* * * * FORMULA 1 RACING * * * *

By Sid Meier
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FORMULA 1 RACING is a joystick game which tests your nerves, driving skill, and racing tactics. Your race car competes against three computer controlled cars with the final elapsed time determining the winner. Features include:

- Five different race tracks
- Four skill levels
- Day or night racing
- Oil slicks and trees
- One to ten lap races
- Indivdiual lap times for each car
- Fully scrolled race course
- Realistic gear shifting and acceleration

PROGRAM SPECIFICATIONS

FORMULA 1 RACING will run on an Atari 400/800 microcomputer with 32K RAM equipped with the Atari BASIC Language Cartridge, Atari Joystick controller and one Atari 810 DisK Drive.

LOADING THE PROGRAM

1. Make sure your BASIC Language Cartridge is in the left cartridge socket.
2. Turn on your disk drive and insert the game diskette.
3. Power up your computer and turn on your video screen. (If you were running another program previously, it is advisable to turn your computer off and back on at this point to clear the computer's memory so it will not interfere with this program.)
3. The program will load automatically. After a short pause, the game will begin. Leave the disk drive turned on and the game diskette in the disk drive as the game accesses the disk at various times.

GAME OPTIONS

The first screen allows you to select the desired game options. This screen displays the game title followed by a list of the race tracks available. See the "Race Courses" section for a description of each track. Type the number corresponding to the track upon which you wish to race, it is not necessary to press RETURN. This number should be between one and five. If your request is understood, the computer will respond with a brief graphic display. If this display does not appear, try entering the track number again.

The computer next lists the difficulty options which you may select. Four options are available, ranging from Amateur (1) to Championship (4). The difficulty level influences the speed and skill which the competing race cars exhibit. Amateur competition is relatively slow (although still difficult until you learn how to keep your car on the track) while Championship competition is quite challenging. Your response will be acknowledged in the same manner as the first prompt.

The final selection displays the number of laps in the race and a request to depress the START, SELECT, or OPTION keys. The OPTION key selects the night racing option. When the night racing option is selected the screen background will turn black. Depressing the OPTION key again returns you to day racing. Depressing the SELECT key increases the number of laps in the race. If you reach ten laps, pressing the SELECT key again will select one lap.

The start key causes the game to begin. There will be a short pause as the necessary information is retrieved from the disk. Following this a section of the race track including the Start/Finish line is displayed along with your car and your competitors. Your car is black in the day racing option and white in the night racing option. All races begin with the cars stopped and facing to the left of the screen. You will hear three warning sirens and the race will begin.

THE GAME DISPLAY

The text at the top of the screen provides you with the following information:

Lap number - The lap which you are currently on. When you complete all the laps selected, the race is over.

Time - The elapsed time since the race began.

Gear - The gear which you have engaged. The gear number and the RPM value are displayed together, separated by colon (:). Your car has five gears numbered 1-5. Lower gears are used for low speeds and improved turning and acceleration. Higher gears are used for high speeds.

RPM - Revolutions per Minute: the rate at which your engine is turning. This is also reflected by the pitch and volume of your engine noise.

The remainder of your screen shows that portion of the race track upon which you are driving. The dark portions of the track are oil slicks which may cause your car to veer sharply left or right if you drive over them. The dark green areas scattered around the course are trees. Coming in contact with a tree ends the race immediately. Driving off the course will slow your car considerably, but you may return to the track at no additional penalty (although you may have to shift to a low gear to accomplish this).

The three other cars on the screen are your opponents. You will be judged by how well you perform against them. If you fall too far behind them (or get ahead of them) they may not appear on the screen. Do not worry, they are still around and will reappear if you catch up to them (or they catch up to you).

You may terminate the race at any time by holding down the START key.

DRIVING YOUR RACE CAR

In order to skillfully drive your car you must learn to steer, accelerate, shift gears, and brake. All these functions are controlled via the Joystick Controller.

Steering means controlling the direction in which the car is progressing. Holding the Joystick to the right will cause the car to turn to the right, holding the Joystick to the left will cause the car to turn to the left. "Left" and "Right" are relative to the direction in which the car is headed, not the left and right sides of your TV screen. The car will not turn immediately and the rate of turn depends upon the gear engaged. Your car turns more readily in a lower gear than a higher gear.

Acceleration is accomplished by pushing the Joystick forward. This will increase the engine RPMs and the car's speed (like stepping on the gas). However, your engine cannot exceed 12,000 RPM. If you wish to accelerate further you must shift to a higher gear.

Gear shifting is controlled by the Joystick trigger and the Joystick itself. If you wish to shift to a higher gear ("upshift") you must depress the trigger and hold the joystick momentarily in the center position, your RPM must be above 10,000 to upshift. If you are successful, you will hear the pitch of the engine decrease as will your RPM, your speed is not changed. To shift to a lower gear ("downshift"), depress the trigger and pull back on the Joystick, your RPM must be below 7,000 to downshift. The pitch of the engine will increase as you downshift.

Braking is accomplished by pulling back on the Joystick. This causes your RPM and speed to decrease.

The steering commands can be combined with the acceleration, gear shifting, and braking commands. Example: if the Joystick is pressed forward and to the right, your car will accelerate and turn to the right.

RACING TACTICS

Your success as a Formula 1 racer will be determined by two factors: your ability to obtain the maximum speed from your own car, and your ability to pass and remain ahead of the opposing cars.

To obtain the maximum speed from your car you must learn to accelerate, brake, corner, and shift gears quickly and smoothly. This requires practice. Shifting is best accomplished by pressing the trigger first, then quickly bringing the joystick to the desired position. Be sure to combine steering and acceleration/braking whenever possible. Many of the principles of real automobile racing apply: the quickest way to take a corner is to maintain your speed as long as possible, then brake sharply and downshift going into the turn. If you have timed your move correctly your car should be able to accelerate through the turn and exit rapidly onto the next straightaway. If you didn't, you will probably end up in the grass (or in a tree). Corners can also be taken faster if you begin near the outside of the track. Fifth gear should be reserved for very fast sections of the track only, as quick steering becomes difficult. If you do find yourself off the course, shift to a low gear to gain maximum acceleration.

Normally, your opponents will be able to accelerate away from the start line a little more rapidly than you. Therefore, in order to win, you will have to learn how to pass them. In passing, you must try to avoid contacting your opponents, as this usually causes your car to change directions drastically. Patience is generally rewarded; on each track there are a number of places which are preferred passing spots. Generally these are long straightaways on which you out-accelerate your competition, or curves where, by waiting until the very last minute to brake, you can slip by them as they slow down for the corner.

These are only suggestions. As your skill improves you will no doubt develop your own ways of sliding around the hairpin turns or passing your opponent while roaring down the final straight.

THE RACE COURSES

INDY The four cornered Indianapolis track is recommended for beginners. Try to come out of the starting line as quickly as possible. You should be able to maintain a fairly high rate of speed on this oval, but be careful taking the corners in fifth gear: fourth is recommended.

MONZA This Italian Gran Prix course has its share of challenges (watch out for the trees!). A prime passing spot is down the long diagonal straightaway, but be careful of the chicane and oil slick. Try to maintain as much speed as possible on the broad final turn, you'll need it in the dash for the finish line.

Watkins Glen This American Gran Prix course is long and varied. Note particularly the sharp hairpin turn at the far right and the long divided straightaway. Don't get too greedy on the straight or you'll run off the end. The quick "S" turn near the end (right and then left) is a good passing spot if you line yourself right.

MONACO This course is famous for its narrow track and tight turns. Rapid acceleration and accurate gear selection are required to win here. Passing room is hard to find and one slip can easily force you off the course. Recommended for experienced drivers.

KILLER This fictional course has it all. Pay special attention to the two crossovers, the treacherous "Tight Squeeze," the labyrinth garden section, and the numerous oil slicks (poor maintenance!). Sorry I can't help you with this track, but if you can win at championship level you deserve your own silk scarf and goggles. Good Luck.

RESULTS

The final screen displays the results of the race. For each lap completed, the lap time will be displayed, along with the total time. If a car did not finish, its total time will be estimated and flagged with an asterisk (*). Your finishing postion will also be indicated. To race again, press the START key.

RESTARTING THE GAME

Under normal circumstances it should not be necessary to restart the game other than by use of the START key. If it does become necessary, we recommend that you turn off the machine and repeat the initial loading instructions.

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SUMMARY OF USEFUL INFORMATION

1. Load the program, with Basic cartridge. The disk loads automatically.

2. Select the race track: type a number from 1 to 5. Do not press RETURN.

3. Select the skill level: type a number from 1 to 4. Do not press RETURN.

4. Use OPTION to select night racing.
   SELECT to select number of laps.
   START to begin the race.

5. To accelerate - push the Joystick forward.
   Brake - pull the Joystick back.
   Turn - hold the Joystick right or left.
   Upshift - press trigger, center joystick. RPMs must be above 10,000.
   Downshift - press trigger, Joystick back. RPMs must be below 7,000.

ABOUT THE AUTHOR

Sid Meier is a 28 year old resident of Baltimore, Maryland. By day, he works as a computer systems analyst, by night, a rock and roll keyboard player in a local band. Sid acquired his Atari two years ago and has been writing games ever since. FORMULA 1 RACING was written over a two month period as an attempt to combine fine scrolling with character graphics. The game was extensively play-tested by his co-workers and friends. Their suggestions improved the game considerably. Sid is currently working on additional games which take advantage of other unique strengths of the Atari computer. His dream is to write the ultimate strategy game and to develop a music composition system.

ACORN is looking for other imaginative programs and programmers for the Atari like Sid. You do not have to have experience in the publishing of programs, just a well executed idea that will appeal to a wide audience. If you have a program that compares favorably in imagination, execution and challenge, **ACORN** wants to hear from you.

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