

## FinishLynx V8.03 Release Notes

- + Improved error code reporting for more efficient trouble-shooting.
- + TagHeuer CP 540 LapTime support is now included. The CP 540 has both RS232 and Ethernet ports. To connect on Ethernet you need to choose "Network (connect)" and use port 7000.
- + LapTime devices that have a standard TCP port number now have that port number automatically filled in. The Tag Heuer CP 540 is 7000, Chronolec is 2008, and IPICO is 10000.
- + There are two new scoreboard fields that are specifically intended to help integrate the Chronolec system with FinishLynx.
  - Code\14\13 is the "From Image" Cumulative Split Time field and always reports the most recent split time that came from image. If there aren't any split times from image for that participant then this field will be empty.
  - Code \14\14 is the "From Image" Window Number field. This reports which window number the "From Image" Cumulative Split Time came from. This value can be used to request image (through the Remote Control Interface) from the correct image window.
- + The reported "type" of COM port (as reported by Windows) is now displayed in parenthesis after the port name in the drop-down lists.
- + You can now open events that are missing image files.
- + Added "Gill 6 Digit.lss" script.

# FinishLynx Release Notes





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FinishLynx 8.0 Release Notes

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# Introduction

This document contains release notes describing new features available in:

- ▶▶ *FinishLynx 8.0* (see "*FinishLynx 8.0 Release Notes*" on page 9)
- ▶▶ *FinishLynx 7.5* (see "*FinishLynx 7.5 Release Notes*" on page 27)
- ▶▶ *FinishLynx 7.3* (see "*FinishLynx 7.3 Release Notes*" on page 43)
- ▶▶ *FinishLynx 7.2* (see "*FinishLynx 7.2 Release Notes*" on page 53)
- ▶▶ *FinishLynx 7.1* (see "*FinishLynx 7.1 Release Notes*" on page 73), and
- ▶▶ *FinishLynx 7.0* (see "*FinishLynx 7.0 Release Notes*" on page 77).

## Obtaining technical support

There are three ways to obtain technical support for Lynx products:

- ▶▶ Go to the *Lynx website* (<http://www.finishlynx.com/>) and click the **Support** link
- ▶▶ Call (978) 556-9780 and ask to speak with someone in tech support, or
- ▶▶ Send an email to the *technical support department* (<mailto:support@finishlynx.com>).

## Obtaining Lynx products and information

There are three ways to obtain Lynx products and information:

- ▶▶ Go to the *Lynx website* (<http://www.finishlynx.com/>) and click the **Products** link
- ▶▶ Call (978) 556-9780 and ask to speak with someone in sales, or
- ▶▶ Send an email to our *sales department* (<mailto:sales@finishlynx.com>).



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## Chapter 1

# FinishLynx 8.0 Release Notes

This chapter contains release notes describing new features available since the release of FinishLynx version 7.5.

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## General New Features

### Support for Black and White EtherLynx 2000+ camera

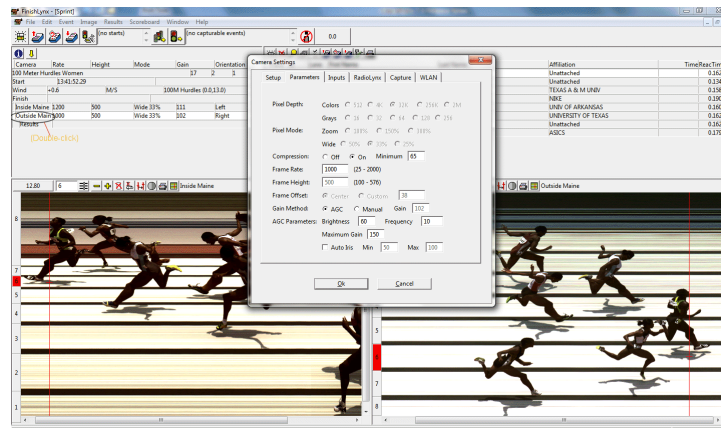
FinishLynx now supports the **Black and White EtherLynx 2000+ Camera**.

### Camera boot failure messages improved

A unique error code is now displayed each time an EtherLynx camera fails to boot properly.

### Easier Camera Settings dialog access

Now, you can access the **Camera Settings** dialog for a particular camera by double-clicking the camera line in the Hardware Control window.



## Ability to set status in \*.evt file

You can now set a status for a participant in the \*.evt file.

When you do this, the first character of the participant line must be a backslash (\) so that FinishLynx knows that the line is a participant line with a status, rather than the first line of a new event block.

***For example:***

```
E1, R1, H1, Test  
  
, 11, 1, Smith, Joe  
  
\DNS, 22, 2, Jones, Bob  
  
, 33, 3, Murphy, Steve  
  
\DQ, 44, 4, Johnson, Mike
```

## Ability to undo an overlay

You can now undo, or delete, the last image overlay that was added.

***To undo an image overlay:***

Click **Image | Remove overlays**.

## Ability to change position of overlay images

You can now change the position of the last image overlay that was added using the arrow keys.

---

**Note:** As soon as you add an overlay, no hairline or selection boxes appear on the image. As long as no hairline or selection boxes appear, then you can use the arrow keys to control the last overlay added.

---

## Ability to enter text into Time field

It is now possible to enter arbitrary text into the **Time** field in the **Results** area. If the result's status is valid, then the result is sorted and assigned a place number based on this text. That is, all "text" results come after "time" results. If the result has a code (DQ, DNS, DNF, etc.), then this text is used to sort those results with the same code.

---

**Note:** Anything entered into the Time field that does not scan as a valid time is considered "arbitrary text." A string that starts off resembling a time is scanned as a time, not text. For example, **-1LAP** is interpreted as a manually entered time of **-1** seconds. **LAP-1**, however, is interpreted as text.

---

***The following hidden settings affect how text in the Time field is interpreted:***

`\Event\Results\TimeString\Enabled:`

- ▶▶ 0=Off, 1=On
- ▶▶ Enables text input.
- ▶▶ Default 1.

`\Event\Results\TimeString\SortTimes:`

- ▶▶ 0=None, 1=Ascending, 2=Descending
- ▶▶ How valid results are sorted.
- ▶▶ Default 1.

`\Event\Results\TimeString\SortCodes:`

- ▶▶ 0=None, 1=Ascending, 2=Descending
- ▶▶ How coded results are sorted.
- ▶▶ Default 1.

## Applications for entering text into the Time field

Entering text into the Time field is helpful with the sport of cycling, for example. In cycling, riders are lapped, do not finish the race, but still are still assigned a "finish place" in the race based on when they were lapped. Also, riders can drop out (marked DNF) and race officials order the riders by when they dropped out. Both of these goals can be accomplished with this new feature.

For instance, you can set **SortTimes** to 1 and **SortCodes** to 2 and use the convention *LAP-n* to indicate how many laps behind someone is that should be ranked. You can also use the convention *DNFn* to indicate on which lap someone dropped out for someone who is marked DNF. You could then generate a results list that looks like this:

Place	Time
1	15:12.34
2	15:14.56
3	LAP-1
4	LAP-2
4	LAP-2
6	LAP-3
DNF	DNF3
DNF	DNF1

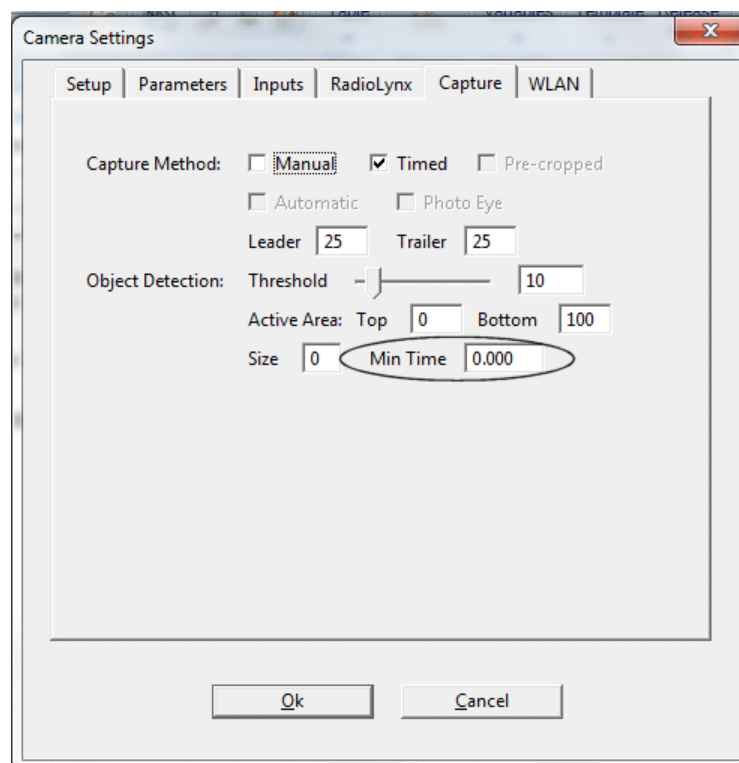
## Minimum time parameter

There is a new minimum time parameter for object detection, called **Min Time**. This setting forces the relative width of the detected object to be at least the specified time. The leader and trailer frames are added in addition to this time.

For example, if Min Time is set to 1 second and something passes by the camera very briefly, you should see 1 second of capture plus the leader and trailer frames. By default, the option is set to 0. The maximum supported value is 1 minute. This setting affects **Find Object** and **Auto Crop** in FinishLynx as well as **Automatic Capture Mode** in the camera.

### *To access the Min Time parameter:*

In the **Camera Settings** dialog, click the **Capture** tab. Enter the **Min Time** parameter in the text box in the lower right area of the dialog.



## New hidden setting controlling event title

There is a new hidden setting, `\Event\Image\FullScreen>TitleOffset`, which controls how far down from the top the event title is in full screen mode. The default is 10 pixels.

## New warning when arming an event

You now get a warning if you try to arm an event that already has a start and already has at least one result entered with a time.

## New ways to customize FinishLynx

### Ability to customize the Main Menu bar

You can now customize the **Main Menu** bar and the image selection pop-up menu by blanking out the text of unwanted items.

#### *To remove an entire menu or sub-menu:*

Blank out the title of that menu. The text of the sub-menu items does not need to be blank.

Removing all of the items in the image selection pop-up causes the menu to not appear at all.

For example, to get rid of the Quick Open item, the entire Edit menu, and the LapTime Clear sub-menu, add this to the end of your language file:

```
Strings\MenuBar\File\QuickOpen:String=
```

```
Strings\MenuBar>Edit>Title:String=
```

```
Strings\MenuBar\LapTime\Clear:String=.
```

## Ability to customize the Options and Camera dialogs

You can now customize the Options and Camera dialogs by blanking out the text of unwanted items. Additionally:

- ▶▶ for an item that is labeled by static text, you generally can remove the item by blanking the label.
- ▶▶ for checkboxes, blank the text that follows the checkbox.
- ▶▶ to remove an entire tab, blank the tab's text. Some items cannot be removed, either because they didn't have some convenient text to blank, or because the functionality of the dialog would be too compromised.

---

**Caution:** It is possible to remove certain items and leave certain other items that will result in odd or incorrect behavior depending on what is grayed out or not. Remember that some items rely on other items to know whether they are active or not.

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## Language Files Updated

### Russian language file

The Russian language file, **ru\_RU.lng**, file has been updated.

***To run FinishLynx in a different language:***

- 1) Click **File | Options....** The **Options** dialog appears.
- 2) Click to select the language you want from the **Language:** drop-down list at the bottom of the dialog.
- 3) Close FinishLynx. The next time you run FinishLynx, it runs in the language file you just selected.

### French language file

The LIF file WindManual string is now blank in the **fr\_FR.lng** file.

***To run FinishLynx in a different language:***

- 1) Click **File | Options....** The **Options** dialog appears.
- 2) Click to select the language you want from the **Language:** drop-down list at the bottom of the dialog.
- 3) Close FinishLynx. The next time you run FinishLynx, it runs in the language file you just selected.



## New LapTime Features

### Support for Chronelec No Ack

FinishLynx supports a new LapTime device, **Chronelec No Ack**. This works the same as Chronelec, except that no ACKs and no Resends are sent to the decoder. Use **Chronelec No Ack** if another device, like the Chronelec software, is sending the ACKs.

### New IPICO LapTime device default

The IPICO LapTime device suffix now defaults to blank.



## New Scoreboard Features

### New scoreboard code

There is a new scoreboard code, `\11\04`, for sending time with ten thousandth precision.

### Tag Heuer HL985 is supported

A new scoreboard script to support the **Tag Heuer HL985** is included.

### Nevco scripts updated

The `Nevco.lss` scripts have been updated.

### New Adaptive scoreboard scripts added

There are two new Adaptive scoreboard scripts:

- ▶ `Adaptive32x128 3line.lss`, and
- ▶ `Adaptive32x128 4line.lss`.

***To select a new scoreboard script:***

- 1) Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2) Click the **New** button to activate the Scoreboard settings.
- 3) From the **Script:** drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4) Click **Ok**.



---

## New External Sync Plug-in Available

The new External Sync Plug-in, **FinishLynx-ES.exe**, is available.

External Sync allows you to attach an external timer to a current generation EtherLynx camera (5L300, 5L400, or 5L420) through the **Photoeye A** input.

---

**Note:** The external timer must make a closure on these inputs exactly once per minute in order for FinishLynx to follow the external timer's clock. The **TagHeuer CP540** only does once per minute, so there is nothing to set there. The **MicroGate MicroSync** has several options, one of which is once per minute.

---

To obtain the External Sync Plug-in, please *contact Lynx* (see "*Obtaining Lynx products and information*").

## Setting up the External Sync Plug-in

- 1) Turn on the external sync device and make sure it is configured according to how you intend to use it.  
**Note:** If you want the external sync device to be synced to GPS time, make sure that happens before you sync FinishLynx to it.
- 2) Double-click the camera in the Hardware Control window.
- 3) Click the **Inputs** tab, on the Camera Settings dialog.
- 4) Click to select the **Photo Eye A** radio button in the External Sync: setting.  
**Note:** We advise you to leave the **Max Error** at its default of 100 microseconds. The lowest allowed is 50, the maximum is 1,000,000.
- 5) That camera's background color turns yellow and the External Sync field says, **Waiting (0)**. When the first "top of minute" event is received, the External Sync field turns to **Waiting (1)**. When the second "top of minute" event is received, the External Sync field says **Ready (2)**.
  - ▶ The camera must have at least two events in its list before you can sync the camera to the external timer.
  - ▶ You can now perform the **Sync TOD...** function and enter the actual time as reported by the external timer of the most recent "top of minute" event. The yellow background now disappears and the status says **Synced**. As the status does not change from **Synced** (as long as the background does not turn yellow), you are synced and ready to go.

- ▶ Similar to a "red lined" camera, the camera line of a capturing event also turns yellow if external sync has failed. The event's camera line does not list the External Sync field; rather, it is displayed as yellow if something is wrong.
- 6) Once the status is **Synced**, you can revert to the **Waiting** state if an event is received at the wrong time or not received at all. If an event is eventually received at the expected time and the error does not exceed **Max Error**, then the status automatically changes back to the **Synced** state. If regular events are received again, but the error exceeds Max Error, then the status becomes **Ready**, and you must manually sync again, using the **Sync TOD...** function.

For example, you might disconnect the external timer briefly, or accidentally short the wires. When properly re-connected, the status likely reverts to **Synced** automatically. Or, if you change the time on the external timer, then the "top of minute" events will likely be off by more than Max Error, and you must perform Sync TOD... again.

## New Sync TOD... dialog option

The **Sync TOD...** dialog has a new option to **Make current event capturable**. This is enabled when using the External Sync Plug-in, and when the current event is compatible with the current camera setup.

- ▶▶ To be compatible, all of the cameras in the event must be present in the current camera setup, and they must be in the same order. That means that you should have all of the same cameras booted and in the same order as when the event was created.
- ▶▶ The purpose of this feature is to allow you to sync the cameras to an external timer, create an event, save the event and turn off all cameras, set up the cameras somewhere else, sync to the same external timer (which has been on the whole time or syncs again to GPS time), and then capture into the saved event, because it has been made capturable again.
- ▶▶ You can only make changes to a camera's External Sync settings from the Hardware Control window.
- ▶▶ You can only have one camera set to use External Sync at one time. Before turning External Sync on for another camera, you have to turn it off for the current camera.

## Chapter 2

# FinishLynx 7.5 Release Notes

This chapter contains release notes describing new features available since the release of FinishLynx version 7.3.

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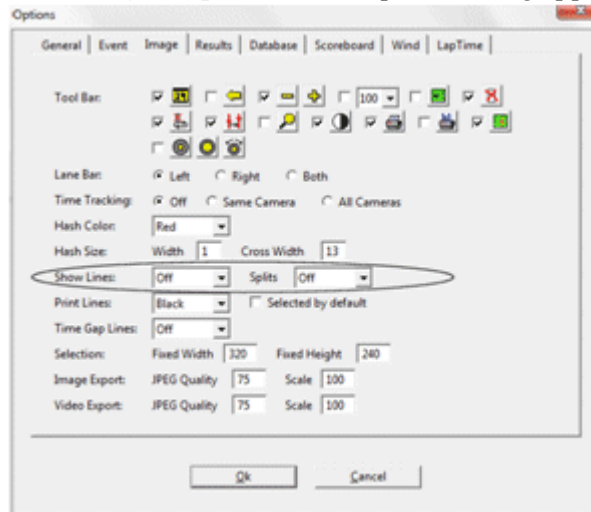
## General New Features

### Show Lines and Splits in full screen mode

If enabled, **Show Lines** and **Splits** now appear in full screen mode.

#### To enable Show Lines and Splits:

- 1) Click **Image | Options**. The Options dialog appears.



- 2) Next to either the **Show Lines:** or **Splits** option, click to select the down arrow to display the drop-down list.
- 3) Select a color to enable **Show Lines** and **Splits**. Click **Ok** to exit the dialog.

### Enhanced Find Object feature

When you use the **Image | Find Object** feature, it now finds the first object in the newly added image. When you run Find Object and it fails to find an object because it is at the end of the image, FinishLynx asks if you want to search from the beginning. If you choose *No*, the default, then the next time you run Find Object, it starts from the last object found.

## New Find Object hidden setting

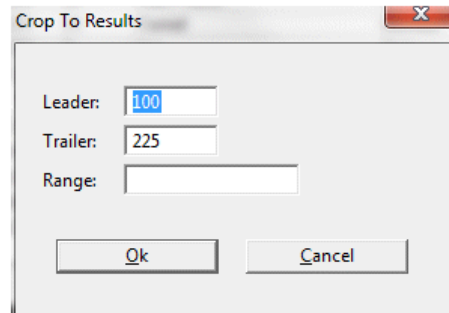
FinishLynx has a new hidden setting, *Event\Image\FindObjectMode*, default 1. This setting controls how image is scrolled when using the **Find object** feature.

- ▶ A value of **0** reverts **Find object** back to its previous behavior, which was to move the hash to the object or to the center if the object is off screen.
- ▶ A value of **1** always centers the hash.
- ▶ A value of **2** moves the object to the current location of the hash. If the hash is not currently visible, it is centered.

## New Crop to results... feature

The new **Image | Crop to results...** feature crops out the entire image except for the image around each result's evaluated time.

Clicking **Image | Crop to results...** makes the following dialog appear:



The **Leader:** and **Trailer:** values are how many frames before and after the result's evaluated time are kept in the image.

If the **Range:** value is left blank, all current results are used.

---

**Note:** Range works the same as the recently added Range feature in the *Print results with image* feature. If left blank, all current results are used. This feature works for both line scan and area scan images. Separate Leader and Trailer values are retained for the two kinds of images.

---

---

## New Cropped Image Warning

If you try to save an event that has had the *Crop to results...* or *Keep selection* features without uncropping the image, a new **Cropped Image Warning** appears.

---

**Note:** If you select *Save as...*, an uncropped copy of the event remains, and therefore the warning does not appear. However, the warning does appear after the first *Save* or *Save as* function is used on an event because a copy is not left behind.

---

## New File | Reload feature

When an event is opened in *Reader mode*, a **File | Reload** command is enabled. Use this feature to load the latest information that the capture computer has stored in the \*.evn file. This feature is useful when you are using *Reader mode* and *Time Trial mode* together, because starts typically come in after the *Reader mode* enabled computer has opened the event.

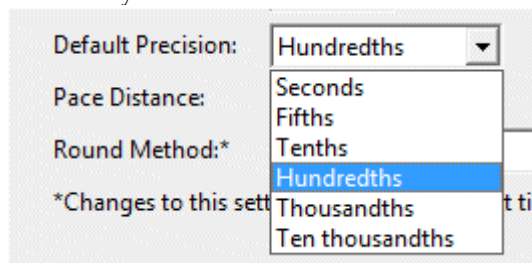
By clicking **File | Reload**, you save, close, and reopen the event.

## Default Precision value used for stop time

When the on-screen running time is set to stop, the precision used is now the same value that you assign to the **Default Precision** value.

### ***To set the Default Precision value:***

- 1) Click **Results** from the Menu bar, and then click **Options**. The Options dialog appears.
- 2) Click the arrow next to the **Default Precision:** setting and click to select the value you want to use.





## New IdentiLynx Features

### Support of IdentiLynx's native ACM

FinishLynx now supports the IdentiLynx camera's native ACM. A separate capture checkbox appears for IdentiLynx cameras. By checking the box, you can control the trigger, size, and active area in the camera dialog.

***To set the active area:***

- 1) Select image in an event.
- 2) Click **Image** from the Menu bar.
- 3) From the drop-down list, click **Set | Object active area**.

### Frame times available

Now, when you use an IdentiLynx camera without any EtherLynx cameras powered on, you can get **frame times**.

Also in this configuration, you can create a manual start to see **elapsed times** in the image, rather than the time of day.

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**Note:** All times, including frame times and manual start times, come from the clock of the PC that is running FinishLynx.

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### Ability to retain the overlay setup

You can now retain the overlay setup of your IdentiLynx camera so that it will appear in the next event that you create or load.

***To retain the overlay setup:***

- 1) Create an overlay or overlays.
- 2) Click **Image** from the Menu bar, and then click **Retain overlays** from the drop-down list.

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**Note:** When this feature is active, a check appears next to the menu item.

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***To clear the retained overlays:***

Click **Image | Retain overlays** again, and the check mark disappears.

When an event is loaded or created, the retained overlays are automatically added. You can remove these overlays and/or add more overlays without affecting the retained overlays.

## **New EtherLynx Features**

### **Ability to set size and active areas**

You can now set the size and active areas in EtherLynx ACM. These settings work the same as the size and area settings for the internal photo eye.

### **Improved camera booting and timer sync**

Multi-NIC systems now enjoy greater camera booting and timer sync capabilities. This means that you can have more than one NIC installed and active, and FinishLynx finds which one has cameras attached to it and properly boots and timer syncs those cameras. FinishLynx does this without having to set a base IP address.



## New Scoreboard Features

### New scripts

FinishLynx now features the following scoreboard scripts:

- ▶ **Adaptive16x128.lss**, and
- ▶ **Adaptive16x128Sprints.lss**.

#### *To select a new scoreboard script:*

- 1) Click **Scoreboard | Options...** from the Menu bar. The **Scoreboard | Options** dialog appears.
- 2) Click the **New** button to activate the Scoreboard settings.
- 3) From the **Script:** drop-down list, click to select a scoreboard script. FinishLynx automatically populates the settings for that dialog.
- 4) Click **Ok**.

### New armed/running results header

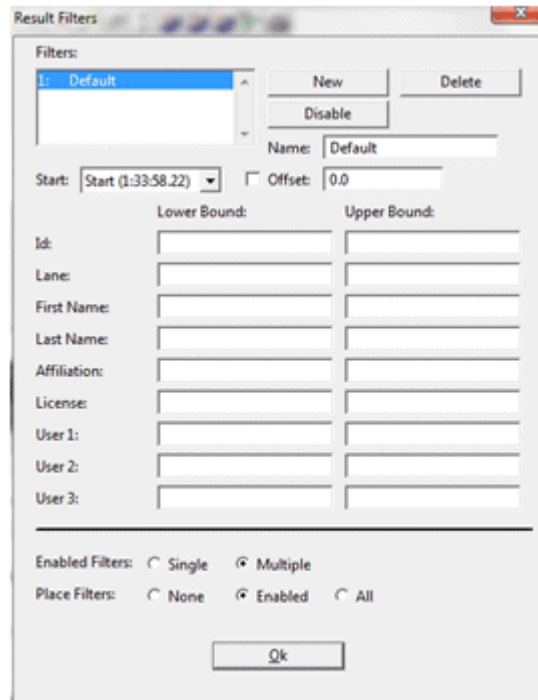
There is a new armed/running results header field in the scoreboard output.

## Ability to disable filters

You can now disable filters in the **Result Filters** dialog.

### *To disable filters:*

Click **Results** from the Menu bar and then click **Filters....** The Result Filters dialog appears.



- ▶ Disabled filters appear in gray, and enabled filters are in black.
- ▶ A button appears next to the filter list that says either **Enable** or **Disable**.
- ▶ At the bottom of the dialog, there is a new setting for how many filters can be enabled at the same time. The options are **Single** and **Multiple**.
  - ▶ If **Single** is selected, then whenever a filter is enabled, all other filters are disabled.
  - ▶ **Multiple** allows as many filters to be enabled as you like.

## Ability to choose which filters are used when calculating place

The new **Result Filters** dialog allows you to choose which filters are used when calculating the place field.

Click **Results | Filters...** to make the Results Filters dialog appear. At the bottom of the dialog are three selections.

- ▶ Select the **Enabled** radio button if you want the place field to be assigned based solely on the visible results with regard to the currently enabled filters.
- ▶ Select the **None** radio button to assign places with no filters defined.  
**Note:** Selecting **None** is a quick way to see the overall places when you are looking at a subset of the results. This works as long as:
  - ▶ all results are using the same start time, and
  - ▶ there are NO manually entered times.
- ▶ Select the **All** radio button to assign places with all filters, even the disabled ones, defined.  
**Note:** Selecting **All** gives you more control over how places are assigned for non-visible results. For example, you can assign the correct start time to each non-visible result using a disabled filter for a race with different start times for different groups of results. Also, if you have a mix of manually entered times and automatic times, they will compare correctly because the non-visible automatic times have subtracted starts.

## Shortcut menu for choosing which filters are enabled

### *To enable this:*

- 1) In the **Results** area title bar, click on any column that does not already have a shortcut menu. For example, *do not* click on *Time*, *Delta Time*, or *Speed*, because they already do.
- 2) A menu appears containing the defined filters with check marks next to the enabled filters. Click to select a filter to enable or disable it.

## **LapTime based place numbers cleared for unread results**

When the first official time is read, the LapTime based place numbers are now cleared for all unread results.

## New Print feature

Now, when you select **Print results with image**, you can select which results are included with the printed image.

You can define which results are included using the following methods:

- ▶▶ Comma separated list, such as 1,2,3,
- ▶▶ A bounded range, such as 4-99,
- ▶▶ An unbounded range, such as 4-,
- ▶▶ An unbounded arithmetic series, such as 1,3,...,or
- ▶▶ A bounded arithmetic series, such as 1,3,...15.  
*Note:* The arithmetic series can also decrease, such as 15, 13,..., or 15, 13,...7.

Other results definitions:

- ▶▶ If you want to specify which values are not allowed, begin the entire string with a caret, or ^.
- ▶▶ If you want to invert the meaning of a single field, begin the field with a tilde, or ~.

### Results definition examples

- ▶▶ *Accept 1 through 5:*

1,2,3,4,5

1-5

1,2,...5

- ▶▶ *Accept 11 and higher:*

11-

^1-10

- ▶▶ *Accept all odd values:*

1,3,...

^2,4,...

- ▶▶ *Accept all odd values to 15:*

1,3,...15

- ▶▶ *Accept all \*but\* odd values to 15:*

$\wedge 1,3,\dots,15$

▶▶ *Accept 1-5, even values to 20 (except 14), then every third value:*

1-5,~14,6,8,...20,23,26,...

▶▶ *Accept all values divisible by 5 except those also divisible by 4:*

~4,~8,~...,5,10,...