image compression, always check images after storage to ensure they are acceptable for future use
- Ensure regular backups are used to prevent data loss from hard disk or equipment failures
- Edited images may lose important image information – Always refer to the original image when reviewing
- Always create users with appropriate permissions to control foreseeable misuse or abuse of data

## NOTE:

Enter dates with a “ / “ to avoid problems.

Patient ID of “0” not allowed.

Patient ID when once entered and saved **CANNOT** be changed.

## Button Functions

All Buttons are graphical and will be easy to recognise after a short period of time using the system while **Tooltip text** is also included to help aid understanding.

Screens that are accessible by ‘**admin**’ only, are coloured peach, while general-use screens are lavender and the live video capture screen is pink. If a patient has been flagged as “Deceased” the screen will be red.

On the Patient Demographics and Episode screens you can move through the **database** by using the four buttons in the bottom right-hand corner:



The 'First' button will move the viewable set of records to the first record and display it on the screen.



The 'Prev' button will move the viewable set of records to the previous record and display it on the screen.



The 'Next' button will move the viewable set of records to the next record and display it on the screen.



The 'Last' button will move the viewable set of records to the last record and display it on the screen.














By right clicking the mouse button over these buttons, on the Patient screen, another small menu appears to enable sorting by Patient ID or the Last Modified.

Keeler Patient Demographics.1 of 1. Last Modified by KAPTURE on 9/18/2013 6:04:44 PM

Patient ID #: A01000 1 Episode View Images For

Name:

Main Details		General Information	
Date of Birth:	Sex: <input type="radio"/> Male <input type="radio"/> Female <input checked="" type="radio"/> Unknown	Ethnicity:	Diagnosis:
Date of Last Visit:			
ID Numbers:	Insurance		
Physician:	Company:		
Hospital:	Number:		
National:			
Address		Patient Notes	
<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>		<div></div>	
Home Telephone:			
Work Info		Physicians	
Telephone:		Physician 1:	
Occupation:		Physician 2:	
<input type="checkbox"/> Deceased			

 Add
  Edit
  Delete
  Save
  Cancel
  To Capture
  To Episode
  First
  Prev
  Next
  Last

Addition or amendment of patient details on the general user screens is facilitated by the following buttons. Each button has an icon corresponding to the current screen for example;



A person represents Patient Demographics



A filing cabinet is used for Episodes



An eye represents Image Capture



The 'Add' button allows addition of a record



The 'Edit' button allows amendment of a record



The 'Delete' button allows deletion of a record. You will be asked if you are sure that you want to delete the record before progressing. Answering in the negative will cancel the deletion with no effect to the record.



The 'Save' button allows you to save a new record or any changes made to an existing record.

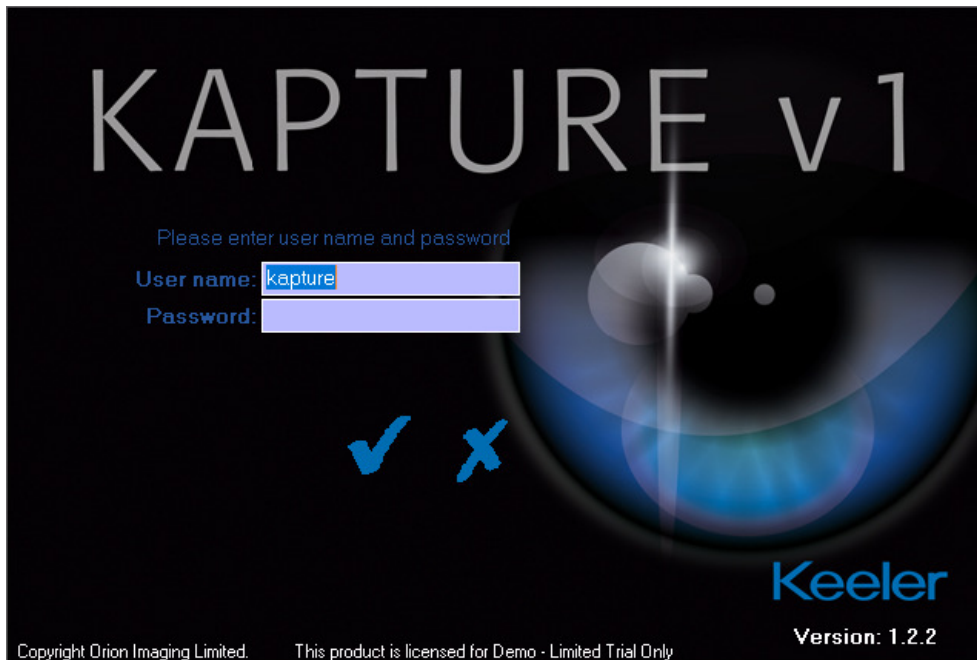


The 'Cancel' button allows you to cancel out of an addition or amendment without saving the changes.

If the image on a button looks mottled or faint then that means that you cannot use that button at the moment. For example, when you are adding a new patient you will not be able to click on the add button until after you have saved or cancelled the current addition.

Most screens will only allow the addition or amendment of information if in add or edit mode. This means that you must first click on either the Add button or the Edit button. To show that you are in add or edit mode most text will turn red in add mode and blue when in edit mode. In both cases the background of editable areas will be yellow. Many of the text boxes, checkboxes, dropdowns etc. cannot be used unless you are in add or edit mode.

The top bar of the patient screen will have an added box when NHS (UK National Health Service) switch is active, this is labelled verified, when selected will check patient number that is entered, if verified and ok, the ID will turn green, unverified numbers will remain red. Patient ID can only be verified if in edit or add mode.

Logging-In

Each time you begin running the program you need to enter your user name and password. After entering, click on the tick to have the information verified and, if it is correct, enter the program. If you enter an incorrect username or password then you will be given two more chances. If, after the third attempt, you still haven't entered a correct username and password then the program will close down. If, instead of entering your password, you decide that you no longer want to log on to the system click on the cross and the program will close down.

DEFAULT USER NAME will be **Kapture** or **Admin**, passwords are blank, on first installation and after that these will be set by the system administrator.

After logging in once, the system remembers the last log-in name (except for Admin) and brings that up automatically. This feature can be disabled from the 'local.ini' file. This file is usually located in the Kapture directory on the local C Drive.

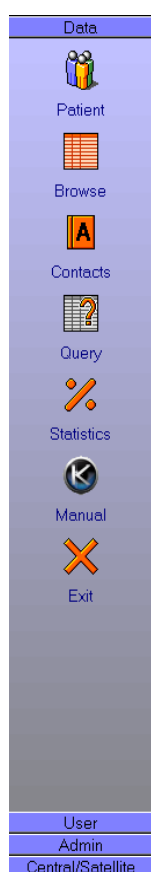
```
[Settings]
Sequence = 25
User=Kapture
;DicomAutoExport = 1
;DsiPort = 1
```

To disable change User=Kapture to User=Disable.

If you have logged in with the user name '**admin**' and there is a problem locating an INI file or a **database** then you will be asked if you want to manually locate the files. Answering in the negative will close down the program whereas saying yes will display a standard file browse screen enabling you to locate the required INI file or **database**.

## The Main Screen

Once you have successfully logged in (as Kapture) you see the main screen from which you can access most areas of the system. The menu bar on the left-hand side lists all accessible screens grouped into categories. Activating DICOM SCU will make additional screens available in the Data category list (Shown right). Clicking on the icon above the caption will display that screen.



If you have logged in as '**admin**' then the list shows primarily **administrative functions**. If, instead, you log in as something other than '**admin**' the list will show non-**administrative functions** and the Patient Demographics screen will be displayed automatically.

**Data – Patient Demographics**

This screen is designed to be used for the entry of general patient information including address, date of birth and physician details.

Most of the information is entered via text boxes although the patient gender is entered via **radio buttons**, which only allow one of the available options to be selected at any time. The date of birth and last visit date use a **date dropdown** and the **diagnosis** field which uses a drop down vocabulary set by the administrator (when in Add or Edit mode).

There is also the facility to flag a deceased patient by ticking the appropriate box in edit mode. When the form is saved in this condition it turns red to distinguish it immediately and can only be switched back to normal by the Administrator.

The Patient Demographics screen consists of two tabs; 'Main Details' and 'General Information' (SCU tab only visible when option is installed). The first shows the patient demographics while the second has user-defined areas for entry of specific information. The labels for these user-defined areas are set up by '**admin**' via the 'System Setup' screen.



A Patient ID number must be included before the record can be saved. If the auto number function has been switched on by ‘**admin**’ then, when the Add button is clicked on, a number will automatically be assigned to the patient. If this number is not appropriate then it can still be changed by just deleting it and typing in a new number. Once the record has been saved, however, the Patient ID number **cannot** be altered.

The **To Episode** button will close the patient demographics screen and display the Episode screen complete with any episodes relevant to the current patient. Another way of accessing the Episodes screen is via the **Episodes dropdown** in the top right hand corner of the Patient Demographics screen. This allows you to choose which Episode you want to view first instead of entering the **Episode screen** at the last Episode and having to scroll through. You do not have to be adding or editing details to use this function.

Next to the **Episodes Dropdown** is a check box captioned **View Images For**. If this is ticked before an Episode is chosen via the **Episodes Dropdown** then the **Image Capture screen** will appear complete with relevant images for that patient and episode.

The **To Capture** button at the bottom of the patient form is to enable a fast track to the image capture form without the need to go via the episode form. A Basic blank Episode is still produced, that is date and time and will of course increase any previous episode count by one.

This button is not active under certain conditions of licence type or permissions set by the administrator.

**SEARCHING AND SHORTCUTS** – On the patient screen, various searches can be performed using certain function keys. It is not necessary to complete the field being searched, the first few letters will give a match.

- [F5] – Searches on Patient ID field.
- [F7] – Searches on the Hospital field.
- [F8] – Searches on the National field.
- [F3] – Repeats the last search.

It is also possible to perform the search on the fields specified above by “double clicking” on that field.

In addition there is an auto-complete on Last Name field, double click to initiate the search. To narrow the search you can supply a First Name and [ / ] or Date of Birth. Terminate the Last Name with a comma and the First Name with a space.

Some of the keys have a letter underlined and this shows there is a shortcut to that function and are initiated by using the [Alt] key and the underlined letter together.

- [Alt] + [A] = Add:
- [Alt] + [D] = Delete:

[Alt] + [E] = Edit:  
 [Alt] + [S] = Save:  
 [Alt] + [C] = Cancel:[Alt] + [F] = First:  
 [Alt] + [R] = Previous:  
 [Alt] + [N] = Next:  
 [Alt] + [L] = Last:  
 [Alt] + [P] = Patient to Episode forms  
 [Alt] + [I] = Episode to Image forms.

## Episode

The screenshot shows the 'Kapture - The Keeler Image Acquisition system: kapture' window. The main form is titled 'Kapture, Episode(s) 2 of 2, Last modified by KAPTURE on 30/09/2013 14:51:15, 4 images.' It contains the following fields and sections:

- Patient ID #:** A01001
- Episode #:** 2
- Name:** PATIENT, EXAMPLE
- Description:** (empty)
- Date:** 30/09/2013
- Time:** 14:51
- Visual Acuity:** (empty)
- General Details:**
  - Diagnosis:** (empty)
  - Notes:** (empty)
  - User 6:** (empty)
  - user notes:** (empty)
  - Insurance:**
    - Company:** (empty)
    - Number:** (empty)

The sidebar on the left contains icons for Patient, Browse, Contacts, Query, Statistics, Manual, and Exit. The bottom toolbar contains icons for Add, Edit, Delete, Save, Cancel, Patient, Images, First, Prev, Next, and Last. On the right side, there are four thumbnail images of an eye.

This screen is used for adding and editing details of patient visits and any findings, including their visual acuity and any general episode information. There is also a facility for burning the current episode to CD.

**Thumbnail** images are included on the right-hand side to illustrate the given information and clicking on one of these images will display a larger version. A single click on the large image will return it to the **thumbnail** bar. If you **right click** on one of these images brief information regarding the image will be displayed. This includes when the image was taken and with which camera as well as what field it has been labelled as.

The information will disappear again if you left click on it or anywhere else on the screen. If there are more images than can be shown on the screen then you can use the **scroll bar** to view the other images.

Information on this screen is entered in a similar way to on the Patient Demographics screen with some of the data being typed into **text boxes** or by clicking

on **radio buttons**. The Visual Acuity section also uses **check boxes** and **dropdown** boxes. Some data entry controls in this section are only available after a previous option has been selected, for example a *reason for extra fields taken* cannot be entered until after the **check box** for *extra fields* has been selected.

The Diagnosis box when in edit mode becomes a dropdown, the vocabulary being set in **Admin**.

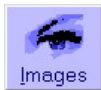
When you add an Episode the date and time will be entered automatically as the current date and time from the computer but they can still be altered in the normal way.

To you can select and move between the General Information and Visual Acuity sections by left clicking page tabs.

The Visual Acuity convention is set in **Admin** for either Bailey-Lovie or Snellen



This button displays the Patient Demographics screen with the relevant patient and closes the Episode screen

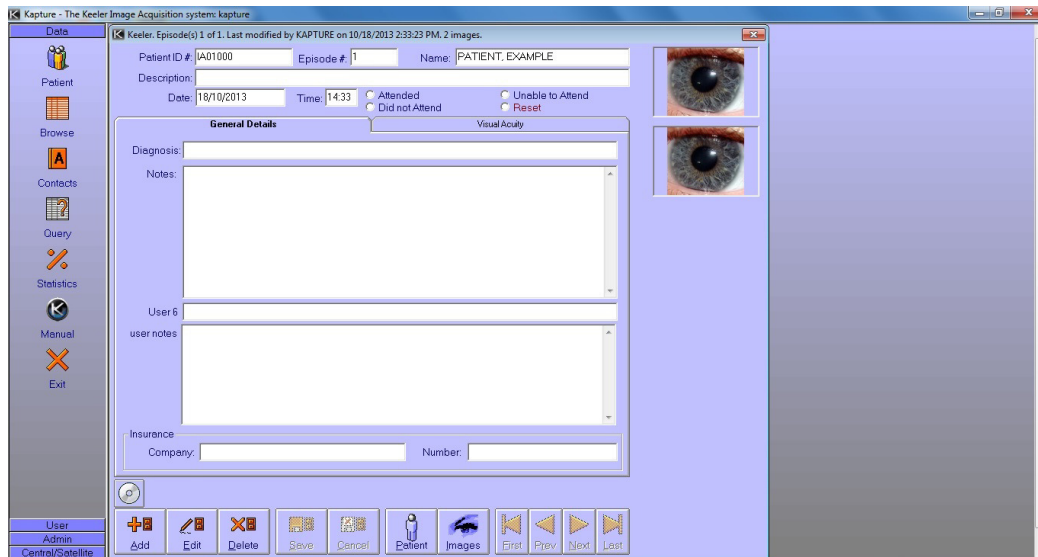


The Images button displays the Image Capture screen and any images that are relevant to the particular Episode and patient



The **Burn** button is for creating an autorun CD of the current Episode.

### **Visual Acuity.**

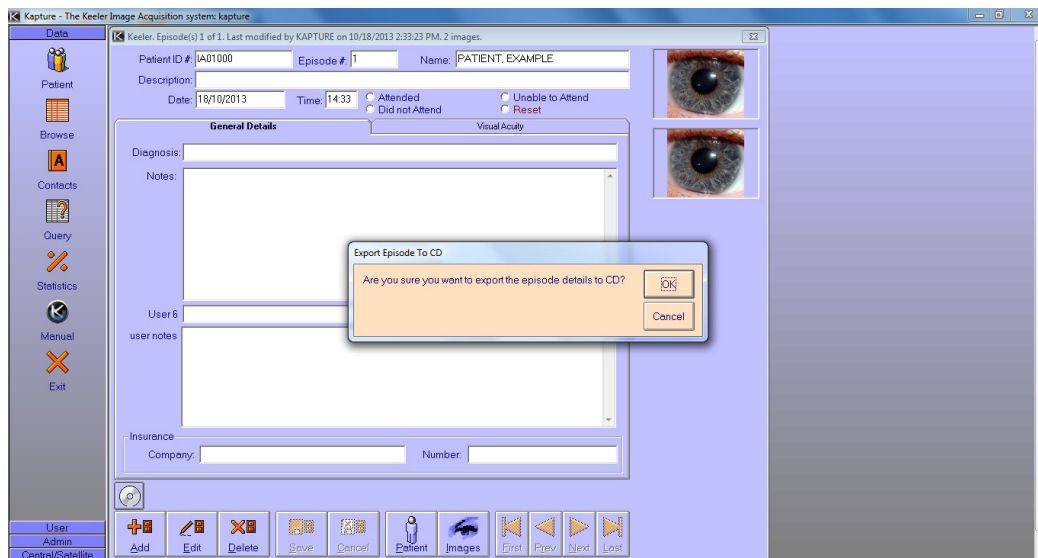


The required system of either Bailey-Lovie or Snellen can be set in the user defined options available on System Setup by the administrator.  
Data can be added, edited or deleted by using the appropriate function button.

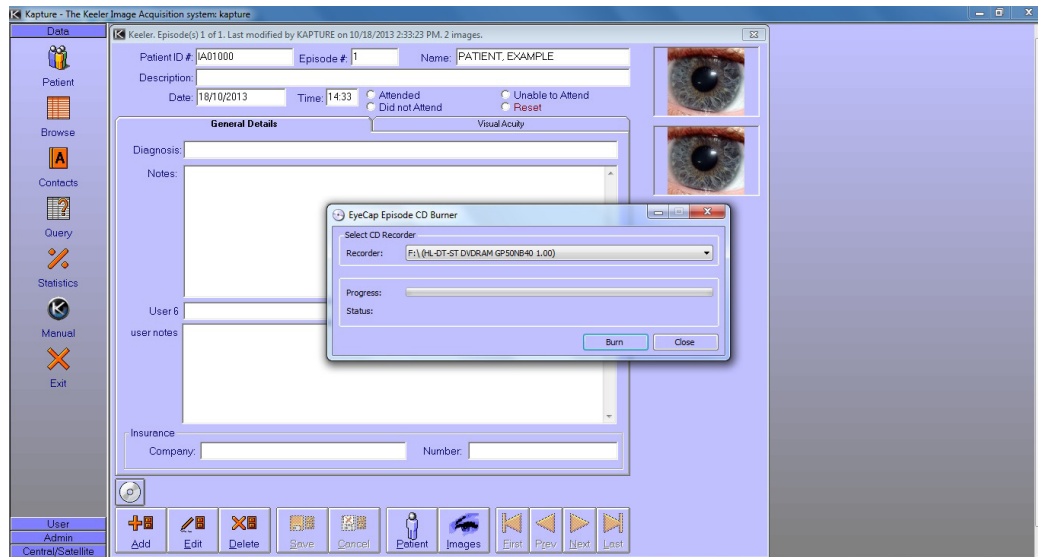
### **Burn CD of Current Episode**

To burn a CD of the current episode, click on the Burn button.  
This box should then appear.

Please make sure that a blank CD is used for this operation.

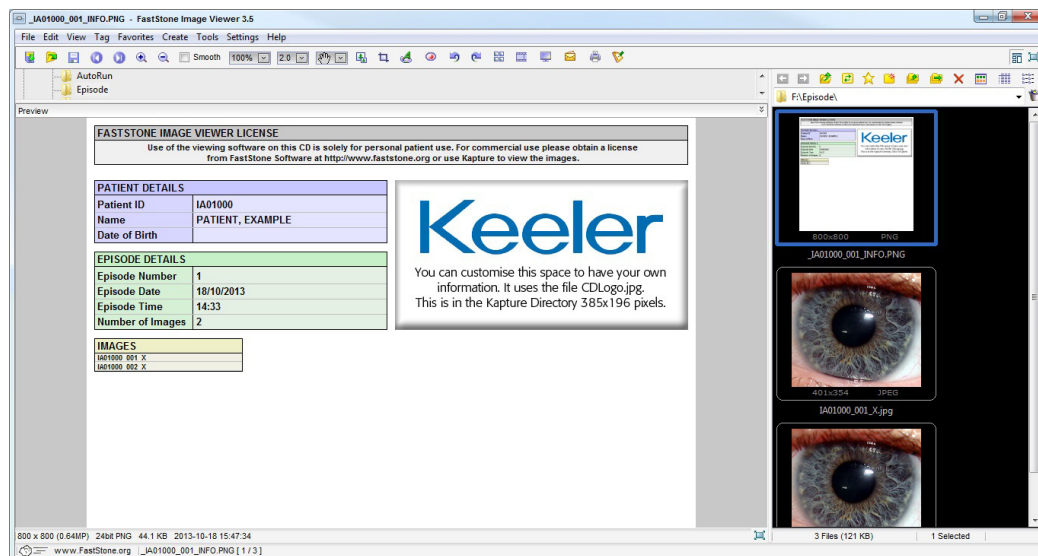


Click "OK" to burn CD.



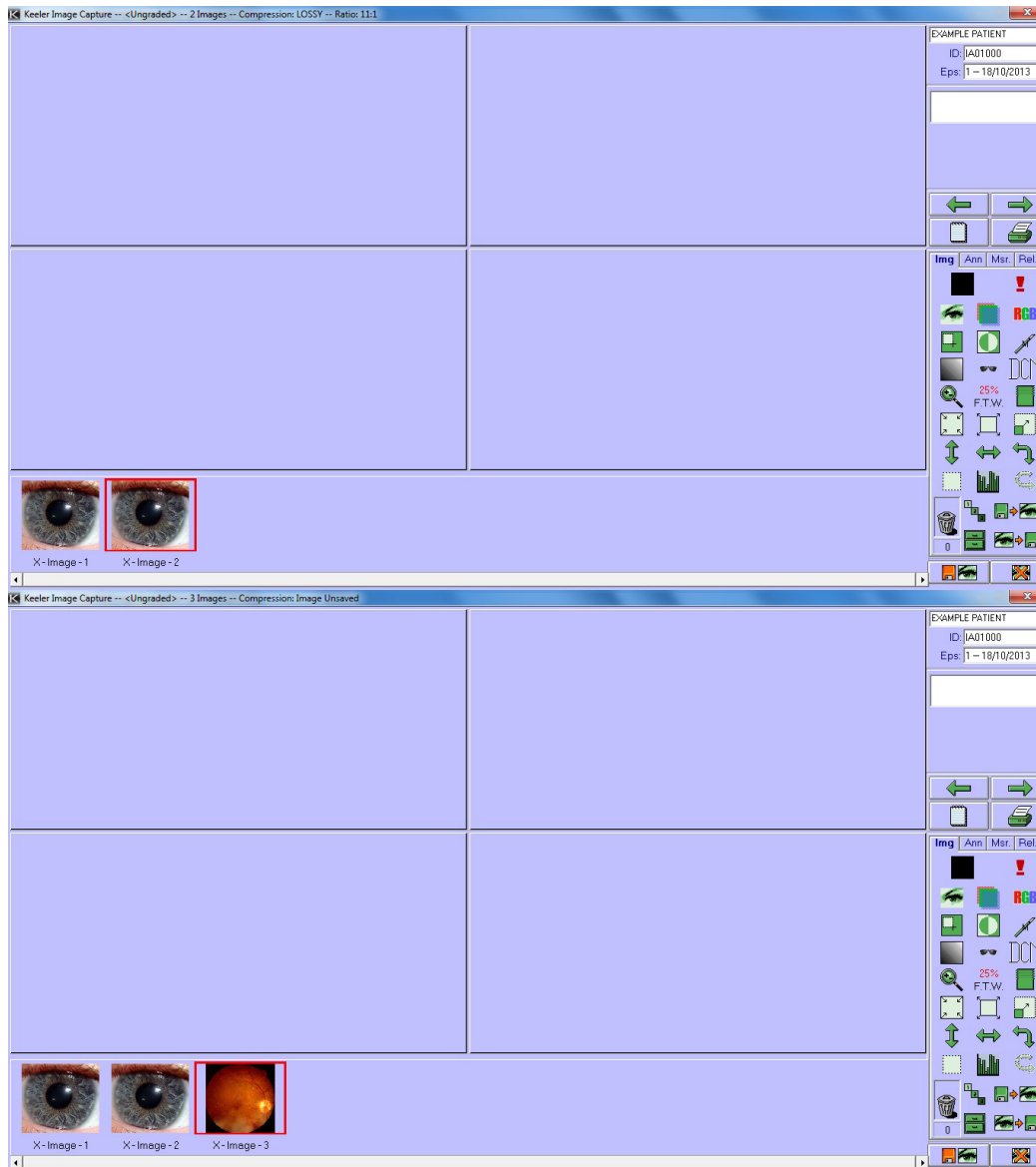
Once the CD is burned it can be viewed as a stand-alone item and is auto run when inserted into a drive.

Below is an example of what you should see.



### Image Capture/Import

Kapture has the facility to capture from both analogue and digital sources as shown in the camera list in Admin.



The Image Capture screen is used to capture images or import images, .pdf or .Avi files relevant to the current patient and episode and to manipulate these images before saving them to the database.

**Note that only images can be manipulated. .Pdf and .AVI can only be viewed.**

Various manipulations can be performed in order to aid notation or diagnosis. Any available images will be shown as **thumbnails** at the bottom of the screen and larger versions can be viewed in the four rectangles above while brief patient details are displayed in the top right-hand corner.



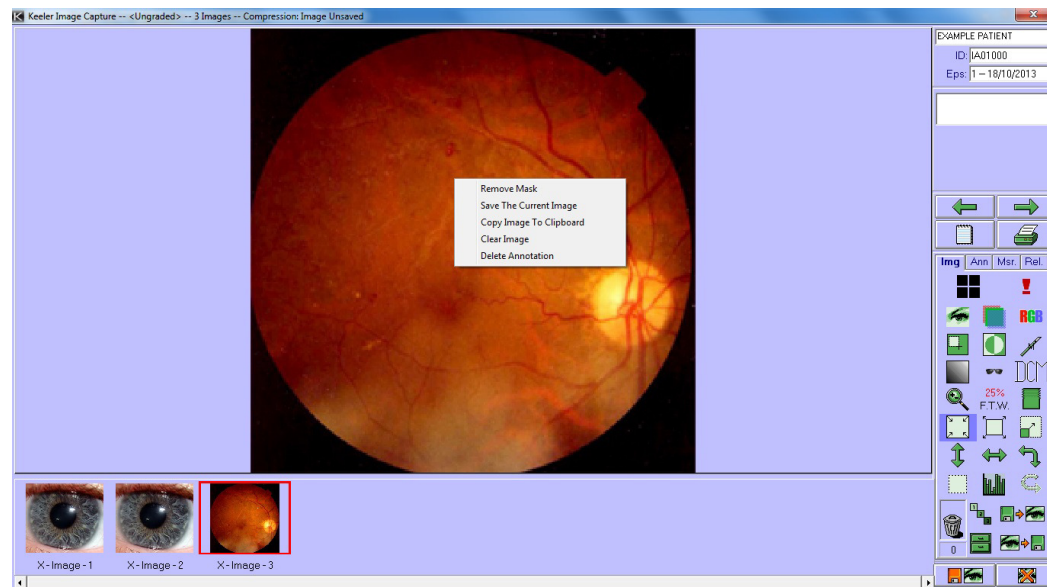
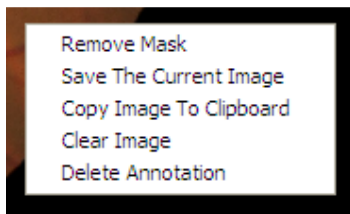
The “**URGENT**” button, below the REL tab, can be used if it is seen at the capture stage that there is a problem. Clicking on the **URGENT** button, flags

that particular episode so it can be found very quickly on a search.

To view an image in the main section of the screen, click on one of the **thumbnails** at the bottom of the screen and keep the left mouse button down as you drag the image over to one of the large rectangles in the main section of the screen. Let go when the rectangular highlight that represents the image is over the correct large rectangle (**drag and drop**).

In the 1 up mode the thumbnail can be double clicked to put it on the main screen as an alternative to dragging.

Once an image has been dragged on to the main capture area, a right mouse click can be performed to get an additional menu.



The first item on the menu is to allow the removal of the black mask prior to printing (saving ink).

Left Clicking Remove Mask performs a standard removal to 10% colour. Holding down the [Ctrl] key while doing the above removes to 2% colour and Holding down the [Shift] key removes pure black.



Other items on the menu are self explanatory.

To view a .pdf or .Avi file in either, the 1 up or the 4 up mode, drag the file to the main section of the capture screen and the file will open in a separate viewing window. To close this window, either click on the close icon, or press [Esc].



### Kapture video player controls

Action	Controls
Play / Pause	Icon or spacebar
Snapshot to thumbnail gallery	Camera icon
Scrubbing 0.1 second	L / R arrows or mousewheel
Scrubbing 0.4 seconds	Control + L / R arrows or mousewheel
Scrubbing 1 second	Shift + L / R arrows or mousewheel

There is also a facility to select multiple images for deletion export etc. and this is achieved in two ways dependant on which images are required.

2. Multiple Individual frames (that is not adjacent).  
Hold down the [Ctrl] key while making the selection with the left mouse button.
2. Frames in a continuous row.  
Make first selection using the mouse key then move to the last item in the sequence, press and hold [Shift] then use the mouse button to click on the last item. Click and drag the icon required on to the selected images.



In both cases the highlighted frames will have a blue background and caption bar. The selection can be cancelled by double clicking on any of the selected thumbnails.

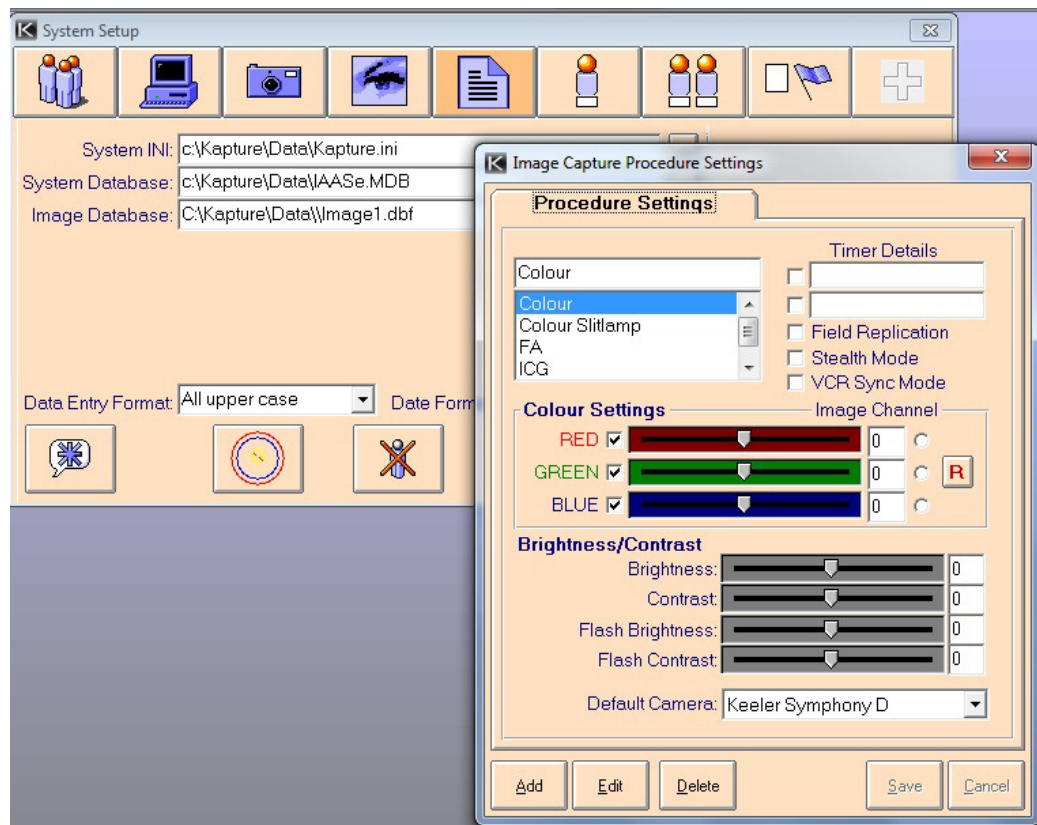
With the multiple selection it also possible to apply a tool to all selected items. If a third thumbnail is selected after a tool has been applied to the first two thumbnails selected then the tool will not be available on the third image. The tool effect is not seen until the image is dragged onto the main screen.

Stepping through images can be achieved by using the [←] and [→] arrow buttons on the keyboard. This is only valid on the capture screen in the 1 up mode with an image dragged up.

The image manipulation will only occur on the image in the main part of the screen that is currently selected. A selected image will have a coloured highlight around it. This highlight colour can be set from the System Setup window in Admin.

In both 1 up and 4 up mode the mouse scroll wheel can be used to zoom (enlarge) the image and this is centred round the position of the mouse cursor.

Also included is a mode, **Stealth Mode**, to enable the screen to be dimmed when capturing images where the ambient light is too great. This facility is set up in Admin, Procedures and is enabled at the time of capture, connecting the camera.



Underneath each thumbnail are some brief image details which display the orientation of the eye and the image number. The orientation is a single digit; “L” for left eye, “R” for right eye and “X” if no eye has been allocated. If you are viewing thumbnails chosen via the Compare Thumbnails screen then the Episode date is shown below each thumbnail. Right clicking on a thumbnail brings up the details of the image.

If you click a button that involves altering values, a panel with **slider bars** on it will appear, allowing you to easily alter the values by dragging the tab of the **slider**. To hide these **slider bars** either click on the button again or pick another Image Capture function.

Image manipulation can be conducted using the following buttons;



Flag image as left.

Using this button will append the Left (L) /Right (R) /Unknown (X) to the filename on export



Flag image as right.

Using this button will append the Left (L) /Right (R) /Unknown (X) to the filename on export



Add notes for the current images.



Print an image report.

Note that when using this function to get correct resolution and number of colours the steps shown at the end of this section must be taken.



This button is shown when the screen is for 4 up and indicates that it has to be clicked to go to 1 up. This is a toggle button and alternates with the one below.



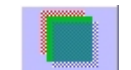
This button is shown when the screen is for 1 up and indicates that it has to be clicked to go to 4 up. This is a toggle button and alternates with the one above.



This is the URGENT button and is used to flag an episode for immediate attention after the capture session. Flagged items picked up on Query, Image Information tab. Must be saved before moving on.



Show image through a green filter



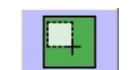
Display the green plane (red-free) image in greyscale.



**Right click** on this icon to cycle through and choose the colour plane required Red, Blue or Green. Once this has been effected it cannot be undone by the undo tool.



Alter red, green and blue values of the image.



Crop section of image. This facility can be used to pick out a portion of the image that is of any special interest. This cropped image can be saved using the right click menu.



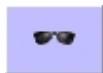
Invert colours of image.



**Sharpen** image. The degree of sharpening can be altered by clicking on the button with the right mouse button. Clicking on the desired style from the list will then select that sharpen style and the initial of the sharpen style will be shown in the middle of the button.



Alter **Contrast** and **Brightness**



Alter **gamma** values.



**Dicom** button which gives **Dicom** information of an image when clicked, with an image in the 1 up mode of the capture screen.



**Zoom** function. The image must be in real-size to be zoomed but the system will do this automatically when you click on the zoom buttons.

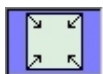
Left clicking zooms in and right clicking zooms out. The clicking takes place on the zoom button NOT on the image.



**Anti Step** function. This function is to lessen the effect of “jaggies” on an image. Please note an effect of this function will be to **soften** the image. The Anti Step function can be dragged on to a multiple selection. **Right click** on this icon to bring up a menu for amount of manipulation.



The zoom percentage and current zoom button. The geographically lower value is the current zoom value and indicates what size the image is being shown at compared to its original size (100%). This value will change every time you zoom in or out. The value above is the zoom percentage which indicates how much the image will be zoomed by each time. This can be altered by right clicking on the panel then selecting the required percentage from the displayed **dropdown**. You can only zoom out to 100% or the image’s true size.

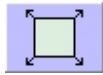


Fit image to window. This function will re-size the image so that the entire image can be seen within the given rectangle without you needing to scroll it. The height and width ratio of the image is maintained.



**Resize image 100%**. Doubles the width and the height of the image using a high-quality algorithm to ensure that the image does not become **pixelated**. Note: resize image will be disabled if the

resulting image would exceed 10MB in size. This feature is designed for small bitmap images



Show image at its true size. This method will be automatically activated when you zoom in or out of the image.



Flip the image.



Mirror the image.



Rotate the image by 90 degrees. Use left mouse button to rotate Counter Clock Wise (CCW) and right mouse button to rotate Clock Wise (CW).



Select a regular area by clicking and holding the left mouse button on the image then dragging a box around the desired area. This function should only be used when the image is in true-size. To remove an area click on the desired image with the right mouse button.



The **Histogram** function where a stretch can be effected either automatically or manually to enable an enhanced copy of Black and White image to be produced. On the right hand side of the histogram form there is a slider which can be used to set the thresholds for stretching. See more detailed information at the end of this section.



Undo last action. This can be enabled/disabled by '**admin**' (**Setup, Imaging**) disallowing any undoing of image manipulation.



**Drag and drop thumbnails** over the rubbish bin to dispose of them. They will be deleted when you exit the session. The panel below the bin shows how many images have been placed in the bin.

The panel below the rubbish bin will show how many images are in the bin. If an image has been mistakenly been put in the bin it can be recovered by clicking on the number panel below the bin. All images currently in the bin will be shown on the **thumbnail** bar and can be recovered by clicking on the 'Recover' buttons below the individual images. Any recovered images will be shown as before on the **thumbnail** bar. If you are looking at the images in the bin but decide not to recover any then click

on the number panel or the 'X' in the top right hand corner of the **thumbnail** bar to return to the main images. If you exit from the Image Capture screen without saving then the images in the bin will not be deleted but next time you look at this Episode they will be shown with the other thumbnails as before.



**Import images, PDFs or AVI Files from disk**



**Show grading screen.**



**Show images** from previous episodes. By left clicking on this icon the thumb nails on the next form are shown at normal size. Right clicking on the icon will show the thumbnails at twice normal size.



**Export to disk.** If exporting multiple images there is also the option to save to a Dicom (Dicom 3) file. Multiple select images as described previously and then **drag the export button over the thumbnails**. The **save** selection will now include a Dicom option. To save a DICOM image you **MUST** have a patient date of birth in the patient record. **DICOM export requires a licence upgrade**



**Save session.** This icon also controls the Dicom session save. The session should have already been saved to the main database, then right click to bring up the "Browse for Folder", select the destination and click OK. The Dicom is Dicom 3 compatible.

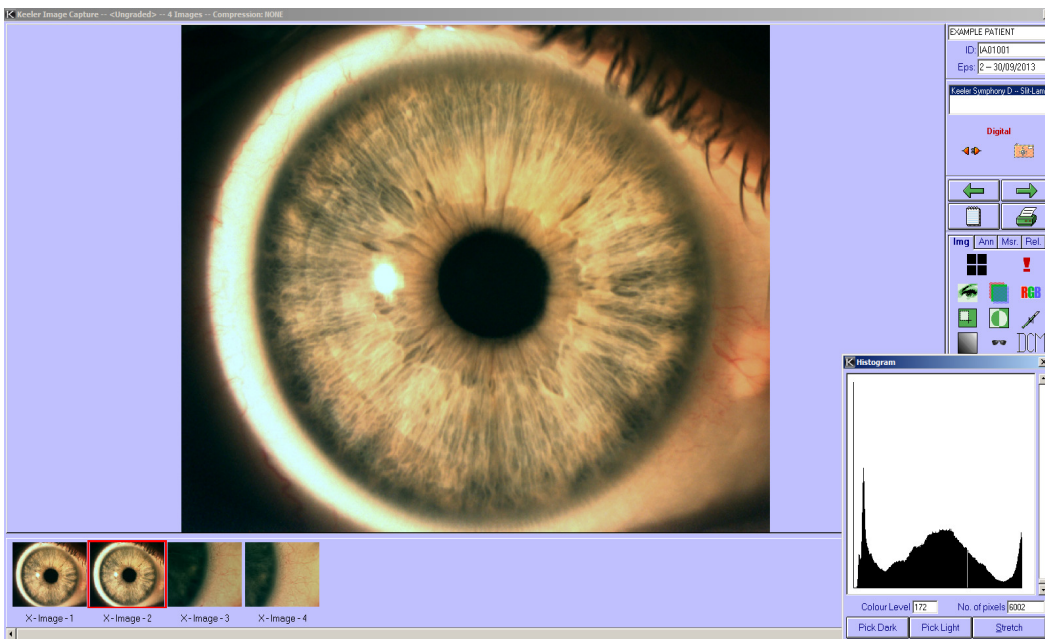
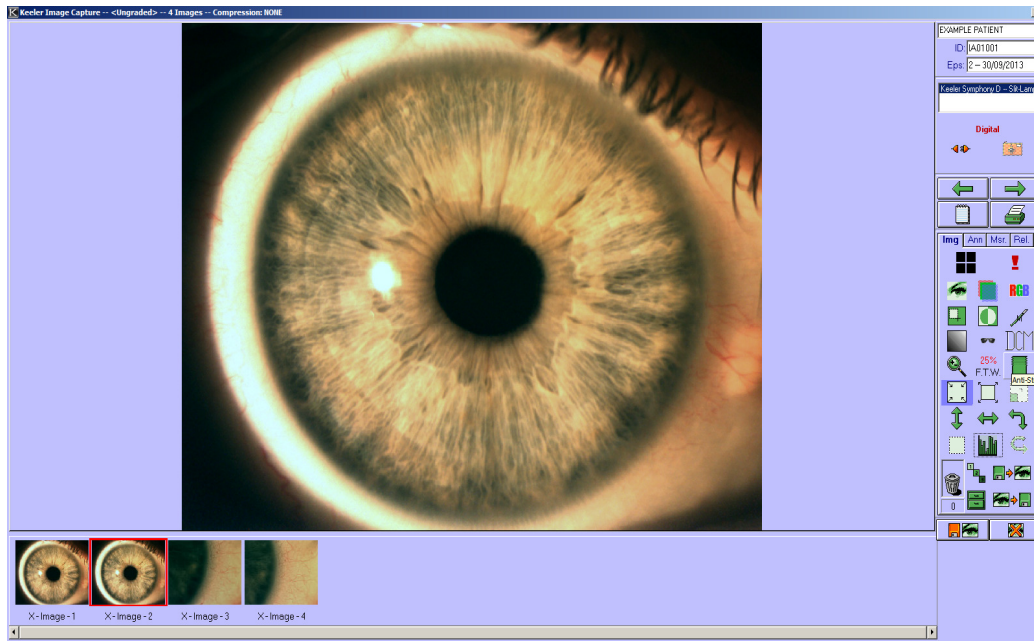


**Close session without saving.**

The **Histogram function** is started by clicking on the histogram icon.

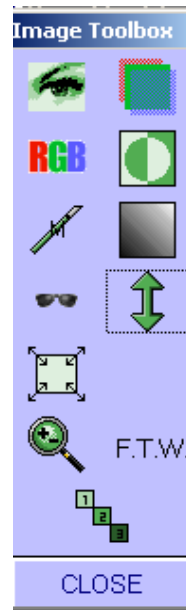
By using the "Stretch" control an automatic enhancement takes place giving an image with more contrast.

The right hand slider allows vertical scale adjustment of the histogram.



**Full Screen Image** is a facility activated by double clicking on the standard image from one-up or double clicking twice from four-up. This will also bring up a floating toolbox for manipulation purposes.





All icons except the flip/mirror icon work with a single left click on the mouse button. The flip/mirror icon works as follows:-  
 Right click selects Flip or Mirror (arrow is either vertical for Flip or horizontal for Mirror).  
 Left click then completes the action.

### **SPLIT PLANES**

This is a facility that allows all three Planes to be split but seen on the screen at the same time.

Right clicking on the Green Plane button provides a menu that allows selection of a single plane or the removal of a single plane plus the last item is SPLIT PLANE. Selecting this item changes the icon to.

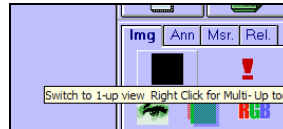


Working in the 4 up mode, drag the required image to the top left position, click on the new icon and an image appears in each of the remaining three positions. Top right is the Red Plane, bottom left is the Green Plane and bottom right is the Blue Plane

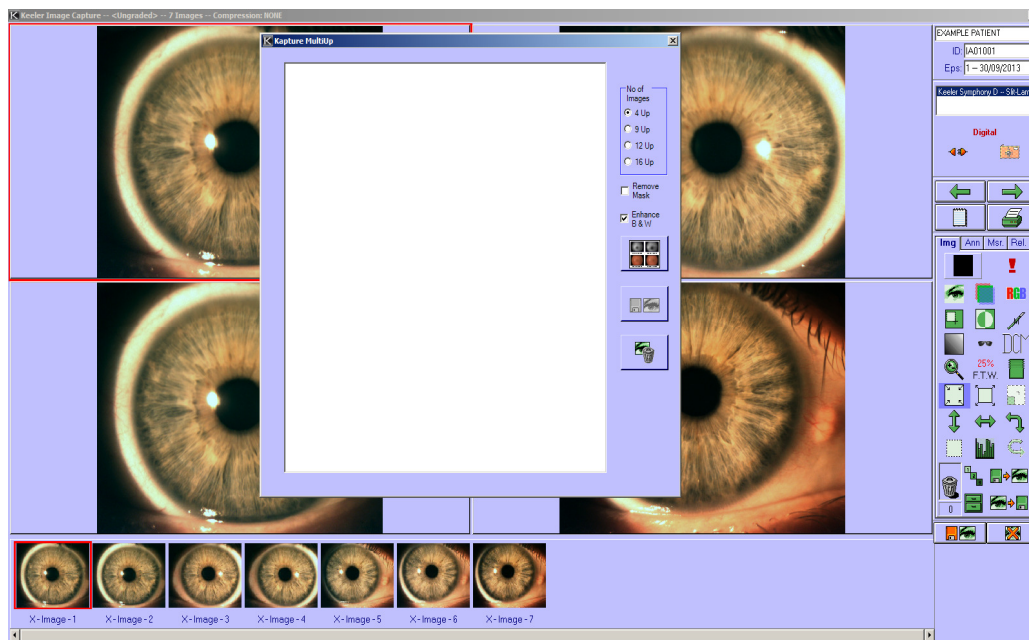


**Multiup facility. (Kapture Digital only)**

This is a facility to enable a print to be made of a number of images (4, 9, 12 or 16) from one episode.



The multiup can be accessed either by;  
Right clicking the 1up/4up icon on the capture screen which will bring up the following screen



Images can be individually dragged from the thumbnail slide to the multiup screen

or

From the capture screen, multiple images can be selected by depressing and holding the [Ctrl] key while selecting each image on the thumbnail slide and then right clicking on the 1up/4up icon which will open the multi up window with the selected images in place.

Once more than 4 are dragged up it will automatically go to 9 up. If then some are discarded to show only 4 you must click in the 4 up button to resize the remaining ones.

**Note;** if a .Pdf or .Avi is selected the, multiup screen will only show the file type icon.

To discard an image from this screen (before it has been merged), click on the clear button



To save ink on printing when there are large areas of black the “Remove Mask” facility can be used.

The “Enhance B&W” facility is to contrast stretch a black and white image if required.



Both the above “Remove mask” and “Enhance B&W” need to be activated before clicking on the create image button.

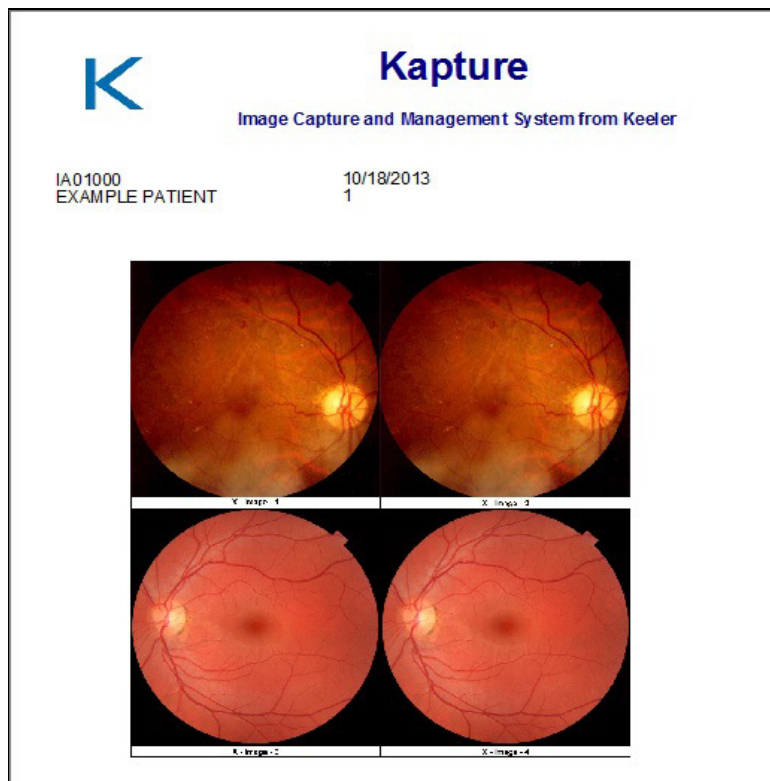




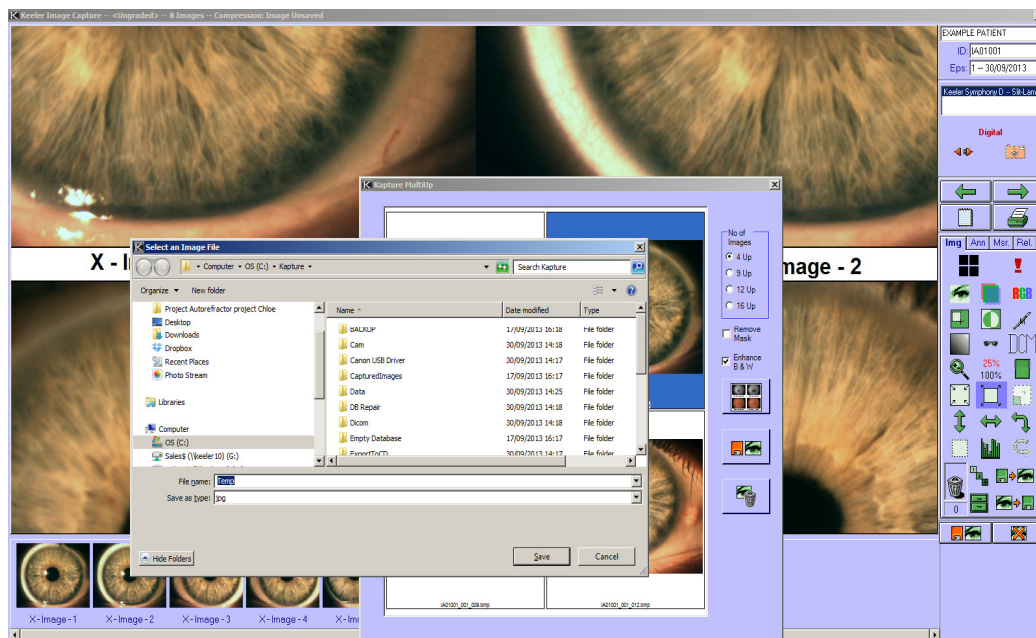
Once the merge is applied a composite will appear in the multi-up screen and the save button will become active.



Left click on the save button will save the merged image to the episode and will appear in the image bar this can be printed via the 1-up print.



Right click on save button will enable the merged image to be saved as a jpg to any location on the PC.



The Multiup screen can now be closed using the X at the top right hand corner.

Now back on the main Image screen a printout can be made as normal.

**Create Image Report** is a facility to either preview or print what is shown on the image form. This note is to show how to get correct resolution and number of colours. By clicking on the “Print Image Report” icon a form appears with two buttons, click on “Create Report” and get the form shown below.

In the Export Media window click on the **dropdown box** and select required option. When any change is made this enables the button to the right of the **dropdown box**. Click this button and select 24 bit and 200dpi.

Also on the form above when changes are made the Save Options Permanently box is enabled so can be ticked.

### **Troubleshooting on capture form.**

If the camera connect button does not appear check the following;

In Admin – System Setup – make sure workstation has the same name as the computer.

**NOTE:** The workstation name must be the computer name and if uncertain what this is then click on “Add New Workstation”. Then click on OK on new box without entering anything, this should put the computer name as the new workstation.

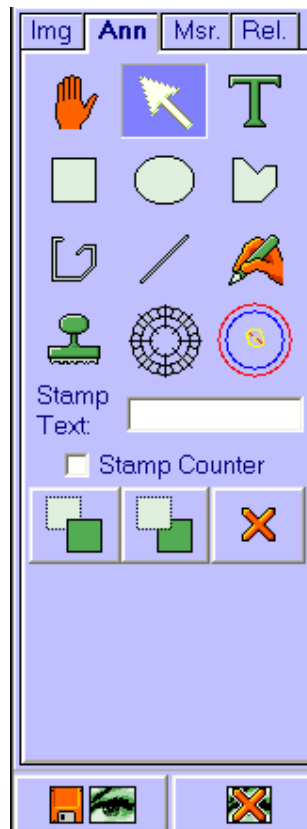
In Admin – System Setup – make sure the correct camera is selected.

In Admin – System Setup – Procedures make sure camera selected.

Capture cannot take place if either patient has been Final Graded or the DNA flag is set.

## Annotation

Annotation can also be added to images via a separate tab (Ann) on the Image Capture screen.



No annotation tool. Image can be accessed using the mouse buttons as normal



Pointer. Allows you to select annotations and amend their properties by clicking with the right mouse button.



Add text to the image in a coloured box.



Place a rectangular area onto the image.



Place an ellipse area onto the image.



Place an irregular area onto the image.



Polygonal line.



Straight line.



Draw freehand.



Stamp onto the image some specified text.



Bring selected annotation to front.



Put selected annotation to back.



Delete selected annotation.

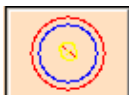


Photo Dynamic Therapy calculation button.

Toric Lens addition.



Annotations can only be performed if the selected image is shown at its true size in the one only view. If the selected image is not in this mode when you click on the annotation tab then it will automatically do it for you. When a tool is selected, options will appear at the bottom of the tab allowing colours and line widths to be altered. When the selected tool is the pointer you can click on individual annotations and choose various options from a menu by clicking the right mouse button. This allows you to set particular sections to transparent or change the colours as before. These changes will only become active if the correct annotation was selected with the left mouse button before you clicked on the right mouse button. All annotation for an image can also be selected via the **right click** menu or they can all be de-selected. If you want to delete all annotations on an image then you need to click on one of the annotations with the left mouse button before right clicking and choosing to 'Select All'. Then click on the delete button.

If you want to move an annotation then make sure that the selected tool is the pointer and click on the annotation that you want to move. The mouse pointer will change to cross-hairs allowing you to drag the annotation to a new position.

When images have had an annotation added the text below the thumbnail becomes bold to show that this is the case.

If the "Annotation Fill" is required to be transparent, for example to put a circle around something on the image to highlight it. Make sure a pen width is selected, at least 1. Select the circular annotation and draw to the required size. Before saving, click on the Pointer tool. Now right click on the annotation and a new menu appears. Select "Backstiles" and "Transparent". The item that required highlighting on the image has a circle around it.

### **PDT (Photodynamic Therapy) Calculation.**

Kapture provides the functionality to perform PDT calculations.

For any image on which the PDT calculation is to be performed, a number of properties **MUST** be known about the image.

1. Fundus camera used (eg. Canon CR6-45NM, Topcon NW100)
2. Camera back (eg. Canon EOS 10D, Nikon D1x)
3. Angle the image was taken (eg. 60 / 40 / 30 degrees)

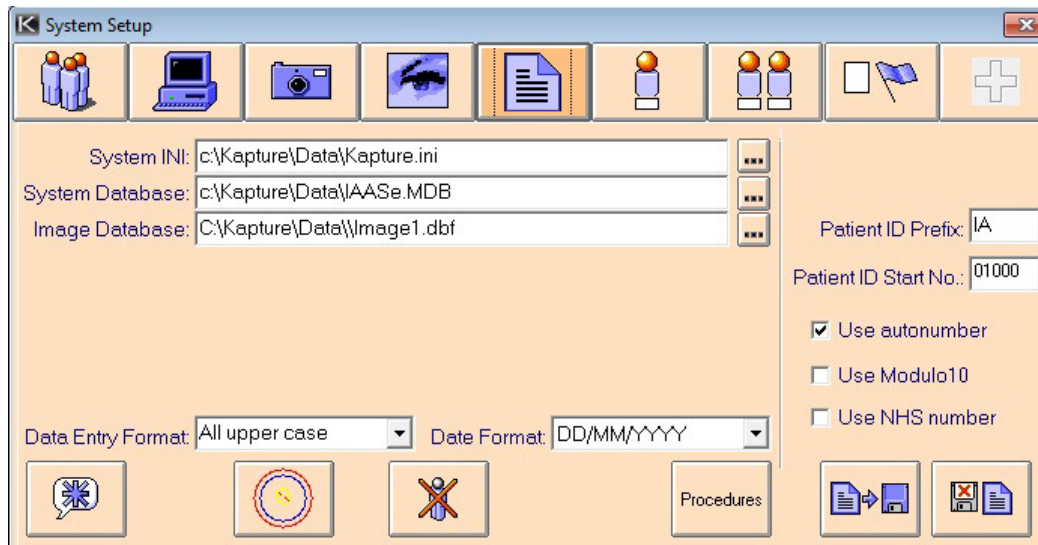
From these properties, a scaling factor should be obtained for the image (in `microns per pixel'). This information should be obtained from your camera supplier.

Procedure to perform the PDT calculation.

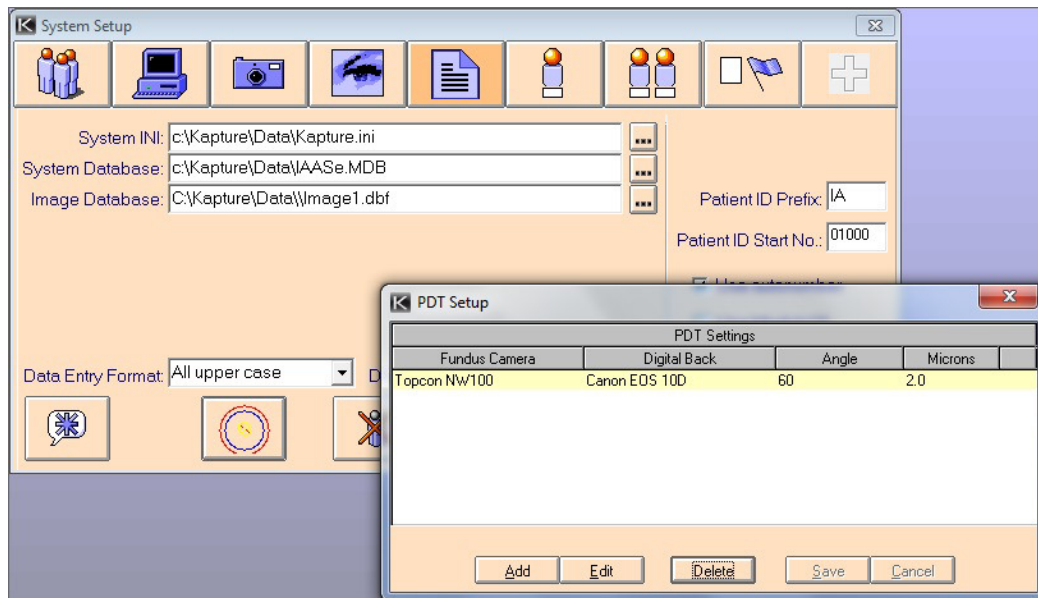
In Admin System Setup

1. Click on Show Settings (5<sup>th</sup> icon along top of box)



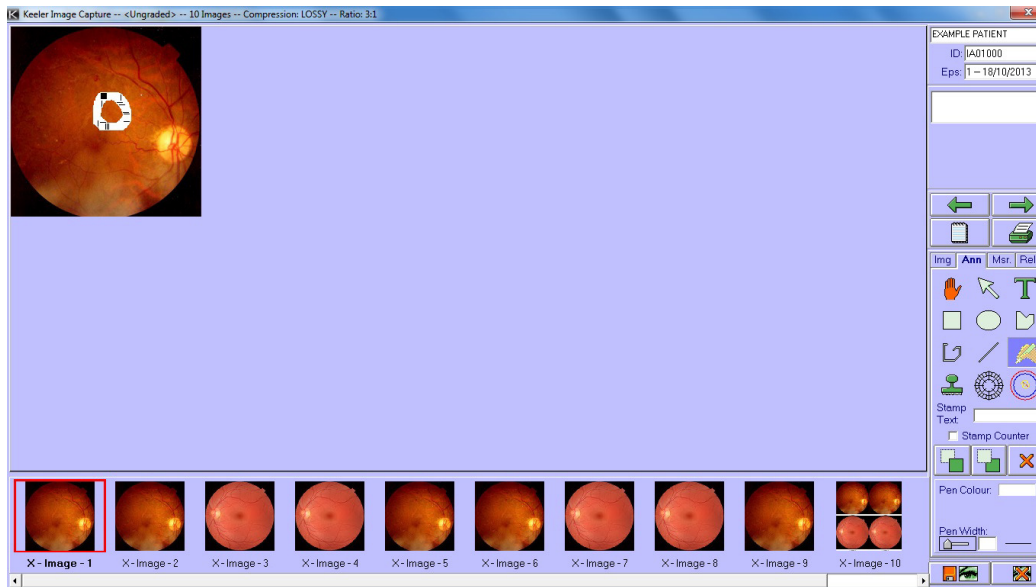


2. Click on PDT button (bottom 2<sup>nd</sup> from left)



3. Populate the fields with the requisite information in the normal way by using Add and Save.

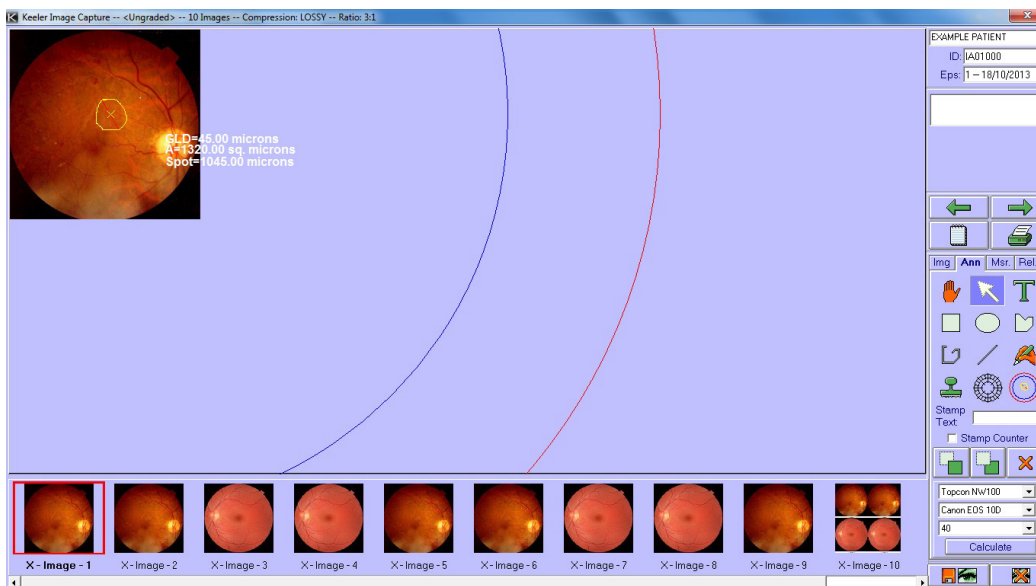
The admin function now complete.



In Kapture perform the following:

1. Draw a shape around the lesion with at least 3 points. (Using the Freehand tool is the best for this.)
2. Click on the 'Dropdown' boxes and select the Fundus camera, Camera Back and Angle.
3. The correct 'microns per pixel' will be automatically applied from your admin entry

Click on the 'Calculate' button to perform the calculation.



A copy of the drawn shape is created in Yellow together with a calculation of the Greatest Linear Diameter (GLD). The area (A) of the lesion is also calculated and displayed.

A circle in Blue is then drawn, with a built in margin of error of 1000 microns centred on the mid point of the lesion (marked by an **X**). This indicates the calculated spot size for the PDT treatment.

The 'Spot Size' should be GLD+1000 microns.

A circle in Red gives an additional 200micron safety margin around the whole thing. This safety margin should in no way touch or intersect the optic disc.

### Toric Lens.

Clicking on the Toric Lens button brings up a new screen showing the image with an overlay.

On this screen the functions are in the right hand panel.

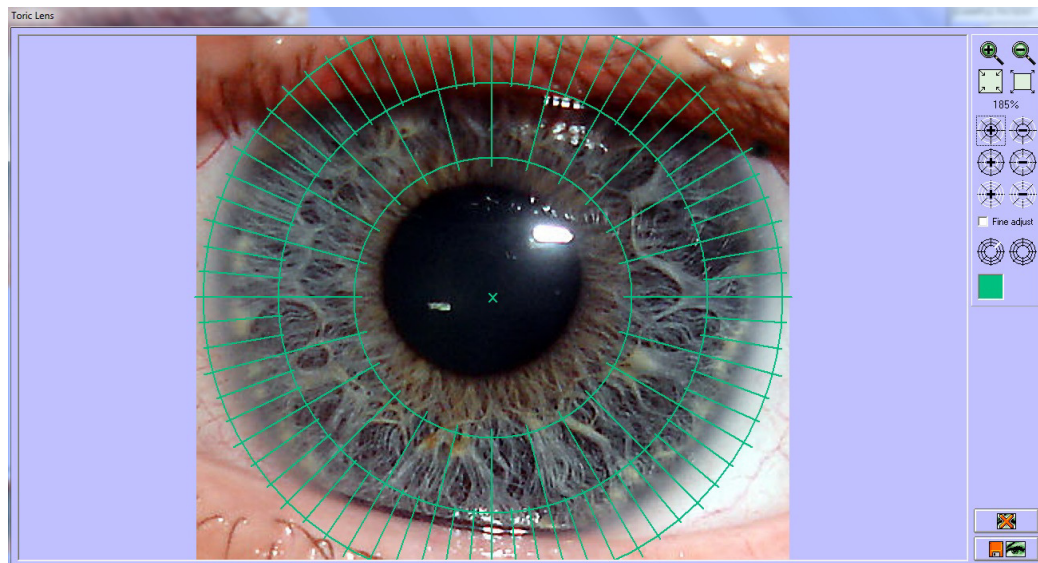
The top four icons refer to the whole image and are methods of magnification or resetting to original.

Working downwards the first pair of icons are for scaling the outer radius, can also be achieved by the use of [Shift] and mousewheel.

The second pair of icons scale the inner radius and can also be achieved by the use of [Ctrl] and mousewheel.

The third pair of icons scale the whole Toric Lens and can also be achieved by the use of Alt and the mousewheel.

Once the final effect is just about achieved things can be finely tuned by clicking on the Fine Adjust and then using the above methods.



The last pair of icons are used to highlight and clear the highlight of a radial.

For clarity the colour of the ring set can be changed by clicking on the coloured square.

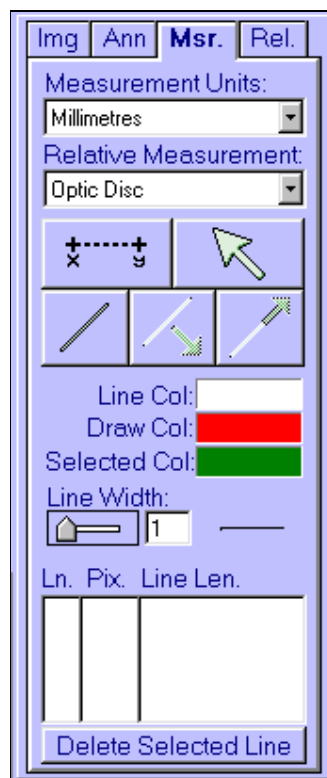
By the use of the mouse wheel the whole image can be zoomed in and out.

Holding down the left mouse with Ctrl, Alt or the Shift key enables the whole image to be moved around.

### Measurements (Kapture Digital only)

Measurements of distances on an image can be taken via the measurements (Msr.) tab. Measurements are a comparison feature, comparing an estimated distance such as a disc diameter with the distance required.

The measurement function in Kapture does not consider certain factors such as patient refractive state and axial length. This tool is meant as a guide and consequently any legal claims based on our measurement are excluded.



Before you can use the functions on this tab, at least one relative measurement must be set up by **'admin'** via the System Setup screen. You need to select which of the previously set up measurements you want to use as a sample and what units of measurement you want to use from the **dropdowns** at the top of the tab. Next, click on the 'Pick Relative Points' button and click on the screen where the two points that make up the chosen measurement lie. This calibrates the image ready for you to measure various distances.

The next action is to click on the 'Draw Line' button which changes the cursor to crosshairs allowing you to draw a line the length of which you wish to be measured. Once the line is complete, it's details will appear in the list at the bottom of the tab. It's length is measured in both pixels and the units that you chose earlier.

Individual lines can be moved around the image by clicking on 'Move Line' then dragging the line or resized by clicking on 'Resize Line' then again clicking and dragging. Each line can be deleted by clicking on 'Delete Selected Line'. Every time you use one of the buttons that actions on a specific line you must ensure that the line selected in the list is the line that you want to perform the action on.



This button allows you to click on the image showing where the pre-set points are. These points are set by '**admin**' and are associated with a usual distance.



The mouse cursor will return to an arrow shape indicating that you can highlight images or **drag and drop** them as usual.



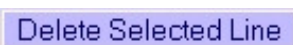
This button allows you to draw a line on to the image.



You can move the highlighted line around the image.



This button allows you to change the size and direction of the selected line.



This deletes the selected line.

To aid line visibility, the colour of the lines can be changed so that they show up on the current image. A different colour is used to indicate when a line is selected and when it's actively being drawn. The line width can also be altered via a **slider bar**.

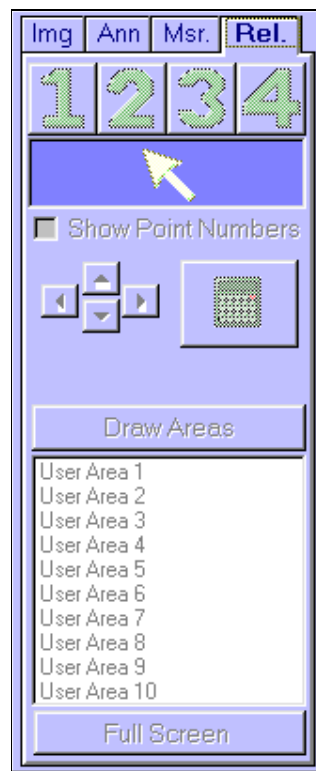
If you want to be able to see the measurements again next time you look at the images, you need to save their positions. The way to do this is, to **right-click** on the image and choose to 'Save The Current Image'. This will display a message at the top of the image asking you to move the caption of the highlighted line to a position in which you want it saved. If the image is high resolution then dragging to the top of the image will be required. Then you need to **double-click** on the image and move the caption of the next highlighted line. Carry on doing this until you have moved the caption of every line. The final **double-click** will create a copy of the original image with all the lines and measurements sealed in place. These lines can no longer be altered but new ones can be added. As well as the measurement lines, a key will be shown on the image which tells you what measurement was given for the relative points used to calculate the measurements. If the image is high resolution then

dragging to the bottom of the image will be required. This was the sample measurement originally entered in System Setup by 'admin'.

### Relative Areas

Relative areas can be plotted on two images at once using the Relative Points tab (Rel.).

To operate this feature the images must be in the top two positions on the four up display.



Before the relative areas can be plotted a number of similar points need to be identified on each image so that the system can work out any differences in scale and positioning. Up to four points can be identified and the more points you use the more accurate it will be. Each point should be plotted on both images and should be the same part of the image as shown in the example images below.





Allows you to place point 1 on the image.

Allows you to place point 2 on the image.

Allows you to place point 3 on the image.

Allows you to place point 4 on the image.



Turns the cursor back into an arrow allowing you to select images in the usual manner.



'Nudges' the selected point left by one pixel.



'Nudges' the selected point up by one pixel.



'Nudges' the selected point down by one pixel.

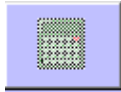


'Nudges' the selected point right by one pixel.

To help yourself remember which points were which you can click on the 'Show Point Numbers' **checkbox** which will display the number of each point on the image next to the corresponding point.



Once you are satisfied with the positioning of your points you need to click on 'Calculate Difference'. This will work out any scale or positioning differences that will be needed to create relative areas.



Calculates the difference in scale between the points on the first image and the points on the second image so that an area can be accurately transferred from one image to the other. This must be done before you can draw areas.

You can now draw an area onto the left-hand image and it will appear on the right-hand image over the same area of the image.



Allows you to draw the area that you want to be translated to the other image. Click on each corner of the shape that you want to draw and the same shape will appear on the other image.



Shows only the currently selected image in full-screen mode. Click the 'Full Screen' button again to return to the two images.

It is likely that the whole image will not all fit into the boxes at once. If you need to move the image around click on the Pointer button. You can now click and drag the image to see all areas. If you return to drawing areas after moving the image, the first area will be selected.

If you make a mistake when drawing an area you can delete the area by **right clicking** on it.

To save the areas on image you need to **right-click** when the cursor is in pointer mode and then select 'Save The Current Image'.

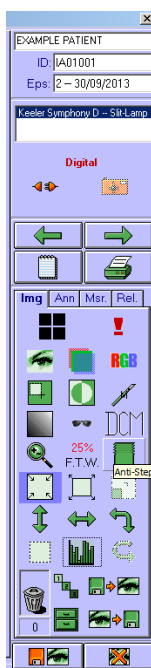
Only ten relative areas are available per Episode so if areas are added to one pair of images and a new pair of images are dragged into the viewing boxes the areas that were drawn onto the previous images will also be visible on the new images. If these areas are not required on the new images then they can be deleted as above but will remain on any images that they have been saved onto.

## Capturing Images

To be able to capture images, your computer must have cameras connected to it. This is set up by ‘**admin**’ on the System Setup screen. If there are no cameras connected to your computer then the Connect button will not be visible on the right-hand side of your screen. If a camera has not had any properties set then it will not appear in the list.



Allows you to connect the selected camera and acquire images or video (Video acquisition may require a license upgrade)



CAPTURE BUTTON



EXPOSURE BUTTONS



After you select your camera and click on the Connect button you will be taken to a live view screen where, depending on your software version will give you the option of capturing still images (default) or a video clip.

Kapture features ‘Freeze Mode’ – pressing the capture button on the joystick will freeze the live view; pressing the button a second time will capture the image; using the dual function aperture control buttons on the Slit Lamp base or the slider on the screen will scroll you through the last few frames of the live image – select your preferred image by pressing the joystick button or clicking the camera icon on the capture screen.

**Keeler BIO footswitch controls**

The optional Keeler BIO footswitch pedals perform the following functions in Kapture



Function	Pedal	Keyboard strokes
Snapshot	Green pedal	Shift F1
Record	Red pedal	Shift F2
Stop record	Black pedal	Shift F3

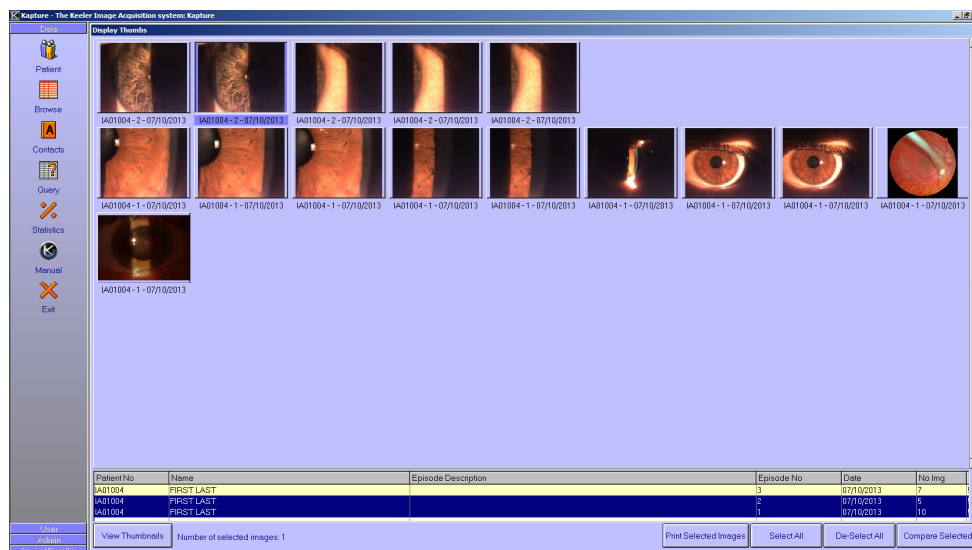
**Left Right flags**

The arrow buttons allow you to flag each image as left or right at the time of capture but this can be changed and un-flagged images can still be allocated as left or right up until final grading.

Images can be captured from the camera or from the screen depending on the Procedure. If a flash is being used then the images must be captured via a camera trigger or a footswitch but non-flash images can be captured by clicking on the live image or the Capture button.

Note:

**Items available on the imaging screen depend on the version of software being used.**

**Compare Thumbnails**

The Compare Thumbnails screen can only be accessed via the Image Capture screen, cabinet, and is used to view **thumbnails** from previous Episodes.

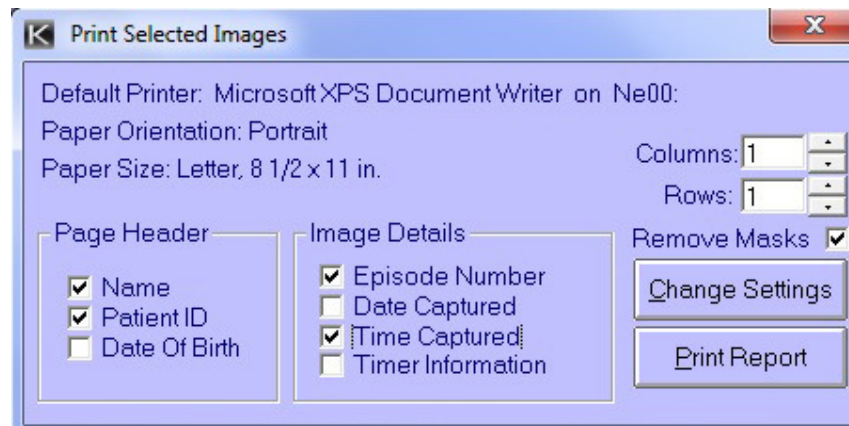
A list of Episodes for the current patient is shown at the bottom of the form and clicking on one or more Episodes then clicking on View Thumbnails will display **thumbnails** for the selected Episodes.

A single click will select or deselect each Episode. The **thumbnails** can be selected by clicking on individual ones or all **thumbnails** can be selected at once by clicking on the Select All button. All **thumbnails** can be unselected by clicking on the De-Select All button.

When the desired **thumbnails** have been chosen click on the Compare Selected button and the Image capture screen will be displayed again with the chosen **thumbnails** in the bar at the bottom. If you decide against comparing **thumbnails** then de-select them all and click on the Compare Selected button whose caption will now be 'Return to Imaging'.

When a number of images are selected you will also be given the option of printing by pressing the Print Selected Images button. A screen will appear allowing you to select various options relating to the printing of the images.

By accessing this form with a right click on the filing cabinet will present the thumbnails at double size.



The current information regarding which printer is being used and paper orientation are displayed at the top. These details can be changed via the printer's own settings screen which is accessed via the Change Settings button. The other information regards what data you want to be printed for each image. The details under Page Header, if selected, appear at the top of the page while the Image Details are shown under each image. Changing the number of rows and columns changes the number of images that can be shown on one page. Any that cannot fit on the page will be printed on a new page. When you have finished selecting details click on the Print Report button.

### Imaging Notes



Notes can be added to images in order to help diagnosis or inform others of what you saw. Each notes can be allocated to the episode as a whole, to both eyes, to a specific image, left eye only or right eye only.

All notes can be viewed by clicking on the corresponding button or specific notes can be viewed by clicking on the button that represents the notes that you want to see. A shortened version of any notes will be displayed in the list along with details of when the note was added and by whom.

To see the entire note, just double-click on the shortened version and then double-click again to return to the list. Notes can be added by clicking on the Add Note button. The information can be typed into the main section and the buttons on the right hand side can be used to set whether it is general or for a specific image, etc. Then either click on Save Note or Cancel Note.

The status of a note is displayed in the list of notes by various icons. Left eye, right eye and both eyes are indicated by arrows while general notes is shown by a sheet of paper and specific image notes by a green rectangle.

During the addition of a note it can be set as 'private' which means that it can only be viewed by the person who wrote it. If the **checkbox** is ticked then the note is private and this will be indicated by a locked red padlock in the list of notes as opposed to an open green padlock for notes that aren't private.

### **Data – Browse**

Enter this function by clicking on the Browse button on the left hand toolbar of Kapture.

The **Browse list** can be used to search for patients in the **database**. You can enter data on which to search into one or more of the boxes.

When you click on the Browse Selected button all patients which fit all requirements will be displayed in the list below.

The **checkboxes** next to the data boxes ask you to select which field you want the data ordered by. If you tick surname then the patient records found will be ordered by surname.

If more than one **checkbox** is ticked then the list will be ordered by the first ticked field. The list can be also ordered, once produced, by clicking on the bar above each column. The data will then be ordered alphabetically and/or numerically by the column above which you clicked. The first time you click on the top of a column the data will be sorted in ascending order and the second time will be in descending order.

A scroll bar on the right-hand side allows you to move through the records by dragging the tab on the scroll bar or by clicking on the arrows at the top and bottom. Double-clicking on a record will close down the **Browse List** and open the Patient Demographics screen on the relevant record.

### **Data – Contacts**

Enter this function by clicking on the Contacts button on the left hand toolbar of Kapture.

The Contacts screen is used for entering and viewing details of any physicians or consultants referenced in other parts of the program. The details are entered either under groups or persons. The persons are linked to groups and are shown in the lower lists with the relevant group's details above.



This button allows you to add a new group or person depending on which area of the screen you are on.



This button allows you to edit the current group or person.



This button allows you to delete the current group or person.



This button allows you to save amendments or additions to a group or person.





This button allows you to cancel an addition or amendment.



This button toggles between group records and the person records for the current group. When you are looking at groups the button will have a picture of persons on it and when you are looking at persons the picture will represent groups.

When looking at the details of a group you can display a specific person's details without having to scroll through every single person by double-clicking on the person in the list at the bottom of the screen.

### Data - Query

Enter this function by clicking on the Query button on the left hand toolbar of Kapture.

**Query Builder**

**Patient Information Query** | Episode Information Query | Image Information Query | Grading

Patient ID:  Insurance No:   
 Title:  Address Containing:   
 First Name:  Patient Notes Containing:   
 Middle Name:  Home Telephone:   
 Surname:  Work Telephone:   
 Date Of Birth: On  DD/MM/YYYY  Occupation:   
 Date of Last Visit: On  DD/MM/YYYY  Physician 1:   
 Sex: ☐ Male ☐ Female ☐ Unknown  Physician 2:   
 Diagnosis:  fact   
 Ethnicity:  user 1   
 Physician ID:  Pers. mem   
 Hospital ID:   
 National ID:   
 Insurance Company:   
 Deceased:

Selected Query Details					
	(	Item	=	Value	)

Return Type:

The Query facility allows for a more flexible and comprehensive search on the database plus offers the facility for generating reports.

Criteria for the various sections of the program can be entered on the four tabs. After entering the criteria it is necessary to click on the <Add To List> or <Insert Into List> buttons to place the information into the list at the bottom of the form. Any criteria that you add to the list will be placed at the bottom of the list but if it is inserted then it will be placed on the line above your cursor.

This list is the criteria on which the query is conducted. You can choose what kind of results you want to see by changing the entry in the Return Type **dropdown**. This defaults to Patient, which shows any patient records that correspond to the entered criteria.

If the **dropdown** says Episode then relevant episode records are shown, if it says Images then corresponding image records are displayed and if it says Image Notes then the corresponding image note records are returned.

The criteria listed at the bottom of the screen can be manipulated to produce the query that you want. Brackets can be added by double clicking in the second (for the open bracket “(“ ) or sixth column (for the close bracket “)”). Brackets must always be added in pairs of one open and one close bracket, otherwise the query cannot be performed.

You can also change the way the query uses the criteria. The first column shows how the criteria are being used. The first line will always say “Where” in the first column but all other lines can be altered.

When criteria is first added each line (apart from the first) will say “And” but a double click in this column on the desired line will change it to “Or”. A second double click will change it back to “And”. This is useful as there is quite a difference between searching for ‘A And B’ and searching for ‘A Or B’. If, for example, you performed a query that was searching for patients with a surname starting with ‘A And B’ you would view all patients with a surname that started with ‘A And B’. No records would be found to match these criteria as no name can start with two letters at once. If, on the other hand, you performed a query searching for patients with a surname starting with ‘A Or B’, the returned patients would either have a surname that started with ‘A’ or a surname that started with ‘B’. This would be a lot more useful as it is possible that quite a few patients would fit these criteria.

Brackets can also affect the way the criteria are used as the rules for brackets in queries are the same as they are for maths. For example, a search was performed looking for patients with surnames beginning with ‘A And B Or C’ would look for patients with surnames beginning with ‘A And B’ or patients with surnames beginning with ‘C’. If you performed a similar search using brackets the results would be very different. A search for patients with a surname beginning with ‘A And (B Or C)’ would be looking for patients with a surname beginning with ‘A And B’ or ‘A And C’.

If you want to delete any of the criteria from the list then you can either delete all criteria by right clicking in the list and selecting ‘Delete All Items’ or you can

highlight individual criteria, right-click on one of the selected lines then select 'Delete Selected Items'.

Clicking on 'Clear Entries' will blank out any details entered onto the current tab allowing the entry of new criteria to begin.

All Patients	Allows you to search for all patients without having to enter any criteria into the Query Builder.
Create Report	Shows the report section of the Query Builder screen allowing new reports to be created or previous ones to be printed or amended with the current data.
Run Query	Displays a <b>Browse List</b> with patient details relevant to the query.

The report section of the Query Builder contains three lists which allow you access to previously created reports in order to view multiple patient details on screen or printed out. The list on the left-hand side shows any default system reports which are already set up as basic reports for you to use. If you need other or more in-depth information on a report then you can add your own. These reports can be saved to whatever directory you wish so the middle box allows you to find that directory and any reports will be shown in the list on the right.

Print Report	Prints the selected report with relevant records.
Preview Report	A preview of the selected report will be built. As it can take some time with large <b>databases</b> , a progress bar will show how far you are through the process. Once the report has been built, the report is displayed within the Report Design screen.
Edit Report	Allows you to edit the selected report. The Report Designer is displayed with the details for the selected report. More information on editing reports can be found in Appendix 2.

To print, preview or edit a report, one of the reports in the list on the left must be highlighted before you click on the relevant button.

Before previewing or printing a report you can select what fields you want the data to be ordered by via the three **dropdowns** at the bottom of the screen. Data can be ordered by all three at once but the order of priority runs from left to right.

Add Report	You can add a new report with all the relevant information. A <b>Windows browse screen</b> will be displayed allowing you to give
------------	---

the report that you wish to create a name. This must be done before you can design the report. The Report Designer will be now be displayed on the report can be created. For more information on the Report Designer see Appendix 2.

When viewing the available reports you can delete any of them by clicking on the one that you want to delete then pressing the right mouse button. This will bring up a menu allowing you to select the option 'Delete Selected Report'. The selected report will then be permanently deleted.

**Before printing a report for the first time you must edit it and change the printer to the one that is set up on your machine otherwise it will try to print to a default printer that may not exist.**

In the Patient and Episode Tabs is the facility of a drop down box for Diagnosis.

This box can be populated under Admin conditions only.

The Episode screen is shown here.

The screenshot displays the 'Query Builder' application window with the 'Episode Information Query' tab selected. The interface is divided into several sections:

- Patient Information Query:** Includes fields for Episode No., Time, Date (On DD/MM/YYYY), Attendance (Attended, Unable To Attend, Did Not Attend), Diagnosis (dropdown), Description Containing, Notes Containing, User 6 containing, user notes containing, Insurance Company, and Insurance Number. A 'Reset' button is present.
- Image Information Query:** Divided into 'Right' and 'Left' columns. Each column has a 'Best Corrected VA' section with radio buttons for Spectacles, Pinhole, and Other, and a 'VA' dropdown. Below this are checkboxes for 'Good View Was Obtained', 'Pupil Dilating Drugs Given', and 'Dilation' (Good, Moderate, Poor). There are also 'Extra shots taken' checkboxes and 'Fields taken containing' text boxes. 'Reset' buttons are provided for each column.
- Buttons:** 'Add To List', 'Insert Into List', and 'Clear Entries' are located at the bottom right of the main form area.
- Selected Query Details:** A table at the bottom left with columns for Item, Value, and a closing parenthesis. The table is currently empty.
- Return Type:** A dropdown menu set to 'Patient', with buttons for 'All Patients', 'Run Query', and 'Select Report' below it.

### Data Export

It is possible to export certain information to a file that can then be opened and manipulated.

At the main patient input screen click on “Query” in the left hand panel and the Query Builder screen should appear.

Now click on “All Patients” at the bottom right and then in the same area click on “Create Report”, the bottom third of the screen now changes to reports sections. The only thing now required is to click on the “Export CSV” button at the bottom right of the screen. When the export is complete a box pops up to inform the fact and will also give a path and filename.

This file can now be opened in something like Microsoft Excel and will present the information with the following headings: Patient ID, Name, Address and Date of Birth.

### Data - Statistics

Patient Statistics	
Total Number of Patients:	2
Number of Patients With Images:	0
(Some may be flagged as DELETED)	

Episode Statistics	
Total Number of Episodes:	3
UNREAD (With Images):	3
REFERRED GRADE:	0
FINAL GRADED:	0

Image Statistics	
Total Number of Images:	0

Close      Disk Info >>

This screen displays details relating to the **database** and free disk space. The boxes that you see first show how many patients' records are in the **database** as well as how many episodes have been referred and final graded. If you click on the Disk Info button the screen increases in size to display information on storage capacity. From this new section of the screen you can click on the Wasted Space button which calculates the amount of disk space used unnecessarily by images marked as deleted or not linked to an Episode etc.

**Data or User or Admin - Manual**

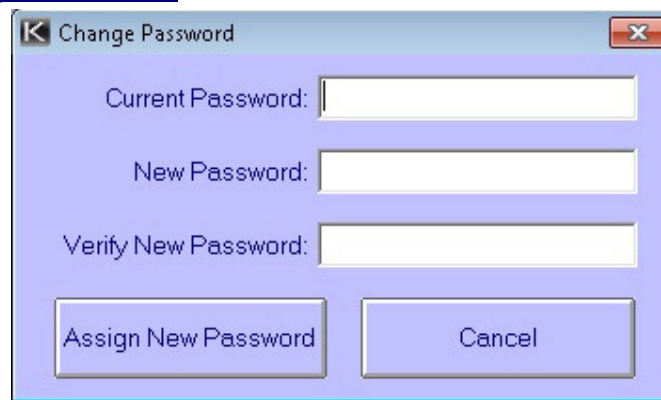
This button displays the Kapture manual in Adobe Acrobat Reader which should be installed on the computer.

**Data or User or Admin or Central/Satellite - Exit**

Exits out of the program.

**User - Log On/Log Off**

Clicking on this will display a message asking if you are sure that you want to log off. Answering in the affirmative will log you off the system and the caption on the bar at the top of the program will indicate this, the log-on screen will also re-appear. This function allows you to change the logged in user without shutting down the system or leave the system logged off if you need to be away from the computer for any time but again do not want to shut down the program.

**User - Change Password**A screenshot of a 'Change Password' dialog box. The dialog has a title bar with a 'K' icon and a close button. It contains three text input fields labeled 'Current Password:', 'New Password:', and 'Verify New Password:'. At the bottom, there are two buttons: 'Assign New Password' and 'Cancel'.

Users can only change their own password as it must be kept secret. A screen is displayed, after clicking on this button, into which you need to enter your current password (the one that you wish to change) and then two instances of your new password for verification purposes. If the first password was correct and the two new passwords were the same then your password will be changed. If you make a mistake then a message will tell you so and your password will not be changed.

### User – About Capture



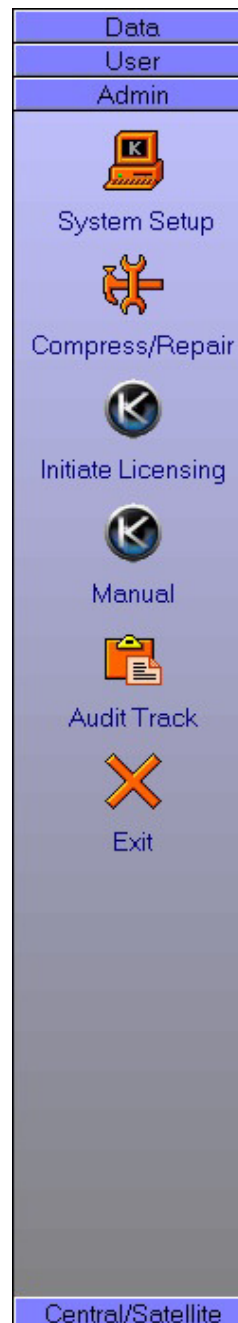
Clicking on this icon displays a screen giving you information about the system. It shows the product, version and build number of the software you are running and any additional features.

Contact details for your distributor are shown so that, in the case of a problem, you know who to contact. Also shown is information about your licence, which shows you if you are on a trial period or have a full version. If you are running a trial period then the number of days left of the trial is shown.

### Admin Login

By logging in as Admin you are presented with the following bar to the left of the screen. Each of the items will be covered under its own heading or as an Appendix.







## System Setup

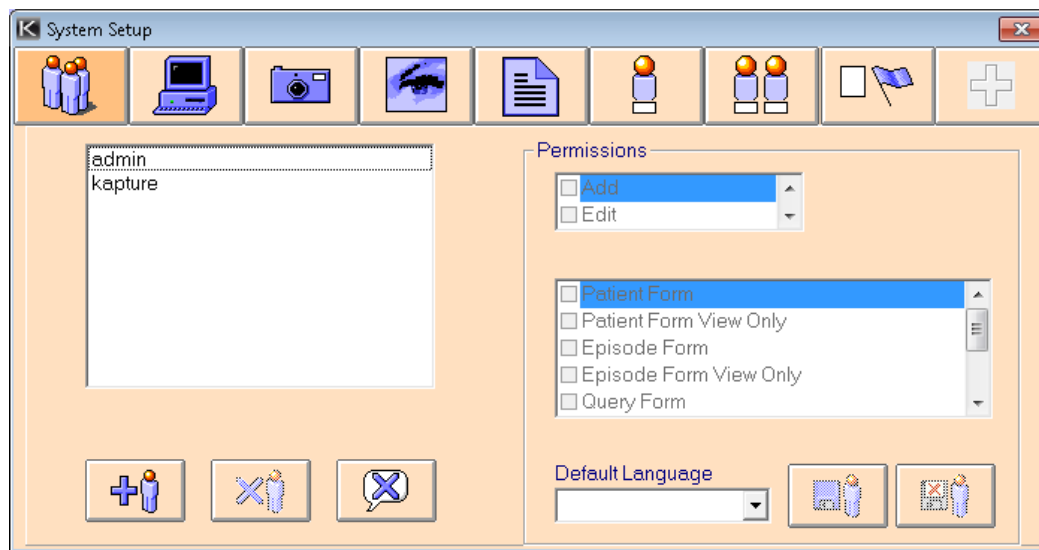
Only users logged-in as '**admin**' can access this section of the program and they will need to enter a second password. If this is correct then the **Administrative Functions** screen is displayed. This screen allows you to set up identities for users, workstations and cameras as well as alter settings for various parts of the program.

Across the top of the screen there are eight buttons that allow you access to different parts of the screen:

### User Setup



Set up new users and amend permissions for existing users



The buttons along the bottom of the screen are used to add and amend users and details for existing users similar to on other screens.



Add a new user.



Delete selected user.



Clear selected user's password.



Save permissions for an individual user. Permissions are allocated to the selected user.



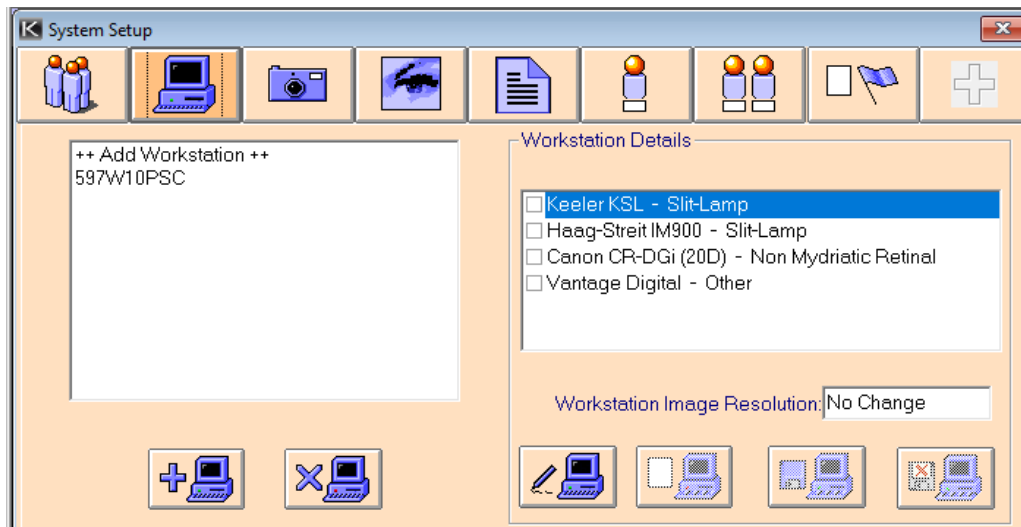
Cancel change of permissions for an individual. Restores previous permissions.

The default language is set on this form: when the translation files are available the language box becomes “live”, but if no translation files available the box is “dead”.

The permissions for users can be altered by selecting the relevant items in the list so that a tick appears in the appropriate box. The correct user should be highlighted before you attempt to change their permissions. Users should not be allocated ‘View Only’ permission as well as full access permission. After amending a user's permissions you need to click on the Save button if you want to allocate the changes or the Cancel button if you decide to revert to the previous permissions. The permissions for ‘**admin**’ cannot be changed.

Workstation Setup

Set up new workstations and amend details for existing workstations.



New workstations can be added, existing ones deleted and cameras can be assigned to each workstation. The cameras that can be added are set up on the Camera section of this screen.

**NOTE:** The workstation will be created and added automatically, When changing or adding a workstation the name must be the computer name and if uncertain what this is then click on “Add New Workstation”. Then click on OK on new box without entering anything, this should put the computer name as the new workstation.



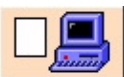
Add a new workstation.



Delete selected workstation.



Edit selected workstation's details.



Clear workstation details. The details for the selected workstation are deleted.



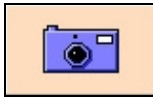
Save details for selected workstation.



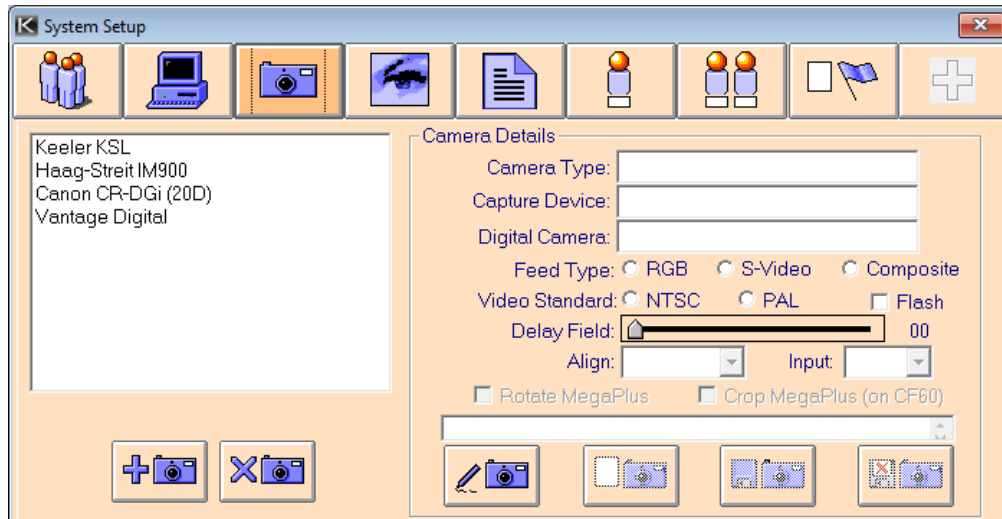
Cancel changes to details for selected workstation and return to previous details.

Cameras can be allocated to the selected workstation by selecting the relevant cameras in the list after having clicked on the Edit button. Any or all of the cameras can be allocated to a workstation and the ones that have been selected will be shown on the Image Capture screen to be used for capture purposes. If you decide not to keep the amendments, then click on the Cancel button, otherwise click on the Save button.

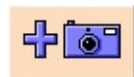
### Camera Setup



Set up new cameras and amend details for existing cameras.



New cameras can be added, existing ones deleted and details amended. The camera type can be set as well as the feed type and a description.



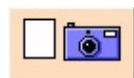
Add a new camera.



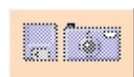
Delete selected camera.



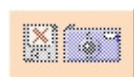
Edit details for selected camera.



Clear details for selected camera.



Save details for selected camera.



Cancel changes to details and revert to previous details.

The details for the cameras are entered in the same way as information on other screens using **radio buttons** and **dropdowns**. You need to highlight the correct camera in the left-hand list before clicking on the Edit button and entering the relevant details. This information is used on the Image Capture screen when capturing images.

The Camera Types are pre-defined and list the various input types that you can use to capture images, while the Capture Device is the type of capture method used; this is usually going to be a USB (Digital) connection. Kapture supports TWAIN, Analogue and Digital (USB) acquisition.

The Feed Type is the type of video signal from the camera and the Video Standard is the resolution used.

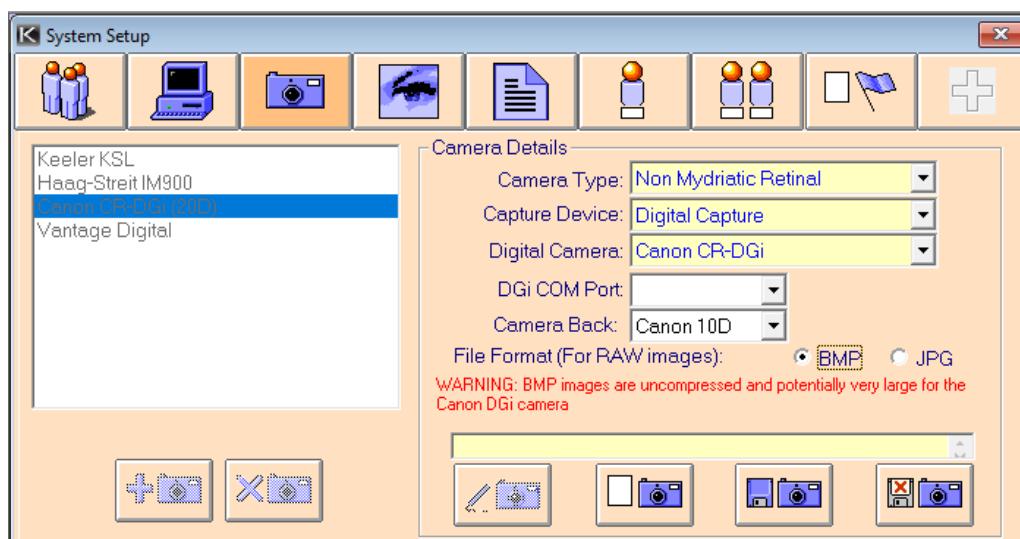
Delay Field is the delay for the flash as different devices might require a different delay. The delay is not in a specific unit e.g. seconds but is incremental from 0 – 10.

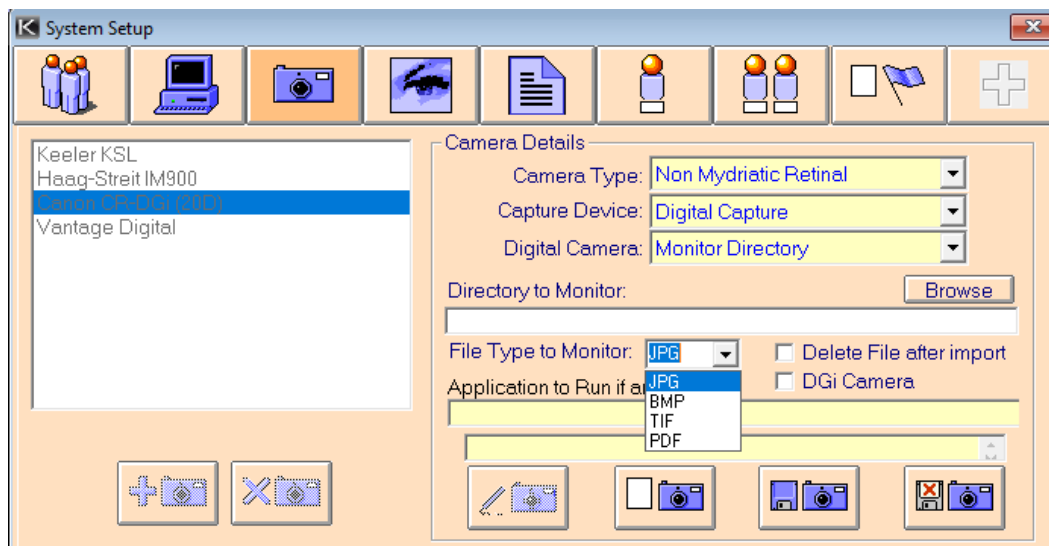
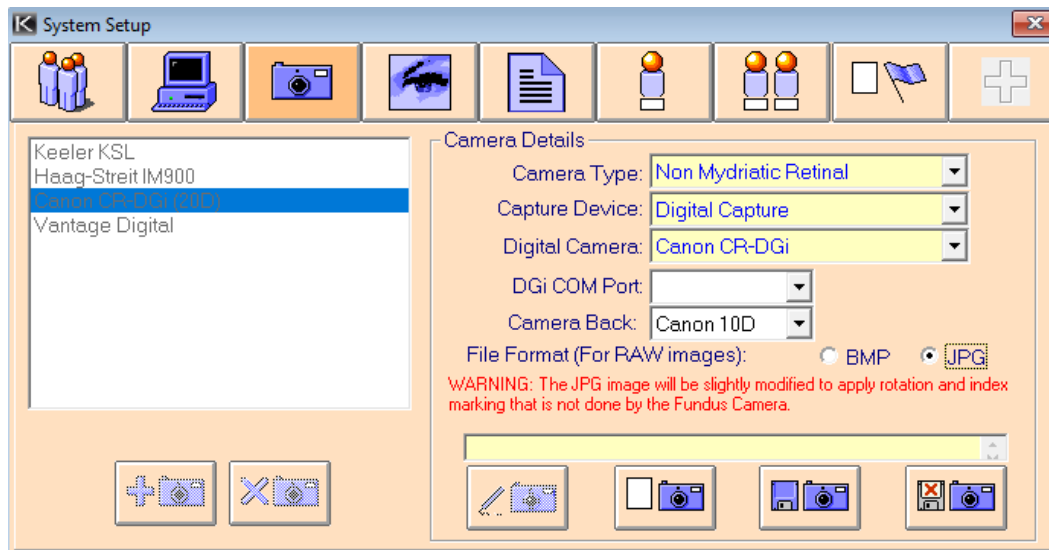
Align is used to decide which frame is captured first while Input depends on the Feed Type and is used to choose the input channel.

Clicking on the Save button will then save the details or clicking on the Cancel button will return the details to their previous settings.

For digital cameras click “Capture Device” dropdown box and select Digital Capture. This action allows a dropdown box to appear by the “Digital Camera” and shows all cameras available. Select the one that is required.

The DGi fundus camera gives a slightly different look to the window. The COM port has to be selected from the drop down list.





Imaging Options

Amend Image Capture options including image highlight colour and compression values

**System Setup**

Allow delete of UNSAVED Images  
Use DB Compression  
Undo Possible  
☒ Time/Date Stamp

Image Capture  
Luminance [Slider] [010]  
Chrominance [Slider] [015]

Sub-Sampling  
☐ No Pixel Compression  
☐ Vertical Compression  
☐ Horizontal Compression  
☒ Horizontal and Vertical Compression

Highlight Colour [Blue]

Measurements  
Default:  
☐ centimetres  
☒ millimetres  
☐ microns

Relative Measurements:  
Optic Disc [1]

Delete Save

**System Setup**

Allow delete of UNSAVED Images  
Use DB Compression  
Undo Possible  
☒ Time/Date Stamp

Image Capture  
Luminance [Slider] [010]  
Chrominance [Slider] [015]

Sub-Sampling  
☐ No Pixel Compression  
☐ Vertical Compression  
☐ Horizontal Compression  
☒ Horizontal and Vertical Compression

Highlight Colour [Red]

Measurements  
Default:  
☐ centimetres  
☒ millimetres  
☐ microns

Relative Measurements:  
Optic Disc [1]

Delete Save

**System Setup**

Allow delete of UNSAVED Images  
Use DB Compression  
Undo Possible  
☒ Time/Date Stamp

Image Capture  
Luminance [Slider] [010]  
Chrominance [Slider] [015]

Sub-Sampling  
☐ No Pixel Compression  
☐ Vertical Compression  
☐ Horizontal Compression  
☒ Horizontal and Vertical Compression

Highlight Colour [Red]

Measurements  
Default:  
☐ centimetres  
☒ millimetres  
☐ microns

Relative Measurements:  
Optic Disc [1]

Delete Save



Imaging options can be amended changing the image type, highlight colour, etc. To change the highlight colour, click on the coloured panel and a colour chart will be displayed. After clicking on the desired colour the chart will then disappear and the chosen colour will fill in the coloured panel.

As with other screens, some controls can only be used if an appropriate other control has been selected. For example, the compression details can only be changed if JPG or ePIC has been selected as the image type to the right of the compression details. In the compression panel are two **slider bars** for altering the **luminance** and **chrominance** that both affect how the compressed image looks and how it affects the file size of the final image.

The Measurement section of this screen is where the default measurements are set up that are referred to on the Measurements section of the Image Capture screen. The selected Default Measurement is the one that is automatically shown in the **dropdown** for measurement units. To add a new Relative Measurement just type the name and the measurement into the yellow boxes then click on the Save button. If you want to delete one of the measurements in the list then highlight it and click on the Delete button.



View sample image for compression values given. Allows you to compare an original image and one using the compression values set above.



Cancel changes made to settings without saving and return to previous settings.



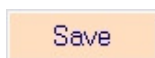
Save changes made to settings.



Clear settings and return to default.



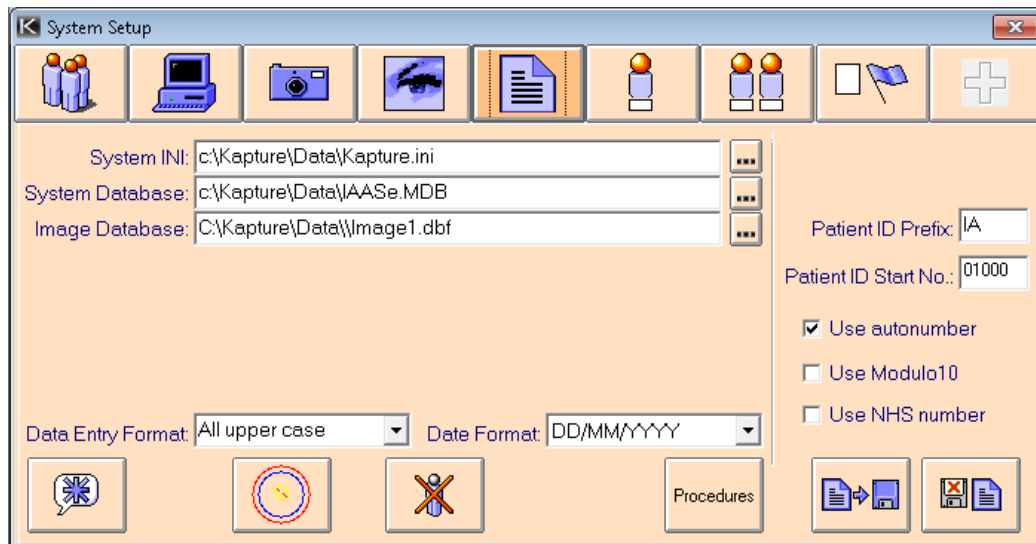
Deletes the selected relative measurement.




Saves the relative measurement in the yellow boxes and adds it to the list.

Program Settings

Change general settings including INI files



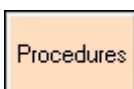
This section of the System Setup screen can be used to alter general program settings including INI files and data entry formats. Each of the top text boxes has a **Browse Button** like this  on the right hand side that is used to browse for the correct file.



Set the '**admin**' only password that is used to enter the System Setup screen. This is not the same as the password that is used to log on to the system.



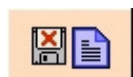
Display the Deleted Patients screen so that patient records can be deleted from the system completely or recovered if necessary



Displays the procedures screen allowing alteration of default settings for capturing. More information on Procedures will be given later on.



Save changes to settings.



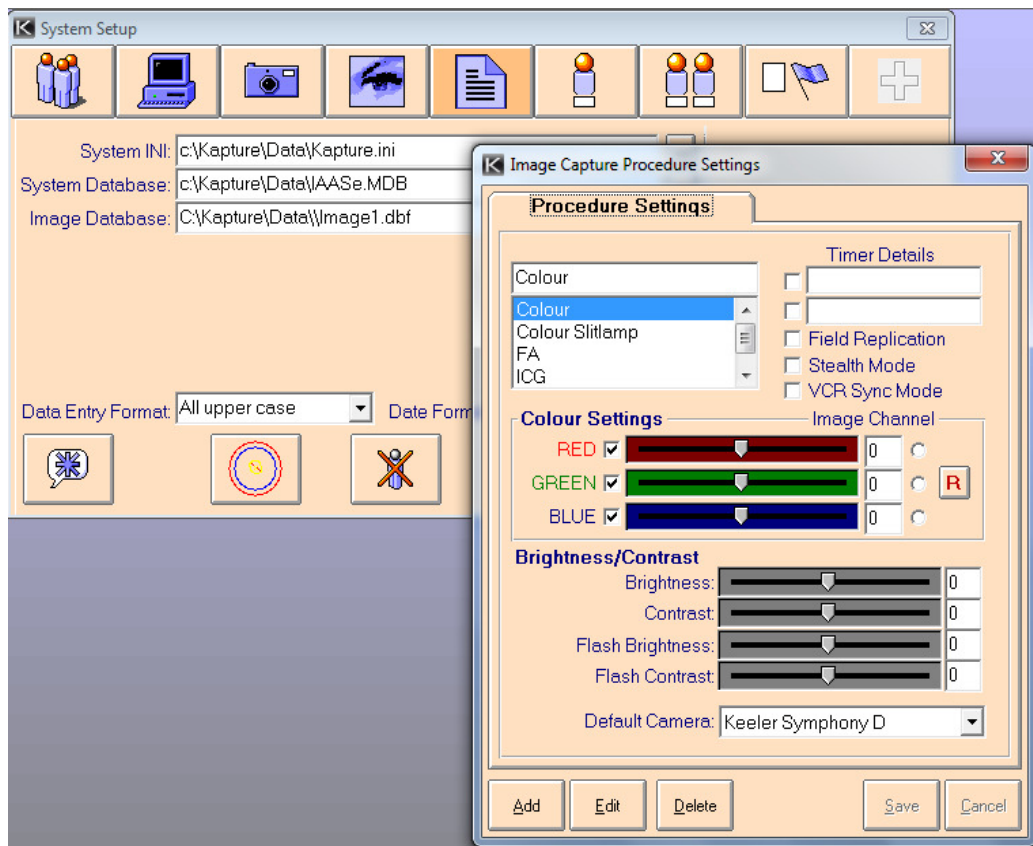
Cancel changes to settings and return to previous settings

The default data input formats are altered via **dropdowns** and affect the look of information entered on the Patient Demographics or the Episode screen.

The automatic Patient ID numbering for the Patient Demographics screen is set up here. To be used it requires that a prefix and a starting number are entered before clicking on the option to use the automatic numbering.

The Modulo 10 feature is set up by clicking in the marked button “Use Modulo 10”.

To set up Stealth Mode enter Kapture as Admin and enter System Setup, Show Settings (fifth icon from left), click on Procedures, click on Edit and check the box marked Stealth Mode making sure all other procedures are correct. Deactivate by removing the tick from the box marked Stealth Mode in Procedures.




### **NOTE:**



**It is dangerous to alter INI or database paths if not aware of the consequences. Changing these settings incorrectly could render your data inaccessible.**




### Deleted Records



Use to access deleted records via the program setting form.

 Deleted Records

Deleted Patients				
Patient ID	Name	Physician ID	Date of Birth	
A01000	JHONSON, SMITH		7/2/1975	
<div>    </div>				

This screen includes two buttons, Patient and Episode, which display any deleted records for those sections of the program. Records deleted from these sections are not fully deleted but just marked as deleted so that they are no longer visible to the user. This is to ensure that if a record is mistakenly deleted it is possible to recover it. **‘Admin’** is able to recover individual records and restore them fully or to purge the **database** of individual records flagged as deleted.



Purge **database** of selected records flagged as deleted. The record will be permanently deleted.



Restore selected records to the **database**.

The buttons above will each show which records are being restored or purged (Patient or Episode) in the normal manner with a person for Patient records and a filing cabinet for Episode records.

Procedures

## Image Capture Procedure Settings

The procedures screen is used to set optimum or default values for any capture method or camera that you may wish to use.

To add a new Procedure click on the Add button and type the name of the new Procedure into the yellow box at the top left of the screen. If one or both of the timers can be used in this Procedure then click on one or both of the **checkboxes** and type a name for the selected timer(s) into the yellow box to the side.

The Field Replication **checkbox** is used to set whether field replication is used. If on, field replication can prevent the blurring that can occur when a patient is moving although the image quality is reduced.

**Please note** that this setting should be off unless special circumstances require it, as it can affect the quality of the image.

The Stealth Mode **checkbox** is used when taking pictures where the light from the monitor adds to the ambient light and is too high eg. ICG capture.

The **checkbox** for 'VCR Capture' should be ticked every time you connect to a Video Cassette Recorder as it evens out the curvature of the image that you would otherwise get.

The **checkboxes** to the left of the coloured **slider bars** are used to specify which colour channels are captured from an RGB camera. For example, if the **checkboxes** next to the red and the blue **slider bars** were un-ticked then only the green channel would be captured. For each colour channel that is ticked you can change the intensity of the colour by moving the **slider bars** or, if you know the exact intensity that you want, you can type into the boxes on the right hand side. To the far right of the colour **slider bars** are three radio buttons which, if selected, indicate which colour plane, if any, to capture. If a colour plane has been captured, the image will be displayed as grey-scale representing the intensity of the selected colour within the image. This provides a better level of contrast than traditional grey-scale. If you wish to capture a colour image then click on the R button which will deselect all of the **radio buttons**.

The four **slider bars** in the Brightness/Contrast section of the screen alter the way images look on screen and the way they look when captured. If you change the Brightness and Contrast **slider bars** the image seen on the Live Capture screen will be affected and, for non-flash capture, the captured image will also be affected. When using a flash the brightness and contrast when capturing will need to be different from what you see on the screen and this is what the Flash Brightness and Flash Contrast **slider bars** are used for.

Each Procedure needs to have a Default Camera which is the camera that will be automatically ticked on the Image Capture screen.

When all the required details have been entered click on the Save button to save the details or the Cancel button to cancel the addition of a new Procedure.

You can change any of the details for a Procedure by clicking on the Edit button and making your amendments as above. The Save button will save the new details but the cancel button will return all details to their previous values.

User Defined Options

Set up user defined options

When in edit mode you can alter the 'Pupil-Dilating Drugs' or the 'Visual Acuities' by typing into the table. To edit an entry, just click in the entry and make the change that you require. To add an entry you need to type into the empty box at the bottom of the table. Any changes that you make are entered straight into the **database** so if you click on the Cancel button instead of save the changes to 'Pupil-Dilating Drugs' and 'Visual Acuities' will still be saved.

Some screens, such as the Patient and Episode screens, have user-defined sections that require setting up via the user-defined options. Captions for each option should be entered into the relevant boxes with each screen having its own section. User defined captions are limited to ten characters in length.



Edit user defined options.



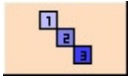
Save changes to user defined options.



Cancel changes to user defined options without saving and revert to previous settings.



Grading Controlled Vocabulary for setting outcomes.



Grading Setup.

Clear Grade

This displays a screen that allows you to search for a specific patient and episode then clear any grading allocated to images for that episode.

A screenshot of a software window titled "Clear Grading for Selected Patients/Episodes". The window has a search section at the top with three input fields: "Search For Patient ID:" (empty), "Date of Birth:" (set to "(NO DATE)" with a dropdown arrow), and "Surname (Starts With):" (set to "J"). To the right of these fields is a "Search" button. Below the search section are two large empty rectangular boxes labeled "Matching Patients" and "Episodes". At the bottom right of the window is a "Clear Grading" button.

Clear Deceased

This displays the screen which enables the deceased flag to be cancelled.



Clear Deceased flag for Selected Patients/Episodes

Search For Patient ID:

Date of Birth:

Surname (Starts With):

Matching Patients

IA01000 - JHONSON, Mr SMITH

## Controlled Vocabulary



Set up controlled vocabulary used in multiple **dropdowns** across the system.

To ensure that common words are used for certain information across the program a controlled vocabulary list is created. This populates the **dropdowns** that are used on the Patient, Episode and Contacts screens.

The type of word is chosen from the **dropdown** at the top of the section and any relevant words are shown in the list below. New words for each type can be added by clicking on the <Add> button



Add Words



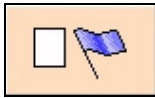
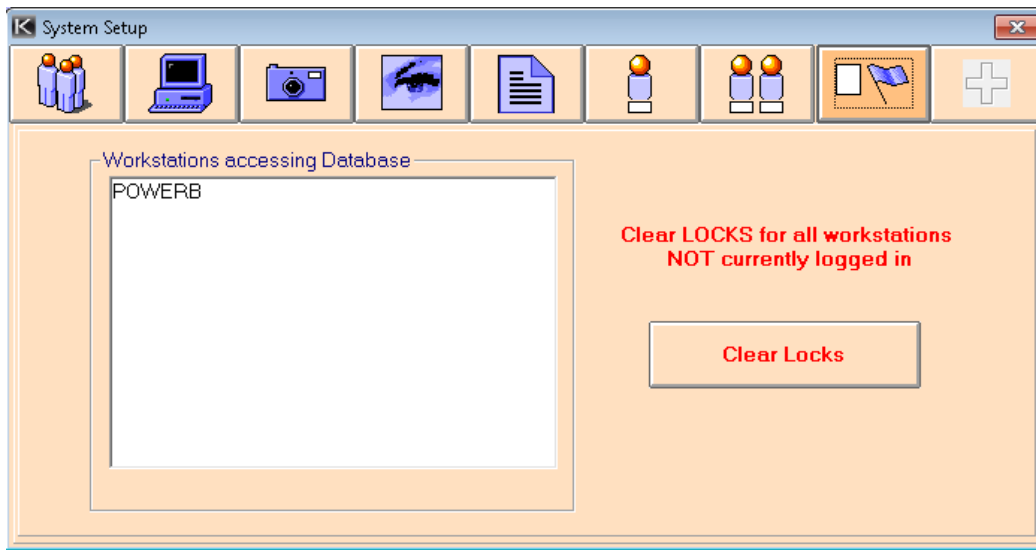
Edit Words



Delete Words

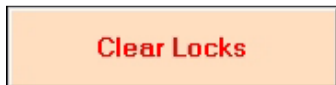
and typing into the lower box when the correct type is shown in the box at the top.

## Clear Flags



Clear flags for logged in users and 'Under Edit' records

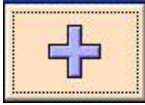
This screen is used to clear any locks that might have been placed on records in Add or Edit if they were logged in while the system was shut down improperly. The list on the left shows any workstations that are logged as being currently logged in.



Locks for all workstations not currently logged on will be cleared.

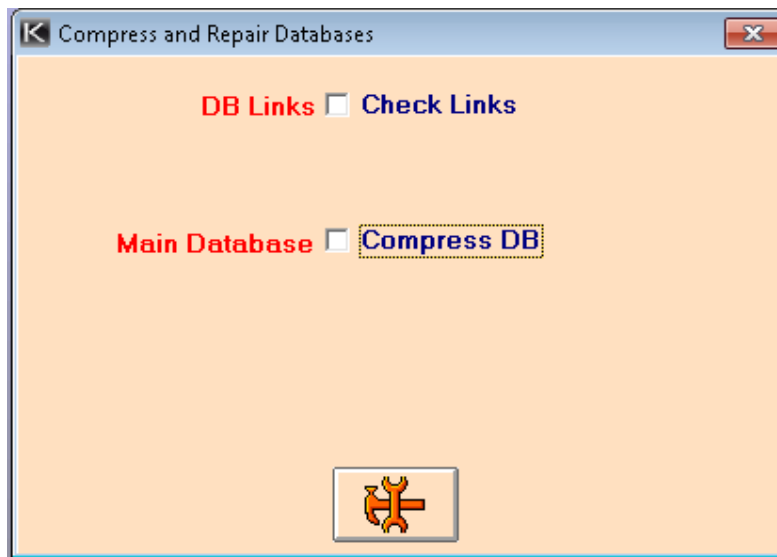
### Additional Administration Settings

Additional administration settings for DICOM



Please refer to Keeler for information on DICOM licences and settings

### Compress and Repair



All other users must be logged out before this function can be used.

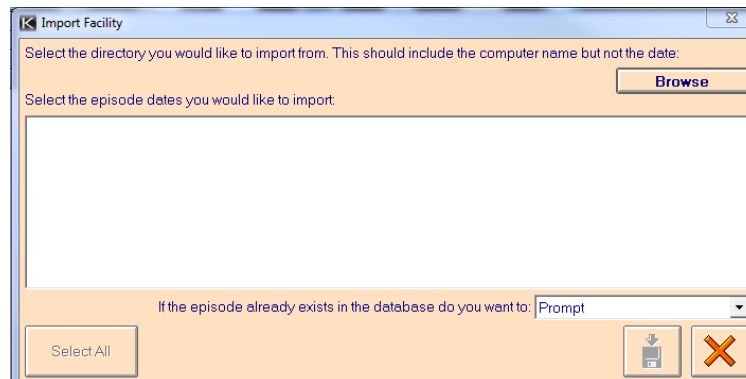


Start Database compression and repair. This function may take some time so please be patient and wait for it to finish.

## Import

### NOTE:

It is recommended that a READ/WRITE device is used for import/export (MO, JAZ, ZIP) and not CD. If CD media is used then it must be reopened in a CD-RW drive for READ/WRITE access.



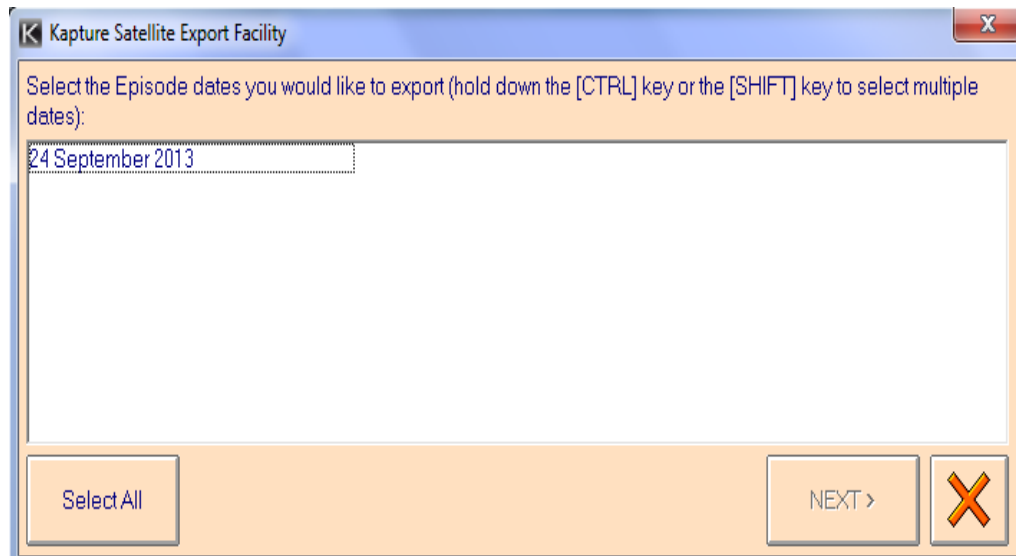
Information and images may need to be imported in from a satellite system or other **database** and this screen is used to perform that function. The directory from which you wish to import data must be entered into the box before you can continue. The best way of doing this is to click on the **Browse button** and use the standard **Windows browse screen**. You do not need to find the actual **database**, just the path to it. When this has been selected and is showing in the box then click on the Import button. The import will be performed and details will be saved to a log file, which can be viewed after the import has been completed.

## Export

### NOTE:

It is recommended that a READ/WRITE device is used for import/export (MO, JAZ, ZIP) and not CD. If CD media is used then it must be reopened in a CD-RW drive for READ/WRITE access.

## Central System

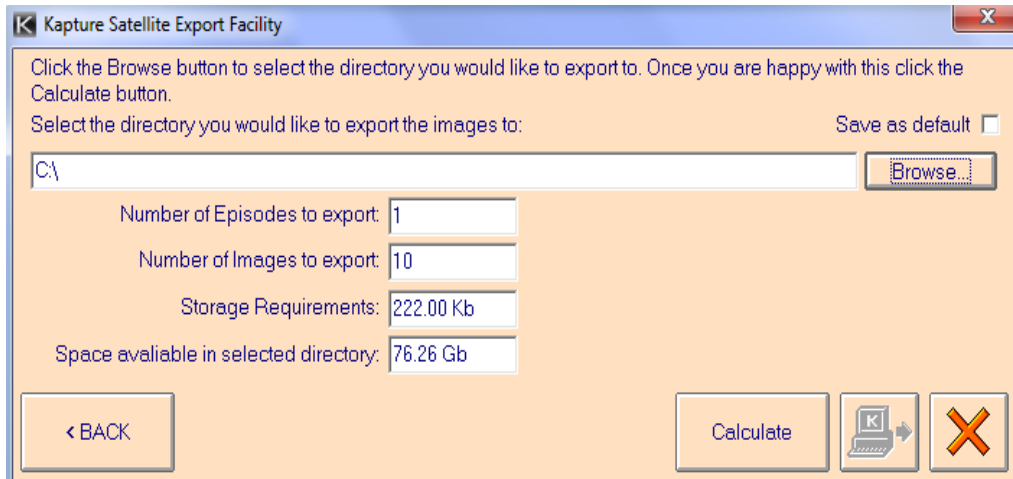


Data may need to be exported to a Satellite system and this screen is where this function is performed. The first thing that you need to do is select a **database** to which you want to export the data. The best way of doing this is to click on the Browse button and use the standard **Windows browse screen**. Then you need to select how much data you want to export, either all patient/episode records or selected ones. If you choose to export selected records you need to use the **date dropdown** to individually select any dates for which you wish to export records. The 'Export ALL Episodes' **checkbox** allows you to decide how many Episodes per patient you want to export. If the **checkbox** is ticked then all Episodes for a patient with Episodes that fit the listed dates will be exported whereas if the **checkbox** is not ticked only Episodes that fit the dates will be exported. Once all the

necessary dates have been chosen click on the Export button and the two boxes above will display the number of Patients and Episodes that have been exported.



## Satellite System



The screenshot shows a Windows-style dialog box titled "Kapture Satellite Export Facility". It contains the following elements:

- Instructions: "Click the Browse button to select the directory you would like to export to. Once you are happy with this click the Calculate button." and "Select the directory you would like to export the images to:"
- A text input field containing "C:\", followed by a "Browse..." button.
- A "Save as default" checkbox.
- Four stacked input fields showing export details:
  - Number of Episodes to export: 1
  - Number of Images to export: 10
  - Storage Requirements: 222.00 Kb
  - Space available in selected directory: 76.26 Gb
- Navigation buttons at the bottom: "< BACK", "Calculate", a button with a Kapture logo and an arrow, and a red "X" button.

The Satellite system can export to MO drives, Direct CD for CD writing or to network paths. The dates that you are able to export are shown in the list at the top and you need to select each one that you want to export. Then use the browse button to find the correct directory to which you want to export. If this directory is likely to be the same every time then tick the 'Save As Default?' checkbox and the directory path will be saved. The boxes below this show details of how many records are being exported and how much room this will take up so when you are ready just click on the Export button .



## Tutorial

### How to Add a New Patient

Go into the Patient Demographics form by clicking on the Patient icon on the Main screen. If you have not entered any previous patients at all then all the boxes will be blank. To add a Patient click on the Add button and the boxes will go yellow allowing you to fill in the desired data. If the automatic Patient ID option has been selected by **'admin'** then the Patient ID box will have an ID number in it but this can be altered if you wish. If NHS ID is switched on and ID entered does not conform to NHS convention a warning will be displayed when save is selected. The Patient Name boxes will say whether they are for First, Middle or Last name but when you click in the box this will disappear allowing you to type in the names. To save all the information click on the Add button and the boxes will become yellow again but the entered information will still be shown. If you decide that you don't want to keep the information then, instead of clicking on the Save button, click on the Cancel button. This will again make the boxes turn white but this time the data will have disappeared.

### How to Add a New Episode

To add a new Episode there must already be a Patient record for you to add the Episode to. Go to the correct Patient on the Patient Demographics screen and then click on the Episode button, displaying the Episode screen. Click on Add and most of the boxes on the screen will turn yellow. The three boxes at the top will remain white because you cannot change details in these boxes. The Patient ID and the Name would have been entered on the Patient Demographics screen and cannot be changed as the Episode record corresponds with a specific Patient to which these details refer. The Episode No will increment automatically each time you add an Episode. You can now enter any other details that are required. If you want to save the Episode then click on the Save button and all the yellow boxes will revert to white. If you decide that you no longer want to add a new Episode then click on Cancel and the boxes will again revert to white but this time all the entered information will have disappeared.

### How to Capture Images for a New Patient

After adding a new Patient and a new Episode in the normal way, click on the Images button on the Episode screen. This will make the Image Capture screen appear. If cameras have been set up for the workstation on which you are working then they will be shown underneath the patient details in the top right hand corner. If there are no cameras then these will need to be set up by **'admin'** before you can capture any images. Click on the Connect button and check that the correct capture type and camera are selected. Most settings will have been set by **'admin'** but you can change the contrast and brightness which will affect how the images look. Images can



also be captured marked as either left or right by clicking on one of the arrow buttons. The button will stay selected until you click on it once more or you close the Image Capture screen. This means that if you disconnect from the camera then reconnect, any images you capture will still be marked as left or right. To capture images not marked as left or right just ensure that neither button is highlighted. Capture images by using the most appropriate method for the camera that you are using. This will either be direct from the camera or from the system (clicking on the Capture button or on the image). If you decide that some of the images are unwanted then you can delete these during capture by dragging them over the rubbish bin in a similar way to using the main rubbish bin on the image manipulation panel. When you have taken all the required images, click on the Disconnect button. You are now able to label and manipulate images as you wish. Once this is complete, click on the Save button to save the images or Close to exit the screen without saving.

### **How to Capture Images for an Existing Patient**

Find the necessary patient on the Patient Demographics screen and click on the Episode button. Now you are looking at Episodes for that one person. Scroll through the Episodes until you find the right one and click on the Images button. Now you can capture images in the same way as for a new patient.

### **How to Print Multiple Images**

Up to four images can be printed via the Image Capture screen but if you want to print more then it is best to use the Compare Thumbnails screen. Select the Episodes from which you want to view thumbnails and click on the View Thumbnails button. Now select any thumbnails that you wish to print before clicking on the Print Selected Thumbnails button. You can print any number of images but, unless you set the number of rows and columns used, only one will be printed per page. Select the information that you want to be printed along with the images then click on Print.

### **How to Add a New User**

Only users logged in as **'admin'** can enter the System Setup screen so you must first make sure that you are logged in as such. Click on the large User button if it is not already selected so that you can access the User section of this screen. Click on the Add User button and then enter the user name into the box. Only standard letters can be used and each user name must be between four and twenty characters long. After entering the name, click on the OK button to save the user name or Cancel if you decide not to add a new user. The user name that you just entered will now appear in the user list and you can highlight it to amend that user's permissions. The user's password will be blank and must be set by the user.

### How to Add a New Workstation

As with adding a new user, you must be logged in as **'admin'** to enter the System Setup screen. Click on the large Workstation button to access the workstation section of the screen. Click on the Add Workstation button and the workstation name can be entered and saved in the same way as the user name above. Once the workstation name appears in the list you can highlight it and select cameras to be allocated to that workstation. These cameras must first be added via the Camera section of this screen. All workstation names entered into the system must be the same as the name allocated to each individual computer when Windows was installed.

### How to Add a New Camera

You must be logged in as **'admin'** to access the System Setup screen for which you can add cameras. Click on the large Camera button, then click on Add Camera and enter and save the camera name in the same way as above. The camera will be allocated default values for the various settings on the right hand side of the screen but these can be altered by clicking on the desired camera in the list then clicking on the Edit Camera Details button. Once the details have been altered click on either Save or Cancel.

### How to Set Up the Autonumber Function

The autonumber function is used when you add a new Patient to supply an automatically incremented Patient ID number. It is set up by **'admin'** via the System Setup screen. The autonumber details are entered on the fifth tab (Settings). Type a prefix into the Patient ID Prefix box and a start number into the Patient ID Start No box (numerical figures only) then tick the Use autonumber **checkbox**.

## Glossary

### **‘admin’**

Being logged in as ‘admin’ means that ‘admin’ has been entered as the username and the correct password has also been entered during the log on process. Someone who is logged in as ‘admin’ can access restricted areas of the system but cannot perform general data entry tasks.

### **Administrative Functions**

The administrative functions can only be accessed if you have logged in with the user name ‘admin’ and the correct password. These functions control the general running of the system and any aspects of the program that should not be available to all users.

### **Browse Buttons**



This button is used to choose files and directories and work in much the same way as standard Window’s browse screens. You can choose the directory that you want to look in via the **dropdown** at the top and double-clicking on a folder in the list below will open it, displaying its contents. When the desired file has been located either highlight it and click on <OK> or double-click on it.

### **Browse List**

Patient Browse List					
PatientID	Name	Address	Postcode	Date of Birth	Physician

The columns on the browse list can be sorted alphabetically or numerically (whichever is the most appropriate) by clicking on the column header. The first click will sort in ascending order and a second click will sort in descending order. Double-clicking on a row will close down the browse list and display the Patient Demographics screen with the relevant details.

### **Check Boxes**



Check boxes can be selected on and off by clicking on them. If a check box is unselected then the first time you click on it, it will select that option and a second click will deselect it. When an option is selected, a tick is shown in the box and this disappears when the option is no longer selected. Any number of these can be selected simultaneously.

## Chrominance

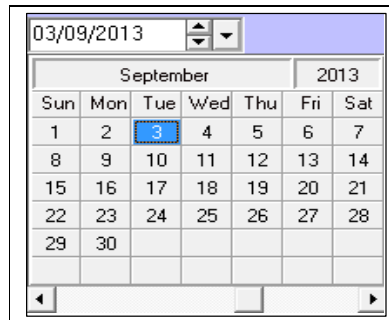
This refers to the colour quality of the image. Lower settings result in a higher colour quality but lower compression and vice versa.

## Database

The database is a structured data file where all demographics, details and images are stored. It is managed by the Kapture system and cannot be viewed any other way.

## Date Dropdown

This is activated by clicking on the down arrow on the right-hand side of the box producing the following view:



Months and years can be scrolled through in various ways. Clicking on the arrows at either side of the scroll bar will cycle through the months, whereas clicking on the scrollbar itself will cycle one-by-one through the years and dragging the tab will move more quickly through the years. When the required month and year have been located click on the desired date - the **dropdown** will disappear and the correct date will be shown in the box. To close the **dropdown** without picking a date, click on the down arrow a second time.

## DICOM - Digital Imaging for Communications in Medicine.

The DICOM Standard facilitates interoperability of medical imaging equipment

## Double-Click

To double-click, press down the left-hand button on the mouse twice in rapid succession.

## Drag and Drop

To 'drag and drop' something you need to click on it with the left mouse button and hold the button down while you drag the item to the desired place. When the mouse pointer is over the correct place then let go of the mouse button.

## Dropdown

These are activated by clicking on the arrow at the side of the box. A list will then be displayed which, if it is long, can be scrolled through in order to see all the options. Clicking on one of the options will display the selected item in the box and the dropdown will disappear or clicking on the arrow again will make the dropdown disappear but with nothing entered into the box.

## Episode Dropdown

Clicking on the dropdown arrow in the same way as standard dropdowns will display a list of episodes for the current patient. Clicking on an episode will close down the Patient Demographics screen and display the Episode screen on the relevant episode. As with any dropdown you can click on the arrow to close the dropdown without selecting an episode.

## Gamma

This refers to the intensity of the image.

## INI File

This is used to store very small amounts of data that just affect the running of the program and do not hold any patient details.

## Left Click

Clicking the left-hand button of the mouse. Also referred to as clicking as it is more commonly used than the **right click**.

## Luminance

This refers to the luminous intensity of an image, which is based on the radiation or reflection qualities of an image. As with **Chrominance**, higher settings produce lower quality images but better compression.

## Pixelated

Pixelation occurs when the squares of colour that make up an image become noticeable. Zooming, resizing and compression can produce pixelated results.

## **PDT - Photo Dynamic Therapy**

A method of measurement for the treatment of Macular degeneration.

## **Radio Buttons**



These are set into groups in which only one option may be selected at once. If you have selected one option then click on another, the new option will be selected and the previous one will lose its selection. An option is shown to be selected by a black dot inside the circle.

## **Right Click**

Clicking the right-hand button of the mouse. If available, a menu may be invoked.

## **Slider Bar**

Click on the tab of the slider and drag it to the left or right to alter the values.

## **Imaging Options on System Setup**

The numbers in the box to the side show the value in numerical form between 1 and 255. Alternatively you can type the desired value straight into the box and the slider will move to that position.

## **Image Capture screen**

Numbers at the side of the bar show the value of the slider between -100 and +100.

## **Thumbnails**

Thumbnails are small versions of a larger picture. The image quality may not be as good on a thumbnail because it is just a representation to indicate that a larger image can be viewed.

## **Episode Thumbnails**

If there are any images for a patient's episode then thumbnail versions are shown on the right hand side of the screen. A larger version can be viewed by double-clicking on the thumbnail. To return the image to a thumbnail just click on the large image. These thumbnails also represent the images that will be shown for this episode in the Image Capture screen. If there are too many thumbnails to be shown at once then you can use the arrow buttons to scroll through the others.

## Image Capture Thumbnails

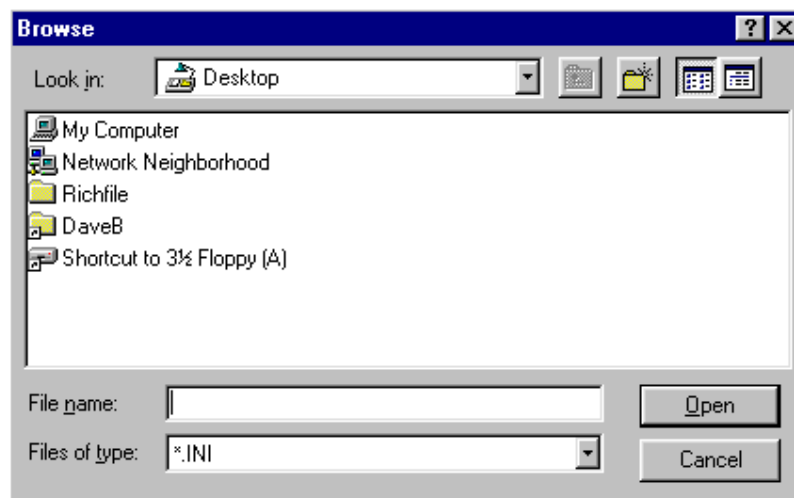
If you have entered the Image Capture screen from an episode with images then thumbnails of these images will be shown in the thumbnail bar at the bottom of the screen. These thumbnails can be dragged up into the main part of the screen to be viewed in more detail. If you have entered the Image Capture screen with no current images then no thumbnails will be shown. If you then capture some images, their thumbnails will appear in the thumbnail bar as well as in the main section. If there are more thumbnails available than can be shown at the bottom of the screen then you can scroll through them by using the arrow buttons at the side.

## Tooltip Text


Tooltip text will appear when the mouse pointer has been hovering over a button or other control with Tooltip text for a number of seconds. A pale yellow box will appear explaining more about the button and what it does. These messages are only short but can be very useful if you are unsure what to do next or which button performs the function that you are looking for.

## Windows Browse Screen


There are two types of Windows browse screens that this system uses:





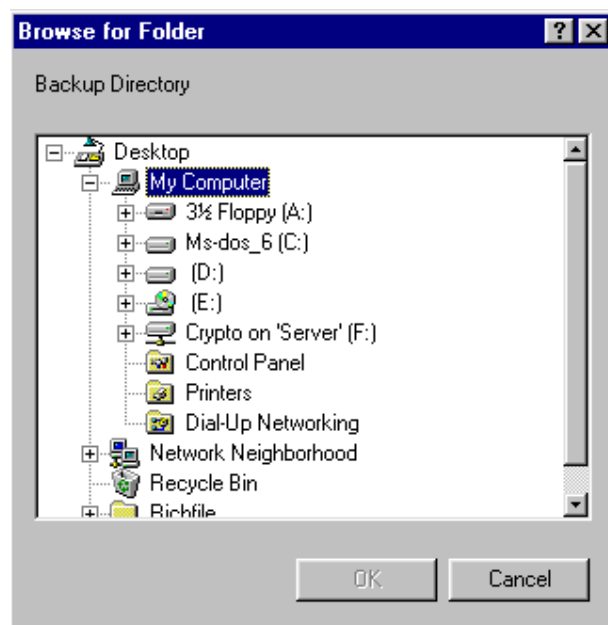
The first type is the one that you are more likely to recognise from other Windows programs but is the slightly more complex to use. This screen will usually open showing the directory in which you are currently working. Files are saved in folders in a hierarchical structure which means that folders may exist inside other folders, rather like Russian dolls. To get to the file that you want to select you may need to move up through various folders until you reach a drive, then select a folder and move down through the tiers until you reach the file that you were looking for. To

move up a level click on the  button. To move down a level just double-click on the folder that you want to look into or by single-clicking on the folder that you want to open then clicking on the Open button. You will then be shown all the folders within the folder that you clicked on and some of the files. When you have found the file that you are looking for then select it and click on the Open button and the path of that file will be placed into the box next to the browse button that you clicked on.

As said above, when you are looking at the contents of a folder, you may not be able to see all of the files that it contains. This is because a filter is used to only show files of a certain type. You can change this type by clicking on the dropdown labelled 'Files of type:'. Allowed file types can be selected and any files of that type within the folder you are looking at will be shown.

The  button allows you to add a new folder via the Windows browse screen. If you click on the button a folder called 'New Folder' will appear. It should be highlighted and allowing you to type into the blue selection that covers the name. Type in the name that you want the folder to be called and press the Enter key.

The  button, when clicked on, shows the folders and files, within the folder that you are looking, in list format which shows the largest amount of files and folders on the screen at once. Clicking on the  button allows you to see details relating to each file and folder including last modified date and size. This means that a lower number of files and folders can be seen on screen at once although they can be seen by scrolling up and down with the scroll bar.



The second Windows browse screen is more often used if only the path to a folder is required rather than to an actual file. This screen can be used in a very similar way to the left-hand side of Windows Explorer. To view the folders on a drive either click on



the plus sign or double-click on the drive name. When you have found the folder that you were looking for then click on OK.

## Appendix 1 – External Image Storage

Below is shown the structure of image storage as applied to Kapture.

From the root directory the structure should be:

```
<ROOT>
  <Patient ID>
    <Episode>
      <Image file>
      <Image file>
      .
      .
      .
    <Episode>
    .
    .
    .
  <Patient ID>
    <Episode>
    <Episode>
```

Where:

<ROOT>	is the root directory in the default data directory
<Patient ID>	is the patient's ID number as specified in Kapture
<Episode>	is the episode NUMBER (and Date?) of the relevant episode and date of episode
<Image file>	is the individual image.

## Appendix 2 – Grading

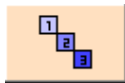
**NOTE:-** Grading should not be performed on any manipulated image as this could cause an incorrect assumption.

### Setting Up

The grading forms can be customised by the user and this is done by the Administrator. Log in to Kapture as Admin.



Click on the button and this will allow the controlled vocabulary for grading to be customised.



Click on the button and this will allow customisation of the grading form by adding or deleting grades as required.

### Grading



Grading is performed from the capture screen by clicking on the button and image gradings appear. The grading is completed for an episode not individual images.

Grading					
Grade	Sub	Description	R	L	B
0		No DR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1		Minimal DR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1-a	<= 5Ma > 1DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1-b	1 Hm > 1DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2a		Mild NPDR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-a	> 5 Ma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-b	<=2 Ma < 1DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-c	>= 2 Hm > 1 DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-d	Ex outside arcades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-e	<= 5 CWS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-f	Questionable IRMA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2a-g	IRMA in 1 Quadrant only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b		Features of 2a AND	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2b-a	>2 Ma < 1 DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2b-b	Ex within Arcade > 1DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2c		Circinate Ex within arcade > 1 DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3a		Maculopathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3a-a	Hm < 1 DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3a-b	Ex < 1 DD fovea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3b		Possible CSME (VA < 6/12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4a		Moderate NPDR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4a-a	> 5 CWS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grading Notes

Reporting Final Grade Refer Grade Close

The grading form is completed by clicking in the box of the selected grade and using L (left), R (right) or B (both). Selecting L and R does not automatically select B, it must be done as a separate action.

### Refer Grade

On clicking Refer Grade a pop-up box shows what you are doing and if any options have been selected.

If options have been selected you are asked if you wish to continue, if sure and reply is yes you are then told that grading referral is completed and asks if a report is required.

Clicking on the Yes button will bring up the Grading Report.

**Grading Report**

**Produce Grading Report With The Following Details:**

Patient Name: Mr SMITH JHONSON  
 Address: .  
 Patient ID: IA01000  
 Episode No: 1 Episode Date: 9/24/2013

**Grading Details:**

Right Left

2a-e - <= 5 CWS  
 2a-g - IRMA in 1 Quadrant only  
 2b-b - Ex within Arcade > 1DD fovea

Date and Time:	Username:	Note:
9/24/2013 12:00:47 PM	KAPTURE	test left
9/24/2013 1:33:41 PM	KAPTURE	test general
9/24/2013 1:33:51 PM	KAPTURE	test both
9/24/2013 1:34:03 PM	KAPTURE	test specific

Design Report Create Report Close

All the information on this sheet is taken from the episode so no fields are in fact editable. At this stage the report can be created by clicking on Create Report which allows you to preview or to select the path for output.

Once a grading has been performed the heading in the blue band at the top of the capture form reflects this fact by showing the episode as a Referred Grading.

### Final Grade

On clicking Final Grade all the same stages as above are performed and the only difference is in the wording at the top of the capture form which states Final Grade.

## **Licensing Kapture**

### **Introduction:**

This Kapture version is Windows Vista, 7, 8, and 10 (32 bit & 64 bit) compatible.

From Keeler you have received a:

- License number
- A serial code, this code is linked to the license number
- The above two numbers are also linked to the type of license (Lite/Digital/FA etc)

The licensing can be activated one of two ways: via the Internet and via E-mail.

### **Internet licensing is performed automatically so it can be activated 24/7**

On the login screen the following license information is displayed:



- The person to whom the Kapture system is licensed to
- The license number (with the version number important for service)
- Number of days left for the support /information if the support has expired

Updates (Kapture Versions and License form) can be easily performed. If the update/upgrade of the (support) license has been ordered and processed at Keeler and/or the support license is still valid, only the Activate License button needs to be pushed (if connected to the Internet). Sent data will be checked against our database and if approved automatically the license will be activated.

### **Activating the license via the internet:**

This is the simplest and preferred method!

To activate the license the system needs to be connected to the internet. Kapture will detect if an internet connection is available and switch automatically to the proper mode.

When the licensing is started, the screen shown below needs to be filled by the customer/dealer:

**Kapture License Request**

**Kapture now requires License Activation**  
This can be done either on-line or Via Email

**Details**

License No:

Serial number:

Licensed To:

City:

Country:

Zip / Postal Code:

Email Address:

Machine ID = 9DFD F133 DE3F 14D7 E9DE

Orion Imaging Limited  
Birchwood, Lydney Rd  
Whitecroft  
Lydney  
Glos  
GL15 4PU  
United Kingdom

Licensing Line: +44(0) 1633 486398  
Telephone: +44 (0) 1633 868811  
Fax: +44 (0) 844 3761376  
Email: support@orions.co.uk

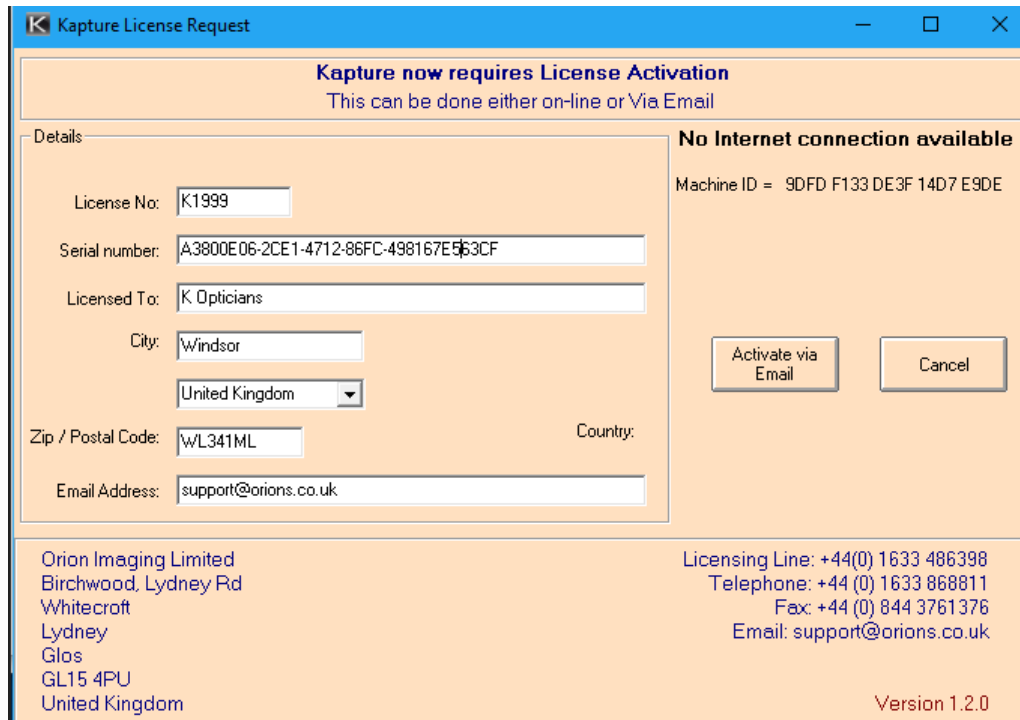
Version 1.2.0

The license number and serial number are the ones issued by Keeler. By pressing “Activate Via Web” the license will automatically be activated via the Internet. You will see a message when the license has been activated successfully.

### Activating the license via E-mail:

If you do not have a direct Internet connection you can also activate the license via E-mail. Kapture will detect if an internet connection is available and switch automatically to the proper mode.

When the licensing is started, the screen shown below needs to be filled by the customer/dealer:



**Kapture License Request**

**Kapture now requires License Activation**  
This can be done either on-line or Via Email

**Details**

License No: K1999

Serial number: A3800E06-2CE1-4712-86FC-498167E563CF

Licensed To: K Opticians

City: Windsor

Country: United Kingdom

Zip / Postal Code: WL341ML

Email Address: support@orions.co.uk

**No Internet connection available**

Machine ID = 9DFD F133 DE3F 14D7 E9DE

Activate via Email Cancel

Orion Imaging Limited  
Birchwood, Lydney Rd  
Whitecroft  
Lydney  
Glos  
GL15 4PU  
United Kingdom

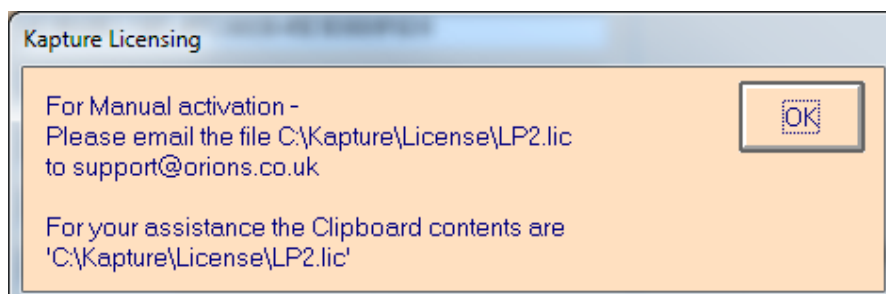
Licensing Line: +44(0) 1633 486398  
Telephone: +44 (0) 1633 868811  
Fax: +44 (0) 844 3761376  
Email: support@orions.co.uk

Version 1.2.0

The license number and serial number are the ones issued by Keeler.

### Make sure you enter a valid Email address as this will be used to E-mail the license activation file back

Press Activate via Email and the following message will appear



**Kapture Licensing**

For Manual activation -  
Please email the file C:\Kapture\License\LP2.lic  
to support@orions.co.uk

For your assistance the Clipboard contents are  
'C:\Kapture\License\LP2.lic'

OK



E-mail the file C:\Kapture\License\LP2.lic to: support@orions.co.uk as an attachment.

Tip: When you select the insert/attach file in your E-mail program and it prompts for the file - all you need to do is [Ctrl] + [V] (paste) because the filename and path have been placed on the clipboard.

If the Kapture installation has the SCP option activated, then the SCP2.lic file will also need to be E-mailed as well.

You will receive an LP.lic and an updated LP2.lic file you need to place these files in the C:\Kapture\License folder (overwrite the present LP2.lic) and the license of the Kapture software is activated.

If the Kapture installation has the SCP option activated then you will also receive an updated SCP.lic and SCP2.lic file, which also need to be pasted into the C:\Kapture\License folder

### **Questions:**

For questions please first visit the Keeler website [www.keeler.co.uk](http://www.keeler.co.uk)

## **Kapture all versions – Additional Installation instructions for EOS-20D / EOS-30D / EOS-40D and EOS-50D (BX900/DGi/CR6/UD/UVi)**

### Contents

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3. INSTALLATION AND SETUP OF THE 20D, 30D, 40D AND 50D CAMERA: .....	103
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7. ADMIN SETTINGS FOR UV/UD/UVI: .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>

### **1. Introduction:**

Kapture (all versions) versions use a new method for connecting to a Canon EOS 20D / 30D / 40D / 50D camera. The advantages of this method are as follows:

- No need for a CF card
- Much faster transfer of images (directly from the buffer of the camera). Note transfer speed depends on the selected image recording quality.
- As the EOS camera is less time busy so less chances of an error on the fundus camera.
- Uses the CanCap application which is run in the background and automatically started and stopped.

Please follow the instructions below for the new method of connecting the EOS-20D or EOS-30D or EOS-40D or EOS-50D.

NOTE: The new method works for the Canon EOS-20D / EOS-30D / EOS-40D and EOS-50D only! For the older Canon EOS cameras please use the usual method.

### **2. Installation .NET 3.5 Framework:**

To use the new method you need to install the .Net 3.5 framework if it is not already installed, this is downloadable from Microsoft at the following link:-

<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=333325fd-ae52-4e35-b531-508d977d32a6>

Download the “**Full Redistributable Package** “

### 3. Installation and setup of the 20D / 30D / 40D / 50D camera:

You only need the WIA drivers so please make sure you install those drivers and then connect the 20D or 30D or 40D to the PC. In the control panel Scanner and Cameras, choose the 20D/30D/40D right mouse click and select properties. Use the test camera button to test the connection. Then select the events tab and activate the “take no action” radio button. Please perform the “take no action” selection for each USB port (as Windows XP treats each USB port individually).

Setup the 20D/30D/40D according to the manual. Important settings are

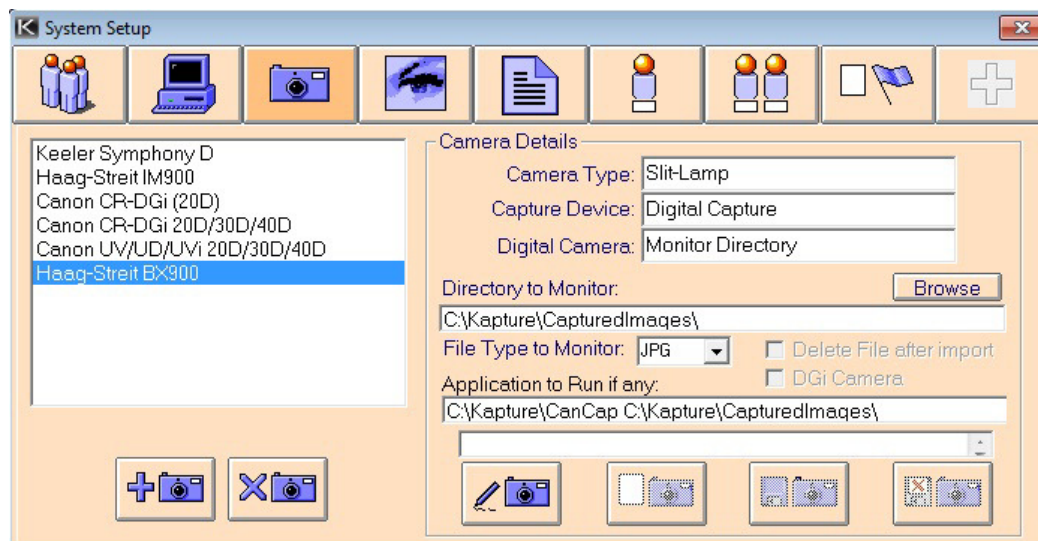
- The camera is in Manual mode (dial on top)
- In the menu select Shoot Without Card to On
- Communication is set to Normal (20D) or PC (30D/40D/50D).
- Auto Power Off is set to OFF.

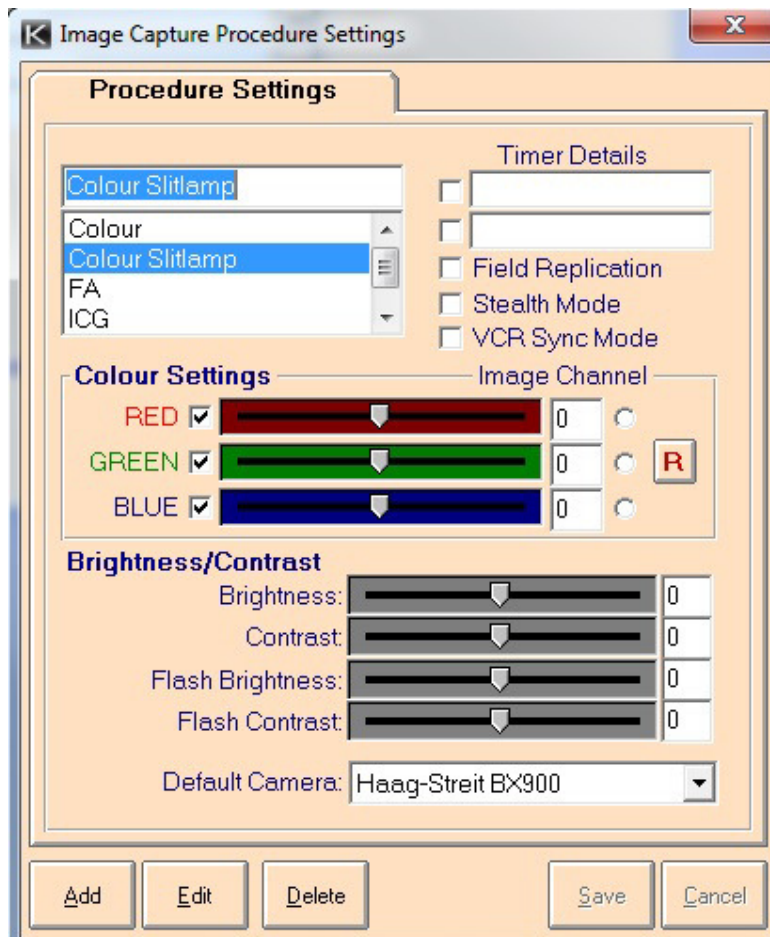
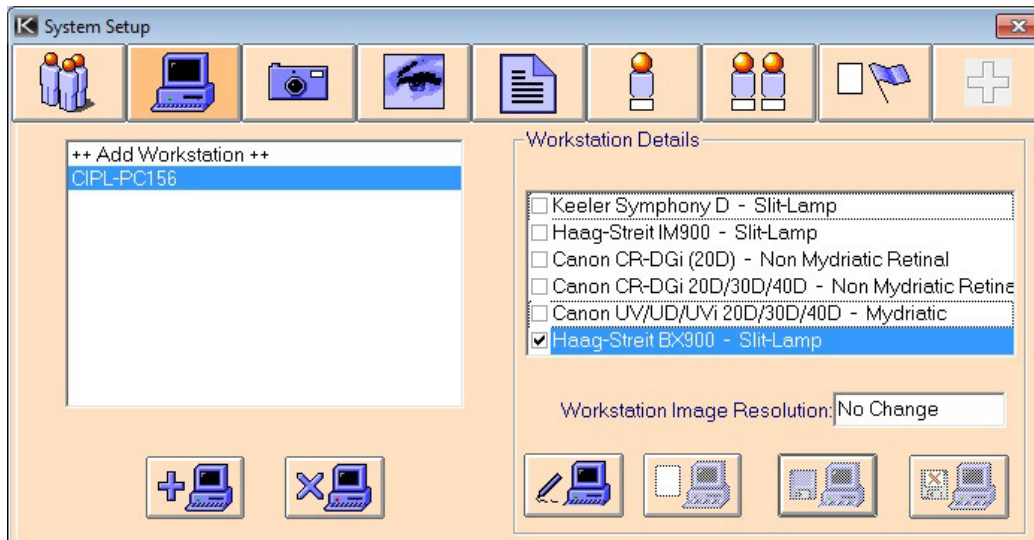
### 4. Installation Kapture

Install Kapture 7 as per the installation manual. Create a CapturedImages folder in the Kapture folder. Make sure this folder is only used for handling images and not used by any other applications or for other storage.

### 5. Admin settings 20D/30D/40D/50D on BX900

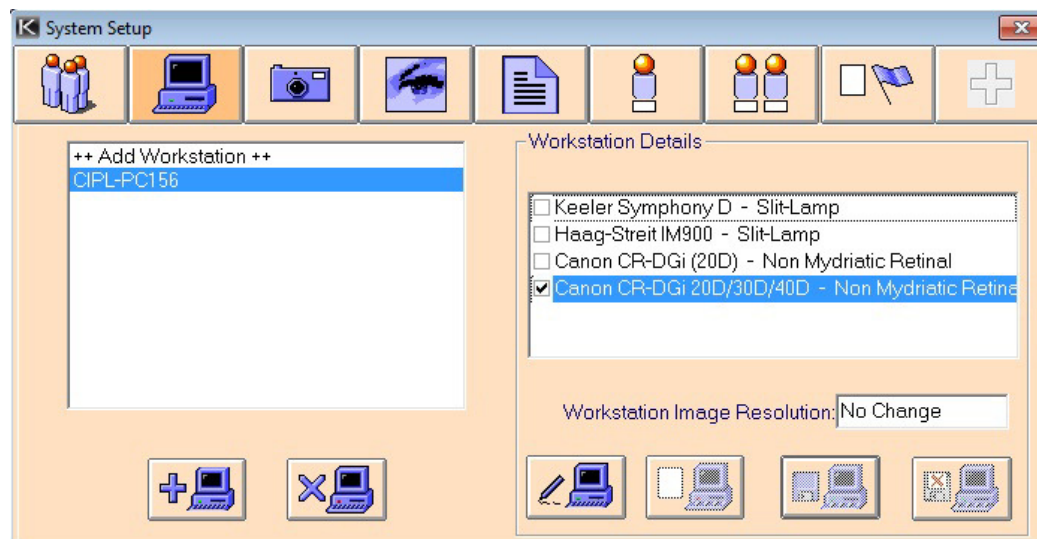
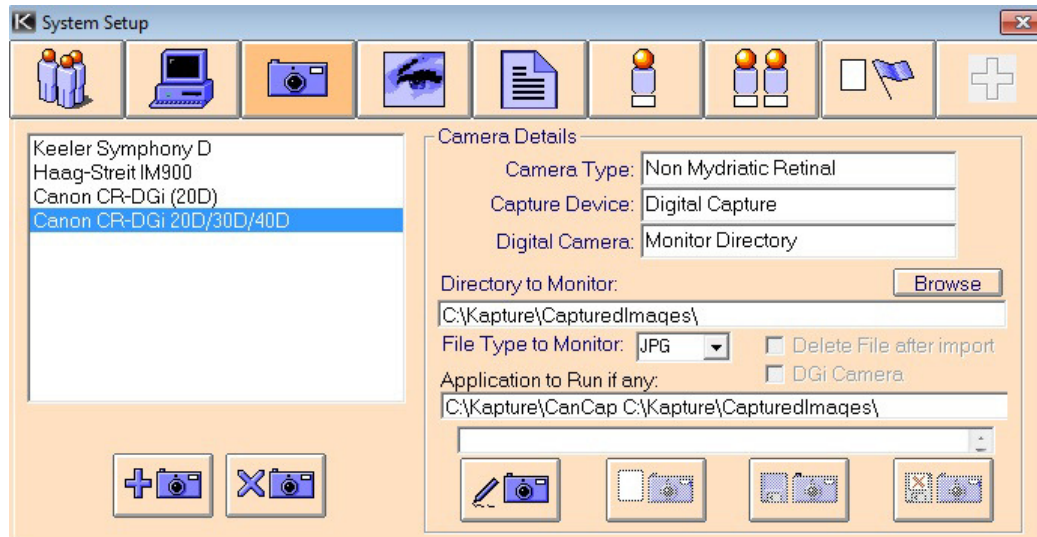
Below are screenshots how the setup the 20D/30D/40D/50D for the BX900 (photo-slitlamp). Please note if an upgraded (older) database is used select Topcon NW100 as Monitor Directory will not be available.

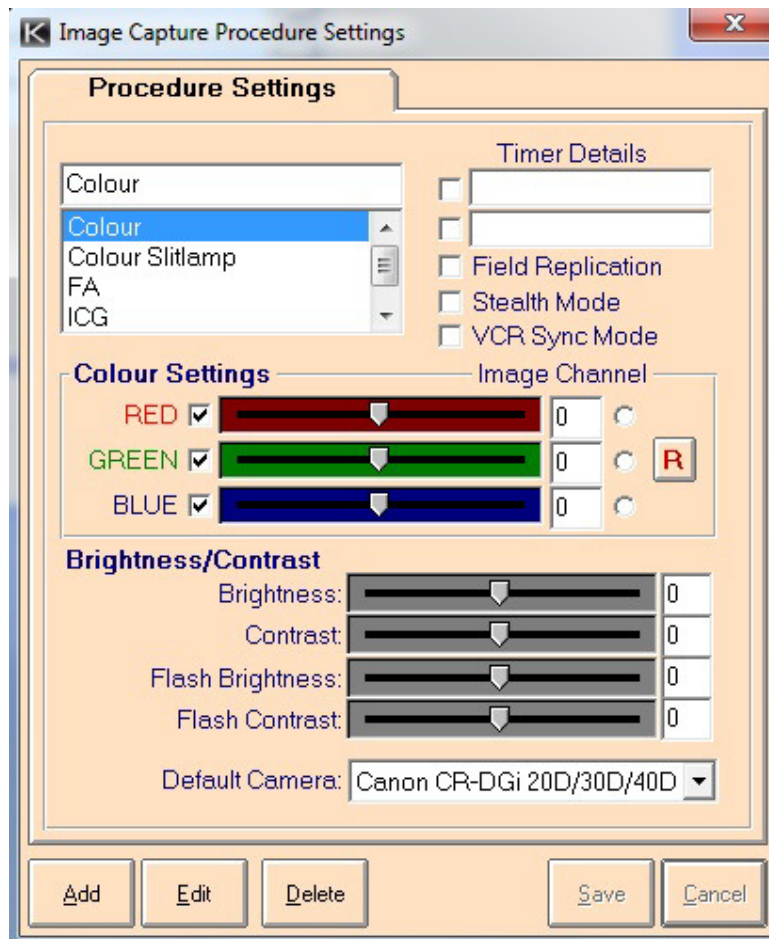




## 6. Admin settings 20D/30D on Dgi/CR6:

Below are screenshots for how to setup the 20D/30D for the DGi. Please note if an upgraded (older) database is used select Topcon NW100 as Monitor Directory will not be available. If you connect a 20D/30D on a CR6 do not tick the DGi camera box.





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