



POWERPLUS

MICROPROSE FORMULA ONE GRAND PRIX
BY GEOFF CRAMMOND

MICROPROSE

IMPORTANT. PLEASE READ THIS!

MANUAL CONTENTS

- This manual contains all documentation necessary to play the enclosed game.
- This manual contains instructions for Amiga, PC 3.5" DOS and PC CD-ROM. You will have to locate the correct documents for your Format of game.
- The technical supplements, key guides etc will all be found at the front of the manual.
- Please ignore ALL other references to the contents of your game package.
- Some copy protection routines may no longer apply. In this case please ignore all reference to manual copy protection.

POWERPLUS TECHNICAL SUPPORT

Tel: UK 0454 329510

FAX: UK 0454 329507

Powerplus is published by MicroProse Ltd. Distributed under licence by Digital Integration Trading, Watchmoor Trade Centre, Watchmoor Road, Camberley, Surrey GU15 3AJ.

IMPORTANT. LISEZ CE QUI SUIIT!

CONTENU DU MANUEL

- Ce manuel contient toute la documentation nécessaire pour jouer au jeu ci-inclus.
- Il contient les instructions pour Amiga, PC 3.5" DOS e PC CD-ROM. Vous devez vous référer aux documents correspondant au format de votre jeu.
- Les suppléments techniques, guides clavier, etc, se trouvent au début du manuel.
- Veuillez ignorer TOUTE autre référence au contenu de votre boîte de jeu.
- Certaines procédures de protection contre la copie ne sont peut-être plus valables. Dans ce cas, veuillez ignorer toute référence à la protection contre la copie basée sur le manuel.

SOUTIEN TECHNIQUE POWERPLUS

Tél.: (1) 48 570554

Powerplus est publié par MicroProse Ltd. Distribué sous licence de Digital Integration Trading, Watchmoor Trade Centre, Watchmoor Road, Camberley, Surrey, GU15 3AJ, R.U.

WICHTIG! BITTE SORGFÄLTIG DURCHLESEN.

INHALT DES HANDBUCHS

- Dieses Handbuch enthält alle Informationen, die Sie zum Betreiben des beiliegenden Spiels benötigen..
- Sie finden darin Anleitungen für den Amiga, den PC mit 3,5"-DOS-Disketten und PC mit CD-ROM. Bitte suchen Sie sich die entsprechenden Unterlagen für Ihr Spielformat heraus.
- Die technischen Begleithefte, Tastaturübersichten etc. finden Sie vorne im Handbuch.
- Ignorieren Sie bitte ALLE anderen Hinweise, die sich auf den Inhalt Ihrer Spielpackung beziehen.
- Einige Kopierschutzvorgänge gelten möglicherweise nicht mehr. Ignorieren Sie in diesem Fall bitte alle Hinweise zum Kopierschutz in diesem Handbuch.

POWERPLUS-KUNDENDIENST

Tel: 05241/9464-80

Fax: 0524/9464-94

Powerplus wird von MicroProse Ltd. herausgegeben. Vertrieb unter Lizenz von Digital Integration Trading, Watchmoor Trade Centre, Watchmoor Road, Camberley, Surrey GU15 3AJ, GB.

MICROPROSE
GRAND PRIX
FORMULA ONE GRAND PRIX

Commodore Amiga

WARNING!

The disk drive fitted in your Commodore Amiga may have difficulty when attempting to load the simulation after the opening title sequence is completed.

If you encounter this problem, leave the disk in the drive and press the "Control" key, the right "Amiga" key and the left "Amiga" key simultaneously, immediately after the opening title sequence.

The simulation will then load.

Please call MicroProse Customer Services on
UK 0666 504329
if you require any further assistance.

MICROPROSETM
SIMULATION • SOFTWARE

BOOT DISK PROCEDURES FOR MS-DOS & CD-ROM DRIVERS

Dear MicroProse Customer

Thank you for purchasing a MicroProse game for your software collection. In order to solve your current memory related problems please follow the instructions on the following pages to create a special system boot disk

IMPORTANT: In order to maintain 100% compatibility please ensure that you are using a Microsoft mouse driver, MOUSE.COM v8.20 or higher.

1. Place a blank high density disk in drive A: and type;

```
format a: /s <enter>
```

2. Now type,

```
edit a:config.sys <enter>
```

3. Now type,

```
device=c:\dos\himem.sys
device=c:\dos\emm386.exe 2048 ram i=e000-efff
dos=high,umb
files=30
buffers=10
:CD ROM DRIVER LOADED ON THIS LINE*
stacks=0,0
```

* In order to access your CD ROM drive, one must modify this line to load the relevant CD ROM driver into upper memory. Please refer to the attached sheet for help on doing this.

NOTE: Users of MS-DOS 6.0 may wish to use this alternative line instead:

```
device=c:\dos\emm386.exe ram highscan i=e000-efff
```

4. Save this file by pressing ALT, then F, then X, then ENTER.

5. Now type

```
edit a:autoexec.bat<enter>
```

6. Now type,

```
prompt $p$g
path=c:\dos;
: CD ROM DRIVERS LOADED ON THIS LINE*
loadhigh c:\dos\mouse.com**
c:
mem
```

* In order to access your CD ROM drive, one must modify this line to load the MSCDEX.EXE program into upper memory. Please refer to the attached sheet for help on doing this.

** If your mouse driver, is not located in the DOS directory then simply change this line to point to the correct directory. Your MS-DOS manual can help you if you are unsure about doing this.

7. Save this file by pressing, ALT, then F, the X, the ENTER.

8. The boot disk is now ready. Leave it in drive A: and reboot the computer.

TIPS FOR CD-ROM USERS WHEN MAKING A BOOT DISK

Creating a system boot disk for your computer using a CD-ROM driver can be a little tricky because of a lack of a standard driver name. In other words, for each brand of CD-ROM drive, there is a different set of commands that you will have to use in the CONFIG.SYS and AUTOEXEC.BAT files.

Below is a list of the most common drivers, however if your CD-ROM drive is a different brand, or the following commands do not work (some brands have different models) please refer to your CD-ROM drive documentation on how to load the drivers for your particular CD-ROM drive. Note that these are mainly examples. Please check your current configuration for the exact line details.

• THE CONFIG.SYS file •

You must load the vendor-specific driver for your drive in the CONFIG.SYS file

The MediaVision (Pro Audio Spectrum) CD-ROM will use the following lines:

```
devicehigh=c:\proaudio\tslcdr.sys /d:mvcd001 /r /s:31  
devicehigh=c:\proaudio\mvsound.sys d:l q:7
```

The Creative Labs (Soundblaster) CD-ROM uses this line

```
devicehigh=c:\sbpro\drv\sbpcd.sys /d:mscd001 /p:220
```

The NEC CD-ROM drives use this line:

```
devicehigh=c:\scsi\neccdr.sys /d:neccd
```

The Sony Laser Library CD-ROM will use this line:

```
devicehigh=c:\laserlib\sony_cdu.sys /d:sony_001 /b:340  
/q:* /t:* /m:h
```

• THE AUTOEXEC.BAT file •

You must load the Microsoft CD-ROM driver, MSCDEX, in the AUTOEXEC.BAT file

The MediaVision (Pro-Audio Spectrum) CD-ROM uses this line:

```
loadhigh c:\proaudio\mscdex.exe /d:mvcd001 /L:d  
/m:8 /v
```

The Creative Labs (SoundBlaster) CD-ROM drive will use the following lines:

```
set sound=c:\sbpro  
loadhigh c:\sbpro\drv\mscdex.exe /d:mscd001 /L:d /v
```

For the NEC CD-ROM drives add the following line:

```
loadhigh c:\scsi\mscdex.exe /d:neccd /m:8 /L:d /v
```

For Sony Laser Library CD-ROM drives add the following line:

```
loadhigh c:\laserlib\mscdex.exe d:  
sony_001 /L:e /m:8 /v
```

If your computer has more than 2Mb of RAM you may add the parameter */e* to the end of the MSCDEX line. This will help conserve precious conventional memory.

MS.DOS 6.0/6.2/6.21 users should load MSCDEX.EXE from the DOS directory instead eg,

```
loadhigh c:\dos\mscdex.exe d:mscd001 /L:d /v
```


MICROPROSE FORMULA ONE
GRAND PRIX

TECHNICAL SUPPLEMENT
For IBM PC and compatible computers

Contents

Required Equipment

Your *Grand Prix* package should contain a manual, this technical supplement, a set of 5.25" or 3.5" disks and a registration card.

Computer: The game requires an IBM PC 286 or better or a computer 100% compatible with this model. The game requires 1 Megabyte of RAM to run. *Grand Prix* will utilise faster chip speed, additional RAM and EMS if you have these options available. Please see the "Memory Management" section on page 1 for more information. You will also need Microsoft DOS version 5.0 or higher.

The computer must have a high density floppy disk drive and a hard drive. You will need about 6 Megabytes of free hard disk space to install the game and intro sequence. However, you can save hard disk space by skipping the installation of the intro (about 3.2 Mb required) and the in-game animations (about 2 Mb) required.

Controls: The game can be run from mouse, joystick, keyboard or a selection of all three.

Display: The game requires a monitor with a VGA/MCGA graphics system. If you are using a compatible graphics card/monitor, it must be 100% hardware compatible to one of the above.

Disk Drives: *Grand Prix* must be installed onto a hard disk.

DOS: You must have IBM PC-DOS or Microsoft MS-DOS version 5.0 or higher.

Memory
Management

You will also need about **600,000** bytes of **Base Memory** available to run the program. If the game fails to run properly your machine's memory is probably not configured correctly.

The easiest way to temporarily configure your machine correctly is to make the GPRIX Directory current and type 'BOOTMAKE' from DOS.

To use your boot disk, insert it and reset the computer.

The game will use either EXTENDED memory (made available via HIMEM.SYS), EXPANDED memory (via add on boards or EMM386.SYS on 386 or above machines) or create a spill file of 320k ('temp000.tmp') on your hard disc if no extra memory is available. Of the three, extended memory is preferred (it's generally faster than expanded memory) and is tested for first by the program.

EMM386.EXE.

Emm386.exe is the standard DOS 5.0 expanded memory manager.

If you are running Grand Prix on a 286 machine you will have to use the Expanded Memory Driver supplied with your machine.

There are many other 3rd party memory management programs available. *Grand Prix* has been tested with a selection of these.

Copy Protection

Grand Prix has no disk copy protection. This means that you can install the simulation files from the original disks to a hard disk. However, the program asks you a manual-related question. Use the manual to answer the question. MicroProse regrets that continuing casual and organized software piracy requires that we retain this minimal form of copy protection.

Installation

An Installation program is included on the *Grand Prix* "Disk A". Insert "Disk A" into your floppy drive (Drive A or B) and designate that drive (by typing "A: [Return]" or "B: [Return]").

When the new prompt appears, type: "INSTALL [Return]"

Please follow the on-screen text which appears. The "Full" installation installs the game and intro. The "Medium" installation only copies the game files and in-game animations. The "Small" installation only copies the game.

Loading Instructions

Boot your machine if necessary and wait until the "C>" prompt appears.

Type "CD MPS [Return]" and then type "CD GPRIX [Return]".

Type "F1GP" to run the simulation and it will begin to load.

If you have installed the program to another directory you must type "CD [Name of your directory]" first.

Sound

The simulation supports the following sound cards:

IBM Sound

This option supports the internal speaker standard on most IBM and compatible computers.

Ad Lib Sound

Only use this option if you have an Ad Lib or 100% compatible sound board installed in your computer.

Soundblaster Sound

Only use this option if you have a Soundblaster or 100% compatible sound board installed in your computer.

Roland Sound

Only use this option if you have a Roland LAPC-1 Sound board installed in your computer.

Enhancements for the IBM PC Version

Important: The IBM PC version of Grand Prix has been enhanced to take account of the powerful processing power and enhanced graphics of these machines.

Many of these program changes have been achieved without affecting the instructions you'll find in the manual. However, you will discover that some things are not documented in the main manual, but are explained below.

The Game Options Menu

The most obvious changes to game options can be seen on the Game Options Menu! You will see the following;

"About F1GP"

"Quick Race"

"Race"

"Game"

"Control Method"

"Startup Files"

"Printer"

"Link"

"Save Options"

"Main Menu"

"Quick Race" allows you to make selections about the track, car, grid position, length and weather for a Quick Race. The "Race" and "Game" selections are the equivalent of "Race Options" and "Game Options" selections described in the manual.

Control Method

Allows you to select between keyboard, mouse, joystick or customised control, to edit the controls and to calibrate an analog joystick.

Start Up Files

Allows you to specify which saved files you want to be loaded as defaults for Driver Names, Car Set Ups and Circuit Records.

Printer

Allows you to specify printer type, port and feeding instructions. You can print out any result screen after a race by selecting "Printer Menu" and then selecting the information set that you want to print out.

It is possible to print results to any IBM compatible printer or to

redirect them to an ASCII file. The printer sub-menu on the Game Options allows you to choose between an IBM printer (with IBM box graphics characters) or any other IBM compatible printer (text only). If in doubt about your printer, try the test print option. Unless you have more than one printer attached to your machine you should select LPT1 as the printer port. It's also possible to send a copy of the grid and/or results tables to a file on hard or floppy disk. To do this select 'File' instead of LPT1-3 on the menu. The files created will be plain ASCII files if you have selected 'other' as a printer type but contain IBM graphics characters if you have selected an IBM printer. These files should be editable in all word processors.

Detail Levels

There are four detail levels which can be adjusted to ensure the faster running of the 3-D landscapes. You can also remove the 'texture' which has been added to the track, by pressing the "T" key. This will allow the simulation to run faster on slower machines.

Gaps between Cars

An additional feature has been incorporated which gives you an accurate gauge of the distance between your car and those in front and behind. It also tells you the drivers' names. By pressing the "G" key during a race, the names will be displayed, along with the last recorded time differences, if available. The time differences are recorded when the cars cross the start/finish line.

Frame Rates and Processor Power/Speed

Because of the wide range of hardware available on the market today this simulation has several custom options to help you get the best performance from your equipment.

Grand Prix will produce similar race times regardless of what type of processor you have, however more powerful machines will have the advantage of being able to use a higher "Frame Rate". This will make the simulation appear smoother and faster, if you wish the default settings may be changed as follows:

A) TEXTURED FILLS.

The keyboard letter "T" will toggle texturing on and off. We recommend this function be turned off for 286 and slow speed 386 machines.

B) FRAME RATE.

Within the "Game options / Game" menu you can alter the frame rate of the simulation; provided your machine is powerful enough this

will provide smoother 3D graphics.

C) PROCESSOR OCCUPANCY PERCENTAGE.

While the keyboard letter "O" is depressed during a race the screen will display the "Processor Occupancy percentage", this figure will fluctuate depending on how much work the processor is doing.

If the % remains well below 100 you may wish to increase the frame rate.

If the % rarely exceeds 100 you are getting maximum performance.

If the % is mostly over 100 you may wish to reduce the frame rate.

A new menu has been added at the very start of the game for those players who want to get straight into the cockpit.

If you select 'Quick Race' at the prompt the program will start a quick race on a chosen circuit. The circuit and its details can be changed from within the GAME OPTIONS / QUICK RACE section as described on page four of the technical supplement.

You will race at Rookie level with all the Help Options switched on. This is a single race and you cannot race a season from the Quick Race option. This option is the fastest way for a player to enjoy the action instantly.

If you select 'Main Menu' you will go into the main part of the game.

When entering a filename you should be aware that the normal MS DOS / PC DOS restrictions apply; i.e. Names must not exceed 8 characters in length, punctuation characters are prohibited, only 1 dot is allowed, this separates the filename from the file name extension.

If you press the + / - keys on the keyboard you can toggle the sound effects on and off. There are two levels of sound effects. If you press the minus key once the first level of sound effects are switched off. If you press it again all sound effects are switched off.

Note: This option only works for Adlib, Roland and Soundblaster sound FX.

A car set-up comprises of the front and rear wing settings, brake balance, race tyre choice and gear ratios. Making changes in these areas are described in detail within the main manual.

Now, in addition to being able to save and load individual car set-

The Start-up Menu

The File Selector

In-game Sound Options

Car Set-ups

ups (from the menu where you actually alter them), you can now create files (from the 'Load/Save Game' menu accessible from the 'Main Menu') which hold your preferred car set-up for each of the sixteen circuits. As you hone each set-up over time, you can add it to such a configuration file and so easily keep track of your most successful configurations.

There is another benefit to using this system. By default, any change that you make to your car set-up for a particular track affects the car's performance in all driving modes when on that track. However, the demands on the car during free practise and qualifying (when the driver is experimenting with such things as the handling of the car and the choice of tyres) are very different to those on the day of the race itself.

More advanced drivers can tell the program to make this distinction by setting the 'Separate Race and Qualifying Car Set-ups' button in the 'Race Options' sub-menu (accessed through 'Game Options' in the 'Main Menu') to 'Yes'.

From then on the program will determine whether any alteration made to a car set-up is a 'qualifying' set-up (made during free practise or qualifying) or a 'race' set-up (made during pre-race practise; you cannot change the car set-up when actually racing), and will record it as such for that track. When you do enter the cockpit the program chooses which set-up to use, based on which class of driving mode you have selected, and configures the car accordingly.

You should note that with this feature enabled, the 'qualifying' set-up will NOT be passed through to the 'race' set-up unless you manually transfer it during pre-race practise.

Steering Sensitivity

A Steering Sensitivity button has been added to the steering control method menu. This is only active if steering help is Off and allows you to set the maximum lock of the front wheels in degrees. This value then corresponds to a full joystick movement. The default is 12 degrees.

The original release used a value of 22 degrees. It was envisaged that an ordinary joystick would not be used without steering help. A large lock ideally requires a steering wheel device capable of spreading the analogue values over a physical movement of about

400 degrees like a real racing car instead of the 50 degree movement of a typical joystick, otherwise the steering feels too sensitive. Even so, a real racing car is still very sensitive in steering compared to a normal road car. It is because typical joysticks make the very sensitive steering of the real racing car approximately 8 times more sensitive that steering help is provided to compensate. However it is apparent from correspondence that some people prefer to learn to control the sensitivity in return for more direct 'feel', the adjustable lock should make it possible to get the best from whatever equipment you have. If you set too small a lock, the steering will feel more controllable but you could have trouble getting round sharp bends or find it harder to 'catch a skid'.

Rudder Pedals

A new sub-menu has been added under Edit Control Method. Switch Joystick Axis is designed for users with rudder pedals, which may only have horizontal (x) potentiometers. It allows the steering to be re-assigned to the vertical(y) axis and the accelerator/brake to be re-assigned to the horizontal(x) axis. In addition, since some pedals could have one pot for each pedal, a further button will assign brake to one axis and accelerate to the other.

Control Method and Game Saves

In version 1.04 you can load a game which was saved whilst using a different control method to the one currently selected and the game automatically allows you to continue to play using the current controls.

Link Modem Play

The major change in version 1.04 is that a new feature, linked play has been added.

What is linked play?

Linking allows you to play on two machines simultaneously. The two machines are connected either via standard Hayes compatible modems using a phone link (called a modem link) or directly via a special cable called a null-modem cable (a direct link).

How to link up the machines

First connect up the necessary cables. In order to use the link you will need to connect the modem or the null modem cable to one of the serial ports on the back of the machine. Most PC's have 2 serial ports, labelled COM1 and COM2. Either port will do, but if you are using a serial mouse then you should leave that port alone and select the other com port.

Having connected the cable, load up the game on both machines. Now from the main menu, go to the Options Menu and select 'link'.

You should see the full screen Link Menu which controls how the link operates.

The Link Menu

The Baud Rate

At the top of the link menu are 4 buttons labelled 2400, 4800, 9600 and 19200. These control the baud rate, which is a measure of how fast data is sent down the serial cable. A fixed amount of data is sent down the cable for each frame of the simulation, so if you wish to play with faster frame rates (for smoother animation and control) you will need a higher baud rate. The downside is that higher baud rates are more error prone, especially with longer or unshielded cables and that, while most modems will communicate with the computer at higher rates, the modem-to-modem connection down the phone lines may not be fast enough (in this case you will see higher than usual occupancy rates in the game).

Link Type

Below the baud rate buttons are two buttons to select the link type. Choose Direct for a null-modem cable between two machines or Modem if you are playing across the phone lines.

Direct Link Lead/Follow

While the link is active, one machine takes control of the menus on both computers and is said to 'Lead', the other machine is said to 'Follow'. For a direct link you MUST set one machine to 'Lead' and the other to 'Follow', otherwise they will not make the connection. For a modem link the machine that does the dialling (and pays the phone bill) is automatically the leader.

Modem Link Dial/Wait for Call

If you are linked by modem over the phone line then one machine must dial up the other, and the other machine must be ready and waiting for a call. You should pre-arrange this (perhaps with a voice call) before try to start up the link. These buttons control how the machine will behave for a modem link.

Modem number to dial

You should type in the phone number to dial on the machine that will initiate the call. The string will be passed direct to the modem so, if your modem supports it, you can use "," to add delays to the dial etc. All the linkup selections are included in your Options file so it's useful to save options before linking.

Modem dial type

This tells the modem to use one of the two dialling methods employed by phone companies. Pulse dialling is much slower than tone dialling so tone dialling is recommended if your phone exchange supports it.

Modem initialisation string.

In order for the game to work smoothly via a modem connection, the mode must be set-up up in a particular way. In order to keep the simulation running in real time it requires the modem to pass the data through immediately and not buffer or compress it as would be needed for a file transfer. Also the game performs its own error checking based on a packet system, so it's recommended that you turn the modem error checking off, as this can also delay data passage. Unfortunately, there is no standard set of commands to do this across all Hayes Compatible modems, we have included sample initialisation strings for some makes below, but if your modem is not included you

may need to look up codes in your modem manual.

In summary, we recommend that you:

1. Turn compression off
2. Turn error checking/control off

On a more technical note, it's recommended (though not essential) that you start the initialisation with the ATZ command to reset the modem. This ensures that it's in a standard state at the beginning and will make linking more reliable. If you need to insert control characters in the modem initialisation string then the sequence ^ + letter will do it. For example ^M will send a carriage return. There no need to insert a ^M at the end of the string as an ASCII 13 is automatically appended.

For example:

Modem type	Sample initialisation string
Courier HST	ATZ&M0&K0
Twincom 144/DF	ATZ&Q6

Hangup/Connect/Exit

Once both machines are set up, you should click on Connect on both computers. If you are connecting via a modem, then you should see the computer initialise the modem and either show 'Dialling' or 'Wait for call'. Once a connection is established then the machines should show 'Starting Link' to the dialler and 'Waiting for link' at the other end. After about a second these messages should clear and the button 'Link is active' appear.

For a direct link, one machine should show 'Starting Link' immediately and the other 'Waiting for Link'. Again, after about a second these messages should clear and the 'Link is active' button appear.

What to do if things go wrong.

- a. For a direct link.

If the machines are showing 'Starting Link' and 'Waiting for Link' but nothing else is happening then you should check:

That you have selected the correct comm port on each machine.

That they are both operating at the SAME baud rate.

If this appears o.k. and still nothing is happening then you may have an incorrectly wired cable. If you are not sure about the cable, you could check it with a comms package.

b. For a Modem link.

If the modem is not responding, check the connections and check that the modem initialisation string is correct. Any error in the string will not get an OK reply from the modem. As a check, try a simple ATZ for the string and see if the modem goes on to dial or wait for a call.

If the modems dial but do not connect. This is the trickiest problem. Many modems have subtle differences and modems from differing manufacturers can have problems with varying protocols. If possible, check that you can connect with a similar modem, after that it's down to checking through the modem's manuals.

After the link is connected.

After a connection is established, you should see the message 'Link Started', with either 'This machine has control' or 'Other machine has control'. While in the menus the system is controlled from one machine, with the other echoing it's movements. The machine with control has the normal red highlight on the menus and is said to 'Lead', whereas the other will show a blue highlight and is said to 'Follow'.

The machine designated to 'Follow' is excluded from certain actions eg Control Method set-up, Printer Setup and general loading and saving (but not game saves) and will display a 'Please Wait' message if the Leader moves into these areas on the menus. Also certain menus will behave slightly differently; Driver Select, for example, now shows both machines' drivers and allows either to change their selections.

While in these Linked menus there are 3 Special hotkeys:

- | | |
|-------|--|
| Alt/M | On either machine will pop up a message box over the current menu and allow you to send up to forty characters of text to the other machine. Type your message and press Return, the link will then wait for the other machine to clear the message before moving back to the original menu. |
| Alt/R | This hotkey is only active on the machine that has control of the menus. When it's pressed, control passes to the other machine. |
| Alt/H | This hotkey is active on both machines and |

brings up a menu box allowing you to hang up the link. You should always end the link either here, or by clicking on Hangup in the linkup menu and not simply switch one machine off (the other machine would then be left trying to regain contact).

(Alt/I functions as normal)

These hotkeys are available on almost every menu, but note that they are disabled in the File Selector.

Extra options while linked.

After linking you may find that some of your option settings have changed, especially if the other machine has control. Many of the option settings are copied across from the 'Lead' machine. If you close the link you will be given the option of re-loading your preferences file.

Also, after linking, some menus change. Driver Select now has selection options for either machine and the Quick Race menu shows both players' chosen car and grid position. There is an extra option available in the Quick Race menu when two machines are linked - a two player Quick Race. This allows a normal Quick Race, but with only the two players and no computer controlled cars.

A note on Quick Race driver selection...

Note that, the normal driver selection and the Quick Race driver selection are two completely separate areas. Quick Race driver selection is accomplished from the Quick Race menu and only one driver is allowed. Full driver selection, for non-championship and championship races, is accomplished from the driver select menu and allows full multi-player selection and editing of Driver and Team names. Note however, that if you edit the driver or team names in driver select, the new NAMES will be used in any Quick Race.

Driving while linked.

Some in car options are accessed slightly differently when linked.

Car set-up is accessed as before, by pressing brake while on the jacks, but now, rather than going straight in, the other machine will show 'pause requested' and the machine wanting set-up will wait for 'pause' to be pressed on the other machine. This is because both

machines must exit to the menus together. The request for pause is, in fact, a courtesy request since the 'requested' player may be in the middle of a hot lap and may not want to be interrupted. In fact, either player can press pause to initiate the car set-up menu so the requested player should not delay unreasonably (much more than a lap time for example) before pressing pause. If the requested player is also jacked up then that player will automatically go into car set-up if a request arrives. Like 'PAUSE', 'ESCAPE' on either machine will cause both to exit from the cockpit into the practise, qualifying or race frozen menus.

Note that, when slow machines are linked and are operating out on the track at 100% occupancy (press 'O' to see) there is a tendency for the pitlane graphics and VDU monitor to add an additional overhead to the occupancy. Although not usually a problem, when two machines are linked this can have the affect of slowing the frame rate on the other machine - even when its driver is out on the track. Therefore, if you wish to remain in the pits for a while waiting for results you could agree to ride with another car out on the track to keep the frame rate normal for your linked opponent. (You could ride with your opponent!)

Loading and saving.

While in linked mode, any game saves must be made on BOTH machines, Screen prompts will guide you through the procedure and the filename chosen by the 'Leader' is automatically passed through to the other machine. It's recommended that you use the same filename on each machine to save confusion, but this is not required.

Other menus

Some menus, notably the control method menu, the startup files menu and use of the printer/printer menu can only be accessed by the machine in control. To reach the menu on the other machine the 'Leader' should release control (from the main or options menu). After the second machine has finished, it can release control again, back to the original 'Leader'. Also some options are not allowed while linked: load names, load track records and save options are disallowed.

Any other enhancements to the program can be found in the readme.txt file. To view this file just type EDIT README.TXT from the game directory.

Operating Difficulties and Loading Problems

In the vast majority of cases a loading problem is not because of faulty software, but either incorrect loading procedure or a hardware fault.

Please ensure that the loading instructions have been correctly executed. Alternatively, a virus may have transferred into your hardware from another piece of software. Pirated copies of games are an incredibly common source of viruses. It always pays to own original software.

In the unlikely event of a software fault please return the complete package, with your receipt, to the **place of purchase**. MicroProse regret that goods cannot be replaced unless bought from the company directly.

If you have any difficulty loading *Grand Prix* or need help while running the simulation, MicroProse will be happy to help you on the Helpline. Please ring UK 0666 504399, Monday to Friday 0900 to 1700 hours. Have a pen and paper handy when you call.

Key Guide

Within the menus, use the arrow keys or A,Z,<,> to move the highlight and Spacebar or Return to select an option. Alternatively, use the mouse or joystick.

Pressing ALT/I will display the PC's processor type, DOS version and the current time. Click on "Continue" to return to the normal menu system.

When Linked:-

ALT/M sends a message down the link

ALT/R releases control

ALT/H hangs up phone or closes the link.

The default method of control is the joystick.

Car Control

<i>Function</i>	<i>Default Joystick Control</i>	<i>Default Key Control</i>	<i>Default Mouse Control</i>
Accelerate	Forward	Key A	Right Button
Brake	Back	Key Z	Left Button
Steer Left	Move Left	Key <	Move Left
Steer Right	Move Right	Key >	Move Right

Change Gear

<i>Function</i>	<i>Default Joystick Control</i>	<i>Default Key Control</i>	<i>Default Mouse Control</i>
Change Up	Joystick Forward + Fire	Key A + Spacebar	Right Button + Spacebar
Change Down	Joystick not Forward + Fire	Spacebar and not A	Spacebar and not Right Button

In the Pits

<i>Function</i>	<i>Default Joystick Control</i>	<i>Default Key Control</i>	<i>Default Mouse Control</i>
Start Qualifying/ Race Session	Fire	Spacebar	Spacebar
Accelerated Time On/Off	Joystick Forward & Release	Press Key A	Right Button

<i>Function</i>	<i>Default Joystick Control</i>	<i>Default Key Control</i>	<i>Default Mouse Control</i>
Pits Menu Access	Joystick Back	Press Key Z	Left Button
Tyre Choice	Joystick Left/Right	Keys <>	Move Mouse
Pause	Spacebar	Key P	Left/Right Key P

Key Commands

Exit to Main Menu and Save Option	Esc
Return to pits during qualifying/practice	Key Q
Signal to pits/cancel signal from pits	Return Key
Detail Adjust (4 levels)	Key D
Display name of driver	Key N
Replay mode	Pause, then 'Key R'
Gap between cars	Key G
Toggle track/scenery Texture	Key T

Driving Aids

Auto gears	Function Key F1
Auto brakes	Function Key F2
Self-correcting spin	Function Key F3
Indestructible mode	Function Key F4
Ideal line	Function Key F5
Suggested gear	Function Key F6

Views

Trackside Camera View	Left Arrow Key
Return to Cockpit View	Right Arrow Key
Move Camera to Car Ahead	Up Arrow
Move Camera to Car Behind	Down Arrow
Return to your Cockpit	'Home' Key
Chase View	'Pg Dn' Key
Reverse Chase View	'Delete' Key
Other Action Replay Modes	Pause, then 'Insert' Key

The 1991 Teams and Drivers

You may rename all the teams and drivers in the simulation as you wish. The 1991 teams and drivers are listed below.

<i>Team</i>	<i>No</i>	<i>Drivers</i>
Scuderia Ferrari	27	Alain Prost
	28	Jean Alesi
Honda Marlboro McLaren	1	Ayrton Senna
	2	Gerhard Berger
Canon Williams Renault	5	Nigel Mansell
	6	Ricardo Patrese
Camel Benetton Ford	19	Michael Schumacher
	20	Nelson Piquet
Brabham Yamaha	7	Martin Brundle
	8	Mark Blundell
Minardi	23	Pierluigi Martini
	24	Gianni Morbidelli
Braun Tyrrell Honda	3	Satoru Nakajima
	4	Stefano Modena
Leyton House Racing	15	Mauricio Gugelmin
	16	Ivan Capelli
Team Lotus	11	Mika Hakkinen
	12	Johnny Herbert
Footwork Arrows	9	Michael Arboreto
	10	Stefan Johansson
7-Up Team Jordan	32	Alessandro Zanardi
	33	Andrea de Cesaris
Larrousse	29	Eric Bernard
	30	Aguri Suzuki
Ligier Loto	25	Thierry Boutsen
	26	Erik Comas
Scuderia Italia	21	Emanuele Pirro
	22	J.J. Lehto
AGS	17	Gabriele Tarquini
	18	Fabrizio Barbazza
Central Park Modena Team	34	Nicola Larini
	35	Eric van der Poele
Coloni	31	Pedro Chaves
Fondmetal	14	Olivier Grouillard

CREDITS

Game Design and Programming:	Geoff Crammond
Circuit Topography:	Norman Surplus
Additional Programming:	Pete Cooke
Bitmap Graphics and Animations:	Mark Scott
Music:	John Broomhall
Based on the Original Theme Music by:	Dave Lowe
Sound and Music Programming:	Andrew Parton
Quality Assurance Management:	Peter Woods
Assisted by:	Andrew Luckett
Technical Assistance:	Norah Crammond
Chief Test Driver:	Dave Surplus
Test Driver:	David Crammond
Quality Assurance Testing:	Richard Bakewell Philip McDonnell Nick Stokes
Produced and Directed:	Steve Perry
Published by:	Paul Hibbard
Assisted by:	Pete Moreland for MicroProse Limited
Documentation by:	Rob Davies Alkis Alkiviades

With grateful thanks to Footwork Grand Prix International and Honda UK



Game Design & Program Copyright ©1991/1992 Geoff Crammond
Documentation, Packaging & Logo Copyright ©1992 MicroProse Ltd.,
Unit 1, Hampton Rd Industrial Estate, Tetbury, Gloucestershire GL8 8LD UK

This documentation and accompanying manual are copyrighted. The owner of this product is entitled to use this product for his or her personal use. Except for back-up copies of the disks for personal use and the quoting of brief passages for the purposes of reviews, no one may transfer, copy, back-up, give or sell any part of the manual or the information on the disks, or transmit in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher. Any person or persons reproducing any part of this program, in any media, for any reason, shall be guilty of copyright violation and shall be subject to civil liability at the discretion of the copyright holder.

MICROPROSE FORMULA ONE
GRAND PRIX

TECHNICAL SUPPLEMENT
For Commodore Amiga computers

Contents

Required Equipment

Your *Grand Prix* package should contain a manual, this Technical Supplement, four Commodore Amiga disks numbered 1 to 4, a key reference card and a registration card.

Computer & Display: This simulation requires a Commodore Amiga with a minimum of 1Mb. of RAM and a colour monitor or a TV with a modulator.

Please prepare a blank formatted disk in advance for your Saved Games.

Controls: The simulation can be run entirely from the keyboard. However, a joystick is recommended for driving, and a mouse may be used during menu selection.

It is recommended that you copy the 4 disks supplied in the package before play. Copies are for your personal use only. See the copyright notice at the back of this document.

Grand Prix has no disk copy protection. Insert your original *Grand Prix* Disk 1 and switch on your computer. A screen will appear which allows you to copy your original disks. Please follow any on-screen prompts. You will need four blank formatted disks.

Installation on Floppy Disks

Installation on a Hard Disk

Boot up your hard disk as normal and insert Disk 4. Open this disk and double-click on the "INSTALL" icon. Please follow any on-screen prompts. A drawer called "Grand Prix" will be created on your hard disk containing all necessary files.

Loading from Floppy Disks

If your computer has KickStart in ROM, insert Disk 1 into the internal drive and power up the computer. The program will then auto-load.

If your computer does not have KickStart in ROM, load KickStart as normal, then insert Disk1 into the internal drive. The program will then auto-load.

Loading from a Hard Disk

Boot up your hard disk as normal. Open the "Grand Prix" drawer and double-click on the "Game" icon.

Saved Games

You may save games currently under way and recontinue them at a later date. Follow any on-screen prompts. If the game was booted from floppy disk, you will be asked to insert your previously formatted Save Game disk before selecting a slot to save to. If the game was booted from hard disk, you will simply be asked to choose a slot to save to.

Whenever you quit the game you will be invited to save your current position.

Loading a Saved Game: Saved games can only be loaded during the pre-game options. To load a saved game choose "Load a Saved Game" option when you start the game. Please follow the on-screen prompts.

Operating Difficulties and Loading Problems

The latest notes regarding this program, additions, revisions etc. can be found on Disk 4 in an ASCII file named "READ.ME".

NB If no "READ.ME" file exists then this Technical Supplement will be the most up to date document on the game.

In the vast majority of cases a loading problem is not because of faulty software, but either an incorrect loading procedure or a hardware fault.

Please ensure that the loading instructions have been correctly executed. The most common hardware failures are due to a misalignment of the heads in the disk drive. Such faults may be detected by loading the game on another computer.

Alternatively, a virus may have transferred into your hardware from another piece of software. Pirated copies of games are an incredibly common source of viruses. It always pays to own original software.

In the unlikely event of a software fault please return the complete package, with your receipt, to the place of purchase. MicroProse regret that goods cannot be replaced unless bought from the company directly.

If you have any difficulty whilst loading Grand Prix, or need help when you are running the simulation, MicroProse will be happy to help you on the Helpline. Please ring UK (0666) 504399, Monday to Friday 0900 to 1700 hours. Have a pen and paper handy when you call.

Protection

We regret that organised and casual piracy forces us to use manual protection. When the game begins to load, you will be asked to indicate which language your manual is in. You will then be asked to type in a word from a given manual reference (Page-Paragraph-Line-Word).

Controls

The default method of control is by joystick. To switch to keyboard control, press the 'k' key at any time.

Car Control

<i>Function</i>	<i>Joystick Control</i>	<i>Keyboard Control</i>
Accelerate	Forward	Key A
Brake	Back	Key Z
Steer Left	Joystick Left	Key <
Steer Right	Joystick Right	Key >

Change Gear

<i>Function</i>	<i>Joystick Control</i>	<i>Keyboard Control</i>
Change Up	Joystick Forward + Fire	Key A + Spacebar
Change Down	Joystick Neutral + Fire	Spacebar and <i>not</i> A

In the Pits

<i>Function</i>	<i>Joystick Control</i>	<i>Keyboard Control</i>
Start Qualifying/Race session	Fire	Spacebar
Accelerated Time on/off	Joystick Forward + Release	Press Key A
Pits Menu Access	Joystick Back	Press Key Z
Tyre Choice	Joystick Left/Right	Keys < >
Pause	Spacebar	Key P

Key Commands

Sound	+/- Keys (non-numeric keypad)
Exit to Main Menu with Save Option	Esc
Return to pits during qualifying/ practice	Key Q
Signal to Pits/ cancel signal from Pits	Return Key
Keyboard/Joystick Toggle (Joystick default)	Key K
Detail Adjust (3 levels)	Alt/D
List name of driver	Key N
Replay mode	Key R

Driving Aids

Auto Gears	Function Key F1
Auto Brakes	Function Key F2
Self-correcting Spin	Function Key F3
Indestructable Mode	Function Key F4
Ideal Line	Function Key F5
Suggested Gear	Function Key F6

Views

Trackside Camera View	Left Arrow Key
Return to Cockpit View	Right Arrow Key
Other car views - Ahead	Up Arrow
Other car views - Behind	Down Arrow
Return to your Cockpit	'Home' Key
Chase View	'Help' Key
Reverse Chase View	'Undo' Key
Other Action Replay Mode	'Insert' Key

The 1991 Teams and Drivers

You may rename all the teams and drivers in the simulation as you wish. The 1991 teams and drivers are listed below.

<i>Team</i>	<i>No</i>	<i>Drivers</i>
Scuderia Ferrari	27	Alain Prost
	28	Jean Alesi
Honda Marlboro McLaren	1	Ayrton Senna
	2	Gerhard Berger
Canon Williams Renault	5	Nigel Mansell
	6	Ricardo Patrese
Camel Benetton Ford	19	Michael Schumacher
	20	Nelson Piquet
Brabham Yamaha	7	Martin Brundle
	8	Mark Blundell
Minardi	23	Pierluigi Martini
	24	Gianni Morbidelli
Braun Tyrrell Honda	3	Satoru Nakajima
	4	Stefano Modena

Leyton House Racing	15	Mauricio Gugelmin
	16	Ivan Capelli
Team Lotus	11	Mika Hakkinen
	12	Johnny Herbert
Footwork Arrows	9	Michael Arboreto
	10	Stefan Johansson
7-Up Team Jordan	32	Alessandro Zanardi
	33	Andrea de Cesaris
Larrousse	29	Eric Bernard
	30	Aguri Suzuki
Ligier Loto	25	Thierry Boutsen
	26	Erik Comas
Scuderia Italia	21	Emanuele Pirro
	22	J.J. Lehto
AGS	17	Gabriele Tarquini
	18	Fabrizio Barbazza
Central Park Modena Team	34	Nicola Larini
	35	Eric van der Poele
Coloni	31	Pedro Chaves
Fondmetal	14	Olivier Grouillard

Game Copyright © 1991 Geoff Crammond
Documentation Copyright © 1991 MicroProse Ltd.,

Unit 1, Hampton Rd Industrial Estate, Tetbury, Gloucestershire UK GL8 8LD.

This documentation and accompanying manual and floppy disks are copyrighted. The owner of this product is entitled to use this product for his or her personal use. Except for back-up copies of the disks for personal use, no one may transfer, copy, back-up, give or sell any part of the manual or the information on the disks, or transmit in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher. Any person or persons reproducing any part of this program, in any media, for any reason, shall be guilty of copyright violation and shall be subject to civil liability at the discretion of the copyright holder.

MICROPROSE™
SIMULATION • SOFTWARE

GRAND PRIX

Game characteristics described in the documentation may vary on some computers

Game Copyright © Geoff Crammond

Manual Copyright © MicroProse Software 1991

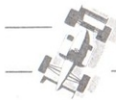
The Ridge, Chipping Sodbury, Bristol BS17 6AY, UK.

Tel: 0454 329510

CONTENTS



	page
Quick Start Driving Instructions	12
Joystick Controls.....	13
Keyboard Controls.....	14
One Lap of Monza for Rookies.....	15
Controlling your own Brakes.....	19
Controlling your own Gears	19
Driving into the Pits	21
A Timed Practice/Qualifying Session	22
A Non-Championship Race	23
Quickstart Guide to Winning the World Championship.....	24
Controlling the Formula One Car.....	26
Methods of Control	27
Sound.....	28
The Basic Driving Controls	28
Cockpit Controls	30
The Cockpit.....	31
Digital Displays	37
The Pits.....	40
Summary	41
Car Set-Up Options.....	42
Car Set-Up Problem Analysis Chart.....	46



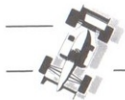
CONTENTS

	page
Camera Views and Action Replays	48
Trackside Camera Views	49
Chase View	49
Reverse Chase View	49
Other Car Views	50
Replay Mode	50
Other Action Replay Mode	51
Demo Mode	51
Weather, Crashes and Discipline	52
The Main Menu	55
Driver and Team Selection	55
Load/Save a Game	56
Set-Up Options	57
Practise on any Circuit	59
Non-Championship Grand Prix Race	60
The Grand Prix Championship Season	62
Review Championship History	64
Multi-Player Mode	65
The World Circuits	67
Phoenix Circuit	68
Interlagos Circuit	70
Imola Circuit	72
Monaco Circuit	74
Montreal Circuit	76

CONTENTS



	page
Mexico City Circuit	78
Magny-Cours Circuit	80
Silverstone Circuit.....	82
Hockenheim Circuit	84
Hungaroring Circuit	86
Spa-Francorchamps Circuit	88
Monza Circuit	90
Estoril Circuit	92
Barcelona Circuit	94
Suzuka Circuit	96
Adelaide Circuit	98



GRAND PRIX

6

GRAND PRIX

INTRODUCTION



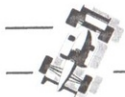
You've watched the Formula One Grand Prix season on television. You've followed the Championship battle and the duel between the world's top two dozen drivers. You've read the sports reports, the features in the glossies and gaped at glamorous lifestyle pictures in gossip magazines. But you've never known what it's like to strap yourself into that sleek cockpit, don the brightly coloured helmet and wait on the starting grid for the green light to propel you into a full sixteen race Grand Prix season. Now you can take the wheel for the ultimate challenge to your driving skills!

MicroProse Formula One Grand Prix leaves nothing to the imagination. The legendary Geoff Crammond, of 'Revs' and 'Stunt Car Racer' fame, has designed the simulation that puts you right in the driver's seat. However, the simulation is not just about the races, it's an attempt to show the complex decisions that have to be made by teams when setting-up a car to race on a particular circuit. Can your car take more wing? Should you re-adjust the gear ratios?

What about the Rookie Driver who has never actually driven a car? We have included a Quickstart Learner's First Lesson that guides the Rookie through several laps of the famous Monza circuit.

Unlike most racing games MicroProse Formula One Grand Prix is packed full of detailed scenery from the original 16 circuits. If you have time, you can admire the yacht in the harbour at Monaco or the Dome at Mexico City!

MicroProse Formula One Grand Prix gives you the complete racing driver experience from stormy start to fiery finish!



SORTING THE MATERIALS

THIS MANUAL



provides a Quickstart driving lesson for learners, including circuit diagrams, detailed operating instructions and background on modern Formula One Grand Prix racing. It is applicable to all computer systems.

THE TECHNICAL SUPPLEMENT



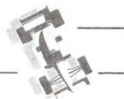
gives specific instructions for loading and/or installing the simulation for your computer. It also provides a complete reference of all the graphics and keys used in the game.

KEY REFERENCE CARD



gives at-a-glance information for all keys used in the game. Designed to stand upright next to your computer screen.

OVERVIEW



MicroProse Formula One Grand Prix is a complete simulation of the full Championship Season. At the end of the 16 races there are two trophies to be won: the Drivers' and the Constructors' Championship.

It's always tough to win even one Grand Prix race and, at the highest level we think you'll find it very difficult. However, for the less experienced drivers we have included 5 levels of difficulty with 6 major driving aids that, when fully implemented, will leave you free to race the car on a previously defined ideal line. You can even choose to re-distribute the driving performance of all the other drivers.

You can win the Championship at the lowest level of difficulty but it will only be at the highest level that you will receive the ultimate accolade.

The major elements of the simulation are:

Quickstart Driving Tutorial

A drive through of the Monza circuit for Rookies. The best way to get to grips with controlling the F1 car and to get to know the circuit.

Cockpit and Car Controls

Understand and learn all cockpit controls until everything becomes second nature to you. Get used to looking in both mirrors and being aware of what is going on behind you.

Car Set-up

You must find out how your car behaves on each circuit with various set-ups for wings, tyres, brakes and gears. Don't be afraid to experiment! As you improve and hone your driving skills, you will appreciate the value of such things as the correct wing downforce.



OVERVIEW

Driving into the Pits

It's essential to know where your Pits are on every circuit and be able to get in and out safely and quickly.

Practice any Circuit

Use these sessions to practise set-ups, driving styles and to get to know all the circuits. You are alone on the circuit and there is no pressure to get a fast time. Get an impression of what should be a good lap time on every circuit.

Free Practice

Acquaint yourself with the way the other cars are performing and what tactics they use for overtaking. This practice is used for setting-up your car before qualifying practice, and you will get an idea of what a circuit is like with other cars roaring around it.

Problems with your car

A chance to review the way your car is handling around the circuit and be directed towards possible solutions.

Qualifying/Timed Practice

Try to achieve a good grid placing. There will be more pressure on you at this point. Understand the limited life of qualifying tyres.

Pre-race practice

Your last chance to test and modify your chosen set-up before the race.

OVERVIEW



A Non Championship Race

Compete in a full Grand Prix race with all the drivers going flat out to win. Learn how to make a good racing start when the green lights come on. Keep an eye on the developing pattern of the race. Avoid shunts because they will impair the car's handling and performance.

Pit Stops during a Race

Practise driving into the Pits quickly and efficiently for a timed tyre change and then straight out again on to the circuit.

The Complete F1 Season

If you are proficient at all the above then you will be ready to undertake a full racing season at the level of your choice. Can you survive sixteen difficult races?

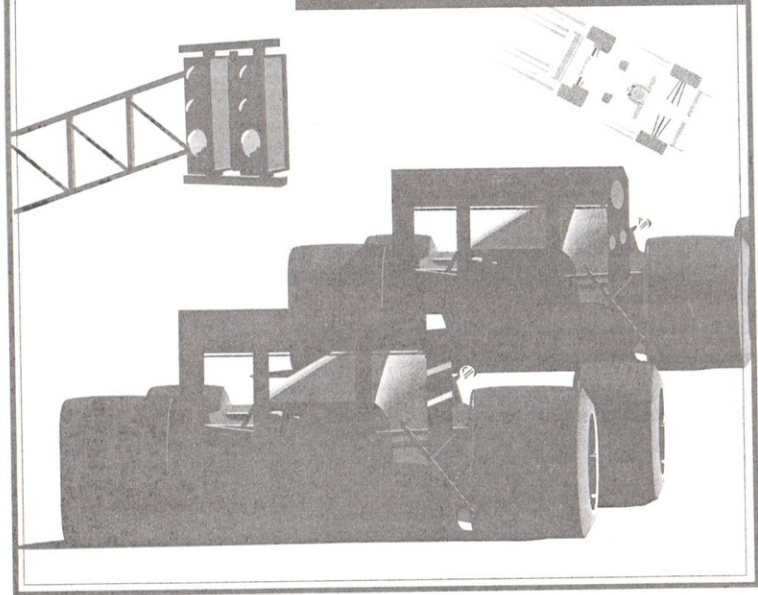
End of Season Championships

The final tables in the drivers' and constructors' Championship.

The Manual

For more background and information on the Grand Prix racing teams, circuits, driving hints and general Grand Prix atmosphere.

QUICK START



QUICKSTART DRIVING INSTRUCTIONS



JOYSTICK/KEYBOARD CONTROL



This manual will refer to the Accelerator, the Brake, Changing Gear and Steering. You will be able to control these functions by keyboard and joystick. Key K toggles Keyboard/Joystick mode. The simulation is initially in Joystick Mode; the recommended method.

If you have a Joystick fitted on your computer study diagram 1 opposite.

Joystick = Controller

Fire Button = Selector

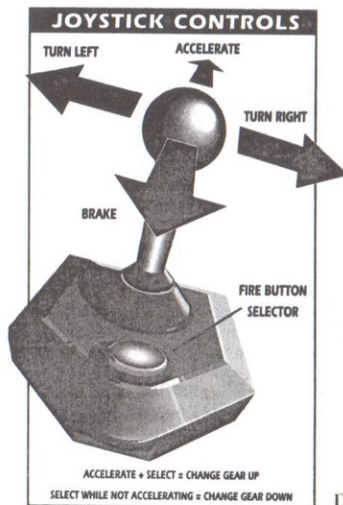
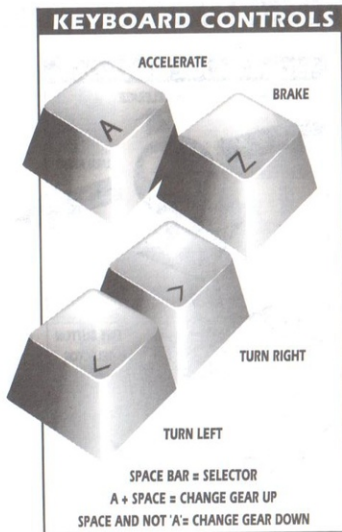


Diagram 1



QUICKSTART DRIVING INSTRUCTIONS



If you are driving on keyboard study diagram 2 opposite.

A/Z = Controller-Accelerate/Brake

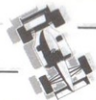
</> = Controller-Steer Left/Steer Right

Spacebar = Selector

The simulation does not support mouse control, except during menu selection. The keyboard cursor keys can also be used to highlight menu options.

Diagram 2

QUICKSTART DRIVING INSTRUCTIONS



ONE LAP OF MONZA FOR ROOKIES



Loading

Install and/or load the simulation as explained in the Technical Supplement and follow any on-screen prompts until you see the **Main Menu**.

Choose **Race Set-Up Options**. Find **Race Distance** and reduce the figure to 10%. Find **Level of Difficulty** and select **Rookie**. Return to **Main Menu**.

Highlight the **Driver Select Menu**.

Select a driver and, if you wish, you may delete the name using the Backspace key and type in your own name. Press the Selector again. Then select 'Driver Selection Complete'.

Highlight **Practise any Circuit** with your Controller and press the Selector.

Highlight the **Circuit Select Menu**.

Select **Monza**. You will see a view of the circuit. Choose **Info**. This gives you the Lap Records and Distance. Select **OK**.

You will now find yourself in the **Pits** at Monza, Italy.

Look at the cockpit controls. Accelerate with the Controller and listen to the engine noise.



QUICKSTART DRIVING INSTRUCTIONS

Press the Function keys F1, F2, F3, F4, F5 and check that each Function key has illuminated 5 of the 6 symbols that appear on the dashboard panel. Each key turns on a driving aid to help you control the car. Do not press Function Key F6.

You will not need to worry about changing gear or braking. You may crash if you stray from the racing line, but you will not be damaged by any 'shunt'. If you spin off, the car will right itself, *once it has come to rest*. It will face the correct direction to continue the race.

Turn to page 90 in the manual. You will see a diagram of the track at Monza. Find the Start line then follow the circuit with your finger to the finish line. Keep a marker in the manual on this page.

Monza is an excellent circuit to practise on. It's fast with some good corners that let you get into a good driving rhythm. It has also got lots of open spaces where you can leave the track without crashing into concrete walls.

You are still in the Pits, on the jack. Press the Selector and when you have been lowered accelerate using your Controller. You will begin to move forward. If not then check that you have pressed Function Key F2 and that the symbol is lit on the display.

When you leave the pits you will join the circuit by driving to one side of a yellow dotted line. Once you are on the circuit the yellow line will disappear and you will see a white long dotted line; like the line that divides two-way traffic in a normal road. Try to line up the middle of the steering wheel with the dotted line as you move around the circuit. This is the best driving line; the ideal path to take so that you can go into bends at the fastest possible speed.

The first bend at Monza turns to the left then quickly to the right followed by another left and right. This is a double chicane called the *Variante Goodyear*.

If a joystick is being used, press 'Space' to pause the simulation. Otherwise, press P.

QUICKSTART DRIVING INSTRUCTIONS



Find the *Variante Goodyear* on your manual map and also examine the following bend: the *Curva Grande*.

Now press the pause key again to re-start the game.

You should now see a white sign with a black arrow bending to the left. Then countdown markers signs: **200** and **100**.

These signs tell you how many metres to go before the approaching left-hand bend.

Steer carefully around the chicane. Try to follow the dotted line, even though it sometimes appears to be aiming away from the track.

Continue along the short straight and steer around the long sweeping right-hander *Curva Grande*. You will find that you can drive through this corner quite fast.

Just after the blue bridge you will see another sign warning you of a right turn. Press the pause key to pause the game and have another look at the map in the manual.

This is the *Curva della Roggia*; another chicane.

Look ahead on the map to the next 3 bends. Try to imagine what they will look like from your cockpit view.

Press the pause key to continue.

Steer through the chicane then carefully along the two right-hand curves. You will then see a long downhill straight.

Accelerate on the straight.



QUICKSTART DRIVING INSTRUCTIONS

Take time to glance at the red gear indicator on the right of the steering wheel as the car changes gear automatically. Listen to the sound of the engine and watch the red power band on the rev counter move up and down the scale.

At the end of the straight is an unusual chicane called the *Variante Ascari*.

Pause the simulation again and study it on the map. Try to memorize the shape of all the bends, then continue and try to drive through the series of bends.

Gradually, you will find that the more you know about the approaching corners the easier they will be to drive through at the correct speed.

Accelerate along the straight and see if the automatic gear change will put you into 6th gear before the auto-brakes slow you down for the *Curva Parabolica*. Don't worry if it doesn't. Try to accelerate around this bend.

As you come out of the corner you will see two grandstands, the pits and a yellow dotted line that marks the pit lane entrance. Keep following the white dotted line.

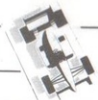
You are now in the finishing straight.

You will then see the Starting Grid, the 26 spaces where the cars are placed to start the race and a thick solid white line across the track will mark the end of one lap.

Cross this line (the Start/Finish line). This is the end of the first lap but you will not be given a lap time until you complete a lap started from the Start/Finish line.

Continue into another lap. Try to remember the corners and straights. Glance at the map occasionally. When you complete the lap you will be given a lap time. Try another lap. Try to be faster!

QUICKSTART DRIVING INSTRUCTIONS



CONTROLLING YOUR OWN BRAKES



When you feel confident around the circuit. Press **Function Key F1**. Check that the first symbol light has gone out. Now, you will have to control your own brakes.

Remember how brakes are operated by your Controller. Check the diagrams at the beginning of this section. This time you will have to cope with braking and steering around the same bends.

Try another lap of Monza. It will feel different this time but try to gauge the right moment to apply the brakes.

CONTROLLING YOUR OWN GEARS



Stop on a straight part of the circuit.

After coming to terms with using the brakes, press **Function Key F2** once, and then press **Function Key F6**. This will cancel Auto Gear Change and switch on the Suggested Gear Indicator. The 'gate' symbol should go out and a blue indicator will appear just below the red gear indicator. Now you will be in control of all gear changes but when you see a number in the blue circle that *will be the suggested gear to be in at the following corner*.

Check the method of gear change for your Controller (refer to the Quickstart diagrams). Practise changing gear and watch the red gear indicator. Try to get N on



QUICKSTART DRIVING INSTRUCTIONS

the indicator. When you are in Neutral, accelerate. The engine should rev and make a high pitched noise. The red indicator should move across the curved r.p.m. scale. Don't worry about damaging the engine.

Push the accelerator until the red band is around the 11 mark then press the Selector to change gear *but keep it pressed in*.

You should have changed into 1st gear; shown by the 1 on the gear change indicator. (If not then the Controller was not pressed forward when you pressed the Selector, try again). You will not be moving forward because you are holding the car on the clutch (the Selector pressed and held).

Now, with the Controller pressed forward, let the Selector go!

You will be moving forward. Listen to the change of tone in the engine noise. The mph indicator should show the speed you are travelling at.

Accelerate again and watch the red power band get to about 12 on the dial, then change up again in the same way as before. The indicator will now show 2.

Try to change up to at least fourth gear.

Then try changing down to take a bend by taking note of the suggested gear indicator (the number in the blue circle). Note that it is not necessary to brake when changing down.

Gear changing is difficult to master even if you are a seasoned driver but try to experiment with the gear shift. You have six forward gears, Neutral, Power Turn (you can only *change down* into this gear) and Reverse.

When you are in Reverse you will see R on the gear indicator. Accelerate with the Controller, just like in a real car, to move backwards.

QUICKSTART DRIVING INSTRUCTIONS



DRIVING INTO THE PITS

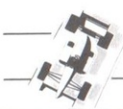


When you think you are familiar with the Monza circuit and the basic car controls, practise driving into **The Pits**. The Pits are where all repairs are carried out and where you are fitted with new tyres.

You will have noticed the **Yellow Dotted Line** just before the main grandstand straight. This is the line leading to the **Pit Lane**.

Drive a complete circuit, during which at any time, you may press 'Return' to inform your pit crew of your intention to stop. You will see the pit signal on your instrument panel light up in yellow. This enables you to enter the pit lane when you see the dotted line. Drive slowly into the **Pit Lane**. You may see several pit crews waiting. As you continue forward motion aim the car towards the Pit bays. The programme will direct you into the correct bay but you must brake just in front of the crewman directly ahead of you.

You will be jacked up and a sign placed in front of the car telling you to keep your brakes on. A selection of tyre types appears on the digital display but don't worry about this for now. Press the Selector and you will be jacked down. You can now drive away from the Pits, weave through the Pit lane, then *carefully* re-join the circuit.



QUICKSTART DRIVING INSTRUCTIONS

A TIMED PRACTICE/QUALIFYING SESSION



Press **ESC** to return to the **Main Menu**. Choose **Non-Championship Race** then **Qualifying/Timed Practice**. You will be placed back in the Pits, jacked up but this time you will have a monitor appear in front of your car. It will list drivers in the Qualifying session including yourself (highlighted). You will also see the Tyre choice display **A B C D Q W**.

Q should be chosen but try to move the Controller left/right to see the effect. Then back to **Q**. You will be running on Qualifying Tyres. Good for about 3 fast laps. You have four sets for this session but you can use any other tyres if you so wish.

You are still in **Rookie** level. If you want to drive with Auto Gears, Auto Brakes or any other Driving Aids you can.

Press the Selector. The monitor will move out of the way and your car be jacked down.

Drive away from the Pits to the circuit then complete one lap. You will not be timed until you have passed the Start/Finish Line. Then you will see that the car timer has begun. Race around the circuit for 1 lap then, as you cross the line your lap time will be displayed. You *should* return to the pits now, but if you were held up for some reason there may be enough life left in your tyres for another fast lap. Don't push your luck too soon, unless you want to find out what it's like to drive on bald tyres!

Drive to your bay, wait to be jacked up. The monitor should reappear in front of you with various times from the other drivers in the Timed Practice session. The session lasts up to 2 hours. To speed up the time, Accelerate with the Controller. The other drivers times will appear very quickly. If you want to go out and beat a

QUICKSTART DRIVING INSTRUCTIONS



particular fast time Accelerate with the Controller again to switch off Accelerated Time, then return to the circuit in the usual way. If you want to leave the session press Esc, but all non-selected drivers will complete at least 1 lap in Accelerated Time, before this is implemented.

When the Qualifying session is over, you will be shown the results. Select 'Continue' and you will be given the option of a **Pre-Race Practice Session**. Do not choose this but go straight to the race itself.

A NON-CHAMPIONSHIP RACE



You will find yourself on the Starting Grid at Monza with 25 other cars. If you have achieved a reasonable lap time you will be placed relative to the other drivers' performance. If you failed to get a time, got a bad time, or have just jumped in at this stage, then you will begin from the rear of the grid.

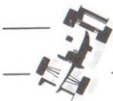
Wherever you are, you will see the starting gantry: a bank of 3 red lights and a bank of 3 green lights. None should be illuminated.

Wait for the red lights to come on. That is the warning that the start will take place within 4 to 7 seconds. Hold the car on the 'clutch' with 1st gear engaged (see earlier).

When the green lights come on, accelerate!

Try to keep out of trouble for the first bend until the cars sort themselves out.

Race around the circuit for the number of laps shown on the display but keep an eye on the Pits Indicator (bottom right in the cockpit). If it turns yellow you are being called by radio to go into the Pits to change tyres, or repair damage. Drive into



QUICKSTART DRIVING INSTRUCTIONS

the Pits as soon as possible, you will lose performance if you don't change your tyres. The pit stop will be timed! If you do not wish to pit, inform the pit crew by pressing 'Return', which cancels the pit signal.

Complete the required number of laps. When the race is over you will lose power and then you will be shown the results screen. If you wish to retire early from the race then press 'ESC'. The race will then be completed for the other drivers in Accelerated Time.

QUICKSTART GUIDE TO WINNING THE WORLD CHAMPIONSHIP



The other circuits

If you think you know Monza quite well, after following the Quickstart tutorial, then you must study all the other 15 tracks with equal intensity to win the World Championship. You can win the World Championship at the lowest level with all Driving Aids **F1** to **F6** turned on and the opposition at their lowest performance level but *you must know the courses like the back of your hand.*

Making use of the Driving Aids

You may find that you start the season off with all driving aids on but as you progress you might prefer to control your own brakes and gears. If you win a World Championship, you will only win at the lowest level. You cannot use any Driving Aids when competing at Ace level.

Probably the most difficult part of the simulation to master is the correct driving line. To win the Championship at Ace level you'll have to get used to

QUICKSTART DRIVING INSTRUCTIONS

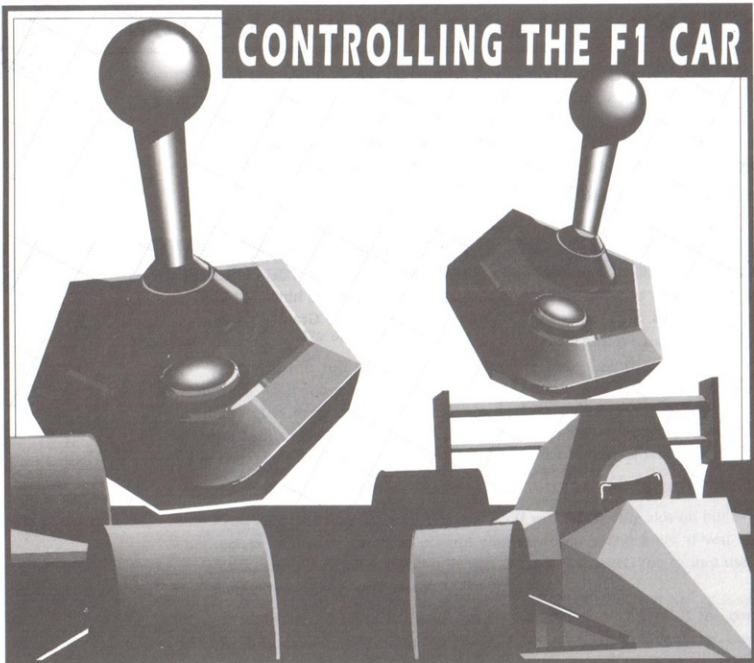


driving without it. Press **Function Key F5** to turn off the ideal line and try to drive around a circuit without it. You will find that the most important guide will be the coloured rumble strip kerbs that appear on the approach of each corner. Try to remember the places where you begin to brake and turn on the approach to each bend and consult the manual Driving Hints on pages 122-143.

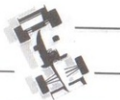
Making use of the manual

The back pages of any computer simulation manual are sometimes seen as unimportant to the winning of the game but *it is recommended that you read all of the manual*. It will give you a complete understanding of attitude, general approach to races and other drivers on the circuit plus numerous hints and tips to help you win. Remember that MicroProse Formula One Grand Prix is a simulation not just a racing game.

CONTROLLING THE F1 CAR



CONTROLLING THE FORMULA ONE CAR



METHODS OF CONTROL



This manual will refer to the Accelerator, the Brake, Changing Gear and Steering. You will be able to control these functions by keyboard and joystick.

Keyboard/Joystick (Key K)

Key K toggles Keyboard/Joystick mode.

If you have a joystick fitted on your computer study diagram 1.

Joystick = Controller

Fire Button = Selector

If you are driving on keyboard only study diagram 2.

A/Z = Controller-Accelerate/Brake

</> = Controller-Steer Left/Right

Spacebar = Selector

NB In Joystick Control mode all Keyboard Control buttons are disabled, except when menus are shown.

For information about the Controllers on your computer please refer to the Technical Supplement.

MicroProse Formula One Grand Prix does not support mouse control, except when menus are shown.

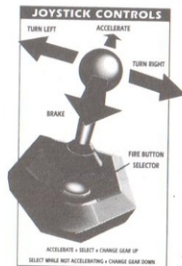


Diagram 1

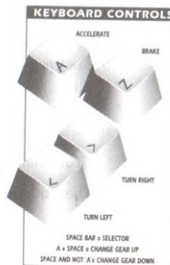


Diagram 2



CONTROLLING THE FORMULA ONE CAR

SOUND



The sound of the Formula One engine is very important in the simulation for, as in real racing, it is a good indication of when to change gear.

Sound (+/-)

Turn the sound level up and down with the +/- keys.

THE BASIC DRIVING CONTROLS



Gear Change: Up

The sequence is Reverse-Neutral-1st-2nd-3rd-4th-5th-6th.

Start in Neutral. Accelerate with the Controller and press the Selector once, the red gear indicator will show 1 and the car will begin to move. Accelerate again until the red power band is between 11 and 12 then *while still accelerating*, press the Selector. You will have now changed gear, the indicator shows the number 2 and the tone of the engine changes. Accelerate again and increase the power, then press the Selector again. You have now changed up into third gear!

Gear Change: Down

The sequence is 6th-5th-4th-3rd-2nd-1st-Power Turn-Neutral-Reverse.

With the Controller not accelerating, press the Selector. The number on the Gear Indicator will change down.

CONTROLLING THE FORMULA ONE CAR



Power Turn

You can only change down into this gear. If you have not implemented Function Key F3 or are racing at a Level that does not allow you to use it, you may recover from any spin by changing down to this gear. The red indicator will show;

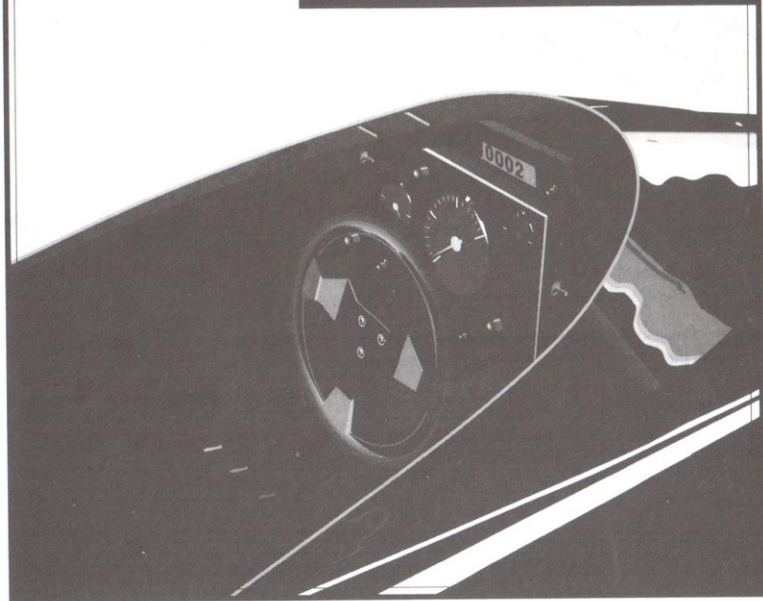


To straighten out a spin, accelerate *from rest*, steering momentarily in the *opposite* direction to where you want to turn, before steering in the desired direction, keeping the accelerator depressed throughout, but change up to first gear as soon as you are facing in the right direction.

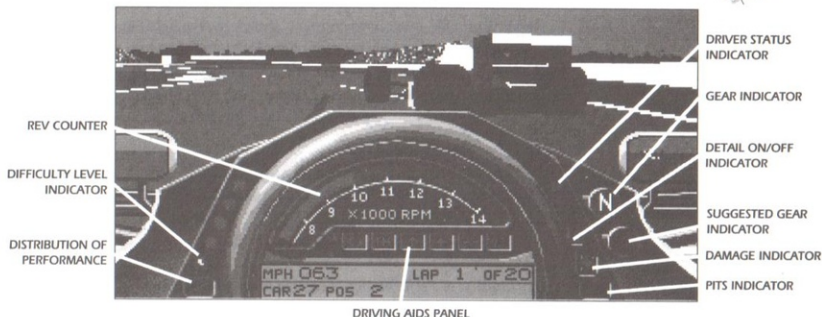
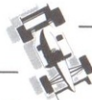
Reverse

You must change down into Reverse. Once the **R** appears on the gear indicator accelerate with the Controller, as in a real car, to move backwards.

COCKPIT CONTROLS



COCKPIT CONTROLS



Summary

Before you start any race, qualifying lap, or practice session you must familiarise yourself with the MicroProse Formula One car cockpit. You must be able to take in all information presented to you at a glance, because at the speeds you will be travelling on circuits such as Monza, a lost second is all it takes to make the difference between a devastating shunt and a brilliant overtaking manoeuvre. At 200 mph the car will travel 90 metres in that second!

It's very important to know who is behind you and who is trying to overtake. Some cars may weave from side to side looking for an opening at a crucial corner, be conscious of their presence. They will try to pass, if you show any weakness or leave a gap where they might dart past. Whilst not advocating a breach of Racing Etiquette it is not unusual for drivers to 'shut the door' on other cars behind them.



COCKPIT CONTROLS

Five levels of difficulty (Accessed from the Main Menu)

The difficulty level you have chosen is shown by five lights in a row on the left of the steering wheel. If the lowest green light is shining then you are racing at Rookie level, if the highest light is on then you are competing at Ace level. The levels are related to and control the number of Driving Aids you can access.

The levels are:

Ace

Pro

Semi-Pro

Amateur

Rookie

Distribution of Performance (Accessed from Main Menu)

Just below the Difficulty Level indicators there is a panel that shows your choice for the distribution of performance among the other drivers.



1991 performance for teams and drivers



All teams and drivers at the same potential performance



Random distribution of performance throughout the grid.

COCKPIT CONTROLS



The Rev Counter

In the centre of the screen just below the top of the steering wheel you will see the Rev Counter, a long sweeping dial that shows your engine's rpm in 1000's from 7 to 14. If you 'blip' the accelerator to rev the engine in Neutral you will notice that a red band moves across the dial. This is the most important indicator of how fast your engine is running when in a particular gear.

You must be aware of being in the right gear at the right moment. The basic guideline is to try and keep the revs up between 10,000 and 12,000 rpm. Changing into the wrong gear will lose you power or you may overrev and damage your engine. You should always know the optimum point on the Rev Counter for gear changes in order to drop the engine back into the meatiest part of its powerband.

Gear Indicator

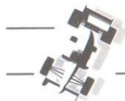
To the right of the steering wheel is the Gear Indicator. This tells you which gear you are in. There are 6 forward gears, neutral N, reverse R, and a 'spin recovery' gear.

Suggested Gear Indicator (Activated by F6)

If F6 driving aid is implemented you will see a blue indicator just below the normal red gear indicator that tells you the suggested gear to be in at the next corner. This is an 'intelligent' aid that will vary depending on the car set-up; wings, brakes, gears and tyres.

Driver Status Indicator

On the right of the steering wheel there is another small LED. If it is Green then you are currently in your own car cockpit. If you choose to see other drivers' cockpit views by pressing the Up/Down Arrows, the light will go off. Unless you are in



COCKPIT CONTROLS

Replay Mode, use this facility at your peril for the car will not be controlled by the computer.

Detail On/Off indicator (Alt/D)

Just below the Gear Indicator is the Detail On/Off indicator. There are 3 levels of detail in MicroProse Formula One Grand Prix and you may step between them by pressing Alt/D.

At the highest level 2 green triangles are illuminated, and you will see all the scenery, stands and spectators.

Press Alt/D once and you remove all large buildings.

Press Alt/D again: smaller buildings, trees and bushes will disappear.

A further press will return all original track and landscape details.



Damage Indicator

Below the Detail Adjust Indicator is the Damage Indicator operated by Radio Telemetry from the Pits. This shows damage to front and/or rear wings, and if lit, extreme caution is advised in driving. Returning to the Pits will repair any damage.



Pits Indicator

Below the Damage Indicator is the Pits Indicator operated by Radio Telemetry from the Pits.

COCKPIT CONTROLS



There are 3 modes:

- GREY** Pits are empty. Call in at any time.
- YELLOW** You have been called in to the Pits or have indicated an intention to call in.
- RED CROSS** Pits are occupied by your other team car. The pit crew is not available to you, so you may have to wait longer if you go in.

Driving Aids

The Driving Aids panel is the bank of 6 boxes directly below the Rev Counter. Driving Aids correspond directly to the Difficulty Level you have chosen.

F1 Auto Brakes



The computer applies braking functions for you to suit the circuit, but will not brake to avoid other cars.

F2 Auto Gears



The computer changes all gears for you when it thinks it is the appropriate moment.

F3 Self-Correcting Spin



In the event of you spinning off the track, when you have come to rest, the computer will point you in the correct direction to continue the race, assuming you are in a fit state of repair.



COCKPIT CONTROLS

F4 Indestructible Mode



No damage will be sustained in this mode, no matter how serious the shunt.

F5 Ideal Line



This lays down a white striped line to show you the best line to drive on the circuit you have chosen. Ideally, you must keep the line on the centre point of the cockpit to get the benefit of the best driving line.

F6 Suggested Gear



Indicates which gear to be in at the following corner.

The Driving Aids F1 to F6 can be turned on at any time from the cockpit if you are in Rookie Mode. However if you are racing at higher levels you will have less help available to you.

Level of Difficulty/Driving Aids Available Summary

Ace	No Driving Aids
Pro	F5, F6
Semi-Pro	F3, F4, F5, F6
Amateur	F2, F3, F4, F5, F6
Rookie	F1, F2, F3, F4, F5, F6



Monitor

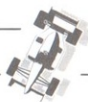
During Qualifying/Timed practice you will be placed in the Pits and a Telemetric Monitor is placed in front of your cockpit. The Monitor lists the other drivers in the race by:

POS	current grid position
N	racing number
DRIVER	driver's name
LAPTIME	current best laptime
SET	sets of qualifying tyres used
TIME	the amount of time left for practice/qualifying
CARS OUT	the number of cars already out on the track.



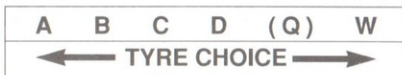
If you watch the monitor you will see the other drivers best lap times for the circuit. The fastest laptime is placed above all the others. You will be positioned in the middle of the monitor display with your nearest rivals on either side of you, unless you are the fastest driver!

You may speed up the time it takes for all drivers to finish qualifying by Accelerating the Controller. Or, you may quit Timed Practice/Qualifying by pressing ESC. All non-selected drivers will complete at least 1 lap in accelerated time before this is implemented.

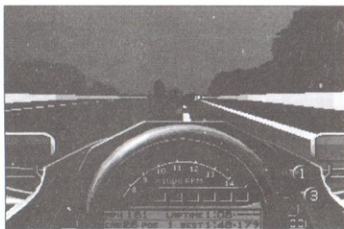


COCKPIT CONTROLS

When you are jacked up in the pits the top row on the digital readout panel will change to:



TYRES: A B C D Q W Move the Controller left/right to select your choice of tyres from Wets, Compounds A (hard) to D (very soft) and Qualifiers.



Qualifying/Practice Display:

KM/MPH	Your speed around the circuit.
CAR	Your team car number
POS	Your current position on the grid
LAPTIME	Your current lap time
BEST	Your previous best laptime
Brake with the Controller to access the car Set-Up Menus.	

MPH 161	LAPTIME 1: 08 .
CAR 26 POS 1 BEST	1: 48 . 179

COCKPIT CONTROLS



Racing Display:

- KM/MPH Your speed.
LAP/OF Your current lap out of total.
CAR Your car number.
POS Your position in the race.

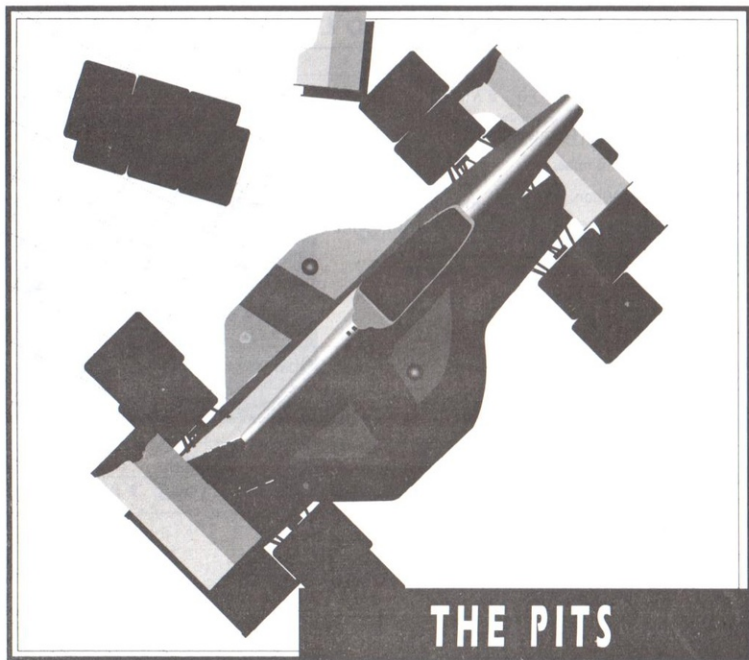
Key N will display the name of the current car driver on the Digital Display.



MPH **063**

LAP **1** OF **20**

CAR **27** POS **2**





You begin any practice or timed/qualifying session in the pit lane.

From here you can choose to drive straight away with the current Set-Up, or change any of the car settings. You can also drive into the pits at any time during practice to change your car Set-Up.

For the Rookie Driver the car Set-Up will seem very complex at first. Do not worry! Accept the current Set-Up, learn to drive fast around the circuits, then return to this section and adjust the settings. Do not adjust more than one setting at a time before trying it out in a practice session. *That is when you will notice the difference in performance.*

Each of the 16 circuits is unique so it's necessary to Set-Up your Formula One car with the correct combination of Wing, Gear Ratios, Brake Balance and Tyres. You are advised to study the track layouts in this manual (pages 67 to 99) and take note of all the track notes and summaries; these will give you an indication of the type of car Set-Up required but there is no substitute for experience. Try a few laps with various settings, get an idea of how the car is running through corners and along straights. Compare your performance with other cars in practice, go into the pits and adjust a setting then try again.

If you are having problems with your car Set-Up and are finding it difficult, for example, to drive into corners please consult the Set-Up Problem Chart at the end of this chapter.



THE PITS

CAR SET-UP OPTIONS



Front/Rear Wing Downforce Adjust.

In general terms the wings on a Formula One racer push the car down on the track. This achieves more grip and less roll giving better control in corners but less speed on the straights because of more drag.

You can adjust the amount of front and rear wing used by the car. This is on a scale from 1 to 64. The higher the number, the more Downforce. Adjust the wing front and back by selecting +/- .

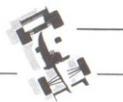
Front/Rear Brake Balance.

Grand Prix cars have a low centre of gravity, centred just behind the driver. If you brake hard at speed the weight shifts onto the front of the car. Therefore brakes must be balanced to cope with the transfer of weight during deceleration (slowing down).

You can change the brake balance of your car by altering the way in which the front and rear brakes are applied. It's always best to have more brake bias at the front than at the rear. Ideally, as soon as the front wheels begin to feel the effect of the brakes, the rear wheels should just be beginning to slow down.

The scale goes from 32 at the Rear to Zero in the middle to 32 at the Front. Move the slider to give you the correct degree of balance.

THE PITS



Gear Ratios

You must set the gear ratios of your gearbox to suit each circuit. This is usually done by setting the 6th gear for the fastest possible speed along the longest straight; then setting the lowest gear for the slowest corner. The rest of the gears are ranged somewhere between the two.

Gear ratio selection is very important. Different cogs can be fitted to the gearbox which can have a major effect on the car's acceleration, performance in bends and top speed.

Twisty circuits with few long straights and plenty of chicanes demand 'short' gearing for quick acceleration.

Other circuits with long straights require 'long' gearing to give the car the top speed it will need to keep up with the opposition.

The gearbox has a range from 1 to 64. Move the slider to set the ratio for each gear.

The nearer the cogs are to each other, the less work the lower gear has to do to get to the higher gear (short gearing).

The further away the cogs are from each other the more work it has to do to get up to the higher gears but the faster the speed at the top gear (long gearing).



THE PITS

Tyre Choice

You can choose from a variety of tyres when you are in racing trim and you can choose qualifying tyres when you are participating in timed practice/qualifying and when you are ready to do a 'hot' lap, otherwise you can use any of the other compounds. Remember, you are limited to 4 sets of Qualifiers.

To change tyres, enter the pits during a race/practice when the Pits Indicator signals that your tyres need changing, or press Return to indicate that you are coming in. Or, if in practice mode, press Q to quit a timed lap immediately.

When you are jacked up, move the Controller left/right to make your tyre selection.

'D' COMPOUND / VERY SOFT

Spongy tyres that give excellent dry condition grip but which wear out quite rapidly and will not last the whole race.

'C' COMPOUND / SOFT

These provide slightly less grip than D's but are harder wearing. You will probably need to change these at least once during a normal race.

'B' COMPOUND / MEDIUM

These provide less grip than C's on the track but they are quite hard wearing and will usually last for the whole race without needing to be changed.

'A' COMPOUND / HARD

A hard tyre that will definitely last a complete race but with less grip in the corners than B's.

THE PITS



Q-QUALIFYING TYRES

Good for approximately THREE laps, including the starting and slowing down lap. Ultra sticky therefore they lack durability. You are limited to 4 sets per qualifying period. It's sometimes possible to squeeze an extra lap out of these tyres, if you're careful.

W-WETS

These tyres have tread for wet weather driving. If the race is in wet conditions, Wets are already fitted.

Quit Session (ESC)

You can choose to end your current session by pressing ESC.

Save the Car Set-up

You can save the Set-Up you have chosen for your car when you are in the Pits, by pulling back on the Controller, to access the Set-Up options.



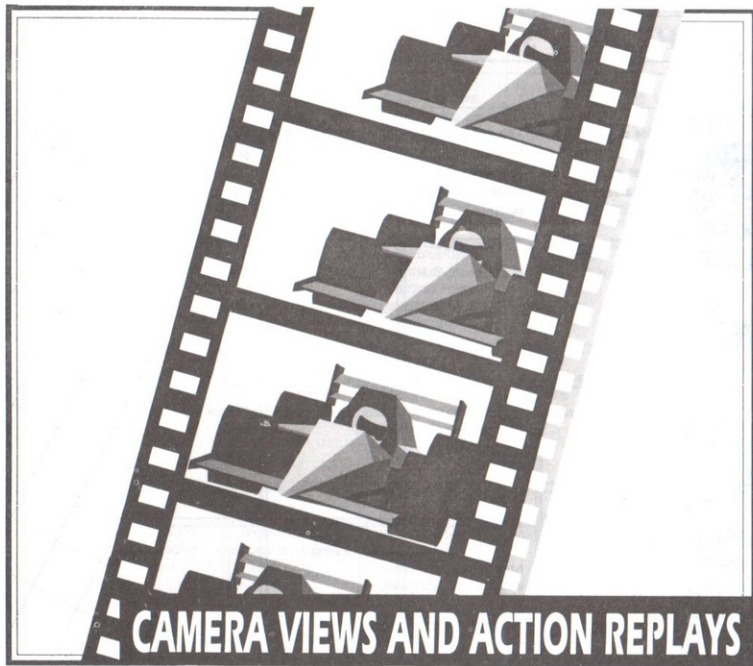
THE PITS

Problem	The car does not want to steer into the corners	The car wants to turn into the corners too quickly or spins too easily when cornering	Other cars are much faster on the long straights	Car does not grip in corners/ other cars are faster in corners	In a wet race, car loses all control
Cause	Understeer	Oversteer	Too much downforce/Gear ratio too 'short'/not enough speed through the previous corner	Not enough downforce/Too high a speed	Lack of grip from tyres
Remedy	Increase front wing/ Perhaps decrease rear wing	Decrease front wing/Increase rear wing	Reduce wings front and back/Space out higher gear ratios/use more throttle	Increase wing front and back/Slow down	Fit Wet tyres
Further Options	Move brake balance towards rear/Install softer tyres.	Move brake balance to the front/ fit harder tyres	Fit softer compound tyres for quicker cornering/Check driving line.	Select softer compound tyres	Adjust driving style to suit conditions

THE PITS



Problem	The car lacks acceleration over short distances	The car has a tendency to spin off when braking into corners	The car is slow in corners or on straights	Gradual loss of performance	Tyres wear out too quickly
Cause	Gear ratios too long	Underbraking/Breaking too late	Gearing	Tyres wearing out	Wrong compound tyres fitted for car as currently set-up
Remedy	Close down gaps between gears	Move brake balance towards the front/Brake earlier	Lengthen the gears	Fit new set of tyres.	Fit harder compound/Lessen wing downforce
Further Options	Fit softer tyres if wheelspin is apparent	Softer tyres/Increase wings	Reduce wing	None	None



CAMERAS, VIEWS AND ACTION REPLAYS



The camera can be moved around at any time by using the camera control keys. Some camera options are mainly suitable for replay or when you are out of a race and watching other cars. It would be difficult to drive from those viewpoints.

TRACKSIDE CAMERA VIEWS



(Left/Right Arrow)

You can view all the action centred on any car at any time during a race by pressing the Left Arrow Key. The Right Arrow Key will return you to the cockpit.

CHASE VIEW



(Help Key)

You can view any car from just behind and above the cockpit.

REVERSE CHASE VIEW



(Undo Key)

View any car from the front with all the action behind it.



CAMERAS, VIEWS AND ACTION REPLAYS

OTHER CAR VIEWS



(Up Arrow/Down Arrow/Home)

You can move forward into the cockpit of the car ahead by pressing the Up Arrow Key. Further presses will move you forward one car per press.

Similarly, you can move back one car by pressing the Down Arrow Key and further presses will move you further back. Home will return you to your own car. A small LED on the right of the control panel will light up when you are in your own car but will go out when you are viewing from other cockpits.

Remember, *your* car is at risk if you use this option outside of Replay Mode.

REPLAY MODE



(Pause/Replay (R))

The Pause button pauses the action and R replays the previous 20 seconds of action. You can freely move the camera around during Replay. At the end of Replay the game is left paused, ready to continue the race. At this point, you can un-pause the game and the camera will return to its *original* position, and you will be back in control of your car. Or, if you wish, press 'R' for another Replay with the camera starting from its current position. There is no limit to the number of times you can Replay an event on the track.

CAMERAS, VIEWS AND ACTION REPLAYS



OTHER ACTION REPLAY MODE



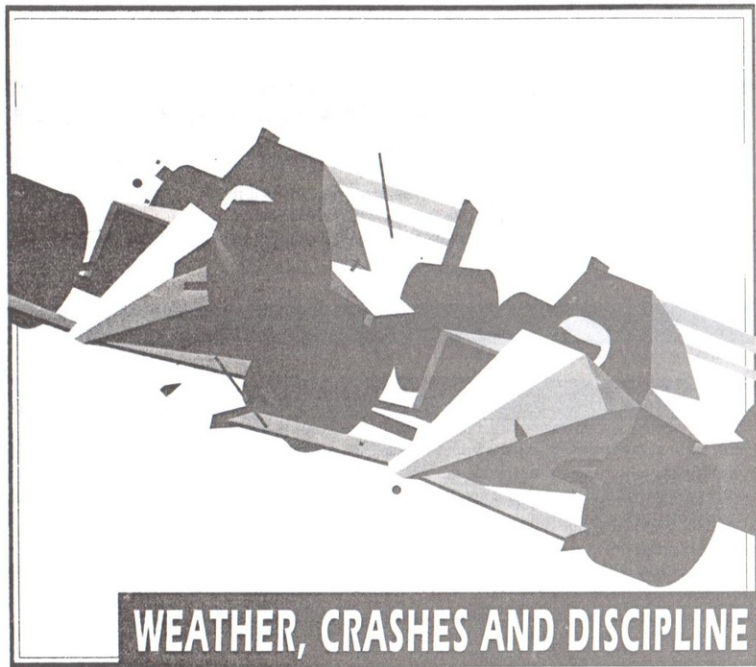
(Insert)

After receiving a message that a car is out of the race, then if the action is still recent, you can see a replay of the event by pressing Pause then Insert. This operates on a normal Replay, but the camera starts with the car in question. If the event is not recent enough, then 'Insert' will have no effect.

DEMO MODE

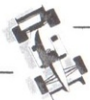


You can watch a race in Demo Mode from any circuit by de-selecting all drivers then entering any driving or race mode. It's often a good way to see the circuit; how fast it is, how twisty. It will also help if you have the manual open on the circuit diagram; follow the car as it races through the straights and corners, watch where most drivers overtake and take note of such features as 'slipstreaming'. Press Esc to return to to the Main Menu.



WEATHER, CRASHES AND DISCIPLINE

WEATHER, CRASHES AND DISCIPLINE



Wet Weather

Some races in the Grand Prix season may take place in rainy conditions. The sky will be grey and your car will already be fitted with wet tyres. If you want to survive in the race you must drive carefully. You will be notified of impending danger by marshals waving a yellow flag.

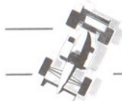
Spinning off

The most common spin causing you to leave the circuit occurs when you take a bend too quickly. You will find this will happen quite often at first. If the circuit is one with wide grassy areas and run-off strips then you can re-join the race but you will find it slow going trying to accelerate smooth Grand Prix tyres on slippery surfaces. You are advised to drop to the spin recovery gear, straighten up, then engage 1st gear. Watch out for faster cars crossing your path, and get back to the track. Your tyres might feel strange for a while.

Crashes

Crashing into other cars on the circuit may damage both vehicles, one of you may go into an uncontrollable spin. If you can still race then the damage will not be serious enough to stop you competing but you may enter the Pits as soon as possible for repairs. Crashing into walls or barriers will have a similar effect.

There are 3 levels of crash that will put you out of the race. If you have crashed, you might be lifted off the track by the crane or pushed out of the way by the track marshals.



WEATHER, CRASHES AND DISCIPLINE

If you have sustained a crash that has ended your chances in a Championship race you can choose to speed up the events and get the race result or watch the race unfold from another drivers cockpit. When you are Practising any Circuit you can start again with a spare car from the Pits.

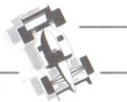
Race Circuit Discipline

You will be warned of any dangerous incident such as a shunt by a Yellow Flag.

A Green Flag will inform you that it is all clear.

Consult the Flags section in this manual (page 111) for a full description of racing flags.

THE MAIN MENU



The Main Menu is the screen you will see most often in the simulation. It is the start/finish point of all races, practices, loads and saves. It presents the player with 8 options:

Driver/Team Selection

Load/Save Game

Set Up

Practise Any Circuit

Non-Championship Grand Prix Race

Grand Prix Championship Season

Game Options

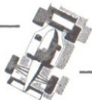
Review Championship History

DRIVER AND TEAM SELECTION



Select Team

Choose from any of the eighteen teams shown on the screen. You can change the names of the teams. For more information of the 1991 season Teams and Drivers see pages 100 to 109.



THE MAIN MENU

Select Driver/ Enter New Driver

Choose from any of the listed drivers. Press Select and the driver number will light up in the right-hand panel. To erase an existing driver highlight the name, press the Selector, then press the Backspace Key and delete the name. Type in your chosen name and press the Selector. You will see the chosen driver number change colour. If you wish to change your mind you can Deselect or return to the Default Name. You may want to choose more than one driver if you want to play Multi-Driver Mode. Select Choose Another Team and you will return to the Team Menu. For more details on Multi-Driver Mode see page 65.

When you have completed your selections you can exit back to the Main Menu.

LOAD/SAVE A GAME



In a World Championship the saved file will always be updated to show your position throughout the season and you can save any race at any point, by pressing ESC.

You can load a previously saved race from the point where you decided to stop racing. If you were in the middle of a race, the game will re-start in Paused Mode with a 20 second replay. Press P to continue.

THE MAIN MENU



SET UP OPTIONS



Realism Level

AUTO BRAKES F1



The brakes will be controlled by the computer.

AUTO GEARS F2



The gear changes will be selected by the computer.

SELF-RIGHTING SPINS F3



The car will always end up facing the right way in the event of a spin if this option is on, once the car has come to rest.

INDESTRUCTIBLE F4



The car you are driving will not crash or be affected by any crash and will not sustain damage.

BEST LINE F5



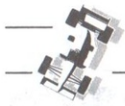
A dotted white line will appear to show you the best driving line to follow on every circuit.

SUGGESTED GEAR F6



A blue gear indicator will appear to show you the suggested gear to be in on the next bend.

(All the above can be toggled during a race by pressing the Function Keys F1 to F6 subject to the limitations of the difficulty level. See page 36).



THE MAIN MENU

Race Options

RACE DISTANCE

Choose the distance you want for the races as a percentage of the actual distance. From 10% to 100%. For example in a 60 lap race 10% will give you 6 laps. This will apply to all circuits if you are competing in a Racing Season, and cannot be changed during a Championship.

QUALIFYING PERIOD

Choose the amount of time you want available for a timed qualifying session, from 5 minutes to 120 minutes. This will apply to all circuits if you are competing in a Racing Season, until you change it again.

LEVEL OF OPPOSITION

Decide on the level of opposition you want to face by selecting the Difficulty Level you desire from Ace to Rookie.

The Difficulty Level you have already chosen is shown by five lights in a row on the left of the steering wheel in the driver's cockpit. If the lowest green light is shining then you are racing at Rookie level, if the highest light is on then you are competing at Ace level. The levels also determine the number of Driving Aids you can access. You can change levels throughout a Championship, but the overall Championship will be decided at the lowest level you competed at.

The levels are:

Ace

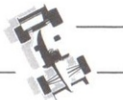
Pro

Semi-Pro

Amateur

Rookie

THE MAIN MENU



DISTRIBUTION OF PERFORMANCE

1991 Performance



The drivers and cars are based on the real events and performances of the 1991 season. Some drivers are rarely out of the points; others regularly appear lower down in the order.

All the Same Performance



Each driver performs equally. All cars have the same power and performance.

Random Performance



Each driver and car achieves a random performance.

PRACTISE ON ANY CIRCUIT



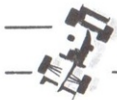
The option that enables you to get to know all the circuits without competing with other cars.

Select Driver Menu

The Select Driver Menu will appear if you have not already chosen a driver and a team.

Circuit Select Menu

You are given a choice of the 16 Grand Prix circuits to practise on. You may practise on all of them in any order. It is only when you start the World Championship season that you will have to race each in turn in the pre-determined order. Highlight your chosen track then press the Selector.



THE MAIN MENU

You will see a view of the circuit. You can choose to see Information about that particular circuit, go to the Previous or Next circuit in the sequence, or get an unobscured View.

Select OK when you have made your choice. You will then be put into the Pits in the car of your choice.

Practice

Your car will appear in your Pits garage ready for you to make adjustments to the car Set-Up or for you to practise with the current Set-Up on the circuit of your choice. In this session, you will not be in a race and there will be no other drivers practising on the same track. Return to the Pits by driving in or by pressing Q.

NON-CHAMPIONSHIP GRAND PRIX RACE



Driver/Team Select Menu

If no driver or team has been chosen this option will appear. Choose an existing team and driver or enter a new driver.

Circuit Select Menu

Select any Grand Prix circuit for a full 26 car race. This will not feature as part of the World Championship season. Practise racing on all the circuits and get to know them before embarking on the full season.

Free Practice

Your car will appear in your Pits garage ready for you to make adjustments to the

THE MAIN MENU



Set-Up, or race with the existing Set-Up on your chosen circuit. Free Practice can take place up to a maximum time of 120 minutes. You will always have the option to Quit/Save or Continue.

Qualifying/Timed Practice

You start in the Pits and you are allowed one timed qualifying session per race. This lasts for a maximum of 2 hours or minimum of 5 minutes. You can choose to go into the Pits at any time if you feel you have achieved a good enough time. A Telemetric Monitor will be placed above your cockpit panel and you can watch the times of other drivers. If you notice that other drivers are improving on your lap times, then you can go out again (as long as there is enough time remaining for practice).

You are limited to 4 sets of qualifying tyres per session.

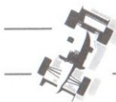
You can Accelerate Time for the other drivers by moving the Controller forward and letting go. This toggles accelerated time On/Off.

You may abandon the current qualifying lap by pressing Q. You will re-enter the Pits. Esc returns you to the Main Menu.

If you manage to set a lap record in any race or qualifying session, the computer will automatically save that information under your chosen driving name, if when you exit the game you use the 'Save' option.

Pre-Race Practice

You will also have the option of Pre-Race Practice in full racing trim (fuel, settings). This session has a time limit of 1 hour (or proportion of 1 hour). This is your final chance to get to know how your car will perform in the race itself. Beware, there may be a lot of other cars on the circuit.



THE MAIN MENU

Race

Once you have practised, got to know the circuit, then qualified for a good grid position, you can enter the race itself. If you have not achieved a good time, or any time at all, you will still be on the starting grid but at the back.

You will be placed on the starting grid among all the other 25 cars waiting for the Red and Green lights. After completing the specified amount of laps, you will be given the Final Race Positions. The race will not count towards any Championship points.

THE GRAND PRIX CHAMPIONSHIP SEASON



Initialise Season/Load Saved Game

Start from Phoenix in the American Grand Prix and drive through to Adelaide in the sixteenth and final race using all the best car Set-Ups gleaned from Practice and with all your acquired knowledge of the various circuits. If you are starting the complete season, the first track will be displayed. If you are in the middle of a season, the latest track will be displayed and you can load a saved season and continue your Championship challenge.

Free Practice

Your car will appear in your Pits garage ready for you to make adjustments to the set-up or race with the existing set-up on the circuit of your choice. You will have a maximum of 120 minutes in Free Practice. You will always have the option to Quit or Save.

THE MAIN MENU



Qualifying/Timed Practice

You start in the Pits and you are allowed one timed qualifying session per race. This lasts for a maximum of 2 hours or minimum of 5 minutes. You can choose to go into the Pits at any time if you feel you have achieved a good enough time. A Telemetric Monitor will be placed above your cockpit panel and you can watch the times of other drivers. If you notice that other drivers are improving on your lap times, then you can go out again (as long as there is enough time remaining for practice).

You are limited to 4 sets of qualifying tyres per session.

You can accelerate time for the other drivers by moving the Controller forward and letting go. This toggles accelerated time On/Off.

You may abandon the current qualifying lap by pressing Q. You will re-enter the Pits. Esc returns you to the Main Menu.

If you manage to set a lap record in any race or qualifying session, the computer will automatically save that information under your chosen driving name, if when you exit the game you use the 'Save' option.

Pre-Race Practice

You will also have the option of Pre-Race Practice in full racing trim (fuel, settings). This session has a time limit of 1 hour (or proportion of 1 hour). This is your final chance to get to know how your car will perform in the race itself. Beware, there may be a lot of other cars on the circuit.

First Race of the Season

Once you have practised, got to know the circuit, then qualified for a good grid position, you will enter the race itself and find yourself on the starting grid among all the other 25 cars waiting for the Red and Green lights. After completing the race,



THE MAIN MENU

you will be shown the Final Race Positions, then the Drivers' Championship Positions and Constructors' Championship Positions.

Next Circuit in the Season

If you are in the middle of a Championship you can Save the season or you will be given the option to continue to the next Circuit. If you have completed the last race of the season you will see the final points table.

Game Options

Animations

Choose the on screen animations you wish to appear during the simulation.

All, Victory, None.

Multi-player Turns

Specify the number of turns per player during a multi-player race.

REVIEW CHAMPIONSHIP HISTORY



Before continuing a season you can study the points tables in a saved Championship.

Driver Championship Positions

Look at what has happened in previous races, who won the points and who is the most consistent driver.

Constructor Championship Positions

Summarises the points allocated to the teams and shows the leading constructors.

MULTI-PLAYER MODE



By selecting more than one driver you can implement Multi-player Mode on any race.

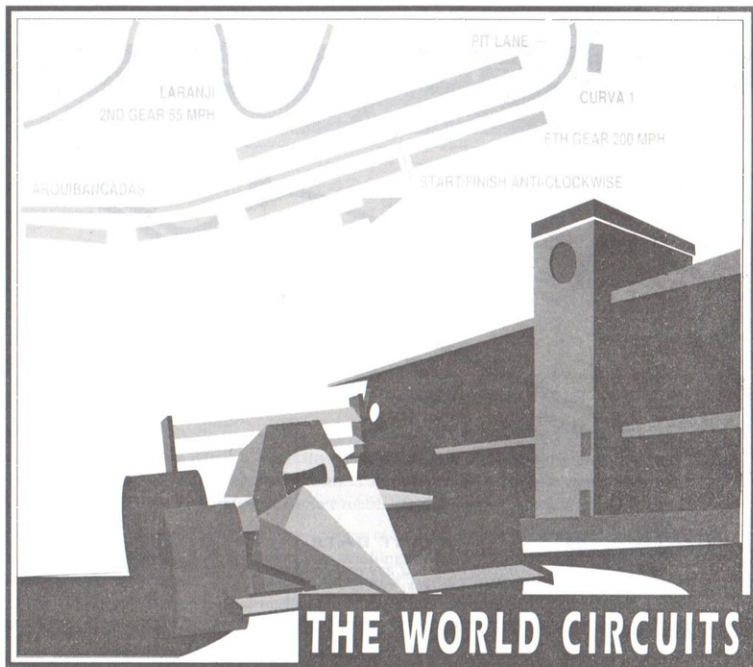
The programme will allocate equal time slots to each driver. For example, if two players wish to compete in a ten lap race, they each enter their names at the Driver Selection Menu, the computer then chooses one player to drive first and drives the other car as well as all the remaining cars on the grid.

A 'programme manager' will allocate equal time for each driver and give a warning of the changeover. The single LED on the right of the steering wheel will flash red for 15 seconds to warn the current player of the change over. Then a five second warning is given before the computer takes control of the current player's car. The camera view then changes to the next player's car, which is being controlled by the computer. Another 5 sec warning is given before control passes to the next player. The option to pause and replay could be used during this period if the new player wishes to see more of his car's recent action.

The players can control the number of changeovers which occur during the race by specifying the number of turns per player in the Game Options Menu.

Remember to set-up enough laps for each person to get a good drive.

In qualifying mode up to 35 players can take part. Changeover occurs when a player returns to the pits. The session ends automatically once the session period is complete and all the players have used the same number of tyre sets. ESC can be used to force an exit. Remember, only the fastest 26 will qualify - but players will always qualify in preference to computer controlled cars.

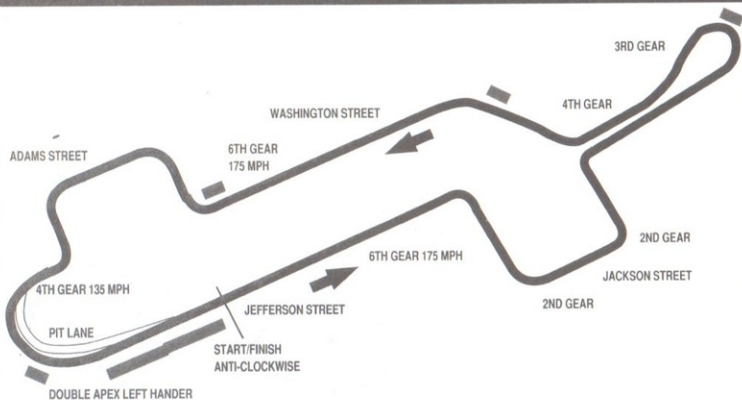


GRAND PRIX

67

GRAND PRIX

PHOENIX CIRCUIT



CIRCUIT DATA

Circuit Length: 2.280 miles/3.668km
Race Distance: 81 laps, 190.392 miles/306.342 km
Location: Phoenix, USA



THE CIRCUITS



UNITED STATES GRAND PRIX



This is the first race of the season. Everyone is keyed up and excited, desperate to make a good start to the Grand Prix year.

Phoenix is a street circuit, full of bumps, manholes and a wide variety of different surfaces. Camber changes can be quite difficult for the driver who is not in top form. Most of the corners are 90 degree turns and overtaking opportunities are few and far between, especially if the driver in front wants to be difficult. It's one of those circuits that can be awkward when you're trying to make a fast qualifying time and you find yourself blocked.

An anti-clockwise circuit, the cars race along **Jefferson Street** flat out in sixth getting to 175mph before they try to outbrake each other into the right-hander for **Madison Street**. Corners are always tricky on this track; the varying surfaces give many levels of grip, especially in the first few laps, before rubber is laid down along the racing lines.

Through the second gear left-hander into **Jackson Street**, then a series of left and right 90 degree bends, the third gear hairpin and then right and left again before you accelerate down **Washington Street**. This and Jefferson Street are the two main overtaking straights. Out of the straight, then very quickly, right, left into **Adam Street**, left again, then right into the fourth gear, 135mph double-apex left-hander before roaring out back into the finishing straight.

Most drivers agree that Phoenix is a very demanding circuit. It also takes a lot out of the cars. Tyres wear out quicker than expected, engines and gearboxes also suffer, especially when it's hot.

PHOENIX GRAND PRIX CIRCUIT PHOENIX, ARIZONA, USA

Length of Circuit:2.28 miles/3.668 km

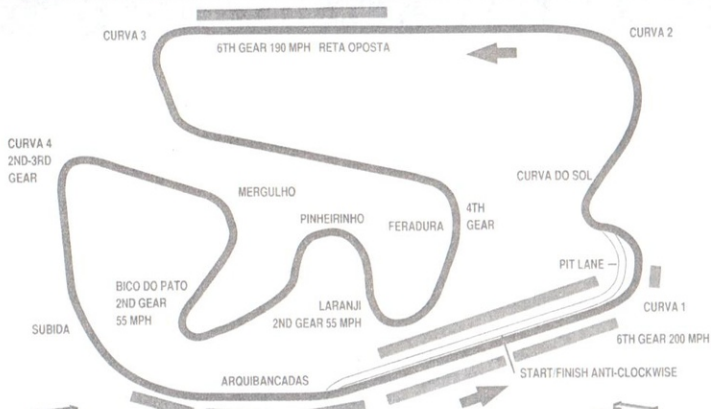
Number of Laps:81

Total Distance:190.392miles/306.342km

Lap Record (Qualifying):1m.21.434sec

Lap Record (Race):1m.26.758sec

INTERLAGOS CIRCUIT



CIRCUIT DATA

Circuit Length: 2.688 miles/4.325 km
 Race Distance: 71 laps, 190.848 miles/307.075 km
 Location: Autodromo José Carlos Pace, Interlagos, Brazil

THE CIRCUITS



GRANDE PREMIO DO BRAZIL



A circuit that demands a great deal from the transmission with numerous gear changes. The long left-hander can also make it very exhausting for the drivers who have to fight the strain on their neck muscles. It's important to be quick on the two long 200mph straights, so cars are set-up with very little downforce. However, this makes the inner sections of the track more difficult to drive with the wheels losing some grip and the cars feeling jumpy and twitchy.

From the pits straight, flat out in sixth at 200mph, you sweep left and right for **Curva 1** and **Curva de Sol** then wind up for the long **Curva 2** left-hander and accelerate past **Reta Oposta** in sixth gear at 190mph. Two slight left-handers after **Curva 3** and storm through the fourth gear **Feradura**. From here you need to get into a good rhythm to take you through a series of slow winding bends: **Laranji** (second gear, 55mph) then **Pinheirinho**, **Bico do Pato** (second gear, 55mph) and finally, **Merghulho**.

Curva 4, taken in second or third gear is next, a bumpy slow left-hander. This corner is important in that, taken properly it can put you in a good position to approach the long left-hander that leads to the pit straight, **Arquibancadas**. Winding up through **Subida**, it's quite possible to line yourself up to 'get a tow', slipstream a car in front of you and overtake.

AUTODROMO JOSE CARLOS PACE, INTERLAGOS, BRAZIL

Length of Circuit:..... 2.699miles/4.325km

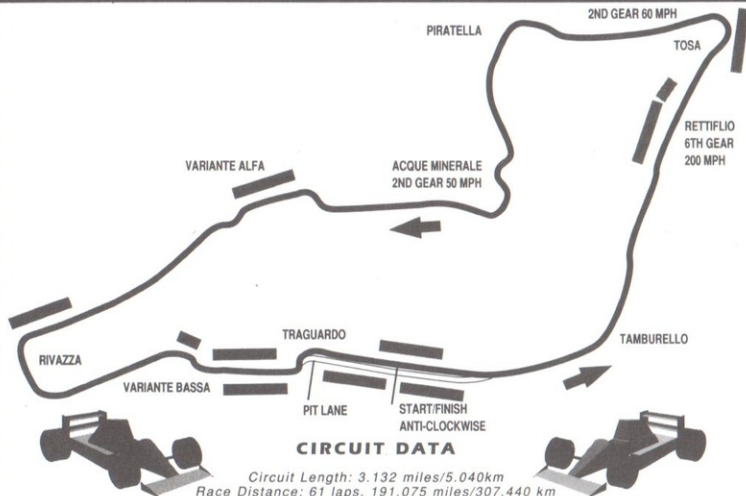
Number of Laps:..... 71

Total Distance:..... 190.848miles/307.075km

Lap Record (Qualifying):..... 1m. 16.392sec

Lap Record (Race):..... 1m. 19.089sec

IMOLA CIRCUIT



CIRCUIT DATA

Circuit Length: 3.132 miles/5.040km
Race Distance: 61 laps, 191.075 miles/307.440 km
Location: Imola, Italy

THE CIRCUITS



GRAN PREMIO DI SAN MARINO



A bumpy, bruising anti-clockwise circuit where the cars run little wing and are often struggling for grip or clipping the kerb.

From the grid, you roar towards **Tamburello**, a long, fast sixth-gear left-hander that pushes you into speeds in excess of 170mph. Accelerating into **Rettifiolo**, the cars can reach 200mph before they brake for **Tosa**, an off-camber tight left-hander that's taken in second at 60mph. Here, you have a good chance of getting on the brakes late and overtaking but it's not easy. Double-back up the hill to a fast left at **Piratella**, flat-out in fourth, then change into fifth just as you leave the bend.

Next, down the hill into the long left-hander towards the **Acque Minerali** chicane. The approach is off-camber and blind; you have no view of the 's' until you are in it, in second at 50mph. Here, there is a tendency to bounce from one side of the track to the other and many drivers spin off on this corner.

Then flat-out through the small chicane at **Variante Alfa** and down towards two bumpy left-handers, **Rivazza**, that shake the car so much you can hardly see where you are going.

Back in fifth gear, you approach **Bassa**, a right-hand chicane that leaves you a bit blind with no idea where the apex is, then weave through **Traguardo** and back into the finishing straight.

AUTODROMO ENZO AND DINO FERRARI, IMOLA, ITALY

Length of Circuit:..... 3.132miles/5.040km

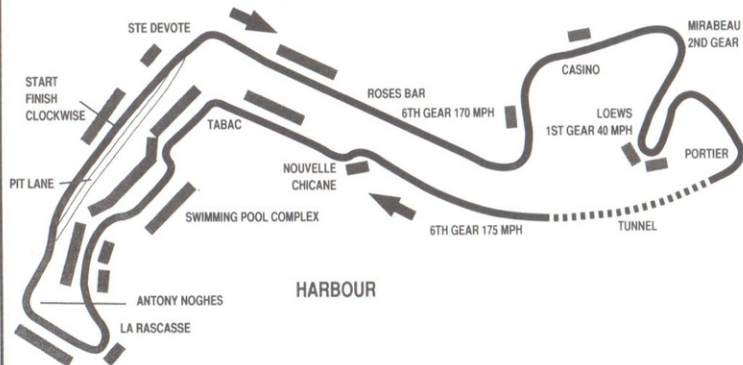
Number of Laps: 61

Total Distance:..... 191.075miles/307.440km

Lap Record (Qualifying): 1m.21.877sec

Lap Record (Race):..... 1m.26.531sec

MONACO CIRCUIT

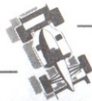


CIRCUIT DATA

Circuit Length: 2.068 miles/3.328km
Race Distance: 78 laps, 161.332 miles/259.584 km
Location: Monte Carlo, Monaco



THE CIRCUITS



GRAND PRIX DE MONACO



The qualifying laps for this circuit are very important because it is practically impossible to pass anybody here unless they make a driving error or crash.

The cars are set up for *maximum downforce* and suspension is a little softer to deal with the many bumps on the course.

After the mayhem of the first bend at **Sainte Devote**, when the field tries to squeeze through, you pass **Roses Bar** flat out in sixth at 170mph, a great uphill straight but full of dips, bumps, and manhole covers that make the car judder and thump.

Then to **Casino**, hard through the left-hander and quickly right downhill, off camber, almost brushing the barrier as the road gets narrower, slippery and very bumpy.

Mirabeau next; a tight, simple, second gear bend. Accelerate sharply then brake practically to a standstill for **Loews**. This is a first gear, 40mph, hairpin that needs maximum lock (many drivers increase the lock of the car for this race). Often, there is a procession of cars here and if you're not in the first six then you have to wait your turn.

Accelerate gently through **Portier** then flat out into the **Tunnel**, third, fourth, fifth. The improved lighting in the tunnel means that it's not so much of a shock coming out of the daylight but you have to be careful; the dirt, grease and oil does not get washed away by the rain and this is not the place to skid.

Roar out in sixth at about 175mph, stay well out to the right and line up for the **Nouvelle Chicane**. Take this fast in fourth, left-right zig-zag but this narrow section needs to be driven with the utmost precision. One touch of the kerb and you're out of the race. Out of the chicane, flat out in fifth, the road widens and you head for **Tabac** and the **Swimming Pool Complex**. In third, two esses, accelerate briefly, brake hard and almost touch the barriers with the right hand side of the car. **La Rascasse** next, then in second for **Antony Noghes**, accelerate out of this bend, roar through the gears and then flat out in sixth heading for the finishing straight.

CIRCUIT DE MONACO, MONACO

Length of Circuit:..... 2.068miles/3.328km

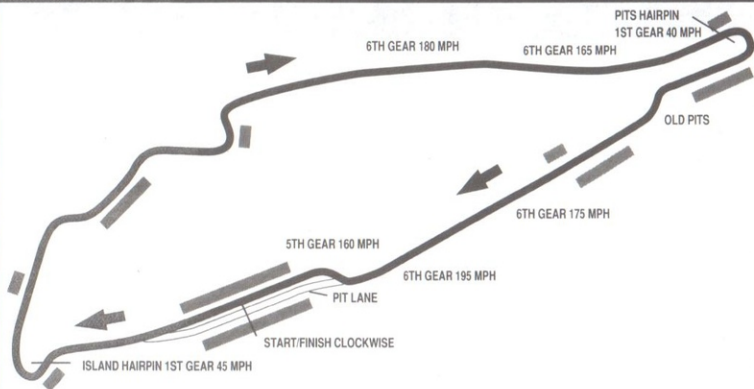
Number of Laps:..... 78

Total Distance:..... 161.332miles/259.584km

Lap Record (Qualifying):..... 1m.20.344sec

Lap Record (Race):..... 1m.24.368sec

MONTREAL CIRCUIT



CIRCUIT DATA

Circuit Length: 2.753 miles/4.430km
Race Distance: 69 laps, 189.975 miles/305.670 km
Location: Circuit Gilles Villeneuve, Montreal, Canada

THE CIRCUITS



CANADIAN GRAND PRIX



A fast circuit comprising of a succession of hard braking and accelerating. Drivers take off downforce which make the slower sections much more difficult and emphasises the uneven surface.

From the start, the cars proceed into the slow left/right first gear **Island Hairpin**, taken at 45mph. The drivers get a lot of wheelspin as they leave this corner and build up to the long extended 's' bend which they can approach in fifth at 160mph. Then it's flat out in sixth, 180 to 185mph along the back straight before slamming on the brakes for the first gear, 40mph **Pits Hairpin**. It's very important to get a good, fast exit out of this bend, then right, left, through what is thought to be the most dangerous part of the circuit with high concrete walls on either side of the track. Past **Old Pits** and into sixth gear, then accelerate through the straight at 175-185-195mph. This is the fastest section of the track and leads to one of the least favourite corners among many drivers, down to fifth, 160mph, a quick right-left. It's very easy to clip the kerb and spin off here either on entry or on the apex, but if you come out of it well, it sets you up for a charge down the finishing straight.

CIRCUIT GILLES VILLENEUVE, MONTREAL, CANADA

Length of Circuit:..... 2.753miles/4.430km

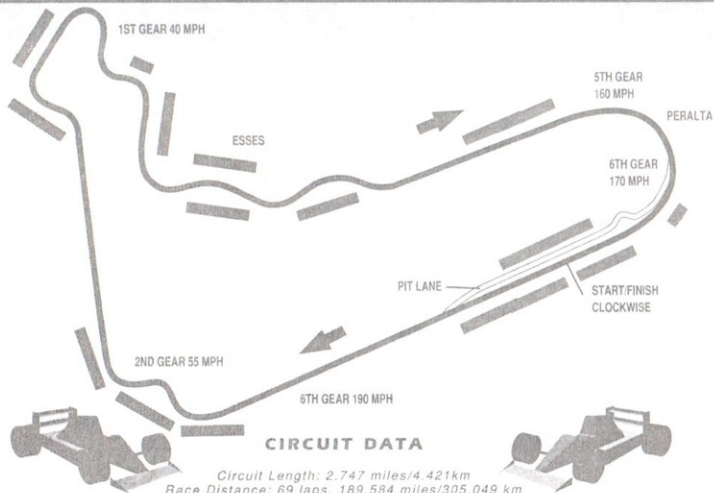
Number of Laps:69

Total Distance:..... 189.975miles/305.670km

Lap Record (Qualifying): 1m.19.837sec

Lap Record (Race):..... 1m.22.077sec

MEXICO CITY CIRCUIT



THE CIRCUITS



GRAN PREMIO DE MEXICO



A hard, bumpy circuit, which needs lots of gear changes but generally very fast. The cars require little downforce and because of the high altitude almost 20% of power is lost but this is compensated by a reduction in 'drag'. Concentration is vital on this course. Drift off-line and you find dusty parts of the track with little grip. Mexico can also have vicious bumps that can cause a lot of damage to the car and knock the breath from your body.

After a long straight, the fastest on the course in sixth at 190mph, and one of the best places to overtake, you brake hard into the first corner, down to 55mph in second or third. Right, left, right into the shorter straight flat out towards a long series of bends, the Esses. It's easier if you can get into a rhythm because they are very similar. When you hit the back straight in sixth and head for **Peralta**, a notorious corner taken in fifth at 160mph and a challenge to any driver, exit on the kerb then accelerate to 170mph past the grandstand.

AUTODROMO HERMANOS RODRIGUEZ, MEXICO CITY, MEXICO

Length of Circuit:..... 2.747miles/4.421km

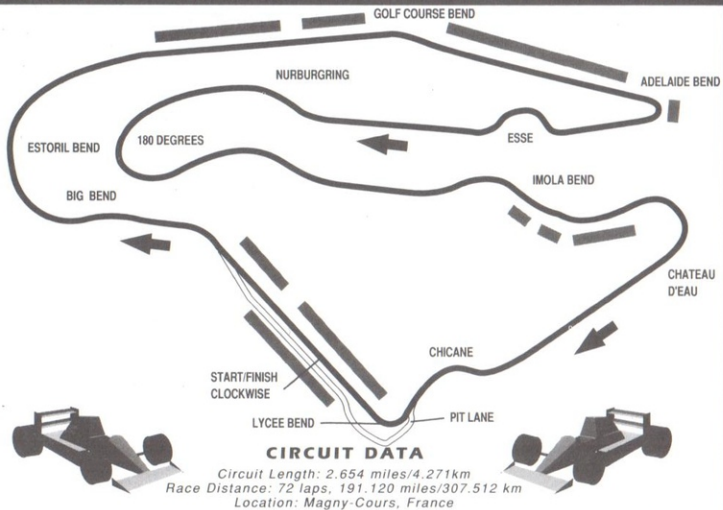
Number of Laps: 69

Total Distance:..... 189.584miles/305.049km

Lap Record (Qualifying):..... 1m.16.696sec

Lap Record (Race):..... 1m.16.788sec

MAGNY-COURS CIRCUIT



THE CIRCUITS



GRAND PRIX DE FRANCE



This is a new course in the World Championships. Smooth and challenging, doubling back on itself, with fast fourth-fifth gear corners and first gear hairpins as well as a long top-speed straight, Magny-Cours has been built to appeal to the Formula One spectators and TV crews alike. The circuit has several constant radius corners but the cars are set up to carry less downforce. The five fast straights mean that acceleration and top-speed are more important than the fraction of a second to be gained at corners when carrying more downforce.

CIRCUIT DE NEVERS MAGNY-COURS, FRANCE

Length of Circuit: 2.654 miles/4.271 km

Number of Laps: 72

Total Distance: 191.120 miles/307.51 km

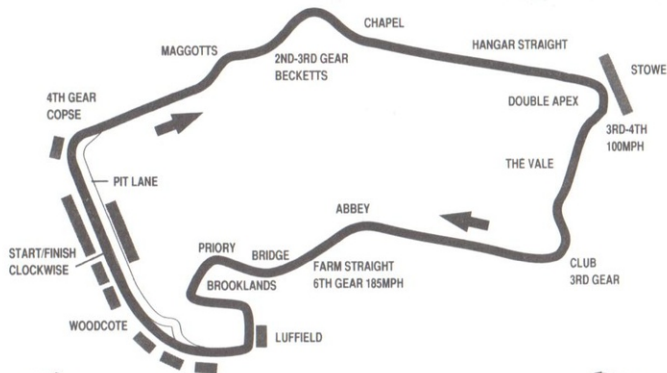
Lap Record (Qualifying): 1 m.14.559 sec

Lap Record (Race): 1 m.19.168 sec

After the pits straight, you roar into a fast left-hander which changes into a slow left-hander at **Big Bend** then turns into a long sweeping right-hander: **Estoril Bend**. Taken in fourth or fifth, this propels you into the long back straight, past the **Golf Course Bend**, in top at 190 mph. After the fastest point, brake hard for the first gear hairpin at **Adelaide Bend** and turn into the infield part of the course. Swing into the second or third gear **Esse** then a short straight before **Nurburgring**, a slight right, then a sweeping left which turns into a double-apex 180 degree bend that throws you into another short straight almost parallel with the previous one.

Next, a fifth gear left-hander, **Imola**, which leads into the fast fourth gear bend at **Chateau d'Eau**, then another short straight, under the bridge and into the **Chicane** before you take a good line sharp right into the **Lycee Bend**, then flat out across the finishing line.

SILVERSTONE CIRCUIT



CIRCUIT DATA

Circuit Length: 3.202 miles/5.153km
Race Distance: 60 laps, 192.000 miles/309.180km
Location: Northamptonshire, Great Britain



THE CIRCUITS



BRITISH GRAND PRIX



The circuit has been altered for the 1991 Championship because it was considered far too dangerous. A bend such as **Club Corner** taken in sixth at 185mph with no run off track was particularly hazardous.

Copse is a fourth gear corner that pushes you into a fast straight leading to **Maggotts**, where you swing into the S shaped **Becketts** in second or third. This slows the cars down and provides a better spectacle for the crowd. Then the cars roar away from **Chapel** along the **Hangar Straight**, under the bridge, towards the double apex right-hander **Stowe**; taken in third or fourth at 100mph. After the **Vale** complex you have to take **Club**, a third gear left-hander that throws you into the **Abbey** straight, a favourite overtaking stretch. In sixth, at 185mph sweep into the **Farm Straight** and a fast right under **Bridge** towards **Priory** and **Brooklands**. Two second or third gear left-handers followed by two right-handers ending at **Luffield**, then it's flat out along the fast **Woodcote** and through the finishing straight.

SILVERSTONE,
NORTHAMPTONSHIRE, BRITAIN

Length of Circuit:..... 3.202miles/5.153km

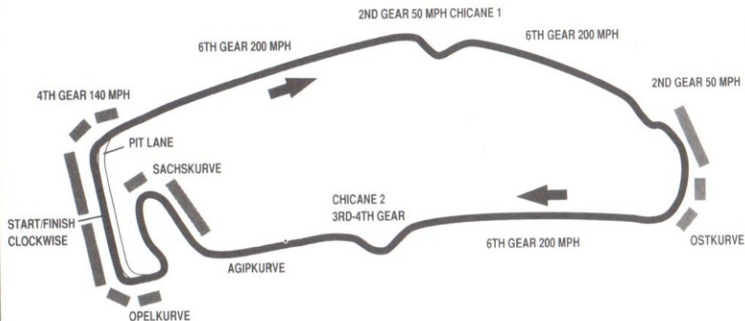
Number of Laps: 60

Total Distance:..... 192miles/309.180km

Lap Record (Qualifying): 1m.20.939sec

Lap Record (Race): 1m.26.379sec

HOCKENHEIM CIRCUIT



CIRCUIT DATA

Circuit Length: 4.227 miles/6.802km
Race Distance: 45 laps, 190.236 miles/306.090 km
Location: Heidelberg, Germany



THE CIRCUITS



GROSSER PREIS VON DEUTSCHLAND



There are three chicanes on the circuit, one fast and two that have to be taken slowly. The rest of the course is a series of straights. This means that to have good top speed almost all downforce is taken off, and the cars are a horror to drive with no grip and twitchy on any bend.

From the start you take a fourth gear right-hander at 140mph, then put your foot down 'till you hit sixth at 200mph for the fastest part of the course. Brake hard for **Chicane 1** which hooks sharp right and can be taken in second at 50mph but if you drive a bad line you may be forced to drop to bottom gear. Up through the gears again, flat out, 200mph for the sweeping right-hander then brake again for another chicane which you take in second at 50mph, come out of that and roar into **Ostkurve**, one of the fastest bends of any championship course, take it in sixth, 200mph. Slow down for **Chicane 2**, drop to fourth or third, then flat out for the rest of the straight until **Agipkurve**. This is the most difficult part of the circuit and tends to wear out tyres prematurely. Drivers have not built up any rhythm for the bends and all concentration is lost on the long straights.

Approaching **Sachskurve**, slip to fourth, line the car into the right-hander, foot down, sweep round, then second gear to take the hairpin, speed up, line up the car for the tight right-hander, brake lightly and roar out of **Opelkurve** in third towards the finishing straight.

Hockenheimring is a good overtaking circuit but the slow chicanes require brutal braking and brakes tend to cool off on the long straights making them less efficient. Most drivers find it difficult to establish a satisfactory rhythm on this course.

HOCKENHEIMRING, HEIDELBERG, GERMANY

Length of Circuit:..... 4.227miles/6.802km

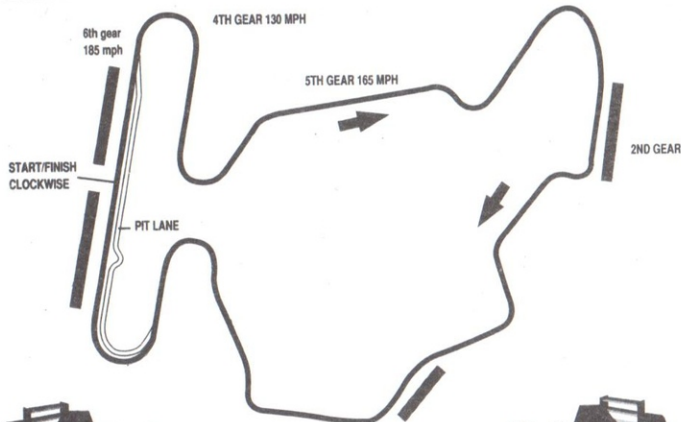
Number of Laps:..... 45

Total Distance:..... 190.236miles/306.90km

Lap Record (Qualifying):..... 1m.37.087sec

Lap Record (Race):..... 1m.43.569sec

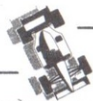
HUNGARORING CIRCUIT



CIRCUIT DATA

Circuit Length: 2.466 miles/3.968km
Race Distance: 77 laps, 189.851 miles/305.536 km
Location: Hungaroring, Budapest, Hungary

THE CIRCUITS



HUNGARIAN GRAND PRIX



A tough but relatively slow circuit with a large number of corners and few straights. It's difficult to overtake on this course and you have to be quite patient, waiting for the right moment. Cars are usually set up for more downforce to gain the advantage of good grip on the numerous bends.

Roaring away from the start, downhill, flat out in sixth at 185mph, the pit straight is the main overtaking point on the course. Then through the first of several constant radius corners at 130mph in fourth, a short back straight, then a double-apex left-hander leading to a long sweeping right. Accelerate to 165mph in fifth, sweep left then go into another double-apex bend. Slow down for the second gear chicane, then drive hard into a whole series of fast corners before the constant radius **Pit Lane** bend throws you out into the long finishing straight.

The twisting up and down nature of the track means that average speeds are quite low, about 105-110mph, and tyres wear out quickly as the drivers lose patience and try to exit corners faster than the tyres will allow. Most teams find that drivers come in for a tyre change much earlier than planned, if only to get away from the queues that develop on this circuit.

HUNGARORING, BUDAPEST, HUNGARY

Length of Circuit:..... 2.466miles/3.968km

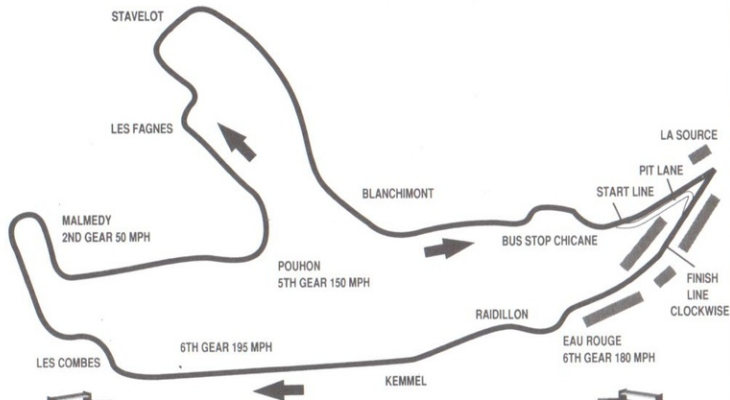
Number of Laps: 77

Total Distance:..... 189.851miles/305.536km

Lap Record (Qualifying): 1m.16.147sec

Lap Record (Race):..... 1m.21.547sec

SPA-FRANCORCHAMPS CIRCUIT



CIRCUIT DATA

Circuit Length: 4.313 miles/6.940km
Race Distance: 44 laps, 189.747 miles/305.360 km
Location: Spa-Francorchamps, Belgium



THE CIRCUITS



GRAND PRIX DE BELGIQUE



Fast, challenging and exhilarating, Spa is a favourite circuit among Grand Prix drivers. It successfully combines fast sixth and fifth gear corners with good first gear hairpins and second gear chicanes. Generally cars are set up with little downforce.

From the start line, there is a short space of time before the cars reach the first gear, 45mph **La Source** hairpin, the scene of many opening-lap shunts, as 26 cars brake from 160mph to 45mph while trying desperately to overtake each other. Then, it's a race up through the gears, downhill in sixth at 180mph, you drop into the **Eau Rouge** dip, a slight left, then sweep right uphill past **Raidillon**. This is one driving line you cannot afford to get wrong, one error and you're off the circuit!

Speed up through **Kemmel** and into the long straight, flat out at 195mph, weave through **Les Combes** and then take **Malmedy** in second. This is a tricky 180 degree corner, downhill and off-camber. **Pouhon** is next; an extremely difficult left-hander that starts off in sixth, then drops to fifth at 150mph.

Through **Les Fagnes** and **Stavelot** you take a series of fast corners that lead you to the long sweeping right and left towards **Blanchimont** then brake hard for the **Bus Stop Chicane**. Bus Stop is the drivers least favourite corner, to be quick you have to run over the shallow kerbs, which is always a risk.

The weather is always a big factor at Spa-Francorchamps and it is invariably wet which results in small, hazardous streams crossing the circuit, making drivers adjust their driving line.

CIRCUIT DE SPA-FRANCORCHAMPS, FRANCORCHAMPS, BELGIUM

Length of Circuit:..... 4.313miles/6.940km

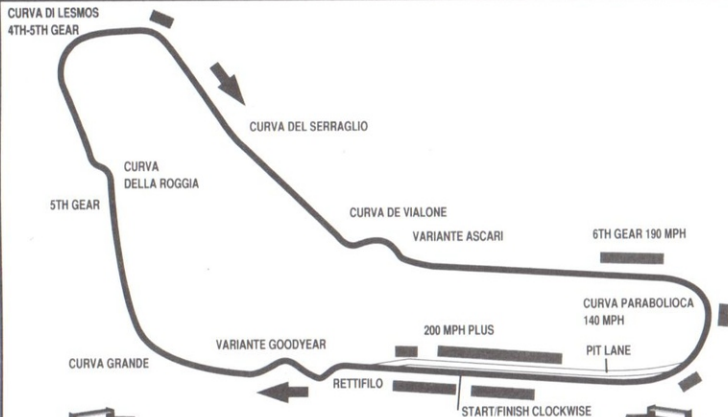
Number of Laps: 44

Total Distance:..... 189.747miles/305.360km

Lap Record (Qualifying): 1m.47.811sec

Lap Record (Race):..... 1m.55.087sec

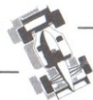
MONZA CIRCUIT



CIRCUIT DATA

Circuit Length: 3.604 miles/5.800km
Race Distance: 53 laps, 191.009 miles/307.400 km
Location: Milan, Italy

THE CIRCUITS



GRAN PREMIO D'ITALIA



Monza is always full of screaming, hysterical crowds being marshalled by even more hysterical officials. The drivers absorb the atmosphere and are spurred on to perform to their utmost, especially if they are driving an Italian car.

The cars run little wing to take advantage of the very fast start/finish straight, **Rettifilo**, which is crossed at speeds in excess of 200mph. The track has been modified to make it safer including the introduction of the second gear **Variante Goodyear**, a chicane that leads into the famous fifth gear **Curva Grande**.

Flat out towards Lesmos in fifth there is another second gear chicane: **Curva della Roggia** before the double right-hander **Curva di Lesmos** corner. You take the first part in fourth gear then power up to take the second part flat-out. These corners have to be taken just right for any slight error will slow you down considerably and put you in a bad position for the 180mph back straight, **Curva del Serraglio**.

Then it's a tricky third gear chicane **Variante Ascari**, come out of this in fifth and charge down **Rettifilo Centro** at 190mph in top and brake hard for the famous **Curva Parabolica**, a fast, 180 degree right-hander that's taken in fourth at 140mph. Accelerate to 160mph out of the bend, then storm through the finishing line with your foot down in sixth.

AUTODROMO NAZIONALE DI MONZA, MILAN, ITALY

Length of Circuit:..... 3.604miles/5.80km

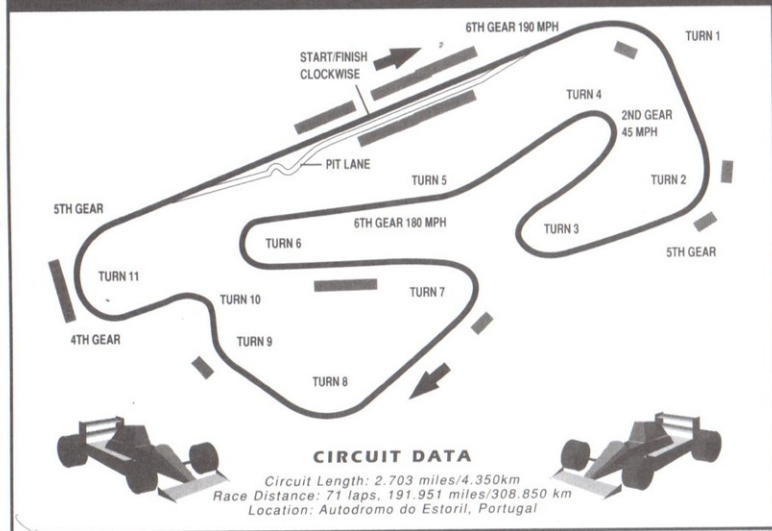
Number of Laps: 53

Total Distance:..... 191.009miles/307.400km

Lap Record (Qualifying): 1m.21.114sec

Lap Record (Race):..... 1m.26.061sec

ESTORIL CIRCUIT



THE CIRCUITS



GRANDE PREMIO DE PORTUGAL



Estoril is a tough, tiring circuit with several long, constant radius corners and some very bumpy straights. If the car is starting from near the front of the grid then it's wise to run a lot of downforce to cope with the long bends, but if you are starting low down in the order then you must use less downforce, otherwise you'll find it very difficult to overtake.

The start/finish line is in the middle of the circuit's longest straight. Cars accelerate to 190mph in sixth before **Turn 1**, trying to overtake each other, before braking into the fourth gear corner. **Turn 2** is another sweeping right-hander, then it's up to fifth for the short straight, brake hard for **Turn 3**, the **Martini Bridge Bend**, a tight double-apex right-hander. It's important to drive a good line through the infield at Estoril, avoiding the kerbs and the sandy, greasy edges.

Turn 4 is almost a mirror image of the previous corner. Take the left-hander in second at 45mph, then race up through the gears, swing through the slight right-hander, **Turn 5**, then flat out in sixth at 180mph. This is probably the best place to overtake on the whole circuit.

Through **Turn 6**, a corner that begins tight then opens out, foot down for a short straight and into the long series of fast bends, **Turns 7-8-9-10**.

It's important to maintain a good rhythm through these bends, keep concentrating, change up, change down, brake hard.

The final corner before the pit straight, **Turn 11**, is a real challenge for any Formula One driver. It's a long, constant radius sweeping bend that you enter in fourth and leave in fifth, accelerating all the way, ready to get in position to overtake.

Estoril is a circuit that's not only hard on gears and brakes but also tough on tyres; the long sweeping bends often mean that many drivers return to the pits earlier than planned as the heat and rough surface take their toll.

AUTODROMO DO ESTORIL, PORTUGAL

Length of Circuit:..... 2.703miles/4.350km

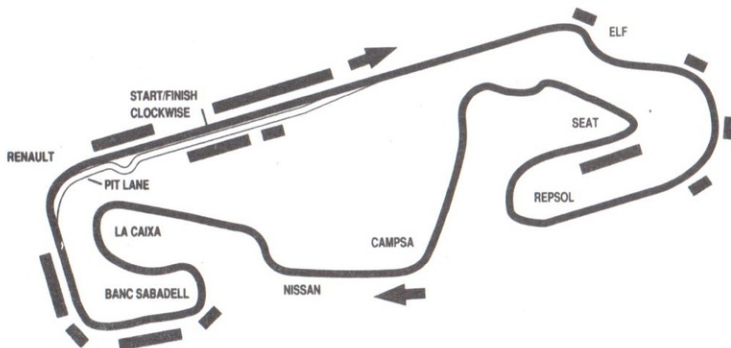
Number of Laps:..... 71

Total Distance:..... 191.951miles/308.850km

Lap Record (Qualifying):..... 1m.18.751sec

Lap Record (Race):..... 1m.22.837sec

BARCELONA CIRCUIT

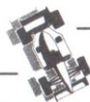


CIRCUIT DATA

Circuit Length: 2.950 miles/4.747km
Race Distance: 65 laps, 191.768 miles/308.555 km
Location: Barcelona, Spain



THE CIRCUITS



GRAN PREMIO DE ESPANA



A new circuit that has a wide range of corners from slow, second gear to fast fourth/fifth gear and includes a very long 200mph overtaking straight. In shape it is very similar to Estoril but the surface is much smoother. Drivers will have to compromise between the downforce needed for the many bends and the speed required for the pit straight. Most will opt for little downforce and try to nurse their cars through the infield section.

From the start, accelerate through the gears, flat out in sixth heading for **Elf**, a slow left-hander. If you are not in the lead, this gives you a good opportunity to overtake under braking. Then, it's a slight left before a long sweeping fourth gear right-hander that you leave in fifth and speed up for the short straight to **Repsol**; a corner which turns back on itself but whose angle progressively widens. Next, a short burst of speed into **Seat**, brake, drop to second at 45mph, accelerate, then slight left, slight right before taking **Wurth** in fourth and roaring off to **Camps**, a fast, third/fourth gear right-hander.

After that it's right and left through **Nissan** and flat out, up to **La Caixa**. This is another corner that starts tight and opens out. Steer in, get on line early and as the corner widens, move to the outside of the track. There is no time to put your foot down before you reach the **Banc Sabadell**, a long constant radius bend.

Next comes the approach to the straight. Sweep right, foot down, then right again take **Renault** in third, change to fourth and charge out in fifth before hitting sixth, flat out, past the finishing line.

CIRCUIT DE CATALUNYA, BARCELONA, SPAIN

Length of Circuit:..... 2.950miles/4.747km

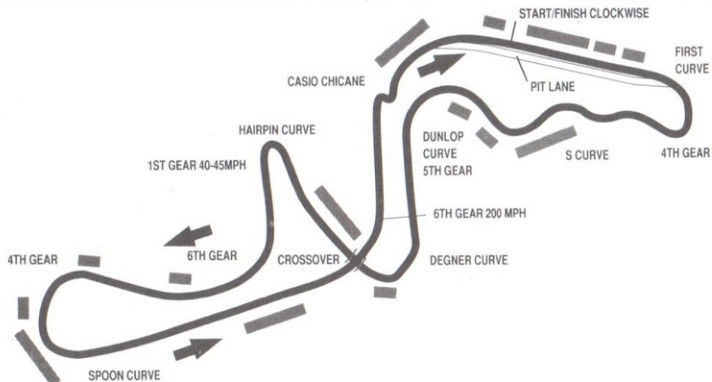
Number of Laps: 65

Total Distance:..... 191.768miles/308.555km

Lap Record (Qualifying): 1m.18.751sec

Lap Record (Race):..... 1m.22.837sec

SUZUKA CIRCUIT



CIRCUIT DATA

Circuit Length: 3.641 miles/5.859km
Race Distance: 53 laps, 192.952 miles/310.527km
Location: Shiroko, Japan



THE CIRCUITS



JAPANESE GRAND PRIX



An interesting, undulating course and the only figure of eight in the Grand Prix. Tough, sixth gear corners combine with first gear hairpins to make tyre stops essential. Little **downforce** is set because of the three long straights and the cars generally feel sluggish in the corners.

The pits straight is a sixth gear, 190mph charge where it is perfectly possible to overtake, then it's down to fifth for the **First curve**. You drift the car to the left side of the track, down to fourth and race out of the corner.

Next you come to a series of fourth gear bends (**The S Curve**). Driving as tight a line as possible through these, you leave **Dunlop Curve** with your foot down in fifth, going uphill and blind for the oncoming left-hander. The car feels light as you roar over the bumpy crest and come down hard for the two right handers **Degner Curve** and **Crossover**. You now pass under the circuit and approach at a slow 40mph for the first gear **Hairpin Curve**. This corner can play havoc with your rear tyres if you try to exit too quickly and overspin the back wheels. Now line up the car for the long double apex left hander. Enter in fourth but slow down for the second part of **Spoon Curve** for it's quite easy to spin off here.

Next you get to one of the fastest straights, sixth gear, 180mph, sweeping left with both hands on the wheel, ease your car carefully through the slow **Casio Chicane** then storm through flat out past the finishing straight.

SUZUKA, SHIROKO, JAPAN

Length of Circuit:..... 3.641 miles/5.859km

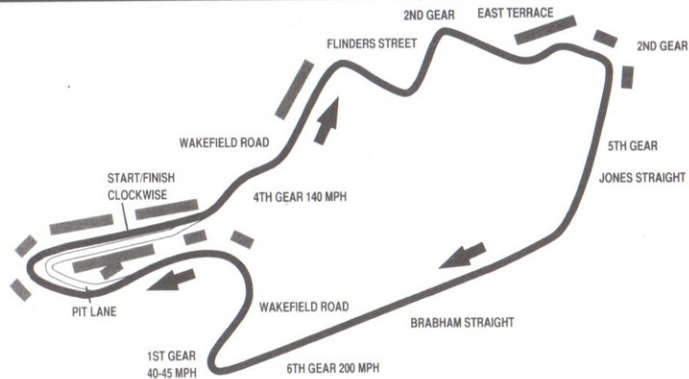
Number of Laps: 53

Total Distance:..... 192.952miles/310.527km

Lap Record (Qualifying):..... 1m.36.996sec

Lap Record (Race):..... 1m.43.506sec

ADELAIDE CIRCUIT



CIRCUIT DATA

Circuit Length: 2.349 miles/3.780km
Race Distance: 81 laps, 190.292 miles/306.180 km
Location: Adelaide, Australia



THE CIRCUITS



AUSTRALIAN GRAND PRIX



A hard, unforgiving street circuit that requires numerous gear changes and is very tough on brakes and tyres. The last Grand Prix venue of the Championship season and always very exciting as teams try to finish the year off with a win. Adelaide has been responsible for deciding the outcome of several championship, the most famous being Nigel Mansell's blowout in 1986. Again, there is a need to compromise with downforce; you'll need a lot for the 90 degree bends but you will also need the speed for the **Jones** and **Brabham** straights.

ADELAIDE GRAND PRIX CIRCUIT, ADELAIDE, AUSTRALIA

Length of Circuit:..... 2.349miles/3.780km

Number of Laps:..... 81

Total Distance:..... 190.292miles/306.180km

Lap Record (Qualifying):..... 1m.15.671sec

Lap Record (Race):..... 1m.18.203sec

After the start, you come to a fast, fourth gear chicane at **Wakefield Road**, take this at about 140mph then flat out towards the **Finders Street Complex**. The road is very bumpy here and the occasional manhole cover will knock the breath out of you. Brake hard for a difficult second-gear, 90 degree right-hander, then left 90 degrees, and right 90 degrees. Through **East Terrace** and a fast off-camber left hander, drop down to second and steer a good line to hit **Jones Straight** in fifth. Foot down, then a slight right and into **Brabham Straight**, under the two bridges flat out, 200mph in sixth.

Next, you step hard on the brakes to take a tricky, first gear, 40mph hairpin and speed up, into third for a deceptive tightening corner. Stay wide as long as possible, hit the apex late, brake, change down, take a line on the outside and follow the curve of the bend to give you the smoothest possible exit angle. Past **Pits** and right through **Racecourse**, brake hard, change down into second for a good fast exit into the finishing straight.

MICRO PROSE

Microprose Ltd, The Ridge, Chipping Sodbury, Avon BS17 6AY.