

DRAGON BOATS ACT



Total Race Management

SUMMARISED USERS MANUAL

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QUICK START GUIDE

1. CONNECT ALL EQUIPMENT
2. POWER UP CAMERA
3. POWER UP COMPUTER
4. TEST CAMERA (STARTS AND CAPTURE)
5. CAPTURE AND EVALUATE THE FINISH IMAGE OF THE RACE
6. SAVE THE RACE



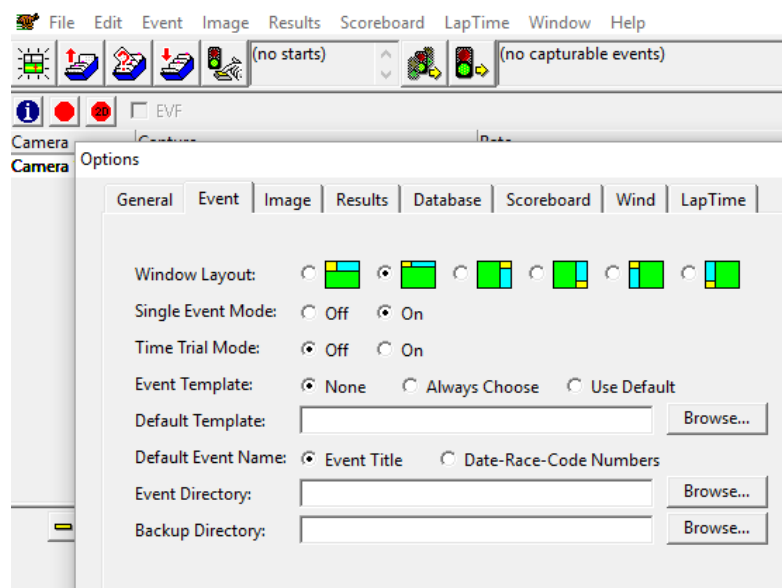
QUICK START GUIDE

Set up for Standard Races

File/ Options:-

Under Event Tab

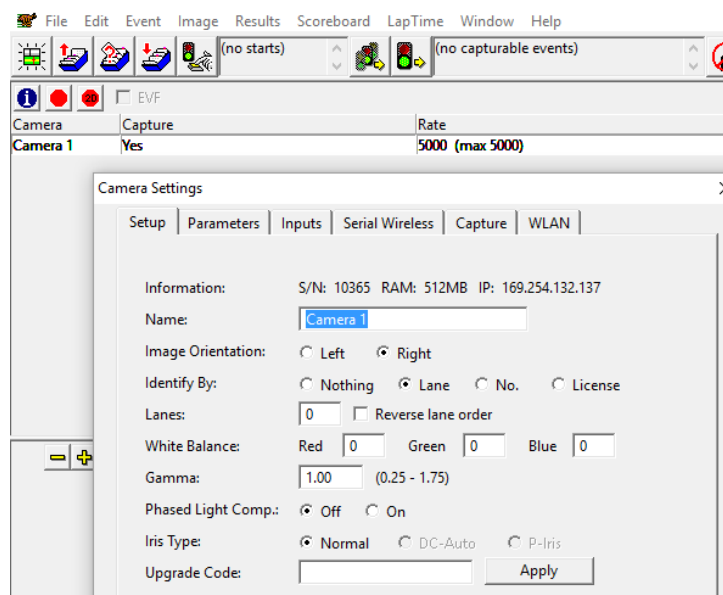
- Single Event Mode ON
- Time Trial Mode OFF



Camera settings:-

Under Event Tab

- Identify by Lane
- Lanes 0

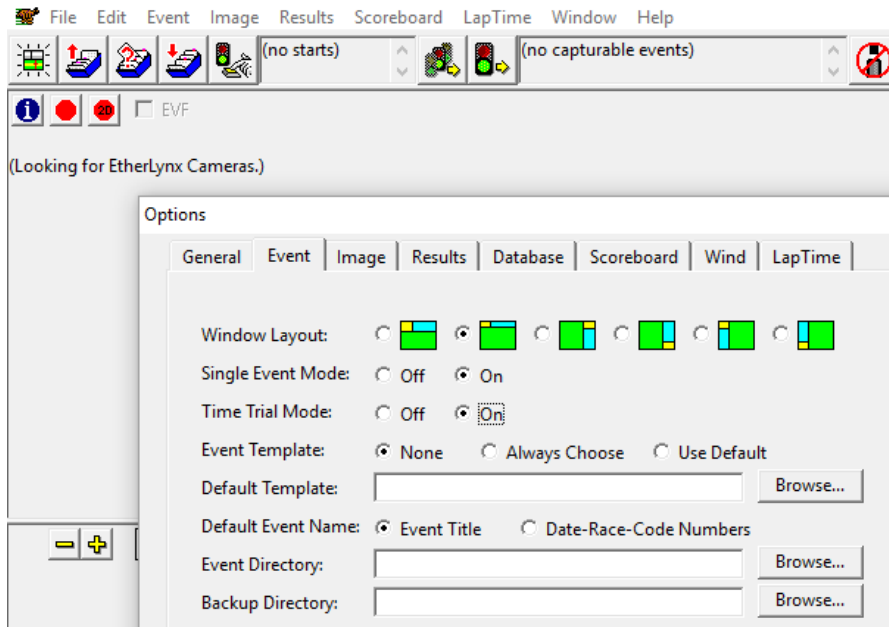


Set up for 2klm Races

File/ Options:-

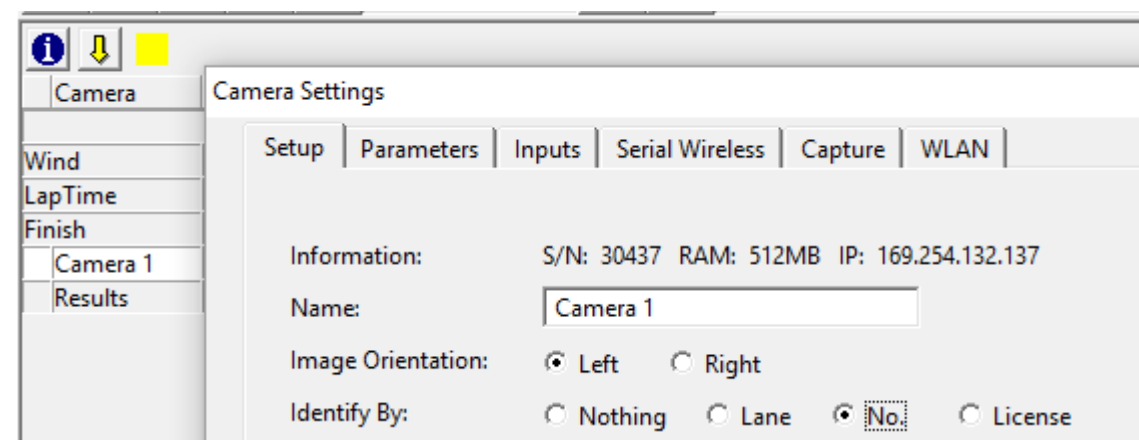
Under Event

- **Single Event Mode ON**
- **Time Trial Mode ON**



Camera settings:-

- **Identify by (No) # or (ID)**



PREFACE

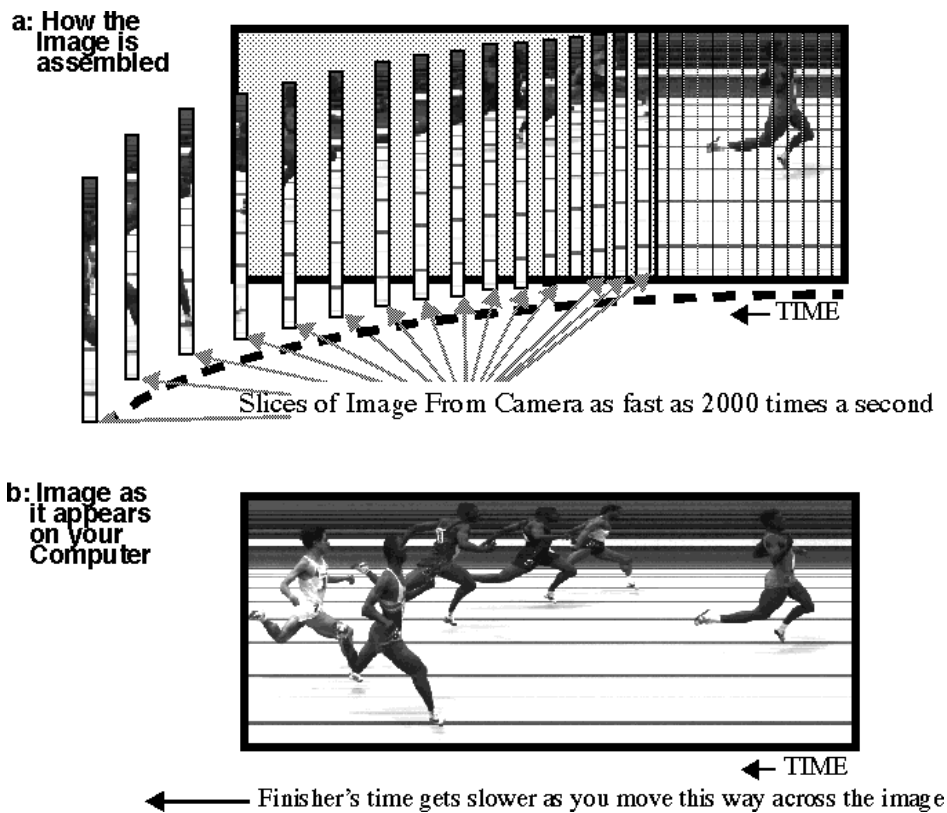
How FinishLynx Cameras Work

True line-scan photo-finish systems (video-based systems are not included in this category) are based on cameras that take lines of image rather than the usual 2-dimensional frame picture taken by a 35mm camera or instamatic.

The "line of image" that is recorded is a picture of the finish line and nothing else.

It is, if you like, the furthest it is possible to get away from a "panorama" view. These images of the finish line can be taken thousands of times a second and displayed on the screen side by side. A FinishLynx picture is actually comprised of thousands of incredibly thin individual images of the finish line - and the activity that was taking place at that split second - placed one next to another.

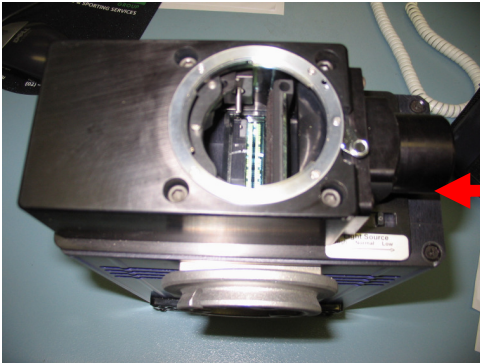
FIGURE 1. Simulation of How a FinishLynx Image is Assembled



RACE DAY SET UP

Set up and connect all equipment as used at your particular location.

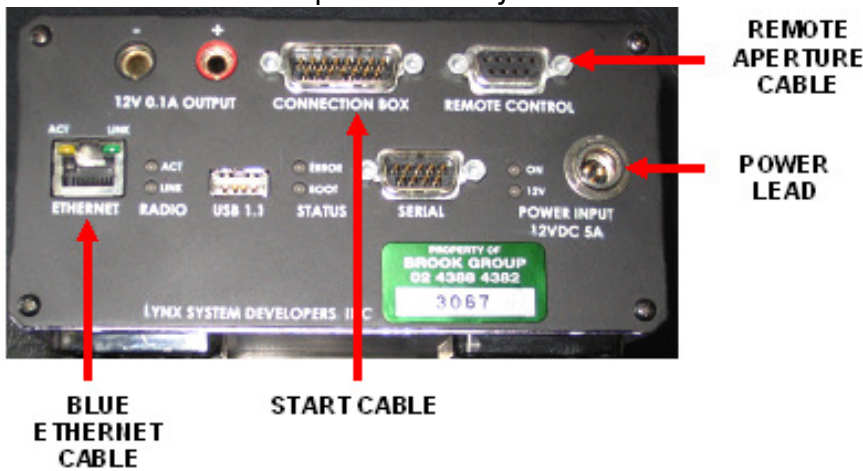
Ensure "Light Source" slide on front of camera is set to the "Normal" position.



For cameras with remote aperture control:-

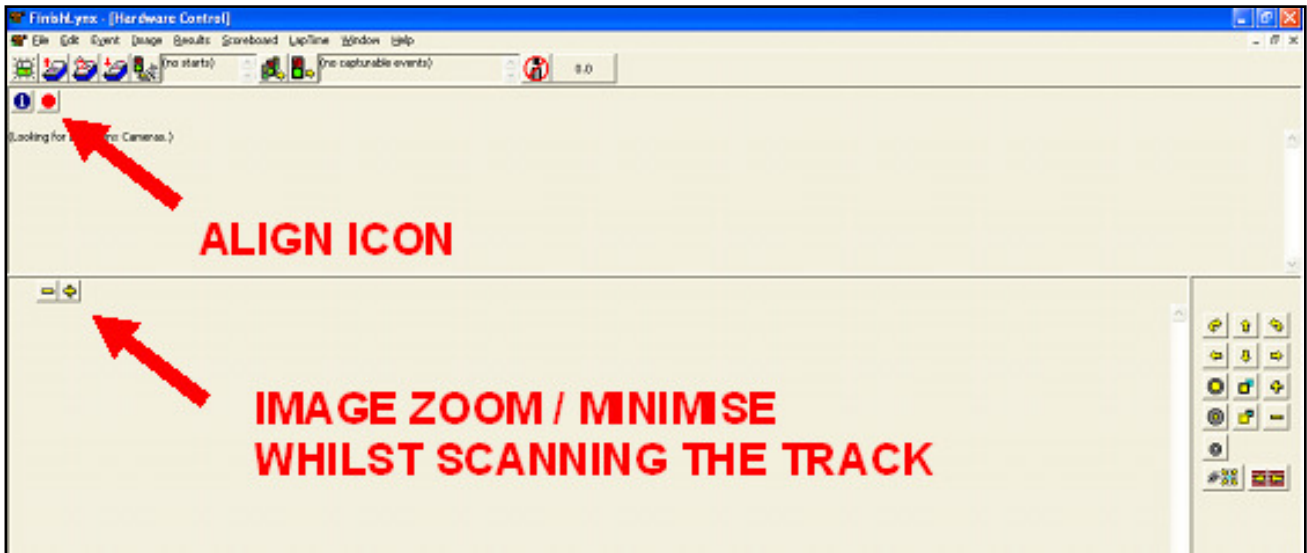
1. Connect remote positioning cable to the camera. (Remote Control Point)
2. Mount the camera and lens.
3. Connect the camera power supply, Ethernet cable and timer lead to the camera.
4. Align the camera. This is done with the camera lens set on the lowest f number on the lens i.e. 1.4 Once aligned has been completed reposition the f number on the lens to its highest no. i.e. 16
5. Close view finder.
6. Power up the camera.
7. Power up the computer, screen & printer.
8. Adjust the aperture from the Lynx Hardware Control Screen.

If prompted, enter user name:- lynx (use lower case)
password:- lynx



RADIOLYNX RECEIVER

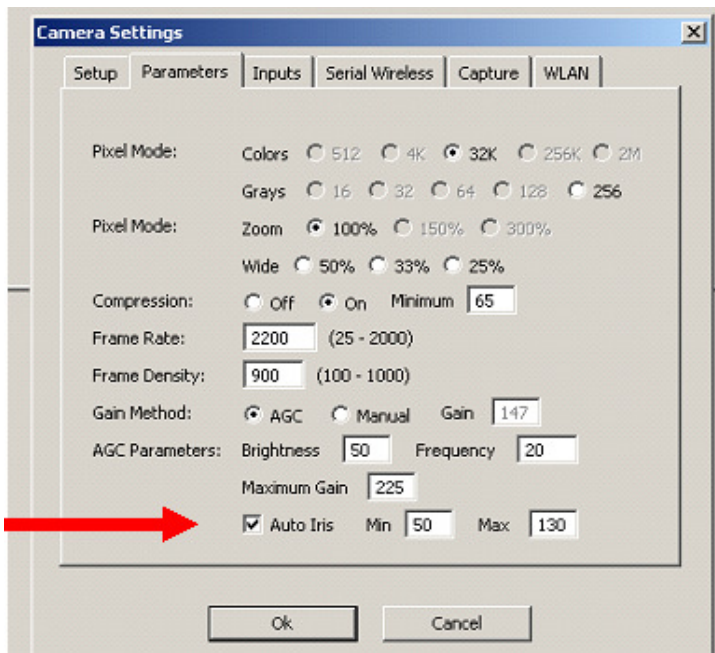




To manually adjust the aperture, simply press and hold remote control buttons for 4 seconds then release and press and hold again.

Auto Iris Feature:-

To enable Auto Iris, go to camera settings simply tick the Auto Iris box and enter Min and Max range. The camera will automatically adjust the aperture.



STARTING THE SOFTWARE

Double click on the finish lynx icon (orange lynx cat), to enter the lynx program.

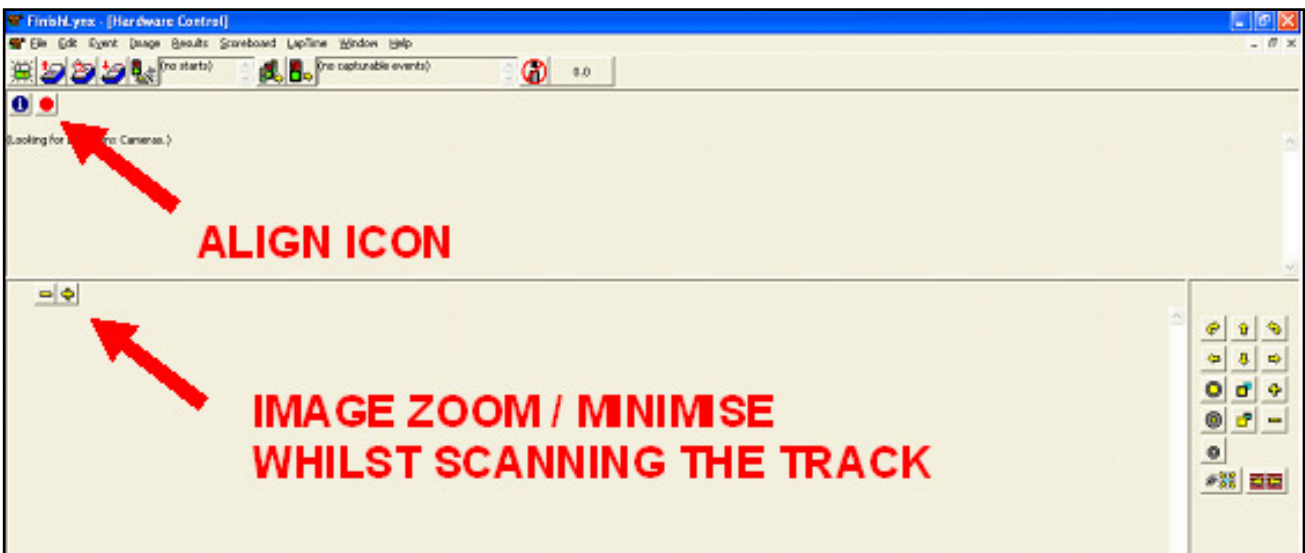
The first screen is titled hardware control.

At this point the mouse pointer will become an “hour glass” and a green bar in the bottom right hand corner will show loading camera. This will take approx. 15 seconds.

If this does not appear check all connections including the camera power supply and re perform race day set up.

Once completed start aligning the camera by clicking the align icon. This icon will change colour from red to green and the track scan will march across the screen. If the image is black close the align mirror on the camera.

Please note the track image should appear sharp on the screen. If the image is blurred check camera alignment and focus. (Refer trouble shooting for hints.) Use the Image zoom / minimize buttons to check focus.



Set Rate, Density, Mode and Gain.

This is accomplished by double clicking on the current settings and entering the new settings and then press “enter”.

Settings for : _____

WEATHER	RATE	DENSITY	MODE
NORMAL			
NORMAL			

PRE RACE SET UP

From the hardware control screen Menu Bar select FILE

In the drop down box select OPTIONS

Under General, type in the venue name in the competition name box.

From the hardware control screen "start selections "

- Either
1. Create a new event and arm it to receive the next start (selection 1)
or
 2. Load the next / previous event in the schedule (selection 2,3 or 4)
To use this option you must have an event and schedule file.
(refer creating an event and schedule file in this manual)

This is achieved by clicking on the appropriate icon.

If selecting option 1 an Untitled race will appear on the screen.

In the Information Zone under the EVENT box Type the date and race No.
27/5/97 R2 and enter.

This information will now appear on all printed reports and images.

Note you must have "a" and "c" proceeding the titled race in the menu bar and also you will have two coloured boxes next to the Information icon.

"a" and the Yellow box stands for timer is armed to receive the next start

"c" and the Green box stands for system is ready to capture an image

If you are using auto capture click on "finish" in the "information zone"

Set capture time (in seconds) at less than the track record and capturing duration at say 4 seconds for greyhounds and 10 seconds for thoroughbreds.

You are now ready for an event.

The "Start Selection" icon bar gives many options:



1 2 3 4 5

- 1. Create a new event and arm it to receive the next start.**
- 2. Load the previous event from the schedule and arm it to receive the next start.**
- 3. Choose an event in the schedule and arm it to receive the next start.**
- 4. Load the next event in the schedule and arm it to receive the next start.**
- 5. Create a manual start.**

RACE CAPTURING AND EVALUATION

Timing a race.

If using a manual timer button, press at the start of the race to manually activate the timer.

If unit is connected to auto timing system the timer will start automatically.

In the event of a “false start” click “arm current event to receive the next start” icon.

Capturing a Finish image.

As the field approaches the wining line (approx. 3-6 lengths) depress and hold down the capture button until all the field has passed the wining line.

Note capture button may be released and re-depressed if there is a large break in the field. Times and margins will not be affected by the break.

Evaluate the Finish image.

To evaluate the captured Finish image appearing on the screen, firstly position the hash line on the results zone and centre the cross hair. Depress and hold the left mouse button and drag the mouse to either the left or right (depending on the direction the image appears from) to reveal the field. Moving the mouse up or down will also centre the image on the screen. At the first boat position the hash line on the nose and release the left mouse button. Fine adjustments may be made using the arrow keys of the keyboard.

Enter the boat number and press enter. (ensure num. lock is on.) Continue this process for the remainder of the field. Note enter runners in correct finish order. In the event of 2 or more close finishers the computer will prompt “another result has a time which is close to this one” enter OK.

For a dead heat position the hash line as above and enter the first boat number and press enter. Without moving the hash line, using the mouse double click the left mouse button in the result ID box, and enter the second boat number and press enter. In the results screen they will show the same placing number.

It may be necessary to use the image zone icons to assist with the evaluation of an image. These include:-

Zooming



To zoom, drag the crosshair to the runner in the middle of the picture. Release the left mouse button and click on the zoom in icon marked with a "+". This will zoom in 2x on the picture. Clicking the zoom out icon marked with "-" zooms back out.

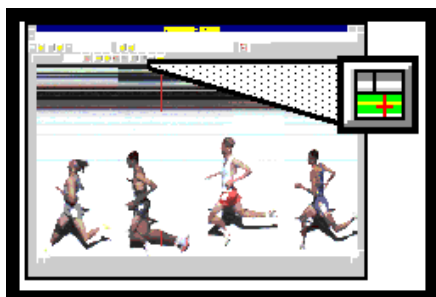
NOTE: The position of the crosshair determines the center of the image which will be enlarged or reduced. (See "Zooming Intelligence" below.)

It should be noticed that after a while of zooming in, the picture becomes very jagged or pixelated.

Full Screen Mode

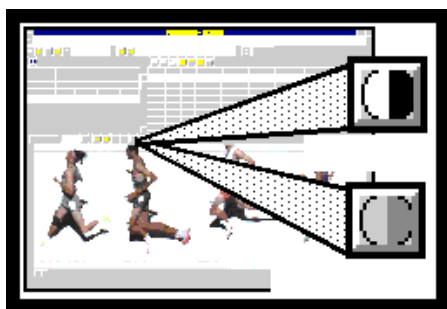


Clicking on the full screen icon will maximize the image zone to fill the window.



Clicking on the reduce screen icon will return the image zone to the default configuration with the results zone also visible.

Contrast Enhancement



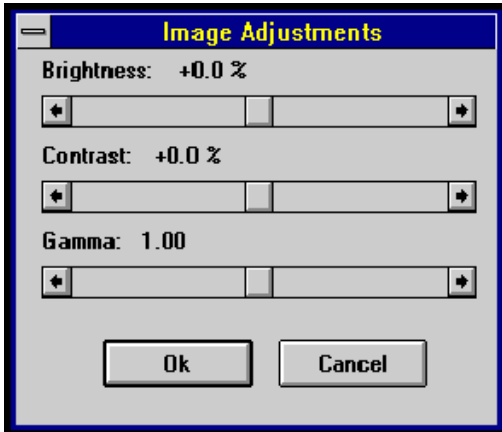
Contrast enhancement allows adjustment of the light level of the image after it has been taken. It cannot salvage terrible pictures, but it can be a big help in distinguishing between parts of an image which are very similar in tone.

It takes a little practice to achieve the desired results, but the good part is that "undoing" the enhancement is as easy as clicking on the un enhance icon, or selecting the Un enhance option from the Image pull-down dialog.

Image Adjustments

In some situations, contrast enhancement might not be the correct action to take to enhance the brightness of an image. For example, it may be desirable to apply a small brightness function to all images. This is particularly useful in events where the background of the image is very similar in color to the objects passing through, as is most common in horse racing. Fine adjustments to the Brightness, Contrast and the Gamma values of an image can be made by selecting Adjustments... from the Image pull down menu.

You can also right click on the side "E" bar and select adjustments.



By using either the sliders, or the arrows at the ends of the slider boxes, the values for the Brightness, Contrast and Gamma value of the image can be changed. The result of making any changes in this dialog can be seen instantly in the image - and it is considerably easier to discover for yourself the effects of altering these values than it is to explain.

For best results use "GAMMA"

Feel free to experiment, because even if the image is saved, the changes can still be undone by returning the sliders to the central position when the file is reopened. For this reason, the operator should not be nervous about experimenting with setting different values in this dialog.

Saving your work.

To save a race to the hard disk click file / save as. Under the Lynx directory select Photos and then the appropriate month. If event file is used the file name will be generated otherwise enter unique file name. Click save.

Results Filters.

It may be necessary to adjust the FinishLynx time to suite a manual time. To do so highlight "start" then left click on the Camera information icon.

Start Settings Box appears. Enter time adjustment in the offset, to either add or minus time.

Printing results.

After entering all results, these may be printed by clicking on the print icon above the results screen. This will reveal the print screen, enter OK.

Printing image.

To print an image, the area to be printed should be highlighted by dragging a box around the area using the right mouse button. A line may be placed on prints by clicking with the left mouse button near the nose. (the line is the actual position where the image was evaluated.)

Reduce / cropping an image.

This removes unwanted image to reduce file size and therefore disk usage. Reduce the image size using the (-) icon until the entire image appears on screen. To crop select the portion of the image with no runners in, and define this area by dragging a box using the right mouse button. Click the "crop" icon with left mouse button. Repeat this until all of the unwanted space is removed. The Auto Crop icon may also be used if desired.

AFTER THE LAST RACE

Once all evaluation has been completed and details saved you can exit the system by clicking the top x on your screen.

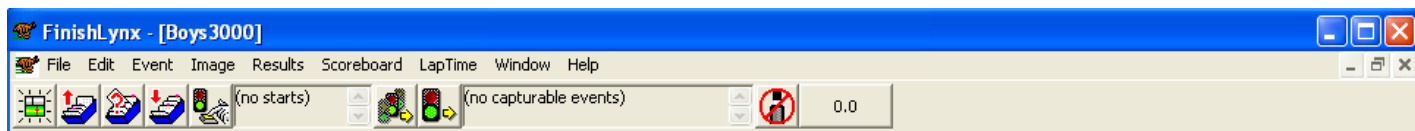
- This will return you to the main menu.
- Click on the start button (bottom left)
- Click on shut down
- Click on shut down computer.
- Click on yes.
- Turn camera off.
- Disconnect all leads to the camera and pack away.

If equipment is to be stored, repack all components into the travel case, ensuring all items on the check lists are present.

Please Note: Do not turn off the power to the U.P.S. or the U.P.S. itself.

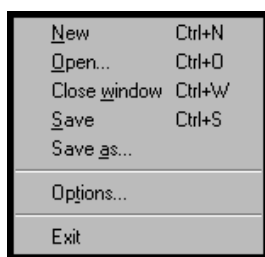
OPENING A FILE

The first step to opening an existing image is to locate the Menu Bar. This extends across the top of the entire screen.



Each of the words across the top of the screen will become a pull down menu of options relating to the topic word that shows on the Menu Bar. Move the mouse over any of the words on the menu bar and click the mouse button. The menu for that group of options will appear. Click anywhere outside the menu to make it go away.

If you click on File in the menu bar you will see this menu:



To open an existing image, you should click on the word Open or use the keystroke combination Ctrl +O.

Most often used menu items are:-

- | | |
|--------------------------|--|
| FILE / OPEN :- | Opens previously saved races. |
| FILE / SAVE :- | Saves race information to a file or saves changes to a modified result. |
| IMAGE / ADJUSTMENT :- | Allows adjustments to captured pictures after photo has been taken i.e. brightness, contrast etc. In most cases the GAMMA should only be adjusted. |
| IMAGE / EXPORT BITMAP :- | Writes a JPEG file to disk of the Selected area for export to a third party graphics program or printer. |
| IMAGE / OVERLAY :- | Places selected overlays on screen. I.e. (photo for win etc.) |

TROUBLESHOOTING

NO "a" OR "ALL START SENSORS FAILED TO ARM"

- Check all connections at the camera and the computer.
- In the hardware control screen information zone highlight camera then click on the "i" information icon to reveal the camera settings.

Gun sensor should be set on () norm. open
() norm. closed

- Check switches and connections on all start boxes (not just the box you are currently using)

NO "c"

- In the hardware control screen check capture says "yes" (this toggles between yes and no)
- Capture button is not connected to computer
- Capture button icon is not turned off (located next to timer on the hardware control screen)

CAMERA FOCUS

If the track image or captured image does not appear sharp on the screen even though the image through the lens viewer is focused

1. Remove the lens and check that the through the lens mirror is sitting properly and not loose. (if not re seat and advise)
2. Manually focus lens by having a second person adjust the focus on the lens while the image on the screen is viewed until the image is sharp.

FINISHLYNX COLOUR DIGITAL PHOTO FINISH EQUIPMENT

POWER FAILURE PROCEDURE

Each system incorporates an uninterrupted power supply unit. This unit will provide temporary power during power failures.

The only equipment to be connected to the uninterrupted power supply unit is the FinishLynx camera, computer, computer screen and the scan converter.

The printer and back up equipment are not to be connected to the uninterrupted power supply unit.

Please note that the photo finish uninterrupted power supply unit is **not** to be turned off between race meetings.

A fully charged uninterrupted power supply unit in good condition should produce 15 to 20 minutes of power for the system.

IN THE EVENT OF A POWER FAILURE WITHIN 5 MINUTES OF A PROGRAMMED RACE START THE FOLLOWING PROCEDURE IS TO BE ADOPTED.

- The judge / operator is to bring up the next race and ready for capture.
- Turn off the monitor (this unit has a large power drain)
- Capture the race as usual.
- After you have captured the race hit " ctrl s " (on the keyboard) and then " enter" to save the race.
- Turn on the monitor to view the captured image, evaluate as normal (if enough power is left to run)
- In the event of not enough power to run the screen wait for the power to restore, restart the system and load the saved race and evaluate as normal.

IN THE EVENT OF A POWER FAILURE WHERE THERE IS GREATER THAN 5 MINUTES OF A PROGRAMMED RACE START THE FOLLOWING PROCEDURE IS TO BE ADOPTED.

- Power down all components of the system.
- Do not turn off the uninterrupted power supply unit.
- When 5 minutes from race time follow the procedure as detailed above.

INSTRUCTIONS

FOR USE OF MULTI REGION ENHANCE:-

- THE MULTI REGION ENHANCE BAR IS LOCATED ON THE LEFT HAND SIDE OF THE IMAGE SECTION AND IS DISTINGUISHED BY AN “ E “
- TO CREATE MULTIPLE SECTIONS SIMPLY MOVE THE MOUSE TO THE TOP OF THE BAR NEAR THE TIME BOX AND THE POINTER WILL CHANGE INTO A DOUBLE ENDED ARROW. HOLDING DOWN THE LEFT MOUSE KEY, SIMPLY DRAG THE ARROW DOWN TO CREATE A SEPARATE IMAGE SECTION.
- TO ENHANCE EITHER SECTION SIMPLY LEFT CLICK ON THE E BAR IN THE AREA YOU WISH TO ADJUST AND A DROP DOWN BOX WILL APPEAR. CLICK ON “ADJUSTMENTS” IN MOST CASES YOU WILL ONLY NEED TO ADJUST THE GAMMA, REDUCE TO BRIGHTEN OR INCREASE TO DARKEN.
- ONCE ADJUSTED THE ENHANCED AREA MAY BE MOVED ON THE SCREEN EITHER UP OR DOWN BY MOVING THE MULTI REGION ENHANCE BAR WHERE THE TWO REGIONS JOIN. SIMPLY HOLD DOWN THE LEFT MOUSE KEY AND DRAG.