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HOW TO PLAY THE STOCK MARKET GAME

This program is a model of the stock market. You can buy and sell shares in eight companies. As the market changes, the stock in these companjes will go up and down in value.

The computer will show four graphic displays to help you make good buying and selling decisions. The DOW-JONES shows the narket trends, the STOCK CHARIS show each company's stock, and your porteonio lists all the stocks you Own. The BIG BOARD shows a sumary of trading.

## OPERATING YOUR COMPUTER

To load, turn computer on, insert your Data Pack into Drive I only. Press the Computer Reset Button.

Then the tape stops and the screen turns black, type RUN and press <RETURN>.

If your computer is turned off or if power is interrupted, the program will be lost from the computer memory, To load the program again, just follow the loading directions.

NJMBER OF PLAYERS (I-6)
The program will accomodate up to six players. Type the number of players now. ENTIRE GAME IS PLAYED WITH UPPER CASE LerPers. To play the game alone, just type one (1).

TYPE NAMES

Now type the name of each player (up to ten letters long). Press the <RETURN> key after typing each name.

HOW MANY WEEKS?
Each turn in the game is equal to one week's trading on the stock exchange. select a short game for a start. Type the number of turns or weeks, and press the <RETURN> key. A long game of 15 to 20 weeks with many players could take several hours to complete.

After you enter the number of weeks into the program, the computer will take a few seconds to create a simulation of the stock market. A DON-JONES average and stock performance charts for eight companies will be calculated
for each of the past five business days.

## THE DOW-JONES AVERAGES

This frame in the program shows the average price of all stocks for the past week. If the graph is going up, then stock prices are rising and you would probably be making a profit on any stocks you own. If the market is moving down, your stocks could be making less profit or even losing money.

The prices across the cop of the graph show the highest and lowest values the Dow has had thus far in the game, the curcent value, and the change for the week.

PLAYER, STOCK, X OR D

The words at the botton of the screen are reminders telling you your choices. When this line appears at the bottom of the screen, you can type a number and see a portfolio, a stock letter to see a stock chart, an X to see the BIG BOARD, or a D to see the Dow.

Player numbers are used to select each player's portfolio. Type a one (l) to see the stock portfolio for player number one. You begin the game with $\$ 50,000$ in cash, as shown at the top of your screen. The figures in the center show the performance of eight stocks and the value of any shares you own.

We'll return to your portfolio and buy stocks in just a moment. Now press (D) and go to the DOW.

Stock charts are the next option listed in the line at the bottom of the screen. These charts are available to you at any time and you'll want to look at them often to see how the value of the stock is changing. Type the letter (M) now and see the stock performance chart for Municipal power and Light, one of the eight companies whose stock you will be trading.

The figures across the top of the chart show the highest and lowest values the stock has had since the game began, the three initials of the company, the current price of the stock, and the change in price on the last trading day. If the last number is positive, the stock has increased in value.

Now press (D) again to return to the DDW.
(X) is used to signal that you wish to see the BIG BOARD.Press (X) now and get a printout of all the latest stock prices with the high, low, and last price of the stock along with the move or the change from last trading day. This display also shows the assets for each player. press (D) again to return to the Doiv.

GO signals the program that you wish to advance the market one week. Before you can go ahead to the next week or turn in the game, each player must have a chance to buy or sell stock. A review of the player's portfolio signals
this opportunity.

## THE STOCK CHARTS

The secret of success in playing this game and in making money on the real stock exchange is knowing what direction a stock will take. Experienced stock traders believe that you can predict the future direction of a stock by looking at a graph of its past performance. You can test this theory yourself. Look at the stock charts for all eight companies and see if you can predict which ones will be the best to invest in.

Go through the following list carefully. Type the first letter of the company name (like M for Municipal Power and Light) to see the stock chart. Compare the performance shown on the graph with these descriptions of each company:

MPI Municipal Power and Light is a publicly regulated utility providing steady growth at the lowest possible risk. Investors in this type of stock tend to be looking for long term gains. You won't get rich overnight by owning MPL, but then you won't lose your shirt either.

UMC United Motors Corporation You remember the old saying, "As goes General Motors, so goes the market". UMC, like GM is a blue chip stock, a steady performer representing big business. It tends to follow the DOW-JONES average more closely than some of the more speculative stocks.

FEC Fast Foods Corporation. Even though new competitors seem to appear on a daily basis, FFC continues to be the leader of the nation's fast food franchise business. It is enjoying increasing profits in an ever growing industry.

COM Computer Communications has long been one of the leading suppliers of telecommanications for the nation's computer networks. More recently, it has diversified by becoming a major marketer of small business and personal computers.

REC Reacreation IUnlimited is one of the nation's largest manufacturers of sports equipment, and has taken good advantage of recent booms in tennis and running. It is a glamour stock, so its price is often inflated by speculation.

PII Pearson-Ives Laboratories, or "Pill" as it is known to insiders, is somewhat of a sleeper because it seldom grabs the headlines or stirs people's inagination. As a pharmaceutical in the expanding medical business, it has very good growth potential and xeasonable high risk.

OTI DEfshore Industries Ita, has been a glamour issue involved in various innovative industries including ocean sea farming, oil exploration and thermal energy production. Successes in any of these areas tend to send its stock soaring. However, failures have almost the exact opposite effect.

LMM Lunar Mining and Manufacturing. This highly speculative stock has questionable financial backing. However, recent scientific advances and rumors could send LMM stock far above its current value.

Each of these companies has been programmed to behave differently. They are listed here in order of their calculated risk. Municipal power and Light having the lowest risk and Lunar Mining and Manufacturing the nighest.

HOW TO BUY OR SELL STOCKS

When you are ready to buy or sell stocks, type your player number. Your portfolio of stocks and a listing of your cash assets will be displayed on the screen. Now select a stock to invest in. The column labeled "Move" shows which shares have gained or lost money. For your first investment, pick the company whose stock has increased the most, with the largest number in the Moved column and type (B) for buy.

Now type the first initial of the stock you wish co buy. The stock chart will appear so that you can be sure of your decision. If you change your mind, press <RETURN>.

Type a number like 25 and then press <RETURN>. The computer will sell you 25 shares in the company you've selected. Your portfolio will reappear after a transaction is completed.

You can buy stock in as many companies as you wish.
If you try to buy more stock than you have cash to pay for, the program will ask you for another quantity. You could then sell stock to raise cash or buy fewer shares.

The broker's fee in this program is always $2 \%$ of the value of the stock you have traded. Each time you buy or sell a stock, this fee is deducted.

Negative numbers in the Move column mean that a stock has dropped in value for the week. You can also make a profit on these stocks by selling short, a technique that is described later.

When all players have typed their player numbers and bought or sold stock, type $D$ and return to the DOW.

HOW TO ADVANCE THE DOW

After the current DOW is displayed, type (G) to advance the stock rarket through the next week of trading.

If any of the players has not looked at his portfolio, the Dow won't advance. Each player must at least review their portfolio each week.

While the program is advancing the DOW, it is also adjusting the daily price of each company's stock. This adjustment is based on a special algorithm or Eormula within the program that considexs the motion of the DOW, the stability factor for each company, the public inood, and the
curcent trend of the stock's movement in the market.
After the market has advanced, a new round of trading begins and each player may buy or sell more shares. See if your stocks have gained or lost value over the past week. Then look at the stock charts and see how the companies have per formed.

Aster each player has checked their portfolio and traded any stocks they wish, advance the stock market another week.

## SELTING SHORT

The classical principal of trading stock is to "buy low and sell high". When you own stock, you are anticipating a profit through an eventual price increase. You can also make a profic on stocks that decrease in value by selling short.

The procedure for selling short is the same as for selling stiock you already own. pick a stock you think will go dow in value and type the number of shares you wish to "sell". Your portEolio will show a negative number of shares owned and a negative total value.

Money from your cash account will be shifted to a deposit account and money from the sale of the stock will be put into a reserve account. These two new accounts will be added to your portfolio.

If the stock goes down (as you predicted) you will make money.

## BANKRUPTCY

A company will go bankrupt if the price of its stock goes to zexo. If this happens, all stock in the company is worthless.

If you sell a stock short and the company goes bankrupt, you will be assured of a large profit. If you own shares, you will lose your investment.

EMDING THE GAME

After you've completed the number of weeks selected at the beginning, the BIG BOARD is displayed automatically, along with Einancial statements on each player. Naturally, the player with the most money is the winner. If you would like to continue the game, just select ( $Y$ ) and the simulation will be excended for another week. Selecting (iv) ends the game.

PROGRAM NOTES

As a teaching aid, a proving ground for stock trading techniques, or simply as a game, this program is designed to be easy enough for children to play and accurate enough for
the experienced stock traders.
The computer simulations that cause the market to fluctuate use a variety of curve fitting techniques to mimic a random period of economic history.

Each of the eight companies is controlled by a slightly different algorithm in this computer simulation of the stock market. The companies will vary from blue chip to speculative ventures and, on the average, act as predicted as described earlier in this manual.

We hope that you enjoy The Stock Market Game, and that you will find your computer offers other challenges to your imagination and skill.

## CARE AND HANDLING

Keep the enclosed magnetic recording away from magnetic fields, transformers, power supplies, motors, etc. so that the program will not be erased. Always protect magnetic cassettes from temperature and humidity extrenes.

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