

**Feature Race**

**Practice**

**Qualify**

# **Heat Racing**

**Heat Races**

**Warmup**

**Consolation Races**

# Introduction

## What is Heat Racing?

The general idea is that a Heat Racing event can have many more people in a race than you would want to have racing against each other at the same time. Instead of using a single Qualifying session to decide who will enter the race, short qualifying and race sessions are used to determine the race field for the main race. This gives competitors more on-track time, and more opportunities to make it into the main race of the event. In real life, it also makes for a better evening's worth of racing for the fans.

## The typical flow of a heat racing event is as follows:

- Practice
- Qualify
- Heat Race(s) (likely more than one)
- Consolation Race(s) (possibly more than one)
- Warmup
- Feature Race (only one)

This all occurs within a single iRacing session, on the same race server. There is no need to exit and reconnect for the next session.

# Introduction

## **A couple of guiding principles are:**

- Keep each race's field size small enough to be reasonable for the track length, style of racing, and the competitor's skill levels.
- Keep each session prior to the main race of the evening relatively short, otherwise the overall event could be quite lengthy. Also, bear in mind that since each session's field size will be much smaller than the entire entry list size, not all drivers will compete in each session. Meaning that most drivers will be idle. Consider keeping the overall number of competitors allowed into the event reasonable, so as to keep the number of Heat and Consolation races from ballooning.



# Event Stages – Practice

## Practice

The open practice session is designed to give competitors time to connect to the race session without fear of missing a portion that counts toward qualifying or the actual race. Official series typically have short practice sessions because members had to pre-register for the event anyway. Hosted sessions should allow a bit more time so the event can be fully populated with drivers.

During practice, everyone is allowed to drive and get ready for the event. To allow everyone to practice, yet keep the number of cars that you might drive against to a reasonable number, cars are split up into run-groups. All run-groups are allowed to drive at the same time, but while you are driving the race server will only send to you the position information for the other cars that are in your own run-group. While you are on the Session screen watching the replay, you will only see the cars in the same run-group as the replay's "focus car".



# Event Stages – Qualify

## Qualify

If Closed qualifying is selected, everyone qualifies alone on track at the same time. If Open qualifying is selected, everyone qualifies at the same time, and run-groups are used to keep the number of cars each driver interacts with during the session reasonable.

The Qualify session is used to determine the order in which cars will be gridded in the Heat races. If so specified, some number of the top qualifiers will advance directly to the Feature race. The top remaining qualifier is placed on pole for the first heat race. The next top qualifier is placed on pole for the second heat race, etc, until the pole sitters for all heat races have been filled in. Then the next qualifier is placed second on the grid of the first heat race, and so on, until all qualifiers have been gridded.

The Qualify session is optional. If the event is defined to not include Qualifying, then the Heat race grids are formed randomly.

Once Qualifying has begun, the entire field for the event is locked-in and registration is closed. No additional cars may be added to the field.

# Event Stages – Heat Races

## Heat Races

The main purpose of the Heat races is to choose drivers that will advance to the Feature race. For example, if the event organizer has specified that 5 cars will advance from each Heat race to the Feature race, then the top five finishers of each Heat race are added to the Starting Grid for the Feature race, while the remainder of each Heat race field is added to the Unqualified Drivers list. Note that it is possible to setup Heat races where no driver goes directly to the main Feature race – in other words the Heat race winners would still need to earn their way into the final by participating in the semi-final race(s).

Once all of the Heat races have finished, the winner of the first Heat race is placed next on the Starting grid for the Feature race (on pole if there was no Qualify session, or if no drivers were taken directly into the Feature from Qualifying). Then the winner of the second Heat race is added next to the Feature Starting grid, etc, until the winner of every Heat race has been added to the Grid. This process continues for the 2<sup>nd</sup> place finisher in the first Heat race, then the 2<sup>nd</sup> place finisher in the second heat race, etc, until the number of drivers the race organizer has specified are to be taken from the Heats directly to the Feature has been met. This same process then continues down the rest of the finishing order of all of the Heat races to build the Unqualified Drivers list, consuming the rest of the finishers from all of the Heat races. The Unqualified Drivers have not yet made it into the Feature, and will instead head into the (optional) Consolation race round(s).

# Event Stages – Heat Races

## Heat Races (continued)

Two of the parameters defining the event control the number of Heat race sessions that will be allocated for the event: Max Entrants, and Max Heat Field Size. The number of Heat races is the smallest whole number greater than or equal to  $\text{Max Entrants} / \text{Max Heat Field Size}$  (mathematically, the “ceiling” of that value). For example if Max Entrants is 55, and the Max Heat Field Size is 10, then  $(55 / 10 = 5.5)$ , and the ceiling of that is 6, so there will be 6 Heat race sessions allocated.

The field sizes for the Heat races will be as evenly balanced as can be managed, with as many of the earlier Heat races having one more driver than the later Heat races as is required. For example, if there are 55 entrants with the Max Heat Field size set to 10, there will be 6 Heats, with 10 drivers in the first Heat race, and 9 drivers in each of the remaining 5 Heat races ( $10 + 9 * 5 = 55$ ).

One goal is to keep the Heat race field sizes as close as possible to the Heat Field Size Limit specified by the event organizer. If it turns out that fewer people actually arrive for the event than Max Entrants, then some of the Heat races might end up being skipped. For example, if only 30 people arrive for a session where the Max Heat Field Size is 10, then only 3 Heat races are required. But if Max Entrants was specified as 55, then 6 Heat races will have been allocated, and so the final 3 Heat races will be skipped.

# Event Stages – Consolation Races

## Consolation Races

The main purpose of the Consolation races is to give the competitors an additional chance to make it into the Feature race. In real life, it also provides additional racing action for the fans. The drivers already assigned to the Starting Grid for the Feature do not participate in the Consolation races. All of the drivers in the Unqualified Drivers list can participate in at least one of the Consolation races.

As with the Heat races, the number of Consolation race sessions that are allocated for the event is based on the overall event limits, and the Consolation race structure as specified by the event organizer. For example, if the event allows for Max Entrants of 60, and a Heat Field Size of 15, then 4 Heat race sessions are allocated. If the top 4 drivers are taken from each heat race into the Feature race, then 16 drivers can advance from the Heat races to the Feature, leaving 44 drivers in the Unqualified Drivers list.

(continued on the next page)

# Event Stages – Consolation Races

## **Consolation Races (continued)**

If Consolation races are Stacked, that means that the top drivers from each Consolation race round advance to the next Consolation race round, and then only the top drivers from the final Consolation race are added to the Starting Grid for the Feature race. When the Consolation races are Stacked like this, the first one is filled solely from the Unqualified Drivers list, and gridded in order from the bottom of that list onwards. Once the first Consolation race is finished, the grid for the next, and all subsequent, Consolation races are formed by first partially filling the grid with the next bottom-most drivers from the Unqualified Drivers list, and then filling-out the grid with the top finishers from the immediately-prior Consolation race. Only the top finishers from the final Consolation race are added to the end of the Starting Grid for the Feature race. Additionally, the race organizer might specify that the field sizes of the Stacked Consolation races increases in the later rounds.

If the Consolation races are not Stacked, their grids are fully filled with drivers directly from the Unqualified Drivers list, in order from the top of that list to the bottom. The top finishers from each Consolation race are added to the end of the Starting Grid for the Feature race.

# Event Stages – Warmup

## Warmup

If the race organizer has specified it, there will be a Warmup session just prior to the Feature race. Only the drivers on the Starting Grid for the Feature race are allowed to participate in the Warmup session. Since it is the intent that these drivers will all race against each other in a single race, they will all be allowed to practice at the same time, in the same run-group.



# Event Stages – Feature

## **Feature:**

This is the final session of the event, and only drivers that have been added to the Feature's Starting Grid from the earlier sessions of the event will participate.

The event organizer can select additional options that are to be used during the event.



# Championship Points

## Championship Points

Some real world heat racing series award championship points to drivers for more than just the Feature race. The iRacing Heat Racing implementation allows for the event organizer to decide whether or not Championship points are awarded for these earlier sessions within the event, including separately for Qualifying, the Heat races, and the Consolation races. The iRacing Heat Racing point structure is as follows:

Qualifying		Heats		Consolation	
Position	Points	Position	Points	Position	Points
1	6	1	8	1	4
2	5	2	7	2	3
3	4	3	6	3	2
4	3	4	5	4	1
5	2	5	4		
6	1	6	3		
		7	2		
		8	1		

Points are always awarded for the Feature race, and follow the general iRacing points system, meaning that the number of points awarded depends on the field size, and the average iRating of the field. Only the drivers that made it into the feature are included in the field size and the field's iRating average.



# Additional Information

## Inversions

The organizer can specify that the top N positions (up to and including the entire field) of the starting grid for the Feature race are to be inverted. Although this is not typically seen in real racing, iRacing also allows the event organizer to specify field inversions for the Heat and Consolation races.



# Additional Information

## General Guidelines—Host

When configuring a Heat racing event, the race organizer specifies things in terms of the maximum number of drivers that they wish to allow to participate in their event. The iRacing systems will configure the set of sessions within the event (number of Heat and Consolation races) to allow for this maximum number of drivers. If fewer drivers actually arrive to participate in the event, adjustments must be made. **The guiding principles that the iRacing systems use in making these adjustments are:**

- Honor, as closely as possible, the event organizer's specified Maximum Field Size for the Heat and Consolation races.
- Honor the event organizer's specification for how many drivers advance to the Feature from each Heat race.
- Keep the size of the Heat race session fields as evenly matched as possible.
- Keep the size of the Consolation race session fields as evenly matched as possible, after accounting for the fact that the race organizer might have specified that each Consolation round's field size should be larger than the earlier one.
- If Consolation races are not Stacked, always take the same number of top finishers from each Consolation race into the Feature.

# Additional Information

## **General Guidelines—Host (continued)**

If fewer than the maximum number of drivers participate in the event, some Heat races might be skipped to try to keep the field size in the Heat races close to the field size specified by the event organizer. Since the number of drivers that advance from each Heat into the Feature is always honored directly, this means that fewer drivers will make it into the Feature due the reduced number of Heat races.

It likely also means that there will be fewer drivers that remain Unqualified for the Feature, and since the system attempts to keep the field size of the Consolation races as close to the organizer's intent, some Consolation races might also be skipped. Since it is also a goal to match the Feature race field size as closely as possible, the systems could adjust the number of drivers that Qualify for the Feature race from the Consolation races. In the extreme situation where the Unqualified Drivers list is empty after the Heat races have been run, all Consolation races will be skipped.

# Additional Information

## General Guidelines— Participant

Since the structure of Heat racing involves having more drivers in the event than actually compete directly against each other at any one time, there are likely to be parts of the event where you will see a [Wait] button, instead of a [Drive/Race] button. If you hover the mouse cursor over the button, a message will appear at the bottom of the screen that will indicate the name of the next session in the event in which you will drive (if that information is currently known). Or, if it is known that you will not be competing in the rest of the event, the message will say so.

Unless the message indicates that you will not participate for the rest of the event, **do not disconnect!** When the event has advanced to your next session, you will be given the [Drive/Race] button. You can watch the competition from the Replay screen, track the session's progress, and view the current standings on the Results tab whenever you are not in your car. Including sessions in which you do not drive, and even if you will not drive for the rest of the event.

The header information on the Replay screen has some additional information about the progression of the event. Each of the sessions is named, and includes some information about it (like whether there are inversions in races, how many drivers advance to some other session in the event, etc). The current session is also highlighted with green. Since there is limited space in the header, only a few of the sessions are shown, but the Info tab has the complete list. You can refer to this list to see the overall structure of the event, as well as to see where in the event is the next session in which you will drive.