Timing Running Events

with

Finishlynx

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Hi Five! TIMING

Agenda

- Finishlynx System Overview
- Set up with one, two or more computers
- Basic configuration guidelines
- Three Easy Steps: Capture, Evaluate, Print
- Making it easier by using Files
- What Can Go Wrong?
- After the Meet is over

Finishlynx – What is it?

- **What Finishlynx Does**
  - Electronic timing for track and cross country events.
  - Accurate times to 4 decimal places (1/10,000 of a second)
  - Provides Finish times, place info, and race results
  - Supports multiple cameras, scoreboards, split times, and more

Finishlynx – What is it?

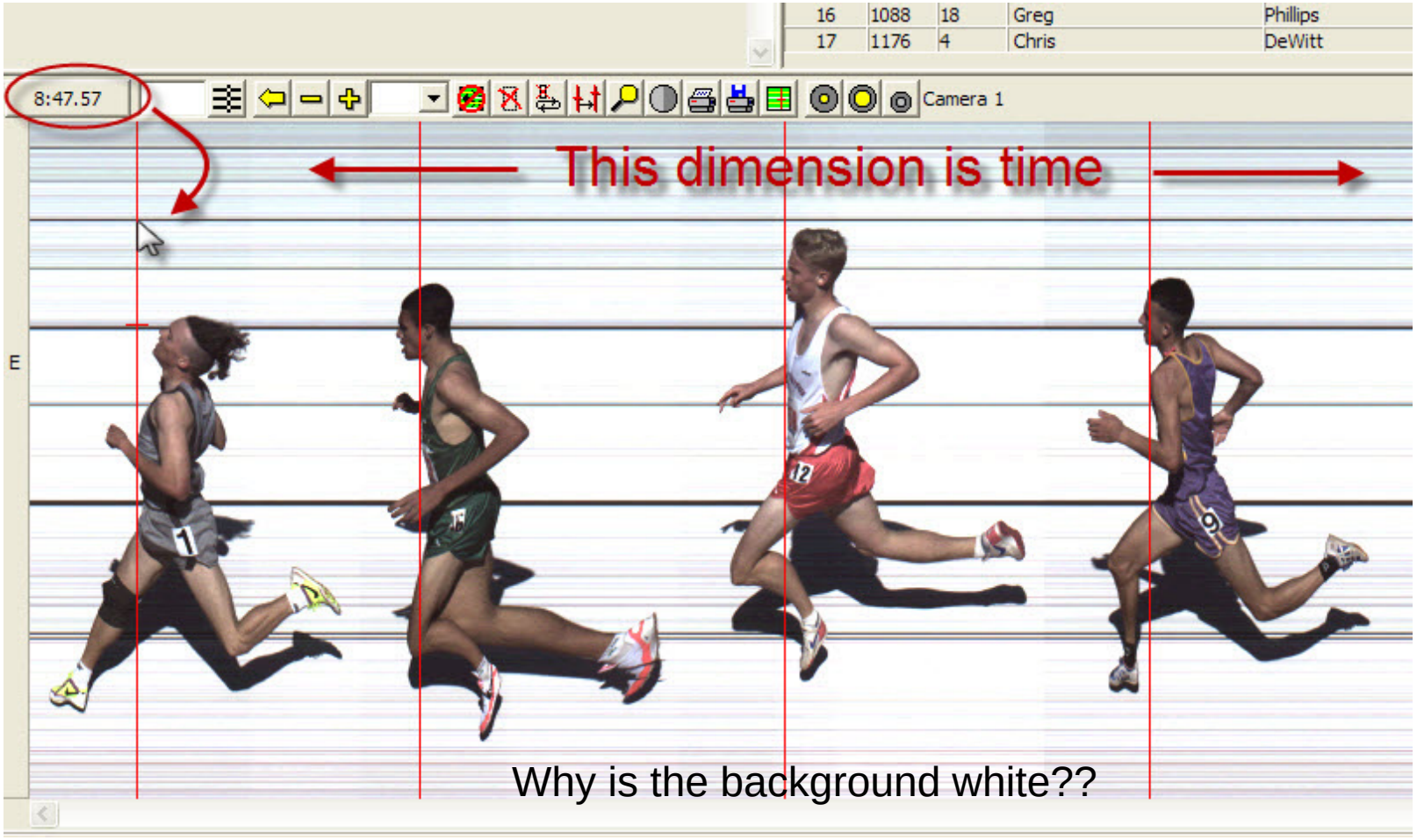
- **What Finishlynx Doesn't Do**
  - Not a full-featured race management system
  - Does not manage meet entries – no "clerk of the course" features
    - (athlete/school/events/etc)
  - Does not do any scoring

Finishlynx – How It Works

- Not your normal digital camera
- Takes very narrow “frames” (1/8th to 1/4th of an inch wide)
- Each frame is assigned a time by the camera
- Frames are “glued” together to form a composite image that you see on the screen.
- Can capture and evaluate at the same time

Finishlynx – How It Works

Finishlynx – The Picture

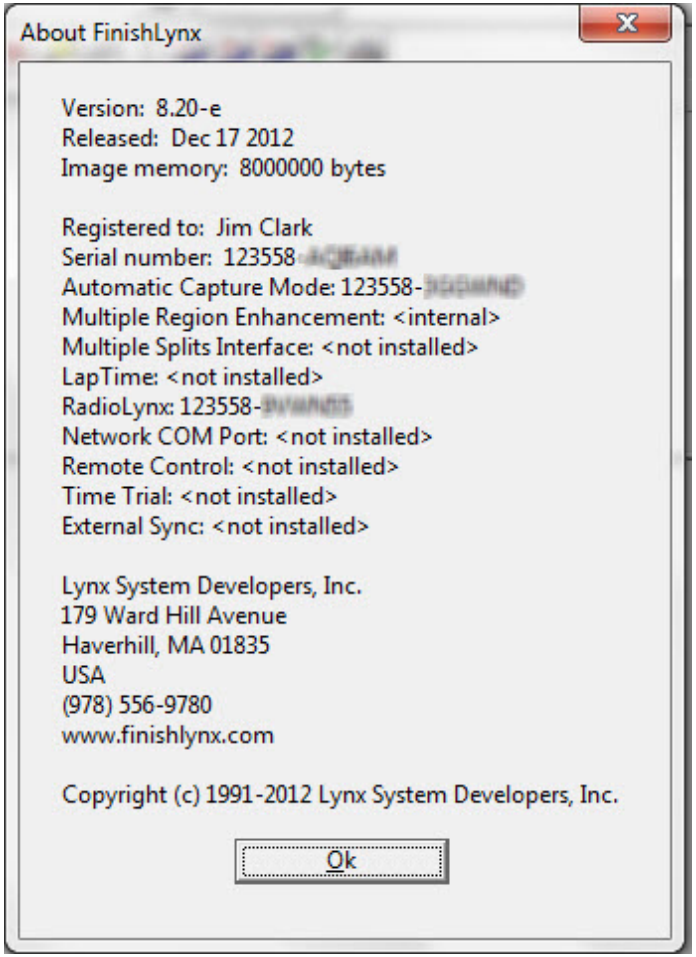


Finishlynx – Installing Software

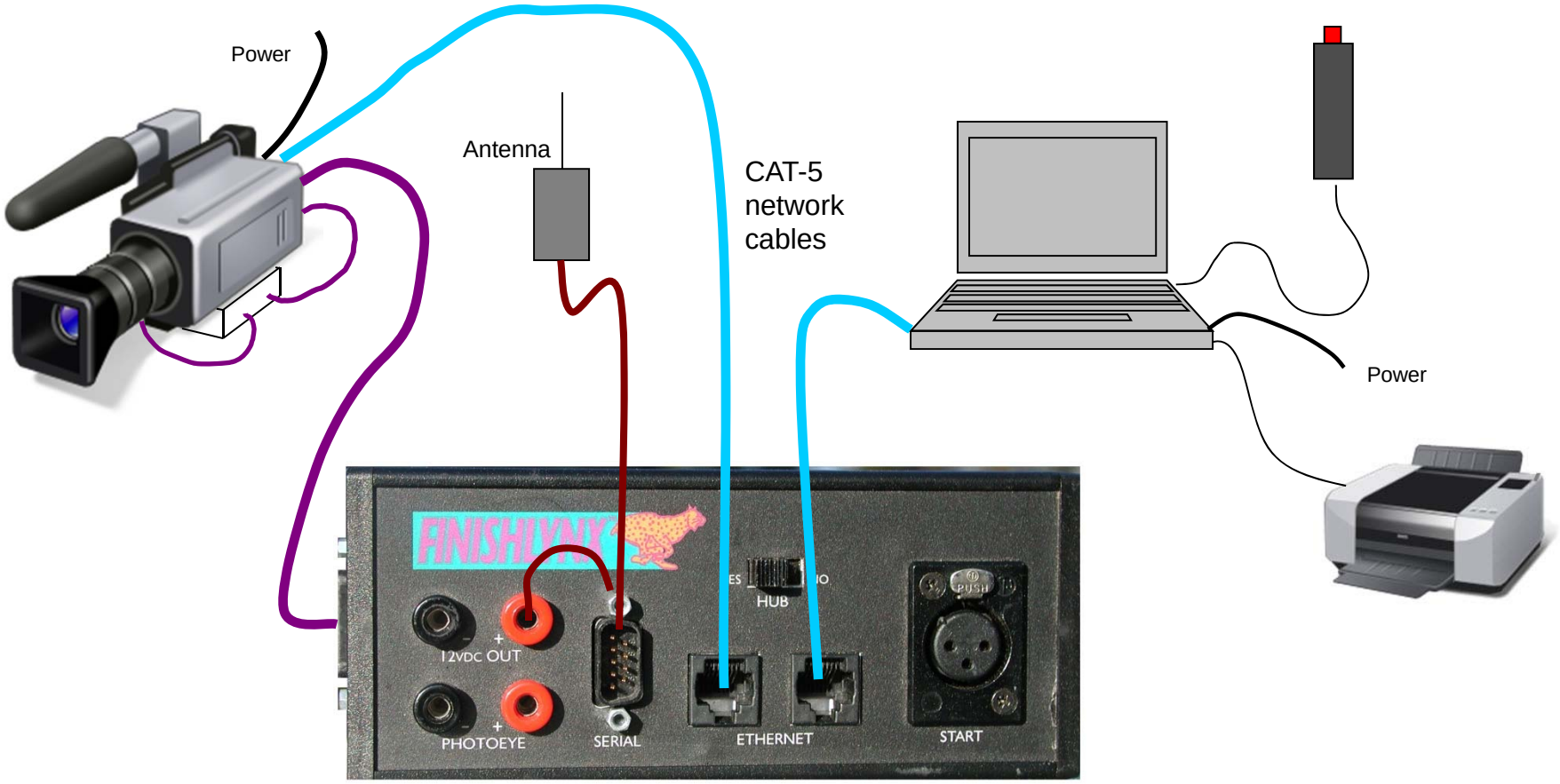
- Software available at www.finishlynx.com
- Don’t forget the plug-ins
- No support contract – upgrades are free!
- All components use different activation keys (serial numbers)
- Step 1 each year – install new software
- But first…

Finishlynx – Installing Software

- Write down configuration info before upgrading
  - Updates reset all config parameters
  - Serial numbers are in the Help->About box
- Maybe install each version in a different location instead of default location.

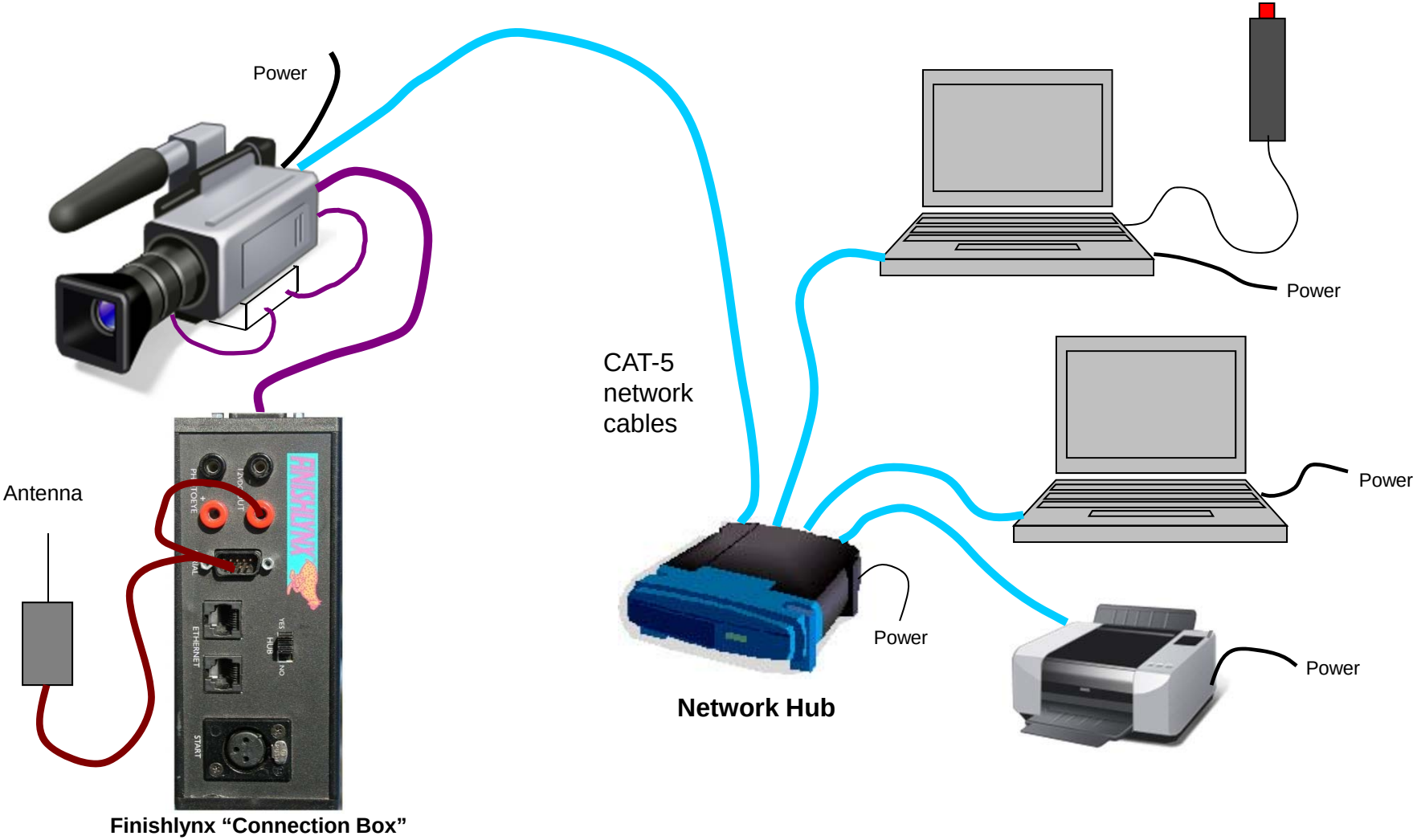


Setup – One Computer



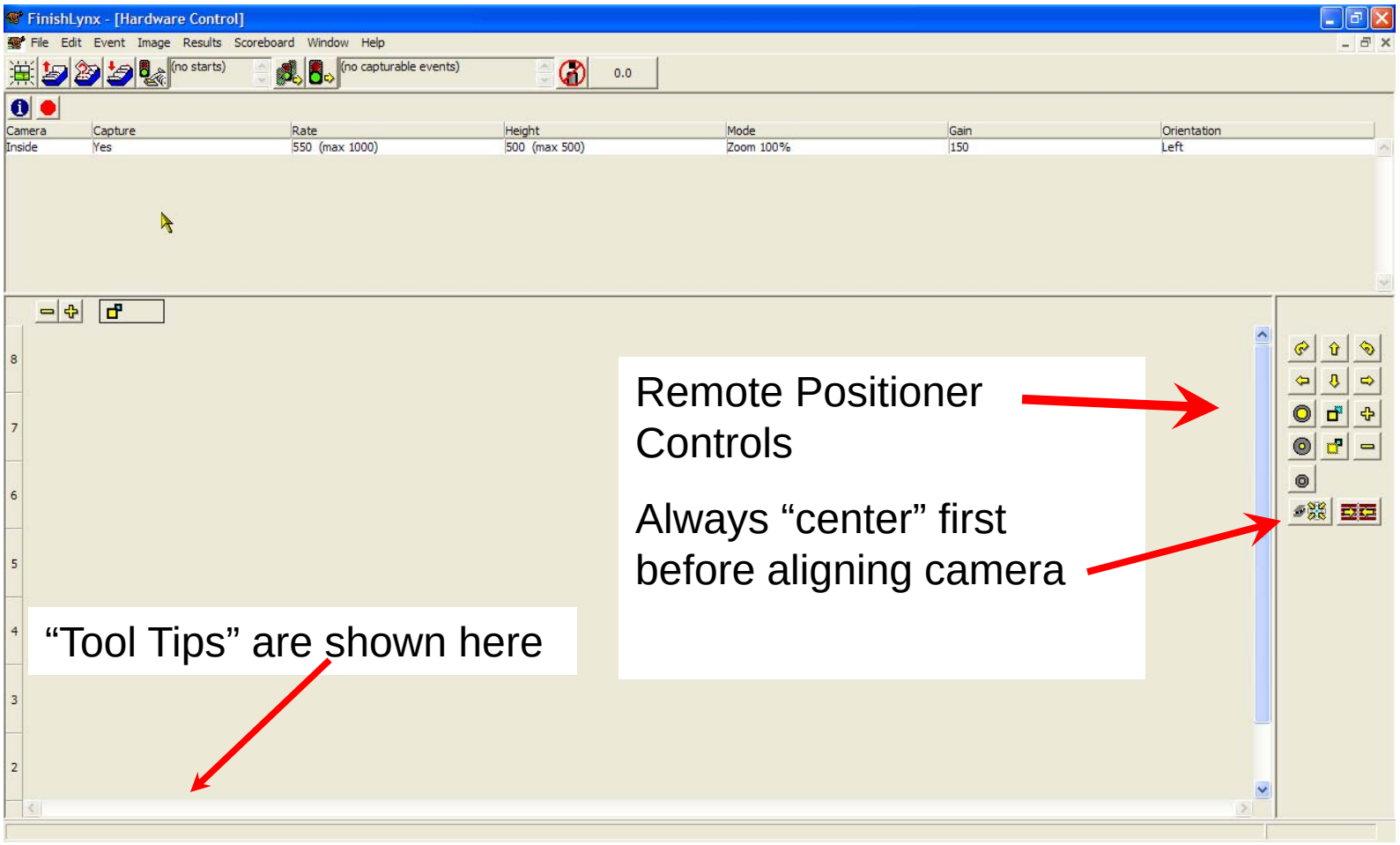
Finishlynx "Connection Box"

Setup – Two Computers

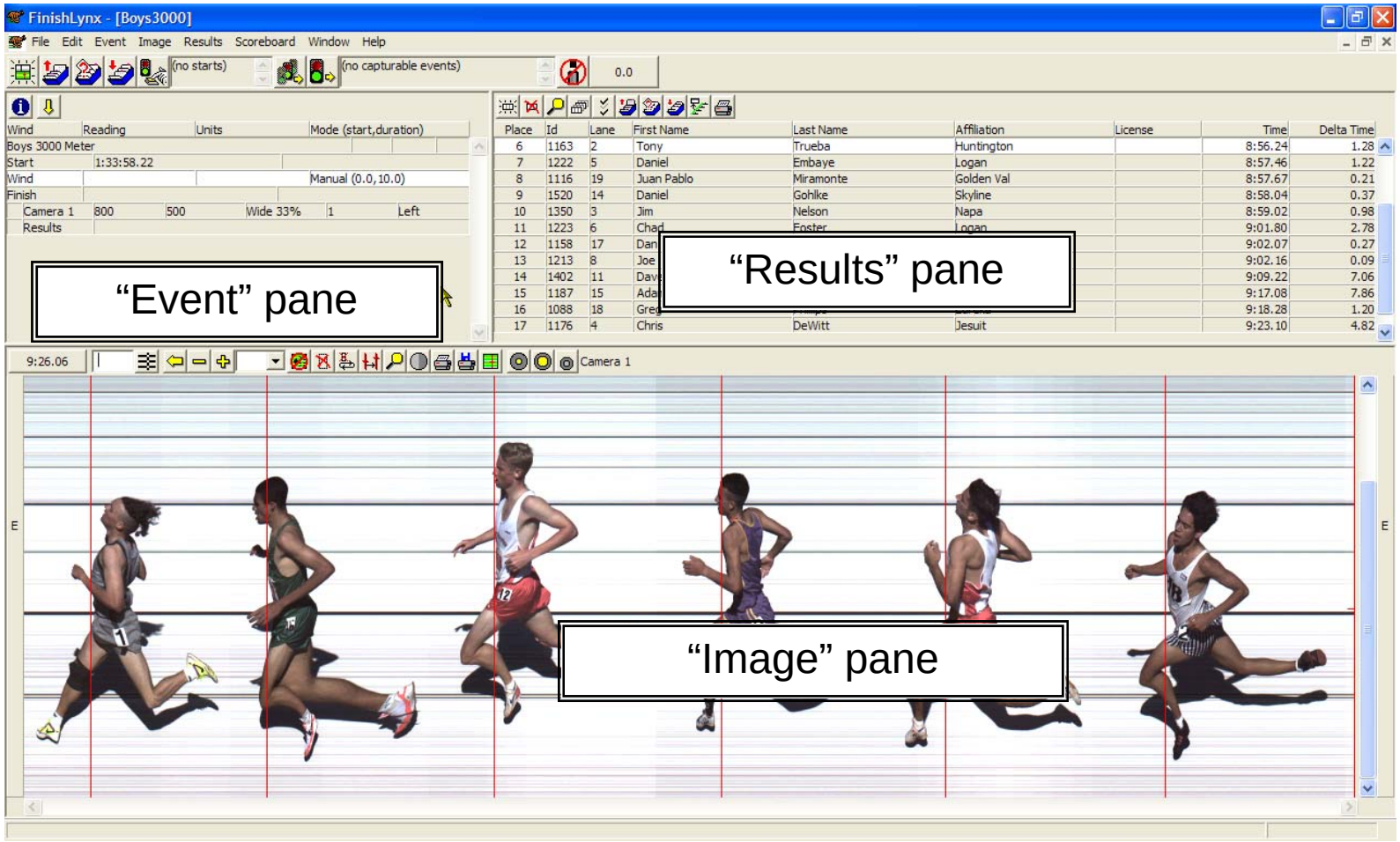


Finishlynx "Connection Box"

The Basic Finishlynx Screen



The Other Basic Screen



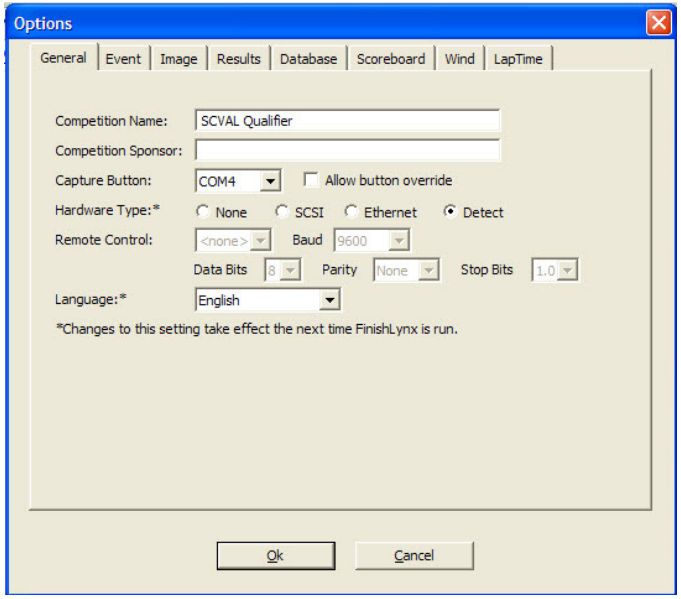
Aligning the Camera

Demonstration

Pre-Race Software Setup

Things to do before any meet

- File->Options
  - Actually, anything->Options
  - 8 tabs, 5 important
- Camera Options
  - 6 tabs, 5 important

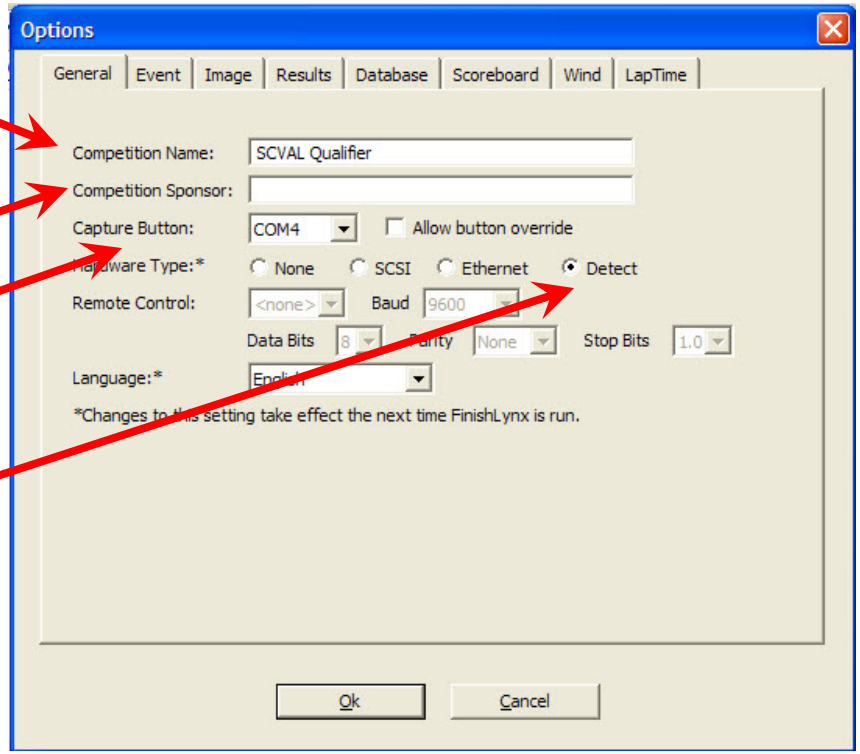


General Options

- Name of Event
  - Los Altos vs. Lynbrook
- Sponsor
  - Printed on all results

"`Visit www.lynbrooksports.com`"

- Port for Capture Button
  - Only lists valid ports
- Let it detect the camera type
  - If multiple computers, set this for capture system only – use none for others



Event Options

- Single Event mode to “On”
  - “off” if you’re really, really good
- Default Template
  - Suggest leaving blank
- File naming
- Where your saved files will go
- Backup directory
  - Can be different than event directory
  - Maybe a USB thumb drive
  - File->Backup

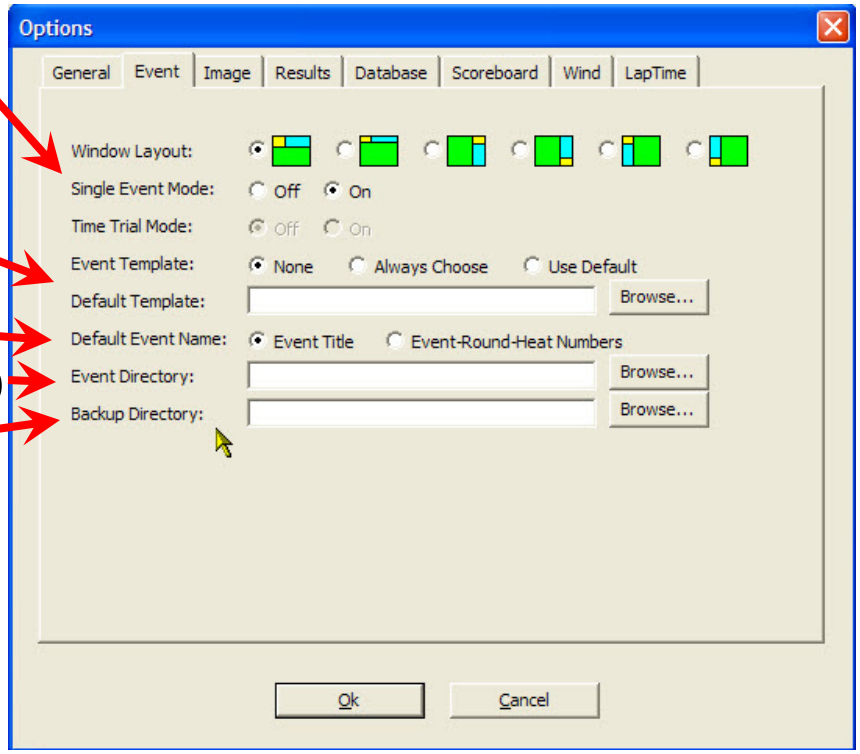
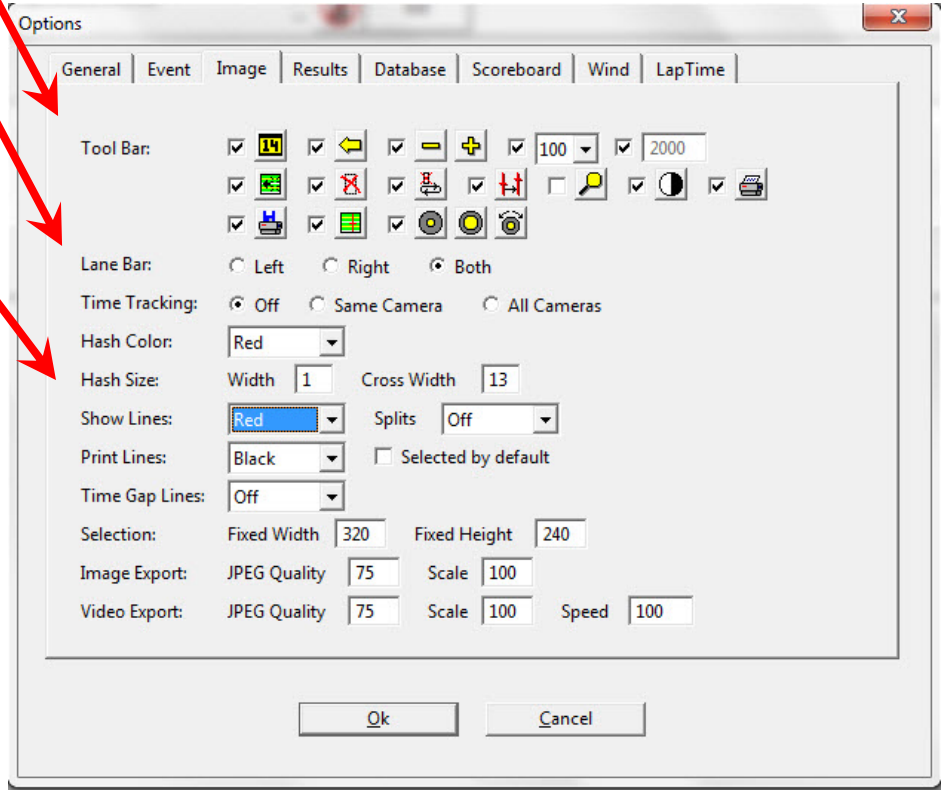


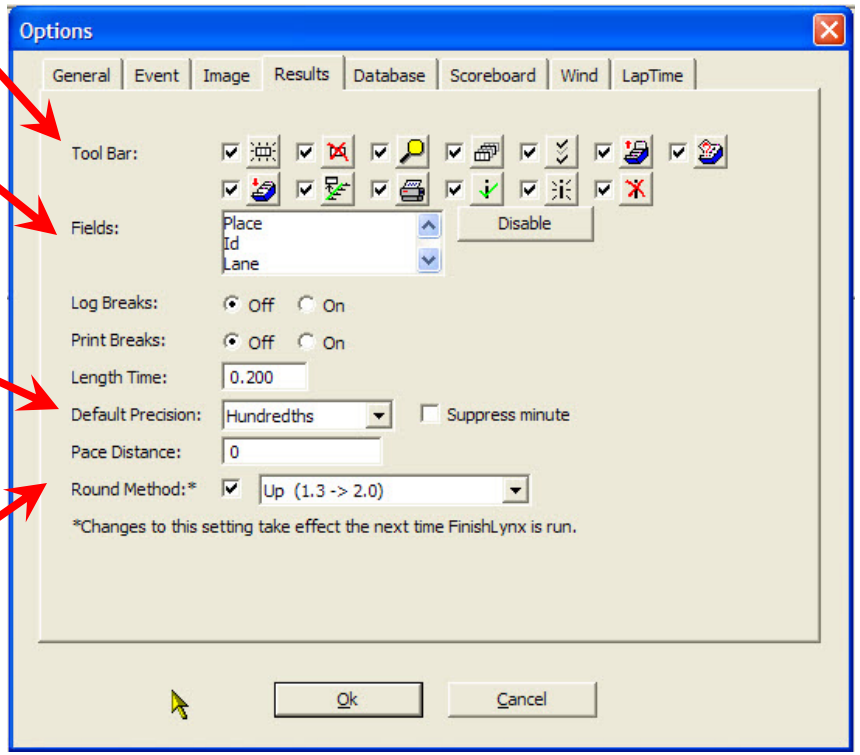
Image Options

- Enable all toolbar items
- Lane Bars on both sides
- Use defaults for other items



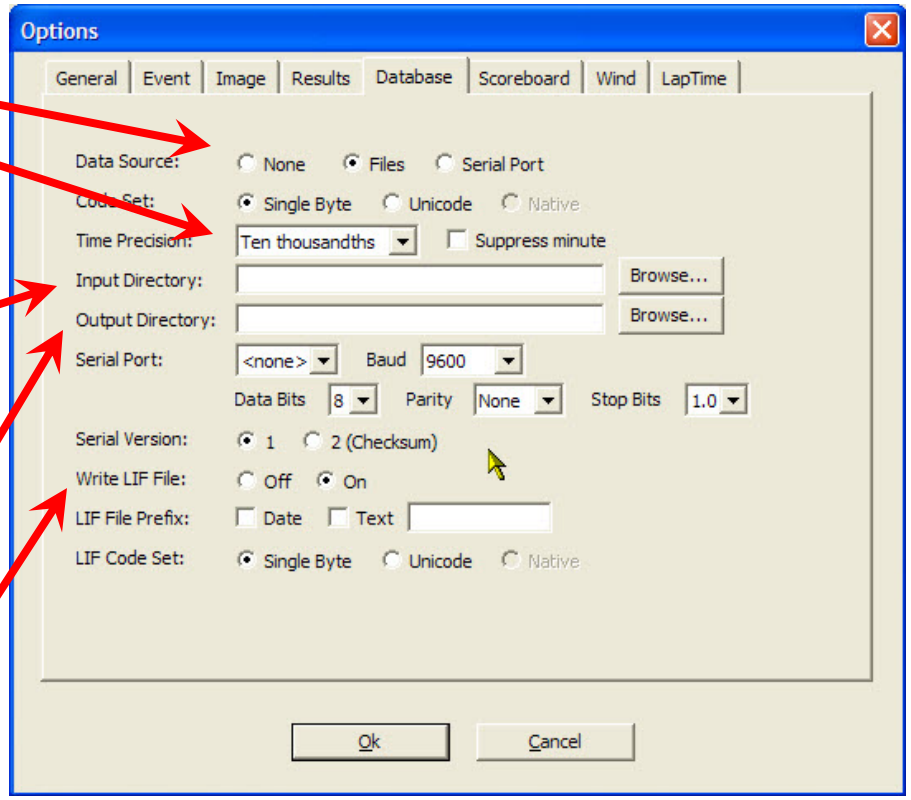
Results Options

- Enable all toolbar items
- Choose fields to list
  - Defaults OK
- Default Precision to “hundredths” (2 decimal positions)
- Use default “round up” method



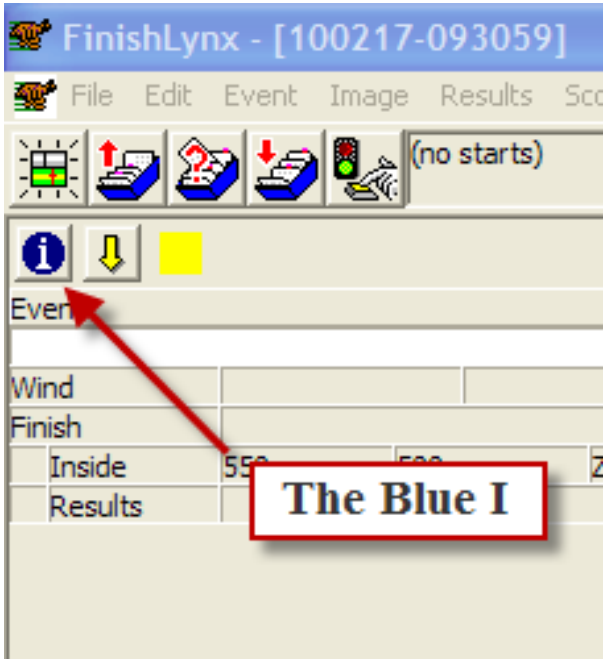
Database Options

- Use “Files”
- Use “ten thousandths”
  - Controls what’s in the LIF file
- Where to look for .evt file and .ppl file
  - Use same directory as event directory
- Where the LIF files are written
- “Off” for capture, “On” for evaluate system



Camera Settings

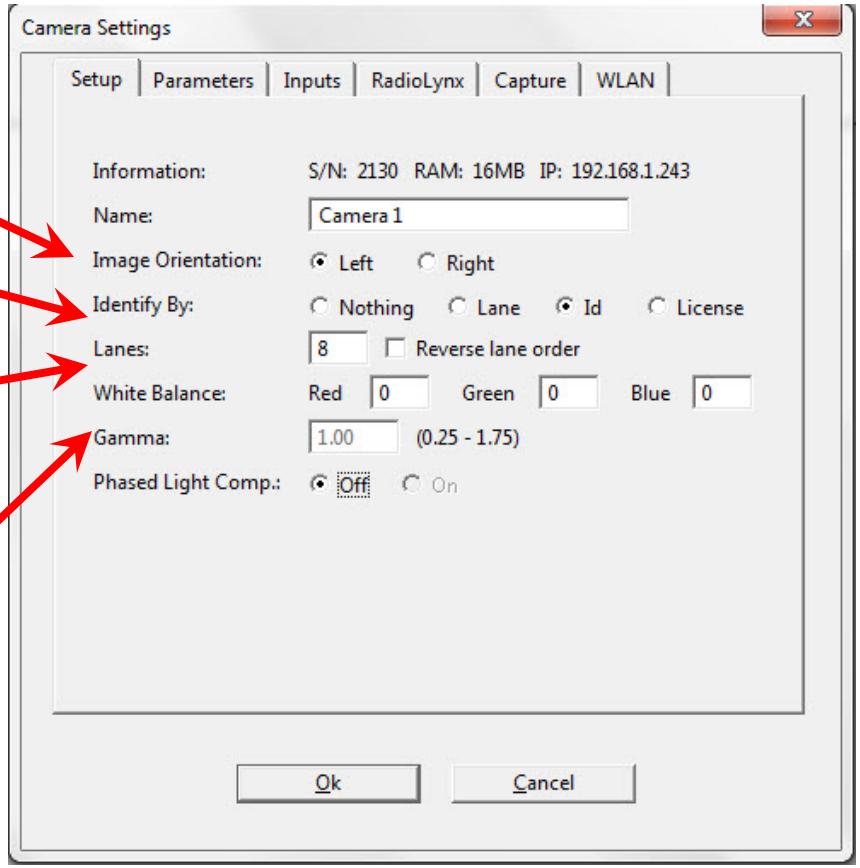
- Used to control “camera specific” options
- If it isn’t on normal “options” windows, it’s probably here.
- Found under the “Blue I”



These parameters can only be changed between races!

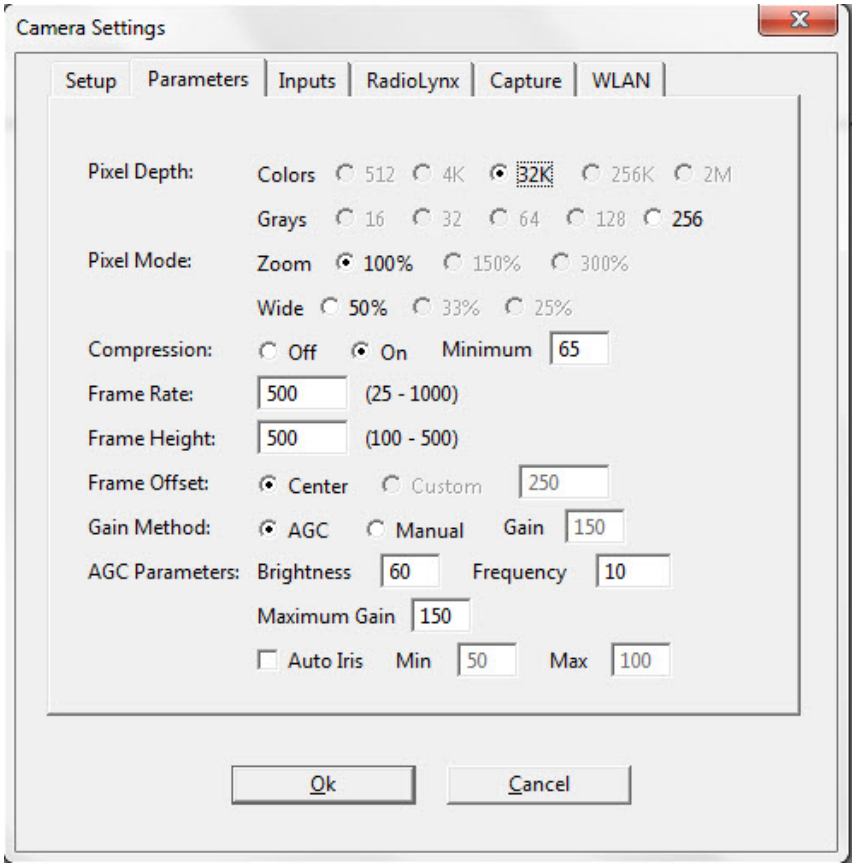
Camera Setup Tab

- Which way are the runners going?
- Race-specific
  - Can be overridden later
- Controls “lane bars”
  - And which lane is at top of picture
- Set to zero, then do white balance



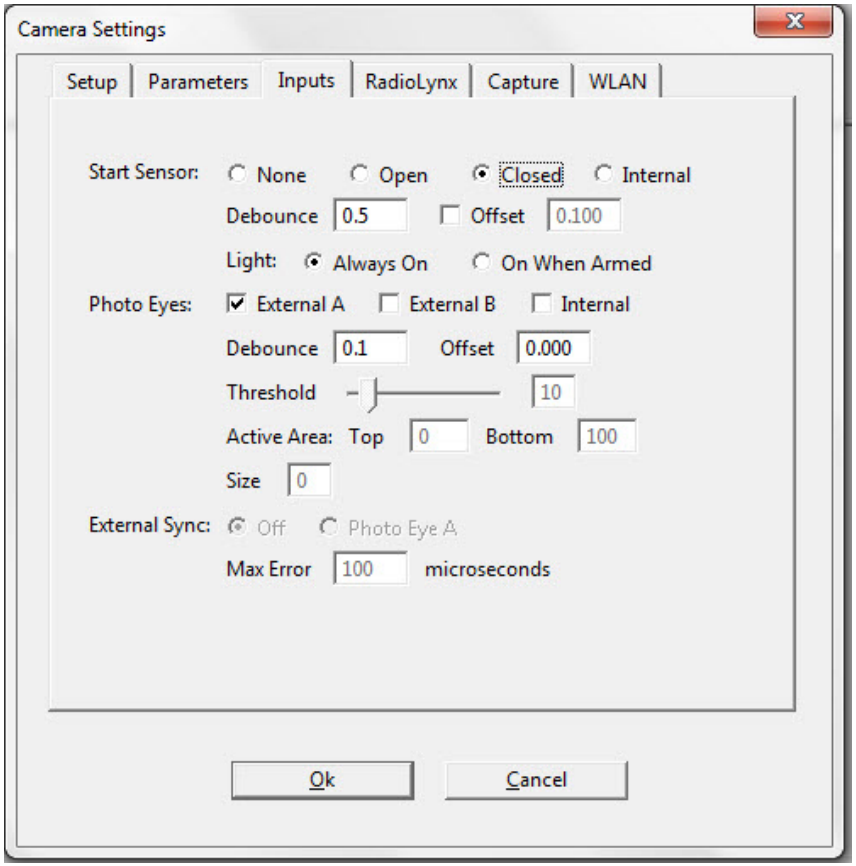
Camera Parameters

- Start with defaults
- Gain – how much electronic “boost” to the picture.



Camera Inputs

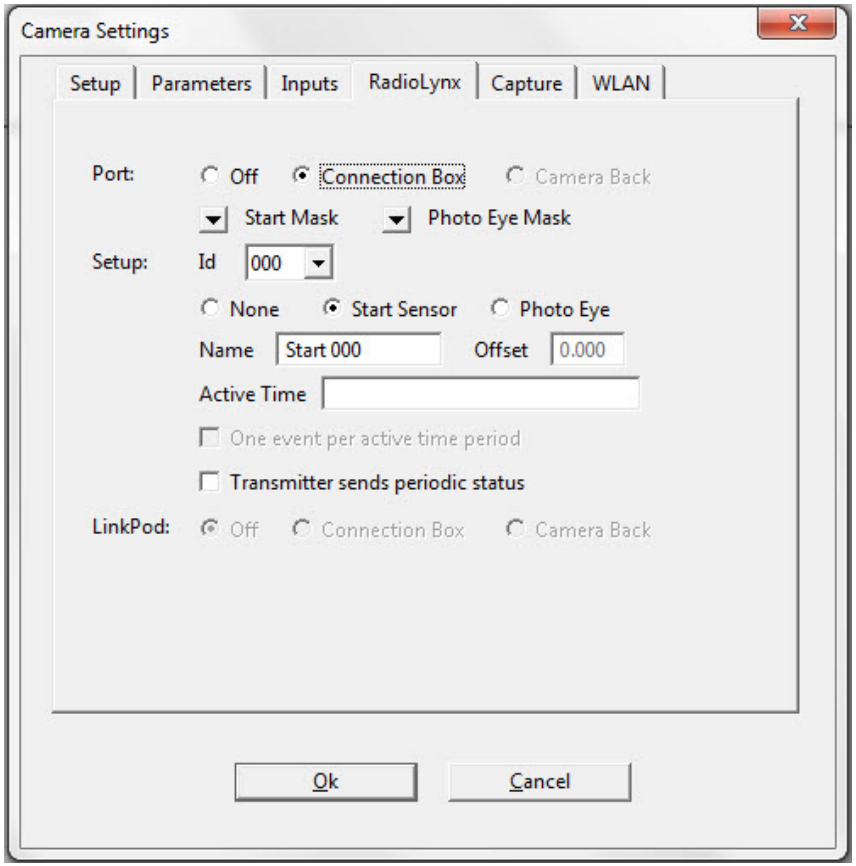
- Using RadioLynx
  - Set to “none”
- Using “Wired” starter
  - Set to “closed” or what is listed on the sensor (look for “NC” or “NO”)
- If not “None” AND you are using wireless sensor, you will see “some sensors failed to arm” when setting up a race



RadioLynx

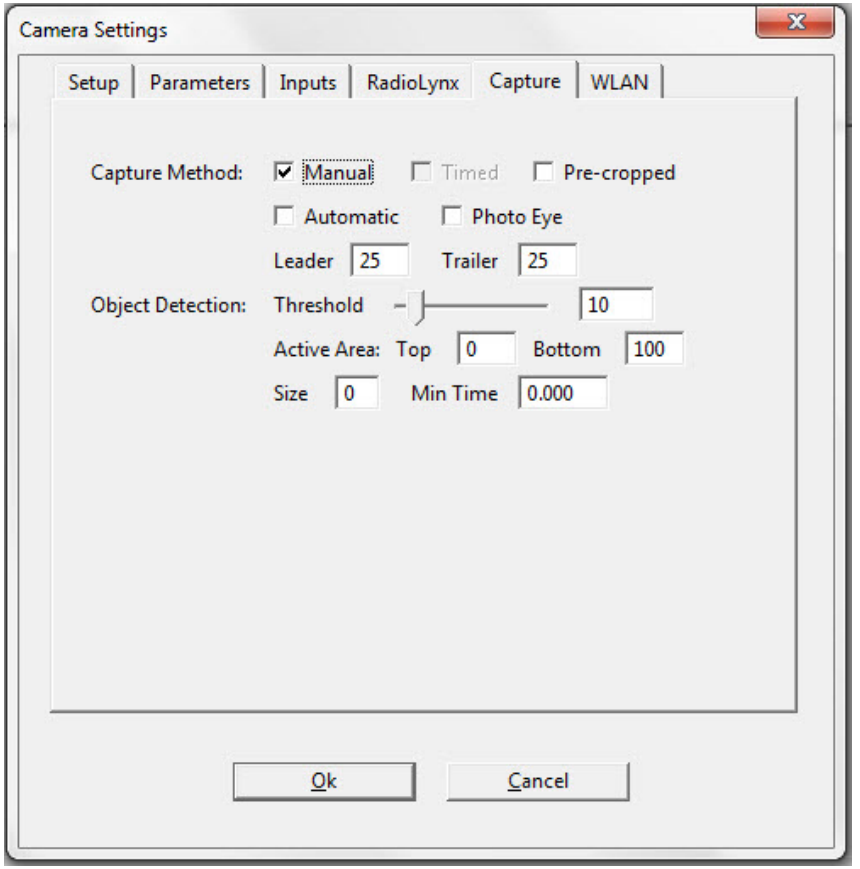
- Set to “Connection Box” to enable wireless start
- Set to “Start Sensor”
- Default other values

- If using multiple systems, can use setup ID and mask to eliminate confusion (older RL units only)



Capture Options

- Suggest “Manual” at first
- “Automatic” isn’t so automatic – have to enable during the race



Three Easy Steps

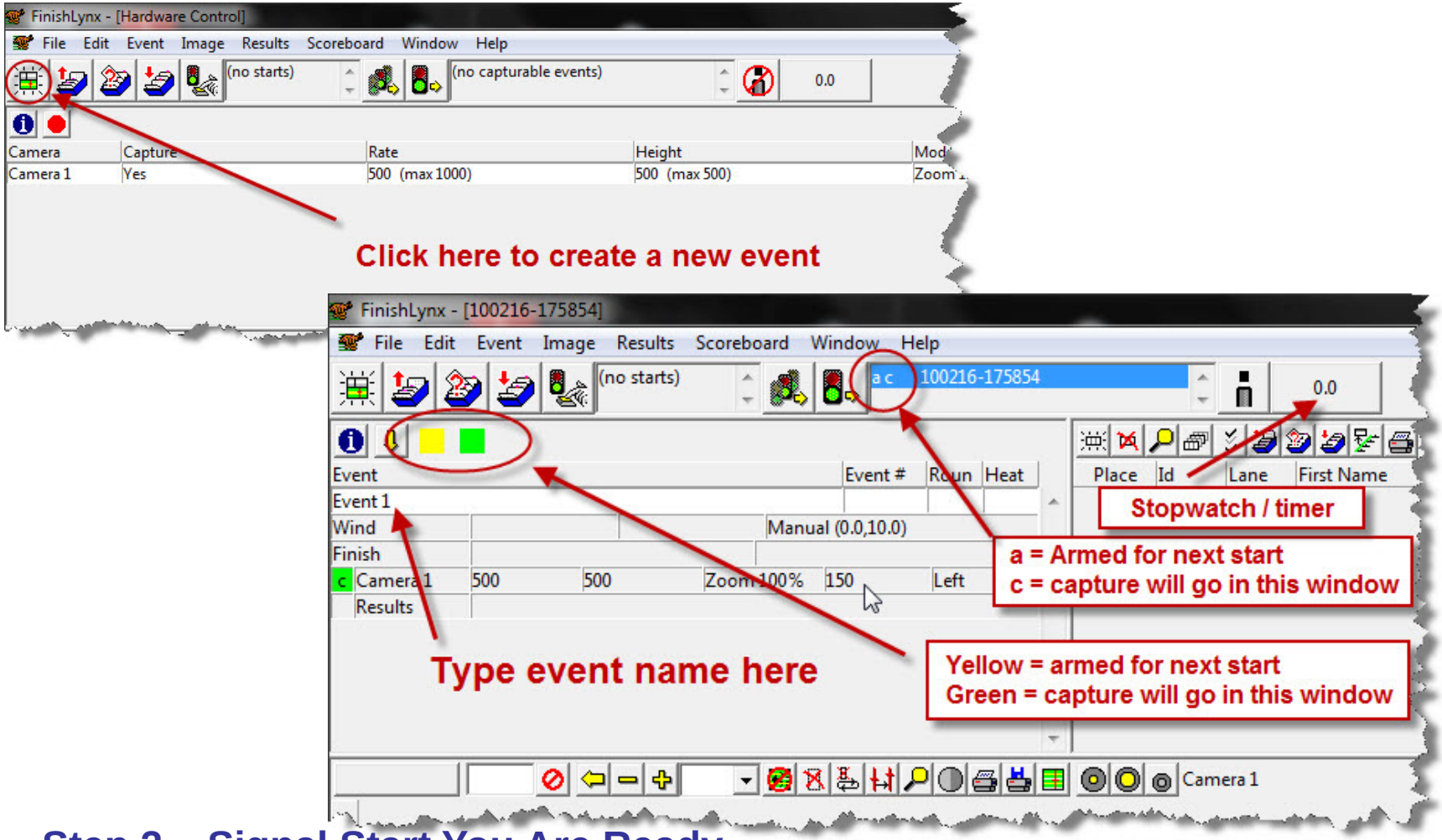
1. Capture
2. Evaluate
3. Print

What can be so hard?

Timing an Event – The Steps

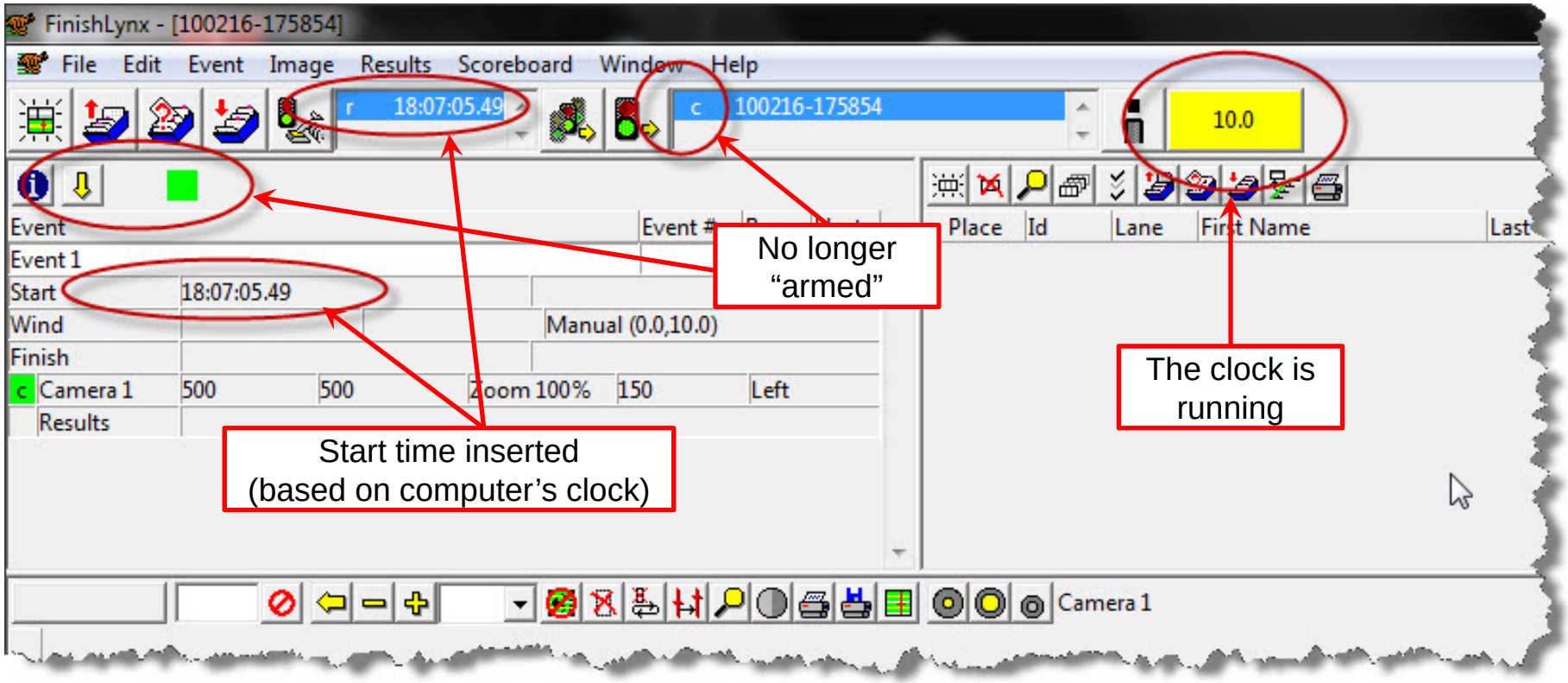
1. Set up the event and “arm” the system
2. Signal starter that you are ready
3. Wait for gun. Verify that clock has started
4. Capture finishers as they cross finish line
5. Save the file
6. Evaluate the results and print
7. Save the file
8. Lather, rinse, repeat…(or capture, evaluate, print)

Step 1 – Set Up the Event

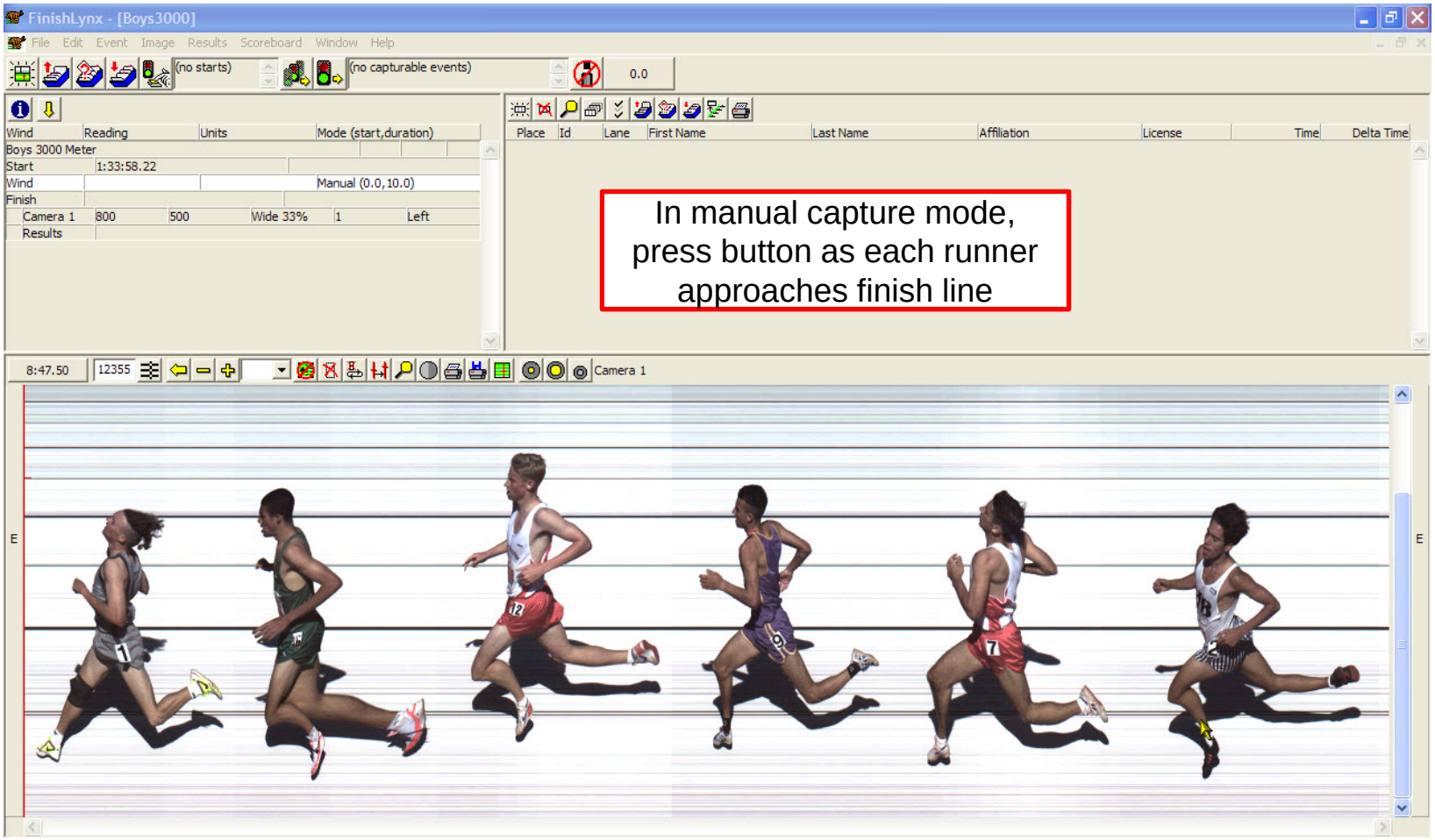


Step 2 – Signal Start You Are Ready

Step 3 – Verify Start of Race

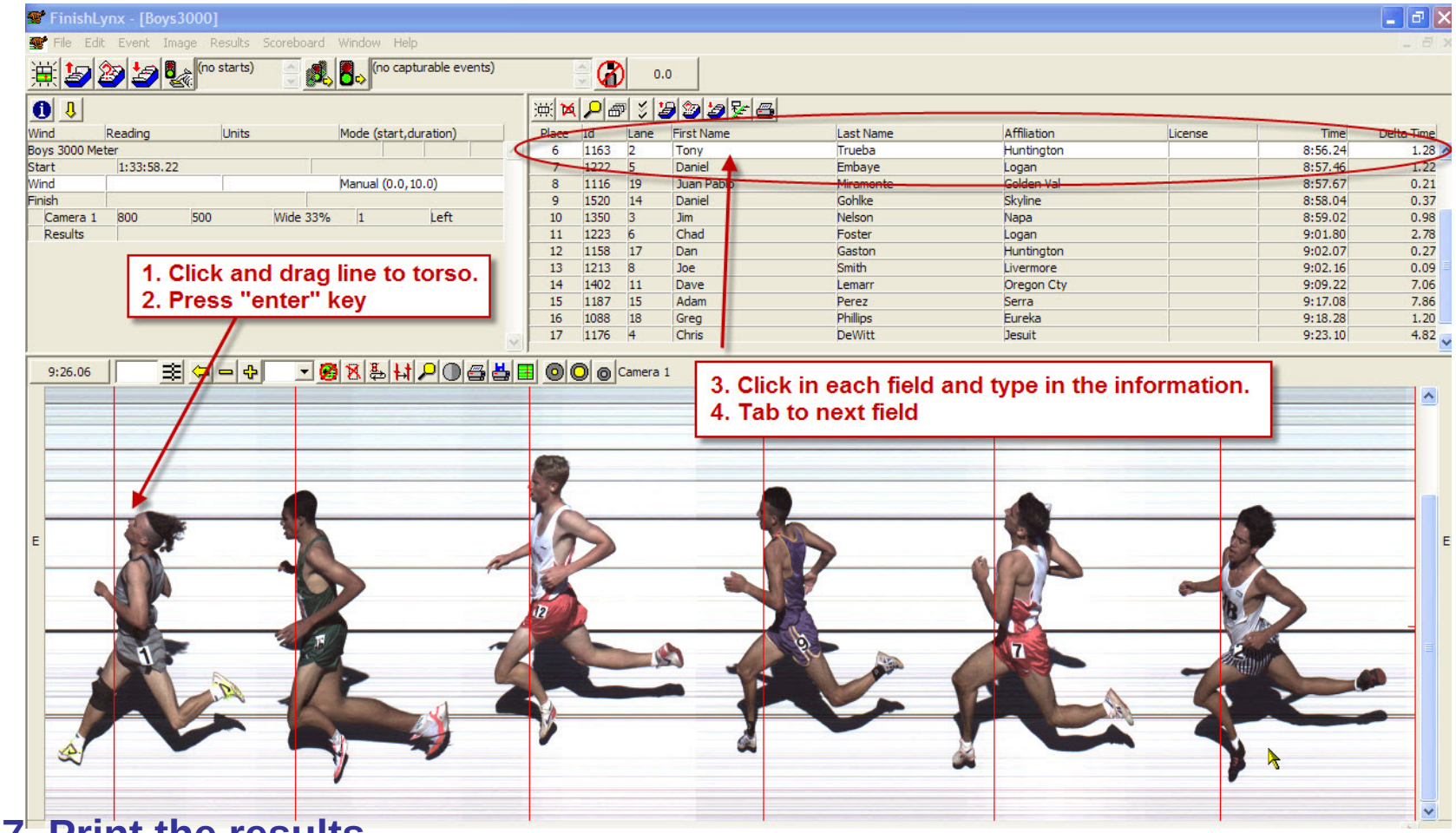


Step 4 – Capture The Finishers



Step 5 – Save the file!

Step 6 – Evaluate Results



7. Print the results

8. Save the file again!

Step 7 – Print The Results

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Boys 3000 Meter

Finish - Results

Start: 2/13/1997 1:33:58.22

Place	Id	Lane	First Name	Last Name	School	License	Time	Delta Time
1	1507	1	Enrique	Torres	Silver Crk		8:47.57	8:47.57
2	1335	16	Davia	Rodriguez	Mission		8:52.03	4.46
3	1458	12	Brad	Hansen	SaintIgnat		8:52.75	0.72
4	984	9	Brian	Henstorf	Ama Valley		8:54.38	1.63
5	1459	7	Paul	Wellman	SaintIgnat		8:54.96	0.58
6	1163	2	Tony	Trueba	Huntington		8:56.24	1.28
7	1222	5	Daniel	Embaye	Logan		8:57.46	1.22
8	1116	19	Juan Pablo	Miramonte	Golden Val		8:57.67	0.21
9	1520	14	Daniel	Gohlke	Skyline		8:58.04	0.37
10	1350	3	Jim	Nelson	Napa		8:59.02	0.98
11	1223	6	Chad	Foster	Logan		9:01.80	2.78
12	1158	17	Dan	Gaston	Huntington		9:02.07	0.27
13	1213	8	Joe	Smith	Livermore		9:02.16	0.09
14	1402	11	Dave	Lemarr	Oregon Cty		9:09.22	7.06
15	1187	15	Adam	Perez	Serra		9:17.08	7.86
16	1088	18	Greg	Phillips	Eureka		9:18.28	1.20
17	1176	4	Chris	DeWitt	Jesuit		9:23.10	4.82
18	1039	10	Jacob	Ekins	Bullard		9:25.92	2.82

Easy! What Could Go Wrong??

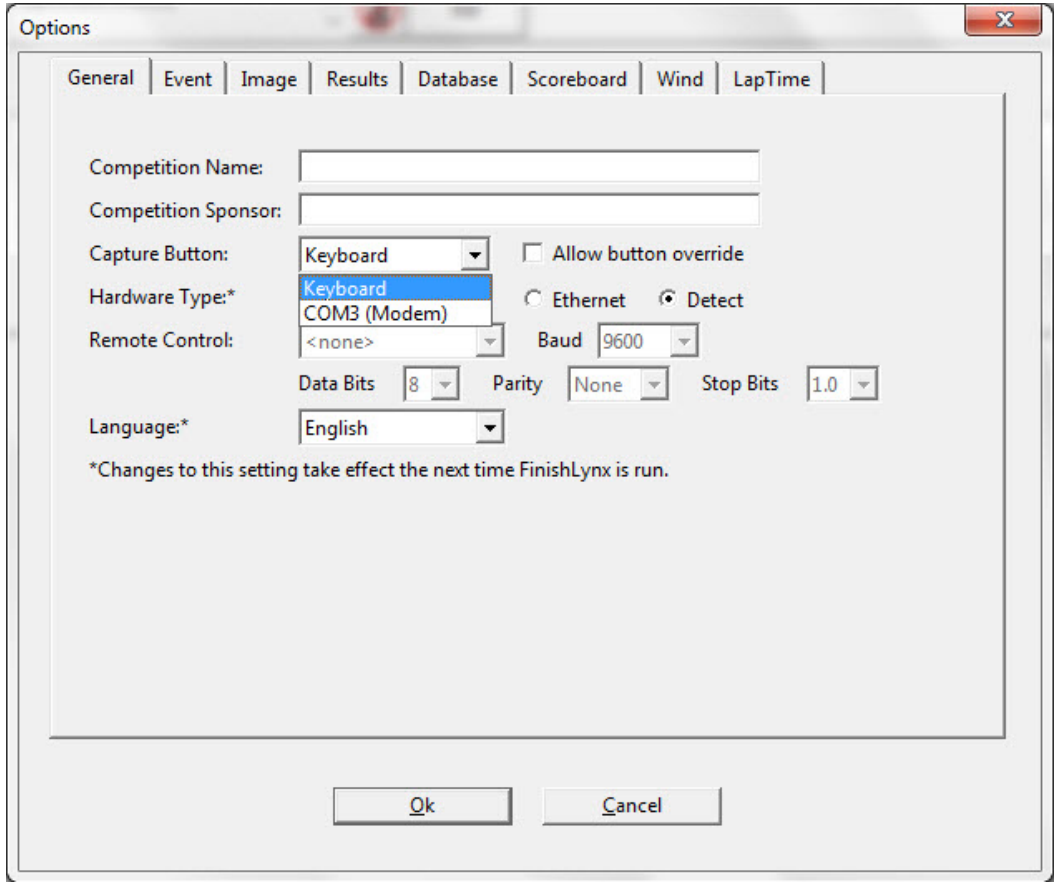
- Setup and Configuration Errors
- “Run Time” Errors

Setup Errors

- Capture Button error when starting Finishlynx

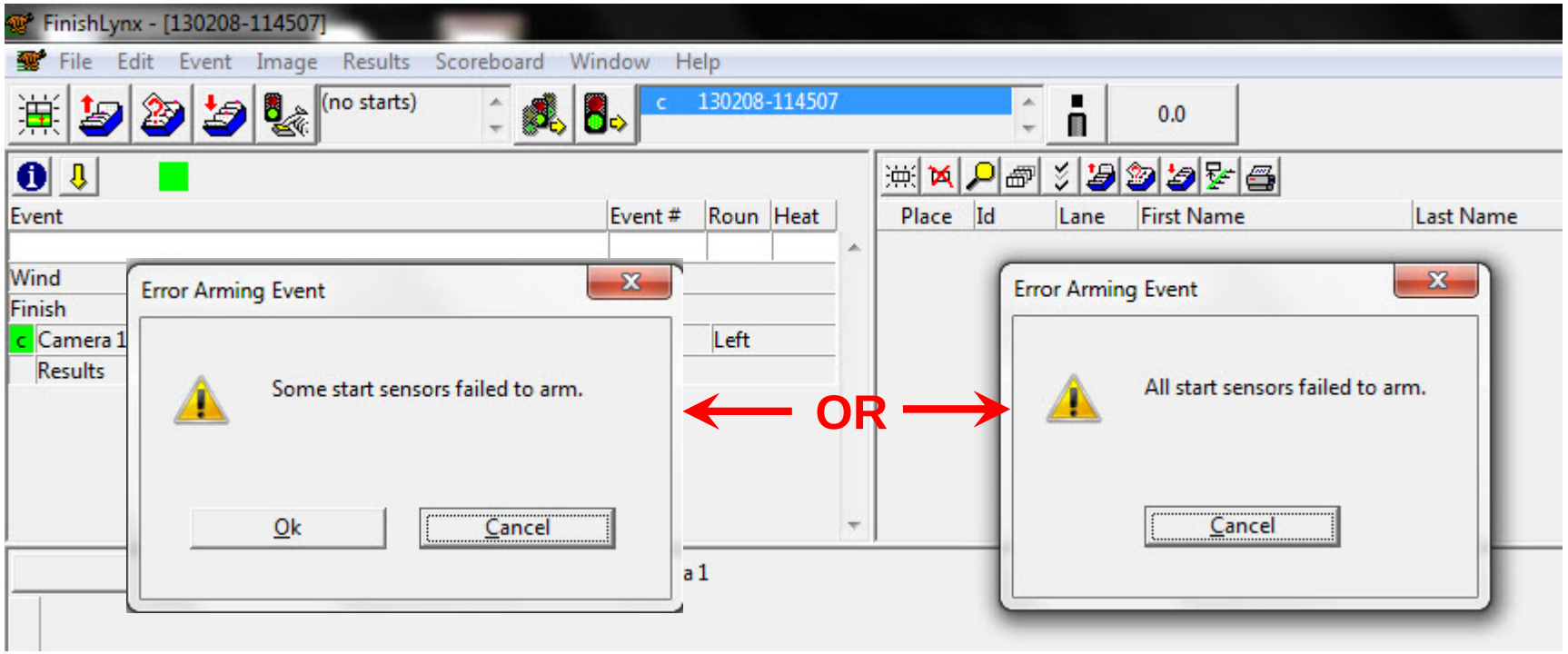
Setup Errors

- Capture Button fix:

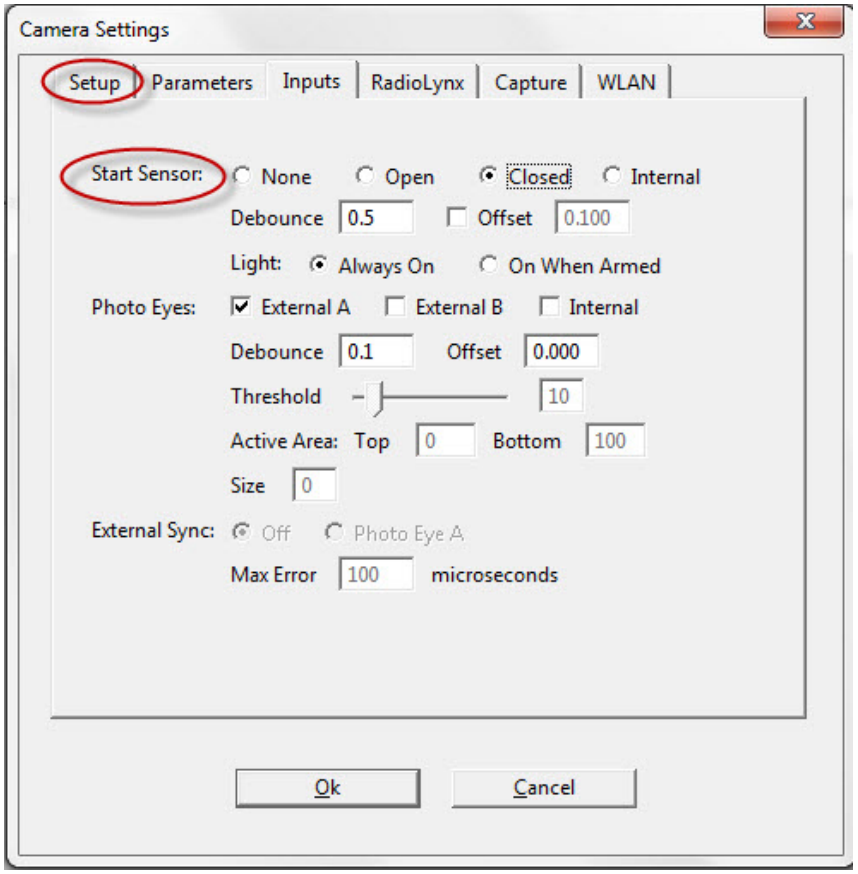


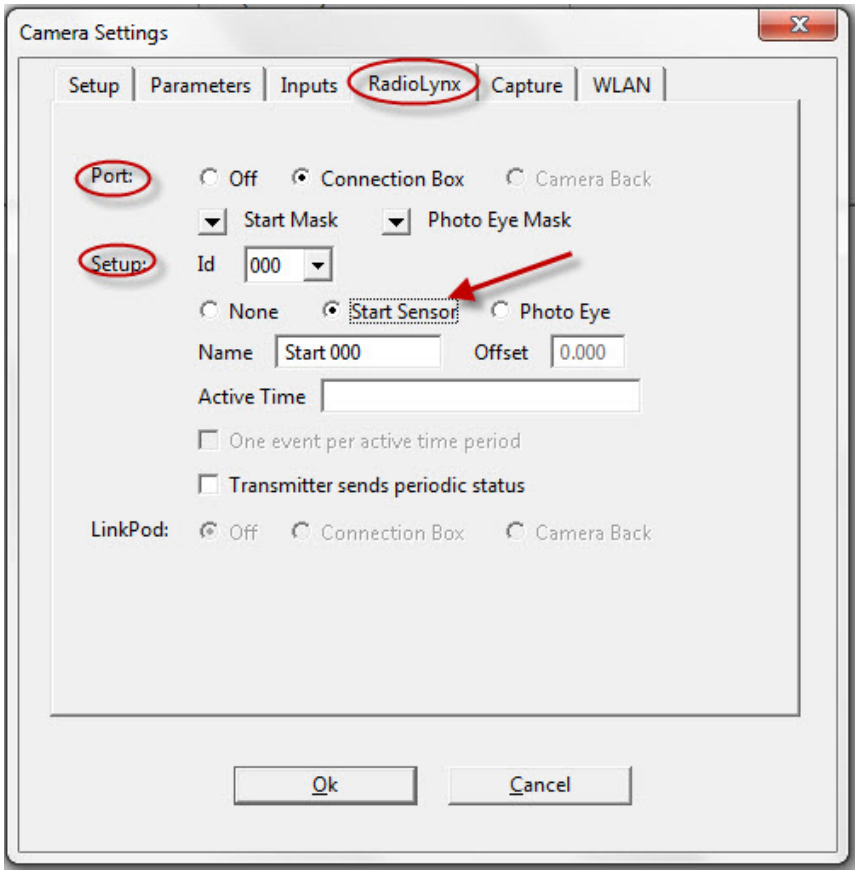
Setup Errors

- Start Sensor Errors



Start Sensor Fixes



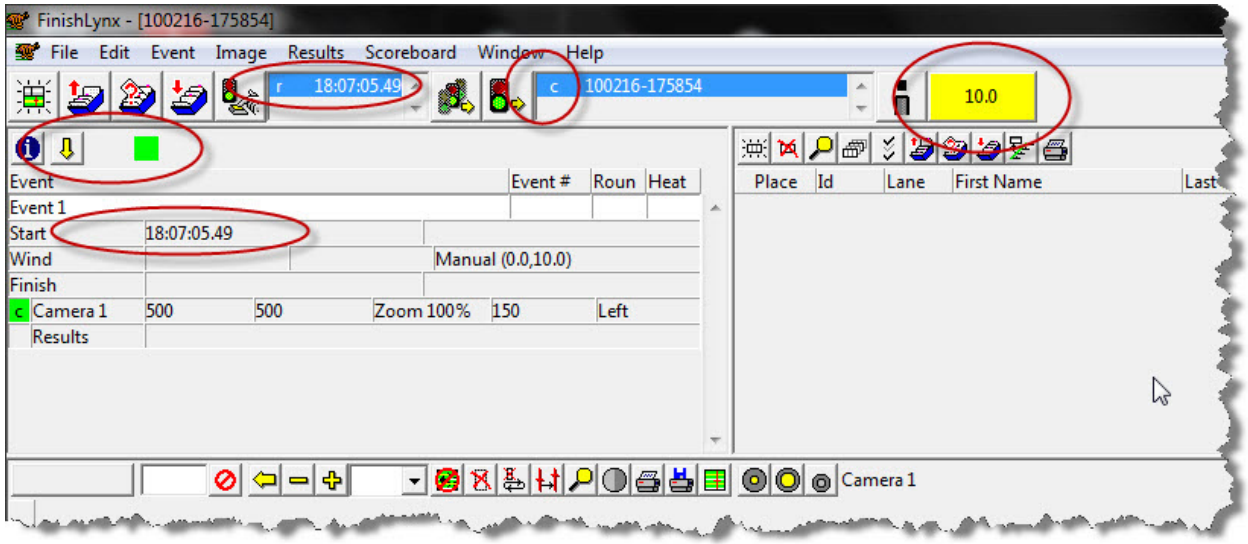


“Run Time” Errors

- Clock starts before the gun goes off
  - Usually the starter bumps start sensor
- Gun goes off, but the clock doesn’t start
  - Transmitter not turned on
  - Transmitter not charged
  - Starter not holding sensor properly
  - Receive antenna close to metal objects

All of these are considered “false starts”.

Clock Starts Before Gun Fires

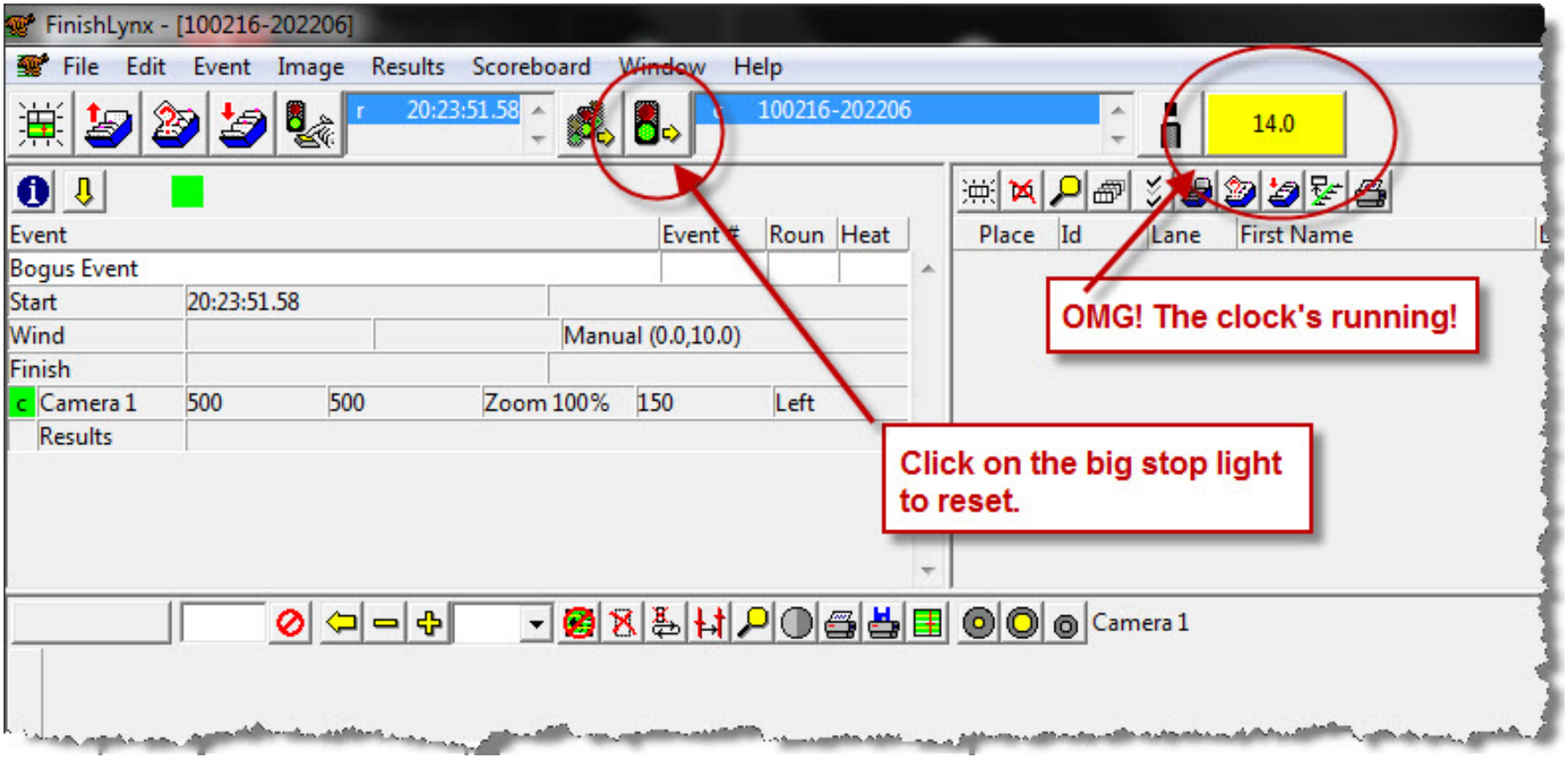


Two solutions based on time available

1. If time available (gun not up), click on the big traffic signal – this just resets everything.
2. Gun up (real start immanent). Wait and assign correct start time.

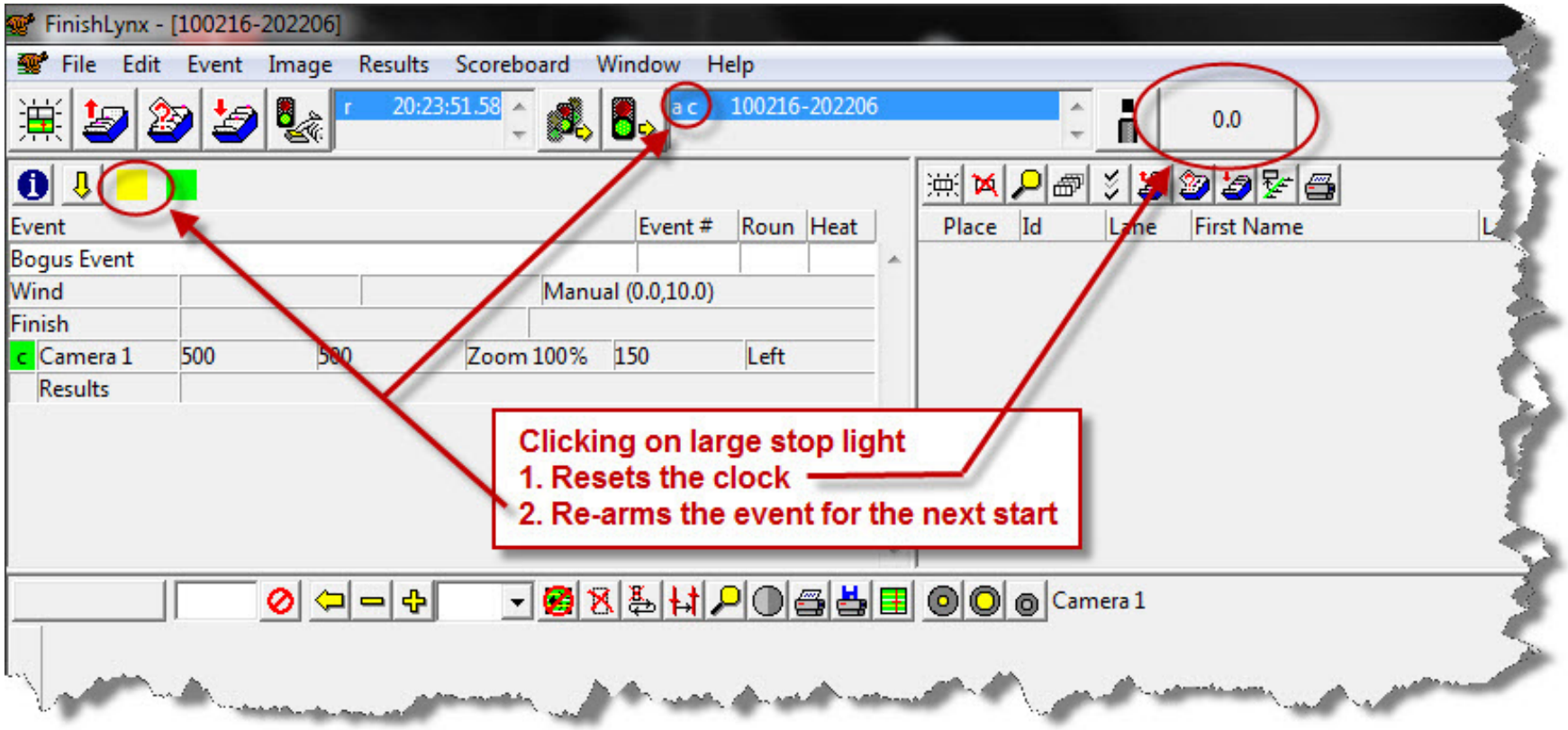
1) Re-Arm The Event

- If time permits:



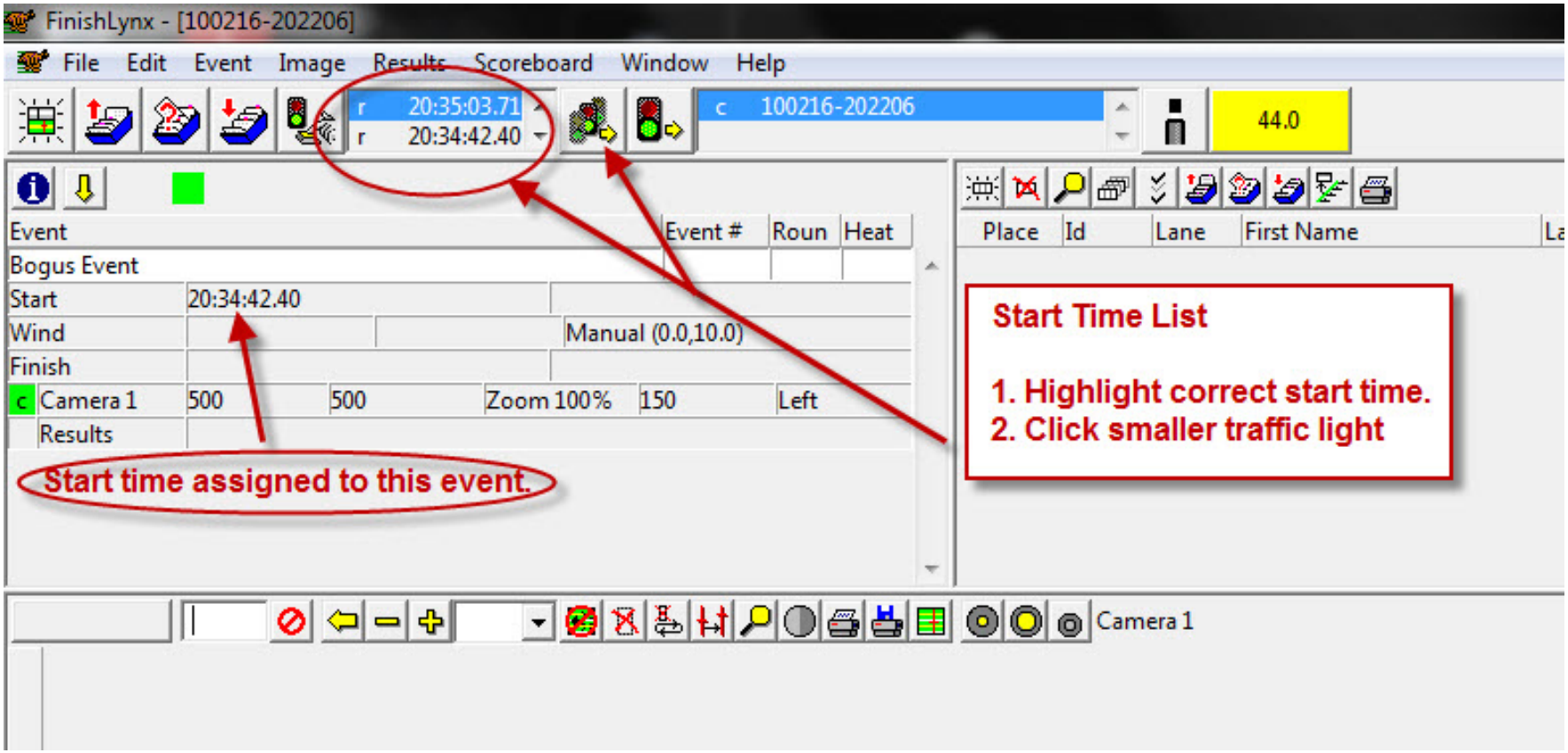
1) Re-Arm The Event

- If time permits:



2) Assign The Correct Start Time

- “Real” start is about to happen



Missed Start Signal

Gun goes off, but no start detected

- **Question 1**: Were you typing at the start?
  - Keyboard entry “holds off” start until you’re done typing – just hit enter a couple of times.
- Nothing you can do on the system
- Signal “false start” to starter (gun, horn)
  - Check connections
  - Gently tap start sensor to create a signal

  (Should have tested this before the first event!)

Hints / Good Practices

- **Pay attention!**
  - Watch actions of starter and start line. As they set in the blocks, check the clock.
  - When the gun's up, watch the clock and have air horn in your hand
- Use a customized sound file for starts
  - Rename your favorite .wav file to `finishlynxstart.wav` (keep it short)
  - Turn volume up!

Play Time and Questions

- Set up an event
- Create a “start”
- Capture something
- Evalute
- Save

Any Questions??

Important FinishLynx Files

- Used to ease the typing task
- Plain ASCII files but don't end in .txt
  - (use Notepad or Textpad to edit/create)
- Commas separate fields (don't put commas in names like Smith, Jr.)
- Stored in the events directory
- "Weird" behavior if you get the commas wrong

Lynx.evt – The Event File

- List running events, usually in order
- Can list entries (seeded race)
- Format:

```
Event#,round#,heat#,event_name
001,1,1,VG-400-R
002,1,1,VB-400-R
002,1,2,VB-400-R
```

Hint: Add extra entries for races known to have more than one heat (main dashes).

Lynx.sch – the Schedule File

- Optional – don't use it
- Lists events in schedule order
- If present, overrides order in Event file
- Format:

```
Event#,round#,heat
012,1,1
002,1,1
```

- **Be careful if you use Meet Manager!**

Lynx.ppl – the People File

- Lists every possible running competitor
- Used to assign “competitor numbers” to names
- When evaluating, use competitor number instead of typing full name/school, etc.
- Format:

```
ID,last_name,first_name,school

2001,Anderson(10),Tyler,Los Altos
8001,Anderson(9),Marcus,Palo ALto
```

Lynx.ppl Hints

- ID does not have to be numeric – 200A works
- Enter extra entries for relay races

```
2000,Los Altos,Los Altos,Los Altos
2999,Los Altos,Los Altos,Los Altos
```

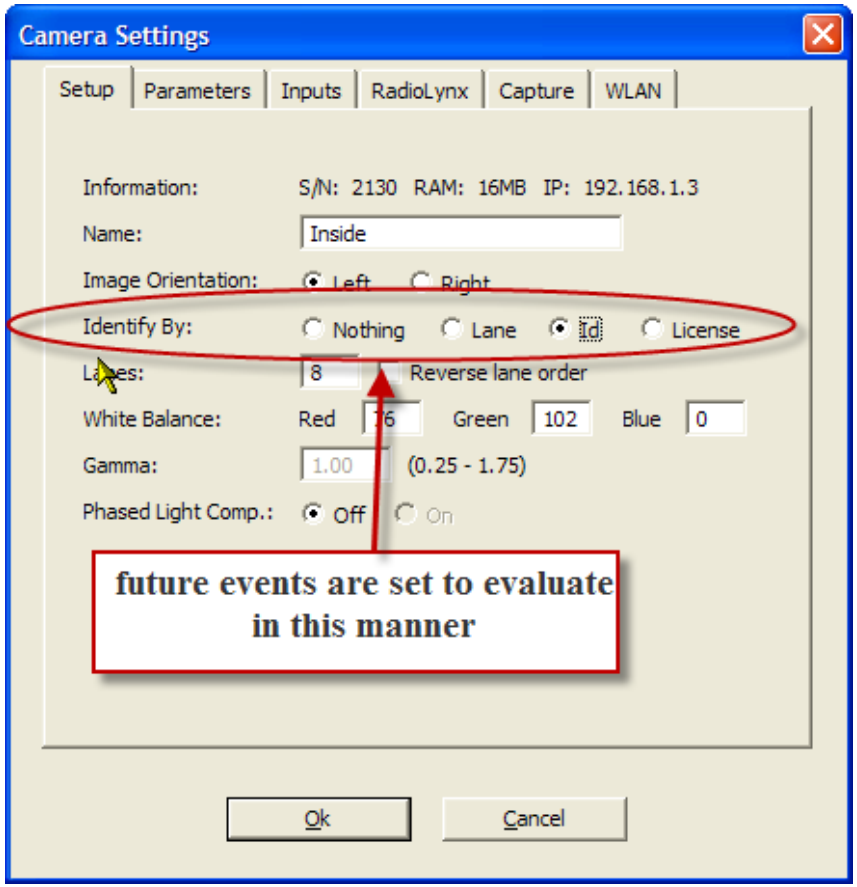
- When evaluating, use competitor number instead of typing full name/school, etc.
- Can only enter ID once per race!
- Develop a numbering plan that works for your environment

Why Use Files?

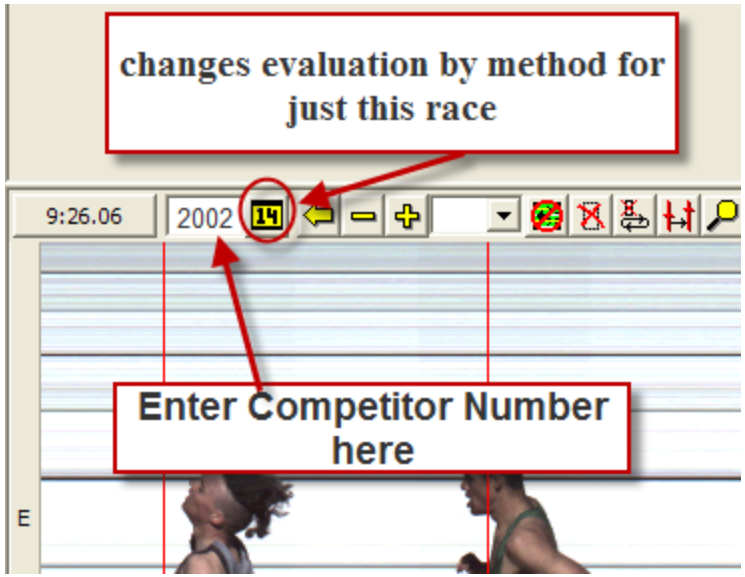
- Speeds up results, requires less people
- Can evaluate by Competitor ID instead of typing full name/school information.

How To Change Evaluation Method

Global Setting



Event-specific setting



FinishLynx Files Demo

What Else Can Go Wrong?

- Missing/Wrong Competitor/ID Number
- Wrong name info shows up on evaluations
- Evaluated using wrong competitor number
- Captured a lapped runner
- Missed capturing a runner
- Bizarre finish times (minutes for 100 meters)
- Captured using wrong event
- No sensors working
- Capture button doesn’t work

What Can Go Wrong?

Missing/Wrong Competitor/ID Number

- Look at the lynx.ppl file
  - Competitor # missing or typo
  - Wrong number of parameters
  - Duplicate competitor number

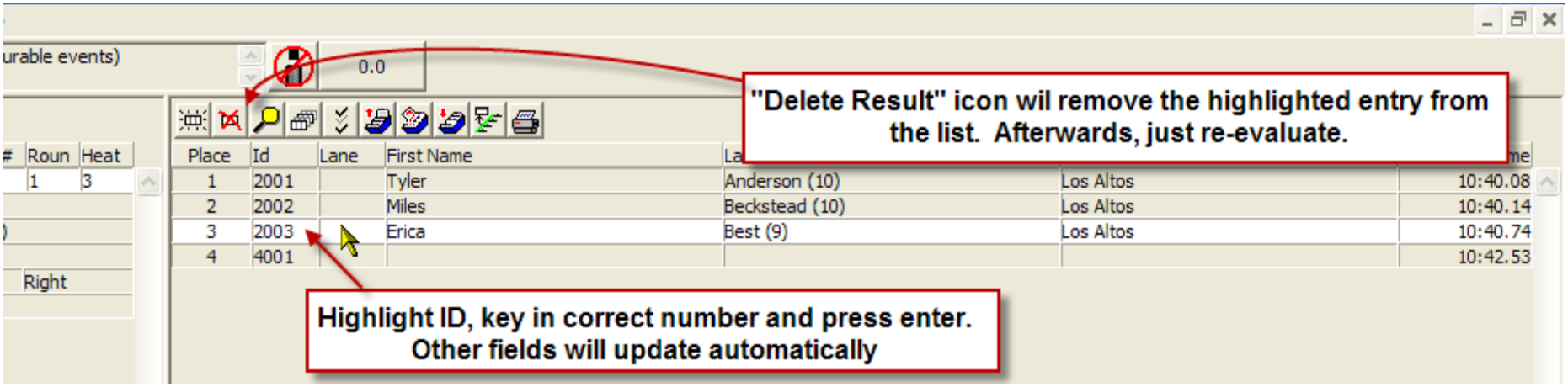
What Can Go Wrong?

Wrong name info shows up on evaluations

- Look at the lynx.ppl file
  - Duplicate competitor number
  - Wrong information

What Can Go Wrong?

Evaluated using wrong competitor number



(* don't use "delete result" if you have a seeded race – (advanced topic)

Captured a lapped runner

– Skip over the extra runner – no biggie

What Can Go Wrong?

- Missed capturing a runner
  - Fudge

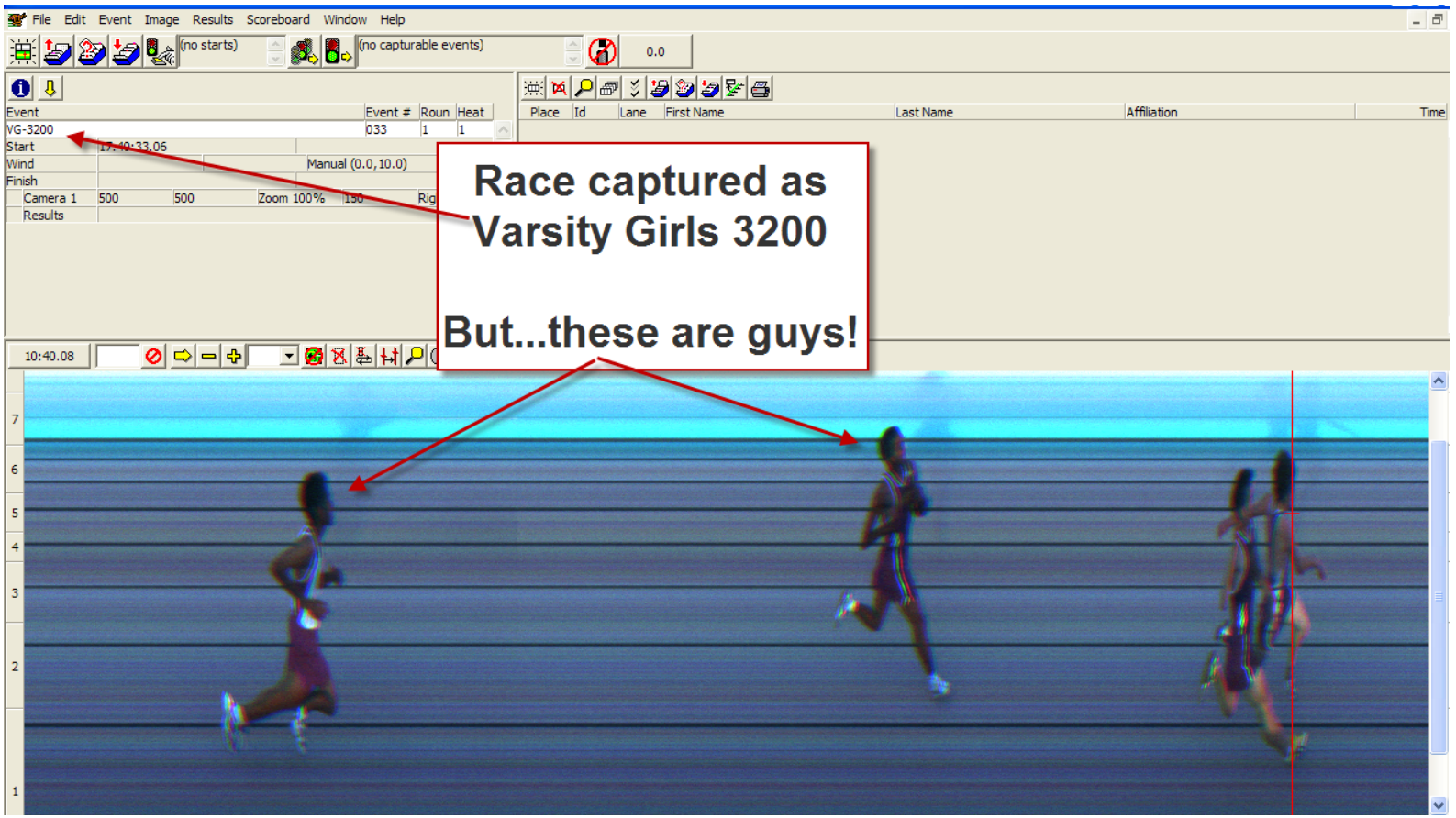
What Can Go Wrong?

Bizarre finish times (minutes for 100 meters)

- The start time is wrong – pick the different start time from the list. You may have to try a few times – maybe you missed the start (pay attention).
- This takes time and can only be done on the capture system (fixed in 8.0)

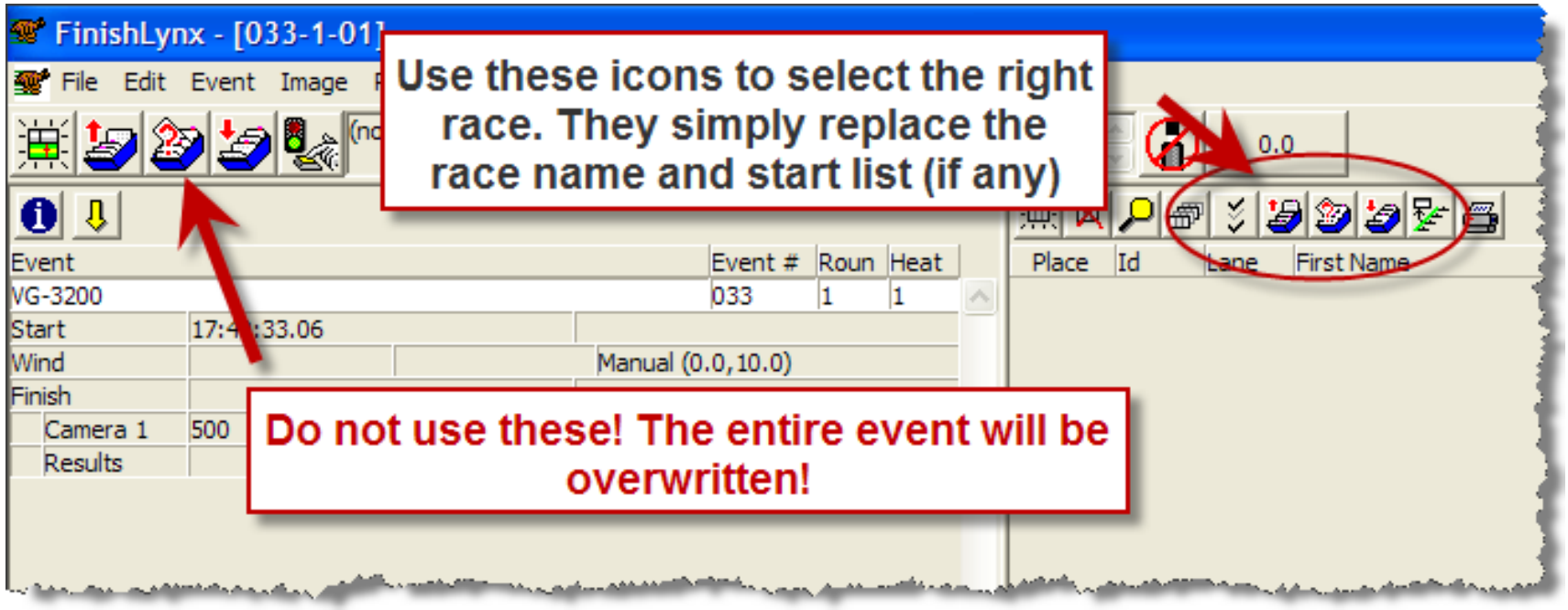
What Can Go Wrong?

Captured using wrong event

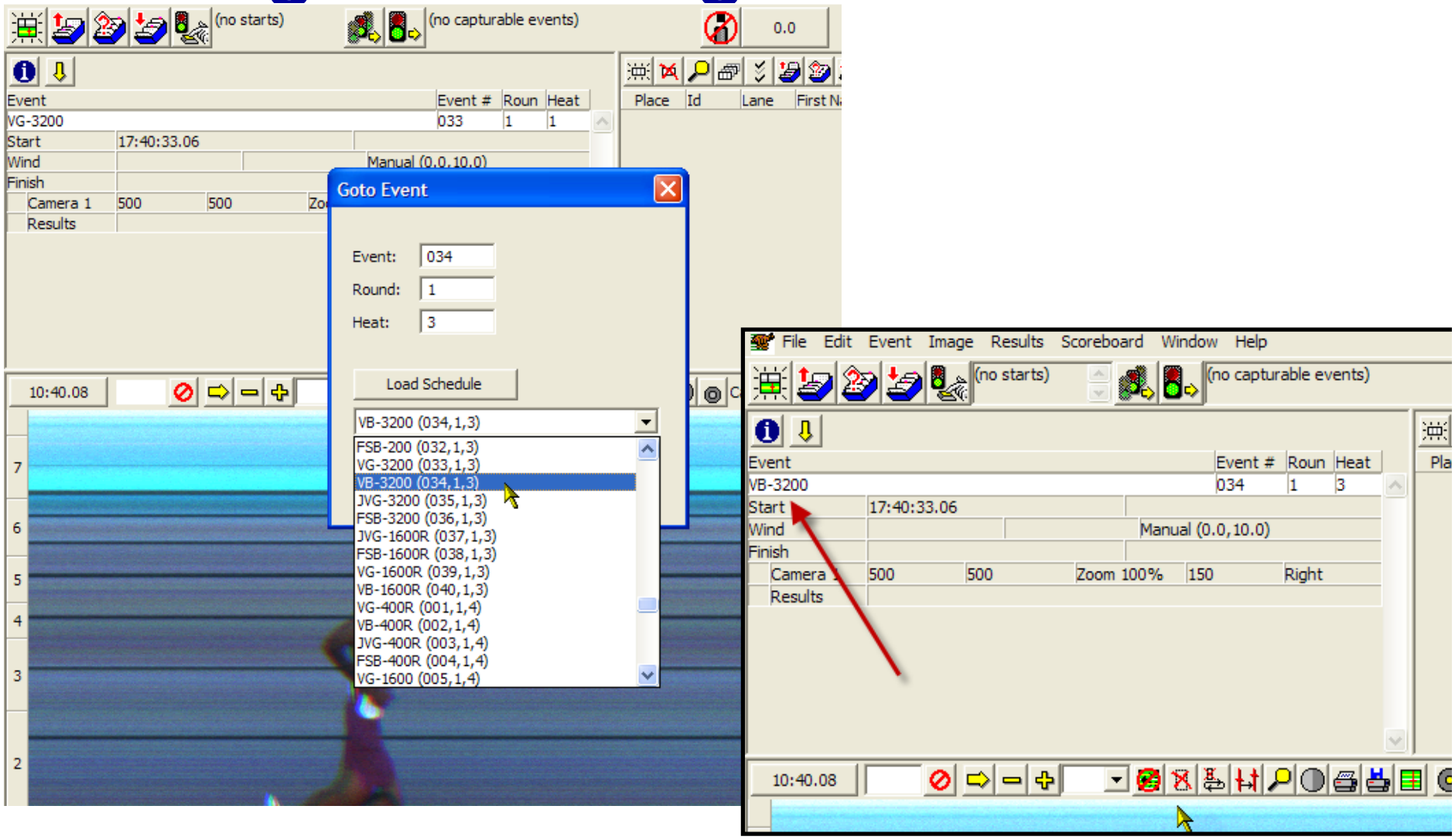


Fixing the Wrong Event Problem

Stop and take your time. Delay the next race if necessary – you need to get this right otherwise you can lose race information.



Fixing the Wrong Event Problem



What Can Go Wrong?

- No sensors working
- Capture button doesn’t work
  - Use keyboard start work-around buttons.

What *Else* Can Go Wrong??

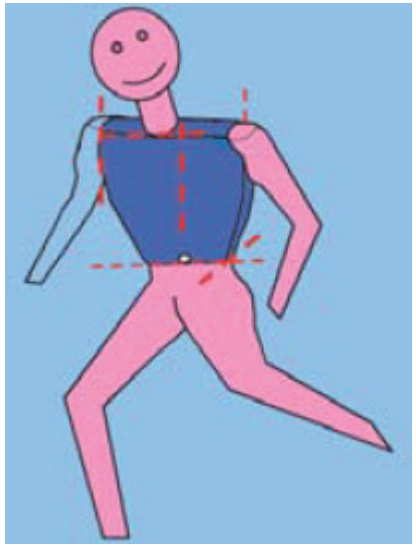
- Lots
  - Power, batteries in laptops
  - People on the track in camera's view (auto capture)
  - Camera gets bumped
  - Electronic starter not fully charged
  - Static electricity on artificial fields! Zap!
  - No paper, no toner/ink
  - Lack of patience
  - <your hot item goes here>

Evaluating a Picture

IAAF Rule 164:

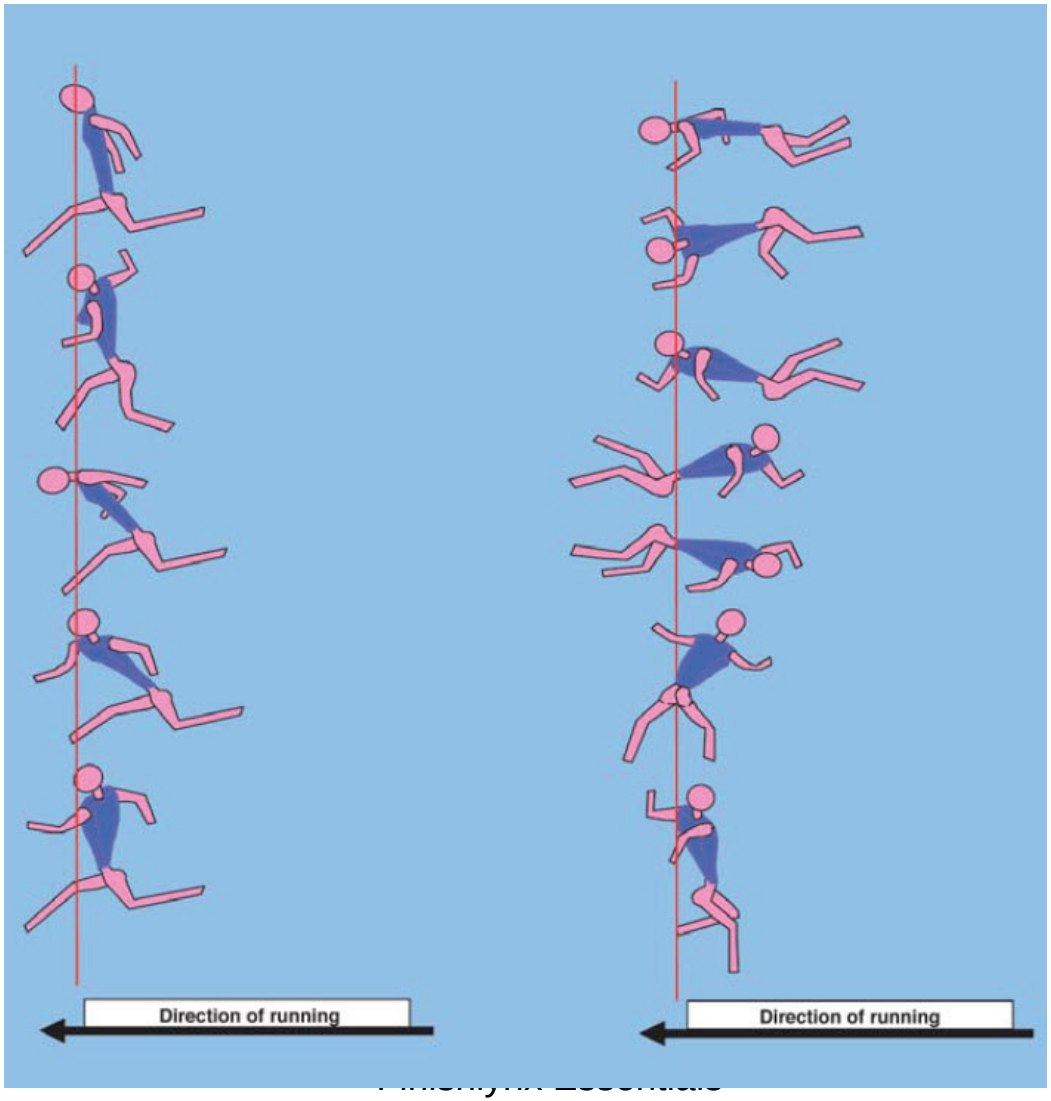
2. The athletes shall be placed in the order in which any part of their bodies (i.e. torso, as distinguished from the head, neck, arms, legs, hands or feet) reaches the vertical plane of the nearer edge of the finish line as defined above.

Or, in a picture…



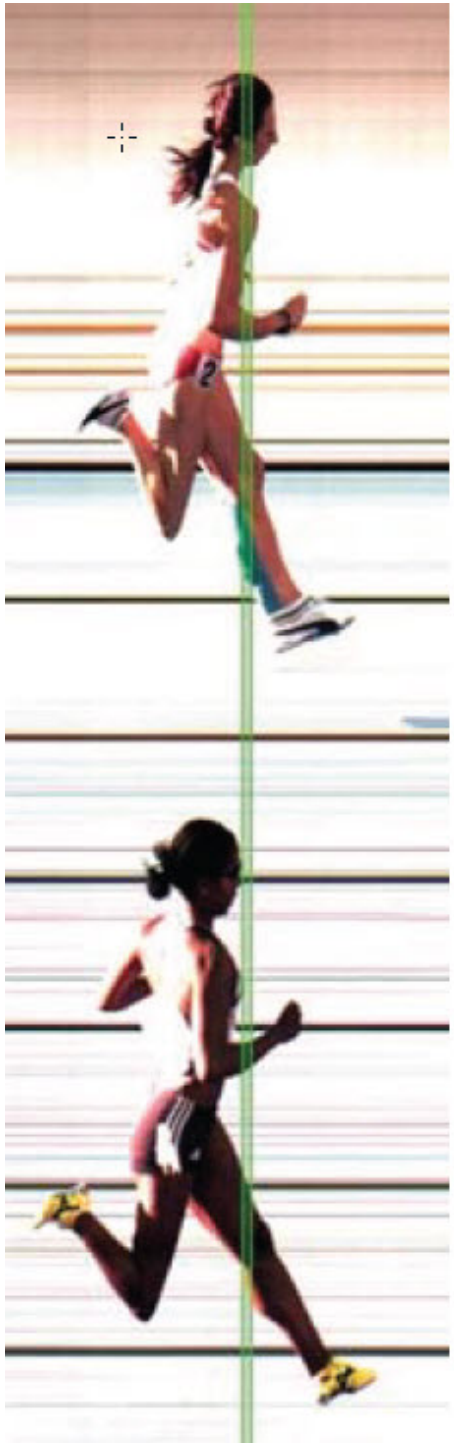
Sounds
so simple!

Evaluating a Picture



Evaluating a Picture

- Primary Goal: Be consistent!
- If close, don’t be afraid to call it a tie.



Other Tricks of the Trade

- Finishline Sheets – examples
- Splitting combined events (Varsity & FSB 1600, etc.)
- Handling combined 3200 (all groups) using autocapture

After The Race Is Over

- Congrats, You Survived!
- Figure out what worked, didn't work.
- Go celebrate!