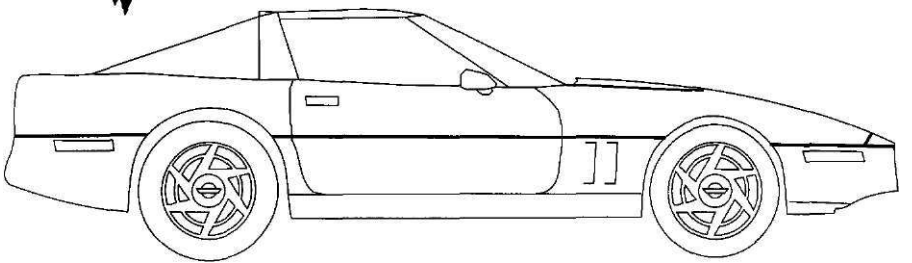
VETTE



OWNER'S MANUAL

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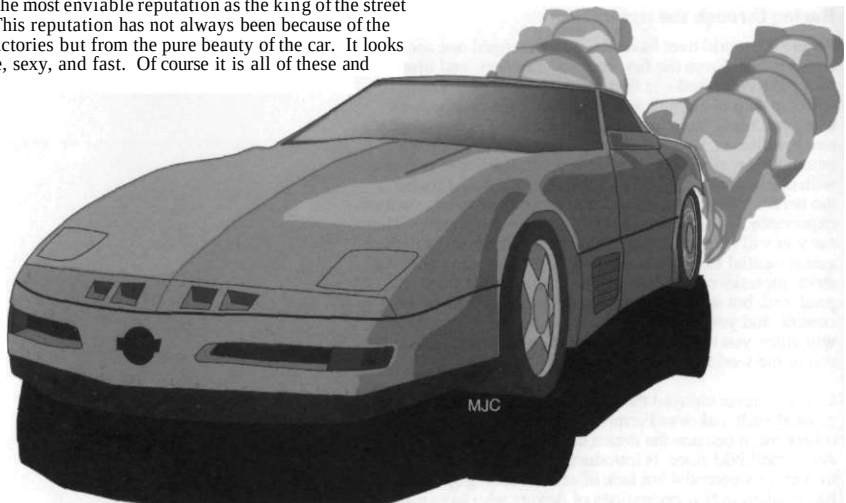
1 Introduction

Racing through the streets

People the world over have always challenged one another in competition. From the first runners, throwers, and lifters they have competed—at first person against person, later with the help of animals and machines. The competition using machines has evolved into auto racing as we know it today; however, only a few have experienced organized automobile racing. For most, this natural desire to compete with our machines can be satisfied only by racing them on the streets. What you are about to experience is just such an experience, but from the safety of your own computer. The car you will be driving has, since its introduction, been the quintessential street racer. You will be competing with the most impressive crop of high-performance cars ever produced, but with an advantage over them. You are in control, and you will decide your exact course. Your skills will allow you to race the mighty Vette and beat the best the rest of the world has to offer.

Corvette never enjoyed the factory racing sponsorship granted such makes as Ferrari, Jaguar, Porsche, and many others, yet it became the dream car of every red-blooded American child since its introduction in 1953. The car's tremendous potential but lack of official racing sponsorship has resulted in two generations of drivers who have used the inherent strengths of the car for racing on the streets.

From straight line drag racing to the ultimate thrill of racing through city streets and freeways, the Vette has always enjoyed the most enviable reputation as the king of the street racers. This reputation has not always been because of the racing victories but from the pure beauty of the car. It looks awesome, sexy, and fast. Of course it is all of these and more.



2 History of the Vette

In *February* 1953, the New York Motorama displayed the first prototype of the all new Corvette. It was a white convertible powered by the 235-cubic-inch, truck-based, straight six-cylinder engine mated to the two-speed, Power Glide, automatic transmission. In order to meet the show deadline for the prototype, the designers, led by Harley Earl, decided to use a new material for the body panels. This material, Glass Reinforced Plastic (GRP), was also used in the initial production run of 300 units as an interim measure until the new metal Kirksite was available. As fate would have it, the new metal and its tooling were not to be, and the Corvette body remained GRP for the next year's run of 3,265 (of the planned 12,000 units). It is still made of fiberglass today.

The interest in the 1953 prototype was so great that Chevrolet went into production immediately, and on June 30th of that year the first unit rolled off the assembly line. Production continued with the six-cylinder engine and automatic transmission until the 1955 model year production, which saw the introduction of the 256-cubic-inch, small block V-8 engine with a three-speed, manual transmission. The 1955 production run was only 700 units, and the car was on the verge of being cancelled by Chevrolet.

1953 *The first prototype of the Corvette was exhibited. The first Corvette rolled off the assembly line on June 30th.*

The Ford Thunderbird was introduced in 1954 for the 1955 model year. That introduction brought a new awareness to the American people of the benefits of a two-seat "personal car" and with it a new hope for the Vette. The 1956 Corvette had a restyled body shape. (Quick body panel changes were possible up to the last minute because of the GRP material being used.) This was the year that the Corvette and Thunderbird faced each other at Daytona for the NASCAR Speed week. With the help of the engine designer/driver Zora Arkus Dontov, who took over for Ed Cole, the new Corvette production car managed to reach a top speed of 150.583 mph. This impressive feat was not enough to beat the Thunderbird in the quarter-mile runs but established the car as one to be reckoned with in the racing circuit.

1956 *The Corvette and the Ford Thunderbird challenged one another for the first time at Daytona.*

In the 1957 model year, the designers added a fuel injection system to the Corvette and bored out the 265 to 283 cubic inches. The injection boosted the power of the 256 up to 283 brake horsepower (bhp), achieving the automotive milestone of one bhp per cubic inch. This was the year that Corvette raced at Daytona and Sebring with full factory support. The Sebring race was the most impressive for Chevrolet, with the win there putting the name "Corvette" on the lips of everyone in motor car racing.

1957 *An added fuel injection system was designed, boosting the bhp of the Corvette, which set a new standard in automotive technology.*

The 1958 through 1962 model years saw the addition of a myriad of options, both in the drivetrain and in external trim pieces. These changes caused a weight gain to over the magical 3000 pound marker. In 1960 sales increased to 10,000

1958 to 1962 *Drivetrain and external trim pieces were added to the Corvette.*

units and continued to rise to 14,531 units in 1962. These sales figures were aided by Ford's withdrawal of the Thunderbird from the market. In 1962 the engine displacement also increased to 327 cubic inches. Corvette's evolution over the first 10 years of production had emphasized the performance of the engine and transmission, without much development of the suspension. This was to be dramatically changed with the next model year.

1962 *The engine displacement of the Corvette was increased to 327 cubic inches.*

The Sting Ray Corvette was introduced in 1963 with a totally revised body derived from Bill Mitchell's racing efforts. It was the first year to utilize revolutionary suspension design components such as the independent rear suspension and ladder frame. This was also the first coupe available as a Corvette and the only year that Mitchell's split rear windshield was produced.

1963 *The Sting Ray split rear window coupe was introduced.*

1964 marked the beginning of the horsepower race for all of Detroit's car makers. The Corvette was no exception. Matched with the new 4-speed, manual transmission, the 327-cubic-inch engine produced 375 bhp at 6200 rpm and 350 lbs/ft of torque at 4600 rpm. In the 1965 edition, a 396 ci produced 425 bhp, and the 1966 model introduced a massive 427-cubic-inch engine. This and the next year saw small styling changes and minor mechanical changes. Aside from engine output, the only major change was the introduction of four-wheel, disc brakes in 1965.

1964 *The Corvette joined the horsepower race.*

1965 to 1966 *A 427-cubic-inch engine was introduced.*

The year 1967 more or less settled the horsepower race. Corvette was declared the winner with the introduction of the L88 with its 12.5:1 compression ratio, alloy manifold and aluminum heads. The model was snatched up from dealers for a total of 20,000 sold. This monster produced 560 bhp at 6400 rpm. A privately sponsored, fuel-injected race car recorded a top speed of 192 miles per hour at Bonneville.

1967 *A top speed of 192 mph was recorded at Bonneville.*

Aerodynamic and structural improvements were the order of the day for the next several years. The sales figures and performance statistics steadily increased. John Z. DeLorean returned in 1968 to actively manage the production runs, to the record sales year of 1969 of 38,000 units. Power train and suspension improvements along with luxury amenities raised both the price and weight of the car. The biggest engine ever put in front of the firewall was introduced for 1970: the 454 ci option that delivered 390 bhp at 4800 rpm, actually 45 horsepower less than the 427 engine. The decline in horsepower per bhp was caused by the advent of emissions legislation.

1970 *A 454-cubic-Inch engine debuted this year.*

For most of the 1970s, horsepower continued to decline while sales went up. Horsepower fell from 330 in 1971 to 255 in 1976 to 165 in 1978. The big engines were phased out of production in the 1974 model year. Sales figures, which remained high, totalled 37,000 in 1974 (a new record) and increased slightly in 1975. The convertible was gone in 1976. In 1978, major style revision took place with a return to the fastback shape of the mid-60s and production of the

1971 to 1974 *A decline in horsepower was seen in the Corvette.*

1978 *The fastback shape of the Corvette returned.*

3 Five Minutes to Play

This section is intended to get you playing VETTE! as quickly as possible. The next chapter gives more information about loading and playing VETTE!

Loading VETTE!

1. If you are playing VETTE! for the first time, please back up your VETTE! disk.
2. Place your backup VETTE! disk (not write protected) in disk drive A: .
3. Type A: and hit Return.
4. Type **VETTE** and press Return. The program should take about 30 seconds to load.
5. If you are using the CGA version of VETTE!, please select the appropriate display mode. Reverse screen modes are for Laptop LCD screens.

Race Set Up

1. Use the left and right arrows (or the mouse) to choose the car you wish to race in. The cars are shown in order from slowest (STOCK) to fastest (SLEDGEHAMMER). Select the SLEDGEHAMMER for this race. Press Spacebar to preview the car's performance on the dynamometer.
2. Press Return or the left mouse button to confirm you wish to drive the SLEDGEHAMMER.

3. Select the skill level you wish to drive at with the up or down arrows (or the mouse). Select TRAINEE for this race—you will be protected from police tickets or damage to your car.
4. Use the left and right arrows (or the right mouse button) to select the car you wish to race against. Select the easiest (slowest) opponent, the Porsche 928S4. Press Return or the left mouse button to accept.
5. There are four courses in VETTE! Use the left and right arrow (or right mouse button) to cycle through them. Select course one for this race. This course starts at the San Francisco Zoo, goes through the Sunset district to the Cliff House, through the Presidio, across the Golden Gate Bridge, and finishes at Vista Point. Press Return (or the left mouse button) to accept course one.
6. You will be asked a VETTE! trivia question as part of our password protection. Page number references refer to this manual. Map references can be found on the back of the street map under Sights, Entertainment, Transportation... or Facts, Figures, and Helpful Hints... Please do not use commas in the numbers. If you make a mistake, press Esc to start again. You will get two tries to get the right answer. Type in your answer with the keyboard (the numeric keypad is disabled) and press Return. If you answer incorrectly, you will be arrested for driving a stolen Vette.

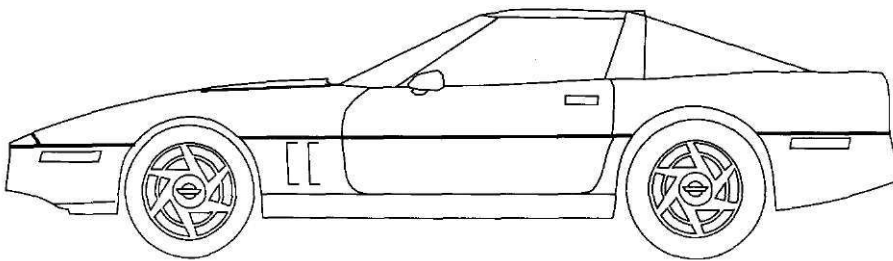
The Race

1. When the race begins, you will be in your Vette, at Wawona and the Great Highway near the Pacific Ocean beach. The race begins with the sequence: **BUCKLE UP, GET READY, GO!**
2. For those of you who wish to race from outside the car, press F4 to switch to helicopter view. Press F5 to turn the dashboard on. You can return to the standard, in-car front view by pressing F2. While in the car, you can toggle the rear view mirror with F6. (On slower machines, we recommend leaving the rear view mirror off until you need it.) F1 and F3 switch to left and right side views.
3. Press A to put the car in automatic transmission. Put the car in first gear by pressing 1 on the top row of your keyboard (do not use the numeric keypad). You can steer with the keyboard, joystick, or the mouse. To accelerate press ↑, the left mouse button, or push the joystick forward. To brake press M, Spacebar, ↓, the center mouse button, or pull back on the joystick. If you need to come to an emergency stop, press F; this will stop your car and shift it into neutral. You can also use the numeric keypad 5, K, or the right mouse button to automatically straighten your car out (except on diagonal streets).

4. You may press [P] in order to pause the game. [Esc] will bring up the menu bar (to select options such as joystick or mouse control).
5. Once your Vette begins to roll forward, turn right onto the Great Highway. Do not drive into the Pacific Ocean. Straighten yourself out in the lane (the center car in lane keys take priority over the other steering input keys). Accelerate to a comfortable speed. If you want to beat the Porsche, go all out (the Porsche has a top speed of 16Smph, while yours is 254mph). Avoid traffic, pedestrians, and buildings. At trainee level, you won't get any tickets or damage, but it will slow you down and cost you valuable time.
6. Go straight down the Great Highway, past the windmills in Golden Gate Park, past the Cliff House, and under the green freeway entrance sign.
7. The freeway traffic is slowest in the right lane and fastest in the left lane. If you are driving slower than 75mph, check your rear view mirror for traffic coming up behind you.
8. The center car in lane button works on the freeways, which makes it easier for you to handle the turns. Release it to make minor adjustments and to change lanes. If you still have problems making the freeway turns, you are probably going too fast
9. When you see the Golden Gate Bridge, move to the right-hand lanes to avoid head-on traffic.

Finishing

1. The finish line is just after the end of the bridge. Watch for it on your right. It will require a hard right turn, so slow down. You must cross between the two poles and under the checkerboard to finish the race. If you pass it, brake and turn around.
2. If you win, you will be given a victory party at Lombard Street. If you lose, you will suffer a bit of abuse from your opponent.
3. You will then see the top ten screen for that course. If your time qualifies, you will be asked to enter your name. Congratulations on your first race in VETTE!



4 Starting and Operating

Hardware Requirements

CGA version

- An IBM AT or compatible, an IBM PS/2, an IBM PC/XT with an accelerator card, or a turbo PC/XT compatible
- A CGA card with an RGB monitor; OR
  a Hercules monochrome card with a mono monitor; OR
  any setup satisfying the EGA version's graphics requirements

EGA version

- An IBM AT or compatible; OR
  an IBM PS/2 Model 30-286 or above; OR
  an IBM PC/XT or compatible with an accelerator card
- A 1.2MB 5.25" disk drive or a 720K 3.5" disk drive
- An EGA card; OR
  a VGA card (in 16 color EGA mode)
- An RGB monitor; OR
  an EGA monitor; OR
  a multiscanning monitor capable of displaying 640 x 200 and 320 x 200 16-color graphics

All Versions

- 512K RAM
- A mouse (optional)
- A joystick (optional)

Set Up and Loading Information

We assume that you are familiar with basic terms and operations of your computer including DOS commands such as formatting and copying disks. If this is the first program that you have run on your computer, please refer to the owner's manual and DOS manual to become familiar with its operation.

There are two 5.25" disks and one 3.5" disk in the VETTE! package. The EGA version is shipped on the 1.2MB 5.25" disk and the 720K 3.5" disk. The CGA version is shipped on the 360K 5.25" disk. If you need the EGA version on two 360K 5.25" disks or the CGA version on a 720K 3.5" disk, you can either transfer the files yourself or else follow the instructions on the Disk Exchange Coupon. You need a hard disk drive in order to run the 360K 5.25" EGA version.

Both versions will run on computers equipped with EGA cards. (The CGA version uses the 4-color CGA mode.) If you have only a CGA card in your machine, make sure you use only the CGA version. The EGA version will not work with a CGA card.

Making a backup copy of the VETTE! disk

You should immediately make a backup copy of the VETTE! disks, and use the backup copy for everyday play. Follow the normal conventions for copying disks, but make sure your *original* disk is write-protected before you make the backup so you don't accidentally erase the original

Put a write-protect tab over the notch of the 5.25" disks to prevent accidental erasures. You can also write-protect the 3.5" disk by sliding the tab so the window is open.

VETTE! disk. Use the backup copy when playing the game and make sure it is *not* write-protected since data is written to the disk during play.

Loading VETTE! onto a hard drive

To run VETTE! from a hard drive, create a directory called "Vette" and copy all the files from the VETTE! program disk(s) to that directory. The VETTE! disks are not copy protected.

Loading the program

Turn on your computer and proceed to a DOS prompt. If you're loading VETTE! from a hard drive, change to the appropriate directory. If you're running from a floppy drive, insert your VETTE! backup disk in the drive. Then change to that drive (e.g. type A:) if you haven't already done so. You need to leave the disk in the drive while playing because information may need to be accessed from or written to the disk.

At the DOS prompt, type:

VETTE or **vette** (press Return)

The CGA version will prompt you for the correct graphics mode. Or you can type **VETTE C** for CGA or **VETTE H** for Hercules monochrome mode. If your computer has an LCD screen that produces a negative image, type **VETTE HR** or **VETTE CR**.

Starting Mechanisms

After the title screen animation, the credits will scroll on the screen. You can bypass the credits by pressing any key.

You have now entered the Performance Test Garage for your vehicles. By pressing the left and right arrow keys or using the mouse pointer, you will be able to select the vehicle of your choice. After highlighting your selection, press Return or the left mouse button to confirm your selection, or press Spacebar or the right mouse button to start the performance test. To use the mouse you must have selected the mouse option from the menu (press Esc) and loaded a mouse driver prior to loading VETTE!

After choosing your car, you will be asked to select a driving skill level which will change the following game parameters:

Level	Damage	Traction	Police	Cruise Control
Trainee	None	High	Inactive	Constant
Rookie	Reduced	Moderate	Active	Constant
Pro	Realistic	Realistic	Active	Realistic

If damage is set to none, you can never damage your car. Reduced damage means your car is tough to damage, and realistic damage can totally wreck your car. Higher traction makes it harder to oversteer or spin out. If police are active, they will pursue you if you commit a traffic violation. Constant cruise control will set a new speed after braking or accelerating. Realistic cruise control shuts off after braking.

Always run the game from backup copies of your original disks.

The left-hand chart shows statistics about your chosen car's performance specifications.

Press Spacebar if you wish to run a performance test on your selected car. The right-hand chart will display an acceleration graph illustrating the car's acceleration of a/I gears in their top speed in color coded bars representing each gear.

Opponent Selection

After selecting your skill level, you can check out your opponent cars at the next screen and pick which one you wish to race against. The opponent's acceleration and top speed performance are also displayed. You can use the arrow keys or the right mouse button to select the opponent car. Hit Enter or the left mouse button when you have chosen an opponent and wish to continue to the course selection screen. While previewing the opponent car in 3D, use F7 and F8 to zoom in and out, F9 and F10 to change the viewing angle, and + and - to change the speed of rotation.

Course Selection

After choosing an opponent, you will be shown a map of San Francisco and asked to choose a course. Use the arrow keys or the right mouse button to select through the four courses. Hit Enter or the left mouse button to continue after making your selection. Specific information about each course is in the next chapter.

Password Protection

Before you can start the race, you must answer a question based on the VETTE! documentation. When a question refers to a map, please look at the text on the back of the street map. You do not need to know worry about units of measurement, capitalization, or commas between numbers. If you make a mistake, hit Esc to start over. If you accidentally enter the answer incorrectly, you will be given a second chance.

Menu Options

You can access the available menu options at any time in the game by pressing the Esc key. This brings up three options: File, Control, and Communications. Use the arrow keys or the mouse to select options:

File	Control	Communications
Return to Game	Mouse ON/OFF	Two players ON/OFF
Tour Mode ON/OFF	Joystick ON/OFF	Hang up line
Quit to Garage	Calibrate	
Quit to DOS		

The File menu will bring up four choices: Return to Game, Tour Mode, Quit to Garage, and Quit to DOS. Choosing 'Tour Mode" will turn on tour mode. Pressing T when tour mode is active teleports you to the next landmark (but you will forfeit your current race). The front dash will display "Tour" and the current landmark's name. Tour mode does not work on the freeways. If you choose "Quit to Garage," your current race will be aborted and you will be returned to the performance garage screen. "Quit to DOS" will exit the game and return you to DOS. You can choose "Return to Game" if you wish to continue your game.

The Control menu has three options: Mouse, Joystick, and Calibrate. You can select a mouse or joystick instead of a keyboard. You must calibrate the joystick or mouse prior to use by selecting the calibrate menu option. You can also select the sensitivity from the calibrate option. Mouse users must load a mouse driver before running VETTE!

The menu option defaults to "Keyboard" for Control.

The Communications menu brings up two options: Two Players and Hang Up Line. If you choose "Two Players," you will next see a full-size screen showing the current communication settings. You can cycle through the options by pressing the up and down arrow keys or you can use the mouse. Press the right mouse button to change the values and the left button to select "Yes" or "Cancel" for the "Done?" option.

All the available options and values are shown below:

CONNECTION:	(DIRECT) (MODEM)
PORT:	(COM 1) (COM 2)
BAUD RATE:	(1200) (2400) (4800) (9600) (19.2K)(38.4K)(57.6K)
MODE:	(CALL) (ANSWER)
PROCEDURE:	(INITIATE CALL) (TAKE OVER LINE)
DIAL:	(STANDARD) (SPECIAL)
LINE TYPE:	(TONE) (PULSE)
(PHONE NUMBER) (DIAL STRING):	
SAVE OPTIONS:	(YES) (NO)
DONE?:	(YES) (CANCEL)

You can save your communications setup (port, baud rate, phone number, etc.) by choosing "Yes" for Save Options. Start head-to-head play by choosing "Yes" for the "Done?" option or return back to the main menu by choosing "Cancel."

Choose "Direct" if you wish to connect two computers with a null-modem serial cable.

Select "COM 1" or "COM2" depending on which serial port you're using.

If you're playing over a modem, choose the fastest modem baud rate in common for you and your opponent. If you're playing over a null-modem serial cable, try the highest speed of 57.6K. If that doesn't work, *keep trying the next highest baud rate until you reach 9600 baud.*

Select "Call" or "Answer" depending on what you and your friend have decided beforehand.

Choose "Take Over Line" if you wish to dial by hand. The default is "Initiate Call."

If your modem is not Hayes-compatible or if you wish to enter the modem commands yourself, select "Special." If you chose "Standard," you can enter a phone number below. If you chose "Special," you can enter a direct modem command.

Head-to-Head Play

If you're playing over a direct connection, you will need a null-modem serial cable. You can use either a regular serial cable with a null-modem adapter (which you can buy from any computer store) or else a specific null-modem serial cable.

If you're playing head-to-head over a modem, decide who will be the caller and the answerer beforehand, as well as which course you'll be racing on. You will not be allowed to race simultaneously on different courses.

When you play head-to-head, you are racing not only the clock but your opponent to the finish line. If your opponent crosses the finish line ahead of you, the program will notify you. You can then press Esc to quit the race.

"Hang Up Line" is not available until you are connected over a modem. If you are playing over a modem and you wish to disconnect after finishing a race, select "Hang Up Line" from the Communications menu.

The communications set up remains in effect until you change it or exit the game. You can also save the communications set up to disk by choosing "Save Options" at the Communications screen.

5 Course Descriptions

1 San Francisco Zoo to Vista Point (Golden Gale Bridge)
2 Golden Gale Bridge to Bay Bridge
3 Bay Bridge to San Francisco Zoo
4 San Francisco Zoo to Golden Gate Bridge to Bay Bridge back to San Francisco Zoo

Navigation

Two maps are included with VETTE! to help you navigate the streets of San Francisco, but they do not include all the details of the game. It is up to you to determine the best route for each race.

To get onto a freeway, you must find and drive under the large green freeway signs. The on-ramps for the Bay Bridge are at Montgomery and Market. Gough and O'Farrell, Clay and Davis, and Battery and Broadway. On-ramps for the Golden Gate Bridge arc at Sunset and Lincoln and at the north end of the Great Highway. If you drive past the toll booth plaza in the right-hand lane on the Golden Gate Bridge, you will exit at Lombard Street instead of Marina.

To help you find your way in the city, we have included an on-board navigational map. Press **H** for "Help" and a map will appear displaying the location of both your car and your opponent (your Vette is the dark red blip). The map also

shows your compass heading in the top-right corner (unless you are on the freeway). The map will also appear automatically when you switch to helicopter view.

Traffic control icons, race timer, and street names are displayed on your front dash. The top street name is the street you are on and the bottom name is the upcoming cross street. From left to right, the icons are: the current street's speed limit; stoplight status and Stop/Yield signs for the upcoming intersection; No Left/Right/U-Turn and Do Not Enter for the upcoming intersection; and one or two way street and curve ahead for cross street.

San Francisco Zoo to Golden Gate Bridge

Your first course starts at the San Francisco Zoo northwest of Lake Merced. The city zoo houses over 1,000 mammals and birds and includes a koala bear breeding facility. The zoo's showcase is the $2 million Gorilla World, a nature-like enclosure for large primates.

If you drive north on the Great Highway, you'll be paralleling the Pacific Coast with its spectacular surf and beaches. You'll pass by the Golden Gate Park, the "Central Park of the West." Spanning nearly half the width of the city, San Francisco's favorite park is over 1,000 acres of gardens, lawns and forests. The transformation of sand dunes to park grounds was begun in 1887 by John McLaren. Golden Gate Park is also the home of the California Academy of Sciences, the DeYoung Memorial Museum, and other cultural sites. Farther on, you can view California sea lions from the Cliff House overlooking Ocean Beach.

If you turn right on Geary Boulevard, you'll pass by Lincoln Park on the left with Monterey cypresses guarding its golf course. Lincoln Park is also the home of the California Legion of Honor with its fine collection of French paintings. As Lincoln Boulevard turns left, you'll be bordering the Presidio, the oldest active military base in the nation. Established by the Spanish in 1776, the Presidio is now composed of 1,500 acres of beautiful wooded hills and has been declared a National Historic Landmark. Finally, you approach the Golden Gate Bridge, the most photographed landmark of San Francisco. Built in 1936, the Golden Gale Bridge

STARTING LINE

HIGHWAY 1
(TO GOLDEN GATE BRIDGE)

THE PRESIDIO
(TO GOLDEN GATE BRIDGE)

FINISH LINE

connects the city to Marin County with 8,981 feet of orange painted steel. Once across the bridge, your race ends at Vista Point, where you can admire the entire San Francisco Bay.

Golden Gate Bridge to Bay Bridge

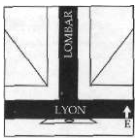
Your route may take you by the famous Coit Tower on Telegraph Hill. Rising above its neighbors, the tower was designed roughly in the shape of a firehose nozzle. It was built in 1933 as a monument to the city's volunteer firemen, and its rotunda is decorated with fifteen frescoes done by WPA artists. Lillie Hitchcock Coit, who had an overwhelming fondness for fire engines, provided this memorial.

A drive through Chinatown is another possibility on this bridge to bridge course. Chinatown is only sixteen square blocks, but more Chinese live here than anywhere outside of Asia. The main entrance to Chinatown on Grant Avenue is guarded by stone lions on either side of an oriental arch. Grant Avenue is lined with tearooms, shops, temples, restaurants, and street performers, while the sidewalks of Stockton Avenue are overflowing with fresh produce and other groceries. You can eat the best of Chinese cuisine here in Chinatown. The crowd-pleasing Chinese New Year's parade always brings out plenty of firecrackers and the famous gold dragon.

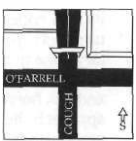
Near Chinatown is the Financial District, also known as the "Wall Street of the West.'" Immortalized in ads, the Transamerica Building is the best-known of San Francisco's skyscrapers and seems to have been inspired by the pyramids of Egypt.

STARTING LINE

MARINA
(FROM LEFT TOLL BOOTH)



LOMBARD
(FROM RIGHT TOLL BOOTH)



CENTRAL SKYWAY
(TO BAY BRIDGE)

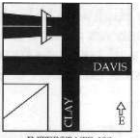
Close by is the shopping mecca of Union Square, lined with fabulous shops and boutiques.

Just before you drive onto the Bay Bridge, you'll see the Ferry Building. Lit at night, this clock tower by the bay used to tell time for those commuting to San Francisco via ferry boats. Now the Bay Bridge links San Francisco to the East Bay. Over 8 miles long, this bridge runs through Treasure Island, a man-made island created for the 1939 Golden Gate International Exposition. Railroad trains once ran on the bottom deck of this bridge. The second course ends on the other side of the Bay Bridge.

Bay Bridge to San Francisco Zoo

Your third course starts on the Oakland side of the Bay Bridge. Driving across the upper deck of the bridge, you can see the waters of the bay beneath. Once across, you'll be racing mostly on freeways to reach your final destination, the San Francisco Zoo.

Going southwest on Interstate 80, you will travel above the South of Market area. This neighborhood is also known as "SoMa" for short in homage to SoHo in New York. The entire area is undergoing a renaissance in the arts with new galleries and clubs opening almost overnight. Also below Interstate 80 is the Moscone Center, a dramatic building built in 1981. Occupying eleven acres, this mostly underground hall is distinguished by a glass-and-girder lobby at street level and a landscaped lawn over the roof.



INTERSTATE 480
(TO BAY BRIDGE)

INTERSTATE 80
(TO BAY BRIDGE)

EMBAKCADERO FREEWAY
(TO BAY BRIDGE)

FINISH LINE

You'll next drive south on Highway 101, also known as the Bayshore Freeway. The road curves around the San Francisco General Hospital. Your route will take you through the residential neighborhoods of the Mission District, Potrero Hill, and Bernal Heights.

Turning west on Interstate 280, you'll parallel BART, which stands for Bay Area Rapid Transit. Reminiscent of Disneyland's monorail, BART operates streamlined cars that zip beneath, above and beside city streets. This form of public transit carries hundreds of thousands of commuters into San Francisco daily. Balboa Park and the City College of San Francisco arc across the highway from each other.

As you approach the coast, you'll turn onto John Daly Boulevard. Your drive will take you past the Olympic Country Club, one of the world's most beautiful golf courses. To the north is Fort Funston, a well-known spot for hang gliders. Across the highway lies Lake Merced, a U-shaped reservoir used by joggers, rowers, and picnickers. Your third course ends at last at the San Francisco Zoo.

STARTING LINE

FINISH LINE

San Francisco Zoo to Golden Gate Bridge to Bay Bridge back to San Francisco Zoo

The fourth and last course is a loop of the first three courses in order. You will start at the San Francisco Zoo, drive to both bridges and finish back at the zoo. Good luck!

6 Information before Driving

We recommend that you limit your speed during the first few races to a maximum of 55 mph, although you shouldn't drive for long periods of time at any one constant speed.

Always drive at a moderate speed the first few times through all four courses in order to become more familiar with them. You should also drive at lower skill levels and use the 1989 Stock Corvette until you're more familiar with the game.

How to operate your vehicle and driving mechanisms

After typing in the password, press Enter to begin the race. Now you are ready to race your VETTE against your opponents. The race is started by a stoplight. When the light changes from red to green, it is signaling the beginning of the race.

You will start out side by side with your opponent Your VETTE will be in neutral gear when the start light turns green. The program will ignore any driving input until the fight turns green.

You cannot begin the race until the light turns green.

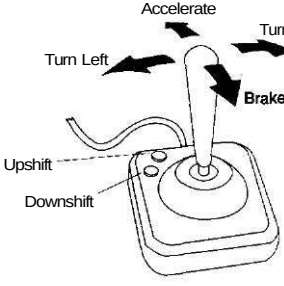
On the numeric keypad, the 7 and 9 keys will allow you to accelerate and turn simultaneously. Similarly, the 1 and 3 keys will allow you to brake and turn.

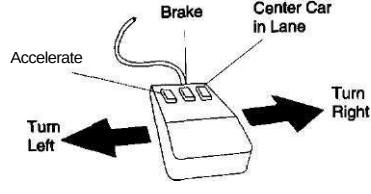
Vettes can have from four to six gears plus reverse. Gears are changed by pressing the corresponding number on the keyboard or hit [+] to upshift and [-] to downshift. (Do not use the [+] and [-] or the number keys on the numeric keypad as they are used for other functions.) If you're using a joystick, button A is upshift and button B is downshift one gear. If your joystick has only one button, use the keyboard for downshifting. If your car is automatic, you do not need to shift gears. (Hit [A] to toggle automatic transmission for any Vette model.)

Acceleration of your VETTE is determined by the gear you ate in, the current speed, the degree of turn and the terrain, just as if you were driving in the real world. By using the up arrow on your keyboard, pressing the left mouse button, or pushing the joystick forward, you can increase the throttle.

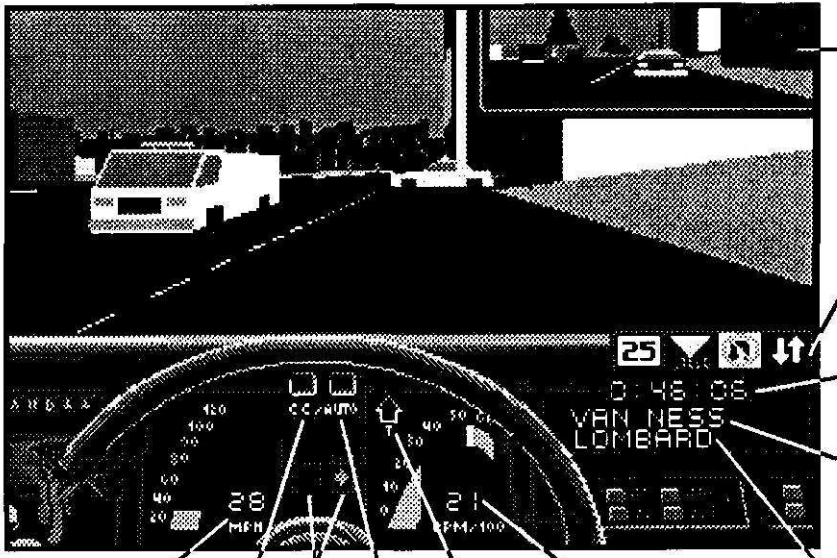
Be careful not to carry too much speed into turns because it can cause spin outs, slides or accidents when trying to take the sharp comers. To steer your VETTE, use the left and right arrow keys, slide the mouse left or right, or push the joystick left and right. When using the keyboard or a joystick the steering wheel is self-centering (just as in the real Corvette). You can press the numeric keypad [5], [K], or the right mouse button to automatically center your car in the lane (except on diagonal streets).

Braking is accomplished by holding down [↓], [Spacebar], the center mouse button, or pulling the joystick back.





IBM VETTE! Instrument Panel



Speed Limit for Current Street

Stoplight/Stop Sign/Yield

No Left Turn/No Right Turn/
No U-Turn/Do Not Enter

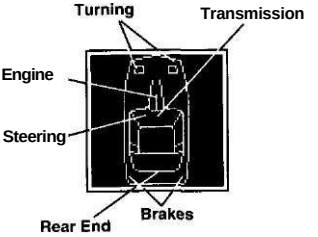
One Way/Two Way/
Curve Ahead

Front Dash Controls

You can toggle Cruise Control by hitting [C]. Automatic transmission is toggled with [A]. Your turn signal indicators will flash automatically when you turn the steering wheel. The upshift indicator will turn red when it is time for you to shift into the next gear (the top row [+] key upshifts). The gear shifter is shown briefly when you change gears, or you can toggle it on permanently with the [G] key. The navigation map can be brought up by pressing [H] and the damage control display with [D].

Collision Damage

Collision damage is determined by the speed and angle of impact, what was hit, and the skill level you are driving at. If you get into an accident the car's performance and handling will suffer due to structural and mechanical damage. You will receive added time delays because you and your car will have to recover. To determine how badly your VETTE is damaged, press [D] to bring up the damage control display. Any damage to the car will displayed according to the severity of the damage: yellow diamond for minor damage, yellow circle for moderate damage, red asterisk for severe damage, and flashing red asterisk for completely destroyed. (The CGA version uses white flashers instead of yellow.) You can repair damage to your car by stopping between the pumps and the building at a gas station. If your car is destroyed beyond driveability, a tow truck will come and tow your car back to the garage (ending your race).



Police and Traffic Violations

If you are driving at Rookie or Pro level, the Police will be active and watching for any traffic violations. If you commit a violation, you will hear a siren and a police car will signal you to pull over. If you refuse to pull over and still get caught, you will get "Evading Arrest" added to your ticket. When the police car is close to your car, you will be stopped automatically and the officer will issue you a ticket. If you are cited for anything but "Vehicular Manslaughter," you can select from a list of excuses. If the officer accepts your excuse, you are free to drive off and continue the race. If you are cited for a violation, you will receive penalty time at the end of the race as shown below:

Seconds Penalized	Violations
2	Moving Violation
5	Speeding or Reckless Driving
15	Vehicular Manslaughter or Evading Arrest

You will receive a "Moving Violation" if you collide with a moving object (such as another car). "Reckless Driving" is given for colliding with a stationary object (such as a building). "Speeding" is given for exceeding the speed limit on a given street. You will get "Evading Arrest" if you fail to pull over when signaled to do so. The most serious, "Vehicular Manslaughter," is given when you kill a pedestrian.

Scoring

If your time is one of the ten best for that course, you will be asked to enter your name in the Top Ten screen by typing your name and then pressing Enter. The Top Ten screen also lists the skill level, the number of traffic violations (if any), and the total penalty time incurred. If you want to show the Top Ten screen without having to first finish a race, press Ctrl O. If you wish to clear your Top Ten lists, type CLEAR at the DOS prompt.

Hints and Tips

1 Automatic shift has less acceleration than manual shift.
2 If your VETTE is badly damaged and you have trouble getting it moving, try starting the car in a higher gear.
3 Make sure you're driving in the two right-hand lanes when you exit a freeway. Otherwise you may be facing oncoming traffic unexpectedly.
4 Avoid driving into the water. A tow track will have to pull your VETTE out of the bay.
5 You must come to a full stop before you get in reverse.

Driver's Checklist

1 Select the correct car for the course and opponent.
2 Practice driving the course before the race.
3 Know the course objective (and the alternate routes).
4 Know the landmarks along the way and study the maps.
5 Understand how the selected VETTE handles.
6 Know how to avoid unexpected driving hazards, such as obstacles, police, etc.
7 Have fun!

There are different traffic patterns that vary according to what time of day it is. Other types of vehicles you might have to drive around are double parked trucks, semi-trailer trucks, school buses, and others. Always remember that Smokey might be on your tail, just waiting for you to run a red light or exceed the speed limit. Receiving a ticket will increase your time for the course.

7 Troubleshooting

What are the system requirements for VETTE?

The CGA version is shipped on a 360K 5.25" disk. It requires an IBM PC or compatible; a color graphics card (CGA) or Hercules monochrome graphics card with an appropriate graphics monitor.

The EGA version, shipped on a 1.2MB 5.25" disk and a 720K 3.5" disk, requires an IBM AT or compatible, or an IBM PS/2 Model 30-286 or above, or an IBM PC with an 80286- or 80386-based accelerator card; an enhanced graphics card (EGA) or video graphics array (VGA) in EGA mode with an EGA monitor or a multi-scan monitor.

Both versions require 512K RAM minimum. Joystick and mouse are optional.

Can VETTE! be installed to a hard drive?

Yes, the VETTE! disks are not copy protected so you can install the program to your hard drive.

Can the EGA version of VETTE! be transferred to a 360K 5.25" two disk?

Since VETTE! is not copy protected, you can copy the program files to two 360K 5.25" disks. However, the program will not run from 360K disks—you will need to transfer the files to a hard disk or a 720K (or 1.2MB) disk in order to run

the game. You can also purchase the 360K 5.25" disk format of the EGA version by sending in your registration card, original disk, and applicable fee to *Spectrum HoloByte* at the address on the inside back cover. Please follow the instructions on the Disk Exchange Coupon.

Is VETTE! compatible with the Hercules monchrome graphics card?

Yes, the CGA version of VETTE! is compatible with the Hercules monochrome graphics card, although the game will not take advantage of the higher monochrome resolution.

Will the EGA version of VETTE! run on my IBM PC or XT?

Yes, but the game will run very slowly. The frame rate on a 4.77 MHz IBM PC (with 8088 processor) is too slow for enjoyable game play. The EGA version requires the speed of an 80286 or 80386 processor in order to display the EGA graphics at an acceptable speed.

The graphics for the EGA version of VETTE! are scrambled or missing.

You must have a 256K EGA card. A 64K EGA card cannot support the resolution of 16 colors at 640 x 200 resolution. Your monitor must also be able to support two EGA resolution modes: 16 colors at 640 x 200 and at 320 x 200. Some

monitors, especially those designed for CAD/CAM work, are unable to adjust to those particular resolutions.

How can 1 play VETTE! against another person?

You can play head-to-head in two ways: direct connect or using a modem. If you connect two computers together directly, a null-modem serial cable must be connected to each computer's serial port. If you're connecting two computers over phone lines, each player needs a 1200 baud (or faster) Hayes-compatible modems.

The game runs too slowly to enjoy.

We suggest you play the game with the following options either enabled or disabled depending on your machine speed:

Machine and Speed	CGA	EGA	Rear Mirror	Windows	No Buildings	No Dash
7MHz 8088						
10MHz 8086						
8MHz 80286						
12MHz 80286						
16MHz 80386						
20MHz 80386						

Acceptable Recommended

Ifyou have any further questions or problems about VETTE! or any ofour other products, please contact Customer Support at:

(510)522-1164
9:00 AM to 5:00 PM Pacific time
Monday through Friday

Spectrum HoloByte, Inc.
2490 Mariner Square Loop
Alameda,CA 94501
(510)522-3584

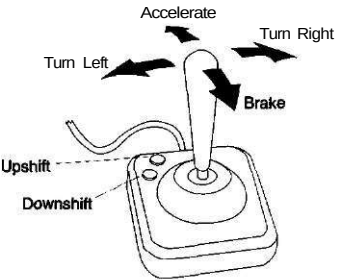
CompuServe: 76004,2144
GEnie: HOLOBYTE
PC-Link: SPECTRUMII

8 Reference

Keyboard Commands

Car Controls	Key
Turn steering wheel left	← or J
Turn steering wheel right	→ or L
Straighten car in lane	5 (numeric keypad) or K
Full stop	F
Accelerate	↑ or I
Brake	↓ or M or Spacebar
Accelerate and turn left	7 (numeric keypad) or U
Accelerate and turn right	9 (numeric keypad) or O
Brake and turn left	1 (numeric keypad) or N
Brake and turn right	3 (numeric keypad) or ,

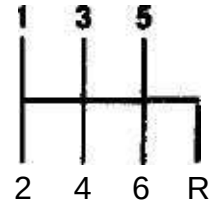
Views	Key
View left	F1
View forward	F2
View right	F3
Helicopter view	F4 or + (numeric keypad)
Raise view	F7
Lower view	F8
Change view angle	F9 and F10



Gear Selection	Key
Gear 1	1 (top row)
Gear 2	2 (lop row)
Gear 3	3 (top row)
Gear 4	4 (top row)
Gear 5	5 (top row)
Gear 6	6 (top row)
Neutral	0 (top row)
Reverse	R
Upshift one gear	+ (top row)
Downshift one gear	- (top row)

Miscellaneous	**Key**
Front dash toggle	F5
Rear view mirror toggle	F6
Automatic shift toggle	A
Buildings toggle	B
Cruise control toggle	C
Damage control display	D
Engine sound toggle	E
Gear shift toggle	G
Navigation map	H
Pause	P
Sound toggle	S
Tour Mode	T
Windows toggle	W
Quit to Top Ten Screen	Ctrl Q
Menu options	Esc

Gear Shift Diagram



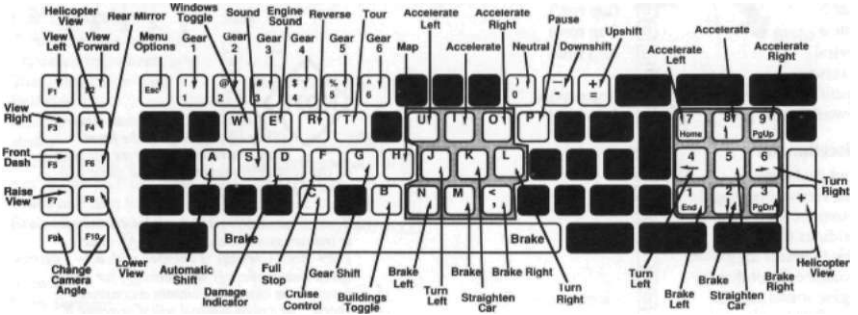
NOTE

You can increase your viewing area by toggling off the front dash, the rear view mirror, or both. (If the gear shift toggle is on, the game will always display the gear shift.)

If you wish to drive a Corvette with automatic transmission, you can press A. (The 1989 Stock Corvette is shipped with a 4-speed automatic.) If you press C for cruise control, the car will maintain a constant speed. The cruise control will disengage if you press C again.

The Windows toggle applies only to buildings downtown. Press E if you wish to turn off the engine sound but leave all other sound on.

VETTE! Keyboard Command Layout



9 Car Specifications

Players

1989 Stock Corvette
ZR1 "King of the Hill" Corvette
Callaway 'Twin Turbo" Corvette
Callaway "Sledgehammer" Corvette

Opponents

Porsche 928S4
Lamborghini Countach
Ferrari Testarossa
Ferrari F-40

1989 Stock Corvette

Engine

Type	V-8, iron block and aluminum heads
Bore x stroke	4.00 x 3.48 in,101.6 x 88.4 mm
Displacement	350 cu in, 5733 cc
Compression ratio	9.5:1
Engine-control system	GM electronic with port fuel injection
Power (SAE net)	245 bhp @ 4300 rpm
Torque (SAE net)	340 lb-ft @ 3200 rpm

Drivetrain

Transmission	4-speed automatic with lockup torque Converter
Final-drive ratio	3.07, limited slip

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	3.06	7.8	43 mph (5500 rpm)
II	1.63	14.7	81 mph (5500 rpm)
III	1.00	24.0	132 mph (5500 rpm)
IV	0.70	34.3	154 mph (4500 rpm)

Dimensions

Wheelbase	96.2 in
Track, F/R	59.6/60.4 in
Length	176.5 in
Width	71.0 in
Height	46.7 in
Curb weight	3313 lb
Weight distribution	51.0/49.0%
Fuel capacity	20.0 gal

Steering

Type	rack-and-pinion, power-assisted
Turns lock-to-lock	2.0
Turing circle curb-to-curb	40.3 ft

Brakes

F:	12.0 x 0.8-in vented disc
R:	12.0 x 0.8-in vented disc
Power assist	vacuum with anti-lock control

Wheels and Tires

Wheel size	9.5 x 17 in
Tires	Goodyear Eagle ZR40, P275/40ZR-17

Acceleration

Zero to 60	5.6 seconds
Standing 1/4 mile	14.3 sec @ 95 mph
Top Speed	154 mph

Braking

70.0 mph @ impending lockup	168 ft
Fade	none

Handling

Roadholding, 300-ft-dia skidpad	0.87g
Understeer	moderate

Suggested Retail Price $32,000

1989 ZR1 "King of the Hill" Corvette

Engine

Type	V-8, aluminum block and heads
Bore x stroke	3.90 x 3.66 in, 99.0 x 93.0 mm
Displacement	349 cu in, 5727 cc
Compression ratio	11.3:1
Engine-control system	GM electronic with port fuel injection
Power (SAE net)	380 bhp @ 6000 rpm
Torque (SAE net)	370 lb-ft @ 4000 rpm
Redline	7200

Drivetrain

Transmission	6-speed
Final-drive ratio	3.54:1, limited slip

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	2.68	7.8	56 mph (7200 rpm)
II	1.80	11.6	83 mph (7200 rpm)
III	1.31	15.6	114 mph (7200 rpm)
IV	1.00	20.8	150 mph (7200 rpm)
V	0.75	27.8	180 mph (6475 rpm)
VI	0.49	42.5	151 mph (3550 rpm)

Dimensions

Wheelbase	96.2 in
Track, F/R	59.6/60.4 in
Length	176.5 in
Width	73.0 in
Height	46.7 in
Curb weight	3500 lb
Fuel capacity	20.0 gal

Steering

Type	rack-and-pinion, power-assisted
Turns lock-to-lock	2.0
Turning circle curb-to-curb	40.3 ft

Brakes

F:	12.9 x 1.1-in vented disc
R:	11.9 x 1.1-in vented disc
Power assist	vacuum with anti-lock control

Wheels and Tires

Wheel size	F: 9.5 x 17 in R: 11.0 x 17 in
Tires	Goodyear Eagle F: P275/40ZR-17 R: P315/35ZR-17

Acceleration

Zero to 60	4.2 seconds
Top speed	180 mph
Suggested Retail Price	$50,000

1989 Callaway "Twin Turbo" Corvette

Engine

Type	twin turbocharged V-8
Bore x stroke	4.00 x 3.48 in,101.6 x 88.4 mm
Displacement	350 cu in, 5733 cc
Compression ratio	7.5:1
Engine-control system	Callaway/Chevrolet electronic with port fuel injection
Power (SAE net)	382 bhp @ 4250 rpm
Torque (SAE net)	562 lb-ft @ 2500 rpm

Drivetrain

Transmission	6-speed
Final-drive ratio	3.54:1, limited slip

Gear	Ratio	Mph/1000 rpm	Max. test speed
	2.68	7.8	43 mph (5500 rpm)
II	1.80	11.6	64 mph (5500 rpm)
III	1.31	15.9	87 mph (5500 rpm)
IV	1.00	20.8	115 mph (5500 rpm)
V	0.75	27.8	153 mph (5500 rpm)
VI	0.50	34.7	191 mph (5500rpm)

Dimensions

Wheelbase	96.2 in
Track, F/R	59.6/60.4 in
Length	179.0 in
Width	71.0 in
Height	46.7 in
Curb weight	3500 lb
Weight distribution, F/R	51.0/49.0%
Fuel capacity	20.0 gal

Steering

Type	rack-and-pinion, power-assisted
Turns lock-to-lock	2.0
Turning circle curb-to-curb	40.0 ft

Brakes

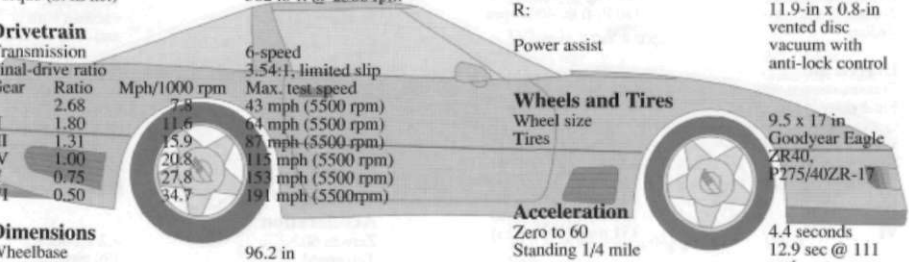
F:	12.9-in x 1.1-in vented disc
R:	11.9-in x 0.8-in vented disc
Power assist	vacuum with anti-lock control

Wheels and Tires

Wheel size	9.5 x 17 in
Tires	Goodyear Eagle ZR40, P275/40ZR-17

Acceleration

Zero to 60	4.4 seconds
Standing 1/4 mile	12.9 sec @ 111 mph
Top speed	191 mph



1989 Callaway "Sledgehammer" Corvette

Engine

Type	twin turbocharged OHV V-8
Bore x stroke	4.00 x 3.48 in, 101.6 x 88.4 mm
Displacement	350 cu in, 5733 cc
Compression ratio	7.5:1
Engine-control system	Callaway/Chevrolet electronic with port fuel injection
Power (SAE net)	898 bhp @ 6200 rpm
Torque (SAE net)	772 lb-ft @ 5250 rpm

Drivetrain

Transmission	5-speed
Final-drive ratio	3.07:1, limited slip

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	2.68	8.8	53mph (6000 rpm)
II	1.80	13.7	82 mph (6000 rpm)
III	1.31	17.3	104 mph (6000 rpm)
IV	1.00	10.7	178 mph (6000 rpm)
V	0.75	43.8	254 mph (5800 rpm)

Dimensions

Wheelbase	96.2 in
Track, F/R	59.6/60.4 in
Length	176.5 in
Width	71.0 in
Height	46.7 in
Curb weight	3313 lb
Weight distribution, F/R	51.0/49.0%
Fuel capacity	20.0 gal

Steering

Type	rack-and-pinion, power-assisted
Turns lock-to-lock	2.0
Turning circle curb-to-curb	40.3 ft

Brakes

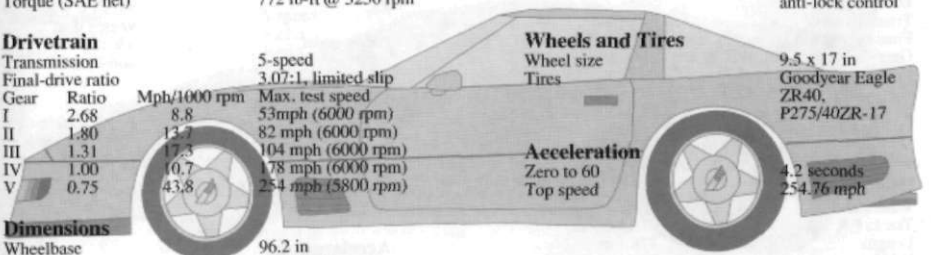
F:	13.0-in vented disc
R:	11.5-in vented disc
Power assist	vacuum with anti-lock control

Wheels and Tires

Wheel size	9.5 x 17 in
Tires	Goodyear Eagle ZR40, P275/40ZR-17

Acceleration

Zero to 60	4.2 seconds
Top speed	254.76 mph



Porsche 928S4

Engine

Type	V-8, aluminum block and heads
Bore x stroke	3.94 x 3.11 in, 100.0 x 78.9 mm
Displacement	303 cu in, 4957 cc
Compression ratio	10.0:1
Power (SAE net)	316 bhp @ 6000 rpm
Torque (SAE net)	317 lb-ft @ 3000 rpm

Drivetrain

Transmission	5-speed
Final-drive ratio	2.20:1

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	4.07	8.0	49 mph (6100 rpm)
II	2.71	12.0	73 mph (6100 rpm)
III	1.93	16.8	102 mph (6100 rpm)
IV	1.46	22.2	135 mph (6100 rpm)
V	1.00	32.5	162 mph (5000 rpm)

Dimensions

Wheelbase	98.4 in
Track, F/R	61.1/60.9 in
Length	178.1 in
Width	72.3 in
Height	50.5 in
Curb Weight	3525 lb
Fuel capacity	22.7 gal

Steering

Type	rack-and-pinion, power assisted
Turns lock-to-lock	3.0
Turning circle curb-to-curb	37.7 ft

Brakes

F:	12.0 x 1.3-in vented disc
R:	11.8 x 0.9-in vented disc
Power assist	vacuum with anti-lock control

Wheels and Tires

Wheel size	F: 7.0 x 16 in R: 8.0 x 16 in
Tires	Dunlop SP Sport D40 F: 225/50VR-16 R: 245/45VR-16

Acceleration

Zero to 60	5.7 seconds
Standing 1/4 mile	14.1 @ 100.7 mph
Top speed	165 mph
Suggested Retail Price	$58,900

Lamborghini Countach

Engine

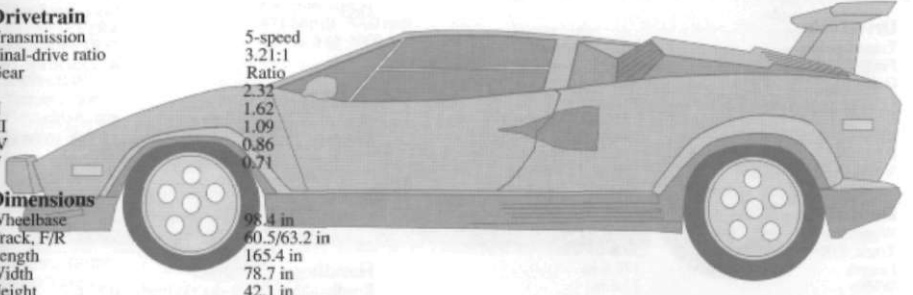
Type	DOHC 4-valve V-12
Bore x stroke	3.37 x 2.95 in, 85.5 x 75.0 mm
Displacement	315 cu in, 5167 cc
Compression ratio	9.5:1
Power (SAE net)	425 bhp @ 7000 rpm
Torque (SAE net)	368 lb-ft @ 5200 rpm
Redline	7200

Acceleration

Zero to 60	4.7 seconds
Zero to 100	10.8 seconds
Standing 1/4 mile	12.9 @ 110.0 mph
Top speed	179 mph
Suggested Retail Price	$116,000

Drivetrain

Transmission	5-speed
Final-drive ratio	3.21:1
Gear	Ratio
I	2.32
II	1.62
III	1.09
IV	0.86
V	0.71



Dimensions

Wheelbase	98.4 in
Track, F/R	60.5/63.2 in
Length	165.4 in
Width	78.7 in
Height	42.1 in
Curb weight	3285 lb
Fuel capacity	31.7 gal

Ferrari Testarossa

Engine

Type	DOHC 4-valve flat-12
Bore x stroke	3.23 x 3.07 in, 82.0 x 78.0 mm
Displacement	302 cu in, 4942 cc
Compression ratio	8.7:1
Power (SAE net)	380 bph @ 5750 rpm
Torque (SAE net)	354 lb-ft @ 4500 rpm

Drivetrain

Transmission	5-speed manual
Final-drive ratio	3.21:1

Gear	Ratio	Max. test speed
I	3.14	50 mph (6800 rpm)
II	2.01	75 mph (6800 rpm)
III	1.53	103 mph (6800 rpm)
IV	1.17	134 mph (6800 rpm)
V	0.88	181 mph (6800 rpm)

Dimensions

Wheelbase	100.4 in
Track, F/R	59.8/63.4 in
Length	176.6 in
Width	77.6 in
Height	44.5 in
Curb weight	3660 lb

Steering

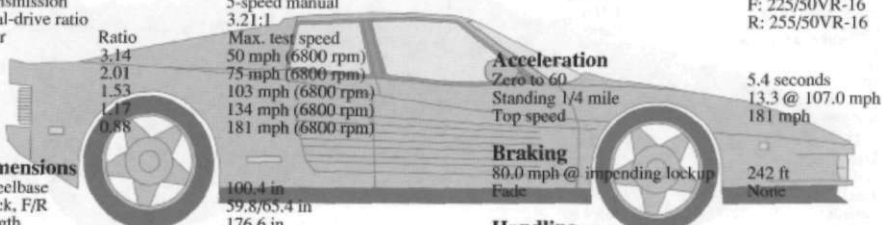
Type	rack-and-pinion
Turns lock-to-lock	3.4
Turning circle curb-to-curb	39.4 ft

Brakes

F:	12.2-in vented disc
R:	12.2-in vented disc
Power assist	vacuum

Wheels and Tires

Wheel size	F: 16 x 8 in R: 16 x 10 in
Tires	Goodyear Eagle VR50 F: 225/50VR-16 R: 255/50VR-16



Acceleration

Zero to 60	5.4 seconds
Standing 1/4 mile	13.3 @ 107.0 mph
Top speed	181 mph

Braking

80.0 mph @ impending lockup	242 ft
Fade	None

Handling

Roadholding, 100-ft-dia skidpad	0.87 g

Suggested Retail Price	$126,600

Ferrari F40

Engine

Type	Turbocharged and intercooled V-8, aluminum block and heads
Bore x stroke	3.23 x 2.74 in, 82.0 x 69.5 mm
Displacement	179 cu in, 2936 cc
Compression ratio	7.8:1
Engine-control system	Weber-Marelli IAW with port fuel injection
Power (SAE net)	471 bhp @ 7000 rpm
Torque (SAE net)	426 lb-ft @ 4000 rpm

Drivetrain

Transmission	5-speed
Final-drive ratio	2.73:1, limited slip

Gear	Ratio	Mph/1000 rpm	Max. test speed
I	3.70	7.8	60 mph (7750 rpm)
II	2.30	12.6	98 mph (7750 rpm)
III	1.64	17.7	137 mph (7750 rpm)
IV	1.28	22.6	175 mph (7750 rpm)
V	1.02	28.4	201 mph (7100 rpm)

Dimensions

Wheelbase	96.5 in
Track, F/R	62.8/63.4 in
Length	174.4 in
Width	78.0 in
Height	44.5 in
Frontal area	19.9 sq ft
Curb weight	2650 lb
Weight distribution, F/R	49/51%
Fuel capacity	31.7 gal

Steering

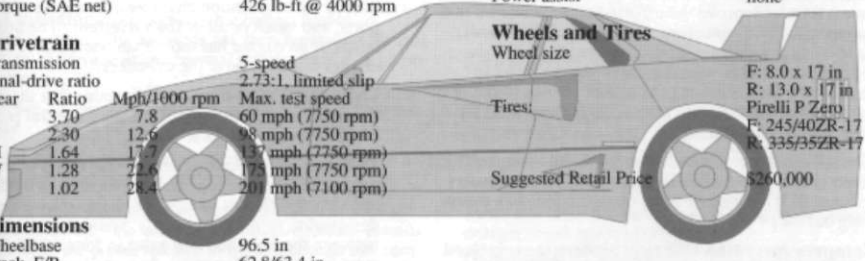
Type	rack-and-pinion
Turns lock-to-lock	2.9
Turning circle curb-to-curb	39.4 ft

Brakes

F:	13.0 x 1.2-in vented disc
R:	13.0 x 1.2-in vented disc
Power assist	none

Wheels and Tires

Wheel size	F: 8.0 x 17 in R: 13.0 x 17 in
Tires:	Pirelli P Zero F: 245/40ZR-17 R: 335/35ZR-17
Suggested Retail Price	$260,000



10 Glossary

Aspect ratio—generally the ratio between two dimensions of an object. In tire terminology it applies to the unloaded sidewall height of the tire divided by its overall width. A lower aspect ratio implies a shorter, wider tire.

Bore—the diameter of a cylinder.

Brake torquing—a procedure generally used in performance tests to improve the off-the-line acceleration of a car equipped with an automatic transmission. It is executed by firmly depressing the brake with a left foot, applying the throttle with the car in gear to increase engine rpm, then releasing the brakes. Brake torquing is particularly effective with turbo-charged cars because it helps overcome turbo lag.

Chassis—a general term that refers to all of the mechanical parts of a car attached to a structural frame. In cars with unitized construction, the chassis comprises everything but the body.

Compression ratio—the ratio between the combined volume of a cylinder and a combustion chamber when the piston is at the bottom of its stroke and the volume when the piston is at the top of its stroke. The higher the compression ratio, the more mechanical energy an engine can squeeze from its air-fuel mixture. Higher compression ratios, however, also make detonation more likely.

Crankshaft—a shaft with one or more cranks, or "throws," that are coupled by connecting rods to the engine's pistons. Together, the crankshaft and the con rods transform the pistons' reciprocating motion into rotary motion.

Cylinder—the round, straight-sided cavity in which the pistons move up and down. Typically the cylinder is made of cast iron and formed as part of the block.

Cylinder head—the aluminum or iron casting that houses the combustion chambers, the intake and exhaust ports, and much or all of the valvetrain. The head (or heads, if an engine has more than one bank of cylinders) is always directly above the cylinders.

Cylinder liner—the circular housing that the piston moves in when the cylinder is not an integral part of the block. Also known as a "sleeve."

Differential—a special gearbox designed so that the torque fed into it is split and delivered to two outputs that can turn at different speeds. Differentials within axles are designed to split torque evenly; however, when used between the front and rear axles in four-wheel drive systems (a center differential), they can be designed to apportion torque unevenly.

Disc brakes—properly called caliper disc brakes, a type of brake that consists of a disc that rotates at wheel speed, straddled by a caliper that can squeeze the surfaces of the disc near its edge.

Drivability—the general qualitative evaluation of a powertrain's operating qualities, including idle smoothness, cold and hot starting, throttle response, power delivery, and tolerance for altitude changes.

Fiberglass—a composite material that relies on small glass fibers for its strength.

Final-drive-ratio—the reduction ratio, found in the gearset of a drivetrain, that is furthest removed from the engine. Typically, the differential ratio.

Fuel injection—any system that meters fuel to an engine by measuring its needs and then regulating the fuel flow, by electronic or mechanical means, through a pump or injectors.

Gearset—a group of two or more gears used to transmit power.

Handling—a general term covering all the aspects of a car's behavior that are related to its directional control.

Horsepower—the common unit of measurement of an engine's power. One horsepower equals 550 foot-pounds per second, the power needed to lift 550 pounds one foot off the ground in one second or one pound 550 feet in the same time.

Instruments—the displays on the dashboard that communicate information about the mechanical operations of the car.

Lockup—the point at which a tire starts to skid during braking.

Neutral steer—a cornering condition in which the front and rear slip angles are roughly the same.

On-center feel—the responsiveness and feel of the steering when die wheel is approximately on center.

Power—the rate at which work is performed. The power is proportionate to torque and rpm and is measured in horsepower.

Roadholding—the ability of the car to grip the pavement.

Series(tire)—the numerical expression of a tire's aspect ratio.

Skidpad—a large area of smooth, flat pavement used for various handling tests.

Torque—the rotational equivalent of force, measured in pound-feet.

Turn-in—the moment of transition between driving straight ahead and cornering.

Understeer—a handling condition in which the slip angle of the front tires is greater than the slip angle of the rears. Also referred to as "push."

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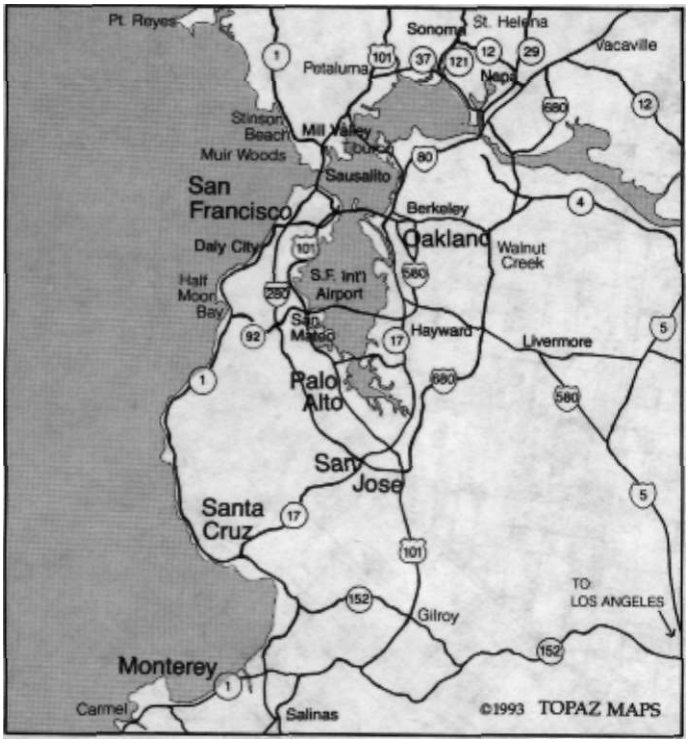
VETTE!

Spectrum HoloByte™



Sights, Entertainment, Transportation . . .

Aquatic
A lovely lawn that borders the water, and home of the marine memorabilia at the Maritime Museum.

BART
The Bay Area Rapid Transit is reminiscent of Disneyland's monorail- It operates streamlined cars that zip beneath, above, and beside city streets. This form of public transit carries hundreds of thousands of commuters into San Francisco daily.

Bay Bridge
The Bay Bridge links San Francisco to the East Bay. Over 8 miles long, this bridge runs through Treasure Island. Railroad trains once ran on the bottom deck of this bridge. The second course ends on the other side of the Bay Bridge.

The Cannery
A three-story complex of red-brick former factories. The structure was built in 1894 to house the Del Monte fruit-and-vegetablc cannery. Shops, art galleries, bookstores, and unusual restaurants now ring the olive-tree courtyard-

Chinatown
Though this area is only 16 square blocks, more Chinese live here than anywhere outside of Asia. The gold rush attracted San Francisco's first Chinese immigrants in the 1850's. A decade later thousands more came to help build the Central Pacific Railroad, The architecture and culture that mirrors China of the 1800's can be seen in Chinatown The main entrance to Chinatown on Grant Avenue is guarded by stone lions on either side of an oriental arch. Grant Avenue is lined with tea rooms, shops, temples, restaurants. and street performers, while the sidewalks of Stockton Avenue are overflowing with fresh produce and other groceries. But most visitors only see the lip of pagodaland. To savor Chinatown best, explore it on foot, and remember that nighttime is as busy as daytime. You can eat the best of Chinese cuisine here, and the crowd-pleasing Chinese New Year's parade always brings out plenty of firecrackers and the famous gold dragon.

Coit Tower
Your route may lake you past this famous lower located on Telegraph Hill. Rising above its neighbors, the tower was designed roughly in the shape of a firehose nozzle. It was built in 1933 as a monument to the city's volunteer firemen, and its rotunda is decorated with fifteen frescoes done by WPA artists. Lillie Hitchcock Coit. who had an overwhelming fondness for fire engines, provided this memorial. Legend relates that at age seventeen Lillie deserted a wedding party and chased down the street after her favorite engine, Knickerbocker No. 5, clad in her bridesmaid finery. Soon after, she signed herself Lillie Hitchcock Coit 5, in honor of her favorite fire engine. Lillie died in 1929 at the age of eighty-six, leaving the city $125,000 to erect the 210-foot tower.

The Embarcadero
If you follow the waterfront, you'll be driving down The Embarcadero with its many shipping piers. At the end of the road is the Embarcadero Center, four skyscrapers connected by a pedestrian mall in one plaza.

Ferry Building
Just before you drive onto the Bay Bridge, you'll see the Ferry Building. Lit at night, this clock tower by the bay used (o tell time for those commuting to San Francisco via ferry boats.

Financial District
Known as the "Wall Street of the West"

Fisherman's Wharf
Home of San Francisco's fishing fleet. Fisherman's Wharf features sidewalk stands that sell fresh crab, shrimp cocktails and sourdough bread. Excellent seafood restaurants, shops, boat tours of the bay.

Fort Funston
A well-known spot for hang gliders.

Fort Mason
If you drive along the water, you might pass by Fort Mason, located on the waterfront. This World War II army base has been transformed into a home for many cultural groups, such as theater workshops and an studios. The 39,000-acre Golden Gate National Recreation Area is headquartered here, where a number of booklets and maps, and information on special programs is located,

Ghirardelli Square
A charming series of brick former factory buildings housing outstanding ethnic restaurants as well as shops. Until the early 1960's, the Ghirardelli Chocolate Company's aromatic production perfumed the northern waterfront.

Golden Gate Bridge
Built in 1936, the most photographed landmark of San Francisco connects the city to Marin County and the Redwood Empire farther North with 8,981 feet of orange painted steel. Its 1.7 mile span hangs from two steel cables, each 36.5 inches in diameter. Joseph B. Strauss designed the bridge, which opened in 1937 at a cost of $35.5 million.

Golden Gate Park
The world's largest human-made park, stretching from the Pacific Ocean to Baker Street, offers 1,017 acres of woods and meadows, lakes and streams, flowers and trees. The "Central Park of the West" spans nearly half the width of the city. The transformation of sand dunes to park grounds was begun in 1877 by John McLaren. Golden Gate Park is also the home of the California Academy of Sciences, the DeYoung Museum and other cultural sites.

Hyatt Regency
Located in the center of The Embarcadero and topped by a rotating restaurant, this hotel sports a spectacular atrium, rising 170 feet.

Lake Merced
A U-shaped reservoir used by joggers, rowers, and picnickers.

Lincoln Park
As you turn right on Geary Boulevard, you'll pass by this beautiful park on the left with Monterey cypresses guarding its golf course. Lincoln Park is also the home of the California Legion of Honor with its fine collection of French paintings.

Lombard Street
Coined "The Crookedest Street in the World."

Moscone Center
Opened December 2, 1981, this superblock at Third and Howard occupies eleven acres. This mostly-underground hall is distinguished by a glass-and-girder lobby at street level and a landscaped lawn over the roof.

Olympic Country Club
One of the world's most famous golf courses.

Presidio
As Lincoln Boulevard turns left, you'll be bordering the Presidio, the oldest active military base in the nation. Established by the Spanish in 1776, this military garrison is now the Headquarters of the United States Sixth Army. Its more than fifteen hundred acres of rolling hills and majestic woods and attractive red-brick barracks and stables present an air of serenity in the middle of the city. A small museum displays historical memorabilia of the early Spanish and U.S. occupants. Composed of 1500 acres of beautiful wooded hills, the Presidio has been declared a National Historic Landmark.

San Francisco Zoo
The beginning of the San Francisco Zoo was the arrival of an inhabitant, a grizzly bear named Monarch, a gift of the San Francisco Examiner. Not until 1940 was the major portion of the present zoo completed, at its current site just northwest of Lake Merced. Presently, of the 1000 animals, more than 130 have been designated as endangered species. Very new is Gorilla World, a $2 million exhibit almost an acre in size, the world's largest and most natural captive-gorilla habitat.

South of Market Area
South of Market is the Mission District, one of the oldest and most polyglot areas of San Francisco. Called "SoMa" for short in homage to SoHo in New York, this entire area is undergoing a renaissance in the arts with new galleries and clubs opening almost overnight. Between Mission and the bay is the Potrero District, mostly industrial but with a growing residential area of refurbished Victorians and low-rise apartments. Both Mission and Potrero are on the rise while still rather seedy.

Transamerica Building
Immortalized in ads, this structure is the best-known of San Francisco's skyscrapers and seems to have been inspired by the pyramids of Egypt.

Treasure Island
The Bay Bridge runs through this man-made island, an island which was created for the 1939 Golden Gate International Exposition.

Union Square
Located near the Financial District, this shopping mecca is lined with fabulous shops and boutiques. Much of the glamour and gloss of San Francisco is centered in this one-block spree of high-fashion stores, international hotels, and some drifters sunning, preaching, and panhandling in the carefully cared-for park three or four blocks south of Chinatown. Named for the pro-Union gatherings held here during the Civil War.

Facts, Figures, and Helpful Hints . . .

Population
San Francisco is the 4th most populous city in California. A January I, 1989 estimate puts the city's population at 731,700, behind Los Angeles, San Diego, and San Jose.

Earthquake Territory
Two main fault zones divide the city into three main blocks, each composed of different kinds of rocks. When the rocks move suddenly along the larger faults, the result is an earthquake. The San Andreas Fault, responsible for the 1906 quake, does not appear within San Francisco but it crosses the ocean floor just off the Golden Gale.

Hotels and Motels
San Francisco is singularly blessed with many distinguished hotels of world renown, as well as charming bed-and-breakfast hideaways, convenient and popular chain motels, and affordable accommodations throughout the city. However, it is essential to have confirmed reservations. In addition to its business and vacation guests, the city hosts major events, causing acute shortages of hotel rooms.

Seasonal Events
Throughout the year, the San Francisco Bay Area hosts all types of events: Chinese New Year festivities, St. Patrick's Day Parade, San Francisco Examiner Bay to Breakers Race, and the Japanese Fall Festival, to name a few. For information, try the San Francisco Convention and Visitors Bureau which publishes a series of free booklets and maps on San Francisco.