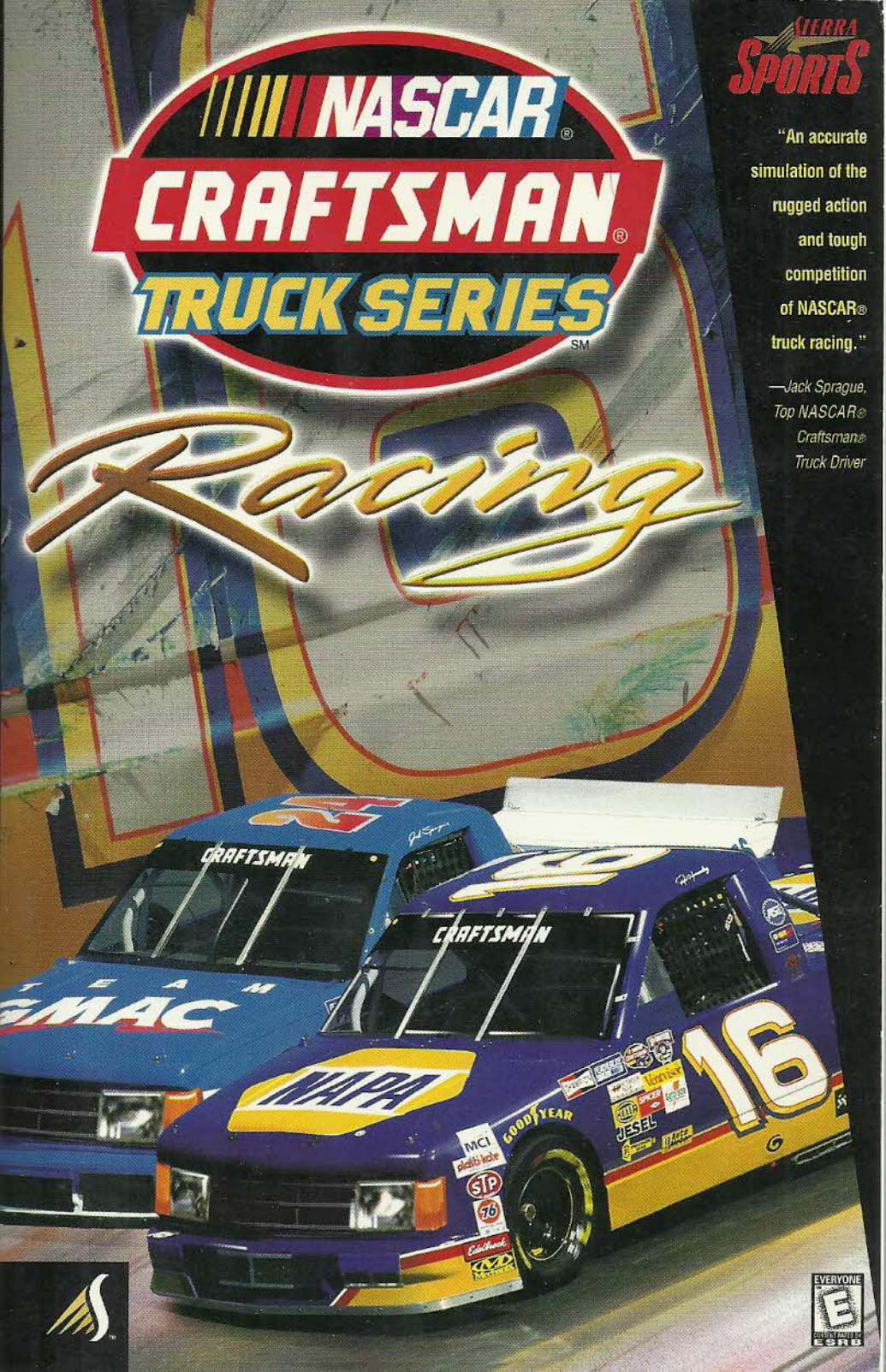
NASCAR®
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TRUCK SERIES℠
Racing
SIERRA SPORTS
"An accurate simulation of the rugged action and tough competition of NASCAR® truck racing."
—Jack Sprague, Top NASCAR® Craftsman® Truck Driver
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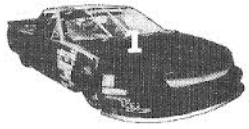
NASCAR® Craftsman® Truck Racing

from

Papyrus Design Group, Inc.



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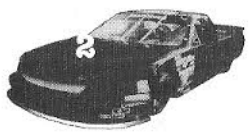

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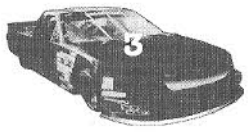
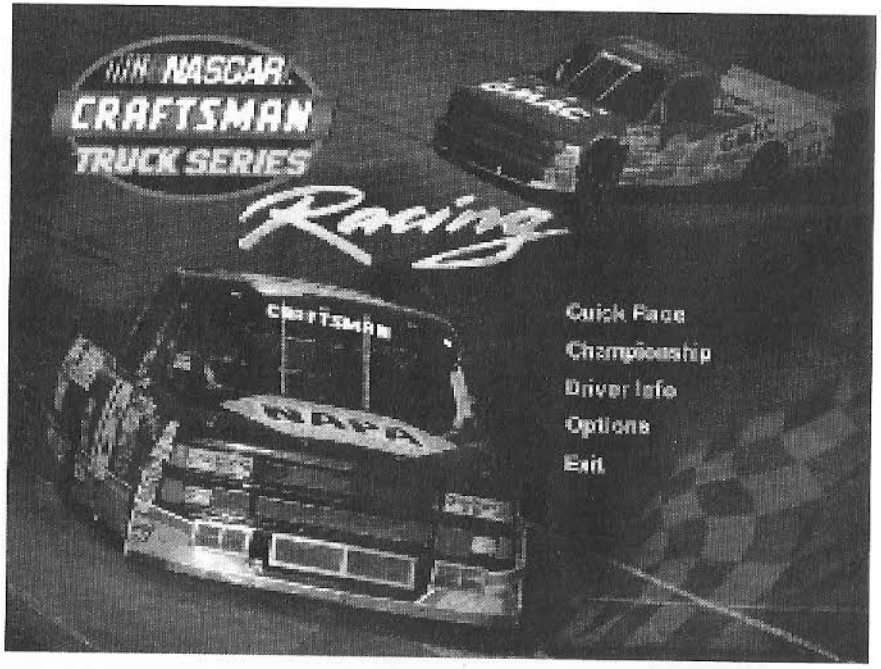




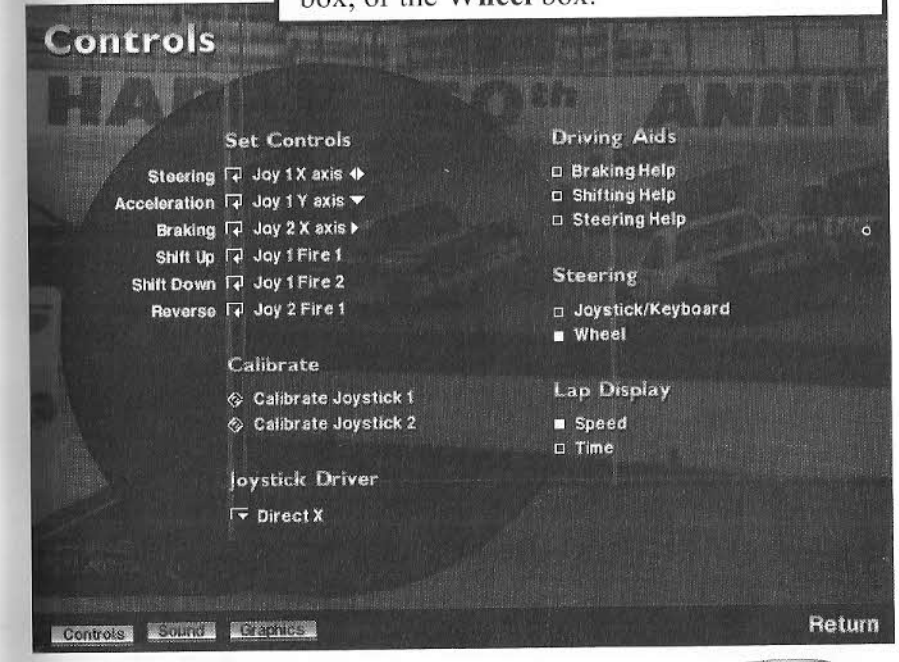
Menus

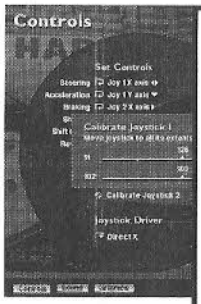
Pointing, Clicking And Having Fun

Before You Drive, Configure Your Joystick!

To Set Up Your Joystick Or Steering Wheel

From the **Main** menu of NASCAR Craftsman Truck Racing, click on the word **Options**. This will take you to the **Controls** options menu, as shown below. On the right-side, check either the **Joystick/Keyboard** box, or the **Wheel** box.





Joystick Calibration

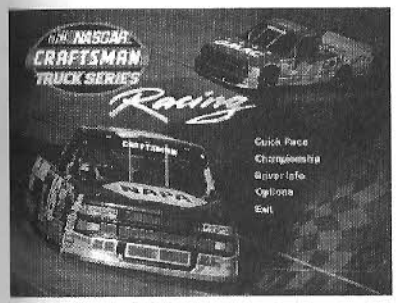
If you are using a single joystick, click on **Joystick 1** with your mouse; calibrate the x and y axis of the stick. If you're using a steering wheel (such as the Thrustmaster NASCAR Pro Wheel), mouse-click on **Joystick 1** and steer left and right. Hit the **"ENTER"** key to complete calibration. Next, click on **Joystick 2** and step on each foot pedal, individually, then press **"ENTER."**

Set Controls

Finally, click on each control item listed under **Set Controls**, one at a time. Now you can assign each control item to your stick or wheel. For example, a joystick user might click **Steering**, then move the joystick to the left and right. NASCAR Craftsman Truck Racing will now automatically remember that left/right joystick movements control the steering. *You cannot assign certain keys that the game is already using. Also, you cannot assign the same control method to two different actions; for example, you can't make joystick button A control both braking and accelerating.* **If you use a joystick button for throttle control, here's something you should know: clicking the throttle button once and holding produces no wheelspin; double-clicking and holding the throttle button creates wheelspin. For pedal users, wheelspin occurs at about 70% of full throttle.**

A Quick Lap Around Flemington Speedway

As you follow the quick start guide below, you may want to periodically pause the simulation in order to skim the manual. To do so, just press the **"P"** key on your keyboard. Press **"P"** again when you're ready to resume driving.

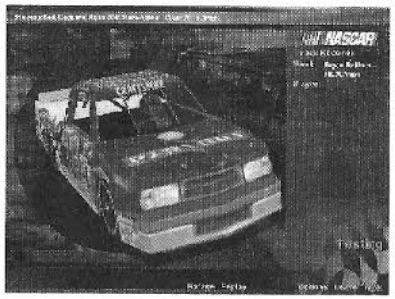


From the **Main** menu, use your mouse to click on the words **Quick Race**.

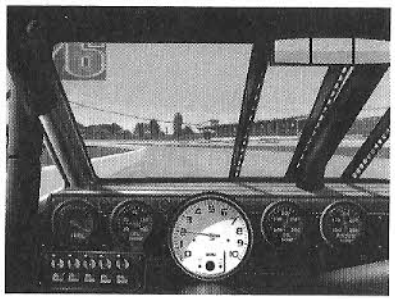
Now, you should see the **Quick Race** menu. Click on the **Event** button that has the right-hand arrow, on the right side of the screen. As you click on this button, you'll notice that the current race track changes. Stop clicking when you see **Flemington Speedway**.

NASCAR Craftsman Truck Racing Menus

In the center of the **Quick Race** menu, you'll see a setting called **Race Weekend**. Click on the pull-down icon and select **Testing**. This will give you a closed course to take your first laps on. Next, click on the word **Race** in the lower-right corner of the screen.



Now you'll see the **Race Weekend** menu. There's lots of stuff to do here, but for now, let's head to the track. Just click on the word **Testing**, found in the lower-right corner of the screen.

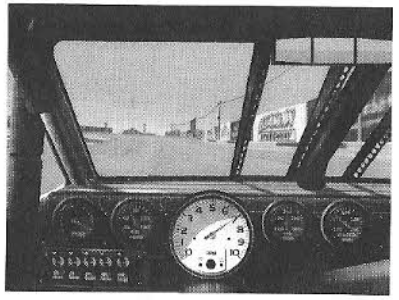


Are you ready to drive a racing truck at high speed? You should now be in your truck, situated in your team's pit stall. Your pit will always be the first one on pit road. At tracks that have pit lanes on front and back straights, your pit will always be located on the front straight. Enough talking, let's go! Give it some gas and gently steer the truck down pit road. If you're shifting your own gears, upshift when the tachometer reaches 8,000 rpms.

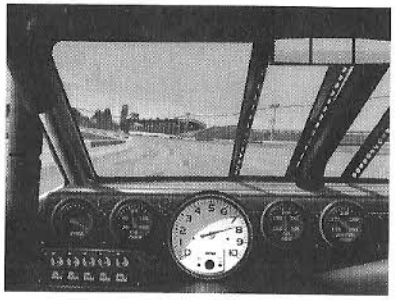
Don't worry about embarrassing yourself- it's a test day, so the grandstands are empty. Take it easy leaving the pits; the transition from the flat pit lane to the 6 degree banking of turn one can be tricky.

As you round turns one and two, you should still be accelerating gradually. Keep the truck in the center of the track; if you feel the truck begin to lose grip, release the throttle and tap the brakes.

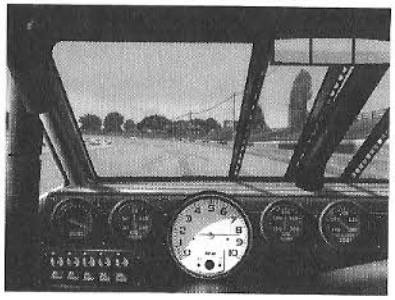
At the exit of turn two, you should be in fourth gear; if you aren't, you've spent too much time gawking at the RV's parked in the infield. As you approach turns three and four, you'll need to lift off the throttle and apply the brakes- *you can't make it all the way around this track full throttle.*



If you slowed down enough, you should be able to steer the truck around the banking through turn three. Stay in fourth gear, but don't get back on the gas yet- wait until you reach the center of turns three and four.



You're now in the middle of turns three and four, and at this point, you should begin to reapply throttle. Flemington requires a constant mix of throttle and braking, so easy does it! Keeping the tachometer below 7,000 rpms should allow you to make it around each corner without stress here.



Just let the truck drift naturally around the shape of the track here. Cross the start/finish line, then get ready to do it all over again. Congratulations, you've taken your first lap of NASCAR Craftsman Truck Racing!

The Main Menu

The **Main Menu** screen provides access to all of the features, trucks and tracks found in *NASCAR Craftsman Truck Racing*. Choose **Quick Race** to compete in a single event (no championship points awarded) or do some on-track testing at the speedway of your choice. For the ultimate challenge, click **Championship** to wage an entire season's worth of competition on the NASCAR Craftsman Truck circuit; who knows- maybe you'll earn enough points to capture the coveted series title. Choose **Driver Info** to log in as a driver, enter the **Paint Shop**, or view stats and bios on your favorite teams and drivers. By selecting **Options**, you can configure your wheel or joystick and customize many of the simulation's parameters to suit your tastes. And finally, choose **Exit** when you've finished racing and it's time to get back to all that word processing stuff. All of these selections are explained in greater detail throughout the following pages.

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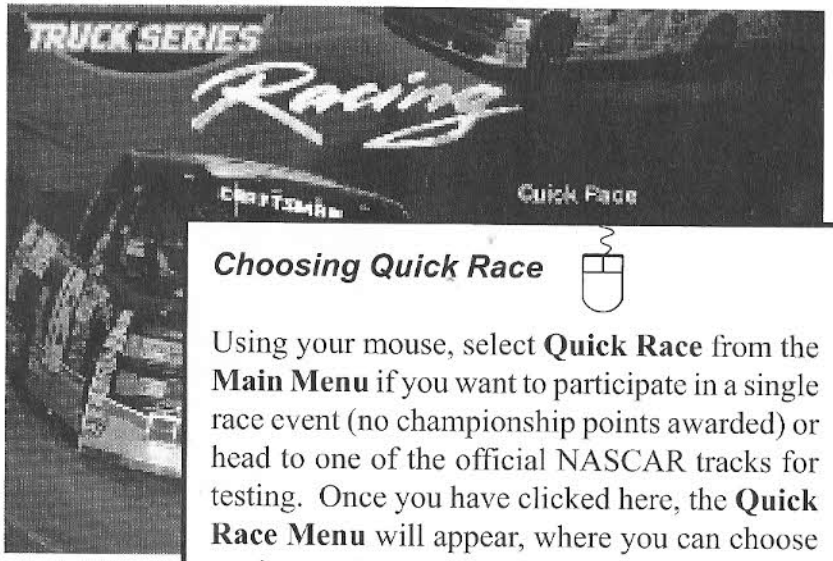
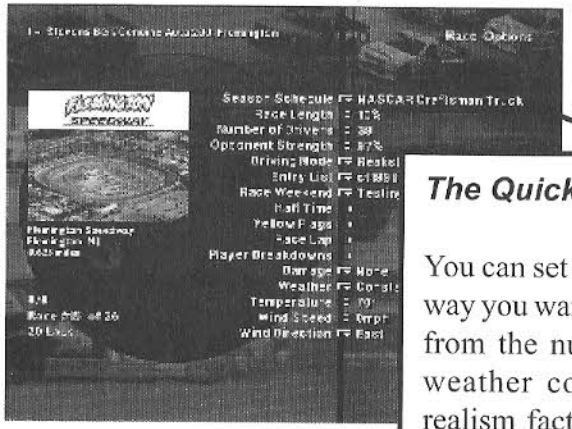


Choosing Quick Race

Using your mouse, select **Quick Race** from the **Main Menu** if you want to participate in a single race event (no championship points awarded) or head to one of the official NASCAR tracks for testing. Once you have clicked here, the **Quick Race Menu** will appear, where you can choose tracks, sessions, realism options and many other attributes which control the simulation.



The Quick Race Menu

You can set a **Quick Race** up any way you want, just choose a track- from the number of laps to the weather conditions and other realism factors, the **Quick Race Menu** gives you total control.

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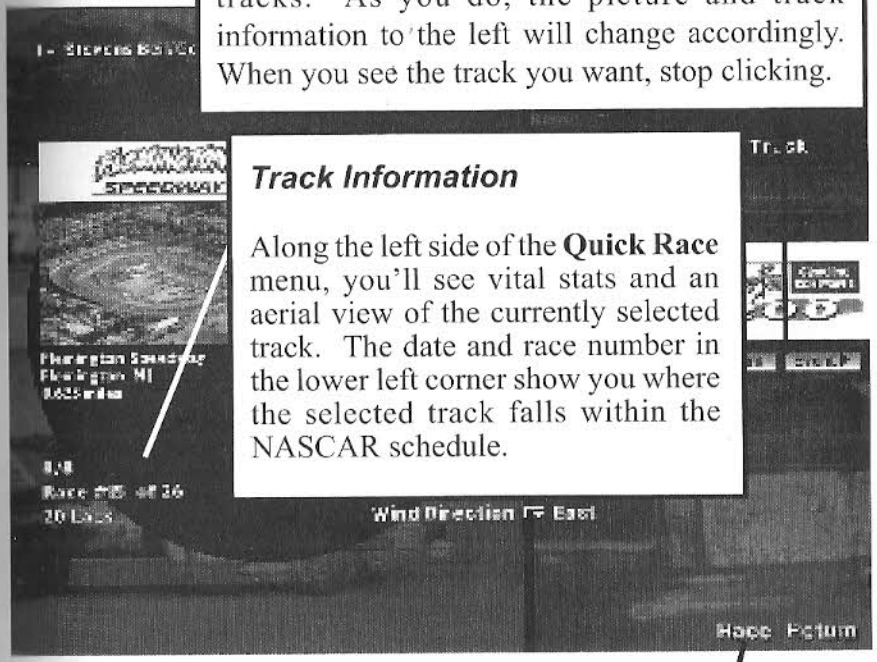
Choosing A Track

Click on either of the two **Event** buttons to cycle forward or backward among the official NASCAR tracks. As you do, the picture and track information to the left will change accordingly. When you see the track you want, stop clicking.



Track Information

Along the left side of the **Quick Race** menu, you'll see vital stats and an aerial view of the currently selected track. The date and race number in the lower left corner show you where the selected track falls within the NASCAR schedule.

When you've chosen the track you want to race or test on, and selected all of your **Race Options** (as is explained on the following pages), click the word **Race**, at the bottom of the screen. This will take you to the **Race Weekend** menu, where you can begin driving. If you'd like to cancel everything and return to the **Main** menu, click on the word **Return**, or press the ESCape key. ESC

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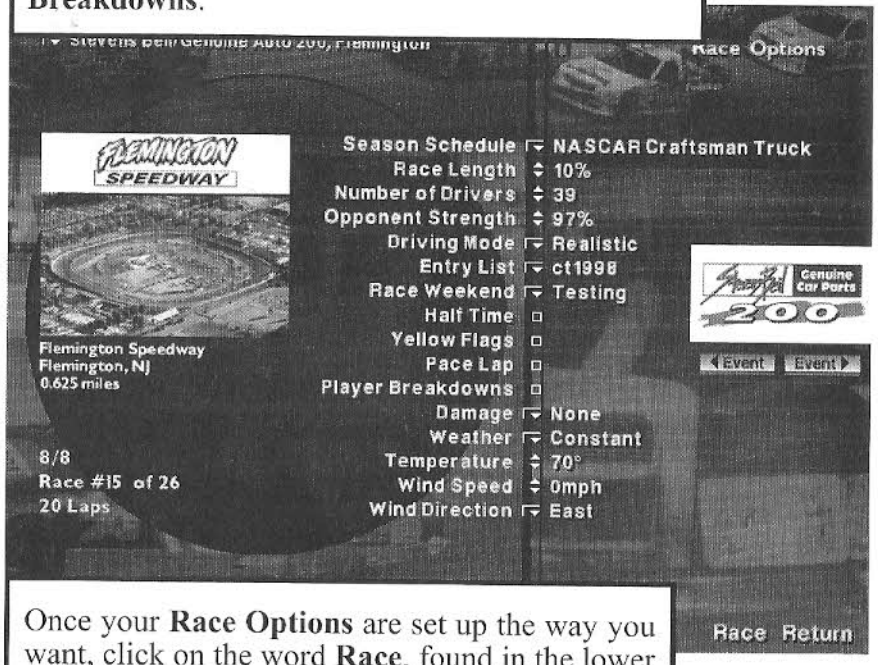
Picking Your Race Options

Before you hit the track you've chosen, set all of the **Race Options** up the way you want; simply use your mouse to point and click your way through the various selections. Adjust **Race Length**, **Opponent Strength** and other parameters to your liking. Toggle on or off factors such as **Yellow Flags** and **Random Breakdowns**.



Once your **Race Options** are set up the way you want, click on the word **Race**, found in the lower right corner of the screen. This will take you to the **Race Weekend** menu.

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Race Options

Season Schedule: Displays the current season schedule.

Race Length: Choose any amount, from 1% to 100% of the actual event distance. Each race is run in real time and requires a minimum length of three laps, however.

Number of Opponents: Try reducing the number of opponents if your computer's frame rate is too slow, or if you wish to race with less traffic.

Opponent Strength: Adjust the overall speed of your opponents to compare with your driving abilities. If you're a rookie driver, you may want to slow the other trucks down while you learn the ropes. Seasoned veterans may desire a stronger challenge, requiring a higher opponent strength level.

Driving Mode: Arcade mode is for those who desire a less realistic rendition of NASCAR competition. Your vehicle is less destructible, and it has more grip and braking power than in real life. Also, the computer opponents will drive according to the player's level. If you are winning by a large margin, computer trucks will speed up in an attempt to catch you. If you are driving at the back of the pack, computer opponents will slow down to offer you a chance to catch them. By contrast, **Simulation** mode offers a highly-detailed version of NASCAR competition. Opponent strengths and characteristics, weather, chassis handling and many other factors affect the outcome of each event.

Halftime: The NASCAR Craftsman Truck Series features a red flag at the halfway point in races. This feature may be toggled on or off.

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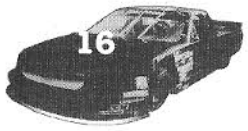
Entry List: Select the list of drivers you'd like to race against. Available entry lists include those shipped with NASCAR Craftsman Truck Racing, and those you may create using the **Driver Info** utilities. You can create and store as many entry lists as you wish.

Race Weekend Type: Choose **Instant** to skip preliminary rounds and jump straight to the race. You'll start at the back of the grid, with all realism settings in effect. Select **Full** if you'd like to "trade a little paint" in practice, compete for a NASCAR pole position in qualifying, and then go racing. Click on **Testing** if you'd like to "shake the truck down" at the selected track. In **Testing** mode, you have the opportunity to drive on a closed course (no other vehicles on the track). This is an excellent way to tweak setups and hone driving skills without the bother of traffic.

Yellow Flags: Toggles caution flags on or off. If yellow flags are off, be advised that accidents may still occur; you'll just have to drive around the wreckage at high speed. With yellow flags turned on, expect caution periods to last between 2-4 laps, depending upon how much carnage has occurred.

Pace Lap: Toggles the opening pace lap on or off. With the pace lap setting off, the green flag is waved the moment you begin the race session. With the pace lap setting on, the field will drive one lap at pace speed around the track before the green flag is waved. This gives drivers a final opportunity to look over the track, warm up the tires and prepare to go really fast. Here's some advice, though: while on the pace lap, if you see someone you know (like your mom, boss or friend) in the grandstands don't wave- it would be embarrassing to spin out before the race goes green!



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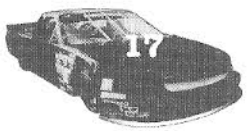
Player Breakdowns: These may be toggled on or off. When activated, breakdowns may occur randomly to your engine, based on actual NASCAR statistics for such hard luck. When disabled, your engine cannot suffer random failures of any sort, though it is still suseptible to damage caused by abuse or accidents. Random breakdowns are always capable of affecting computer opponents, regardless of this setting.

Damage: This may be toggled to **Off**, **Arcade** or **Realistic** damage. When damage is set to **Realistic**, your truck is capable of suffering damage to the bodywork, engine and wheels due to impact. Contact with other vehicles, walls or trackside structures could result in various degrees of realistic body damage, depending upon the severity of the impact. Minor damage could be repaired in the pits by your crew although a reduction in the performance of your truck may linger throughout the race. Major damage could greatly reduce the effectiveness of your race truck, or possibly disable it completely, forcing an early end to your race day. The **Arcade** damage setting allows the truck to be fully repaired in the pits and lessens the severity of impact. When damage is turned **Off**, your truck is indestructible when it comes to impacts. However, the tires are still suseptible to wear and must be replaced periodically, and the engine can still fail if over-revved excessively.

Weather: Choosing **Random** weather creates realistic, variant conditions, based on the time of year and average climate for the track's region. Choose **Constant** weather if you want to pick the race weekend weather yourself. Set the **Temperature**, **Wind Direction** and **Wind Speed**. Cooler weather generally creates more downforce, producing faster lap times. Hotter air is less dense, robbing trucks of needed downforce. Hotter conditions also can cause tires to wear out quicker, thanks to the blistering pavement.



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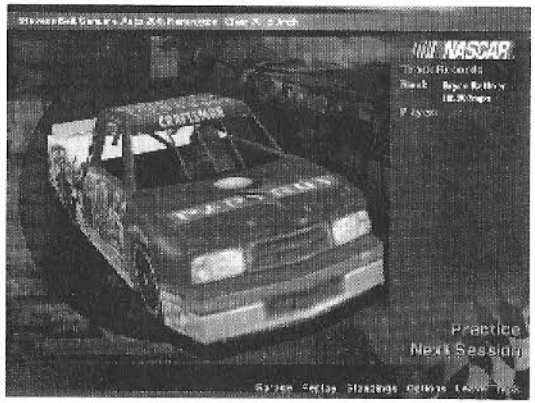
The Race Weekend Menu



Are you ready to drive? Once you've chosen the track and other options found on the **Quick Race** menu (as previously described), click on the word **Race**, located in the lower right-hand corner. This takes you to the **Race Weekend** menu, where you can tune the truck for better performance, view instant replays or head for the cockpit. Remember, you get to the **Race Weekend** menu by choosing **Quick Race** from the **Main** menu, then clicking on the word **Race**, found in the lower right corner of the **Quick Race** menu.

Now that you're here, you'll notice that the **Race Weekend** menu has two bars on it. The bar that runs across the top of your screen is the **Status** bar. It contains information about the event you are currently involved in; the current event, session and current weather conditions are all displayed along the **Status** bar. At the bottom of your screen you'll notice the **Command** bar. The **Command** bar contains items that you can select and/or change with your mouse. Change the current session, view replays or click on the currently displayed **Session** to get behind the wheel of your racing truck. While on the track, press the **"ESCape"** key at anytime to return to this menu. Just click on the current **Session** once again to resume the action on the track right where you left off.

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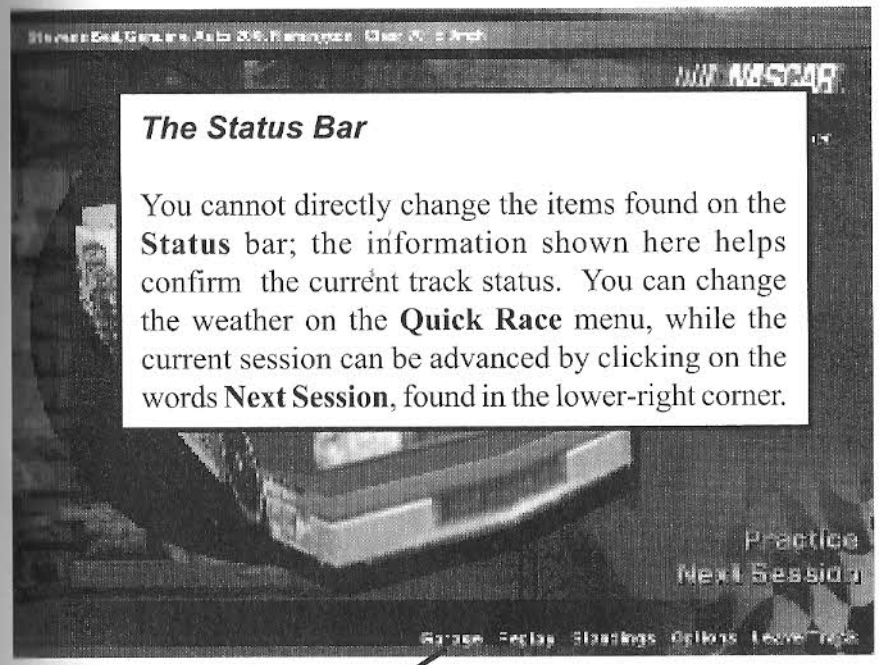

The Status Bar

You cannot directly change the items found on the **Status** bar; the information shown here helps confirm the current track status. You can change the weather on the **Quick Race** menu, while the current session can be advanced by clicking on the words **Next Session**, found in the lower-right corner.

The Command Bar

Click on any of the items found along the **Command** bar to perform an action. Click on the word **Practice** to head for the cockpit of your race truck. Click on the words **Next Session** to advance forward, such as moving from the **Practice** session to the **Qualifying** session. Click on the word **Return** to jump back to the previous (**Quick Race**) menu.

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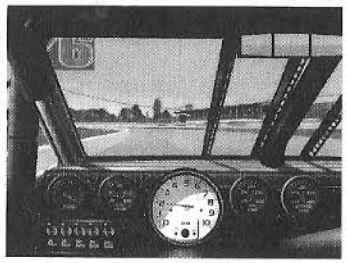
Here's a review on how to get to your truck from the **Main** menu:

From the **Main** menu, use your mouse to click on the words **Quick Race**. This brings you to the **Quick Race** menu.

The **Quick Race** menu allows you to choose a track, select **Realism** options and configure other items. Once you're ready to move on to the **Race Weekend** menu, click on the word **Race**, found in the lower right corner.

The **Race Weekend** menu allows you to change the session you are currently participating in, tweak your truck in the garage, view replays and other options. When you're ready to go to the truck, click on the word **Practice**, located in the lower-right corner on the screen.



Now you'll find yourself seated at the wheel of your truck, on pit road. Apply some throttle, steer clear of the other pits and have some fun!

Race Weekend Command Bar Items:

Current Session: Click on this word (**Practice, Qualify, Race**, etc.) to head for the cockpit of your truck. Whatever selections you've made up to this point concerning sesssion, realism, driving aids or other items are in effect while you drive.

Next Session: Each mouse click here toggles forward to the next race session. The order of sessions is **Practice**, **Qualifying**, **Warm Up**, and **Race**. Once you've stepped forward to the next session, you cannot back up to the previous session.

Garage: This selection allows you to roll your truck into the team's garage stall for adjustments. Inside the garage, you can adjust the stiffness of each shock absorber, the rear spoiler angle, the cross weight and many other items. During **Practice** sessions, it is common to spend more time in the garage than on the track, while you attempt to "dial your truck in." For complete information on **Truck Setup**, refer to the chapter entitled, *"Taming Those Horses!"*

Replay: Click here to view instant replay footage from a variety of trucks and camera angles. You can also save or retrieve your favorite highlight clips from on-track escapades. It is important to note that you will not lose your current position on the track or in the standings while you view replays. When you return to the cockpit, you'll pick up the live action wherever you left off.

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Standings: If you'd like to check the current status of the entire field, choose **Standings**. You can view and print a rundown that includes positions, interval behind the leader and mechanical status. If a driver has retired from competition prematurely, you'll see the reason the truck dropped out listed here. You can also save or review results from past races at the current track. The word **Standings** will appear greyed out until the **Practice Session** has begun.

Options: Click here to return to the **Race Options** menu. This allows you the opportunity to change these settings without leaving the current **Race Session** type.

Accelerate Time: This feature allows you to view the remainder of the current race quickly. Because your truck is permanently removed from the race when you select **Accelerate Time**, it is strongly recommended that you only use this feature when your vehicle has suffered too much damage to continue in the race.

Return: Click here to abort the current event and return to the **Quick Race** menu, where you may select a new track/event.

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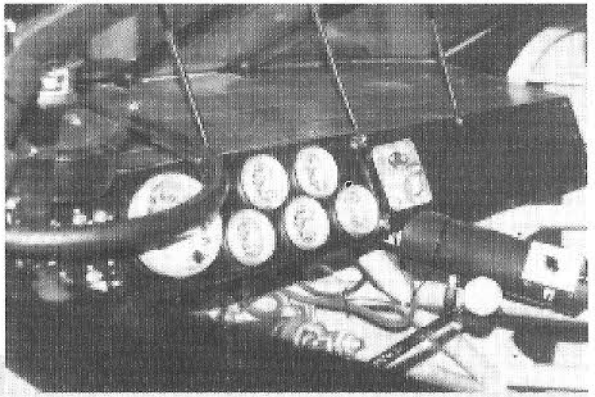
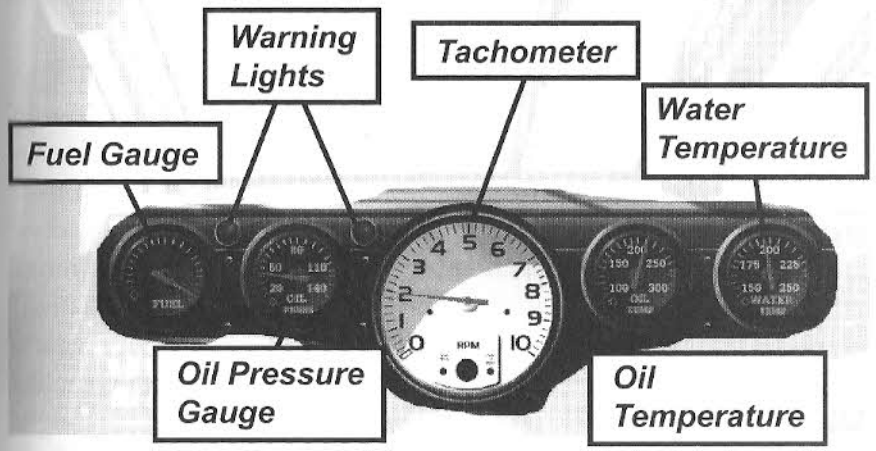
Inside Your Truck

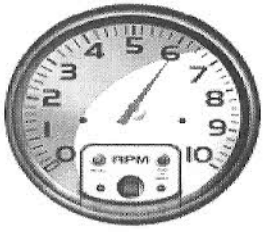


Your NASCAR Series racing truck is equipped with custom high performance instrumentation and a special race driver's rearview mirror. Details of your cockpit are described below:



Fuel Gauge: The needle on this gauge indicates how much fuel your truck has remaining. When the needle points all the way to the right (about 4 o'clock), the tank is filled completely (22 U.S. Gallons). The warning light located at the upper-right corner of the fuel gauge will begin blinking when there are three gallons left in the tank. Time to pit for another tankful!

Oil Pressure Gauge: Normal operating pressure is 80 psi. Over-revving the engine will cause the warning light at the upper-right corner of the oil pressure gauge to blink, as pressure rises. Continuous over-revving can lead to premature engine failure. If the oil pressure warning light blinks excessively, you should either upshift sooner, or readjust gear ratios.



Tachometer: The largest instrument on the dash, this dial indicates current engine rpm's. The tachometer digits are read in thousandths (1,000 to 10,000 rpms). NASCAR racing trucks do not have speedometers in them, so the driver relies on the tach for engine speed information. The driver also reads the tach to know when to shift gears. Generally, shifts should be made when the needle reaches between 7,000 and 8,000 rpms. The needle points straight upward (12 o'clock) when the rpms are at 8,000. This is where it should be, particularly at the end of straightaways; this indicates optimum engine performance. Constantly

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revving the motor beyond 9,000 rpms can lead to engine failure. If your oil pressure warning light blinks constantly while in fourth gear at high speed, you probably need to readjust gear ratios.

Oil Temperature: This instrument provides the driver with the current temperature of the engine oil. Normal readings are in the 200 degree range (Fahrenheit). Should the oil temperature rise significantly higher than optimum, this means the engine is running too hot. Remedies for this situation include readjusting gear ratios, raising the rear spoiler angle, or altering your driving style to take it easier on the motor. A high oil temperature condition could also be the result of damage, or a random problem with one of the truck's critical systems.

Water Temperature: Normal water temperature readings should be in the 175-200 degree range (Fahrenheit). Water temperature can increase by abusing the engine, a random failure of some sort, damaging the front bodywork (which can restrict airflow into the radiator) or by drafting for extended periods of time. If the water temperature climbs abnormally high, you can slow down or pull into the pits for repairs. Eventually, your engine may blow if the temperature remains in the critical range.

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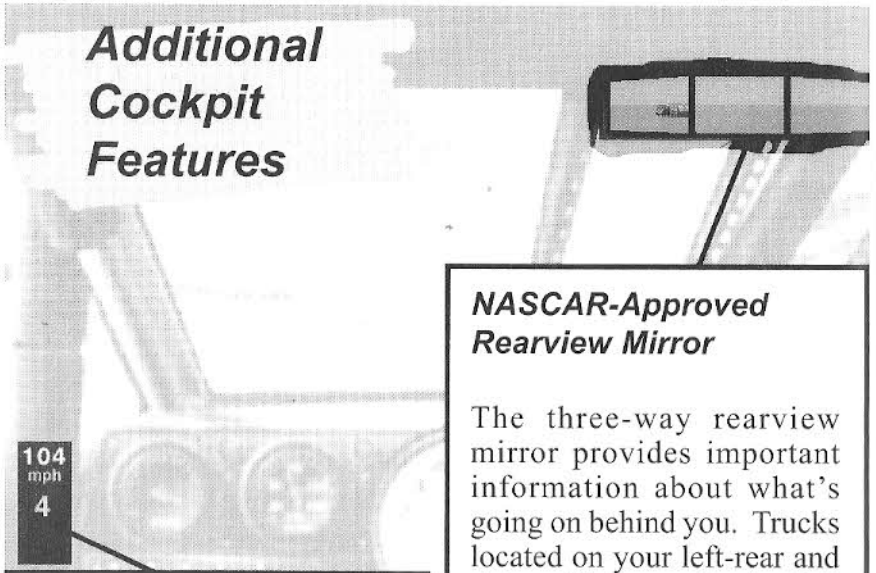
Additional Cockpit Features



Speed & Gear

Real racing trucks do not have speedometers in them, but if you'd like to view the current speed and gear status of your vehicle, press the **"S"** key. This toggles on or off a digital display that shows the current mph and selected gear of the truck. This may be handy for novice drivers or those in testing, though it is available anytime.

NASCAR-Approved Rearview Mirror

The three-way rearview mirror provides important information about what's going on behind you. Trucks located on your left-rear and side will appear in the left panel of the mirror; trucks located on your right-rear and side will appear in the right panel of the mirror, while trucks in the center panel of the mirror are directly behind you.

Tip: Use the speed/gear display during practice or testing to learn how many rpms equal the pit road speed limit under your current setup.

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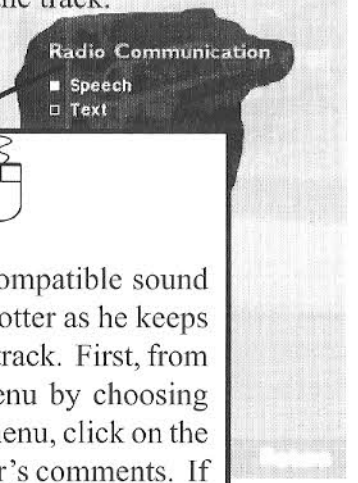
Meet Your Spotter

Any driver that has ever won a NASCAR event will be quick to point out that it takes a total team effort. The *Spotter* is often likened to an assistant football coach stationed in the press box during a game; he's the eyes and ears for the driver, providing critical up-to-the-minute info about what's happening on the track.



Getting Info From Your Spotter

If your computer is equipped with a compatible sound card, you can hear the voice of your spotter as he keeps you abreast of what's happening on the track. First, from the **Main** menu, get to the **Sound** menu by choosing **Options**, then **Sound**. On the **Sound** menu, click on the **Speech** box to audibly hear your spotter's comments. If you do not have a sound card installed, click on the **Text** box located on the **Sound** menu in order to view the spotter's comments on-screen instead.

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Tip: You can also access the Sound menu while racing. From the Race Weekend menu, choose Options, then Sound. Choose Speech or Text to accomodate your system's sound capabilities. You only need to do this once; NASCAR Craftsman Truck Racing will automatically save the most recent selections when you exit the Sound menu.

Listen to what your spotter tells you. He'll keep you informed of everything that's happening out on the track- whether other trucks have spun, stalled or crashed, your spotter can see the entire track, so he knows about it almost immediately. Below are some comments you're likely to hear your spotter utter while you're in the cockpit:

Keep Digging: Drive harder and try to improve your position.
Car Low: An opponent's truck is located beside you, on the inside.
Clear Low: The opponent is no longer beside you on the inside.
Car High: An opponent's truck is located beside you, on the outside.
Clear High: The opponent is no longer beside you on the outside.
The (Number) Car Is A Lap Down: You are approaching an opponent who is a lap behind you.
The (Total Number Of) Cars Ahead Of You Are All Racing For Position: The pack of trucks in front of you are all on the lead lap, ahead of you in the running order.
Let's Go! Race Back To The Line!: When the caution flag is waved, you can continue to try to overtake opponents at full race speed (and they'll definetly try to pass you) until your truck crosses the start/finish line, completing the current lap; once you've completed the lap the caution appeared on, you must slow down and maintain your position.
You Are On The Point: You've taken the lead, Fireball!

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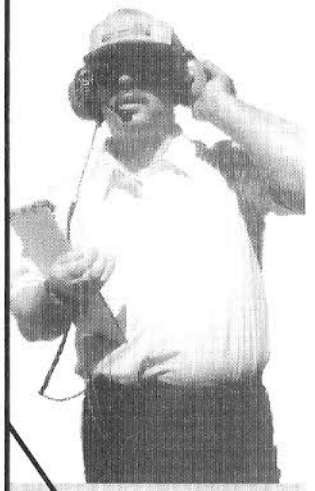
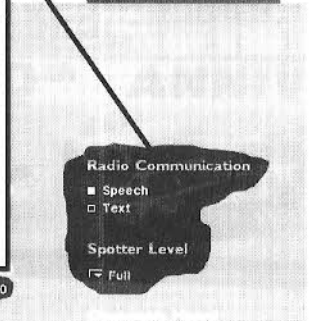
Train Your Spotter Right

No doubt, having a spotter's help is invaluable, but for experienced racers, too much of the guy's advice may seem more like having a backseat driver. Fortunately, NASCAR Craftsman Truck Racing lets you decide how much spotter info you receive as you drive.

From the **Options/Sound** menu, click on the **Spotter Level** pull-down icon. Choose **Full** if you want to hear constant chatter about *everything* from your spotter. Select **Novice** to hear fewer details about traffic. Choose **Experienced** to only hear the important stuff, such as flags that are being waved, and when you're clear of other trucks. Select **Professional** when you really don't need the spotter interrupting your concentration. He'll leave you alone to watch pit road speeds and other trucks yourself. Click **Off** if you want to shut that guy up and handle it all yourself.





By adjusting the **Speech** slider, you can control the volume of the spotter's voice, relative to other sounds. Values between 0-50% adjust the sound level of the spotter's voice, with 50% being max volume. Values over 50% decrease all other sounds, collectively, so the spotters voice is heard above everything else.

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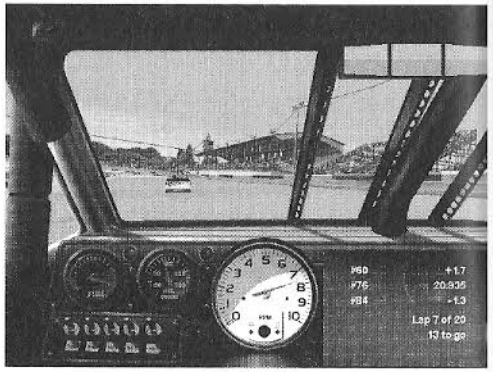
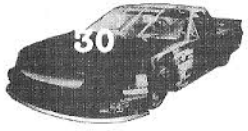
Using The Onboard Radio



In addition to receiving information from your spotter, you can communicate with your pit crew via the onboard radio. According to NASCAR rules, each truck is allowed to carry a two-way radio inside. The driver's microphone is activated with a push button mounted on the steering wheel; NASCAR Craftsman Truck Racing simulates this effect by using function keys on your keyboard. By pressing a function key, you can receive current truck setup information, order adjustments you'd like made during the next pit stop, or view critical performance information.

For instance, press the **"F1"** key on your keyboard as you drive. You'll see a box appear superimposed over the right-side of your dashboard. This box contains pit board information, such as the current lap number, number of laps remaining, the speed of your most recent lap, and interval data concerning the truck immediately ahead of or behind you (in this case, you're on the seventh lap of a twenty lap race; you completed the sixth lap in just under 21 seconds. You trail truck #60 by 1.7 seconds, while you lead truck #84 by 1.3 seconds.



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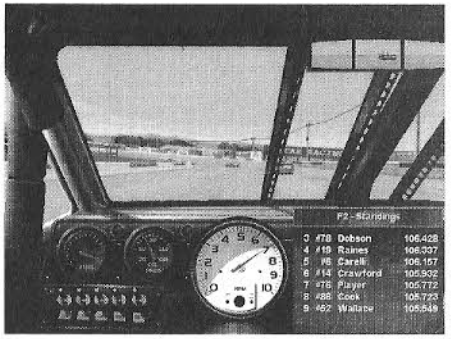
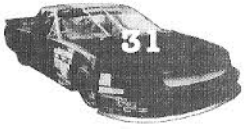
View Standings

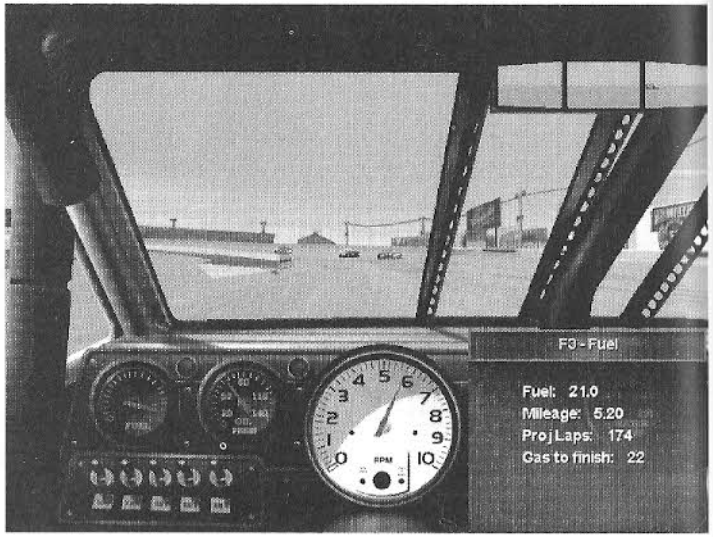


Hit the **"F2"** radio key to view current session standings as you drive. In **Practice** sessions, this is a handy way to compare your efforts with the rest of the field prior to qualifying; use this key in **Race** sessions to find out who you've got to hunt down, and who is pursuing *you*.

Use the **Greater Than (">")** and **Less Than ("<")** keys to scroll up or down the list, through the entire field. Note that this list is constantly updated as you drive, so if you want to read the whole thing, you should probably wait for a caution lap or hit the **Pause ("P")** key.

By pressing the **"ENTER"** key, you can toggle this display to show you seven primary trucks- the three ahead of you on the track, your truck, and the three trucks immediately behind you on the track. Drivers shown in red are one or more laps ahead of you in the standings, drivers displayed in green are at least one lap behind you, while drivers shown in white are on the same lap that you are. Your name is shown in yellow.





Fuel Information

Hit the **"F3"** radio key to receive a comprehensive fuel mileage report from your crew. The amount of fuel remaining in the tank, projected laps before you run out of fuel, and current fuel economy (mpg) are each displayed. In addition, you can adjust the **"Fill To"** value to the amount of gas you'd like put in the tank during your next pit stop, using the **Greater Than (">")** or **Less Than ("<")** keys. *Your crew chief will conservatively calculate the amount of fuel you need on each pit stop. The "Fill To" display shows you how much fuel your crew chief has ordered the crew to pour in during the next pit stop.*

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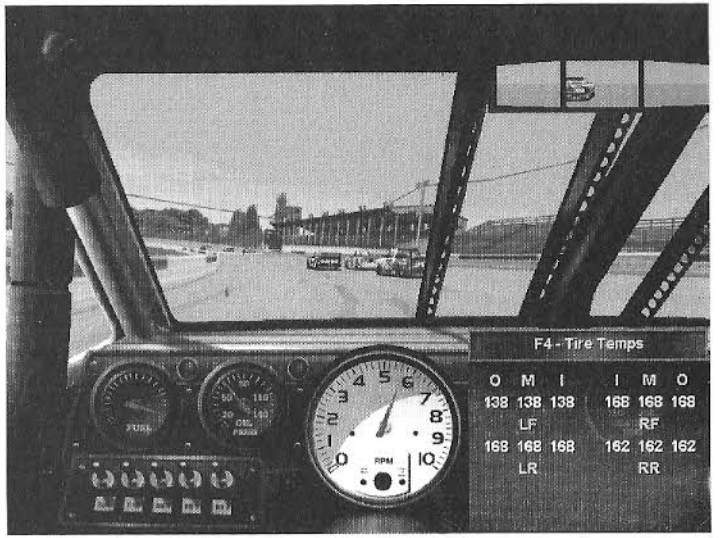

View Current Tire Temperatures

You can view the current temperatures of each of your truck's tires, while you drive. Outer, Middle and Inner temps of each tire are displayed when you press the **"F4"** radio key. Temperatures displayed in white text are within the "safe operating" range. Mildly high temps are shown in yellow text, while red digits indicate dangerously hot temperature readings. Looking at the display as it appears superimposed over your dashboard, note that the tire temperatures are arranged as if you were viewing your car from a camera high above. The left-front temps are in the upper left corner, the right-rear temps are in the lower right, and so on. Unless you are on a traffic-free straightaway, you should probably use the **Pause ("P")** key prior to scoping out the temp readings.

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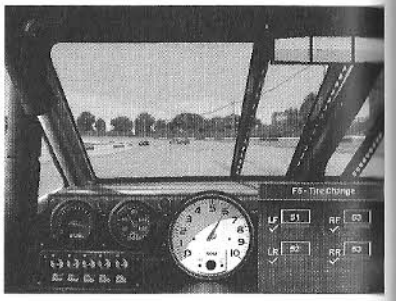
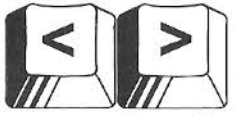
Specify Tire Changes



Using the **"F5"** key, you can display a box that allows you to relay tire changing instructions to your pit crew. Any changes you specify will be carried out during the next pit stop; with the Halftime feature enabled, undamaged tires may only be changed during the halftime break. By default, you will always receive four fresh tires when you pit, so you only need to radio ahead if you'd like otherwise. A bar graph beneath each tire shows you the current condition of the tire. Green bars indicate fresh rubber, yellow bars mean excessive wear, and short red bars alert you that you'd better pit for new tires quickly.



Select each tire with the **"SPACE"** bar. Use the **Greater Than (">")** and **Less Than ("<")** keys to raise or lower the air pressures in the new tires that will be put on. A checkmark appears beneath each tire that will be changed. Use the **"ENTER"** key to specify tire changes as follows: Press once to remove all checkmarks, thus telling your crew not to change any tires; press a second time to select left side changes only; press **"ENTER"** a third time to order right side tire changes only; press **"ENTER"** a fourth time to reinstate all checkmarks, thus ordering every tire changed.

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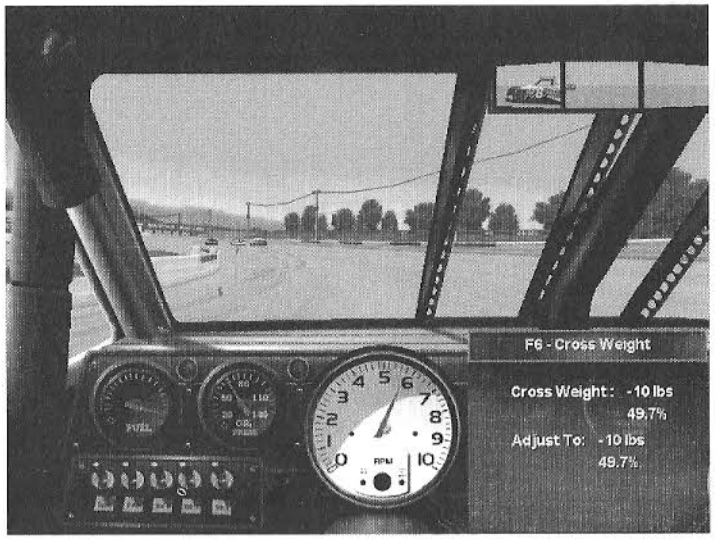
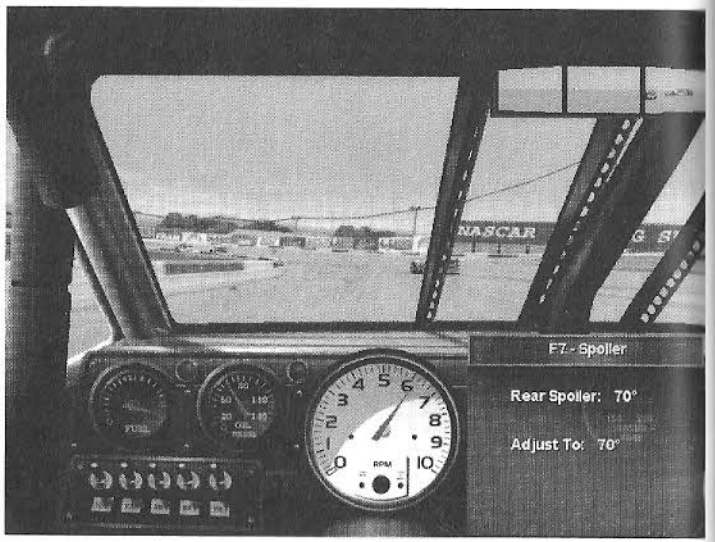


Specify Cross Weight Adjustments

If your truck is in need of a quick chassis wedge adjustment, use the **"F6"** radio key to inform the crew ahead of time. Specify the amount of cross weight you'd like to add or remove from the truck; one of your crew members will perform the adjustment during your next pit stop.

Use the **Greater Than (">")** and **Less Than ("<")** keys to increase or decrease the amount of wedge desired. If your truck feels too loose out on the track, increasing the wedge setting in the pit may correct the problem. However, keep in mind that as you increase the wedge setting, your right-front tire will also undergo more stress as a result.

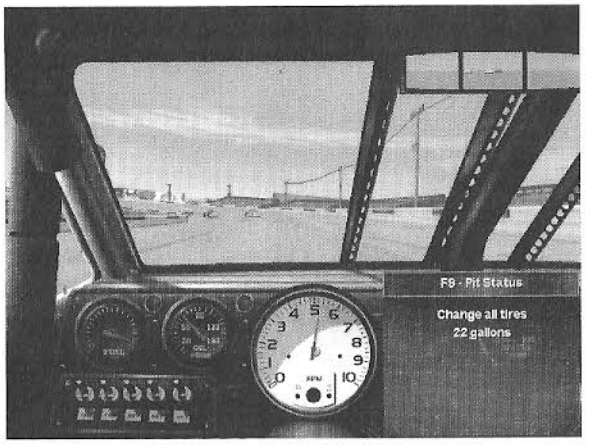


Specify Rear Spoiler Adjustments

Using the **"F7"** radio key, you can instruct your crew to change the rear spoiler angle during the next pit stop. Use the **Greater Than (">")** and **Less Than ("<")** keys to select the angle you want the spoiler adjusted to; using a mallet, a crew member will bend the spoiler to the desired angle *(must be between 40 and 70 degrees)*.

If you need more top speed, you may want the angle reduced; if you need more control, you may want the spoiler angle raised. Try not to call for drastic spoiler adjustments, as this could have an unpredictable effect on your car's handling; instead, work with five-degree increments.

Next Pit Stop Status



Switch on the **"F9"** radio key to see a list of what duties your crew will perform during the next pit stop. If you gave specific instructions regarding tire changes, fuel or other adjustments, this information will be confirmed in the lower right corner, superimposed over the dashboard. If your truck has received damage to the bodywork, you will see the phrase **Repair Damage** displayed. Use the **"ENTER"** key to toggle this phrase to **Do Not Repair Damage** if you don't want the crew to fix the wreckage. While you are in the pits during a yellow flag period, your spotter will keep you up-to-date regarding the pace car's whereabouts. If the pace car is about to lap you, you can press the **"F9"** key to display **Pit Status**, and hit the **"ENTER"** key to immediately cease repairs. Your crew will then release the jack so you can beat the pace car across the start/finish line without being lapped. You may then continue repairs during the next pit stop.

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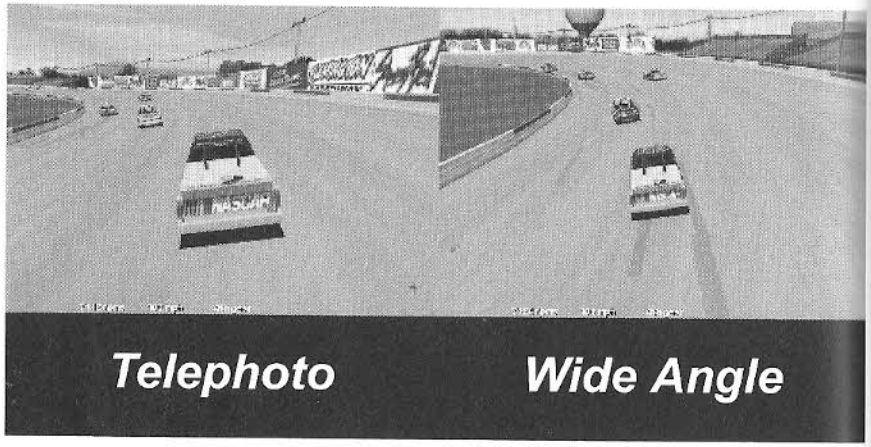

Arcade Driving Views

By pressing the **"F10"** key, you can drive from an **Arcade** perspective, instead of the realistic cockpit view. The first time you press **"F10,"** you leave the cockpit in favor of an angle overhead and to the rear of your truck. A second press of the **"F10"** key widens the angle for better viewing. Press **"F10"** a third time to return to the traditional cockpit view.

You can use change viewpoints with the **"F10"** key at any time while driving. Using an **Arcade View**, you will still receive some instrument data, superimposed on the screen, but you will not be able to see secondary gauges, such as *Water Temperature*.

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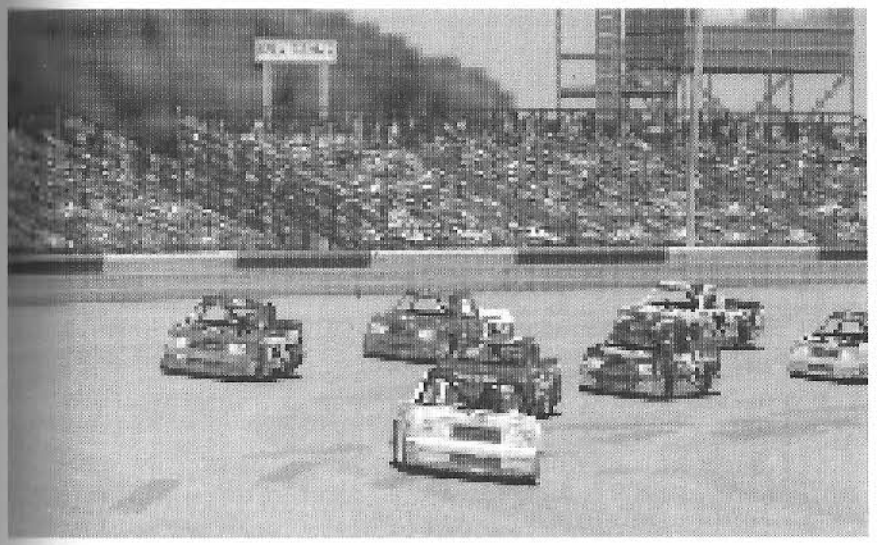

Following The Pace Truck

On the **Quick Race** menu, there is a checkbox that enables/disables the prerace **Pace Lap**. With the **Pace Lap** on, the entire field will drive one warmup lap before mashing the gas and going racing. During the pace lap, you must keep your truck in double-file formation. If you pass an opponent, your spotter will try to help get you back into the appropriate position; if the green flag waves and you're out of position, you'll be penalized with a black flag.

Likewise, during caution periods you must remain in position; the lead-lap trucks must follow the pace car single-file on the outside, while lapped vehicles must line up single-file on the inside. You can enable/disable yellow flags on the **Quick Race** menu. Note that if you disable the **Pace Lap** and **Yellow Flags**, the pace car won't appear at all.

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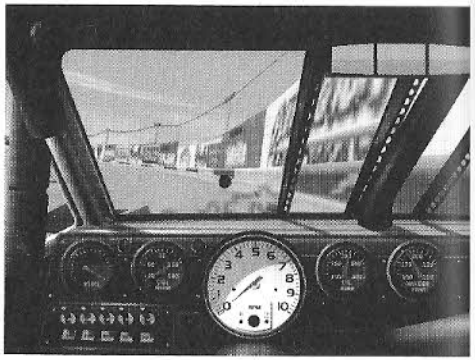
Getting A Tow



ALT I

If your truck is too banged up to make it back to the pits, you can press **"ALT-I"** to call for the tow truck. You must come to a complete stop before requesting a tow. Your truck will be towed back to your pit at a very slow speed (hey- it's a tow truck for crying out loud!); if the engine is still in good working order, your crew will repair the truck so you can get back onto the track as soon as possible.

SHIFT R

Your spotter will inform you if you are receiving towing service. If the engine is destroyed, you will automatically be towed back to your pit, but your truck cannot be fixed in time to resume the current race. You do have the option, however, of clicking on the **Accelerate Time** feature (on the **Race Weekend** menu) to view the outcome of the race. Or, press **"SHIFT-R"** to restart the current session.

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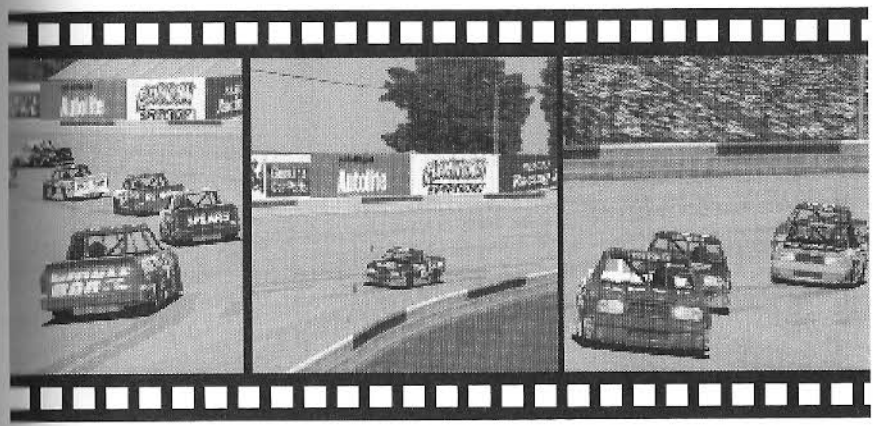

"Wow! Can We See That Again?" How To View Instant Replays

NASCAR Craftsman Truck Racing lets you relive your greatest driving exploits, thanks to a powerful replay system. Numerous television cameras are stationed around each track, covering the action from every angle imaginable. In addition, each racing truck has wireless micro-cameras mounted onboard for added viewing enjoyment.

You can view replay footage from any of the camera angles provided; in addition, you can see all of these camera angles from any truck on the track. This gives you over 300 possible replay angles to enjoy, at any single moment!

Replays consist of video "frames," up to thirty of these per second on the fastest computers. *The length of each replay depends upon how much RAM your computer has.* Using a VCR-like interface, you can review daring passes, fantastic spins and heroic victories..."Pass the popcorn, will ya?"

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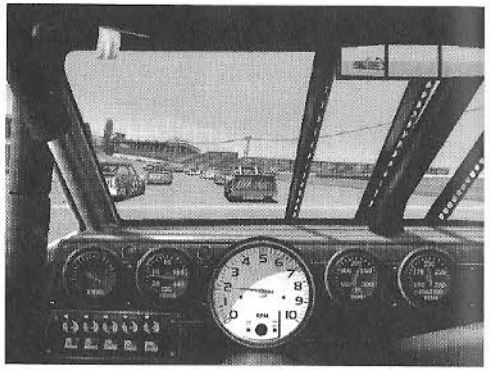
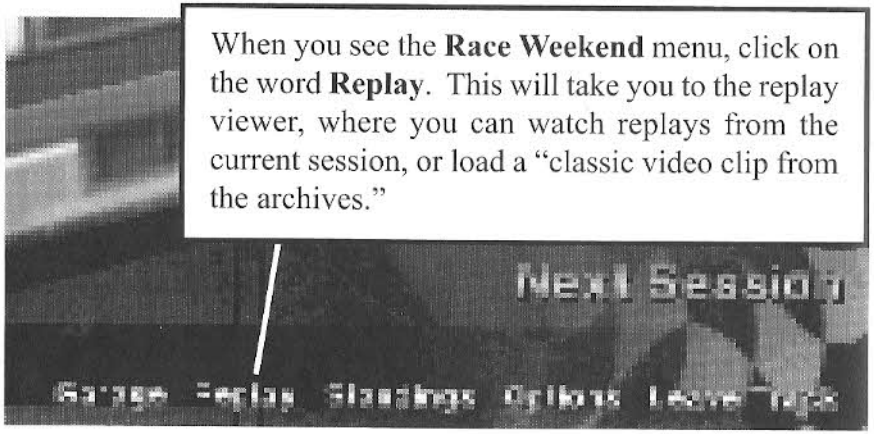
To momentarily pause the live action and view replay footage, press the **"ESCape"** key. Don't worry about losing your current track position- when you return to the cockpit, you'll pick up right where you left off.





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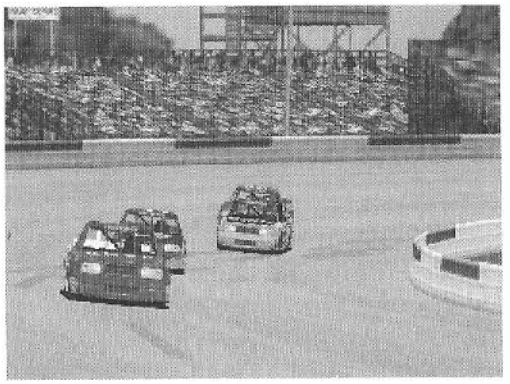
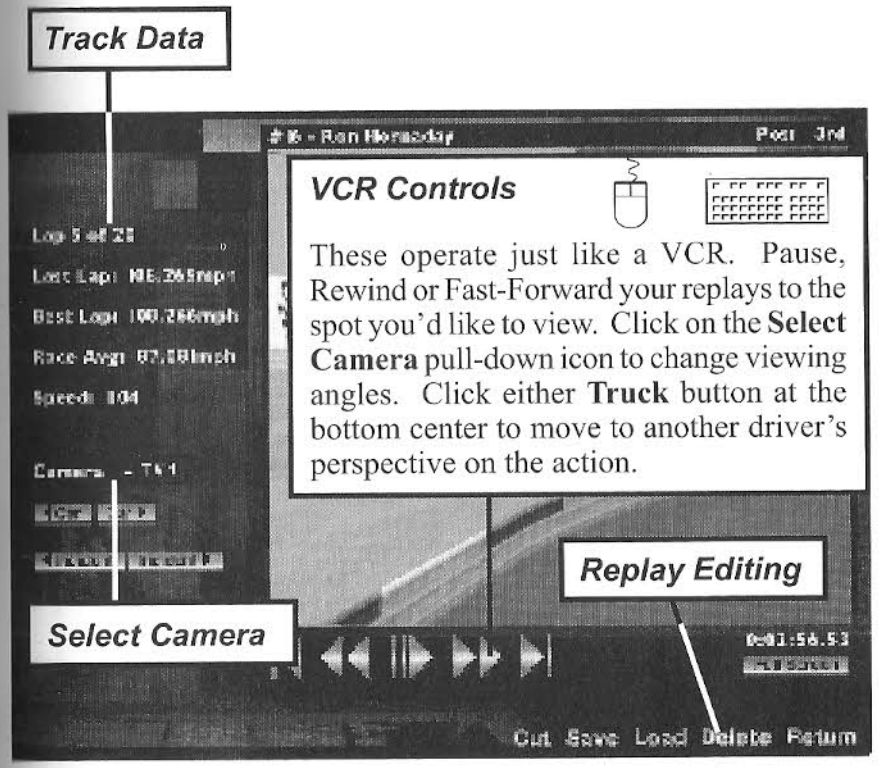
The Instant Replay Viewer





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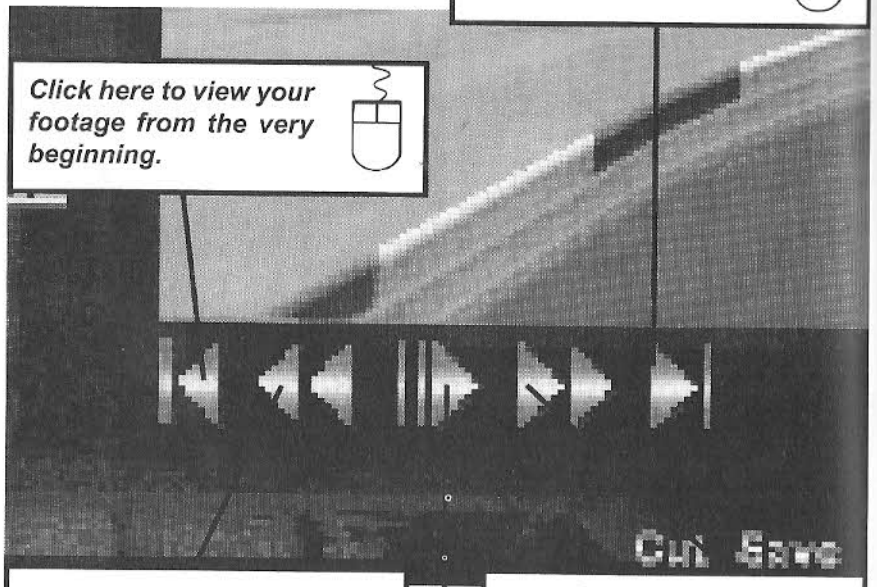
VCR Controls



Click here to skip your footage to the very end.

Click here to view your footage from the very beginning.

Click and hold to quickly rewind. Short, single mouse clicks step the footage backward, one frame at a time.

Click and hold to quickly fast-forward. Short, single mouse clicks step the footage forward, one frame at a time.

Click to toggle between real-time playback and freeze-frame. If the footage is moving, click here to freeze the action for a closer look. If the footage is paused, you can "roll tape" with a single mouse click.

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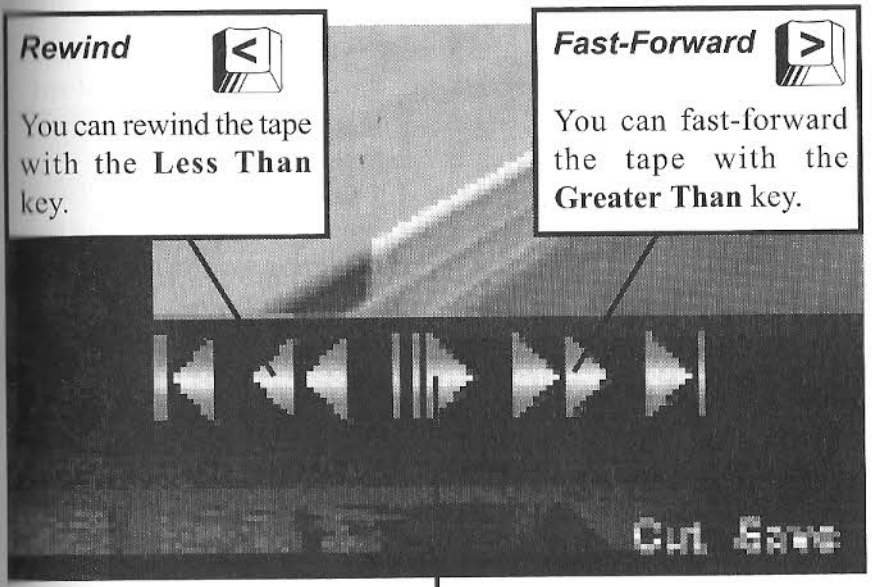
VCR Keyboard Shortcuts



Rewind <

You can rewind the tape with the **Less Than** key.

Fast-Forward >

You can fast-forward the tape with the **Greater Than** key.

Play/Pause SPACE

You can start or stop the replay tape with the **SPACE** bar.

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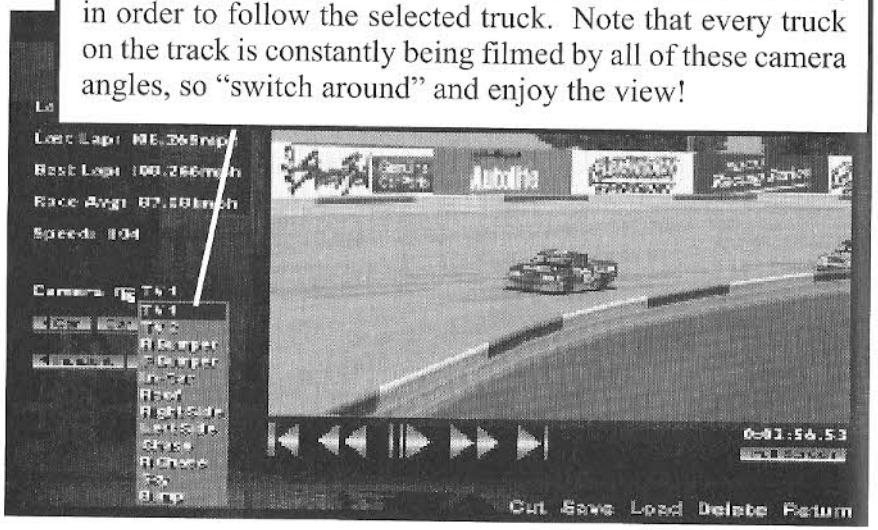
Checking Out The Best Camera Angle

Click on the pull-down icon next to the word **Camera** to see a list of available camera angles. Drag the selector downward to scroll through the list (there are more camera angles than can be displayed on the list at one time). Choose a new camera angle, and the replay footage will automatically switch to it. You can also use the keyboard shortcut to change cameras; press the **"C"** key to step forward to the next camera angle, or press **"SHIFT-C"** to step backward through the list.

The **TV1** and **TV2** angles represent a network-quality telecast; it's as if a TV Director were cutting from camera to camera, in order to follow the selected truck. Note that every truck on the track is constantly being filmed by all of these camera angles, so "switch around" and enjoy the view!



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Selecting Vehicles

In addition to viewing multiple camera angles covering your truck, you can also view all of these same angles as they cover every other truck on the track. Just click on either of the **Car** buttons to advance to the next truck ahead, or back to the next truck behind. Keep clicking one of the **Car** buttons to cycle through the entire field of trucks. You can also use the keyboard shortcut key to save time. Press the **"V"** key to advance through the field of trucks. Press **"SHIFT-V"** to step backward through the field of trucks.

Finding Wrecks

Click on either **Incident** button to skip forward or backward to the next wreck. You can also press **"I"** to move forward to the next incident, or **"SHIFT-I"** to step back to the previous incident. These buttons are inactive if no accidents currently exist on the replay tape.

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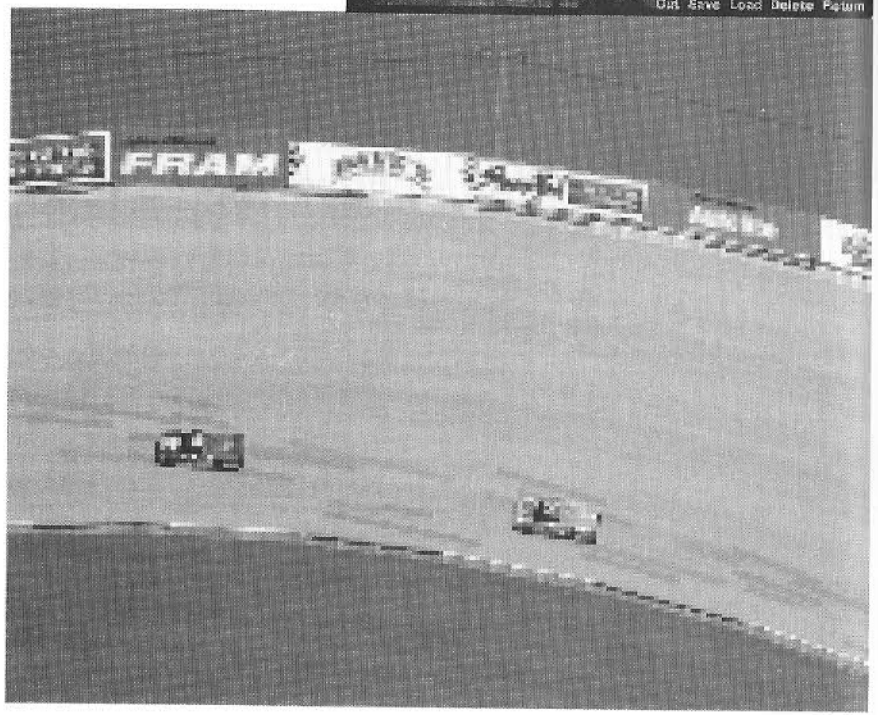
Big Screen TV

Click on the **Full Screen** button to get a bigger view of your replays. All VCR controls, track data and other buttons are removed from the screen while you get the big picture. When you want to return to the normal replay window, press **"ESCape."**



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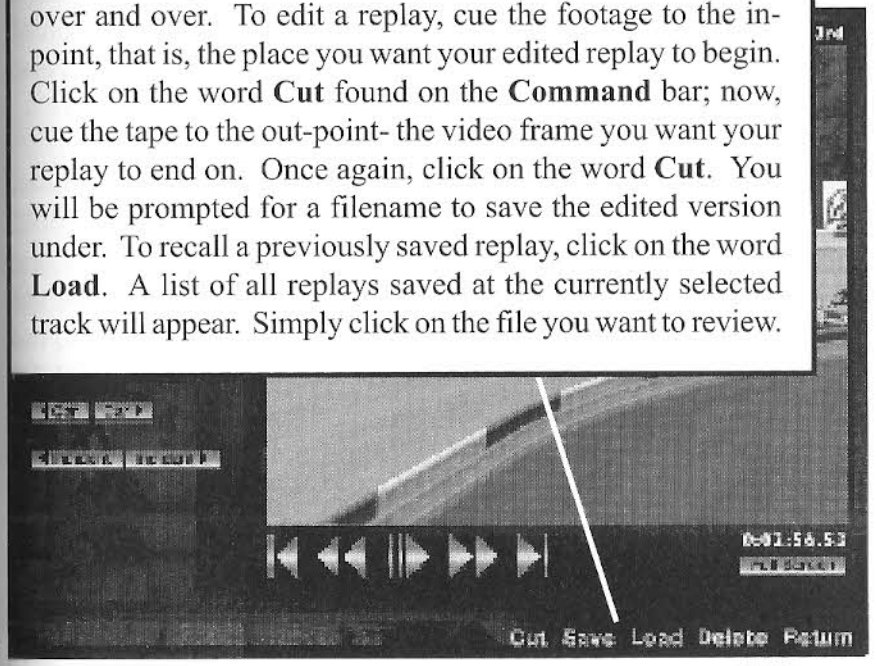
Saving, Loading And Editing Replays

You can **Save** replays of your greatest NASCAR moments to disk in order to impress your friends and settle bets. Just click on the word **Save**, found on the **Command** bar along the bottom of the replay screen. You should be aware of the fact that replays can be quite large in file size; a few of these on your hard drive can gobble up several megabytes faster than you can say, "Ron Hornaday." For this reason, you might want to chop out all the stuff you don't want to keep in your replay file; that way, your highlights will only have the crashes, passes or dashes you want your friends to see over and over. To edit a replay, cue the footage to the in-point, that is, the place you want your edited replay to begin. Click on the word **Cut** found on the **Command** bar; now, cue the tape to the out-point- the video frame you want your replay to end on. Once again, click on the word **Cut**. You will be prompted for a filename to save the edited version under. To recall a previously saved replay, click on the word **Load**. A list of all replays saved at the currently selected track will appear. Simply click on the file you want to review.



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Competing For The NASCAR Season Championship

There is only one thing each driver wants more than a race- the NASCAR Craftsman Truck championship. The road to the season title begins in February, and ends in November. At the conclusion of each race during the year, points are awarded to the top forty drivers, based upon their individual finish in that event.

The winner of each race is awarded 175 NASCAR series points, while the fortieth-place finisher only picks up 43 points. In addition, five bonus points are awarded to each driver who leads at least one lap, while five more bonus points are awarded to the single driver who lead the most laps in that event. At the end of the season, the driver possessing the highest number of total points is crowned the NASCAR Craftsman Truck Champion. In addition to a hefty bonus, this driver can expect endorsement opportunities, excellent race sponsorship and the admiration of every other driver in truck racing.

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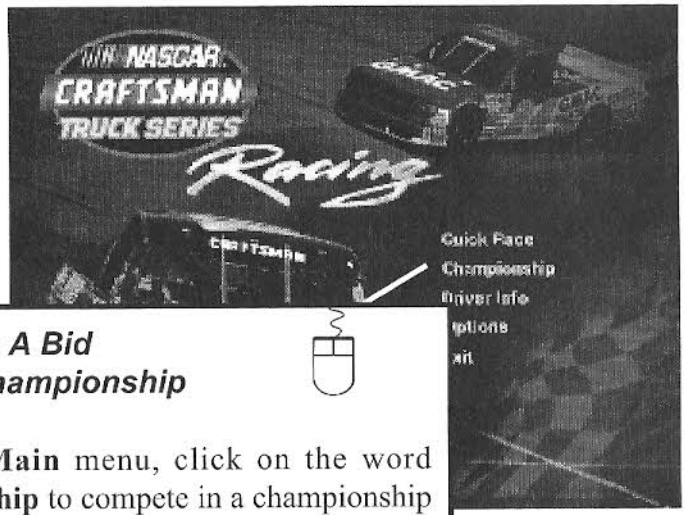

Launching A Bid For The Championship

From the **Main** menu, click on the word **Championship** to compete in a championship season. This will open the **Championship** menu, where you can begin a **New Season**, **Continue** an existing **Season**, **Delete** a **Season** no longer needed, or **Return** to the **Main** menu.

When you begin a new season, you'll compete at all of the tracks that are currently installed on your computer, in order of their actual occurrence on the NASCAR Craftsman Truck Series schedule. For example, you cannot skip ahead to the Louisville race, without first competing at Portland and the other events that are held earlier in the season.

Each event consists of **Practice**, **Qualifying**, **Warm Up** and **Race** sessions. At the conclusion of each event, points are awarded based on order of finish. The table on the following page shows how the points are distributed.

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NASCAR Craftsman Truck Points System

1st.....175	15th.....118	29th.....76
2nd.....170	16th.....115	30th.....73
3rd..... 165	17th.....112	31st.....70
4th.....160	18th.....109	32nd.....67
5th.....155	19th.....106	33rd..... 64
6th.....150	20th.....103	34th.....61
7th.....146	21st.....100	35th.....58
8th.....142	22nd.....97	36th.....55
9th.....138	23rd..... 94	37th.....52
10th.....134	24th.....91	38th.....49
11th.....130	25th.....88	39th.....46
12th.....127	26th.....85	40th.....43
13th.....124	27th.....82	Lead 1 Lap.....5
14th.....121	28th.....79	Ld Most Lps....5

Before you start a **Championship Season**, set all of the **Realism** and gameplay **Options** to your liking. *Once the season starts, these cannot be changed.* For example, if you set the **Race Length** to 30%, and the **Opponent Strength** to 95% prior to the first race, all races staged during that season will be 30% in length, with opponents competing at a 95% skill level.

You may save as many seasons as you'd like; so if things aren't going well during one season, skip ahead to the next one by creating a **New Season.** Click on **Delete Season** to remove past seasons from memory- something a lot of drivers wish they could do!

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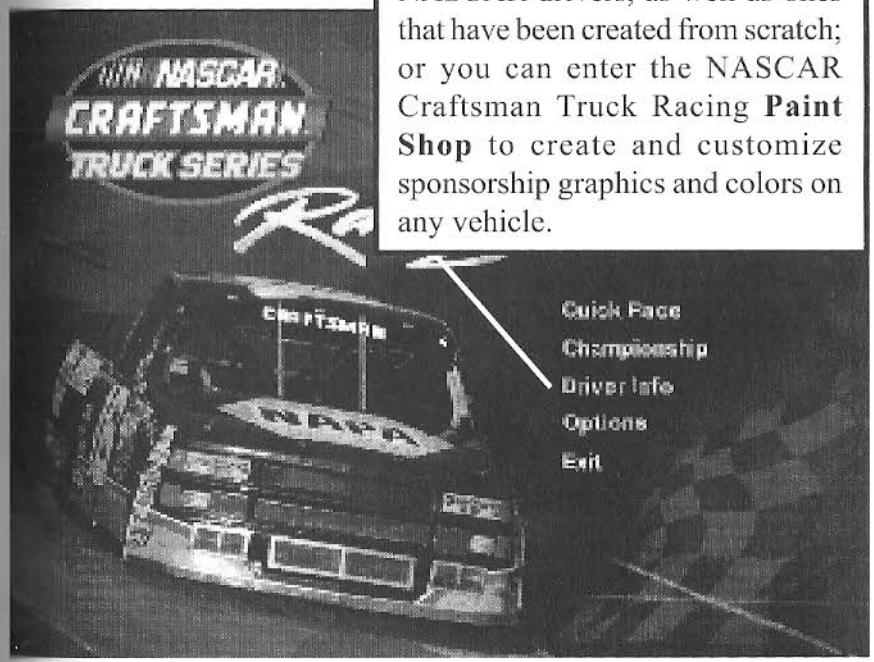
Getting To Know The Opposition

Driver Info

From the **Main** menu, click **Driver Info** to access information and utilities regarding your computer opponents. From the **Competitor List** menu you can build and save **Entry Lists**, allowing you to compete against any combination of drivers you want; you can digest **Info** and stats on your favorite NASCAR drivers, as well as ones that have been created from scratch; or you can enter the NASCAR Craftsman Truck Racing **Paint Shop** to create and customize sponsorship graphics and colors on any vehicle.



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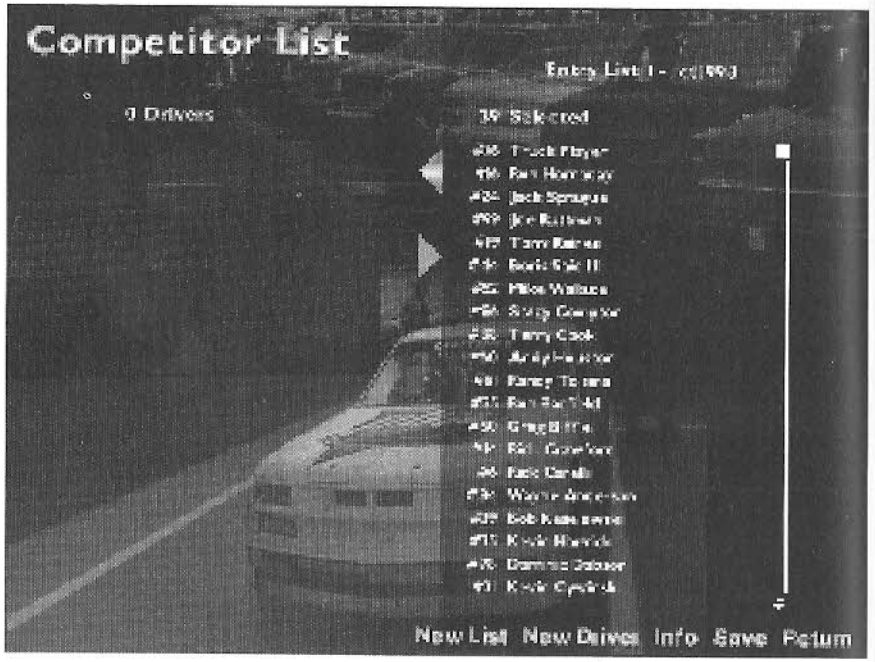
Working With Entry Lists



When you click **Driver Info** from the **Main** menu, the **Competitor List** screen will appear. This menu allows you to put the drivers you want to race against into one handy list. Build and save as many **Entry Lists** as you'd like. When you're ready to go racing, just select the existing **Entry List** you want to compete with- that's all there is to it! To find out more about how all of this **Entry List** stuff works, just check out the following pages.

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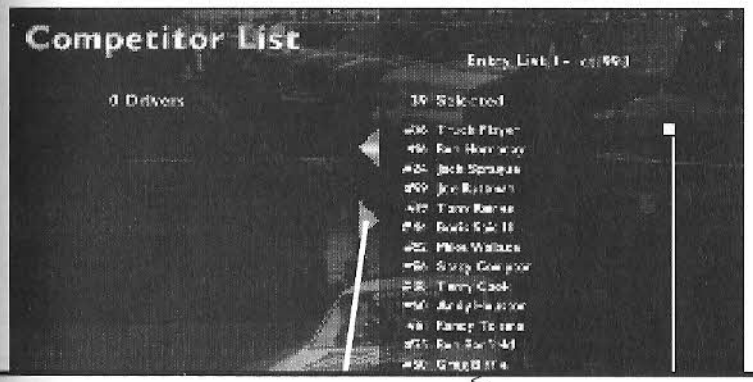

Shuffling Drivers

In the upper right corner of this screen, there is a pull-down list of all **Entry Lists** that exist on your system. Click on **Entry List** pull-down tab to reveal all of the lists that are currently available. Select the list you want to use; it now becomes the active **Entry List** used when you head for a track. The box on the left contains the names of all of the drivers currently in existence on your computer. To make a new **Entry List**, select an existing driver from within the box on the left. Next, click on the arrow icon pointing toward the right- this will move the selected driver's name into the box on the right, thus adding that driver to the **Entry List**. Select a name from within the right-side box and click the left arrow icon to remove a driver from the **Entry List**. Use the scroll bars on either box to see all of the drivers available. You can also use the "<" and ">" keys on your keyboard to scroll the driver's position on the list.

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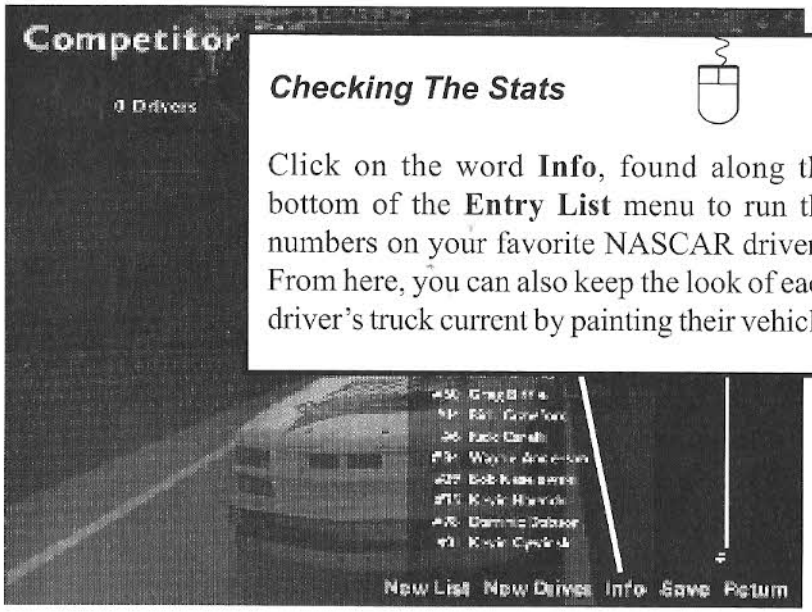
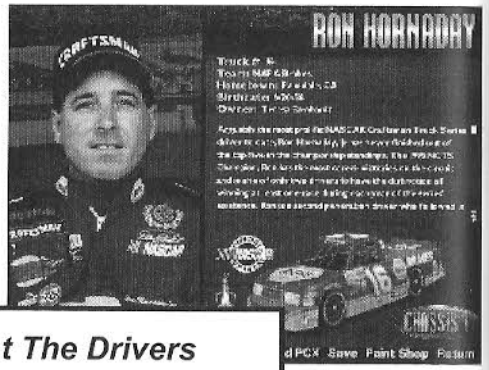


Checking The Stats

Click on the word **Info**, found along the bottom of the **Entry List** menu to run the numbers on your favorite NASCAR drivers. From here, you can also keep the look of each driver's truck current by painting their vehicle.



Getting A Good Look At The Drivers

Check out full color portraits of all your favorite drivers- Hornaday, Sprague, Ruttman, they're all here.

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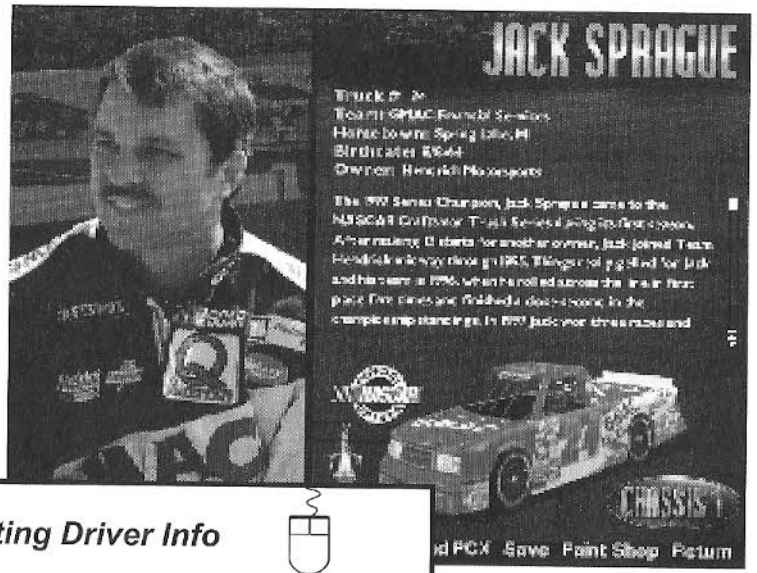

Digesting Driver Info

Click on the **Bio** button to read about your favorite NASCAR drivers. The **Stats** button lets you view career totals of the selected driver. Press the **Skill** button to access the ratings assigned to the selected driver, for use in NASCAR Craftsman Truck Racing. The **Team** button gives you information on the current driver's owner and operation. Past Champions also have a replica of the title holder's trophy beside their portrait. And of course, each driver's truck is displayed alongside in a 3D perspective.

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Editing Drivers

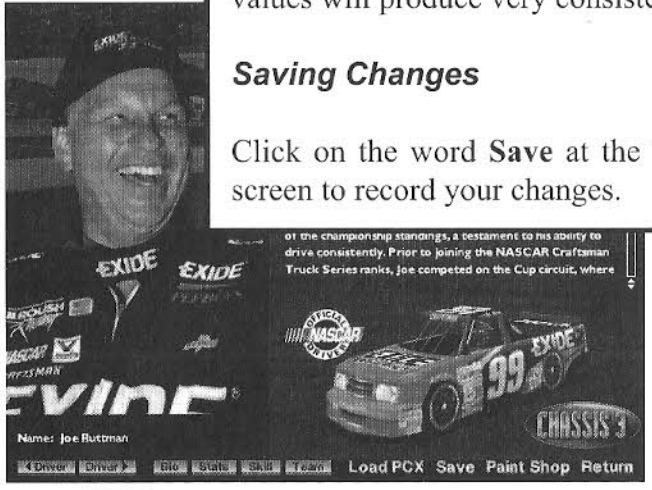
Click on the driver's **Bio** and type anything you want in the box. Select the **Skill** button and click on the ratings that are displayed, in order to edit them.

Editing Driver Ratings

To change a driver's ratings, there is one thing to keep in mind. Aside from the obvious strengths of the ratings themselves, each rating has a low and a high value (between 100 and 900). The greater the difference between these values, the less consistent the current driver will perform. Smaller increments between these two values will produce very consistent results.

Saving Changes

Click on the word **Save** at the bottom of the screen to record your changes.



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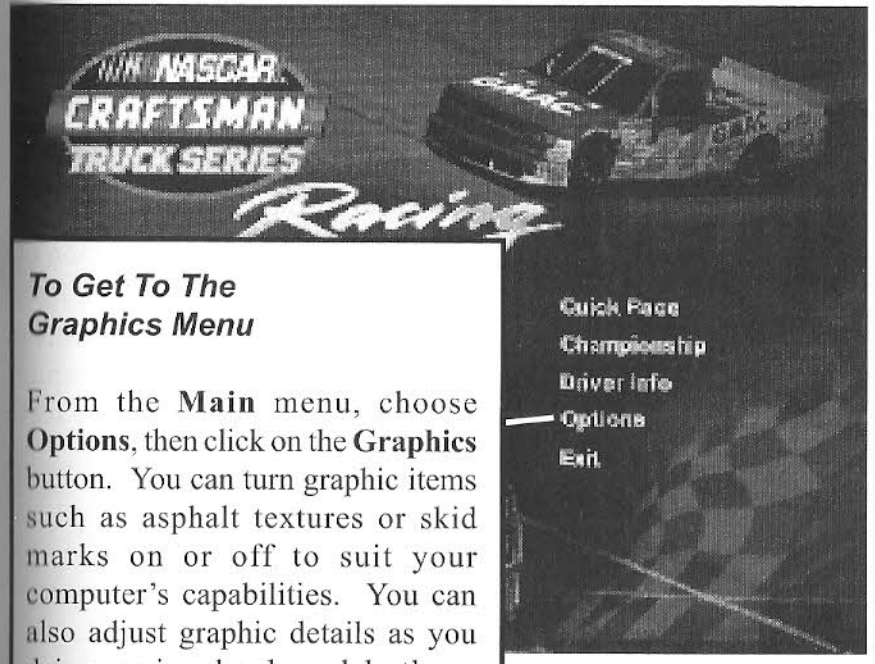
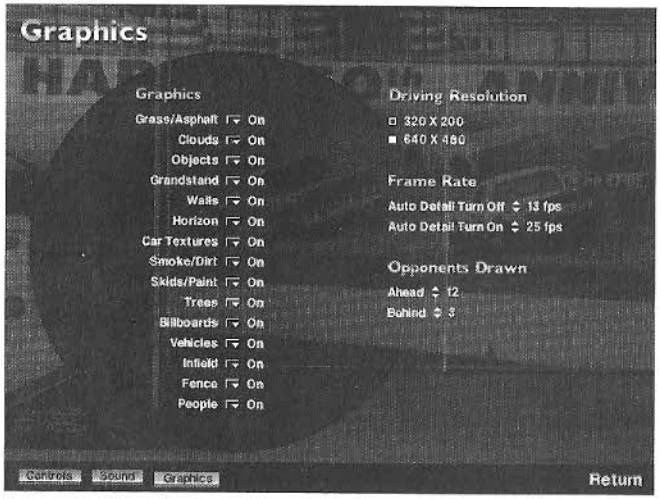
Graphic Details
Improving Frame Rate



To Get To The Graphics Menu

From the **Main** menu, choose **Options**, then click on the **Graphics** button. You can turn graphic items such as asphalt textures or skid marks on or off to suit your computer's capabilities. You can also adjust graphic details as you drive, using keyboard hotkeys described in this section. Owners of slower computers may need to turn one or more graphic features off, in order to achieve smooth animation.



On the **Graphics** menu, you'll find all of the necessary controls to achieve the "frame rate" (animation smoothness) you want. Textures are listed on the left-hand side, and may be toggled **On/Off**, or set to **Auto**. Textures that are set to **Auto** will toggle themselves on or off, depending upon the current frame rate.

While you are driving relatively free of traffic, you may notice that the animation is smooth. However, as you encounter heavy traffic and more grandstands, etc., the animation could become too choppy to drive. By switching certain textures to **Auto** mode, you can have the computer constantly manage the frame rate for you. On the right-side of the **Graphics** menu, you'll see **Minimum** and **Maximum Frame Rate** settings. By adjusting the **Minimum** setting, you're telling your computer when to begin turning textures off. So, with a **Minimum** setting of 12, your computer will begin switching off textures if the animation runs at fewer than 12 frames per second.

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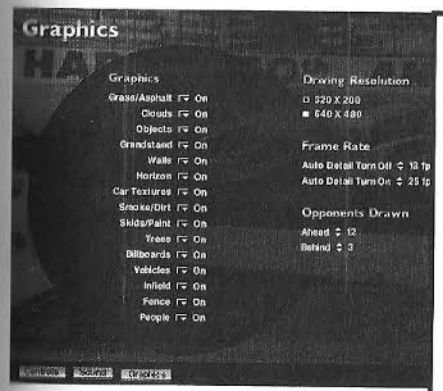
The **Maximum Frame Rate** setting tells your computer at what speed to begin turning textures back on. For example, you've got your **Asphalt** texture set to **Auto**, a **Minimum Frame Rate** setting of 12, and a **Maximum** setting of 24. As you drive into heavy traffic, the frame rate slows down below 12fps and the computer turns the **Asphalt** texture off. You still see the pavement, of course, but it's a solid color now. You no longer see the cracks and discolorations of the roadway. As you continue driving, let's assume you reach a point where there is very little traffic. When the frame rate reaches 24fps or better, **Asphalt** is switched back on by the computer. As you can see by this example, the **Minimum** and **Maximum** frame rate settings do not tell the computer how fast to run the simulation, but rather at what speeds to toggle on/off textures set to **Auto**.



Choose the screen resolution that's best for you. Slower machines may require 320x200 resolution in order to run smoothly. Note that this setting only affects on-track action, not game menus. You can also minimize the **Opponents Drawn** settings (how many cars you can see on the screen at once) to speed up animation.

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Improving Your Frame Rate (Animation Speed)

NASCAR Craftsman Truck Racing is extremely flexible, so that you can enjoy the best frame rate possible on your machine. Below, you'll see a handy list of the various ways you can customize the frame rate to suit your needs:

1. Textures: Turn some or all of them off to increase the frame rate. From the **Main** menu, choose options. Choose **Graphics**, then turn on/off textures as desired.

2. Number Of Opponents: Racing against fewer trucks increases the frame rate. From the **Quick Race** menu, choose **Number Of Opponents**. Reduce the number as desired.

3. Number Of Trucks Drawn Onscreen: The fewer the number of trucks your computer must draw at a single time, the faster your frame rate. From the **Main** menu, choose **Graphics**. Adjust the number of **Opponents Drawn**, both **Ahead** and **Behind**.

4. Number Of Trucks Heard: The fewer number of engines your computer must audibly recreate at one time, the faster your frame rate. From the **Main** menu, choose **Sound**. Adjust the **Opponents Heard** setting to the desired number.

5. Driving Resolution: Use the 320x200 setting instead of 640x480. This only affects track action, not game menus.

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Graphic Keyboard Hotkeys

1	Asphalt/Concrete/Grass	**On/Poly**
2	Sky Textures	**On/Poly**
3	Object Textures (except crowd)	**On/Off/Poly**
4	Crowd Textures/Empty Grandstands	**On/Poly**
5	Wall/Armco Textures	**On/Poly**
6	Horizon Textures	**On/Poly**
7	Truck Decals	**On/Poly**
9	Road Lines/Skid Marks	**On/Off**
0	Trackside Trees	**On/Off**
CTRL B	Trackside Billboards	**On/Off/Poly**
CTRL C	People (excluding Pit Crew)	**On/Off**
CTRL F	Trackside Fencing	**On/Off**
CTRL L	Infield Objects	**On/Off/Poly**
CTRL V	Infield Vehicles (RV's)	**On/Off/Poly**

Use the hotkeys listed above to adjust graphic details as you drive. Using these hotkeys overrides any selections you've made via the **Graphics** menu.

The NASCAR Craftsman Truck Racing Paint Shop

And Now A Word From Our Sponsors

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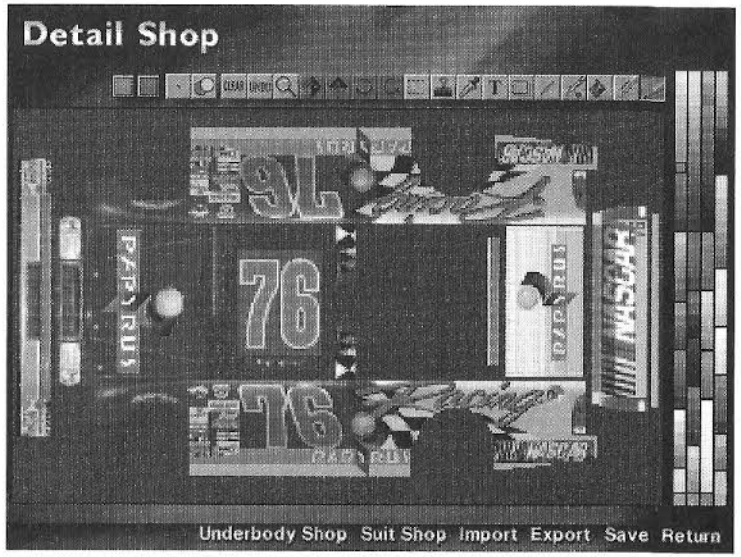

Painting Your Truck

With the NASCAR Craftsman Truck Racing **Paint Shop**, you have the power to create many different sets of trucks and save each vehicle under any filename you wish. Use the **Paint Shop** to make all of the current season's paint schemes or to create your own radical designs; you can make and store various collections of opponent trucks, or several different paint schemes for your own truck. These trucks can then be loaded from within NASCAR Craftsman Truck Racing, or swapped with friends via disk or modem.

Since you create **Entry Lists** from your pool of existing drivers for each race or season, you might wish to create some of the commemorative paint schemes for your own events.

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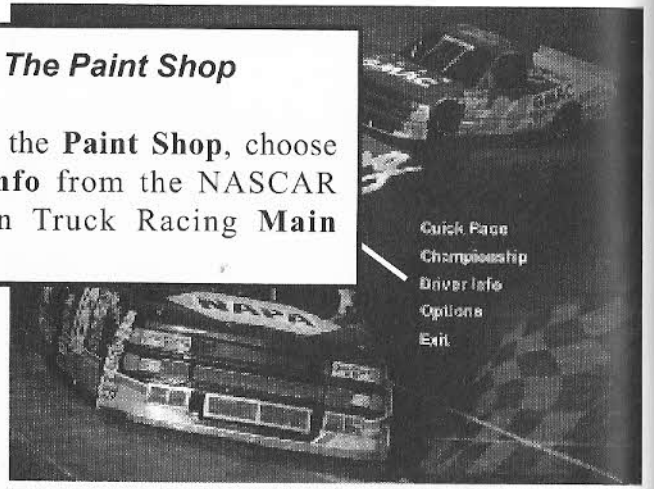
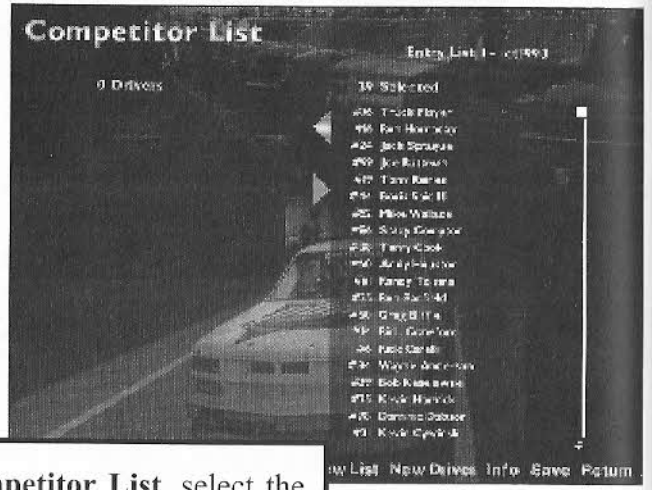
Entering The Paint Shop

To access the **Paint Shop**, choose **Driver Info** from the NASCAR Craftsman Truck Racing **Main** menu...





From the **Competitor List**, select the driver of the truck you wish to paint, or create one from scratch by clicking on the words **New Driver**, found at the bottom along the **Command** bar...

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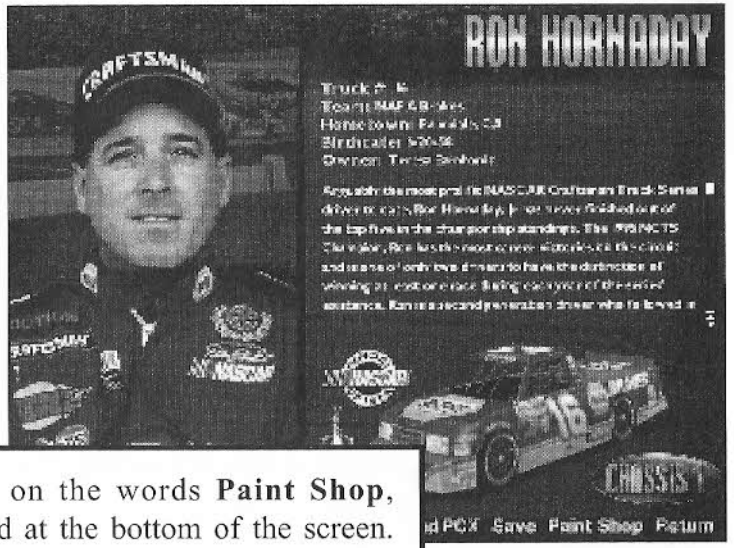
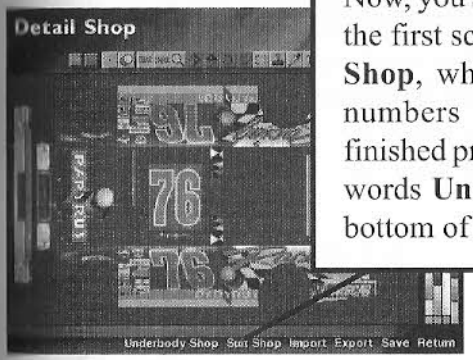


Click on the words **Paint Shop**, located at the bottom of the screen. This will take you to the NASCAR Craftsman Truck Racing **Paint Shop**...



Now, you should be in the **Paint Shop**; the first screen you'll see is the **Detail Shop**, where you can apply decals, numbers and other graphics to the finished product. For now, click on the words **Underbody Shop** found at the bottom of the screen.

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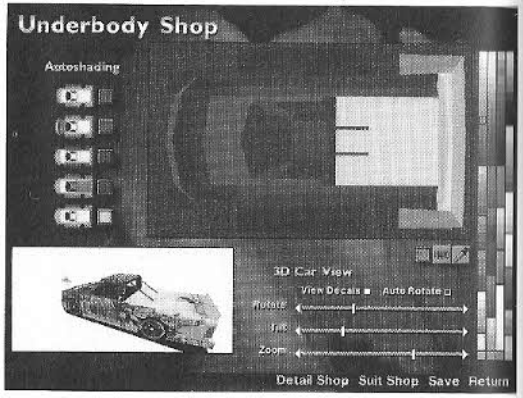
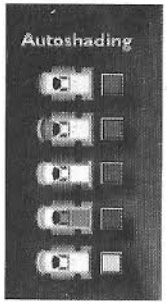
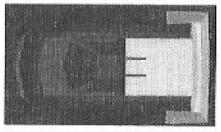
Using The Underbody Shop





Autoshading area

3D Truck View



Workspace

Use the **Underbody Shop** to paint the "base coat" colors of your truck. If you turn **Truck Textures** off, these base coat colors will show instead; therefore, you'll want them to resemble your truck's overall design for consistency. Also, certain parts of your truck cannot be texturized; the colors of these parts are determined with the **Underbody Shop**.

To add realistic shading to your truck's base coat, click your mouse button a color in the palette; now click your mouse on one of the five **Autoshading** buttons found on the left side of the **Underbody Shop**. To view your truck's design in its present state, drag the **3D View** sliders left or right; the 3D picture of your truck will rotate accordingly. The length of the rotate and tilt sliders represents one full rotation of your vehicle. Check on the **Auto Rotate** box to set the sample truck in a continuous spin. For accurate paint matching, use the **Eyedropper (Get Color Tool)** to "pick up" colors from the truck's body shown in the **Workspace**.

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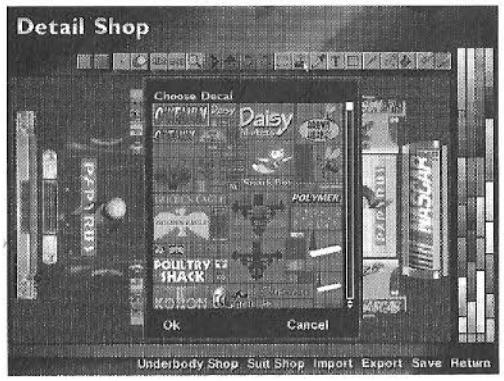
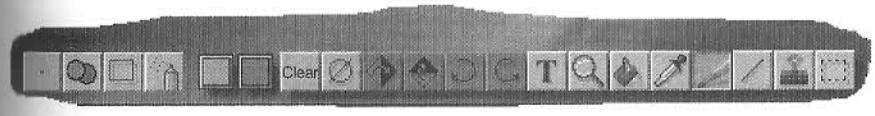
Adding Decals, Numbers And Logos



To add finishing touches to your truck, click on the words **Detail Shop**, found along the bottom of your screen. The **Detail Shop** contains several handy tools to polish off your design, with virtually any design you could concoct. If you've used other computer-based paint programs, you'll probably get a feel for the **Detail Shop** right away. If you haven't, fear not- painting trucks is easy, and you won't have to clean any mess up when you're done!



Using The Detail Shop Tools

The heart of the **Detail Shop** is the **Tool Bar**, found at the top of the screen. With these tools, you can add and rotate text, artwork, numbers and truck body parts to your design. On the following pages, we'll examine each of these tools and their functions.

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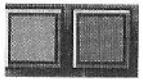
Brush Thickness- Click on this button to reveal a pull-down menu of available brush widths. Simply choose the thickness you'd like to use.

Tool Setting- Click on this button to reveal a pull-down menu of three tool types: 1.) Blend, for complete coverage, 2.) Anti-aliasing, to remove jagged edges, or 3.) Smear, to help achieve a more natural look without involving Foreground or Background colors.

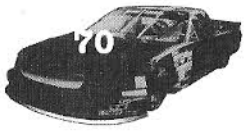
Draw Shapes- Use this tool to draw squares, rectangles and ovals. Click the right mouse button over the Shape button to reveal different shapes you can choose. Next, position the mouse cursor over the truck part in the workspace where you want to start the shape. Click and hold the mouse button as you drag the shape to whatever size you desire, even across several truck parts. As with other drawing tools, holding down the left button to draw the oject produces a shape with the foreground color; using the right mouse button draws a shape with the currently selected background color.

Airbrush Tool- Use this tool to create spraycan effects on your truck. Choose a color with either mouse button, position the cursor over the body part you want to paint, and hold the mouse button down to apply spray.



Color Selections- Click your left mouse button on the color palette to load a foreground color, which will be displayed in the left Color Selection box. Click your right mouse button on the color palette to load a background color, which will appear in the right-hand Color Selection box. When you paint, use the left mouse button to apply foreground color, or use the right mouse button to apply the selected background color.

Clear Button- Press this button to clear all textures off the truck. Use this when you first create a new truck, or want to start the whole thing over.



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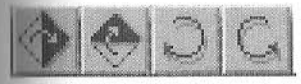
Undo Button- Click this button to Undo the most recent action taken. Click it once again to change your mind and redo the action.



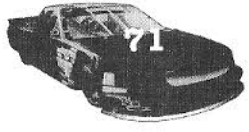
Flip and Rotate Buttons- Click one of the Flip buttons to invert the selected item, horizontally or vertically. Click one of the Rotate buttons to spin the selection in 90-degree increments, either clockwise or counter-clockwise.

Text Tool- Click on this to reveal a text window. Inside the text window, you can choose from a variety of typefaces and sizes. The text will appear in the current foreground color. After you type your text, use the Flip and Rotate buttons to produce the orientation you want, then drag the selected text over the appropriate truck part, and into position.

Zoom Button- Click this button to get in close, for fine, pixel-to-pixel work. Click on this button again to return to normal viewing size.

Fill Tool- Click on this tool to get the paint bucket icon. Position the icon over a truck part, and click the left mouse button to fill with the foreground color. Click the right mouse button to fill with the background color.

Get Color Tool (Eyedropper)- Choose this tool, then position the cursor over a truck part that has the color you want to "pick up." Whatever color is beneath the cursor when you click the left mouse button will be stored as the foreground color. Click the right mouse button instead to "pick up" a background color.



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Freehand Drawing Tool- Choose a color, click on the pencil button, and start drawing! Adjust the Brush Width and Opacity with the appropriate buttons.

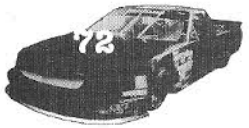
Line Tool- Choose a color, click on the line tool and position the cursor over a truck part where you want to start the line. Click once with the left button to draw with the foreground color, once with the right to use the background color. Drag the line in the direction you want, then click a second time to release the cursor and keep the line. Like the Freehand Drawing Tool, you can adjust the Brush Width and Opacity levels with the appropriate buttons.

Decal Stamp Tool- Right-click on this button to reveal a window of available decals. Select the decal you want to apply, and position it over the truck part where you want to stamp it. Use the Flip and Rotate buttons to adjust the decal's orientation. Click the left mouse button to affix the decal in place.

Select Tool (Marquis)- With this tool, click the left mouse button, and drag the marquis over the truck part or area you want to copy into memory. To recall the selected graphic, click on the Stamp toool with the left mouse button.

Detail Shop Drawing Tips

You can draw matching lines across several truck parts at once with the **Line Tool**. For example, start a line at the top, on the truck's right-side in the parts window. Drag the line straight down, so that it crosses the truck's roof and left-side. Use the **Detail Shop** tools to draw gas caps, hood pins, air ducts and other bodywork features on your truck.



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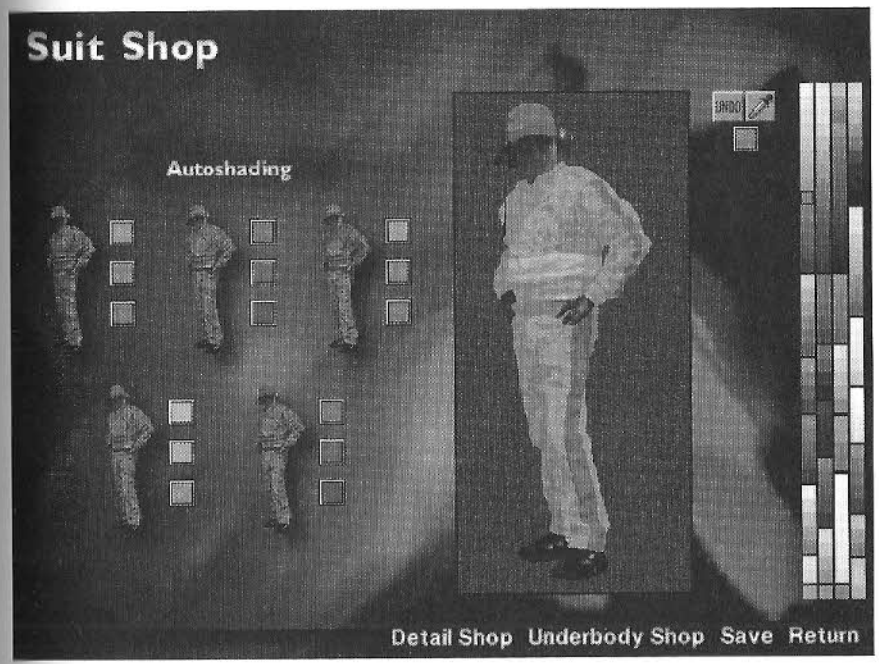
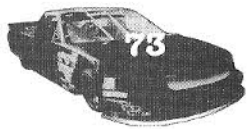


Painting Uniforms

Click on the words **Suit Shop**, at the bottom of the screen to give your pit crew a fashion look that keeps the sponsors happy. Choose a color from the palette, and click on one of the **Autoshade** buttons to apply it to the uniform. Continue through each item until the crew is properly adorned.

Tip: Try to use three different shades of the same color for each item listed. This will give you professional results almost every time.



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Evergreen Speedway

The Tale Of The Tape:

Length:	0.646 Miles
Banking:	Turns at 8 Degrees
	Straights at 4 Degrees

Qualifying Record:
100.397 mph (23.164 secs.)
Set May 9, 1997
by Rich Bickle
Race Average Record:
81.286 mph (200 Laps)
Set May 11, 1996
by Mike Bliss

One of the largest, most unique racing facilities found in the Pacific Northwest, Evergreen Speedway is located in Monroe, Washington. The track has hosted NASCAR Craftsman Truck Series events since the inception of the series in 1995.

Evergreen Speedway is the site of various weekly racing programs, including NASCAR Super Stock, Minis, Bombers and Figure Eights.

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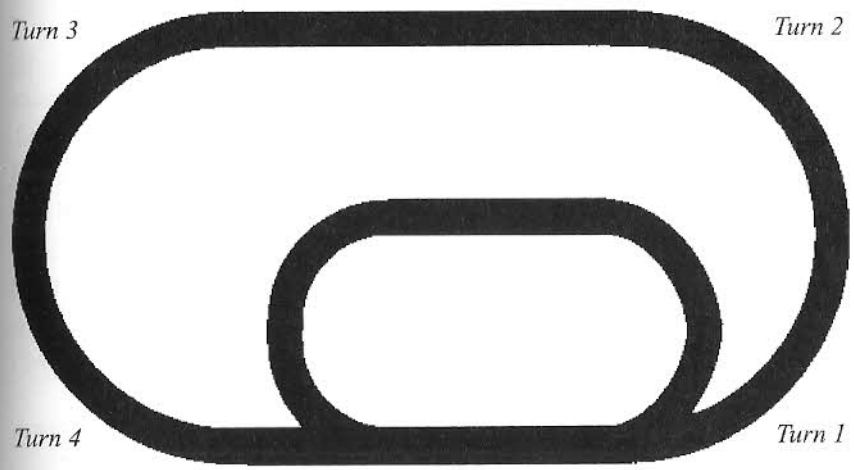
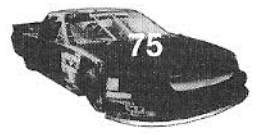
Evergreen Pit Notes From Jack Sprague:

"Evergreen's surface doesn't have much grip; you need soft rear suspension. And for a short track, the front end needs to be pretty stiff. You have to stay 'hooked up' all day, you can't get loose or you'll wear the rear tires out.

"That's probably the biggest key to Evergreen- keeping the back end underneath you all day long."





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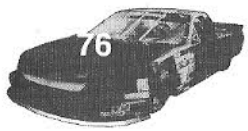
A Lap Around Evergreen With Jack Sprague:

"At the flagstand going down the front straightaway, stay out at the wall. Coming into turn one, you need to lift earlier than you think you should. I'm not gonna say you need a lot of braking, because you need to let the truck sort of 'float' in there. At Evergreen, you kind of let the vehicle drift up about a lane in the center of the corner; get the truck turned and aiming for the bottom of the race track coming off turn two- I actually clip the grass coming off turn two, with the left front tire.

"Feed it as much throttle as you can until you get wide-open without hitting the outside wall. You need to do all of this without getting loose. Go down the backstretch against the outside wall.

"Going into turn three you can actually stay out at the wall, lift a little earlier than you think you should once again; now you can run across the apron- that's the way I do it. Again, let the truck drift up a little bit in the center, maybe not quite as much as you did in one and two. Turns three and four aren't quite as sharp as one and two. I come across the apron out of four, feeding it as much throttle as I can without getting loose. Get back out against the outside wall and back across the start/finish line."



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Flemington Speedway

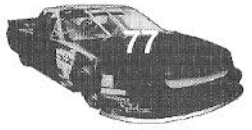
The Tale Of The Tape:

Length:	0.625 Miles
Banking:	Turns 1 & 2 at 6 Degrees
	Turns 3 & 4 at 8 Degrees

Qualifying Record:
119.408 mph (18.843 secs.)
Set August 9, 1997
by Terry Cook
Race Average Record:
98.232 mph (200 Laps)
Set August 9, 1997
by Ron Hornaday

Flemington Speedway is located in Flemington, New Jersey, and has hosted NASCAR Craftsman Truck Series races since the series' initial season in 1995. The track held its first auto race in 1915, hosting a yearly race during the local fair. Lighting was installed in 1955 and since then, the speedway has staged weekly events. Originally a dirt track, the surface was paved in 1991.

Fast Fact: The first official NASCAR Craftsman Truck Series race was held at Phoenix on Feb. 5, 1995. Mike Skinner edged Terry Labonte for the win.



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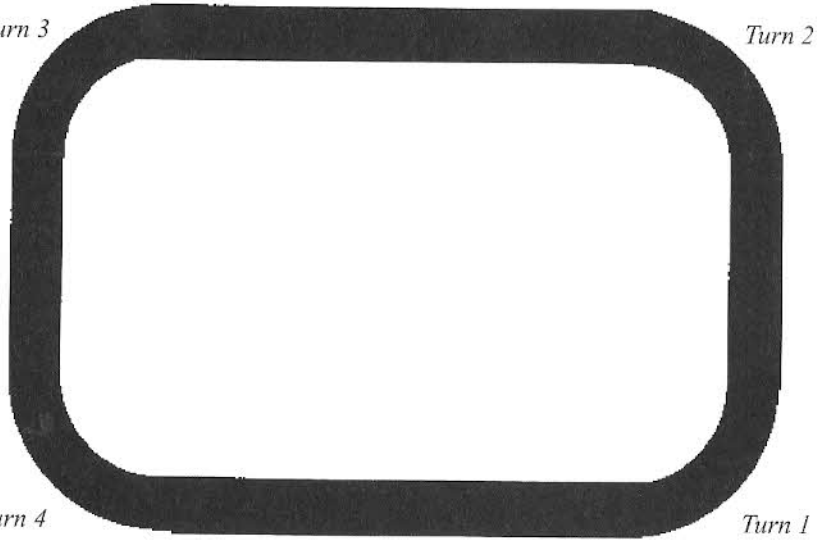
Flemington Pit Notes From Jack Sprague:

"Flemington is like racing around the inside of a cereal bowl; It's very slippery, and you never can get wide-open. To me, you ought to be able to get wide-open somewhere. Here you need a soft setup, front and rear, because you're turning the whole 'way around- there's no straightaway whatsoever.

"In the motor, run a very high fourth gear; you don't want to turn any rpms because once again, you're never really wide-open and it's very easy to spin the tires."



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A Lap Around Flemington With Jack Sprague:

"At the start/finish line, you're already turning and going into one. Lift off the throttle. There's guard rails around the inside of this race track- you just miss the guardrail with the left front fender. Give it a little bit of gas again. You drift up at Flemington probably two, maybe three truck widths, up to the outside. Lift a little bit, feed it a little throttle, turn again, just miss the guardrail coming off turn two.

"Feed it about half throttle; as you're going down the backstretch you're turning, and you're out at the outside. Probably feed it about three-quarters throttle- you're never wide-open at this place, it's a rhythm track. At the end of the back stretch, start aimin' toward turn three. Lift off the throttle some. Just miss the guardrail again with the left front fender goin' into turn three. As soon as you get to the guardrail again, you feed it a little throttle and let it wash to the outside of the race track.

"Feed it a little bit of throttle again and come off of turn four, just missing the guardrail. Going down the front stretch toward the start/finish line you might get to three-quarters throttle again and get in good."

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Heartland Park Topeka

The Tale Of The Tape:

Length: 2.1 Miles
Number of Turns: 14

Qualifying Record:
87.175 mph (1 min. 26.722 secs.)
Set July 26, 1997
by Joe Ruttman
Race Average Record:
74.433 mph (81 Laps)
Set July 27, 1997
by Joe Ruttman

Heartland Park Topeka is located in Topeka, Kansas. The road course is a favorite among NASCAR Craftsman Truck Series drivers due to its overall design- not quite as claustrophobic as many other road courses. The track is actually a multi-purpose facility that also hosts drag events.

Fast Fact: Ron Hornaday was the first NASCAR Craftsman Truck Series driver to win on a short track, road course and superspeedway in a single season.

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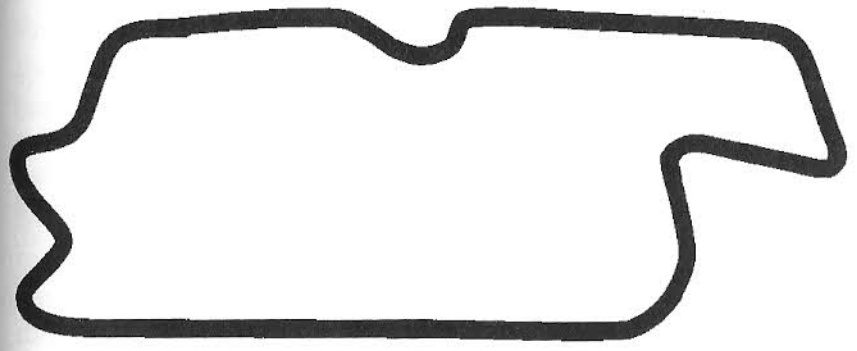
Heartland Park Topeka Pit Notes From Jack Sprague:

"Topeka's a nice race track. I just wish they could turn the heat down! It's been very hot the last two years we've been there. Topeka is a pretty simple road course...basic setup, equal suspension in the front, fairly soft; equal suspension in the rear. You don't have to be 'soft-soft,' you can be sorta 'medium-soft' I guess.

"We run a little more left side weight than right side; it's a left handed road course for the most part. The best passing opportunities are as you exit turn one, and outbraking them at the end of the straightaway, just past the inner loop. The only other spot I could see making a pass would be coming off the last turn, if someone gets loose- jump beside 'em going down the dragstrip and make the pass."



A Lap Around Heartland Park Topeka With Jack Sprague

"Past the flagstand down the front stretch, you're in fourth gear goin' toward turn one. I go to the 'number two' sign, brake hard and downshift to third. Turn one is a left hander, slightly uphill. Keep the vehicle tight against the left side of the race track as you make the turn and go up the hill. As soon as you crest the top of the hill, brake hard and downshift to second. Turn two is a right hander; just clip the curb with the right front tire; the truck will wash out to the left side of the race track.

"As soon as you get the truck turned, still in second gear, you feed it throttle and get the left side tires on the ripple strip. You get wide open and drive back to the right side of the race track. Turn three is a slow left hander; hard braking, downshift to first gear and turn left, just clipping the curb once again with the left front tire. Let the truck run out to the right side of the race track. It's very slippery coming off of turn three.

"Shift up to second; turn four is a left hander, and it's uphill a little bit, and off-camber. Clip the curb with the left side tires. It's kind of a long, sweeping corner. Just as you get out of turn four, you're heading toward the right side of the race track. Grab third gear, you've got a short straightaway. Just as you hit about nine-thousand rpms on the straightaway, brake very hard, and downshift to second. This is what they call the 'Inner Loop.' You make a hard left, almost ninety degrees, very slow. As soon as you turn left, you have to turn back to the right once again. Go over the curbing with the right side tires. It's a long sweeper to the right; going through there is second gear and quite slippery.

"Feed it some throttle as you come off, and there's some ripple strips on the left side. Run your truck just up on those strips with the left side tires. As soon as you get up on them you have to turn left again and shift to third gear, and then you've got another short straightaway, uphill."

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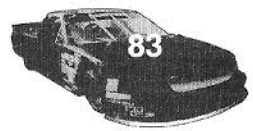
"As soon as you crest the top of the hill, brake hard, downshift to second gear and prepare for the left hander. It's not a slow corner, it's like a medium speed left hand turn; turn in but don't hit the curbing. You can feed it full throttle down short straightaway. Brake and turn right, still in second gear. You can feed the truck full throttle again once you get through this right hand turn, but just for an instant.

"As soon as you get wide open, you've got to lift again, brake, and there's a rather sharp, slippery left hand turn. Still in second gear, I run right around the bottom of this corner with the left side tires against the curbing. You can't feed the truck a lot of throttle here until you get it straightened back out. Still in second gear, you're going downhill toward the second-to-last corner, a right hand turn; stay on the left side of the race track, brake, downshift to first. In the middle of the turn let the truck drift back out to the left side of the track, then turn it back and drive toward the right side of the track on the very outer edge.

"Brake for the sharpest corner of the race track, the last corner. Still in first gear, bring the truck right down to the bottom of the race track against the curbing. When you get out of this turn, the track is very slippery; that's where the dragstrip starts. Feed it all the throttle you can and once you hit the dragstrip you've got pretty good adhesion. Run it up through the gears and you should hit fourth as you get to the start/finish line."



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I-70 Speedway

The Tale Of The Tape:

Length:	0.543 Miles
Banking:	Turns at 28 Degrees
	Front Straight at 4 Degrees
	Back Straight at 7 Degrees

Qualifying Record:
113.125 mph (17.280 secs.)
Set May 23, 1997
by Rich Bickle
Race Average Record:
82.725 mph (200 Laps)
Set May 24, 1997
by Tony Raines

I-70 Speedway is located in Odessa, Missouri. Inclement weather prevented qualifying from being held for the first race in 1995, but the speedway has been a fixture on the NASCAR Craftsman Truck Series since the initial season.

Fast Fact: The closest finish in NASCAR Craftsman Truck Series history happened at Colorado National Speedway on July 15, 1995. Butch Miller edged Mike Skinner by 0.0001-second to claim the victory.

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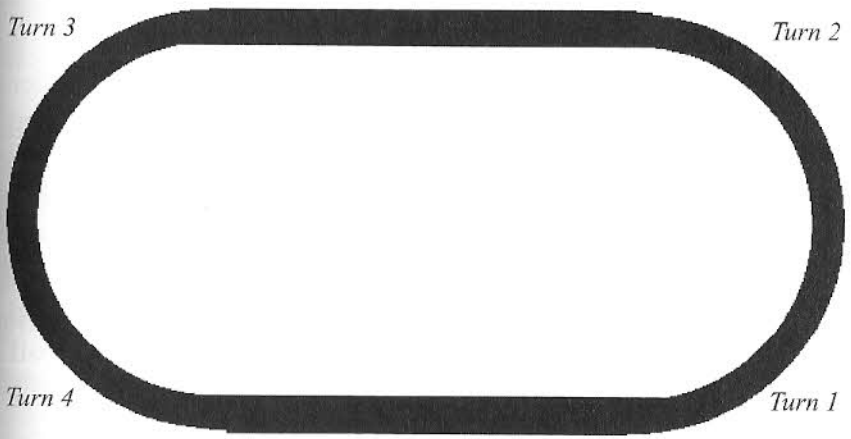
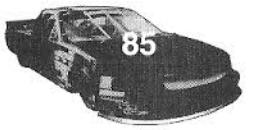
I-70 Pit Notes From Jack Sprague:

"I-70 has a very worn-out racing surface. It's a high-banked half-mile; very rough, but not as rough as Bristol. Bristol's the roughest track we run on. It takes a stiff setup in the front, but a soft setup in the rear.

"The key here is to keep the vehicle tight enough so as not to spin the rear tires and wear them out, because once you do that you just can't hang on. At a lot of places you can run loose and abuse the rear tires, but places like this and Seattle just chew the tires off.

"It's a very fast half-mile, and you run a lot of gear because you have to climb a hill out of both corners at Odessa."





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A Lap Around I-70 With Jack Sprague:

"Goin' into turn one, you dive straight for the bottom of the race track; the preferred line is right on the bottom against the white line. You can drive in pretty deep here at Odessa because of the banking, it'll hold you. Just before you get to the bottom of the race track, you lift and hopefully your truck goes in there and stays on the bottom. By the center of the corner, you can feed it back throttle and pretty much be wide-open before you get out of the corner.

"Comin' off turn two, bring it out to the outside wall. The backstretch actually has a little 'jog' in it- I don't want to say a dogleg, because it's not that obvious, but if you're not careful and you're runnin' along the backstretch wall, it turns back into the left. So I just run a lane down off the backstretch wall because it does jump back out there at you.

"Going into turn three, you have to lift at this corner a little earlier than going into turn one because it's a little flatter. Try to keep the truck on the bottom; in turns three and four, people tend to run a half a lane up in the center just because they can't keep it on the bottom. So if you have to let it drift up, fine. Get the vehicle turned and try to bring it back down to the white line with the left-side tires at the exit of turn four. If you've got the vehicle pointed straight, you can squeeze the throttle off quicker and come off harder, but if you're still turnin' you've got to wait on throttle because you're gonna get loose.

"Come off of turn four as straight as you can, and as hard as you can without spinnin' the rear tires, back up a hill once again and out to the frontstretch wall, and back across the start/finish line."

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Louisville Motor Speedway

The Tale Of The Tape:

Length:	0.438 Miles
Banking:	Turns at 12 Degrees
	Straights at 6 Degrees

Qualifying Record:
103.160 mph (15.285 secs.)
Set July 11, 1997
by Jimmy Hensley
Race Average Record:
68.358 mph (225 Laps)
Set July 12, 1997
by Ron Hornaday

Louisville Motor Speedway was built in 1987. Originally designed as a 3/8-mile oval with a Figure 8 course, the track was modified in 1993 to its present configuration. Located in Louisville, Kentucky, the speedway now features a unique D-shape that feels like one big, constant turn. Trucks rarely get wide-open, placing an emphasis on cornering speeds.

Fast Fact: Mike Skinner's victory at Heartland Park Topeka completed the first three-victories-in-a-row streak in NCTS history.

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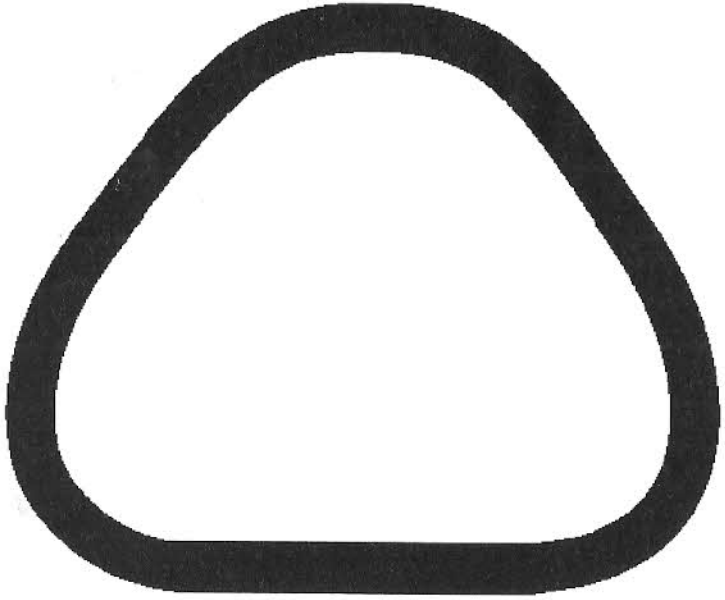
Louisville Pit Notes From Jack Sprague:

"Louisville's like Flemington; you look up 'bullring' in the dictionary, you'll find Louisville. I like a soft setup, front and rear, and a real high gear- no rpms whatsoever...don't spin the rear tires. It's very hard to pass- there's really only one good spot, and that's comin' off of turn one where you do manage to get wide-open just for an instant. If you can get underneath somebody there, that's about the only place you can pass if they're huggin' the bottom."



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A Lap Around Louisville With Jack Sprague:

"Across the start/finish line, you need to lift early and turn into one; It's a very tight turn. This is the only place you're gonna be straight on the race track at all. From the exit of turn two up to the back- the track turns, but you can actually run it almost straight. Get on the throttle, quick and hard, and be wide open maybe for a second or two.

"You run it up toward the back, which is a long sweeper that ends up back at the start/finish line. So, like I said, you run up the backstretch, lift off the throttle and get right on the bottom againt the grass; And from this point, all the way around to the start/finish line you're playin' with the throttle- on & off, on & off, on & off...never all the way on, never all the way off.

"You come off this sweeper, let the vehicle drift out maybe a truck-width, and from this point on it's downhill. You're still turnin' left, no more straightaways whatsoever; you're playin' with the throttle, feeding it a little, letting off a little. You come around to what they call the Front Straightaway, which is not really straight either, and there's curbing at the bottom. You just clip the curbing with the left front, once again playing with the throttle. When you get to the curbing you feed it a little throttle and run back past the start/finish line and lift again."

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Memphis Motorsports Park

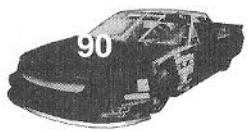
The Tale Of The Tape:

Length:	0.75 Mile
Banking:	Turns at 11 Degrees
	Front Straight at 4 Degrees
	Rear Straight at 3 Degrees

Qualifying Record:
119.792 mph (22.539 secs.)
Set September 12, 1998
by Greg Biffle
Race Average Record:
84.204 mph (200 Laps)
Set September 13, 1998
by Ron Hornaday

Memphis Motorsports Park is a new addition to the NASCAR Craftsman Truck Series schedule, hosting its first race during the 1998 season. When the complex was built in 1986 it featured a drag strip, road course and go-kart track. In 1997, the paved oval was constructed on the site of the original dirt track.

Fast Fact: Kenny Irwin became the first Rookie of the Year candidate to win a NASCAR Craftsman Truck Series race, at Homestead on March 16, 1997.



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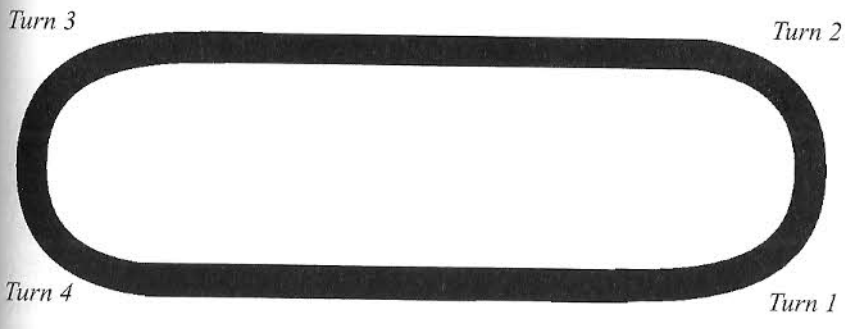
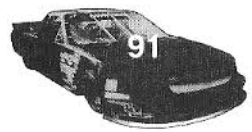
Memphis Pit Notes From Jack Sprague:

"Memphis to me is shaped like an egg. Turns three and four are very, very tight, while turns one and two make a broad, decent corner. We run medium stiffness in the front, a soft left rear, and medium stiffness in the right rear. It's a brand new race track."





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A Lap Around Memphis With Jack Sprague:

"The frontstretch is a dogleg; you run it against the outside wall. As you pass the start/finish line you're actually goin' downhill toward turn one. You bring it off the wall, and you can drive turn one fairly aggressive, not all the way to the corner before you lift, but fairly deep. Lift off the throttle, bring it to the bottom; you get into the corner and it kinda levels out as far as the banking goes. Stay right on the bottom. In turns one and two, by the time you get to the center of the corner you're off the throttle, but you can actually get back wide-open- feed it throttle but don't slam it...just feed it.

"Comin' off turn two, there's a lot of room there, enough to let the vehicle drift out to the wall; it's not a dangerous part of the race track whatsoever. Bring it out to the wall as you go down the backstretch.

"Turn three is very deceiving; I had a lot of trouble here during testing, I was driving too deep and couldn't get it turned. You need to lift very early. Into turn three, you're goin' downhill and you try to keep the truck as low as you possibly can. It's faster if you lift early, keep it on the bottom and get it turned in the center. Coming off turn four there's a lot of room because there's a dogleg on the frontstretch. So in the center of three and four, when you get the truck turned, drive it straight out toward the wall since you have a lot of room. Let the truck drift toward the outside wall as you head back down the frontstretch and past the start/finish line.

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Mesa Marin Raceway

The Tale Of The Tape:

Length:	0.5 Miles
Banking:	Turns at 17 Degrees
	Straights at 7 Degrees

Qualifying Record:
92.540 mph (19.451 secs.)
Set October 12, 1996
by Ron Hornaday
Race Average Record:
76.293 mph (300 Laps)
Set October 12, 1997
by Randy Tolsma

Located in Bakersfield, California, Mesa Marin Raceway has hosted NASCAR Craftsman Truck Series races since the initial 1995 season, including two events that first year. Mesa Marin Raceway was tapped to be one of the development tracks for the NASCAR Craftsman Truck Series, holding the first-ever exhibition race prior to the series' formal launch.

Fast Fact: Mike Skinner's third-place finish in the point standings for 1996, coupled with his 1995 championship, made him the series' first millionaire.

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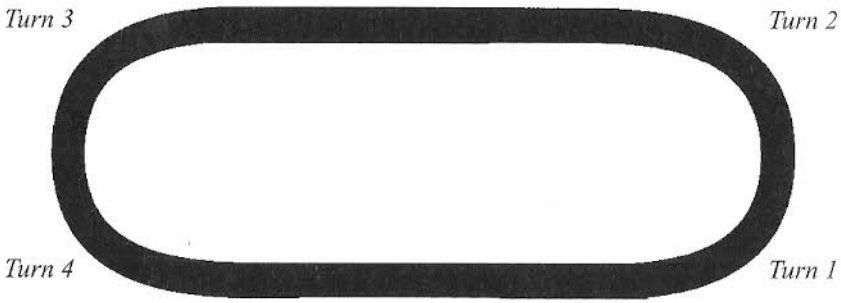
Mesa Marin Pit Notes From Jack Sprague:

"You need for the truck to stay tight underneath you all day because if you get loose whatsoever, you'll lose the rear tires and fall to the back of the field. I've been there and done that! It takes a stiff setup in the front, soft setup in the rear, and a lot of throttle control to not spin the tires."



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A Lap Around Mesa Marin With Jack Sprague:

"Going down the frontstretch at the flagstand, you have to lift a little earlier than you'd think because you're going downhill into the corner. Get down to the bottom; the truck doesn't have a lot of grip front or rear. When you get the vehicle turned, you feed it throttle and come off turn two back against the bottom. You can't really get wide-open at this race track until you're basically off the corner and headin' straight because there's not a lot of grip.

"So as you're coming off turn two you feed it as much throttle as you can without losing the back end, get the truck straightened out and then you're back wide-open against the outside wall.

"Go into turn three and come off the wall down the backstretch and aim toward the bottom of the race track. Lift a little earlier and try to keep it on the bottom. Get it turned and start feeding it back throttle very gently, very slowly. Coming off turn four, get back on the bottom; Once again, you can't get wide-open until you're pretty much straight and up against the outside wall because there's not a lot of grip.

"You're back out against the outside wall as you cross the start/finish line. Now, in the race the groove will move up to the middle of the race track. You actually find more grip at the top as the race goes on."

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Portland Speedway

The Tale Of The Tape:

Length:	0.5 Miles
Banking:	Turns 1 & 2 at 9 Degrees
	Turns 3 & 4 at 8 Degrees

Qualifying Record:
88.990 mph (20.227 secs.)
Set May 3, 1997
by Rich Bickle
Race Average Record:
68.886 mph (200 Laps)
Set May 3, 1997
by Rich Bickle

One of the oldest race tracks in the United States, Portland Speedway was originally built as a clay oval in the 1920s. The track was paved and resized in 1946. Located in Portland, Oregon, speeds at Portland Speedway have escalated with each NASCAR Craftsman Truck Series race held here.

Fast Fact: Prior to launching the NASCAR Craftsman Truck Series, four demonstration races were staged in 1994, with the first being held at Mesa Marin.

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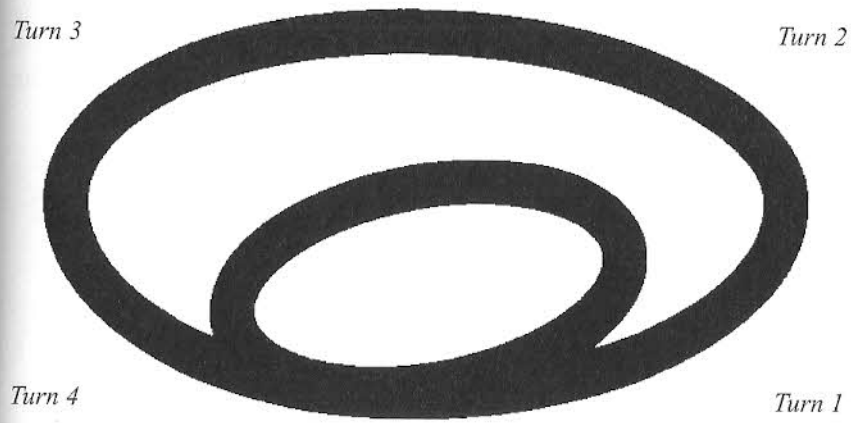
Portland Pit Notes From Jack Sprague:

"Another bullring. Here, you've got to be soft all the way around, front and rear because it is slippery and you're not goin' very fast at all."

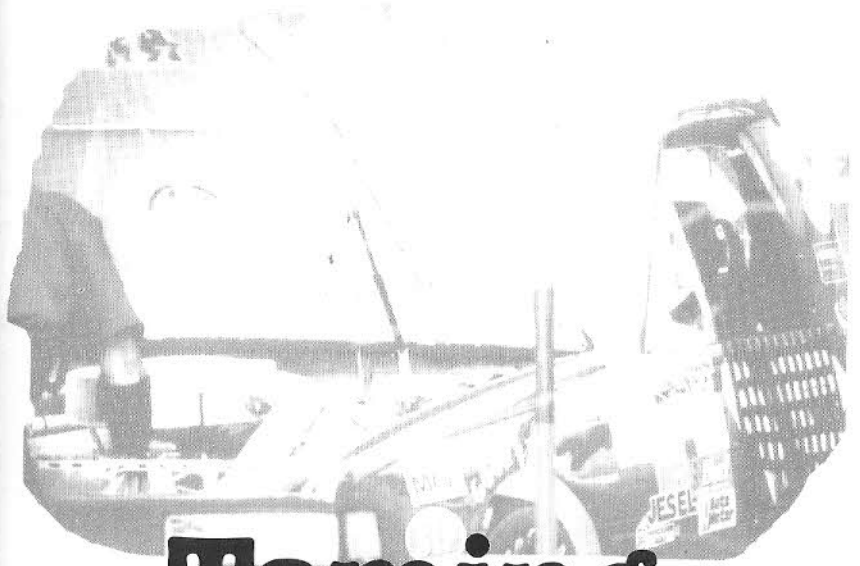


A Lap Around Portland With Jack Sprague:

"As you're going down the front straightaway across the start/finish line, you start aiming toward the bottom of the race track to get into turn one. You have to lift a little earlier and chase the vehicle across the bottom, staying on the bottom as best you can. The vehicle usually wants to drift up a little bit in the middle of this corner; let it drift up and turn the truck again to come off of turn two right on the bottom against the grass...a lot of people clip the grass with the left front tire on the exit of turn two.

"Let the vehicle come out to the wall, down the back straightaway wide-open. You can drive into turn three a little bit deeper; when you get into three, lift off the throttle and keep it right on the bottom of the race track. When you get two-thirds of the way through the corner you let it drift up a little bit. Turn the vehicle and come off turn four about a half-a-truck width off the bottom. It's very slippery off turn four, probably the slipperiest part of the race track.

"Feed it all the throttle you can and get wide-open as soon as you can, and let it drift back out to the outside wall and back across the start/finish line."



Taming Those Horses!

Tuning Your Truck For Better Performance

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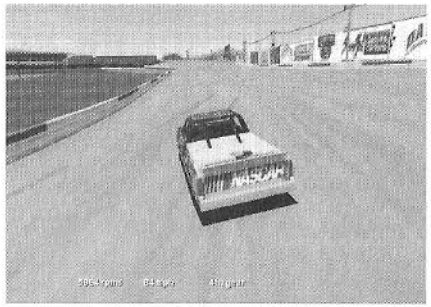
Basic Chassis Behavior

Before you begin turning wrenches on your truck, you may want to take a moment to review routine handling conditions that may or may not be desirable to your team. There are two terms commonly used to describe a vehicle's present handling- Oversteer and Understeer.



Oversteer: In NASCAR circles, the word **"Loose"** is more commonly used to refer to oversteer. A loose truck's rear tires lose grip with the pavement sooner than the front wheels do, when the truck is traveling around corners at high speed. The truck begins to "fishtail" as the rear end swings toward the outside. This is caused by a lack of weight or downforce at the rear end.

Understeer: You're more likely to hear the words **"Pushing"** or **"Tight"** used to describe understeer. A truck that is pushing will lose grip with the pavement at the front wheels, before the rear wheels lose traction. This causes it to drift out near the wall in corners, and feel like it won't turn sharp enough in general. This can be caused by a lack of weight or downforce at the front end.

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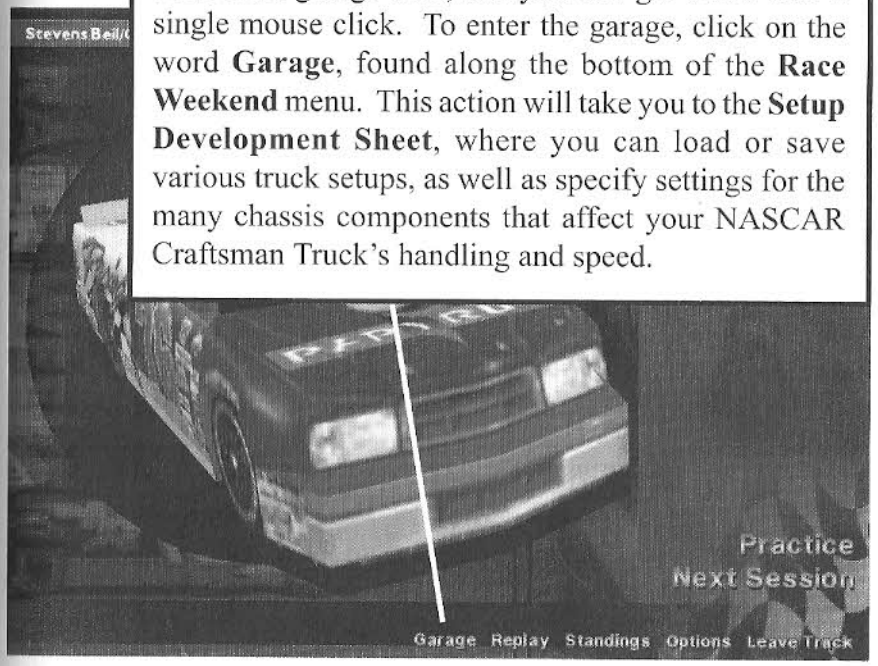
Entering The NASCAR Craftsman Truck Garage Area

Minor adjustments to your truck's chassis can be made by the crew in the pits, but you'll need to roll your vehicle into the team's garage to make major changes. The average Joe needs an act of Congress to enter the NASCAR garage area, but you can get there with a single mouse click. To enter the garage, click on the word **Garage**, found along the bottom of the **Race Weekend** menu. This action will take you to the **Setup Development Sheet**, where you can load or save various truck setups, as well as specify settings for the many chassis components that affect your NASCAR Craftsman Truck's handling and speed.



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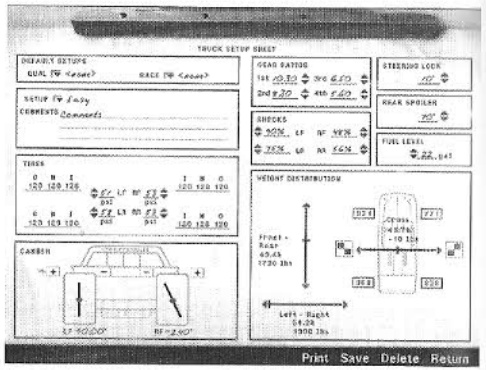
The Setup Development Sheet



NASCAR Craftsman Truck teams almost never race a vehicle in the condition it arrives at the track in. The largest part of the race weekend is spent tuning, tinkering, tweaking and timing for more speed and better performance. Typically, each driver will run a preset number of practice laps, bring the truck in for adjustments, then repeat the process. Even the best built trucks spend more time in the garage than they do on the track during this phase. Thorough notes about each setup are kept in case the most recent adjustments need to be "thrown out the window" because they are making the truck worse. Using the **Setup Development Sheet**, you can specify adjustments on your team's racing truck, make notes about the setup, and save settings to your hard drive for later recall.

Tuning Tip: Before you begin to setup your truck, load the Fast setting file. Drive 10 laps, make changes to one component, drive 10 more laps, make more changes, and so on until the vehicle performs the way you want.

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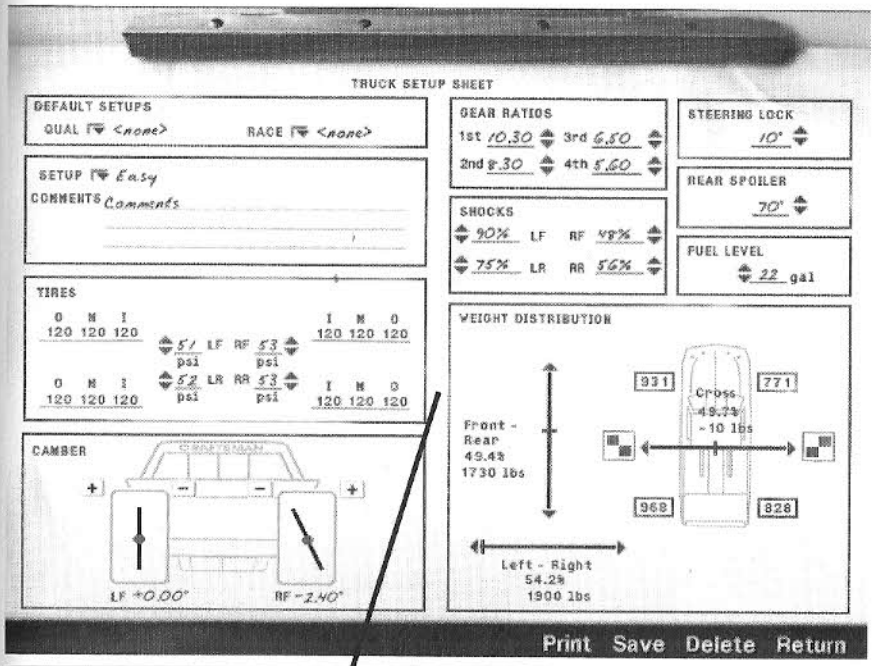
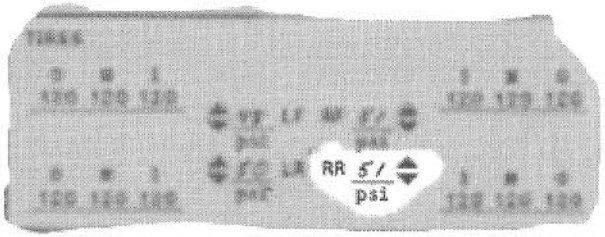


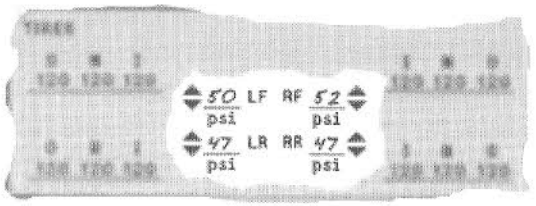
Using The Setup Development Sheet

Each adjustable item on your NASCAR Craftsman Truck is represented on the **Setup Development Sheet.** Related items are grouped in boxes for clarity. Click on each item you wish to change, and specify the new settings. The **Command Bar** along the bottom allows you to **Print** setups, **Save** setups to disk, and **Delete** unwanted setups from disk.



Pointing And Clicking

As shown above, you can make changes to items on the **Setup Development Sheet** in various ways. Click on icons (like the arrows pictured) next to items to increase or decrease values. In this case, *clicking on the part of the arrow icon pointing upward increases the tire pressure, while clicking on the part of the arrow icon pointing downward reduces the tire pressure*. As shown below, you can also click directly on an item and use the flashing cursor to make changes; simply enter the new value (within the allowed range) with your keyboard.



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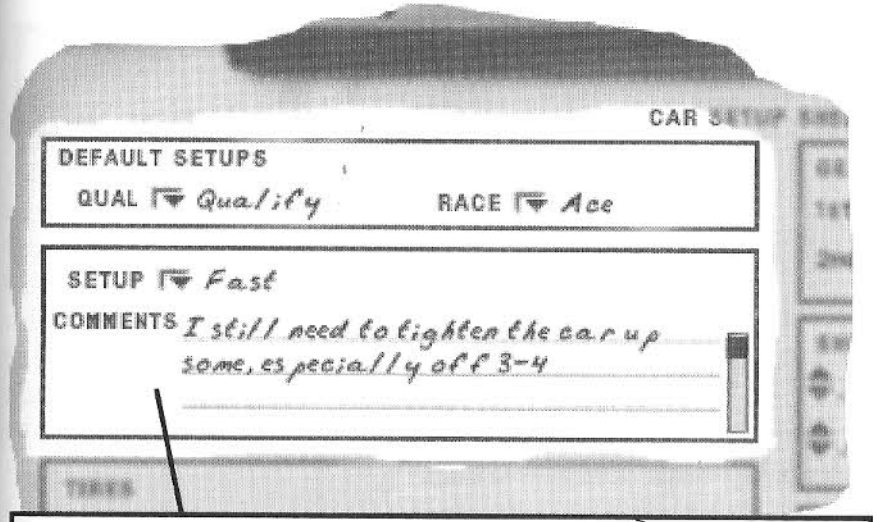
Loading And Saving Chassis Setups



Loading Setups

You can load up to three setups simultaneously- The bottom setup (called "Fast" in the above example) is the **Current** setup. This can be the qualifying or racing setup, or it can be a "scratch" setup you're currently tweaking. You can also load a setup to **Qualify** with, and another to **Race** with. Click on the pull-down icons to select the settings you want to use. These settings will be automatically loaded on your truck each time you visit the current track, during the appropriate sessions- the **Qualify** setting will be loaded for the qualifying session, and the **Race** setup will be loaded when you move to the race session. You don't have to use these- if you select **None** for each of these setups, then the **Current** setup will be in effect instead.

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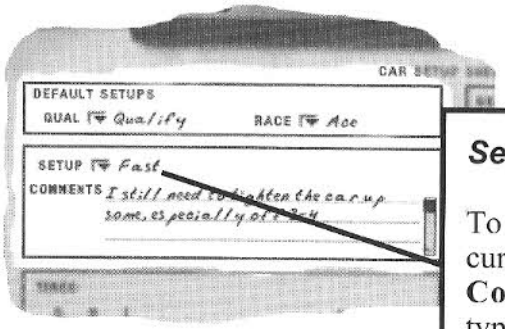
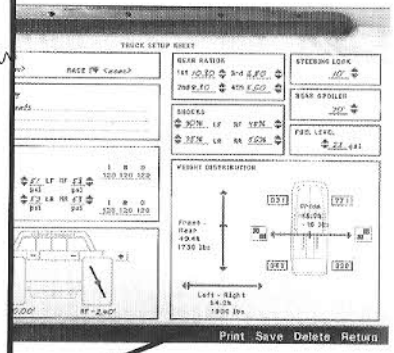


Setup Notes

To make notes about the current settings, click on the **Comments** line and begin typing. To **Name** the current setup, click on the pull-down **Setup** icon and enter a new name.

Working With Chassis Setup Files

To get a "hard copy" of the current setup, click on the word **Print**, found at the bottom of the **Setup Development Sheet**. Click on the word **Save** to record the current setup to disk (remember to name the setup and make notes first, as explained above). The **Delete** command allows you to remove old, unwanted setup files from your hard drive.



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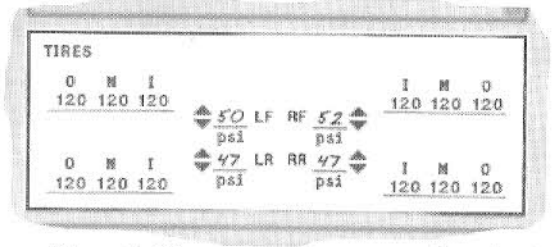
Reading Tire Temperatures

When your truck has just been rolled out onto the track, the tire temperatures will read much lower than they will while it is being driven. As you drive at competitive speeds, however, the temperature inside each tire rises dramatically. Each racing tire's optimum operating temperature is two-hundred twenty-five degrees Fahrenheit. If the tires are run hotter than this for extended periods of time, they tend to wear out much quicker. Generally, the hotter a tire is, the more stress it is enduring.

Tire temperature readings provide the crew with detailed information about the current setup. Therefore, you should always check the current tire temperatures before making any adjustments to the truck. NASCAR crews always take temperature readings from three locations on each tire's racing surface: The **Outer (O)** edge, The **Middle (M)** of the tire, and the **Inner (I)** edge. The part of the tire that is spending the most time touching the track will be the hottest, while the part of the tire that makes the least amount of contact with the roadway will be the coolest.

If one tire's temperature readings are significantly hotter than the others, then that tire is undergoing the most stress with the current chassis setup. You'll probably have to soften the suspension or reduce the weight at the hotter wheels, while you'll need to stiffen the suspension or add weight to a wheel that is too cold. *As a rule of thumb, you'll also want the outer, middle and inner temperature readings of each tire to be as close to identical as possible.* If the inner edge of a tire is very hot, while the outer edge is cool, then you'll need to make chassis adjustments to evenly distribute heat across that tire. Remember: if the temperatures read evenly all across a tire, that means the whole surface of the tire is touching the pavement, providing maximum grip and tire life.



One final note about tire temperatures- As a tire heats up, it provides better grip than a tire that is cold. A cold tire provides minimal grip; you'll probably notice that as you log the first few laps of practice or a race, the truck handles unpredictably. After a few laps, however, the tires warm up and the handling gets better. This is also true following extended caution periods (the tires have time to cool significantly, and must be warmed up again), or right after your crew replaces the tires during a pit stop (the new tires must be warmed up before they grip acceptably).

Tip: Remember, you can get instant tire temperature readings while on the track. Just press the "F4" key as you drive. Normal tire temps are shown in white. Tire temps that are mildly high are shown in yellow, while dangerously hot tire temps are shown in red.

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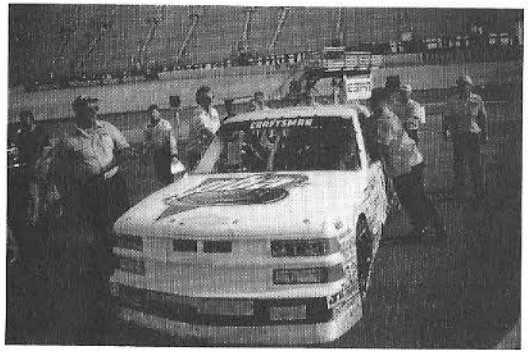
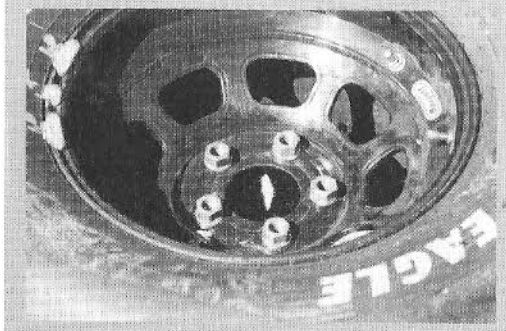
Reading Tire Pressures



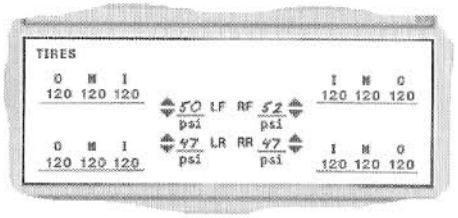
Tire pressures in each wheel play a key role in several areas. First, the "profile" of a tire (whether it's "saggy" or firm) can dictate the level of performance for the whole chassis. An under-inflated tire will tend to sag in the middle (indicated by hotter temperatures on the edges), while an over-inflated tire will protrude in the center (indicated by a hotter middle temperature). Generally, more inflation produces a stiffer tire, capable of faster speeds, but sometimes less grip. Less inflation in a tire means the tire will be softer, slower (because of the increase in "rolling drag") but perhaps grip in a more forgiving manner.

NASCAR Craftsman Truck tires are filled with nitrogen, rather than compressed air. That is because nitrogen is more stable inside the tire. Air is 78.06% nitrogen anyway, but its humidity changes with the weather, making it an unreliable inflation source. As the humidity levels at the track change, so would the pressure readings inside your tires- and that would make for a headache powder-filled day. Nitrogen, on the other hand, is relatively inert (inactive) and remains unaffected by humidity. Your crew can fill your tires to exact levels of pressure, and know within a few psi what the pressures will read after thirty laps.



Each NASCAR Craftsman Truck wheel has two valve stems. Ever wonder why? One stem is used to fill the tire's inner liner, a bladder around the rim that provides some measure of inflation in case of a blowout. The other valve stem is used to fill the tire itself. Crew members glue the lug nuts on each wheel prior to races, so the tire changer doesn't have to fumble with them during a high-pressure pit stop.

Tires are perhaps the most critical part of the equation when it comes to handling and performance. Each tire must be treated individually in order to enjoy maximum grip and horsepower. Before making any adjustments on your truck, you should always drive some warmup laps first. Then, take temperature readings and perform a single adjustment. Drive more warmup laps, take further temperature readings and repeat the adjustment process as necessary. It is not vital that you use identical pressures in each tire; in fact, it is rare that a team would.



Tip: While on the track, you can radio tire pressure instructions to your crew by using the "F5" key. Pressure changes will be carried out during the next pit stop. This is one of the most common raceday handling adjustments performed on the NASCAR Craftsman Truck circuit.

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Tire Setup Summary

Temperatures: Even temps all across each tire generally provide the best grip.

Under-inflated *(Tire's Middle Temp Too Low):* Causes the tire's center to "sag," creating more rolling drag and making the tire run hotter. This is sometimes desirable if you're looking for an "easier-to-drive" tire with more grip.

Optimum Pressure *(Even Temps):* Upon warmup, if Outer, Middle and Inner temperatures match, you'll probably enjoy maximum tire life.

Over-inflated *(Tire's Middle Temp Too High):* Causes the tire's contact surface to "crown" or "bow up" slightly. This generally increases the shock rates of the tire, while making the tire run cooler; just what you want if you like firmer, faster tires with less grip.

Note: The items mentioned above only consider adjustments to the pressure and temperature of each tire. However, many other factors affect a tire's readings, life and consistency. *Weight Distribution*, *Shock Stiffness*, *Track Temperatures*, *Camber Settings*, *Downforce*, *Speed* and *Driving Style* all play a role in the performance and life of a racing tire. Consult the pages that refer to other chassis adjustments to determine the proper course of action in solving tire problems.

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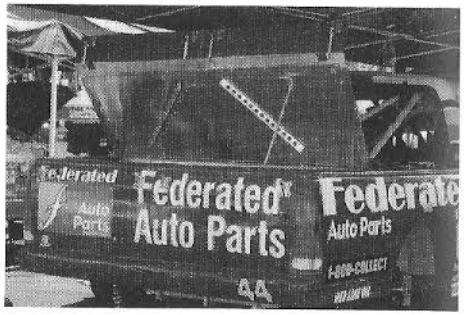
Fuel Information



Your NASCAR Craftsman Truck burns a very high octane blend of gasoline. Octane ratings indicate the fuel's ability to resist premature detonation and burn evenly inside the engine. The higher the octane rating, the more anti-knock additives found in the gasoline, a must for high-performance racing engines.

According to NASCAR rules, each truck must be equipped with an approved fuel cell, which is located inside the bed of the truck directly behind the rear axle. It must have a capacity of 22 U.S. gallons. The exterior of the fuel cell is made of steel; a bullet-proof bladder located inside the steel casing actually houses the fuel. The bladder is stuffed with an absorbent foam material in order to prevent the fuel from "sloshing around" during a spin.

Using the **Setup Development Sheet**, you can decide how much fuel you want in the tank during **Testing** sessions by entering the garage via the **Truck Setup** option found along the bottom of the **Race Weekend** menu.

Note: You cannot remove fuel from the truck as you drive (who'd want to siphon it out, anyway?). Also, you can only choose fuel amounts during Testing sessions. All other sessions begin with a full tank of gas, with your crew chief handling fuel estimation tasks.

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While driving your truck, you can radio ahead to your crew in order to find out the amount of fuel they're going to pour into the tank during the next pit stop. Press the **"F3"** key to see comprehensive fuel information, including the **"Fill To"** setting, which is decided by your crew chief. In the late stages of a race, he will automatically calculate the amount of fuel you need to "splash and go," in order to finish the event.

Note: You cannot select the amount of fuel for Qualifying, Warm Up and Race sessions. NASCAR rules state that the tank must be topped off prior to qualifying; during all session types other than Testing, the fuel level section found on the Setup Development Sheet will appear "greyed out."

Tip: Instead of using a full tank, try driving test laps with only 10-12 gallons of fuel. This will give you a better "average" of how the truck behaves under the current conditions, allowing you to make more accurate decisions regarding chassis adjustments.

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Fuel Summary

Full Tank: The extra weight slows the car slightly, as each gallon of gasoline weighs approximately 6.8 pounds.

Near-Empty Tank: Your truck may pick up two or three more mph in top speed, as the total gross weight of the vehicle becomes lighter. In addition, your truck may develop a slight "push" (understeer).

The amount of fuel remaining is indicated by the fuel gauge, located on the dashboard. Keep in mind that during every session but Testing, it is mandatory that your truck carry a full tank of gas.

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Playing With Spoiler Angles

Your truck is equipped with a wind-resistant spoiler mounted on the top of the tailgate. The spoiler extends across the tailgate in two halves, with a small opening down the center, between the two sections to accomodate insertion of the body template during inspection. A crew member will tape this small opening shut just prior to the race, per NASCAR rules.

The actual height of the spoiler is dictated by NASCAR in order to achieve fair competition between the different manufacturers. The spoiler's angle of attack, however, is up to you. The steeper the spoiler angle, the more drag and downforce that is created at the rear of your truck. With a steep spoiler setting (higher values) your truck may lose overall top speed because of the additional drag (the spoiler is striking the wind "dead on"). However, your truck will also have more downforce at the rear end, a factor that often means better handling in the corners, because the rear end doesn't become too loose. Conversely, should you choose a flatter spoiler setting (lower values), your truck may gain more straightaway speed while trading off some cornering performance.

Make spoiler adjustments while in the garage by clicking on either arrow to achieve the desired setting. Higher values indicate a steeper angle, while lower values reduce the spoiler angle. You can also click on the angle itself, and use the cursor to type a new value directly in. While on the track, you can use the **"F7"** key to radio ahead a new angle value you'd like your crew to adjust the spoiler to during the next pit stop.

Spoiler Summary

More Rear Spoiler *(Higher Angle Values):* Used to eliminate a loose (oversteer) condition by improving grip at the rear wheels. Higher angles generate more downforce on the rear, because the spoiler picks up, or "catches" more wind. This also increases drag, while reducing top speed.

Less Rear Spoiler *(Lower Angle Values):* Used to improve top speed and minimize a "pushing" (understeer) condition. This is accomplished because the lower angle reduces downforce and drag on the rear, as the spoiler picks up less wind.

Note: More downforce can slow the truck, due to the increased drag. This can also make the tires operate at higher temperatures. Less downforce can improve top speeds, but if the driver can't maintain control with the extra mph, the tires could get chewed up by the pavement too quickly. Try to strike a happy medium between speed and handling.

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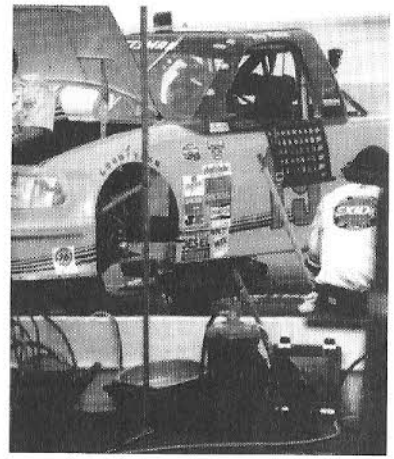
Suspension Adjustments



Casual observers of NASCAR Craftsman Truck Racing might think the engine deserves the most attention from the crew in the garage. However, the better part of a race team's weekend is actually spent tweaking the suspension. Tire life and grip mean everything to the success or failure of the race team during a weekend's action. After all, what good are seven-hundred horses under the hood if their hooves can't get any traction as they gallop?

Chassis setups are likely to vary from track to track, and driver to driver. Trying to devise a winning chassis setup that accomodates the weather, track conditions, driving style and overall speeds can be a mind-boggling task. Fortunately, NASCAR Craftsman Truck Racing comes with some basic setups that are developed for each track; until you become a suspension wizard yourself, it is recommended that you start by tweaking one of these setups instead of building from scratch. Remember to take it slowly, and adjust one component at a time. Check the results, then make more adjustments if necessary. Keep in mind that the weather can greatly affect your truck's performance. A chassis setup that's unstoppable at Flemington in cool weather may not cut the mustard on a warm day.

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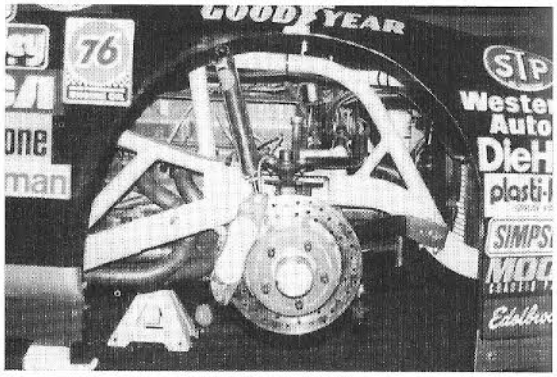

Front Wheel Camber

The term camber simply refers to the upright angle at which your front wheels rest in relation to the roadway. A camber value of zero indicates that a given wheel is exactly perpendicular to the pavement; negative camber values mean that the top of the wheel is closer to the framework of the truck, while positive camber values are used to describe a wheel that is further from the chassis at the top than it is at the bottom.

So why would you want your truck to have any camber setting other than zero (wheels pointing straight up)? To answer this question, drive a few laps, then check the tire temperatures. You'll probably notice that on some or all of the tires, the outer, middle and inner temp readings are uneven. This means that as your truck is rolling around the track, its tire surfaces are not pinned flat against the roadway. Speedway banking, high-speed maneuvers and intense downforce all exert stress on your truck's suspension. As downforce presses down on your vehicle, one or both of the front wheels may pitch out slightly at the bottoms (negative camber). Steep speedway banking may cause the left-side tires to overheat along the outer edges. All of these conditions can be compensated for by making camber adjustments to the front wheels.

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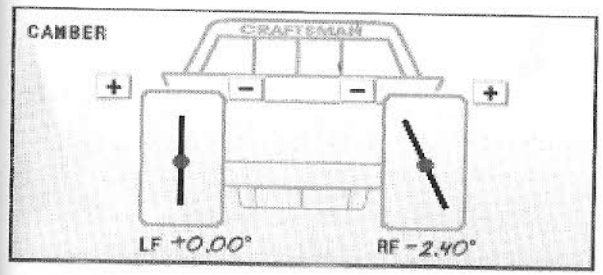
Make camber adjustments based on tire temperature readings. Remember, camber adjustments only apply to the front wheels of your truck. The camber diagram on the **Setup Development Sheet** represents a view of the front-end of your truck. Click on either "plus" icon to add positive camber to the appropriate wheel. Click on either "minus" icon to add negative camber to the appropriate wheel. The numerical value of each adjustment is shown at the bottom of the diagram.



Camber Summary

What It's For: Used to align the front wheels perpendicular with the roadway. Adjustments should be dictated by tire temps taken just after the truck is driven, rather than temps taken while the truck is at rest with cold, fresh tires.

Negative Camber: The top of the tire is closer to the truck than the bottom. If the outer tire temps are too hot, use negative camber.

Positive Camber: The bottom of the tire is closer to the truck than the top. If the inner tire temps are too hot, use positive camber.

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Weight Lifting Exercises

As you drive your truck, its weight shifts constantly in various directions. For instance, as you accelerate, more of the truck's weight transfers toward the rear. When you hit the brakes, the truck's weight comes forward, pressing the nose of the vehicle down. When you turn left, weight shifts toward the right. When you turn right, the load transfers to the left. The greater your *action*, the greater the weight of the truck's *reaction*.

According to the NASCAR rulebook, your truck's total weight must be 3,400 pounds. NASCAR's special scales not only detect your truck's total weight, but also the distribution of the truck's weight at a complete standstill. Neither side or end of the truck can weigh more than 1,900 pounds. Your team has different methods of controlling the truck's weight, however, to compensate for the various load shifts.

By itself, a truck's weight falls short of the 3,400 pound minimum, so teams anchor blocks of lead to the chassis to make up the difference. This extra weight is distributed in a variety ways, depending upon where the team determines the extra baggage is needed.

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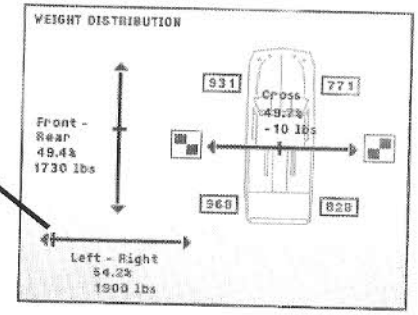
Left-Side Bias Adjustments

On NASCAR Craftsman Truck oval tracks, your truck spends a great deal of time enduring left turns. This means a great deal of your car's 3,400 pounds shifts, or transfers to the right side of the truck around corners. However, this can be offset by positioning more weight on the left side of the truck before it's rolled out onto the track. NASCAR rules allow either side of your truck to weigh as much as 1,900 pounds; since you won't be making any "planned" right-hand turns on ovals, you may want as much of that extra weight on the left side as you can get. From the **Setup Development Sheet**, instruct your crew to move the extra weight to the right or left, as you wish. This is called a *bias* or *ballast* adjustment. It is quite common to set the left-side weight to the 1,900 pound limit. NASCAR Craftsman Truck Racing prevents you from exceeding this limit- heck, if we didn't, those NASCAR tech inspectors would be all over you!

Left Bias Adjustment

Click on the arrows at either end to shift weight in the direction you'd prefer. Or, click and drag the slider to the desired position.



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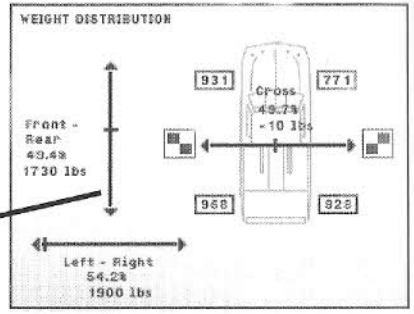
Front-To-Rear Bias Adjustments

As you accelerate, your truck's weight tends to shift toward the rear. Unbridled, this can cause the truck to handle in a very loose manner as it is driven around corners at high speeds. However, if you have more weight in the front end of the truck to begin with, the load that transfers toward the rear will be minimized, thus balancing the truck under high speed conditions. Sometimes, it is desirable to have a truck that is slightly loose to begin with; so you'd probably shift more weight toward the rear via the **Setup Development Sheet**. For example, large superspeedways are generally better suited for a chassis that is neutral, or pushes slightly. For these tracks, try setting more weight at the front of the truck to begin with. Smaller, short ovals may require sharper chassis response in corners, so setting more weight at the rear of the truck may prove beneficial.

Rear Bias Adjustment

Click on the arrows at either end to shift weight in the direction you'd prefer. Or, click and drag the slider to the desired position.



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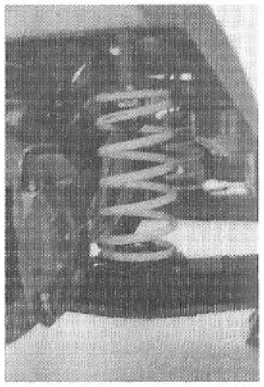
Cross Weight (Wedge)

Adjusting the front-to-rear and left-to-right weight ratios provide a certain measure of chassis control. But you need a way to adjust the weight at each wheel individually, not just end-to-end. That's where *cross weight*, or *wedge* as it is more commonly called, comes into play.

Since most of the corners on the NASCAR Craftsman Truck circuit are left-handers, it would be ideal to position more weight on the truck's left-rear wheel. This would help the rear wheels grip the pavement better as the truck races through corners at high speeds. However, in every adjustment there are tradeoffs, and in this case, the more weight you set on the left-rear wheel, the more weight you set on the right-front, an already heavily-stressed tire.

Wedge adjustments are made by "tipping" one corner of the truck up or down. As the chassis is tipped in the direction of the left-rear corner of the truck, the weight at that wheel becomes greater. One of the best features of wedge adjustment is that, unlike other weight adjustments, the cross weight can be adjusted in the pits as well as the garage. So, if your truck is too loose, or too tight during a race, simply use the **"F6"** key to radio wedge changes you'd like the crew to perform during the next pit stop.

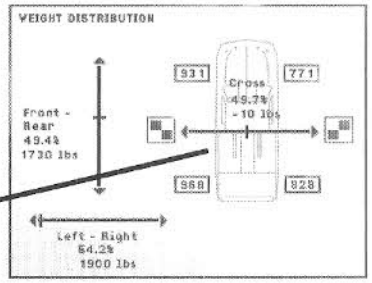


Each wheel's spring on your truck has a cap on top. By exerting pressure on that cap, the spring is compressed slightly, and becomes more responsive. In turn, the truck's weight tips in the direction of the shortened spring. Wedge adjustments are performed by moving that cap up or down, compressing or expanding the spring. Each rear spring's cap is controlled by a long, threaded rod that extends up from the spring, through the rear windshield. These rod & cap combinations are called "screw jacks." The front wheel springs have screw jacks that extend up to the engine compartment, but because the hood must be opened to reach them, they're rarely adjusted during a race. The rear screw jacks protrude through the bed, however, so they're easily accessible at all times.

Each complete revolution of a screw jack is called a "round." If you hear an announcer say that a crew member "put two rounds of wedge in the truck," that means the technician tightened the left-rear screw jack two full revolutions.

Cross Weight Adjustment

Click on the arrows at either end to shift weight in the direction you'd prefer. Or, click and drag the slider to the desired position.



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Weight Jacking Summary

Left/Right Bias Adjustments: Sliding this value toward the left puts more weight on the left-side of the truck, helping balance the chassis as you turn left on ovals. When this is correctly set, tire grip improves. Road courses may require different tactics. You may need to move the extra weight to the right-side for a circuit that features important right-hand turns. A neutral setting may work better at a track with a variety of corners.

Front/Rear Bias Adjustments: Sliding this value forward puts more weight on the front of the truck, increasing the amount of understeer. Sliding this value toward the rear places more weight at the back of the truck, increasing the amount of oversteer.

Wedge Adjustments: Increase this setting with positive values to tighten the truck up if it is "too loose." Decrease this setting to reduce understeer. Wedge adjustments work diagonally: as you increase wedge values, the left-rear corner gains weight and grips better, but the right-front corner also gains weight on an already heavily stressed tire.

Note: Think of the left/right and front/rear bias adjustments as *coarse* settings, while the wedge adjustment should be considered a *fine* adjustment.

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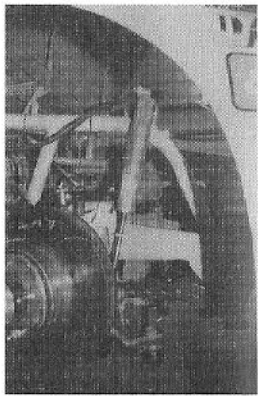
Shock Stiffness



Your truck has a gas-filled shock absorber installed at each wheel. In addition to minimizing all of the little bumps and jounces experienced on the race track, shock absorbers play a key role in stabilizing the chassis during high-speed turns.

When you turn your truck left, centrifugal force causes the chassis to shift its weight toward the right. Conversely, right turns cause the chassis weight to transfer toward the left. When you mash the gas, the truck's weight shifts toward the rear end, while stepping on the brake pedal causes the weight to abruptly transfer toward the front of the truck. With each transference of weight that occurs, you could be losing grip somewhere.

You can counteract these weight shifts and improve cornering performance by adjusting the stiffness of each shock. Stiffer shocks help the chassis "reset" quicker after a shift in weight. This added responsiveness can sometimes lead a driver to overcorrect, however. On the other hand, softer shock settings cause the chassis roll to last longer as the weight transference gradually dampens out.

Getting Your Shocks To Work For You

If you adjust one shock absorber to a stiffer setting as compared to the other three, more weight will transfer at that wheel, adding response while diminishing its grip. It's likely that you'll want the

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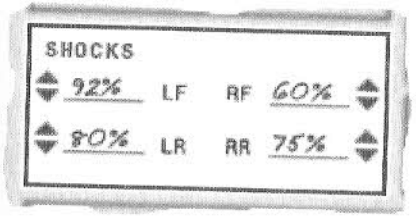
rear shocks to be set slightly softer than the front, in order to keep the truck from getting too loose. Typically, you should begin the setup phase at each track by setting the front shocks up relatively stiff compared to the rear ones. This will create enough understeer, or a push to give you maximum control as you attempt to dial your truck's chassis in. As you make shock adjustments, consider the track temperature, tire conditions, top speeds and amount of banking- these factors all play a role in what your shocks must accomplish for you. You don't have to set front wheel shocks to identical values. It is quite common to use different settings on each wheel, since each corner of the truck undergoes a different degree of load transfer during racing action.



To adjust your truck's shock settings, use the **Setup Development Sheet** to specify desired values. Click on the accompanying arrows to increase or decrease shock stiffness; higher values indicate stiffer shocks, while lower values result in softer shock absorbers. You can also click directly on a shock value, and enter the desired amount of stiffness with your keyboard.

Some folks in the garage area believe that using extremely soft rear shocks on the big tracks will result in better performance. The thinking here is that the rear end of the truck will ride lower at high speeds, due to the soft shocks. If this were true, then the rear spoiler angle would drop slightly as well, reducing drag. This theory has not been proven, but hey- it's your racing truck!

Shock Summary

Softer Shock Settings: Weight transfer is reduced at that wheel. The truck tends to become less responsive as the chassis requires more time to reset after each corner. Softer settings can help your truck handle in a more forgiving manner, less likely to induce over-correction.

Stiffer Shock Settings: Weight transfer is increased at that wheel. Handling becomes much more responsive and straightaway speeds can be faster, but the truck can feel "twitchy" as the chassis whips back into place after each corner. Stiffer settings and give you quicker times, but they can also lead to over-correction.

Note: Because shock absorber work can be time consuming for a crew, and these adjustments affect a sensitive area of your truck's chassis, you'll have to specify these settings in the garage via the **Setup Development Sheet**. Shock adjustments are not something routinely handled by the pit crew on raceday. You'll have to try to correct any in-race handling problems by ordering wedge adjustments or tire pressure changes instead.

Remember, each shock absorber may be adjusted to individual values, independent of one another.

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Steering Lock

By changing the gear ratios in the steering box, you can alter the turn rate and steering radius of your truck. Superspeedways place a higher demand on control, with very little steering performance an issue because of the steep, sweeping turns. On the other hand, short tracks and road courses require greater steering response in order to negotiate tight corners.

It is important to understand that a loose truck will still be loose after adjusting the steering lock, just as a tight truck will still be tight after a lock adjustment. In other words, tweaking the steering lock will not correct other problems that surface within your chassis setup. So, don't waste time trying to compensate for handling errors by changing the steering lock.

Try to select a steering lock value that you can drive comfortably and consistently with at the current track. One factor to consider when setting the steering ratio is your control device. Sometimes it has to do with what you're using as a controller. As you know, a bigger steering wheel is slower; one that's really small revolves faster, so you need to slow the steering down (lower angle). The same amount of turning on a big steering wheel is different than the same amount of turning on a small steering wheel. But yes, you'll go to a big track where you need to slow the steering down because of the faster speeds; and you don't have to make a 180-degree corner running 80 mph. You're making fast corners with banking. Sure, you're still turning 180-degrees but you're taking a half mile to do it in.

To adjust the steering lock on your truck, open the **Setup Development Sheet** and click on the arrows adjacent to the current lock value. Higher values indicate faster, sharper steering, while lower angles call for controlled, slower steering. You can also click directly on the lock value, and use your keyboard to enter a new setting. For road courses, try basing your steering lock value on a cumulative average of the most important corners, rather than simply picking an angle that accomodates the tightest hairpin.

Steering Lock Summary

More Wheel Lock (Higher Angle): This increases the turning radius of the truck, adding responsiveness to cornering. Too much wheel lock, however, can cause the driver to over-correct when steering. This results in dangerous maneuvers and reduced tire life.

Less Wheel Lock (Smaller Angle): This decreases the turning radius of your NASCAR Craftsman Truck. Lower wheel lock values are ideal for megatracks where small steering corrections are necessary. However, using a steering lock setting that's too low will make it tough to guide your truck around turns at high speed.

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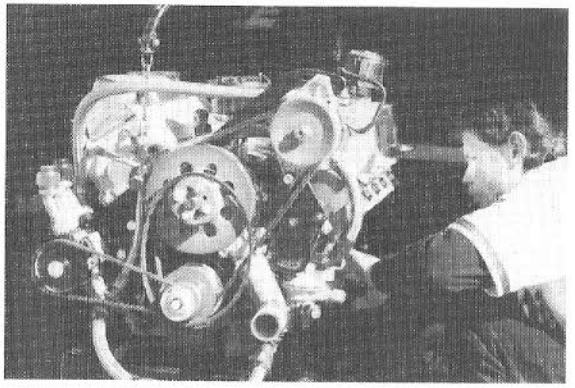
Selecting Gear Ratios



By mixing different combinations of cogs in your truck's transmission, you can modify its use of horsepower. Certain tracks were built with top speed in mind, while others throw top speed out the window in favor of acceleration and finesse.

Taller gears are used to create more top speed, perfect for super tracks, where you want to "throw it in fourth and keep your foot on the floor" all day. The other gears are only needed to get you in and out of the pits, so the ratios between them is not very critical.

Shorter gears are installed when you want to tighten the power curve and generate greater acceleration. Shorter gears must make the driveshaft turn four to six times in order to produce a single revolution of the drive wheels, as opposed to a taller gear that can achieve the same result with only about three turns of the driveshaft. Shorter, tighter gear ratios are better suited for short tracks and road courses, where overall top speed is an afterthought. These types of tracks also generally demand that the gear ratios be spaced somewhat close together, to orchestrate a power curve that is capable of reaching its top speed quickly.

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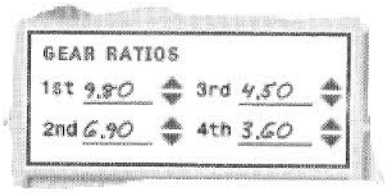
Your truck is equipped with a four-speed transmission. Choose gear ratios individually, based on the type of performance you want. Generally, drivers set fourth gear up first by driving several test laps and noting the rpm readings at the end of the longest straightaway. Your oil pressure light should barely begin to blink at the end of straights, so you may want to use this as a general guideline. If your truck is too slow on a big track, try lowering the fourth-gear ratio; if it's too slow on a short track, try raising fourth gear to a higher value, and spacing the other gears tightly together.



Gear Ratio Summary

Shorter Gear Ratios (Higher Ratio Numbers): These are used to create more rpms/acceleration. Shorter, tighter gear ratios help you reach peak horsepower quicker, though top speed is a little slower.

Taller Gear Ratios (Lower Ratio Numbers): These ratios produce slower acceleration, but generally provide faster top speed. If your oil pressure warning light blinks constantly, try using a taller fourth-gear ratio.

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Compensate For Driving Style

There are several key components on your NASCAR Craftsman Truck that may require adjustments to compensate for your driving style and the current track conditions. Since no two drivers handle a truck exactly alike, it's best to create your own setup files for each track; that way, the car will behave in a manner best suited for your individual driving skills.

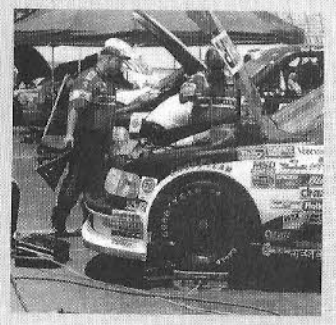
Compensate For Weather

Weather conditions also play a key role in how your truck responds on a given day. A setup that yields favorable results at Evergreen on a cool, breezy day might not be very competitive on a calm, hot day. This may force you back to the garage stall for more fine tuning.

Compensate For Body Style

You may develop a setup file that works very well with one chassis type- but a switch to another chassis type may not produce the same results.

The garage area is located in the infield of each track. Inside, there are no walls that separate trucks and teams from one another- if your truck gets a new set of shocks, everybody else in the garage can see your crew put them on.



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NASCAR Tech Talk

Classic Racing Terminology

Air Dam- A strip that hangs beneath the front grill, often just inches from the ground. The air dam helps provide and direct downforce at the front of the vehicle.

Back Marker- A slower truck that is running near the rear of the field.

Bodywork- The fabricated sheet metal that encloses the chassis.

Boogered Up- Messed up; generally said about a truck that is wrecked or has spun.

Chassis- Refers to the truck's floorboard, roll cage and interior as a single unit.

Chassis Roll- As the truck travels around corners at high speeds, the side of the truck facing the inside of the turn becomes lighter, causing it to raise up. The extra weight that shifts toward the outside of the turn causes that side of the truck to pitch downward. The term *Chassis Roll* describes this up and down movement.

Contact Patch- The portion of the tire that is presently touching the ground. The size of each tire's contact patch changes as the truck is driven.

Dirty Air- A vague term that refers to unstable, swirling air currents that are used and discarded by a leading truck.

Donuts (As damage)- Black, circular, dent-like marks found on the side panels after rubbing against other trucks at race speed.

Downforce- A combination of aerodynamic and centrifugal force. The more downforce, the more grip your truck has. However, more downforce also means more drag. More downforce provides better

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cornering performance, but a loss of top speed.

Draft- An effect that occurs when a trailing truck closely follows another at high speed. The trailing truck experiences less drag, and is "pulled" toward the leading truck. This enables the trailing truck to gather more speed than the leading truck, and easily overtake the opposition.

Fabricator- One who specializes in creating the sheet metal body of a NASCAR Craftsman Racing truck.

Front Clip- Beginning at the firewall, the front most section of the vehicle.

Fuel Cell- The fuel in a NASCAR Craftsman Racing truck is housed in a bullet-proof bladder that is encased in stainless steel for driver safety. The fuel cell in a truck is located beneath the bed.

Groove or Racing Line- The preferred path around a race track. Denoted by the blackened pavement and skid marks that form where all of the trucks orbit the track.

Happy Hour- The last official practice session held before a race, Happy Hour takes place on Saturday after qualifying sessions and support races have been staged.

Hauler- The semi-truck rig that teams use to transport two vehicles, engines, tools and equipment to tracks. Trucks are stowed in the top section, while the bottom floor is used for workspace.

Head Wrench- Slang for "Crew Chief."

Interval- The time-distance between two trucks.

Lapped Traffic (also "Lap Cars")- Trucks that have completed at least one full lap less than the race leader.

Lead Lap- The lap that the race leader is currently on.

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Loose- Also known as "oversteer," a truck is said to be loose if the rear wheels lose traction with the pavement before the front wheels do. This causes the truck to "fishtail," as the rear end swings outward during turns. A minor amount of this effect can be desirable on certain tracks.

Lugs- The five nuts that hold each wheel on the axle.

Neutral- A truck that is neither loose, nor tight.

Pit Road- The strip of asphalt where pit crews service the trucks. Generally located near the start/finish line.

Pit Stall- The area along Pit Road that is designated for your team's use during pit stops. Each truck stops in the team's stall before being serviced.

Pole Position- The foremost position on the starting grid, awarded to the fastest qualifier.

Pyrometer- An electronic device used to measure tire temperatures.

Rear Clip- Describes the section of the truck, between the base of the rear windshield and the rear bumper.

Restart- The waving of the green flag following a caution period.

Restrictor Plate- Used on the biggest tracks to help slow cars down. NASCAR mandates the installation and use of these. Restrictor plates are mounted on the engine, beneath the carburetor in order to limit the air/fuel mixture consumed by the motor. Currently, no truck races require the use of a restrictor plate.

Ride Height- The distance between the truck's frame and the ground.

Roll Cage-The steel tubing inside the truck's interior. Designed to protect the driver, the roll cage must meet strict NASCAR safety guidelines.

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Round- One revolution or turn of a wrench; usually used in conjunction with Wedge adjustments, such as "adding a round-and-a-half of bite."

Setup- All of the current tunings and adjustments on the truck are referred to as the truck's "setup."

Short Track- Speedways that are less than a mile in length.

Silly Season- A period that begins during the latter part of the current season, wherein some teams announce driver, crew and/or sponsor changes for the following year.

Splash 'N Go- A quick pit stop that involves nothing more than refueling with the amount of fuel necessary to finish the race.

Sponsors- Companies that pay the race team money in return for advertising. The sponsor's name, colors and logos are adorned on the race truck for high visibility and product identification.

Stop 'N Go- A penalty, usually assessed for speeding in the pits or unsafe driving. The truck must be brought onto pit road at the appropriate speed, and stopped for one full second in the team's stall before resuming competition.

Stagger- If the tires on the right side of your truck are larger in diameter than the left side, this is called "positive stagger." This technique is often used to improve cornering performance on oval tracks. Stagger can only be changed by using different sized tires. Due to the radial tires now in use, stagger cannot be changed by overinflating the tires on one side of the truck. This will only change the spring rate, or stiffness of the tire. Stagger is preselected at the current track for all of the NASCAR Craftsman Truck teams by the tire manufacturer, and is not adjusted by the team in the garage.

Stickers- New Tires. This name is derived from the manufacturer's stickers that are affixed to each new tire's contact surface.

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Stroking- A term used to describe a driver who is playing it safe, driving tentatively to score points instead of going all out for the win.

Super Speedway- Speedways that are over one mile in length.

Template- A device used to check the body shape and size, to ensure compliance with the rules. The template closely resembles the shape of the factory version of the truck.

That's Racin'- Generally uttered when describing an accident or human error. Also referred to as, "One-a-them deals."

Tight- Also known as "understeer," a truck is said to be tight if the front wheels loose traction with the pavement before the rear wheels do. A tight racing truck doesn't seem to be able to be steered sharply enough through corners. Instead, the front end continues out toward the wall.

Tire Profile- A term that describes the shape of a tire. Under inflated tires tend to sag, while over inflated tires have a very upright profile.

Trading Paint- Phrase used to describe agressive driving, featuring a lot of bumping and rubbing.

Victory Lane- The spot on each track's infield where the race winner parks for the celebration.

Wedge- Term that refers to the Cross Weight adjustment on the truck.

Window Net- A woven mesh that hangs across the driver's side window, to prevent the driver's head and limbs from being exposed during an accident.

Weight Jacking- NASCAR Craftsman Trucks must each weigh the same. That weight can be unevenly distributed, however, to provide maximum grip at the wheels that need it most. The art of shifting the truck's weight to favor certain wheels.

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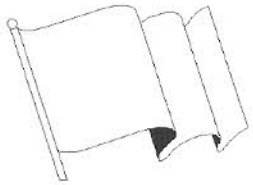
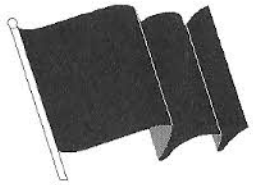
NASCAR Flags



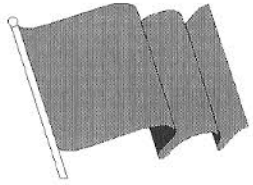
White

One lap to go! This flag is waved when there is one lap remaining in the race or qualifying session. It appears when the lead car crosses the start/finish line. Also, 2 crossed white flags indicate the halfway point of a race.



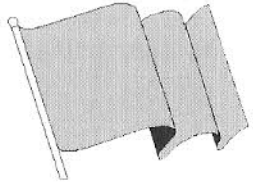
Black

Penalty. Generally given to a specific driver who has committed a rules infraction. When this flag flies over your truck you must come to a complete stop in your pit stall for one second. Penalties are enforced for exceeding the pit road speed limit, passing the pace car or passing an opponent under yellow. Failure to obey the black flag will result in disqualification after three laps.



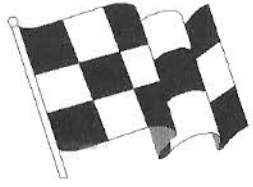
Green

Go Racing! During qualifying rounds, the green flag hails over each lap you drive that counts toward an official qualifying attempt. During races, the green flag indicates that the race is underway safely and drivers may proceed at full speed.



Yellow

Caution on the track. An accident has occurred, or an unsafe condition exists. All drivers must slow to pace car speed. Penalties for passing illegally under yellow are strictly enforced.



Checkered

End of race or qualifying run. The traditional checkered flag waves when the winning truck crosses the start/finish line, or a qualifying attempt is successful.

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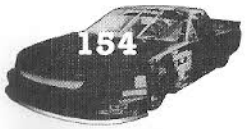

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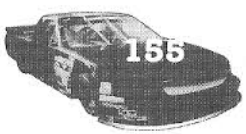

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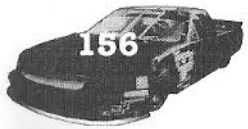

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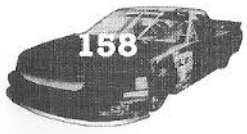

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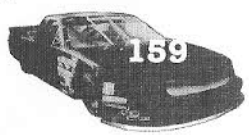

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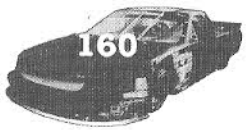

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