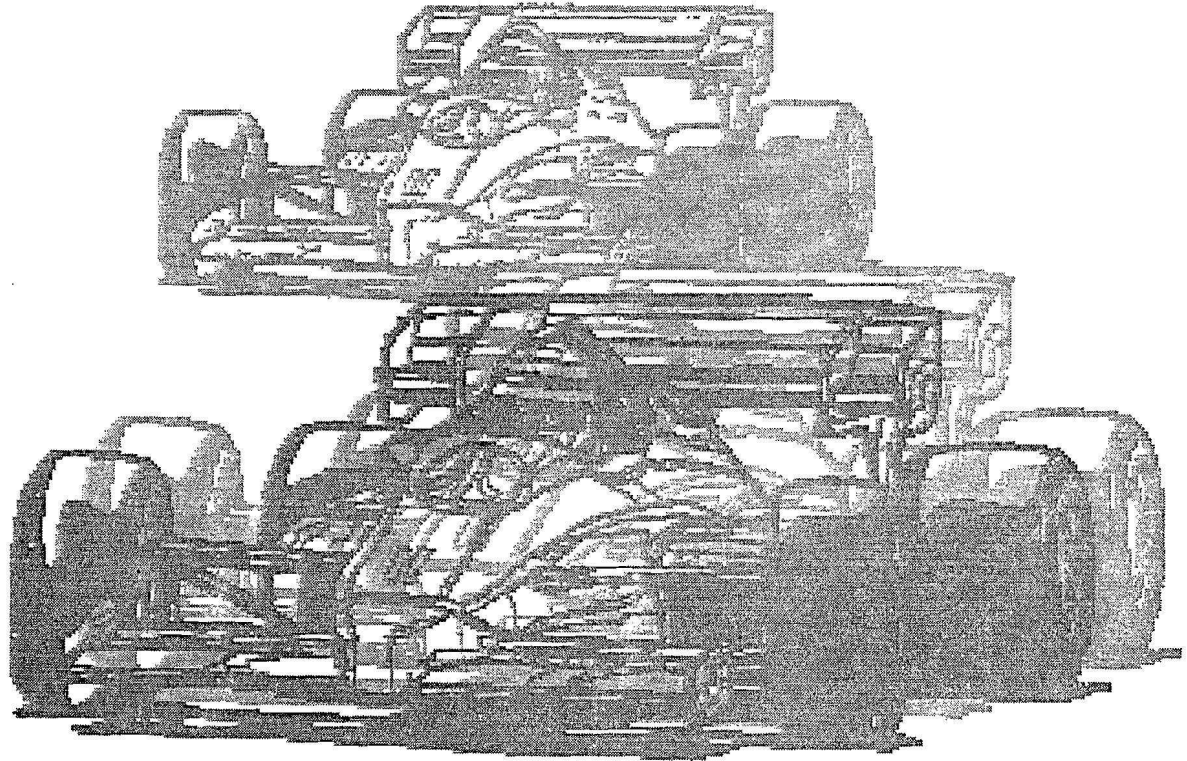


Final LapTM



Operators Manual

Preliminary

This preliminary manual contains Chapters 1 and 2 of the full four-chapter *Final Lap Operators Manual*. To obtain a free copy of the complete manual, be sure to send in the orange business reply card that was included with your game.

© 1988 by Atari Games Corporation.

All rights reserved.

No part of this publication may be reproduced by any mechanical, photographic or electronic process, or in the form of a phonographic recording, nor may it be stored in a retrieval system, transmitted, or otherwise copied for public or private use, without permission from the publisher.

The game play, all graphic designs, this technical manual, its accompanying schematic diagrams, and the display manual are protected by the U.S. Copyright Act of 1976.

This Act provides for substantial penalties for violating federal copyright laws. Courts can impound infringing articles while legal action is pending. If infringers are convicted, courts can order destruction of the infringing articles.

In addition, the Act provides for payment of statutory damages of up to \$50,000 per infringing transaction in certain cases. Infringers may also have to pay costs and attorneys' fees and face an imprisonment of up to five years as well as fines of up to \$250,000 in the case of individuals and up to \$500,000 in the case of corporations.

Atari Games Corporation will aggressively enforce its copyrights against infringers. We will use all legal means to immediately halt any manufacture, distribution, or operation of a copy of video games made by us. Anyone who purchases such copies risks forfeiting such a game.

Published by:
Atari Games Corporation
675 Sycamore Drive
P.O. Box 361110
Milpitas, California 95035

Printed in the U.S.A 68

Produced by the Atari Games Technical Publications Department

Chapter 1

Set-Up

How to Use This Manual

This manual is written for game operators and service personnel, and provides information for setting up, playing, testing, and maintaining your Final Lap™ game.

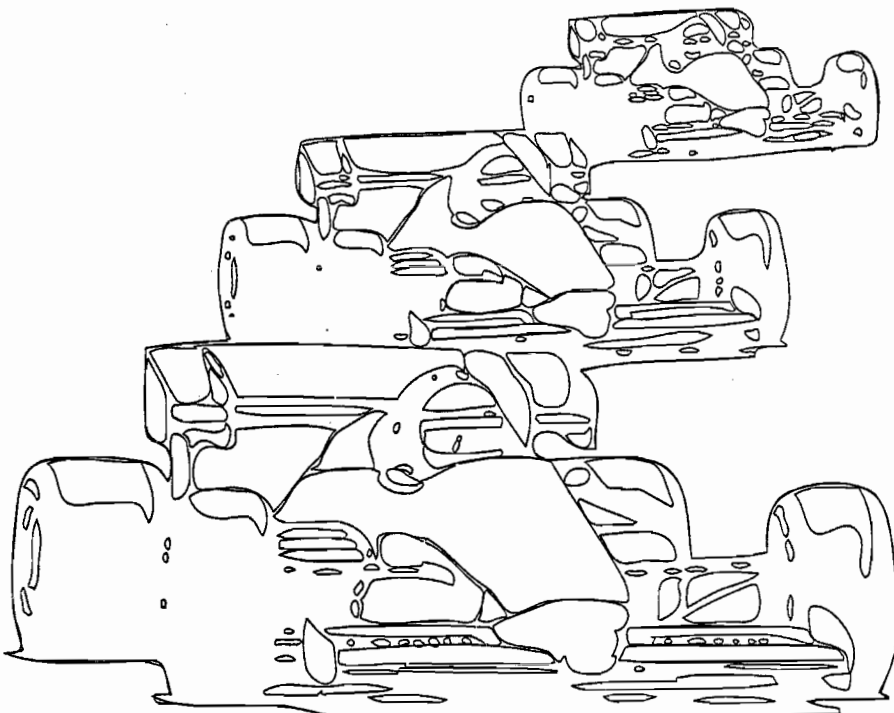
The manual is divided into the following chapters:

- Chapter 1 contains set-up and game play information.
- Chapter 2 contains self-test procedures.
- Chapter 3 contains preventive maintenance and repair procedures.
- Chapter 4 contains illustrated part lists.



Wiring and schematic diagrams for the Final Lap game circuitry are contained in the Schematic Package Supplement (SP-322) included with your game.

This chapter includes information required to set up and play your Final Lap game. Carefully read the information in this chapter before applying power.



WARNING

To avoid electrical shock, do not plug in the cabinet until it has been properly inspected and set up for the line voltage in your area.

This cabinet should be connected to a grounded three-wire outlet only. If you have several cabinets, each one should be connected to its own separate grounded outlet.

If you have only two-wire outlets, we recommend that you hire a licensed electrician to install grounded outlets. Players can receive an electrical shock if the cabinet is not properly grounded.

Inspecting the Game**WARNING**

Do not plug in the game until you have completed the following inspection steps.

Please inspect your Final Lap game carefully to ensure that the game is complete and was delivered to you in good condition.

Figure 4-1 shows the locations of the parts of the game. Table 1-1 lists space, power, and environmental requirements.

Inspect the game cabinet and seat assembly as follows:

1. Examine the exterior of the cabinet for dents, chips, or broken parts.
2. Unlock and open the lower service door. Unlock and open the coin doors. Inspect the interior of the cabinet as follows:
 - a. Ensure that all plug-in connectors (on the cabinet harnesses) are firmly plugged in. (The connector bracket next to the EMI enclosure is for the car type selection. One of three connectors can be plugged into the connector bracket or none of them may be. For more information, see *Choosing the Car Type* in this chapter.)
Do not force connectors together. The connectors are keyed so they fit only in the proper orientation. *A reversed edge connector can damage a printed-circuit board (PCB) and will void your warranty.*
- b. Ensure that all plug-in integrated circuits on each PCB are firmly plugged into their sockets.
- c. Inspect the power cord for any cuts or dents in the insulation.
- d. Inspect the power supply. Make sure that the correct fuses are installed. Check that the harness is plugged in correctly and that the fuse block cover is mounted in place. Check that the green ground wires are connected.
- e. Inspect other major sub-assemblies, such as the video display, printed-circuit boards (PCBs), and speaker. Make sure that they are mounted securely and that the ground wires are connected.

Table 1-1 Game Specifications

Characteristic	Specification
Power Consumption	150 V-A, 110 W RMS
Temperature	+5° to +50° C (+37° to +122° F)
Humidity	Not to exceed 95% relative
Line Voltage	102 to 132 VAC (U.S. games)
Width	50 in. (127 cm.)
Depth (with seats)	64 1/4 in. (163.2 cm.)
Height	60 in. (152.4 cm.)
Weight	625 lbs. (284 kg.)

Installing the Seat Platform

The seat platform is shipped separately from the game cabinet. The seat platform must be connected to the game cabinet with two pipes and two side brackets. The parts required for this procedure are packaged with the seat and in the extra parts package. The speaker harnesses must also be connected. See Figure 1-1, *Installing the Seat Platform*, for an illustration.

Installation is easier if you set up the seat platform to face the cabinet before you begin. The seat platform also should be at least three feet away from the game cabinet.

1. Remove the two seat platform panels below and behind the seats by taking out the eight Phillips-head screws that hold each panel on the seat platform.

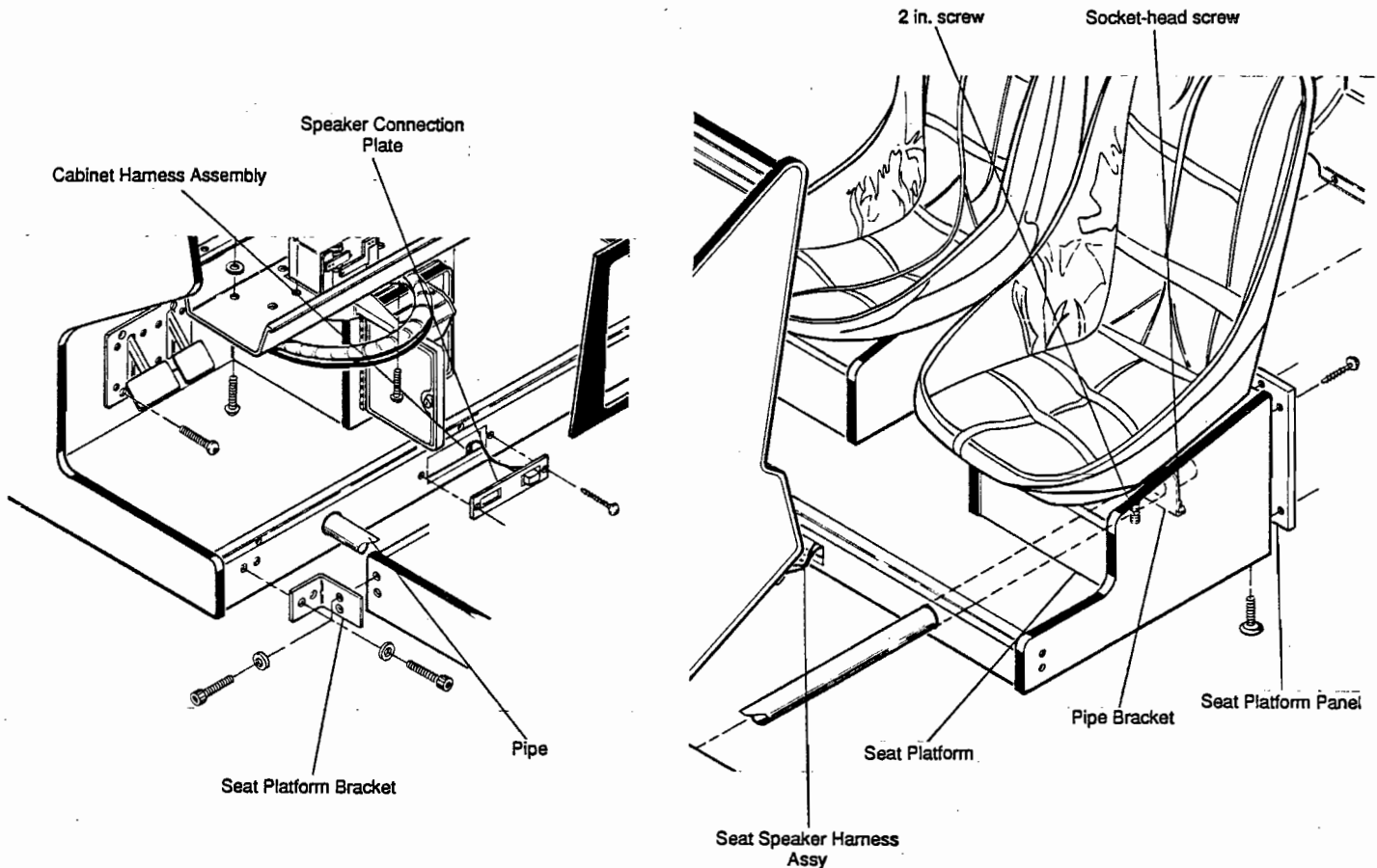


Figure 1-1 Installing the Seat Platform

2. Remove the pipe bracket inside each panel by removing the two socket-head screws that mount the bracket to the platform base.
3. Remove the two pipes from the seat packaging and find the 3/8-inch diameter holes drilled near one end of each pipe.
4. Put the pipe bracket on the end of the pipe with the drilled holes. The bracket must be in front of the drilled holes and the flat side of the bracket must face the seat platform.
5. Now, put the pipe in the seat platform and slide it all the way through the platform into the hole in the front.
6. Fit the drilled holes in the pipe over the two-inch screw shaft in the base of the platform.
7. Reinstall the pipe bracket.
8. Repeat steps 4 to 7 for the pipe on the other side.
9. Replace both seat platform panels.
10. Now slide the seat platform forward, and insert both pipes into the holes on the base plate of the cabinet. Stop when the seat assembly is about 8–10 inches from the game cabinet.
11. Plug both speaker harnesses into the bottom panel.
12. Slide the seat platform all the way up to the cabinet.
13. In the parts package included with the game are two L-brackets and eight socket-head screws. Screw these brackets onto the sides of the seat platform and then onto the cabinet base (see Fig-

ure 1-1). The holes in the seat platform and the cabinet are already threaded.

Installing the Attraction Sign

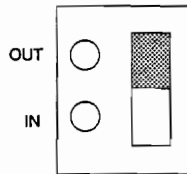
The attraction sign mounts behind the top panel of the game. See Figure 4-1.

1. Rest the attraction sign on the top panel retainer, behind the panel. Center the attraction sign.
2. Screw in the three Phillips-head wood screws to hold it in place.

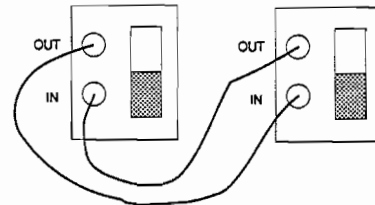
Connecting Cabinets

You can connect up to 4 cabinets. Each cabinet is shipped with a 6-foot long connecting cable. If you are connecting 3 or 4 cabinet together, you need longer cables. These are available from Atari Games Customer Service. These cables are 10 feet long (part no. 150031-120) and 20 feet long (part no. 150031-240).

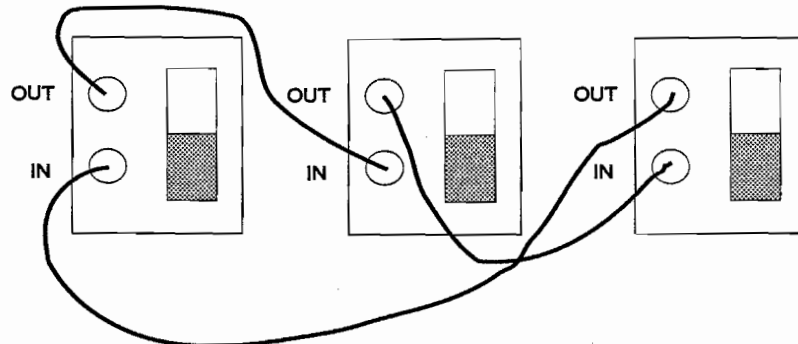
1. Turn off the game power to all the cabinets.
2. Find the Link PCB in the back of the game. Plug in the connecting cables as shown in Figure 1-2. Each cable must be connected from an input to an output.
3. Switch the connecting switch located on the Link PCB to the *down* position on all the cabinets.



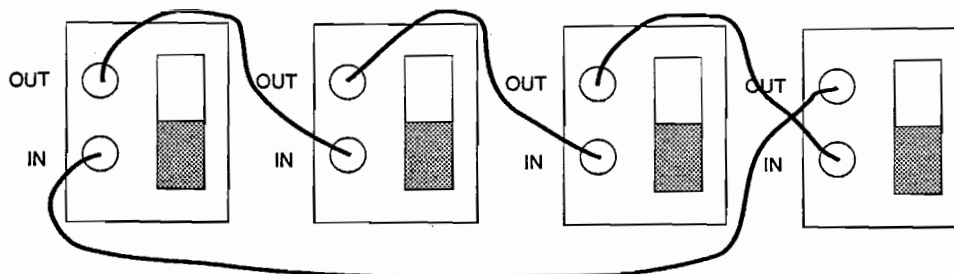
One Cabinet



Two Cabinets



Three Cabinets



Four Cabinets

Figure 1-2 Link PCBs on Connected Cabinets

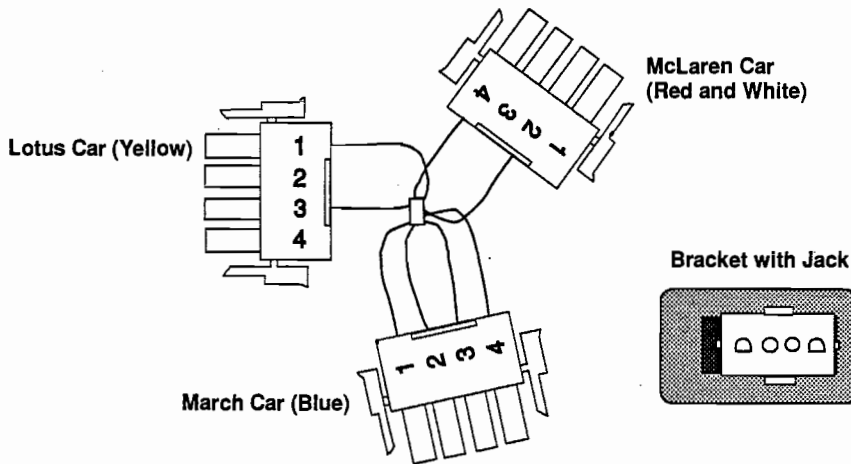


Figure 1-3 Car-Type Connectors

Choosing the Car Types

Each player can have one of four car types. These are selected by plugging in different connectors (included with the game) into the car-type connector bracket. The car-type connector bracket is next to the PCB enclosure and shown in Figure 1-3.

At the factory, one car-type connector is plugged into the car-type connector bracket and the other two connectors are attached to it by a tie wrap.

These are the car types and their connectors:

- March—blue car. Plug in the connector with wires at all 4 pins.
- McLaren—red and white car. Plug in the connector with wires at pins 2 and 4.
- Williams—white, blue, and yellow car. Use *no* connector.
- Lotus—yellow car. Plug in the connector with wires at pins 1 and 3.

Control and Switch Locations

Power On/Off Switch

The power on/off switch is located at the bottom left of the cabinet. (See Figure 4-1.)

Volume Control

The volume controls are located on the self-test utility panel behind the upper coin door. (See Figure 1-4.) Each player has two volume controls which adjust the level of sound from the two speakers on the seat headrest.

Self-Test Switch

Each game has two self-test switches located on the utility panel behind the upper coin door. (See Figure 1-4.) The self-test switches are slide switches.

Each video display has its own self-test switch that selects the Self-Test Mode to check game operation. See Chapter 2 for a complete description of the self-test.

Auxiliary Credit Switches

Each game also has two auxiliary credit switches, next to the self-test switches on the utility panel. These are push button switches. Use either auxiliary credit switch to give a player coin credits.

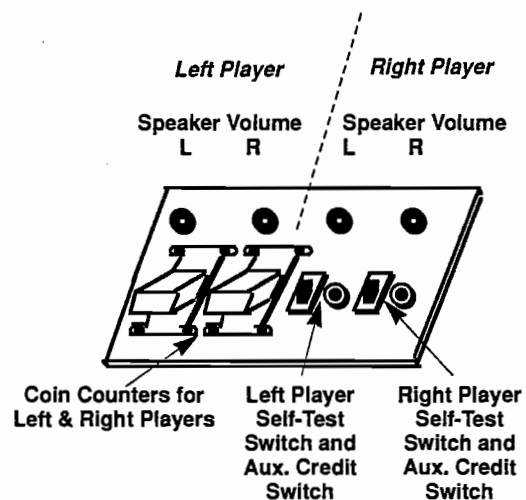


Figure 1-4 Control and Switch Locations

Connection Switch

NOTE

*If you have one cabinet, be sure the Link PCB switch is in the **up** position. Otherwise the game will not function properly.*

The connection switch is on the Link PCB (see Figure 1-2.). This switch should be in the down position with connecting cables plugged in, if you have two or more cabinets connected together. For more information, read *Connecting Cabinets* in this chapter.

Coin Counter

The two coin counters, one for each player, are located on the utility panel inside the upper coin door. The coin counter records the number of coins deposited.

Setting the Coin and Game Options

The Final Lap coin and game options are set in the Self-Test Mode. Refer to Chapter 2 for the recommended settings and the procedure for setting the options.

Game Play

This section of the manual describes the theme of the Final Lap game and the game play features.

Introduction

Final Lap is the first linked game designed for the amusement industry. Originally created by Namco Limited of Japan, Final Lap is a realistic racing game in the tradition of Pole Position.

Each Final Lap unit is actually two games in one, with two seats and two separate monitors linked together for interactive play. Realistic player controls consist of a steering wheel with return-to-center steering, a high/low shifter, and gas and brake pedals. As many as four Final Lap units can be linked together for unprecedented competition: Up to eight players can compete head-to-head.

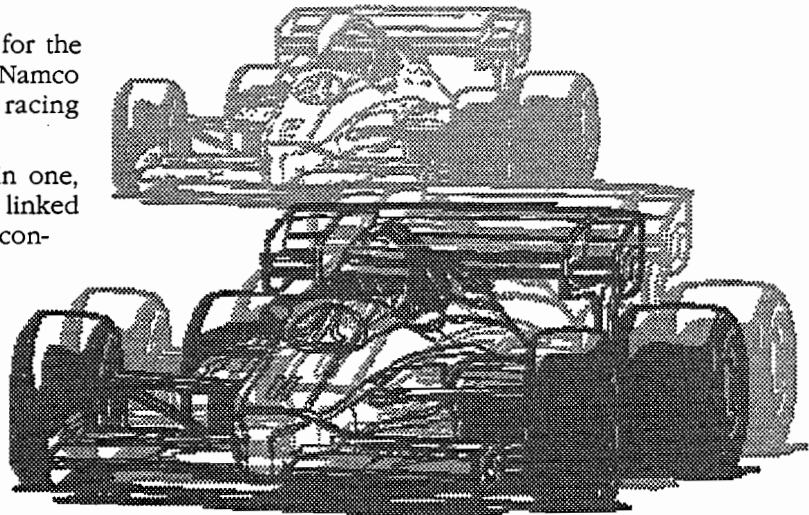
Play Mode

Imagine yourself racing head-to-head against the player sitting next to you. You see his car approaching in the rear-view mirror, and suddenly, he passes you on the inside, narrowly missing a road sign. You weave between the other competitive cars in hot pursuit. You are on his tail through the

hairpin and pass him in the straightaway! The status screen tells you that you are now in first position. You pass the finish line before the time runs out and again get extended time, but the question still remains: can you complete the final lap?

To start the game, player(s) deposit coin(s) in the slot corresponding to their seat (e.g., the right player uses the right coin slot and the left player the left slot). The green light flashes, the checkered flag is waved and the race is on!

- To begin a head-to-head race, players must deposit coins within 16 seconds of each other.
- One player can compete against the clock or multiple players race can simultaneously on the same course.
- Each player has his own realistic first-person perspective of the track and sees his competitors' cars on his screen.
- New players can start a new game even if another race is in progress.
- As an incentive for multiple-player games, all players can continue for an extended time, as long as at least one player completes the lap within the time allowed on the computer clock shown in the center of the video display.
- Players who set the best lap time are rewarded with a bottle of champagne in the winner's circle.
- If a player's time is fast enough, the player can enter his initials on the high score table.



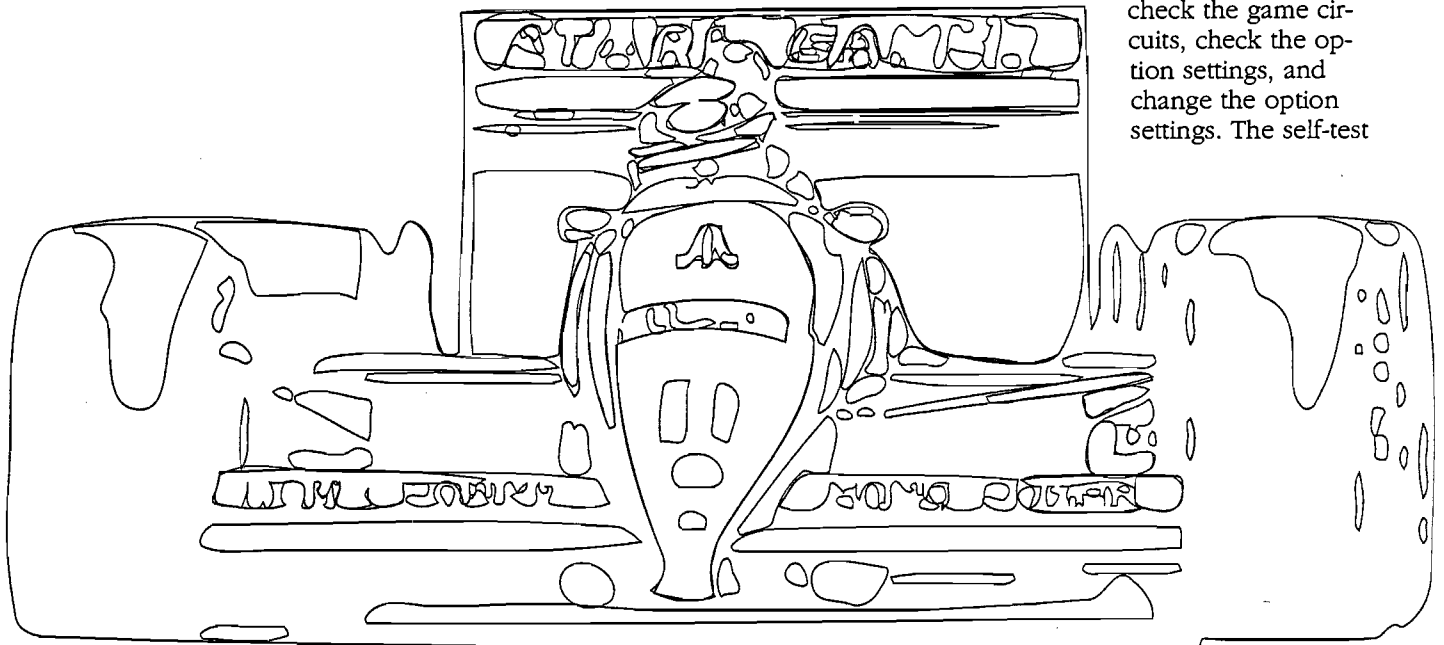
Chapter 2

Self-Test

The Final Lap™ game tests itself and provides visual and audible indications of the condition of the game circuitry and controls. Self-test information is displayed on the screen and through the sound system. No additional equipment is required.

We suggest that you perform a self-test at least once a day and when you first set up the game, connect additional cabinets, collect coins, or when you suspect game failure.

Use the self-test to check the game circuits, check the option settings, and change the option settings. The self-test



switches (one for each display) are located on the utility panel behind the upper coin door. The self-test switches are the slide switches on the bottom of the utility panel.

You can choose 1 to 8 coins and 1 to 4 credits. The coin amounts and the credit amounts change independently of each other.

NOTE

All players must have identical Coin 1 settings.

Difficulty Level

RANK is the difficulty level of the game. When you change the rank, you shorten or lengthen the game time.

NOTE

All players must have identical Rank settings.

The levels are:

- A (easy)
- B (medium)—recommended setting
- C (hard)
- D (difficult)

Number of Laps

ROUND is the number of laps each player is permitted to complete in each game. If one player completes a lap in less than the allotted time, then all players receive another lap.

NOTE

All players must have identical Round settings.

These are the settings for the number of rounds:

- 3
- 4 (recommended setting)
- 5
- 6

Communication Circuit Test

SCI ON, at the top right of the screen, indicates whether the Game PCB communications circuits are working correctly. SCI ON should be followed by four letters and numbers. If it is not, check the connecting cables to other games and the connectors.

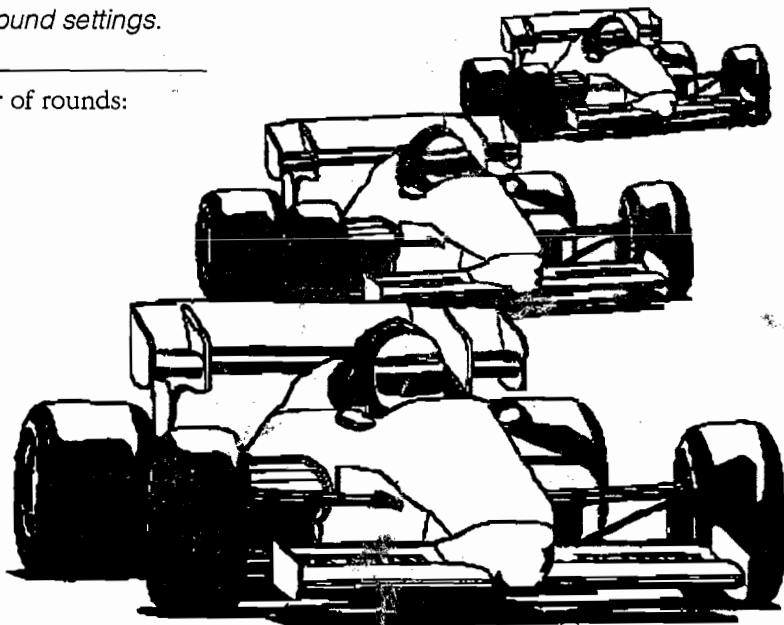
Linked Games

LINK counts the number of game PCBs connected together (not the number of cabinets). LINK should always read *On*. If it reads *Off*, the switch on the Link PCB is in the wrong position. Check Figure 1-2, *Link PCBs on Connected Cabinets*, for the correct position of your switch.

If you have one cabinet, the number of linked games should be 2. If you have 3 cabinets connected, the link number should be 6. If you do not have the correct number of links, check the connections between your games.

Car Type

The car type is the type and color of car that each player has. Each type of car has a different color. For more information about choosing the car type, see *Choosing the Car Type* in Chapter 1.



Motion Test

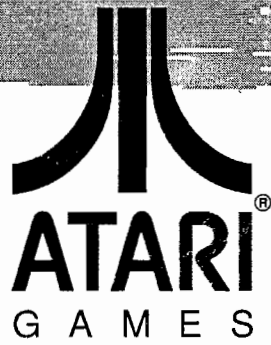
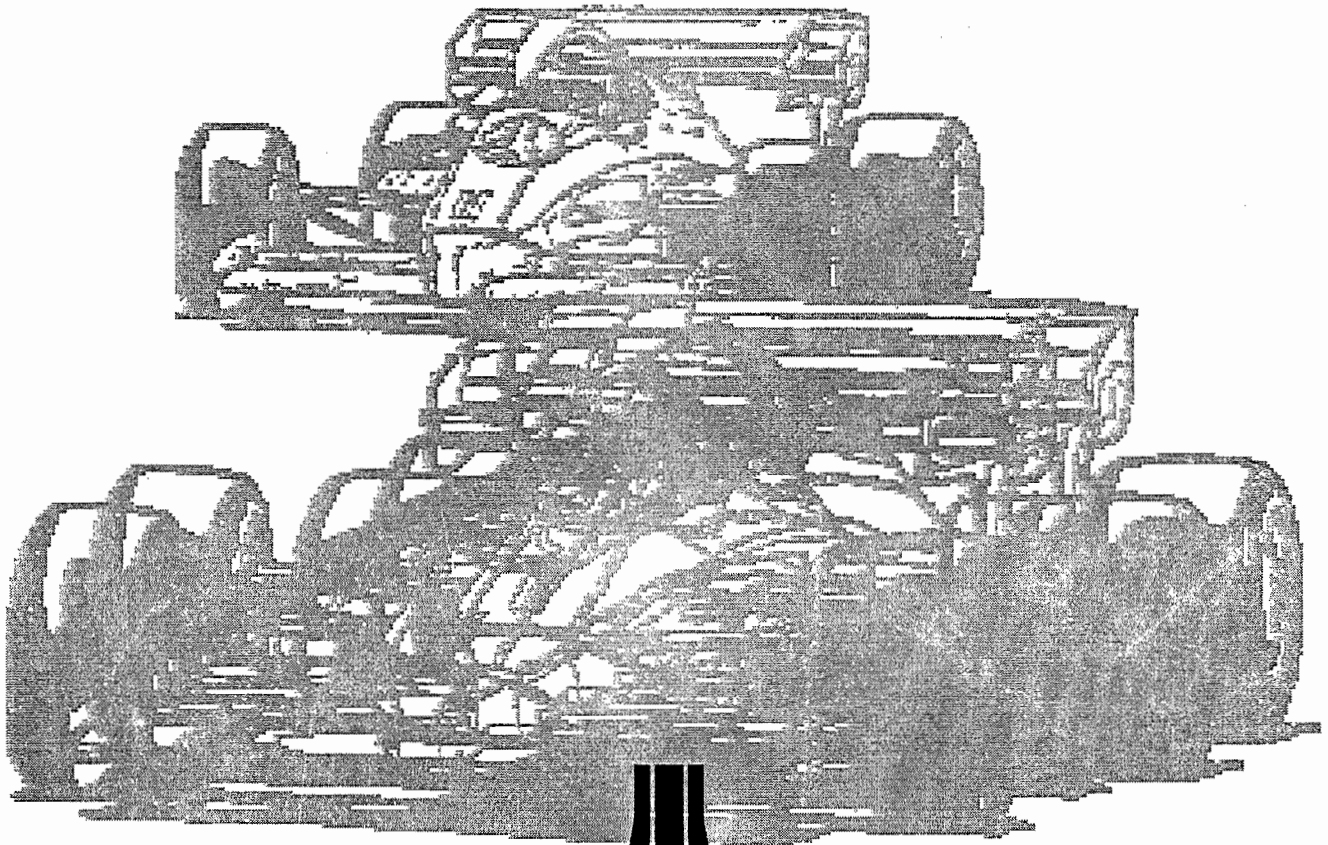
MOTION does not apply to Final Lap. It should always read *Off*.

Convergence Test

When you turn off the self-test, you will briefly see a test pattern. Use this screen to check the convergence and the color balance of the video display. For more information, see your video display service manual.

Reset the High Score Table

To reset the high score table, turn the steering wheel until the number 1F appears and change the gear shift to high. The words *HISCORE INITIALIZED* appear at the bottom of the self-test screen. The high score table now shows the default names and times.



Atari Games Corporation
675 Sycamore Drive
P.O. Box 361110
Milpitas, California 95035