# Make Millions™

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## ght Notice



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## A Note from the Authors

*Make Millions* is a business adventure game. It takes place in a carefully designed environment that encourages decision making and risk taking. A story line and graphics provide incentives to help any executive—or would-be executive—through the occasional economic slumps.

The game is designed to minimize the usual "data-intensive" feeling of an economics simulation. Instead, you are encouraged to train a group of five managers, who do the routine number crunching. *You* do the "what-ifs."

**G. Richard Fryling**

**Arthur Lewbel, Ph.D.**

**Thomas F. F. Snyder**

## A Note from the Economist

Economists, like computer programmers, can only construct highly simplified models of reality. Life is complicated. Students of economics can best get a feel for and an understanding of the complicated processes involved by playing with well-designed models of them. Good models preserve the essential richness and complexity of life while omitting the endless details of reality.

*Make Millions* is such a model. At its core is a model of how managers, companies, stock markets, and economies operate. Laid over this core is another model—that of modern corporate life. By playing *Make Millions* you will see how the business and financial worlds operate. You will also get the feeling of being a big-time investor and corporate president. That feeling is what good models strive for. It is an exciting feeling, but it also constitutes true learning and understanding. An educational game can have no higher aspiration than this—to be a good model.

**Arthur Lewbel, Ph.D.**

## Contents





# I. The Scene

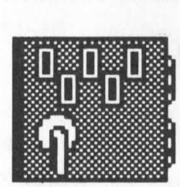
You ignore the ringing phone. Let the machine take a message. You need a break. Your life has become increasingly hectic since you acquired your third Aloha company—visits to the factories, urgent phone calls from company managers, risky stock ventures, and the constant, ominous threat of Humungus, Inc.

As you lean back in your chair you temporarily forget the emergencies of the moment and stare at the portrait of your father on the wall. His eyes seem to stare back. Why, after all these years, did he call you back to Wiki-Wiki Island from the mainland? The letter had said that the time had come—whatever that meant. Your father needed you immediately.

But he was nowhere to be found. The office was empty, yet no one was surprised to see you. In fact, you seemed to be expected, and you were quickly caught up in the relentless stream of activity.

The answer rests in the safe, its contents tightly locked away. You look at the three keys neatly fitted into three of the safe's five locks. The two empty keyholes represent the final two companies of the Aloha guitar empire. Own them and you own the answer.

These thoughts last only a moment. The phone wakes you up from your brief reverie. Humungus is buying up shares of Aloha Music. It already owns 20% of Aloha Lumber. And now you face a worker walkout at Aloha Guitar Manufacturers. Your work is far from over.



YOUR GOAL:
To discover
the contents of
the office safe.

To open the safe you will need five keys, one from each of the companies in the Aloha Guitar Empire.

LI AWC AGM ADO AMS

n Lumbering Incorporated
oha Woodshop Company
Aloha Guitar Manufacturers
Aloha Distributing Organization
Aloha Music Stores

be able to run an Aloha company, you must:

quire at least 30% (15,000 shares) of the available stock in that
mpany, and
wn more stock in that company than your competitor, Humungus,

obtain a key from a company, you must own a *majority interest* of
ock. This means you must accumulate more than 25,000 shares.

## NG MILLIONS

ake enough money to acquire the Aloha companies, you must wisely. You begin the game with approximately $250,000 in cash. ailable cash is automatically invested in Treasury Bills, so you will ning interest even if you do nothing. The faster way to make , however, is to invest in the local stock market. The island includes the Aloha companies, which you can own and run, as other companies, which you can never control.

n you have at least 15,000 shares of a company, you can see and its operations. You can get dividends and increase the value of ock by running Aloha companies profitably.



# II. Playing the Game

To activate an item on the screen, move the arrow to an item and click the mouse. (For more information on using Macintosh controls, see the *Mac Help Guide* on the command card in this package.)

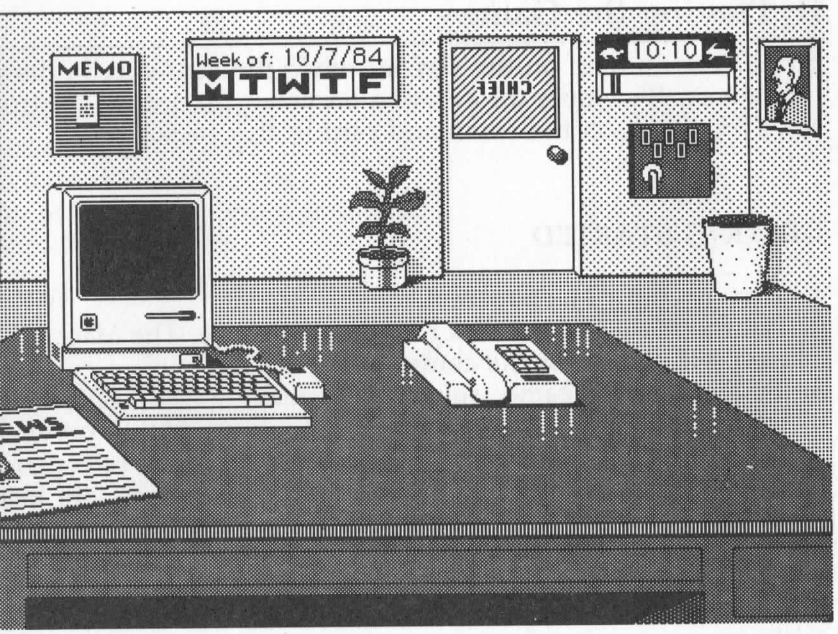
## GETTING STARTED

1. Turn on your Macintosh.
2. Put the *Make Millions* disk into the disk drive. The *Make Millions* game icon will appear in the center of the screen.
3. To start a new game, select and open the *Make Millions* game icon (click the mouse twice rapidly). To continue with a previously saved game, first open the *Make Millions* disk icon, then select and open the icon corresponding to the saved game. The game will load and the credits will roll by. (To skip the credits, click the mouse button as they begin.) If you select a saved game, you will immediately be put in your office to continue your game. Otherwise, you will see a menu with the choice **Play New Game** or **Load Old Game.**
4. If you are playing a new game, select **Play New Game.** A window will then appear asking you to type in your name. Type your name and hit **RETURN.** Your office will appear on the screen and you'll be ready to play.

## YOUR OFFICE

Until you become an owner of one of the Aloha companies, most of your time will be spent in your office. Here you can:

- talk to your stockbrokers and advisers
- buy and sell stocks
- check on current events
- keep tabs on the economy
- take advantage of the programs in your desktop computer




Your wall clock shows the time of day. You can speed up or
n how fast time goes by in the game by using the mouse to
lever underneath the time.
*up time,* slide the lever to the right, towards the rabbit.
*down time,* slide the lever to the left, towards the turtle.

*ar.* Your wall calendar shows the current week and day.
the rate that time passes will affect how fast you move
week.
ings in *Make Millions* happen on a weekly basis. Changes in
es and company plans occur at the end of each week. Since
on in the game changes each week, you will have to be sure to
hing you want to do before the week ends.

*per.* Your newspaper, *The Island Business Gazette,* will keep you



informed about current events, stock prices, and the economy. This newspaper is issued weekly and is three pages long.

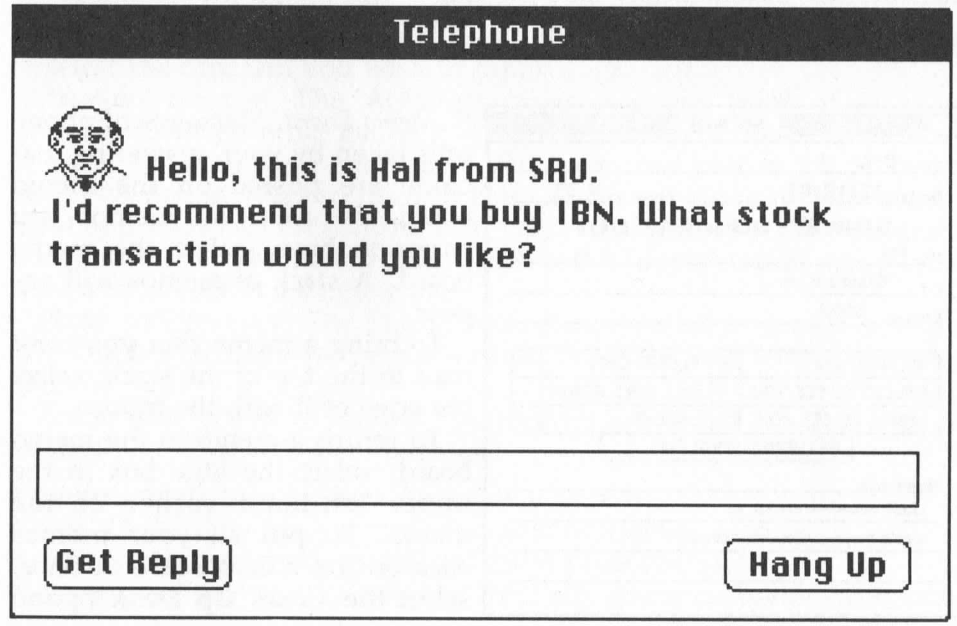
To turn the pages of the newspaper, click the triangles in the upper corners of the newspaper pages.

*Page One* of the newspaper contains a short, one-sentence, top story of the week.

*Page Two* of the newspaper has the stock market report for the week.

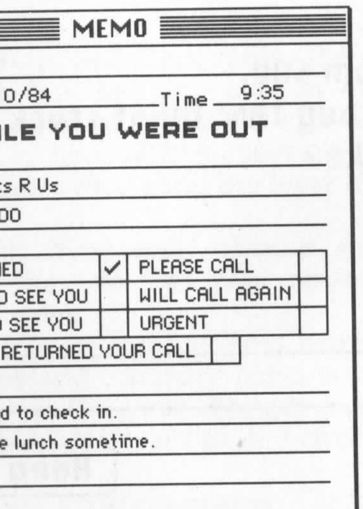
*Page Three* of the newspaper is a report on the economy of the island. (For a more detailed description of the economic report, see the Economics Dictionary and the Stock Market Strategies sections of this manual.)

*D. Telephone.* A short, repeated beeping sound indicates that the phone is ringing. You can hear the phone ringing and answer it only when you are in your office. If the sound of your Macintosh is turned down, the



at the top of the screen will flash when the telephone is
o answer the phone, select it while it's ringing.
e a phone call yourself, select the phone. The phone window
r. Type in the phone number of the person you wish to call
the **Get Reply** option (or hit **RETURN**). To hang up the
ny time, select the **Hang Up** option.
e sure that you are understood in a phone conversation, make
onses simple and clear. The main words you will use in phone
ons are **BUY, SELL, SHARES, YES, NO, ALL,** and the initials
ies. When a conversation is completed, you must hang up
e to close the phone window.
vant to completely avoid outside interruptions, you can select
nnect Phone** option from the **Special** pulldown menu. This
letely shut down the phone system—no calls and no mes-

do not answer the phone while it's ringing, your answering
vill automatically take the call. It will record the caller's name
er and post a message on your memo board.




*E. Memo Board*. Messages of phone calls taken by your answering machine are posted on the memo board. To see what memos you currently have, select the memo board. A stack of memos will appear.

To bring a memo that you can't read to the top of the stack, select the edge of it with the mouse.

To return a memo to the memo board, select the little box in the upper left-hand corner of the memo. To put all your memos back on the memo board at once, select the **Clean Up Desk** option



from the **Special** pulldown menu at the top of the screen. This option will put away everything on your desk.

To throw away a memo, drag it to the wastebasket and release it there. To throw away all the memos on your desk, select the **Throw Away Memos** option from the **Special** pulldown menu.

Memos left on the memo board will not be thrown away immediately. Your memo board can hold up to six memos at any one time. After the total reaches six, when new messages are taken old memos will be thrown away. Memos on your desk are not updated. Be sure to check your memos often and discard those that you don't need.

*F. Desktop Computer*. Your *Make Millions* office computer comes with three programs:

- an Accounts program
- a Phone Book file program
- a Spreadsheet program

To turn on the computer, select it with the mouse. Then use the mouse to select the program you wish to run.

*Accounts program.* The Accounts program keeps track of all your personal finances in the game. It shows how many shares of each kind of stock you hold, how much gold you have, and how much cash you have invested in Treasury Bills. It lists the current value of each investment and your Net Worth (the total value of all of them). The program also shows your Max Net Worth, which is the largest sum of money you were ever worth in a single game.

*Phone Book program*. The Phone Book displays a list of people you can call. The list includes the person's name, business, and telephone number.

*Spreadsheet*. The *Make Millions* Spreadsheet has access to a data base of information. This data base contains:

- the information from your Accounts program
- most of the data from current and past economics reports
- current and past stock prices and stock price changes
- current and past factory variables from any Aloha companies you own

and past manager estimates from any Aloha companies you

preadsheet to read, compare, summarize, and analyze eco-
ancial, and company data. (To learn more about the Spread-
"Using the Spreadsheet" on pages 27 to 32.)

. Select the office window to look out of it. This is where you
r weekends and vacation. This view allows you to quickly see
loha companies. Signs on each of the company buildings show
ou, Humungus, Inc., or neither of you owns the company.

electing the office door allows you to leave the office, view the
ies, and visit ones that you own.

*I. Safe.* The safe contains the answer to the puzzle of why you were summoned to the island. You cannot open the safe until you have all five keys.

The **Special** pulldown menu contains these helpful features
ffice:

**p Desk**
**Away Memos**
**lant**
**ect Phone**
**oor**

n, you may take a four-week vacation once a year by selecting
**acation.**

he **File** pulldown menu contains the **Save, Open,** and **Quit**

e apple pulldown menu contains some useful Macintosh fea-
luding a calculator, a notepad, and a realtime clock.



## BUYING STOCKS

Stocks are traded by calling a broker on the phone. You tell the broker:

- to buy or sell
- the name of the company
- how many shares you wish to deal.

Examples of acceptable sentences might be **I would like to buy 3000 shares of gold, BUY 1000 SHARES IBN** or **sell all ado.** Be sure to put spaces between words, give only one transaction at a time, and hang up only when your transaction is completed.

The newspaper contains news about the companies and weekly changes in stock prices. The Accounts program in your desktop computer will automatically update your stock portfolio and calculate your Net Worth each week. The data base in the Spreadsheet program in your computer also stores newspaper and company data.

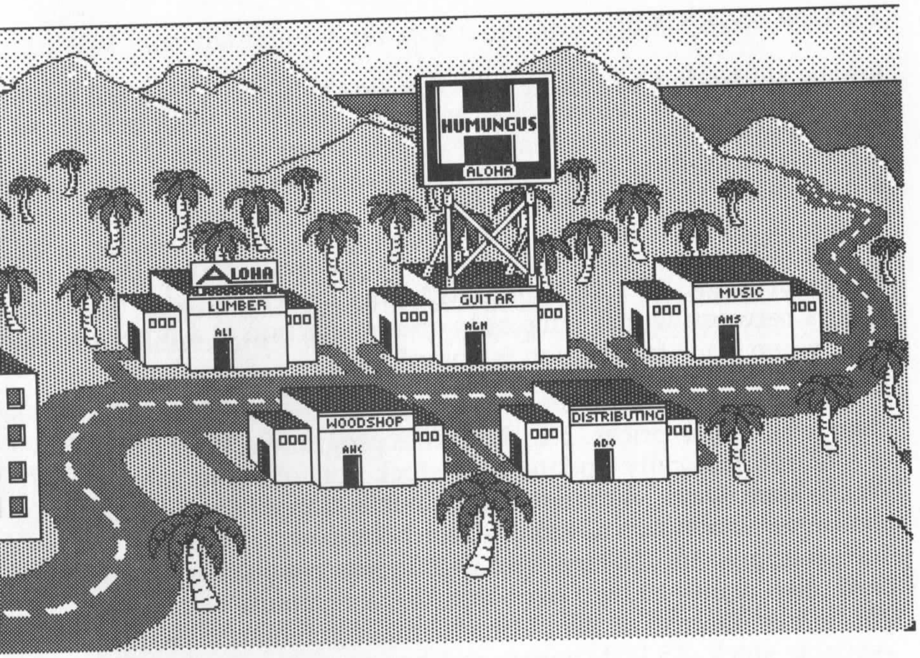
Humungus, Inc., a large and mysterious conglomerate from the mainland, also wants to take over the Aloha companies. Like you, Humungus gains control of an Aloha company when it owns 30% of the available stock (15,000 shares) and has more shares than you do.

## OWNING AN ALOHA COMPANY

To control an Aloha company, you must own at least 15,000 shares (30% of the available stock) in that company and own more stock in that company than your competitor, Humungus, Inc.

When you own more than 25,000 shares (50% of the available stock) in a company, you will be able to select the **?** door of the factory. This will cause a key to appear in one of the locks of your office safe. If your stake in the company drops to 50% or less, the key will disappear from the lock.

When you control a company, you have some new features in your office. You can also enter the company's factory and directly oversee its operation. Smart control of a company can lead to increased profits.




## W OFFICE FEATURES

en you control an Aloha company, you gain some additional office
s.

*proved Spreadsheet*. The data base of your Spreadsheet program
s access to current and past data about any Aloha companies you
. You can use the Spreadsheet to analyze the data to help you make
sions about how to run the company.

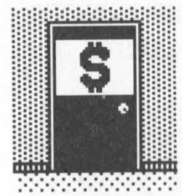
*ew Phone Calls*. The managers of the Aloha companies you own will
call you on the phone to inform you of current plans or to seek
ice. You can also call them. The managers will ask you specific
stions. Be sure to answer clearly.



## AT THE FACTORY

When you own a company, a sleek **ALOHA** sign will appear above its factory. Once outside your office (done by selecting the office door), you can enter a factory that you own by selecting it with the mouse. A typical factory floor looks like this:

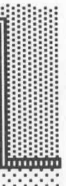

**A. Labor Use.** The company employees are paid on an hourly basis. The **Labor Use** figure is the total number of hours that all the employees will be working this week.




**B. $.** Behind this door you will find the financial accounts of the Aloha company you are visiting. You will see a weekly summary report of money that the company is receiving and paying out. To see a more detailed report, select **Show More Info** from the **Goodies** pulldown menu. (For a description of what the items in these reports mean, see the Economics Dictionary at the end of this manual.)


**C. MANAGER.** When you select the manager's door, you will be shown the manager's plans and estimates for the next week. You are free to change these plans. Managers will remember changes that you make and include them in their plans for later weeks. This is how you train managers to run the companies the way that you want them to be run.

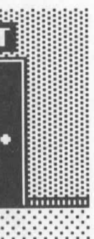
To see additional estimates that the manager makes, select **Show More Estimates** from the **Goodies** pulldown menu at the top of the screen. (For directions on how to make changes, see "Managers' Plans" on p. 18.)



D. ?. Behind this door is a key to one of the five locks in your office safe. You can select this door when you own more than 50% of the available stock of the company.

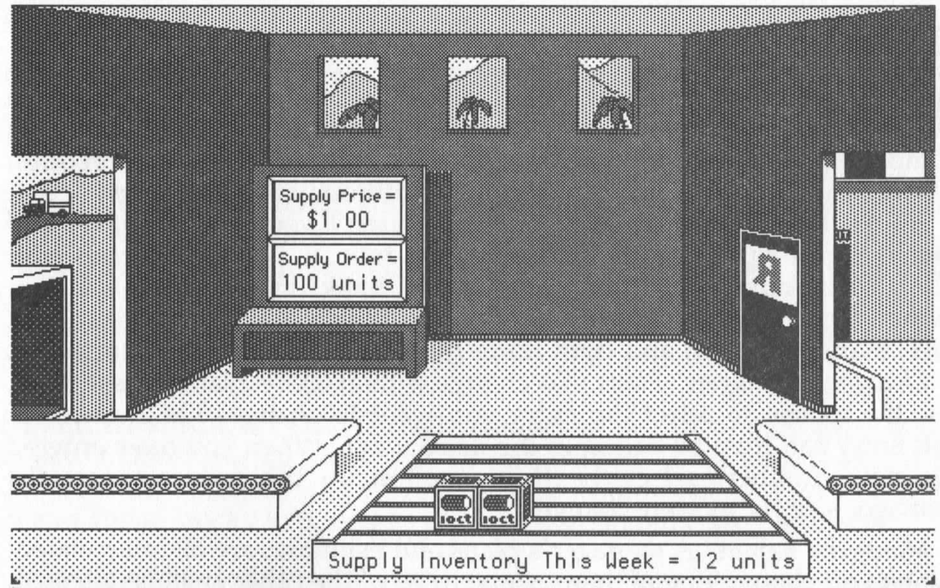
VING. Select the door marked "R." This is the Receiving place where an Aloha company receives and stockpiles sup- en you visit the Receiving Area, you will see the previous pply inventory, the arrival of new supplies, supply use, and for the current week.
on the wall also shows the supply price and the supply order. supplies have to be made a week in advance. The following pply purchase will equal the current week's supply order. e the Receiving Area, simply select the door you entered by.

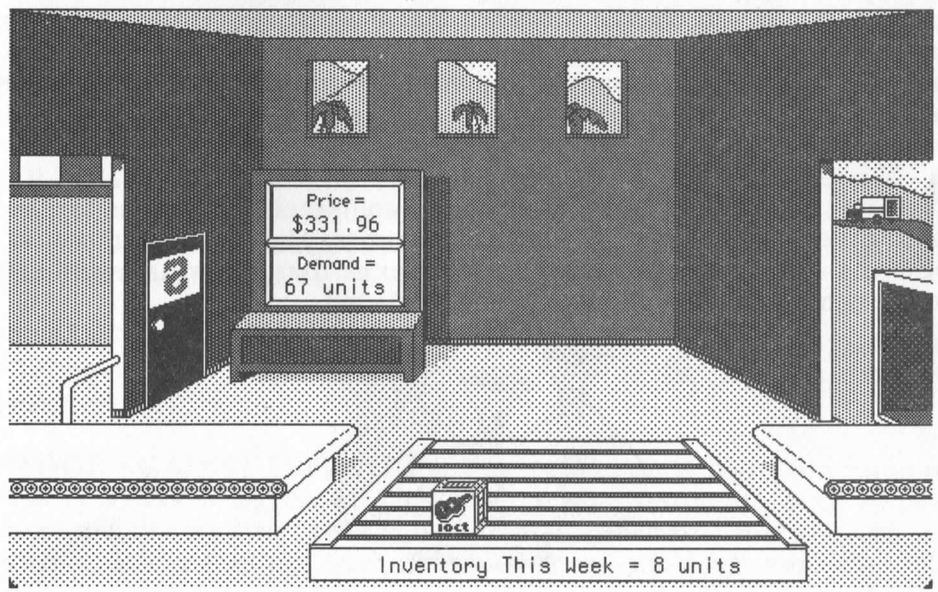
NG. Select the door marked "S." This is the Shipping Area, where an Aloha company keeps its inventory of finished Products are also shipped from this area. When you visit the Area you will first see the previous week's inventory. Then see the current week's production (added to the previous ales, and inventory.
on the wall will show you the price at which you are currently ur product and the existing demand for your product.
e the Shipping Area, simply select the door you entered by.



G. EXIT. The exit door returns you to the road outside the factories. You can then reenter your own office, which is in the large building on the far left of the screen.





RS' PLANS

a company is run by a manager. Managers plan things, such ny supplies to order and how much to advertise. Managers of you own will frequently call you to ask questions, request d keep you informed about conditions at the company.

agers do their jobs, but some aren't very good at it. A bad an run a company deeply into debt. If a company goes over n outstanding loans, it will go bankrupt and you will lose . To make companies really profitable, you will have to visit gers often and train them to make better business decisions.

*Managers' Plans.* To change a manager's plans or estimate, ouse to select the entry you want to change. The number in can then be edited in the usual ways. When you have entered number, select the **Reply** option on the screen to get the reply to your change.

*s' Replies.* A manager's plans and estimates are all interrelated. change one of them, some or all of the others will be affected. le, if you change the price that the manager plans to charge ing week, then that change will affect estimates of sales and erefore, whenever you change a number, you must get the reply to see how your change affects all other plans and

manager's plans and estimates are merely projections for the ek. They are not the actual outcomes. Making the numbers in come out nicely does not guarantee that the actual numbers ning week will come out as predicted.




## III. Stock Market Strategies

This section contains hints and strategies used in the real world for playing the stock market. Apply them to *Make Millions* and you may see your profits rise.

**BUY LOW, SELL HIGH.** This classic advice for stock trading must be applied with care. A low stock price will often indicate a bad company, not a good deal. You should be especially careful about buying low-priced Aloha companies. It's risky to take one over unless you can advise and retrain the manager to run it better. Still, you can't make millions without taking some risks.

**DIVERSIFY YOUR PORTFOLIO.** Financiers use this fancy expression to say, "Don't put all your eggs in one basket." This means that it is unnecessarily risky to put all your money in only one or two stocks. If one of those stocks happens to plummet, you could lose your shirt.

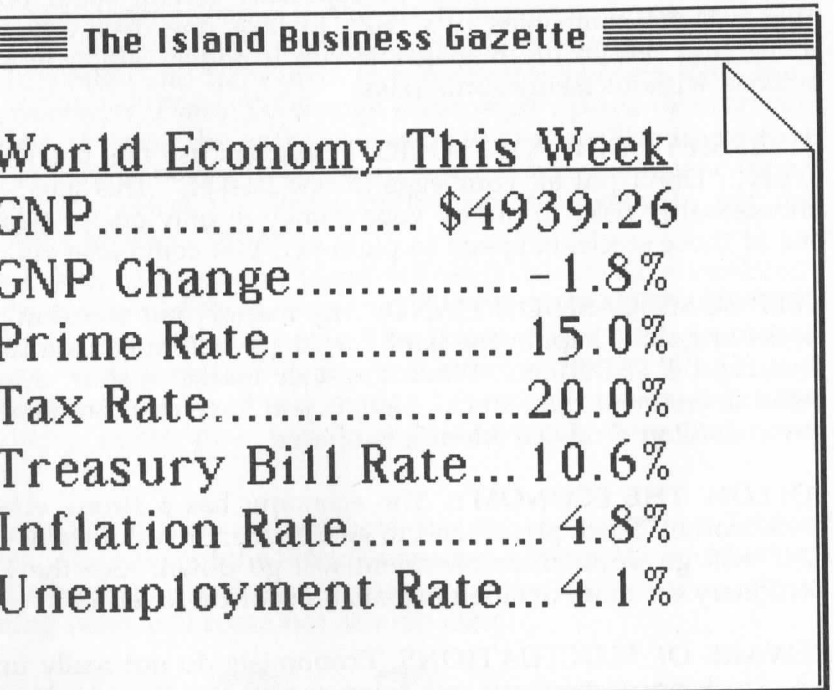
**KEEP SOME CASH ON HAND.** Any money that you don't invest in stocks or gold is kept in the bank for you, where it earns interest at the Treasury Bill (T-Bill) rate. When the stock market is sour, this may be a better investment than stock. Also, if you have cash on hand, you can buy consultants' advice when it is offered.

**FOLLOW THE ECONOMY.** The economy has a strong effect on the stock market. Stock prices tend to go up when investors believe that the GNP will go up or unemployment will go down. (See the Economics Dictionary for more detailed explanations of these terms.)

**BEWARE OF FLUCTUATIONS.** Economists do not really understand why stock prices move up and down as much as they do. You probably won't either.

**HEDGE AGAINST INFLATION.** When inflation is high, the value of cash or stocks is decreased. However, some investments, such as precious metals, tend to "hold their value." This means that they go up when inflation goes up. Such investments are called *inflation hedges*.

E NEWSPAPER. Anything that affects a particular company
y can affect the stock prices of companies in that industry.
by the time news gets reported, sharp investors may have
ticipated the event, driving the stock price up or down.
king investments based on news stories, you must look at
stock price has already done. Then you can decide whether
the stock will continue to move up or down.




TS. Chartists are people who try to predict future stock prices
g for patterns in graphs and charts of past stock prices. Very
ors succeed in making money this way, and those few who do
t be lucky. Still, it doesn't hurt to try. To help budding



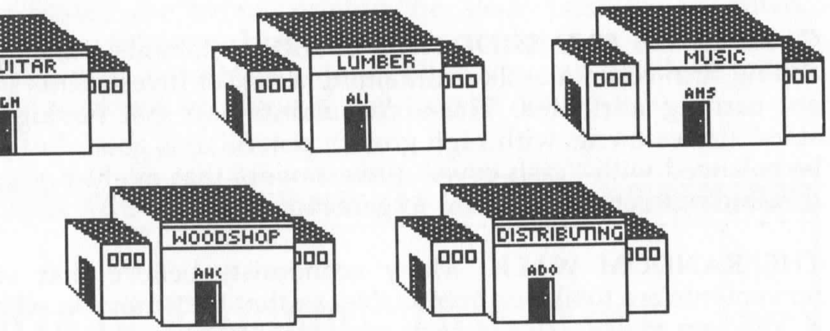
chartists, the Spreadsheet program in your desktop computer keeps records of stock price data. (See the chapter titled "Using the Spreadsheet" for more information.)

**CASH COWS AND SHOOTING STARS.** A famous management consulting firm recommends maintaining a mix of investments with different earning attributes. These consultants say that having "shooting stars" (investments with high growth potential) is good, but these must be balanced with "cash cows" (investments that might not grow much in value but can be relied on to generate cash).

**THE RANDOM WALK.** Many economists believe that stock price movements are totally unpredictable, so that they move in what is called a "random walk." This theory says that the very action of buying or selling stocks based on stock price patterns will prevent these patterns from repeating themselves in the future. If you really believe the random walk theory, then you should invest in stocks only if you have some special information about particular companies.

**INSIDE INFORMATION.** The stock price of a company depends partly on how the company itself is doing. If you own an Aloha company, then you have "inside" information on how it's doing. For example, you may know that the company is about to make large profits by selling off inventory. In the United States, there are strict laws against using inside information for making money in the stock market. The laws on Wiki-Wiki Island are not so strict.

## …egies For Running Aloha Companies




…some pointers to help you run more efficiently any Aloha … you own.

**…OCK THE BOAT.** Unless you are really sure of what you are … id making reckless changes in managers' plans. Big changes … y cause big losses. Even if the ship is sinking, rocking isn't … elp.

**…O YOUR UNDERLINGS.** The people who work at the com… uding the manager, probably know the company better than … stead of disagreeing with your managers' plans, try to under… they change them as they do. Learn from your managers by … hem. For example, if you lower a manager's price plan, he or … espond by increasing the production plan, indicating a belief … ing price will increase sales, which may in turn increase the … nore inventory.

**…TRATE ON AVERAGE PROFITS.** Even in a well-run compa… can vary widely from week to week. For example, if a lot of … re purchased in one week, that week's profits may be low or … tive, but this may be made up for in high profits due to low



supply costs the following week. After retraining a manager, let him or her operate alone for at least a few weeks before judging whether the changes you made were good or bad.

**IF IT AIN'T BROKE, DON'T FIX IT.** If a company is producing profits week after week, then the best thing to do with it may be to leave its manager alone. Just buy up stock in it and let the dividends roll in.

**EX ANTE AND EX POST.** Managers make their plans and estimates ex ante, that is, before the fact. What actually happens later is ex post—after the fact. One good way to track down problems is to compare managers' plans to what actually happens. (A convenient way to do this is with the Spreadsheet program on your desktop computer.) For example, if a manager plans to produce 20 guitars, and you discover that only 15 were actually made, then it is possible that the manager is not using enough labor or is not keeping enough supplies on hand.

**ROSY PREDICTIONS DON'T PAY THE BILLS.** Managers estimate what sales and profits will be in the future. They will often be overly optimistic. Don't judge how good a manager's plans are solely on the basis of profit predictions. Wait a week to see what profits actually are. A manager may think that spending a million dollars on advertising will produce two million dollars in sales, but he or she could be very much mistaken.

**STUDY THE PAST.** The best way to get a good feeling for how a company is doing is to look at its past as well as its present. A good way to examine a company's past and plan its possible future is with a Spreadsheet. The *Make Millions* Spreadsheet program is linked to the data bases of the companies you own, so you can use it to look at past and present information about your companies.

**VERTICAL INTEGRATION.** Taking over companies involved in various stages of processing a single item is called *vertical integration.* There are many advantages to vertical integration. For example, if you own both a lumber company and a woodshop, then you can lower the price

to reduce supply costs at the woodshop. You also take into
e woodshop's supply order when predicting sales of lumber.
ngs can be done with any adjacent pair of Aloha companies.
ll five companies in the Aloha Empire is the goal of *Make*

**COMMON VALUE OF COMMON SENSE.** Never let fancy
slick tables confuse you. Most people have an intuitive under-
of prices, inventories, and advertising. Whenever possible,
ut what you know and use your judgment. You know you
guitars for a million dollars each, so don't bother to try.
if you see something you don't understand, look it up in the
*ons* Economics Dictionary. That's what it's there for.

**NTIFIC METHOD.** To discover causes and effects, try apply-
entific method of controlled experiments. For example, if you
ee the effect of increasing advertising, first see what the sales
s are for a few weeks without changing any of the manager's
xt, increase planned advertising and let the company run
a few weeks without changing anything else. Comparing
d other variables) before and after the change is as close as
come to doing a controlled experiment. You may find the
eet program very helpful for keeping track of things here.

**THE ECONOMY.** The economy affects companies in many
e demand for your products will tend to be related to how well
my is doing. Also, interest companies pay on their loans is
the prime rate, and interest earned on cash (which is automat-
ested for you) depends on the T-Bill rate. Following the econo-
page of the newspaper) can help explain why a company does
ng some periods and poorly during others.

●●●●●●●●

e sitting in your office, running a company or two, doing all
things and making some decent profits, and what happens?
us starts muscling in, taking over Aloha companies. You've got



to buy up stock in other Aloha companies quickly, but where will you find the cash? How can you make some real money fast? How can you stop Humungus?

The following strategies may give you some answers. But beware! They are radical and risky moves and some are only legal on Wiki-Wiki Island. But if it's time for drastic measures....

**LEAPFROGGING.** Say you own 30 to 50% of the stock in one company, and its stock price has risen pretty high because you've trained its manager well. If you sell all of your stock in that company, you may have enough cash to buy two companies, or to buy a company that Humungus owns part of. This means giving up your old manager (who may forget your training) and having to train one or two new managers. To use this strategy, you must have great faith in your ability to train managers.

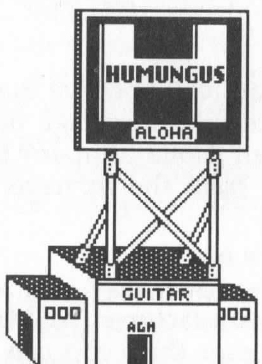
**TAILSPIN.** If a company you own keeps falling further and further into debt, unload it! Sell all your stock in it before the stock price drops any further. Later, when you have more experience, you can buy the company back at what may be a cheaper price. In fact, if you're really sure of yourself, you can purposely send a company into a tailspin, then sell all your stock in the company right away. If the price of stock then drops, you can buy the company back again, having made a profit for yourself on the deal. Of course, you'll probably have to train the manager all over again at this point.

**GO FOR BROKE.** Suppose you really believe that the price of gold will go up. Don't be afraid to take full advantage of the opportunity, and buy all the gold you can. Sell an Aloha company if you have to. You can always buy it back later and train the manager again. You've got to really take chances to win big.

**SQUEEZE PLAY.** Suppose you own, say, the woodshop (AWC) and you want to own the guitar manufacturer (AGM). Your problem is that the stock price of AGM is higher than you can afford, or Humungus

e than 50% of it and is unwilling to sell. What can you do?
WC supplies woodshapes to AGM, you can apply economic For example, you can charge a very high price for wood- ereby increasing AGM's costs (or forcing AGM to buy them body else, although still at a pretty high price). If you owned you could apply a full squeeze play by ordering very few orcing AGM to sell guitars to somebody else at a lower price. the squeeze on someone is risky, and you could end up urself more than Humungus. But it is one way to drive the company's stock down to something you can afford, and it nce Humungus to sell some of its stock.

**HE COMPETITION AND KEEP TRYING.** Find out every- can about Humungus and its doings. Try to be there to e phone when Manny calls. Consider calling Rent-a-Sleuth. messages and look at the newspaper every week. Most of all, g to buy stock away from Humungus. If no stock is currently n a Humungus-owned company, then try buying again after a s have passed. Put the squeeze on Humungus. Be ready to tage of it when opportunity knocks.






## V. Using the Spreadsheet

### DEFINING A ROW

Rows go across and columns go up and down. "Defining a row" means telling the computer what data to put across a selected line of the Spreadsheet. To define a row, you must:

1. Select a line from the **Row Definitions** column of the Spreadsheet. When properly selected, a border will appear around that area in the column, and the **Row Definitions** window will appear, overlaying part of the Spreadsheet.
2. Select the data you wish to access from the list under **Choose Row Type.** The **Factory Variables** and **Manager Estimates** are available only for companies that you own. Calculations are done only after you have defined at least one row. **Clear Row** will erase all data in that row from the Spreadsheet.
3. After you select a row type, other options will appear in the **Row Definitions** window. The number of options that appear will depend on which type you selected. Choose which item you want from each of the available choices. The row will not be filled in until you have selected an item from each section.

### MAKING CALCULATIONS

Once you have defined at least one row, you can then begin making calculations. The kinds of calculations you might make are discussed in the Sample Spreadsheets section below. To make calculations:

1. Select a space from the **Row Definitions** column of the Spreadsheet.
2. Select **Calculation** from the **Row Definitions** window.
3. Select the two rows you wish to use and the type of calculation you wish to make. Treat the left list of rows as the first part of the

tion upon which you perform an operation with the right list. It n't matter in which order you make your selections.

## G THE SPREADSHEET

ging the numbers in the data columns of rows you are using in ons, you can perform many valuable "what-if" operations. You what would happen if, for example, you had more cash or the a certain stock was a few points lower. Specific strategies for e Spreadsheet are illustrated below. To edit the Spreadsheet:

t the number you wish to edit. A dark border will appear nd that number.
in the new number.
he **RETURN** key. At this point the Spreadsheet will make tes, if there are any, based on your change.

## EDITING FEATURES

al editing functions are found in the **Goodies** pulldown menu.

### ow

the space in the **Row Definitions** column where you would insert a row.
the **Insert Row** option from the **Goodies** pulldown menu. The ou have selected plus all rows below will move down one row. ata on Row 20, if there is any, will be pushed off the Spread-

### ow

the space in the **Row Definitions** column where you would delete a row.



2. Select the **Delete Row** option from the **Goodies** pulldown menu. The row will disappear and the rows below it, if there are any, will move up one to fill in the blank line.

### Put Away Spreadsheet

Selecting this option puts the Spreadsheet away as it is and returns you to your office.

### Clear Spreadsheet

Selecting this option will erase all the data from the Spreadsheet.

## MORE ON READING THE SPREADSHEET

The column on the far right of the Spreadsheet shows current data. The Spreadsheet program will automatically and immediately update that column when you make new investments.

The **Average** column will also be updated. It is often more useful to look at the 5-week average than specific week-by-week changes. The large fluctuations that can occur week to week can make these weekly figures misleading. The average will often give a truer overall picture.

## SAMPLE SPREADSHEETS

**Sample #1.**
This Spreadsheet might be useful at the beginning of a game, when you are trying to build enough wealth to purchase your first Aloha company.

**A.** By monitoring your Net Worth, you can keep track of the growth and decline of your wealth.

**B.** Since your goal is to acquire the Aloha companies, it is important to keep an eye on how much they cost.

| Spreadsheet | | | | | | |
|---|---|---|---|---|---|---|
| Row Definitions | Average | 7/9/89 | 7/16/89 | 7/23/89 | 7/30/89 | 8/6/89 |
| Net Worth | 249516.78 | 248504.22 | 249009.47 | 249515.75 | 250023.05 | 250531.39 |
| | | | | | | |
| ALI Stock Price | 18.60 | 18.75 | 18.75 | 19.00 | 18.25 | 18.25 |
| AWC Stock Price | 21.00 | 20.75 | 20.00 | 21.00 | 21.50 | 21.75 |
| AGM Stock Price | 20.30 | 20.75 | 20.75 | 19.50 | 19.75 | 20.75 |
| ADO Stock Price | 21.35 | 20.50 | 22.25 | 22.00 | 21.50 | 20.50 |
| AMS Stock Price | 21.80 | 20.25 | 22.00 | 22.25 | 21.75 | 22.75 |
| | | | | | | |
| Row 1 / Row 3 | 13418.82 | 13253.56 | 13280.50 | 13132.41 | 13699.89 | 13727.75 |
| Row 1 / Row 4 | 11891.19 | 11976.11 | 12450.47 | 11881.70 | 11628.98 | 11518.68 |
| Row 1 / Row 5 | 12301.09 | 11976.11 | 12000.46 | 12795.68 | 12659.39 | 12073.80 |
| Row 1 / Row 6 | 11701.05 | 12122.16 | 11191.44 | 11341.62 | 11628.98 | 12221.04 |
| Row 1 / Row 7 | 11462.46 | 12271.81 | 11318.61 | 11214.19 | 11495.31 | 11012.37 |

ding your Net Worth by the price per share can show you how ny shares you can buy at any one time. You need to own at least 00 shares (and more than Humungus owns) of an Aloha compa- before you can control its operations.

#2

a Spreadsheet you might use when you own an Aloha company nt to make changes to train the manager to improve the compa- ofitability.

first group of items informs you about the general state of the pany. You want profit and cash to be going up. You want to loans to a minimum. (Over $100,000 in outstanding loans will e the company go bankrupt.)

second group of items shows you the actual weekly accounts for company. Examining these numbers will help you see more



clearly how the company operates. For example, you can see how the supply order for one week is the supply purchase for the next week.

C. The third group of items are the manager's plans and estimates. By comparing these estimates to the actual figures (for the following week) in the section above, you can determine how to advise your manager. For example, you can see that the manager's sales estimates during the week of 4/3/88 (1742) were lower than the actual sales shown in the next week's column (1906). On the average, however, the manager's estimates have been very accurate (1770 estimate to 1771 actual).

| | Spreadsheet | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Row Definitions | Average | 7/9/89 | 7/16/89 | 7/23/89 | 7/30/89 | 8/6/89 |
| A | 1 | AWC Profit | 8001.42 | 7972.58 | 7713.45 | 8955.57 | 8243.92 | 7121.56 |
| A | 2 | AWC Cash On Hand | 21456.68 | 26590.70 | 24304.15 | 17259.72 | 25503.64 | 13625.20 |
| A | 3 | AWC Loans Outstanding | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4 | | | | | | | |
| B | 5 | AWC Revenue | 16393.43 | 16242.08 | 15906.85 | 17284.21 | 16533.77 | 16000.23 |
| B | 6 | AWC Selling Price | 9.23 | 9.43 | 9.15 | 9.04 | 9.33 | 9.20 |
| B | 7 | AWC Sales | 1771 | 1718 | 1732 | 1906 | 1768 | 1733 |
| B | 8 | AWC Costs Before Tax | 6200.54 | 6085.93 | 6080.80 | 5875.84 | 6031.96 | 6928.18 |
| B | 9 | AWC Labor Use | 72 | 72 | 69 | 68 | 74 | 78 |
| B | 10 | AWC Production | 1655 | 1646 | 1580 | 1562 | 1695 | 1792 |
| B | 11 | AWC Supply Price | 18.59 | 18.57 | 18.60 | 18.61 | 18.58 | 18.61 |
| B | 12 | AWC Supply Purchase | 159 | 149 | 151 | 144 | 152 | 198 |
| | 13 | AWC Supply Order | 168 | 151 | 144 | 152 | 198 | 197 |
| | 14 | | | | | | | |
| C | 15 | AWC Price Plan | 9.14 | 9.15 | 9.15 | 9.04 | 9.33 | 9.05 |
| C | 16 | AWC Supply Order Plan | 176 | 144 | 152 | 198 | 197 | 188 |
| C | 17 | AWC Production Plan | 1690 | 1580 | 1562 | 1695 | 1792 | 1819 |
| C | 18 | AWC Labor Use Plan | 74 | 69 | 68 | 74 | 78 | 79 |
| C | 19 | AWC Sales Estimate | 1770 | 1771 | 1742 | 1813 | 1782 | 1744 |
| C | 20 | AWC Profit Estimate | 8049.13 | 8238.13 | 7900.82 | 8582.68 | 8038.90 | 7485.14 |

**Sample #3**

This is a Spreadsheet you might use late in the game, when you already own four of the Aloha companies and are attempting to purchase the fifth and final one.

Spreadsheet

| Row Definitions | Average | 7/9/89 | 7/16/89 | 7/23/89 | 7/30/89 | 8/6/89 |
|---|---|---|---|---|---|---|
| Net Worth | 7587171.50 | 7467731.50 | 7624770.50 | 7666264.00 | 7574018.00 | 7603072.50 |
| Cash | 260917.20 | 250023.05 | 250145.00 | 261152.50 | 263140.25 | 280125.25 |
| | | | | | | |
| ALI Profit | 4278.65 | 3135.67 | 4200.40 | 4412.44 | 5634.87 | 4009.88 |
| AWC Profit | 8158.94 | 8007.12 | 7112.67 | 7473.88 | 8184.25 | 10016.77 |
| AGM Profit | 2128.96 | 4556.11 | 3229.75 | 1007.22 | -157.77 | 2009.49 |
| ADO Profit | 8142.02 | 6009.33 | 7914.19 | 6901.05 | 11155.44 | 8730.09 |
| | | | | | | |
| AMS Stock Price | 33.80 | 35.50 | 36.25 | 34.75 | 32.00 | 30.50 |
| Row 2 / Row 9 | 7773.24 | 7042.90 | 6900.55 | 7515.18 | 8223.13 | 9184.43 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| IBN Stock Price | 36.95 | 35.75 | 36.25 | 35.75 | 39.50 | 37.50 |
| IHC Stock Price | 37.05 | 34.75 | 33.75 | 36.00 | 39.00 | 41.75 |
| NBS Stock Price | 68.00 | 66.75 | 67.25 | 69.00 | 68.75 | 68.25 |
| SOI Stock Price | 97.70 | 100.25 | 96.25 | 97.25 | 98.00 | 96.75 |
| UCC Stock Price | 42.00 | 38.25 | 37.75 | 41.00 | 46.75 | 46.25 |
| Gold Stock Price | 31.35 | 39.00 | 31.00 | 29.75 | 29.50 | 27.50 |

se these figures to get an overall picture of how you're doing. Net orth and cash should be rising steadily at this point.

ese figures will show you how each of the companies you own is ing. You can look for potential trouble areas by watching the profit ch week.

dividing your cash by the per-share price of the company you sh to buy, you can see how many shares you are able to purchase thout selling any shares you own in other companies.

en when you own most of the Aloha companies, you can still ake money playing the stock market. These figures will let you ep track of your other investments.



## VI. *Make Millions* Economics Dictionary

### ECONOMIC INDICATORS (from the newspaper)

**GNP** — Gross National Product. The total value of everything produced on the island for a given week. When the GNP goes up, this rise indicates that supply and demand for goods (including guitars) are increased and that many companies are doing well. The opposite is also true.

**INFLATION RATE** — The (annualized) percentage rate at which prices of everything sold on the island vary from week to week. When inflation is high, you should consider investing in inflation "hedges," such as gold.

**PRIME RATE** — The (annualized) interest rate that banks charge businesses for loans in a given week. The interest on any loans that your companies take out is charged at the prime rate.

**TAX RATE** — The rate at which business profits are taxed by the government in a given week. The profits of companies that you own are taxed at this rate.

**TREASURY BILL RATE** (T-Bill) — The (annualized) interest rate obtainable from investing in Treasury Bills in a given week. Any cash that you and your companies have is automatically invested in T-Bills.

**UNEMPLOYMENT RATE** — The percent of people that can't find work in a given week. Like the GNP, the unemployment rate relates to the supply and demand for goods and may affect the stock market.

Y TERMS (in the Receiving Area)

**Y TORY** How many units of supplies your company has at a given time. The pile of boxes in the center of the Receiving Area represents your supply inventory.

**Y ORDER** The number of units of supplies on order for the following week.

**Y PRICE** The price per unit that you are currently paying for supplies.

**Y IASE** The number of units of supplies that you are buying and paying for this week.

**Y USE** The number of units of supplies that you are actually using this week.

UCTION TERMS (in the Shipping Area)

**TORY** What you currently have ready to sell.

The per-unit price at which you are currently selling your product.

**CTION** The number of produced goods that are currently included in your product inventory.

The quantity of goods that you will sell this week.



## FINANCIAL ACCOUNTS (in the $ room)

**CASH AVAILABLE** The amount of money that the company has readily available. Cash comes from profits that are not paid out as dividends. When necessary, cash is obtained by taking out loans.

**DIVIDENDS PAID** If the company has been profitable for a while, it will pay out part of its accumulated profits in the form of a dividend. Dividends paid is the total amount of money that the company is paying out in dividends this week. The dividends are divided up equally by shares of stock in the company and are paid out as cash to the holders of the stock.

**LOANS OUTSTANDING** The total amount of money, including any new loans that the company has borrowed from banks. When the company is operating at a loss and has little cash, it will need to borrow money to pay the costs. Interest on loans is paid weekly at the prime rate. A company whose loans exceed $100,000 will be declared bankrupt.

**PROFIT** Profit equals revenue minus costs. The number you see is the company's total profit for the week. If the company is losing money, this will be expressed as a negative number.

**TOTAL COSTS** The total amount of money that the company will spend to run its operations this week.

**TOTAL REVENUES** The total amount of money that the company collected at the end of a given week from product sales and interest on cash on hand.

**TIONAL FINANCIAL ACCOUNTS (select Show More Info on ies pulldown menu)**

| | |
|---|---|
| **ERTISING** | The amount of money the company will spend on advertising this week. |
| **'S BEFORE** | The total amount of money, other than taxes, that the company will spend this week. The sum of all the above costs. |
| **REST ON I** | The amount of money the company will receive in interest on its cash this week. |
| **REST ON NS** | The amount of money the company will pay to cover interest on its loans this week. |
| **R COSTS** | The amount of money the company will spend on labor this week. |
| **RHEAD 'S** | The amount of money the company pays each week for overhead, which includes utilities, rent, petty cash, and so on. |
| **S NUES** | The amount of money the company will receive from selling its product this week. |
| **AGE 'S** | The amount of money the company will spend to store its inventory this week. |
| **LY COSTS** | The amount of money the company will spend to buy supplies this week. |
| **PAYMENT** | The amount of money the company will spend on taxes. This figure depends on the company's before-tax profits (which equals total revenues minus costs before tax) and on the tax rate (given in the newspaper). |



**MANAGERS' PLANS (in the manager's office)**

| | |
|---|---|
| **ADVERTISING PLAN** | How much, in dollars, the manager plans to spend on advertising next week. |
| **LABOR USE PLAN** | The amount of labor use, measured in person-hours, that the manager plans to pay for and use next week. |
| **PRICE PLAN** | The price that the manager plans to charge for the company's product next week. |
| **PRODUCTION PLAN** | The number of units of the company's product the manager plans to produce, or make ready for sale, next week. |
| **PROFIT ESTIMATE** | What the manager expects the company's profit will be next week. |
| **SALES ESTIMATE** | The number of units of the company's product that the manager expects to sell next week. |
| **SUPPLY ORDER PLAN** | The quantity of supplies that the manager plans to order next week. Since orders take a week to be filled, it will be two weeks before the supplies actually arrive at the company. |

**ADDITIONAL MANAGER ESTIMATES (select Show More Estimates on Goodies pulldown menu)**

| | |
|---|---|
| **(ESTIMATED) INVENTORY** | The remaining inventory of produced goods the manager estimates will be left on hand at the end of next week. |

**MATED) LY NTORY** The remaining supply inventory the manager estimates will be left on hand at the end of next week.

**MATED) LY USE** The amount of supplies that the manager estimates will be used making next week's production.

**GINAL** The manager estimates that this would be the increase in costs due to labor and supplies if production were increased by one unit.

**Note:** Marginal revenue, below, and marginal cost are related concepts. To understand them, start with a manager's planned price and sales estimate. Now consider the alternative plan of decreasing price just enough to make estimated sales go up one unit. This alternative plan will get you more revenue (since you are selling one more unit), but it will also cost you more (since you must produce this additional unit). The difference in revenue between these two plans is marginal revenue, and the difference in cost between these plans is marginal cost. Subtracting marginal cost from marginal revenue gives marginal profit, that is, the (approximate) increase in profit you would get from the alternative plan (approximate because other things, such as inventory storage costs and taxes, also affect profit).

**MUM** The manager estimates that if the price were this high (or higher), then sales would be zero.

**Note:** Potential demand and maximum price together help define what is called a *demand curve*. These two estimates describe the extremes between selling as much as possible (without advertising) and selling none at all. A manager must try to set planned price and estimated sales at some reasonable level in between these extremes.



**MARGINAL REVENUE** The manager estimates that this is how much revenues would go up if prices were cut just enough to increase sales by one unit.

**POTENTIAL DEMAND** The manager estimates that this is what sales would be if advertising and price were both practically zero.

# CORPORATE FACT SHEET

## Aloha Lumbering Incorporated

Manager Profile

**Name:** Karen Forrester
**Education:** BA Economics, Roosevelt College (Chicago); MBA, NYU
**Experience:** Economic Adviser, United Farm Laborers
**Activities:** Union Representative

…KER SYMBOL: ALI

…E OF WORK: Cutting and trimming logs, making woodblocks

…IN SUPPLIES: Logs

…IN PRODUCTION GOOD: Woodblocks

…PLY PRODUCTIVITY RATE: 1 log = 10 woodblocks

…RAGE WAGE RATE: $7.00/hour

…RAGE LABOR PRODUCTIVITY RATE: 6 woodblocks/hour

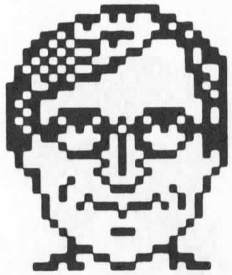
…RAGE INVENTORY STORAGE COSTS: $0.40/unit/week

…RAGE OVERHEAD COSTS: $1750.00/week



# CORPORATE FACT SHEET

## Aloha Woodshop Company



Manager Profile

**Name:** Ricky Barker
**Education:** BA Management, Trinity College; MBA, Harvard University
**Experience:** Economic Consultant, Blaine and Company
**Activities:** Vice-Chairman, Wiki-Wiki Whittlers Association

TICKER SYMBOL: AWC

LINE OF WORK: Producing specialty woodshapes

MAIN SUPPLIES: Woodblocks

MAIN PRODUCTION GOOD: Woodshapes

SUPPLY PRODUCTIVITY RATE: 1 woodblock = 10 woodshapes

AVERAGE WAGE RATE: $5.00/hour

AVERAGE LABOR PRODUCTIVITY RATE: 23 woodshapes/hour

AVERAGE INVENTORY STORAGE COSTS: $0.20/unit/week

AVERAGE OVERHEAD COSTS: $2400.00/week

# CORPORATE FACT SHEET

## Aloha Guitar Manufacturing

Manager Profile

**Name:** Arthur Stringer
**Education:** BA Music and Business Administration, Purdue University
**Experience:** Band Manager, The Music Makers
**Activities:** Accompanist, Wiki-Wiki Community Ensemble

KER SYMBOL: AGM

IE OF WORK: Manufacturing guitars

IN SUPPLIES: Specialty woodshapes

IN PRODUCTION GOOD: Guitars

PPLY PRODUCTIVITY RATE: 4 woodshapes = 1 guitar

ERAGE WAGE RATE: $8.00/hour

ERAGE LABOR PRODUCTIVITY RATE: 2.5 guitars/hour

ERAGE INVENTORY STORAGE COSTS: $0.30/unit/week

ERAGE OVERHEAD COSTS: $2700.00/week



# CORPORATE FACT SHEET

## Aloha Distributing Organization

Manager Profile

**Name:** Peter Wheeler
**Education:** BA Administrative Science, Wiki-Wiki College
**Experience:** Shipping Supervisor, ADO; Field Rep., ADO
**Activities:** Chairman, Wiki-Wiki Community Service Organization

TICKER SYMBOL: ADO

LINE OF WORK: Packaging and shipping musical instruments

MAIN SUPPLIES: Guitars

MAIN PRODUCTION GOOD: Packaged guitars

SUPPLY PRODUCTIVITY RATE: 1 guitar = 1 packaged guitar

AVERAGE WAGE RATE: $4.00/hour

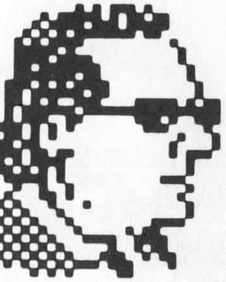
AVERAGE LABOR PRODUCTIVITY RATE: 30 packaged guitars/hour

AVERAGE INVENTORY STORAGE COSTS: $0.50/unit/week

AVERAGE OVERHEAD COSTS: $1300.00/week

# CORPORATE FACT SHEET

## Aloha Music Stores



**Manager Profile**

**Name:** Dick Sellars
**Education:** BS Applied Psychology, Florida State University
**Experience:** Sales Manager, Wiki-Wiki Used Cars
**Activities:** Trainer, Stress Management Workshops

KER SYMBOL: AMS

IE OF WORK: Selling musical instruments

IN SUPPLIES: Packaged guitars

IN PRODUCTION GOOD: Ready-for-sale guitars

PPLY PRODUCTIVITY RATE: 1 packaged guitar = 1 ready-for-sale guitar

ERAGE WAGE RATE: $4.50/hour

ERAGE LABOR PRODUCTIVITY RATE: 3.5 ready-for-sale guitars/hour

ERAGE INVENTORY STORAGE COSTS: $0.50/unit/week

ERAGE OVERHEAD COSTS: $650.00/week



# Index