

The 25-year-old who is programming the future with personal computers.

In 1975, a revolution began in the computer industry. Working in a garage, Steven Jobs and his partner, Stephen Wozniak, produced by hand the prototype for a remarkable new kind of computer that, today, is on the verge of changing the way America does business, the way it goes to school and, most likely, the way America thinks.

The computer created was the first true personal computer: a small, personally affordable and easy-to-operate computer capable of solving serious problems. Apple Computer's revenues now exceed \$100 million a year. Jobs is vice-chairman and a marketing vice-president.

"In the past, computers have been designed for *groups* of people, for corporations, for entities. Our company is organized around one key principle one person, one computer."

Apple has demystified the computer, and simplified computer languages, introducing software that is friendly, and easily understood. The average American now has access to what may be this century's most potent technological advance.

In addition to improving the professional's productivity, Apples are helping farmers analyze soil compositions and commodity futures. Physicians keep abreast of new developments by responding to Apple as it poses diagnostic questions. Apple-based systems have been placed in truckstops, giving truckers instant access to available hauling jobs, routes and schedules. Health organizations use Apples in underdeveloped countries to conduct medical surveys and treatment programs. "They can go where the problems are. In a medical context, that saves lives. Personal computers are saving small businesses, giving them vital management information." The interaction between man and his computer will fundamentally change the future.

Steven Jobs is also a manager. He spends much of his time "just talking to people, keeping them excited and on track. At its best, business is creative. That's the kind of atmosphere we try to maintain at Apple; one in which personal goals remain aligned with corporate goals."

There is a wholeness to Steven Jobs: designer, engineer, entrepreneur, manager, and corporation head. He also reads SCIENTIFIC AMERICAN.

"It helps me make connections with a range of disciplines. Computers are relevant to virtually all of them. I like the off-beat too. SCIENTIFIC AMERICAN seduces me into subjects I'd never even thought of before. I learn when I read SCIENTIFIC AMERICAN."

A growing number of newsstand buyers and subscribers join Steven Jobs every month. Each issue of SCIENTIFIC AMERICAN reaches more than two million people who make the future happen.

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NOW THAT YOU'VE SEEN THEIR FIRST GENERATION TAKE A LOOK AT OUR THIRD.



It started with the simple notion that computer power ought to be available for the individual, not just the corporation.

Admittedly, a revolutionary idea back in 1976.

But one which proved quite popular. So popular, that last time we stopped to count we'd sold over a half billion dollars in personal computers.

Before we knew it, a half dozen corporate biggies moved into the marketplace.

Not to fear.

We more than held our own. Even with all this competition, the Apple[®] II remains the largest selling personal computer in the world.

Good enough, right? Not right. There were still a lot of people who needed more power and more capacity than even the Apple II could deliver.

THE BIGGEST APPLE.

Our answer was the Apple[®] III.

Which in all due modesty is, dollar for dollar, the most powerful personal computer on the market.

The Apple III has up to 256K RAM of usable internal memory.

That's more memory than any other personal computer. So you can solve a limitless number of business problems easier and faster than you ever thought possible.

Xerox 820	Hewlett-Packard 125-Model 10	IBM Personal Computer	Apple III	
Standard Memory				
64K	64K	64K	128K	
Maximum Memor	y when fully configured	14: 		
64K	64K	192K	256K	
Expandability				
No expansion slots	No expansion slots	No extra expan- sion slots in fully configured* 192K system	4 extra expansion slots in fully configured 256K system*	
Diskette Storage (per	r drive)			
92K	256K	160K	140K	
Mass Storage (per d	rive)			
	1.16 megabyte Floppy Disk	-	5 megabyte Hard Disk	
Display Graphics C	Capability			
High resolution B/W	High resolution B/W	High resolution B/W or 4-color (color requires additional card)	High resolution B/W or 16-color	
Software Available				
Word Processing Super Calc [®] Communications CP/M [®] library	Word Processing VisiCalc [®] 125 Business Graphics Communications CP/M [®] library	Word Processing VisiCalc* Communications CP/M* 86 programs	Word Processing VisiCalc * III Business Graphics Communications Apple II software library CP/M* library (available Spring, 1982)	

*"Fully configured" means system includes, at minimum, monitor, printer, 2-disk drives and RS-232 communicator. NOTE: Chart based on manufacturer's information available as of December, 1981. VisiCalc is a registered trademark of Personal Software, Inc. CP/M is a registered trademark of Digital Research, Inc.

FIRST RUN PROGRAMS.

For openers, we have developed new software packages exclusively for the Apple III. First, there's VisiCalc^{*} III – a"Super VisiCalc"

that lets you create and revise the most complex forecasts, budgets, strategies and projections with unimagined speed.

Then there's Apple Business Graphics, which lets you generate graphs, plots, bars or pie charts. All in 16 high resolution colors or 16 gray scales.

Add Apple Writer III software and you've got professional word processing capability-for less than the price of most word processors.

You can create, edit and print memos, letters or large documents in record time.

For those long cumbersome mail lists, there's Mail List Manager. This lets you store nearly 1,000 names on one disk. And retrieve them in any way you wish. Alphabetically, occupationally, whatever.

In addition, all of these programs are totally interactive with each other.

For example: you can take the information from VisiCalc III, convert it to a graph, and print the graph in a personalized form letter to be sent to a select list of customers.

For the authorized dealer nearest you, call (800) 538-9696. In California, call (800) 662-9238. Or write: Apple Computer Inc., 10260 Bandley Dr., Cupertino, CA 95014. Apple is a registered trademark



There's another Apple III exclusive, Access III communications software.

Which gives you just what the name implies, access to mainframe computers.

You can remove information from your firm's big machine, even work with it, and put it back. Or plug right into Dow Jones or the New York Times.

And if your fancy runs to Goodspell, Job Costing, Personal Finance Manager or virtually any of the other Apple II programs, you're in luck.

The Apple III can run thousands of Apple II programs. And soon you'll be able to run thousands of existing CP/M* programs.

Taken together, this gives Apple III more available software than any other personal computer.

APPLE III'S NEW PROFILE™

Another Apple III exclusive is ProFile, a new hard disk option that greatly expands the capabilities of your Apple III.

With this addition, your Apple III can store over 1,200 pages of text (5 million bytes of information). Which enables you to handle problems once reserved for big computers.

About the only thing we didn't build into the Apple III is obsolescence.

Unlike many of our competitors' first generation machines, the Apple III is built to grow as your business needs grow. Even when you've equipped the Apple III with a printer, a plotter, a phone modem and extra disk drives, you've still got room for more.

Finally, Apple III is backed by a network of over 1.000 full service dealers in the U.S. and Canada, offering complete technical support.

Visit one of them. Compare our Apple III with our competitors' machines.

We're sure you'll find that between our third generation and their first, there's quite a gap.

The personal computer.



We're looking for the most original use of an Apple since Adam.

What in the name of Adam do people do with **Apple Computers?**

You tell us.

In a thousand words or less.

If your story is original and intriguing enough,you could win a one-week all-expense paid trip for two to Hawaii, Which is the closest we could, come to paradise.

Win fabulous prizes for creative writing.

To enter, drop by your nearest Apple dealer and pick up an entry blank. Fill it out. Then write an article, in 1000 words or less, describing the unusual or interesting use you've found for your Apple.

A jury of independent judges will cast the deciding vote for the grand prize: a week for two airfare included, in Hawaii.

The judges will also choose 16 additional winners, two each from eight categories:

graphics/music, entertainment, home, business, education, scientific, professional, and industrial: And each winner will choose from a long list of longed-after Apple peripherals-from Apple Disk II's to graphics tablets to Trendcom/printers. Or you can take a \$250 credit towards the purchase of any Apple product.

The contest ends March 31, 1980. All winners will be notified by May 15.

Entry forms are available at your participating Apple dealer, Call 800-538-9696, (800-662-9238 in California), for the one nearest you,

Mail the entry blank, your article and any photos to: Apple Computer, "What in the name of Adam" contest, 10260 Bandley Drive, Cupertino, CA 95014. apple computer And may the juiciest

application win.

What the average business person doesn't know about personal computers could fill a 12-page ad.



There are more people in more places doing more things with Apples than with any other personal computer in the world.

Which is saying a lot. But if you're like most business people we've talked to, you still don't have a clear understanding of what a personal computer can do for you, personally.

So, over the next several pages, we're going to explain

five of the many powers an Apple[®] Personal Computer can bring to anyone in business. In basic English.

Since we invented the whole idea of personal computing, we feel it's our duty.

Besides, it's a lot easier to explain why Apples are the best personal computers to people who understand what personal computers are for.

For example, you can

You probably know "word processing" as a secretarial function, a way of efficiently churning out stacks of letterperfect documents. But with an Apple, it's a personal tool that can dramatically improve not just the quantity, but also the quality of your writing.

Moving prose. The Apple's keyboard is similar to a typewriter's.

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There ware

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never se

So if you have touchtyping skills, you can apply them. And if you don't, you'll find you really don't need them.

Personal word processing lets you use the keyboard at your own speed. Before your words ever appear on paper, vou'll see them on the

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Brian O'Neill Vice president of Sales

before set you one set with wife and children

Beerd of Hebru Jackets with Lapels Defore.

June 23, 1982

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Dear fillsh-tor-brains After examine your hru jackets fill dozen defective you of your by

Sincerely,

E1118

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In oddition on every single ris

Dear Mush-for-Brains

26

video monitor. And when you need to make a change, there's no need to cross things out.

Or scribble. Or scrawl. Or retype.

Instead, a few keystrokes allow you to dart instantly to any part of the document, to move words. paragraphs or entire pages, erasing and replacing them in a matter of seconds. And when you feel the text is perfect, your Apple-

Jacket.

Brian mike

avoid the draft.

teamed with the printer of your choice – can put it down on paper.

A lot faster than any typist could.

Play tricks on our memory.

Most business people find there are times when it really

Dear Math for Trains.

After examing nour recent chipment to us of 200 dozen defective Metru jackets. I shald sensorilly like to string you up by your thanks.

The sample as seed us, to the fampeoned to have a small ciparette burn in the right slow i beyour realize. Much for Brains, that was seed us over 2000 jokets with that burn precisely desirated an every single right sleeve?

And who ever heard of being packets with larges?

It'll be cold day an Calcollar hush for Brains, before we pay you one red cent

Your first draft. You may decide "Mush-for-Brains" is inappropriate in a business letter. With one simple command, you can change every occurrence of "Mush-for-Brains" to "Mr. Ellis."

pays to remember everything they've written. Word for word. The Apple can assist them in one of two ways:

By putting it on paper, which can be filed away. Or by storing your document on a "floppy disk" to be recalled later (it's smaller than a 45 rpm record and holds approximately 48 pages-worth of doublespaced typing).

Want to update a manual?

Or send the same basic letter customized for several different companies? Or insert new names and information in a standard contract?

Simply load the document from the disk back into the computer, make your changes and print out a letter-perfect copy every time.

ein Mr. Ellis

After examing your recent shipment to us of 200 dozen defective. Neuru jackets, I would personally like to string you up by your thumbs,

The samely we sent white crowy haspened to have a small clearette burn in the right cleave. To you realize, Mr. Ellis, that you sent us over 2000 packs with that burn precisely durinated on every simple right sleave?

And who ever heard of Nebru jackets with Tapels? It'll be cold day in Calcutta, Mr. Ellis, before we pay you o red cent.

You did that in an instant. And it's just as easy to delete words and whole paragraphs. As soon as you give the command, the words realign themselves in perfect form.

There's even a feature that lets you change or delete specific words wherever they occur. So every reference to "Smith vs. Jones" can be changed to "Mugwump vs. Gretzky," with one simple command.



A better choice of words.

There are more word processing programs available for Apples than for any other personal computer.

Including our advanced Apple Writer text-editing software, for both the Apple II and Apple III.

Dear Wr. Elli

After examining your recent shipment to us of 200 dozen Hebru Jackets. I regret to inform you that the entire lot was Found defective.

There were small born holes in the right sleeve of every jacket. In addition, we have never seen Hehru jackets with lapels before All my best wishes to your lovely wife and children. Sincerely.

Brian O'Neill Vice President of Sales

Since revisions are so easy, with no retyping or scrawled corrections, you may decide to do a still more diplomatic rewrite. There's even a program that will catch the misspelling of "examining."

We even have a program that catches misspelled words. And another that will keep the names and addresses of all your customers at your fingertips.

Apple also offers a complete line of printers, for everything from rough drafts to finished letter-quality. Some can even print on your own letterhead or forms.

All of which makes personal word processing very good for business.

So try it yourself.

We think you'll agree, the Apple is mightier than the pen.

Or seek less and find

In the business world, more than anywhere, it's important to know the facts.

And, to be able to store and retrieve them in the fastest and most efficient method possible.

That method is "data base management" — a computer term for a human activity which, if you've ever looked up a word in a dictionary or a number in a phone book, you're quite familiar with.

It's not what you know. It's how you know.

Data base management is the most common application for computers of all types and vital to the world's governments and major corporations. But since the advent of Apples, it's also become a powerful personal tool.

Because when you turn your paper files into electronic files with an Apple[®] Personal Computer, you can look at what you need to know in ways you never knew you could. Paper files are limited to one organizational scheme — either

more.

numbering or alphabetizing.

But electronic files can be automatically cross-tabulated so you can get any information you want, in any order you specify, and get it a lot faster from an Apple than from a file cabinet.

You can selectively retrieve information – like the name

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THE NEWD, MARTIN			
AN THE			
MATTIN 65			
MITTED TO MINE H L- C	CHEVALL SUMPE		
ILLY SAM ST WEISON	and the second		
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ON SHIPPED TURS			

With Apple's Quick File software, you can easily create electronic files that match the paper files you're used to working with. But that's the end of the similarity, because...

and address of your top sales person on the East Coast. Or you can generate a variety of reports – like a listing of all your accounts ranked alphabetically, or by profitability, age, size, or any other way you specify.

Give yourself instant recall.

It's easy to understand the value of data base management to the Pentagon or the IRS. But what can it do for you? Yes, it can shrink your paper files. Apple's ProFile" storage system can hold up to 3000 pages of double-spaced text Yes, it can put the information you need at your fingertips sales records, personnel files, expense reports, account lists, appointment calendars, price lists and inventories.

Those benefits alone have paid for thousands of Apple systems, providing smaller businesses and departments efficiencies once available only to the largest organizations.

But for you, the manager or proprietor, it means much more.

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CLAR DIGERS		HEIGE	150	
DIMERBORIES	160	NUT	28	
NCC125	1960 -	ARESTONE	12	
DAUCHO PRINTS		CALL F	18	
FIGUES STITE	1	2114	19	
MENTS DRESS SH	100	Dava Saut	15	
NUME SKIRTS		DARK FILM	4	
IEHRU JACKETS	ñ.	LINE	65	
PEDDLE. PUSHERS		01250,000	12	
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TOREADOR PANTS		E ACC	- 65	

Not only can you retrieve information selectively in an instant — whether a single name or all the addresses in a certain zip code — but you can also generate a variety of reports instantly, like this alphabetical inventory or...

It means increased personal productivity, because you spend less time searching for information and more time deciding how to use it.

It means a totally private information library you can use



as a management tool.

And it means the flexibility to consider information easily in many different ways, allowing you to develop an instinctive feel for the facts and make better decisions.

More ways to establish order.

There are more ready-to-use data management programs available for Apples than for any other personal computer you can buy. Although many

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With a few keystrokes, you can look at the same information in chronological order. Or, for that matter, in any other order you want — by merchandise sold, location, billing, or whatever you specify.

are specialized packages for specific types of businesses, Apple offers several data base packages adaptable to any office.

Quick File, for example, is designed for individual use by managers or professionals.

It's easy to use, extremely flexible and well-suited to a wide variety of applications.

And for your information, Apple has more ways to obtain, store and retrieve information than any other personal computer.

But there's only one way to know that for yourself — see your authorized Apple dealer. And learn how to manipulate the facts to your advantage

Or turn a sea of data

Numbers can tell you a lot. But pictures can tell you a lot more, a lot faster.

Just imagine, then, what would happen if your personal computer could not only generate raw information, but also give you a clear picture of what it all means - using clear pictures.

Well, now there's something

called "business graphics" that makes it all possible.

More ways to see what you're doing.

That's the beauty of Apple* Business Graphics. The software package that

gives your Apple II or

Apple III Personal Computer the power to convert rows and rows of numbers - or pounds of printout - into one simple, colorful and comprehensible illustration.

And that gives you the

ORGE

- power, for example,
 - to understand
 - relationships and
 - comparisons in a complex
 - market
 - analysis.



into data you can see.

hours sifting through dull data, armed with little more than a ruler, a compass and a few not-so-magic markers.

With Apple Business Graphics, all you do is enter the data or transfer it directly from your VisiCalc* model or other computer files. Your Apple will take it from there.



Horizontal bar graph (a unique feature) makes it easy to compare the profitability of six different products—from periwinkles to petunias.

Helping you to get the big picture in a variety of ways. Line or area graphs, bar graphs, pie charts or scattergrams. Whichever configuration best suits your application.

When you're done charting market shares you can do the same with forecasts, budgets, stock trends, business plans or customer demographics.

Show your stuff.

In addition to helping you better visualize results, Apple Business Graphics can make presentations more presentable. Because whatever you produce can be rapidly and easily reproduced, on virtually any printer or plotter on the market.

Moreover, sophisticated Apple features like exploded views, unlimited overlays and floating titles allow your displays remarkable flexibility.



To get the overall market share picture, (and any other percentage related data), Ichiban management consults this easy-to-digest pie chart.

And a choice of up to six colors makes them remarkably colorful.

By combining Apple Business Graphics with various slide-show packages, charts and graphs on your monitor



can easily be converted into impressive transparencies and slides.

Getting started in pictures.

Start by seeing the Apple Business Graphics package up close (at any of the over 1300 authorized Apple dealers).



With many types of graphs to choose from, Ichiban has more ways to see exactly how its annual sales blossomed (or drooped) relative to the rest of the market.

You'll see how it can generate more types of pictures, in more colors, using more data than any other graphics package.

You'll also see what all that can mean to you, your accounting firm, your import business, or your chain of quiche-on-a-bun family restaurants.

And, how easy it can be to produce your first picture. All with Apple Business Graphics. So try it yourself. And draw your own conclusions.



Ormakeaworksheet

To most business people, a spreadsheet is just a piece of paper with columns running down the page and rows running across.

But, when you fill up all those rows and columns with information-dates, places, dollars-it becomes a powerful business tool. Because it's a model of what's going on in your world.

Now imagine what would

happen if you could move that model from a paper worksheet to an electronic worksheet.

The implications are, to say the least, electrifying.

Snap decisions.

When teamed with VisiCalc* financial software, an Apple* Personal Computer can help anyone make better, smarter, faster business decisions. All you do is choose a category (Net Profit, for example), enter some information (the name and cost of your product), then do a few keystrokes. That's it.

If the variables change, the computer will recalculate the numbers for you (advanced

> mathematical functions and all kinds of business formulas are built-in).

play.

So you can revise budgets, business plans, sales trends, stock trends, or other trends.

And do it in seconds.Versus the hours or days it used to take your mechanical pencil.

Make clearer forecasts.

What if, next month, the



An Apple teamed with VisiCalc can give you the power to rapidly revise and compare sales totals, market share or any important business data.

cost of making a product rises four percent instead of three? What if vendors hike their, finance charges two percent per year for the next five years? Or what if the department hires another six employees in the third quarter?

An Apple armed with VisiCalc can easily answer all of the above.

And let you experiment with hundreds of other assumptions, helping you to thoroughly analyze the impact of any business decision, before you actually make it.

So you'll know, down to the dollar, how these decisions will affect the future of your budget. Or your inventory. Or your investments. Or your tax returns.

Or your golf game. Or your condo in Key Largo.



Using the built-in split screen feature, the same sales analysis can even be compared to projected totals for more accurate forecasting.

What if "what if" isn't enough?

Very often it isn't. Because very often you need to turn your financial findings into reports that can be shared with other departments (the



average spreadsheet can't help you there).

Enter Apple's Senior Analyst. A powerful, flexible program for *corporate* planning and financial modeling. It lets you print out formatted, easy-to-read financial reports, from several departments or several cities.

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Apple's Senior Analyst program lets you consolidate reports using data from other departments, whether they're in L.A., S.F., or the Ichiban home office in Cucamonga.

It also documents every step, in English, so everyone will know how you reached your conclusion. It even has built-in functions for depreciation, linear regression forecasting, and other powerful virtues not found in most financial software packages.

And Apples can run more electronic spreadsheet software than any other personal computer.

But there's only one way to appreciate what an Apple can do for your worksheet. Play around with it.

Or send mail at 670,0

That's about the speed of light. And also about the speed of "electronic mail."

Which, simply stated, is a quick and inexpensive way of sending any information, anywhere, anytime.

For the six dollars it costs to produce and mail a typical

the second

Claurie vou were our

E YOU WERE OUT

business letter, you could easily splurge on a patty melt and Perrier at The Blue Turtle.

Or, you could send the same letter for about 1/12 the cost using electronic mail.

Put your computer on the phone.

This exciting technology enables your Apple* Personal Computer to send or receive any correspondence to any compatible computer over standard phone lines.

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Arice Goldman Amarai Ichiban, S.F. 114 Jackson Square San Francisco, Calif, 94111

FURILE: DO NOT BOND

00,000 mph.

The same ones your voice has been using for years.

So there's no costly hook-up expense. All you need is an Apple and a device – called a modem – that translates the computer's electronic codes into fleet phone signals.

Which, in turn, can actually move messages at about the



The first thing to do in the morning is check your mailbox. Micro-Courier will tell you how many letters you've received, print them out, forward them, discard them, or save those you want in the computer's memory.

speed of light. As opposed to the speed of the U.S. Mail. And not just letters. But memos, charts and graphs, stock reports, VisiCalc* reports, weather reports or whatever. To one address. Or a hundred.

24-hour postal service.

Depending on the software you use, your Apple Personal Computer can perform a number of unusual postal chores. Functioning, for example, as a 24-hour-aday mailroom. Automatically sending and receiving messages, unattended, even late at night (when phone rates are lowest). So, instead of paying an overnight service nine dollars to rush a four-page report from Winnemucca to Wanamassa, you can arrange to have it sent electronically – anytime during the night – for less than 40 cents.

Your Apple will also let you revise messages right on the

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Like the Post Office, Micro-Courier has mailboxes — 99 of them. As you assign them to different people, the numbers appear in white squares. You can send the same letter to everyone at once or a selected few, or correspond one-to-one.

screen. So you can edit at the last minute. Or comment on incoming mail, and send it on to another department. Another office. Another company. Or any compatible computer anywhere.



It can even record the date and time of all transactions. Sort, file or print them out. And keep a running directory of up-to-date addresses.

Dialing for data.

Your Apple can also access larger computers that function as electronic postal centers.

They offer subscribers a central electronic "mailbox," and a number of message handling services.

But that's not all. These same "data banks" provide users with access to a wealth



Electronic mail is not only as fast as a phone call, it's generally more reliable and informative than a phone call, Because, no matter how elaborate the facts, your recipient will see them in black and white (or phosphor green).

of services and information.

So you can use your Apple to obtain stock quotes, make travel arrangements, scan *The New York Times*, or tap an electronic encyclopedia that can provide detailed answers to diverse queries (if you wish, it can even provide you with floor plans of Czechoslovakian hospitals).

And, as you might expect, there's more electronic mail software available for Apples than for any other personal computer (including the popular Apple Access III and Micro-Courier programs).

So let your Apple dealer tell you all about it. You'll get the message rather quickly.

And what we couldn't fit in this ad could fill a book. Or two.



A Personal Guide to Personal Computers

We've prepared two new booklets that explain what personal computers are all about and how they can help you do what you do.

Personal Guide to Personal Computers is an excellent general introduction. It'll make you feel comfortable in any computer store and at several cocktail parties. Personal Computers in Business, as the title hints,

> shows you how a personal computer can help you run your own business or manage part of one.

Both books take you from defining your real needs to becoming a canny computer shopper. And both are available at your participating authorized Apple dealer.

For the location of the dealer nearest you, or for information on our National Account Program, call (800) 538-9696. In California, (800) 662-9238.

Or write: Apple Computer Inc., Dept. C., 20525 Mariani Ave., Cupertino, CA 95014.

The most personal computer.



What are you waiting for? Christmas?

If you've been waiting for just the right reason to investigate the Apple II Plus personal computer, one of the best you're ever going to get is just around the corner.

And right now, we're poised, primed and ready to show you exactly how the Apple II Plus can do things like help with a child's education, balance the books, provide counsel on investments or just plain entertain you and your family with its wealth of intriguing computer games.

We're also ready to explain how, as you gain experience and your uses grow, the Apple has the power to grow right along with you. To the point where you could soon be expanding your system and adding a wide array of fascinating accessories.

> Why not stop in soon and find out more about Apple II Plus, along with its full range of peripherals and software. Better hurry though. With the holidays upon us, there may not be many Apples left for the picking.



(This space for Dealer name.)



Ring out the old. Ring in the new.

It's true that old business management practices die hard. But if you're letting past habits prevent you from discovering the benefits of the Apple II business system, you could be making a big mistake.

The Apple II's Controller[™] software package comprehensively monitors your business to provide the improved cash control, information flow and management assistance necessary to help profits reach new heights.

Not only does it help you collect money by identifying slow paying customers, it also helps you pay bills by taking advantage of discounts and varying net terms. What's more, the accounting reports and audit trails the Controller produces help reduce bookkeeping time. And bookkeeping errors.

The Apple II business system is simple to use, reliable, easily expandable and can be serviced quickly right here where you buy it. (If it ever needs service.)

Price? Less than \$5,000, including the Controller software.

So why not stop in and find out more about the Apple II business system this year. It could be just

what you need to boost profits next year.

(This space for Dealer name.)

ple computer

Why Apple II is the world's best selling personal computer.

appla

\$ W

satisfaction a personal computer can bring, today and in the future.

15 colors & hi-resolution graphics, too.

PLESOF1 Manual Don't settle for a black and white display! Connect your Apple to a color TV and BASIC gives you instant command of three display modes: Text, 40h x 48v Color-graphics in 15 colors, and a 280h x 192v High

> Resolution array that lets you plot graphs and compose 3-D images. Apple gives you the added

capability of combining text and graphics, too.

Back to basics, and assembly language too.

Apple speaks three languages: fast integer BASIC, floating point BASIC for scientific and financial applications, and 6502 assembly language. That's maximum programming flexibility. And, to preserve user's space, both integer BASIC and monitor are permanently stored in 8K bytes of ROM, so you have an easy-to-use, universal language instantly available. BASIC gives you graphic commands: COLOR=, VLIN, HLIN, PLOT and SCRN. And direct memory access, with PEEK, POKE and CALL commands.

Software: Ours and yours.

There's a growing selection of preprogrammed software from the Apple Software Bank—Basic Finance, Checkbook, High Resolution Graphics and more. Now there's a User Section in our bank, to mak it easy for you to obtain programs developed

hich personal computer will be most enjoyable and rewarding for you? Since we delivered our first Apple^{*} II in April, 1977, more people have chosen our computer than all other personal computers combined. Here are the reasons Apple has become such an overwhelming favorite.

Apple is a fully tested and assembled mainframe computer. You won't need to spend weeks and months in assembly. Just take an Apple home, plug it in, hook up your color TV* and any cassette tape deck — and the fun begins.

To ensure that the fun never stops, and to keep Apple working hard, we've spent the last year expanding the Apple system. There are new peripherals, new software, and the Apple II Basic Programming Manual. And wait till you see the Apple magazine to keep owners on top of what's new. Apple is so powerful and easy to use that you'll find dozens of applications. There are Apples in major universities, helping teach computer skills. There are Apples in the office, where they're being programmed to control inventories, chart stocks and balance the books. And there are Apples at home, where they can help manage the family budget, control your home's environment, teach arithmetic and foreign languages and, of course, enable you to create hundreds of sound and action video games.

When you buy an Apple II you're investing in the leading edge of technology. Apple was the first computer to come with BASIC in ROM, for example. And the first computer with up to 48K bytes RAM on one board, using advanced, high density 16K devices. We're working to keep Apple the most up-to-date personal computer money can buy. Apple II delivers the features you need to enjoy the real by other Apple owners. Our Software Bank is your link to Apple owners all over the world.

Alive with the sound of music.

Apple's exclusive built-in speaker delivers

the added dimension of sound to your programs. Sound to compose electronic music. Sound to liven up games and educational programs. Sound, so that any program can "talk" back to you. That's an example of Apple's "people compatible" design. Another is its light, durable injection-molded case, so you can take Apple with you. And the professional quality, typewriter-style keyboard has n-key rollover, for fast, error-free operator interaction.

Apple is the proven computer.

Apple is a state-of-the-art single board computer, with advanced LSI design to keep component count to a minimum. That makes it more reliable. If glitches do occur, the fully socketed board and built-in diagnostics simplify troubleshooting. In fact, on our assembly line, we use Apples to test new Apples.

*Apple II plugs into any standard TV using an inexpensive modulator (not included). **In California, call 408/996-1010.

Apple peripherals are smart peripherals.

Watch the far right column of this ad each month for the latest in our growing family of peripherals. We call them "intelligent interfaces." They're smart peripherals, so you can plug them in and run them from BASIC without having to develop custom software. No other personal computer comes close to Apple's expandability. In addition to the built-in video interface, cassette I/O, and four A/D inputs with two continuously variable game paddles, Apple has eight peripheral slots, three TTL inputs and four TTL outputs. Plus a powerful, state-of-the-art switching power supply that can drive all your Apple peripherals.

Available now.

Apple is in stock and ready for delivery at a store near you. Call us for the dealer nearest you. Or, for more details and a copy of our "Consumer's Guide to Personal Computers," call

800/538-9696** or write Apple Computer, Inc., 10260 Bandley Drive, Cupertino, CA 95014.

Programming is a snap! I'm halfway through Apple's BASIC manual and already I've programmed

my own space wars game.

Those math programs I wrote last week–I just rewrote them using Apple's mini-assembler and got them to run a hundred times faster.

apple computer

New from Apple.

Valuable new series of software packages for investors

Now private investors can generate their own stock market reports and perform critical investment analysis instantly with Apple II. Just log your Apple II computer on to Dow Jones' central data bank with powerful Apple software: the Dow Jones Series. The first two of these

highly practical programs are available now.

With Apple's Stock Quote Reporter program, a local tele-

phone call links you to Dow Jones' continuously updated

stock quotes for more than 6000 companies listed on six major U.S.

exchanges. Current activity for stocks in

the investors portfolio is delivered automatically: ask/open, bid/close, high, low and last prices, and volume traded.

Our **Portfolio Evaluator** enables you to analyze current value of your portfolio, and short- and long-term gain/ loss for each stock — or for your entire portfolio.

Cost of Apple's Dow Jones service is a one time contract fee of \$25, which includes the Stock Quote Reporter program. An additional \$3 charge is made for the first three minutes of any transaction and 50¢ per minute thereafter.

To take advantage of Apple's new financial services, Apple II users need only a communications card, a modem and an ordinary telephone. This equipment, the Dow Jones Series, and a broad selection of other Apple software are now in stock at your local Apple dealer.

Apple's smart peripherals make expansion easy. Just plug 'em in and they're ready to run. I've already added two disks, a printer and the communications card.

What kind of man owns his own computer

Rather revolutionary, the whole idea of owning your own computer? Not if you're a diplomat, printer, scientist, inventor... or a kite designer, too. Today there's Apple Computer. It's designed to be a personal computer. To uncomplicate your life. And make you more effective.

It's a wise man who owns an Apple.

If your time means money, Apple can help you make more of it. In an age of specialists, the most successful specialists stay away from uncreative drudgery. That's where Apple comes in.

Apple is a real computer, right to the core. So just like big computers, it manages data, crunches numbers, keeps records, processes your information and prints reports. You concentrate on what you do best. And let Apple do the rest. Apple makes that easy with three programming languages including Pascal-that let you be your own software expert.

Apple, the computer worth not waiting for.

Time waiting for access to your company's big mainframe is time wasted. What you need in your department ---- on *vour* desk — is a computer that answers only to vou... Apple Computer. It's less expensive than timesharing.

More dependable than distributed processing.

Far more flexible than centralized EDP. And, at less than \$2500 (as shown), downright affordable.

Visit your local computer store.

You can join the personal computer revolution by visiting the Apple dealer in your neighborhood. We'll give you his name when you call our toll free number (800) 538-9696. In California,

(800) 662-9238.

apple computer Apple Computer, 10260 Bandley Drive, Cupertino, CA 95014.

CEPTRITERE AND MARY BOOK

statistics for economists be

Working its way through colleges.

The way in which some college and university-level educators are using Apple computers is an education in itself.

An economical, intelligent terminal.

The University of Michigan, for example, recently clustered together a number of Apples as intelligent terminals to a timesharing system for teaching Engineering classes. For about the same cost as mere terminals, they obtained stand-alone computers that can receive down-loaded programs and operate independently of the university's large Amdahl. As a result, computer throughput has increased nearly five times.

To teach computer literacy, rely on Apple.

After being impressed by our system design, inherent reliability and ability to provide hands-on usage, North Texas State University picked Apple to teach BASIC in computer literacy classes. And they haven't been disappointed. In fact, the Apples have been such a success, the university's now using them under a grant from the National Science Foundation to teach programming to Dallas school teachers.

PASCAL spoken here.

At the University of California, San Diego, dozens of Apples are being used to teach PASCAL to Introductory Computer Science classes. Not only are the Apples less expensive than the previous systems the university used, they're more versatile. They provide high-resolution color graphics. And since their arrival, UCSD has been teaching PASCAL to many more students than was formerly possible.

We're serious about education.

For more about Apple, its audio capabilities, range of educational peripherals, powerful software, easy expandability, extended warranty and in most cases, same-day service, see your nearby Apple dealer. We'll give you his name, address and phone number, plus a free copy of our Educational Information Package when you call 800-538-9696. 800-662-9238 in California. Or write: Apple Computer, 10260 Bandley Drive, Cupertino, California 95014.

No one is more dedicated to higher education than Apple.

The man the light and the Apple.

If you could talk to Thomas Edison, he'd tell vou what it was like to turn the lights on in 1879. You could tell him about some bright ideas of the 20th century ... particularly, a technological phenomenon that can handle everything from solar heat control to lighting your home via voice command. The Apple personal computer.

Expand your own inventiveness with the always-expandable Apple.

Take a look inside your local computer store. There's a range of Apple systems for you ... whether you want expansion capabilities of four or eight accessory slots...or memory expandable to 64K bytes or 128K bytes. With this kind of flexibility, the possibilities for creating your own computer system are endless.

Want to add an A to D conversion board? Apple makes it happen. Want to plug into time sharing, news and elec-



With Apple, Edison could've written a program to determine why some filaments burned longer than others.

tronic mail services? Apple does it all. Because Apple is the most popular personal computer with the least complicated interface, over 100 companies supply peripherals for the Apple family ... including an IEEE 488 bus for instant control.

Disk drives, a tool kit and creativity in color.

Apple was one of the first to use disk drives for increased performance and application versatility. Today, our 54" disk drive offers high density (143K bytes),

high speed and low cost. No wonder this drive is the most popular on the market.

But now Apple goes one better with the DOS Tool Kit. A series of utility programs, it gives you the freedom to easily design 280h x192v graphic displays in a palette of living color ... depending on your choice of Apple system.

Edison was first with the movie camera and projector. Now, with Apple's DOS Tool Kit, you can be first to work wonders with colorful creative animation.

Imagine the broadest line of software programs ever.

Apple's broad line of peripherals is equalled only by the most extensive line of software you'll find in the personal computing world. Since more than 170 companies offer software for the Apple family, you can have one of the most impressive program libraries ever.

When you write your own programs. your Apple speaks creatively in BASIC,







Edison had the first movie camera...and Apple has the DOS Tool Kit that takes you into the colorful world of animation.

Pascal, FORTRAN, PILOT and 6502 assembly language. Use these languages to score a sonata. Apple will play back your musical masterpiece on its built-in speaker.

Edison listened to his voice on a revolutionary phonograph in the 1800s... now you can listen to the sounds of today with Apple's inventive family of personal computers.

Where to find even more illuminating Apple experiences.

There's always something new being invented at Apple to set your imagination soaring. And there's always an expert to tell you all about it in detail. Your Apple dealer. If you already own an Apple, there's a whole future ahead to

challenge man, mind and machine. If you're considering a personal computer, stop by the computer store and compare. Apple's reliability, proven performance and recognized technological leadership will help you see the light. Don't let history pass you by. Visit your nearest Apple dealer, or call 800-538-9696. In California, 800-662-9238.

The man, the revolution and the Apple.



How Apple's versatility helps you declare your independence.

What if you could test various alternatives to better forecast next year's sales? What if you could create profitability analyses in 15 minutes, or determine departmental budgeting and capital equipment depreciation ... all at the touch of a key?

You can do it all with Apple, a desk-top planner that can handle word-related tasks, too. Help you

write quarterly reports. Print cover letters. With Apple's text-editing capabilities, it might not have taken Jefferson 17 days to draft the Declaration

And you might be celebrating



of Independence. With Apple's text editing capabilities, it might not have taken 17 days to draft the Declaration of Independence.

the July 4th holiday on June 18th.

Why all personal computers are not created equal.

If you think a personal computer that can tackle all those sophisticated business applications has to cost a lot, the Apple will change your mind.

For \$1,500 to \$5,000, you get a serious solution. The same sort of solution a \$15,000 computer could give you. But without big-computer headaches and without having to hire a data processing pro to run it for you. With Apple, you don't have to sacrifice life or liberty pursuing efficiency and productivity. Because with Apple you have the freedom to run a computer all by yourself.

INTEREST

TOTAL

Apple is versatile enough to tackle everything from planning and analyses to personal financial forecasting.

Where to get personal advice about personal computers.

Before you can make a decision about buying a personal computer, you have to feel comfortable with how the computer operates. And what it can do. You need one-on-one conversations with an Apple dealer who knows his product inside and out. An expert who can guide you through the extensive line of hardware and software, directing you to the Apple system best suited to your professional goals and specific application needs.

You need someone who can prove that making the right business decision takes a lot more than just common sense. It takes a versatile Apple computer. Don't let history pass you by. Visit your nearest Apple dealer, or call 800-538-9696. In California, 800-662-9238.

apple computer



Wall someone please tell me exactly what a personal computer can do?





There are more people in more places doing more things with Apples than any other personal computer in the world. Most of them had never touched a computer before.

So it's more than likely that, whoever you are and whatever you do, you could use an Apple, too. Just a few possibilities:

1. Send letters at the opposed to the speed of the U.S. Mail.

2. Talk with the animals. Specifically,

the marine animals. Dr. John Lilly is doing just that in experiments with dolphins. Any day now, they may talk back.

3. To catch a thief, and other malefactors, several police departments and FBI offices are using Apples for detective work.

4. Teach a dog to heal. Veterinarians use Apples to diagnose animal diseases and store their patients' medical histories.

5. Keep with the

Dow Joneses, summoning stock quotes and news, evaluating investment options.

6. Or train a horse. Darrell Vienna uses his Apple to keep veterinary and racing statistics for an entire stable. 7. Test your wings. Rutan Engineering uses Apples to design experimental aircraft.

8. Or learn to fly. Cockpit simulators cost millions, but you can "fly" an Apple with a program that costs just \$40.

Make a better impression. U.S. Lithograph does by typesetting directly from an Apple,

dramatically reduc-

10. Save a life. The American Heart Association

uses an Apple and a mannequin to teach CPR.

11. Calm your mind. Bendo Japan, uses his Apple to help people meditate.

12. Or read a mind. At the University of California's

Davis campus, an Apple is "teaching" ESP.

13. Draw your own conclusions. Bloomingdales uses Apple Business Graphics to see what's in store for

Apples are

major league

with the Oak-

land A's, the White

Sox, and the Phillies.

With a great mind for

statistics, they can even

help call a play.

the future. And Bell & Howell uses them to get a better picture for corporate planning.

Bob Waltz's Apple at Smithers-Oasis can tell you everything you ever wanted to know

about growing geraniums. **15.** Collab-**15.** orate. Three Harvard professors writing a physiology text use their Apples to exchange chapters by phone, and report that word processing is healthier than typing and re-typing. Although he never could get \bullet it to change diapers, Edward

As BABY BEGINS CRYING, VOICE SYNTHESIZER RELAYS THE SIGNAL TO APPLE OF THE COMPUTER RELASES HWIGRY MOUSE OF UND LEAPS UBN CHEESE-LADEN PLATFORM @ PUSHING BICYCLE PUNP HANDLE TOWN. ALF BWIERED TOGENIE TOSSER OF IS ACTIVATED AND THE EXCITED TOG OF DEGINS ROCKING CRATLE. BRAY IS LULLEP TO SLEEP. OF COURSE, EDWARD APLER ACHIEVED THE SAME RESULT WITH A SOMEWHAT SIMPLER DESIGN.



Adler rigged his Apple to rock his baby's cradle every time she cried.

17. Apples are helping sell cars at Tom Masano Motors in Reading, PA, with cash flow and inventory programs that make lean times more liveable.

18 And they're helping fix cars at RPS Automotive in L.A. where they specialize in customizing Porsches for the

unashamedly wealthy. Getting physical, Steven Kamm at



South Oklahoma City Junior College reports course completions up 12% after introducing an Apple to his physics classes.

Meanwhile, at North western University, Andy Gordon enrolled an Apple in his Urban Affairs class and works with community groups to find real-life solutions for Chicago's urban problems.

> A pricing program developed by Peat, Marwick and Mitchell helps truckers get the most out of a truckload.

> > 23.

Nikegets a jump on their competition by using Apples to design better running shoes.



24. Contractors are getting all kinds of constructive advice from Apples, with job costing and



analysis programs customized for their industry.

25. architects can sketch new designs on Apples with the kind of programs once available only

on million dollar systems. 26. When he's not working on of a major aerospace firm uses his Apple to predict the winner of the Mazatlan Regatta.

27. An Apple called every play in The Greatest Baseball Game

That Never Was, broadcast by over 300 radio stations and realistically announced by Jack Buck and Lindsey Nelson. Fans who tuned in mid-inning were startled to hear Babe Ruth going to bat against

Sandy Koufax.

28. You can even get hitched with an Apple. Reverend Ron Jaenisch added a voice synthesizer to his so it can perform the wedding ceremony.

29. If you'd just out, several health clubs use Apples to tell you how many push-ups you owe yourself. And how

many dollars you owe them. **30.** Getting into serious training, teach everything from photocopier repair to advanced optics.

31. Apple to figure out just how much of a marathon a runner can

take, contributing hard data to sports medicine.



32. A high-flying Apple on the space Shuttle monitored experiments on plant growth in a weightless environment.

33. While a down-to-earth Apple helped the Shuttle aim its experimental imaging radar system.

34. Well International engineers determine how the Shuttle should be loaded to keep its center of gravity centered.

→ is using Apple's color graphics to teach people relaxation and self-hypnosis.

-36. Everybody banks on computers. But the Bank of Louisville uses Apples for more per-

sonalized service and faster

approvals on loans. 37. You can make less taxing with tax

preparation packages customized for several states.

38. At Checkers Pub in London, an Apple makes sure there are enough bitters, bangers and mash to go'round.

39. At Domain Chandon, they use Apples to help pick which grape harvests will make their fine wines sparkle.

41. And in Washington, they're using Apples to grow hops.

42. You can perfect your pitch with an Apple, learn to read music and, that done, start writing it yourself.

43. In fact, Herbie Hancock

uses one for all that jazz. It lets him use one keyboard for an incredible variety of sounds.

44. Todd Rundgren used his great sound, but to write another kind of hit – a program that makes spectacular color graphics easy with Apple's Graphics Tablet.

45. Earth, Wind and Fire use an Apple for fire. It sets off flash pots and explodes little bombs on stage during the rock group's pyrotechnic performances.

46. The Grateful everything from standard accounting and scheduling to controlling their sound systems.

47. And Santana's Apple has inside info on major auditoriums throughout the U.S. – stage sizes, door heights, power sources, etc. – which saves weeks of logistics work when



they go on tour. **48.** On a main classi note, the San cisco Concert Orchestra uses theirs for something

just as important as staying in key: keeping their books in harmony. **49.** Farmers everywhere are fast-growing users of Apples, thanks to ready-to-use agribusiness programs on everything from soil fertility to hog breedirg.



40. While at the Center for Brewing Studies, an Apple tests new beer recipes. 50. At the World's Fair in Knoxville, 35 Apples are running U.S. Commerce Dept.'s energy exhibit

with touchsensitive video screens. So to run an Apple, just point. In the oil industry, Apples are doing jobs once reserved for big computers. Like analyzing geological data and managing offshore drilling platforms. Take in the trash. In Ft. Lauder-∠ dale, an Apple helps collect the garbage, scheduling pick-ups and keeping track of equipment. Knit one, compute two...a JJ. German firm is using Apples to create new sweater patterns. In Sun/Tronics Home of the Future, Apples

control the invironnent, monitor security and tell you hat's fo inne

At St. Paul's Children's Hospital, there's one Apple for every bed in the intensive care unit, freeing nurses for more important work. Like holding hands. In Tucson, Michael Lamb has adapted an Apple to automate the vital job of anesthesia monitoring in surgery.

Dr. Terry Pundiak taught his Apple to talk with a text-tovoice synthesizer. Appropriately, it gives anti-smoking lectures. Since Apples never smoke. Other talking Apples are read-• ing to the blind in experimental programs.

Apples a can leafn to listen, too, making life a little easier for severely handicapped people

carrying out simple voice commands. Apples arrived in China short-OO + ly after Coca Cola.® A Beijing



professor uses his for laser experiments. And a Shanghai physician's helps speed diagnosis of liver cancers.

Dr. Michael Rumelt uses an bo Apple to find glaucoma patients who would most benefit from surgery. 67. Psychologist John McPhee de-an Apple program to analyze Rorschach Tests, otherwise known as inkblots. What do you

think

it means? Make a no dragon fly. Or a horse, run.Apples make/ computer animation afford-

able. Colossal Pictures used one to create the exquisite title sequences in The Black Stallion and One From The Heart. 69, In Mon-treal, a weather-forecasting Apple at radio station CJAD will tell you what roads clear of snow. Or, more importantly, which ones aren't.

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a'u!

Lose 200 pounds of ugly fat. Apple's Diet Analysis can helpup to 10 family members eat smarter.



On the other hand. one Apple diskette can hold 500 recipes for homemade ice cream. Or anything else you've got cooking.

Drexel-Heritage uses an Apple to furnish the paper work that goes with making fine furniture.

If your credit cards are warm () to the touch and ready to self-destruct, try Apple's Personal Finance Manager.

Improve Life and save Time. Both magazines use Apples in their national circulation departments. With over 300 agents using () Apples, E.F. Hutton Life custom-tailors insurance programs in

minutes instead of days. 6. Most writers have trouble with anything more technical than an elevator. But many are trading their typewriters for Apples. With Apple Writer, editing is painless and the computer does all the typing.

77 Speaking of write and wrong, Apple's Goodspell will "look up" every word in a document and point out the misspelled ones.

O electronics engineers are

using Apples for circuit design.

Or get in the chips by writing a hit disk. A high school student in Orinda, CA made \$50,000 designing games on his Apple.

80. Speaking of games, an Apple can play more of them than any computer outside the Pentagon. So you can stage your own World Series or Super Bowl with stars whose performance is based on their career averages.

Or chase the Bismarck across the North Atlantic or the Graf Spee up the coast of South America in chillingly realistic strategic simulations. Or match wits with the most O∠→ sophisticated computer chess programs commercially available.

> Or outwit the 83. programmer-trolls who've created worlds of dungeons, dragons, magic spells and incantations.

 Or play golf, poker, pool, O4 → pinball or your favorite

arcade games, with far more strategic sophistication, thanks to Apple's ample memory, than any

mailing

home video game.

85. back Back to business, you own customer list with

Apple's Mail List Manager. It can handle up to 5,400 names and addresses. With Apple OO+QuickFile™ software, you can store up to 200 files on a single 51/4" floppy disk and retrieve the information you want in seconds. Q7 For even bigger jobs, you need ProFile,[™]Apple's hard disk Q Get a chip off your mind. Micro- storage system. It can hold about 2,400 double-spaced pages

or 30,000 names and addresses.

88, something. Not only that, but More educational programs run on Apples than PBS. The top ten educational publishers are now writing courseware

for Apples to compliment their textbooks.

89. Or teach something. With Apple's course design software, teachers with no prior computer experience are writing their own educational programs.

Or make programming child's play, even for adults. With Apple Logo™ the first computer

The most personal computer.

language designed specifically to teach programming. It's simple enough for first graders vet powerful enough for professionals. **O1** Or run the

whole school. Several Apples have been sent to the principal's office.

To keep records and handle finances. Or take the SchoolBus™(avail-2 → able Spring '83), a system allowing classroom Apples to share the same program, significantly

cutting costs. Q2 On a different track,

J ♦ the Sports Car Club of America's San Francisco office now uses an Apple to keep up with

race results and way ahead of paperwork.

94. An Apple nelped and Pope An Apple helped the city of John Paul during his last U.S. visit, planning being one of its cardinal virtues. 95. Assumption Church in • Omaha and St. Ann's in Palo Alto, CA are just two of the growing number of churches using Apples for everything but inspiration.

6 Of course, ♦ if it's inspiration you seek, you can now read the Bible

on an Apple. you can cross

reference passages six ways to Sunday. Fire departments use Apples to keep track of equipment and hydrant locations. So they can make decisions with blazing speed. **OS** David Curtis of Minneapolis O. is a seeker of truth. So he turned his Apple into a lie-detector. 99. Some small businesses may be too small to profit from an Apple. But not Wade Harris'. He's a chimney sweep in Ellicott City, MD. Floyd Berghout of Utah came up with one of the best applications yet for an Apple: understanding / his 14-year-old son.



Will someone please tell me more?

We've prepared two new text books that explain what personal computers are all about and how they can help you do what you do.

The 56-page Personal Guide to Personal Computers is an excellent general introduction. It'll make you feel comfortable in any computer store and at several cocktail parties.

The 56-page Personal Computers in Business, as the title hints, shows you how a personal computer can help you run your own business Program, call (800) 538-9696. or manage part of one. In California, (800) 662-9238.

Both books take you from defining your real needs to becoming a canny computer shopper.

And both are available at your participating authorized Apple dealer.

For the location of the dealer nearest you, or for information on our National Account Program, call (800) 538-9696. In California, (800) 662-9238. Or write: Apple Computer Inc., Dept.C, 20525 Mariani Ave., Cupertino, CA 95014.

The most personal computer.



The man, the wheel and the Apple.

If you could talk to Henry Ford, he'd tell you what it was like to start a business in 1893. He could tell vou about America's industrial revolution. You could tell him about our technological revolution ... particularly about the 20th century solution that helps keep your business under control. A machine that doesn't take an expert mechanic to run or a millionaire to buy. The Apple personal computer.

Why Apple has enough drive to handle your business details.

Whatever business you're in, costly wheel spinning occurs when all the details aren't handled on time and on budget. Details like accounts payable/receivable. General ledger. Writing the checks and paying the bills.

Why be bogged down doing these tasks when a

Lord Ford Ford

Higher Than Ever In Quality

typewriter-size machine can do it for you? Small enough to sit on an office desk. the Apple can handle today's details...vet be serious and sophisticated enough to test tomorrow's business decisions long before you make them. With Apple, you'll get the competitive

What do the Apple and the Model T have in common? Ease of operation and affordability.

edge from on-target sales forecasts, profitability analyses and budgets ... even print management reports or mailing lists at the touch of a key.

Ease and affordability typify the Apple and the Model T.

In 1910, cars were priced as high as \$8,000. Yet the Model T sold for under \$600. The Model T did what the expensive cars did, the same way the \$1,500 to \$5,000 Apple systems do what \$15,000 systems do. But with Apple you don't get big computer headaches, or have to hire a data processing pro to run the system. You run it yourself.







Skeptical? Folks felt the same way about driving a car until they tried the Model T. Try Apple and discover how easy the hardware is to use. Enjoy the simplicity of software in English-like languages.

Where to get personal advice about personal computers.

When you buy a car, you take it for a test drive. When you buy a personal computer, you should

test it the same way. You should consult with an Apple dealer who knows his product line inside and out, so you won't have to. An expert to explain Apple service, expandability, support and warranty. Someone to put Apple through its



Apple software belps you bandle business details ... everything from today's general ledger to tomorrow's sales forecast.

business-related paces.

Meet someone who will prove that the versatile Apple is just the investment that can help keep you in the driver's seat. Don't let history pass you by. Visit your nearest Apple dealer, or call 800-538-9696. In California, 800-662-9238.

apple computer



If you could talk to Orville Wright, he'd tell you the problems he faced as a turnof-the-century engineer. You could tell him all about the technological solutions available to today's engineer and scientist ... particularly a 20th century phenomenon

> **Computation**, calculation, analysis...the power to pilot your projects.

> that tests assumptions and defines models

before a project gets off the ground.

The Apple personal computer.

With a highly-integrated system from the extensive Apple personal computer family. Orville and brother Wilbur would have increased their productivity. Perhaps even launched the Kitty Hawk Flyer well before 1903.

An Apple in their hangar would have freed them from the time and tedium of crunching numbers by hand.

An Apple in your lab or office will give you the problem-solving capabilities you demand from a big computer...without the time-consuming problems typical of remote processing.

But the Apple system solution doesn't stop there. It keeps on soaring with proven performance, power and expandability



Apple's existing software library includes a program that plots the shape of an airfoil, given its parameters.

that's unparalleled for analyzing alternative paths of design and modeling a wide variety of physical processes.

Want more memory? Depending on your choice of system, Apple has memory expandable to 64K bytes or 128K bytes. Prefer wide displays? Choose 40 or 80 characters. Need to control instruments in the lab? Get on the IEEE 488 bus. Over

100 companies also supply peripherals for Apple because Apple is the most popular personal computer with the least complicated interface.

Want an efficient system of data storage and access? Apple's 51/4" disk drive not only offers you increased application versatility, but high density (143K bytes), high speed and low cost. You can even add up to four or more drives to your Apple system. With proven reliability. no wonder it's the most popular drive on the market today.



FORTRAN that helped to design a 20th century flying machine.

Fluent in the same language that helped to design the 747, Apple FORTRAN lets you tackle differential equations at the touch of a key. And since more the 170 companies also offer software for the Apple family, you can have one of the most impressive program libraries ever...including vast subroutine libraries for math, science, engineering and statistics. When you write





your own programs, the Apple also speaks in languages other than FORTRAN: Pascal. BASIC, PILOT and 6502 assembly language.

Where to learn more about Apple, the small-yetserious solution.

> Let your imagination soar with

Apple Discover the 20th century tool versatile enough to monitor quality controls and manufacturing schedules, orchestrate tolerance tests and determine alternative

Wilbur determined that birds didn't have to constantly flap their wings to fly. With an Apple, he could've determined the fixed-wing design of the Kitty Hawk Flyer much faster.

apple computer

parts selection. Learn why Apple emerges as the technological leader of reliable personal computer products that increase your productivity.

Let the Apple dealer show you how, by putting the system of your choice through its paces. He'll tell you about our extended warranty, support and service. And he'll prove that a personal computer is not just a flight of fancy but a serious solution. Don't let history pass you by. Visit your nearest Apple dealer, or call 800-538-9696. In California, 800-662-9238.

How to cash in on the \$5 billion opportunity in personal computers.

The Opportunity

In 1977, 43,000 people bought personal computers. By 1978 the number was 240,000. And in 1979 over 825,000 people will become users of personal computers. In 1982, it will be a \$1,300,000,000 opportunity. By 1985, a \$5,000,000,000 market.* And that's only the beginning.

The beginnings of the personal computer industry were very much like the stereo industry; a handful of

new manufacturers producing hobby kits. But there is one big difference: personal computers have grown faster than stereo... five times faster. And by 1981 total retail sales of personal computers will exceed stereo sales. If you're a successful, innovative, high end audio dealer then there's an immediate ground floor opportunity in personal computers. For you. Now.

About Apple

Apple Computer, Inc. is a little over three years old. A pioneer in the personal computer field and today one of the largest suppliers of personal computers and accessories. The first personal computer manufacturer to offer a one-year warranty. The first with price protection. The first with self-demonstrating P.O.P. programs. That's Apple Computer. The most talked about company in the business.

Apple personal computers are sold as a system. Just like a stereo system. And follow-on sales continue long after the purchase of the initial computer. In fact, the average initial system purchase price is \$1542. 93% of the original purchasers have returned to the store for an average of \$800 of add-on purchases within a year. Since Apple is an expandable computer system, your sales will continue for several years as the customer's interest and usage increases.

Who uses Apple Computers

Almost everyone has a use for a personal computer. The same person who buys stereo equipment is a likely prospect for a personal computer. Businessmen use Apples to manage their books—then take them home for their families to use. Apple computers are used in schools. In small businesses. In professions. In retail stores. And at home for enrichment and entertainment for the whole family.

Apples in your future

Apple has a strong two-step distribution system. Today Apple computers are sold through carefully selected retail computer outlets, audio visual dealers, and audio retail stores. And we're expanding our coverage in many markets.

Currently 25% of our dealers are audio dealers. The majority of our new dealers will be recruited from the ranks of audio dealers.

When you become an Apple dealer you'll get the training and support you need to become successful. Retail floor displays.

Sales and product training. An agressive national advertising and promotion program. A sensible co-op plan. Regular newsletters to keep Apple owners and dealers up on the latest products and software. Regional service centers. Plus all the literature and support material you need. And most important of all, you'll be selling the most profit producing line in the industry.

Your move

To get in now on the ground floor in personal computing call Ron Rohner, at (415) 996-1010. Use the coupon or write Apple Computer, 10260 Bandley Dr., Cupertino, CA 95014.

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Please send in the Name		
Address City, State, Zip Phone ()		Arket figures cited are obtained from published reports and articles retailing. Oct. 1978: Electronic News.
L-(Aug. 21, 1978; Ele Research, "Personal Comp	cited are obtained from published reports and articles: <i>ctailing</i> , Oct. 1978; <i>Elactronic News</i> , <i>ctronic News</i> , March 5, 1979; Vantage ulter Industry Report," February, 1978.

"31,000 student hours later, we still love Apple Computer

When the Minnesota Educational Computing Consortium recommended Apple Computer to the state's school districts—well, it started something big.

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Today there are hundreds of Apple Computers in use in 35% of Minnesota's elementary and secondary schools, and nearly all of the colleges and universities in the state. Most communicate with the Consortium's CYBER 73 mainframe in a state-wide educational computer network.

The educational computer

Dr. Kenneth Brumbaugh, Manager of User Services, heads the team responsible for supporting instructional computing.

"MECC evaluated personal computers and chose Apple because it was the one that met our rather rigid specifications.

"And, we employ a conventional timesharing system, with remote terminals. But that means high phone costs.

And limited user access. Apple solves that. It gives schools a stand-alone computer for about the price of a terminal. Also, Apple interfaces directly to our CYBER, so we can download programs to any Apple



in the state. That also means we can serve as the communication link for the wealth of new programs students and teachers are writing themselves. For us, Apple is an excellent educational computer.

The kids-and the teachers-love Apple

"One big reason we chose Apple is that it is so easy to program. Now, with Pascal, Apple can provide even more programming flexibility.

"For example, MECC has written a note-recognition program to help teach music that takes advantage of Apple's unique built-in speaker. And Apple's color graphics make programs far more interesting than conventional black and white terminals can.

"To date, we've logged over 31,000 student hours on Apple Computers. We even have schools trying out computers for home study. The kids love the Apple. And so do the teachers."

Is Apple for you?

For the name and address of your local Apple dealer and your free copy of Apple's *new* Curriculum Materials Kit, call **800-538-9696**. In California, **800-662-9238**. Or write us at 10260 Bandley Drive, Cupertino, CA 95014.

Taking on a new partner is sometimes just what's needed for a business to take off. That's why small aggressive companies everywhere are taking on Apple Computer as a new partner.

Apple is the small computer that works for small companies the way big computers work for big companies. It tackles the company books. Prints bills and writes checks. Produces monthly summaries and helps manage inventories.

> And digs out the data you need to make decisions that can get your business really rolling.

Apple, the personal business computer.

We designed Apple to work the way you work. You run your own business because you're an independent sort. You like making your own decisions. And looking for better ways to run a tighter ship is just plain fun. Apple is the tool for you.

To start with, there's never been a computer that's easier to put to good use. And Apple is downright affordable. For example, our most advanced system, with Accounts Payable/Receivable and General Ledger programs included, is priced at less than \$5,000. And you can write your own customized programs. Apple makes that easy with *three* programming languages, including Pascal, the hot new language everyone's talking about. Apple is portable, too. So when you take work home you can take your computer along.

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Apple, in big companies, too.

O'Neil & Son. And Apple Computer.

> Don't feel left out just because you're in a big company. Apple can bring all the benefits of low cost computing to your office or department. Make Apple your personal desk top computer.

Visit your local computer store.

There's an Apple dealer near you. He's a computer expert. So you don't have to be. Ask him to sit down in front of an Apple and show you how to put it through its paces. In minutes, you'll be thinking of dozens of ways to put Apple to work for your business.

After all. You are the boss.

Call for the dealer nearest you. (800) 538-9696. In California, call (800) 662-9238. Apple Computer Inc., 10260 Bandley Drive, Cupertino, CA 95014.

How to buy personal computer.

In California, a store owner charts sales on his Apple Computer. On weekends though, he totes Apple home to help plan family finances with his wife. And for the kids to explore the new world of personal computers.

A hobbyist in Michigan starts a local Apple Computer Club, to challenge other members to computer games of skill and to trade programs.

> Innovative folks everywhere have discovered that the era of the personal computer has already begun—with Apple.

Educators and students use Apple in the classroom. Businessmen trust Apple with the books. Parents are making Apple the newest family pastime. And kids of all ages

are finding how much fun computers can be, and have no time for TV once they've discovered Apple.

Visit your local computer store

The excitement starts in your local computer store. It's a

friendly place, owned by one of your neighbors. He'll show you exactly what you can use a personal computer for.

SMO!

What to look for

Your local computer store has several different brands to show you. So the salesman can recommend the one that best meets your needs. Chances are, it will be an Apple Computer. Apple is the one you can program yourself. So there's no limit to the things you can do. Most important, Apple's the one with more expansion capability. That means a lot. Because the more you use your Apple, the more uses you'll discover. So your best bet is a personal computer that can grow with you as your skill and involvement grow. Apple's the one.

It's your move

Grab a piece of the future for yourself. Visit your local computer store. We'll give you the address of the Apple dealer nearest you when you call our toll-free number. Then drop by and sink your teeth into an Apple. 800-538-9696. In California, 800-662-9238.