

# Judge Training

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## **OBRA Officials Training**

Corvallis, Oregon

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# Table of Contents

1. Priorities .....	5
2. Expectations .....	6
3. Roles .....	7
3.1 Downstream Judge .....	7
3.2 Judge .....	7
3.3 Scorer .....	7
3.4 Sprint and KOM Judge .....	7
3.5 Timer .....	7
4. Order of Events .....	8
4.1 Home Preparation .....	8
4.2 Pre-Race .....	8
4.3 During the Race .....	9
4.4 Post-Race .....	10
5. Number Placement .....	11
5.1 Well Placed Numbers .....	11
5.2 Poorly Placed Number .....	11
5.2.1 Number Pinned on Back .....	12
5.2.2 Number Pinned on Belly .....	12
5.2.3 Number is Folded .....	13
5.2.4 Number is Obstructed by Hair .....	13
5.2.5 Number is Upside-down or Sideways .....	13
5.2.6 Number is on the Wrong Side .....	14
5.3 Other Number Visibility Issues .....	14
6. The Finish-line .....	16
6.1 When is a Rider Finished? .....	16
7. Scoring a Race .....	18
7.1 Scoring Systems .....	18
7.1.1 Vertical Scoring .....	19
7.1.2 Horizontal Scoring .....	19

7.1.3	Continuous Vertical Scoring.....	20
7.2	Laps Up/Down Tally Sheet .....	20
7.3	Lap Board .....	21
8.	Electronic Results.....	22
8.1	Formatting .....	22
8.1.1	Data File .....	22
8.1.2	Data .....	22
9.	Checklists .....	24
	Personal Equipment Checklist .....	24
	Setup Checklist.....	25
	Process Checklist.....	26
10.	Additional Resources .....	27

# 1. Priorities

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## 1. Safety

If there is anything that jeopardizes safety (including racer, volunteer, official, spectator, or civilian), it is your responsibility to mitigate it. Primarily, you will make it known to the Chief Referee, and they will handle the problem. If this is not possible, other actions may need to be taken, including stopping the race.

Normally, the main job of judges is to ensure the accuracy and timeliness of results. Safety matters normally fall to the Chief Referee, but if you see something that may jeopardize safety, don't hesitate to act. If you cannot act, report it to someone who will.

## 2. Fair Competition

Fair and impartial enforcement of rules and judgments are critical. This is especially important in the scoring process. If you witness irregularities or violations, it is your job to make them known to the Chief Judge and/or the Chief Referee.

## 3. Integrity

Integrity means that you help ensure the good name of OBRA and the event. Making sure that advertised prize lists are honored, and that rules that affect public opinion (public urination, foul language) are being observed. This is important and should receive attention as time permits.

## 2. Expectations

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There are several expectations of judges. These are skills and attributes that you will need to have or acquire in order to be an effective race judge.

**1. The ability to record numbers (and other data) quickly and accurately.**

- This is the very heart of what judges do.
- Picking a finish visually with a pen & paper or voice recorder is a key skill that cannot be replaced by video cameras.

**2. A dedication to getting things right and making sure they correct.**

- Generating accurate results is a process.
- Working with multiple people and data sources helps ensure the best work possible.
- Often correct results will only occur after several iterations, getting corrections from racers and re-reviewing materials.

**3. The ability to deal with pressure and distractions while crunching data.**

- At the finish-line, there are constant distractions. These include, race announcers, riders asking for results, other officials.
- Results are very time sensitive. Generating results quickly allows riders to review for accuracy and allow promoters to hold award ceremonies in a timely manner.

**4. The ability to communicate well with others.**

- Officials, especially judges, work as teams.
- Each person has a different view of the race and different information that they've collected. Creating a the final results that everyone agrees on can only be accomplished if everyone is working well together.

**5. Adequate experience with the commonly used technology for judging.**

- Excel
- Laptops
- Thumb drives
- Printers
- Video technology

# 3. Roles

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## 3.1 Downstream Judge

Assigned when there is no photo-finish camera. The downstream judge is placed past the finish line at a point where riders will be slowing down and sitting up.

The downstream judge should record every number possible in the group. Numbers recorded will not be order of finish but will enable the Chief Judge to eliminate riders from the top placings who were actually in the back of the field.

## 3.2 Judge

The duties of a judge are to record each rider as they cross the finish line and compile the final results from the recorded data. In stage races, other considerations such as penalties and time bonuses will need to be accounted for.

## 3.3 Scorer

A scorer is an official who keeps track of the number of laps in a any kind of circuit race. They keep track of laps to go in the event and also the laps gained or lost by riders. The scorers work in close conjunction with other judges to put together the final results.

## 3.4 Sprint and KOM Judge

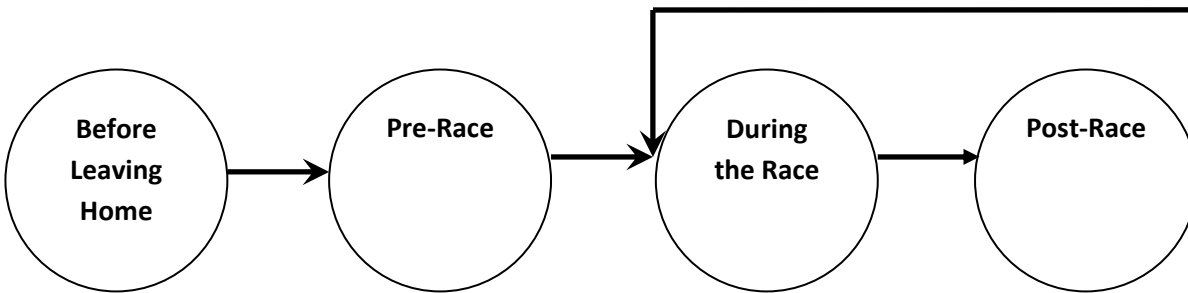
An assistant judge assigned to record results at intermediary sprints and KOM sprints. In OBRA, this is not a position often assigned.

## 3.5 Timer

Timers are assigned in time trials and stage races. They record the number and time of every rider. In stage races, all riders in a group receive the same time.

## 4. Order of Events

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### 4.1 Home Preparation

- Make sure you're fully alert: eat well, sleep well
- Double check that you have:
  - Maps, directions
  - Equipment: whistle, voice recorder, extra batteries, laptop, etc
  - Forms
  - Race flyer / race bible
  - Pens, pencils, highlighters, rubber bands
  - Note pads
  - Food & water you may need
  - Proper clothing for staying warm/cool, dry. Include your OBRA officials gear: shirt, vest, etc
- Make sure you give yourself enough time to make it to the race site before any pre-race meetings. A comfortable window (at least 1 hour before the first race starts) will reduce overall stress.
- Record your mileage before leaving your driveway

### 4.2 Pre-Race

- Meet with Chief Judge to be given your assignment
- Find out where the start and finish lines are
- Find out what equipment is being used, where it currently is, and where it will be setup
- Find out where race results are to be posted
- Attend the pre-race meeting for officials.
  - Listen for or raise issues that will impact your ability to provide accurate and timely results
- Setup the finish-line area. Don't be surprised if nothing is setup. If you need help, ask for it.
  - Make sure that everything is in place (as needed):

- Finish line banner (sign)
  - Generator / Power
  - Tents (EZ-ups)
  - Cameras
  - TV's
  - Printers
  - Tables
  - Chairs
  - Finish-line
  - Lap boards
  - Finish-line radio
  - Double check on distance marker (200m, 1k, etc).
- Check the lines of sight. Make sure you can see clearly.
- Double check all your equipment to make sure it works (voice recorder, pen, TV, Camera)

### 4.3 During the Race

- If you can be at the start-line (for instance, when the start and finish are at the same place), check number placement
- Monitor all you equipment to make sure it's functioning:
  - Batteries charged, gas in the generator, time remaining on recorders (video and voice)
- Get the start lists from registration (or from another source as decided, such as a road official on the first lap), and input the data into the computer as needed.
- Know what is coming: the race bible will help, but listen to the race radio for clues. Things happen on the course.
- If it is a multi-lap race, record lap times for each field. This will help you estimate what is happening including:
  - When a field will finish
  - If a field will overtake another field
- For intermediary laps, record:
  - the field (cat 4s)
  - the race numbers for riders off the front
  - the count of riders in the field
  - The race numbers of riders off the back
  - If possible, record and place all the riders.
- For the finish:
  - Make sure all your recorders are running
  - Record the finish order of each rider using the camera, your voice recorder, and pen & paper
  - Make sure you record riders off the back as they come through

## 4.4 Post-Race

- Generate Results:
  - Use your personal records (voice recorder, paper), to generate an Order of Finish, as best you can
  - Use the camera to supplement and correct your results
  - **EQUIPMENT DOES FAIL- don't rely on it**
  - Verify your results with the other judges. It's all too easy to miss a rider (even after reviewing tape). Verifying will help catch errors.
  - Generate the Order of Finish
  - Gather notes from the Follow Car Referee. This will include information about riders off the front (OTF), riders off the back (OTB), riders who dropped out of the race (DNF), penalties, crashes, etc. This information may affect the final placings for riders, so pay attention to it.
  - Using notes on lapped riders & penalties generate the Final Placing. For road races, this will typically be the same as order of finish.
- Results should be posted as soon as possible to allow riders an opportunity to protest and correct errors
- Results are final 15 minutes after posting.
- Printed, finalized results should be given to the Chief Referee and the race promoter
- Race promoters will need finalized (after 15 minute protest period) results ASAP in order to conduct award ceremonies.
- Electronic results will be sent to the OBRA webmaster and the OBRA mailing lists. Know who is taking care of this.
- Turn in mileage to Chief Referee.
- Collect all notes, electronic files, tape, print-outs, etc and give them to the Chief Judge. Most of it will need to be filed for the remainder of the season.
- Break down the finish-line area

# 5. Number Placement

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Good number placement is a skill that comes from lots of feedback. Most riders don't seem to be able to get it right at first. Even when someone else is pinning on a number, they are still often times improperly placed.

## 5.1 Well Placed Numbers

Well placed numbers are

- Clearly readable from a standing position
- Not folded
- Not covered by vests, hair, or other obstructions
- Stretched tight
- Can be seen by someone looking at them from the side



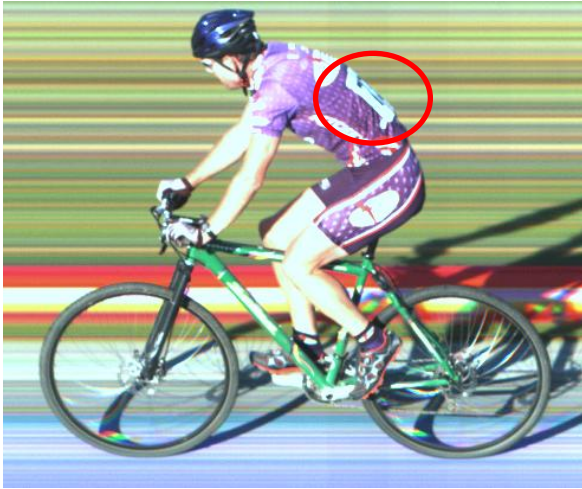
## 5.2 Poorly Placed Number

The most common mistakes are

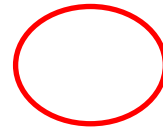
- Upside-down number
- Placed on the back
- Placed on the belly
- Folded
- Obstructed by hair or vests
- On the wrong side

- Pinned too slackly to be read

### 5.2.1 Number Pinned on Back



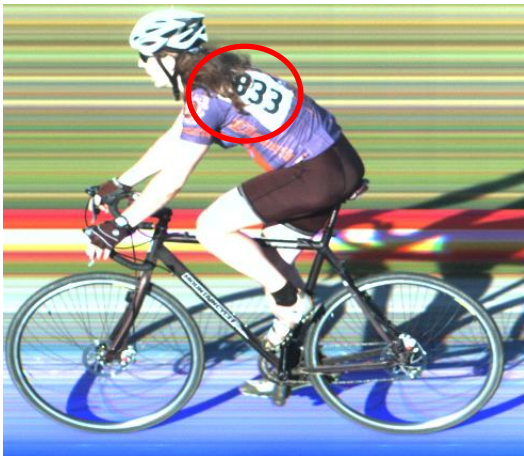
### 5.2.2 Number Pinned on Belly



### 5.2.3 Number is Folded



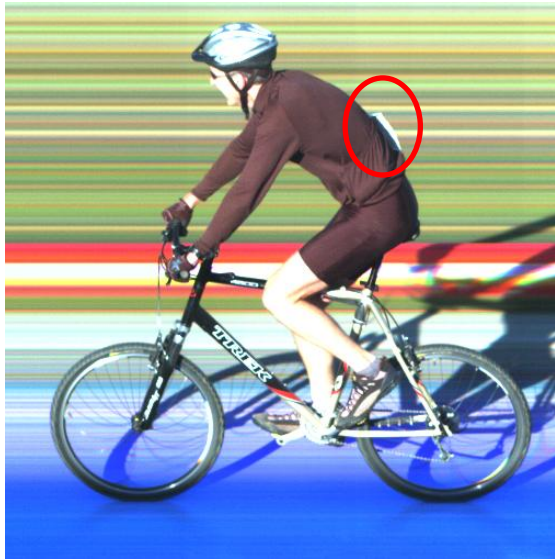
### 5.2.4 Number is Obstructed by Hair



### 5.2.5 Number is Upside-down or Sideways



## 5.2.6 Number is on the Wrong Side



## 5.3 Other Number Visibility Issues

When scoring, you will also run into several other issues related number visibility. The most common ones are:

- Riders sitting up
- Riders standing to sprint
- Riders obscured by other riders

In these situations, you just have to do your best to identify riders. Use smaller details to help identify riders such as:

- Team kit or jersey color
- Bike brand and color
- Helmet color
- Size of the rider

It's often helpful to call over anyone wearing the same team kit. They can often identify a rider easily when you cannot.



# 6. The Finish-line

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The finish-line is a fickle creature.

You need to know

- where the finish-line will be place (ask the Chief Referee or promoter)
- whether it will be across one lane or the entire road
- how you will mark the line (tape, paint, powder)

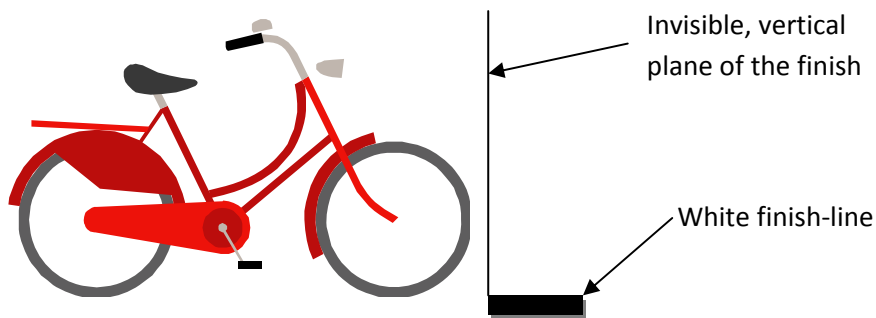
Be considerate of weather conditions when choosing the finish-line medium.

- Tape doesn't stick well to wet roads, and powder will blow away and wear down quickly.
- Paint is long lasting and may not be allowed by the permit.
- Tape is the easiest to get a straight line with.
- Paint and powder are difficult to get a straight line with

Also note that your finish-line should be as straight as possible.

## 6.1 When is a Rider Finished?

Although the finish-line is wide line on the road, the “theoretical” finish is not. In theory, the finish-line is an invisible 2 dimensional vertical plane that intersects the road at a right angle along the front (rider-side) edge of the finish-line. Note the figure.



The rider will finish the instant their bike breaks the plane.

Depending on the technology being used, “the bike” has varying definitions. Here is the general rule of thumb:

- Camera scoring, used at most road events:
  - When the front tip of the tire breaks the plane
- Timing strips, used at most track events:

- When the bottom of the tire (the part touching the ground) breaks the plane (meaning touches the timing strip)
- Timing chips
  - Generally, the time is taken when the chip crosses the plane.

# 7. Scoring a Race

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Before you start the race, make sure you have

- a start list
- the number of riders in the field
- the number of laps the field will be doing

In most races, the number of laps is known ahead of time. You should always count down the number of laps to go, rather than start at lap one and count up. This way, your scoring will be in line with the “laps to go” that riders are seeing on the lap board. If there are 25 laps, your first lap will be 24 as that is what riders will see the first time they come around and you score them. Lap 0 will be the finish.

Your main job as a judge is to KEEP YOUR EYES ON THE RACE. Avoid looking at your score sheet while riders are near the finish. It is easy to miss things if you take your glance down. This is an important skill that you will need to learn.

## 7.1 Scoring Systems

There are two general systems for scoring races using a pen and paper. These are vertical scoring and horizontal scoring. Through experience and time, each person develops their own style for scoring races that works best for them. Feel free to adapt these approaches to work for you, rather than feeling compelled to stick to the system.

Scorers generally use a symbolic nomenclature for quickly and clearly recording race events. Here symbols you will commonly see:

- |          |   |
|----------|---|
| / or --  | a single slash indicates a small gap between fields or riders |
| // or == | two slashes indicates a large gap                             |
| ○        | circled rider number indicates loss of a lap                  |
| or _     | indicates a missed rider                                      |
| P or F   | indicates the Peleton or Field                                |

You will need to determine which symbols you will use when scoring, and then be consistent in their use.

### 7.1.1 Vertical Scoring

Vertical scoring will place the laps across the top, with the placing information below.

Laps	24	23	22	21
	6	6	3	3
	3	3	6	101
	<hr/> 18	18	18	6
	42	42	42	18
	<hr/> <hr/> 85	<hr/> <hr/> 96	<hr/> <hr/> 96	<hr/> <hr/> 42
	96	85	85	85
	101	32	32	96
	10		87	32
	87			87
	12			
		F		
		<hr/> 12	<hr/> F	
		<hr/> 10	<hr/> 12	<hr/> F
	F	<hr/> <hr/> 101	<hr/> <hr/> 10	<hr/> <hr/> 12
				<hr/> <hr/> 10

### 7.1.2 Horizontal Scoring

Although the horizontal method takes less space, it often leads to ambiguities. As you will be writing without looking at the paper, you might record two numbers close together. In the example below, you might write the 6 and 3 close enough together that it reads 63. This doesn't happen with the vertical method.

Lap 24	6 3   18 42    85 96 101 10 87 12 ----- F
Lap 23	6 3 18 42    96 85 32 ----- F   12 10    101
Lap 22	3 6 18 42    96 85 32 87 ----- F    12   10
Lap 21	3 101 6 18 42    85 96 32 87 ----- F    12    10

### 7.1.3 Continuous Vertical Scoring

Both the vertical and horizontal scoring methods shown above work well when the field size are manageable (less than 50). If the field sizes are larger, or your hand writing is large, you may want to try an alternative scoring method, demonstrated below.

Lap 24	101	F		
6	32	<u>12</u>		
3		10		
18				
42				
<u>85</u>		<u>Lap 21</u>		
96	F	3		
101	12	(101)		
10	10	6		
87	101	18		
12		42		
		<u>85</u>		
	<u>Lap 22</u>	96		
	3	32		
	6	87		
F	18			
	42			
<u>96</u>	<u>96</u>			
Lap 23	85			
6	32	F		
3	87	<u>12</u>		
18		<u>10</u>		
42				
<u>96</u>				
85				

This method allows you to capture lots of data spanning multiple pages more easily. The down side is that it is not as visually intuitive when looking across laps.

## 7.2 Laps Up/Down Tally Sheet

With good scoring methods, you should be able to recreate the entire race. There is, however, one other piece of information that you should maintain. This is the laps up and down tally sheet. At the end of the race, there might be 20 or more riders down laps. It will take a long time to count up all your circled riders. As a rider is lapped, immediately write their number on a separate piece of paper

Rider #	Laps Down
10	
101	
53	

This way, once the race is over, you will know how many laps each rider has lost.

## 7.3 Lap Board

The lapboard should always be changed before the lead riders in the field come through the finish-line. Give yourself enough time to flip the board and refocus on the race so that you can properly score.

Always base your lap board on the leaders, even if there are riders off the back that have not come through the finish. If a rider is close to getting lapped near the finish, continue to flip the board for the leaders with adequate time to score.

# 8. Electronic Results

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Electronic results are sent to the OBRA webmaster (Cheryl Willson) after the race has finished. The results are then uploaded and put onto the OBRA website.

The format for electronic results is pretty specific. Results that are not submitted in the correct format must be fixed before they can be uploaded. This takes a significant proportion of the webmasters time and may not happen in the future. Expect results submitted in an improper format to be sent back to the judge for modification.

## 8.1 Formatting

Results should be submitted in an Excel format. Alternatively, they may be submitted in a comma or tab-delimited file.

### 8.1.1 Data File

1. All fields should be on a single sheet,
  - a. Do NOT put results in multiple files or multiple tabs/sheets in a single file
2. Race results should be submitted separately from series results. Place them in a separate file or worksheet.
3. Stage race results should submit daily with each event (all categories) in its own worksheet or file.
4. Do not use linked data in a submitted file. The result files should be flat files that do not reference other sheets or files.
5. Do not use or leave hidden columns in the file. Remove these before submitting.
6. Use a practical file name such as pir\_20080810.xls or cherry\_pie\_feb2009.xls.

### 8.1.2 Data

7. Label the columns once at the top of the file.
8. The left most column needs to be the "Place" columns. In other words, the column indicating 1<sup>st</sup> place, 2<sup>nd</sup> place, 3<sup>rd</sup> place, and so on. The order of the other columns is no important.
9. The file must include at least these columns: Place, Number, First Name, Last Name, Team. Please use these specific labels for the columns.
10. While additional columns are not required, these are all possible labels (You can use the labels under "Column" or choose one of the labels listed under "keys").

Column : keys

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Age : age, racing\_age

City : city, hometown

Date of birth : date\_of\_birth

First name : first\_name, firstname, first, racer.first\_name, first name  
 Laps : laps  
 Last name : last\_name, racer.last\_name, last name, last, lastname  
 License : license, membership, membership #  
 Name : racer  
 Notes : notes  
 Number : number, rider\_#, wsba#, #, obra\_number  
 Oregon cup : oregoncup  
 Parent : barcategory, bar\_category  
 Place : place, placing  
 Place in category : place\_in\_category  
 Points : points, pts  
 Points bonus penalty : points\_bonus\_penalty  
 Points from place : points\_from\_place  
 Points total : points\_total  
 State : state  
 Team name : team\_name, club/team, team, team.name  
 Time : time, time, stage\_time  
 Time bonus penalty : time\_bonus\_penalty, penalty, bonus  
 Time gap to leader : time\_gap\_to\_leader, gap, down  
 Time gap to previous : time\_gap\_to\_previous  
 Time gap to winner : time\_gap\_to\_winner  
 Time total : time\_total, total\_time, stage+\_penalty, time\_total

11. Be sure to split the names into two columns: First Name and Last Name.
12. Unlabeled data should be placed in a column labeled as Notes.
13. Use common sense category names such as Cat 3 Men. Don't use something like CT3M
14. If rider numbers are not clear, please put incomplete numbers or rider descriptions in a column labeled "Notes". If you put these things in other columns, it will create "junk" riders in the database.
15. Email the file to Cheryl ([webmaster@obra.org](mailto:webmaster@obra.org)) and indicate who will be fielding results questions and making corrections. This person's email will be posted with the results.
16. Format questions should go to Cheryl ([webmaster@obra.org](mailto:webmaster@obra.org)).

## 9. Checklists

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### **Personal Equipment Checklist**

#### ***Critical***

- Clipboard
- Writing implements (several):  
pens, pencils (rain), highlighters
- Notepad or paper
- Voice recorder
- Stop watch
- Race flyer/bible
- Map/directions to the race course
- Extra forms
- Record mileage

#### ***Important***

- Whistle
- Food & water
- Appropriate clothing

#### ***Optional***

- 2-way radios
- Laptop
- Printer
- Extension cord
- Folding chair

### Setup Checklist

- Unload Truck (usually done by promoter)
- Position Truck (usually done by promoter)
- Unpack finish line signs, generator, tables, canopies, cords, and ladder
- Fill the generator with gas. A full generator can last all day.
- Install finish-line on the road (paint or tape)
- Setup finish-line sign/banner
- Setup Lynx camera (if being used)
- Setup tables, chairs, computer, camera, printer, and power
- Test the camera. Check auto focus, frame rate settings
- Setup the lap board and bell
- Get start list and input on computer or Lynx software
- Make sure you have a working OBRA radio set to frequency 3-15.

## Process Checklist

### ***Pre-Race***

- Determine where finish-line is
- Determine result format (how deep, etc)
- Determine where results will be posted
- Attend pre-race meeting

### ***During Race***

- Check rider number placement at start
- Monitor race radio to track field locations
- Test camera on a passing field to make sure you can see all the numbers
- Test printer
- Decrement completed laps from your lap counter (and paper notes)
- Document dropped and DNF riders
- Capture prime sprints, if any
- Turn on camera and hit record at least 2 minutes prior to the finish
- Activate voice recorder well before finish
- Score finish

### ***Post-Race***

- Build Order of Finish results
- Verify with recordings and other judges
- Collect notes from follow car referee
- Build Final Order (order of placing)
- Input results into the computer
- Print 4 copies of results for: 1. Posting, 2. Chief Referee, 3. Chief Judge, 4. Race Promoter
- Post results
- Help pack break down finish / pack up truck
- Turn in mileage to Chief Referee

# 10. Additional Resources

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**OBRA Training WIKI:** <http://obra.wikidot.com>

The place to find materials from this training. The growing resources section currently includes start line instructions for criterium and road races, a race notes worksheet, and instruction information for drivers.

**OBRA Website:** <http://www.obra.org>

All things OBRA

**OBRA Forms:** <http://www.obra.org/forms/>

Includes OBRA rules and forms for medical occurrences and race charges.

**USA Cycling Officials Section:** <http://www.usacycling.org/officials/>

Rulebooks, manuals, and lots of useful forms.

**National Association of Sports Officials:** <http://www.naso.org/>

Liability insurance for officiating.