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NASCAR_® Grand National_® Series Expansion Pack

from
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Welcome To The NASCAR Busch Grand National Series

Congratulations on your purchase of the NASCAR Grand National Series Expansion Pack for NASCAR Racing 2- the most realistic stock car simulation available for the personal computer. Slip on your helmet, cinch up the safety belts and prepare to wage war on NASCAR's fabled Grand National circuit. Many of stock car racing's stars have deep roots in the Grand National Series. In order to win the coveted season championship, you'll need to master the competition on everything from Saturday night bullrings to road courses to superspeedways.

What's On The Disc

The enclosed CD ROM includes the following additions/enhancements to the NASCAR Racing 2 environment:

- · Ten officially-licensed NASCAR Busch Grand National Series Race Tracks
- · Two updated versions of fantasy tracks created by Papyrus artists
- New NASCAR Busch Grand National Series cars and drivers
- Two distinct installation methods (see page 4 for more information)
- · All-new Race Calendar Selection Button, for total scheduling control
- · The latest patches and updates to NASCAR Racing 2
- · Race event logos and templates

Important: Before installing the Grand National Series Expansion Pack, read the following pages to determine the best installation method for you.









Installation

Important! There are two different ways to install and use the Grand National Series Expansion Pack. Each method will provide you with different results, so read this section carefully *before* you install. There is no minimal installation method, and therefore no way to race the tracks directly from the CD ROM.

Full Installation - 65 meg. (strongly recommended)

This method will install all of the NASCAR Grand National Series and Fantasy tracks (twelve total) onto your hard drive. In addition, you'll receive the NASCAR Grand National Series cars and drivers, newer versions of several NASCAR Racing 2 files (these updated versions provide new features like **Save Race** and **Choose Calendar**), and other files that accompany the Grand National Series Expansion Pack. If you have a **Championship Season** saved in-progress, the **Full Installation** option will render existing season files inoperable. This is due to key changes made to the way NASCAR Racing 2 administers a season schedule. One other item of note is the installation of a complete set of new BIGLOGO.PCX files to your hard drive. If you've altered any of your existing BIGLOGO.PCX files, you may want to save them in another location and re-add them later.

Tracks & Patches Only Installation

For drivers who would like to preserve and continue to race existing Championship Seasons, the **Tracks/Patches Only** option will place





just the tracks (twelve total) and a few of the newer NASCAR Racing 2 files on your hard drive. You will also receive a file called CALENDAR.GN (a Grand National calendar template). Save existing Calendar files in a separate directory, then rename the CALENDAR.GN file to CALENDAR (dropping the .GN). While you will not be able to dynamically choose between the Grand National Series or Fanstasy Track Series schedules, you can compete on these tracks individually (not in a championship format.) You will still receive the Save Game feature, but *not* the Choose Calendar option. Later, when you've completed your season(s) that are in-progress, you can complete the full installation of the NASCAR Grand National Series Expansion Pack.

Windows 95 Installation

Place the CD ROM disc in your drive. The installation process should begin immediately. If it does not, click on the **Start** button and choose **Run**. Type D:\Setup (substitute D: with the drive letter of your CD ROM drive) and choose OK. The installation Wizard will now begin.

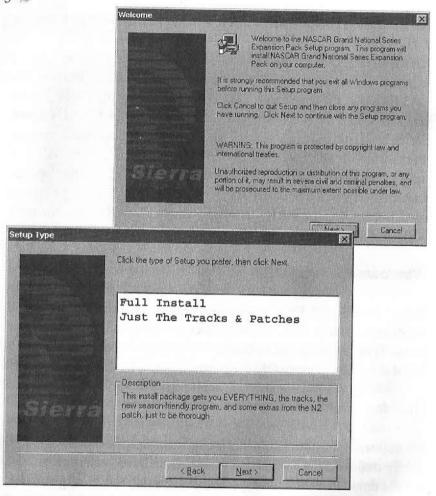
DOS Installation

It's important to note that even though you may have installed and configured NASCAR Racing 2 to operate in DOS, you may still use the Windows 95 installation if you wish. This will not affect gameplay, and may be simpler for most users. However, if you wish to install the Grand National Series Expansion Pack from within DOS, from the C: prompt simply type D: (substitute D: with the drive letter of your CD ROM drive) and press the **Enter** key. Then type **Install** and press **Enter**. The installation process will now begin.



NASCAR Grand National Series, The Circuit Guide



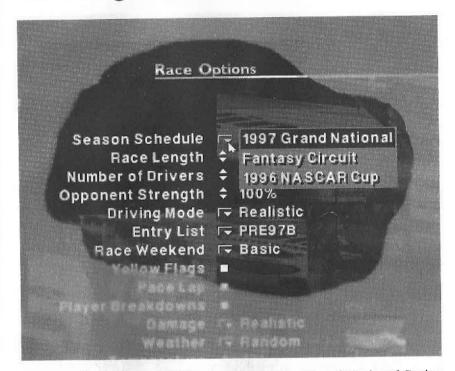


During the installation process, you will be given the opportunity to copy and install all of the files from the CD ROM disc onto your hard drive, or to just install the tracks themselves, along with a few game enhancements. We recommend players choose to fully install this product, unless you have **Championship Seasons** underway that you'd like to complete first.





New Feature: Choosing A Race Calendar



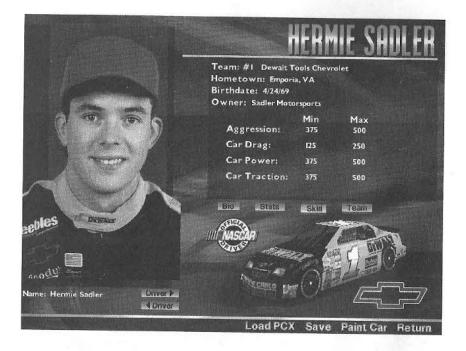
Players who perform a full installation of the Grand National Series Expansion Pack will notice a new **Season Schedule** button on the **Race Options** menu. This pull-down button allows you to select a **Championship Season** schedule; in addition, race events are now displayed in order of appearance within the selected calendar. To race on either Fantasy Track, for example, click on the **Season Schedule** pull-down button and select Fantasy Circuit. You may now scroll back and forth between the two Fantasy Tracks via the two **Event** buttons.







New Feature: Grand National Series Cars And Drivers

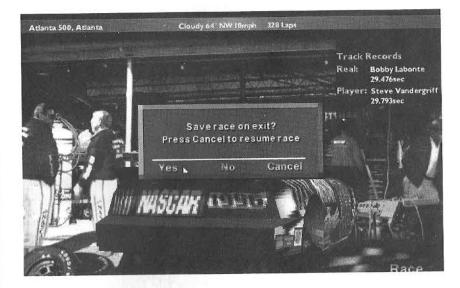


Regardless of installation method, a new set of NASCAR Grand National Series cars and drivers are now available on your hard drive. You may view these drivers in the normal manner by selecting **Driver Info** from the **Main** menu. Read their bios and check the stats to learn more about "who's who" in the NASCAR Grand National Series. Choose to race against the NASCAR Grand National Series drivers by selecting the appropriate **Entry List** on the **Race Options** menu.





New Feature: Save Race In Progress



It is now possible to save an event either after qualifying, or during the race itself. When you attempt to exit an event by pressing the **ESCape** key, you will automatically receive the **Save Race** prompt (providing that you've completed the qualifying session, or driven at least three laps in a race.) You may save one race at each event; if you've saved a race at a particular event, you will be given the option to restore and resume the saved race the next time you choose that event. Be advised that saved events are resumed at the exact point at which they were recorded; if you're zooming down the back straightaway at California when you save the race, you'll be zooming down the back straight when you resume it. Therefore, it's best to save races during yellow flag periods.







Other Notes Of Interest

Patch Files

The Grand National Series Expansion Pack will automatically update your installed copy of NASCAR Racing 2 to the most current version. This includes patch files that correct anomalies found in earlier releases of the game. The files that will be updated are:

ATLANTA.DAT ATLANTA.TXT BRISTOL.DAT LAYOUT.DAT NCHRLTTE.DAT

Working With Calendar Files

Complete installation of the Grand National Series Expansion Pack introduces a redesigned season **Calendar** file format. These files may still be customized with any text editor, but the format of the text differs slightly from previous versions. The new **Calendar** file format is as follows:

SNAME 1996_NASCAR_Cup

1 2 25 0 0 ROCKING Goodwrench Service 400
Goodwrench_400 393 event1.pcx biglogo1.pcx
2 3 3 0 0 RICHMOND Pontiac_Excitement_400
Pontiac_400 400 event1.pcx biglogo1.pcx

SNAME is the actual name of the **Calendar** file, as it appears on game menus. In the example above, take a look at the second line that has the word ROCKING in it. Reading from left to right, this



line of text represents the information that "positions" the race within a **Calendar**. The first digit on the left, in this case 1, indicates the race number. The next digit, 2, is the month of the race (February). The number 25 in our example is the day of the race (2/25). The next digit is a zero, and this means that our example race will be the first race of the season held at that track. A "1" instead of the zero would indicate the second race of the season. In our example, a second zero follows the first. This determines whether the race is going to be run during the day or night (0=day, 1=night).

The word ROCKING is the track directory name for the first race, and is followed by the event's long name (Goodwrench Service 400) and the event's short name (Goodwrench 400). The figure 393 represents the total number of laps that comprise a 100% race distance in the event. Finally, event1.pcx indicates the name of the **Quick Race** event logo (this logo must reside in the appropriate track directory) and biglogo1.pcx represents the event logo that is displayed during a **Championship Season** for the event (this logo must also reside in the appropriate track directory).

The last three items mentioned above (the number of laps and the two logos) are new additions to the **Calendar** file format. Unlike previous versions of NASCAR Racing 2, the program now reads the 100% laps value from the **Calendar** file, rather than from the track's .TXT file (e.g. TEXAS.TXT) during **Single Player** events.

Multiplayer Compatibility

Players who own the Grand National Series Expansion Pack can still go head-to-head against those who do not. In Multiplayer situations,









the 100% laps value of each event is derived from each machine's local TRACK.TXT file, instead of the Calendar file. If you wish to simulate 100% Grand National race distance at a NASCAR Cup track, such as Atlanta Motor Speedway, you'll need to reduce the overall race distance. The NASCAR Cup length is 328 laps, which is displayed in the ATLANTA.TXT file, while the Grand National event length would be 197 laps.





The Grand National Circuit

To get the straight scoop on how to tame the bullrings found on the NASCAR Busch Grand National Circuit, we talked with two of the series' drivers: Elton Sawyer and Patty Moise. In addition to being competitors on the race track, Elton and Patty happen to be married to one another. As Patty tells it, "We had raced against each other off and on for three years or so before we ever said much more

to one another than 'Hi, how ya doing, see ya.' I was at the shop being seated in a new race car, and Elton and his guys stopped by there on their way to Lanier, to pick up a brand new race car. We struck up a conversation, and I offered for a couple of 'em to ride with me to Lanier- so he and his Crew Chief rode with me. It was two hours in a car on the way over there, and we just talked the whole time. We really hit it off, and the rest is history."

So, when your spouse is competing in the same race you are, does it mean you'll always have their assistance in the heat of racing action? "No, once the race starts, we're both very focused on doin' the best job we possibly can for our given teams and sponsors," Elton says. "In fact," Patty laughs, "we'll blow right past each other."







Racing close together at Talladega in 1995, Elton suddenly picked up the draft of another car, leaving Patty behind to fend for herself. "After the race, on the way home I was giving him a hard time. I said, 'What'd that guy ever do for you?' He left me hung out there and picked up some stranger." "Hey," Elton quips, "it's every man or woman for themselves out there."

The two drivers were involved in the same incident a while back. Elton recalls, "At Orange County, we were runnin' twelvth and thirteenth. Patty was ahead, and we were lapping a car. As she went by the car, he checked up and they touched. They were spinning and I didn't have really anywhere to go, other than to run into the side of the forty-two car, which Patty happened to be driving. When the race was over, they interviewed the winner- and Patty and I. We actually got more TV time than the winner!"

There are certain things that even married couples won't do with each other at the race track. "Ino longer spot for Elton," Patty muses. "I did twice at little short tracks- it wasn't in the Busch series. The first time, there was a wreck in front of him, and I called out, 'Go high! Go high!' He immediately went low and wrecked. The very next weekend, different race track, same team, same scenario. A wreck in front of him, and I called out once again, 'Go high! Go high!' He went low and drove directly into the wreck. That was the end of my spotting. I told him he needs to get a spotter he'll listen too," she says with a laugh. Oh well...real men don't ask for directions.

Having a spotter other than your spouse doesn't always work out, either. Take for example Elton's first NASCAR Busch Grand National Series victory, at Myrtle Beach in 1994. "On the last lap, we took



the white flag and had a pretty good lead," Elton remembers. "A car spun off in turn two- it was far enough ahead of me that I could see what was going on. But at the time, the spotter was our P.R. man, and he'd already started getting down off the top of the truck to get to victory lane. He kind of got his radio tangled up and panicked." "Yeah, I happened to be standing on top of the truck with the spotter," Patty says, "and I saw the spin and pointed it out. The spotter had been so excited that they were goin' to win, and all of a sudden it was like a hundred hands- he was trying to get to the radio button, and he got all discombobulated. I thought he was going to fall off the truck trying to warn Elton about this car that had spun." Elton continues, "Luckily, I saw what was happening and was able to drive around the car and get back to the start/finish line."







California Speedway

The Tale Of The Tape:

Length:

2 Miles

Banking:

Turns at 14 Degrees

Front Straight at 11 Degrees

Back Straight at 3 Degrees

Qualifying Record:

183.753 mph (39.183 secs.)

Set June 23, 1997

by Greg Sacks

Race Average Record:

155.025 mph (250 Laps)

Set June 24, 1997

by Jeff Gordon

Located 45 miles from Los Angeles, California Speedway was built by racing giant Penske Motorsports, Inc. The track itself stands in place of an old steel mill on 475 acres, and will accomodate 80,000 spectators, with plans for an additional 25,500 seats to be added before the year 2,000.

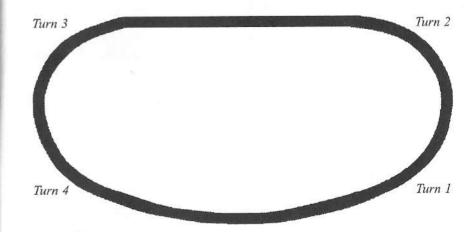
Though likened to Penske's beloved Michigan Speedway because of its size and shape, California Speedway offers slightly lower banks that aid in slowing the cars down somewhat. This freshly-built racing venue brings NASCAR competition back to Southern California for the first time since 1988.



California Pit Notes From Elton Sawyer And Patty Moise:

Patty: "It's a tradeoff because you want the spoiler to give you good downforce in the turns, so the car feels like it's really 'stuck down' into the race track."

Elton: "It's a high-speed race track, so horsepower is going to be very important. It's a place where you might be able to play with the rear spoiler just a little bit. Maybe to qualify, you can run a little bit less spoiler to increase your straightaway speed, but you won't be able to race that way. When you get into traffic, you'll need that additional downforce, so when you get ready to race you're going to need to get the spoiler up somewhere between 65 and 70 degrees. The nose weight and the cross weight are the areas to work in that'll get your car handling."









A Lap Around California With Elton And Patty:

Elton: "As you cross the start/finish line, you're going to let the car kind of drift out towards the wall. It's a "D" shaped race track, and you're going to be right up against the wall; it's going to be extremely wide, so there's a lot of room there. If you get a run at someone, you can dive all the way down to the bottom through the front straightaway, but as you go along you're going to need to get back up against the wall so that you'll have a better entrance into turn one."

Patty: "This is one of those tracks where you'll want to stay out (enter the turn high) as long as you can; if you don't stay out you'll pick up a 'push' in the center of the turn. In ol' road racin' lingo- you don't want to early-apex."

Elton: "As you enter turn one you'll move down to the bottom; around one and two, you're right on the bottom of the race track. As you exit turns two and four you're going to give the car as much nose as you can (turn sharper and slower) in order to get back up against the wall, so that you don't keep the car in a bind.

"Exit turn two and get up against the wall, and run down the back straightaway. When you get to the end of the straightaway, the race track's pretty flat, so it's not like other superspeedways where you have a lot of banking to hold you. Because you're carryin' so much speed, the car's going to have a tendency not to have as much 'side bite' as you'd like to see. When you enter turn three, you're going to get right down to the bottom of the race track, and you're going to run right around that bottom with the left-side tires. As you get to the center of the corner, you'll still be on the bottom, but as you start to exit three and four onto the front straightaway, let car drift back out to the wall."



Gateway International Raceway

The Tale Of The Tape:

Length:

1.25 Miles

Banking:

Turns 1 & 2 at 11 Degrees

Turns 3 & 4 at 9 Degrees

Qualifying Record:

130.993 mph (34.353 secs.)

Set July 25, 1997

by Joe Bessey

Race Average Record:

78.802 mph (240 Laps)

Set July 26, 1997

by Elliott Sadler

Newly renovated for 1997, Gateway International Raceway features a drag strip and a 1.6-mile road course in addition to it's 1.25-mile oval. Although the track is actually located in Madison, Illinois, Gateway International Raceway is often thought of as being in St. Louis, Missouri, which is five miles away.

Fast Fact:

David, Mark and Jeff Green hold the record for being the most brothers to compete in a single NASCAR Busch Grand National Series race.

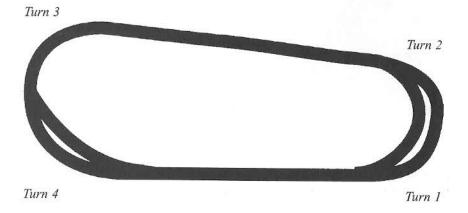






Gateway Pit Notes From Elton Sawyer And Patty Moise:

Elton: "It's got some short track characteristics, so you won't run as much nose weight- it'll be a 'Hickory' or 'South Boston' type setup. Top speed's about 155-160 mph gettin' into the corners; it's a very flat race track. There was a lot of talk about this track being like Darlington, because of its shape. But once I'd been here and raced, I don't see Darlington at all. It's got more Loudon than anything else."





A Lap Around Gateway With Elton And Patty:

Elton: "As we come to the start/finish line we're wide open, fourth gear; you're out against the wall heading into turn one. It's a very tight one and two- it's hard to carry a great deal of speed through the center of the corners, so it's quite a bit of braking as you get into turn one. You're on the brakes pretty hard, gettin' the car slowed down, then trying to get off the brakes. Through the center of the corner you're not on the brakes and the car's rollin' and you're able to pick the throttle back up a little quicker.

"Then you're around turn two on the exit, runnin' up against the wall down the back straightaway. Turn three is a little bit more forgiving-you can get in there a little bit deeper; not as much braking in turn three as there is in turn one, but yet you run right around the bottom. It's real flat, and you want to keep the left-side tires on the white line. Once you get to the center of the corner you want the car to really turn well. You'll want to use a lot of throttle from the center of the corner on- that's really key to having a fast lap at Gateway. Once you exit turn four, you're out against the wall and back to the start/ finish line."







Hickory Motor Speedway

The Tale Of The Tape:

Length:

.363 Mile

Banking:

Turns 1 & 2 at 12 Degrees

Turns 3 & 4 at 14 Degrees

Straights at 8 Degrees

Qualifying Record:

90.990 mph (14.362 secs.)

Set November 6, 1993

by Bobby Labonte

Race Average Record:

78.362 mph (400 Laps)

Set April 8, 1996

by David Green

Hickory Motor Speedway is hailed as part of the fiber of NASCAR Busch Series racing. One of the founding members of the Busch Series, Hickory Motor Speedway's hallowed surface has been the site of many heated short track battles. Long a staple of weekly NASCAR competition, Hickory Motor Speedway has launched many great driving careers.

Fast Fact:

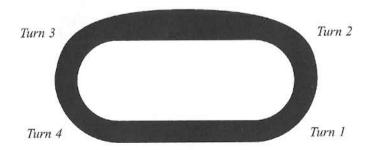
Driver Tommy Houston holds NASCAR Busch Grand National records for most starts, and most top-five finishes in series history.



Hickory Pit Notes From Elton Sawyer And Patty Moise:

Patty: "At a track like Hickory, first of all, I'm going to want the steering to react quicker for me. We're not going to run a lot of split in the front suspension (the left/right settings will be similar). The biggest thing is to get the car set up so that it will turn in the center of the race track."

Elton: "It's basically similar shock settings to what we would run at Loudon or Gateway. It's stiffer in the front than it is in the rear. Like Patty said, the car has to be able to turn in the center of the corners; if not, you won't get any speed at all. It's a very, very small race track, and you'll want the gears to give you a lot of rpms on the short straightaways. It's a downforce place, so you'll want all of the spoiler that you can possibly have-you don't want to mess with that."









A Lap Around Hickory With Elton And Patty

Elton: "Once you get to the start/finish line, you're just about into turn one, because it's such a small place. You want to stay out as long as you can (stay wide as you enter the turn) without gettin' the car outta shape, or gettin' it too high to the point of losing control. But you need to stay out as long as possible, so that when you get to the center of the corner, you don't have to turn again. You want it to be a real fluid motion, so that you stay out, stay out... then when you turn you've got the car set at an angle so that you're coming back off in turn two. As you exit two, you're up against the wall just as you get to the center of the straightaway.

"When you get to the center of the straightaway, you kind of start back down towards turn three, back at the bottom of the race track as tight as you can."

Patty: "You do a little bit of a 'diamonding' there to try to come off the turn low."

Elton: "Yeah, a little bit. There's more like four points there- in the center of each corner and at the center of each straightaway that you want to aim for. You try to draw a straight line from each one of 'em. But you want to 'round' the corners, you don't want to have to drive in straight, turn the car, drive off, because you won't see any fast laps that way."

Patty: "One of the tougher things at Hickory is to make sure that you're able to come off of the fourth turn. It's like Elton said, there's almost no straightaway, so the minute you exit out to the outside of the race track, you're ready to turn back down to go into turn one again. But turn four seems to be a little bit tricky- you've got to be able to get the diamonding right to be able to come off as low as possible. It's really tempting for the driver behind you to try to get a nose up underneath you as you drift up a little bit. But if they don't drift up a little bit too, it's hard for them to get any bite coming off the turn."



Indianapolis Raceway Park

The Tale Of The Tape:

Length:

.686 Mile

Banking:

Turns at 12 Degrees

Straights at 3 Degrees

Qualifying Record:

113.461 mph (21.766 secs.)

Set August 4, 1994

by David Green

Race Average Record:

96.923 mph (200 Laps)

Set June 22, 1985

by Jimmy Hensley

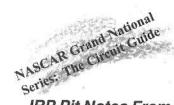
One of the original NASCAR Busch Series tracks, Indianapolis Raceway Park hosts one of only two races on the schedule that have had the same sponsor for every race. Although the track itself appears symetrical from the sky, its shallow banking ranges from six to eight degrees.

Fast Fact:

In addition to Patty Moise, there have been four other women who have competed in NASCAR Busch Grand National events. In fact, roughly forty percent of the races held in series history have had at least one female driver in the field.





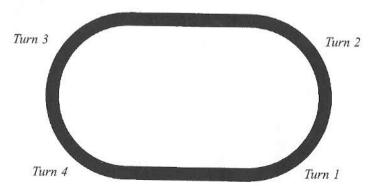




IRP Pit Notes From Elton Sawyer And Patty Moise:

Elton: "Setup-wise here, it's very, very similar to what you would run at Hickory. At all of those short, flat race tracks we don't carry a great deal of speed gettin' into the corners- somewhere in the 140-160 mph range. You'll run anywhere from half of the weight on the nose, to fifty-one percent of the weight on the nose. It's a real tight, 'pushy' race track off the corners so you'll really have to adjust your car for that, but it's not a place to play a whole lot with the rear spoiler."

Patty: "The most fun I've ever had at IRP was last year. Elton was kind of coaching me, he wasn't driving there in that race. He was on the radio and had set up the car; it's by far the best I've run there, until we got caught up in a wreck. It was sort of like a light clicked on- it's the first time I was able to stay with the leaders there, and it was like, 'Oh yeah, I get it! I finally get what it is I'm trying to accomplish here!' IRP reminds me of like, when you watch the sprint car guys run on the dirt. They get out there on that berm, and run on the outside- that's kind of what it feels like as the car slips up the race track and you run around next to the wall."





A Lap Around IRP With Elton And Patty:

Elton: "The line around IRP is completely different from about anyplace else we go. At the start/finish line, you're up against the wall. There's a lot of race track there, it's pretty wide through the corners but it's really more of a lane-and-a-half race track as far as the groove that we try to set up for.

"As you enter turn one you go in *just* a little bit low- maybe a carlength, or a car-length and-a-half off the wall. The whole car's going to have a tendency to want to drift. What you'll want to do is kind of time it so that when you get to the center of the corner, the car is about parallel with the wall. You don't want the front of the car to be pushing so bad that it's heading directly at the wall, and you don't want it to be so loose that the back of the car's trying to get there first. It's kind of a timing thing- you go in, the car slides up and as you get to the center you're starting to turn it and pick up throttle. The key here is to be able to use as much throttle from the center of the corner to the exit as possible. You basically run around the outside wall here, all the way around.

"As you exit turn two, you're right up against the wall and down the back straightaway. As you enter turn three, go a car-length or so off the wall. As the car's drifting up in the center of the corner it 'takes a set.' Once again, try to turn and pick up throttle as hard as you can to exit the corner. Stay up against the wall as tight as you possibly can, back to the start/finish line."









The Milwaukee Mile

The Tale Of The Tape:

Length:

1 Mile

Banking:

Turns at 9.25 Degrees

Straights at 2.5 Degrees

Qualifying Record:

118.320 mph (30.426 secs.)

Set July 6, 1996

by Hermie Sadler

Race Average Record:

100.999 mph (250 Laps)

Set July 2, 1994

by Mike Wallace

Pass the Bratwurst and step on the gas! The Milwaukee Mile is one of the oldest racing venues in North America. Originally constructed as a dirt track for horse racing, the Milwaukee Mile is located at the Wisconsin State Fairground. Interestingly, no NASCAR Busch Grand National Series driver has won a race from the pole here yet!

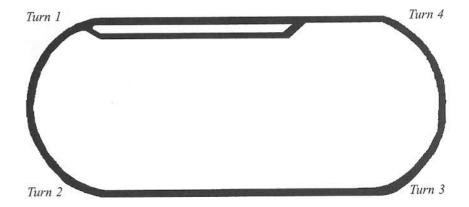
Fast Fact:

Dale Earnhardt holds the NASCAR Busch Grand National Series record for most consecutive years winning at least one race (10).



Milwaukee Pit Notes From Elton Sawyer And Patty Moise:

Elton: "It's a one-mile race track that's very flat, so you'll want fairly soft front and rear suspension. The corners are very 'sweeping' so you'll need the front weight to be somewhere in the fifty-point-five to fifty-one percent range. You'll be looking anywhere from the forty-nine to forty-eight percent cross weight range. It's not a place to mess a whole lot with the rear spoiler, because what happens when you lay the rear spoiler down to have more straightaway speed is, that once you get to the corner you don't have the rear downforce you need. So, the car's going to have a tendency to be really loose gettin' in."











A Lap Around Milwaukee With Elton And Patty:

Elton: "At the start/finish line, stay up against the wall. As you get off the gas into turn one you can get in there fairly low, fairly quick; you don't want to stay out here, even though there's a lot of race track. The preferred line is going to be right around the bottom. As you get into turn one, you need to go in pretty hard because, as I said, it's so sweeping that you'll want to pick the throttle up really quick if you don't get in there deep enough."

Patty: "Yeah, that'll make it push coming off if you do that."

Elton: "What you want to do is get into the corner pretty hot, use a little bit of brake, get off of it and let the car roll through the center; as it gets to the center of the corner then you start pickin' the throttle up to exit turn two.

"Out against the wall, down the back straightaway, and as you get into turn three, once again you can get into the corner a lot earlier than you can at some of the other race tracks where we've talked about 'staying out.' Actually, you need to get in earlier because it's not a place that you want to run in the corners on the outside of somebody- the passing is done off the corners. So, get into the corner pretty hot, use a little bit of brake, get off of it, and let the car roll through the center. As the car takes a set and starts to turn, you pick the throttle up hard, and you let the car kind of drift out against the wall; then you run down the front straightaway and you're back to the start/finish line."

Patty: "In road racing, lots of times you 'trail-brake' leading into a turn-but not at all on this kind of race track. If you keep your foot on the brake and carry on into the center of the corner, you'll make the car push."



Myrtle Beach Speedway

The Tale Of The Tape:

Length:

.538 Mile

Banking:

Turns at 13 Degrees

Straights at 3 Degrees

Qualifying Record:

99.195 mph (19.525 secs.)

Set June 11, 1997

by Elliott Sadler

Race Average Record:

79.599 mph (250 Laps)

Set June 10, 1995

by Larry Pearson

Myrtle Beach Speedway is located in one of the nation's most famous resort areas. This makes it a favorite stop on the NASCAR Busch Series schedule for the drivers and their families. However, the claustrophobic, D-shaped oval ensures that there is little time for pleasure in this paradise.

Fast Fact:

Joe Nemechek edged Bobby Labonte by three points to win the 1992 NASCAR Busch Grand National Season Championship- the closest margin in series history.





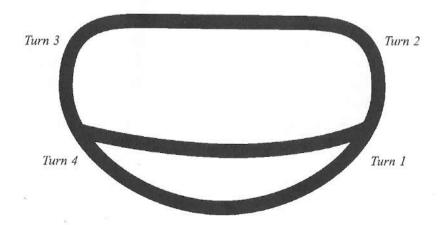


Myrtle Beach Pit Notes From Elton Sawyer And Patty Moise:

Elton: "These tracks are so similar- I mean, we had the same car at Indianapolis, and Milwaukee and Myrtle Beach. And actually, we didn't run our same car at St. Louis, but a lot of other people did. We could have, but we just elected not to there. We have five cars right now, and we're building two brand new ones this winter, so we will have seven when we start next year. And that's a good fleet of cars there. Some teams have more, some teams have less.

"But Myrtle Beach is very similar to what we might run at IRP- about fifty to maybe fifty-and-a-half percent on the nose. We run pretty close to forty-nine, to forty-nine-and-a-half percent cross because you pull such a low gear there, that you have to have some wedge in the car or you won't have any bite off the corners."

Patty: "Don't try to spin the tires there. It's kind of a 'D' shaped track, so you'll need fast steering (higher steering lock) there."





A Lap Around Myrtle Beach With Elton And Patty:

Elton: "Cross the start/finish line, which is kind of 'D' shaped. Here's another one of those race tracks where you want to stay out as long as you can as you're gettin' into turn one. You've got to be real careful because if you get out of the groove, it's a good chance that you're going to get real loose and wreck. But the fastest way is to get right to 'that edge' so that when you turn the car back to the bottom in the center of the corner, you have a much better exit position. The front of the car's already pointed down the back straightaway, and you come off of turn two as low as you can.

"You're still on the white line, and as you get the car straight you gradually let it kind of ease up against the wall. You run down the back straightaway, and turn three is very similar to turn three at St. Louis- you drive right to the bottom as hard as you can. You're on the brakes pretty good; once you get the car to 'take a set' then you get off the brakes. Let it roll as free as possible through the center, then pick the throttle up very, very hard coming off the turn. You have a lot of race track as you exit turn four, so you can let the car get up against the wall and run along there back to the start/finish line."

Patty: "We took a car there last year and we both tested it. I'd drive it for a little bit, then he'd drive it for a little bit. Once we started working on a race setup, he told me that one of the things that's pretty important at these little short tracks, and certainly at Myrtle Beach is that, you can't 'hurry' it. If you're not hearing times that you want to hear over the radio from your spotter, you can't start trying to really hustle the car. The harder you try to drive at these kind of places, the slower you go. You'll end up making it push in the center of the corner, then you'll spin the tires coming off the turn."

Elton: "Yeah, it's definitely a finesse-type race track."





Nashville Speedway USA

The Tale Of The Tape:

Length:

.596 Mile

Banking:

Turns at 18 Degrees

Front Straight at 3 Degrees

Back Straight at 5 Degrees

Qualifying Record:

113.566 mph (18.893 secs.)

Set March 16, 1996

by Sterling Marlin

Race Average Record:

78.217 mph (320 Laps)

Set March 19, 1995

by David Green

"How-w-w-dee!" Nashville Speedway USA has been a part of the NASCAR Busch Series lineup at various times. Located at the Tennessee State Fairgrounds, the track sports steep banks (18 degrees) for its size (just over a half-mile), so consequently, speeds are much faster here than they are at many of the other bullring tracks found on the series schedule.

Fast Fact:

When Dick Trickle won the NASCAR Busch Grand National race at Hickory in March of 1997, he became the oldest driver in series history to visit victory lane- at the age of 55 years, 5 months.



Nashville Pit Notes From Elton Sawyer And Patty Moise:

Elton: "The banking at Nashville affects the car setup a little bit; we use stiffer front suspension here than we do at, say, Hickory. So you may be just a little bit stiffer because of the banking, but it's not going to be as drastic a stiffness as you'd use at Dover, or someplace like that.

"But basically, Nashville's one of those small-type race tracks where the setup doesn't vary a whole lot. We'll be about fifty percent to fifty-and-a-half percent weight on the front of the car, with about fortyeight to forty-nine percent cross weight."

Patty: "I'll want the car to steer fast, so I'll use a higher wheel lock on it. At most of these short tracks, making sure that you don't have the car 'push' under braking is pretty important."







A Lap Around Nashville With Elton And Patty:

Elton: "At the start/finish line, you're out against the wall; to get into turn one, you use quite a bit of brakes initially. And then, you get off the brakes and by now you're at the bottom of the race track. As you get to the center, the car needs to really turn well; and this'll be a racetrack, too, where you can run two-wide. As the race goes on, the upper groove will come in and you'll actually be able to pass people on the outside. But early on in the race, when your car's still on brand new tires it's going to be a race track where you run right at the bottom. You get in, use the brake, turn really good in the center and accelerate hard.

"Off of turn two, you'll need to get out to the wall a little bit quicker than normal. It's a pretty good little straightaway down the back up against the wall; then as you get into turn three, the banking really kind of comes into effect. You've really got to 'get in' low- you really don't want to get in high on either one of these corners. Your car will have a tendency to get real loose gettin' in if you stay out too long and enter too high.

"Get into turn three on the bottom, put your left front tire on the white line. Then once you get into the corner, especially in turns three and four the car will have a tendency to really want to turn good as you enter. You'll want to pick the throttle up really quick, but what you're going to have to do is wait just a little bit- because if you don't what happens is, you accelerate before you get to the actual apex of the corner and it makes the car want to push. You have to drive in there to a certain point, then just let the car roll, roll, roll...then you're back on the throttle. And you're really on it hard, you're out against the wall and you're back to the start/finish line."



Nazareth Speedway

The Tale Of The Tape:

Length:

1 Mile

Banking:

Turn 1 at 3 Degrees

Turn 2 at 4 Degrees

Turns 3 & 4 at 6 Degrees

Qualifying Record:

129.674 mph (27.762 secs.)

Set May 17, 1997 by Elliott Sadler

Race Average Record:

104.772 mph (200 Laps)

Set May 11, 1991 by Chuck Bown

Along with the new California Speedway and Michigan Speedway, Nazareth Speedway is owned and operated by racing legend Penske Motorsports, Inc. Although technically classified as a tri-oval, Nazareth's surface tends to handle more like a four or five-turn course. Perhaps the most unique feature of Nazareth Speedway is the pit lanenearly three-quarters of a mile long; entry and exit to the pits is available on the back stretch.

Fast Fact:

Jeff Gordon holds the NASCAR Busch Grand National Series Record for capturing the most poles in a single season (11).







Nazareth Pit Notes From Elton Sawyer And Patty Moise:

Elton: "It's a very flat, very smooth track. You can work with your shocks here- maybe just a little bit softer front and rear suspension combination than the normal short track setup. It's a mile-long race track, but it has a lot of short track characteristics. You may have to run a little bit stiffer right rear shock to make the car turn. It's a pretty fast race track, but in some ways it's very similar to South Boston or Loudon. That same type of setup will work here; you'll have to refine it and figure out exactly what you need in your driving style."

Patty: "It is a pretty unusual course in that they call it an oval, but it's certainly not shaped like one. To me, it doesn't feel like a road course because it doesn't turn left and right- and as long as you keep turning one direction, to me, it's not a road course. I struggled the first couple of times I raced there, until last year. Finally, I feel I've caught on to driving the race track, and enjoyed it last year. Once you figure it out, it is sort of interesting, really, because the turns are all different. There are some long, sweeping ones, there's a dogleg on the front straightaway that's really fast, and pretty exciting. You're really carryin' the mail through there."

Elton: "Under caution, because the radius of the pit lane is so much smaller than the actual race track, if you run the same speed as the pace car, you'll pass the pace car. There's a line there across pit road, and you cannot pass the pace car until you get to that point, or they will penalize you for that."

Patty: "Have you been reading the rule book again, honey?"

Elton: "No, I'm just starting to pay a little more attention in the driver's meetings."

Patty: "O-o-o-oh! Good idea!"



A Lap Around Nazareth With Elton And Patty:

Elton: "Just past the start/finish line, you'll kind of breathe it a little bit. You've got to stay out (enter high) as long as you can, and this'll be a 'feel' thing. You really drive that first corner like you do a road course- you back off a little bit early, get the car set and then you're hard back into the throttle as you drive across the apex of the corner."

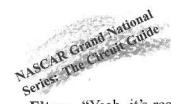
Patty: "That next corner's a left-hander, a big sweeper. That's the turn where if you get in it wrong, the car'll push there."

Elton: "Yeah, you're out against the wall, and it's kind of a little short chute there. Drive into turn two pretty hard; it's a long sweeping turn so you'll drive in low, and in the center you'll let the car kind of drift up just a little bit, so that it can 'take a set.' You want to make the back straightaway as long as possible. If you try to run around the white line through this turn, the nose of the car'll be pushing. You have to diamond that corner just a little bit- not real sharp, but you kind of go in low, let the whole car kind of drift up; as it's drifting you're starting to get it set so that you can really go hard on the throttle as you exit the corner.

"Stay up against the wall down the long back straightaway. It runs a little bit downhill. As you get into the next corner, you drive on in there pretty hard, and get in low."

Patty: "There seems to be numerous lines through that turn. Whatever setup you have, you can still make it work coming off, but it's an awkward turn."



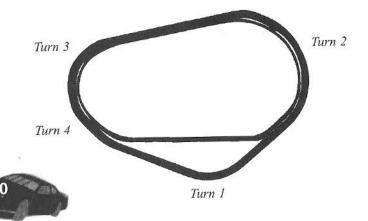




Elton: "Yeah, it's real wide, and you almost want to shift there, because you're almost out of the power band of the engine. No one has been able to make the shifting work well enough to do it, so we just kind of 'live' with that corner. It's kind of uphill back to the start/finish line. There's a blind spot there as you come up that hill. As you get to the start/finish line, you're back into that dogleg. So, having yourself in the right position at about the start/finish line is really important."

Patty: "You can't be on the outside- I mean, even the lapped cars have to be considerably slower there for you to be able to pass 'em on the outside."

Elton: "If someone is underneath you here, you have to give 'em the lane. That's a real treacherous part of the race track- timing's everything there. If you can catch your car just right through there, you can make up a lot of ground. If you're really runnin' tight with somebody and they're right on your bumper while you catch a lap car just right, you can pick up three or four car lengths there and get away from 'em. I know that the year we ran second there, we were the best through the tri-oval. The years that we haven't been very good at all."





South Boston Speedway

The Tale Of The Tape:

Length:

.400 Mile

Banking:

Turns at 12 Degrees

Straights at 7 Degrees

Qualifying Record:

92.921 mph (15.497 secs.)

Set July 16, 1994

by David Green

Race Average Record:

70.785 mph (300 Laps)

Set June 8, 1996

by Todd Bodine

Contrary to popular belief, South Boston Speedway is located in Virginia, not Massachusetts. The speedway temporarily vanished from the NASCAR Busch Series schedule in the early ninties, in order to undergo a renovation that included slightly enlarging the track surface. Originally a charter member of the NASCAR Busch Series, South Boston Speedway returned to the schedule in 1994, following its expansion.

Fast Fact:

Terry and Bobby Labonte are the only brothers to win back-to-back races in NASCAR Busch Grand National Series history (Atlanta, Nashville, 1996).





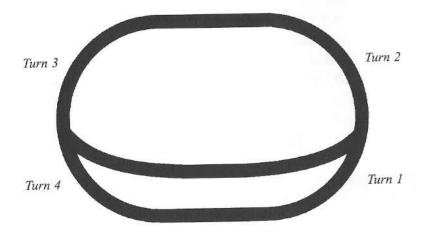


South Boston Pit Notes From Elton Sawyer And Patty Moise:

Elton: "I know it sounds kind of repetitious, but..."

Patty: "We just have one setup. (laughs)"

Elton: "Well, it's not a great big change there. It's really bad gettin' into turn three at South Boston, it's like the car just falls out of the sky. What happens is, it makes you run a lot stiffer right front suspension there than what you'd really want to. It takes a little more in the right front only because of that corner, there. You may also want a little bit stiffer right rear, because it's a 'tight exit' type race track. Coming off the corners the car will have a tendency to push, so you'll have to work on the right rear and wedge."





A Lap Around South Boston With Elton And Patty:

Elton: "At the start/finish line, you're up against the wall; you don't go directly to the bottom at this race track, you run about in the center as you enter the corner. Then, in the middle of the corner you're up against the wall, pretty close. You run it from the center of the corner, where you're in the center of the race track all the way to the exit. As you exit the corner, you get up against the wall."

Patty: "You might not think about it, but at these short tracks, if you can maintain your momentum through the turns so that you don't really have to use so much brake and slow the car down, it's so much better, your lap times are so much faster. It's kind of like a 'mind thing' in a lot of ways. Once you get your car right, it's like, 'Okay, keep your momentum up, keep your momentum up.' Don't slow the car down so much if you can keep from doin' it."

Elton: "Leaving turn two, it's not a very long back straightaway. Then as you get into turn three, it'll try to upset the car to the point of making it push. You really have to think about it as you're racin' because a lot of times, during the heat of battle you could forget it. You enter about midway in the corner, not at the bottom, not at the top, but pretty much in the center. As the car gets to the center of the corner, it's like the race track tightens up there. You need to turn real good, and be able to use a lot of throttle; you need to get the car turned as quick as you can so that you can make the straightaway as long as possible. As you exit the corner you're hard on the throttle, and you don't want to pinch the car down, you want it to get up against the wall as fast as possible, and then you're back to the start/finish line."







Texas Motor Speedway

The Tale Of The Tape:

Length:

1.5 Miles

Banking:

Turns at 24 Degrees

Straights at 5 Degrees

Qualifying Record:

180.054 mph (29.991 secs.)

Set April 3, 1997

by Jeff Green

Race Average Record:

125.105 mph (334 Laps)

Set April 6, 1997

by Jeff Burton

When racing power broker Bruton Smith set out to build his new track in the state of Texas, one could sense that the end result was going to be big. Now complete and boasting over 150,000 seats, the Texas Motor Speedway is the second-largest sports facility in the United States. Patterned after Smith's quad-oval in Charlotte, Texas Motor Speedway features two distinct bankings- 8 degrees along the lower portion of the turns, then extending up to 24 degrees along the higher line.

Fast Fact:

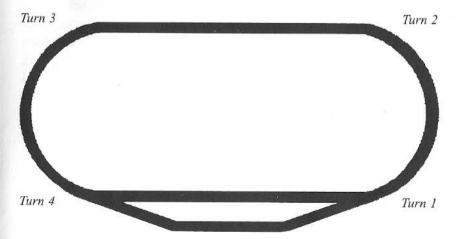
Texas Motor Speedway is one of only a handful of superspeedways equipped with lights for nighttime racing action.



Texas Pit Notes From Elton Sawyer And Patty Moise:

Elton: "Actually, it's a very, very, very fast Rockingham. It uses an Atlanta/Charlotte type setup, but from a racing line standpoint, it drives to me very similar, especially one and two, to Rockingham. Turns three and four seem to be pretty forgiving- very little braking, if any, getting into turn three. Just barely crack the throttle, the car'll take a really good set, and you're right on the white line all the way around three and four. It's a really fast race track, pretty narrow.

"Setup-wise, yeah, it's somewhere in the Atlanta/Charlotte range. You're going to have more nose weight-somewhere in the fifty-one-and-a-half, fifty-two-and-a-half range. And you'll be up in the forty-nine to forty-nine-and-a-half cross weight setting. Spoiler angles are really important here. I haven't been able to get by with a whole lot less than what recommended is-somewhere between sixty-five and seventy degrees."









A Lap Around South Boston With Elton And Patty:

Elton: "At the start/finish line, it's sort of a 'dogleg' type configuration like Charlotte, but you basically drive it as just a long straightaway. Stay kind of out against the wall just a little bit because the start/finish line is a lot closer to turn one than the one at Charlotte is. So, once you get to the start/finish line you need to be thinking about turn one right away. As you pass the start/finish line, you're starting to make your entrance into turn one. You want to stay out wide as much as you can; from a comfort standpoint, it's really tough to get used to. After you enter, you just want to get right into the bottom, quick. The car will take on just a little bit of a push and then center. Once you can get it turned then go really hard on the throttle. Turn two will remind you a lot of turn two at Charlotte, the way you exit it; but you're going to be right at the bottom, and you don't want to be on the outside of anyone.

"Get up against the wall. It's a fairly long back straightaway. As you get into turn three, just barely breathe it, let the car take a set, and as soon as it does, you're just all in the throttle as hard as you can. Just run all the way around the center of the corner and as you exit turn four, you want to stay on the white line. If you get off the white line, the car may have a tendency to want to 'skate up the race track,' and that wall comes up fast. So you want to make sure that you stay down low as you exit four, then you're up against the wall for just a little bit. Back at the start/finish line, you're starting to look again to get into turn one."

Patty: "I guess to fans sometimes it must look easy, because when you think about it there's usually only a few-tenths of a second difference between the fastest car and the slowest car out there. It's so completely different when you're out there doing it, though."



Bull Run Raceway

The Tale Of The Tape:

Length:

3.660 Miles

Type:

12-Turn Road Course

Qualifying Record: 128.576 mph (1:42.476 secs.) Set January 6, 1997 by Kevin Snarke Race Average Record: 116.271 mph (100 Laps) Set November 15, 1991

by Mark Diede

Nestled in Megville, Colorado, within eyeshot of the posh Lake Moore Resort area, Bull Run Raceway has played host to drivers of various automotive breeds for over thirty years. The original course wound alongside the spectacular lake, prompting drivers to ruefully dub it as "Lake Morgue." This was due to the number of mishandled cars that were collected by the water (although no driver actually ever perished in the lake). In 1969, prominent Megville businessman Huey J. Ruffridge stepped forward to spearhead the relocation and design of the race facility. In 1971, the current configuration of Bull Run Raceway was christened with an open-wheel race won by Justin Tyme.



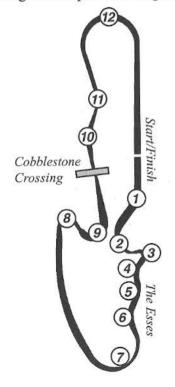




Bull Run Raceway Pit Notes:

There's a balanced combination of left/right turns at Bull Run; hence, chassis adjustments should bear this out. Left-side bias will most likely fall near the centerline, in order to negotiate the Esses. This means that tires should be equally stressed throughout an entire run. Check tire wear during test sessions, and work at getting the temperatures even on all four wheels.

Gear ratios should fall pretty even, with somewhat more care applied to selecting third gear. Bull Run Raceway's design requires the car to produce solid power through multiple sets of turns. You've got to have enough rpms underneath you as the car exits the winding sections of the course, leading onto important straightaways.





A Lap Around Bull Run Raceway

On a hot lap, you'll cross the start/finish line flat out in fourth gear, along the left side of the track. As you draw even with the number five brake marker on your left, brake hard, downshift to third and steer around the turn one right-hander. The ensuing combination of turns two and three require maximum skill, and are critical to turning in a fast lap time.

Staying in third out of turn one, gently work the gas until the nose of your car points at the number three brake marker in the middle of turn two. Stab the brakes hard, turn left and downshift to second, pause a beat then shift down to first and brake hard for turn three, a hairpin to the right. Stay off the power completely until you feel the car bite as you begin to face the cow pasture.

Jump back on the gas, shift up to third and work the car through turns four, five, six and seven: a left-right-left-right combination known as the "Esses." Throughout the Esses, your rpms in third gear will vary between 5,800 and 7,200. The sweeping number seven right-hander culminates with a crest, which reveals the Lake Moore Resort area off to the left. As you reach the apex of seven, mash the gas, shift to fourth and speed downhill toward turn eight. Here, the pavement bends slightly to the right, so care must be taken to keep the car under control as you battle traffic. Stay on the gas full until you reach the number one brake marker on your left; at this moment, brake hard, downshift to second and turn right.

Try to enter the number eight banking high, then dive down to the apron in the middle of the corner. As you exit the turn, punch the







throttle until you reach what appears to be the middle of turn nine. Get on the brakes, downshift to first and begin your assault on this blind left-hander. There's a lot of pavement here, but driving a wider line through this corner will gravely impact your lap times. The generous supply of asphalt here does offer its advantages, however: you'll find that you can jump back on the throttle before you've apexed the turn, for example.

Upon leaving turn nine, you should be able to climb back into fourth gear just as you cross under the Cobblestone Crossing Bridge. Stay to the left before you reach the bridge; the pavement along the right side of the track actually "dead ends" at the bridge's stone base. Just after Cobblestone Crossing, add some brakes, downshift to third and prepare for the roadway to bend to the right. As you gently work the gas through turn ten, look ahead to the turn eleven brake markers fast approaching. Aside from its location just following a tight bend, turn eleven isn't particularly challenging. You should be able to take this corner easily in third gear, or aggressively in fourth.

Now it's full speed ahead to turn twelve, a stadium-style right hander that enshrouds the century-old original Ruffridge Dairy barn. The old Ruffridge family cabin also sits in the infield area of this corner. Enter turn twelve high on the banking; stay in fourth on the gas, dip down to the apron and exit out near the wall. This sequence will deposit you back onto the main straightaway, where you'll cross the start/finish line along the left side.



Red Rock International Raceway

The Tale Of The Tape:

Length:

2.607 Miles

Type:

5-Turn Road Course

Qualifying Record:

167.207 mph (56.129 secs.)

Set July 4, 1994

by Armand Dilpare

Race Average Record:

158.716 mph (125 Laps)

Set August 9, 1997

by Doug Lawrence

Carved from an old, abandoned mining trail, Red Rock International Raceway has put the tiny town of Plaster City, California (pop. 544) on the map, literally- prior to the speedway's existence, Plaster City didn't even appear on California State maps. So why was a major league racing facility erected in such a remote area? Track owner Jumpy Gattis has a quick response: "Plaster City is perfect- there's three major television markets within twenty miles of here. We're right off the interstate, and there are plenty of hotel rooms within five minutes of the track. The price was right on the land, (we pay) low taxes, and there's no crime to speak of in Plaster City."



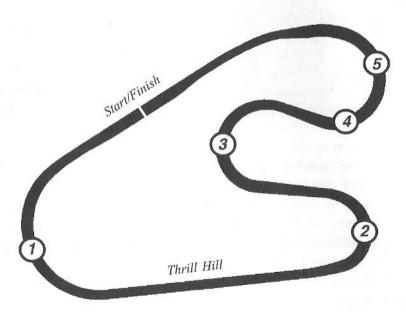




Red Rock International Raceway Pit Notes:

Red Rock International Raceway is a Crew Chief's worst nightmare. Chassis setup must strike a balance between blistering speed and delicate handling. This is one race track where proper car setup has more impact than driving line.

Since all but one of the turns are left-handers, suspension adjustments should favor those found on superspeedways- more left-side weight, very little cross weight and stiffer right-side tires. The spread between gears, primarily third and fourth, is also critical. Turn two, immediately following "Thrill Hill," requires a dreadful downshift that will tax even the most bullet-proof of transmissions.





A Lap Around Red Rock International Raceway

As you set out to conquer "The Big Red Rock," there are two important points to keep in mind. First, the combination of turns four, five and one almost drive as one big corner; and second, lap averages here are well above 160 mph- comparable to those reached at Darlington, a superspeedway. By the way- if you're hungry and feel like stopping, there's a Poultry Shack located at the top of turn four. It's the only chow found on top of the mountain, aside from the track concession facilities. Walk in and order the "eight clucks for four bucks" family special on test days, and you're likely to spot your favorite driver dining on a roasted bird and an old-fashioned bottle of rootbeer.

As you cross the start/finish line, make sure the car is running along the right side of the track, setting up the entry into turn one. The first corner at Red Rock is a long sweeper to the left; many drivers are tempted to try this turn flat out, but that's really living on the edge. The safer, more consistent approach is to lift off the throttle for just a heartbeat as you enter the turn. The longer a driver waits to back off, the tougher it will be to gather the car up at the exit of the turn. You should be hitting about 170 mph as you leave the first corner.

The first corner dumps you out at the crest of Thrill Hill, where cars plummet down the roadway at dizzying speeds. At the basin of the hill, the speedometer will peg 220 mph! Watch the banking change that occurs as you enter turn two- the car can really get punched around by the neurotic camber of the pavement. Begin moderate braking as you draw even with the number one marker on the right side of the track. When the rpms drop below eight-thousand, downshift to third, jump back onto the gas and head for turn three, the track's only right-hander.







As you approach turn three, your engine's rpms should be hitting a peak in third gear. Brake lightly, stay off the gas for a moment, and downshift to second. As soon as you downshift, step back on the gas full. Before you've completed the corner, you'll be back in third gear. Some drivers prefer to tackle this turn in third, instead of making the downshift to second. The tradeoff that must be considered is that turn three is followed by a steep climb. You'll need plenty of revs at your disposal as the car soldiers uphill, so choose a method that will prove consistent.

As you arrive at the combination of turns four and five, the car will still be building power in third gear. The Poultry Shack is just ahead, at the top of the corner. Try not to enter turn four too late, or you may be battling to get the car back down to the bottom of the track at the apex. As you sail around turns four and five, you must keep the car along the left-hand side of the track. The cruel right wall comes up deceptively quick to the inexperienced road warrior. You'll most likely still be in third gear at this point; as the car nears the start/finish line, shift up to fourth gear, move to the right and prepare to enter turn one.



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