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It is my hope that you find the file of use to you personally – I know that I would have liked to have found some of these files years ago – they would have saved me a lot of time !

Colin Hinson

In the village of Blunham, Bedfordshire.



# Diskette Software

Model PHD 5018

# Market Simulation

A game which helps you understand how  
businesses operate.  
You and your opponent are faced with these  
decisions:

- Can you profitably build more products?
- Should you increase your advertising budget?
- Do you raise your prices?

The choices you make determine whether your  
profits increase or your company goes bankrupt.

Designed for use with the TI-99/4 Home  
Computer and the TI Disk Memory System (TI  
Disk Drive Controller and TI Disk Memory Drive  
— sold separately).

As this manual was designed for the U.S.  
market, the warranty conditions described  
herein are not applicable in the U.K. The  
only valid Guarantee Conditions are those  
set forth in the "Users Reference Guide"  
accompanying the Home Computer.

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Portions of the "Market" program from the Huntington Two Computer Project and used with the permission of the State University of New York.

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## MARKET SIMULATION

## Description

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Author: Texas Instruments

Language: 99/4 BASIC

Hardware: 99/4 Home Computer  
Disk Controller and Drive or Cassette Recorder

Media: Diskette and Cassette

Market Simulation is an educational game which allows two people to compete in a simulation of the market place. Each competitor has his own company. Both sell the same product. The cost of building the product, the cost of storing inventory, the cost of borrowing money, and the number of products that can be sold each quarter without the benefit of advertising are the same for each company.

Each company's success is determined by how well the player manages the production level, the advertising budget, and the pricing strategy. The competitors have an opportunity to alter business policy each quarter. Decisions are made based on information displayed on the screen each quarter: net profit, percentage of market share, costs, inventory size, cash, and accumulated assets. The effects of policy decisions are also revealed each quarter when the changes to these items are displayed.

Another factor affecting the company's success is the random events that happen to every business and cause unexpected delays in product shipments or unforeseen expenses. The computer determines when such an event takes place and what its effects are.

The game ends when one company accumulates 12 thousand dollars in assets or is bankrupt.

Making a business profitable depends on many factors such as the quality of the product sold, its attractiveness to the consumer and the economic climate. Because some of these factors are difficult to assess and duplicate in a game, Market Simulation uses a simplified model of the competitive market place. The game is based on an analysis of the relationship of production costs, advertising, and pricing.

Manufacturing costs are crucial in determining whether a company can make a profit. Fixed expenses, such as rent or depreciation, real estate taxes, property insurance, and cost of capital equipment used in production, do not vary regardless of the number of units produced. Variable costs, which include the cost of materials used in building the product and the wages of the workers who build the products, change depending on the quantity of goods being produced. Other costs, such as operating costs, maintenance of facilities, storage, and selling expenses, also affect the selling price of a product and, in turn, the profits a company can make.

If the production costs are high, a selling price which returns a profit to the manufacturer may be above the price that a consumer would ordinarily pay. At this point, advertising comes into play. Advertising increases the consumer's awareness of and desire for the product and overcomes the hesitancy to purchase. Markets for products are often enlarged and sometimes created by advertising. A wise business manager determines the effect advertising has on a particular product and then decides how large the advertising budget should be to maintain maximum profits.

Pricing of a product obviously affects sales volume and, therefore, the profits generated. A price that is too high may not attract enough customers to generate sufficient profits for the business to grow. A price that is too low may give the company a large market share, but no profits.

Occasionally, the cost of producing a product becomes so high that increased advertising may not change the consumer's reluctance to purchase. At this point, the sales of the product and maybe even the company itself begin to decline. Unless the company finds a way to decrease production costs, it may become bankrupt.

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STEP 1: If the computer is not already in the BASIC mode, select TI BASIC. To load the program from a diskette, insert the diskette into the disk drive, type

OLD DSK1.MARKET

and press ENTER.

To load the program from a cassette tape, insert the cassette into the recorder, type

OLD CS1

and press ENTER. The computer then displays directions for loading the tape. Refer to "Loading Cassettes" if you have difficulty in loading the program from the cassette.

NOTE: Copies of the program are located on both sides of the tape. If for any reason you experience trouble loading the program, try again, using the other side of the tape.

STEP 2: When the cursor reappears, type RUN, and press ENTER. When the MARKET SIMULATION title screen appears, press ENTER.

A synopsis of the game is displayed. Read this carefully, and press any key. The computer prompts you to choose whether you wish to begin a new game or continue a game in progress.

If you wish to begin a new game, enter 1. If you choose to continue a game, enter 2. If you select option 2, the computer prompts you to enter the amount of cash and inventory that Company 1 and 2 had when the game was stopped. You then enter the variable product cost that was in effect when the game was stopped. Finally, you enter the quarter number with which you wish to resume the game.

Once you have determined whether you will play a new game or continue an old one, data on fixed and variable costs, selling level, storage fees, and interest charges are

displayed. Only the variable cost (production cost per unit) changes as the game progresses. Remember these figures because they affect the cost of producing your product. When you have finished reading this display, press any key to begin the game.

STEP 3: A three-part display appears on your video screen. The first part displays the following financial information for two quarters:

PROF	Profit
M%	Market share
CASH	Cash on hand
SOLD	Number of products sold during this quarter
INV	Number of products on hand at the end of the quarter
ASSET	Combined value of the inventory and cash

The middle part of the display is reserved for messages which affect the data entered in the game or signal the end of the game.

The bottom part is used by each player to enter the production level or the number of products to be built this quarter (PRD LEV), the advertising budget (ADV BUD), and the unit price of the product (UNI PRI). The data entered here is determined by the information displayed for the last quarter on the upper portion of the video screen. After each competitor has entered the data, the effects of the business decisions are displayed in the new quarter. In turn, this quarterly information and any messages displayed in the middle of the screen are used as the basis for decisions for the next quarter.

The game is over when either company reaches \$12,000 in assets or is bankrupt. If you and your opponent do not have time to finish the game, it may be continued later. Write down the pertinent data for each company: cash and inventory. Also record

the variable production cost and the last quarter number. Press SHIFT C (CLEAR) to stop the program. To begin the game again, load Market Simulation and enter RUN. Select the option for continuing an old game, and enter the necessary data.