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The Manual
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GETTING STARTED RACING

Load the program according to the instructions on the disk label. When the theme music starts playing and the title screen appears, press the joystick button to produce the main menu.

The top line in the main menu lets you tell the computer whether one or two players will be playing. Move the joystick right or left to move the reverse highlight over the choice you want. Then move the joystick up or down to move the highlight to the other options in the menu. Press the button to select the highlighted option.

When you select “Set Options and Race” from the main menu, a new menu will appear. The selecting highlight will be on “Start Race”. Pressing the button will load the program for a two-lap race between two fully powered Can-Am racers equipped with racing slicks. The race will take place on a track named Demo. (Note: You may be prompted to insert side 2 of the game disk when you choose the “Start Race” option. If you do, simply take the game disk out and turn it over, then put it back in the drive and press the button again.)

If you are racing against the computer (in the one-player game) you’ll see a message saying that the computer is testing the jumps. You may stop the analysis and start the race by pressing the key named in the message. If you do so, the computer will not be smart about the right speed for the jumps (or the right direction at the forks, if the track has any) until it has driven several laps around the track.

Once the race starts it will proceed until both cars have crossed the finish line or until you press the “restart race” key listed on the reference card. In either case, you’ll get the chance then to say whether you want to try that race again or return to the racing menu.

HOW TO DRIVE

The red car uses the top window and is always under joystick control. The yellow car uses the bottom window and is under computer control in one-player games and joystick control in two-player ones.

Moving the stick forward is like stepping on the gas. Moving it back is like stepping on the brake. Moving it to the right points the car toward the in-car driver’s right, and moving to the left points the car toward the in-car driver’s left. If a lane exists on the side the car is pointing toward, the car will move into that lane.

Think of the track as a slot racing set. As long as you steer straight ahead, your car will stay in its slot unless until you try to go too fast through a turn or across certain jumps, or until you are interfered with by another car.

Practice controlling the car at first without worrying about wrecks. At the “Normal” difficulty level setting, and with the “Racing/Destruction” option set on “Racing”, wrecks have no effect on a car’s performance. Take advantage of this safety net to learn how to drive and how to memorize the track.
CHOOSING DIFFERENT LEVELS AND OPTIONS

Selecting "Set Options and Level" from the racing menu produces a new menu. The options it contains allow you to set the difficulty and complexity of the game and to choose among 4 different background graphic sets.

Use the joystick to move the highlight up and down from option group to option group in the left column and back and forth among the options within each group. When you have the settings you want, move the highlight up to "Exit" and press the button.

What Each "Difficulty Level" Setting Means

Normal - The vehicles are invulnerable in regular races and very durable even in destruction contests. This is the level the program begins with each time you start it up.

Advanced - The vehicles are much less durable. Running into the sides of the track or into other vehicles reduces power and speed. Vehicles can be damaged so badly that they will no longer run. If one car ceases to run, the other is declared the winner as soon as it crosses the finish line, regardless of what lap it is on. If neither car is able to do even this, press the "restart race" key listed on the reference card.

Severe - The tracks have no safety walls. Enter a turn or take a jump too fast and you'll leave the track - permanently. At this level, you can literally run your opponent off the track. And land mines are always fatal.

Using "Computer Vehicle" to Handicap the Computer Opponent

At the Pro level, the computer will drive the straightaways at the top speed available for its vehicle. At Expert level, its top speed will be 10 mph less than that, and at Novice level, its top speed will be another 10 mph slower. When you start the program, this option is always set on Novice.

Using "Rules" to Choose Destruction

Racing - The goal is to complete the required number of laps (shown by the number on the starting spot) before your opponent does. If one vehicle stops running altogether, the other may win simply by crossing the start/finish line one more time. This is the setting the program will always start with.

Destruction - The goal is still to complete the required number of laps before your opponent does, but you may now more actively interfere with his progress. As in Racing, if one vehicle stops running altogether, the other may win simply by crossing the start/finish line one more time.

In Destruction contests, vehicles may carry armor to increase their durability and crusher capability to increase the damage they can do by running into others. They may also carry either land mines or gallons of oil (for laying down oil slicks). If you're carrying land mines, pressing the button while traveling on a flat section of track drops one of them. If you're carrying oil, it drops some of your oil.

The Can-Am racers in place when you start the program are each carrying 9 gallons of oil. For details about how to change to land mines or to add armor and crusher capabilities, see Choosing and Modifying Vehicles below.
Using "Gravity" to Liven Things Up (& Down)

There are 14 possible settings ranging from a low of the moon (1/6 of Earth's) to a high of Jupiter (2½ times Earth's). No more than 4 of these possibilities may be displayed at once. To scroll new possibilities into view, move the joystick right or left. The starting setting for the demo track is Earth.

To get a feel for the range available, use a track with jumps (Demo will do) and try the Can-Am racers, first on moon gravity and then on Jupiter. On the first setting, you should be able to learn to time the steep jump on the Demo track so that you completely clear the icy stretch below it. At Jupiter weight, on the other hand, you'll find it hard to clear a single jump without rolling the car.

Setting the Number of Laps

You may pick any number from 1 to 9. The program will keep a separate lap count for each vehicle during the race. Each time you cross a start/finish piece, your count will decrease by 1. The demo track is set for a 2 lap race.

Choosing Background Graphics

There are 4 different background graphics possibilities to choose among. Any background may be used with any track and vehicles. Experiment to find the combinations you like best. The demo track is saved with the Motox background ("Motox" is a shorthand way of writing "motocross").

CHOOSING AND MODIFYING VEHICLES

Selecting "Choose or Modify Vehicles" from the racing menu, or "Vehicle Selection" from the main menu, brings up the vehicle menu.

Using the "Choose/Customize" Options

Select the "Choose/Customize Red Car" and "Choose/Customize Yellow Car" options to produce the basic car design screen. When that screen appears, move the joystick up and down to move the highlight among the first seven entries. Move it from side to side to change the selected entry. When you have all entries the way you want them, press the button to return to the vehicle menu.

The first three items in the car design screen - vehicle type, tire type and engine size - are important to both racing and destruction games. There are 10 different vehicles, each with its own set of engine size and/or tire possibilities. As you use the joystick to flip through the possibilities, watch the bottom of the list for changes in traction, weight, top speed and acceleration which appear in response to the different choices.

The changing numbers tell you how the vehicle will behave on different surfaces (the higher the number the better the traction) and how it will react to your joystick commands (the higher the acceleration, the quicker you can get to full speed). The weight is given in Earth pounds.

Use these settings to create challenges for yourself - give the pro computer driver a Can-Am with a 5000cc engine, then try to beat it with a 3000cc one, for instance - and to handicap things so a strong driver and a weaker one can still have an exciting contest against each other.
Notice also that different vehicles are better suited for different types of courses. The bikes for instance cannot roll backwards easily. (They may only go backwards as fast as their riders might walk while carrying them.) If they don’t make it over a hill, they have a tough time getting back far enough to make another run at the climb.

The second group of choices in the vehicle design screen – land mines, oil gallons, armor and crusher – are important for the destruction game. If destruction is not the selected game, the entries shown in this group have no effect (other than the effect additional weight may have on your acceleration).

Armor protects a vehicle from crash damage. A crusher delivers more damage when ramming an opposing vehicle. Both add weight to the car, sometimes to the detriment of acceleration. Up to 5 layers of armor and 7 of crusher power can be carried per vehicle.

Land mines and oil slicks can be dropped by pressing the joystick button. Up to 4 land mines or 9 gallons of oil may be carried per vehicle, depending on the vehicle.

HINT: When racing, do everything possible to avoid running into land mines. They cause great damage and loss of time. And remember where you drop them. It’s embarrassing, not to mention painful, to run into the ones you dropped yourself.

Using a Data Disk to Store Customized Vehicles

The save and load vehicle options require a separate data disk. The first time you use the disk, select the format disk option and follow the instructions as they appear on the screen. This will erase any data already on the disk, and it will prepare the disk for use with the Racing Destruction Set program.

When you save vehicles to disk, an opening will appear at the bottom of the screen for you to type in a name for the vehicle. Names may contain only numbers and lower case letters and may be up to 10 characters long. If you change your mind about saving, just erase any characters you’ve typed (use the delete key) and press Return.

When you select “Load Vehicles from Disk” and follow the on-screen instructions, a list of previously saved vehicles will appear. Move the highlight to the name you want and press the button to select it. Similarly, select “Delete Vehicle from Disk” to bring up the list so you may highlight and select the name of a vehicle you wish to erase from the disk.
CHOOSING A DIFFERENT TRACK

There are 50 tracks (including Demo) stored on your Racing Destruction Set game disk, and you can make and save as many more as you like. Selecting "Track Selection" from the main menu or "Choose or Modify Track" from the racing menu brings up the track menu.

The load, save, delete and format options work just as those described above for vehicles. Tracks and vehicles may be saved on the same disk.

Loading a track also loads in the gravity, lap number and graphics settings which were in effect at the time the track was saved. It does not change the settings in place for difficulty level, computer vehicle or rules.

When you choose Start Race with a freshly loaded track, the program first scans the track, converting the track information into the form it needs for the race. When the process is finished, the race will start. On very complicated tracks, like Killer for instance, this process can take more than a minute.

For a complete annotated listing of the 50 tracks on the game disk, see page 7.

For a description of how to use the Construct/Edit Track option, see the next section.

BUILDING AND REBUILDING TRACKS

Selecting "Track Construction" from the main menu of "Choose or Modify Track" from the racing menu brings up the track menu. Selecting "Construct/Edit Track" from that menu produces the track construction screen.

Laying Down Track

The track layout currently in memory is displayed in the upper left hand corner of the screen, and the track parts box is displayed to the right. To select a track piece, move the blinking cursor over a track section, in either the track layout or the parts box, and press the button.

While a track section is selected, its name, an enlarged picture and several control bars appear on the screen. Moving the cursor anywhere in the track area and pressing the button lays down a copy of the selected section. If a section is already there, the new piece replaces the old one.

IMPORTANT: A piece remains selected until you move the cursor out of the track area and press the button. If an enlarged track section picture is visible, pressing the button while the cursor is in the track area will lay down a copy of that section. Think about where the cursor is and what you want to do before you press the button.

To erase a track section, select the blank piece at the lower right hand corner of the parts box and lay it down on top of the pieces you want to erase. To erase everything and start over, move the cursor to the word Clear and press the button. When you've built a complete circuit, use the same process to select the word Exit.
Modifying Track Pieces

To activate the track modification control bars, move the cursor to the word Modify and press the button. When cursor control moves to the control bars, moving the joystick right or left moves the cursor from bar to bar, moving it up or down moves the selected line (or line portion) within the bar. The corresponding change in the track section is reflected in the enlarged drawing.

You may change the width, height and surface area of most of the pieces. A few pieces, described below, offer special modification possibilities. When you've made all the changes you want for a piece, press the button. The cursor will move to the track area, primed to lay down the modified track piece when the button is pressed again.

Special Track Pieces

The four pieces in the top row of the parts box, and the two pieces in the middle of the bottom row, offer special modification opportunities.

The first two pieces in the top row can be made into **jumps** and can be used to make a gradual, matching transition between two other pieces which have different heights. The second two pieces allow **variable width** settings and are useful as driving challenges and as bridges between two pieces with different widths. The middle two in the bottom row are **start/finish** pieces. You may set their height and surface, but not their width.

A track must have a start/finish piece with vehicles on it or it cannot be raced. You may use the vehicles control bar to start the race in either direction, or to start the two cars so that each must run the course in the opposite direction from the other (setting up a head-on collision possibility out there somewhere).

You can also set the start/finish piece so it has no cars. This is useful for producing special track arrange-ments like the one called "dragrace". That track is circular (all track pieces must always be connected on both ends to other track pieces), but only the straight-away portion between the two start/finish pieces is actually used in the race. The lower start/finish piece contains two cars. The top one contains no cars. The lap count is set to 1. The result is a race that moves from bottom to top between the two start/finish pieces.

Handling the "These Pieces Don't Match" Message

Adjacent pieces must match in height and width where they touch each other. If you put down a piece which doesn't match the one(s) you're joining it to, a message will appear at the bottom of the screen. If you want to go ahead and put the new piece down and then make an adjustment in the old one(s) to create a match, just select Drop with the cursor and press the button. On the other hand, if you know what the problem is and can solve it by changing the piece you are in the act of dropping, select Modify. Then make the changes needed to create a match and lay down the modified piece.
If you don’t fix all the mismatches before you select Exit, the program will alert you with a noise and a message and will flash the cursor at the problem point. (Note: Pieces connected to nothing are considered to be mismatched. All pieces must connect to at least 2 other pieces.)

When you get a “these pieces do not match” message, move the cursor over one of the mismatched pieces and press the button. Look carefully at the height and width settings on the end where the two pieces join. Next move the cursor out of the track layout area and press the button. Then move it over the other mismatched piece and press the button to look carefully at its height and width setting. Finally, select Modify and make the change(s) necessary to fix the mismatch, or move off the track layout area and press the button, then move back and modify the other piece.

If selecting Exit causes only one piece to be identified as mismatched, you will need to check and modify the connections between that piece and the pieces it joins with at both ends.

**Trying Out a Track and Saving Your Work**

When you believe you have a track with a start/finish line and completely connected matching pieces, select Exit. If there are no mismatches, the track menu will return and you can try out your new track by selecting Set Options and Race. But you might want to use the Save Track to Disk option first to keep from losing any work (power failures can happen).

When you select the Save Track to Disk option and follow the on-screen instructions, a space will open up into which you can type a name for your track. If you type in a name already in use, the new version will replace the old one. You may use the same disk for saving track and vehicles. For more information, see the “using a data disk” section on page 4.

**INVENTORY OF PRE-BUILT TRACKS**

demo – Mostly pavement. Earth gravity. 2 laps. Several jumps, one crossover. Tough on bikes and on underpowered vehicles.

**TRACKS WHICH ARE SHAPED LIKE THEY SOUND**

dirt8 – A figure 8 on dirt. Lots of Friday night midwestern duels have been settled on layouts like this one. Be sure to pay attention to your tire section when you pick your vehicle.

bige – Shaped like an e. Lots of jumps. Pavement.

snake – And a mean snake at that. Every kind of surface and tons of jumps. Great workout for a pickup or a jeep.

clover – The classic cloverleaf with a few twists – like four crossovers in the center, plus lots of jumps and two maniacs driving through the intersections at breakneck speeds. Pavement.

spiral – A mixture of a lot of turns and short jumps. Pavement.

**TRACKS WHICH DRIVE LIKE THEY SOUND**

jumps – There aren’t that many jumps here, just big ones. Don’t start out at low gravity and severe level unless you just enjoy watching crashes. Pavement.

headon – A track virtually guaranteed to aim the two drivers directly at each other somewhere in the race. Pavement, so the collisions will take place at high speeds.

roundabout – No matter which way you go at the forks, you’re guaranteed not to have to drive any further than your opponent. If you change the number of laps for this one, be sure to change to another even number. Pavement.
whichway - There are seven different routes in this one. All but 2 are the same length. Those 2 are shorter. They are also meaner. Every route, in fact, has its disadvantages. You pays your money and you takes your chances. Pavement.

destruct - The shortest track you can build with the construction tools. So you don’t have to go so far to find someone to run into. A completely elevated paved track.

tiger - A much longer set of opportunities to run into your opponent, 16 in fact. A total of 15 crossovers and a loop. Pavement.

variety - Lots of turns, several crossovers and plenty of jumps on a mostly paved surface.

killer - Lots of everything on every surface. Good luck.

supercross - Modeled on the one they set up in the L.A. Coliseum. All dirt. 5 laps. Lots of jumps and bumps plus two killer corners. Get out the dirt bikes, the baja bugs, the jeeps, whatever can take some punishment.

dragrace - Pavement. Just what it says it is. See page 6 for an explanation of how it was made.

**FAMOUS TEST TRACKS**

Here are three tracks modeled on ones designed to put hot cars through their paces. Use them to test your driving skills.

**fiorano** - Enzo Ferrari’s little backyard race course. Home of more world champions than any other track. One crossover. A great place to learn how to drive road racing courses.

**weissach** - Porsche’s test track, and if it’s good enough for them . . .

indy - Just a simple gruelling oval.

**THE GRAND PRIX CIRCUIT**

These are all modeled after some of the famous European and American tracks where the world driving champion earns the right to his title. From buenosaire[s] to watkinsgle[n], they are listed in the order they were driven during the 1979 World Driving Championship competition. Pavement, no jumps, Earth gravity, 5 laps. A good place for Can-Am and Gran Prix vehicle duels.

**buenosaire[s]** - Buenos Aires, Argentina. Site of the Argentine Grand Prix.

**kyalami** - Johannesburg, South Africa. Site of the South African Grand Prix.

**longbeach** - Long Beach, California. Where they actually had Formula I races on city streets. Lots of turns. Notoriously hard on brakes.

**jarama** - Near Madrid, Spain. Site of the Spanish Grand Prix.

**zolder** - Near Hasselt, Belgium. Site of the Belgian Grand Prix.

**monaco** - In Monte Carlo. The most famous of all the Grand Prix courses. Generally considered by those competing for the world championship to be the toughest challenge.

**dijon** - Near Dijon, France. One of the French Grand Prix courses. Half of those currently competing on the circuit got their start here.

**silverston[e]** - Near Towchester, Northamptonshire, England. One of the British Grand Prix courses. Just about any kind of pavement vehicle you can name has been raced on this layout.

**hockenheim** - Near Heidelberg, Germany. One of the German Grand Prix sites.
**AMERICAN ROADRACE COURSES**

A Selection of IMSA (International Motor Sport Association) and SCCA (Sports Car Club of America) and NASCAR (National Association of Stock Car Auto Racing) courses from across the country. Can-Am, Gran Prix, Street Bike and Stock Car will all feel at home on these.

**willowsprings** - Rosamond, California.

**daytona** - Daytona Beach, Florida. Home of a famous 24 hour endurance race. One of the best motorcycle road races in America is held here.

**riverside** - Riverside, California. One of the only places the NASCAR drivers have to think about turning right.

**searspoint** - Sonoma, California. Famous especially for the motorcycle races held here.

**roadamerica** - Elkhart Lake, Wisconsin.

**midohio** - Lexington, Ohio.

**roadatlanta** - Atlanta, Georgia. Paul Newman has won here.

**brainerd** - Brainerd, Minnesota. Not far from the source of the Mississippi. Use the track construction option to turn the surface to ice and you'll see why they don't race here in January.

**charlotte** - Charlotte, North Carolina. When the NASCAR boys race here, they turn it into a circle.

**lagunaseca** - Monterey, California. Jewel of California road racing. Site of the famous corkscrew.

**limerock (park)** - Limerock, Connecticut.

**cleveland** - Cleveland, Ohio. Where they use the Burke Lakefront airport for Indy style car races.