



ZRound y ZRound Manager

Quick Start Guide

Version 1.3

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Table of contents

Welcome	1
Training Quick Start.....	2
Single Race Quick Start.....	4
Championship Race Quick Start.....	6
Championship setup.....	6
Race setup.....	6
Your first race	7
ZRound – F.A.Q.....	10
Interface with automatic detection systems	10
How long can be ZRound timing working?.....	10
Public & Drivers Monitor	10
Alarm Sound System.....	11
Voice System	11
Training mode	12
Race Start modes	13
Qualifying modes.....	13
Information saving.....	14
Drivers identification	14
ZRound Manager – F.A.Q.....	15
Championship creation	15
Race creation	15
Drivers registration	15
Race Formats	16
Generating Qualifying Heats.....	16
Generating Finals.....	18
Championship scoring	18
Transponders and frequencies validation.....	19
Drivers identification	19
APPENDIX A –PN Racing race format.....	21
APPENDIX B – Heats, Semifinals & Final	22

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Welcome

Welcome to ZRound Suite, I hope you'll find it of your convenience and it will make your racing experience more exciting covering most of your timing and management needs and giving you extra functionality to make things funny and easy.

This is FREE software, please read carefully the license agreement before installing and using it.

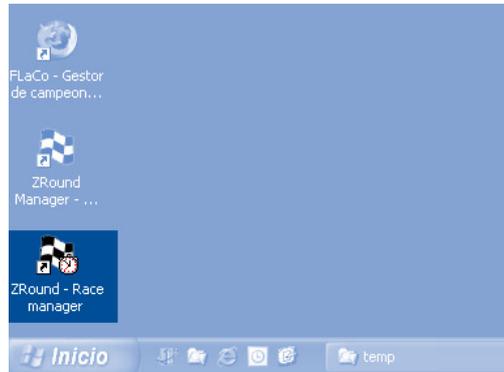
You can find more tips and information in www.zround.com site. There are no more documents like this about using it but I think its concepts are easy to understand. Please don't doubt in posting your comments, suggestions and questions in the site forums. Unfortunately I haven't free time enough to write a complete guide nor online help system. All contributions are welcome.

ZRound has been built by racers thinking in racers. Many thanks to all the people who have make ZRound possible, thanks to Susana for her patience by the robbed time and thank you for using ZRound.

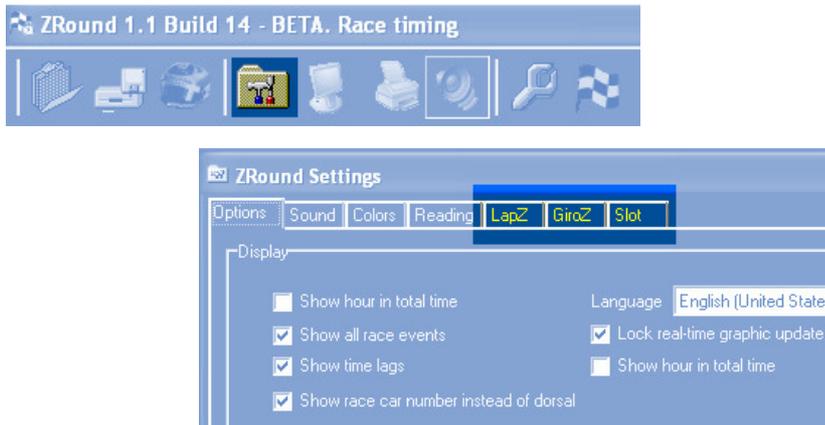
Training Quick Start

Follow these steps to start a training session:

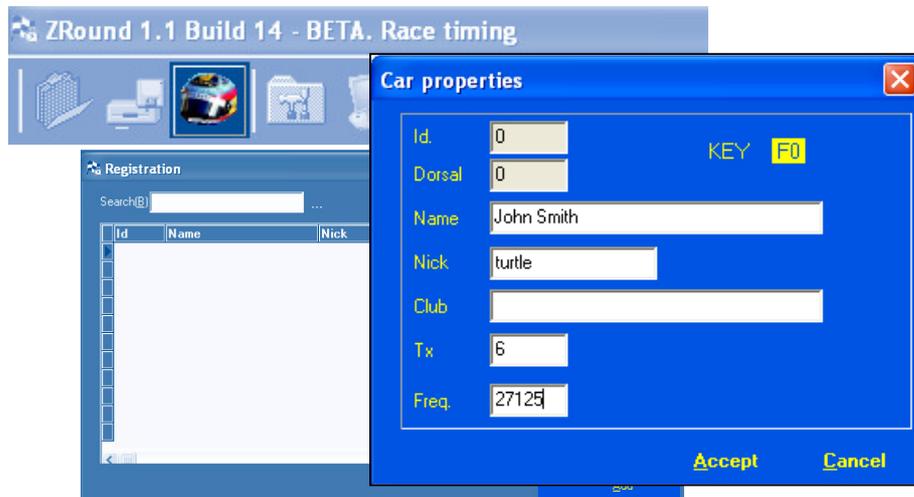
- 1) Start ZRound using shortcut in your desktop or the ZRound programs group in windows start menu.



- 2) Setup your detection system configuration (GiroZ, LapZ, Slot)



- 3) Register yourself in the ZRound database using driver's database registration form. If you are using LapZ you can read/write the id to the transponder from the "Car properties".



- 4) Now you are ready for training so click in the training button. All cars detected are automatically added to the training session.



NOTES:

- To use voice system you must first have MS SAPI and your favourite TTS engine installed on your PC. You can setup voice settings in the ZRound "Speaker" configuration page where Speaker, reading speed, events to read, text by events, etc. can be customized.
- Every time you can show/hide monitoring window to allow public and drivers to view laps and times if you own a two monitor video adapter.

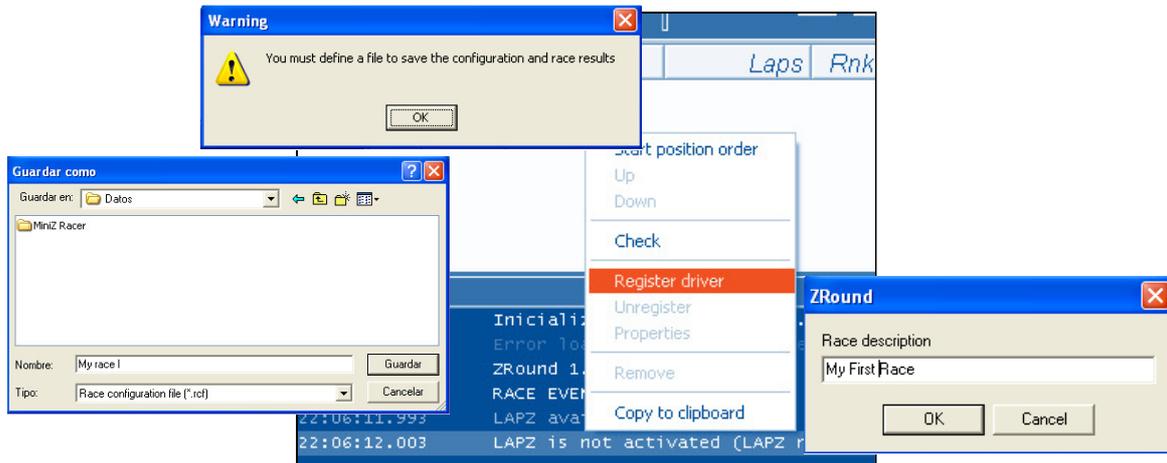


Single Race Quick Start

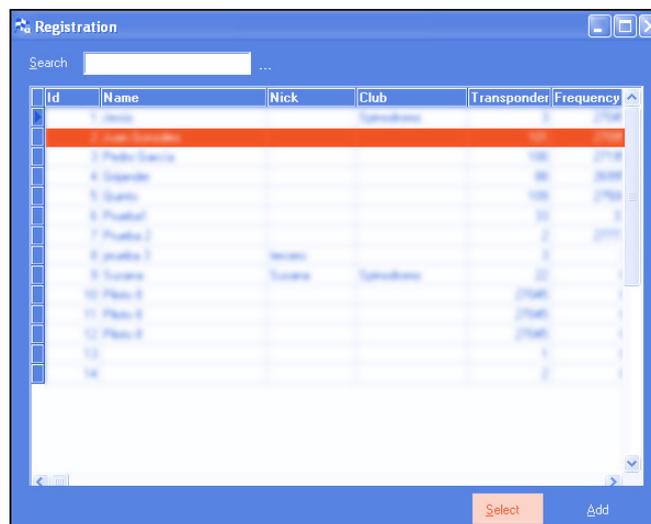
Single race is a competition which doesn't belong to any championship. This is an isolated race managed by ZRound, you don't need a championship manager nor the results will be available on them. All information related to this race is jointly saved in the same folder that you must choose to save race configuration file. Later you can review this race by loading this race configuration file in ZRound.

To start a single race you must follow these steps:

- 1) Start ZRound as described in previous section
- 2) Register drivers in ZRound database (as explained in previous section) if they are not registered yet.
- 3) Register drivers in the race. System warning you about choosing a filename to save race configuration. When you click OK a file dialog box let you define the folder and requested filename. The folder holding this file will hold all race information files (log, lap times, html, etc) too. A description for the race must be entered. It is used in main window, html output and reports.



- 4) Now you must choose each race driver in the list and click "Select".



- 5) Change starting order using popup menu if you want. Menu items "Up" and "Down" will move drivers to achieve the order you want.



- 6) Setup race parameters:
- Qualifying criteria: "Best lap" or "lap count"
 - Duration of the race. You must provide hours, minutes and seconds o Laps to go.
 - Start mode: Staggered or Le Mans
 - Time to finish
 - Minimum lap time: Seconds to complete a lap. If a lap time is less than this time ZRound give an alert to the console. Lap won't be counted because it is considered an error of lap counter or an incorrect reading due to a car incident or other race situation.



- You may customize other parameters related to the way ZRound start counting and working like countdown time, time between cars in staggered start, enabling and customizing sounds and alerts, etc. Please read the F.A.Q. section for more information.

- 7) Start the race clicking in the flag button



Championship Race Quick Start

First I will introduce some concepts about race setup for better understanding about qualifying and drivers distribution. For detailed information about how distribution is done please read ZRound Manager F.A.Q. section below.

Championship setup

Number of races: Number of race competitions to complete.

Number of worst races to discard: You can ignore the worst races of each driver in order to calculate the championship scoring. This number is the amount of races to ignore.

Rounds by Heat: Number of rounds to complete a single Qualifying Heat

Drivers by Round: Minimum amount of drivers to drive each round

Number of race assistants: Number of assistants needed to help during the race (this is not used now)

Max. time to complete last lap: This is used in ZRound to manage timing. It is an extra time given to drivers to complete their last lap after the race total time has gone.

Start mode: Staggered or Le Mans (see F.A.Q.)

Qualifying mode: Laps (lap count) or Best lap (see F.A.Q.)

Duration: Duration of the race. It can be time or a lap count.

Training Duration: Duration (time) of the training before the race. If a value is given (not zero) it will be mandatory (it won't be changed) in ZRound

Training Start Mode: Staggered or Le Mans (see F.A.Q.)

Time between drivers in staggered mode: Time elapsed between drivers start in staggered mode.

Number of drivers promoted to next final: It is a way of giving an opportunity for better qualifying to the bests drivers of each final.

Drivers by Final: Number of drivers who drives each Final group.

Min. drivers by Final: When Finals are generated it is possible to have a little number of drivers in the last Final. If there is not enough drivers to complete the group all of them will drive in the previous Final group. (See F.A.Q.)

Race setup

Race setup is based on championship default definitions. When you create a new race you can override that values and only the race setup is modified. There is another parameter defined for races.

Min. Lap Time (sec.): It is the amount of seconds needed to complete a lap. It is supposed than a driver never can drive a lap under this time and timing ignore any laps with a time under this value considering it an error (a post will be wrote in the ZRound log window).

Now you know these concepts and you can setup a championship race ...

Your first race

 *Note: It is out of the scope of this guide to provide a complete user manual but important notes are detailed in the F.A.Q. sections below. Please read them carefully.*

For creating a championship race follow these steps.

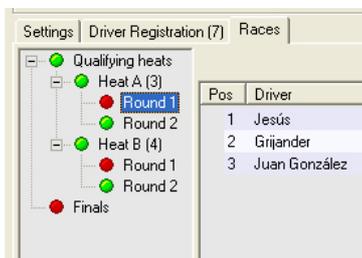
- 1) Create a championship or open it if it already exists. If you need to create the championship ensure to fill in all setup parameters.
- 2) In the Race page of championship window click on "New" button
- 3) A Race setup window will be show with the default values provided for the championship. You can now customize the race modifying some of these parameters if you need it. When setup is saved (clicking Save button) two new pages are shown in the race window to let you to register drivers and to control Heats and Finals.

- 4) Register drivers in the race using Driver Registration page.

Id	Driver	Dorsal	Name	Trans...	F1	F2	F3	F4
7	4	0	Grijander	1	0	0	0	0

The registration process consists in two steps like in ZRound single race. First you have to create a record for new drivers. Then you can register it in the race.

- **You only need to create one and only one record for each driver. This is used system wide in all race of all championships. The system needs unique drivers definition to control championships scoring and reports. Please pay attention in registering process to avoid drivers record duplication. When a driver is selected an historic report is listed to make easy identify him and to distinguish from other drivers. Filling in the nickname can help too.**
- 5) Once you have all drivers registered Heats must be generated clicking in "Generate Heats" button. If there are conflicts due to repeated transponders id or frequencies in Heats you will be warned and assisted in their resolution.
 - 6) Go to "Races" page to control round timing and qualifying.



- You will see all generated Heats and all Rounds belonged to each Heat. This page is divided into two blocks. The left panel is a tree view with hierarchical information about Qualifying Heats and Finals. When an item is selected the right panel shows information related to it. Printing works in this way too.

Qualifying Heats: Information about general Qualifying of all Heats after each round is viewed. The button Generate Finals is available only in this view. You can generate the Finals when were needed and even if there were pending rounds you can anticipate them.

Heat "X": Driver registration information for Heat "X". Transponder & Frequency conflicts are shown in paired colors. You can edit the driver registration properties. Also you can print it. You are asked about printing the present Heat or all of them and you can print labels for cars too.

Round "N": Information about round results after it is complete. You can edit these results for corrections due to errors, penalties, etc. You can lap times, position chart by laps, and lap time chart by driver from the driven race clicking in "details" button.

Finals: Information about Final Qualifying after each final is complete. When all Finals are driven you will see the definitive competition results.

Final "X": Driver registration information for Final "X". Transponder & Frequency conflicts are shown in paired colors. You can edit the drivers registration properties. Also you can print it. You are asked about printing the present Final or all of them and you can print labels for cars too.

- 7) Now it is time to drive. Select the Round you want to start and click in "Go" button. You will be asked for opening ZRound for timing. If you click Yes ZRound will be opened with the round configuration. You only have to start the race from ZRound and when round were done and ZRound were closed all results will be available for editing, printing and qualifying. Click on Refresh button if results are not updated successfully after closing ZRound.

- 8) Repeat previous step until all Rounds were completed and select "Qualifying Heats" item in the left panel. You will see ordered the drivers by qualifying and marked in blue the drivers expected to be in Final A. You can print it and click on "Generate Finals". All Finals groups will be generated following race setup. If the distribution is not of your convenience you can edit it or may be you want to change race setup and click on "Generate Finals" again for a new calculation. You can repeat this step as many times as you need.
- 9) When Finals are ready you can click on Final A item in the left panel to print Finals driver distribution and labels if you want. Next you have to timing all Finals (beginning in the last one) until Final A is completed like were done for Heats rounds.
- 10) All Finals are completed. Select "Finals" item to view competition race final qualifying and scoring and to print them.
- 11) Close the race. This prevents future race changes, edition and starting any closed round by error. Championship scoring will be update, you must "refresh" championship view if it were opened during race control and timing.

ZRound – F.A.Q.

Interface with automatic detection systems

GiroZ: Interface LPT1 (ONLY LPT1).

LapZ: Interface RS-232C. Comm port can be selected.

Slot: Parallel port interface (SPP & ECP modes). Ports 378h, 278h or 3BCh

How long can be ZRound timing working?

1193 hours. **LapZ** requires user to reset the bridge safely during the race. There is a minimum probability of loosing a lap if automatic reset were done while a car is running under the bridge. You can choose to do this operation manually and you can setup an alarm in ZRound with the elapsed time between each bridge reset.



Also you have the "automatic LapZ bridge reset" in the configuration (using the bridge alarm clock).

LapZ bridge needs 2 seconds to complete the reset operation safely. If you cannot provide this safe margin you can follow next procedure:

- "Pause" the race (click on pause button) and order drivers to go to boxes
- Reset the bridge
- "Continue" the race (click on continue button)

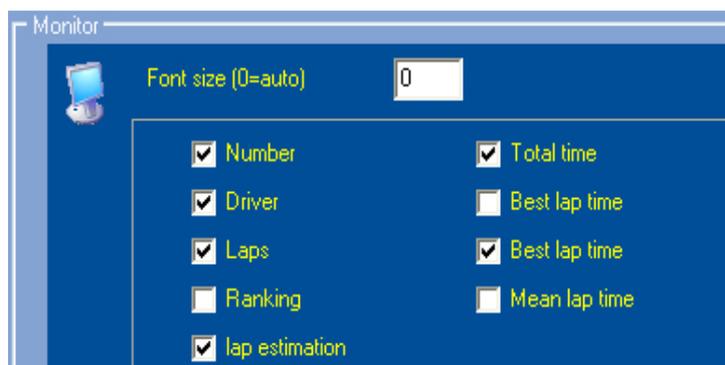
GiroZ & **Slot** systems do not need to be resetted.

Public & Drivers Monitor

You can show or hide it at any time clicking on "monitor" button. You can move it to a suitable place on a multi-monitor installation to allow public and drivers to follow laps and time in real time. ZRound will move the information window to that position next time it is shown.

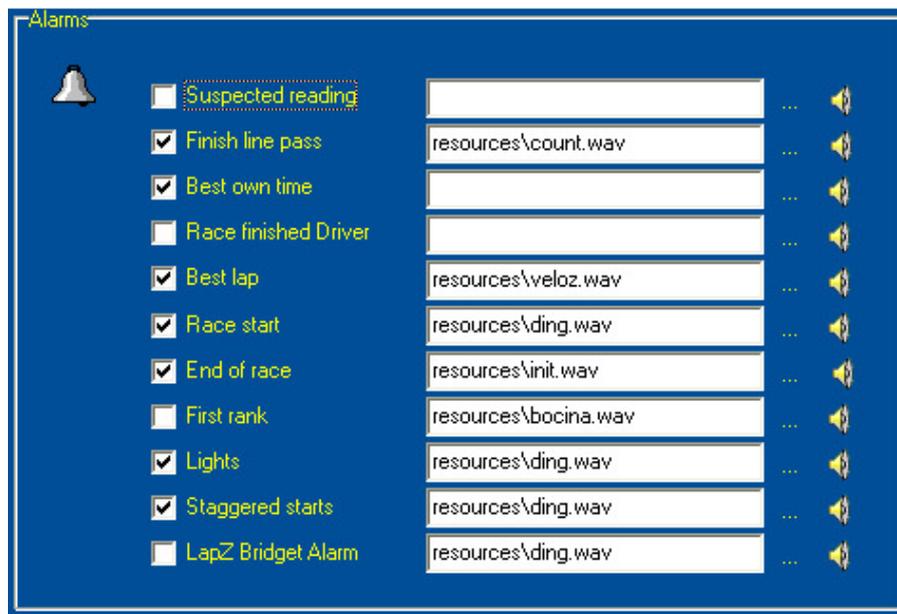


It's possible to choose which information will be shown and font size in ZRound configuration window.



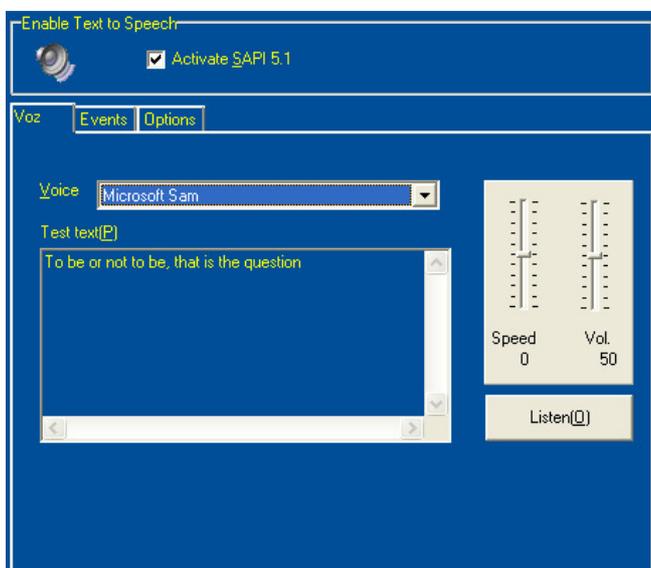
Alarm Sound System

ZRound will alert you when main events are fired like best times, car detection and so on. Next you will find the event list:



Voice System

ZRound supports Microsoft SAPI 5.1 interface. If you have a Text to Speech synthesis engine then ZRound will use it to speak. If you haven't SAPI installed you can download it for free from Microsoft site.

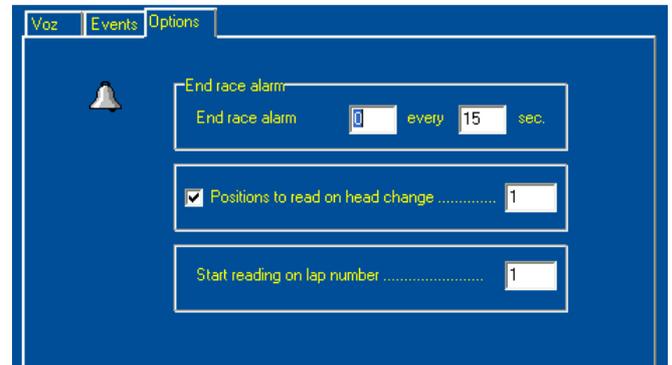
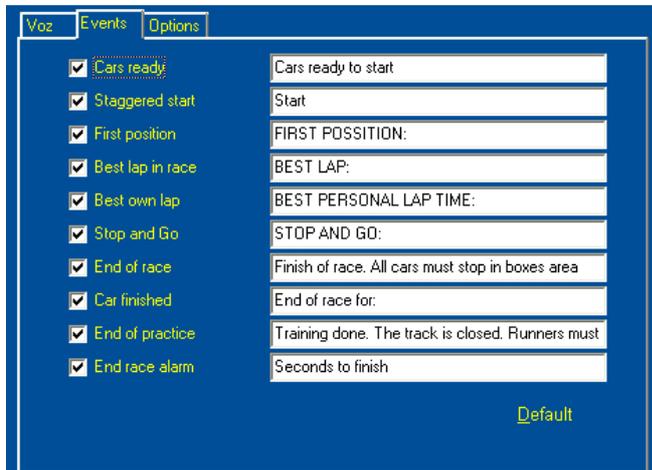


If you want voices in your language or with a better quality and performance may be you want to test some of these products:

- Loquendo: www.loquendo.com (GREAT!!)
- ATT Natural Voices: www.naturalvoices.att.com
- Nuance: www.nuance.com

The Speaker button let you to enable/disable voice system and it doesn't affect to alarm sound system so you can *interrupt* voice system but lap detection sound (and all selected sounds) will continue working.

Here you have configuration windows from ZRound voice subsystem:



Training mode



There are two training modes:

- *Competition race training*: It's activated when a race configuration file is loaded or ZRound is launched from Championship Manager. In this mode a voice warning with information about drivers who must be ready for training will be spoken. The system calls them by their nicks/name saying the total time for training session too. It's not allowed to drive to other drivers than called and an alarm will be shown in log window if other drivers are detected.
- *Free training*: You only have to start training without drivers registered. When a new car is detected the driver name and details are searched in the database (by transponder number). All session data is stored under "Entrenamientos" folder. If you give a time limit to the training each driver will have that total time to compete his training session. When the time has gone speaker will warn to finished driver. A new session will be started when driver will be detected again.

The system can talk the best drivers times if this event is checked in the Voice system settings.

Registration and Unregistration from training

Registration in free training mode is automatic by car detection. The transponder number detected will be searched in the database to show the driver who has it assigned. If a driver is not found then the car "<new tx=nn>" will be shown to allow you edit the driver properties. If there are more than one driver with these transponder then you must select the driver from the database (only drivers who owns that transponder number will be shown)

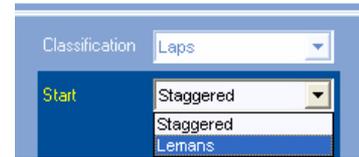
To unregister a driver you can choose "Unregister" from the popup menu in drivers

list. His timer will be disabled until a new detection were done. After the elapsed minutes configured in the Settings/Options/Display window check "Time to remove car registration from training" without detecting the car it will be removed from training.

Race Start modes

Staggered

Each car has its own times. The drivers times starts the first time their car is detected.



Le Mans

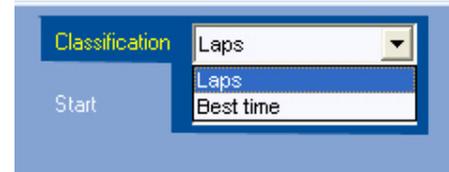
All the cars have the same race time. There are two ways of starting timing (it's controlled by a check near the start mode combo).

- 1) Time starts when you click on "Start race" button.
- 2) Time starts when the first car is detected.

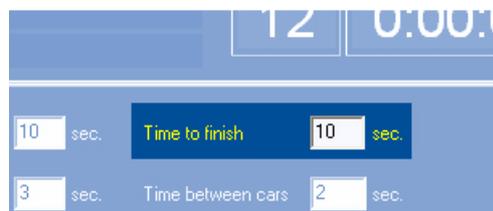
Qualifying modes

Lap Count

The first qualified driver will be who drives more laps in the race duration.



Each car has the duration (time or number of laps to go) for completing the race. When race is over duration the drivers has en extra time to complete the last lap configured in the "Time to finish (sec.)" setting.



Example: assume duration 5:00 and 10 sec time to finish

Car	Time	LAPS
1	4:51	19
2	4:58	19
1	5:11	19 (car finishing after 10s., this lap is ignored so the total lap value is the last one: 19)
2	5:08	20 (car finishing in time, lap counted)

Usually you give a time high enough to complete last lap after detection (three times the minimum lap time is a safe value).

Best Lap

The first qualified driver will be who drives quickest in the total lap count given to complete the race.

In training mode, always best lap will be use for showing better drivers.

Information saving

After complete a timing session all information registered by ZRound is saved in differents ways:

Free Training sessions: A file is created with lap times for each driver in the folder "Entrenamientos\YYYY\MM\DD" under ZRound installation path (Y=year; M=month; D=day) saving training session files by driver an day.

ZRound race: When registering drivers ZRound ask for a filename to save race configuration file (.rcf). A file with the same name but extension .dat is saved with lap times.

FLaCo race: A ".dat" file is saved for each round/Final generated following FLAco specifications (see www.flaco.org)

ZRound Manager race: A .dat file is saved under *Class\Championship\Competition* folder with the name of Manga_X.Serie.N or Final_X name with lap times and the results (laps and times) of the race. Also information about qualifying is registered in the Manager database.

It is common to all type of races/training to save a log file with the details written to the log window and a HTML output with results and drivers detailing lap times and position chart.

Drivers identification

There are three way to registering a driver:

- Using ZRound (you are not using a championship Manager, i.e. FLAcO or ZRound Manager) drivers are assigned the firs low number available beginning with 1.
- Using FLAco: the driver number is generated by FLAco
- Using ZRound Manager: Two numbering system are available:
 - o Dorsal: Number assigned to each driver for all races in the competition.
 - o Number in Heat/Final: Relative number for each Heat/Final (from 1 to total drivers in the group). This is usefull to count laps using the keyboard (pressing F1 .. Fn each time a car must be counted).

You can choose the numbering model using the checkbox "Show race car number instead of dorsal" in the Options/Display window



ZRound Manager – F.A.Q.

Championship creation

A championship is a set of races. Drivers running in each race get a score depending on their position in the competition. You only have to choose "New Championship..." in the application "File" main menu. The championship configuration window will be shown to let you to define the parameters to apply by default to every race (you can modify this parameters in the race parameters later).

Championships manager controls scoring and let you print them or export them to the clipboard (you can paste in a spreadsheet or text editor). Also it generates HTML output for championship status and a javascript/HTML document with a menu for navigating around all races, heats, rounds and finals HTML output generated by *ZRound*. The HTML files are saved in the "*Class\Championship*" folder under data folder of the ZRound installation path.

Race creation

First you must have a championship created. Then you can create a race inside the championship. When you create a new race a window will be shown with the default values defined in the championship settings. When "Save" button is clicked two new pages will be available to let drivers to be registered and to control race times.

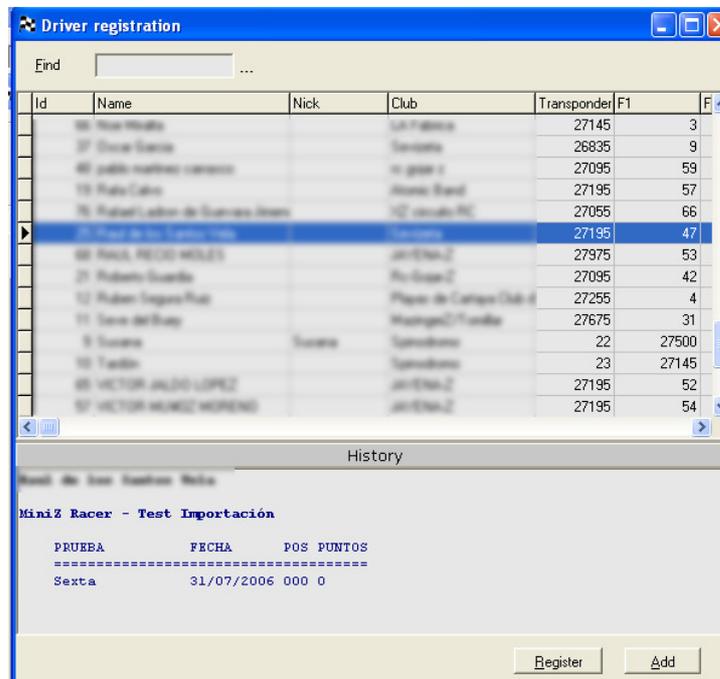
Drivers registration

You can register drivers in the "Driver Registration" page:

Id	Driver	Dorsal	Name	Trans...	F1	F2	F3	Ranki...	Freq...	Heat	Pos	Fin
8	1	1	Jesús	191	27095	0	27045	0	27.045	1	7	1
9	4	2	Grijander	1	26995	0	0	0	26.995	1	6	1
10	2	3	Juan González	101	27095	0	0	0	27.095	1	5	1
11	7	4	Prueba 2	2	27095	0	0	0	27.095	2	3	2
12	6	5	Prueba1	33	33	0	0	0	33	2	2	1
13	5	6	Quinto	109	27500	0	0	0	27.500	2	4	2
14	3	7	Pedro García	100	27195	27045	0	0	27.195	2	1	2

You only have to click on "Register" button, to press "Ins" Key or to use the popup menu in the registration list. The drivers database will be open to let you to search and to register drivers. If the driver doesn't exist you can create a record for him in the database in this window clicking on "add".

Searching by name (any name which contain the string searched) is allowed and a history of the selected driver in all his competitions are reported to make easy registering process and driver identification.



Race Formats

There are available the following race formats:

- **Heats & Finals:** Explained next
- **PN Racing:** This is used in the MiniZ PN Racing World Championship. It's explained in Appendix A
- **Heat & Semifinals & Final:** It is a variante of Heats & Finals and it's explained in Appendix B

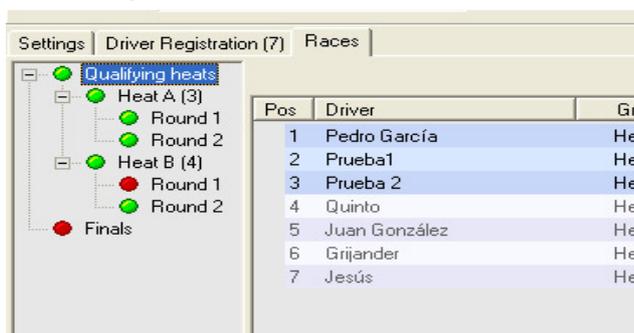
You must choose a race format for each race and a championship allways has a default race format.

Generating Qualifying Heats

When a driver is registered in the database a Ranking is provided. This value is used as default when he is registered in the first race of the championship (the last race driver ranking will be used if it is available) and you can modify this value in order to configure heats properly. Ranking is used to group drivers when Heats are generated letting drivers with similar ranking drive together. Drivers with highest ranking will be in Heat A and the next Heats will be filled by ranking order. Each Heat will have the number of drivers defined in the race configuration window. So we have as many heats as the "number of drivers"/"drivers by Heat" division. This is not an integer value usually so the module of this division will be assigned to each Heat (one per Heat) beginning with the last one. This way the difference between the amount of drivers in each Heat is always less or equal to one.

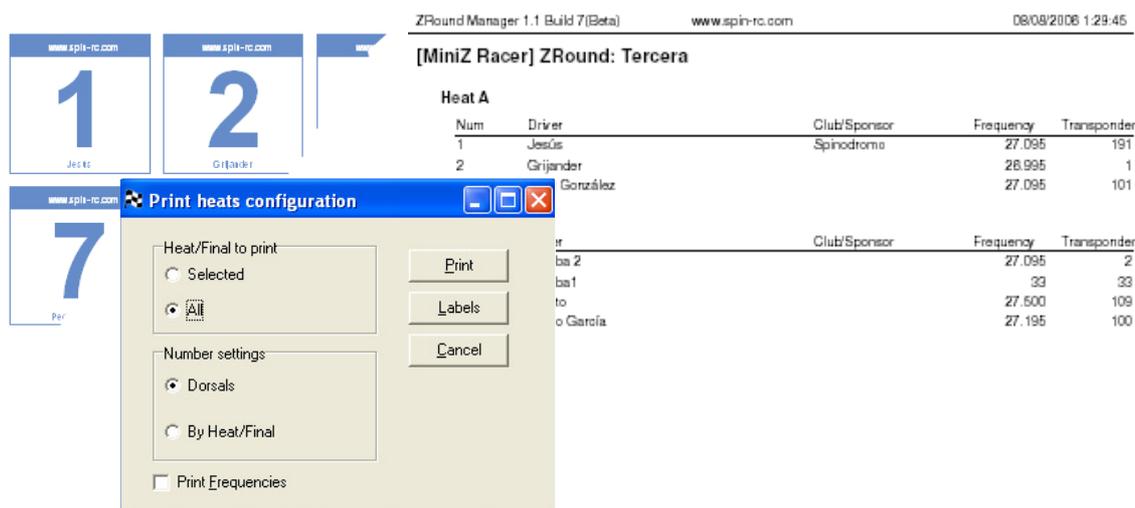
To begin generation you must click in "Generate Heats" button.

After Heat generation you can adjust them manually editing the drivers properties (Heat 1 = A; Heat 2=B; etc.)



Heat generation structure

You can print a Heat alone or all together (you will choose the way in the print dialog) if you click on "Print" when the Heat or Final item is selected. You can print labels too to glue in the cars. Numbers to print depends on your preference about numbering drivers in the competition and it can be the driver dorsal or the number of car in the Heat (or Final). To print frequencies is optional according some associations regulations (like AECAR does). If there are conflicts these will be marked with an asterisk near the offended value.



When slot interface is selected in ZRound, slot assignment will be done by driver's ranking. You can get a random slot assignment using the popup menu in the drivers list when a Heat or Final is selected.

Example of Heat generation:

- Total Drivers registered: 25
- Drivers by Heat: 7
- Heats generated:
 - Heat A: 8 drivers.
 - Heat B: 8 drivers.
 - Heat C: 9 drivers.

Why?

$$25 \text{ drivers} / 7 \text{ drivers/heat} = 3 \text{ heat (module=4 filling 1->A, 1->B, 2->C)}$$

Generating Finals

When all Heats are completed (you can do it before with provisional qualifying if you want) it is time to generate the Finals.

First you must select the "Qualifying Heats" item to display qualifying results and print them if you want. The "generate finals" button will be enabled to make possible the generation process when clicked. This button is only available in the Qualifying Heats view.

The number of drivers by Final is defined in the competition parameters and it will be generated as many Finals as "total drivers"/"drivers by final" division. In contrast with qualifying heats the lasts drivers (the division module will give the total count) fill the last Final group. If this value is less than "min. drivers by final" parameter then all of them will be drive the previous one Final.

You can move drivers between finals after generation process using the popup menu in the drivers list when the desired Final item is selected.

The Finals are launched in inversed order (first you will run the last one). When a final is done the firsts drivers ("number of driver promoted" parameter) are registered automatically in the previous Final. If you don't want work with promotions you must set that parameter to 0.

When all Finals are completed you can select the "Finals" item to show the competition results to print them if you want. Then you can "Close" the competition to avoid editing Heats, results, etc. and to restart any race.

You can choose if your final results are grouped by final/result or simply by results to allow be the first one qualified the driver with best results although this is not in the Final A

Example of Finals generation:

Total drivers: 25
Drivers by Final: 7

Case 1) Min. drivers by final: 4
Final A = 7 drivers
Final B = 7 drivers
Final C = 7 drivers
Final D = 4 drivers

Case 2) Min. drivers by final: 7

Final A = 7 drivers
Final B = 7 drivers
Final C = 11 drivers

Championship scoring

Championship scoring is under AECAR (Spanish association of radiocontrol cars) regulation giving to each driver points depending on their final position in each competition. You can edit this position-points table (PUNTOS_AECAR) with MS Access or by using the "File/Scoring" menu in ZRound Manager.

Transponders and frequencies validation

When Heat or Finals are generated an automatic validation is done in order to guarantee there are not two drivers with the same transponder/frequency. System gets up to three different frequencies to minimize conflicts issues.

When conflicts are detected a detailed report will be listed with information about offended values and the driver who must change it. A detailed list of drivers with available (no used) frequencies will also displayed. Finally you can see in the Heat/Final race view offended values in colors (by pairs) to make easiest (if possible) the conflict resolution.

Example of validation output:

```

HEAT A

FREQUENCY CONFLICTS

Juan González           : 27.095 (Jesús)

AVAILABLE FREQUENCIES

CLUB           PILOTO
-----
                Pedro García           27.045

HEAT B

THERE IS NOT CONFLICTS.
    
```

Drivers identification

When qualifying heats are generated a **dorsal** number is assigned to each driver. Also a number will be generated relative to each Heat or Final to make easy to timing races without an automatic detection system (ZRound lets you to count laps by pressing F1 to F12 keys). System let you to use any of the two numbering types. You can print Heat/Final distribution and labels for cars using both of them methods.

Example: Numbering modes in a 8 drivers and 2 Heats (4 drivers by heat) Race.

Heat	Dorsal	Num	Driver
A	1	1	Jesus
A	2	2	Pedro
A	3	3	Sergio
A	4	4	Antonio
B	5	1	Pepe
B	6	2	Condemor
B	7	3	Angel
B	8	4	Javier

After qualifying you could have the following Finals distribution:

Final	Dorsal	Num	Driver
A	1	1	Jesus
A	7	2	Angel
A	4	3	Antonio
A	8	4	Javier
B	6	1	Condemor
B	2	2	Pedro
B	5	3	Pepe
B	3	4	Sergio

You can see how Dorsal are the same in Heats and Finals but the driver "Num" is different.

APPENDIX A –PN Racing race format

Racing race format have the following rules:

- Two qualifies (PreClasificatorias), the second one will run in reverse grid.
- Third qualify (Clasificatoria). A re-sort will be done based on the best laps/times in the first two qualifies.
- Finals: The best laps/time of any qualify will be used to fill them.

APPENDIX B – Heats, Semifinals & Final

The qualify heats are generated following the “Heat & Finals” rules. This new format is usually applied in race control scales bigger than miniZ and it makes more competitive in order to reach the Final.

The Final setup is done by the parameters:

- **A)** Drivers in each final: Amount of drivers who run each semifinal, quarter, etc.
- **B)** Drivers in the FINAL: Amount of drivers who run the Final.
- **C)** Drivers qualified to the Final: Amount of drivers who directly run the final based on the best qualifying.
- **D)** Drivers promoted: Amount of drivers who promote to the next final level (just until the semifinal)
- **E)** Drivers promoted to the Final: Amount of drivers who promote to the Final from each semifinal.

For generating the “**semifinals**” (semi, quarters, etc.) is used the qualify following these rules:

- The **(C)** drivers pass to the final.
- Next drivers are divided in two lists “A” and “B” by putting a driver in list “A” and the next one in list “B” in order to mix them.
- Drivers are grouped by **(A-D)**. We must reserve **D** places for promoting.

These drivers will run the **Final**:

- Directly qualified **(C)**
- Promoted from Semifinal A and B **(E)**
- All drivers needed to complete amount of drivers in Final **(B)** will be promoted too by better laps/time in Semifinal A and B (promoted driver won't be considered).

Next we have an example. Will be used next parameters:

- **A)** Drivers in finals: 6
- **B)** Drivers in the FINAL: 10
- **C)** Drivers qualified to the Final: 1
- **D)** Drivers promoted: 2
- **E)** Drivers promoted to the FINAL: 4

We have the next qualify after qualifying heats.

Driver	Heat	Round	Laps	T.Total	T.Mean	T.Best	L.Better
Posición 1	Manga A	2	30	07:01.782	14.059	13.178	24
Posición 2	Manga A	1	30	07:07.003	14.233	13.535	14
Posición 3	Manga A	2	30	07:07.085	14.236	13.230	8
Posición 4	Manga C	2	30	07:08.143	14.271	13.018	30
Posición 5	Manga A	1	30	07:09.848	14.328	13.431	23
Posición 6	Manga A	1	29	07:00.081	14.486	13.200	13
Posición 7	Manga D	1	29	07:01.056	14.519	12.659	23
Posición 8	Manga B	1	29	07:07.670	14.747	14.114	12
Posición 9	Manga B	1	28	07:00.418	15.015	13.822	13
Posición 10	Manga A	1	28	07:05.286	15.189	14.007	3

Posición 11	Manga B	2	28	07:06.361	15.227	13.426	10
Posición 12	Manga B	2	28	07:06.636	15.237	13.616	24
Posición 13	Manga D	1	28	07:07.251	15.259	13.427	4
Posición 14	Manga A	2	28	07:09.298	15.332	14.233	3
Posición 15	Manga B	2	28	07:09.554	15.341	14.215	19
Posición 16	Manga B	1	27	07:02.027	15.631	14.692	6
Posición 17	Manga A	2	27	07:05.492	15.759	13.763	16
Posición 18	Manga C	1	26	07:00.029	16.155	14.943	2
Posición 19	Manga C	2	26	07:05.433	16.363	14.322	26
Posición 20	Manga D	2	26	07:07.672	16.449	14.404	5
Posición 21	Manga C	2	26	07:10.603	16.562	14.578	5
Posición 22	Manga C	1	26	07:11.232	16.586	14.954	7
Posición 23	Manga C	2	26	07:11.383	16.592	14.736	16
Posición 24	Manga C	2	26	07:11.831	16.609	14.798	19
Posición 25	Manga B	1	26	07:11.917	16.612	15.070	3
Posición 26	Manga B	1	26	07:14.788	16.723	14.377	24
Posición 27	Manga D	1	26	07:16.264	16.779	14.698	17
Posición 28	Manga C	1	25	07:03.753	16.950	15.443	21
Posición 29	Manga D	1	25	07:08.876	17.155	15.756	23
Posición 30	Manga A	2	25	07:11.024	17.241	14.497	14
Posición 31	Manga D	2	25	07:13.723	17.349	14.373	25
Posición 32	Manga D	2	25	07:20.556	17.622	15.275	17
Posición 33	Manga C	1	24	07:17.726	18.239	16.042	1
Posición 34	Manga D	2	23	07:08.818	18.644	16.261	10
Posición 35	Manga B	1	23	07:13.878	18.864	15.813	13
Posición 36	Manga D	2	22	07:03.127	19.233	16.068	10
Posición 37	Manga D	1	15	05:52.133	23.476	17.275	10

Driver will be grouped as follows:

FINAL

Posición 1

SEMIFINALS

Posición 2	Semi A	Semi B
Posición 3	Posición 2	Posición 3
Posición 4	Posición 4	Posición 5
Posición 5	Posición 6	Posición 7
Posición 6	Posición 8	Posición 9
Posición 7		
Posición 8		
Posición 9		

QUARTERS

Posición 10	Quarters A	Quarters B
Posición 11	Posición 10	Posición 11
Posición 12	Posición 12	Posición 13
Posición 13	Posición 14	Posición 15
Posición 14	Posición 16	Posición 17
Posición 15		
Posición 16		
Posición 17		

8th

Posición 18	8th A	8th B
Posición 19	Posición 18	Posición 19
Posición 20		

Posición 21	Posición 20	Posición 21
Posición 22	Posición 22	Posición 23
Posición 23	Posición 24	Posición 25
Posición 24		
Posición 25		
16th		
Posición 26		
Posición 27	16th A	16th B
Posición 28	Posición 26	Posición 27
Posición 29	Posición 28	Posición 29
Posición 30	Posición 30	Posición 31
Posición 31	Posición 32	Posición 33
Posición 32	Posición 34	Posición 35
Posición 33	Posición 36	Posición 37
Posición 34		
Posición 35		
Posición 36		
Posición 37		

All "semifinals" will have 4 drivers (except the Final & 16th). We have 2 promotions so these groups will have really of 6 drivers (parameter **A**)

When "semifinals" are gone 4 drivers will be promoted from each one to the FINAL. We will have:

- **1** driver qualified directly (**C**)
- **4 + 4** promoted from semifinal A y B (**E**)

This sums **9** drivers and we need (**B**) 10 drivers in the Final. We need to promote the driver with better laps/time in the semifinal A or B without considering the 8 directly promoted