

Capitalism User's Guide

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1 Getting Started

To play Capitalism, you need the following hardware:

- IBM or 100% compatible computer
- 386DX CPU
- 4MB RAM
- 12MB hard disk space
- CD-ROM drive
- VESA-compatible video driver
- 256-color SVGA (640x480) monitor
- MS-DOS 5.0 or higher, or Windows 95
- 100% Microsoft-compatible mouse and driver
- 100% Sound Blaster-compatible sound card

Installation

Installing Capitalism is straightforward:

1. Run the **INSTALL.EXE** program from the Capitalism CD-ROM and follow the instructions.
2. When installation is complete, type **CAP** in the **CAPITAL** directory on your hard disk to start the game.

Quick Start

We strongly recommend that you go through the instructional games before reading this manual. The instructional games are easy to follow and understand. Once you have played them, refer to this manual for in-depth reference information.

The first time you play the game, it takes you to the first instructional game. The first game introduces basics and guides you through setting up your first company. The instructional part takes about 5–10 minutes. After that, you can try managing your own business.

Troubleshooting

If you have any problems running Capitalism, read the following sections.

FILES parameter in CONFIG.SYS

The FILES parameter in your CONFIG.SYS file controls how many files can be open at the same time. Set it to at least 30 to run the game. To edit the CONFIG.SYS file, you can use EDIT, the standard DOS editing utility.

Graphics Cards

Capitalism requires a graphics card and monitor that are capable of running at 640x480 resolution and 256 colors in Super VGA mode. If Capitalism does not recognize the SVGA feature of your graphics card, and you are sure that the card supports SVGA graphics, you can try to load a VESA driver.

VESA is a standard for programming SVGA graphics cards. Loading a VESA driver lets most programs recognize the SVGA feature of your graphics card. Since each SVGA card requires a custom VESA driver, you must find your card's VESA driver first.

Unless your card is very old, you'll probably find the VESA driver on the diskette that came with your SVGA card. Copy the driver from the diskette to your hard disk and run the driver before running Capitalism. You can add the VESA command to your AUTOEXEC.BAT file so that it is loaded automatically each time your system starts.

Finding a VESA driver

If the VESA driver did not come with your graphics card, check the VESA directory of the Capitalism CD-ROM.

You can also try the on-line services. On CompuServe, go to the PC Programming forum and look in the library under VESA Info/Drivers. On America Online, use the keyword VESA and look under Software Libraries in VBE TSRs for your VGA card.

To obtain a VESA driver on the World Wide Web, try the following URLs:

- <ftp://ftp.cica.indiana.edu/pub/pc/win3/drivers/video>
- <http://www.us.dell.com/ftp/video.html>

Memory Requirements

Capitalism requires a minimum of 4MB RAM. If there isn't enough memory, Capitalism can use hard disk space as virtual memory. However, you may notice a considerable reduction in game speed if you use virtual memory.

The game will run only if there is enough memory available for the game to start properly. If the game won't run, you should either free up more memory or create a boot diskette (see below).

If you are using Smart Driver or other utilities that use memory, you can free up memory by removing them from your AUTOEXEC.BAT and CONFIG.SYS files.

Creating a Boot Diskette

If you are having problems loading the game, we recommend creating a boot diskette. Starting Capitalism from a clean boot diskette ensures that memory-resident programs (TSRs) do not conflict with your device drivers.

Before creating a boot diskette, you should print paper copies of the system configuration files. Type the following at the MS-DOS prompt to print them:

```
COPY C:\AUTOEXEC.BAT PRN
```

```
COPY C:\CONFIG.SYS PRN
```

To create a boot diskette, insert a diskette into your disk drive and type `FORMAT A: /S` at the MS-DOS prompt.

Create an AUTOEXEC.BAT and a CONFIG.SYS file on the boot diskette using EDIT, the standard DOS editing utility. These files must include:

- Your mouse driver
- Your sound card environment variables and/or driver
- Your CD-ROM driver
- MSCDEX in your AUTOEXEC.BAT
- FILES=30 in your CONFIG.SYS

2 Beginning the Game

To play the game, you need to know a few game basics. The following table lists the mouse commands.

Action	Description
Click	Press the left mouse button once.
Double-click	Press the left mouse button twice quickly.
Right-click	Press the right mouse button once.

Number Display Convention

In the game, numbers in parentheses are negative numbers, following the accounting convention.

Using Browsers

A browser is a dialog box that contains data you can browse. To browse, you can either use the scroll bar or click the browser's body area. If you click the upper half of the body area, the browser scrolls up. If you click the lower half of the body area, the browser scrolls down.

Using Spinners

A spinner lets you increase or decrease the number or value it displays. It has a + and a - button. Left-click to increase or decrease the number a small amount, and right-click for a large change.

Closing Windows

You can close most windows immediately by right-clicking anywhere in the window.

Main Menu

You begin Capitalism at the main menu (shown below). The main menu options are described in the following sections.



Capitalism Main menu

Quickstart

Select the Quickstart option to play the instructional games. We recommend you start here.

Start a New Game

Selecting this option takes you to the new game generation menu, where you can customize the following game settings:

- Map
This option displays a randomly generated world in which the new game will take place. If you don't like the map, click the **Generate** button to generate a new map.
- Corporation
Before starting a corporation, you have to make several decisions.

Begin by selecting the corporate logo, corporate color, and your portrait. You begin as the chairman and chief executive officer of your corporation.

Next, select your corporation's name and your name.

Last, decide on your corporation's initial capital. The more capital you choose, the less of your company you'll own. The relationship between capital and ownership is explained below.



Corporation options

In the beginning of the game, you receive \$6,000,000 personally and \$5,000,000 for your new corporation. If you set your corporation's initial capital higher than \$5,000,000, the remaining amount is raised by offering your corporation's stock to the public.

Although raising capital using this method seems almost effortless, it is not without its drawbacks. In fact, issuing new shares increases the total number of outstanding shares of the corporation and thus weakens the founder's ownership in the corporation. In addition, having too many outstanding shares also increases the risk of a hostile takeover

- Competitors
 - *Number of Competitors.* Determines the maximum number of corporations controlled by computer players.
 - *Competitor Characters.* Determines the computer players' characters. The default setting **Pre-defined** means that the computer characters are pre-defined. If this option is set to **Conservative**, **Moderate**, **Aggressive**, or **Very Aggressive**, most of the computer players will have that character. If set to **Random**, the computer player are assigned random characters. If set to **Even**, the computer players are assigned evenly to the different characters.

- *Competitor Capital*. Determines the initial capital of corporations started up by computer players.
- *Competitor Expertise Level*. Determines the level of expertise the computer players have. If set to **Pre-defined**, their expertise is pre-defined. If set to **Low**, **Moderate**, or **High**, their expertise levels are generated randomly. See [Chapter 9, “Personnel Management,”](#) for details.
- *Show Competitor Trade Secrets*. Determines whether you can see the competitors’ trade secrets. If set to **No**, competitors’ firm layouts, product costs, and R&D information are hidden from you.
- *Random Competitor Personality*. If set to **Yes**, the personalities of the computer players are set randomly. Otherwise, the personalities of the computer players are pre-defined.
- *Random Competitor Strategy*. Determines whether computer players change their business strategies.



Competitor options

- Environment

You set the game environment options here.

- *Maximum Number of Cities at the Beginning*. Limits how many cities can be created initially in a random world. The number of cities is also constrained by the availability of suitable territories for cities.
- *New Cities Emerge During the Game*. Determines whether new cities emerge as the game progresses.
- *Competence of Local Competitors*. There are local competitors in each city. Although their firms are not shown on the game map, they do compete directly with the corporations. This option

determines the competence of the local competitors. (For more details, see "[Local Competitors](#)" on page 5-12.)

- *Allow Stock Investment*. Determines whether stock investment is allowed.

- **Imports**

You set the import options here.

- *Number of Seaports Importing Consumer Goods*. Determines how many seaports import consumer goods.
- *Number of Seaports Importing Industrial Goods*. Determines how many seaports import industrial goods.
- *New Seaports Emerge During the Game*. Determines whether new seaports emerge as the game progresses.
- *Constant Import Supply*. If **Yes**, the supply of imports is constant as long as demand is constant. Otherwise, the supply may be cut off suddenly.
- *Import Quality*. Determines the average quality of imports.

- **Difficult Level and Rating**

You can select six difficult levels from **Very Easy to Hardest**.

Each difficulty level has a set of predefined settings for the Competitor, Environment, and Imports parameters. Selecting a difficulty level immediately changes those parameters.

You can also change these parameters yourself. If you do so, the difficulty level is automatically set to Custom. The settings are used to calculate a difficulty rating, which is shown as a percentage ranging from 0% to 200%

Play a Scenario

Select this option to play a scenario game.

Scenario options

A scenario has a set of goals. You must achieve all of the scenario goals within the given time to win the game.

Some scenarios are similar to case studies in business textbooks. You may be appointed CEO of a highly profitable corporation to lead the corporation into a new business endeavor. In another scenario, you may be put into a very unfavorable position and have to rescue the corporation from bankruptcy.



Scenario window

To review your progress toward the scenario goals, you are provided with a Goal Report. You can display the Goal Report anytime by selecting it in the game menu or pressing the 9 key.

Use the **Play in a New World** option if you want to replay a scenario you have already won. The game generates a new world for the scenario, which gives you more variety. This option is not, however, available for every scenario, because some scenario depend on a particular geographic layout.

NOTE: When you select your corporate logo and portrait in a scenario game, you do not have all the choices which you have in a normal game, because some of the corporate logos and portrait are being used by the computer players.

Load a Saved Game

Select this option to load a saved game.

Hall of Fame

Select this option to display Capitalism's Hall of Fame.

Quit

Select this option only if you want to quit the game and return to DOS.

Winning or Losing

In Capitalism, there are two types of games: the normal game and the scenario game. Each has its own definition of winning and losing.

To play a normal game, select **Start a New Game** in the opening menu.
To play a scenario game, select **Play Scenario**.

Normal Game

You win if your corporation dominates every industry.

You lose if:

- Your corporation goes bankrupt.
- A competitor dominates every industry before you do.

Scenario Game

You win if you achieve all of the assigned goals in the given time.

You lose if:

- You are not able to achieve all of the goals within the given time.
- You retire without achieving all of the goals.
- Your corporation goes bankrupt.

3 Using the Interface

This chapter describes how to use the Capitalism interface.

Game Menu



File menu on the main Capitalism screen

When you move the cursor to the very top of the game screen, the game menu appears. The menu choices are as follows:

- File menu
 - *Load*. Load a saved game.
 - *Save*. Save the current game.

- *Abort*. Abort the game and return to the main menu.
- *Quit*. Quit to DOS.
- Options menu
 - *Newspaper*. Set newspaper display options.
 - *Auto Apply R&D*. Automatically apply research and development result to your factories without asking your permission.
 - *Default Internal Sale*. The default setting of the internal sale status of your new products.
 - *Consider Tender Offer*. Whether you will consider tender offers from computer players. If it is off, you will not see any tender offers.
 - *Music*. Toggle musical soundtrack on and off.
 - *Sound Effects*. Toggle sound effects on and off.
- Reports menu
 - *Product Summary*. Display Product Summary Report.
 - *Product Detail*. Display Product Detail Report.
 - *Firm*. Display Firm Report.
 - *Corp. Summary*. Display Corporate Summary Report.
 - *Corp. Detail*. Display Corporate Detail Report.
 - *Person*. Display Person Report.
 - *Billionaires 100*. Display Billionaires 100 Report.
 - *Financial*. Display Financial Report (Available only if you have highlighted a firm whose financial information you have the right to see.)
 - *Goal*. Display Goal Report.
 - *News Log*. Display News Log.
- Action menu
 - *Stock Market*. Display the stock market window. (This option is hidden in games that do not allow stock investment.)
 - *Financial*. Bring up the financial action menu, where you can borrow/repay loans, issue new shares, and set stock dividends. (In games that do not allow stock investment, only the loan option is available.)
 - *Retire*. Retire and end the game.

- Speed menu
 - *Frozen*. Freeze the game speed.
 - *Slowest*. Set the time scale to 6 seconds equals 1 game day.
 - *Slow*. Set the time scale to 3 seconds equals 1 game day.
 - *Normal*. Set the time scale to 1 second equals 1 game day.
 - *Fast*. Set the time scale to 0.5 seconds equals 1 game day.
 - *Fastest*. Set the game to run at maximum speed.

On some slower computers, the game may not run faster after selecting a faster speed option. If the computer is using all of its processing power to run the game, it cannot run faster even if a faster speed option is selected.

- Help
 - *Manufacturer*. Display Manufacturer's Guide.
 - *Farmer*. Display Farmer's Guide.
 - *Manager*. Display Manager's Guide on Functional Units.
 - *Layout Plan*. Display Layout Plan Library.
 - *Display Settings*. Display Game Settings.
 - *Credits*. Display Game Credits.
 - *About*. About the Game.

Game Map

After starting the game, you see two map windows at the top of the game screen. The left one is the *regional map window* and the right one is the *detailed map window*.

Regional Map

The regional map shows the entire game world. The area enclosed by the orange rectangle is magnified in the detailed map. Click any area of the regional map to magnify that area in the detailed map.

The magnifying-glass button at the bottom-right corner of the regional map area is the zoom button. Click it to enlarge or reduce the area displayed in the regional map. In enlarged mode, you can scroll the viewing area by using the scroll bars or by right-clicking a site to center the map there.



Game map

To highlight a firm or resource reserve location in the regional map, double-clicking the dot of the firm or the letter of the resource reserve.

Detailed Map

The detailed map shows a magnified portion of a selected area in the regional map. Because you can see only a relatively small portion of the whole map in the detailed map, it is often necessary to scroll this map. To scroll the map, you can either move the sliders on the scroll bars beside the map or right-click on a site on the map to center the map there.

The small flashing box on the detailed map is the *highlighted location*. Information for this location is shown in the lower half of the screen in the *information area*. You can highlight a different location on the map by clicking it. If the highlighted location is in a city, information about that part of the city is shown in the information area. If the highlighted location is a firm, you can examine the firm, and if it belongs to your corporation, you can give it orders.

Map Modes

There is a row of buttons between the regional map and the detailed map. The top five buttons are map mode buttons. You can change the information displayed on the map by clicking these buttons.

- Terrain Mode button

Click this button to set the display to terrain mode. In this mode, you see differently colored dots scattered throughout the map. Each

dot represents a firm and the color of the dot tells you who owns the firm.

- **Climate Mode button**

Click this button to set the display to climate mode. There are three kinds of climate maps: climate map, rainfall map, and soil fertility map. The first climate map depicts information about temperatures. The rainfall map indicates the areas of greater and lesser rainfall. The soil fertility map helps you choose a fertile location to build a farm. Toggle these three map types by clicking the climate button.

- **Resource Mode Button**

Click this button to display locations with untapped natural resource reserves. The different natural resources are represented by the first letter of the resource name, except chemicals, which are represented by Hs.

- **Profit Mode button**

Click this button to display firms as colored dots on the map. The color tells the firm's profitability. A green dot means that the firm is profitable. The darker of the color, the more profitable the firm is. Conversely, a red dot means that the firm is losing money. The darker the color, the more money the firm is losing. You'll also find some yellow dots. They represent firms that are not controlled by corporations, such as seaports, newspaper publishers, and television stations.

- **Firm Linkage Mode button**

Click this button to set the map display to firm linkage mode. In this mode, you see lines connecting the highlighted firm to any firms with which it has business relations.

If a firm has many linkages with other firms, it may be difficult to see which type of business relationship exists between these firms. If you want:

- To find out the supplier of a specific product, switch the viewing mode to "layout mode" and highlight the purchasing unit that is purchasing the product. The line joining that supplier and the current firm turns red, and the other lines stay blue.
- To find out the buyers of a specific product, switch the viewing mode to "information mode" and highlight the product. Now, you can identify those buyers by examining the red connecting lines.

- To find the media firm advertising a specific product, switch the viewing mode to “layout mode” and highlight the appropriate advertising unit. Now, you can identify the media firm by examining the red connecting line.

Map Filters

Underneath the map mode buttons are three map filter buttons. If any of these filters is activated, then only firms matching the criteria of the filter are visible on the map.



Map filters

- Corporation Filter button
Click this button to activate the corporation filter and display only firms controlled by the highlighted firm’s corporation. To choose a different firm, right-click the button to display a list of firms and choose one.
- Firm Filter button
Click this button to activate the firm filter and display only firms of the same type as the highlighted firm. To choose a different firm type, right-click the button to display a list of firm types and choose one.
- Product Filter button
Click this button to activate the product filter and display only firms that are selling or researching the highlighted product. To choose a different product, right-click the button to display a list of products and choose one.

These filters help you manage your business. The following are a few ways in which you could use them:

- *To locate the suppliers of a specific product.* Right-click the product filter button and select the product.
- *To examine the factories that are part of your corporation.* First, highlight one of your factories and then click both the corporation filter but-

ton and the firm filter button. Only the factories belonging to your corporation are shown. You can press F5 and F6 to look at the previous and next factory, respectively, owned by your corporation.

- *To analyze competitors' holdings.* Before entering a new industry, you need to estimate the ability of other corporations to compete with you. Analyze the competitors thoroughly; try to determine each one's strengths and weaknesses. To see all firms in a specific industry, right-click the product filter and select the product that the industry produces.

Display Modes

The lower part of the screen is where you find most of the information you need, from climate to a firm's location to its sales revenue. It is also where you can set up and give orders to your firms.



Display mode

At the center of the lower half of the screen, there is a row of buttons. The upper three are "mode" buttons, which control the display in the lower half of the screen. You can change the display mode by clicking any of these three buttons. The three modes are:

- **Information Mode**
This mode displays information about the highlighted location.
- **Layout Mode**
This mode displays the layout of the highlighted firm.
- **Building Mode**
This mode displays a building interface, where you can build firms.

4 Starting a Business

Building Firms

Click the building mode button to display the building interface in the lower half of the screen. On the left, you list the types of firms you can build. The right side shows information such as cost.

To build a firm, select the type of firm you want to build. Next, highlight the location on the map where you want to build the firm. If the firm can be built in the selected location, you are informed about the total building cost, which includes the land and construction costs. If you think the cost is reasonable, click the **Build** button to start construction.



Building interface

Firm Layout

In layout mode, you see nine boxes. Each box represents a space in this firm where you can set up a business functional unit.



Firm layout mode

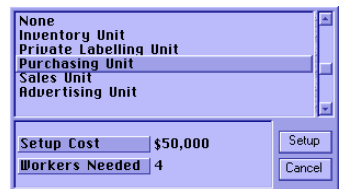
There are more than a dozen different functional units in the game. Each one has a distinct function. For example, a purchasing unit is responsible for purchasing goods, whereas a sales unit sells goods and generates income for the firm.

Setting up a Functional Unit

To set up a functional unit, double-click a location inside the firm where you want to begin construction. A menu prompts you to select the type of unit you want to set up. The menu includes the setup cost and number of employees needed by each kind of unit. Because the different types of units have different functions, some units require more capital and workers than other units. For example, the manufacturing unit requires many more people than the inventory unit.

After you set up a unit, a box displays summary information about it in the lower left of the screen.

In the detailed information area, you see a picture of the unit and a group of people representing its workers. The workers in blue uniforms are novice workers and the workers in red uniforms are experienced. For details



on improving worker experience level, see [“Worker Experience and Unit Level”](#) on page 4-4.

Linking Functional Units

You can link two units together by double-clicking the link line between them. Once linked, they are able to communicate with each other and transfer goods.

Since functional units are the essential components of a firm, if the linkages between the units are not properly established, the firm may not be able to function as intended.

For example, linking a purchasing unit to a sales unit enables the goods purchased by the purchasing unit to move onward to the sales unit for sale. Without the linkage, both of the units will become idle and neither will contribute to the profitability of the firm.

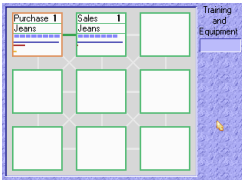
See [Chapter 10, “Firms,”](#) and [Chapter 11, “Business Functional Units,”](#) for more detailed information about each type of unit and the possible linkages.



Labor Cost

For simplicity, the monthly salary of each worker in the game is set at \$2,000. This salary applies to all workers regardless of the nature of their jobs or their experience. The specific salary expenses of a firm are shown in the Financial Report (see [page 12-30](#)).

Staff Training and Procurement of New Equipment



To the right of the layout section, there is a slider labeled “Training and Equipment.” Use it to set the spending for staff training and procuring new equipment. The maximum amount a firm can spend on improving training and equipment is twice the total value for the combined salaries of all staff in the firm. The training and equipment amount is automatically adjusted to a proportion of the total amount you could spend (that is, \$4,000 per employee is the maximum) based on how far you move the slider. A slider moved completely to the right represents an expense of \$4,000 per employee while a slider moved completely to the left represents an expense of \$0 per employee. When the slider is between these two extremes, a share of the \$4,000 per-employee maximum is spent proportional to how far

over the slider is moved to the right. You can see the exact amount spent on training and equipment for the entire firm in the Financial Report.

Spending on staff training and installing new equipment greatly affects the efficiency of the workers as the functional units improves. It is worthwhile for a firm to spend more on this area especially as one considers that there are long-term benefits to be gained.

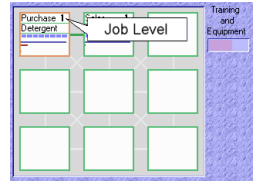
Worker Experience and Unit Level



If an inexperienced worker is provided with proper training, the worker eventually become an experienced worker. You can distinguish between a novice worker and an experienced worker by looking at the uniform color. Novice workers wear blue uniforms, whereas experienced workers wear red. When all the workers in a unit

become experienced, the unit will increase one level.

The overall productivity and capacity of most units increase when their unit level is increased. All units begin at unit level 1 and certain units continue to improve until they reach the highest rating, unit level 9.

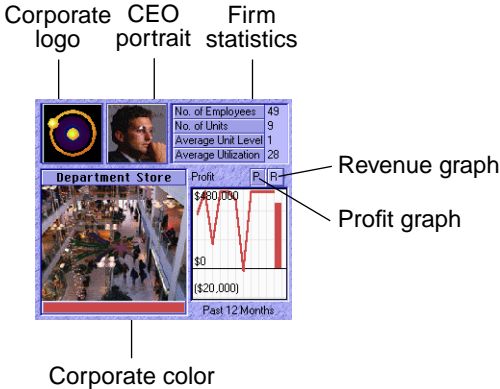


The rate of improvement varies for the different unit types. Improvement largely depends on the resources you allocate to train staff and upgrade new equipment. Employees who are in units with high utilization receive more experience than employees who do not work to capacity. Workers that work to their capacity will learn faster than workers that are idle. Therefore, it is not unusual to find that the rate of improvement is faster during the growth phase of the business than when the firm has leveled off in its productivity.

The unit level decreases for most units when there is change in the product handled by that unit. For example, if a manufacturing unit which previously manufactured sport shoes changed its production line to manufacture jeans, its unit level would drop right away.

Firm Summary

If you highlight a firm which is currently selling products, the summary information of the firm is displayed at the lower left area of the screen. In this area, you will see:



Corporate color

- Corporate Color

The corporate color of the firm is displayed directly under the picture of the firm. It tells you which corporation owns the firm.

- Corporate Logo

The corporate logo of the firm appears at the upper left corner of the information area. Actually, the corporate logo itself is a button. Click it to display the Corporate Detail Report (see [page 12-10](#)).

- CEO Portrait

To the right of the corporate logo, the portrait of the corporation's chief executive officer (CEO) is displayed. Click the CEO's portrait to display the Person Report, which shows the CEO's personal details (see [page 12-25](#)).

- Firm Statistics

Some basic firm statistics are shown in the upper right section of the left window.

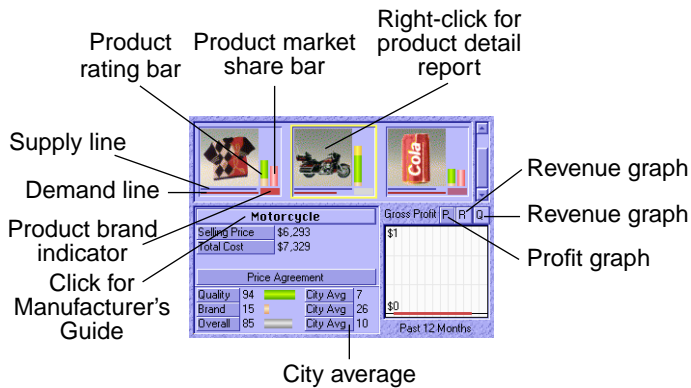
- *No. of Employees.* The total number of employees working in the firm.
- *No. of Units.* The total number of functional units in the firm.
- *Average Unit Level.* The average unit level of all functional units in the firm.

- *Average Utilization.* The average utilization ratio of all functional units in the firm. The firm is fully utilized when this ratio is 100%.
- *Delegation.* Who manages this firm.
- Graph

There is a graph under the statistic area. Press the **P** button above the graph to display the firm's net profit over the past 12 months. Press the **R** button to display the firm's revenue over the past 12 months.

Firm Product Summary

If you highlight a firm which is currently selling products, the summary information about the products, including a product browser, a graph, and some figures, is displayed in the lower right.



Firm product summary

Product Browser

The browser displays the pictures of all products currently available for sale in the firm. Each product picture has several bar and line indicators on the side. These indicators tell you how good the product is compared to the market's standard and how well the product is currently selling. An explanation of the indicator bars and lines follows.

Supply and Demand Lines

There are two horizontal lines under the product picture. The upper, blue one is the supply line, and the lower, red one is the demand line.

If the supply line is longer than the demand line, the supply of the product exceeds the demand. This implies that the profitability of the product might not yet be fully exploited. There is more capacity to meet demand and generate revenue than there is currently demand for the product.

On the other hand, if the demand line is longer than the supply line, the firm cannot supply enough goods to meet the demand. In this situation, you should increase the supply of product as soon as possible to increase revenues.

Product Rating Bars

There is a set of two vertical bars to the right of the picture. The left one, which usually consists of differently colored portions, is the overall rating bar. Each portion represents a distinct aspect of the product and their combined rating becomes the overall rating of the product. The definitions of the colors are:

- *Yellow.* The product's price attractiveness.
- *Green.* The product's quality.
- *Orange.* The product's brand.

Product Market Share Bar

Next to the product rating bar, there is a red bar showing the market share of the current product in the city. When the length of the bar is close to its maximum, the product is dominating the market in the city.

Product Brand Indicator

Directly under the two bars, there is an indicator showing the corporate color of the product's brand owner.

Graph

The graph under the product browser shows information about the product highlighted in the browser. There are three buttons above the graph. Click one of these buttons to control the type of information displayed on the graph.

- *P button.* Shows the gross profit of the product over the past 12 months.

- *R button*. Shows the revenue of the product over the past 12 months.
- *Q button*. Shows the quantity of the product sold over the past 12 months.

Product Cost and Selling Price

When you highlight a product in the product browser, the selling price and cost of the product are displayed.

- *Selling Price*. The selling price of the product.
- *Total Cost*. In a factory, this is the total cost of the raw materials used to manufacture one unit of the product, including the freight cost of the raw materials.

In a department store, this is the purchase cost and the freight cost of the product.

In a mining company, a forestry company or a crude-oil company, this is the cost of the consumption of the natural resource reserve. When a corporation buys land with a natural resource reserve, the reserve is treated as a corporate asset. Hence, when the reserve is being consumed, the devaluation of the asset is then regarded as a cost to the company.

- *New Price*. If the current firm belongs to your corporation, you can change the selling price of the product by setting the new selling price and then clicking the **Confirm** button to confirm the change of the selling price.

NOTE: There is an upper limit on the price you can set.

Internal Sale

If the highlighted firm is owned by your corporation and the firm is selling products to corporate buyers instead of end users, you see the **Internal Sale** button under the price information.

If you press the button, the product is sold only to firms owned by your corporation. Other corporations are not allowed to buy the products. However, those buyers who are already buying the product from this firm are not affected—it doesn't make business sense to cut the supply suddenly. To cancel the internal sale, just click the button again.

For those firms that your corporation doesn't own, the **Internal Sale** label indicates that the product is for internal sale only and you cannot buy the product.

Price Agreement

Sometimes, the **Price Agreement** label is displayed under the price information.

This happens when the following three conditions coincide:

- The firm is a department store selling products in a city.
- The product being sold is produced by another corporation.
- The producer of the product has its own retail outlet in the city for that same product.

In such a case, this firm has a price agreement with the producer and must follow the producer's retail price. A price agreement prevents price cutting among the other retailers of the producer's product, which is very unfavorable to the producer.

Product Ratings

The section at the lower part of the information area displays important ratings about the highlighted product in the browser. They are:

- *Quality*. The product's quality rating.
- *Brand*. The product's brand rating.
- *Overall*. The product's overall rating.

For details about these ratings, see [Chapter 5, "Marketing."](#)

To the right of each rating, the average rating of similar products in the city is displayed.

For example, if the display is "Overall: 73 City Avg: 50," it means that the overall rating of the product being sold by the firm is 73 and the average overall rating of all products being sold in the city is 50.

Links to Other Reports

For your convenience, you are provided with links to other reports which can be activated by a single click.

Product Detail Report

You can display the Product Detail Report for a specific product by right-clicking the product picture.

Manufacturer's Guide

You can display the Manufacturer's Guide and get information about the highlighted product by clicking the product name.

5 Marketing

Overall Rating

In the game, each product is given an overall rating. This rating serves as an indicator of the overall attractiveness of the product.

The overall rating is determined by:

- *Price.* The higher the price, the lower the overall rating.
- *Quality rating.* The higher the quality rating, the higher the overall rating.
- *Brand rating.* The higher the brand rating, the higher the overall rating.
- *Price Concern.* Determines the weight of price in the overall rating.
- *Quality Concern.* Determines the weight of quality rating in the overall rating.
- *Brand Concern.* Determines the weight of brand rating in the overall rating.

Price, Quality, and Brand Concern

When a consumer buys a product, the product's price, quality, and brand are considered. However, the relative concern consumers place on these factors varies from product to product.

Some products, such as frozen meat, are very difficult to apply a brand to because they lack differentiating features. Customers generally buy based on quality and price with little concern for the brand name.

On the other hand, for products such as soft drinks, the brand name is much more important when consumers make their purchasing decisions. Some consumers may continue to purchase a product to which they are loyal, even if competitors offer other products of superior quality and at a lower price.

Based on this consumer behavior, each product has a set of predefined values. These values include price concern, quality concern, and brand concern. They are shown as percentages and their sum is always 100% (that is, when a consumer buys a product with 50% price concern, 30% quality concern, and 10% brand concern, the foremost concern is price. Quality is second and the brand is least important.)

These concerns vary slightly from city to city because of cultural variations among cities. To find out the concerns for a specific product in a specific city, refer to the Product Summary Report ([page 12-1](#)) or the Product Detail Report ([page 12-3](#)).

Overall Rating and Product Demand

Most people will prefer a product with a higher overall rating. This does not, however, imply that goods with a lower overall rating are destined to fail in the market. There is always a group of consumers who are more price-sensitive and will buy a lower-cost product even if it has a lower overall rating. Similarly, consumers who are more quality-conscious may buy a high-quality product despite a low overall rating. Thus, you can still compete successfully in the market by becoming a cost or quality leader.

Calculating the Overall Rating

Since the overall rating is calculated automatically by the game, you don't need to understand how it's calculated. The following formula is for your reference only.

$$\text{Rating} = \frac{\text{QR} \times \text{QC}}{60} + \frac{\text{BR} \times \text{BC}}{60} + \frac{(\text{StdPr} - \text{SellPr}) \times \text{PC}}{\text{StdPr}}$$

- QR is the quality rating.
- QC is the quality concern.
- BR is the brand rating.
- BC is the brand concern.
- StdPr is the standard price.

NOTE: Each product has a predefined standard price. It is for internal calculations only and is not displayed.

- SellPr is the selling price.
- PC is the price concern.

Quality

To compete successfully in the marketplace, you need a solid understanding of how a product's quality is determined and how you can improve the products' quality.

In the game, a product's quality rating ranges from 0 to 100. If you are in a highly competitive market, compare the quality ratings of your products to those of the competitors frequently and react if their quality ratings rise.

The following sections explain how the quality of manufactured goods, crops, livestock products, and raw materials is determined.

Manufactured Goods

The quality of manufactured goods depends on two factors:

- The quality of raw materials
- The production technology level of the factory

Some products' quality, such as a computer CPU, is determined mainly by the production technology level. Other products, such as furniture, are affected more by the quality of the raw materials. Thus the importance of these two factors varies from product to product. (For the details on individual products, refer to the Manufacturer's Guide. See [page 6-1](#).)

The next section describes how the *quality rating* is calculated. We will use an example from a manufacturing unit to illustrate the calculation.

The information from the manufacturing unit is as follows:

- The unit is manufacturing textiles, using cotton as the raw material.
- The quality rating of the cotton is 40.
- The factory's production technology level of textiles is 30.
- The top production technology level in the world is 100.
- The quality of textiles is 50% affected by the quality of raw materials and 50% affected by production technology.

If you highlighted this manufacturing unit in layout mode, you would see the following lines:

- Product Quality: 35/100

The quality rating of the current product is 35 and the maximum quality rating that a product can have is 100.

- Raw Material Quality: 20/50

The quality of the textiles is 50% affected by the quality of raw materials and the quality of cotton contributes 20 rating points to the textiles' overall quality ($40 \times 50\% = 20$).

- Production Quality: 15/50

Textile quality is 50% affected by production technology and the production technology contributes 15 rating points to the textiles' overall quality. This figure is calculated using the following formula: (importance of technology to product quality) \times (factory technology)/(top technology in the world)

In this example, the result is $50 \times 30 / 100 = 15$

A high production technology level does not guarantee a high quality rating. You can obtain a high quality rating only if the technology level of your factory is close to or the same as the top technology level in the world.

- Production Technology: 30

In the beginning, the top technology level of every product starts at 100. When a product with a higher technology level hits the market, the top technology level is updated accordingly. Therefore, launching a product of unprecedented technological level into the market may cause the existing products to become inferior.

You can improve production technology by conducting research. See ["Research & Development Center" on page 10-4](#) and ["Research & Development Unit" on page 11-21](#).

Crops

Crop quality is affected by the climate, volume of rainfall, and soil fertility of the farming area. Some crops grow well in warm climates, whereas some crops require heavy rainfall for their growth. Growing the right crops in the right area is the key to a high-quality crop. Additionally, the crop quality is higher if the crop is grown by a crop growing unit with a higher unit level.

The quality of crops is determined by the following factors:

- *Climate*. Is the climate suitable to the crop?
- *Rainfall*. Is the rainfall suitable to the crop?
- *Soil Fertility*. The higher the soil fertility, the higher the crop quality.

- *Crop unit level.* The higher the unit level, the higher the crop quality.

To read about the optimal climate and rainfall for a crop, refer to the Farmer's Guide (see [page 6-3](#)).

Livestock Products

Livestock product quality is fairly consistent among different farms. The quality does increase, however, as a farm accumulates experience. A farm with higher unit levels produces better-quality livestock products.

Raw Materials

For raw materials such as timber, crude-oil, coal, chemicals, or metals, the quality is determined by the quality of natural resource reserves.

Brand

A brand is a distinguishing name and/or symbol intended to identify and differentiate a seller's products from competitors' products. A well-established brand is a valuable, intangible asset. For some products, a consumer may judge a product mainly by its brand.

A brand rating represents the overall value of a brand. This rating is the sum of the brand awareness rating and the brand loyalty rating. These two ratings are described in detail in the following sections.

Brand Awareness

Brand awareness measures consumers' knowledge that a particular brand exists. People will often buy a familiar brand because they feel more comfortable with it. They may assume that a product with a familiar brand is reliable, of reasonable quality, and that it is produced by a company with a reputation for having been in the marketplace a long time.

Brand Awareness Level and Rating

Brand awareness ranges from barely being recognized as a competitor in the marketplace to being recognized as the only one in the product class. The brand awareness rating, which has a range from 0 to 100, represents the two main dimensions of brand awareness: the percentage of the city population that is aware of the brand and the average awareness level of these people.

Increasing Brand Awareness

Brand awareness increases when:

- The brand has been advertised extensively.
- The products using the brand have been sold for a long time.
- The products using the brand are widely distributed.
- The customer base is large.

Brand Loyalty

Brand loyalty measures the attachment that a customer has to a brand. If a customer continues to purchase a brand even in the face of competitors with superior quality and/or lower price, then there must be a substantial value placed in the brand itself.

Brand Loyalty Factors

Brand loyalty is based mainly on the following factors:

- *Brand Awareness*

Brand loyalty cannot exist without the prior purchase and use of a product. The brand must first generate sufficient awareness for the consumers purchase and use the product. The higher the awareness, the more people will try the product, and the faster the rate at which the loyalty can increase.

- *Product Quality*

If a customer is satisfied after using the product, brand loyalty increases. Conversely, a bad experience with a product will lead to a decrease in brand loyalty or sometimes even negative brand loyalty (the customer will avoid buying the same brand in the future). In addition, customers will only be loyal to a brand if products of the brand have consistent quality.

- *Brand Scope*

If a brand covers a variety of products, the corporation is not perceived as a dedicated provider of a single category of products. Consumer may doubt the devotion of the corporation to that product and their loyalty to the brand may thus be reduced. See [“Brand Strategy” on page 5-6](#) for details on brand scope.

Brand Strategy

Your corporation can select from three brand strategies in Capitalism:

- *Corporate Brand.* A corporation uses a single umbrella brand for all its products.
- *Range Brand.* A single brand covers a range of products within the same product class.
- *Unique Brand.* Each product has a unique brand.

We strongly recommend that you decide the brand strategy of your corporation at the beginning of the game. Switching brand strategy after brands have been established not only leads to a loss of the hard-earned brand rating, but it also gives your competitors an opportunity to steal customers during the difficult task of re-establishing your brands.



Corporate Detail Report, Brand section

To set the brand strategy of your corporation, first open the Corporate Detail Report and then select the Brand section. A set of buttons appears in the upper left section of the report:

- Corporate Brand
- Range Brand
- Unique Brand

The pressed button represents your corporation's brand strategy.

To switch to a new brand strategy, click the button representing that strategy. You are warned that your products will be designated with the new brand strategy and that the brand ratings of all your products will be set to zero as a result. To proceed, answer **Yes** and the brand replacement starts immediately.

Corporate Brand

If the corporation uses a single umbrella brand for all its products, the corporation does not start from scratch in building up awareness of the brand identity for a new product. The investment required in the new line is accordingly reduced.

Although this strategy offers major savings in the time and resources required to build a new brand from scratch and improves the cost-effectiveness of resources spent on supporting the brand family, it is not without drawbacks.

Its major drawback is that the corporation is not perceived as a dedicated provider of a single category of product. Consumers may doubt the devotion of the corporation to the product and their loyalty to the brand may thus be reduced.

In addition, when a corporation extends its product lines to others markets, it becomes more difficult for the corporation to maintain the quality and consistency of its products. Failure to maintain quality and consistency results in damage to the brand as a whole. The risk increases if the corporation extends its product lines across markets of different product classes.

Range Brand

Under this strategy, products in the same product class are labeled with a single range brand.

The range brand strategy enjoys the same benefits and drawbacks as the corporate brand strategy, but to a lesser extent. The reason these effects are limited is because the number of products a range brand can cover is smaller.

The range brand strategy is preferable to the corporate brand strategy if the quality of your corporation's products varies substantially across different product classes. On the other hand, if you are confident that the quality of your products can be maintained, then the corporate brand strategy may be a better choice.

Unique Brand

Under this strategy, each product has an unique brand.

The unique brand strategy's most obvious advantage is that you can simply forget about the risk of brand interference across different product lines. The brand loyalty which has been built up over the years will not be damaged by inappropriate quality control in other product lines.

The downside of this strategy, however, is that each individual product needs separate advertising to establish and support its brand. Under this strategy, advertising can become a major expense for the corporation. The corporation can lose a price advantage to a corporation that successfully pursues a corporate or range brand strategy.

Advertising

Advertising is the most important element of brand development. With a handsome advertising budget, a firm can raise the public awareness of a brand easily and rapidly. A clear understanding of advertising is the first step towards becoming a successful brand manager.

The sections below first introduce some basic media concepts and then discuss the effect of advertising frequency, reach, duration, and the relationships between them. Finally, a section illustrates the relationship between advertising and product quality.

The following deals with the theoretical side of advertising. To know how exactly your products can be advertised, see [“Advertising Unit” on page 11-1](#).

Media Concepts

Before you start advertising your products, you should be familiar with the following media concepts, as they will be used extensively in areas relating to advertising.

- *Media Vehicle*. The specific program, publication, or promotional piece used to carry an advertising message.
- *Coverage*. A measure of the potential audience that might receive an advertising message through a media vehicle.
- *Reach*. The number of different audience members exposed at least once to a media vehicle in a given period.
- *Rating Points*. A measurement used to determine the portion of potential audiences receiving messages from a specific media vehicle. One rating point is the equivalent of 1 percent of all of the potential audiences receiving messages from a specific media vehicle. It can be calculated by dividing the reach by the coverage.
- *Cost Per Advertisement*. The cost to place an advertisement in the medium.

- *Cost Per Thousand*. The cost of exposing 1,000 members of a target audience to an advertising message.
- *Daily Frequency*. An indication of the number of times a target audience is exposed to an advertisement in a day.
- *Monthly Frequency*. An indication of the number of times a target audience is exposed to an advertisement in a month.
- *Frequency, Reach, and Duration*. Three main attributes of an advertising campaign. These terms are explained below.
 - *Frequency*. This indicates the number of times an average audience is exposed to an advertisement in a specified time period. The higher the frequency, the greater the chance the audience will be aware of the advertisement. It is difficult to determine which frequency is the most effective, but generally a person must be exposed to an advertisement at least 3 or 4 times before the person can recognize the brand. A frequency that is too low cannot deliver an advertising message clearly and may not be able to improve the brand awareness at all.
 - *Reach*. The number of people exposed to a specific advertisement at least once during a particular time period. Each media vehicle (newspaper and television in the game) has a different rating and reach. Media vehicles with a higher reach will charge a higher cost for delivering an advertisement. To make the advertising campaign successful, enough people must be exposed to the advertisement. If a single media vehicle cannot provide you with satisfactory reach, you should advertise your products on more than one media vehicle, in order to have a higher combined reach.
 - *Duration*. This refers to the duration of the advertising campaign. You determine the duration of an advertising campaign. You can spread the advertising budget evenly over a year or concentrate spending on months when the demand is high. Since your advertising budget may not allow you to have high frequency, high reach, and long duration at the same time, you must allocate your resources to each of them wisely. For example, if high-frequency exposure is necessary to bring your product into public awareness, then you might need to sacrifice reach and duration for frequency.

Advertising and Product Quality

Advertising can be an effective way of building up brand equity, but only when used adequately and wisely.

Spending large amounts of money advertising a low-quality product is a waste of money. Customers will only develop brand loyalty towards a high-quality product. If your product is inferior to those of competitors, you can save the money budgeted for advertising and concentrate on cost reduction instead. This lets you position your company as a cost leader and target the market segment of price-sensitive customers.

The following illustrates the effect of advertising under four different case scenarios:

- Low quality and little advertising—low demand at first due to low brand awareness
Demand remains low or even drops because the buyers are not satisfied with the low quality, which results in low or even negative loyalty toward the brand.
Long term: brand awareness is low; brand loyalty is low or even negative; demand is low
- Low quality and heavy advertising—high demand at first due to high brand awareness raised by heavy advertising
Demand decreases gradually because buyers are not satisfied with the low quality, resulting in low or even negative loyalty toward the brand.
Long term: brand awareness is high; brand loyalty is low or even negative; demand is low to moderate (high awareness can always attract some new buyers)
- High quality and little advertising—low demand at first due to low brand awareness
Demand increases gradually because buyers are satisfied with the high quality and develop loyalty toward the brand.
Long term: brand awareness is low to moderate (large sales and a loyal customer base help increase awareness); brand loyalty is moderate to high; demand is moderate
- High quality and heavy advertising—high demand at first due to high brand awareness raised by heavy advertising
Demand continues to increase because buyers are satisfied with the high quality and develop loyalty towards the brand.

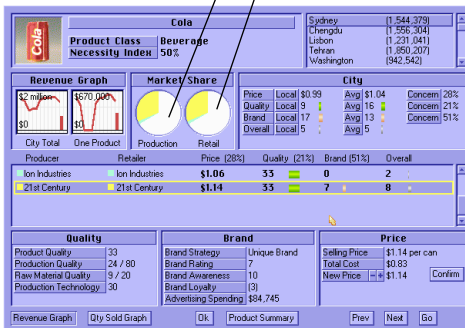
Long term: brand awareness is high; brand loyalty is high; demand is high

Local Competitors

There are local competitors in each city. Although their firms are not shown in the game map, they compete directly with the corporations. Sometimes, they are even the major competing forces in the market.

Information about local competitors is shown briefly in the Product Summary Report ([page 12-1](#)) and the Product Detail Report ([page 12-3](#)). The white portion of the pie charts in the reports represents the combined market share of all local competitors in the city. The reports also show the average price, quality rating, brand rating, and overall rating of the goods that are sold by the local competitors in the city. For more details on information in these two reports, see [Chapter 12](#).

Market share of the local competitors



Product report showing market share of local competitors

6 Tools

Manufacturer's Guide

The Manufacturer's Guide is an on-line guide that provides essential information about manufacturing processes of different types of products.

Manufacturing Diagram

In the Manufacturer's Guide, a manufacturing processes are summarized in the manufacturing diagram. To help you understand it quickly, a sample is shown below.



Manufacturer's Guide

The manufacturing diagram above shows a car and it tells that:

- 1 car body, 1 engine, and 4 wheel/tire units can be used to create one car.
- The quality of the car is 30% determined by the production technology and 70% determined by the quality of the raw materials; 10% by the wheel/tire quality and 30% each by the car body and engine quality.

(For details about production technology, see [“Manufacturing Unit” on page 11-10.](#))

The Picture Button

The picture of the product or the input material is actually a hypertext button. Click it for more details about the product or the input material.

The hypertext feature is disabled for mineral resources, because they are not derived from other materials.

More Button

Next to the picture of an input material, you find the **More** button. Click it to see the next manufacturing process that uses that material.

The **More** button is disabled if the input material can be used only to produce a single product.

The **More** button for an output product is disabled unless there is an alternative way to manufacture the product.

Other Controls

The selector in the upper right corner of the window lets you switch between the Manufacturer’s Guide and the Farmer’s Guide.

The following buttons are available at the bottom of the window:

- **Input** button
Shows a manufacturing diagram that uses a specific raw material or intermediate good as the input material. In some scenarios, certain materials are excluded. They are marked with an asterisk (*).
- **Output** button
Displays a product’s manufacturing diagram. In some scenarios, certain materials are excluded. They are marked with an asterisk (*).
- **Prev** button
Displays the previous manufacturing diagram.
- **Next** button
Displays the next manufacturing diagram.

Farmer's Guide

The Farmer's Guide is an on-line guide that provides essential information about growing crops and raising livestock.



Farmer's Guide

Crop Information

The guide shows the suitable climate, suitable rainfall, sowing month, and harvest month for the selected crop. When you select a location for a new farm, you look for a location that provides the most suitable climate for the crops that you want to plant. The Farmer's Guide tells you what to look for.

Many crops, such as cotton and wheat, are the end products and can be sold directly. Other crops, such as sugar cane and rubber plant, need additional processing. For example, sugar cane is processed into sugar and rubber is extracted from the rubber tree plant. In these cases, the Farmer's Guide shows the crop and the end product.

Click a crop to go to the Manufacturer's Guide and see which products can be made from that crop.

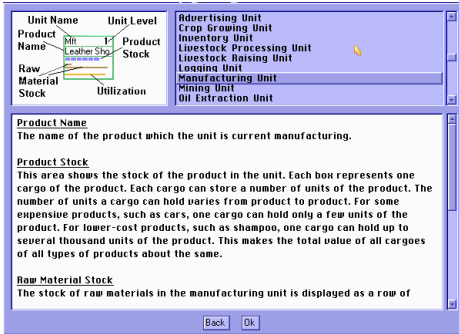
Livestock Information

The guide shows which products you can make from the selected livestock.

Some livestock products are displayed as buttons. These are products that can be used as input materials for other products. Click the button to go to the Manufacturer's Guide and see which products can be made from that livestock product.

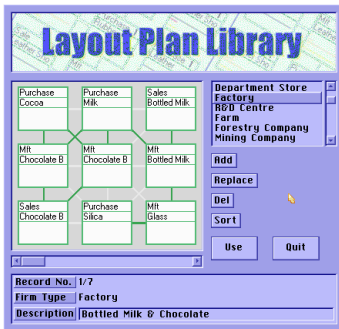
Manager's Guide

The Manager's Guide is an on-line guide that tells you how to interpret the indicators in a functional unit's info-box. If you are in Layout Mode and a functional unit is selected, display the guide to show the information about the functional unit immediately.



Manager's Guide

Layout Plan Library



You may need to use the same layout in more than one firm. If so, you would be wise to add that plan to the Layout Plan Library. After you add the plan to the library, you can paste it into other firms of the same type later. Using the Layout Plan Library will save you time and effort in the current game and in future games. You may want to collect many layouts for future use.

The Layout Plan Library contains a folder for each firm type. Make sure, you select the appropriate folder in the upper section of the window before adding or using a layout plan.

Adding a Plan to the Library

To add the layout plan of an existing firm to the library, follow these steps:

1. Highlight the firm which has the layout you want to save.
2. Select the folder corresponding to the correct firm type.
3. Press the **Add** button.
4. (*optional*) Type a description of the plan.

Using a Layout Plan

To use a layout plan for a firm, follow these steps:

1. Highlight the firm to which the layout plan will be applied.
2. Select the folder of the appropriate firm type.
3. Press the **Use** button.

Command Buttons

The library window has several command buttons. These buttons are described below:

- *Add*. Add a layout plan using the layout of the highlighted firm.
- *Replace*. Replace the current layout plan with the layout of the highlighted firm.
- *Del*. Delete the current layout plan.
- *Sort*. Sort the layout plans by plan descriptions.
- *Use*. Use the current layout plan on the highlighted firm.
- *Exit*. Exit the layout plan library.

Layout Plan Information

The following information about the current layout plan is displayed at the bottom of the window:

- *Record No*. The record number of the currently displayed layout plan. The total number of records in the folder is displayed next to the number.
- *Firm Type*. The type of firm that the current layout plan is designed for.
- *Description*. The description of the layout plan. You can change this description at any time.

Newspaper

In the game, newspapers appear from time to time to keep you informed about the latest events. After reading a newspaper, you can

close it either by clicking on the closing box in the upper left corner of the newspaper or by right-clicking. If you have a stack of newspapers to read, you can right-click the closing box to bypass them all.

Newspaper Display Option

If the newspaper shows up so frequently that it becomes disruptive. In this case, select the Newspaper Display Option window in the menu. This option lets you limit what kind of news is displayed. The keyboard shortcut is the **N** key.



News log

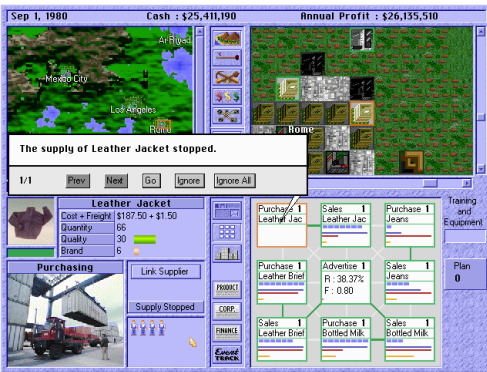
NOTE: For stock trading news, only news related to corporations you control is displayed even if you set the display option to All News. The keeps the news volume to a reasonable level.

News Log

Although switching off the newspaper display can help you concentrate on your own business, you may miss important news. To prevent this, all news items are automatically saved to a log, which you can view at any time. You can list the news log by date, by corporation, or by topic.

Event Tracker

The event tracker tracks supply breaks, exhaustion of natural resource reserves, and completion of R&D projects. With this tool, you can fix supply problems and start new R&D projects in a timely manner. After an event occurs, the **Event Tracker** button (the bottom button on the screen) "pops" up. Press the button to go to the place where the event happened. Now, you can use one of the following commands:



Event pop-up window

- *Prev.* Move backward to the previous event. The current event remains in the event list.
- *Next.* Move forward to the next event. The current event remains in the event list.
- *Go.* Go to the firm where the current event happened. The current event is removed from the event list.
- *Ignore.* Ignore the current event. The current event is removed from the event list.
- *Ignore All.* Ignore all tracked events. The entire event list is cleared.

NOTE: The total number of events and the position of the current event are displayed to the left of the buttons. For example, "2/15" means that there are a total of 15 events in the list and the current event is the second one in the list.

7 Stock

Before you start investing in the stock market, you should be familiar with some basic stock concepts.

- *Stock Price.* The stock price is determined by the market.
- *Total No. of Shares.* A company's the total number of shares.
- *Equity Per Share.* Equity per share is calculated by dividing the amount of shareholders' equity by the number of shares.
- *Earnings Per Share.* Earnings per share is determined by dividing the amount of operating earnings over the past 365 days by the number of shares. Operating earnings is used in the calculation instead of net earnings because of game design considerations. This ensures that the stock price correctly reflects the profit-earning ability of the corporation and is not affected by the price fluctuation of stocks that the corporation owns.
- *Price/Earning (P/E) Ratio.* The P/E ratio is the relationship between the price of a stock and its earnings per share. The P/E ratio is calculated by dividing the stock price by the earnings per share. A stock selling at \$30 with earnings of \$2 per share has a price/earnings ratio of 15.

The P/E ratio can be thought of as the number of years it will take the company to earn back the amount of your initial investment—assuming that the company's earnings stay constant. Let's say you buy 100 shares of a stock selling at \$30 for \$3000. Current earnings are \$2 per share, so your 100 shares will earn \$200 in one year, and the original investment of \$3000 will be earned back in 15 years.

This may give you the impression that stocks with low P/E ratios are more attractive than stocks with higher P/E ratios. However, it is not always true. You should also consider the profit-making ability of the company.

Although a stock with a high P/E ratio is regarded as undesirable at current moment, it will perform better and reward you better in the future.

Therefore, you will find that the P/E levels tend to be lowest for the slow growers and highest for the fast growers.

- **Dividend Yield.** Dividend is the distribution of a company's earnings to stockholders. Dividend yield is the percentage calculated by dividing the dividend by the stock price.
- **Total Return.** The total return to shareholders is the percentage calculated by dividing the total return amount by the stock price. The total return amount includes the dividend and profit gained from the rise of the stock price over the past 365 days.

Investing

To invest in the stock market, display the stock investment window by selecting the **Stock Market** option in the action menu. In the stock market window, you see the following displays.

The screenshot shows a 'Stock browser' window with several data tables and a chart. Labels on the left point to different sections: 'Stock browser' points to the top table, 'Shareholder browser' points to the middle table, and 'Investor browser' points to the bottom table.

Corporation	Price	P/E	Owned%	Stock Value
INDEPENDENT	\$196.72	10.07	0.00%	\$0.00
Maple Five	\$194.03	9.44	0.00%	\$0.00
Concept Bogle	\$368.17	11.26	0.00%	\$0.00
Markind	\$137.26	12.24	89.00%	\$82,354,424
Eyewatch	\$56.41	9.41	0.00%	\$0.00
Moon Beam	\$23.57	10.97	25.35%	\$34,466,352
Light Works	\$212.97	10.27	0.00%	\$0.00
Phat Group	\$53.75	(16.46)	0.00%	\$0.00

Shareholder	Owned Qty	Owned%	Stock Value
Public Shareholders	1,247,394	57.27%	\$34,511,229
Maple Five	110,000	5.95%	\$23,436,486
Moon Beam	330,000	15.15%	\$8,455,459
Phat Group	354,180	16.26%	\$34,979,763
Arthur Guardia	119,626	5.49%	\$32,079,872

Who	Cash
Slipper	\$11,195
INDEPENDENT	\$49,522,538
Markind	\$46,661,500

Summary statistics on the right:

- Stock Price: \$268.17
- Total no. of shares: 2,178,200
- Equity Per Share: \$107.39
- Earnings Per Share: \$23.01
- P/E ratio: 11.26
- Dividend Yield: 0.81%
- Total Return: 192.30%

A 'Stock Price' chart shows the price over the 'Past 30 Months' with a 'Buy' button and a 'Sell' button below it.

Stock browser window

Stock Browser

The stock browser shows the stock available on the market.

- **Company.** The name of the corporation.

- *Price*. The stock price.
- *P/E*. The stock's price/earnings ratio.
- *Owned%*. The percentage of the total number of shares owned by the current investor or investing corporation.
- *Stock Value*. The value of the stock owned by the current investor or investing corporation.

Once you highlight a stock, details about the stock are displayed to the right of the stock browser. Below this area, a graph shows the stock price over a specific period. You can select the period (past 30 days, past 30 months, or past 30 years) by clicking the corresponding button below the graph.

Shareholder Browser

The shareholder browser is under the stock browser. It identifies existing shareholders of the highlighted stock.

- *Shareholder*. The name of the shareholder.
- *Owned Qty*. The number of shares owned by the shareholder.
- *Owned%*. The percentage of the total number of shares owned by the shareholder.

Investor Browser

The investor browser in the lower right lets you select the person or corporation that will be investing in the stock market. The available selections are the player as an individual and the corporations controlled by that player.

- *Who*. The investor or the investing corporation.
- *Cash*. The amount of cash the investor has.

Display News Button

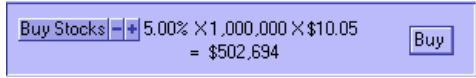
The **Display News** button at the bottom of the window controls whether news about stock-trading activities are displayed to you. Click it to toggle it on and off.

Buying and Selling to the Public

To buy stocks from or sell stocks to public shareholders, follows these steps:

1. Select which person or corporation will buy or sell the stock in the investor browser.

2. Select the stock that you are going to buy or sell in the stock browser.
3. At the lower right, you see something similar to the example shown at right.



In this example, there are 2,500,000 outstanding shares of stock and you are going to buy 5% of the total at \$10 per share. The total price is \$1,250,000. If you are satisfied with these conditions, click the **Buy** button to buy the stock.

Use the same process to sell stocks—just click the **Sell** button instead of the **Buy** button.

For information about buying stock from non-public shareholders, see [“Tender Offer” on page 7-6](#).

Issuing New Shares

One of the most common ways a corporation raises new capital is by issuing new shares. When new shares are issued, the shares are offered to public shareholders. The cash received from the sale of stock is deposited into the operating capital of the corporation.



Financial Action window

To issue new shares, open the financial action window by selecting the **Financial** option in the Action menu. Next, select the **Issue New Shares** option.

When your corporation issues new shares, you must make two decisions. First, you must decide the issuing price. It can be any amount lower than the current stock price. (If the price were higher than the

current stock price, nobody would buy the new shares.) Second, you must decide how many new shares to issue. The limit on the number of new shares you can issue depends on the following:

- *Profitability of your corporation.* Your stock will be welcomed by investors if your corporation is showing some promising results.
- *Issuing price.* If the new shares are offered at a lower and more attractive price, more investors will want to buy them.
- *Frequency of issuing new shares.* New shares cannot be issued too frequently. You must give the market time to absorb the new shares.

In the stock issuing window, the maximum number of the shares you may issue is displayed. In addition to considering the maximum number of shares that can be issued, you should also consider the following:

- *Total number of shares outstanding.* The impact on the existing shareholders will be greater if the number of new shares to be issued is closer to the total number of shares outstanding.
- *Current stock price.* The issuing price cannot exceed the current stock price.
- *Expected gross receipt.* The expected amount of money your corporation will receive by issuing new shares.

Although issuing new shares is an effective means of rapidly generating new funds, it does have a major drawback. Issuing new shares reduces the ownership percentage of existing shareholders. Because you also own less of your company after you issue new shares, you could open your company to a hostile takeover. If issuing new shares provides any corporation or investor with the opportunity to own more than 50% of your corporation, the danger of a hostile takeover is not worth the new capital that you might raise.

Buying Back Shares

If a company buys back its shares, those shares are taken out of circulation and the supply of outstanding shares is reduced. This can have a positive effect on the earnings per share, which in turn has a positive effect on the stock price. If a company buys back half its shares and its overall earnings stay the same, the earnings per share double. Few companies could get such an increase in earning per share by merely cutting costs or selling more goods.

Buying back shares also strengthens the owner's control of the corporation and reduces the risk of being taken over.

The procedure for buying back shares from public shareholders is not much different than normal stock buying. The steps are:

1. Go to the stock investment window.
2. Select the corporation as the buyer in the investor browser.
3. Select the stock of the corporation in the stock browser.
4. Set the percentage of total outstanding shares to buy and press the **Buy** button.

Because the stock you buy back is taken out of circulation, the ownership percentages of all shareholders, except public shareholders, will increase.

For example, suppose your corporation has 1,000,000 outstanding shares. You, the CEO, own 50% of the stock, or 500,000 shares of your corporation, and the other 50% of the stock is owned by public shareholders. If your corporation buys back 5% of its shares from public shareholders, 50,000 shares are taken out of circulation, and the total number of outstanding shares is reduced to 950,000. After this change, you own 52.63% of the stock ($100\% \times 500,000 \text{ over } 950,000$) and the public shareholders own the rest—47.37%.

For details about buying back shares from non-public shareholders, see ["Tender Offer"](#) below.

Tender Offer

Tender offer is an offer to buy shares of a corporation, usually at a price in excess of the value of the shares on the stock market. A tender offer is only necessary if all shares of the stock that you are interested are in the hands of non-public shareholders.

To buy shares from non-public shareholders, do the following:

1. Go to the stock investment window.
2. Select which person or corporation will buy stock in the investor browser.
3. Select the stock you are interested in from the stock browser.
4. Select the shareholder from whom you want to buy stock.
5. If you are going to buy stock from a corporation which you control, you can just set the percentage of the stock you want to

buy and press the buy button. The transaction will be done at the current stock price.

If you are going to buy stock from a shareholder who has no relation with you, you must

Buy Stocks	+	-	5.00%	×	1,000,000	×	
Offer Price	-	+	\$147.36	=	\$9,824,682		<input type="button" value="Offer"/>

offer the shareholder a price in excess of the market value of his stock. In such a case, you might find something similar to the example show at right in the lower right section of the window.

- Set the price that you are willing to offer in the window. Your offer must be above the current stock price to entice the shareholder to sell. After you have settled on a price, click the **Offer** button to make the offer.

If the shareholder is not satisfied with your offer, the shareholder will reject it and demand a new price. If you think it is still an attractive price, accept it to complete the transaction.

NOTE: Some shareholders will refuse to sell their shares no matter how much you offer them, because their main interest is in controlling the corporation.

Takeover

If a person or a corporation acquires more than 50% of a target corporation, that person or corporation takes over the target corporation. After the takeover, the chairman of the acquiring corporation becomes the new chairman of the target corporation.

In a corporation, the chairman is in charge of stock investment and the chief executive officer (CEO) is fully responsible for all day-to-day management. Once you have taken over a target corporation, you immediately gain the right to use the cash supplies of the corporation for stock investment.

To maintain control over a corporation, you possess at least 50% of the corporation's stock. If the percentage you own falls below 50%, you lose control immediately. If no single shareholder owns more than 50% of the corporation's stock, control reverts to the corporation's CEO.

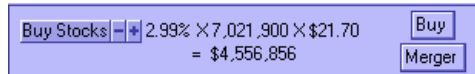
Mutual control can happen. That is, corporation A owns more than 50% of corporation B's stock and corporation B owns more than 50%

of corporation A's stock. If this occurs, ultimate control belongs to the corporation that first initiates the takeover.

Merger

A merger results when two corporations combine. In the game, if a corporation owns at least 75% of another corporation, the corporation can execute a merger with the controlled corporation.

To execute a merger, open the stock investment window. The **Merger** button



below the **Buy** button in the stock buying section is displayed is your corporation owns at least 75% of another corporation. Click the **Merger** button to display a window which explains you must acquire the remaining shares of the target corporation to accomplish the merger. You have two choices to perform a merger. You can either pay cash equal to the value of the remaining shares of the company you want to take over, or you can issue new shares of your corporation in exchange for the value of the stock held by shareholders in the company you are buying out.

If you prefer to issue new shares, be careful not to weaken your current shareholders, including yourself, and introduce new shareholders into your corporation. Although a rare event, it is possible that after you issue new stock, the shareholders of the target corporation in the merger could own more than 50% of your corporation and gain the control of your corporation as a result.

If a merger is successful, all the target corporation's assets are consolidated into the acquiring corporation. The acquiring corporation also acquires the target corporation's technologies. The target corporation ceases to exist and the merger is complete.

After the merger, all the target corporation's products are labeled with the acquiring corporation's brand. If the acquiring corporation is pursuing a unique brand strategy, the brand rating of all these products is reset to zero.

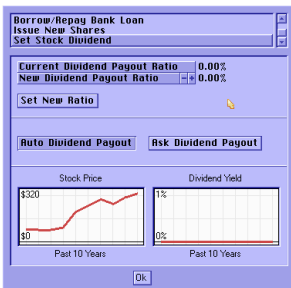
NOTE: If your corporation is controlled by another corporation, you cannot execute a merger. On the other hand, you can order any corporation that you control to merge with another corporation. For example, if your corporation controls corporation A, and corporation

A owns more than 75% of corporation B's stock, you can order corporation A to merge with corporation B.

Paying Dividend

You have to decide whether to pay out the corporation's earnings or retaining those funds for reinvestment in the firm. Although the dividend policy of a normal corporation has no long-term effect on its share price, in practice, most corporations try to pay a steadily increasing dividend. This provides investors with signals about management's expectations for growth and its ability to generate more earnings.

You can set a dividend payout ratio for your corporation and automatically pay dividends based on this ratio each year. Under this policy, the dividend per share is calculated by multiplying the earnings per share by the dividend payout ratio.



Setting a stock dividend

To set the dividend policy for your corporation, select the **Financial** option in the Action menu. Next, select the **Set Stock Dividend** option. Now, set the dividend payout ratio using the spinner and press the **Set New Ratio** button when you are satisfied with your selection.

To pay dividends automatically, select the **Auto Dividend Payout** button. If you want to approve the dividend to be paid each year, select the **Ask Dividend Payout** button. At the end of each year, a window lets you decide the exact amount of dividend to be paid. The window also shows the suggested dividend, along with useful reference information.

Stock Trading Regulation

To prevent you from manipulating the stock market, you must follow these regulations:

- You cannot use a corporation that you control to buy a stock in which you have ownership.
- You cannot use a corporation that you control to buy a stock in which your corporation has ownership.
- Your corporation cannot buy a stock in which you have ownership.

8 Finance

Borrowing and Repaying

To borrow or repay a bank loan, select the **Financial** option in the Action menu. Next, select the **Borrow/Repay Bank Loan** option in the window.

You see the following information:

- *Total loan.* The total loan your corporation has borrowed.
- *Monthly Interest.* The monthly interest your corporation needs to pay.
- *Credit Limit.* The maximum amount your corporation can currently borrow. This is determined by two factors: the equity and profitability of your corporation.
- *Interest Rate.* The current interest rate, which fluctuates from time to time.



Under this information are two sets of spinners and buttons, one for borrowing and another for repaying. To borrow or repay a loan, set the amount you want and press the **Borrow** or **Repay** button.

NOTE: The interest rate of your loan is floating. The amount of interest your corporation pays rises and falls with the current interest rate.

Out of Cash and Bankruptcy

If your corporation runs out of cash, a window pops up and you are forced to take one of the following actions:

- Borrow bank loan
- Issue new shares
- Sell stocks
- Close down firms
- Declare bankruptcy

If you decide to raise funds by taking out a bank loan, issuing new shares, or selling stocks, you are directed to the appropriate menu to carry out the transaction. For more information, refer to [“Borrowing and Repaying” on page 8-1](#), [“Issuing New Shares” on page 7-4](#), and [“Buying and Selling to the Public” on page 7-3](#).

If you decide to close down one or more of your firms, you go back to the normal gaming screen with the main buttons at the center of the screen replaced by **Close** and **Done** buttons. To close one of your firms, highlight the firm in the map and press the **Close** button. The firm is closed down and the land is sold. If the land sale provides the cash you need, press the **Done** button to finish the process.

If you have exhausted every means of raising cash and still cannot meet your financial obligations, then your corporation must face the ultimate misfortune—bankruptcy. Once your corporation declares bankruptcy, all of the corporation’s firms are closed down and the land is sold. A report shows the remaining cash after selling off all land and stocks owned by your corporation. If there is any cash remaining, the cash is used to repay the bank loan. If any cash remains after repaying the bank loan, the cash is distributed to the shareholders.

When your corporation goes bankrupt, you lose the game. The Bankruptcy Report is displayed, followed by the Final Score Report showing your final score in the game and then the game ends.

9 Personnel Management

You can hire a president for your corporation and let that person take care of the day-to-day management of your firms. This frees you from tedious micro-management and lets you concentrate on corporate-level planning.

Hiring a President

To hire a president, follow these steps:

1. Display the Person Report and go to the Career section.
2. Select the person you want to hire and click the **Hire** button. If interested, the person requests a salary. If you agree, the deal is

closed.



Factors that Affect the Expected Salary

- *The person's expertise.* The more expertise the person has, the higher the requested salary.
- *The person's salary preference.* Each person has different salary expectations. This preference is not, however, shown on the report; you have to figure it out yourself by experience.
- *Profitability of the corporation.* A person expects a higher salary offer from a highly profitable company.
- *The person's attitude towards you.* Someone who doesn't like you will work for you only if you offer a higher than average salary.

Attitude

A person's attitude toward you improves if the person works for your corporation.

It gets worse if:

- You reject a request for a raise.
- You terminate the person's employment.
- The person resigns.

Salary Raise Request

If your president thinks he or she deserves a raise, you see a request for a raise. If you turn the request down, two outcomes are possible.

- Stay in the corporation

If the president is a good friend (attitude toward you is very good), the president may stay in the corporation, but will feel discontented and attitude toward you will get worse.

- Decide to resign

If the president is not particularly fond of you, he or she may decide to resign.

How often a person asks for a raise depends on their personality. Some people ask for a raise without a second thought as soon as their current salary is below their expected level. Some people ask for a salary raise only if their current salary is far below their expected level.

Resignation

Your president may ask to resign to start his or her own corporation or for personal reasons. You can try offering a higher salary or just let the president go. The chance of a resignation is lower if your president has a good attitude toward you.

Layoff

To terminate the employment of your president, go to the career section of the person report and click the **Terminate Employment** button.

You pay your president one month's salary and severance when you terminate the employment. Severance is calculated by multiplying the weekly salary by the number of years the person has been working for your corporation.

Laying a person off may cause resentment toward you. However, if the layoff is because of the corporation's financial difficulties, the degree of resentment is minimized.

Delegating Firms to the President

You can let the president you hire manage your firms. Display one of your firms in Information Mode and you see two new buttons on the firm summary area. Click the **President** button to delegate the firm to the president. Click the **CEO** button to manage the firm yourself. Right-click either button to let the president or yourself manage all the firms in the current filter set. For example, set the Firm filter to factory (see ["Map Filters" on page 3-6](#)) and right-click the **President** button to have the president manage all your factories. If no filter is set, right-click to let the president or yourself manage all your firms.

Your President's Responsibilities

The president is responsible for day-to-day management of your firms but does not have the authority to set up or close down functional units.

- *Department Store*

The president sets the products' selling price, arranges advertising, seeks better suppliers, stops the purchase if the cost is higher than the selling price, and conducts training if necessary.

- *Farm*

The president sets the products' selling price, and conducts training if necessary.

- *Factory*

The president sets the products' selling price, seeks new suppliers if the current supply of raw materials stops, and conducts advertising and training if necessary.

- *R&D Center*

The president decides which products to research and develop and how much training should be conducted.

- *Mine, Oil Well, and Logging Camp*

The president sets the raw materials' selling price and conducts training if necessary.

Your president's personality affects how much advertising and training are conducted and the preference for buying goods from sister firms owned by your corporation (see ["Personality" on page 9-7](#)).

Pricing Policy of the President

If you let your president manage your firms, product prices are set in response to the market change. You can tell your president to follow the pricing policy you prefer. It can be one of the following:

- *Normal Pricing Policy.* The president adjusts product prices so that your overall product ratings are close to the competition.
- *Aggressive Pricing Policy.* The president adjusts product prices so that your overall product ratings are about 10 points higher than the competition.
- *Very Aggressive Pricing Policy.* The president adjust product prices so that your overall product ratings are about 20 points higher than the competition.

However, if demand for a product is higher than supply, the president will increase the price regardless of which pricing policy is in effect. When the bottleneck is in the supply, decreasing price only generates more demand but not sales.

Set the pricing policy to aggressive or very aggressive only if you want to trigger a price war with your competitors. A price war greatly reduces the profit margins of all parties involved. It only pays off if your competitors are driven out of the market and you take advantage of the monopoly.

To set the pricing policy, go to the career section of the person report and click the appropriate pricing policy.

Mr. Capital	(21st Century)	Summary
Elizabeth Banks	(Moon Beam)	Wealth
Ray Shepleford	(Teetop Inc.)	Career
Caroline Bandy	(Quest Intl.)	Personality
Clayce Murran	(21st Century)	Expertise
Jeff Fletcher	(Azrin Inc.)	Score
Jefferson Risq	(Southern Lines)	

Career	
Corporation	21st Century
Job Title	President
Years of Service	?

Attitude Towards You	Good, 1%	Terminate Employment
Annual Salary	\$152,000,000	

Pricing Policy:	
Normal	Adjust prices so that our overall ratings are close to the competitors'.
Aggressive	Adjust prices so that our overall ratings are slightly higher than the competitors'.
Very Aggressive	Adjust prices so that our overall ratings are much higher than the competitors'.

Ok

Person report, Career section

Expertise

If you set the Competitor Expertise Level in the New Game Setting menu on, the computer players have expertise in the following fields:

- Retailing
- Farming
- Manufacturing
- Research and Development
- Raw Materials Production

If a person has expertise in these fields, the firms that the person manages have higher unit levels. For every 20 expertise-level points, the units advance one level. For example, if a person's manufacturing expertise level is 40, all functional units created in factories the person manages start at level 3.

- Advertising

If a person has an advertising expertise, advertising conducted by the person generates higher brand awareness. The result doubles when a person's advertising expertise level is 100.

- Training

If a person has a training expertise, the staff learn faster in training conducted by the person. The efficiency doubles when a person's training expertise level is 100.

The expertise of an individual person is displayed in the Expertise section of the Person Report.



Person report, Expertise section

Delegating firms to a president with expertise

If you assign your president to manage a firm and your president has expertise managing the firm, all the functional unit levels in the firm increase. For example, if you have a manufacturing unit of level 3, delegating the factory to a president whose a manufacturing expertise is 40 points increases the level of the manufacturing unit to 5 ($3+2$).

If the president quits managing your firms, the functional units drop back to their original level. However, any advancement gained from training is not affected.

Delegating R&D Centers

If you assign a person with R&D expertise to manage your R&D centers, new projects started by the president will have higher expected technology advancement. However, the R&D projects that have already started do not benefit from the president's expertise.

If the president quits managing the R&D centers, the expected technology advancement drops to the original level.

Personality

Each computer player has an individual personality. The information is displayed in the Personality section of the Person Report.



Person report, Personality section

Character

The most important aspect of personality is the main character attribute. The main character attribute can be any of the following:

- *Conservative.* The principal mindset of a conservative person is safety. All expansion must be carefully planned and is carried out only when the existing business is profitable and the corporation's cash reserve is high enough to make the person feel comfortable.
- *Moderate.* A moderate person is always open to opportunities, but takes action only when confident. A moderate person still pays considerable attention to the corporation's profitability and cash reserve before any expansion, but not as much as a conservative person.
- *Aggressive.* Expect a corporation controlled by an aggressive CEO to expand relentlessly, because it does not care too much about the profitability and cash reserve of the current business. An aggressive person does not fear competition and will not hesitate to compete with you whenever the market is attractive.
- *Very Aggressive.* The person with very aggressive character always wants to extend into all kinds of businesses. This person is inter-

ested in every sort of business because the ultimate goal is to control every market in the world.

Concerns

Apart from the main character attribute, a person's concern about other subjects can also give you clues about management style. The person's attitude toward a particular subject can range from 0 to 100. The areas a person has concerns are listed below.

Some of them are meaningful only if the person is a CEO or president and do not apply to independent investors. The people to whom these concerns apply are shown in parentheses.

- *Investing in Research and Development (CEO & President)*

A high degree of concern here indicates someone who would invest heavily in R&D. A low number means that the person is conservative towards R&D investment.

- *Investing in Training and New Equipment (CEO & President)*

Whether the person believes in expending resources for the training of staff and the procurement of new equipment.

- *Frequency of Upgrading Production Facilities (CEO & President)*

A high degree of concern in this area indicates that the person would upgrade the production facilities as soon as a better production technology becomes available. A low number means that the person would upgrade production facilities only if the production technology has improved significantly.

Upgrading production facilities can improve product quality, but it causes a downgrade of functional units. Therefore, there is never an optimal rate of upgrading production facilities.

- *Spending on Advertising (CEO & President)*

Whether the person would spend aggressively on advertising.

- *Paying Dividend (CEO, President & Independent Investor)*

- A high degree of concern here indicates that the person would pay generous dividends to the shareholders.

- *Investing in Stock (CEO)*

A high number in this attribute indicates that the person enjoys investing in stocks and the person may enjoy speculating in stocks even more.

- *Corporation Takeover and Merger (CEO)*

A high number in this area warns that your corporation would be at risk if the person is interested in your corporation.

- *Strengthening Corporation Ownership.* A high degree of concern here means that the person is highly conscious of the need to strengthen ownership.
- *Endure Loss for Avoiding Layoff (CEO)*
A high degree of concern reflects that the person is a good employer and will be reluctant to close down firms or laying off employees.
- *Purchasing Goods from Own Firms (CEO and President)*
A high degree of concern indicates that the person's corporation would always buy goods from its own firms, even if the goods offered by other suppliers were better.

Advanced Management Technique

Follow the steps below.

1. Add the layout plans of your existing firms to the Layout Plan Library. Make sure that every functional unit is working before adding the plan to the library.
2. Set up a new firm, and apply a layout plan from the library to the firm.
3. Delegate the firm to your president. Your president will take care of the firm.

Using this technique, you can minimize the amount of operation-level management you need to do. It is especially useful for factories, because your president does the purchase of all raw materials needed and you don't have to look for the suppliers yourself.

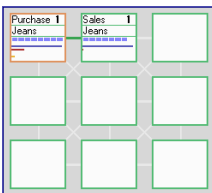
10 Firms

Department Store

Setup cost	\$1,000,000
Monthly expense	\$100,000

You can set up the following units in a department store:

- Purchasing Unit (see [page 11-18](#))
- Inventory Unit (see [page 11-5](#))
- Private Labelling Unit (see [page 11-16](#))
- Sales Unit (see [page 11-24](#))
- Advertising Unit (see [page 11-1](#))



Purchase units and sale units are typically the most common in department stores. With one unit of each type, you can form a simple purchasing-sales team. The following example shows a team purchasing jeans from the manufacturer and selling them to the consumers.

You can also set up:

- An *inventory unit* to stock goods and provide the department store with merchandise when a fluctuation of supply or demand might otherwise leave the store without sufficient stock.

- An *advertising unit* to arrange advertising of your products on TV stations or local newspapers.



- A *private labelling unit* to convert products made under another brand to your own brand.

Location Selection

To choose an appropriate location for a department store, you must consider the following factors.

- *Strength of competitors in the city.* First, you should know which products you plan to sell. It is wise to build your department store in a city with comparatively weak competitors.
- *Population of the city.* The population of the city directly affects the total demand for the goods your department store offers.
- *Land cost.* The land cost can vary greatly. Land in urban areas is always much more expensive than in rural areas. Similarly, land near the center of the city is more expensive than land farther away from the city center. Despite these costs, it makes sense to build a department store near the city because this ensures a larger flow of customers.
- *Transportation cost of goods from suppliers.* You have to estimate the cost of transporting goods from the suppliers to your department store. For goods with a high ratio of weight to value, try to open your department store in a city not too far away from the suppliers. Otherwise, the cost of transportation could severely affect your firm's profitability.
- *Availability of building site near the city center.* Finally, the availability of a building site near the city center is an important criterion. The flow of customers reaches its maximum in the city center and decreases towards to the city border. If most spaces in the city center are already occupied by your competitors, you will have to set up your department store in a less advantageous location and you will be at a disadvantage from the very start.

Factory

Setup cost	\$1,500,000
Monthly expense	\$100,000

The types of units in a factory include:

- Purchasing Unit (see [page 11-18](#))
- Sales Unit (see [page 11-24](#))
- Inventory Unit (see [page 11-5](#))
- Advertising Unit (see [page 11-1](#))
- Private Labelling Unit (see [page 11-16](#))
- Manufacturing Unit (see [page 11-10](#))

To help you better understand the basic function of each type of unit in a factory, an example follows.



The file at left the layout of a factory manufacturing sweaters:

The purchase unit buys the raw material, wool. Next, the raw material is moved to the manufacturing unit and stored there. Once the manufacturing unit has the required raw materials, it starts manufacturing sweaters. The finished goods move to the sales unit and are ready for sale.

After operating the factory for a few months, you may find that the supply of wool is inconsistent, because of seasonal fluctuation of the wool supply. To solve this problem, set up an inventory unit between the wool purchasing unit and the manufacturing unit.

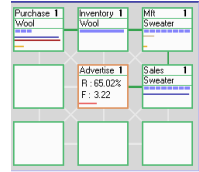


The inventory unit is a buffer; it stores wool when the available supply exceeds the company's ability to process it into sweaters. When the wool supply diminishes, supplies of wool are taken from the inventory unit so that the factory can continue to operate. The inventory unit helps the company's profitability by keeping the factory running year-round and not only during the wool-shearing season.

We now have a constant supply of raw materials and need a constant demand for the finished product to make the factory profitable. To

stimulate demand for sweaters, you can advertise the product widely in the city using television broadcasts or newspaper ads.

To advertise the sweater, you must first set up an advertising unit in the factory. Link the advertising unit to either the manufacturing unit or the sales unit to identify the product that you want to advertise. Click the advertising unit. Select the **Link Media Firm** button and choose a television station or a newspaper publisher in which to advertise your product. Once the advertising campaign starts, brand awareness and the sales of your product will increase.



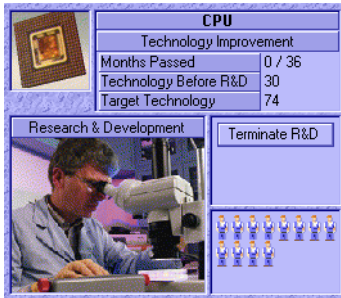
A private labelling unit can convert products of other brands to your own brand. If you are tired of manufacturing products yourself, an alternative to production is to label products of a less popular brand with your own brand. This saves you the trouble of managing production lines and lets you concentrate on marketing.

Research & Development Center

Setup cost	\$1,500,000
Monthly expense	\$100,000

Your products need good quality to compete successfully. The most effective way to improve your products' quality is to invest in the

research and development (R&D) for new technologies, which produces better products.



R&D centers are very expensive to set up and maintain. Companies that are struggling financially may not want to set them up right away. You should not, however, put off their construction too long, because the quality improvements from R&D will lead to increased sales and profits. Investment in research and development anticipates that you need to develop better-quality products to stay ahead of your competition.

Setting up an R&D center is simple compared to other firms, because you just set up an R&D unit. You can use several strategies in R&D. See [“Research & Development Unit” on page 11-21.](#)

Farm

Setup cost	\$1,000,000
Monthly expense	\$100,000

On a farm you can set up the following business function units:

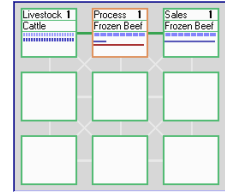
- Crop growing unit (see [page 11-3](#))
- Livestock raising unit (see [page 11-7](#))
- Livestock processing unit (see [page 11-8](#))
- Inventory unit (see [page 11-5](#))
- Sales unit (see [page 11-24](#))
- Advertising unit (see [page 11-1](#))

On a farm, you grow crops and raise livestock. To grow crops, set up one crop growing unit and one sales unit and link them together, as shown below: Next, select a crop type for the crop growing unit. After sowing, growing, and harvesting, the unit moves the crops to the sales unit.



To raise livestock in a farm, set up the units shown below:

Select the livestock to raise in the livestock raising unit and the livestock product in the livestock processing unit. The units start their operations immediately.



Do not set the game speed to frozen during this process, because it prevents the livestock processing unit from obtaining information from the livestock raising unit, which means you won't see the appropriate choices when selecting the livestock product.

Mine, Oil Well, and Logging Camp

Setup cost	Mine: \$5,000,000 Oil well: \$5,000,000 Logging camp: \$1,500,000
Monthly expense	Mine: \$300,000 Oil well: \$300,000 Logging camp: \$100,000

These three firms all produce raw materials, but each one specializes in a different type of raw material. The following section shows how to set them up.

Producing Raw Materials

First, locate a site with deposits of the natural resource. If you have trouble finding that resource, click the **Resource Map** button to get a view of all the natural resource reserves. (The **Resource Map** button is the third one of the row of buttons in the upper center of the screen. It is between the "regional" and "detailed" maps.)

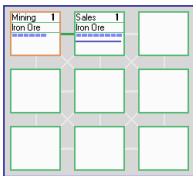
Next, build an appropriate firm in that location as follows:

- For timber, build a logging camp.
- For aluminum, coal, chemical minerals, gold, iron ores, oil, and silica, build a mine.
- For oil, build an oil well.

As you know, firms won't start operating until the appropriate units are properly set up inside the firm. First, set up the unit responsible for the production of raw materials. Each raw material firm requires a different type of unit to obtain the raw material, as shown below:

- Logging camp—logging unit
- Mine—mining unit
- Oil well—oil-extracting unit

Once this unit is set up, it starts to produce raw materials. To sell them, add a sales unit and link the two units. You now have a raw-materials firm.



Television Station and Newspaper Publisher

Each city starts with some television stations or newspaper publishers. New television stations or newspaper publishers appear periodically.

You cannot set up television stations or newspaper publishers, but you can advertise your products through them. The procedures for arrang-

ing advertising are described in [“Advertising Unit” on page 11-1](#). This section focuses on the information provided about a media firm.



Television or newspaper publisher firm details

Firm Details

Highlight a television station or a newspaper publisher to display information about the firm in the lower right section of the screen.

The pie chart in the upper left of the area shows the share of each advertiser during the past month. The colors indicate which corporation purchased which portion. The graph next to the pie chart shows the rating points of the media firm over the past 12 months.

Below the pie chart and graph various useful figures about the media firm are displayed:

- *City Population.* The population of the city where the television station or the newspaper publisher is located.
- *Coverage.* How many people might receive an advertising message through TV broadcasts or newspaper circulation.
- *Reach.* How many people received an advertising message at least once in the past month through TV broadcasts or newspaper circulation.
- *Rating Points.* A percentage calculated by dividing reach by coverage.
- *Cost Per Advertisement.* The cost to place an advertisement in this particular media outlet.
- *Cost Per Thousand.* The cost to expose 1,000 people to an advertising message.

11 Business Functional Units

Advertising Unit

Set up in	Department store, factory, or farm
Setup cost	\$5,000
Workers needed	1

An advertising unit in a firm is responsible for contacting firms (television stations and newspaper publishers) and arranging advertising. The following sections describe the unit's basic operation. For an in-depth discussion of advertising, see ["Advertising" on page 5-9](#).

Advertising a product

To advertise a product, do the following:

1. Link the advertising unit to a unit with a product. If you link to a sale unit, the advertising unit will advertise the product sold by the sale unit.
2. Press the **Link Media Firm** button to select a media firm (a television station or a newspaper publisher) in which to advertise the product. Choose a media firm and press the **Link** button.
3. Set the monthly advertising expense per product by clicking on the

Monthly Expense slider. A higher advertising budget means your advertisement is broadcast more frequently which increases public awareness about your product more rapidly.

Locating the linked media firm

To find out where the linked media firm is placing advertisements, set the map to linkage mode and highlight the advertising unit. The line joining that media firm and the current firm changes to red, and other lines remain blue. To inspect the media firm, double-click its dot.

Unit Details

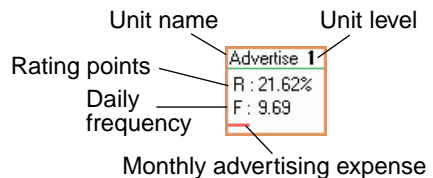
When an active advertising unit is highlighted, the unit detail area shows the following information.

Advertising	
Monthly Spending Per Product	\$122,821
<input type="text"/>	
TV Broadcast	
Cost Per Ad.	\$422.66
Cost Per Thousand	\$2.22
Rating Points	21.62%
Reach/Population	20.32%
Daily Frequency	9.67
Monthly Freq.	290
Link: Media Firm	Break Linkage

- *Cost Per Ad.* The cost to place an advertisement in the medium.
- *Cost Per Thousand.* The cost to expose 1,000 members of a target audience to an advertising message.
- *Rating Points.* This measurement indicates the portion of potential audiences that receive messages from a specific media outlet. One rating point is equivalent to one percent of the potential audience that receives messages from a specific media outlet. It is calculated by dividing the reach by the coverage.
- *Reach/Population.* The percentage of the population who receive the advertising message, calculated by dividing the reach by the population.
- *Daily Frequency.* How many times a target audience is exposed to an advertisement in a day. If you increase spending, daily frequency increases accordingly.
- *Monthly Frequency.* How many times a target audience is exposed to an advertisement in a month.

Unit Info-box

The information shown in the advertising unit box is labelled at right.



Unit Level

Since the function of an advertising unit is to contact media outlets and arrange advertising, the unit's experience does not affect the outcome of the advertising. Therefore, unlike other units, the unit level of an advertising unit does not increase over time.

Crop Growing Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Crop growing units in farms grow and harvest crops. Once you tell a crop growing unit which crop to grow, it takes care of the growing and harvesting process and stores the harvested crops in its barn.

Growing a Crop

To grow a crop, press the **Grow Crop** button in the unit detail area. You see a menu where you select the crop you want to grow. The menu shows the suitable climate, suitable rainfall, sowing month, and harvesting month of each crop, as well as the climate, rainfall, and soil fertility of the farm land. By comparing these two, you can choose the crops most suited to this farm. Consider the sowing month of the crop and the growing season. If you try to start a crop after its sowing season, the unit will just wait until the sowing season next year.

Crop Quality and Yield

Crop quality and yield are affected by climate, volume of rainfall, and soil fertility. Some crops grow better in warm climate conditions whereas some crops require heavy rainfall for growth. Growing the right crop in the right place is the key to high quality and high yield. Note that the quality and yield of the crop is also higher if the crop is grown by a crop growing unit with a higher unit level.

Crop quality and yield are determined by the following:

- *Climate*. Is the climate suitable for the crop?
- *Rainfall*. Is the rainfall suitable for the crop?
- *Soil Fertility*. Is the soil fertility high?

- *Unit level.* The higher the unit level, the greater the crop quality and yield.

To find out the optimal climate and rainfall for a crop, refer to the on-line Farmer's Guide (see [page 6-3](#)).

Unit Details

When you highlight an active crop growing unit, the unit detail area shows the following about the crop:

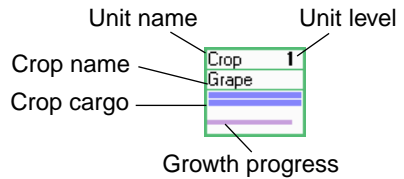
- *Quantity.* How much is in the unit's barn.
- *Quality.* The quality rating.
- *Growth Days.* The number of days since the crop was planted.



Unit Info-box

The info-box of the Crop Growing Unit in the layout area shows the following information:

- *Crop Name.* The crop that the unit is currently planting.
- *Crop in Barn.* When crops are harvested, they are stored in barns. Crops in barns are represented by boxes in the unit info-box. Each box represents a certain quantity of crops. You can see more boxes appear as crops are harvested and disappear as crops are sold.
- *Growth Progress.* The crop's growth progress. When this bar reaches its maximum length, the crop is ready to be harvested.



Unit Level

The capacity of a crop growing unit improves as its unit level increases. The following table shows the relationship.

Unit Level	Capacity
1	100%
2	150%
3	200%
4	250%

Unit Level	Capacity
5	300%
6	350%
7	400%
8	450%
9	500%

Inventory Unit

Set up in	All types of firms except R&D
Setup cost	\$50,000
Workers needed	1

Inventory units provide storage for large quantities of raw materials or finished goods.

Although most firms can operate without an inventory unit, it supports smooth operations for the whole firm. The inventory unit's capacity is several times greater than other units and operating costs are several times smaller than other units. The discussion which follows describes the Inventory Unit in detail.

Why Retain Inventories?

There are two major operational reasons why companies retain inventories: anticipation and buffer.

- *Anticipation inventories*

Anticipation inventories are held because you expect a future increase in demand. Rather than operate at peak capacity during one period and then shut down in a subsequent period, anticipation inventories can accumulate before a period of peak demand.

- *Buffer inventories*

Buffer stock protects against unexpected surges in demand. Any inventory held over and above the average demand requirement is considered buffer inventory. High buffer inventories allow companies to continue to serve customers through unexpected increases in demand.

Unit Details

When an inventory unit is highlighted, the unit detail area shows the following information:

- *Cost+Freight*. The product cost and the freight cost.
- *Quantity*. The quantity of the product stocked in the unit.
- *Quality*. The product's quality rating.
- *Brand*. The product's brand rating.

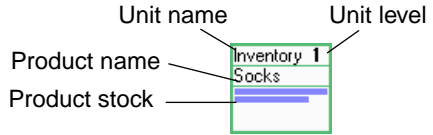


NOTE: The color bar under the product picture shows the corporate color of the brand owner of the unit's products.

Unit Info-box

The info-box of the inventory unit in the layout area shows the following information:

- *Product Name*. The product in the unit.
- *Product Stock*. This area shows the quantity of stock of the product in the unit. Each box represents one cargo unit of the product. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.



Unit Level

Because an inventory unit provides a place for storing goods, the unit's experience does not affect the productivity of the business. Therefore, unlike other units, the unit level of an inventory unit does not increase over time.

Livestock Raising Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Raising Livestock

To order a unit to raise livestock, press the **Raise Livestock** button in the unit detail area. Select the livestock you want to raise in the menu. The menu also shows which products you can make from each type of livestock. After you select a product, the livestock raising unit purchases livestock for breeding and begins the breeding-raising cycle.

Livestock Quality

The quality of the livestock products is determined by the level of the functional unit. A higher unit level indicates that the unit has more advanced equipment and the workers are more experienced. Livestock raised in these conditions are healthier and of better quality.

Unit Details

When an active Livestock Raising Unit is highlighted, the unit detail area shows the following information.

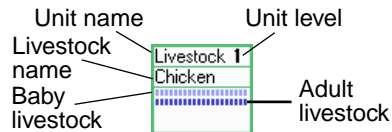
- *Baby Qty.* The Quantity of baby livestock in the unit.
- *Adult Qty.* The quantity of adult livestock in the unit.
- *Quality.* The quality of the livestock in the unit.



Unit Info-box

The info-box of the livestock raising unit in the layout area below shows the following information:

- *Livestock Name.* The kind of livestock being raised.
- *Baby and Adult Livestock.* These two rows of boxes represent the quantity of baby and adult livestock in the unit. Baby livestock



mature and become adult livestock. Different types of livestock have different growth rates. From fastest to slowest, the livestock growth rates are chickens, sheep, pigs, and cattle.

Unit Level

The productivity and capacity of a livestock raising unit improves when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	120%	120%
3	140%	140%
4	160%	160%
5	180%	180%
6	200%	200%
7	220%	220%
8	240%	240%
9	260%	260%

Livestock Processing Unit

Set up in	Farm
Setup cost	\$100,000
Workers needed	16

Livestock grow up in a livestock raising unit. They are then sent to the livestock processing unit, which can process the livestock into several useful products.

Processing Livestock

First, link the livestock processing unit to a livestock raising unit. Once the linkage is established, a **Select Product** button appears. Click it to display a menu where you can select the livestock product you want to

produce. After you select one, the unit starts functioning and you see the livestock products appearing as a row of boxes.

Livestock Quality Product

The livestock product quality is determined by the quality of the livestock and the level of the functional unit processing the livestock. This reflects the fact that experienced workers and modernized facilities produce higher-quality products.

Unit Details

When you highlight an active Livestock Processing Unit, the unit detail area shows the following information:

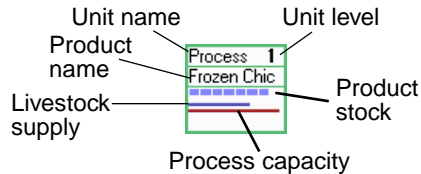
- *Quantity.* The quantity of the livestock product in the unit.
- *Quality.* The quality of the livestock product in the unit.



Unit Info-box

The info-box of the livestock processing unit in the layout area below shows the following information:

- *Product Name.* The livestock product being produced.
- *Product Stock.* This area shows the quantity of stock of the product in the unit.
- *Livestock Supply and Processing Capacity.* The blue bar indicates the livestock supply. The red bar indicates the processing capacity. If the livestock supply bar is shorter than the processing capacity bar, the unit is underutilized and could process more livestock. In this case, consider linking more input units to the processing unit to exploit unused capacity.



Conversely, if the blue supply bar is longer than the red processing capacity bar, this means that the unit has reached its full capacity and can't process all the available livestock. You should probably set up a new livestock processing unit to lessen the workload on the current one. You could also increase the training budget of the current unit, which would increase the unit's productivity in the long term.

Unit Level

The productivity and capacity of a livestock processing unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Manufacturing Unit

Set up in	Factory
Setup cost	\$300,000
Workers needed	24

Manufacturing a Product

A manufacturing unit is very flexible. It can manufacture any product, if supplied with the appropriate raw materials. For example, if cotton enters a manufacturing unit, the unit automatically produces textiles. If wheat is the input, flour is produced.

If you want your factory to manufacture a specific product, you must know what its raw materials are. The Manufacturer's Guide contains the raw material information for each product you can produce. You can refer to the Manufacturer's Guide anytime by selecting it from the game menu or pressing F1. (For details, see ["Manufacturer's Guide" on page 6-1](#)).

Once you know which raw materials you need, you need to locate a supply of each of the required raw materials. Generally, this is easiest using the map filter. First, change the map mode to “profit mode” and apply the appropriate map filters. Right-click the product filter button and select the raw material to show only firms that supply the specified raw material in the regional map. (for details about the map and filters, see [“Game Map” on page 3-3](#)). If you can't find an existing supply of the required raw materials, you must decide whether to abandon the plan to produce that product or create a supply yourself.

Once you set up a supply of each of the required raw materials, you need to set up purchasing units in your factory to purchase these raw materials. Link the purchasing units to a manufacturing unit to start production. After the necessary connections are established you see the products being manufactured. If you can produce more than one product from the specified raw materials, you see a **Set Production** button in the unit details area.

Quality of Manufactured Goods

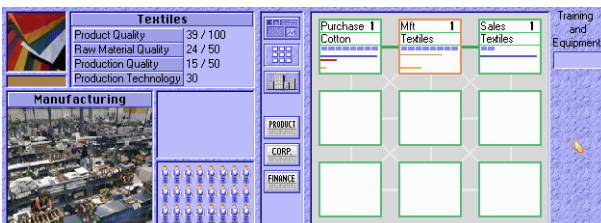
The quality of manufactured goods depends on two factors:

- Raw materials quality
- Factory's production technology

For some products, such as the computer CPU, quality is determined mainly by the production technology. For other products, such as furniture, quality is affected more by the quality of the raw materials. The importance of these two factors varies from product to product. (For details refer to the Manufacturer's Guide.)

The quality rating is calculated from these two factors. The example below show how to calculate the quality rating.

Information concerning the example manufacturing unit is listed below:



Manufacturing unit example

- The unit is manufacturing textiles, using cotton as the raw material.
- The quality rating of the cotton is 48.
- The factory's production technology level for textiles is 30.
- The top production technology level in the world is 100.
- The quality of the textile is 50% affected by the quality of the raw material and 50% affected by the production technology.

If you highlighted this manufacturing unit in layout mode, you would see the following information:

- Product Quality: 39/100

The quality rating of the current product is 35 and the maximum quality rating a product can have is 100.

- Raw Materials Quality: 24/50

The quality of textiles is 50% affected by the quality of the raw materials and the quality of cotton contributes 24 rating points to textiles' overall quality ($48 \times 50\% = 24$).

- Production Quality: 15/50

The quality of textiles is 50% affected by the production technology and the production technology contributes 15 rating points to textiles' overall quality. These rating points are calculated by multiplying the importance of technology to the product's quality by factory technology divided by the top technology in the world, or, in this case, $50 \times 30/100 = 15$.

- Production Technology: 30

A high production level does not guarantee a high quality rating. You obtain a high quality rating only if your factory's technology level is close to or the same as the world's top technology level.

The top technology level of every product starts at 100. When a product with a higher technology level enters the market, the top technology level is updated accordingly. So launching a new product with an unprecedented technology level into the market can cause the existing products to become inferior.

You can improve production technology by conducting research. (See "[Research & Development Center](#)" on page 10-4 for details.)

Improving Product Quality

Product quality is determined by the quality of raw materials and the production technology. You cannot always control the quality of the raw materials, because you often purchase raw materials from external

suppliers. A better way to improve the product quality is to improve the production technology. You can accomplish this with research and development (R&D) projects in your R&D units.

If your corporation successfully completes an R&D project on a specific product, the production technology of that product improves. Then, you can upgrade your manufacturing units so that they benefit from the improved technology. To upgrade a manufacturing unit, highlight it and select the **Upgrade Tech** button in the unit detail area. A message asks for your confirmation. If you agree to proceed, the new production technology is applied to the unit and the quality of the manufactured products rises.

If the unit's level is higher than level one, a message informs you that upgrading production technology will decrease the unit's level by one level. The unit's level is downgraded because installing new production equipment and applying new production techniques means most workers' experience becomes obsolete. While they go through a new learning process, while their productivity drops.

Unit Details

When you highlight an active manufacturing unit, the unit detail area shows the following information:

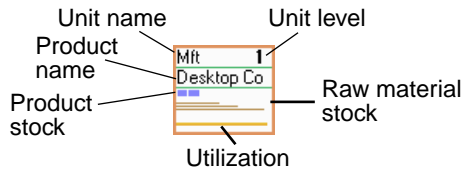
- *Production Quality*. The quality rating of the production.
- *Raw Materials Quality*. The quality rating of the raw materials.
- *Overall Quality*. The overall quality rating of the manufactured products. It is the sum of the production quality rating and the raw material quality rating.
- *Production Technology*. The production technology level, which affects the production quality.

The colored bar under the product picture shows the brand owner's corporate color. Because the current factory must be the manufacturer and brand owner of the manufactured products, the color displayed is always the corporate color of the factory.



Unit Info-box

The info-box of a Manufacturing Unit in the layout area below shows the following information:



- *Product Name.* The product that the unit is current manufacturing.
- *Product Stock.* This area shows the quantity of stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.
- *Raw Material Stock.* The stock of raw materials in the Manufacturing Unit is displayed as a row of lines. The length of each line indicates the quantity of the raw material stocked in the unit. During the manufacturing process, raw materials must first be input into a manufacturing unit and then converted into products. The manufacturing process is suspended if any of the required raw materials is unavailable. Thus, for the unit to operate at maximum efficiency, you must provide a consistent supply of raw materials.
- *Utilization.* The orange bar describes the utilization of the unit. If this bar reaches its full length, the unit has reached full capacity. It can manufacture no more goods even if there is additional supply and demand. If the unit is underutilized, its facilities and resources are not used as effectively as possible. Underutilization might be an explanation for a firm's low profitability.

Unit Level

The productivity and capacity of a manufacturing unit increase when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%

Unit Level	Productivity	Capacity
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Bottleneck Diagnosis

Here are some suggestions to eliminate some common bottlenecks:

- *Inconsistent supply of raw materials.*

Setting up an inventory unit and linking it between the purchasing unit and manufacturing unit usually improves this situation. In addition, an inventory unit is useful for raw materials that have seasonal supply fluctuations (for example, wool and crops).

- *Insufficient supply of raw materials.*

Try to find a supplier that can provide raw materials of comparable quality and price more consistently. If you cannot find a better supplier or you anticipate a surge in demand for your manufactured goods, consider backward integration—setting up a firm yourself to supply the lacking raw materials.

- *Peak Manufacturing Capacity.*

The most common way to remove this bottleneck is to increase the budget for training and new equipment. This accelerates the process of upgrading the unit level, which gives the unit more capacity and higher productivity. If the demand keeps increasing and this increase is likely to be sustained, you could set up more manufacturing units or a new factory to meet the increasing demand.

- *Bottleneck at the output unit.*

If finished goods from a manufacturing unit cannot be moved out of the manufacturing unit, production is suspended inside the unit. In this case, the bottleneck is at the output unit. Removing it restores the smooth flow of finished goods out of the manufacturing unit. To move more goods out of your manufacturing unit, you can increase the number of sales units or the demand for your man-

ufactured products through increased distribution or advertising, depending on the nature of the surplus in supply.

Private Labelling Unit

Set up in	Department store or factory
Setup cost	\$100,000
Workers needed	6

A private labelling unit converts products of other brands to your own brand by relabelling the product. If you are tired of manufacturing products yourself, you can label products of a less popular brand with your own brand. This saves you the trouble of managing production lines and lets you concentrate on marketing.

When to private label products

Private labelling is a reasonable choice if your corporation is pursuing a corporate or range brand strategy. In this case, the private-labelled goods can be sheltered under the retailer's brand and receive the immediate benefit of a well-established brand.

Although it seems that private labelling could put additional brand value into a product effortlessly, this tactic should be used with extreme caution. If the quality of the private-labelled product is inferior to those of the existing products in the brand family, it will damage the entire brand. Furthermore, since the products are manufactured by external suppliers, it is very difficult to assure that their quality will always meet your corporation's quality standard.

Private labelling products

Any products directed into the private-labelling unit are relabelled immediately. Usually linking a private labelling unit between a purchasing unit and a sale unit is the easiest way to relabel the products from another corporation. In this arrangement of units, the purchased goods from another company are private labelled with your brand and resold as if you had produced them yourself.

Unit Details

When you highlight an active Private Labelling Unit, the unit detail area shows the following information:

- *Brand Awareness.* The brand awareness rating of the private-labelled goods.
- *Brand Loyalty.* The brand loyalty rating of the private-labelled goods.
- *Brand Rating.* The overall brand rating, which is the sum of the brand awareness rating and the brand loyalty rating.



Unit Info-box



The info-box of a Private Labelling Unit in the layout area below shows the following information:

- *Product Name.* The product that the unit is currently processing.
- *Product Stock.* This area shows the quantity of product stock in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

Unit Level

The productivity and capacity of a private-labelling unit increases when its unit level increases. The table below shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%

Unit Level	Productivity	Capacity
8	430%	437%
9	500%	500%

Purchasing Unit

Set up in	Department store or factory
Setup cost	\$50,000
Workers needed	4

A purchasing unit buys products from suppliers. These units essential for department stores and factories. The following sections describe the basic operations and displays of the purchasing unit.

Purchasing a product

Once you tell the purchasing unit which product you want to purchase, it purchases the product until the supply is no longer available.

To give the purchase unit an order, select the purchasing unit and press the **Link Supplier** button. The screen switches to information mode. Now, select the product you want to purchase from a supplier by clicking it. When you highlight a product, the freight cost of transporting the product from the supplier's location to the current firm's location is shown in the product information area. Include the freight cost in the calculation of the total product cost. If you are satisfied with the selection, press the **Link** button to start the purchasing process.

If you see an Internal Sale bar under the freight cost display, the product is only available for purchase within the company that manufactured it. If the supplier firm is not owned by your corporation, the **Link** button is disabled and you cannot purchase the product. You have to try to locate another source for that product.

Stopping a product purchase

After a purchase linkage is established, the **Stop Purchase** button appears. Press this button to stop the current purchase.

Changing the current supply

To switch to a new supplier, press the **Link** button and select the product that you want to purchase. This is the fastest way to change the current supply, because the newly selected product is purchased immediately. You will, however, incur a loss, because the stock of the old product in the purchasing unit is discarded.

To avoid this loss, stop the purchase of the current product by pressing the **Stop Purchase** button and wait until its stock is cleared to the sales unit or manufacturing unit. Then, link the purchasing unit to the new supplier. If the type and brand of the new product are the same as the old one and the only difference is that they are from different suppliers, then you don't need to worry about this problem.

Locating the Supplier of a Purchasing Unit

To find the supplier of a specific product, set the map to linkage mode and highlight the purchasing unit that is purchasing the product. The line joining that supplier and the current firm changes to red, while other lines stay blue. To look at details about the supplier, double-click the dot.

Unit Details

When you highlight an active Purchasing Unit, the unit detail area shows the following information:

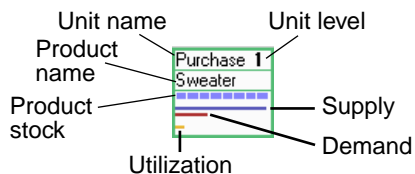
- *Cost+Freight*. The cost of the product and the freight cost.
- *Quantity*. The quantity of the product stocked in the unit.
- *Quality*. The quality rating of the product.
- *Brand*. The brand rating of the product.



The color bar under the product picture indicates the brand owner's corporate color.

Unit Info-box

The info-box of a Purchasing Unit in the layout area below shows the following information:



- *Product Name.* The product that the unit is currently purchasing.
- *Product Stock.* This area shows the stock of the product in the unit. Each cargo unit can store a certain number of product units. The number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.
- *Supply and Demand bar.* The supply bar is blue and indicates the product supply from the supplier. The demand bar is red and indicates the product demand from the current firm. If the supply bar is shorter than the demand bar, there is a supply shortage. Overall firm performance may be affected by the shortage and you should consider switching to a better supplier.
- *Utilization bar.* The orange bar shows the unit's utilization. If this bar reaches its full length, the unit is at full capacity. No more goods can be purchased, even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not being used effectively. This could contribute to low profitability of the firm.

Unit Level

The productivity and capacity of a purchasing unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

Research & Development Unit

Set up in	R&D center
Setup cost	\$500,000
Workers needed	12

Starting R&D

You can set up a maximum of nine R&D units in an R&D center. They can work independently as nine separate R&D teams or be linked together into a larger team for increased performance. An R&D team can consist of any number of units from one to nine.

After you connect as many units as you want into an R&D team, highlight the "leader" R&D unit. The leader unit is the one that has connections to all other R&D units in the team. Then, click the **R&D Technology** button and select the product you want to research and the duration of the research plan. After receiving your order, the R&D team starts the R&D plan immediately.

Technology Advancement

The technological advancement you can achieve with an R&D plan is determined by the following:

- Duration of the R&D plan
- R&D team size
- Unit levels of the R&D team
- Top product technology level

Duration of the R&D Plan

The duration of the R&D plan determines the amount of technological advancement which will be accomplished when the R&D plan is complete. Technology is represented by the technology level. The following table shows the relationship between expected technology gain and R&D duration.

NOTE: The table excludes other determining factors. These other factors are discussed in the following sections.

R&D Duration	Technology Gain
6 months	1

R&D Duration	Technology Gain
1 year	3
2 years	7
3 years	11
5 years	20
10 years	50

R&D team size

An R&D team can have one to nine R&D units. A larger team can achieve more technological advancement than a smaller team. However, an R&D team with two R&D units is not 100% more productive than a single-unit R&D—it is only 70% more productive. This is because in any research, one or a few core scientists are in charge of the most difficult part of the research. Adding more staff and resources can improve productivity in all but the key research areas. Larger teams also lack the flexibility of smaller teams and suffer from decreased efficiency.

The following table shows the relationship between the size of the R&D team and technological gain. If you are still unclear about the concept, consider this example: If a single-unit R&D team can gain 20 technology levels after five years of research, then a three-unit R&D team can gain 48 (20 x 240%) technology levels after five years of research.

No. of R&D Units	Effect on linked together Tech Gain	Marginal Increase
1	100%	
2	170%	70%
3	240%	70%
4	295%	55%
5	350%	55%
6	390%	40%
7	430%	40%
8	455%	25%
9	480%	25%

Unit levels of the R&D team

Each increase of the unit level boosts the effect of the R&D plan by 20%, because more experienced scientists usually achieve better results.

Top Product Technology Level

If you are conducting research on a product for which a competitor already has a higher level of technology, which is being put to practical use in their product, the research time on that technology is shortened. You need less time gain this knowledge because of the diffusion of technology and the use of special technology-acquisition techniques such as reverse engineering.

Application of Technology to Production

When a research period is complete, you can apply the results (the improved production technology) to your manufacturing units. Click the **Apply Tech** button to display the manufacturing units eligible for a technology upgrade and you are provided with the following options:

- *Yes.* You proceed, the new production technology is applied to the unit, and the quality of the manufactured products rises.

If the unit's level is higher than level one, a message informs you that upgrading production technology will decrease the unit's level by one level. The unit's level is downgraded because installing new production equipment and applying new production techniques means most workers' experience becomes obsolete. While they go through a new learning process, their productivity drops.

- *No.* Do not apply the technology to this manufacturing unit.
- *All.* Apply the technology to all eligible manufacturing units immediately without asking you one by one.
- *Go.* Go to the manufacturing unit, so you can examine the unit in detail before applying to the technology.
- *Quit.* Cancel the action and quit the menu.

Unit Details

When you highlight an active R&D unit, the unit detail area shows the following information:

- *Months Passed.* The number of months since the R&D plan began and the duration of the R&D plan in months.

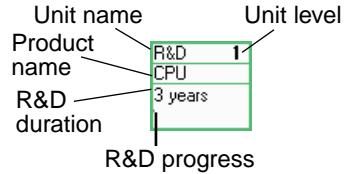


- *Technology Before R&D.* The original technology level.
- *Target Technology.* The target technology level.

Unit Info-box

The info-box of an R&D Unit in the layout area below shows the following information:

- *Product Name.* The product currently being researched.
- *R&D Duration.* The duration of the R&D plan.
- *Progress Indicator.* The progress of the current R&D plan.



Sales Unit

Set up in	All types of firms except R&D center
Setup cost	\$100,000
Workers needed	8

A sales unit is responsible for selling products to customers. Since sales units are the only units in a firm that generate income directly, you find them in almost every type of firm that produces goods. In the following section, the basic operations and displays of this unit are introduced.

Unit Details

When you highlight an active Sales Unit, the unit detail area shows the following information:

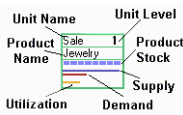
- *Selling Price.* The product's selling price.
- *Cost+Freight.* The cost of the product and the freight cost
- *Quality.* The quality rating of the product.
- *Brand.* The brand rating of the product.

NOTE: The color bar under the product picture represents the corporate color of the product's brand owner.



Unit Info-box

The info-box of a sales unit in the layout area below shows the following information:



- *Product Name.* The product which the unit is currently selling.
- *Product Stock.* This area shows the quantity of stock of the product in the unit. Each cargo unit can store a certain number of product units. The

number of units a cargo unit can hold varies. For some expensive products, such as automobiles, one cargo holds only a few units. For lower-cost products, such as shampoo, one cargo unit holds several thousand units. The value of each cargo unit is about the same.

- *Supply and Demand bar.* The blue supply bar indicates the supply of the product by the current firm. The red demand bar indicates the demand of the product from the buyers. By examining these bars and the utilization bar carefully, you can identify the bottlenecks in your business.
- *Utilization bar.* The orange bar describes the unit's utilization. If this bar reaches its full length, the unit has reached its full capacity and can sell no more goods even if there is additional supply and demand. Conversely, if the unit is underutilized, its facilities and resources are not used effectively. This might be one of the factors contributing to low profitability of the firm.

Unit Level

The productivity and capacity of a sales unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%

Unit Level	Productivity	Capacity
9	500%	500%

Bottleneck Diagnosis

Because sales units are the only units in a firm that generate sales revenue directly, inspecting them frequently and removing any bottleneck usually increases the profitability of the whole firm. Refer to the following table to identify common bottlenecks:

Supply & Demand Utilization	Bottleneck
Supply < demand utilization = 100	Capacity is peak
Supply > demand utilization = 100	Capacity is peak
Supply < demand utilization < 100	Insufficient supply
Supply > demand utilization < 100	Low demand

Here are some suggested solutions:

- *Capacity is peak.*

When the capacity of the sales unit is at its peak, you can resolve this bottleneck in two ways. The first way is to set up an additional sales unit to share the workload. However, due to the limitations of layout space, you can do so in every case. The second way is to increase the spending on training and new equipment, which lets the unit to improve its unit level and productivity faster.

- *Insufficient Supply.*

Sometimes, the cause of the problem is not obvious. It can be caused by a shortage in the product supply, capacity limitation of a purchasing or manufacturing unit, or improper linkage of units, which affects the scheduling among functional units. To increase the supply, trace the chain of supply and examine all linked units carefully, and remove any bottlenecks you find.

- *Low Demand.*

There are many ways to increase demand, but all have costs. For a department store, increasing the frequency of the advertising can be an adequate short-term decision. The real driving forces of demand are price, quality, and brand, however, so you should also allocate more of your budget to research and development and plan strategi-

cally to decrease the cost of your products. A long-term strategy will win out over a short-term one, if you plan ahead.

Mining Unit, Oil-Extracting Unit, and Logging Unit

Set up in	Mine (mining unit)
	Oil well (oil-extracting unit)
	Logging camp (logging unit)
Setup cost	Mining unit—\$1,000,000
	Oil extracting unit—\$1,000,000
	Logging unit—\$100,000
Workers needed	24

These three units share a common function—production of raw materials. Each specializes in producing different raw materials:

- Mining unit—aluminum, coal, chemical minerals, gold, iron ores, silica
- Oil extracting unit—oil
- Logging unit—timber

For more information, see [“Mine, Oil Well, and Logging Camp” on page 10-6](#).

Unit Details

When you highlight an active raw material producer, the unit detail area shows the following information:



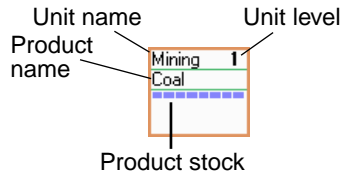
Raw material unit details

- *Quantity.* Quantity of the natural resource.
- *Reserve.* Reserve of the natural resource, represented in as an index from 0 to 100. When it reaches zero, the reserve has been exhausted.
- *Quality.* Quality of the natural resource.

Unit Info-box

The info-box of a raw material–producing unit in the layout area below shows the following information:

- *Raw Material Name.* The raw material which the unit is currently producing.
- *Raw Material Stock.* This area shows the quantity of stock of the raw material in the unit. Each cargo unit can store a certain amount of the raw material



Unit Level

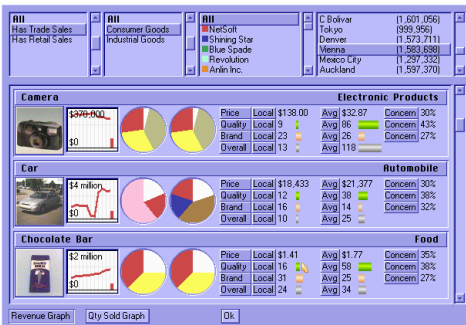
The productivity and capacity of the unit increases when its unit level increases. The following table shows this relationship.

Unit Level	Productivity	Capacity
1	100%	100%
2	130%	125%
3	160%	175%
4	200%	200%
5	250%	250%
6	300%	300%
7	360%	375%
8	430%	437%
9	500%	500%

12 Reports

Product Summary Report

The Product Summary Report provides a quick and convenient way to browse product information.



Product summary report

Product Information

At the top of the display area of each product, the name of the product is on the left and the product class on the right side.

Next to the picture of the product is a graph which can show either the total revenue or the total quantity sold over the past 12 months. Press the **Revenue Graph** button or the **Qty Sold Graph** button at the bottom of the window to choose which to display.

To the right of the graph, there are two pie charts. The left chart shows each producer's share in the market and the right one each retailer's share in the market. Each piece of the pie represents a different corporation's market share. The white portion represents the combined market share of all local competitors.

There are local competitors in each city. Although their firms are not shown on the game map, they do compete directly with all of the corporations in the game. Sometimes, they can even be the major competing force in the market.

If the product is for consumers, the following information is displayed. Next to the two pie charts, the report displays the average price, quality rating, brand rating, and overall rating of the goods that are being sold by local competitors in the city; for example, [Price][Local] \$305.00 means that the average price of goods from local competitors is \$305.00.

Next to the local competitor information, the average price, quality rating, brand rating, and overall rating of all goods from both corporations and local competitors are displayed. For example, [Price]...[Avg] \$250.00 means that the average price of all goods being sold in the city is \$250.00.

When consumers buy a product, they usually consider several factors. Generally, the three most important factors are price, quality, and brand. The importance of these three factors, however, varies for each product. For example, when buying a pair of sport shoes, a consumer is more concerned about brand than price. In contrast, when buying a piece of frozen meat, a consumer is usually more concerned about price than brand. Based on consumer behavior, each product has a set of predefined values. These are *price concern*, *quality concern*, and *brand concern*. They are shown as percentages and their sum is always 100%. If a consumer buys a product with 50% price concern, 30% quality concern, and 20% brand concern, the foremost criterion in the consumer's mind is price with quality second, and brand third.

The product picture itself is a hypertext button. Click the button to display the Product Detail Report. To go back to the summary report, click the **Product Summary** button at the bottom of the window.

Display Filter

You can control the products listed in the report by setting the display filters. The four display filters are described below.

Product Availability Filter

The product availability filter has the following options:

- *All*. Displays all available products.
- *Has Trade Sales*. Displays only products available in the trade market.
- *Has Retail Sales*. Displays only products retailed by corporations.

Product Category Filter

The product category filter has the following options:

- *All*. Displays all product categories.
- *Consumer Goods*. Displays only consumer goods.
- *Industrial Goods*. Displays only industrial goods.

Corporation Filter

Set this filter to a corporation to list only those products being produced or retailed by that corporation. The default setting, **All**, lists every corporation.

City Filter

If this filter is set to **All Cities**, the report shows the combined sales of all products in all cities.

Set this filter to a specific city to list sales information for that city only. The browser also shows the population of each city.

NOTE: If you set the city filter to on, the information about industrial goods is not shown because suppliers of industrial goods are scattered all over the map and information about them is useful only if all cities are selected.

Key Search

You can display a specific product quickly by pressing the first character of the product name.

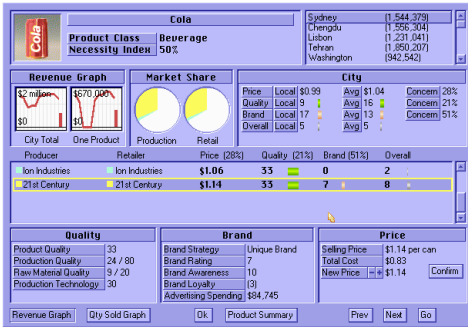
Product Detail Report

The Product Detail Report provides complete information about a specific product. You can access the Product Detail Report any of the following ways:

- Call it up from the game menu.

- Click the report button in the lower section of the screen.
- Click the a product's picture in the Product Summary Report.
- Highlight a firm in the map and right-click the picture of a product in the firm.

Most of the information in the Product Detail Report is also displayed in the Product Summary Report, and it is not repeated here. This section discusses only those features which are unique to the Product Detail Report. See [“Product Summary Report” on page 12-1.](#)



Product detail report

Necessity Index

In the upper left corner of the report, the necessity index of the product is displayed next to the product picture. A high index value indicates that the product is necessary to people in their daily lives. The demand for necessary goods is fairly constant, because people must buy them even if the price they are offered is not attractive.

Conversely, the demand for non-necessary goods is influenced mainly by the attractiveness of the goods. Therefore, cutting the price does not always result in decreased profit, because the lower price can stimulate demand. This increased demand could offset or even surpass the reduced profit margin.

Product Browser

The product browser lists all of the products of the same type currently being sold in a specific city. The price, quality rating, and brand rating are shown for each product.

If you want to know more about a product, look at the information displayed below the product browser. These sections display the data

related to price, brand, and quality in detail. By evaluating these data, you can determine the strengths and/or weaknesses of each competitor's product lines.

At the top of the browser, you see some percentages next to the headings "Price," "Quality," and "Brand." These refer to the price concern, quality concern, and brand concern of the city. These values are the same as those displayed in the City section of the report. They are repeated here for your convenience.

Changing Selling Price

The Product Detail Report gives you all the essential information about the product, and also serves as the control center for battling your competitors in the marketplace. You can respond to your competitors by cutting your products' prices or raising your prices to increase the profit margin if the market is already under your control. To change the price of a product sold by your corporation, simply highlight that product and adjust the **Price** spinner. The new selling price takes effect as soon as you confirm the price.

Prev and Next Button

Click the **Prev** button to display the previous product or the **Next** button to display the next product. The product you can browser are limited by the filtering criteria you set in the Product Detail Report.

Go button

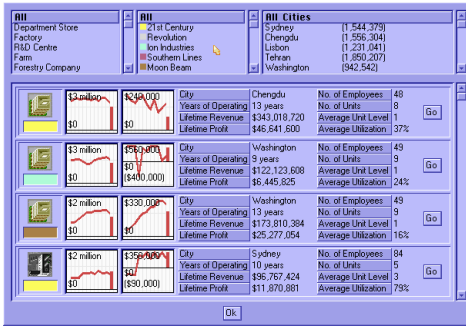
Click the **Go** button to go to the department store that is selling the highlighted product.

Key Search

You can display a specific product quickly by pressing the first character of the product name.

Firm Summary Report

The Firm Summary Report lets you quickly browse the summary information of all firms.



Firm summary report

Three filters at the top of the report let you limit the list to a specific type of firm, firms owned by a specific corporation, or firms in a specific city. To see only your factories, select **Factory** in the firm type filter and your corporation in the corporation filter.

For the firm record, you see two graphs. The left one shows the firm's revenue for the past 12 months. The right one shows the firm's profit for the past 12 months. The color bar below the firm icon is the firm's corporate color. If the word "delegate" is displayed on the color bar, the firm is delegated to your president. Other information shown includes:

- *City*. The city where the firm is located.
- *Years of Operating*. How many years the firm has been operating.
- *Lifetime Revenue*. Total firm revenue over its lifetime.
- *Lifetime Profit*. Total firm profit over its lifetime.
- *No. of Employees*. Total number of employees working for the firm.
- *No. of Units*. Total number of units in the firm.
- *Average Unit Level*. The average unit level of all units in the firm.
- *Average Utilization*. How busy your employees are. The firm is fully utilized when this ratio is 100%.

Click the **Go** button to close the report and go to the selected firm immediately.

Corporate Summary Report

This report shows the following information about each corporation:

- Financial overview
- Stock overview
- Firms overview
- Business relations

To find out more about a corporation, click its corporate logo to display the Corporation Detail Report. To go back to the Corporate Summary Report, click the **Corp. Summary** button at the bottom of the detail report window.

Financial Overview

This shows the following financial information about the corporation:

- *Cash*. The corporation's cash.
- *Annual Revenue*. Total corporate revenue over the past 365 days.
- *Annual Profit*. Total corporate operating profit over the past 365 days.
- *Profit Graph*. The corporation's operating profit over the past 12 months.



Corporate summary report, Financial overview

Stock Overview

The Stock Overview shows information about the corporation's stock.

- *Stock Price*. The corporation's current stock price.

- *Equity Per Share*. Calculated by dividing the shareholders' equity in the corporation by the total number of outstanding shares of the corporation.
- *Earnings Per Share*. Determined by dividing the corporation's annual operating profit by the total number of outstanding shares of the corporation.
- *P/E Ratio*. Calculated by dividing the stock price by the earnings per share.
- *Dividend Yield*. Dividends are the distribution of a company's earnings to the stockholders. The dividend yield is a percentage calculated by dividing the dividend by the stock price.
- *Total Return*. Total return to shareholders is calculated by dividing the total return on one share over the past 365 days by the stock. This return includes the dividend received and profit gained from the rise of the stock price.
- *Stock Price Graph*. Shows the corporation's stock price over the past 30 months.



Corporate summary report, Stock overview

Firms Overview

This overview shows the total number of each firm of each type that the corporation owns.



Corporate summary report, Firms overview

Business Relations

Relationships between your corporation and other businesses are shown in several ways. These relationships are reported based on how much trade has been conducted between the two businesses.

- *YTD Trade*. The value of the trade between the player's corporation and the displayed corporation in the current year.
- *Lifetime Trade*. The value of the trade between the player's corporation and the displayed corporation during their lifetimes.



Corporate summary report, Business Relations overview

Corporate Detail Report

You can find most of the information about a corporation in the Corporate Detail Report. The following sections are available:

- Overview
- Firms
- Products
- Graphs 1
- Graphs 2
- Stock
- Balance Sheet
- Income Statement
- Technology
- Advertising
- Brand
- Dominance
- Statements

Overview

The Corporate Detail Report has the following overview sections:



Corporate detail report, overview sections

Management Overview

This shows the chairman and chief executive officer of the corporation. Under the Management title, it shows the business strategy of the corporation, which can be one of the following:

- *Diversified.* The corporation operates all kinds of firms.
- *Retail Focused.* The corporation opens only department stores.
- *Production Focused.* The corporation only produces products.
- *Stock Focused.* The corporation focuses on investing and speculating stocks of other corporations.

Financial Overview and Stock Overview

This shows some important financial and stock information. See "[Corporate Summary Report](#)" on page 12-7 for details.

Firms Overview

This shows the total number of each type of firm that the corporation owns.

Firms

This report shows the total number of each type of firm that the corporation owns and their annual revenue and profit.

Firm Type	Total	Annual Revenue	Annual Profit
Department Store	20	\$380,772,160	\$20,742,434
Factory	21	\$246,432,272	\$105,210,136
R&D Centre	8	\$0.00	(\$33,268,850)
Farm	6	\$32,488,862	\$11,117,180
Forestry Company	1	\$825,710	(\$1,196,829)
Mining Company	4	\$14,545,688	(\$4,852,418)

Corporate detail report, Firms section

- *Annual Revenue.* Total revenue of all firms of a specific type owned by the corporation over the most recent 12-month period.
- *Annual Profit.* The total operating profit of all firms of a specific type owned by the corporation over the most recent 12 month period.

The report explains which types of firms are your corporation's main profit generators. When you plan changes to your corporation, make sure you sustain the profitability of these valuable firms. On the other hand, you also find out which firms burden your corporation and limit its overall profitability. A shrewd manager finds this information critical to improving the company's profits.

This report reveals only the consolidated revenue and profit. If you need the profitability statistics for individual firms, refer to the Firm Summary Report (see [page 12-6](#)).

Products

This report lists the products that contribute to the revenue and profit of the corporation. It shows the following information about each product:

Product	Annual Revenue	Annual Gross Profit
Air Conditioner	\$44,304	\$7,384
Bed	\$18,262,116	\$10,155,900
Bottled Milk	\$6,222,494	\$4,370,288
Bread	\$17,626,760	\$8,895,458
Camera	\$5,627,254	\$3,304,989
Car	\$15,700,052	\$9,480,252
Car Body	\$15,000	\$12,738
Chemical Minerals	\$10,374,002	\$10,040,255
Chocolate Bar	\$95,918	\$14,319
Cigarette	\$64,158,820	\$38,401,812
Coal	\$82,339	\$84,595
Cola	\$49,445,340	\$24,964,240

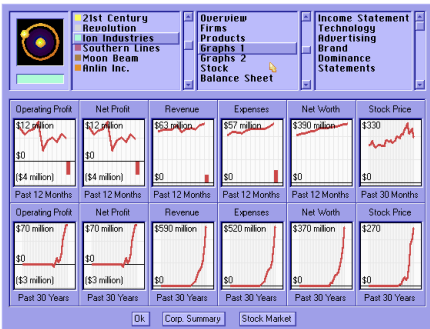
Corporate detail report, Products section

- **Annual Revenue.** Total product sales over the last 12-month period.
- **Annual Gross Profit.** Gross profit is the difference between the sales and the cost of the goods sold. Other operating expenses are not factored into this calculation.

In the default setting, the report shows all products being sold by the corporation. To limit the list to products that the corporation is currently producing, click the **Production** button at the bottom of the report. Also, you can click the **Retail** button to see only products that the corporation is currently retailing.

Graphs 1

This report contains 12 graphs. They show six different items about the corporation over two different periods: the past 12 months and the past 30 years.

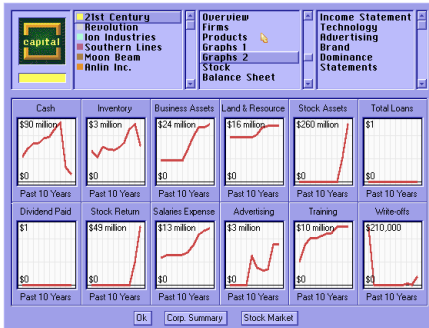


Corporate detail report, Graphs 1 section

- **Operating Profit.** A corporation's operating profit is the difference between the corporation's operating income and operating expenses. It tells how much the corporation has earned by producing and selling goods over a specific period.
- **Net Profit.** A corporation's net profit is the sum of the operating profit and other non-operating profits of the corporation. Because it includes the return on stock and increase in land value, this figure fluctuates when the stock price or the land value fluctuates.
- **Revenue.** The corporation's total operating revenue.
- **Expenses.** The corporation's total operating expenses.
- **Net Worth.** Net worth, *shareholders' equity*, of a corporation represents the resources invested by shareholders. It is the difference between a corporation's total assets and total liabilities.
- **Stock Price.** The price of the corporation's stock.

Graphs 2

This report contains 12 graphs. The graphs show the following information over the past ten-year period:

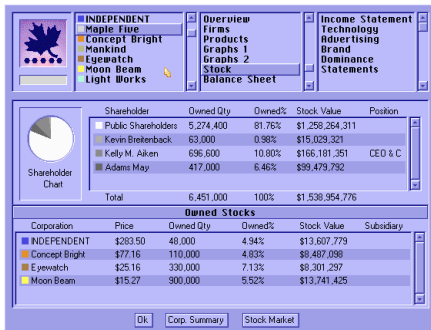


Corporate detail report, Graphs 2 section

- *Cash*. The amount of cash that the corporation has on hand.
- *Inventory*. The total value of all raw materials and goods stocked in firms owned by the corporation.
- *Business Assets*. The total value of all business buildings and facilities owned by the corporation.
- *Land and Resources*. The value of the land and natural resources owned by the corporation.
- *Stock Assets*. The total value of stock that the corporation owns.
- *Total Loans*. The total loans that the corporation has borrowed.
- *Dividend Paid*. The dividend paid each year.
- *Stock Return*. The profit gained from the rise of the price of the stocks owned by the corporation and the dividend received from these stocks.
- *Salaries Expense*. The corporation's total salary expenses.
- *Advertising*. The total amount of the corporation's advertising spending.
- *Training*. The corporation's spending on staff training and procurement of new equipment.
- *Write-offs*. The corporation's business assets and inventories which have been discontinued are treated as write-offs.

Stock

There are two sections in the Stock Report. The first section lists the corporation's shareholders and shows their shares in a pie chart.



Corporate detail report, Stock section

- *Shareholder*. The name of the shareholder.
- *Owned Qty*. The quantity owned.
- *Owned %*. The percentage owned, calculated by dividing the quantity owned by the total number of outstanding shares of the stock.
- *Stock Value*. The total value of the stock owned by the shareholder.
- *Position*. The shareholder's position in the corporation (CEO = Chief Executive Officer, CEO & C = Chief Executive Officer and Chairman).

A corporation can own stock of other corporations. The second section of the Stock Report shows the information about the stock that the current corporation owns.

- *Corporation*. The corporation name of the stock.
- *Price*. The current stock price.
- *Owned Qty*. The quantity owned.
- *Owned %*. The percentage owned, calculated by dividing the quantity owned by the total number of outstanding shares of the stock.
- *Stock Value*. The total value of the stock.
- *Subsidiary*. Whether the corporation listed is a subsidiary of the current corporation.

Balance Sheet

A balance sheet is a financial statement showing the corporation's assets (what the corporation owns), liabilities (what it owes), and the difference, called *shareholders' equity* or *net worth*.

Assets	Total (23 years)	YTD changes	Last Year Changes
Cash	\$288,712,896	(\$45,840,204)	\$78,416,992
Inventory	\$14,863,144	\$249,881	\$637,372
Business Assets	\$112,810,000	\$0.00	\$5,000,000
Land and Natural Resources	\$76,131,880	(\$68,039)	\$386,904
Stocks	\$44,625,628	\$221,012	\$12,418,108
Total	\$516,963,520	(\$45,437,552)	\$97,859,376

Liabilities	Total (23 years)	YTD changes	Last Year Changes
Bank Loans	\$0.00	\$0.00	\$0.00
Total	\$0.00	\$0.00	\$0.00

Shareholders' Equity	Total (23 years)	YTD changes	Last Year Changes
Common Stock	\$70,065,544	(\$3,583,881)	\$0.00
Retained Earnings	\$446,907,968	(\$41,853,872)	\$97,859,376
Total	\$516,963,520	(\$45,437,552)	\$97,859,376

Corporate detail report, Balance Sheet section

Note that the balance sheet shows the amount of each account in three different periods:

- *Total*. The total amount of the account
- *YTD changes*. Year-to-date changes to the account.
- *Last Year Changes*. Last-year changes of the account.

Assets

Anything of value owned by a corporation is regarded as an asset. Assets are classified into the following categories:

- *Cash*. The amount of cash that the corporation currently has.
- *Inventory*. The total value of all raw materials, intermediate goods, and finished goods stocked in firms owned by the corporation.
- *Business Assets*. The total value of all business buildings and facilities owned by the corporation.
- *Land and Natural Resources*. The land and reserves of natural resources that the corporation owns.
- *Stocks*. The total value of stock that the corporation owns.
- *Liabilities*. Anything that a corporation owes is regarded as liability.
- *Bank Loans*. The amount of money that the corporation has borrowed from banks.

- *Shareholders' Equity.* Shareholders' equity, *net worth*, of a corporation represents the resources invested by shareholders. It is the difference between a corporation's total assets and total liabilities.
- *Common Stock.* The amount of money that has been invested directly into the corporation by shareholders. The account increases when new shares are issued and decreases when the corporation buys back its shares.
- *Retained Earnings.* The earnings that have been reinvested back into the business after dividends are paid to stockholders.

Income Statement

The income statement shows the corporation's business results. The corporation's income, expenses, and profit are displayed in dollars.

Description	Current Month	Last Month	YTD	Lifetime (23 years)
Operating Revenue	\$3,601,320	\$9,325,461	\$55,750,728	\$573,135,040
Cost of Sales	\$1,474,998	\$3,188,731	\$21,437,378	\$189,302,436
Salaries Expense	\$882,640	\$1,511,950	\$11,262,104	\$152,598,576
Operating Overhead	\$500,000	\$500,000	\$6,300,000	\$80,131,616
Advertising Spending	\$462,804	\$370,884	\$4,595,449	\$49,611,992
Training and New Equipment	\$323,139	\$611,577	\$4,292,009	\$52,877,564
Write-offs	\$0.00	\$223,529	\$310,274	\$12,532,297
Operating Expenses	\$3,843,581	\$6,806,283	\$40,797,212	\$517,014,538
Operating Profit	(\$182,261)	\$1,519,178	\$5,353,516	\$56,120,502
Stock Return	\$0.00	\$0.00	\$0.00	\$0.00
Increase in Land Value	\$1,365	\$1,415	\$10,362	\$105,170
Loan Interest	(\$38,698)	(\$2,045)	(\$547,357)	(\$11,131,738)
Other Profit	(\$37,733)	(\$80,628)	(\$537,194)	(\$11,026,568)
Net Profit	(\$199,994)	\$1,438,549	\$6,416,321	\$45,093,944

Corporate detail report, Income Statement section

The balance sheet shows the value for each account during four different periods:

- *Current Month.* The value for the account in the current month.
- *Last Month.* The value for the account in the last month.
- *YTD.* The year-to-date value of the account; the amount accumulated since the beginning of the current year.
- *Lifetime.* The value for the account accumulated in the corporation's lifetime.

Operating Income

The total operating income of the corporation is the consolidation of the operating income of all firms owned by the corporation.

Operating Expenses

A corporation has the following types of operating expense:

- *Cost of Sales.* The consolidated cost of sales, which includes costs of all raw materials, intermediate goods, and salable products purchased by all firms owned by the corporation.
- *Salary Expenses.* This refers to the total salary expenses within the corporation.
- *Operating Overhead.* The fixed operating overhead of all firms owned by the corporation is reported here.
- *Advertising Spending.* The total amount of advertising spending by the corporation is reported here.
- *Training and New Equipment.* The corporation's spending on staff training and procurement of new equipment is reported here.
- *Write-offs.* Discontinued merchandise from the corporation's business assets and inventories are treated as write-offs.

Operating Profit

The operating profit of a corporation is the difference between the corporation's operating income and operating expenses. It shows directly how much the corporation has earned by producing and selling goods over a specific period. Since the ultimate goal of most corporations is to earn as much money as possible, this single figure means a lot to a corporation. Due to its importance, the annual operating profit of a corporation is also displayed in various other reports and screens for the player's quick reference.

Other Profit

The other profit section of an income statement includes the non-operating incomes and expenses of the corporation.

- *Stock Return.* The profit gained from the rise of the price of the stock owned by the corporation and the dividend received from this stock.
- *Increase in Land Value.* The increase in the value of land owned by the corporation.
- *Loan Interest.* The loan interest paid by the corporation to the bank.

Net Profit

Add a corporation's other profits to its operating profits to get the net profit of the corporation. It includes all sources of profit that a corporation generates over a specific period.

NOTE: Because the net profit includes the fluctuation of the value of the stock owned by the corporation, it may rise over time. Thus, it may not be a sufficient indicator of the actual profit-earning ability of the corporation. For this reason, when we refer to *profit* or *earnings*, it always means the operating profit instead of the net profit.

Technology

The Technology Report shows the following information about a product.



Technology report

- **Product.** The name of the product. If an asterisk (*) appears in front of the product name, the corporation is currently producing the product.
- **Current Tech.** The current production technology level of the product.
- **Top Tech.** The top production technology level of the product in the world. At the beginning, the top technology level of all products is 100. When a product with a higher technology level enters the market, the top technology level is updated accordingly.
- **Target Tech.** The target production technology level that is reached when the current research and development (R&D) plan is complete. Nothing is shown here if there is no R&D plan on the product.
- **R&D Progress.** The red bar shows the progress of the current research and development (R&D) plan. To the right of the bar, you see the duration of the R&D plan and the number of R&D units involved in the R&D plan. Nothing is shown here if there is no R&D plan on the product.

In the default setting, the report only shows technology information for products that the corporation is currently researching. To show the technology information for all products, press the All button.

For more information about production technology, see [“Manufacturing Unit” on page 11-10](#). For more information about R&D plans to improve your corporation’s production technology, see [“Research & Development Unit” on page 11-21](#).

Advertising

This report lists all the products advertised by the selected corporation. The following information is shown in the report:

Brand	Product	City	Brand Rating	Monthly Ad. Spending	Daily Ad. Freq.	Rating Points
Beer		Miami	65	\$500,000	3.96	80.61%
Desktop Computer		Cleveland	31	\$360,468	5.46	49.96%
Desktop Computer		Miami	52	\$500,000	3.96	80.61%
Shampoo		Accra	9	\$120,366	4.96	24.89%
Television		Miami	52	\$500,000	3.96	80.61%
Toothpaste		Cleveland	10	\$115,959	2.52	62.73%
Toothpaste		Accra	9	\$120,366	4.96	24.89%

Advertising report

- **Brand.** The color indicates who is the product’s brand owner.
- **Product.** The product being advertised.
- **City.** The city in which the product is being advertised.
- **Brand Rating.** The current brand rating of the product.
- **Monthly Ad. Spending.** The monthly advertising spending of the product.
- **Daily Ad. Freq.** The daily advertising frequency indicates the number of times a target audience is exposed to an advertisement in a day.
- **Rating Points.** A measurement of the portion of potential audiences receiving messages from a specific media vehicle. One rating point is equivalent to 1 percent of all of the potential audiences receiving messages from a specific media vehicle.

You can sort the list by product name or city name. You can change the sorting order by clicking on the buttons on the lower part of the report.

Brand

This report shows brand information of any corporation in any city instantly.



Brand report

The information in this report is straightforward. If you are not familiar with terms such as *brand awareness* or *brand rating*, see [“Brand” on page 5-5](#).

Switching Brand Strategy

This report is somewhat different from the other reports, because you can switch your corporation's brand strategy here. The selected button in the upper left indicates your corporation's brand strategy:

- *Corporate Brand*. A single brand covers all products.
- *Range Brand*. A brand covers a range of products.
- *Unique Brand*. Each product has an unique brand.

To switch to a new brand strategy, click the button you want. You are warned that your products will be labelled with new brands and brand ratings of all your products will be set to zero as a result. To proceed, answer **Yes** to start the brand replacement immediately.

Decide the brand strategy of your corporation at the beginning of the game. Switching brand strategy after brands have been established leads to a loss of the hard-earned brand rating. This also gives your competitors an advantage in competing with your products while you are re-establishing your brands.

Dominance

This reports the results of the corporation's market dominance in various industries and different markets. It shows the corporation's market share and position in each industry and market.

Industry	Leader Market Share	Market Share	Position
Retailing	25%	25%	1st
Manufacturing	33%	35%	1st
Farming	21%	17%	3rd
Raw Material Production	59%	59%	1st

Product Class	Product Name	Leader Market Share	Market Share	Position
Automobile	Car	24%	24%	1st
Chemical Products	Shampoo	20%	15%	2nd
Chemical Products	Toothpaste	30%	19%	2nd
Food	Bread	29%	29%	1st
Food	Chocolate Bar	53%	53%	1st
Food	Cookies	45%	31%	2nd
Food	Ice Cream	24%	24%	1st
Livestock Products	Egg	12%	12%	1st

Dominance report

You control the display range by clicking one of the three buttons at the bottom of the report:

- *All*. Show all industries and markets.
- *With Market Share*. Show only those in which the corporation has market shares.
- *Only Dominated*. Show only those which are dominated by the corporation.

Statements

This report shows financial statements, which are important in determining whether a corporation is gaining or losing ground in the

unending struggle for profitability and solvency. Each financial statement is explained below:

Description	Value	Position	Leader
Net Worth	\$564,381,504	2nd	\$591,205,696
Market Value	\$1,565,257,984	1st	
Cash	\$311,666,464	1st	
Annual Revenue	\$527,529,344	1st	
Annual Operating Profit	\$108,373,056	1st	
Annual Net Profit	\$119,903,616	2nd	\$134,719,840
Total Assets	\$564,381,504	2nd	\$591,205,696
Total Loans	\$0.00	4th	\$40,661,032
Stock Asset	\$63,835,076	3rd	\$576,932,608
No. of Years of Operating	23	1st	
Total No. of Employees	2,741	2nd	2,940
No. of Product Classes	10	2nd	12

Statements report

- **Net Worth.** The difference between the corporation's total assets and total loans.
- **Market Value.** The corporation's market value is calculated by multiplying the corporation's stock price by the total number of outstanding shares of the corporation.
- **Cash.** The cash that the corporation currently has on hand.
- **Annual Revenue.** The corporation's total revenue over the past 365 days.
- **Annual Operating Profit.** The corporation's total operating profit over the past 365 days.
- **Annual Net Profit.** The corporation's total net profit over the past 365 days.
- **Total Assets.** The sum of the corporation's assets. The individual asset details are shown in the corporation's balance sheet.
- **Total Loans.** The corporation's total bank loans.
- **Stock Asset.** The total value of stock that the corporation owns.
- **No. of Years of Operating.** The number of years that the corporation has been operating.
- **Total No. of Employees.** The total number of employees includes those working for the corporation in all firms.
- **No. of Product Classes.** The total number of classes of product which the corporation is currently producing.

- *No. of Product Types.* The total number of product types which the corporation is currently producing.
- *Return on Equity.* The annual return on the capital invested by the ordinary shareholders of the corporation as a percentage. It can be calculated by dividing the corporation's annual profit by the shareholders' equity of the corporation.
- *Return on Total Assets.* This is the percentage calculated by dividing the corporation's annual profit by the total assets of the corporation. It gives you a brief idea about the profit-generation efficiency of the assets of the corporation.
- *Dividend Yield.* The dividend yield is a percentage calculated by dividing the dividend by the stock price.
- *Total Return to Investors.* The total return to investors is a percentage calculated by dividing the total amount of return on one share over the past 365 days by the stock. The return includes the dividend received and profit gained from the rise of the stock price.
- *Operating Profit Margin.* The operating profit margin tells you how profitable the corporation's products are to manufacture and sell. It is a percentage calculated by dividing the corporation's annual operating profit by the corporation's annual income.
- *Net Profit Margin.* The net profit margin measures a corporation's profitability after all costs and expenses have been paid. It is a percentage calculated by dividing the corporation's annual net profit by the corporation's annual income.
- *Inventory Turnover.* The relationship between the corporation's annual sales and the value of the corporation's inventory. It indicates the number of times that the inventories "turn over" and can be calculated by dividing the corporation's annual sales by the value of the corporation's inventory.
- *Assets Turnover.* The relationship between the corporation's annual sales and the value of the corporation's total assets. It indicates the number of times that the assets "turn over" and can be calculated by dividing the corporation's annual sales by the value of the corporation's total assets.
- *Equity-to-Assets Ratio.* The equity-to-assets ratio is a measure of the financial strength of the corporation. A high ratio indicates that the corporation is financially healthy because its assets are mostly financed by the its own capital instead of loans. This ratio can be

calculated by dividing the corporation's equity by the corporation's total assets.

Person Report

The Person Report shows information about all persons active in the game. Some of these people compete directly with you in the marketplace while the rest are investors and speculators who are more interested in trading stocks than starting up businesses themselves.

You will see two browsers in the upper section of the report. The one on the left lists all of the people and lets you select which person's information you want to see. The one on the right is the topic selector, which lets you select the information to display in the report. The topics available include:

- *Summary.* Lists a summary of each person.
- *Career & Wealth.* Displays the person's career & wealth status.
- *Personality.* Displays the person's personality.
- *Score.* Displays a person's game score.

Summary

This report displays the person summary information. The information displayed includes:



Person summary report

- *Character.* The character determines how the person manages his/her business. Character is described as: conservative, moderate, aggressive, or very aggressive.

- **Job Title.** Job title refers to whatever titles the person has earned through running or acquiring companies. CEO stands for Chief Executive Officer.
- **Corporation.** The corporation which the person is operating.
- **Cash.** The total cash this person owns.
- **Stocks.** The total value of stocks this person owns.
- **Total Wealth.** - This person's total wealth, calculated by adding the value of the cash and stocks.

Wealth

The information shown in this section covers the following areas:



Wealth report

Personal Wealth

- **Cash.** The total amount of cash this person owns.
- **Stocks.** The total value of stocks this person owns.
- **Total.** The person's total wealth including cash and stocks.

Stocks Owned

- **Corporation.** The name of the corporation whose stock is owned.
- **Price.** The current price of the stock.
- **Owned Qty.** The quantity of stock.
- **Owned %.** The percentage owned is calculated by dividing the quantity of the stock owned by the total number of outstanding shares of the stock.
- **Stock Value.** The total value of the stock.

- **Position.** The position the person holds in the corporation. (CEO = Chief Executive Officer; CEO & C = Chief Executive Officer and Chairman)

Career

- **Corporation.** The corporation which the person is operating.
- **Job Title.** Whatever titles the person has earned through running or acquiring companies. CEO stands for Chief Executive Officer.
- **Years of Service.** The number of years the person has been working for the corporation.

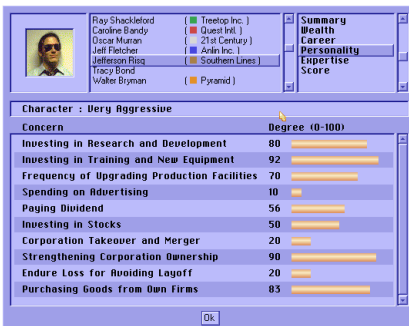


Career report

The report also displays information about hiring. See [Chapter 9, "Personnel Management,"](#) for details.

Personality

In the game, each computer player has an individual personality. See [Chapter 9, "Personnel Management,"](#) for details.



Personality report

Expertise

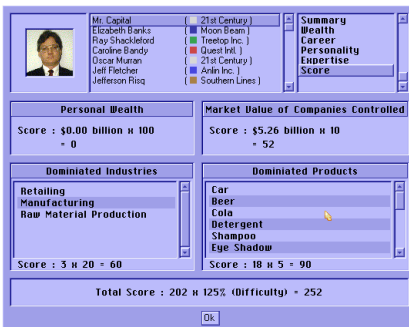
If you set the Competitor Expertise Level option in the new game setting menu to on, some of the computer players will have expertise. This report shows the expertise of individual computer players. See [Chapter 9, "Personnel Management,"](#) for more information.



Expertise report

Game Score

A person's game score is determined by the following criteria:



Game Score report

- The wealth of the person.
- The market value of the corporations controlled by the person.
- The number of industries dominated by the person's corporations.
- The number of products dominated by person's corporations.
- The difficulty rating of the game.

- In a scenario game, if the player has achieved all the goals, the player will be rewarded with a bonus score.
- In a normal game, if the player has been in the game for more than 50 years, the game score decreases accordingly. This rule keeps the player from obtaining a high score simply by accumulating profit as time passes.

Billionaires 100

This report shows the top 100 billionaires in the world, including such famous names as Bill Gates and Queen Elizabeth II. If your wealth makes you eligible to enter the chart, you see your name next to those celebrities. That honorable achievement deserves to be recorded.

Name	Wealth (\$Billion)
1 Sultan of Brunei	\$37.00
2 Walton family	\$23.00
3 Mars family	\$14.00
4 Moni family	\$13.00
5 Newhouse family	\$10.00
6 King Fahd Bin Abdulaziz	\$10.00
7 John Werner Kluge	\$8.00
8 Rausing family	\$8.00
9 Queen Elizabeth II	\$7.00
10 Teichi Takemaka	\$7.00
11 Sheikh Jaber	\$7.00
12 William Gates III	\$6.00

Billionaires 100 report

If you want to see only billionaires who appear in the game, you can select the **Local Billionaires** option in the upper right corner of the report.

Financial Report

If your firm is losing money, you probably want to find out why. You can call up the Financial Report, which displays one of the following financial statements for the highlighted firm:

Description	Current Month	Last Month	YTD	Lifetime (18 years)
Salaries Expense	\$69,660	\$215,946	\$1,591,408	\$49,462,126
Operating Overhead	\$100,000	\$100,000	\$700,000	\$22,480,644
Training and New Equipment	\$5,055	\$28,072	\$205,584	\$4,252,379
Write-offs	\$0.00	\$0.00	\$0.00	\$0.00
Operating Expenses	\$178,715	\$344,018	\$2,496,992	\$76,195,144
Operating Profit	(\$178,715)	(\$344,018)	(\$2,496,992)	(\$76,195,144)

Financial report

- Corporate Balance Sheet
- Corporate Income Statement
- Firm Income Statement

For help with the financial terms used in these statements, see [“Balance Sheet” on page 12-16](#) and [“Income Statement” on page 12-17](#).

If no firm is highlighted or if you don't have the right to inspect the financial information of the highlighted firm, the Financial Report won't show anything.

Goal Report

The Goal Report shows the goals you are working toward and your progress toward achieving those goals.

Goal	Target	Current	Achieved
Annual Revenue of Your Corporation	\$200 million	\$306 million	Yes
Your Ownership of Your Corporation	50%	2%	

Goal report

Normal Game

In a normal game, the ultimate goal is to dominate all industries. The **Target** column lists the names of industries and the **Achieved** column shows whether or not you have dominated the industry.

Scenario Game

In a scenario game, the Goal Report shows the total number of years you have to complete the scenario, as well as the number of years that have passed since the beginning of the game. The difference between these two numbers is the number of years you have left to achieve the goals. You lose the game, if you cannot accomplish all the goals within the allotted time.

There can be one or more goals for you to accomplish. These goals are listed in the Goal Report. The **Target** column shows the target value of the goal, the **Current** column shows your current value, and the **Achieved** column shows whether or not you have achieved that goal.

For example, suppose the goal description column reads Annual Operating Profit of Your Corporation, the target column is \$100 million, and the current column is \$16 million. These values would indicate that your corporation's annual operating profit must reach \$100 million in order to complete the goal but that they are currently only \$16 million. From this information you can estimate how far you are in meeting the scenario goal.

A Shortcut Keys

Key	Action
1	Product Summary Report
2	Product Detail Report
3	Firm Report
4	Corporation Summary Report
5	Corporation Detail Report
6	Person Report
7	Billionaires 101 Report
8	Financial Report
9	Goal Report
0	News Log
F1	Manufacturer's Guide
F2	Farmer's Guide
F3	Manager's Guide
F4	Layout Plan Library

Key	Action
F5	Previous Firm
F6	Next Firm
F7	Stock Market
F8	Financial Action
Q	Frozen Speed
W	Slowest Speed
E	Slow Speed
R	Normal Speed
T	Fast Speed
Y	Fastest Speed
N	Set Newspaper Display Options
M	Toggle Newspaper Display Options
A	Toggle Auto Apply R&D
I	Toggle Default Internal Sale Setting
C	Toggle Consider Tender Offer
D	Display Game Settings
Z	Toggle zooming in and out of the regional map
L	Load Game
S	Save Game
Esc	Abort Game
Alt-Q	Quit to DOS

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