Commodore Announces One Millionth VIC 20 Computer

Featured on the middle of the Commodore booth at the winter Consumer Electronics Show was the one millionth VIC 20 computer, thus confirming the prediction made at the Commodore press conference one year earlier that "Commodore would sell more computers in 1982 than the entire industry did the previous year."

Contents

VIC 20 Voted Computer of the Year

An International competition run by 7 personal computer magazines has voted the Commodore VIC 20 "Home Computer of the Year." The magazines sponsoring the competition were:—"Databus" (Holland), "Microsystems" (France), "Bit" (Italy), "Practical Computing" (Britain), "Chip" (Spain), "Personal Computing" (U.S.A.), and "Chip" (Germany).
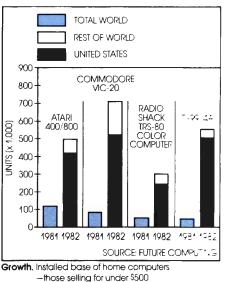
Computers had to meet basic criteria—fully developed machines, not pre-production prototypes; available to the marketplace with software and service back-up. Second and third places were awarded to the Sinclair ZX 81 and Spectrum, with the Atari 400 and Tandy color machines coming in as runners up.
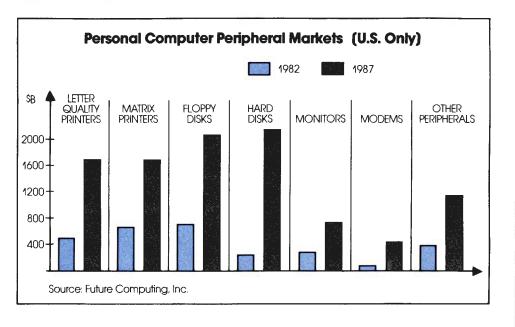
Future Computing Inc Analyzes The Personal Computer Market

This record milestone for the industry and Commodore was made at the same time as the Dallas based market research firm FUTURE COMPUTING released their latest report on the personal computer market. The report included the comment that "one year ago the Apple II was the leading personal computer with the largest installed base, the largest shipment rate and the largest revenue generator of any single personal computer." The report also stated that "one year ago the Atari 400/800 was the clear leader in the home computer segment." The report then went on to comment that "Now one year later the changes have been phenomenal and that the monthly shipment rate of the largest home computer manufacturer (Commodore) has now outdistanced the Apple II by a factor of three or more." One result they forecast is that a flood of software will become available for the leading home computers in 1983. Judging by the quantity and variety of titles recently released by Commodore we should be leading the way to make this particular prediction come true.

Growth. Installed base of home computers —those selling for under $500

The Growth Opportunity in Peripherals

According to FUTURE COMPUTING's research report "the market for computer peripherals represents a major growth opportunity." In 1982 they valued it at $2.5 billion in the U.S.A. at retail price level. This they estimated was presently two-thirds of the total hardware market and will grow to over $10 billion by 1987. The three largest sectors were given as letter quality printers, dot matrix printers and floppy discs. While the new emerging sectors were given as hard discs, monitors and modems—all three of these are market sectors that Commodore has entered with competitive products over recent months. Commodore is already established in the first three major categories. So with the largest installed base of any computer manufacturer worldwide the company should be in a strong position to capitalize on these profitable markets in future years.

Personal Computer Peripheral Markets (U.S. Only)

Source: Future Computing, Inc.

A Message From Our President and Founder

Our company has had outstanding success since we started 25 years ago. We are an exciting company in an exciting industry. However the rapid growth we have planned for and are experiencing means that I can no longer meet and get to know all of you personally to tell you of the constant principles that we have learned to rely upon and guide us through the many changes necessary to achieve and continue our rapid growth. These principles lie at the heart of Commodore's success. Learn them and learn them well and you will be successful as a member of the Commodore family. Practice them, discuss them with your colleagues and managers and we will continue as a leader and innovator.

JACK TRAMIEL
President and Founder
Commodore International

The Commodore Philosophy

THE COMMODORE PHILOSOPHY is like our company religion. Commodore is a "family" of employees so when we talk about ourselves we talk about "we" not "I." We should all share the same goal . . . to produce the best products for the best prices, using the newest available technology.

BUSINESS PHILOSOPHY . . . Business to us is not a sport—it's war. We are not here to play the sport but to win the battles. We will win because we work harder, work smarter and we serve our customers better. Every competitor, from the smallest to the biggest, is an enemy and we are dedicated to winning.

INTERNATIONALISM . . . We don't believe in nationalism. We believe in internationalism. Commodore is an international company.

DECISION MAKING . . . Progress at Commodore is maintained by middle management making the decisions that drive us forward. Every time we make a decision we have to look to the left and right to see if we are helping each other . . . not just thinking of number one (ourselves) because we as a group of over 3000 employees are much stronger than one.

CUSTOMERS . . . Our marketing strategy is clear. We produce for the masses—not the classes. Quality and service is our commitment. Our customers are mature and intelligent. We must give them the best because they will know if we don't.

TECHNOLOGY . . . Commodore is driven by technology. We don't only introduce the products the customer wants . . . we introduce products the customer didn't even know were available.

PROFESSIONALISM . . . A good professional needs to practice every day . . . not only to have one good "concert" a year. Don't just react—think first! Treat every situation as if you were the one being affected by your actions.

INVOLVEMENT . . . Delegating is important but involvement is more important.

We all have to involve ourselves in the problems as well as the successes.

MUTUAL IMPROVEMENT . . . Never settle for doing things the way they were done in the past. Always find new ways to do things better, cheaper and more efficiently. Constructive criticism of each other is essential. We should not tell ourselves and each other only what we have done well. Every morning we should tell ourselves what we didn't do and what we could have done better.

ADVICE . . . No one is too important to accept advice. No one is too unimportant to give it.

COMMUNICATION . . . If you have information that others need . . . share it! Communication is a key strength of our company. There are no secrets inside the company but outside we keep our business confidential.

SUPPLIERS . . . Never buy a product if you don't know what it costs to make it. Never buy below the supplier's cost so the supplier is driven out of business. Give him a decent profit . . . but never more than our company makes. Develop long term relationships with our suppliers and always negotiate in good faith.

FINANCIAL RESPONSIBILITY . . . Treat every penny as your own.

EMPLOYEE RELATIONS . . . Every employee should and will know the goals we are trying to achieve as a company. There is always a reward for the best but there is also a reward for the one that tries the hardest . . . because trying hard is important. Neither discrimination nor prejudice is tolerated at Commodore. Your individual problems are the problems of the company . . . we're here to help in happiness and sorrow. That's what a family is all about.

THE FUTURE . . . We're always looking at the future because we're helping to create that future . . . but the work is always done in the present.

Commodore Stuns Press At Winter Consumer Electronics Show

—Infoworld Magazine

This was the headline that Infoworld Magazine used to report on a Commodore press conference during the Consumer Electronics Show. Their opening paragraphs read as follows:
LAS VEGAS, NV. "A dual processor portable computer at a low price, the announcement of the Commodore 128 (P500), one million VIC's sold, the possible takeover of Zilog and scads of new products were among the topics at a Commodore hosted press conference at the winter C.E.S. Nearly 100 reporters packed a small conference room to hear Commodore spokesmen declare that the company is now number one in both home and personal computer sales. President Jack Tramiel boldly predicted that his company will be number one in home, personal and business computer sales by this time next year."

New Products Shown

Here we take a brief look at the new products that made their debut at C.E.S. and helped make Commodore the hit of the show.

The Executive 64- A Portable Version of the Commodore 64

The new product hit of the show was a briefcase style portable computer based on the popular Commodore 64. The portable computer shown at the booth had 64K of memory, a 5 inch color monitor and two standard size floppy disc drives (340K capacity) all built and packaged in an extremely attractive briefcase style housing complete with keyboard. The unit was both smaller and lighter than the leading Osborne computer on the market today. The computer was put together by a design team in Japan cooperating with their American counterparts in Commodore.

Compatibility with the rapidly expanding range of software for the Commodore 64 was evidenced each morning when Commodore staff took the same discs they used to demonstrate the standard Commodore 64's on the booth and inserted them in the new portable model. As well as the standard Commodore MOS 6510 microprocessor the 64 accommodates a Z80 processor and CP/M operating system.

While the final price of the Executive 64 has yet to be announced Mr. Gould, Com-

modore's chairman, commented that "the price of this series of machines, like all Commodore computers will be substantially below any comparable product now on the market." Certain configurations could well be on the market for under $1,000 while a full configuration with two disc drives and color monitor should retail for under $1,500. Initial shipments are being targeted for spring/summer.

Color Monitor for Under $300

At the CES show Commodore Business Machines U.S.A. introduced a low priced color monitor especially designed for its line of home, school and business computers.

The new 13 inch monitor—designated the CBM 1701—will retail for $299.95 and was especially designed for use with the COMMODORE 64 and VIC 20 computers. The monitor accepts a standard 75 ohm composite video signal or a "Commodore" video signal with separate provisions for luminance and chrominance signal input as well as audio input.

The monitor was developed in conjunction with a major television manufacturer and includes special circuitry which greatly enhances the picture resolution. Commodore has applied for a patent on the design.

Up until now the main choice for a user has been to either buy an expensive monitor or to keep connecting and disconnecting the family T.V. set every time.

From a business standpoint Commodore has diversified into color monitors as they will become a key component in future color computer systems. So now retailers and customers will be able to buy their full system from Commodore just like stereo component systems are sold. Deliveries of the color monitors are scheduled for early 1983.

A Low Cost Printer/Plotter

Also at the CES Show Commodore unveiled a new printer/plotter to retail at $199.95. This computer accessory uses 4½ inch roll paper and prints in four colors or combinations of colors to achieve multi colored graphs, charts and other types of illustrations which are enhanced by the use of color. High resolution illustrations are achieved by the printer/plotter's ability to "step" 480 dots horizontally and up to 999 steps vertically. The unit can also print out letters and numbers as required.

Four separate ball point ink pens provide a clean, high quality color image and the 5 inch wide carriage accommodates standard roll paper. The VIC 1520 printer/plotter rounds out the existing line of low priced main accessories for the VIC and COMMODORE 64 computers. First deliveries are scheduled for early 1983.
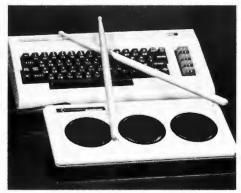
Computer Desk from Canada

Commodore U.S.A. is adding a computer desk to its line of products marketed through authorized dealers.

Designed specifically for computers and their peripherals, the desk has a ventilated compartment for a disk drive, handy shelf for storing disks and other accessories; as well as special slots to conceal cables. The sturdy steel frame desk stands at a comfortable height for typing on a computer keyboard. The desk top (26" x 48" x 1¹/₈" thick), is made of durable easy-care Arborite and is T-molded with rounded corners. The steel legs have adjustable leveling glides.

The desk was developed and manufactured by Commodore Canada's own steel office furniture division where it has already been successfully introduced along with their traditional line of desks, filing cabinets and other office furniture. In the U.S.A. the desk will retail for $279.00.

Digidrum Adds New Dimension

Imagine an electronic drumset controlled by a computer, with volume control and sound generated through a TV set, monitor or stereo system . . . but priced as low as a video game cartridge! At the CES Show Commodore demonstrated a new low

priced three-pad electronic drumset called DIGI-DRUM™ which will attach to the COMMODORE 64 and VIC computers.

This new peripheral will plug into the computer's expansion port and comes complete with special software which lets the user simulate a snare drum, base drum and "high hat" cymbal, with startling realism.

The combination of computer and DIGI-DRUM visually displays 3 animated drums on the TV screen, which perform with each drumstroke. Other screen simulations can be programmed. The three drums can be combined in an infinite variety to produce high quality rhythm effects suitable for entertainment, learning or sound effects. DIGI-DRUMmers can use their computers to create and save drum routines and play them back through their stereo system or TV speaker. First deliveries are planned for Spring/Summer 1983.

A Keyboard Synthesizer for Under $100

Another new product demonstrated at the CES show was a 12 voice, 37 full size key organ keyboard synthesizer designed to work with both the VIC and 64 computers. Accompanying the keyboard is an interface card that plugs into the cartridge port of the computer. A demonstration tape for the unit allows the user to play and select from a few instrument parameters. In addition there is to be a cartridge slot in the interface itself into which special music cartridges can be inserted. The first of these will allow the user to select from unlimited preset instruments. Users can also record what they play in real time and then play back and accompany their recordings. The computer screen can be used to highlight various aspects including a graphic display of the synthesizer with slider controls. While the price on this unit is not yet announced it is anticipated to be available by the summer at under $100. This together with the DIGIDRUM brings a new world of spectacular music within the reach of would be personal computer owners and opens up the market for electronic music to Commodore.

Business Oriented Products Lead Off 1983

While Commodore made dramatic gains to world leadership in home computers last year much backroom work was going on in its business oriented products to support the traditional dealer base and get ready for strengthened activity in that area during 1983.

Upgrated CBM Computer Becomes Workhorse of the Industry

For several years the CBM 8032 desktop computer has been the backbone of our business sales. Especially so in Europe where it is the brand leader. During 1982 a 64K add on memory board was brought into the range. This has enabled some very powerful upgrades to be made to the large existing base of software for this machine. These upgrades include: a version of Visicalc running with 96K of memory to give an exceptionally large worksheet and data base, a version of the popular Wordcraft word processor package with built in communications facility to other computers, plus the much acclaimed Silicon Office from the U.K. Silicon Office is a fully integrated package of

word processing, data base, calculation and communications programs that are all resident at the same time in the increased memory facility of the computer. Indeed there has even been a new electronic spreadsheet package developed by our distributor in Sweden which has several advantages over the enhanced Visicalc.

As a result of this Commodore companies in Europe have marketed the increased 96K version of the computer as a separate machine in its own right—the CBM 8096 Business computer. So excellent has the response to this been that the computer has been repackaged in the very stylistic new "B" series housing by our German factory in Braunschweig to give a running start to 1983 Business sales and a logical upgrade for the many thousands of Commodore commercial installations worldwide.

Commodore 128K Color Computer

Initial shipments of the new P500 series computer, named the Commodore 128 in

the U.S.A., are to begin during the first quarter of 1983. Priced at $795 in the U.S.A., this computer is expected to achieve the same rapid acceptance as the Commodore 64 has done. The 128K computer offers all the popular features of the 64 including color, music synthesis, sprite graphics and a CP/M option. Further enhancements make it particularly useful for business and scientific needs. These additions include both IEEE-488 and RS232 interfaces built in. The former makes it fully compatible with the full range of Commodore CBM peripherals already on the market. These include hard and floppy disc units up to 7.5 megabyte capacity, printers and a wide range of scientific instruments such as many Hewlett-Packard devices. Also included are 10 function keys in an extremely attractive and functional styling. This computer is being sold on a restricted distribution basis via professional Commodore dealers.

An 80 column monochrome version of this model, based on the "B" series, will also be marketed.

Commodore "B" & "Bx" Series Business Computers

Initial shipments of the B700 series computers will begin in early 1983 to boost Commodore's presence in the business sector. Acclaimed worldwide for the extremely attractive and practical styling which includes a detachable keyboard and a screen with both tilt and swivel facilities, the B700 series has just as impressive technical features as well as an outstanding price.

The B700 series comes with either 128 or 256K built in user memory and can potentially be expanded up to a massive 896K total internal memory. This series has a full 80 column green monitor display and like the "P" series is fully compatible with the wide range of existing CBM peripherals as well as having its own optional built in floppy disc drives.

In addition to the standard Commodore 6509 microprocessor the computer has also been designed to take a second co-processor. Both a 16 bit 8088 system and a Z80 system will be offered by Commodore as extras—the former will be offered as a built in standard on the "BX700" series.

The wealth of software for the CBM 8000 series is currently being upgraded and enhanced to take advantage of the additional capabilities of this new series. The "B" & "BX700" series computers will be distributed through Commodore professional business dealers and will spearhead our attack on the business markets through 1983.

A Teachers Pet Computer

The Commodore PET and the new COMMODORE 64 have both found great popularity in schools worldwide so a new model the COMMODORE 4064 (nicknamed Teacher's PET), is being released that combines popular features of both computers. The COMMODORE 4064 is based upon a monochrome version of the 64 housed in the PET cabinet complete with green monitor display. This should give the robustness, simplicity and cost effectiveness sought by so many schools plus great software compatibility—particularly when used in conjunction with an IEEE-488 cartridge and PET emulator software for the 64. This computer is also expected to find much use as a low cost terminal and wordprocessing system. It is planned for release in early 1983.

Editorial

When I had the good fortune to join Commodore U.K. it was difficult but quite possible to get a feel for what was happening in the "world of Commodore" and in one's own company most of your colleagues were known on a personal name basis. Now some 8 years, and for me several countries later, I find fewer people know what is going on elsewhere that could affect and help them. This is not surprising in a company that has grown more than ten times in this period.

So one of the objectives behind this publication of Commodore International is to improve communication across the world barriers on which we operate. The intention is to focus on news of products, technologies and philosophies of the "business" aspects of the company that can make us all more productive and interested in the working aspects of our life. In this first issue there is an emphasis on the background and philosophy of Commodore to help put some perspective on our day to day growth. However, you should also find a considerable amount of current news and this is where much of the future focus will be.

Comments and contributions from around the world will be much appreciated. Meanwhile I hope you will find this issue both useful and interesting.

Kit Spencer

Kit Spencer
Vice President
Commodore Electronics
Sasson House
P.O. Box N10256
Nassau, Bahamas

New Technologies Shown

During the CES Show, Commodore took the opportunity to demonstrate prototypes of new technologies and products it is working on. These included a touch sensitive screen that can be used separately or overlayed directly on a computer screen and a "mouse" type controller currently being featured on some very expensive competitors products. No formal announcement about products or prices are being made at this time.

Commodore and Zilog Announce Agreement

Mr. Irving Gould, Chairman of the Board of Commodore International Limited has announced that Commodore has signed a definitive agreement with Zilog, Inc., an affiliate of Exxon Corporation.

According to Mr. Gould, "the agreement relates to an exchange of technology between Commodore and Zilog, with Commodore licensed by Zilog to manufacture Zilog's Z8000 16-bit microprocessor and related family of peripheral support circuits for use in Commodore microcomputer systems, while Commodore will supply Zilog with mask sets and manufacturing rights to selected custom circuits used in current and future Commodore microcomputer systems."

Mr. Gould went on to note that "Commodore's financial business commitment to Zilog is significant and involves a similar commitment by Zilog that could utilize a substantial portion of Zilog's production facilities devoted to the manufacture of large scale integrated circuits for exclusive use in Commodore microcomputer systems."

Mr. Gould concluded by stating that "this agreement with Zilog is intended to give Commodore a substantial increase in semiconductor manufacturing capacity toward meeting its large scale integrated circuit needs, while reducing the time and investment required if Commodore were to expand its own semiconductor manufacturing capacity."

"Notwithstanding this," Mr. Gould added, "our own semiconductor facilities capacity is in the process of being increased by 100% as part of a program to be completed over the next twelve months."

Commodore Demonstrates First Speech Technology Product

Commodore has announced a sophisticated new voice synthesizer for the Commodore 64 home computer. This is the first voice I/O product to be developed at the company's Speech Technology Division in Dallas, Texas.

The low-cost speech add-on is capable of generating a wide variety of voices—including female and children's voices—for games and learning cartridges, and will be usable from the Commodore BASIC programming language.

The voice peripheral has three modes of operation: two of which will be available with the basic module, and a third with the purchase of optional cartridges.

The Commodore voice module can be used as soon as it is inserted into the cartridge port of the Commodore 64. When the Commodore 64 is powered up with the voice module, the user may create speech through simple BASIC commands, such as:

```
SAY    "A"    "B" "C" or

10     SAY    "Enter your name"
20     INPUT  B$
30     SAY    "Thank you"
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This short program instructs the computer to speak the name typed in from the keyboard.

Besides the capabilities added to the BASIC language, the module features a built-in learning activity called "A Bee

C's"™ an instructional program that uses speech to teach the alphabet to preschoolers.

The most exciting feature of the voice module, however, may be its capability to integrate voice into games and learning cartridges. Commodore is now developing cartridges that will offer the widest variety of exciting games and instructional material for home use. The voice synthesizer's ability to accept different vocabularies and different "characters'" voices means Commodore computer owners will be able to choose the type of voice (male, female, child's, cartoon character, etc.) used with various programs.

This flexibility, greater than that on any other comparable computer, is achieved through a special technique which allows speech to be generated while the computer's microprocessor is performing other functions such as graphics/cartoon animation.
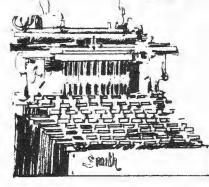
For example, the technique allows the computer to put an animated face on the screen simultaneously while speech is being generated.

Pricing for the speech synthesizer has not been announced but the product is expected to retail for under $100, with initial delivery scheduled for Summer 1983.

From Typewriter Repair to World Leader in Electronics

The story of Commodore begins 25 years ago and is closely associated with Jack Tramiel, the founder of our company and architect of what it has become today.

Jack's first association with our industry was in his army days at Fort Dix where he became involved with the repair of typewriters. This was back in the days of mechanical machines and long before word-processors were thought of. However, the experience in the applications and the technology gave a useful base for the future and it was this business that Jack went into after leaving the army. Ever one for hard work, Jack Tramiel also drove a New York taxi in these early struggling years to establish himself in civilian life. It was the typewriter experience that led to the start of Commodore a few years later when Jack moved his family to Toronto, Canada, and started his own typewriter repair business. The year was 1958 and it was the beginning of the Commodore International of today.

The First Ten Years

During those early start-up years some 25 years ago, Commodore progressed from typewriter repairs to typewriter selling and eventually to typewriter manufacturing with the acquisition of a factory in Berlin, Germany. This was Commodore's first major foothold in the European market that would become very important to us in future years. Responsive to our customer needs for office equipment Commodore also moved into mechanical adding machines imported from Japan. This gave us our first experience of the Far East and the industrial potential that was to come from there. Indeed while many Western companies are now trying to understand the "Japanese phenomenon" it is comforting to know that we have had our own Japanese company for more than a decade. Commodore Japan has been, and still is, making valuable contributions to the growth of our international organization.

The Electronic Calculator and the Second Decade

In 1965 Jack Tramiel met the Canadian financier Irving Gould who was to become Commodore's chairman and the two of them the top management team that has stayed together for over 15 years to build the Commodore we know today.

It was shortly after this that Jack got his first look at what was then a large desktop ELECTRONIC calculator. Jack Tramiel realized that it would one day spell the doom of mechanical machines and open up new business potential. With the Commodore philosophy that "if we are not our own competition then someone else will be" we went fully into the electronic desktop calculator market. So once again when the first electronic "pocket" calculator appeared a few years later by combining a Texas Instrument chip with a Bowmar l.e.d. display it was brought to market by Commodore as the C108 "hand held" calculator. It was another example of what has become a long history of Commodore "industry Firsts" in marketing value, innovation and performance in new products.

Commodore sales grew dramatically during this period from 1969 to 1974 with the launch of this first "under $200 electronic calculator." It is interesting to note that this was sold at much the same price, through similar distribution channels and to similar customers as does our "under $200 VIC computer" today. During this period we developed a strong distribution system in Europe that has remained a strength of ours ever since.

Our line of calculators grew from simple 4 function machines, to memory machines, scientific machines and to keyboard programmable models. So the stage was set for the next logical step—a full computer.

However up to this time Commodore had been largely dependent on third parties for the supply of the crucial chips and displays that went into the products we were making. So in 1974/5 we suffered badly with a rapid decline in the price of calculators and components as some of the makers of components tried to enter the market for end products along with Commodore and dumped their inventories onto the market. These hard times lead Commodore to do some key strategic thinking.

The Drive for Vertical Integration

Commodore was convinced of the long term potential for semiconductor based office and consumer electronic products. We were also convinced that technology would be a key driving element. So a major decision was made to become "vertically integrated." This is the name in our industry

for producing both the key electronic chips and the final user products they go into.

With hindsight this may seem to have been an obvious decision. It was not so readily apparent at the time when both the calculator and semiconductor markets were suffering badly and every bit of finance was needed to keep the day to day operations running. Indeed it was at this time that our chairman personally guaranteed a $3 million loan to the company in order to make the critical investments for our future growth.

The Purchase of M.O.S. Technology

In 1976 we made our first major purchase of MOS Technology—a struggling manufacturer of calculator and other

semiconductor chips based in Norristown, Pennsylvania. This purchase for under $1 million proved to be an extremely wise decision for the marriage of their technology with Commodore's business, marketing and mass production skills proved to be a formidable combination. This acquisition was followed in the next eighteen months by two further key investments. These were the purchase of Frontier, a Los Angeles based manufacturer of C-MOS chips which is a complimentary technology to the N and P-MOS chips of MOS Technology. The other major acquisition was that of M.D.S.I., a Dallas based manufacturer of liquid crystal displays. This was another key technology that was to become the basis of nearly all calculator displays and holds much future potential including use in computers. The result of all this was that Commodore had in house expertise and production in more key technologies than most electronic companies several times its then size.

Our Entry Into the World of Computers

During this time we were deciding on what our next programmable scientific calculator should look like. At the same time we were reviewing the potential for KIM 1, a microcomputer board from the recently acquired MOS Technology that had achieved some success in specialized market areas. The bold decision was made to develop our own fully fledged microcomputer. A small team got feverishly to work and in record time the PET (Personal Electronic Transactor) was developed and launched to the world in 1977 at the Hanover Show in Europe and the Consumer Electronics Show in the U.S.A. It was this machine that together with the TRS 80 and the Apple was to give birth to the personal computer marketplace of to-

day. The PET computer used our own MOS Technology 6500 microprocessor that has become the heart of many other computers since including Apple and Atari. While the PET's technical features were exceptional so were some of the user friendly features that are a hallmark of Commodore Computers. These included the built-in screen, built-in basic language, cassette deck, graphics characters, intelligent peripherals and easy screen editing. Many of these features are still found on our latest models. Indeed a program written in Basic on the original PET will run unmodified on our new Commodore 64—an amazing degree of compatability considering the progress made in product value and features.

The Rise to World Leader

Commodore's entry into the computer market once again sparked off a period of rapid growth that is still in its infancy today. The Commodore PET was marketed worldwide but a strategic effort took place in the complex European market where we very rapidly established the leadership position via a strong dealer network for the PET and CBM Business computer.

Commodore is not a company to sit back and congratulate itself so the effort stayed on to develop further new products. The next major computer product was the VIC 20—the first full featured color computer to be launched for under $300. With a mindful eye for "stopping the competition on the beaches" the VIC was first launched in Japan and it has proved to be yet another Commodore winner. The VIC was also the product used by Commodore to spearhead an attack on gaining a major share of the U.S.A. market starting in 1981. So successful has this been that by January 1983 over 1 million VIC 20's had been sold, the largest installed base of any computer ever, and Commodore had become the largest unit seller of computers in North America.

The story does not end there for in the latter months of 1982 we launched the COMMODORE 64 for $595 as a direct competitor to the world famous Apple II. By the end of the year and aided by the single biggest advertising launch in Commodore history it had already passed the Apple II in monthly unit sales. So Commodore has yet another winner to enter 1983 with to say nothing of the new "B" series business and "P" series personal computers being launched as this article is being written.

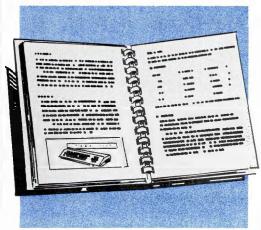## Commodore is About Creating History

If one studies the history of Commodore it is readily seen that we have consistently been a leader in recognizing change and leading our industry into it. But more than studying history Commodore is much more a company that creates the history and that's exciting for all of us in it.

Extensive Software for the Commodore 64

Programmers Reference Guide for Commodore 64

A 486 page PROGRAMMERS REFERENCE GUIDE has been released for the COMMODORE 64. The manual retails at $19.95 in the U.S.A. and provides the user with what could well be the most comprehensive reference source available on any personal computer today. It includes everything from MOS Technology chip specifications to memory maps and is an indication of the increased importance Commodore has been placing on user documentation.

Each section of the book was written, before editing, by the Commodore expert who worked most extensively in that area. It was then tested at nearly 20 different Beta sites for accuracy and understandability. The informaton provided is repeated on two different levels, one for the novice and one for the expert, with all sections color highlighted for easy reading.

This Reference Guide is the first in a series of manuals being prepared for users of the popular COMMODORE 64 computer. Other titles planned for release in early 1983 are: MAKING MUSIC ON THE COMMODORE 64, CP/M FOR THE COMMODORE 64, and INTRODUCTION TO BASIC PROGRAMMING.

In addition to distribution through Commodore dealers and retailers the Reference Guide will be distributed through bookstores via an agreement with the Howard Sam's book publishing company.

Released at the C.E.S. show was a 12 page catalog of software offerings for the Commodore 64. This catalog represents a comprehensive range of programs planned at the time of the development of the 64 and coordinated via Commodore companies

with software houses worldwide. This swift coordination on an international basis could only be done by a company like Commodore International.

In addition to products developed in the U.S.A. major contributions came from the U.K., particularly in the business and programming aid areas, and from Japan in the games field. A large number of "public domain" educational programs were put together in Canada. Where appropriate, these programs will be offered for sale on a worldwide basis through Commodore companies and distributors who will make any necessary translations required by local market conditions.

The range of software has been classified into seven major sectors of interest. A few of the programs were put on sale pre-Christmas while most of the balance of more complex programs have been undergoing final testing for release during the early months of 1983.

Business Aids

EasyFinance 64

- Buy vs. Lease Evaluation
- Payback Analysis
- Future Value of Annuities Due
- Profit Margin
- Loan Analysis
- Future Value of Ordinary Annuities
- Future/Present Values

EasyFile 64

EasyFile is a database product that allows the user to define the data he wishes to keep track of, how it looks on the screen, and the ability to enter and retrieve that data with editing and selective criteria.

- Simple instructions and 'on line' help functions.
- Individual field editing on entry to prevent bad data from being entered into the system.
- Ability to add, change, delete, report on and search for the data in any manner required.
- The program is memory resident, so the entire disk is free for data.
- Sorting of the data may be accomplished with up to eight levels of dependence.

EasyCalc 64

- One of the largest electronic worksheets available.
- Selective row reporting and printing.
- Instant 'what if' type calculations.
- Integration of spreadsheets, from disk to memory, allows summation and consolidation of different size and type matrices.

EasyInventory 64

EASY INVENTORY is a comprehensive stock control system created specifically for retailers and smaller businesses. The reason it's "EASY" is because you don't have to be a computer expert to set up and operate the system. Simply enter your stock records and store the information on convenient floppy diskettes. Items include stock description, location, reorder level, tax rate, profit margin and cumulative/purchase totals, to name a few. Also generates printed reports on stock levels, stock movement, sales returns (weekly or annual basis), stock-taking lists, valuation reports and more.

EasyMail 64

A fully featured name and address program for the serious user that requires a complete name and address system for small business, club or organization.

- Allowance of entry/change/deletion of a name and address by number or name.
- One or two abreast address labels.
- A complete printout of the system is possible showing all information.
- The capability to search and sort any field for creating special list or mailings.
- A 'help' function that is available at all times.

EasyPlot 64

- Full page printing of charts and graphs.
- Integration with EasyCalc for data, or allows the user to input up to eighty data points directly.
- Will plot up to four data series at a time, depending on the type of plot required.

EasySchedule 64

- The ability to tailor certain areas of the program to your specific scheduling needs.
- Input of data in easy logical steps.
- Day, Week, Month, and Year at a glance lets you see the scheduled items by time slots.
- The ZOOM option lets you zero in on smaller and smaller time slots.
- Organization of data by priorities.

EasyScript 64

This wordprocessor provides the user with all of the options of much larger products, like Wordcraft and Wordpro, and even more. This product actually allows the Commodore 64 user to get into the wordprocessing market and compete with comparable products at half the price.

- Text width from 40 to 240 columns.
- Interface to different supported printers.
- Total and complete cursor movement.
- Function keys for frequently used options.
- Vertical and horizontal tabs.
- Range selection for text movement options.
- Search and replace.
- Output to printer, disk, 'fill' files.
- Scroll left, right, up, and down.
- Supports user defined characters.
- Underline, bold, shadow, super/subscript, on supported printers.
- Right margin justification or alignment.

EasySpell 64

Do you ever misspell words? Wouldn't it be nice if you had a computerized spelling checker that automatically corrected your errors, counted the words in a manuscript or contract? Wouldn't it be nice if the spelling checker had a 20,000 word spelling dictionary built in, and was totally compatible with your wordprocessor? What if you could add your own "frequently misspelled words" to the dictionary? That's EASYSPELL 64! This ingenious disk-based program is designed to work with your EASYSCRIPT 64 wordprocessor. As soon as you use it, you'll say, "What a terrific idea!"

Future Finance 64

Future Finance and the Commodore 64 team up to give you the most cost effective financial planning package on the market, able to perform hundreds of calculations in a fraction of a second. Simply change your estimate of sales, costs and expenses and the computer automatically recalculates the results. The list of primary options speaks for itself: Sales Titles and Tax, Sales Prices and Costs, Sales, Material Costs, Other Direct Costs, Gross Profit, Expenses Titles and Tax, Expense, Net Profit, Sales Credit, Sales Received, Purchase Titles and Tax, Purchases, Expenses, Tax and Cashflow.

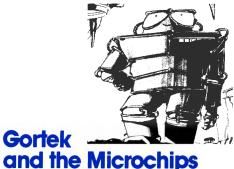### The Word Machine & The Name Machine

This product is our most easy-to-understand wordprocessing product, and is designed as an entry level product for the

home. It is perfect to jot down a note to the kids, letters to friends and so on.

- Simple, easy to understand menu options.
- Allows overtype, insert, and delete of text in an easy to understand 'building block' approach.
- Three print formats, draft, informal and formal.
- Will generate personalized form letters via a link to Commodore Name Machine, its companion program.
- Simple creation of a name and address list.
- Prompts are given for Last, First, Title, Organization, Address, State and Zip, Telephone and Category.
- One or two abreast address label print.
- Can generate a Name and Address file to be used in form letter processing in The Word Machine.
- Can select names and addresses by category.

Learning Aids

Introduction To Basic— Parts I And II

By the time you're done with this two-part self-teaching course, you'll be writing advanced programs like an expert! Just LOAD the cassette tapes and follow the workbooks. The course is divided into individual units each of which covers one aspect of BASIC programming. Two cassette tapes in each Part provide sample programs, and questionnaires are also included. This time-tested programming course has become a "classic" in the United Kingdom where it was developed, and the VIC-20 version is a best-seller in the United States.

Gortek and the Microchips

Can you help GORTEK stop the Zitrons! This delightful and unique concept in teaching young people to program combines a space adventure story with lessons in BASIC programming. The first lesson consists of 2 tape cassettes and a colorful glossy instruction book which reads like a comic book while teaching the fundamentals of BASIC programming. The book in-

cludes full color illustrations, large easy-to-read type and is written so it may be read by older children . . . or used by younger children with parental assistance. The combination of computer lessons and storybook format makes GORTEK a fun experience for adults as well as children.

Computer Tutor 64

A learning experience/sales tool providing the purchaser with sufficient information to correctly understand and operate the computer features.

- Starts at an elementary level and graduates to a level displaying the more complex features of the computer.
- Explains the color and sound features in great detail, as well as the BASIC language.
- Teaches the novice the function of the various keys in an interactive and entertaining session.
- Will reveal the simplicity of desktop computing.

Assembler Tutorial 64

- An introduction into the how's and how not's of assembler programming.
- A multi-lesson approach to the subject.
- Each lesson brings the student new examples and instruction into the subject.
- The product will contain tests so that the student may measure progress, at home or in a school environment.

Math Improvement Six-Pack

Six cassette tapes for grades 2-6:
Numbowl,
LCM Machine,
Sector Five,
Backfire,
Scare City Motel,
Ruler Dueler

Speed/Bingo Math

Two learning games in one. Learn to add, subtract, multiply and divide . . . while having fun. Teach your child to think and respond quickly while having fun. Math is made simple and fun with SPEED/BINGO math. For elementary grade children.

Visible Solar System

Astronomy buffs love this incredible game-science-learning tool. Journey to the major planets of our solar system, learn key statistics about each planet . . . OR . . . record atmospheric conditions and compare planetary statistics using "Astro Calc." A wonderful astronomy tool which gives you a tour of the solar system and teaches you about major planets along the way.

EasyLesson 64 & EasyQuiz 64

- The ability to easily create a lesson pool of questions from which subsequent tests or quizzes may be generated.
- Each lesson may be printed out for clarity.
- The user has up to seven categories into which the questions may be classified.
- The generation of a test from the lesson pool can be directed either to printer or disk, and the test itself may be restricted to questions of a certain category.
- The ability to administer the test created in EASYLESSON.
- It asks for the student name and the name of the test that the student wishes to take.
- The test questions can be randomly shuffled before they are displayed.
- The test itself can be taken in either a 'flash card' or a 'multiple choice' mode.
- The student is graded at the end of the session.

656 Public Domain Programs—Series I

Commodore is pleased to announce the availability of the first in a series of educational public domain programs which we are converting and distributing worldwide. The set consists of two looseleaf binders filled with diskettes, with reference documentation included.

The programs run on all Commodore computers including the COMMODORE 64 (excluding the VIC-20). Program categories include: Administration, Business, Computer Science, English, French, Games, Geography, History, Mathematics, Miscellaneous, Science, Technology and Utilities. Dealers, schools, and individuals are encouraged and welcome to purchase this collection and duplicate/distribute these educational public domain programs.

Lifestyle Series

Watch for the series of "lifestyle" software dealing with popular themes like I.Q., Personality, Money Management, Recipe Planning, and other areas of interest. You might think of these "lifestyle" programs as three-dimensional paperback books. The subjects will cover a wide variety of interests and activities. You'll enjoy them!

Programming Aids

Assembler 64

- Allows the experienced user to write software in Assembly language.

- Allows the total extraction of the machine power and function while developing applications that run at maximum speed.
- The package contains the assembler itself, two machine code monitors, editor, DOS wedge, and two loaders.

Petspeed Basic Compiler 64

- This product is an adaptation of the popular PETSPEED product for the 8032.
- This compiler is simple to use, and will generate code that gives the user up to a 40 times speed increase.

EasyDisk 64/EasySprite 64

This all-purpose disk contains a programmer's "feast" . . . including all the utilities you always wanted on one disk: DOS WEDGE, Programmable Character Set Editor, Screen Editor, Sprite Editor, Music Editor and more. An excellent programming tool including many editing programs developed by Commodore's own programming staff.

EasyGraphics 64

A programming tool that is really an extension to our BASIC language that facilitates the use with superior graphics, color and sound features of the Commodore 64.

- Prevents the user or programmer from having to 'massage' certain places inside the computer's memory to create a color or sound with simple commands such as:

  Border = Red   Circle
  Plot   Line
  Tempo = 110   Note = A#

- Color, Circle, Sprite, Move Sprite, Scroll, and others.

Logo

Commodore has contracted with the original authors of this favorite graphics language to put it on the Commodore 64. The adaptation will be complete and similar to the Apple LOGO by Terrapin, plus extensions that really show off the power of the sprite graphics on our machine.

- Graphics definition and movement.
- Text display.
- Multi-level graphic character display.
- Easy-to-use instructions. Uses the Commodore defined keyboard for screen editing.

Pilot

- All of the features defined as 'Common

Pilot.

- Interfaces for Video disk/tape players to help get into the industrial education market.
- Because the adaptation is based around Common Pilot, certain lessons that are already in the field may be modified to run under our PILOT with little change.

Pet Emulator

An emulator that will allow a high level of existing PET software to be executed on the Commodore 64.

- The ability to recapture the tremendous amount of software that has been generated on the PET product, especially in the educational area.
- Effective translation of an existing program commands to run on a Commodore 64 as if it were written for it.

The effort to create this emulator displays our intention to have everyone benefit from existing software. The Commodore 64 is a quantum leap ahead of the PET in design and function, but we will not ignore the existing software base.

Simon's Basic

It's called "SIMON'S BASIC" because it was developed by a programmer named SIMON who wanted to add 114 extra commands to BASIC . . . so he did. Commodore put it on a cartridge and now you can take advantage of four complete GROUPS of commands: HIGH RESOLUTION (to draw shapes on the screen), STRUCTURED PROGRAMMING (to write more legible BASIC code), MUSIC COMMANDS (for musical composition), and PROGRAMMING AIDS for easy program writing and editing. Examples include IF . . . THEN . . . ELSE, REPEAT . . . UNTIL, LOOP . . . EXIT . . . to name a few. AUTO gives you automatic line numbering. KEY makes it easy to define function keys. If you're a programmer, you're going to love SIMON'S BASIC!

Games and Recreation

Jupiter Lander

Pilot your "Jupiter Lander" through the treacherous crevices of a mysterious planet. Variable rocket thrust, anti-gravity, horizontal retros.

Kickman

Steer your unicycle through a three dimensional city popping and bouncing the falling balloons. Exciting Bally/Midway action!

Sea Wolf

As submarine commander you are in charge of sinking and destroying all enemy ships . . . destroyers, freighters and P.T. boats . . . an explosive Bally/Midway "arcade classic." Fast action fun!!

Radar Rat Race

The magical mouse maze makes for a fast-paced, challenging game of wit, strategy and reflexes. Excellent graphics.

Clowns

Come one, come all . . . see the amazing jumping clowns . . . direct from their show-stopping Bally/Midway arcade tour . . . A true arcade "classic!" Colorful acrobatics with high scoring skill.

Avenger

It's an invasion of space intruders and you're the "Avenger." Space action for arcade enthusiasts.

Omega Race

The ultimate space game. You've got one Omegan fighter maneuvering against droid ships, command ships, death ships, photon mines and vapor mines. Fantastic "rubber band" boundaries, multiple levels of difficulty . . . all the features that make the Bally/Midway game so successful! One or two players.

Tooth Invaders

Prevent tooth decay and battle "plackman" using your toothbrush and dental floss. A great arcade/educational game.

Wizard of Wor

Exciting Bally/Midway arcade game! Seek out, track and destroy enemy monsters, worlucks and wizards . . . kill for bonus points and advance to increasingly difficult levels.

Gorf

Midway's incredible coin-operated game is now on cartridge! Includes 4 completely different games, multiple levels of difficulty, some of the best cartoon graphics ever devised for video games. Invaders, gorfies, death ships, saucers, aliens . . . it's terrific!
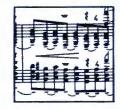
Art and Music Series

Music Machine

Use the sound capabilities of the Commodore 64 and turn your computer keyboard into a musical keyboard. Create special effects, waveforms, percussion, octaves and pitches.

Music Composer

Compose a song, play a song, load the song and save the song. Turn your Commodore 64 into a piano keyboard, choose your instrument and play your song.

Meta Music

A music tutorial that allows the novice, as well as the serious composer, to create music on the Commodore 64.

- Displays all phases of the computer's sound capabilities in detail.
- Demonstrates examples of tempo, harmony, and composition and examines them from the programmer's point of view, as well as practical usage.
- Is disk and RS 232 printer compatible.
- Has two modes of operation: SCORE and PLAY.
- Will implement various music education processes (e.g., note and interval identification, sight singing, melody recognition, rhythm training, and elementary timbre identification).

Telecomputing Aids

Three separate software packages will be available. The range in capabilities is from a simple dumb terminal to a very sophisticated electronic mail and message system.

Term-64 Level I software is the VICTERM I package translated to operate on the Commodore 64.

EasyComm 64 Level II software will be targeted at the average consumer who wants to use his computer for more than accessing the Source, etc.

Office Terminal Level III software is designed for the business user. This software will allow internal electronic mail, report sending, auto dial/answer, etc.

Gortek and the Microchips Teach Children How to Program

A new robot-like character "Gortek" will be helping children learn to program in a unique series of books and cassette tapes, the first of which is entitled: *GORTEK AND THE MICROCHIPS.*™

This delightful and unique concept in teaching young people to program combines a space adventure story with lessons in BASIC programming. Gortek comes in two versions, for the Commodore VIC-20 and COMMODORE 64 color computers.

The first lesson is designed for children under age 14, and consists of 2 cassette tapes containing 12 educational programs and a colorful glossy instruction book which reads like a comic book while teaching the fundamentals of BASIC. The book includes imaginative full color illustrations, large easy-to-read type, and is written so it may be read by older children . . . or used by younger children with parental assistance. The unique combination of computer lessons and storybook format makes Gortek a fun experience for adults as well as children.

As the story goes, the planet Syntax is being invaded by the fearsome Zitrons. Gortek is working furiously to teach the microchips to program the computer to repel attack. The "Microchips Training Manual" teaches the child how to help stop the Zitrons (by learning how to program the computer!).

Those who complete the lessons and successfully repel the Zitrons earn the right to wear the Gortek badge which comes in the package.

This innovative approach to computer education was developed by three British school teachers who wanted to make programming fun to learn. The result is a pioneering achievement in the field of computer education.

New VIC Software Like Paperback Books

Commodore has introduced a series of "Lifestyle" software products for the VIC 20 which resemble paperback books in theme, packaging and content.

The first U.K. developed products were introduced to the U.S.A. market at the CES Show after successful introduction in the U.K. pre-Christmas.

The first five products are: KNOW YOUR PERSONALITY, KNOW YOUR CHILD'S I.Q., Robert Carrier's MENU PLANNER, and QUIZMASTER. The programs include a booklet and computer tape cassette(s). They were all developed by recognized experts in their field, such as Professor H.J. Eysenck, who have lent their names to the products.

"We all want to know more about ourselves" was a comment made at their introduction. Many people don't know their I.Q. or their child's I.Q. but they would like to find out without having to track down a university testing center or pay a large fee for a test. A computer is a wonderful interactive way to take and also evaluate an I.Q. test . . . or any other test for that matter.

Giving tests can be fun and helpful too, so included in the range is "QUIZMASTER" which lets you design your own

tests. Great fun for entertaining friends at parties as well as use in classroom tests.

Commodore has already been successfully selling "computer novels" through the very popular Scott Adams ADVENTURE GAMES series—interactive novels which lead the reader through a computer controlled adventure where all decisions are made by the reader. In 1983 computer owners will look to their computer for more products like this that "go beyond" the one dimensional pages of a book. The popularity of our Scott Adams series is just one indication of this trend.

VIC Business Programs Add New Potential

A new range of business products developed in the U.K. will be sold worldwide. This "serious" software which can be used with expanded memory will file and sort large amounts of information on disk or tape. Among the products are SIMPLICALC—an electronic spreadsheet, VICFILE—a data base management program and VICWRITER—a quality word processor product.
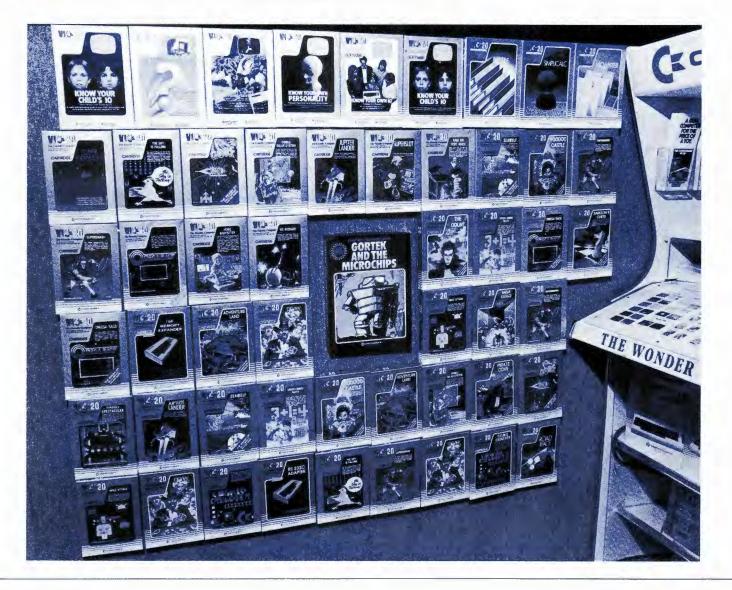
Because the VIC is an introductory computer for many users, Commodore has tried to ensure that these programs maintain the "friendliness" that has become a trademark of this computer. So these programs are accompanied by easy to read instruction guides aimed at the beginning computerist.

For the over 1 million VIC owners, who may well have originally bought their computer for learning and entertainment, these programs add further potential to their computer's capability.

A few years ago computer hobbyists were a specialist breed that learned how to program in the complexities of machine code. Today's hobbyists are more like the people who bought Chemistry sets in the 1950's . . . it is doubtful that anyone thought they would use it to develop a cure for cancer but there are probably quite a few people working on cures right now who used to own chemistry sets. So maybe in a few years we will find some famous novelist who wrote his first book with VICWRITER.

Winning German Software

There were over 800 entries for a competition run by Commodore Buromaschinen to win a Volkswagen Beetle convertible. In Germany the VIC 20 has been nicknamed the "Volkscomputer." Now the winning titles are to be marketed by Commodore U.K. in translated versions. The three titles are ODD MAN OUT—a pre-school matching game for children, AFRICAN BEADS—a game of moving beads into a bucket and CHINAMEN— a board game where the objective is to trap your opponent. All three programs require an 8K memory expansion and are packaged on cassette.

Welcome Aboard

As part of a continuing plan to strengthen Commodore's management team along with our growth, two senior appointments have been made over recent months.

Robert H. Lane Joins as President of North American Operations

Mr. Irving Gould, Chairman of the Board of Commodore International, announced that Robert H. Lane has joined the company as President of North American Operations. Mr. Jack Tramiel, President of Commodore noted that "Bob Lane's appointment was made with the intention of maintaining the unique spirit and philosophy which has made Commodore a leader in the Microcomputer industry."

Mr. Tramiel noted that "Bob Lane has a broad background in marketing and

manufacturing combined with retailing industry experience."

Before joining Commodore, Lane spent 6 years with Northern Telecom, the international telecommunications company, where he held top management posts in Canada and Europe. He served as president and chief executive of the company's $200 million NEDCO division in Canada, and was vice-president of European operations.

Mr. Lane's academic background includes a master of business administration (M.B.A.) from the University of Western Ontario and a B.A. in Psychology from the University of Toronto. He is a native of Canada, married, with two children.

Lloyd Taylor Appointed as Vice-President of Technology

Mr. Irving Gould, Chairman of the Board of Commodore International announced the appointment of Mr. Lloyd A. Taylor as Vice President—Technology for Commodore and President of Commodore's Semiconductor Division.

Prior to joining Commodore, Lloyd Taylor served as Group Vice President, Semiconductor Components Group, Northern Telecom Ltd., and Vice President—Technology, Bell-Northern Research Ltd., a wholly-owned subsidiary of Northern Telecom Ltd.

Northern Telecom Ltd. is the second largest telecommunications company in North America with annual sales in excess of $3 billion and the second largest funder of commercial research and development in North America.

According to Mr. Gould "Commodore is very proud to have a person with Lloyd Taylor's past experience and accomplishments as a member of Commodore's senior management."

Mr. Gould went on to note that "while he was with Northern Telecom, Lloyd Taylor's responsibilities included the introduction of new microelectronic technologies and

designs into Northern Telecom products, including the design, manufacture, external procurement and control of semiconductor based electronics, as well as overall responsibilities for all custom semiconductors used in Northern Telecom products."

Mr. Taylor noted that "during my seven years with Northern Telecom, I turned a small exploratory research department with a staff of 40 into a strong, viable and motivated multi-divisional organization with a staff of over 800."

Mr. Taylor concluded by noting that he "has known both Irving Gould and Jack Tramiel, Commodore's president, for more than ten years and very much admires the success they have achieved, thus providing a foundation for the efforts I plan to devote toward further strengthening Commodore's leading and growing position in the microcomputer industry."

Commodore Computer Works In Borneo Jungle

"Dear Mr. Tramiel:

45,000 pages of printout and still going strong! In April of 1980, I purchased a CBM 2001, 2040, 2022 to process data collected from Tropical Forest Inventories. The first two inventories from the Amazon basin of Peru were so successful that the system was taken to Chile and set up in the field to handle our next inventory. Here the system ran off a portable Honda generator using an old lumber camp office to house the compuer. Again, unqualified success.

The system's third adventure was to a steamy jungle village in Central Borneo, with nothing but a tin roof to keep off the rain and a mosquito net to keep off the flies. We processed data to an extent 10 times the previous efforts over a period of four months. Again, tremendous response from a really robust dependable product.

I'm enclosing photos of the system as set up in Borneo.

The only shortcoming is the lack of machine storage for the large real number arrays 120 x 40, of which we would like to use.

When I purchased the equipment for this type of use, I felt I was going out on a limb but results have gone beyond my most optimistic hopes. Your agent in Vancouver, Richard Leon of Prominico Industrial Electronics Ltd., has been most helpful with suggestions and software, taking a real interest in pushing the machine as far as possible."

Yours truly,

L. David Taylor
41 East 39th Avenue
Vancouver, B.C.
V5W 1J6

We recently received a letter from Mr. David Taylor who seems to have put his Commodore computer system through more than the usual tests of spilled coffee mugs and dropped paper clips. So we decided to print his interesting letter and unusual photographs. Many thanks David and happy computing.

Record
Second Quarter Results

Mr. Irving Gould, Chairman of the Board of Commodore International Limited announced on January 25 that Commodore had achieved record sales, net income and earnings per share for the second quarter and six month period ended December 31, 1982.

In commenting upon these results, Mr. Gould stated that "Commodore's record results in the second quarter and six month period resulted from continuing very strong sales of Commodore's microcomputer systems to the business, educational, personal, and home markets."

Mr. Gould went on to say that "Commodore expects to start shipping its new $795 COMMODORE 128 (P500 series) personal computer to its dealer network this quarter, while its new B700 and BX700 small business microcomputers would commence shipment during the final quarter of fiscal 1983 which ends June 30th. Both the B700 and BX700 microcomputers will be priced substantially below any other small business microcomputers with comparable features now on the market and will be sold exclusively through Commodore dealers in the United States and abroad."

"In addition," Mr. Gould noted, "Commodore will also begin shipping its brand new 64K portable color computer in approximately 120 days, this being a brand new market opportunity for Commodore."

Mr. Gould concluded by stating that "with the current strong demand for our small business, educational, personal, and home computers, fiscal 1983, which ends in five months, should result in our sales, net income and earnings per share being significantly ahead of the record results we reported in fiscal 1982."

COMMODORE INTERNATIONAL LIMITED
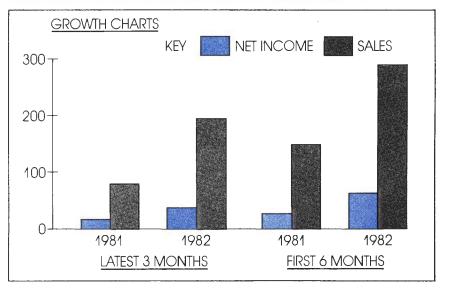## AND SUBSIDIARIES
CONDENSED STATEMENT OF OPERATIONS
$(000)
(unaudited)

	Three Months Ended December 31,		Six Months Ended December 31,	
	1982	1981	**1982**	1981
Net Sales	**$176,241**	$70,056	**$279,571**	$124,206
Income from Operations	**29,314**	11,065	**46,144**	20,675
Provision for Income Taxes	**6,345**	2,300	**9,825**	4,090
Income before Extraordinary Item	**22,969**	9,305	**36,319**	16,585
Extraordinary Item (A)	**2,080**	—	**3,680**	300
Net Income	**$ 25,049**	$ 9,305	**$ 39,999**	$ 16,885
Earnings Per Share (B)				
Before Extraordinary Item	**$ 1.49**	$ .61	**$ 2.36**	$ 1.08
Extraordinary Item (A)	**.14**	—	**.24**	.02
Net Income Per Share	**$ 1.63**	$ .61	**2.60**	$ 1.10
Average common shares and common share equivalents	**15,408,000**	15,352,000	**15,384,000**	15,402,000

(A) Represents tax loss carryforward benefit.
(B) 1982 per share amounts have been restated to reflect a 3-for-2 stock split in 1982.

Commodore International Reports Record Second Quarter Financial Results

GROWTH CHARTS

KEY ■ NET INCOME ■ SALES

LATEST 3 MONTHS: 1981, 1982
FIRST 6 MONTHS: 1981, 1982