Commodore® MAGAZINE

128 Mode & Gold Mine, see p. 59 & 62.

RUN

December 1989
An IDG Communications Publication

U.S.A. $2.95
CANADA $3.95
U.K. £2.00

THE COMMODORE 64/128 USER'S GUIDE

BEST GAMES OF 1989

Readers Choose Their Favorites!

The Dramatic Search for PRODUCTIVITY SOFTWARE

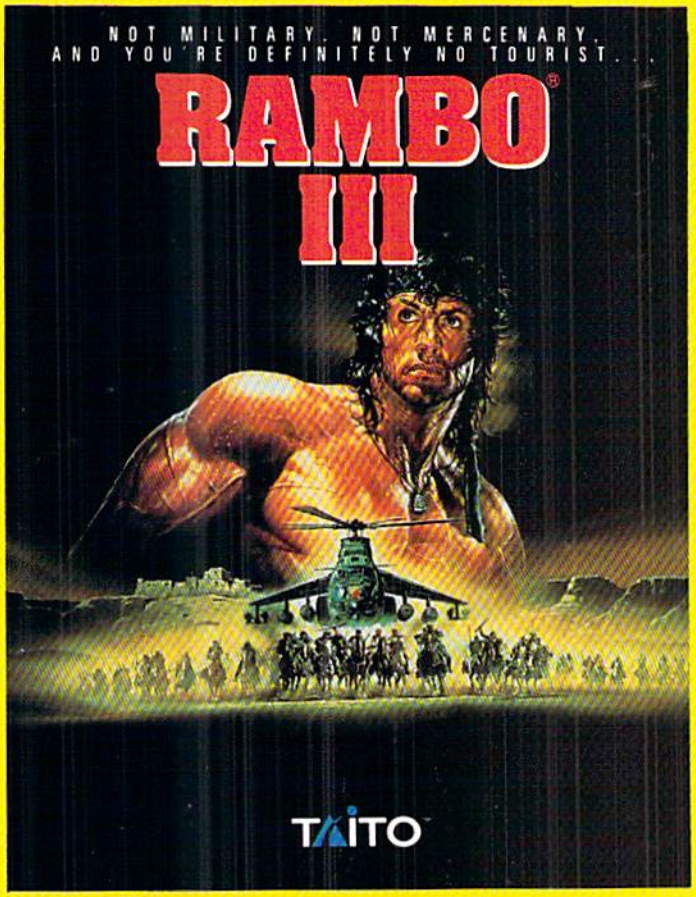
PLUS!

- Create Your Own 3-D BAR GRAPHS
- C-64 High-Speed Loader
- GEOS and C-128 Season's Greetings



12
0 74820 08679 7

RAMBO® III



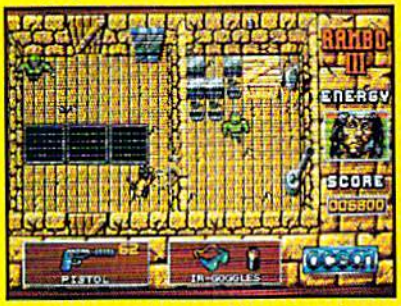
NOT MILITARY. NOT MERCENARY. AND YOU'RE DEFINITELY NO TOURIST...

SOVIET COMMANDER: "WHO ARE YOU?"

RAMBO: "I'M YOUR WORST NIGHTMARE."

Remember that line? Now YOU can deliver it to the enemy—in person. Thirty miles over the Afghanistan border, Soviet forces are torturing your friend and mentor, Colonel Trautman. You're the only man alive with enough guts, brawn, and resourcefulness to single-handedly rescue the man who taught you how to fight. Every Soviet commando, tank, and attack chopper in the sector is on your tail. It's the ultimate contest for the ultimate fighter.

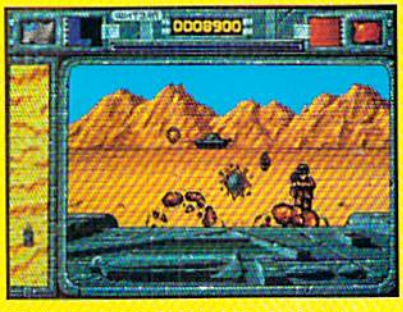
Amiga game screens.



It takes more than muscle to de-activate electronic gates, cross treacherous mine fields, and find the keys to Trautman's cell.



Ever fly one of these things? With the enemy breathing down your back, that Hind chopper's the best way out of this hell hole.



It's just you and your hijacked tank against anti-tank missiles and choppers. Sight in and rearrange that balance of power!

TAITO™

If you cannot find this product at your local retailer, Visa/Mastercard holders can order direct anywhere in the United States by calling toll free 1-800-663-8067.

Game Design, ©1988 Ocean Software Ltd. RAMBO is a registered trademark of Carolco. ©1989 CAROLCO.
Ocean is a trademark of Ocean Software Limited. Taito is a registered trademark of Taito America Corporation. ©1989 Taito America Corporation.
All rights reserved. Amiga is a registered trademark of Commodore-Amiga, Inc.

We turn C64 owners into C64 users. For only $6.65 a month.



A subscription to Loadstar brings you two 5¼" disks, chock-full of great programs for your Commodore® 64/128 each month for just $6.65.

Learn all the capabilities of your Commodore.

Loadstar takes you beyond the two or three programs you bought for your Commodore. Without spending a fortune, **Loadstar** will introduce you to new software *you can use* each month. You will get music, sprite animation, telecommunications, graphics, educational programs, and specialized utilities that make your C-64 easier to work with. There are always a number of entertaining games.

Loadstar programs are *original software*, **not** public domain, so you will build a quality software collection as you learn. Each month you will sharpen your computing skills and become a smarter software buyer. You just can't buy better computing experience.

Contents of Issue #53
(Available as a back issue)

Print Shop® Air Force Patches—Patches from WW II's Army Air Force.
Paragon—Eight levels of arcade fun.
Cheap Hex—An excellent disassembler.
Font Customizer—Create your own fonts.
Plus 7 more great programs!



FREE SOFTWARE with order.

Try **Loadstar** for three months for only $19.95. As a bonus, we will send you FREE—the *Best of Loadstar Vol. 4* which contains the very best programs from recent issues.

Money-back guarantee.

If you are not satisfied with your purchase for any reason, return your first issue for a full refund. *The Best of Loadstar Vol. 4* is yours to keep. You can't lose, so order today!

SOFTDISK PUBLISHING

Call toll free
1-800-831-2694

Commodore is a trademark of Commodore Electronics, Ltd.
Print Shop is a trademark of Broderbund Software.

YES! Please rush me my free *Best of Loadstar Vol. 4* and start my three-month subscription to **Loadstar** for my Commodore 64/128 for only $19.95 postage paid. (Canada/Mexico $24.95, Overseas $27.95). Make checks payable to Softdisk Publishing in U.S. funds.
(Louisiana residents add 4% sales tax).

Name _____
Address _____
City _____ State _____ Zip + 4 _____ - _____
Home Phone (_____) _____ - _____
❑ Discover ❑ AmEx ❑ VISA/MC ❑ Payment Enclosed (*U.S. funds only!*)
Card # _____ Exp. _____
Signature _____

SOFTDISK PUBLISHING P.O. Box 30008 • Shreveport, LA 71130-0008 • 318-221-871 **RU129**

Circle 66 on Reader Service card.

A VERY SPECIAL OFFER FROM COMMODORE

Just in time for the holidays!

The 1541-II 5.25" Disk Drive was designed especially for the Commodore 64. Whether you are a new owner looking for the right drive to enhance the performance of your new computer, or a long-time Commodore 64 user looking for that extra disk drive to make your computer more powerful....
this is the disk drive for you!



Designed by Commodore for Commodore computer owners, this product is fully-compatible to your 64 and capable of running the thousands of programs that are available to you. Word Processing, Games, Education - even Music - from all the best software developers.

For a limited time Commodore is offering you the 1541-II for a savings of over **34%** - that's **$149.95** instead of **$229.95**! At this price, you'll want to order several. They make great gifts for your Commodore 64- owner friends and relatives.
Order today and be ready for the holidays and for a future of enjoyment with your Commodore 64 system.

SPECIAL FEATURES

- ***External 5.25" Floppy Disk Drive***
- ***External power supply for cool operation***
- ***Comes with its own microprocessor, RAM, ROM & Operating System software***
- ***New small footprint***
- ***Complements your 64C with fast throughput and large memory capacity***

Name _____

Address _____
Sorry, no P.O. Boxes

City _____ State Zip _____

METHOD OF PAYMENT:

☐ Enclosed is my check or money order for $_____ payable to Commodore Business Machines, Inc.
☐ Charge my ☐ VISA or ☐ MasterCard

Exp. Date _____ Signature _____

MAIL TO: Commodore Business Machines, Inc.
Box 651
Holmes, PA 19043

YES, I'd like to take advantage of this Special Offer for the Commodore 1541-II Disk Drive.

QTY		PRICE
_____	1541-II 5.25" DISK DRIVE for $149.95 each	_____
	Pennsylvania residents please add 6% Sales Tax	_____
	Shipping & Handling charge: $5.00 each unit	_____
	TOTAL ORDER	_____

OFFER GOOD UNTIL JANUARY 31, 1990

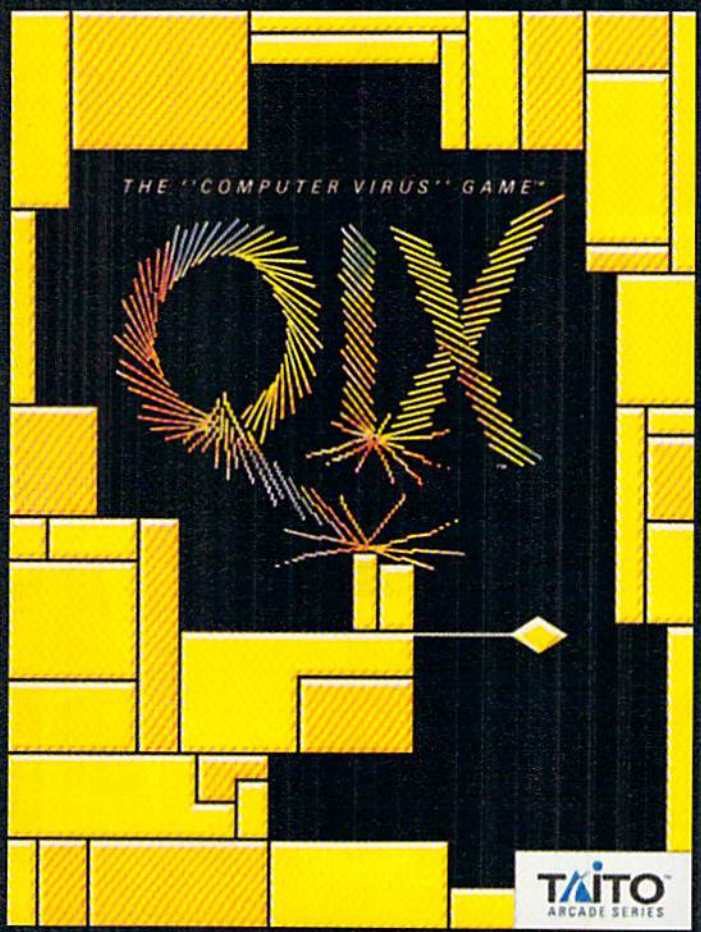
FOR EVEN FASTER SERVICE CALL (800) 345-8112

Commodore®

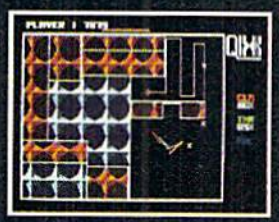
RDDO01

VIRUS!

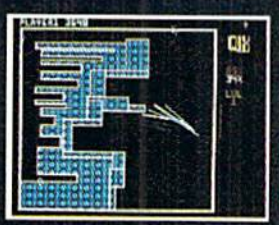
CAN YOU KICK THE QIX® ADDICTION?



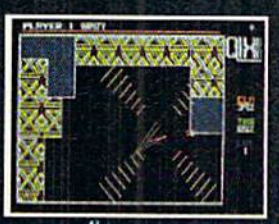
When QIX fever strikes, there is no cure! Like the mind-blowing arcade original, QIX is a computer virus that lives deep inside your computer, attacking without warning. Construct a trap in any one of the billions of configurations possible to immobilize QIX. But watch out for SPARX™ and SPRITZ™ and other deadly energy forms! In this electrical world of high-tech infections, mental dexterity and superior strategy are basic to survival. The practice mode turns beginners into addicts. No one is immune! Get your QIX before QIX gets you!



Actual Atari screen.



Actual C/64 screen.



Actual Amiga screen.

TAITO™

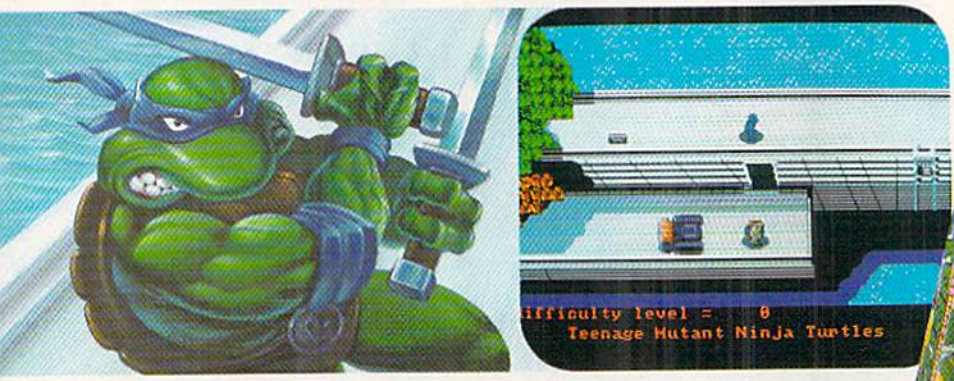
If you cannot find this product at your local retailer, Visa/Mastercard holders can order direct anywhere in the United States by calling toll free 1-800-663-8067.

Taito®, QIX®, SPARX™ and SPRITZ™ are trademarks of Taito America Corporation. Copyright ©1989. All rights reserved. Atari, Commodore, and Amiga are registered trademarks respectively of Atari Corporation, Commodore Electronics, Inc., and Commodore-Amiga, Inc.

FOUR COMPUTER HACKERS ARE ABOUT TO RAID YOUR DISK DRIVE.









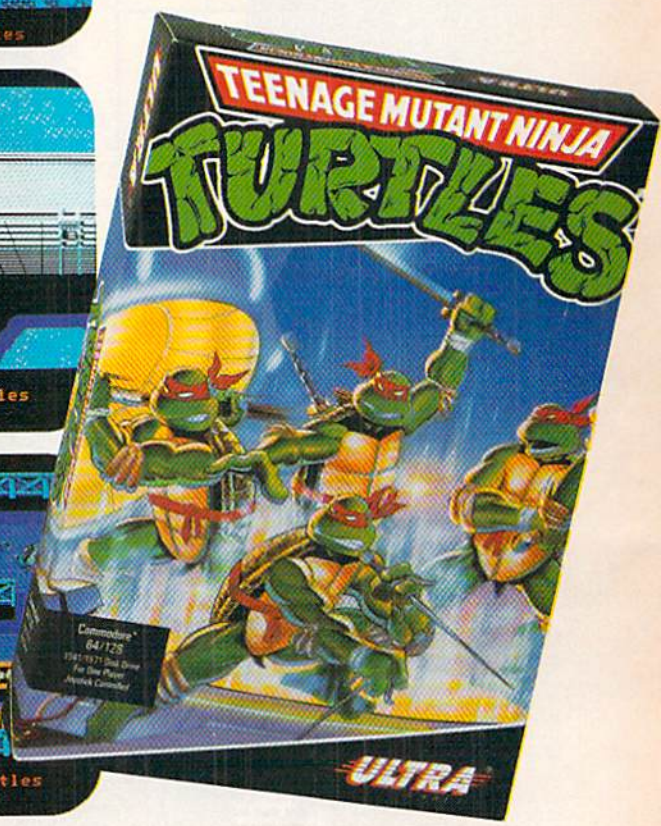
No computer will go unscathed, as Ultra's version of Teenage Mutant Ninja Turtles® storms into your disk drive to duke it out with Shredder™—a maniac more menacing than an army of mind-altered Bruce Lees.

But if they're to survive, you must command the role of each turtle, rumbling through a maze of Mouser™ infested sewers, criminally polluted rivers and alleys patrolled by the fanatical Foot Clan.™

Along the way, search for bonus weapons like the Triple Shuriken. You'll have to also think fast, switching turtle identities in order to match their karate skills with those of the enemy.

So grab your joystick and nunchukus, then control every leap, chop, slice and dice, until you splatter Shredder senseless or get yourself hacked into turtle soup.

Now featuring the ULTRA® "GAME SAVE" command.



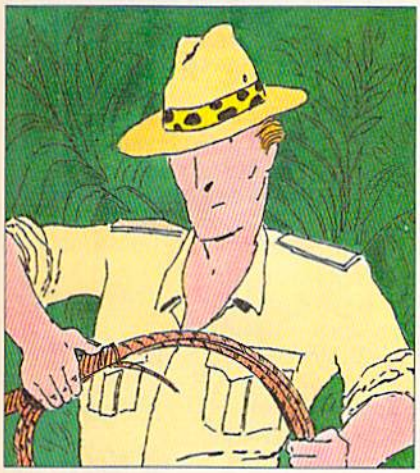
ULTRA GAMES

Teenage Mutant Ninja Turtles,® Shredder,™ Foot Clan™ and Mouser™ are registered trademarks of Mirage Studios, USA. All Rights Reserved. Used with permission. Based on characters and comic books created by Kevin Eastman and Peter Laird. © 1989 Mirage Studios, USA. Exclusively licensed by Surge Licensing, Inc. IBM® is a registered trademark of International Business Machines, Inc. Commodore® is a registered trademark of Commodore Electronics Ltd. Amiga® is a registered trademark of Commodore-Amiga, Inc. ULTRAGAMES® is a registered trademark of Ultra Software Corporation. © 1989 Ultra Software Corporation.

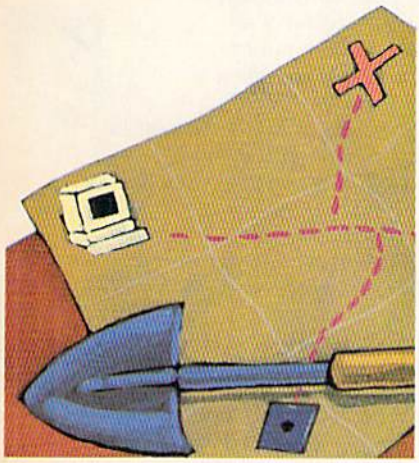
Teenage Mutant Ninja Turtles is available for IBM, Commodore and Amiga.

C O N T E N T S

VOLUME 6, NUMBER 12 DECEMBER 1989



PAGE 38



PAGE 59

COVER PHOTOGRAPHED
BY ED JUDICE

RUN (ISSN 0741-4285) is an independent journal not connected with Commodore Business Machines, Inc. *RUN* is published monthly by IDG Communications/Peterborough, Inc., 80 Elm St., Peterborough, NH 03458. Phone 603-924-9471. Second-class postage is paid at Peterborough, NH, and at additional mailing offices. Canadian second-class mail registration number is 9565. Subscription rates in U.S. are $22.97 for one year, $34.97 for two years and $48.97 for three years. In Canada and Mexico, the one-year subscription rate is $27.97, with U.S. funds drawn on a U.S. bank. Foreign surface mail subscriptions are $42.97 for one year, and foreign air mail one-year subscriptions are $77.97, with U.S. funds drawn on a U.S. bank. *RUN* is nationally distributed by International Circulation Distributors. **Postmaster**: Send address changes to *RUN*, Subscription Services, PO Box 58711, Boulder, CO 80322-8711. (Canadian address changes to *RUN*, PO Box 1051, Fort Erie, Ontario, Canada L2A 5N8.)

FEATURES

PAGE 35

35 TEN TOP GAMES *by* RUN *Editors*
The best games of 1988 and 1989, according to the vote of our readers. And the lucky readers who won the contest drawing? Find out on page 14.

38 IN SEARCH OF PRODUCTIVITY SOFTWARE *by Ellen Rule*
There's a treasure trove of productivity software just waiting to be discovered—everything from integrated packages and desktop publishing to spreadsheets and telecommunications.

40 PACKING A PUNCH *by Michael Cavanaugh*
Your C-128, productivity software and peripherals make for a knockout combo!

44 GET A LOAD OF THIS!* *by Michael Miller*
Now 1571 and 1581 drive owners can increase C-64 loading speed tenfold.

46 GRAPHMAKER* *by Robin Franzel*
Make your data come alive with this 3-D bar-graph program for the C-64 and C-128.

52 SEASON'S GREETINGS* *by Malcolm Gardner*
Here's a creative visual display, accompanied by a familiar theme, that will put you in the holiday spirit. C-128.

DEPARTMENTS

6 RUNNING RUMINATIONS
A look at the home computer in the '80s, then back to the future for a look at the next decade.

8 MAGIC
The number-one column of hints and tips for performing Commodore computing wizardry.

14 NEWS AND NEW PRODUCTS
Recent developments and releases in the world of Commodore computing.

18 MAIL RUN
Lambasting those who bad-mouth Commodore products; circumventing a geoBug; and other input from our readers.

22 SOFTWARE GALLERY *Reviews of:*

- Speedball
- Axe of Rage
- Titan
- Tangled Tales
- Book
- Double Dare
- California Pro Golf
- Devon Aire in The Hidden Diamond Caper
- Last Ninja 2
- Combat Course
- The Magic Candle
- The Crack of Doom
- War in Middle Earth

59 128 MODE *by Mark Jordan*
RUN's new column for the C-128 begins by revealing an assortment of Basic 7.0 programming tricks.

62 GOLD MINE *by Louis F. Sander*
Another new column that's an exciting and helpful compilation of game tips for C-64 and C-128 users. Dig in!

66 GAMES GALLERY *by Bob Guerra*
Give your joystick wrist and thumb a break and put your intellect to the test on six mind games.

72 GEOWATCH *by Douglas Bayles*
Make your own greeting cards with geoPublish and geoPaint.

78 *RUN*'S CHECKSUM PROGRAM
Run it right the first time.

96 COMING ATTRACTIONS; LIST OF ADVERTISERS

* Relax and enjoy the holidays with the family and leave the typing to us. Order the November–December 1989 ReRUN disk, which includes the programs in this and last month's issue, plus three bonus items, for $16.47. See the card at page 48.

PUBLISHER
STEPHEN ROBBINS

EDITOR-IN-CHIEF
DENNIS BRISSON

MANAGING EDITOR
SWAIN PRATT

SENIOR EDITOR
BETH S. JALA

ASSOCIATE EDITOR
HAROLD R. BJORNSEN

TECHNICAL MANAGER
LOU WALLACE

COPY EDITOR
PEG LEPAGE

CONTRIBUTING EDITORS
JOHN RYAN; TIMOTHY WALSH

ART DIRECTOR
HOWARD G. HAPP

DESIGNERS
ANN DILLON
LAURA JOHNSON

PRODUCTION SUPERVISOR
ALANA KORDA

ASSOCIATE PUBLISHER AND
NATIONAL ADVERTISING SALES MANAGER
KENNETH BLAKEMAN

SALES REPRESENTATIVE
NANCY POTTER-THOMPSON

ASSOCIATE SALES REPRESENTATIVE
CLASS AD SALES
HEATHER PAQUETTE
603-924-9471

ADVERTISING COORDINATOR
SUE DONOHOE

CUSTOMER SERVICE REPRESENTATIVE
SUSAN KANIWEC

ADVERTISING ASSISTANT
MARGOT SWANSON

WEST COAST OFFICE:

WESTERN STATES SALES MANAGER
GIORGIO SALUTI

SALES REPRESENTATIVE
SHELLEY HARMON

3350 W. BAYSHORE ROAD, SUITE 201
PALO ALTO, CA 94303
415-328-3470

CIRCULATION DIRECTOR
PAUL RUESS
1-800-274-5241

ASSISTANT CIRCULATION MANAGER
PAM WILDER

MARKETING MANAGER
WENDIE HAINES MARRO

MARKETING COORDINATOR
LAURA LIVINGSTON

EXECUTIVE ASSISTANT TO PUBLISHER
LISA LAFLEUR

Entire contents copyright 1989 by IDG Communications/Peterborough, Inc. No part of this publication may be printed or otherwise reproduced without written permission from the publisher. Programs published in this magazine are for the personal use of the reader; they may not be copied or distributed. All rights reserved. *RUN* assumes no responsibility for errors or omissions in editorial or advertising content. *RUN* does not assume any liability for advertisers' claims.

Commodore Magazine is a registered trademark of Commodore Business Machines, Inc.

RUNning Ruminations

As we enter the 1990s, we can look forward to reading articles that take a look ahead at the next decade. Conjecture pieces about how our lives will change in the coming years.

But before we say goodbye to this decade, let's take a look back. Certainly, the 1980s have to be described as the decade of the home computer. And the computer of the decade has to be the Commodore 64/128. Macintosh may have controlled the spotlight, IBM has the prestige, but in terms of number of units sold, price/performance value and longevity, Commodore is the computer king.

The home computer was *Time*'s "man" of the year during this decade. But more importantly, PCs have proven that they aren't just a fad. The PC has become a valuable fixture in one out of five homes, countless businesses and thousands of schools.

Remember the 1980s, the decade of the home computer. ◆

Given this background, which major household consumer item, including home computers, do you consider to have had the most important effect on your life during this past decade? *The Wall Street Journal* recently asked this question in a nationwide poll to find out what recent invention Americans consider to have contributed most to improving their way of life. If your answer was the home computer, you would have been in the minority. Only 45 percent cited it as a product that made life a lot better. Nineteen percent consider it a "modern frill."

Would you believe that the smoke alarm was rated the biggest hit of the 1980s? Followed by the microwave oven and the coffee maker? Even the lowly TV remote control (how essential!) outpointed the home computer.

While some Americans can't live without their pulsating shower massagers, video cameras, Walkmans, CD players and car phones, most Americans consider these items frivolous and not necessary to the household.

Just about all of these items were unavailable prior to the 1980s. Ten years from now most of these products will have become obsolete, or at least have been replaced in importance by other items.

What products will be the stars of the 1990s?

The simple smoke detector will be replaced by an elaborate home control system that regulates the lights, heat and security systems, as well as air purification and smoke detection. The home computer as we know it will probably be replaced by the wristwatch-sized computer.

How about a computer that mimics human functions and "hears" to interpret messages or "reads" handwriting?

Industry experts predict that we're poised for yet another computer revolution. Just as the personal computer dramatically changed the way we work, play, learn and create in the 1980s, the coming decade promises even greater change. Stay tuned for multimedia, the next major development in the computing arena. Adding high-quality sound and video capability to PCs represents a major new market, especially in the area of "edutainment."

Let the 1990s begin.

Dennis Brisson

Dennis Brisson
Editor-in-Chief

Advanced Dungeons & Dragons®
COMPUTER PRODUCTS

TRIPLE YOUR FANTASIES.

DUNGEON MASTERS ASSISTANT, VOL. II

Utility program to help Dungeon Masters generate characters and treasures quickly for AD&D game campaigns.

APPLE II
C-64/128
COMING SOON:
IBM

WAR OF THE LANCE

DRAGONLANCE® Strategic Fantasy Wargame

APPLE II
COMING SOON:
IBM
C-64/128

CURSE OF THE AZURE BONDS

FORGOTTEN REALMS Fantasy Role-Playing Epic

IBM
APPLE II
C-64/128

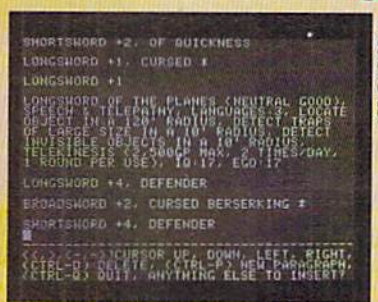
TSR, Inc.

ADVANCED DUNGEONS & DRAGONS, AD&D, FORGOTTEN REALMS, DRAGONLANCE and the TSR logo are trademarks owned by and used under license from TSR, Inc. © 1989 TSR, Inc. © 1989 Strategic Simulations, Inc. All rights reserved.

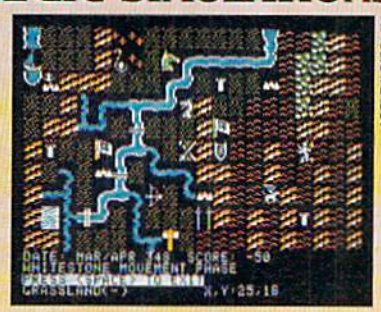
To Order: Visit your retailer or call 1-800-245-4525 to charge on VISA or MasterCard. To receive SSI's complete product catalog, send $1.00 to: SSI, 675 Almanor Avenue, Sunnyvale, CA 94086.

SSI™

STRATEGIC SIMULATIONS, INC.®



APPLE II DISPLAY



APPLE II DISPLAY


IBM DISPLAY

MAGIC

Protect your programs from prying eyes, save scores of your games and move big chunks of memory instantaneously on your C-64.

Compiled by TIM WALSH

$561 C-64 Character Color to Cursor Color Changer

One of the most eye-catching routines in the world of C-64 programming also has one of the longest, descriptive names in Magicdom. C-64 Character Color to Cursor Color Changer does just that—it instantly changes all of the characters displayed on the screen to the current cursor color.

A completely relocatable machine language routine, C-64 Character to Cursor Color Changer can be used as a standalone program or as a routine within a program. Activating it with its default memory location requires entering SYS 49152 after changing the cursor color with either POKE 646,X or with the control or Commodore keys.

```
Ø REM 64 CHARACTER COLOR TO CURSOR COLOR C
  HANGER - LARRY E. SUTTER          :REM*111
1Ø FORT=49152 TO 492ØØ:READ D:POKE T,D:CK=
  CK+D:NEXT                         :REM*23Ø
2Ø IF CK<> 7149 THENPRINT"ERROR IN DATA...
  ":END                             :REM*225
3Ø PRINT"{SHFT CLR}ACTIVATE COLOR CHANGE W
  ITH SYS 49152"                    :REM*43
4Ø DATA 173,134,2,162,141,142,252,3,162,96
  ,142,255,3,162,216,16Ø,Ø,142      :REM*192
5Ø DATA 254,3,14Ø,253,3,32,252,3,2ØØ,192,Ø
  ,24Ø,6,192,232,24Ø,7,2Ø8,236      :REM*51
6Ø DATA 232,224,Ø,2Ø8,231,224,219,24Ø,2,2Ø
  8,225,96                          :REM*253
```

—LARRY E. SUTTER, STERLING HEIGHTS, MI

$562 Score Keeper 64/128

If you're an avid game programmer, you can save the top five scores for your C-64 and C-128 games to disk by incorporating Score Keeper 64/128 into them. If you run the program and don't yet have a score file, it automatically writes a top-five score on the disk for you.

The guidelines to follow when using Score Keeper 64/128 are simple. NM$ is the current player; the current player's score is the variable SC; the top five scores in line 10 go from highest to lowest; and bear in mind that it won't accept names over 14 characters long.

```
Ø REM SCORE KEEPER 64/128 - JERRY DICKSON
                                    :REM*44
1Ø NM$="NO ONE YET!":S1=5:S2=4:S3=3:S4=2:S
  5=1                               :REM*254
2Ø IFLEN(N$)>14ORLEN(NM$)>14THENPRINT"NAME
   TOO LONG!":RUN                   :REM*157
3Ø PRINT"{SHFT CLR}{CTRL 2}":OPEN 2,8,2,"H
  IGH,S,R":GOSUB28Ø                 :REM*89
4Ø OPEN 2,8,2,"HIGH,S,R"            :REM*69
5Ø FORL=1TO5:INPUT#2,H(L):INPUT#2,I$(L):NE
  XTL:CLOSE2                        :REM*19Ø
6Ø FORL=1TO5:F(L)=H(L):J$(L)=I$(L):NEXTL
                                    :REM*2Ø4
7Ø IFSC<F(5)THEN13Ø                 :REM*89
8Ø IFSC>F(1)THENGOSUB23Ø:GOTO13Ø    :REM*1Ø9
9Ø IFSC>F(2)THENGOSUB24Ø:GOTO13Ø    :REM*72
1ØØ IFSC>F(3)THENGOSUB25Ø:GOTO13Ø   :REM*167
11Ø IFSC>F(4)THENGOSUB26Ø:GOTO13Ø   :REM*13Ø
12Ø GOSUB27Ø                        :REM*2Ø4
13Ø PRINT"{SHFT CLR}{2 CRSR DNs}";SPC(14)"
  HIGH SCORES":PRINTSPC(14)"{11 COMD Ys}
  ":PRINT                           :REM*86
14Ø FORL=1TO5:PRINT"":PRINTTAB(11);I$(L);T
  AB(25);H(L):NEXTL                 :REM*192
15Ø OPEN 15,8,15,"SØ:HIGH":CLOSE15:REM*156
16Ø OPEN 2,8,2,"HIGH,S,W":FORL=1TO5:PRINT#
  2,H(L):PRINT#2,I$(L):NEXTL:CLOSE2
                                    :REM*11
17Ø PRINT"{2 CRSR DNs}":A$=" PRESS ANY KEY
   TO CONTINUE "                    :REM*8
18Ø GETB$:IFB$=""THENGOSUB2ØØ:GOTO18Ø
                                    :REM*1Ø2
19Ø END                             :REM*63
2ØØ PRINT"{CRSR UP}"TAB(7);"{CTRL 9}";A$:F
  ORP=1TO1ØØ:NEXT                   :REM*1Ø6
21Ø PRINT"{CRSR UP}"TAB(7);"{CTRL Ø}";A$:F
  ORP=1TO1ØØ:NEXT                   :REM*123
22Ø RETURN                          :REM*1Ø7
23Ø H(1)=SC:I$(1)=N$:FORL=2TO5:H(L)=F(L-1)
  :I$(L)=J$(L-1):NEXTL:RETURN       :REM*2Ø
24Ø H(2)=SC:I$(2)=N$:FORL=3TO5:H(L)=F(L-1)
  :I$(L)=J$(L-1):NEXTL:RETURN       :REM*193
25Ø H(3)=SC:I$(3)=N$:FORL=4TO5:H(L)=F(L-1)
  :I$(L)=J$(L-1):NEXTL:RETURN       :REM*247
26Ø H(4)=SC:I$(4)=N$:H(5)=F(4):I$(5)=J$(4)
  :RETURN                           :REM*212
27Ø H(5)=SC:I$(5)=N$:RETURN         :REM*148
28Ø CLOSE2:OPEN 15,8,15:INPUT#15,E,E$:CLOS
  E15:IFE<>ØTHEN3ØØ                 :REM*168
29Ø RETURN                          :REM*177
3ØØ H(1)=S1:H(2)=S2:H(3)=S3:H(4)=S4:H(5)=S
  5:FORL=1TO5:I$(L)=NM$:NEXTL:RETURN
                                    :REM*156
```

—JERRY DICKSON, SANDWICH, IL

$563 1541 Disk Dater

Classify all of your work disks by the year of their creation

or their updating with 1541 Disk Dater. A C-64 mode program, Disk Dater writes the last two digits of the year to an unused portion of the disk directory where it is prominently displayed each time the directory is listed. It defaults to 89, but prompts you to change that to any year desired.

As with any disk header manipulator program, it is better to be safe than sorry, so use this program carefully. Test it thoroughly on non-essential scratch disks before using, and, to avoid potential problems, don't use it on 1571-formatted disks.

```
Ø REM 1541 DISK DATER - RICHARD PENN
                                    :REM*1Ø6
1Ø PRINTCHR$(147)CHR$(18)"1541 DISK DATER
   - RICHARD PENN"                  :REM*56
2Ø CLOSE 15:OPEN 15,8,15:PRINT#15,"IØ":CLO
   SE2:OPEN2,8,2,"#"                :REM*2Ø5
3Ø PRINT#15,"U1:2,Ø,18,Ø":PRINT#15,"B-P:2,
   164"                             :REM*117
4Ø FOR T=1TO3:GET#2,A$:C$=C$+CHR$(ASC(A$+C
   HR$(Ø))):NEXT                    :REM*41
5Ø PRINT:PRINT:POKE 212,1:PRINT"PREVIOUS C
   ONTENTS: "C$                     :REM*18Ø
6Ø POKE 19,1:INPUT"CHANGE TO{8 SPACEs}: '8
   9{3 CRSR LFs}";N$:POKE 19,Ø:PRINTN$=LEF
   T$(N$,3)                         :REM*1Ø3
7Ø PRINT#15,"B-P:2,164":PRINT#2,N$;:PRINT#
   15,"U2:2,Ø,18,Ø":CLOSE8          :REM*24
8Ø INPUT#15,ER,ER$:PRINT:PRINT:PRINT"DISK
   STATUS:"ER;ER$:PRINT#15,"IØ":CLOSE15
                                    :REM*214
```

—Richard Penn, Montreal, Quebec, Canada

$564 Effective C-64/C-128 Program Protection

A little-known program protection method allowed by the C-64 and C-128 requires two and four Pokes, respectively, to keep unwanted eyes from scanning your Basic programs.

With the C-64, it's simply a matter of entering the following commands in the proper sequence. When you're ready to save a C-64 program to be encrypted to disk, just enter POKE 2050,0. When the program is re-loaded into the C-64, it won't list or work properly. Just enter POKE 2050,8 to restore the program to pristine condition.

C-128 programs can be protected in a similar manner, but it's a little more complex. First, enter the following two Pokes before saving: POKE 7169,0:POKE 7170,0. To revive the now "dead" C-128 program after reloading it into the computer, enter POKE 7169,36:POKE 7170,28. But unlike the C-64, you're not out of the woods yet. The final step is to enter RENUMBER in Direct mode, which may change the original ►

New Release!

Version 6.0

The first in a new series of integrated C64/C128 hardware products from CMD

JiffyDOS™

Give your system a new lease on life and the power to compete with today's newer, more expensive machines

- **Ultra-fast multi-line serial technology.** Enables JiffyDOS to outperform Cartridges, Burst ROMs, Turbo ROMs, and Parallel Systems – without any of the disadvantages.
- **Speeds up all disk operations.** Load, Save, Format, Scratch, Validate, access PRG, SEQ, REL, USR & direct-access files up to **15 times faster!**
- **100% Compatible – or your money back.** Guaranteed to work with all your hardware and software, including copy-protected commercial programs.
- **Uses no ports, memory or extra cabling.** The JiffyDOS ROMs upgrade your computer and drive(s) internally for maximum speed and compatibility.
- **Easy Installation.** No electronics experience or special tools required.
- **Supports C64, 64C, SX64, C128, C128D, 1541, 1541C, 1541-II, 1571, 1581 and more**
- **Can be completely switched out.** If ever necessary, the flip of a switch returns you to a 100% stock configuration – without resetting or powering down.
- **Built-in DOS Wedge.** Plus 17 additional commands and convenience features, including file copier, screen dump, directory menu, and single-key load/save/scratch.

C-64/SX-64 systems $59.95; C-128/C-128D systems $69.95; Add'l drive ROMs $29.95
Please specify computer (with serial number) and drive(s) when ordering

System includes ROMs for computer and one drive, User's Manual, illustrated step-by-step installation instructions, 30-day money-back compatibility guarantee and 90-day parts warranty. Add $4.25 shipping/handling per order, plus $3.00 for C.O.D., APO, FPO, AK, HI, PR & Canada. $10.00 add'l for other overseas orders. MA residents add 5% sales tax. VISA/MC, COD, Check, Money Order. Allow 2 weeks for personal checks. U.S. & Dealer pricing available. Call or write for more information.

• Version 5.0 owners call for upgrade information and prices •

JiffyDOS™ Version 6.0

New Features and Enhancements

- **Built-in two drive file copier.** Copy PRG, SEQ, REL and USR files between two drives of any type or to and from REU's. Great for quick backups and moving programs and files between 1541, 1571 & 1581 drives. Directory menu, two-key commands, and Control-key combinations enable easy selection of source and destination drives and the files you want to copy. Can also be used to change filetypes.
- **REU support.** The JiffyDOS commands now fully support Commodore RAM Expansion Units running under RAMDOS. Access your REU just like a disk drive without having to load special wedge utilities.
- **1581 support.** Copy programs and files from 1541 and 1571 drives to any partition on your 1581. Move between partitions easily with just a few keystrokes.
- **Supports CMD HD Series Hard Drives and RAMLink.** Enhances the performance of CMD's new line of integrated C64/C128 products.
- **Quick printer output toggle.** A simple 3-key command switches output from screen to printer and back with ease. Eliminates the bother of having to type the complicated OPEN4,4:CMD4 and PRINT#4:CLOSE4 command sequences.
- **Redefinable 64-mode function keys.** If the JiffyDOS function keys are not to your liking, you can easily redefine them to suit your specific needs.
- **Enhanced screen dump.** Automatic screen mode recognition and printing of upercase/graphics & lowercase characters.
- **Adjustable sector interleave.** Enables you to increase disk-access performance even with hard-to-speedup software.

CMD Creative Micro Designs, Inc.
50 Industrial Drive, PO Box 646 Phone: 413-525-0023
East Longmeadow, MA 01028 FAX: 413-525-0147

Circle 166 on Reader Service card.

line numbering, but the program will then work fine.

—BRIAN DAVIDSON, POMPANO BEACH, FL

$565 64/128 CLEAR SCREEN DIRECTORY

C-128/1571 disk drive users, you're not forgotten. Here's a 64/128-compatible Magic Trick that clears the screen in any mode whenever the directory is listed. Just format a new disk with either a 1541 or 1571 (even a 1581!) using the following technique:

```
OPEN 15,8,15,"N0:"+CHR$(13)+CHR$(147)+
CHR$(18)+CHR$(34)+"diskname,id":CLOSE15
```

—RICHARD PENN, MONTREAL, QUEBEC, CANADA

$566 64 RAM CACHE

Move large chunks of data instantly on your C-64 with 64 RAM Cache. This relocatable machine language program can move memory from either Direct or Program mode. The required syntax for a memory movement after running 64 RAM Cache is straighforward using this format:

```
SYS 49152,S,E,L
```

where S is the starting address of the memory to be moved, E is the ending address and L is the starting address of the new location.

```
Ø REM 64 RAM CACHE - DAVID FICKEN :REM*156
1Ø FORI=49152TO49239:READA:POKEI,A:X=X+A:N
   EXT                              :REM*43
2Ø IFX<>14313THENPRINT"ERROR IN DATA...":E
   ND                               :REM*1Ø7
3Ø DATA 32,253,174,32,138,173,32,247,183,1
   32,251,133,252,32,253,174,32     :REM*42
4Ø DATA 138,173,32,247,183,14Ø,254,2Ø7,141
   ,255,2Ø7,32,253,174,32,138       :REM*163
5Ø DATA 173,32,247,183,132,253,133,254,16Ø
   ,Ø,177,251,145,253,24,165,251    :REM*54
6Ø DATA 1Ø5,1,133,251,165,252,1Ø5,Ø,133,25
   2,24,165,253,1Ø5,1,133,253       :REM*43
7Ø DATA 165,254,1Ø5,Ø,133,254,165,251,2Ø5,
   254,2Ø7,2Ø8,219,165,252,2Ø5      :REM*159
8Ø DATA 255,2Ø7,2Ø8,212,96          :REM*244
```

—DAVID M. FICKEN, TOPSAIL, NFLD., CANADA

$567 64 LINES AND BYTES

Are you curious about exactly how many keystrokes it took you to type in finger blister-inducing programs such as RUN Paint (March 1989) or RUN Shell (July 1989)? Just load and run this C-64 mode program called 64 Lines and Bytes, then load the Basic program or loader of choice and enter SYS 49152 in Direct mode.

The first number that appears is the number of lines in the program, and the second number is the number of bytes, or characters, contained in the listing.

```
Ø REM 64 LINES & BYTES - DAVID FICKEN
                                    :REM*145
1Ø FORI=49152TO49252:READA:POKEI,A:X=X+A:N
   EXT                              :REM*227
2Ø IFX<>16253THENPRINT"ERROR IN DATA...":E
   ND                               :REM*149
3Ø DATA 16Ø,Ø,177,43,133,251,2ØØ,177,43,13
   3,252,169,Ø,141,254,2Ø7,141      :REM*12
4Ø DATA 255,2Ø7,16Ø,Ø,165,251,2Ø8,4,165,25
   2,24Ø,39,165,251,133,253,165     :REM*167
5Ø DATA 252,133,254,24,173,254,2Ø7,1Ø5,1,1
   41,254,2Ø7,173,255,2Ø7,1Ø5,Ø     :REM*1Ø9
6Ø DATA 141,255,2Ø7,177,251,72,2ØØ,177,251
   ,133,252,1Ø4,133,251,76,19       :REM*2Ø
7Ø DATA 192,174,254,2Ø7,173,255,2Ø7,32,2Ø5
   ,189,169,32,32,21Ø,255,56,165    :REM*156
8Ø DATA 253,229,43,17Ø,165,254,229,44,32,2
   Ø5,189,169,33,32,21Ø,255,96      :REM*59
```

—DAVID M. FICKEN, TOPSAIL, NFLD., CANADA

$568 1K RAM C-64 EXPANDER

1K RAM Expander is a C-64 program that provides 1228 bytes of additional Basic memory. When you run it, PRINT FRE(0)+2↑16 reveals 40137 bytes free instead of the usual 38909. Some dynamic memory reconfigurations make this possible.

The program reconfigures memory by moving screen memory to locations 49152 through 50151 and sprite pointers to 50168 through 50175. Sprites must be stored at locations 49152 through 65535 and the character set at locations 57344 through 61439. Basic memory now runs from 828 to 40959, making larger programs possible.

```
Ø REM 64 1K RAM EXPANDER - RICHARD PENN
                                    :REM*36
1Ø POKE 56334,Ø:POKE 1,51:POKE 781,16:POKE
   782,255:POKE 9Ø,Ø:POKE 91,223    :REM*166
2Ø POKE 88,Ø:POKE 89,239:SYS 41964:POKE 1,
   55:POKE 56334,1                  :REM*252
3Ø POKE 56578,PEEK(56578)OR3        :REM*2
4Ø FOR U=679 TO 693:READ Q:POKE U,Q:CK=CK+
   Q:NEXT                           :REM*123
5Ø IF CK <> 1777THENPRINT"ERROR IN DATA...
   ":END                            :REM*23
6Ø DATA 72,169,148,141,Ø,221,169,9,141,24,
   2Ø8,1Ø4,76,131,164               :REM*117
7Ø POKE 77Ø,167:POKE 771,2:POKE 648,49152/
   256                              :REM*41
8Ø PRINTCHR$(147)"1K RAM EXPANDER BY RICHA
   RD PENN"                         :REM*27
9Ø POKE 43,53:POKE 44,3:POKE 82Ø,Ø:NEW
                                    :REM*213
```

—RICHARD PENN, MONTREAL, QUEBEC, CANADA

$569 64 INSTANT DATA

Here is one of the fastest, shortest ways to make Basic Data statements out of any machine language program. After running the program, enter, when prompted, the range of memory where the machine language resides—a starting line number followed by a line number increment.

After 64 Instant Data does its conversion to Data statements, delete line numbers 60000 on up and save the data. You can then use the data in your own Basic programs.

```
Ø REM 64 INSTANT DATA - DAVID FICKEN
                                    :REM*11Ø
6ØØ1Ø INPUT"START ADDRESS";A:INPUT"END ADD
```

Continued on p. 80.

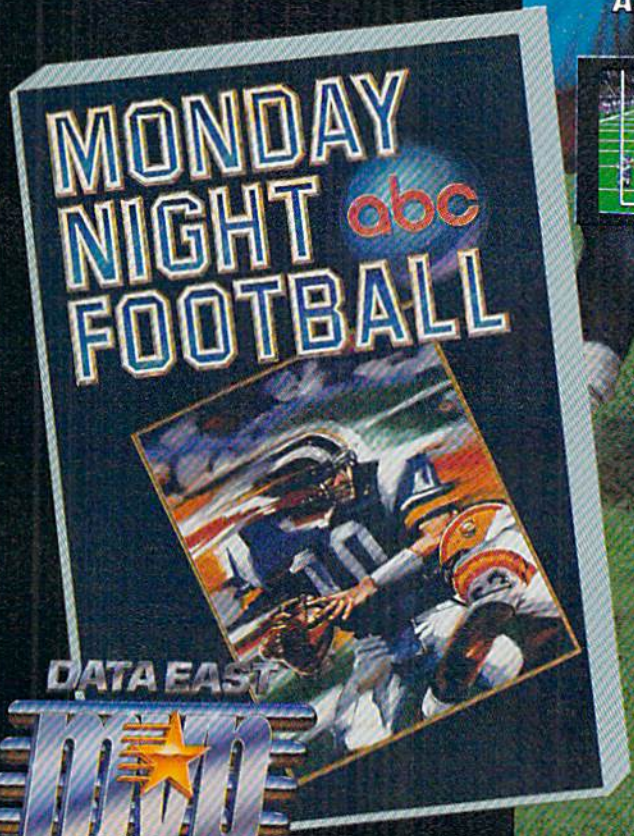
CATCH IT!... IF YOU CAN!

ABC's Monday Night Football Like You've Never Seen Before!

Powerhouse shotguns. Unexpected fumbles, on-side kicks, awesome blitzes and some of the most incredible touchdown runs you'll ever make.

YOU set the formations and **YOU** call the plays. Select from over 40 preset playscreens or, create your own plays. And, the digitized sound technology gives you Frank Gifford's actual voice announcing your most awesome moves.

But, whatever you do – don't be left on the bench when ABC's Monday Night Football kicks off.



AVAILABLE NOW FOR THE IBM-PC/COMPATIBLES AND COMMODORE 64.



SONY

Free Interactive Demo

Buy a Sony® ten-pack of 3.5" floppies and receive a FREE interactive demo of ABC's Monday Night Football software game.

Demo includes a special "SONY SPORTBOOK" which gives you additional plays to use with the complete ABC's Monday Night Football game. Available only through SONY and Data East MVP Sports.

Free USA Today Sportsware

Get a **FREE** bonus worth more than **$50** from USA Today Sports Center. With every purchase of ABC's Monday Night Football game, you'll receive **FREE**:

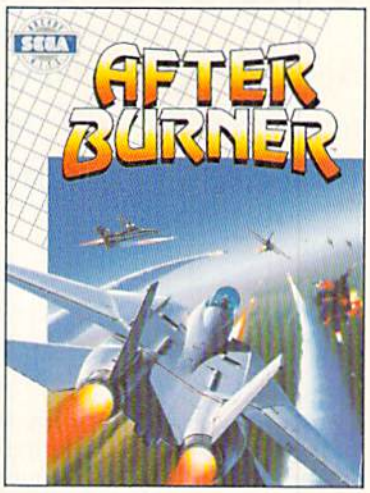
- USA Today Sports Center membership
- Sportsware – communications software
- Online time to the USA Today sports information network.

USA TODAY Sports Center

© 1989 Data East USA, Inc. ABC's Monday Night Football is a registered trademark of ABC Sports, Inc. Data East MVP Sports is a trademark of Data East USA, Inc. IBM is a registered trademark of International Business Machines. Commodore 64 is a registered trademark of Commodore Business Machines, Inc. Sony is a registered trademark of Sony Corporation. USA Today Sports Center is a registered trademark of Gannett New Media. Sportsware is a registered trademark of USA Today Sports Center.


HEAVY METAL
HEAVY MENTAL
ARCADE
SEGA™
·H·I·T·S·

AFTER BURNER



Get your adrenaline pumping—you're going to need it when you take to the skies. Because you're not going to believe what's up there! You supply the guts, the skill and the reflexes—the F-14 Thunder Cat will supply the mach 2+ speeds and the state of the art battle computer.

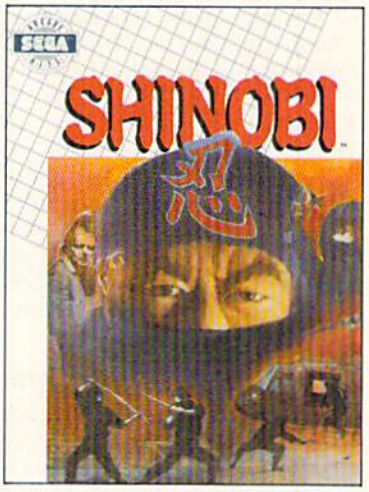
To evade enemy fire, you must execute difficult maneuvers including a 360° barrel roll. Getting by the Flying Fortresses isn't a simple matter—but if you succeed there's a fuel tanker to dock with. It will replenish energy and ammo.

Ok, jet jockey. Show us your true colors. Are you an ace, the top card in the deck?





SHINOBI

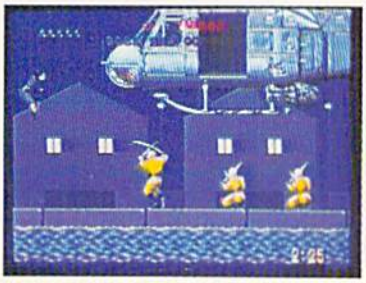


By day, you are Jo Mushapi, an ordinary martial arts instructor. But in crisis, you are capable of extra-ordinary feats. Ninja Mastery, Might and Magic!

You become a walking, breathing force-field!

You can reach inside and unleash the powerful synergy of nerve, muscle and spirit. Behind every corner of the suprising world of Shinobi, danger lurks.

In the caverns of the city—everywhere—enemy leaders roam. Find them. Find their weaknesses. Rescue the hostages. Outmaneuver the attackers. Fend off thugs and mongos with your Ninja Star. Defeat the evil Ring of Five. Destroy the evil helicopter!





MINDSCAPE INC

DISTRIBUTED BY

M I N D S C A P E

Visit your retailer or call 1-312-480-7667 for VISA and MASTERCARD orders. To purchase by mail, send your card number and expiration date, check or money order for $34.95 (C64 & C128), $39.95 (IBM), and $49.95 (Amiga and Atari ST), plus $3.00 handling to Mindscape, Inc., P.O. Box 1167, Northbrook, IL 60065. Allow 3-5 weeks for delivery. ©Copyright 1989 Mindscape, Inc. Mindscape is a trademark of Mindscape, Inc. Copyright ©1989 Sega Enterprises, Ltd. This game has been manufactured under license from Sega Enterprises, Ltd. Japan. AfterBurner and Shinobi are trademarks of Sega Enterprises, Ltd. Commodore 64 and Commodore 128 are registered trademarks of Commodore Electronics, Ltd. Atari is a registered trademark, and ST, 520ST, and 1040ST are trademarks of Atari Corporation. Amiga is a registered trademark of Commodore Amiga, Inc. IBM is a registered trademark of IBM Corporation.

Circle 49 on Reader Service card.

NEWS AND NEW PRODUCTS

Announcing the winners of RUN*'s Reader Choice Contest; a few non-game items enter the marketplace as, of course, do some new games.*

Compiled by HAROLD R. BJORNSEN

WHO WON?

The grand prize winner in *RUN*'s Reader Choice Contest is **Craig Moore** of Belpre, Ohio. Moore, a retired U.S. Marine and a long-time *RUN* reader, will receive over $5000 worth of entertainment software. His ballot was drawn from about 4000 entries.

Second place winner of a complete collection of ReRUN disks is **Enrique Hernandez** of Miami. **Emmit Howell** of Jacksonville, Arkansas, is the recipient of the third prize—a collection of *RUN* productivity software.

Other winners, who will be given their choice of prizes from among subscriptions to *RUN* or ReRUN or other *RUN* software, include: **Rick Rosinski** of Midland, Michigan; **Matthew Martin** of Goodlettsville, Tennessee; **Keith Chanley** of Pontiac, Michigan; **Brian Weberling** of Bristol, Virginia; **Kathy Taylor** of The Colony, Texas; **Gary Lee** of Jacksonville, Florida; and **Bill Harrop** of Largo, Florida.

RUN extends its appreciation to all the readers who voted for their favorite game software and to the manufacturers who contributed software to the grand prize. For the winning software packages, see this month's cover story.

WHAT'S THE SECRET PASSWORD?

STATEN ISLAND, NY—**Lock-It** is a C-64 disk password security system for the 1541 and 1571 disk drives to prevent unauthorized access to protected disks. The program requires a secret password, consisting of up to seven characters provided by the user to read the directory and files. There are a total of 49 characters from which to choose in creating your password. Available via mail order for $29.50, plus $4.50 s/h, from Magus Software Systems, PO Box 050256, Staten Island, NY 10305.

Check Reader Service number 405.

BEACH BALL

SAN MATEO, CA—Electronic Arts (1820 Gateway Drive, San Mateo, CA 94404) has released **Kings of the Beach: Professional Beach Volleyball** for the C-64 at $29.95. One or two players compete in a five-beach tournament in Rio, Australia, Hawaii, Chicago and San Diego. To advance in tournament play, you must win three games on each beach. After the third successive victory, you're rewarded with an Electronic Arts Pixel-Mate, which provides the secret password to move on. Computer opponents become progressively tougher as you play through 15 matches and attempt to become King of the Beach.

Check Reader Service number 401.



Using strategy against your opponents is one way to win the volleyball tournament in Kings of the Beach.

WWII IN ONE EVENING

SUNNYVALE, CA—Strategic Simulations, Inc. (675 Almanor Ave., Sunnyvale, CA 94086) has released its newest World War II strategy game for the C-64, **Storm Across Europe**. This one- to three-player simulation lets you recreate the entire war in as little as one evening of play.

The game covers every part of the conflict in Europe from 1939 through 1945, from North Africa to Sweden, from Gibraltar to the Ural Mountains of Russia. Each game turn represents three months of action. Armies consist of units, each rated for strength and efficiency. They vary in the number of tanks, paratroops, infantry, air support and mechanized forces.

Every facet of the war can be controlled. Move armies across the map to conquer territory. Mount amphibious landings. Launch U-boat campaigns in the Atlantic. Carry out strategic bombing strikes against enemy production centers. Send raiding fleets to cripple the opponent's shipping. And drop paratroop forces on enemy positions. While the battle rages on, limited resources must be juggled between production and advanced research. Multiple scenarios and the ability to change starting levels for each country allow for endless variations. $39.95.

Check Reader Service number 403.

REASSEMBLE THE KING

SAN FRANCISCO—Britannica Software (345 4th St., San Francisco, CA 94107) has released **Eye of Horus**, a C-64 arcade game set in ancient Egypt.

Engaging the player in several levels of interaction, the game begins with you, Horus, god of all that is light and good and the son of King Osiris and Queen Isis, as heir to the throne. But your position has been usurped by your uncle Set, god of evil and night, who takes the form of a dragon. Set has slain your father and scattered his body all over the burial chamber.

Inside the confines of the maze, you must locate all the missing pieces of Osiris's body and then reconstruct the dismembered body with the help of various amulets. You will then receive the strength needed to confront Set. To complete this task, you must use all of the found weapons and amulets to increase your powers.

You travel through a series of mazes that consists of various-sized chambers and ancient mystical elevators. Within the maze, there are four different areas. Some of the elevators will be locked, blocking access to some areas. To unlock an elevator, you need to find various colored keys.

In the final area, which can be accessed with the blue key, Set will hunt you out and seek to destroy you with vicious snakes. If Set's power is less than ►

Stunt Track Racer™

8 WONDERS OF THE RACING WORLD

1.

THE HUMP BACK.
Lots of little bumps that take their toll. Chassis damage adds up quickly.



2.

THE LITTLE RAMP.
Looks easy enough. The ramp isn't too big. But everyone wants to clear it full speed. They end up kissing dirt 100 feet down.



3.

THE STEPPING STONES.
Speed control is the name of the game — not too fast, not too slow. You'll have to clear four chasms, one after the other.



4.

THE BIG RAMP.
Build up speed for that ramp, but be ready for the landing. It'll rattle your molars. Your chassis can fall apart quickly on this one.





5.

THE HIGH JUMP.
Clearing the ramp is easy. Making it over that monstrosity in the middle is another story.



6.

THE ROLLERCOASTER.
The ride is silky smooth until you hit that slight dip in the road — all 500 feet of it.



7.

THE SKI JUMP.
For elite racers only. Handle this course right, and you're a legend. One small mistake, you're in orbit.



8.

THE DRAWBRIDGE.
This one *moves*. Catching the drawbridge at the right angle requires perfect timing. Better get it right. Second chances are for the living.

They're the meanest speedways ever designed. Like rollercoasters from Hell, they twist and climb through empty space without tracks to guide your wheels. Or guard rails to save your neck. In some sections, they don't even have roadway to carry your weight.

Your super-charged car is like a plane without wings. You have only momentum — the perfect combination of speed and steering — to carry you safely across gaping holes in the track. Airborne,



you hold on, only hoping that all four tires find the track again — and that the jolt won't be too much for you and your car to handle.

Fast-scrolling screens are so vivid they do everything but blow wind in your face. When the track rises and drops sharply away, the illusion of weightlessness runs straight to your gut. On hairpin turns, you'll find yourself leaning in your chair.

The Eight Wonders of the Racing World. No wonder you can't wait to ride them.

Earn Great Prizes In The "Go For The Gold" Frequent Buyers Club!
(Details Inside Every Specially Marked MicroPlay Game Box)

NEW FROM

MEDALIST INTERNATIONAL

A marketing division of MicroProse Software, Inc.
180 Lakefront Drive • Hunt Valley, MD 21030

Circle 67 on Reader Service card.



MICROPLAY™ SOFTWARE

Can't find Stunt Track Racer? Call 301-771-1151 ext. 208 weekdays 9 am to 5 pm Eastern Time and order by MC/Visa/AmEx. Or mail check or money order for $39.95 for Atari ST or Amiga versions; $34.95 for IBM-PC/Tandy/compatibles (specify disk size); $29.95 for C-64/128. MD residents add 5% sales tax. Free shipping in US; $5 international. US funds only.

your own, he will retreat. To force a conflict situation, you must corner him in a dead end. $29.95.

Check Reader Service number 404.

Not a Fretless Tutorial

OAK CREEK, WI—**Guitar Tutor** is an interactive music instruction program for beginning guitar students. The large fretboard graphic and lesson format enables the C-64 or C-128 to become a music instructor, and the student has the advantage of learning chords, scales, music theory and familiar songs at his or her own pace. Available for $29.95 from Northern Star Software, PO Box 63, Oak Creek, WI 53154.

Check Reader Service number 407.

Taking Inventory

MESQUITE, TX—The **CMS Inventory System** for the C-128 holds up to 1500 items. It lets you design reports and set colors, and it has a point-of-sale program that prints your customers' invoices, handling both charge and cash sales. In addition, it "batch enters" invoices for later printing. With one or two disk drives and printers, it also prints all reports, including inventory lists, on-order reports, sales analysis reports, transaction summaries and audit trail reports.

The FileGuard feature prevents data loss, even if the electricity goes off. The package includes sample files, startup instructions, a complete tutorial, on-screen instructions, and daily, monthly, quarterly and yearly operations outlines. It retails for $79.95 from CMS Software Systems, 2204 Camp David, Mesquite, TX 75149.

Check Reader Service number 400.

A Different Point of View

COSTA MESA, CA—SportTime Computer Software (3187-G Airway Ave., Costa Mesa, CA 92626) announces the **Side-View Game Option Module** for the company's Omni-Play Basketball game. From this new perspective and playing mode, you see every second of hoop action from the eye of a television camera following the ball left to right, down the court and back again. In addition to coaching, you now lead the team as its center at all times. You can run anywhere on the court, set picks and call for the ball, and your teammates will give it to you whenever you want. Double- and triple-team options are even possible. It's available for the C-64 for $19.95.

Check Reader Service number 402.

Look Ma, No Hands!

MOUNTAIN LAKES, NJ—R. F. St. Louis Associates (PO Box 232, Mountain Lakes, NJ 07046) has released **Automater**, a single power switch that controls your computer system. The unit, which is plugged into a wall outlet, senses when your computer is turned on, and then, after a two-second delay, turns on the power to the system's peripherals, eliminating the nuisance of having to turn each peripheral on individually. It's available for $39.95 plus $2.50 s/h.

Circle Reader Service number 408. ■



Excellence ...
for the **Commodore**

Lt. Kernal – a 20 or 40 Megabyte Hard Drive which supports CPM, includes enhanced system commands, and is expandable, configurable, & *FAST!* Great for BBS operation.

Super Graphix GOLD – the ultimate printer interface which supports 128 FAST serial and includes a 32K buffer, 4 built-in fonts, 4 downloadable fonts, and a utility disk with 27 fonts.

Super Graphix – an enhanced printer interface which has NLQ built in and includes an 8K buffer, 2 downloadable fonts, reset button, and a utility disk with 27 fonts.

Super Graphix jr – an economical printer interface with NLQ built in and includes 10 printing modes, graphics, and easy operation.

FontMaster II – a powerful word processor for the C-64 with 30 fonts ready to use, 65 commands, font creator, data merging, super- and subscripting, italicizing and more.

FontMaster 128 – a super word processor for the 128 with 56 fonts ready to use including foreign language fonts, on-screen font preview, 4 column printing, a 102,000-word spell checker and much more.

The ***Xetec*** Product Family for the Commodore C64® and 128® .
The name that spells *Quality, Affordability,* and *Reliability*
All Hardware is FCC Certified All Interfaces include a Lifetime Warranty
Commodore C64 and 128 are registered trademarks of Commodore Business Machines, Inc.
Xetec, Inc. 2804 Arnold Rd. Salina, KS. 67401 (913) 827-0685

Circle 96 on Reader Service card.

"I Challenge You To Win A Caribbean Vacation!"

—Major "Wild Bill" Stealey
President, MicroProse

Enter "The Major's Mission" Contest and take off to the Caribbean!

Just ask your retailer for details on how to receive your Top Secret documents. They contain your mission orders and a tough set of questions on four of our hottest games: F-19 STEALTH FIGHTER, RED STORM RISING, F-15 STRIKE EAGLE II and M1 TANK PLATOON. To find the answers, read through your documents. Then send in your answers to win!

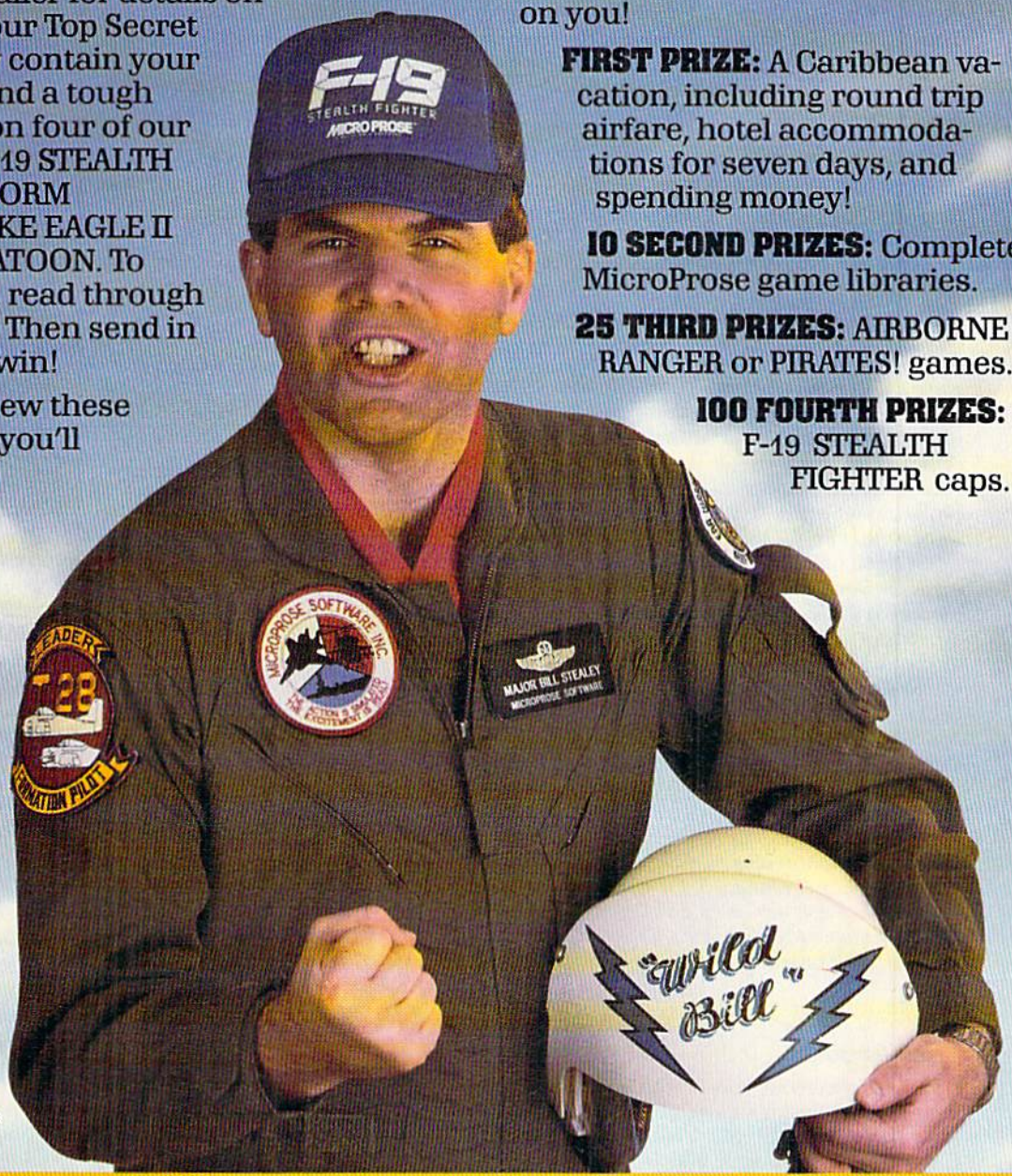
You'll get to preview these four games, plus you'll have the chance to win a fabulous Caribbean vacation, or one of 135 other awesome prizes! So enter now. The Major is counting on you!

FIRST PRIZE: A Caribbean vacation, including round trip airfare, hotel accommodations for seven days, and spending money!

10 SECOND PRIZES: Complete MicroProse game libraries.

25 THIRD PRIZES: AIRBORNE RANGER or PIRATES! games.

100 FOURTH PRIZES: F-19 STEALTH FIGHTER caps.



Open to U.S. residents except employees of MicroProse Software, Inc., Stooker & Quinn, Inc., their affiliates and members of their families living in the same household. Void where prohibited. Entry materials and complete details available at participating retailers until 12/31/89 or while supplies last. Official entry form only. No reproductions permitted. Bill Stealey, U.S.A.F. Reserve. This offer is not affiliated with, sponsored or endorsed by the U.S. Air Force.

Get Ready! Contest Starts November 1, 1989!

MICROPROSE™
Just For Fun.

© 1989, MicroProse Software, Inc.

Circle 68 on Reader Service card.

MAIL RUN

A former Commodore user speaks out, and two readers lambaste those who bad-mouth Commodore products.

COMMODORE VS. THE CLONES

Your editorial suggesting that IBM-clone owners lack enthusiasm for their machines is laced with the same overtones of blind fanaticism seen in similar hype from Texas Instruments groups. Sort of makes me wonder if you might drive an Edsel.

I've grown ever more concerned as I've watched Commodore and magazines like yours constantly increase the promotion of games while the rest of the computer industry focused on more adult applications.

Commodore-specific magazines slowly and relentlessly have been digging their own graves with game after game, never seeming to realize that children grow up and want computers with serious applications software. The clones offer the serious user all the speed, memory and data storage they can reasonably ask for, and abundant software to run on them.

So, if you only want to play games or turn on your lawn sprinklers, Commodore is the way to go. But if you have a need for serious computer use, run to the nearest clone dealer and see a whole new world of computing possibilities open before your eyes, with prices and features unmatched, even by Commodore's own IBM clones.

—GARY DAVIDSON
VACAVILLE, CA

You have an interesting hypothesis, Gary, and one we hadn't considered: the relationship between Edsel ownership and Commodore ownership. Maybe readers will respond to this or other comments in your letter.

—EDITORS

SHOP AROUND!

I have just about had it with all of these people who knock a good product (Mail RUN, August 1989). I bought my C-64 about a year ago, and it works quite well. I researched the various methods of buying this wonderful computer, as all intelligent buyers do when shopping. Those weeping fly-by-night buyers who will switch to another brand at the drop of a hat do not interest me. They never shop around. I am pleased with my computer and plan many years of use with it. To all of you who have recurrent Commodore problems, next time, shop around.

—DAVID A. SIMON
WONDER LAKE, IL

I can no longer stand by and see people bad-mouth in print the good Commodore products that I have used for many years. The only troubles that I ever had with my C-64 and C-128 were ones that I brought on by misuse or neglect.

—CLYDE E. CORSON
LAWNDALE, CA

In Mail RUN in the August issue, I note that most of the letters are of the "poor me" type. While I do agree that Commodore's support of the 128D has been less than one might hope for, there is no sense in crying about something over which you have no control.

I strongly urge those who have had things go wrong with their computer, power supply or disk drive to put in the claim if it is still under warranty, but to be prepared to get it fixed on the outside with a reliable concern and hold them responsible for the repair. I also suggest that the local computer club is a good place to find your local fixer, as others most problably have had the same problem and can tell you which shop is the better one to do business with.

As to the lack of software—again, the local club is the place to go for information on what's new and hot. Most clubs' libraries are loaded with goodies just waiting to be discovered.

—RALPH S. LEES, JR.
NEW YORK, NY

"I'D RATHER SWITCH THAN FIGHT" REDUX

After reading Mr. Lowen's letter, "I'd Rather Switch Than Fight" (Mail RUN, August 1989), I'm contemplating going the same way. It's difficult to get a hard disk drive and too much trouble getting a good compatible printer to work right. I'm planning to switch to an IBM PC this year. I'll still keep my Commodore system mainly because I have too much money tied up in software. Sorry it has to be that way.

—ROSS H. BELT
OAKLAND, CA

If you'd still like a good hard disk drive for your Commodore, look into the Lt. Kernal from Xetec, Inc., 2804 Arnold Rd., Salina, KS 67401.

For a good compatible printer, refer to November's feature article on printers.

—EDITORS

GETTING LONELIER

Editor-in-chief Dennis Brisson's editorial comments (RUNning Ruminations, October 1989) on the disappearance of non-game software were very timely for us. We had just sent out for beta testing our Tax Command program for 1989 taxes, updated based on preliminary IRS forms and with three more schedules added. So we feel the C-64 and 128 markets are worthy of continued investment.

But I must admit that it is getting lonelier in the Commodore applications software market. Most of our competitors of a few years ago have disappeared.

I think the Commodore market has self-destructed to some extent. The very low prices on much of the software has tended to promote game software development, where there is little expectation of continued customer support and improvement.

—BRUCE R. THOMPSON
PRES., PRACTICAL PROGRAMS
MILWAUKEE, WI

FROM SQUARE DANCES TO WATER METERS

The following are the major documents I routinely maintain in support of my community and personal computering. Probably nothing individually is worthy of being singled out for special attention (see "Sculptor, Lawyer, Editor-in-Chief," RUN, August 1989), but the overall effort reflects the ►

Burt's in deep trouble.

2,000 feet below the sea, he's being hunted by the Soviets. And he's smiling. Because Burt's immersed in Red Storm Rising, the thrill-packed strategy game of submarine warfare, based on the best-selling novel by Tom Clancy.

As captain of a U.S. nuclear attack submarine, you're at war with the rampaging Warsaw Pact. Only you have the know-how and weapons to stop them.

To find and destroy Soviet subs, helicopters and surface ships, you must remain undetected. You'll need every trick you know to survive this deadly game of ambush and evasion.



After dinner, Burt Delaney will captain a U.S. nuclear sub, sink two Soviet destroyers, win the Navy Cross and save the free world.

Just for fun.

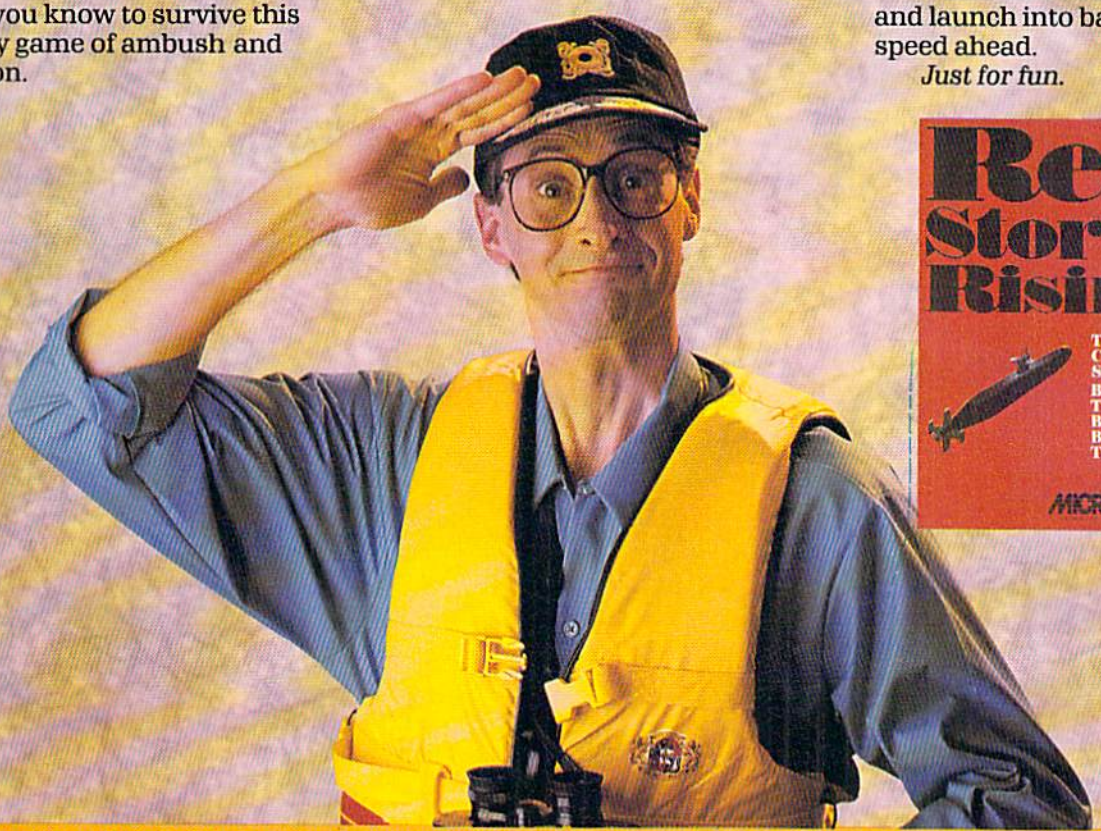
You can start with a training program, then choose one of four skill levels, from beginner to ultimate, moving up as your tactical abilities improve. You'll select from four time periods, each with different weapons systems. And you can command any of five types of subs in three major battle scenarios. You'll even see the map of Western Europe change as you repel the Warsaw Pact!



All with the quick thinking and non-stop action that make us the first, last and best name in combat simulations.

Climb into Red Storm Rising and launch into battle full speed ahead.

Just for fun.



Watch for "The Major's Mission" Contest coming to your favorite retailer November 1!

Can't find Red Storm Rising? Call (301) 771-1151 x208, weekdays 8:30 am to 5:30 pm Eastern Time and order by MC/Visa/AmEx; or mail check/money order for $54.95 (specify disk size). U.S. funds only. MD residents add 5% sales tax. MicroProse Software, Inc.; 180 Lakefront Drive; Hunt Valley, MD 21030. *For IBM-PC/XT/AT/PS2/Tandy/Compatibles. Requires 384k RAM. Supports MCGA/VGA, EGA, CGA and Hercules graphics.*

MICRO PROSE™
Just For Fun.

© 1989, MicroProse Software, Inc.

Circle 103 on Reader Service card.

many fine capabilities of the C-128.

I keep a directory of over 120 records and a mailing list of our square dance club; for our 70-member service club, I also maintain a directory in addition to a newsletter, board-meeting agenda and a two-page form for documenting weekly meetings; for the Water Association, I generate a bi-monthly spreadsheet and 3-D bar chart showing each meter's usage for the past three years; a 13-page roster of museum donators; family group and blank forms for genealogy purposes; and a standard form for documenting data (20 topics) in estate management.

—WILLIAM H. CLARK
LYNDEN, WA

GOLFING, INVESTING, COLLECTING AND RACING

Besides word processing, printing chores and game playing, I also use my C-128 to prepare the monthly events calendar for our golf club, calculate statistics, standings and handicaps and publish a weekly newsletter. In addition, I calculate and keep a variety of my personal golf statistics, track a modest investment portfolio, and index and catalog a 1700-item music collection.

Oh, yes—addressing the question of speed, hook the C-128 up to a 1750 RAM expander and GEOS, and watch it go! There's a Big Blue PS 2 Model 30 in the office, and, under certain conditions, I'll put it up against my 128 anytime.

—CARL "BUDDY" GROHS
BAY MINETTE, AL

CIRCUMVENTING A GEOBUG

GEOS users need to be notified that there is a major bug in the geoPublish program.

When you go to Zoom mode and the zoom window encompasses a portion of a document while in page graphics, the program presents a dialogue box informing the user that the text file is not present. Clicking on OK causes the program to crash and locks up the keyboard. To circumvent this, users should put their text files on the same disk with the geoPublish document.

—KEVIN R. MOORE
EPHRATA, WA

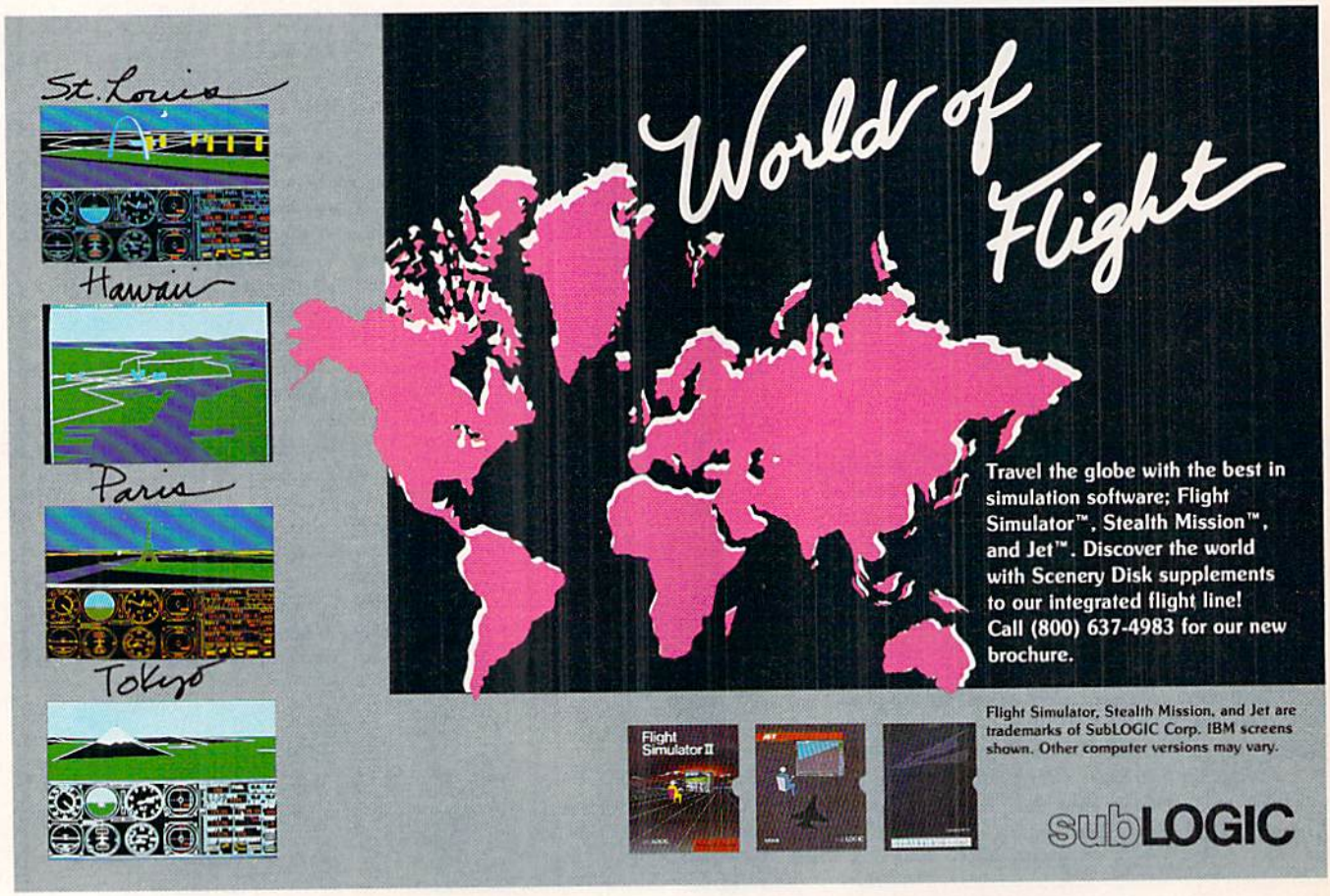
Berkeley Softworks informs us that the bug should be fixed in the next release of geoPublish.

—EDITORS ■

A CALL TO READERS

This page is your stage, so stand up and say a few words. Extend praise, air grievances or offer hands-on advice and information.

Send your letters to Mail RUN, 80 Elm St., Peterborough, NH 03458. Each letter must include the writer's name and complete address. RUN *reserves the right to edit letters for style, clarity and space.*



Circle 87 on Reader Service card.

ALL NEW FOR YOUR 1989 TAX RETURNS!
Prints Out IRS-Approved Forms & Schedules

SWIFTAX™ . . .

EVEN IF YOU'VE NEVER PREPARED A TAX RETURN, SWIFTAX MAKES IT EASY TO DO YOUR OWN –*AND KEEP MORE OF WHAT YOU EARN!*

Step-by-step, line-by-line, SWIFTAX guides you through your Federal tax returns, and instructs you on which forms you must complete. This software program contains an abundance of Help Screens (which you'll find right in the program) that make SWIFTAX so easy to use, *you may not need the manual!*



SPECIAL OFFER
THE PRICE WATERHOUSE "PERSONAL TAX ADVISER"
Tax Information & Planning Guide
Details inside every package

- **Prints out itemized lists of interest, dividends, etc., for submission to the IRS and for personal records.**
- **Sets up unique Taxpayer Files,** enabling you to make changes to your completed tax returns at a later date.

Features:

- **Guides you through every step of the tax preparation process** and instructs you on which forms you must complete.
- **Quickly performs all calculations,** including specially-designed worksheets and entries, with the tax tables stored in the program.
- **Automatically checks your tax alternatives,** and calculates the lowest amount of income tax you must pay.
- **Calculates and completes the most commonly used supporting schedules—1, 2, A, B, C, D, E, F, R, SE, and Forms 2106, 2441, 3903, 4562, 6251, 8615, and 8814—stores the totals, and automatically enters this information onto your forms 1040, 1040A, or 1040EZ.***
- **Prints your tax information directly onto IRS forms 1040 and 1040A. Printouts for all other supporting forms and schedules are IRS-approved.**

A special HELP! Screen summarizes the new 1989 tax law changes, at the press of a key.

This Program Also Includes:

- **A Multi-function Calculator,** at your command at the press of a key.
- **Swiftkeys:** Provides instant access to any forms and schedules included in your tax return.
- **Context Sensitive HELP! Screens:** Just press a key and you'll be guided through the program with easy to understand instructions.
- **Timeworks Exchange Policy:** Allows you to purchase the 1990 SWIFTAX at half price.

For
- Apple 11e, 11c, 11c Plus, IIGS **$69.95**
- Commodore 64, 64c, C128 . . . . . **$49.95**

TIMEWORKS®

444 Lake Cook Rd., Deerfield, IL 60015-4919
708-948-9200

Find SWIFTAX at your local dealer or order direct from Timeworks. Just call:

708-948-9202

With Timeworks You Get A MONEY BACK GUARANTEE

©Copyright 1983 Timeworks, Inc. All rights reserved.

*Commodore version does not complete Forms 3903, 4562, 6251, and Schedule E

Circle 146 on Reader Service card.

SOFTWARE GALLERY

This Christmas, give your Kriss Kringle a gift of mystery, arcade, sports or fantasy role-playing software.

Compiled by BETH S. JALA

SPEEDBALL ..... A+

Futuristic Fun in This Free-for-All Sport

Set in the 21st century, Speedball is part soccer, part basketball and part hockey, with a measure of extra violence added in. All these elements have been skillfully combined into one exceptionally entertaining computer game.

You begin a session by choosing one of three five-man teams, each with different degrees of power, skill and stamina. The program gauges the stamina level with on-screen meters and penalizes a player whose energy has ebbed too low during a match.

The action takes place in an enclosed, rectangular arena. Scattered on the playing field are bounce domes and warp tunnels, which make the steel game ball fly in some unexpected directions. Centered at the arena's ends are the two goal mouths.

Using a joystick during the timed matches, you knock down anyone who tries to stop the march of your men toward your adversary's goal. On defense, you guide your goalie to block incoming shots.

You can increase the above-mentioned attributes with tokens that randomly appear during a match. Other on-screen markers let you pull dirty tricks, like freezing your opponent's team or reversing his or her joystick control.

While the program can track and save the results of up to 100 matches between two human players, it also includes two ways for an individual to compete against the computer. In the One-Player Knockout, there are ten progressively difficult rounds. To advance in this elimination tournament, you must do at least as well as your electronic opponent in each round's three matches.

The second solo competition is the One-Player League, which has a season of from ten to 100 weeks. A team earns five points for each goal, 20 for a draw and 100 points for every win. If you have one of the eight highest cumulative scores after the last match is played, you participate in the play-offs. The season's grand finale is the pleasantly named Blood Bowl.

The amazing thing about this program is that it does so much so well. Its graphics and sound effects are first-rate, and, though it takes some getting used to, the control system is extremely easy to use. In addition, the furious battles over the ball, along with the tactical challenge of using the on-screen markers effectively, result in an exciting gaming experience for either one or two players.

When joined together, all these features make Speedball a must buy for fans of futuristic sports contests. *(Spotlight Software; distributed by Cinemaware Corp., 4165 Thousand Oaks Blvd., Westlake Village, CA 91362. C-64/$29.95.)*

—WALT LATOCHA
OAK PARK, IL



Watch out that cave crud doesn't zap your strength in Axe of Rage.

REPORT CARD

A Superb!
An exceptional program that outshines all others.

B Good.
One of the better programs available in its category. A worthy addition to your software library.

C Average.
Lives up to its billing. No major hassles or disappointments here.

D Poor.
This program has some problems. There are better on the market.

E Failure.
Many problems; should be deep-sixed!

AXE OF RAGE ..... A

Have Axe, Will Travel

What can you say about a game whose box features an extreme close-up of some Neanderthal's blood-spattered face and comes with its own press-on tattoo? If you're ready to grab the first copy you can get your hands on, be assured that Axe of Rage won't disappoint you.

You start the game by choosing one of two axe-wielding characters. Your object is to make your way through three mazes before entering the subterranean sanctum of Drax. Drax must be destroyed before he can "shrink humankind's advanced brain capacity back down to the size of a pea."

Using your trusty axe, you must dispose of several different types of bizarre creatures. In the Valley of Despair, for instance, you'll encounter Knuckle Draggers, Blade Bellies and the dreaded Lardosaurus (who has a nasty habit of abruptly ending his battles by biting off your head), while the Dungeon is home to Octospleens, Leaping Larvae and the Carnivorous Pit Lizard. If you make it all the way to Drax's place, you can look forward to a battle with the Gargantuan Phlegm Launcher.

As you chop away at each of these strange beasts, strength meters show how much you and your opponent are weakening. In addition, the little squirt ►

BAD TO THE BONE

These are the streets. And there are no rules when you do battle here.

STREETFIGHTER is strictly survival of the fittest against 8 of the baddest dudes from around the world. Watch out for flying scissor kicks, lethal Ninja weapons, and other evil tricks. Block their attacks while you counter with jabs and roundhouse kicks. Don't drop your guard cause these guys aren't just b-b-b-b-bad. They're "Bad to the Bone."

So see your favorite software retailer or call Capcom U.S.A. 408-727-1665. You don't want to keep these guys waiting!



Try a roundhouse kick against an English street tough.



Dodge the lethal Ninja weapons of Geki.



CAPCOM® USA

Circle 22 on Reader Service card.

of green blood from your opponent's wound lets you know when you've landed a successful blow.

The monsters are unique creatures with individual fighting styles, appearances and movements. Animation all through the game is fluid and lifelike.

Maybe the idea of slashing, hacking, slicing and dicing your way through countless blood-squirting monsters won't appeal to everyone. However, Axe of Rage is so well "executed" (pardon the pun) that most gamers will have a lot of fun with it. *(Epyx, 600 Galveston Drive, PO Box 8020, Redwood City, CA 94063. C-64/$34.95.)*

—BOB GUERRA
CHARLESTOWN, MA

TITAN ..... A–

Rollin', Rollin', Rollin' Keep that Ball A-Rollin'!

Titan is a radically different program that entices the player with its scrolling screens, billiard ball-type movement and futuristic special effects.

You control the movement (via joystick or keyboard) of a small square. Using that unit, you deflect a bouncing ball at any angle against various walls that enclose you in different levels. Once hit, the sphere never stops moving; it ricochets like a pool ball.

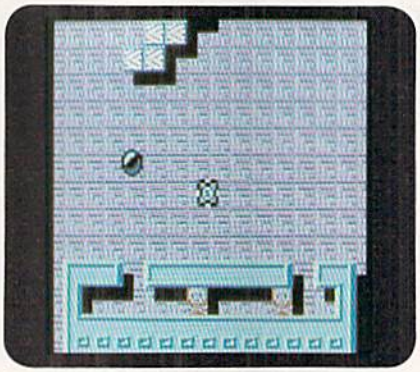
Random obstacles occupy stationary positions in each scene. When your ball hits an obstacle, the latter disappears. (But you must hit certain obstacles several times in order to destroy them.)

Bumping into certain wall sections collapses them, which lets your sphere get through. However, it's probably best to confine your on-screen ball to a more circumscribed area at first, until you've demolished one section's obstacles.

Your computer screen reveals about one-fourth of the overall display; thus, your ball often bounces out of view (unless you chase it with your control unit) and then reappears in a moment. It's hard to track and predict its behavior this way. Perhaps Titan would have been easier to play had everything been shrunk into a single view.

Your square and the sphere must avoid fixed-position skulls—hitting them risks death. In addition, you must detour around oil spills, or you'll slip up badly.

Titan's mirror-smooth movements, easy control and exceptional graphics make it superior to similar games on the market. For one thing, your bouncing sphere moves around the playing field



Warning: Your Titan sphere must avoid all contact with skulls.

like a real object—a perfect simulation of motor-movement. Also, a satisfying "click" resounds each time a collision occurs between metallic objects.

My one complaint: poorly written directions, apparently a bad translation from the original French. You must begin playing Titan to fully understand what to do.

Nevertheless, this program's a winner. Combining the best of Pinball and Tetris, Titan made me want to cheer. *(Titus Software, 20432 Corisco St., Chatsworth, CA 91311. C-64/$39.95.)*

—JOHN DIPRETE
CRANSTON, RI

TANGLED TALES ..... B+

The Trials and Tribulations Of a Would-Be Wizard

Tangled Tales is a role-playing adventure that starts you off as an apprentice to the wizard, Eldritch. You begin with no spells and no other members in your party. As you explore the city of Fairhaven and the surrounding countryside, however, you'll learn several useful spells and discover a number



The icon-based command interface is a useful feature in Tangled Tales.

of characters who are happy to team up with you.

As its name implies, Tangled Tales intertwines your quest to become a wizard with several other stories. Many of these subplots are familiar. For instance, three bears that have escaped from the circus turn up at a cottage in the countryside with a gorgeous blonde. The blonde turns out to be Goldilocks, and if you save her, she'll join your party for a short time.

Another familiar tale involves a character by the name of Sir Isaac. When you first meet him, he mentions his desire for an apple. Later, when you have a chance to bring him an apple, you accidentally drop it on his head, and, *voila*, gravity is discovered.

Tangled Tales is atypical among fantasy role-playing games, not only because of its novel uses of widely varied (though familiar) elements, but also because it is user friendly and very easy for FRP novices to play. Instead of being assigned cryptic numeric values for strength, intelligence, speed and charisma, your character's attributes are described in familiar words such as athletic, educated, brisk and tactful. These are the default settings, but you can increase your rank in any trait by decreasing your rank in another.

Another feature is the icon-based command interface. Commands such as Look, Talk, Drop, Fight, and so forth, can be entered by clicking on the appropriate icon. All commands can also be accessed by pressing the corresponding keyboard equivalents.

The screen displays a first-person view of your surroundings, an overhead map centered on your character and a message window. Although the view doesn't change for each specific location and displays all outdoor scenes in daylight, regardless of the time of day, it does provide terrific animated pictures of the people and monsters you encounter on your journey.

Even though Tangled Tales is easy to play, the game is every bit as engaging as some of the more complex role-playing games I've encountered. Many FRP games thrust you into an endless cycle of buying better weapons to kill tougher monsters to get more gold to buy better weapons.

The goal in Tangled Tales, however, is to become a wizard. To do so, you must interact with the people you meet, not amass a powerful arsenal. Sure, there are giant rats, burly guards and evil spirits to slay, weapons to acquire and gold to be won, but with Tangled Tales, these events serve to embellish a ►

SANTA CLAUS IS COMING TO TOWN

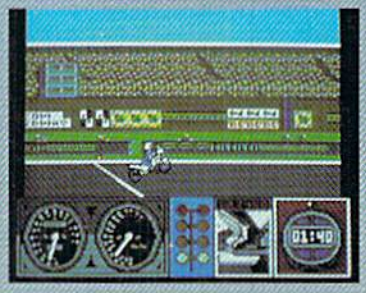
Better watch out!

After a test ride on Pocket Rockets, the high-speed motorcycle simulation game, Santa picked up a new sleigh that will make this year's rounds faster than ever. And whether you've been naughty or nice, you could win this Suzuki 600 Katana during "Santa's Sleigh Giveaway" in January.

Meanwhile, experience all the thrills and spills of high-speed racing with machines that take you from zero to 60 in under four seconds. Already gaining critical acclaim, Pocket Rockets lets you choose from four of the quickest, most exotic bikes on the planet. The action's as real as the adrenaline you'll feel.

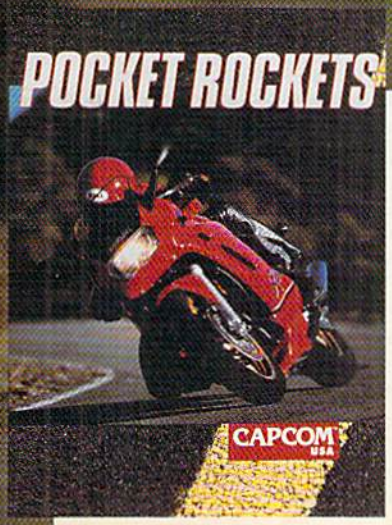
Then, enter "Santa's Sleigh Giveaway" from Capcom U.S.A. Besides the chance to win a new Suzuki motorcycle, you could get a Bell full coverage helmet, or Capcom computer game software. Look to enter in all Capcom computer game packages or visit your favorite computer game retailer for more information. Capcom's belated Christmas giveaway is just around the bend so don't miss out on your chance to win!





LEFT: Try your skill against the clock with a couple of laps around the test track. RIGHT: Drag racing demands a quick wrist and fast shifting. Just don't blow the engine!

Circle 19 on Reader Service card.



SWEEPSTAKES RULES How to Enter:

1. NO PURCHASE NECESSARY. Fill out and mail official entry found in package or you can enter by hand printing your name, address and zip code on a 3" x 5" piece of paper and mailing it to CAPCOM Santa's Sleigh Giveaway, 3303 Scott Blvd., Santa Clara, CA 95054. Enter as often as you wish. Each entry must be mailed separately by JANUARY 15, 1990. No mechanical reproductions of entry will be accepted and all mail-in entries must be received at the above address by JANUARY 31, 1990. No responsibility is assumed for lost, late, misdirected, or damaged entries.

2. Prize winners will be determined by means of a random drawing to be conducted by an independent judging organization whose decision shall be final. All prizes listed will be awarded, but there can be only one prize winner per household, group or organization. Odds of winning depend on the number of entries received. Approximate grand prize retail value is as follows: Suzuki Katana $4,495.00. Winners will be notified by mail by FEBRUARY 15, 1990 and may be required to execute affidavits and advertising release. Taxes on prize winnings are solely the responsibility of the winners.

3. Sweepstakes is open to U.S. residents except employees of CAPCOM U.S.A. and their immediate families, its subsidiaries and affiliates, its advertising and promotional agencies, and the judging firm. Prizes won by minors may be awarded to parent or legal guardian. Void where prohibited or restricted by law. All Federal, State and Local regulations apply. For a list of major prize winners send a stamped, self-addressed envelope to CAPCOM Santa's Sleigh Giveaway Winners List, 3303 Scott Blvd., Santa Clara, CA 95054 by MARCH 31, 1990.

CAPCOM® USA

much larger story. *(Origin Systems, Inc. 136-B Harvey Rd., Londonderry, NH 03053. C-64/$29.95.)*

—Bob Guerra
Charlestown, MA

✓Book ..... B+

Your Personalized Checking Account

If you're like most people, paying the bills and balancing your checkbook can be a monthly headache. If you've been hoping that your computer could ease these chores, ✓Book may be the program for you. It's a comprehensive system that not only helps you balance your checkbook, but also keeps track of your account balance and even prints on preprinted checks.

✓Book is easy to use. After entering your name, bank account name and beginning balance, you can immediately begin typing in transactions. There are 17 different transaction types to select from, including electronic transfers, monthly service charges, auto teller debits, checks and deposits.

The program then asks, "Is the Payee on File?" If yes, you simply enter the payee number. If no, you can add the payee address, account number and category type. Or, if this is a one-time payment, you might enter just the amount and check description.

Your new balance is shown at the bottom of the screen. The full checking transaction record is displayed, and you can use full-screen editing to make any changes or enter additional information. You can create a main category and subcategory, such as "M" for medical or "E" for eyeglasses. Also, you can flag transactions as tax deductible or indicate checks that have cleared.

Do you have payments automatically deducted from your account? If your car payment, life insurance premium and monthly service fee are the same amounts every month, then ✓Book can save you time entering these transactions. You can use its Scheduled Transactions option to set up these payments and the Functions menu to automatically deduct them from your checking account. (You can even edit the amount due if it differs from month to month.) The Functions menu is also where you balance your checkbook to agree with the bank statement balance.

The Query menu saves some time getting tax information ready. You can page through each transaction or request a brief one-line display of all transactions. You can choose to select transactions for certain dates, descriptions, category codes or tax-deductible flags, and then print the results of your search for your tax accountant.

The Print menu provides numerous reports of your transactions. Included are a transaction record, daily balance report, daily balance chart, payee report, scheduled transactions listing, category listing, transaction listing by category and overdraft history report.

Overall, I found ✓Book complete and thoroughly developed. There are some nice features, such as a low balance warning, password protection, on-screen help and a pop-up calculator. The manual is detailed and complete, although not easy reading. Computer Craftware deserves credit for including a C-128 version that has pull-down menus and a colorful display. ✓Book would be beneficial for your personal use or even for your small business. *(Computer Craftware, 17966 Arbolada Way, Tustin, CA 92680. C-64 and C-128/ $34.95+$2.50 for s/h.)*

—Sandra Cook Jerome
Shell Beach, CA

Double Dare ..... B

Is It on TV or on Your Computer? I DARE You To Tell the Difference!

While Double Dare will hold little appeal for some people, fans of the television show will definitely want to add it to their gaming libraries.

As leader of a two-person electronic team, you compete against another squad, which either a friend or the computer controls. Your goal is to have more dollars at the contest's end than your opponent. Correct answers to multiple-choice questions are the main route to riches; however, a wrong response lets the other player control the next question. To prevent this from happening, you can give a real stumper to your opponent by using a Dare. Unfortunately, the question can come right back on a Double Dare from your adversary.



Will you answer the question or dare your opponents in Double Dare?

You can decline a Double Dare by accepting one of the game's Physical Challenges. The program also re-creates the show's Toss-Up Challenge and Final Round Obstacle Course, where you can earn bonus dollars.

Supported by very good graphics and sound throughout, the physical events are well thought out, although frequent play may eventually remove some of the challenge. In addition, the questions are interesting and varied, and parents will appreciate the educational element.

On the other hand, the game suffers from a few minor problems. For example, the sharing of the keyboard and a joystick by two players can be awkward at times. Also, the instructions are extremely brief, so much so that those who aren't familiar with the show may not be able to fully understand them.

Nevertheless, Double Dare is an appealing piece of software. It delivers exactly what its makers promise—an entertaining reenactment of a television series that has been enjoyed by millions. *(GameTek, 2999 NE 191st St., North Miami Beach, FL 33180. C-64/$14.95.)*

—Walt Latocha
Oak Park, IL

California Pro Golf ..... B–

Inexpensive Greens Fees On this Course!

Imagine a golf simulation retailing at $9.99 that boasts many of the features of established programs costing three times as much. Such is the lure of Mastertronic's California Pro Golf.

From two to four competitors can play either a tournament (lowest score wins) or a match (winner of most holes is victor), or an individual can go it alone in Tournament mode. Golfers can select 14 of 17 clubs available to tackle either of the two equally challenging courses.

The center of the game screen is reserved for one of three basic playing areas: the course proper, the greens and the maps of each hole. Your view of the first is from behind and above the on-screen golfer and the various fairways, sand traps, trees and water obstacles. Greens and maps are seen from overhead. ►

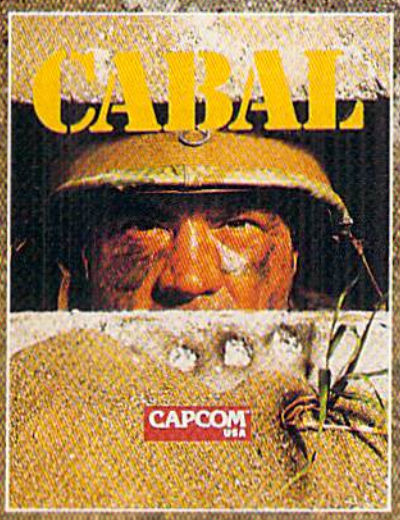
ANOTHER ONE BITES THE DUST

Eliminating terrorists.

Easier said than done. You must destroy these soldiers of fortune who strike you with machine guns, tanks, grenades and worse. Only then can you celebrate your victories.

Go beyond traditional war games and see why CABAL is #1 in the arcades. The fast action of every covert operation keeps you at the edge of survival.

See your favorite software retailer to enlist in the excitement. Or for more details, call Capcom U.S.A. at 408-727-1665 Act fast so that "another one" is one of them.



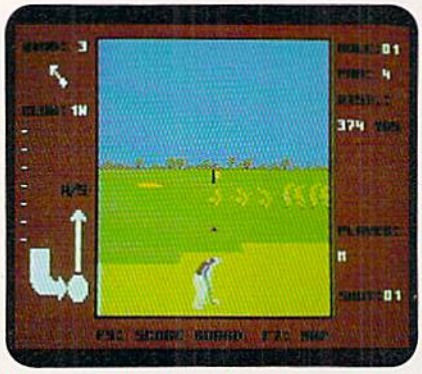




Cabal Screen Shots.

CAPCOM® USA

Circle 35 on Reader Service card.



If you can't play the real game this winter, practice with California Pro Golf.

For drives and approach shots, you select the club to use, the amount of loft, whether to hit straight or to hook or slice (to counteract effects of the wind), and how much force to put behind your stroke. Much of this requires moving the joystick handle or pressing the firebutton at just the right time.

Until you become proficient at reading the greens, you'll find yourself four-putting every hole. Using the side and top elevations provided, you must accurately position the crosshair, which controls the strength and direction of your putt. Unfortunately, the program does not provide a practice putting green, so you'll have to "learn as you go."

In the course proper, moving your cursor to the side of the screen draws the adjacent areas one at a time until you have made a complete revolution. Instant replays and the ability to save your handicap to disk are also included.

CPG's graphics are adequate, although the course proper lacks the sense of depth found in more expensive programs. As a result, it's very difficult to visually gauge distances, forcing you to rely totally on the yardage information provided to the right of the main screen.

Among drawbacks are the program's lack of a course editor and a feature for printing a copy of your scorecard. In the original version, it was also impossible to call up a final tally at the end of a round. Thankfully, this oversight was corrected in the revised program. One aspect of poor quality control that remains is the presence of two consecutive identical holes in Course 1.

Another deficiency is that there are no novice, intermediate and expert settings. The documentation is also unfortunately skimpy and especially misleading in one crucial area—club distances. With any club, always assume that your ball will travel farther than the manual suggests.

CPG is nearly as good as its higher-priced competitors, and at one-third the price. Rabid electronic golfers and game players on a tight budget take note. *(Virgin Mastertronic, Inc., 18001 Cowan St., Irvine, CA 92714. C-64/$9.99.)*

—Len Poggiali
Syracuse, NY

Devon Aire in the Hidden Diamond Caper ... C+

Crack the Crystal Case
As You Avoid Animal Atrocities

What Cary Grant was to Hitchcock's *To Catch a Thief*, Devon Aire is to Epyx's Devon Aire in the Hidden Diamond Caper. As the debonair cat burglar, you've been hired by a wealthy widow to find 12 precious gems that were hidden by her peculiar late husband. Each is concealed in a different location within the 30 rooms of the family mansion. You must discover the whereabouts of the stones and return them to your employer before your strength runs out. On the surface, this might seem a simple task; however, by comparison, Grant had it easy.

Several obstacles complicate matters—the sheer number of rooms and objects you must investigate and the seemingly inaccessible locations whose entrances you must discover. In addition, danger lurks in the form of killer canaries, mutant pig-mice and poisonous plants, all of which must be avoided or neutralized.

Food, which satisfies the pig-mice, is in plentiful supply. Bird cages that contain the canaries are another story. According to an Epyx representative, there are two cages in the house. After hours of play, I have yet to find one. Fortunately, you can render all three hazards temporarily impotent if you're holding a ringing telephone.

Aiding you in your search is the ability to move furniture, to carry some items between rooms and to place objects atop one another in order to climb high enough to reach certain areas. Also, you regain some of your strength by drinking goblets of fruit juice.

You can summon many commands via joystick, although pulling, picking up and dropping objects and pausing, resuming and saving a game can only be controlled from the keyboard. You are allowed to save just one game per blank, formatted disk, so keep a number of disks handy.

Devon Aire's animation and three-dimensional graphics are of first-rate quality. From the billiard room to the boudoir, you move smoothly through screens of beautifully rendered and easily recognizable locations, replete with furniture, fireplaces, grandfather clocks and other appropriate objects.

For all its sophistication, however, this C-64 translation seems incomplete. Knowing that the 16-bit versions have many more rooms to explore and diamonds to find fuels this belief, as does the generic quality of the annoyingly brief and inadequate documentation.

As treasure hunts go, Devon Aire is a disappointment. Because diamonds appear to be hidden arbitrarily, finding them is more an act of endurance than of problem solving. Choosing objects, carrying one at a time and stacking them to reach inaccessible areas requires more patience than mental adroitness. And, without easily obtainable weaponry, warding off canaries is more of a pain than a challenge.

If the designers were looking for logical and worthy adversaries, why didn't they include greedy relatives, sneaky servants and a rival female cat burglar? Cary Grant would have settled for no less. Why should we? *(Epyx, 600 Galveston Drive, PO Box 8020, Redwood City, CA 94063. C-64/$29.95.)*

—Len Poggiali
Syracuse, NY

Last Ninja 2 ..... A

Beneath the streets of New York City, the evil Samurai Master Armkakuni awaits you. To answer his challenge, you must travel through seven devious levels.

Last Ninja 2 is a refreshingly different martial arts contest that goes well beyond the simple formula of kick-thrust-then-go-to-a-different-screen format. You must be able to defend yourself against the hordes of bad guys and use your noggin in dealing with puzzles, traps and other dilemmas.

There is an amazing depth to this program. As you travel through three-dimensional screens, you can move in front of, behind and through many of the on-screen objects while contending with a multitude of doors, passages, gates, cliffs and other obstacles.

The program's animation is highly professional, with on-screen action fluid and lifelike. Your ninja can move in any direction; however, it'll take several hours of game play before you'll be able to deftly leap and kick without losing a life (of which you only have five, although you can gain more by picking up certain objects). ►

FACE THE FIRE

Weapons of fury.

It's the next century in FORGOTTEN WORLDS, and you're the only one left who can save Mother Earth from savage aliens. Your space-age weaponry is awesome but so are your obstacles! Armed with an anti-gravity device you can fly through enemy defenses and eradicate the alien bases. But watch out! Missiles, monsters, dragons, robots and laser guns are bombarding you from every direction!

If you're ready to save Earth's defenseless men, women and children, see your favorite software retailer or call Capcom U.S.A. at 408-727-1665



There's havoc in the factory as you blast away the invaders.



The Bronze Dragon is a formidable foe. You never know when it will strike!

CAPCOM® USA

Circle 34 on Reader Service card.

The key to success here is joystick mastery and keen powers of observation and deduction. A timer and scorekeeper show your progress, while the concise gaming instructions offer several helpful hints.

All in all, Last Ninja 2 is a superb game and probably the best of its class in the martial arts genre. Sequels rarely do justice to the original, but this program shows that the biggest and brightest stars are often born from earlier ideas. *(Activision; distributed by Mediagenic, 3885 Bohannon Drive, Menlo Park, CA 94025. C-64/$34.95.)*

—JOHN RYAN

COMBAT COURSE ..... A

Hold on to your dog tags. To pump you up for danger, your drill sergeant has designed an incredibly rigorous school of hard knocks.

Your combat lessons take place on a military assault course—more fun than a chamber of horrors. This boot camp puts you through the mill—playing with live grenades, dodging a man-eating dog, blowing up crates of dynamite, using an automatic rifle and crawling through drain pipes. If you survive, you should enlist.

The program's graphically detailed, scrolling scenery realistically portrays an outdoor training course. You can run, jump, set explosives, kneel, crawl and more. Using your joystick or keyboard in Combat mode, you can crouch, kick, punch, defend and even do push-ups.

With the game's Construction Set, you can design and save your own courses. It's fun to push props around, plant grenades and stage events. You shouldn't have any problems following the instructions or manipulating the on-screen components.

If you favor diverse game elements (search and destroy, hand-to-hand combat, and so on), you'd better run for the cover of your Commodore and boot up Combat Course. *(Mindscape, Inc., 3444 Dundee Rd., Northbrook, IL 60062. C-64/$29.95.)*

—JOHN DIPRETE

THE MAGIC CANDLE ..... A–

The Magic Candle is a huge game, but quite straightforward as computer role-playing programs go. It has a bit of an Ultima flavor—there are dozens of lands to explore, all with multiple levels and dungeons.

Gathering information is a massive chore. There are over 300 conversations from which you can get clues as to what needs to be done and where things can be found.

The members of the party you form have to earn money for weapons and armor, learn magic, collect information and sharpen their fighting skills so as to be ready for the final confrontation. As their leader, you have to keep track of them to make sure they get enough rest and nourishment to perform their tasks.

When, and if, you finally put all the pieces together, you'll have to supervise all your companions in the proper procedure for entrapping Dreax (the leader of the evil armies that threaten to plunge your homeland of Deruvia into eternal darkness) back into the Magic Candle.

The Magic Candle is not simply a grab-the-treasure-and-run game. It will take all your concentration and powers of deduction—as well as a bit of luck—to successfully complete your mission. While the C-64 graphics and animation are a little primitive, the game is so engrossing that it doesn't really present a problem.

Warning: Before playing The Magic Candle, cancel all your appointments and dates for the next few weeks! *(Miles Computing, Inc.; distributed by Electronic Arts, 1820 Gateway Drive, San Mateo, CA 94404. C-64/$39.95.)*

—ART LEWIS KIMBALL

THE CRACK OF DOOM C

The official computer adaptations of Tolkien's three-volume fantasy, *The Lord of the Rings*, and its companion piece, *The Hobbit*, are the creations of Addison-Wesley Publishing's software department. If The Crack of Doom, the last in the company's four-part series, is any indication of the quality of these translations, then the results are decidedly mixed.

The game is played in real time, although a pause command is available. Commands are typed in—an antiquated method in this day of point-and-click interfaces. Fortunately, allowances are made for sequential commands, certain time-saving abbreviations and some flexibility in word order. The 800-word vocabulary is adequate, as is the game-saving function.

Maintaining close ties to its literary source gives the program some credibility as an educational tool. Unfortunately, the game version features bland writing and lackluster characterizations.

Further, although the on-screen illustrations are attractive, they are inaccurate and fail to capture the tone of the original.

On the plus side, the game's documentation provides excellent background, detailed operating instructions, a map and three pages of hints. Also, the program is not copy protected.

The Crack of Doom is a moderately enjoyable way of being introduced to Tolkien's works, although it will never be confused for the real thing. *(Addison-Wesley Publishing Company, Route 128, Reading, MA 01867. C-64/$29.95.)*

—LEN POGGIALI

WAR IN MIDDLE EARTH ..... D

Tolkien's three-volume *Lord of the Rings* is an exciting, yet philosophical, adventure that occurs in a magical realm populated by endlessly fascinating characters. War in Middle Earth, Melbourne House's software adaptation, lacks the philosophy, the magic, the fascinating characters, and, most deplorably, the excitement of the original.

Hampering all your efforts with the program are a flawed control system and inaccurate documentation. Although you can move each on-screen piece individually via joystick, when you arrive at a battle line, your way may be blocked by your own men. In such circumstances—documented assurances to the contrary—there is no way to switch control from one figure to another. As a result, you're forced to look on and let the battle run its course. Other major defects include your inability to form battle lines (another documented feature missing), to retreat and to concede defeat in a hopeless clash.

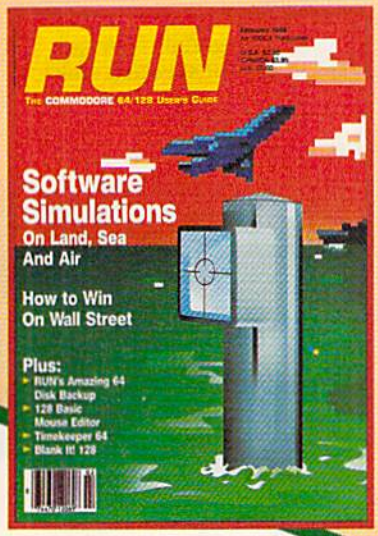
In addition to spending hours moving pieces and fighting battles, you can view attractive character portraits and descriptions, all of which, however, reside on a second disk. Since loading these non-essentials into memory is time-consuming, I doubt that this disk will get much use.

With no spells to cast, interesting characters to meet, inns or taverns to visit or intermediate goals to keep you involved, War in Middle Earth offers little for adventure fans. My advice: stay in your Hobbit hole, reread the novels and save your money for a worthier product. *(Melbourne House; distributed by Mastertronic, 18001 Cowan St., Irvine, CA 92714. C-64/$39.99.)*

—LEN POGGIALI ■

Give A Gift That Will Be Opened Every Month.

No need to plug in, hook-up or add on. A *RUN* gift subscription is one of the most valuable accessories you can give your favorite Commodore user this season. That's because *RUN* will be opened every month of the year—each issue revealing fresh and exciting operating hints and programming tips for the C-128 and C-64 user. And no accessory can match *RUN* for features like the incomparable "Magic" column. . .first-class type-and-run program listings for every application. . .thorough new product information. . .and candid reviews. This year, surprise your brother, your mother or a friend with a great Commodore reference library for which they'll remember you all year. *RUN* is easy to give, and easy on your shopping budget—you'll **save 35%** off the newsstand price. Best of all, you won't be billed until *after* the holidays! To order, simply fill in the coupon, or call **1-800-258-5473.**





YES. This year, I want to give the ideal Commodore accessory! Please send a *RUN* gift subscription to the person listed below. I'll pay the special holiday rate of just $22.97 for 12 issues—a **35% saving** off the newsstand price.

( ) Payment Enclosed ( ) Bill me after the holidays

Charge my: _____ Visa _____ MasterCard 2ADY5

Card # _____ Exp. Date _____

Signature _____

Name of Gift Recipient _____

Address _____

City _____ State _____ Zip _____

My Name _____

Address _____

City _____ State _____ Zip _____

Please make checks payable to *RUN*

Canada and Mexico $27.97, Foreign Surface $42.97, Foreign Airmail $77.97 (U.S. Funds drawn on U.S. Bank). All rates are 1 year only. All gift subscriptions will begin with the first available issue in 1989.

MAIL TO: *RUN* • PO BOX 58711 BOULDER, CO • 80322-8711

NEW

8 Unbeatable Reasons Why C-128 Owners Everywhere Are Winners with

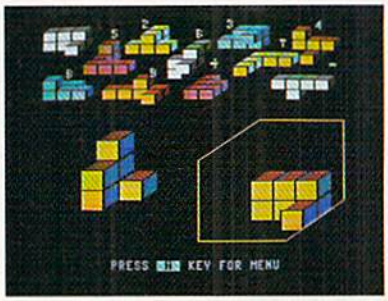
FUN PAK 128

1. **BLOODSTAR***. It's a desperate international race, pitting you against Japan, the Soviet Union and the United European States as you each try to colonize the rest of the solar system. Enjoy hours and hours of realistic strategy gameplay. By itself, **BLOODSTAR** is worth the entire cost of **FUN PAK 128**!



2. **MAZAMORF***. If you liked Pac-Man, you'll be doubly challenged to avoid these voracious meanies. And all the while you'll be trying to make your way out of a maddeningly different kind of maze!

3 & 4. Think you qualify for MENSA membership? Then **CUBIX 2*** and **CUBIX 3*** are ready for the test!



But beware, these twin teasers share only their name—and their neural nastiness!

5. Meanwhile, back in the outer reaches of the universe, load up for a couple rounds of **DEATH QUADRANT**. The blast-happy lover of Asteroids in you will never be busier!

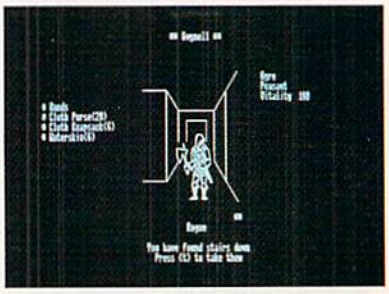
6. Remember what the good old days were like? Well, **BYE, BYE BRICK** reminds you of the by-gone thrills of Breakout, but this time in 80-column color mode.



7. Get your trigger-finger ready for **NIGHTHAWK 128**, a delightful challenge that tests your driving and your shooting skills!

8. **GWYNELL** is a detailed 3-D maze adventure that takes you through level-upon-level of dungeon-danger.

There's always an en-counter or an interesting twist just beyond the next door!



* Denotes a 40-column mode game.

FUN PAK 128 has been called "a cut above what is expected from a budget-priced disk, and well worth its price of **$19.95**."** And with a special 27 page documentation book/playing guide AND a **money-back satisfaction guarantee**, there isn't a 128 owner today who won't be a winner with FUN PAK 128.

** from Twin Cities 128, Issue #26

Order now! Call 1-800-343-0728 or mail the handy coupon, today!

☐ **YES! Send me *RUN*'s FUN PAK 128 today! Here's my $19.95** RN129

Name _____

Address _____

City _____ State _____ Zip _____

☐ Check Enclosed Charge my: ☐ AMEX ☐ MC ☐ VISA

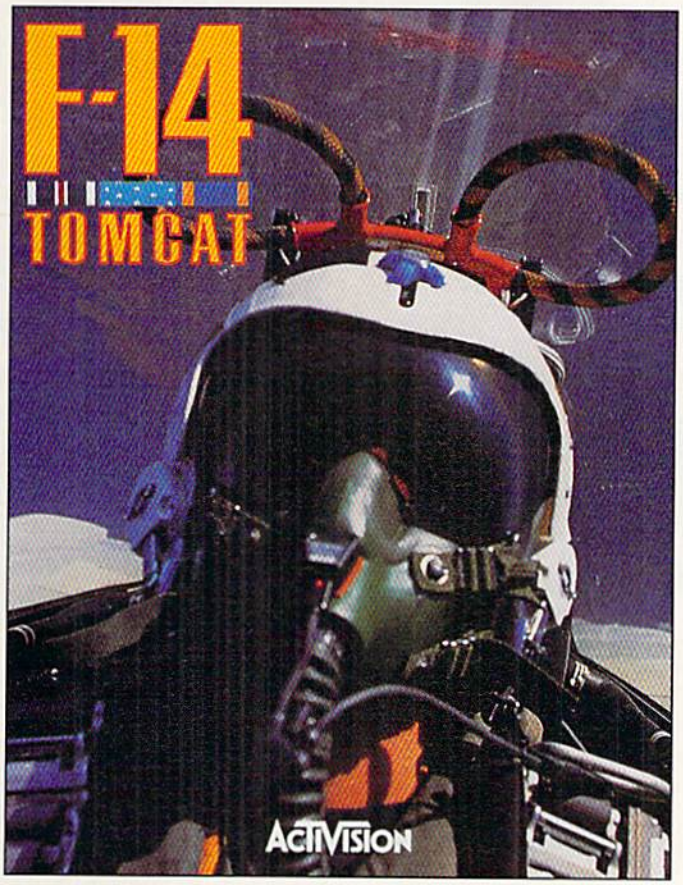
Account _____ Expires _____

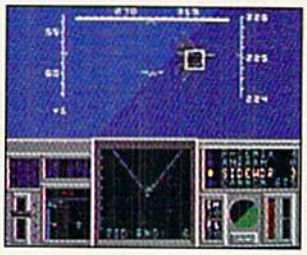
Signature _____

Foreign Orders, please add $3.75 per disk for postage and handling. Checks must be made payable in US Funds drawn on US Bank.

FUN PAK 128 • *RUN* Magazine • 80 Elm Street • Peterborough, NH 03458

Will they call you "Tinkerbell" or "Deadeye"?





Take on the best pilots in one-on-one dogfights at the Naval Fighter Weapons School to find out who is the real top gun.



You don't know what a good chewing out is until you've ticked off Admiral Hawk. Wipe that smirk off your face, Lieutenant.

Find out, on the toughest fighter training ground in the world. In *F-14 TOMCAT.*

Master the fine points of aerial combat. Move up the ranks in your tours of duty aboard the carrier *U.S.S. Nimitz.* And test your dogfighting skills against the most elite pilots in the world.

F-14 TOMCAT features 80 randomly assigned missions in five theaters. 1st-person in-the-cockpit realism. And feel-it-in-your-gut aerial maneuvers. It's the best-selling combat flight simulator on the Commodore today.

Think you're a "Top Gun"? Then prove it, hot-shot, in *F-14 TOMCAT.*

"F-14 TOMCAT is one of the best combat flight simulators for the 64. Graphics, sound, and action are excellent, and the framework of a career scenario adds a sense of realism and purpose."
– Compute's Gazette

"F-14 gives you a shot at being one of America's most elite fighter pilots."
– Computer Gaming World

ACTIVISION®

See your local retailer, or call 1-800-227-6900 to order.

© 1989 ACTIVISION. All brand names and trademarks are the property of their respective holders.

Circle 18 on Reader Service card.

Accomplish more. . . in less time with the power and versatility of the ReRUN Disk



Useful Applications

- Word Processing
- Telecommunications
- Utilities
- Music
- Finance
- Databases
- Graphics
- Entertainment, and more. . .

All year long, ReRUN disks bring you pre-tested, high quality, ready-to-run programs for your business, home, and educational computing needs.

Save Time

No need to spend your time entering lengthy program listings from the magazine. ReRUN disks are ready to load and run. No typing. No trouble.

Each bimonthly ReRUN disk offers popular programs from two issues of *RUN* magazine. Programs designed specifically for your Commodore 64 or 128.*

Added Bonus

Plus you get **BONUS programs never before published . . . plus hints and tips from the popular Magic column . . . and a documentation booklet with each disk.**

ReRUN saves you money and time by increasing your computing productivity. For example, in previous issues ReRUN has helped our subscribers . . .

- ✓ write more effective letters and reports with our efficient low-cost word processor
- ✓ enhance the image of business presentations with eye-catching graphics
- ✓ manage your expenses, keep track of accounts, calculate the future effects of your present financial moves
- ✓ break the memory barrier. . . create a RAM disk by using the RAM expansion module for your C-128
- ✓ create documents with double-sided pages and columns of text
- ✓ print banners, signs, and mailing labels
- ✓ help your kids with their math and spelling
- ✓ and enjoy our challenging, exciting ReRUN games.

You can order ReRUN disks individually at $16.47 each, but for maximum savings sign up for one year and receive all six ReRUN disks and documentation booklets for only $69.97. You save almost $5 per disk!

To place your order immediately, call our Toll-Free number

1-800-343-0728

(in NH, 1-924-9471).

*Commodore 64 and 128 are registered trademarks of Commodore Business Machines, Inc.

☐ **YES!** Help me put my Commodore to greater use. Send me a one year subscription to ReRUN (6 bimonthly disks and documentation booklets) for $69.97.

Reduced Price! Save 30%



☐ Nov/Dec '89 single issue for $16.47 each

_____ back issues for $16.47 each

_____ month _____ year _____ month _____ year

Prices include postage and handling. Foreign Airmail please add US $4.95 per order.

☐ Payment Enclosed

☐ MasterCard ☐ American Express ☐ VISA

_____

Card # Exp. Date

Signature _____

Name _____

Address _____

City _____ State _____ Zip _____

RN1289

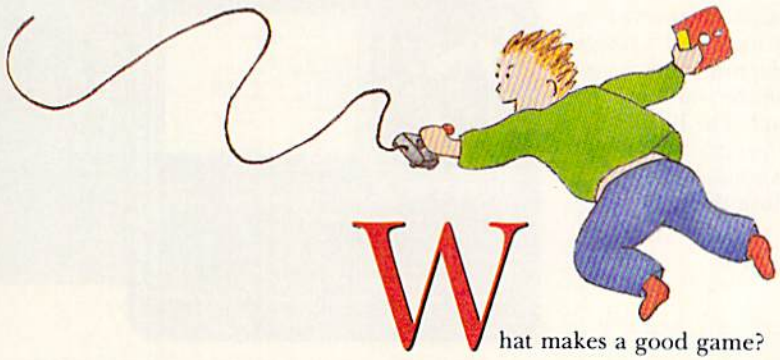
Each ReRUN disk covers two issues of RUN magazine. Shipment occurs after the second issue is published. First available back issue is Jan/Feb. '86.

To place your order immediately call our Toll-Free number 1-800-343-0728 (in NH 1-924-9471)

Mail to: ReRUN, 80 Elm Street, Peterborough, N.H. 03458

Ten Top Games

The games people play are many these days, but which ones lead the popularity pack? We asked—and here are the answers!



What makes a good game?

If you asked a dozen users for a specific example of a good game, you'd get a dozen different answers. However, you could come to a consensus that all good games should be easy to play, offer a substantial value and, most of all, be entertaining.

Those characteristics are all common to the winners of *RUN*'s Reader Choice Contest.

We all know that the primary application of computers in the home is games. That's right. Walk into a typical Commodore user's home and chances are you'll see Arkanoid, rather than Superbase, on the screen. More time is spent mapping adventure game strategies than telecommunicating. And users are more interested in perfecting their joystick-maneuvering agility than their programming skills.

But which games are the most popular among users?

To find out, *RUN* conducted its annual reader choice poll. We asked readers to select their five favorite games—no easy decision, given the hundreds available for the Commodore. To help, we limited our ballot to those games that hit the market in 1988 and early 1989.

The winners—highlighted below—represent a microcosm of the software marketplace. While adventure games dominate, just about every genre of game is there—education, sports simulations, arcade, strategy and wargaming.

The results indicate that the *RUN* voter is very discriminating. Today's computer gamer wants excitement, challenge, playability, entertainment and, most of all, fun—all for less than the price of a good pair of sneakers. He wants sound and graphics that rival the special effects of major motion pictures. Compared to the computer user of just a ►

By *RUN* EDITORS

ILLUSTRATED BY LAURA JOHNSON

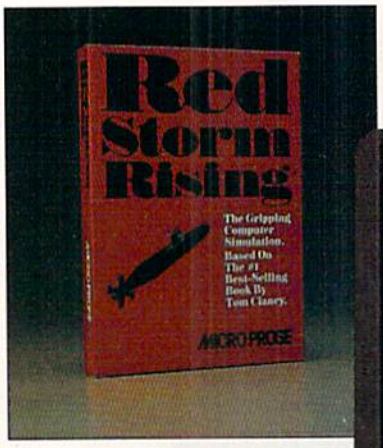
few years ago, today's gamester has grown up and has cultivated sophisticated tastes.

You can deduce the following from the results of our poll:

1. If a game is successful, consumers tend to stick with it. Sequels fared well in the voting.
2. *RUN* voters are looking to get their money's worth. In return for their investment, they want a game that offers hours and hours of play along with plenty of time to become proficient with the game.
3. Consumers have moved away from simple arcade shoot-'em-ups. Today's games are more involved, more interactive and more complex, and require a certain level of dedication and commitment from the user.

Keep in mind that this poll was not a beauty contest. All of the winning programs are deserving, quality products that cater to today's discriminating Commodore computer users.

But, enough of this. There's a danger in becoming too analytical. Let's get to the stars of the show. Introducing the top five winners, along with the five honorable mentions, of this year's contest:



RED STORM RISING



When it comes to sophisticated simulations, MicroProse is the king, and their best effort to date is Red Storm Rising. This submarine warfare game, based on Tom Clancy's popular novel, offers a realistic wargaming environment, combined with a variety of scenarios and play options. Your success means world peace, while your defeat could mean the flag of the hammer and sickle flying over the U.S. Capitol. It's entertaining, it's fun, it's exhilarating. It's simply the best military simulation to be released for the C-64 since Gunship.

THE BARD'S TALE III: THIEF OF FATE

Electronic Arts brings you more monsters, magic, elves and dungeons in their popular fantasy role-playing series. Using a mix of logic and strategy, you must gather a group of adventurers to search out the Mad God Tarjan; failure will leave the world of Skara Brae in his bond. The Bard's Tale series personifies adventure programming and brings characters to life with its animated graphics. Role-players of all levels will love this one.







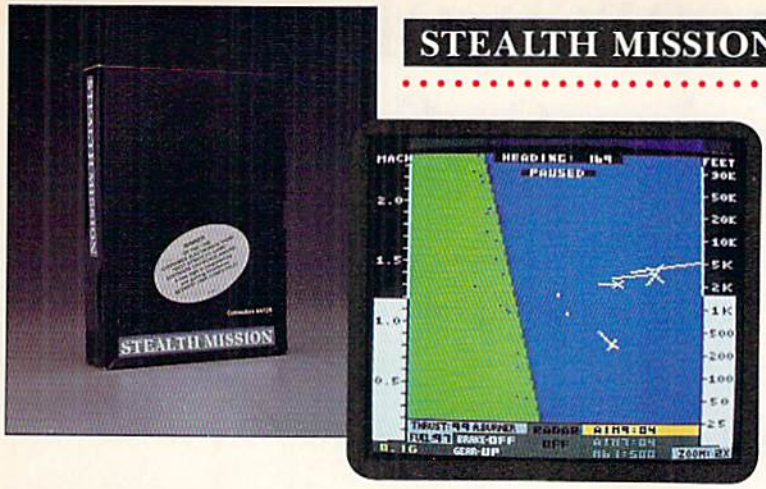
POOL OF RADIANCE



SSI has performed magic in adapting Dungeons and Dragons action to the computer screen. This four-disk package provides hours of adventure, with a heavy emphasis on an intricate combat system. There's enough excitement here to satisfy both D & D fans and computer gamers alike. More than just another role-playing game, it's a significant addition to the genre.

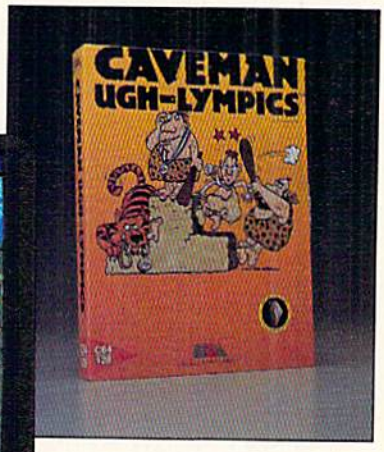
PHOTOGRAPHED BY LARRY DUNN

STEALTH MISSION



With its wide variety of options, this is the most ambitious flight simulator we've seen since Flight Simulator. You chart your own course by choosing the difficulty level, type of aircraft and combat mission. The program's easy-to-follow instructions quickly get you airborne and keep you off the ground for hours. We dip our wings to SubLogic for its programming attention to detail . . . and for supporting both 64 and 128 markets with this software title. This challenging and entertaining program clearly ranks as the top flight simulator of the year.

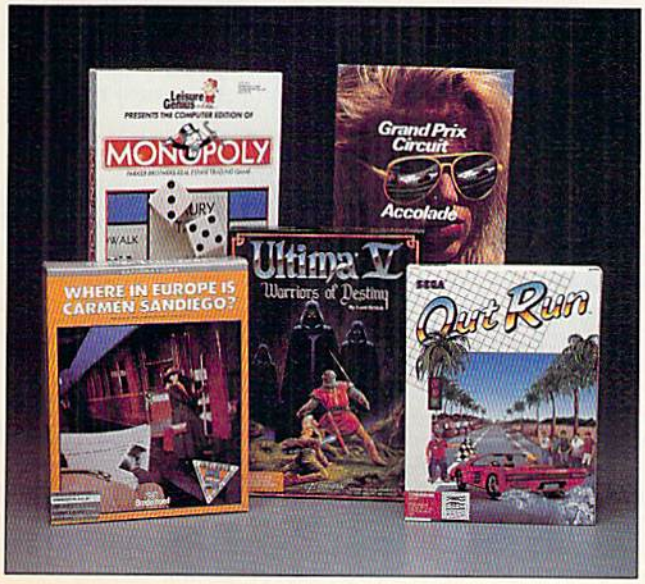
CAVEMAN UGH-LYMPICS





This game tickles your funny bone as it tests your joystick skills. A light-hearted look at Olympic competition in the days of the dinosaur is an entertaining idea, and its execution is even better. Great graphics, fluid animation, playability, antics of cartoon-like characters and a liberal dose of humor assures this program a place in the annals of software history. Only a Neanderthal would fail to appreciate the entertaining humor of this game. As reviewer John Ryan notes, "it contains elements rare in today's software market: good graphics, great sound and the marvelous combination of irreverence and slapstick comedy." The handwriting's on the cave: Not since dinosaur rocks has prehistoric man contributed so much to modern man's entertainment.

HONORABLE MENTIONS



GRAND PRIX CIRCUIT—Once again, Accolade's attention to detail pays off. Fast action, superb graphics and a unique racing perspective make Grand Prix Circuit, of all the car-racing games, the one that "captures the feel, excitement and competitive spirit of racing."

ULTIMA V—Welcome to the fantasy world of Lord British. This is the latest in a long-running series that just keeps getting better. All the traditional winning elements of fantasy role-playing are here—attention to detail, adventure, interaction, ease of play and more—to bring a richly detailed fantasy adventure to life on the screen.

MONOPOLY—No one should be surprised that the world's most popular board game is a software hit. As much fun as the classic . . . and, you don't have to clean up the dining room table after a game!

WHERE IN EUROPE IS CARMEN SANDIEGO?—Don't tell the kids that this is an educational game—it may spoil their fun! Broderbund has devised a successful formula in which you—armed with an atlas or almanac—must know your history and geography, including culture and economy, to solve the crime. A great and entertaining learning tool.

OUT RUN—Wave the checkered flag for this program's entertaining sound effects, superb graphics and animation. This is arcade action at its best. You'll burn out a joystick or two before you tire of this game. ■

In Search of Productivity Software

You don't have to be Indiana Jones to uncover a treasure trove of useful programs.

By ELLEN RULE

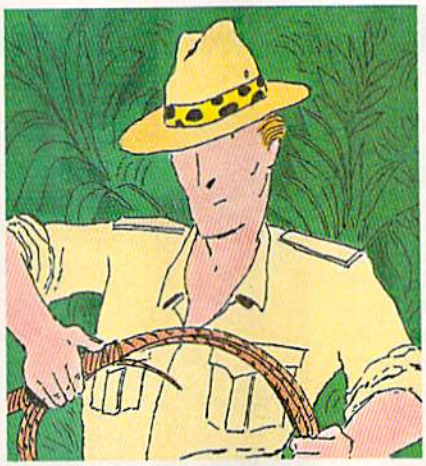
You might be amused by the sight of this intrepid *RUN* author, dressed now in khaki, adorned with pith helmet and machete in belt, ready to hack through the jungle of entertainment titles in search of productivity software. Then again, perhaps you, too, bought your C-64 or C-128 to accomplish meaningful tasks and would like to come along. We won't see everything, of course, but we will uncover a variety of word processors, databases and spreadsheets, plus desktop publishing and financial programs. There will even be some titles that are no longer in print but are well worth digging for.

So off we go. Swinging our machetes, we slash our way along a narrow path through the undergrowth, entertainment titles and flashy ads pressing in from all sides. Suddenly a huge mound of earth and stone blocks looms ahead! Could this be the legendary Pyramid of Productivity? We tear at the vegetation, then push through the weathered door. Down a dark, winding corridor an archway appears, bearing the inscription Integrated Packages. We've found it!

Integrated Packages

Passing through the door, we enter a splendid chamber that, despite the heavy growth outside, has not long been forsaken. Enshrined here is Professional Software, Inc.'s **Fleet System 2+** (C-64) and **Fleet System 4** (C-128), a word processing package that includes a spell checker, thesaurus and pop-down menus, and, as a bonus, comes with a database, Fleet Filer.

Nearby we spot **Superscript 64** and **Superscript 128**, from Precision Incorporated, menu-driven word processors with five-function calculators, plus line and column arithmetic, and, beside them, Precision's **Superbase 64** and **Superbase 128**, powerful database management systems. Broderbund's **Bank Street Writer**, **Filer**, **Mailer** and **Speller** modules for the C-64 are just visible in the light of our torches.



"What about something with more comprehensive math functions?" whispers someone in our party. Looking further, we behold Timeworks' extensive productivity line and record our discovery: **Word Writer 4** (C-64) and **Word Writer 128**, with calculator, thesaurus and integrated outline processor; **Partner 64** and **Partner 128**, cartridge-based accessories with eight desktop functions; **Swiftcalc 64** and **Swiftcalc 128**, spreadsheets with 12-digit accuracy, financial analysis features, super-graphics modules for graphs and charts, and a wonderful feature, Sideways, that prints out your data sideways, so nothing is lost off the paper; and **Data Manager 2** (C-64) and **Data Manager 128** for filing and recordkeeping.

We also spot Digital Solutions' **Pocket 2 Series** for the C-64 and C-128 and log its many components: **Pocket Writer 2**, one of the best WYSIWYG (what you see is what you get) word processors, with math column functions, foreign characters and an optional dictionary; the **Pocket Filer 2** database, with versatile sort and custom-report capabilities; and **Pocket Planner 2**, a spreadsheet with 16-digit accuracy, on-screen help, sideways printing and graphing. We note that, true to the concept of an integrated package, Filer and Planner data can be merged into Writer.

Advancing farther into the chamber, our torch light falls on the cartridge-based **VizaWrite 128** (Progressive Peripherals & Software), which, in addition to the usual WYSIWYG, mailmerge and word-wrap features, includes math functions and the capability to extend page width. Alongside it is **VizaStar 128**, an office information system that includes a database, a spreadsheet and business graphics.

Suddenly we feel a change in the air and know we're near the Graphics Environment Operating System, **GEOS**. Produced by Berkeley Softworks for both the C-64 and C-128, GEOS is the most comprehensive of all integrated packages, with **geoWrite**, **'Paint**, **'Calc**, **'Chart**, **'Publish**, **'Programmer**, the forms-oriented **geoFile**, and the accompanying **DeskPack** and **FontPack**. Nearby, we see Spinnaker's **Better Working Word Publisher**, an alternative GEOS-compatible word processor.

Word Processing and Desktop Publishing

As we move about, we notice several other chambers adjacent to Integrated Packages. The first contains word processing and desktop publishing packages. Hieroglyphics on the wall reveal the presence of Xetec's **Fontmaster II** (C-64) and **Fontmaster 128** with Speller, an extremely sophisticated word processor that offers more than 30 fonts, including Greek, Russian, Hebrew and custom fonts, and achieves near-desktop publishing quality with its column and paste-in graphics capabilities.

Next to Fontmaster is Busy Bee's **The Write Stuff 64 and 128** with Spell- ►

ILLUSTRATED BY KERRY GAVIN

THEY'RE BACK!



ON A COMPUTER NEAR YOU

	IBM	APPLE II	MAC	C64	AMIGA	ATARI ST
SCRABBLE®	$39.99	$39.99	$39.99	$29.99	$39.99	$39.99
MONOPOLY®	$39.99			$29.99	$39.99	$39.99
RISK™	$39.99	$39.99	$39.99	$29.99	$39.99	$39.99
CLUE® MASTER DETECTIVE™	$39.99	$39.99		$29.99	$39.99	$39.99

Monopoly® © 1935, 1985. Produced under license from Parker Brothers, division of Tonka Corporation. Risk™ © 1959, 1989. Used under license from Parker Brothers.
Clue® Master Detective™ © 1988. Produced under license from Parker Brothers, division of Tonka Corporation, and Waddingtons Games Limited.
Scrabble ® Licensed by Selchow and Righter Company, a subsidiary of Coleco Industries, Inc. Scrabble board design © 1948 Selchow & Righter Company.

Virgin Leisure Genius

Distributed by:- VIRGIN MASTERTRONIC INTERNATIONAL Inc.
18001 Cowan, Irvine, California 92714 U.S.A.
Telephone (714) 631-1001 Telefax (714) 631-1004

MASTERTRONIC

Circle 36 on Reader Service card.

Checker, a relative newcomer to the Commodore community. Available with a speech option in 64 mode, The Write Stuff is affordable, easy to use and packed with features and utilities.

Oops! Another favorite, Electronic Arts' **PaperClip III** (64 and 128) is dangling from a spider web right above our heads. Recovering our composure, we inspect the package, with its telecommunications module and 40,000-word speller, as well as the sophisticated **PaperClip Publisher** (64) a nicely polished desktop publishing package.

In a nearby cranny we discover three packages designed for creating and printing newsletters. Springboard's **Newsroom**, for the C-64, was one of the first such programs, while the GEOS-compatible **Personal Newsletter** from Softsync and Free Spirit's **News Maker 128** are more recent offerings. News Maker 128 works on a C-128D or a standard C-128 with a 64K video RAM upgrade. We record the programs beside geoPublish in our journal.

Peeking from a wooden chest are four outline processors: **Thoughtform** (from Steven Gollery) and **Thinking Cap** (from Broderbund) for the C-64, **Brainstorm 128** (Country Road Software), and Kamasoft's **Out-Think** for CP/M mode, all ready to help you organize ideas into outlines and turn outlines into finished documents. In the same box we find **Term Paper Writer** (Activision/Mediagenic) for the C-128 with 1571 drive, ►

PACKING A PUNCH

By MICHAEL CAVANAUGH

IN OUR SEARCH for productivity software, the ultimate system came to light: a C-128 or C-128D equipped with the latest peripherals. The C-128's Native mode has more built-in memory than C-64 mode, and it reads and writes faster from the 1571 disk drive. So, we took a look at the power you can achieve when you combine your C-128, productivity software and the following peripherals: the 1581 disk drive, the 1351 mouse and the 1750 and 1700 RAM expansion units (REUs).

First of all, the 1351 mouse provides fast, precise cursor movement with the C-128. While a luxury with many programs, it's a virtual necessity with certain GEOS applications such as geoPaint.

The REUs are useful with word processors, especially for dictionary storage and subsequent spelling checks, and they're a must with CP/M, an operating system designed around 64K machines that relies heavily on disk access. With CP/M, the RAM expanders become electronic rather than mechanical disk drives, transforming the tortoise into a hare.

Finally, the 1581 disk drive is fast, small and can store about 800,000 bytes of data. Think of it as a cheap 0.8-meg hard drive.

Passing on to the software, the **Pocket 2 series** from Digital Solutions, consisting of a word processor, database and spreadsheet, is one of the best examples of device support for the C-128 in Native mode. All three programs can load files into expanded memory and support the 1351 mouse for pulling down menus. In addition, you can store the word processor dictionary and database modules in expanded memory and use the mouse to move rapidly through the spreadsheet.

Fleet System 4, from Professional Software, Inc., will recognize a RAM expander, too, and configures it as a RAM drive, where you can store files, the dictionary and the thesaurus.

Electronic Arts' **PaperClip III** makes use of expanded memory in a slightly different way, storing both its dictionary and various program overlays there. The result is instant access to features such as the built-in terminal program, and a dictionary that checks spelling with such speed that it catches errors as you type them.

As a bonus, PaperClip III isn't copy protected. Most of the programs for the 128 can use the 1581 disk drive for file storage, but only a few, including PaperClip III,



Your C-128, productivity software and peripherals make for a knockout combo!

can themselves be copied onto a 3½-inch disk. Since PaperClip III is free of protection, it can be transferred with a simple file copier.

Another word processor that supports both the 1581 and the REUs is **Fontmaster 128** from Xetec. While this program can't load files into expanded memory, it can store the dictionary there. Also, since Fontmaster 128 uses a dongle for protection rather than a software method, it can easily be copied onto a 3½-inch disk.

A final entry in the 128 word processor category is Busy Bee Software's **The Write Stuff**. Version 2.0 of this program is available with a 77,000-word dictionary, which can be stored in memory if an REU is present. Alternatively, you can configure the extra memory as a RAM drive. The Write Stuff is sold without copy protection in both 3½- and 5¼-inch formats.

Sad to say, only a few spreadsheet and database programs support the REUs, the 1351 mouse or the 1581 disk drive. Two that do are the **Pocket 2 series**, which takes advantage of extra memory and the mouse, and Precision Incorporated's **Superbase 3.0**, which now supports the 1581 drive and can be ordered in either 3½- or 5¼-inch format. Superbase 3.0 does not support RAM expansion, however.

Little has been heard in the past year from **Basic 8**, the graphics-oriented programming language distributed by Free Spirit, but it does make excellent use of both the 1351 mouse and RAM expansion. It also recognizes the extra video memory that comes in the C-128D or that can be added to a standard C-128 via chip replacement. Although there are only a few programs available for Basic 8, it's almost worth purchasing just for the graphics demo files. They're sure to impress you with the untapped potential of the C-128.

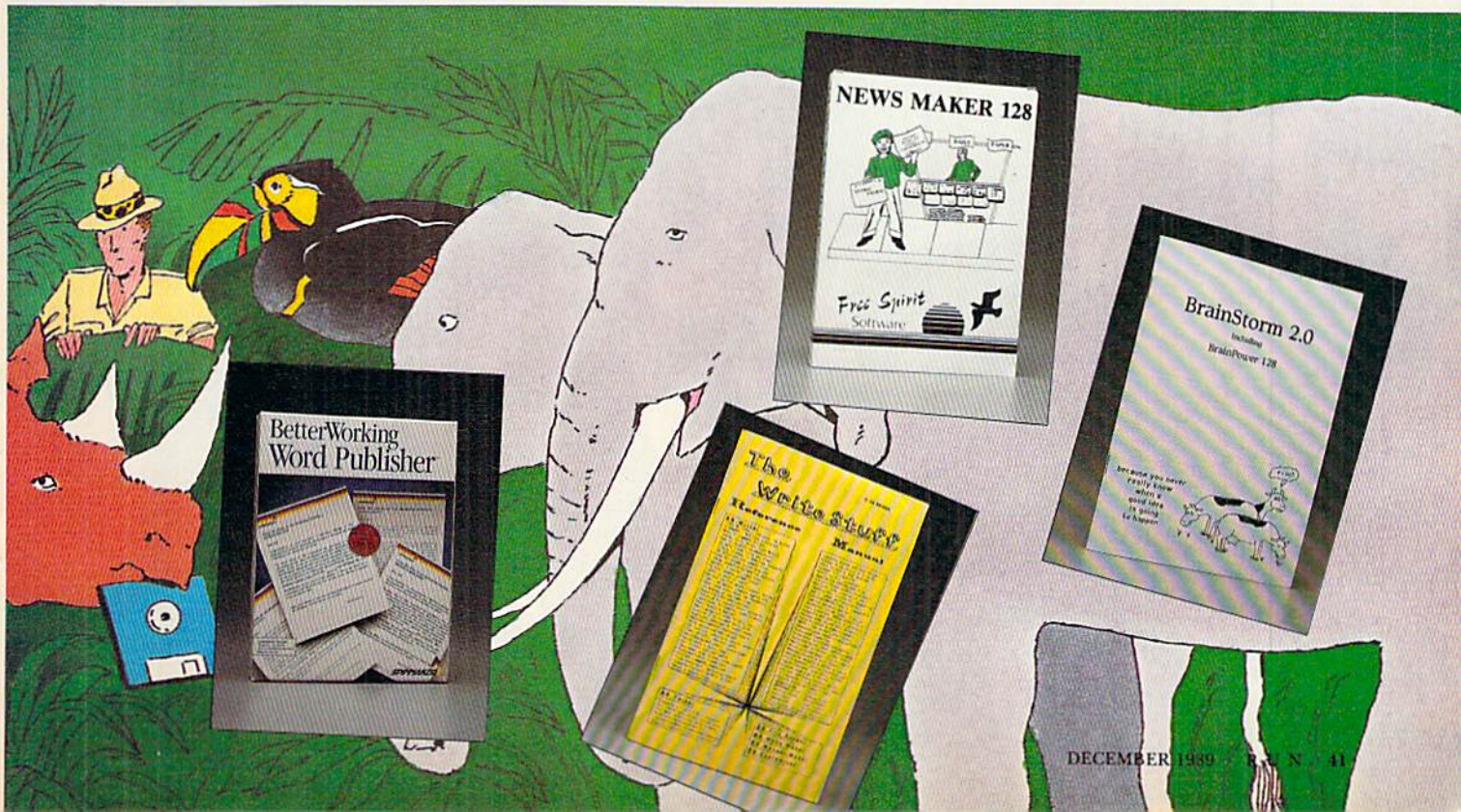
GEOS 128, with its spreadsheet, database, word processor, dictionary, terminal program, games and utilities, recognizes all three peripherals mentioned here. Also, you can run GEOS 64 programs such as geoPublish in 128 mode when using 40 columns.

While almost all GEOS programs can be copied to a 3½-inch disk, the boot (system) disk cannot. Heavy-duty copy protection means that GEOS must always be loaded from either a 1541 or 1571. Version 2.0 of GEOS 128 can utilize two physical drives as well as a RAM drive, if an REU is present.

The CP/M 3.0 operating system that's built into the C-128 can take advantage of the hardware extras, as well. It recognizes RAM expansion and automatically sets it up as drive M, and the latest release also supports the 1581 disk drive. Using the 1581 for storage greatly reduces the time needed for disk drive access, while an REU almost eliminates it. Although overshadowed in recent years by MS-DOS, CP/M is worth investigating.

These aren't all the C-128 programs that make use of the 1581 disk drive, the 1351 mouse and the 1750 and 1700 RAM expanders; they're the ones I own and have used. For information about others, check "The Tale of the RAM and the Mouse" in the November 1987 issue of *RUN* and "Dear Santa. . ." in the December 1988 issue. Instructions for ordering copies of *RUN*'s back issues appear on the last page of this magazine. R

Michael Cavanaugh, a field supervisor for the Pennsylvania Bureau of Standard Weights and Measures, enjoys photography, canoeing and bicycling when not absorbed in using his extensive Commodore system.



which takes you step by step from index cards to a completed term paper.

A nearby fissure holds Progressive Peripherals' **MicroLawyer** (64), which provides over 100 legal form templates that are compatible with most word processors, and **WillWriter** from Nolo Press, which guides preparation of a valid will.

Separate Databases And Spreadsheets

We saw most of the popular databases and spreadsheets in the Integrated Packages room, but there are others. Peeking into another chamber, we find an old standby, **The Consultant**, a database for the C-64 and C-128 from Electronic Arts (also found under the original Batteries Included label). Here also is **XPer-64** from Abacus. "More than just a database," this knowledge-based package uses your data to guide you through complex decision making.

In the spreadsheet nook we unearth a copy of the powerful **Microsoft Multiplan** for the C-64. Nearby are two Abacus programs: the menu-driven **PowerPlan 64**, with help screens and graphics, and **Chartpak** (64 and 128), which creates screen or printer displays of pie and bar charts from data entered directly or imported from spreadsheets.

We re-emerge into the central corridor, determined to find other areas to explore. Before long, scattered gold coins lead us past a pool of circling loan sharks to an entryway marked Financial Packages.

Financial Packages

Here we find **Personal Accountant** from Softsync and Timeworks' **Sylvia Porter's Personal Financial Planner** (with checkwriting) for the C-64 and C-128, as well as **J. K. Lasser's Money Manager** (Simon & Schuster), Electronic Arts' **Financial Cookbook** and Scarborough's **Net Worth** for the C-64. They are all available to help you manage your money, produce reports and plan your financial future. For simplified small-business bookkeeping, **Dome Accounting by Computer** for the 64 (Great American Software) automates the familiar Dome bookkeeping method.

Also for the C-64, the B.E.S.T. **Accounting Series** and the Timeworks **Business Management Systems** offer professional-quality, business-management modules (accounts payable and receivable, general ledger, inventory management) that can be used as stand-alone programs or as components of integrated packages. **CMS General Accounting System** provides basic accounting features, plus job costing and payroll, for the C-64 and C-128, with an optional inventory module for the 128.

KFS Accountant, which provides simplified small-business accounting for the C-128/1571 combination, includes standard accounting modules, as well as add-ons for inventory control and service invoicing. Paragon's **Cash-In Cash-Out** package for the C-128 includes sales, disbursements, payroll, reports, graphics and financial toolbox modules. And, if your accounting skills are a little rusty, **Pro Tutor Accounting** for the C-128 (Professional Software) coaches the basics.

Aboriginal drawings of bulls and bears decorate the walls over Timeworks' **Sylvia Porter's Investment Manager 128** and Abacus's **Personal Portfolio Manager** (64 and 128), which offer the home user a thorough investment management system. For more advanced charting and analysis of technical indicators, **Security Analyst 128** (Free Spirit) and Abacus's **Technical Analysis System** (64 and 128) include automatic updating via modem to keep close tabs on your portfolio.

Returning on schedule to the door, we notice income tax preparation software for the C-64: Timeworks' **Swiftax**, **Tax Master** from Master Software, **Taxaid** from Taxaid Software, **Tax Command Professional** from Practical Programs, Inc., and Double Eagle Software's **Tax Advantage**.

Telecommunications

Once again in the main passage, we brush away dusty clouds of cobwebs and peer into the shadows beyond at an inscription, Telecommunications. Our torches cast their light on Progressive Peripherals' menu-driven **Bobsterm**



Pro 64 and **Bobsterm Pro 128**, with many features for accessing local and commercial bulletin boards through a Commodore- or Hayes-compatible modem. We note that **Prototerm 128** (Free Spirit) doesn't have as many extras, but is simple to set up and use. For the would-be SYSOP, **Protolinc BBS** (Free Spirit) for the C-128 is a fast, flexible, multimessage-base BBS that's packed with features and easy to set up.

RUN Reviews

If you want to know more about any of these packages, they've all been described in past issues of *RUN*. Comprehensive articles, covering a number of packages, have included "What's Write for You?" (word processors, August '87), "Database Decision" (October '87), "Take Stock of Investment Software" (February '88), "Desktop Publishing with the C-64" (March '88), "Graphics Galore" (July '88) and "Many Happy Returns" (tax software, March '89). Many packages have also been reviewed individually in Software Gallery. Check out our annual indexes to articles and reviews to find the ones you're interested in. All annual indexes have appeared in the January issue of the following year except the 1987 index, which appeared in February of 1988. Write or call for the back issues you need; the last page of this magazine tells how.

Retail Software Outlets

The packages mentioned here can be purchased through the manufacturer, a designated distributor or mail order outlets. Mail order firms that carry Commodore software include Briwall, PO Box 129, Kutztown, PA 19530, 800-638-5757; Montgomery Grant, PO Box 58, Brooklyn, NY 11230, 800-759-6565; Software Discounters of America, PO Box 111327, Dept. RN, Blawnox, PA 15238, 800-225-7638 (in state, 800-223-7784); Tenex Computer Express, PO Box 6578, South Bend, IN 46660, 800-PROMPT-1; Software Support International, 2700 NE Andresen Rd., Vancouver, WA 98661, 800-356-1179; and Lyco Computer, PO Box 5088, Jersey Shore, PA 17740, 800-233-8760. ■

Ellen Rule keeps busy not only as a RUN *author, but as a psychiatric R.N., an active user's group member and operator of a home-based business, Home Computer Resource.*

Table 1. Manufacturers' addresses.

Abacus Software
5370 52nd St. SE
Grand Rapids, MI 49508

Activision; distributed by Mediagenic
See address below

Berkeley Softworks
2150 Shattuck Ave.
Berkeley, CA 94704

B.E.S.T.
PO Box 852
McMinnville, OR 97128

Broderbund Software
17 Paul Drive
San Rafael, CA 94903

Busy Bee Software
PO Box 2959
Lompoc, CA 93438

CMS Software Systems, Inc.
2204 Camp David
Mesquite, TX 75149

Country Road Software
70284 C.R. 143
Ligonier, IN 46767

Digital Solutions, Inc.
PO Box 345, Station A
Willowdale, Ontario
Canada M2N 5S9

Double Eagle Software, Inc.
2210 Wilshire Blvd.,
Suite 875
Santa Monica, CA 90403

Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404

Free Spirit Software
PO Box 128
Kutztown, PA 19530

Steven J. Gollery
45828 Emerson St.
Hemet, CA 92344

Great American Software
PO Box 910
Amherst, NH 03031

Kamasoft, Inc.
PO Box 5549
Aloha, OR 97007

KFS Software, Inc.
1301 Seminole Blvd.
Largo, FL 33540

Master Software
6 Hillery Court
Randallstown, MD 21133

Mediagenic
3885 Bohannon Drive
Menlo Park, CA 94025

Mindscape, Inc.
3444 Dundee Rd.
Northbrook, IL 60062

Nolo Press
950 Parker St.
Berkeley, CA 94710

Paragon Software
600 Rugh St.
Greensburg, PA 15601

Practical Programs, Inc.
PO Box 93104
Milwaukee, WI 53203

Precision Incorporated
8404 Sterling St., Suite A
Irving, TX 75063

Professional Software, Inc.
51 Fremont St.
Needham, MA 02194

Progressive Peripherals & Software
464 Kalamath St.
Denver, CO 80204

Scarborough Systems; distributed by Mindscape
Address above

Simon & Schuster Software
Gulf + Western Building
One Gulf + Western Plaza
New York, NY 10023

Softsync, Inc.
162 Madison Ave.
New York, NY 10016

Spinnaker Software
One Kendall Square
Cambridge, MA 02139

Springboard Software
7808 Creekbridge Circle
Minneapolis, MN 55435

Taxaid Software
606 Second Ave.
Two Harbors, MN 55616

Timeworks
444 Lake Cook Rd.
Deerfield, IL 60015

Xetec
2804 Arnold Rd.
Salina, KS 67401

Editor's note: If an address for software mentioned in the text is not listed in the table, the manufacturer has probably gone out of business or has stopped production on the product. This doesn't mean the program cannot be found: check stores, used merchandise ads, user's groups, software discount houses and mail order companies.

Get a Load of This!

Now 1571 and 1581 drive owners can increase C-64-mode loading speed tenfold.

By MICHAEL MILLER

The 1571 and 1581 disk drives brought increased speed and storage capacity to Commodore computing—but only when using a C-128 in 128 mode. With a C-64 (or C-128 in 64 mode), the drives default to their usual long loading times. That is, unless you use Directory Speed Loader (DSL), which loads program files up to ten times faster than normal. With DSL at work, a 130-block file that normally takes 90 seconds to load will be in memory in less than ten seconds.

DSL itself loads in only a few seconds, then automatically displays a directory of the program files on the same disk. To load one of the files, just place the cursor over its filename and press the return key. DSL checks to see if your disk drive is a 1571 or 1581 and, if so, starts loading at high speed. If you're not using a 1571 or 1581, it will load at the normal speed.

When DSL is used with a 1571, a PRINT#15,"U0>M1" command in the program automatically switches the drive to 1571 mode. When used with either a 1571 or 1581, DSL can load files of up to 250 blocks (considerably more than the usual 202-block maximum), it allows load addresses of $0400 and up, it maintains the screen display during a load, and it even checks for disk errors!

Note that, if the file you select to load loads any others in turn, the others will enter memory at normal speed. Also, DSL works great with memory snapshot-type programs.

How It Works

DSL uses a combination of Basic and machine language. The C-64 machine code is poked into the cassette buffer, and the 1571/1581 machine code is loaded into the drive via a user file, using the special 1571/1581 Utility Loader command.

DSL does not use Burst-mode serial communication, because Burst mode isn't possible on the standard C-64. However, the serial routines between the C-64 and 1571/1581 using DSL are as fast as Burst mode.

The actual speed increase using DSL with a 1571 depends on the sector interleaving that was used when the file was saved. The interleaving determines how close together sectors are written, and with the 1571 it's normally in the range 6–10. With an interleave of 10, DSL will load a file about five times faster than normal; with an interleave of 4 (the fastest that DSL can use with the 1571), the file will load ten to 12 times faster than normal. The 1581 drive has a full track buffer and uses a sector interleave of 1, making the speed increase with DSL about tenfold.

How To Use It

DSL is best installed as the first program on a newly formatted disk. Type in both DSL (Listing 1) and Make USR File (Listing 2 or Listing 3, depending on which drive you have), and save them to disk. Then run Make USR File to create a user file named either 1571 or 1581, depending on your drive. The user file will become the second file on your disk. Finally, save to the disk any files you want to be able to load at high speed. But don't save more than 20, because the DSL directory routine might scroll the excess filenames off the screen.

To use DSL, type LOAD ":*,8: and return, then RUN and return. The directory of program files will appear on the screen, and DSL will await your desire. R

Michael Miller presides over S.O.G.W.A.P. Software and is the author of Big Blue Reader, which was voted best utility in RUN's *Reader Choice Awards Contest last year.*

Running Instructions: **Type in Listing 1 and either Listing 2 or Listing 3, depending on whether you have a 1571 or 1581 drive, and save them to disk. Then, to create a fast-load disk, save Listing 1 to a freshly formatted disk. Then load and run either Listing 1 or Listing 2, as appropriate, to create a user file, which must be the second file on the fast-load disk. Finally, save to the disk any files you may want to have fast-loaded, with a maximum of 20 per disk.**

Listing 1. Directory Speed Loader menu program. (Available on ReRUN disk. See card at page 48.)

```
10 PRINT "{SHFT CLR}{CRSR DN}{2
   SPACEs}DIRECTORY SPEED LOAD
   (C) 1989 RUN":U=PEEK(186):I
   F U<8 THEN U=8        :REM*118
20 PRINT "{CRSR DN}{2 SPACEs}MO
   VE CURSOR OVER NAME - PRESS
   RETURN{CRSR DN}":OPEN1,U,96,
   "$:*=P"               :REM*92
30 GET#1,X$,X$,X$,Y$:PRINTASC(X
   $+CHR$(Ø))+ASC(Y$+CHR$(Ø))*2
   56;                   :REM*Ø
40 FOR I=1 TO 7:GET#1,A$,B$,C$,
   D$:PRINT A$;B$;C$;D$;:NEXT:P
   RINT:IF ST=Ø THEN 3Ø:REM*21Ø
50 CLOSE 1:Y=PEEK(214):OPEN15,U
   ,15,"UØ>M1"           :REM*222
60 FOR I=82Ø TO 981:READ A:POKE
   I,A:NEXT              :REM*11Ø
70 SYS 42336:AD=518:IF PEEK(AD)
   <>34 THEN 7Ø          :REM*14
80 AD=AD+1:IF PEEK(AD)<>34 THEN
```

RUN it right: **C-64 or C-128 in 64 mode; 1571 or 1581 disk drive**

```
   N$=N$+CHR$(PEEK(AD)):GOTO 8
   Ø                        :REM*1Ø9
9Ø POKE 214,Y:PRINT#15,"M-R";CH
   R$(198);CHR$(229);CHR$(1)
                            :REM*1Ø9
1ØØ GET#15,X$:IF X$=CHR$(55) OR
    X$=CHR$(255) THEN 12Ø
                            :REM*131
11Ø PRINT "{CRSR DN}LOAD"CHR$(3
   4)N$CHR$(34)","U",1{3 CRSR
   UPs}":POKE 198,1:POKE 631,1
   31:END                   :REM*16Ø
12Ø PRINT "{CRSR DN}LOADING...
   ";N$                     :REM*4Ø
13Ø OPEN2,U,2,"#2":PRINT#15,"&1
   5?1":PRINT#15,"UØ"+CHR$(255
   )+N$;:SYS 9ØØ            :REM*2
1ØØØ DATA 16Ø,Ø,169,234,44,169,
   96,141,1Ø9,3,44,Ø,221,16,2
   51,56,173,18             :REM*7Ø
1Ø1Ø DATA 2Ø8,233,5Ø,144,4,41,7
   ,24Ø,245,169,7,141,Ø,221,7
   2,1Ø4,173,Ø              :REM*88
1Ø2Ø DATA 221,74,74,77,Ø,221,74
   ,74,77,Ø,221,74,74,77,Ø,22
   1,73,249                 :REM*179
1Ø3Ø DATA 142,Ø,221,234,23Ø,1,1
   45,174,198,1,2ØØ,198,144,2
   Ø8,2Ø2,24,152,1Ø1        :REM*89
1Ø4Ø DATA 174,133,174,144,2,23Ø
   ,175,96,162,15,32,2Ø1,255,
   169,85,32,168,255        :REM*2Ø3
1Ø5Ø DATA 169,52,32,168,255,32,
   2Ø4,255,12Ø,162,23,142,Ø,2
   21,44,Ø,221,48           :REM*249
1Ø6Ø DATA 251,32,57,3,168,32,57
   ,3,133,174,32,57,3,133,175
   ,136,136,152             :REM*171
1Ø7Ø DATA 24Ø,14,2Ø1,255,24Ø,1Ø
   ,133,144,32,52,3,32,57,3,2
   Ø8,242,166,174           :REM*11Ø
1Ø8Ø DATA 164,175,134,45,132,46
   ,32,51,165,169,Ø,32,113,16
   8,88,76,174,167          :REM*1Ø3
```

Listing 2. Make USR File program for the 1571 drive. (Available on ReRUN disk. See card at page 48.)

```
1Ø PRINT CHR$(147):PRINT "{5 SP
   ACEs}COPYRIGHT 1989 RUN MAGA
   ZINE"                    :REM*1Ø7
2Ø PRINT:PRINT "MAKE 1571 DIREC
   TORY SPEED LOAD USR FILE
                            :REM*63
3Ø PRINT:PRINT "{6 SPACEs}WRITT
   EN BY MICHAEL MILLER":PRINT:
   PRINT                    :REM*115
4Ø DV=8:INPUT "CREATE USR FILE
   ON DRIVE NUMBER";DV :REM*113
5Ø PRINT:PRINT "INSERT DISK INT
   O DRIVE #";DV:PRINT:PRINT,"-
   PRESS ANY KEY-"          :REM*253
6Ø GET X$:IF X$="" THEN 6Ø
                            :REM*195
7Ø PRINT CHR$(147);"WRITING 157
   1 USR FILE...":PRINT:REM*233
8Ø A$="":FOR I=1 TO 196:READ A:
   CS=CS+A:A$=A$+CHR$(A):NEXT
                            :REM*2Ø9
9Ø IF CS<>16689 THEN PRINT "ERR
   OR IN DATA STATEMENTS":STOP
                            :REM*113
1ØØ OPEN 15,DV,15:OPEN 8,DV,8,"
   1571,U,W":PRINT#8,A$;:INPUT
   #15,E,EM$:CLOSE 8        :REM*176
11Ø PRINT E;EM$:PRINT "DONE!":C
   LOSE 15:END              :REM*168
2ØØ DATA Ø,5,192,76,176,5,169,2
   ,141,Ø,24,174,111,2,165,126
   ,2Ø8,8                   :REM*2Ø3
21Ø DATA 12Ø,24Ø,78,234,197,6,2
   4Ø,3,16Ø,128,44,16Ø,136,88,
   133,6,134,7              :REM*231
22Ø DATA 14Ø,2,2,132,Ø,32,94,13
   4,12Ø,224,2,176,5Ø,16Ø,254,
   173,Ø,3                  :REM*99
23Ø DATA 2Ø8,4,172,1,3,136,132,
   31,152,32,12Ø,5,16Ø,2,185,Ø
   ,3,32                    :REM*193
24Ø DATA 12Ø,5,2ØØ,198,31,2Ø8,2
   45,169,2,141,Ø,24,173,Ø,24,
   48,12,174                :REM*2Ø2
25Ø DATA 1,3,173,Ø,3,2Ø8,181,24
   Ø,2,169,255,32,12Ø,5,76,192
   ,218,Ø                   :REM*36
26Ø DATA 8,2,1Ø,4,12,6,14,1,9,3
   ,11,5,13,7,15,162,Ø,142
                            :REM*4
27Ø DATA Ø,24,17Ø,74,74,74,74,7
   2,138,41,15,17Ø,189,1Ø4,5,1
   7Ø,169,4                 :REM*148
28Ø DATA 44,Ø,24,2Ø8,251,142,Ø,
   24,138,1Ø,41,15,72,1Ø4,141,
   Ø,24,1Ø4                 :REM*6Ø
29Ø DATA 17Ø,189,1Ø4,5,234,141,
   Ø,24,1Ø,41,15,72,1Ø4,141,Ø,
   24,96,32                 :REM*1Ø5
3ØØ DATA 14,2Ø8,162,2,134,13Ø,1
   34,131,142,1,2,76,132,2Ø3,Ø
   ,57                      :REM*171
```

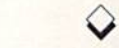
Listing 3. Make USR File program for the 1581 drive. (Available on ReRUN disk. See card at page 48.)

```
1Ø PRINT CHR$(147):PRINT "{5 SP
   ACEs}COPYRIGHT 1989 RUN MAGA
   ZINE"                    :REM*1Ø7
2Ø PRINT:PRINT "MAKE 1581 DIREC
   TORY SPEED LOAD USR FILE"
                            :REM*85
3Ø PRINT:PRINT "{7 SPACEs}WRITT
   EN BY MICHAEL MILLER":PRINT:
   PRINT                    :REM*85
4Ø DV=9:INPUT "CREATE USR FILE
   ON DRIVE NUMBER";DV :REM*117
5Ø PRINT:PRINT "INSERT DISK INT
   O DRIVE #";DV:PRINT:PRINT ,"
   -PRESS ANY KEY-"         :REM*253
6Ø GET X$:IF X$="" THEN 6Ø
                            :REM*195
7Ø PRINT CHR$(147);"WRITING 158
   1 USR FILE...":PRINT:REM*253
8Ø A$="":FOR I=1 TO 172:READ A:
   CS=CS+A:A$=A$+CHR$(A):NEXT
                            :REM*131
9Ø IF CS<>14933 THEN PRINT "ERR
   OR IN DATA STATEMENTS":STOP
                            :REM*21Ø
1ØØ OPEN 15,DV,15:OPEN 8,DV,8,"
   1581,U,W":PRINT#8,A$;:INPUT
   #15,E,EM$:CLOSE 8        :REM*154
11Ø PRINT E;EM$:PRINT "DONE!":C
   LOSE 15:END              :REM*168
2ØØ DATA Ø,5,168,96,234,234,234
   ,234,234,12Ø,169,2,141,1,64
   ,234,165,76              :REM*14
21Ø DATA 174,139,2,133,11,134,1
   2,162,Ø,169,128,32,84,255,1
   65,2,2Ø1,2               :REM*35
22Ø DATA 176,5Ø,16Ø,254,173,Ø,3
   ,2Ø8,4,172,1,3,136,132,16,1
   52,32,112                :REM*175
23Ø DATA 5,16Ø,2,185,Ø,3,32,112
   ,5,2ØØ,198,16,2Ø8,245,169,2
   ,141,1                   :REM*197
24Ø DATA 64,173,1,64,48,15,174,
   1,3,173,Ø,3,2Ø8,191,24Ø,2,1
   69,255                   :REM*191
25Ø DATA 32,112,5,88,96,Ø,Ø,Ø,Ø
   ,Ø,8,2,1Ø,4,12,6,14,1
                            :REM*199
26Ø DATA 9,3,11,5,13,7,15,162,Ø
   ,142,1,64,17Ø,74,74,74,74,7
   2                        :REM*16Ø
27Ø DATA 138,41,15,17Ø,189,96,5
   ,17Ø,169,4,44,1,64,2Ø8,251,
   142,1,64                 :REM*79
28Ø DATA 138,1Ø,41,15,72,1Ø4,14
   1,1,64,1Ø4,17Ø,189,96,5,234
   ,141,1,64                :REM*191
29Ø DATA 1Ø,41,15,72,1Ø4,141,1,
   64,96,199                :REM*229
```

■

Graphmaker

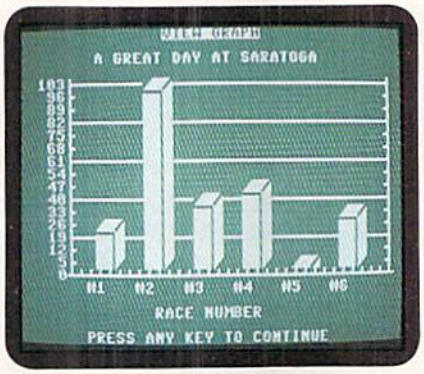
Make your data come alive with this 3-D bar-graph program.



By ROBIN FRANZEL

You can use Graphmaker 64/128 in either 40- or 80-Column mode to create attractive and informative bar graphs. If your printer outputs Commodore graphics characters, your graphs will appear in "3-D"; if you use a daisywheel printer, or have trouble getting your printer to obey commands, your graphs will be made of standard printer characters.

Data for the bar graphs can be entered manually or through complex analysis of sequential database files. You can even edit the data that defines your graph, and graphs can be saved to and loaded from disk.



Graphmaker permits novel uses.

Getting Started

Type in Listing 1, using *RUN*'s Checksum program to ensure accuracy, save it to disk and run it.

The bottom of the title screen indicates whether you're using a C-64 or a C-128 and whether you're in 40- or 80-Column mode—a handy feature for C-128 users who often switch between 64 and 128 modes. After the title screen, the main menu, shown in Figure 1, appears. When you're just beginning to use Graphmaker, you can press return for the default choice, Create Graph; 7 for Printer Setup; or 8 to End. The other selections aren't available until after you've created a graph, so let's get started by pressing the return key.

Figure 1. The main menu.

```
1. Create Graph
2. View Graph
3. Edit Graph
4. Save Graph
5. Load Graph
6. Print Graph
7. Printer Setup
8. End Program

Enter Selection (1–8) ? 1
```

Creating a Graph

Refer to Figure 2 and Figure 3 for clarification as we proceed. Figure 2 shows the initial screen for creating a graph; it requests information from you. You may find it helpful to go through the exercise of re-creating the sample graph in Figure 3.

At the **title** prompt in the Figure 2 screen, you can input both lower- and uppercase letters, and the title will appear that way in printouts. However, the letters will all be uppercase when your graph is displayed on the screen.

The **legend** is a line at the bottom of your graph that can be used for explanation, such as indicating your units of measurement. Again, both lower- and uppercase may be used.

The **number of ranges** tells Graphmaker how many bars to display in a particular graph. There are 12 bars in Figure 3.

The next prompt asks where Graphmaker will get the maximum values for each range—from keyboard input or from a disk file. If you intend to type them in, enter K; if the program should look for them in a database file on disk, enter D. For now, press K and return.

Next, you must enter a **label** for each range. These labels will run along below the x-axis of the graph, truncated by the program, if necessary, to prevent overlapping. In general, the fewer bars in a graph, the more space that's available for labels. In a 40-column graph with six bars or an 80-column graph with 12 bars (see Printing below), the labels can be up to four characters long.

Finally, you'll be prompted for the maximum value in each range. For the graph in Figure 3, 12 numbers from 10000000 to 150000000 (no commas) must be entered. To make the graph look neater, I edited the numbers (see Edit Graph below) to run from 10 to ►

Figure 2. Initial screen for creating a graph.

```
Create Graph

Press ← for Menu

Enter Title:
Enter Legend:
Number of Ranges (1–12):

Keyboard or Disk Input? (k/d)

Label for Range 1:
.
.
.
```

RUN it right: **C-64 or C-128, in 40- or 80-Column mode; printer optional**

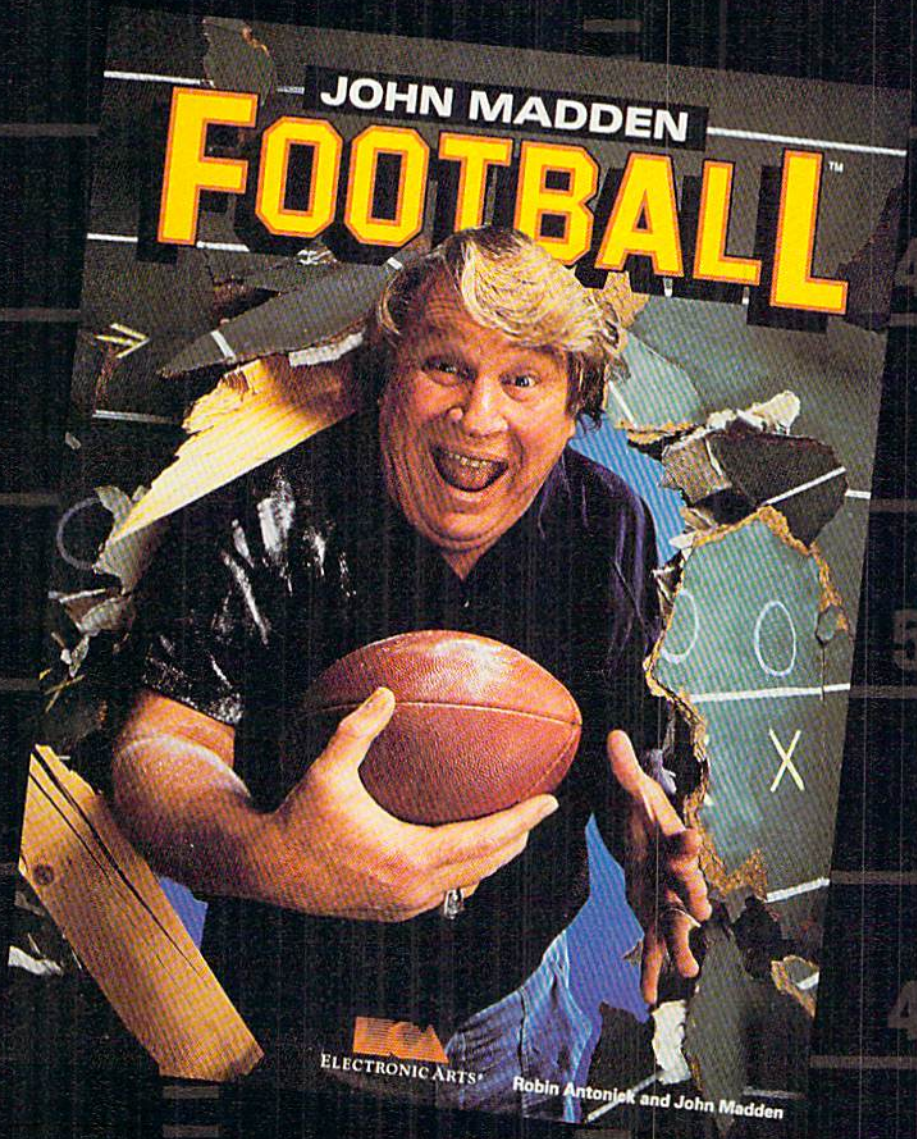
The Complete Football Game For Real Football Fans

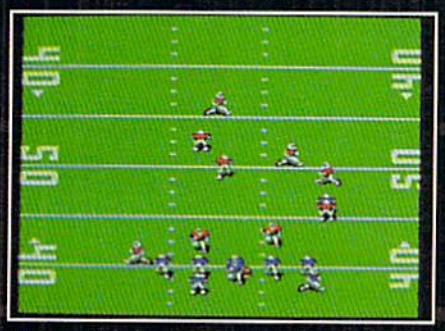
Co-designed by John Madden, including over 160 plays from the actual playbooks of John Madden. If that's not enough, you can design your own plays for both offense and defense.

Take to the field, launching the long bomb or bursting across the line of scrimmage as full field graphics bring the excitement of live football onto your screen.

The Quick Set-up Game will have you playing in minutes. The Standard Game gives you everything from audibles and injuries to on-side kicks and astroturf.

Look for the NFL Players Association Players Disk™ for John Madden Football. Crash through the line of scrimmage as your favorite superstar. Challenge a friend...your favorite football team against his.

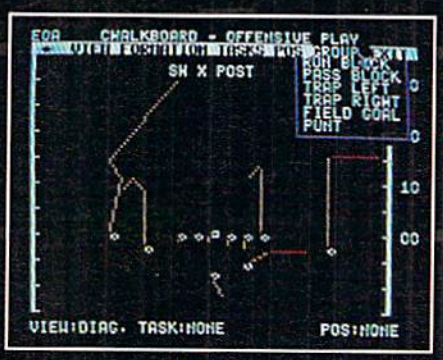




Cut back against the grain. The yardage you gain is affected by everything from ball carrier skills and defensive formations to turf and weather conditions.



Choose your line-up with the Madden Report, a head to head comparison of important match-ups; everything from speed and fatigue to passing accuracy.



Design your own plays, then put on the pads to see how they work against different defenses.

ELECTRONIC ARTS®

How to Order

Visit your retailer or phone with VISA/MC: USA or Canada, 800 245-4525, Mon-Fri, 8am-5pm Pacific Time. IBM and Apple versions - $49.95. C64 version - $39.95. IBM, Apple, and C64 are registered trademarks of International Business Machines, Corp., Apple Computer Corp., and Commodore Electronics Limited respectively. NFLPA is a registered trademark of the National Football League Players Association.

Circle 142 on Reader Service card.

150, then indicated the conversion in the legend.

After you have answered all of the prompts, the main menu will reappear, with a new default choice of 2, for View Graph. Before I describe that option, however, let's see what happens if you press D at the Keyboard/Disk Input prompt.

Analyzing a Disk File

To learn how to analyze a database file, consider a database that contains statistical data on a fictitious company. The record for each employee includes the fields shown in Figure 4.

Many Commodore database and spreadsheet programs produce sequential data files that can be read into a word processor. Before you attempt to use a data file with Graphmaker, load it into a word processor so you can look at it.

Figure 5 shows a printout of the beginning of a data file on our fictitious company created by RapidData Software's DataOrg database. That program places fields holding the filename, the number of records, the number of fields per record and the name of each data field at the beginning of the file, before the actual data. Graphmaker must be told to skip this housekeeping information. Figure 6 shows a DataOrg printout of the same database, including all the records.

Now that you know the layout of our database file, let's produce the following bar graphs:

1. Number of employees in each work category.
2. Distribution of employees by age group.
3. Salaries paid in each work category.

Graphmaker offers three types of database analysis in the Disk menu in Figure 7. With option 1, you can count occurrences based on comparisons of alpha/numeric data (we'll use this for our first graph). Option 2 lets you specify high and low values for your ranges using numeric analysis (the second graph). With option 3, you can sum a numeric field based on an alphabetic comparison of a second field (the third graph).

Analysis Option 1

To re-create a graph showing the number of employees in each work category, enter 6 for the number of ranges, since there are six types of work. Then press D at the Keyboard or Disk Input prompt and 1 for Tally Field.

The number to enter next, for **fields to skip**, depends on your file organization. To analyze the entire contents of your data file, you'd enter 0. For our example, enter 7 to skip the seven housekeeping fields of the file (see Figure 5 again). Any time you've progressed this far and realize you don't know how many fields to skip, you can enter ← to return to the main menu.

To analyze the number of employees in each work category, enter 3 for **field number of data**, since Type of Work is the third field in each record.

The number of **fields per record** also depends on your file organization. ►

Figure 3. Sales by year.

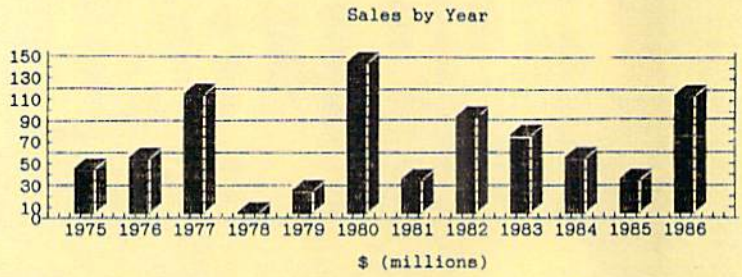


Figure 4. Fields in sample employee record.

Field 1: Employee number
Field 2: Employee age
Field 3: Codes by type of work
- 1 Manual Labor
- 2 Secretarial
- 3 Supervisory
- 4 Analysts
- 5 Managerial
- 6 Executive

Field 4: Salary of Employee

Figure 5. Printout of beginning of sample data file.

```
SAMPLE.DBF
 42
 4
EMPL NUM
EMPL AGE
TYPE WORK
SALARY
1
52
6
125000
2
45
6
100000
3
38
5
65000
```

Figure 6. Printout of a portion of a sample database.

NO.	AGE	TYPE	SALARY
1	52	6	125000
2	45	6	100000
3	38	5	65000
4	42	5	63500
5	34	3	32750
6	36	3	33500
7	28	3	30250
8	38	3	38200
9	42	5	55000
10	53	5	63500
11	47	2	23500
12	42	2	21500
13	22	2	18200
14	18	2	16500
15	18	2	16500

Figure 7. The Disk Menu.

Create Graph

1. User-Defined Ranges
   Tally Field (Alpha/Numeric)

2. User-Defined Ranges
   Tally Field (Numeric)

3. File-Defined Ranges
   Sum Field

4. Return to Main Menu

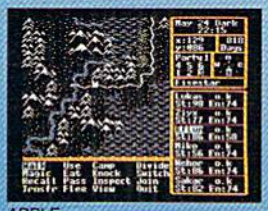
Enter Selection (1–4)

The Magic Candle

Volume I

1989 Role-Playing Game of the Year.

— Computer Gaming World



APPLE



COMMODORE 64



IBM



IBM



IBM

"Bottom line: Definitely recommended."
— Scorpia, Computer Gaming World

"Countless original touches and innovations. . ."
— Shay Addams, Quest Busters

"The Magic Candle is an addictive game. . .weeks of exciting entertainment."
— Lesser, Dragon Magazine

"A fresh challenge. . .breaks new grounds. . ." — Scott Mace, inCider

"Such skill, thoroughness, and attention to detail. . .an entire new class of fantasy games." — William R. Trotter, Game Players

"The Magic Candle is one of the best RPG's to come along." — Guy Wright, PC Games

"Incredible, Absolutely Incredible! At last, a software company that really cares after the purchase has been made. You are an outstanding company and PLEASE continue your marvelous policy(ies)."
- Gail Ponthier, Palo Cedro, CA

To order see your local retailer, or call (213) 320-5215.

The Magic Candle Volume I is currently available for: Apple II (64K required), IBM and Compatibles (in CGA, EGA and Tandy 1000 16-color mode), Commodore 64/128.

Secret Guide Now Available!





MINDCRAFT

Mindcraft Software, Inc.
2341 205th Street, Suite 102, Torrance, CA 90501

Circle 59 on Reader Service card.

Since each record in our example has four fields, enter 4 at this prompt.

The number of ranges was specified earlier, but now you must indicate what each of those ranges represents by entering its Type of Work code: 1–6 (see Figure 4 again). You can use the graph editor later to change these codes to more meaningful labels.

Now Graphmaker will read your data file and create the graph; then it will display the main menu so you can view, edit, save or print the graph.

Analysis Option 2

Next, we'll do the analysis of employees by age. Enter 4 for the number of ranges and D at the Keyboard or Disk Input prompt, then 2, for Numeric Tally, when the Disk menu (Figure 7) appears. Again, you'll be asked for the number of fields to skip, field number of data and number of fields per record. This time, the field number of data will be 2, for the Age field.

When the program prompts for the **low/high value for the range**, enter the minimum and maximum age in each group. If you enter a high value that's smaller than the corresponding low value, Graphmaker will alert you and let you re-enter the values. The labels for the ranges will be generated automatically, based on your input.

Analysis Option 3

The final type of analysis we'll do sums up one field based on the contents of another. It produces a graph that shows how much money was paid in salaries to each type of worker. Enter 6 for the number of ranges, since there are six types of work for which salaries will be totaled. Then select 3 at the Disk menu (Figure 7) and enter the number of fields to skip.

With this analysis, the prompt for **field number of data** refers to the field you want to sum. Enter 4 for our example, since salary is the fourth field. **Field number for ranges** is again 3, Type of Work.

If you wanted to use an alphabetic field for selection of records to be included in summing a numeric field, you'd respond with A to the Alpha or Numeric prompt. For our example, we're using the numerically coded Type of Work field, so enter N.

Finally, as before, enter the number of fields per record and the ranges to be searched.

Viewing Your Graph

Once you've created your graph, the default at the main menu becomes 2, for View Graph. Press return, and, if your computer is in 40-Column mode, the first six bars of the graph will appear. The bars to the right are still there, but there isn't any room to display them. As I mentioned before, they'll appear in the printout (see Printing, below). In 80-Column mode, your entire graph will fit on the screen.

To make changes to your graph, press any key to access the main menu, and then select 3, Edit Graph.

Editing Your Graph

In Edit mode, you can retype the title, legend, range labels and even the range values. When you're done, the main menu will reappear, offering you the option to proceed to another part of the program or to edit some more by pressing 3 again.

Saving Your Graph

Once you've created your graph and edited it as desired, you'll probably want to save it to disk. Select 4 from the main menu, then enter a filename that's no more than 16 characters long. If you enter one that's too long, Graphmaker will automatically truncate it. Any time the program encounters a problem with the disk drive, it will display an error message on the screen and return you to the main menu to try again.

Loading Your Graph

To load a previously saved graph into Graphmaker, select 5 at the main menu and enter the filename. Here again, the program will report any disk errors.

Printing Your Graph

Printing a graph is as easy as pressing 6 at the main menu. If the printout doesn't look right, see the Printer Setup section below to correct it.

The printout of a graph that contains six or fewer bars will be one-half page wide; a graph that contains more than six bars will extend across a full page. You can expand a graph with six or fewer bars to make more room for range labels by adding enough "invisible" bars (no label and a range value of 0) to bring the total to seven.

Printer Setup

Graphmaker makes use of Commodore graphics to print out the same three-dimensional graph you see on the screen. However, you can also produce a printout with normal daisywheel characters. Just select 7 at the main menu and respond "no" at the CBM Dot Matrix Printer prompt.

You'll be prompted to enter the secondary addresses that Graphmaker should use to open your text and graphics printer files. Normally, you'd select 7 for the text secondary address and 0 for graphics, but with a daisywheel printer, you must select 7 for both. If these secondary addresses don't work with your printer, consult your printer or interface manual for other possibilities.

Finally, Graphmaker will ask for the number of printer control codes to send to the printer when the printer file is opened. If you don't want to send any codes, overwrite the default with 0. The default settings will tell an Epson-compatible printer to print approximately 10 lines per inch (a $^{7}/_{72}$-inch linefeed), so the lines barely touch. If these control characters aren't correct for you, refer to your printer manual to determine how to adjust the linefeeds.

End Program

Selecting 8 at the main menu terminates execution of Graphmaker. If you have a graph in memory, the program will ask for verification that you want to exit—in case you forgot to save the graph or need to print it out. Then type N to return to the main menu, or Y to leave the program.

Even if you type Y, it's not too late to save or print your graph. Just enter RUN 740, and the main menu will return, with your last graph still in memory. Ⓡ

Robin Franzel, who currently manages a software development group, has written many articles and programs for RUN.

Running Instructions: **Type in Listing 1, save it to disk and run it.**

Listing 1. Graphmaker program. (Available on ReRUN disk. See card at page 48.)

```
10 DATA 5,27,64,27,65,7 :REM*22
20 REM **** STORE PRINTER CODES
    ****                :REM*179
30 IFPEEK(215)<>0ANDPEEK(215)<>
   128THENPOKE55,0:POKE56,158:C
   LR:GOTO50           :REM*180
40 POKE57,0:POKE58,158:CLR
                       :REM*32
50 READZ:POKE40579,Z:FORI=1TOZ:
   READK:POKE40579+I,K:NEXT
                       :REM*226
60 POKE40576,0:POKE40577,7:POKE
   40578,0             :REM*207
70 REM "*********************
   *****"               :REM*82
80 REM "****{2 SPACEs}{SHFT G}{
```

Continued on p. 84.

Super Super COMBO PRICE!



C-64 or **C-128** owners!
Expand your programming knowledge now
by getting two of the most popular and best-selling languages for your C-64 or C128
at the money saving price of $79.95 (save over $39.00!). Offer expires January 31, 1990.

Super Pascal 64 - Complete development system implements full Jensen & Wirth compiler plus extensions for graphics - has complete source file editor, full assembler and a comprehensive utility package. Features high-precision 11-digit arithmetic; a very fast compiler; overlays; automatic loading of editor and source program; exact error messages and localization during compilation; high speed DOS; free run-time package.
Suggested retail price $59.95

Super C 64 - development package produces 6502 machine code. makes use of versatile C language; includes editor, compiler, linker and thorough handbook. Source programs up to 41K in length, 53K in object code. combine up to seven modules for later execution. Run-time library may be called from ML or included as a BASIC look-alike program. Includes graphics and math libraries.
Suggested retail price $59.95

Combination package for the C-64:
Super C 64 & **Super Pascal 64** $79.95
Offer expires January 31, 1990

Combination package for the C-128:
Super C 128 & **Super Pascal 128** $79.95
Offer expires January 31, 1990

More Best-selling software for your C-64 or C-128:

Assembler/Monitor 64 - machine language programming:	39.95
BASIC Compiler 64 - compiles your BASIC programs:	39.95
BeckerBASIC 64 - write your own GEOS applications:	49.95
CadPak 64 - (bestseller for over 2 years!) professional quality CAD:	39.95
ChartPak 64 - build charts of your data:	39.95
Cobol 64 - learn as you go with Cobol language programmer:	39.95
Fortran 64 - program in this popular language:	39.95
PPM-64 - comprehensive stock market portfolio manager:	39.95
TAS-64 - analyzes, charts technical stock indicators:	39.95
BASIC Compiler 128 - compiles your BASIC programs:	59.95
CadPak 128 - (best-seller for over 2 years!) professional quality CAD:	59.95
ChartPak 128 - build charts of your data:	39.95
Cobol 128 - learn as you go with Cobol language programmer:	39.95
PPM-128 - comprehensive stock market portfolio manager:	59.95
TAS-128 - analyzes, charts technical stock indicators:	59.95

More titles available - write for your free catalog!

Available at participating Dealers Nationwide.

To order call Toll Free: 1-800-451-4319

In US and Canada add $4.00 for postage and handling.
Foreign orders add $12.00 per item postage and handling.

Abacus

Dept. R11, 5370 52nd Street SE, Grand Rapids, MI 49512
Phone (616) 698-0330 • Fax (616) 698-0325

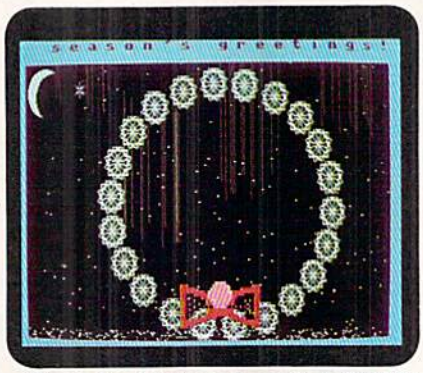
Circle 33 on Reader Service card.

Season's Greetings

Here's a creative visual display, accompanied by a familiar musical theme, that will put you in the holiday spirit.

By MALCOLM GARDNER

Circle around your C-128 and enjoy the magical holiday scene created by Season's Greetings, a program for the C-128 in 40-Column mode. Much of Santa's know-how about C-128 sound and graphics went into this program. The scene features a wreath of moving multicolored lights that's highlighted by a big red bow. The wreath hangs in a window that looks out on a night sky filled with stars and a crescent moon. Snow sifts down, piling higher and higher on the outside window sill for about an hour. The background music is not a run-of-the-mill holiday ditty, but the Ode to Joy, from Beethoven's ninth symphony, played by various "instruments" at different tempos.



Type in Listing 1, using *RUN*'s Checksum program to keep any stray snowflakes from shorting it out, and then save it to disk. If you're in 80-Column mode when you run Season's Greetings, you'll be prompted to switch your monitor to 40 columns, then to return to 80 columns when you end the display (just switch the monitor button again). From 40-Column mode, you'll be prompted to wait 20 seconds while the program loads some of Santa's graphics data.

When you're ready for bed or to depart to an alternative program, just push the run-stop key while the light is moving around the upper portion of the wreath. With warm season's greetings to everyone! R

Malcolm Gardner is an environmental designer and producer of serigraphic works who enjoys the holiday season and computer graphics.

Running Instructions: **Type in and save Listing 1; thereafter, just load and run the program.**

Listing 1. Season's Greetings program. (Available on ReRUN disk. See card at page 48.)

```
1 GOTO1Ø                    :REM*125
1Ø TRAP33Ø:PRINT"{SHFT CLR}{2 C
   RSR DNs}ONE MOMENT . . .":SL
   EEP2:FAST:GOSUB 35Ø:IF RGR(Ø
   )>=5THENPRINT"{CRSR DN}PLEAS
   E SWITCH MONITOR TO {CTRL O}
   4Ø COLUMN"CHR$(143)" MODE."
                            :REM*194
2Ø COLORØ,1:COLOR4,15:COLOR1,Ø2
   :GRAPHIC1,1              :REM*61
3Ø X=11:I=9Ø:FL=Ø:G=1:CT=-1:W=7
   :V=193:XM=18:YM=35       :REM*48
4Ø DOUNTILX=3:FOR A=15TO165STEP
   3Ø:CIRCLE1,11,1Ø,X,,,,A,I:NE
   XT:X=X-4:I=I+9Ø:LOOP     :REM*65
5Ø SSHAPE SPIR$,Ø,Ø,23,21
                            :REM*128
6Ø GSHAPE SPIR$,Ø,Ø,4       :REM*175
7Ø SPRSAV SPIR$,1:MOVSPR1,Ø#Ø
                            :REM*135
8Ø GOSUB 27Ø                :REM*164
9Ø COLOR1,16:FORM=1TOØSTEP-1:CI
   RCLEM,XM,YM,16:PAINT1,15,24:
   XM=XM+8:YM=YM+3:NEXT:PAINTØ,
   28,38,Ø:FORM=6ØTO36ØSTEP6Ø:C
   OLOR1,15: CIRCLE1,48,33,5,,,
   ,M,18Ø:NEXT              :REM*247
1ØØ CT=CT+1:FORA=9ØTO216STEPØ6
                            :REM*4
11Ø Y=SIN(A)*8Ø:X=COS(A)*96:COL
   OR1,14                   :REM*173
12Ø IF FL=ØTHENGSHAPE SPIR$,(X+
   16Ø),(Y+1ØØ),2:ELSE GOSUB22
   Ø:MOVSPR1,(X+183),(Y+15Ø):G
   OSUB 3ØØ: ON G GOSUB 23Ø,24
   Ø,25Ø,26Ø                :REM*174
13Ø NEXT                    :REM*5
14Ø IF G=ØTHENG=1           :REM*193
15Ø IF FL=Ø THEN BEGIN      :REM*244
16Ø MOVSPR2,169,188:MOVSPR3,157
   ,2ØØ:MOVSPR4,179,2ØØ
                            :REM*132
17Ø MOVSPR5,5Ø,1Ø:MOVSPR6,11Ø,1
   ØØ:MOVSPR7,19Ø,7Ø:MOVSPR8,2
   8Ø,3Ø                    :REM*46
18Ø SPRITE2,1,11,1,1,1,Ø:SPRITE
   3,1,3,Ø,1,1:SPRITE4,1,3,Ø,1
   ,1:SPRITE5,1,2,1,1,Ø:SPRITE
   6,1,2,1,1,Ø:SPRITE7,1,2,1,1
   ,Ø:SPRITE8,1,2,1,1,Ø
                            :REM*18Ø
19Ø MOVSPR5,18Ø#1:MOVSPR6,18Ø#1
   :MOVSPR7,18Ø#1:MOVSPR8,18Ø#
   1                        :REM*149
2ØØ SLOW:BEND               :REM*5Ø
21Ø FL=1:GOTO1ØØ            :REM*1ØØ
22Ø C=(RND(1)*15+2):SPRITE1,1,C
   ,Ø,Ø,Ø,Ø:RETURN          :REM*142
23Ø TEMPO (INT(RND(1)*14+12)):P
   LAY"V1 XØ TØ U2 O4 HE QF QG
    QG QF QE QD QC QC QD QE QE
    QD HD":G=G+1:FORP=1TO8Ø:NE
   XT:RETURN                :REM*48
24Ø PLAY"U3 T6 O4 HE QF QG QG Q
   F QE QD QC QC QD QE QD QC H
   C M":G=G+1:RETURN        :REM*1Ø1
25Ø FILTER6ØØ,Ø,Ø,1,14:PLAY"U9
   X1 TØ O3 QD QD QE QC QD IE
   IF QE QC QD IE IF QE QD QC
   D HG M":G=G+1:RETURN:REM*58
26Ø FILTER1ØØØ,1,Ø,Ø,15:PLAY"U7
    X1 T7 O2 HE QF QG QG QF QE ►
```

RUN it right: **C-128 (in 40-Column mode)**

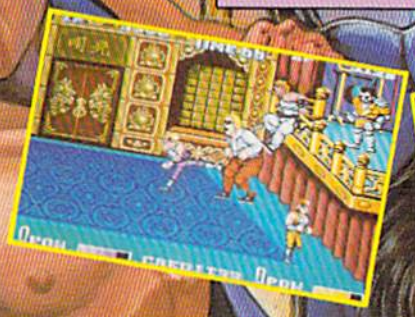
双截龍 II
DOUBLE DRAGON II
The Revenge™

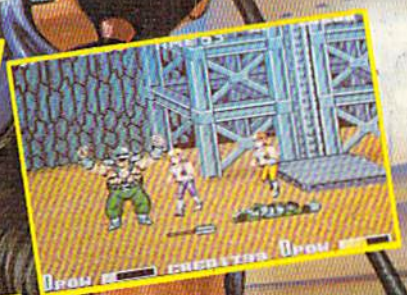
Billy and Jimmy Lee return in the latest and greatest version of the coin-op smash hit!

Featuring more weapons and more powerful moves, with more new missions such as the Underwater City, the Garden of Death, and the infamous Trap Room!

It's martial arts at its best, coming soon for your home computer!

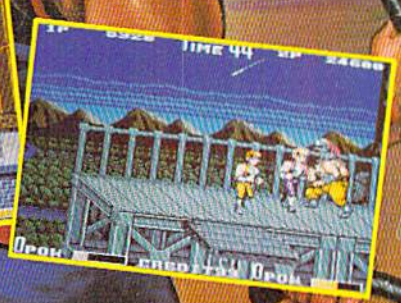
Machine availability:			
IBM 5-¼"	$39.99	Atari ST	$39.99
IBM 3-½"	$39.99	Commodore 64	$34.99
Amiga	$39.99		











Virgin Games

DISTRIBUTED BY MASTERTRONIC

18001 Cowan, Irvine, CA 92714 Tel (714) 833-8710

Circle 36 on Reader Service card.

SEASON'S GREETINGS

```
    QD QC QC QD QE .HD QC WC":
    G=Ø:RETURN          :REM*116
27Ø COLOR1,2:FOR R=1TO2ØØ:X=RND
    (1)*3Ø4+16:Y=RND(1)*193:DRA
    W1,X,Y:NEXT:FOR R=1TO14Ø:X=
    RND(1)*32Ø:Y=RND(1)*7+193:D
    RAW1,X,Y:NEXT       :REM*73
28Ø COLOR1,15:CHAR1,Ø,Ø,CHR$(14
    )+"{3 SPACEs}S E A S O N '
    S{3 SPACEs}G R E E T I N G
    S !{2 SPACEs}"+CHR$(142),1
                        :REM*68
29Ø CHAR1,Ø,1,"{4Ø SPACEs}",1:C
    OLOR1,6:RETURN      :REM*161
3ØØ IF CT>1Ø THEN W=23:V=177:EL
    SE IFCT>5THENW=15:V=185
                        :REM*117
31Ø IFCT>2ØTHENW=39:V=161:ELSE
    IF CT>15THEN W=31:V=169
                        :REM*16Ø
32Ø COLOR1,2:FOR R =1TO4:X=RND(
    1)*32Ø:Y=RND(1)*W+V:DRAW1,X
    ,Y:NEXT:RETURN      :REM*234
33Ø FORS=1TO8 :SPRITES,Ø:NEXT:I
    F RGR(Ø)>=5THEN GRAPHIC5,1:
    ELSE GRAPHICØ,1     :REM*242
34Ø PRINT"HAPPY HOLIDAYS TO ALL
     GOOD {CTRL 9}RUN{CTRL Ø} R
    EADERS,":PRINTTAB(1Ø)"{CRSR
     DN}E V E R Y{3 SPACEs}O N
    E !":END            :REM*17Ø
35Ø FOR MO=3648TO4Ø95:READ Z:PO
    KE MO,Z:NEXT:RETURN:REM*2Ø4
36Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*223
37Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*169
38Ø DATA Ø,Ø,124,Ø,Ø,254,Ø,1,25
    5,Ø,3,255,128,3,255,128
                        :REM*21Ø
39Ø DATA 3,255,128,1,255,Ø,Ø,25
    4,Ø,Ø,124,Ø,Ø,Ø,Ø,Ø  :REM*74
4ØØ DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*135
41Ø DATA Ø,Ø,24Ø,Ø,Ø,254,Ø,Ø,25
    5,224,Ø,227,255,Ø,232,127
                        :REM*235
42Ø DATA 24Ø,226,3,255,232,128,
    31,226,42,16Ø,232,128,31,22
    6,3,255             :REM*75
43Ø DATA 232,63,24Ø,227,255,Ø,2
    55,24Ø,Ø,255,Ø,Ø,24Ø,Ø,Ø,Ø
                        :REM*146
44Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*11Ø
45Ø DATA Ø,Ø,Ø,Ø,15,Ø,1,255,Ø,1
    5,255,Ø,127,135,3,252
                        :REM*6Ø
46Ø DATA 7,255,224,87,255,Ø,7,Ø
    ,85,87,255,Ø,7,255,24Ø,87
                        :REM*69
47Ø DATA 1,254,7,Ø,63,199,Ø,7,2
    55,Ø,Ø,255,Ø,Ø,15,Ø:REM*219
48Ø DATA 64,Ø,Ø,Ø,Ø,Ø,64,Ø,Ø,Ø,
    2,Ø,Ø,Ø,1,Ø          :REM*7
49Ø DATA Ø,Ø,Ø,64,Ø,Ø,Ø,Ø,128,Ø
    ,Ø,Ø,Ø,Ø,Ø,Ø         :REM*69
5ØØ DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,32,Ø,Ø,Ø
    ,Ø,Ø,Ø,2,Ø           :REM*14Ø
51Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,132,Ø,
    Ø,Ø,Ø,Ø,4,Ø          :REM*2Ø6
52Ø DATA 128,Ø,Ø,Ø,Ø,2,Ø,32,Ø,Ø
    ,Ø,Ø,Ø,Ø,Ø,16        :REM*62
53Ø DATA Ø,64,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø
    ,128,Ø,Ø,Ø,Ø         :REM*247
54Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,1,Ø,Ø,Ø,
    Ø,2,Ø,Ø,5            :REM*53
55Ø DATA Ø,Ø,2,Ø,Ø,Ø,Ø,Ø,128,Ø,
    Ø,Ø,Ø,Ø,Ø,Ø          :REM*215
56Ø DATA Ø,32,1,Ø,16,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,64,Ø,Ø,Ø         :REM*182
57Ø DATA Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,Ø,1,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*196
58Ø DATA Ø,Ø,Ø,Ø,5,Ø,Ø,2,Ø,16,Ø
    ,Ø,Ø,Ø,Ø,Ø           :REM*255
59Ø DATA Ø,2,Ø,16,Ø,Ø,Ø,Ø,Ø,Ø,Ø
    ,Ø,Ø,Ø,Ø,Ø           :REM*14Ø
6ØØ DATA Ø,Ø,Ø,64,Ø,16,Ø,Ø,8,4,
    Ø,Ø,Ø,Ø,Ø,Ø          :REM*251
61Ø DATA Ø,Ø,Ø,4,Ø,Ø,Ø,Ø,128,Ø,
    4,Ø,Ø,Ø,Ø,Ø           :REM*6
62Ø DATA Ø,Ø,Ø,Ø,Ø,1,Ø,Ø,128,12
    8,Ø,Ø,Ø,Ø,Ø,Ø        :REM*94
63Ø DATA Ø,Ø,Ø,Ø,Ø,1,Ø,Ø,Ø,Ø,Ø,
    Ø,Ø,Ø,Ø,Ø            :REM*184
```

■

VIDEO BYTE II the only FULL COLOR! video digitizer for the C-64, C-128

Introducing the world's first **FULL COLOR!** video digitizer for the Commodore C-64, 64-C, C-128 & 128-D computer. **VIDEO BYTE** can give you digitized video from you V.C.R., LASER DISK, B/W or COLOR CAMERA or OFF THE AIR or CABLE VIDEO (thanks to a fast! 2.2 sec. scan time). New version 3.0 software features full RE-DISPLAY with MULTI CAPTURE MODE, MENU SELECT PRINTING, EXPANDED COLORIZING FEATURES, SAVE to DISK feature and much more!

FULL COLORIZING! Is possible, due to a unique SELECT and INSERT color process, where you can select one of 15 COLORS and insert that color into one of 4 GRAY SCALES. This process will give you over 32,000 different color combinations to use in your video pictures. **SAVES as KOALAS!** Video Byte II allows you to save all your pictures to disk as FULL COLOR KOALA'S. After which (using Koala or suitable program) you can go in and redraw or color your V.B. pic's. **LOAD and RE-DISPLAY!** Video Byte II allows you to load and re-display all Video Byte pictures from inside Video Byte's menu. **MENU DRIVEN!** Video Byte II comes with easy to use menu driven UTILITY DISK with V3.0 digitizer program. (64 MODE ONLY). **COMPACT!** Video Byte II's hardware is compact! In fact no bigger than your average cartridge! Video Byte comes with it's own cable. **INTEGRATED!** Video Byte II is designed to be used with or without EXPLODE! V5.0 color cartridge. Explode! V5.0's menu will return you to VIDEO BYTE II's menu. EXPLODE! V5 is the **PERFECT COMPANION!** Video Byte II users are automatically sent **FREE SOFTWARE** updates along with new documentation, when it becomes available. **PRINT!** Video Byte II will printout pictures in BLACK and WHITE GRAY SCALE to most printers. However when used with Explode! V5.0 your printout's can be done IN FULL COLOR 8 by 11's SIDEWAYS on the **RAINBOW NX-1000, RAINBOW NX-1000C, JX-80, Seikosha 3000 AI. (OKIDATA 10/20's (print larger 6" by 9") USER SLIDE SHOW program w/auto or manual display is standard with VIDEO BYTE program. And can be backed up!)**

ONLY $79.95

Why DRAW a car, airplane, person or for that matter . . . anything when you can **BYTE it. . .VIDEO BYTE it instead!**

NEW! SUPER CARTRIDGE by The Soft Group EXPLODE! V.5

The **MOST POWERFUL, DISK DRIVE and PRINTER CARTRIDGE** ever produced for the COMMODORE USER. Super **USER FRIENDLY** with all the features most asked for.

New FEATURES . . .(a) Faster non-blanking FASTLOAD. (b) MIRROR imaging of all HI-RES screens. (c) 4 Way color selection with insert, for all HI-RES screens. (d) Infinite FILE COPY for all SEQ. & PRG. files, copy your file only once, then write that file to as many disks as you like. . . great for single file copying by small user groups. (e) **FULL COLOR PRINTING of ALL COLOR HI-RES & MULTI-COLOR SCREENS to ALL COLOR DOT MATRIX PRINTERS** (not for INK JET printers). (f) Direct ONE KEY access back to VIDEO BYTE software thru EXPLODE! V5.0's 2nd MENU. (g) Supports all popular printer interfaces. (h) FREE upgraded utility disk.

SUPER **FASTLOAD** and **SAVE** (50K-9 SEC'S) works with **ALL C-64 or C-128's NO MATTER WHAT VINTAGE** or disk drives EXCEPT the 1581, M.S.D. 1 or 2. SUPER **FAST FORMAT** (8 SEC'S). - plus FULL D.O.S. WEDGE w/standard format! SUPER **SCREEN CAPTURE.** Capture and Convert **ANY SCREEN** to KOALA/DOODLE. SUPER **PRINTER FEATURE** allows ANY DOT MATRIX PRINTER even 1526/802 to print HI-RES SCREENS in FULL COLOR (using 16 shade GRAY SCALE). **ANY PRINTER or INTERFACE COMBINATION** can be used with SUPER EXPLODE! V5.0. NEW and IMPROVED **CONVERT** feature allows anybody to convert (even TEXT) **SCREENS into DOODLE or KOALA TYPE PICTURES w/FULL COLOR!** SUPER **FAST SAVE** of EXPLODE! SCREENS as KOALA or DOODLE FILES w/COLOR. SUPER **FAST LOADING** with **COLOR RE-DISPLAY of DOODLE or KOALA** files. SUPER FAST LOAD or SAVE can be turned OFF or ON without AFFECTING the REST of SUPER EXPLODE'S FEATURES. The rest of Explode! V5.0 is still active. SUPER **EASY LOADING and RUNNING** of ALL PROGRAMS from the DIRECTORY. SUPER **BUILT-IN TWO WAY SEQ. or PRG. file READER** using the DIRECTORY. NEVER TYPE a FILE NAME AGAIN when you use SUPER EXPLODE'S unique LOADERS.

CAPTURE 40 COLUMN C or D-128 SCREENS! (with optional DISABLE SWITCH).

All the above features, and much more!

PLUS A FREE UTILITY DISK w/SUPER EXPLODE!

MAKE YOUR C-64, 64-C or C-128*, D-128* SUPER FAST and EASY to use. THE BEST THING of ALL. . . IS THE PRICE!!! still only $44.95 or w/disable $49.95.

*Note UP GRADES for V5.0 are offered to V4.1 owners only. $20.00, w/dis add $5.

**Note V4.1 owners w/disable will be sent V5.0 w/disable for only $20.00

ONLY $44.95

All units come w/90 day WARRANTY. All orders add $3 for UPS BLUE LABEL S/H. UPS BLUE available only in 48 states. FOREIGN ORDERS are US FUNDS +$6.35 S/H. ORDER BOTH EXPLODE! V5 & VIDEO BYTE II together and receive FREE!! UPS S/H. ***Note all SALES are FINAL, 90 DAY WARRANTY covers PARTS & LABOR ONLY. All SOFT GROUP UTILITY DISKS COME w/built-in CATALOG of PRODUCTS.

* IN 64 MODE ONLY **TO ORDER CALL 1-312-851-6667** IL RESIDENTS ADD 6% SALES TAX

PLUS $3.00 S/H. NO C.O.D.'S. FOREIGN ORDERS U.S. FUNDS ONLY $6.35 S/H. Personal Checks 10 Days to Clear

MasterCard VISA

THE SOFT GROUP, P.O. BOX 111, MONTGOMERY, IL 60538

Circle 236 on Reader Service card.



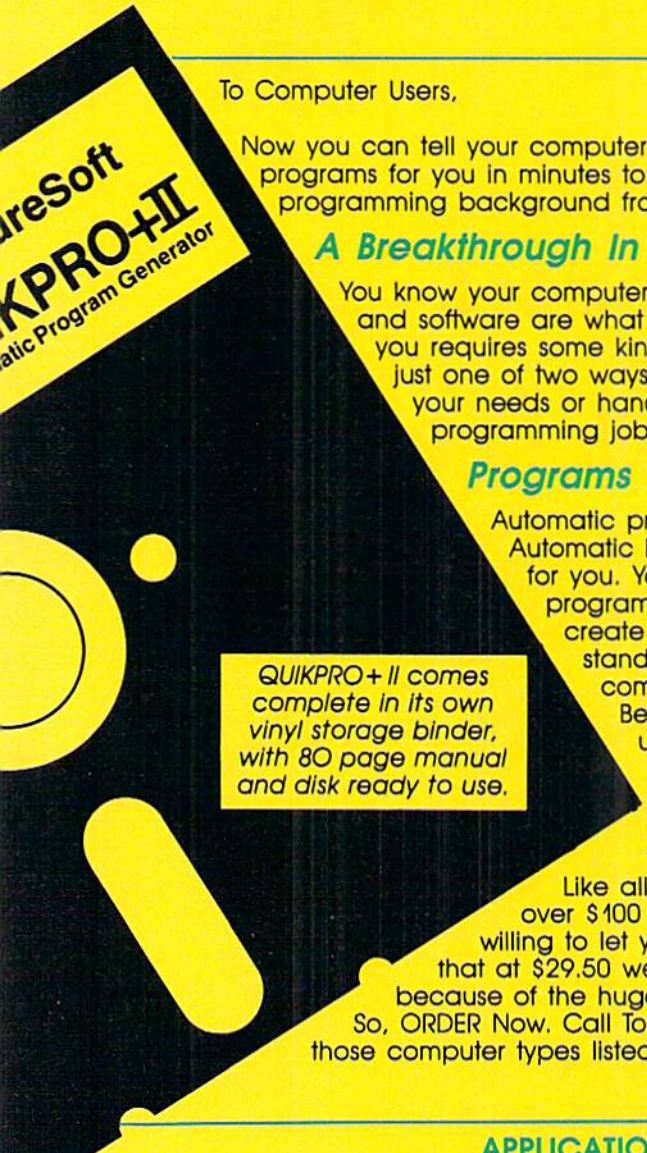
NOW! Your IBM
Tandy
TRS-80
Apple
Commodore
or
Compatible is . . .

a COMPUTER that WRITES PROGRAMS FOR YOU for ½ OFF*

** Save ½ or More on this Special Limited Offer*
Limited Offer Good for 30 Days

SAVE! Over ½ OFF an AUTOMATIC PRO

for your IBM or Compatible, Tandy,



QUIKPRO+II comes complete in its own vinyl storage binder, with 80 page manual and disk ready to use.

To Computer Users,

Now you can tell your computer what you want and your computer can write your programs for you in minutes to your custom design—easily and without requiring any programming background from you. . . with QUIKPRO+II.

A Breakthrough In Micro Computer Technology

You know your computer is fantastically fast. . . once it knows what to do. Programs and software are what makes it happen. Every task your computer performs for you requires some kind of program. Until now, you could only get programs in just one of two ways: buy a canned package that many times doesn't meet your needs or hand over hundreds or thousands of dollars for a custom programming job. Now, you have a better choice. . .

Programs Without Programming

Automatic programming is what it's all about. And, with QUIKPRO+II the Automatic Program Writer, your computer can actually write programs for you. You can quickly generate a new individual application program when you want it with QUIKPRO+II . Each program you create is a completely stand alone program that will run in the standard BASIC language you already have on your own computer.

Best of all, **you do not have to become a programmer** to use QUIKPRO+II. The QUIKPRO+II software becomes your personal programmer, waiting to do your work for you any time of the day or night you choose to use it.

How To Get Over ½ Off

Like all successful software QUIKPRO+II was originally sold for well over $100 per copy, and we have sold thousands. So why are we willing to let you buy at less than half price? . . . because our tests prove that at $29.50 we sell over ten times as many. Obviously this cuts our costs because of the huge volume, so **we pass all savings directly to you.**

So, ORDER Now. Call Toll-Free 24 Hours or Mail in your Order. This offer is limited to those computer types listed on the Special Discount Order Form.

APPLICATION CHECKLIST

Here are a few of the thousands of possible applications you can do with QUIKPRO+II. . . And most can be created in a few minutes.

BUSINESS USES
Customer Filing
Master Files for General Ledgers
Accts. Receiv.
Accts. Payable
Telephone Logs
Telephone Lists
Hotel/Travel/Data Reservations
Property Control
Library Catalogues
Inventories
Key Employee Data

EDUCATIONAL USES
Student Records
Grade Records
Teacher Lists
School Lists
Program Design
Course Design
Tuition Data
Enrollment Data
Property/Equipment
Athletic Schedules
Player Statistics
Test Scores
Menus

HOME & HOBBY USES
Personal Records
Check Lists
Club Rosters
Telephone Directories
Recipe Files
Medical Information
Insurance Records
Tax Records
Christmas Gift Lists
Deposit Files
Due Dates
Mortgage Data
Travel Records

Not to mention the unlimited number of general filing, and crossfiling, technical and scientific uses.

d get QUIKPRO + II GRAM WRITER

TRS-80 or Apple Computers.

The All-In-One Program

The custom programs you can generate from the new QUIKPRO + II will let you perform Personal Filing, Fast Data Retrieval, including Changes, Deletions and Searches. You can selectively Print Custom Letters, all kinds of forms (if you have a printer). This new feature is called **Free Form Reporting**. You can even include calculations in the programs you create. QUIKPRO + II is perfect for creating inventory programs. You can use QUIKPRO + II to prepare letters and selectively address the letters to only certain people. And of course you can **SORT** your reports so that they print out information in the order that you want it, or print out only certain information. In fact, you can actually use QUIKPRO + II to create an easy to use Data management program or a simple spread sheet. You can do all of this and more with this All in One Program . . . and the best part is that **you need no BASIC programming experience**.

How Does It Work?

You can do it simply by answering easy questions that appear on your screen. You won't have to learn any Computer commands or special Programming Lanuages. Instantly the QUIKPRO + II software instructs the computer to write efficient error free, BASIC Programs and puts the **Programs right onto your own disk, ready for you to use**.

The resulting custom program is truly a separate BASIC program. You can list it. You can modify it. You can customize it to you own liking. You can actually see what makes it tick.

What People Say About QP Software

From a GENERAL CONTRACTOR/CONSTRUCTION COMPANY owner:

*"The program seems to be good and I must compliment you on the documentation. It is the **best** of its kind that I have seen."*

From an INSURANCE AGENCY MANAGER:

*"I would like to compliment you on . . . **an excellent** . . . **program.**"*

From a HOBBYIST USER out in Oklahoma:

"I thought I would drop a quick note about QUIKPRO. I have it running and it ***will do*** *what I bought it for. I am very pleased with it . . ."*

This from a Vice-President of a Federal Savings & Loan:

*"In the past several weeks, I have used QUIKPRO software on four **different** programs. I am pleased with the results achieved so far. With your help over the telephone, I have created an /ISI file for a **large** data file that was **already** in existence, and the data file now works with an input program created by QUIKPRO."*

Proven and Widely Used

Businesses, Schools, Hobbyists and Government are among our thousands of users . . .

Johns Hopkins
U.S. Department of Agriculture
Proctor & Gamble
Federal Express
American Express
Monsanto
NASA
Blue Cross Blue Shield
Ford Motor Company
Duracell International
Westinghouse
General Electric
Random House
U.S. Navy
Tandy Corporation
NCR
DuPont
RCA
Satellite Broadcasting
New York University
Brooklyn High School
Blue Ridge School District
Public Schools of Grand Rapids
University of Alabama
Exxon
AT&T
Texas Tech
Clemson University
U.S. Dept. of Energy
U.S. EPA
University of Maryland
Mobil Chemical
University of Arkansas
University of Tennessee
Speed Queen Co.
Rhode Island Hospital
University of Oklahoma
University of Hartford
Many, many more . . .

Special Discount Offer
ORDER NOW

NOW! Your IBM, Tandy, TRS-80, Apple, Commodore, or Compatible is . . .

½ OFF or more

*a COMPUTER that WRITES PROGRAMS FOR YOU for ½ OFF**

ORDER NOW—Take Advantage of this SPECIAL OVER ½ OFF DISCOUNT OFFER

Yes, send me QUIKPRO + II for my . . .

Check your computer type:

Item No.	Reg Price
☐ (1015) IBM PC, XT, AT	$149
☐ (1015) IBM Compatible	149
☐ (1015) TANDY 1000, 1200	149
☐ (1015) TANDY 3000	149
☐ (1017) Apple IIc, IIe or Compatible	149
☐ (1016) Commodore 64 with Disk	149
☐ (1014) TRS-80 Model 4	149
☐ (1022) COLOR COMPUTER II or III (Radio Shack)	149
☐ (1013) TRS-80 Model 3	149
☐ (1011) TRS-80 Model 1	149
☐ (1012) TRS-80 Model 2, 12, or 16	149
☐ (1018) OSBORNE 1	149
☐ (1020) KAYPRO 2	
☐ (1023) KAYPRO 4	149

YOU PAY

$29.50

for any computer type

Limited Offer Good For 30 Days

SHIPPING & HANDLING $ 4.50

TOTAL ORDER $ _____

YOU MAY ORDER BY MAIL OR

CALL TOLL FREE 24 HOURS

1-800-221-3333, Operator K943

Payment By: ☐ VISA/MasterCard ☐ Check or Money Order
☐ COD ☐ Bill My Company (must be D&B rated & have Company P.O.)

VISA/MC # _____ Exp. Date _____

By Mail: Name _____

Address _____

City _____ State _____ Zip _____

Send To:

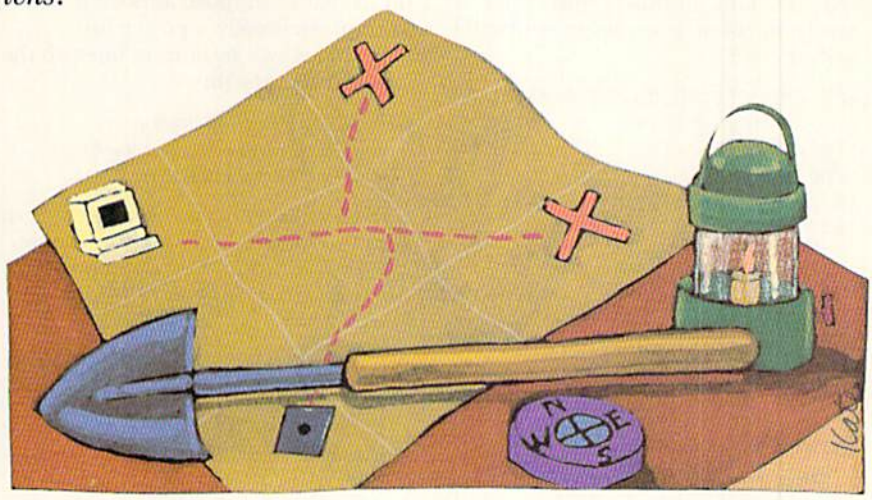
ICR Future Soft
PO Box 1446-OK
Orange Park, FL 32073

© 1988 OGRAMAT, INC. Limited offer, subject to change.

128 Mode

Here are some secrets that reveal an assortment of Basic 7.0 programming tricks.

By MARK JORDAN



WELCOME TO 128 MODE, a new *RUN* column that delves into the depths of the C-128 mother lode. Where shall we delve? Every-ware: the Vales of Software, the Hills of Hardware and the vast Regions of Else-ware. That should keep us busy for quite awhile!

One of the great joys of C-128 computing is digging out secrets of the machine: back doors, undocumented routines and alternative power uses. For our first expedition, we'll look at several of my favorite programming tricks.

Round and Round

How would you go about programming a sprite to move in a circle? Here's a sneaky way you might do it in Basic.

```
10 GRAPHIC1:GRAPHIC0          :REM*102
20 X=160:Y=150                :REM*114
30 SPRITE1,1,2                :REM*205
40 FORT=0TO360 STEP 5         :REM*153
50 LOCATE X,Y                 :REM*179
60 LOCATE 50;T                :REM*168
70 MOVSPR 1,RDOT(0),RDOT(1)
                              :REM*233
80 NEXT                       :REM*210
90 GOTO 40                    :REM*218
```

The trick involves using graphics commands (in this case, Locate and RDot) to move the pixel cursor around. The key lies in using the special notation Basic 7.0 allows for moving the pixel cursor a certain distance and angle from a starting point, as line 40 demonstrates. (See page 279 of your *C-128 System Guide* for more details.) By having the sprite follow the pixel cursor (line 50), you can use graphics commands to move sprites in unusual ways.

Want a smoother sprite orbit? Remove the STEP 5 in line 20. But be prepared for a slower waltz. You could get around this limitation in a program by using arrays to hold the X and Y coordinates, or you could use the following little machine language interrupt routine. Type it in and run it, and you'll find that every time you execute a graphics drawing command, sprite 1 will move with the pixel cursor.

```
10 FORT=0TO45:READA$:POKE3072+T
   ,DEC(A$):NEXT              :REM*37
20 GRAPHIC1,1                 :REM*158
30 SPRITE1,1,2                :REM*205
40 SYS3072                    :REM*145
50 DO:CIRCLE 1,170,100,70,50:LO
   OP                         :REM*15
60 DATA 78,A9,0D,8D,14,03,A9,0C
                              :REM*87
70 DATA 8D,15,03,58,60,AD,33,11
                              :REM*41
80 DATA 18,69,28,8D,D7,11,AD,32
                              :REM*168
90 DATA 11,29,01,F0,08,AD,E6,11
                              :REM*45
100 DATA 09,01,8D,E6,11,AD,31,1
    1                         :REM*201
110 DATA 8D,D6,11,4C,65,FA
                              :REM*96
```

Graphics commands such as Draw and Box happen too fast to help much with this routine, but Circle is loaded with potential. Page 249 of the system guide shows how to make ellipses, octagons, diamonds and triangles. With the above routine, your sprites can do the same.

Save the Rasters!

Rasters are the "television lines" that make up a monitor screen's image. On the C-128 there are 200 of these horizontal lines (400 in Interlaced mode, but that's another article). They disappear about as fast as they're painted onto your screen, but, thanks to some creative use of SShape, you can save them and then do interesting things with them.

Such as? Such as wavy screen displays, stretched out and slanted text, and, as this little program illustrates, a herringbone character display.

```
10 COLOR0,4:COLOR1,4:GRAPHIC1,1
                              :REM*224
15 SPRITE1,1,2                :REM*188
20 FORT=0TO1:CHAR1,10,T,"VOILA!
   {2 SPACEs}HERRINGBONE":NEXT
                              :REM*146
30 FF=1:COLOR1,1              :REM*200
40 FORT=0TO15                 :REM*253
50 SSHAPE A$,0,T,319,T        :REM*192
60 GSHAPE A$,OF,T+88          :REM*70
70 OF=OF+FF:IFOF=70ROF=0THENFF=
   -FF                        :REM*74
80 NEXT                       :REM*210
```

Line 50 is the raster-saver. When using SShape, the last four parameters are the upper-left and lower-right coordinates of the area to be saved. Note that this routine saves just one skinny line of the graphics screen each time through the For-Next loop that starts in line 40, and that it works from the left side of the screen (0) to the right (319) but on the same vertical line (T) each time.

Line 60 plays with these saved rasters by using GShape, SShape's fraternal twin. By using an offset to place the raster back down (the OF in lines 60 and 70), a zig-zag pattern is easily achieved.

This technique is powerful, and I promise to dedicate a full column to it in an upcoming issue.

Keying on the Fly

The 128-mode Key command is very popular because it provides what 64 mode can't: user-definable function keys. It does this by placing characters in a queue waiting to be processed by the operating system.

One oft-overlooked benefit of Key is ►

ILLUSTRATED BY KATE BRENNAN HALL

that you can use it while a program is running. Let's say you're writing a little database of some sort and want to give the user the convenience of having to type in long phrases only once—a macro of sorts. You could use the following code:

```
1ØØ INPUT"TYPE IN YOUR MACRO FO
    R THE ";K1$          :REM*46
11Ø KEY1,K1$             :REM*67
1ØØØ DO                  :REM*215
1Ø1Ø GETKEYA$:PRINTA$;   :REM*155
1Ø2Ø LOOP                :REM*236
```

Then, whenever you press F1, the whole string of characters you typed in line 100 will get processed just as if you were typing them afresh. Try this trick in a program of your own; it's potent and easy to do.

Power Keying

Listing program lines is about the most mundane thing a Basic programmer does, and using the function keys to do it is a natural. In fact, F7 comes defined to list lines.

But there's listing and then there's "listing"—power-listing, that is. Here are three tips:

1) Define your list lines like this:

```
KEY 1,"{CTRL/4} {CLR-HOME}
COLOR0,1:COLOR4,1:SLOW:GRAPHIC0:
LIST(starting line#)-(ending
line#)"+CHR$(13)+ "{CRSR UP}{CRSR
UP}"+CHR$(27)+"@"
```

This will always bring you back into Edit mode with the screen, cursor-color and Graphics mode of your choice, no matter what you were doing before. (Of course, you should change the specifics to suit yourself.) And it will shut off that annoying Insert mode (escape/A) you might have been using, as well as get rid of that even more annoying Ready prompt. Definitely a power list!

2) To list two sections of lines on the same screen, try this:

```
KEY 1,"LIST(starting line#)-
(ending line#):LIST(starting line#)-
(ending line#)"+CHR$(13)
```

Works like a charm, as long as there aren't too many lines in either range.

3) BSave your key definitions for whatever program you're working on. Here's how:

```
BSAVE "KEY.THIS.PROGRAM",B0,P4096
TO P4352
```

Then include the following line as the first one in that program you're working on:

```
BLOAD "KEY.THIS.PROGRAM"
```

Now, every time you boot up to work, your keys will be ready to go.

Off-Keying

For richer, fuller sound effects, mistune all three C-128 voices just a little. That's right, make them sing off-key. The result, unlike human singing that's off pitch, is pleasing. And it's easy to do: Simply adjust very slightly the second parameter in the Sound statement. Try this one from the keyboard:

```
1Ø SOUND1,5ØØØ,5Ø:SOUND2,5Ø2Ø,5
   Ø:SOUND3,5Ø4Ø,5Ø      :REM*2Ø6
```

Alas, the Play statement is set in ROM and is mathematically tuned. Another case of perfectionism gone awry.

Taking CMD of Things

Almost everyone uses CMD to do one thing only: print program listings. That's like using your biceps just to check your watch. CMD has got muscle—use it.

Use it to save to a disk file anything you can print on the screen: program lines, machine language listings, screen dumps, variables, and so on. Here's what you need to type in to start the process:

```
DOPEN #2,"TEMPORARY",W:CMD 2
```

Now, anything that would normally go to the screen will be saved to the disk. I used this technique to save all the listings in this article. First I typed the routines in Basic and tested them. Then I opened a temporary file as above. Next I typed LIST. . .but nothing showed up on the screen, of course, because the output was going to the disk. Then I closed the file (a crucial step—just type DCLOSE and hit the return key when you're done). Finally, I booted up my word processor, found the file and loaded it, confident that it would be free of mistakes.

Okay, shovels up. We didn't dig very hard or very deep, but we have exposed a few handsome nuggets. As time goes by, we'll discover lots more. Until next time, keep digging! ■

Mark Jordan, a high school English teacher by profession, has been programming Commodore computers since 1983.

TAX COMMAND©

RUN

REVIEW SAYS

". . .contains more forms and schedules than the other programs. It's generally a more professional program, combining completeness and speed."

"The program switches quickly between forms and schedules . . .doesn't force you to save data and makes subtotal and tax calculations automatically."

March ***RUN****, 1989*



Since 1982

Time Saving • Easy-To-Use • Powerful • Affordable • Guaranteed

RUN says, "This program is suited to the professional tax preparer for completing most returns and quickly checking previously prepared returns." Tax Command is all menu operated. Anything you put in can be easily changed with the help of the built-in calculator. Tabulations are made automatically and schedule totals fed to the proper line on other schedules. You can save data, print for record-keeping or directly on IRS forms. Forms covered include: 1040, Schedules A thru F (incl. new D1), R, SE, Forms 2106, 2119, 2441, 3903, 8615 and estimated tax worksheets. New for 1989 are forms 4562 (Depreciation), 6251 (alternative minimum tax) and the ability to use a 1764 RAM cartridge. Yet despite Tax Command's power and completeness, **90% of users recently surveyed listed EASE OF USE as the primary reason for using Tax Command year after year.**

OUR GUARANTEE: Return for a refund if not satisfied. **Tax Command 1989 — $59.95** Shipping/Handling (US - $2. Foreign air - $3.95) Specify Commodore 64 or 128. Wisconsin residents add 5% sales tax.

Send Check or Credit Card information to: Practical Programs Inc., PO Box 93104, Milwaukee, Wisconsin 53203. Phone orders, CALL:

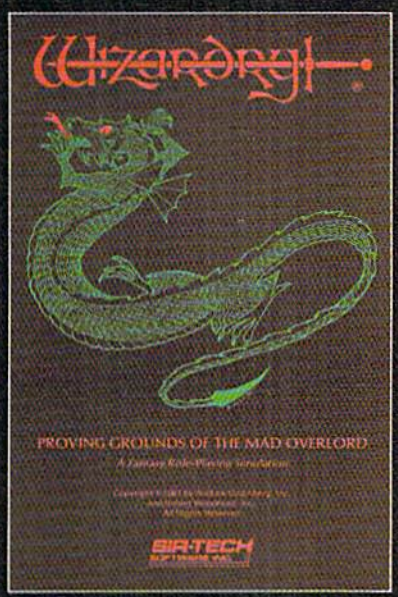
Users get ½ price annual updates, even if they switch to a PC.

1-800-776-7047

Circle 11 on Reader Service card.

Circle 133 on Reader Service card.

Wizardry®



Now the world of Wizardry comes to Commodore 64/128

PROVING GROUNDS of the MAD OVERLORD

Also available for:
Apple II Series,
IBM PC & compatibles,
Tandy 1000 SX & EX,
Macintosh

With your Commodore 64 or 128 you can now experience an exciting initiation into the internationally-acclaimed world of the Wizardry Gaming System.

Begin with the first scenario*: Proving Grounds of the Mad Overlord. It challenges you to overcome devious tricks and sudden traps, strange and mysterious encounters, maze upon maze of puzzles, stimulating and intricate sub-plots and sophisticated themes. Ingenious multi-level, mind-bending tests abound with vile creatures, unspeakable villains, courageous adventurers and strong allies to hinder and help you achieve ultimate victory.

SIR-TECH

Sir-tech Software, Inc.,
P.O. Box 245, Ogdensburg, NY 13669
(315) 393-6633

® Registered trademark of Sir-tech Software, Inc.
© Copyright by Sir-tech Software, Inc.
Commodore is a registered trademark of Commodore International

PLAY IT TO THE HILT!

* Many other Wizardry scenarios coming for Commodore players.

GOLD MINE

Welcome to the Gold Mine, an exciting and helpful compilation of game tips for C-64 and C-128 users.

By LOUIS F. SANDER

FOR ALMOST TWO YEARS, Gold Mine's gaming tips have been one of the most popular features in *Commodore Magazine*. Now that it's joined *RUN*, even more readers can gather nuggets from the Mine.

For those new to the column, Gold Mine has tips on game play for the C-64 and C-128, submitted by readers from around the world. It emphasizes tips from recent bestselling games without overlooking past favorites.

While we try to ensure that all of the tips will work as published, you should be advised that some tips work only on certain 64 or 128 configurations.

ARCTICFOX: If fighters are chasing you, head for a mountain or the force field. They may shoot, but if you're close enough to the obstacle, they'll slam into it, ending that battle.

—JEFF COX
BREVARD, NC

THE BARD'S TALE III: After you complete the Chaos dungeon, you can make new characters, then take them in with the rest of the group to kill Brilhasti again and again. This will give the new characters about 35 levels. It's best to have Bede or Heal before trying this.

You get an extra 25,000 experience points every time you kill Brilhasti.

You need a longbow and black arrows to kill Sceadu.

—STEVE & LINDA SEIDL
COX'S MILL, WV

MONOPOLY: To give or receive cash when two players are working together, select the Trade option. Use the Quit option within the Trade option to select no property for either player. Then enter an amount after the Cash Amount prompt.

—GENE LETELLIER
ADDRESS UNKNOWN

OUT RUN: Always try to have the Ferrari pushed to the max by the first turn of the game. Also, keep the joystick pushed forward and take the inside lane on the turns. Let the car sort of glide across the lanes.

—ACE
ADDRESS UNKNOWN

ULTIMA IV: Do not kill creatures fleeing from you after battle. It will make it harder for you to become an avatar.

Help others whenever you can. Give generously to the poor, and donate units of blood to the Mystic Healer in Skara Brae. He is located on an isle near Spiritwood, roughly southwest of the Great Castle.

Many items are "buried" in the ground, so you may have to search three or four times for them. Each search is equivalent to digging deeper.

—PETER LALTOO
SAN FERNANDO, TRINIDAD

CONTRA: At the bottom of the waterfall stage, jump up to the next ledge. As soon as you get there, shoot the pillbox twice and jump down again. Wait for the enemy to pass; then jump up again, jump across and get your barrier. You should now be able to jump straight up to the top without being killed.

—BRADLEY POCATELLO
ADDRESS UNKNOWN

POOL OF RADIANCE: Do you ever have problems where your players don't seem to have enough hit points or experience? Here's a solution.

When you create your player, put him in the party only. Get his or her equipment, then head to the training center and enter the sparring room. When asked if you want to spar, answer no. You'll then be asked if you want someone to join your party. Answer yes, and get a group of fourth level fighters or other people.

By the way, you can tell the level of the NPC by the number of shares they ask for. For example, two shares indicates a second or third level NPC.

After you have a high-level player, you can go back to your original disk. Remove him from your party, and he'll be saved to the disk. After a while, you'll have lots of high-level people on that disk. Restart the game by rebooting and creating a new party.

—CHAD EVANS
FREMONT, IN

DESERT FOX: Try to avoid Ambush, Convoy and Minefield conflicts, because you are most likely to be damaged in them. Send the planes to Pardia; then go first to the battle closest to Tobruk. Head northeast from there, where there are only a few encounters. Finally, head to either battlesite.

—CHARLES MURACH
LANSING, IL

EOS: EARTH ORBIT STATION: On the Search for Life mission or any long mission, play with all four players, using one of them for money. Use one player for research and another for exploration. Trade tech points and money between players.

—RYAN FILLMORE
GRIDLEY, CA

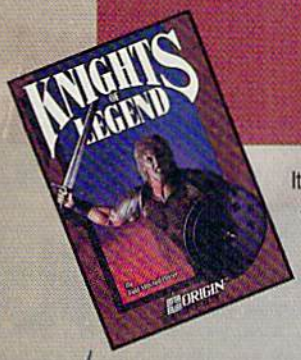
IKARI WARRIORS: At the start of each new level, a tank appears halfway up the screen. Instead of risking a life to get it, you can move one or two inches to the right of the screen. When you get there, pull back on your joystick, press the firebutton and the grenade button at the same time. You'll automatically be in your tank. This works on both the first and the second tanks.

—JOHN ERICSON
NEWINGTON, CT

HOLLYWOOD HIJINX: To get up to the fourth floor, fill the rusty bucket with water from the pond. Then enter the closet and hang the bucket on the third peg. Now, quickly go up the stairs, go on top of the closet and wait. The ►

KNIGHTS OF LEGEND™





It has taken more than eight calendar years to create **KNIGHTS OF LEGEND**, the crowning achievement in medieval fantasy and role-playing. We've developed the most comprehensive combat system ever, surrounded by a meticulously crafted world of strategy, action and emotion. The lands are filled with hundreds of unique personalities and dozens of towns and hamlets — and the people are filled with spirit, conflict and honor.

ORIGIN™
We create worlds.™



IBM/COMPATIBLE VERSION



IBM/COMPATIBLE VERSION



APPLE VERSION

Available for: IBM/Tandy/compatibles, C-64/128, Apple II series; *coming soon for*: Amiga. Actual screens may vary.

Can't find KNIGHTS OF LEGEND at your local retailer? **Call 1-800-999-4939 (8am to 5pm EST) for Visa/MC orders; or mail check or money order (U.S.$) to ORIGIN. All versions $49.95; shipping is FREE via UPS. Allow 1-2 weeks for delivery. ORIGIN, P.O. Box 161750, Austin, Texas 78716.**

Circle 239 on Reader Service card.

closet will move up in a couple of turns.

The buttons in the game room have the following functions: Red shoots flame; White swipes at both puny planes; Blue grabs the ring from the monument; Black stomps on tanks and radar truck; and Green moves.

On the piano, play the song you heard in the film room. When the door opens, go down and get the South pillar, then go up and push the piano south. Go back down and get the North pillar, then enter the passage to find the parking meter.

—SPC Jeff Collins
APO, NY

The Legend of Blacksilver: To increase your hit points to the maximum of 200, go to any of the temples. When the priest asks you for a tribute, offer the same number of gold pieces as the number of hit points you need. It works every time.

The Tongue of Flame magic spells are good investments, costing only 25 gold pieces. They pay for themselves in no time if you use them to kill monsters.

King Dureck's Castle is by the ocean, south of the Iron Forge.

At the Metal Works display, use the blue gem that you found at Dureck's Castle. Then buy an Armor Enhancement spell and cast it on your armor.

—Tommy Dyer
Jacksboro, TX

The Three Stooges: In the hospital, try to stay in the middle of the hall, and don't run too fast. In boxing, stay on one side of the street; you can make it on time by running slowly. In Cracker, wait for the oyster to come up.

—Alex Mau
Brooklyn, NY

Wasteland: When you're ready to start a siege on the Outlaw Hideout in the city of Quartz, you can surprise them by attacking from the roof. To do this, go to the Space of No Design, between the Outlaw Hideout and the building to the left. Remember to bring a rope and something to break the glass skylight with.

When you're badly wounded on the second level of Base Cochise, you need to get back to the surface. Just go to the one-way force field to the left of the stairs. This will take you to the beginning of level one.

—Bill Jentarra, Jr.
Tonopah, NV

If you like what you see in this column, you might want to buy *Lou Sander's Gold Mine*, which has over 1200 tips for over 500 Commodore games. Look for it in your bookstore or send for it by calling TAB Books toll-free at 800-822-8158. Ask for Book #3323. ■

To submit your own C-64 or C-128 game tips for consideration, send them to Gold Mine, PO Box 101011, Pittsburgh, PA 15237. You must state which Commodore computer your tips are for, or we cannot publish them. Be sure to include your name and complete address. RUN *will pay $5 per submission upon publication.*

WIN BIG MONEY!

As seen on the NBC Today Show

The COMPLETE
Lottery TRACKER and WHEELER!™
Use Your Computer to help YOU pick the WINNING NUMBERS!

★ Record hundreds of past winning lottery numbers and dates! ★ Track as many State and International lottery games as you want . . . NO LIMIT! ★ Produce EXPERT trend charts to identify those HOT and DUE numbers! ★ Data Base Print . . . Now Store up to 300 Drawings (50% increase in storage area)! ★ Automatic FIFO (First-In . . . First-Out) Data Base Features! ★ BACK-UP and RESTORE of data base now automatic from menu! ★ Check your bets for winning combinations . . . Record ALL systems played including BONUS NUMBERS where applicable! ★ Print Charts, Statistics, Recorded Numbers, and WHEELING SYSTEMS! ★ NEW Skip and Hit Chart Included.

Choose From The Worlds Most Popular Wheeling Systems

How Have Our Customers Reacted? . . . *"I Hit 54 CASH PRIZES the first 8 weeks with the help of your program! . . . Over $2100 ahead AFTER ALL EXPENSES!" says B.C. of El Paso, Texas . . . and B.L.M. of Wilmington, Delaware says, "I won 4 cash prizes the first 2 times I used the TRACKER and WHEELER!" . . . A.A.B. of Ozark, Alabama, a member of a lottery group writes, "The COMPLETE Lottery TRACKER and WHEELER . . . has produced 48 winning tickets for a total of $10,485." These are only a few of the letters we have received from CASH winners AROUND THE WORLD!*

No other lottery software package has all of these features. When we say complete, WE MEAN COMPLETE! Easy to use MENU DRIVEN SCREENS! Printer and Color Monitor recommended but not required for use. All wheeling systems and program features now take only seconds to complete! You will LOVE this program in COLOR! Why pay up to $150.00 for less?

DON'T HESITATE . . . ORDER NOW!
Only $39.95 Plus $2.00 S&H

Lottery Winning Strategies!™
Audio Cassette Tape

Learn Lottery Winning Strategies on this 45 minute Cassette Tape! This audio tape is a super compliment to our lottery computer programs and an excellent choice if you don't own a computer. Learn lottery number selection methods which can improve your odds for winning by HUNDREDS of times. This NEW, REVISED Audio Cassette tape fully covers strategies for lottery number selection while explaining, in detail, what to look for and what to avoid in your methods for placing lottery bets.

Look at JUST SOME of the features covered by the information on this cassette:

★ Develop your OWN winning numbers . . . ★ What numbers should you PLAY and AVOID . . . ★ Which games are BEST to PLAY and WIN . . . ★ An introduction to WHEELING SYSTEMS . . . ★ When and why you should sometimes play RANDOM NUMBERS . . . ★ Develop your own TREND CHARTS . . . ★ NUMEROLOGY theory and use . . . ★ and MUCH, MUCH MORE!

This tape includes everything you need to play INTELLIGENTLY and WIN! The information on this audio cassette tape represents years of research of ACTUAL lottery winners. Whether you play U.S. STATE or International lotteries, IT'S ALL HERE ON "LOTTERY WINNING STRATEGIES!"



Still Only $9.95 Plus $2.00 S&H
Listen at home, at work, or in your car!

Visa/M.C. Call Toll Free **1-800-824-7888** In Canada **1-800-544-2600**

Entertainment-On-Line,® Inc.
The PREMIERE Lottery Software and Audio Products Company
P.O. Box 553, Dept. RM, Westboro, MA 01581

© 1989 Entertainment-On-Line,® Inc. All Rights Reserved. NIPA

Circle 158 on Reader Service card.

MONTGOMERY GRANT

RUN 12 89

ESTABLISHED 1968

OUTSIDE USA & CANADA....CALL
(718)692-0790
FOR CUSTOMER SERVICE
Call:Mon-Thurs:9:30am-4:30pm
Fri. 9am-3:30pm (718)692-1148

Retail Outlet: Penn Station, Main Concourse
(Beneath Madison Square Garden) NYC, NY 10001
Store Hours: Mon-Thurs 8:30-8/Fri 8:30-3:00/Sat-Closed/Sun 9:30-7

FOR ORDERS & INFORMATION IN USA & CANADA

1-800-759-6565

OR WRITE TO:
Montgomery Grant Mail Order
Department. P.O. Box 58
Brooklyn, NY 11230

FAX NO. 7186923372
TELEX 422132 MGRANT

Extended Holiday Season Order Hours: Mon-Thurs, 8:30am-8pm / Fri, 8:30am-3:45pm / Sat-Closed / Sun, 9:30am-6:30pm

NO SURCHARGE FOR CREDIT CARD ORDERS/WE INVITE CORPORATE & EDUCATIONAL CUSTOMERS
DISCOUNTS FOR QUANTITY ORDERS / RUSH SERVICE AVAILABLE / TOLL FREE TECHNICAL SUPPORT

AMIGA



AMIGA 500

Amiga 500 w/512K Built-in 3.5" Disk Drive Mouse FREE Software

$549

AMIGA 500
RGB COLOR PACKAGE

Amiga 500 w/512K Built-in 3.5" Disk Drive Mouse RGB Color Monitor Free Software

$749

AMIGA 500 With 1084.....$829
AMIGA 500 With 1084 & 1010 3.5" Drive.....$999

PERIPHERALS

AMIGA 1010 Disk Drive..$179
A-1680 Modem.....$99.95
20, 30, 40, 60, 80MB Hard Drives for AMIGA 500/2000.....IN STOCK
A-2088D Bridge Card.....$499
A-2286D Bridge Board.....$1149
A-501 Memory Expansion.....$149
A-1084 RGB Color Monitor.....$289
AMIGA A-2058 RAM Expansion.....$699

ALL OTHER AMIGA PERIPHERALS & HARD DRIVES IN STOCK



AMIGA 2500

3MB RAM Keyboard Mouse Built-in3.5" Disk Drive 40MB Hard Drive System Software Amiga Basic

$3299

C= 64C commodore C= 128= D

$119.95

INCLUDES:
FREE GAME ($19.95 VALUE)
GEOS PROGRAM
QUANTUM LINK SOFTWARE & MEMBERSHIP

C-128D with Built-In Disk Drive

$429



COMMODORE C 64-C
STARTER PACKAGE

C/64-C with Excelerator Plus Disk Drive Two Games Softwares GEOS Program Quantum Link Software & Membership FREE Gift Offer

$229

COMMODORE C 64-C
COMPLETE PACKAGE

Commodore C-64/C Computer
Commodore 1541-C Disk Drive
Commodore Color Printer
12" Monitor GEOS Program
Quantum Link Software & Membership

$319

COMMODORE C 64-C
COLOR PACKAGE

Commodore C-64/C Computer
Commodore 1541-C Disk Drive
Commodore Color Printer
Color Monitor GEOS Program
Quantum Link Software & Membership

$429

1525 Dot Matrix Printer.....$99
MPS-1250.....$219



1571 Disk Drive
CALL

1581 Disk Drive
CALL

1541II Disk Drive
Includes Free Game! (a $19.95 Value)
$159.95

1750 RAM Expansion
CALL



1084 Monitor
$289.95

1802 Monitor
$189.95



COMMODORE 128D
COMPLETE PACKAGE

Commodore C/128-D Computer with Built-in Disk Drive
Commodore Color Printer
12" Monitor

$479

COMMODORE 128D
DELUXE PACKAGE

Commodore C/128-D Computer with Built-in Disk Drive
Commodore 1902 RGB Color Monitor
Commodore Color Printer

$629

C/128-D Complete w/1084 Monitor **$699**

1700 RAM Expansion.....$99.95
#1764 Expansion Module.....$114.95
XETEC S. Graphix Jr. Interface.....$29.95
XETEC S. Graphix Sr. Interface.....$49.95
XETEC Supergraphix Gold.....$74.95
C-64/C -64C Power Supply.....$29.95
C-1660 Modem.....$19.95
C-1670 Modem.....$69.95
COMMODORE 1350 Mouse.....$26.95
XETEC Lt. Kernal 20MB Hard Drives for:
C-64C.....$799
C-128 & 128D.....$849
XETEC 40MB Hard Drive for:
C-64/128 &128D.....$1199

SEAGATE
20, 30, 40, 50, 60, 70, 80MB
HARD DRIVES IN STOCK

WE CAN RECONFIGURE ANY OF OUR COMPUTER PACKAGES TO YOUR SPECIFICATIONS. CALL FOR INFORMATION.

AMIGA
AMIGA 2000

A-2000 Computer w/Keyboard 1MB Expandable to 9MB Built-in 3.5" Disk Drive Mouse FREE Software

$1459

AMIGA 2000 w/1084 Monitor.....$1739

AMIGA 2000
RGB COLOR PACKAGE

A-2000 Computer w/Keyboard 3.5" Disk Drive RGB Color Monitor Free Mouse & Software

$1659

AMIGA 2000 w/SEAGATE 40MB H.D.....$1949

AMIGA
2000HD

1MB RAM 40MB Hard Drive Built-in 3.5" Disk Drive Keyboard Mouse Amiga Basic System Software

$2099



COMMODORE COLT

MONITOR INCLUDED



COMMODORE COLT Computer 640K 4.77-7.16MHz 2 360K Floppy Disk Drives Mono Monitor MS DOS & GW Basic

$659

w/1 Floppy & 20MB Hard Drive.....$859
COMMODORE COLT w/1084 MONITOR.....$869

COMMODORE PC-40III



$1599

IBM AT COMPATIBLE 80286/12MHz 1MB RAM 40MB Hard Drive 1.2MB Floppy Video Graphics Card 12" VGA Monitor MS DOS 3.3 GW Basic

PRINTERS



PR-3000
Daisy Wheel Letter Quality Printer

$59

HEWLETT PACKARD

HP Deskjet.....$569.95
HP Deskjet Plus.....$679.95

EPSON

LX-810.....$179.95
LQ-510.....$329.95
FX-850.....$329.95

star

NX-1000.....$154.95
NX-1000C.....$159.95
NX-1000II.....$164.95
NX-1000 Rainbow.....$209.95
NX-1000C Rainbow.....$209.95
NX-2400.....$277.95
XR-1000....$339 XR-1500....$429
XR-2410....$429 XR-2415....$549

NEC

P2200.....$319.95
P5200.....$489.95

CITIZEN

180 D.....$149.95

OKIDATA

OKIMATE 20.....$139.95
OKIDATA 183.....$249.95
180.....$219.95
320.....$319.95
390.....$439.95
321.....$439.95

Panasonic

KXP-1180.....$177.95
KXP-1191.....$229.95
KXP-1092I.....$269.95
KXP-3131.....$269.95
KXP-1124.....$299.95
KXP-1524.....$519.95
KXP-1595.....$419.95

MasterCard VISA

Certified Check, Bank Check, Money Orders, Approved PO's, Mastercard, Visa, Amex, Diner's Club, Carte Blanche, C.O.D.'s accepted. Please call before submitting P.O.'s. No additional surcharge for credit card orders. Non-certified checks must wait 4-6 weeks for clearance. NY residents add applicable sales tax. Prices and availability subject to change without notice. Not responsible for typographical errors. Return of defective merchandise must have prior return authorization number or returns will not be accepted. IBM XT AT are registered trademarks of International Business Machines Corp. Please add 5% shipping & handling (min. $6). Volume orders over $2000 are discounted to 3% shipping & handling. Canadian orders add an additional 5%. APO/FPO orders please add 10% shipping & handling. All APO/FPO are shipped first class priority air All orders can be shipped Air Express. Call for details. D.C.A. #000233

GAMES GALLERY

These mind games challenge you to outthink, not outshoot, your computer opponent.

By BOB GUERRA



I ADMIT IT. I enjoy obliterating aliens as much as the next person. For me, there's something relaxing about zapping away my problems with a laser pistol, especially after spending the day dealing with problems that aren't as easily eliminated. Sometimes, the idea of actually using my brain to win a computer game seems like cruel and unusual punishment.

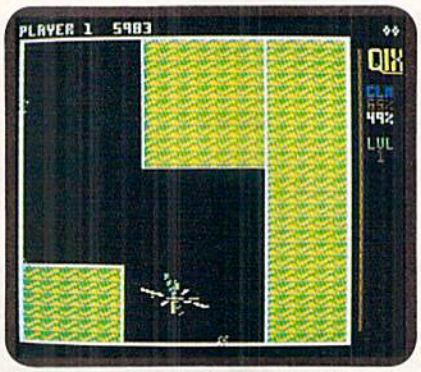
There are, however, those occasions when my brain rebels. Maybe it's lack of stimulation, or perhaps it's guilt. Whatever the reason, my gray matter sometimes seems to scream "use me!" When this happens, I could happily tackle a *New York Times* crossword puzzle, try to figure out what my kids see in Pee Wee Herman or even attempt to program the VCR.

Instead, I usually reach for a different type of computer game—one that will give my mind as much of a workout as my joystick. Here are some of the games that have recently given me reason to cerebrate. All six are entertaining, addictive and challenging. The first three appeal to the side of my brain that controls fast thinking; the second batch appeals strictly to my sense of logic and strategy.

TETRIS

How is it that a game like Tetris, which seems only slightly more complicated to program than Pong, has become one of the hottest computer games? Perhaps more important, why did we let the Russians think of it first? Spectrum HoloByte's Tetris has already earned itself a place in the Computer Game Hall of Fame because of its deceptively simple, yet addictive, gameplay—a cliche I know, but it is true. The program's status as a classic is confirmed by the recent appearance of Tetris-inspired games like Accolade's Mental Blocks (see below) and California Dreams' Blockout.

In case you've been hopelessly lost in a dungeon for the past few years, here's how Tetris works. You begin with an empty pit. Various shaped blocks fall, one at a time, into the pit. Each block is made up of four small squares; some resemble the letter L, others look like T, and so forth.



Qix dares you to avoid getting zapped by its charge of electrical energy.

The blocks fall slowly at first, but their speed increases as the game progresses. Your job is to use your joystick to guide the falling blocks into place, rotating them if necessary, to form complete layers of blocks across the pit. Points are scored for every block that enters the pit and for finishing rows.

You don't need an extensive mental database to excel at Tetris—just a turbocharged CPU. Early on, when the blocks are falling slowly, Tetris is fairly easy to play. As the blocks speed up, however, and your uncompleted rows begin inching toward the top of the pit, it takes a quick and decisive mind to analyze the situation and slide each new piece into place. For a game with "blocky" graphics, Tetris is pretty hard to resist.

QIX

Back when every lunchtime saw the arcades packed with truant school children and businessmen in three-piece suits, Qix was one of the hottest coin-ops you could drop a quarter into. Its relatively slow pace and strategic challenge set it apart from games like Defender and Pac Man and made it a favorite among "thinking" arcade addicts. Thanks to Taito's faithful reproduction of the coin-op classic, you can now play Qix at home.

Qix (pronounced "Kicks") is a drawing game that challenges you to fill in at least 65 percent of the screen with blocks of any size or shape that you choose to draw. As each block is completed, it is filled with a colorful pattern. However, roaming around the screen along with your drawing cursor is an unpredictable surge of electrical energy—Qix—which can zap any line that has yet to be closed into a solid block. So, you are vulnerable whenever you're attempting to complete a new block. If you play it safe for too long, however, you'll be forced into action by deadly Sparx that travel along the existing lines.

The main strategic dilemma here is whether to draw with bold strokes in an attempt to fill large chunks of the screen as quickly as possible, or to patiently build a network of smaller blocks that can eventually be linked with short lines to form larger sections. For advanced players, however, the real challenge is in trying to trap Qix in as small a space as possible.

MENTAL BLOCKS

As I mentioned above, Mental Blocks is a game that seems, at least in part, to have been inspired by Tetris. Mental Blocks is actually a collection of three different brain-teasing contests. The first game, Free Fall, has two variations—one that's essentially identical to Tetris, but another that lets you fill a three-dimensional pit with three-dimensional blocks. Thus, you can rotate the falling blocks along three different axes and slide them forward into the background as well as from side to side.

Unfortunately, the other two brain teasers are reminiscent of those multiple-choice intelligence tests to which we used to bring our sharpened No. 2 pencils. The first displays a solid box, and you're asked to select the cube's counterpart from among four unfolded patterns; the second requires you to choose the next logically following geometric shape in a series.

Mental Blocks can be enjoyed by one or two players, and high scores are saved to disk. Best of all, because Mental Blocks is part of Accolade's Avantage ►

The Best Prices & Service

NEW
GEOS 128 2.0

Includes:
- Geowrite Workshop 128
- Geospell 128
- Both 80 and 40 column modes
- Many dramatic improvements

68956 $44.95

Diskette Storage

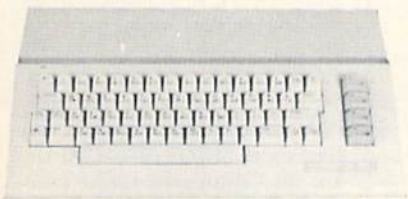


$9.95

- 100 disk (5.25") capacity.
- Lock and keys for extra security and easy carrying.
- Includes 8 index dividers for organization of filing and retrievel.
- Made of durable anti-static, high impact plastic.
- Attractive smoke colored lid.

Sug. Retail $19.95
66826 $9.95

$129.95



Commodore 64C

The complete computer for home, school and small business. Supported by high-quality peripherals and over 10,000 software programs. Full typewriter-style keyboard, 64K RAM, eight sprites, three voices.

64C Computer 54574 $129.95

Commodore Hardware

1670 Modem, 1200 Baud	36952	$69.95
1351 Mouse C64/C128	37885	$32.95
1802C Composite Monitor	54595	$CALL
1581 3.5" Disk Drive	74023	$179.95
1541 II Disk Drive	54586	$179.95
1764 RAM Expansion C64	72513	$114.95

$59.95

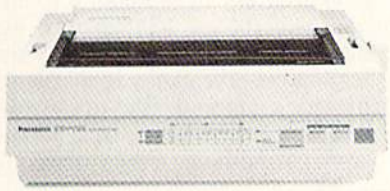


MINIMODEM-C.

A Commodore direct-connect modem (no additional interface is needed) that not only fully emulates the Commodore 1670 modem, it also offers 100% Hayes compatibility (not just partial Hayes compatibility like the 1670 or some Avatex models). This allows the Minimodem-C to be used with ALL communications software for the Commodore 64, 64C, and 128. Other key features include seven status indicators, Busy Detect, DTR signal support, High Speed Detect Line, and Auto Answer/Auto Dial. Multiterm 64 and 128 software included with the modem, so you can start communicating as soon as you receive it! Full one year warranty.

Sug. Retail $75.00
Minimodem-C 81576 $59.95

BLAZING 192cps
$189.95



Panasonic KX-P1180

Select over 11 functions on front panel. Four NLQ fonts and two draft fonts, each sized 5 to 20 char./in. Proportional spacing. Graphics 240x216 dpi. Draft at 192cps, NLQ at 38cps. Push or pull tractor feed. Two year warranty.

Panasonic KX-P1180 82779 $189.95

FREE 60 PAGE CATALOG



Thousands of products for your COMMODORE 64, 128 and AMIGA computers. CALL TODAY to receive your FREE copy!

Disk Drive Includes FREE Software!
$149.95



FSD-2 Excelerator+

- Completely Commodore Compatible
- Faster, quieter, and more reliable
- Separate power supply eliminates overheating
- Full one year warranty

While supplies last, we're bundling a powerful word processor and database with each drive! To get your copy, order item No. 82363 with your disk drive. Sug. Retail $179.95

FSD-2 Excelerator+ 66166 $149.95

NEW! Star NX-1000 II



$CALL

All the great features of the NX-1000 and more. Prints at 180 cps (draft mode, 12 dpi) and 45 in near letter quality. (150 cps draft and 38 cps NLQ at 10 cpi.) Parallel input port for direct cable connection to IBM or Amiga. To use with Commodore requires a parallel interface cable.

Star NX-1000 II 86719 $CALL
Black Ribbon 75471 $5.95

TENEX™ Computer Express

We gladly accept mail orders!

TENEX Computer Express
P.O. Box 6578
South Bend, IN 46660
(219) 259-7051 — FAX (219) 255-1778

No Extra Fee For Charges!

VISA MasterCard

We Verify Charge Card Addresses

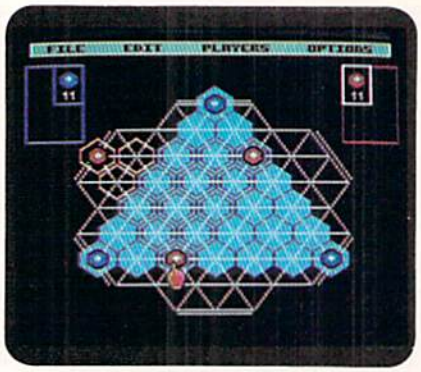
*Shipping, Handling, Insurance

Order Amount	Charge
less than $19.99	$3.75
$20.00-$39.99	4.75
$40.00-$74.99	5.75
$75.00-$149.99	6.75
$150.00-$299.99	7.75
$300.00 & up	$CALL

ORDER TODAY CALL 1-800-PROMPT-1

COMMODORE 64 and COMMODORE 128 are registered trademarks of Commodore Electronics, Ltd. AMIGA is a registered trademark of Commodore Amiga Inc., NOTE: Due to publishing lead-times, product prices and specifications are subject to change without notice. * APO, FPO, AK, HI, CN, VI, GU, and foreign orders are subject to additional shipping charges. R3L

Circle 155 on Reader Service card.



Move stones among the triangles in TrianGO.

line, it comes with a bargain basement price of $14.95.

TRIANGO

I love this game. I hate this game. That pretty much sums up my relationship with this clever little computer game from California Dreams. TrianGO is played on a grid that's made up of several small triangles. Up to four players take turns placing colored stones on the intersections of these triangles. The object is to capture other stones within triangles formed when three stones of the same color are joined by lines on the grid. Whenever you perform a capture, your opponent's stones are removed from the game. However, any of your stones that were part of the capturing triangle can be played again. You lose if you run out of stones.

TrianGO can also be played solo against the computer. Even though the game is easy to learn, and most players have a fairly good idea of what it takes to win, the computer is a very tough opponent, even on the novice level. Once you begin to consistently win against the computer's novice level, there are four tougher levels to challenge you: intermediate, expert, master and grand master.

The fact that I seldom beat the computer, even on the novice level, is what I hate about TrianGO. What I love about the game is the wide variety of options. Besides multiple skill levels, the game also offers three levels of on-screen hints, and the option to save games in progress. In addition, you can edit the game board, change sides at any time and undo moves right back to the beginning of the game. If you want a game that's guaranteed to make you think (about your own inadequacies as a player, if nothing else), then try TrianGO.

RISK

One of the most recent of board games to make the transition to floppy disk is Risk, a contest of strategic planning in which two to six players (either human or the computer) compete for world dominance. Mastertronic's Risk is played on a map that divides the world into six continents comprising 42 individual territories. You begin by placing armies on unoccupied territories until all have been claimed. Then you can go on to distribute additional armies to reinforce your territories.



Define your territories in Risk.

On each subsequent turn, you get a number of armies based on the number of territories and continents you control. After these armies are placed, you can attack adjacent territories in an at-

Table 1. Hints and tips.

Tetris and **Mental Blocks**:

—The faster you drop a block into place, the more points you'll receive for it, so try to work as quickly as possible. Learn to judge exactly where a block will land while it's still high in the pit.
—Avoid using the ends of long thin blocks to fill small holes.
—Take advantage of the fact that Tetris shows you the next block ahead of time. Try to plan your positioning two blocks at a time.

Qix:

—Draw thin columns (made up of many small blocks) to divide the playing field into halves or, if possible, quarters.
—Wait until Qix works itself down into one of the corners and trap it by closing off that quarter.
—Remember, you get more points for sections you complete when using Slow Drawing mode. Therefore, use Fast mode until only a short line is required to complete a large section; then switch to Slow mode.

TrianGO:

—TrianGO is not won by capturing all of your opponent's pieces, but by being the last player to make a legal move. So, your goal should be positional control of the board.
—Don't give up control of a large section of the board just to capture a few of your opponent's stones. Instead, fill triangles that are eligible for capture with your own stones so that when you do capture, you'll get back a lot of stones that are replayable.
—Don't place stones in the center of the board unless you already control the area. Also, don't create triangles that can be easily destroyed when your opponent captures.

Risk:

—If you select your own territories, try to grab *all* of the territories on a single continent at the outset. Depending on the continent you control, this could give you between two and seven extra armies on each turn.
—If you do capture an entire continent, defend your borders well so you can withstand enemy invasions.
—Don't spread yourself too thin. It's better to have a small invincible empire than a large one that's in danger of collapsing under its own weight.

Chessmaster 2100:

—Take your time—the computer's got all night. You can even shut off the on-screen game clocks if it helps you to relax when playing.
—While the 3-D board looks great, it might be easier to analyze your position while playing on the 2-D board. Remember, you can switch between boards in the middle of the game without disturbing the pieces.
—If the computer has a weakness, it's during its middle game. Try to set up a strong defensive position early, while looking for weaknesses in the computer's position.

tempt to expand your empire.

Battles are decided by a roll of the on-screen dice. Before ending your turn, you can fortify your position by moving armies from one occupied territory to any adjacent territory that you also control. This usually means taking armies from a well-protected interior territory and placing them on a more vulnerable border territory.

Needless to say, the initial placement of armies is quite important. You should try to occupy large chunks of adjacent territories in specific continents with the eventual goal of conquering and fortifying the entire continent. Also, remember that not all continents are created equal. Controlling Asia, for instance, earns you seven new armies per turn, while controlling South America or Australia only nets you two.

CHESSMASTER 2100

Finally, what better way to look intelligent than by playing the greatest of all board games, chess, against the computer. For my money, the best chess game available for the C-64 is Chessmaster 2100, from The Software Toolworks. Chessmaster is a worthy opponent for even the most experienced chess player, and it's also an excellent teacher for young players or anyone new to the game.



Pros and novices alike will be challenged by Chessmaster 2100.

In the Teaching mode, Chessmaster shows you all the possible moves for a selected piece. You can even ask Chessmaster to suggest the best possible move or watch it "think" as it considers its next move. In addition, the manual provides a tutorial and ten chess brain-teasers to challenge your ingenuity.

The flip-side of the program disk contains 110 classic chess games from as early as 1834 to 1988. These you can load, watch and analyze. Then, the next time you want to impress your chess-playing friends, you can casually bring up "Gary Kasparov's brilliant use of the Sicilian Defense in the 24th match game against Anatoly Karpov." ■

Bob Guerra, editor for a Boston hospital, keeps a seemingly endless stream of software reviews coming RUN's *way.*

Table 2. Retail prices and manufacturers' addresses.

Chessmaster 2100
$39.95
The Software Toolworks
Distributed by Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404

Mental Blocks
$14.95
Accolade
550 South Winchester Blvd.
Suite 200
San Jose, CA 95128

Qix
$29.95
Taito
267 West Esplanade
North Vancouver, B.C.
Canada V7M 1A5

Risk
$29.99
Leisure Genius
Distributed by Mastertronic
18001 Cowan St., Suite A
Irvine, CA 92714

Tetris
$24.95
Spectrum HoloByte
2061 Challenger Drive
Alameda, CA 94501

TrianGO
$29.95
California Dreams
780 Montague Expwy. #403
San Jose, CA 95131

VSI

1-800-544-7638
Inquiries & Oregon buyers
1-503-246-0924

SCHOOLS OUR SPECIALTY

CABLES, 5 YEAR REPLACEMENT GUARANTEE

5 Pin, M-M, 6 ft.	M-M B56MM	$5.95	M-F B56MF	$5.95
5 Pin, monitor...2 RCA	M652	$4.95	3 RCA	M653	$5.95
6 Pin, M-M, 6 ft.	B66	$5.95	9 ft.	B69	$7.95
6 Pin, M-M, 18 ft.	B618	$12.95	36 ft.	B636	$19.95
6 Pin, M-F			6 ft.	A66	$5.95
8 Pin, monitor...2 RCA	M382	$4.95	5 RCA	M385	$5.95
DB9, Joystick M-F			12 ft.	JS12	$4.95
DB9, Y cable			1F 2M	JSY	$4.95
DB9, 6 ft.	M-M DB9MM	$7.95	M-F DB9MF	$7.95
DB25, M-M, 3 ft.	R3MM	$7.95	6 ft.	R6MM	$8.95
DB25, M-M			10 ft.	R10MM	$10.95
DB25, M-F			6 ft.	R6MF	$8.95
Parallel, M-M, 6 ft.	C6MM	$9.95	10 ft.	C10MM	$11.95
Parallel, M-F, 6 ft.	C6MF	$9.95	10 ft.	C10MF	$11.95
IBM Printer, 6 ft.	IBP6	$7.95	10 ft.	IBP10	$9.95
IBM Printer, 15 ft.	IB15	$16.95	25 ft.	IBP25	$24.95

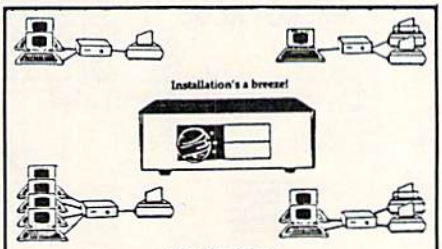
We now stock a full line of gender changers, null modems, adaptors, testers and connectors.



COOLING FAN $29.95 Heat is a #1 enemy to your disk drive. Reduce bad loads and costly repair bills with a fan, keep your 1541 or 1571 cool. Quiet, surge and spike protection, EMI filtering.

TO ORDER: VISA, MASTER CARD, money orders, or check (allow 21 days for check to clear) accepted.

FREE CATALOG, send a post card with your name & address.



DATA SWITCHES
VSI switches end cable swapping, share equipment. Need extra cables, we stock a broad selection.
• ONE YEAR WARRANTY, Deluxe All Metal Case
• Compact Design, Rotary Switch
• Full Shielding, Exceeds FCC Requirements

			AaBb=2 to 2	AB=2 to 1	ABCD=4 to 1
5 Pin				AB $29.95	ABCD $39.95
6 Pin				AB $29.95	ABCD $39.95
8 Pin Mini	AaBb	$39.95	AB	$24.95	ABCD $34.95
DB9				AB $24.95	ABCD $34.95
DB25	AaBb	$39.95	AB	$24.95	ABCD $34.95
Parallel	AaBb	$39.95	AB	$24.95	ABCD $34.95

OMNITRONIX INTERFACES

HOT SHOT PLUS $64.95
Printer interface, 8K buffer, expandable to 64K, 6 fonts plus editor in ROM, prints double or quad density, CPM selection.

DELUX RS232 INTERFACE $39.95
Connects standard modems or RS 232 accessories to the C64, C128, 64C, SX64, VIC20, or Plus4.

SERIAL PRINTER INTERFACE $64.95
Use a standard RS232 type printer on the Commodore. Connects to Serial Bus (6 pin).

IBM to CBM Adaptor $37.95
Now use your C64 compatible printer on a PC compatible. Includes a specially designed cable and software.

Reset Button for C64	$8.95
Disk Notcher	$4.49
Dust Cover, C64, Vic-20	$5.95
Dust Cover, 1541	$5.95
Dust Cover, C128 or 1571	$6.95
Mouse Mat	$5.95
Disk Sleeves, 100 pack	$7.95
Joystick Rapid Fire	$5.95
Aprospand 64	$26.95
Cartridge Port Extension, 12 in	$19.95

MODEM LINK, RS232 Interface $15.95
interfaces a Hayes compatible modem to C64, 64C, C128 or 128D. Full plastic case, 3 x 1½.

VSI 3641 S.W. Evelyn, Portland, OR 97219, Shipping $3.00, VISA, MC, money orders accepted. Price & stock, subject to change.

Circle 51 on Reader Service card.

LET'S FACE IT—MAIL ORDER HOUSES ARE *NOT* ALL THE SAME!

SOFTWARE SUPPORT INTERNATIONAL

CONVENIENCE—FAST SERVICE—RELIABILITY—SUPPORT

Abacus Software

128 Internals (book)	17.36
128 Tricks & Tips (book)	17.36
1571 Internals (book)	17.36
Anatomy of the 1541 Disk Drive	16.97
Basic Compiler 64	24.97
Basic Compiler 128	36.97
Becker Basic for Geos	33.97
Cad Pak 64	24.97
Cad Pak 128	36.97
Chart Pak 64	24.97
Chart Pak 128	24.97
Cobol 64	24.97
Cobol 128	36.97
CP/M for the C-128(book)	17.36
Fortran 64	25.97
Geos Inside & Out Book	17.36
Geos Inside & Out Disk	12.76
Geos Tricks & Tips Book	15.20
Geos Tricks & Tips Disk	12.76
Super C Compiler 64	36.97
Super C Compiler 128	36.97
Super Pascal 64	36.97
Super Pascal 128	36.97

Access Software Incorporated

Echelon w Lipstick	27.97
Heavy Metal	25.97
LB & Tourn & Exec	13.97
Mach 5	21.97
Mach 128	30.97
World Class Leader Board	24.97
W/C L/B Fam Courses 1	12.97
W/C L/B Fam Courses 2	12.97
W/C L/B Fam Courses 3	12.97

Accolade

Apollo 18	12.97
Bubble Ghost	18.97
Card Sharks	12.97
Fast Break	18.97
Fourth & Inches	18.97
Fourth & Inches Team Const	10.97
Grand Prix Circuit	19.97
Harrier 7	12.97
Jack Nicklaus Golf	19.97
Jack N. Course Disk #1	12.97
Mental Block	12.97
Miniputt	12.97
Power at Sea	12.97
Rack-em	18.97
Serve & Volley	18.97
Shoot Em Up Game Const	12.97
Steel Thunder	19.97
T.K.O.	18.97
Test Drive	18.97
Test Drive 2	19.97
Test Drive 2 (Data Super Cars)	12.97
Test Drive 2 (Data Scenery)	12.97
The Train	12.97

Activision Entertainment Software

Aliens	10.97
Apache Strike	12.97
Blackjack Academy	24.97
F-14 Tomcat	25.97
Faery Tales	30.97
Faerytale Hints	8.97
Fire Power	16.97
Last Ninja	21.97
Last Ninja II	22.97
Main Frame	25.97
Neuromancer	25.97
Neuromancer Hints	12.97
Predator	10.97
Rampage	21.97
Sky Travel	30.97
USS Ocean Ranger	21.97

Softworks

Desk Pak Plus*	18.97
Font Pack Plus*	18.97
Geos 64 V2.0	36.97
Geos 128 V2.0	42.97
Geocalc 64	30.97
Geocalc 128	42.97
Geochart 64	19.97
Geofile 64	30.97
Geofile 128	42.97
Geoprogrammer 64	42.97
Geopublish 64	42.97

Box Office

$100,000 Pyramid	9.97
Alf	9.97
California Raisins	15.97
High Rollers	9.97
Psycho	15.97

Broderbund Software

Arcade Game Const. Set	12.97
Bank Street Writer	30.97
Bank Street Filer	18.97
Carmen Sandiego Europe	24.97
Carmen Sandiego USA	24.97
Carmen Sandiego World	21.97
Omniplay Basketball	22.97
Print Shop	27.97
Print Shop Companion	21.97
P.S Graphics Disk 1	15.97
P.S Graphics Disk 2	15.97
P.S Graphics Disk 3	15.97
P.S Holiday Graphics	15.97
Quest for Clues II	19.97
Quest for Clues (book)	19.97
Sim City	19.97
Star Wars	12.97

Cinemaware

Darkside	19.97
Defender of the Crown	21.97
Sinbad	12.97
Speedball	19.97
Rocket Ranger	23.97
Three Stooges	23.97
Warp Speed (Cart)	33.97

Data East

Bad Dudes	19.97
Batman	16.97
Guerilla Wars	19.97
Ikari Warriors	18.97
Karnov	18.97
Kid Niki	18.97
Platoon	18.97
Robo Cop	19.97
Speed Buggy	18.97
Victory Road	18.97

Datasoft

Alternate Reality:City	19.36
City Hint Book	7.97
Alternate Reality:Dungeon	25.48
Dungeon Hint Book	7.97
Firezone	16.30
Hunt For Red October	25.48
Time & Majik	20.97
Video Title Shop w/Comp 1	19.36

Electronic Arts

Bard's Tale I	12.97
Bard's Tale I Hints	9.97
Bard's Tale II	25.48
Bard's Tale II Hints	9.97
Bard's Tale III	25.48
Bard's Tale III Hints	9.97
Caveman Ugh-lympics	19.36
Chessmaster 2100	27.47
Chuck Yeager's AFS	12.97
Deathlord	12.97
Deathlord Hints	9.97
Demon Stalkers	12.97
Double Dragon	22.42
Instant Music	12.97
Jordan vs Bird One on One	19.36
Kings of the Beach	20.97
Legacy of the Ancients	12.97
Magic Candle	26.97
Maniac Mansion	23.97
Maniac Hint Book	7.97
Mars Saga	12.97
Mars Saga Hints	10.97
Mavis Beacon Typing	25.48
Might & Magic	24.97
Might & Magic Hints	10.97
Modem Wars	22.42
PaperClip 3	31.60
PaperClip Publisher	31.30
Pegasus	12.97
Power Play Hockey	12.97
Project Firestart	20.36
Skate or Die	12.97
Skyfox II	12.97
Strike Fleet	12.97
Wasteland	12.97
Wasteland Hints	9.97
Zak McKracken	23.97
Zak Hints	11.97

Epyx

500XJ Joystick	17.95
Axe of Rage	25.97
Battleship	18.97
California Games	24.97
Create A Calendar	18.97
Destroyer	14.97
Devon Aire	19.97
Dive Bomber	12.97
Fast Load Cartridge	24.97
Final Assault	14.97
4 X 4 Racing	14.97
The Games:Summer Edition	12.97
The Games:Winter Edition	24.97
Home Video Producer	30.97
Impossible Mission II	14.97
L.A. Crackdown	14.97
Legend of Black Silver	24.97
Metrocross	15.97
Mind Roll	19.97
Snow Strike	19.97
Space Station Oblivion	14.97
Sporting News Baseball	24.97
Sports-A-Roni	15.97
Street Sports Baseball	14.97
Street Sports Basketball	14.97
Street Sports Football	14.97
Street Sports Soccer	14.97
Sub Battle Simulator	14.97
Technocop	24.97
Tower Toppler	24.97

Free Spirit

1541/71 Drive Align	23.97
Basic 8	26.95
Basic 8 Tool Kit	16.95
Home Designer	29.97
Home Designer Data #1 (Circuits)	9.97
Newsmaker 128	21.97
Sketchpad 128	21.97
Spectrum 128	25.97

Gamestar

Champ. Baseball	11.97
Champ. Basketball	11.97
GFL Football	12.97
Star Rank Boxing II	18.97
Take Down	18.97
Boxing I/Tennis	12.97

Infocom

Battletech	25.97

Inkwell Systems

Flexidraw 5.5	24.06
Flexifont	20.76
Graphics Integrator 2	20.76
Light Pen (184C)	42.97
Graphics Gallery 1	20.75
Graphics Gallery 2	20.75

Mastertronics/Virgin

Barbarian	25.97
John Elway Q.B.	19.97
Monopoly	19.97
Risk	19.97
Scrabble	21.40
Scrupples	25.48
War in Middle Earth	25.97

Micro Prose

3D Pool	22.97
Airborne Ranger	25.97
Destroyer Escort	25.97
Dr. Doom's Revenge	22.97
F-19 Stealth Fighter	28.97
Gunship	25.97
Pirates	28.97
Pro Soccer	22.97
Red Storm Rising	28.97

Microleague

Action Fighter	19.97
Alien Syndrome	19.97
Bad Street Brawler	18.97
Block Buster	18.97
Captain Blood	21.97
Clubhouse Sports	18.97
Combat Course	19.97
Crossword Magic	19.97
Gauntlet	21.97
Gauntlet II	19.97
Gauntlet (Deeper Dungeon)	15.97
Hostage	19.97
Indy Jones/Temple of Doom	21.97
Outrun	22.97
Pole Position II	16.97
Road Raider	19.97
Road Runner	21.97
Space Harrier	19.97
SuperStar Ice Hockey	21.97
SuperStar Soccer	21.97
Thunderblade	22.97
Uninvited	21.97

Origin Systems Inc.

Autoduel	33.36
Ogre	20.40
Omega	31.97
Tangled Tales	19.97
Times of Lore	25.97
Ultima 4	39.84
Ultima 5	39.84
Ultima 5 Hints	10.97
Ultima Trilogy (1-2-3)	39.84

Psygnosis

Baal	19.97
Captain Fizz	19.97
Menace	16.97

SSI Strategic Simulations Inc

Curse of Azure Bonds	26.97
Demon's Winter	20.97
Dungeon Master Assistant	20.97
Dungeon Master Assistant II	20.97
Hillsfar (A.D & D)	25.97
Hillsfar Hintbook	7.97
Heroes of the Lance	19.47
Heroes of the Lance Hints	7.97
Phantasie III	25.47
Pool of Radiance	25.47
Pool of Radiance Hints	10.95
Questron II	25.47
Typhoon of Steel	31.97
Wargame Construction Set	19.47
Wizard's Crown	25.47

Sharedata

Card Sharks	9.95
Concentration	9.95
Concentration II	12.97
Family Feud	9.95
Jeopardy	9.95
Jeopardy II	9.95
Jeopardy Jr.	9.95
Sports Jeopardy	9.95
Wheel Of Fortune	9.95
Wheel of Fortune 2	9.95
Wheel of Fortune 3	9.95

Solutions Unlimited

Billboard Maker	24.97
Grafix Link	12.97
Icon Factory	24.97
Photo Finish	18.97
Screen F/X w/Grafix Link	21.97

Springboard

Certificate Maker	14.97
Certificate Maker Libr.I	10.97
Newsroom	14.97
Newsroom Clipart 1 or 2 or 3	10.97
P/S Graphic Expander	23.64

subLOGIC

Flight Simulator II	31.97
Flight Sim Scenery 1	16.97
Flight Sim Scenery 2	16.97
Flight Sim Scenery 3	16.97
Flight Sim Scenery 4	16.97
Flight Sim Scenery 5	16.97
Flight Sim Scenery 6	16.97
Flight Sim Scenery 7	19.97
Flight Sim Scenery 11	19.97
Flight Sim Scenery West. Europe	19.97
Flight Sim Scenery Japan	19.97
Flight Sim Scenery SanFran	19.97
Jet v2 w/Japan Scenery	25.97
Stealth Mission	31.97

Taito

Alcon	12.97
Arkanoid	12.97
Arkanoid II	19.97
Bubble Bobble	12.97
Operation Wolf	19.97
Qix	18.97
Sky Sharks	19.97
Rambo III	19.97
Rastan	19.97
Renegade	12.97

Timeworks

Accounts Payable	33.36
Accounts Receivable	33.36
Data Manager 2	17.16
Data Manager 128	33.36
Electronic Checkbook	13.92
General Ledger	33.36
Partner 64	33.36
Partner 128	39.84
Payroll Management	33.36
Swiftcalc/Sideways 64	17.16
Swiftcalc/Sideways 128	33.36
Word Writer 4	25.97
Word Writer 128	33.36

Unison World Incorporated

Art Gallery 3	15.97
Printmaster Art 1 & 2 Combo	22.97
Printmaster Plus	21.97

MISCELLANEOUS

1943	19.97
Advanced Art Studio	27.97
Art Worx:Bridge 5.0	21.97
Big Blue Reader 128:CP/M	27.97
Bob's Term Pro 64	30.97
Bob's Term Pro 128	36.97
B/W Business Form Shop	24.97
Club Backgammon	20.40
Crossbow	21.97
CSM Newsletter Compendium	29.95
CSM Protection Manual I	24.97
CSM Protection Manual II	29.97
Doodle	24.97
Elementary Commodore (Book)	7.95
Elite Hint Book (Leroy)	6.97
F-18 Hornet	21.97
Family Tree 2.0 64/128	36.97
Font Master 2	30.97
Font Master 128	36.97
Hes Mon 64 (cart)	9.95
Hole In One Golf	19.97
Honeymooners	19.97
IHT:CAD 3D	30.97
Merlin Assembler 64	30.97
Merlin Assembler 128	42.97
MSD Mass Duplicator	39.95
Roger Rabbit	19.97
Sam's:C-64 Prog. Base Ref. Guide	16.97
Star Empire	15.97
Strip Poker	18.97
Pocket Rockets	19.97
Poker Data Disk 1	12.97
Poker Data Disk 2	12.97
Poker Data Disk 3	12.97
Superbase 64	25.97
Superbase 128	31.97
Superbase the Book	13.97
Superscript 64	22.95
Superscript 128	25.97
Sysres	19.95
Thunderchopper	18.97
Twin Cities C-128 Compend.(Book)	14.95
Twin Cities C-128 500 Q & A	16.95
Up Periscope	18.97
Vampire's Empire	18.97
Warlock	19.97
Wizardry:Sir Tech	24.97
Wizardry 2	24.97
Wizardry III	25.97
WWF Wrestling	24.95
WWF Superstars Data #1	13.97
WWF Superstars Data #2	13.97

ACCESSORIES

1541/71 Serial Cable	5.95
1541/71 Power Cable	5.95
C-128 RGB Monitor Cable (Monochrome)	6.95
C-64 Color Monitor Cord	5.95
Commodore 64 H/D Power Supply	39.95
Commodore 128 Power Supply	54.95
Phoenix CPS 30 C-64 Power Supply	34.95
RS-232 Interface (Supra)	27.95
MW 350 Printer Interface	49.95
Aprospand 64	27.95
Aprospand Extender Cable	15.95
Aprotek 1200 Baud Minimodem C	59.95
Aprotek User Port Extender Cable	15.97
Commodore 1670 Modem (1200 Baud)	69.95
Commodore 1764 Ram Expander	129.95
Curtis Computer Tool Kit	24.95
Contriver M3 Mouse	37.95
Mouse Holder	5.95
Mouse Mat	8.95
Numeric Key Pad C-64	49.95
Slimline C-64 Replacement Case	19.97
Computer Hand II	6.95
Disk Mailer	49
1541 Dust Cover	8.95
1541 II Dust Cover	8.95
1571 Dust Cover	8.95
C-64 Dust Cover	8.95
C-64C Dust Cover	8.95
C-128 Dust Cover	8.95
C-128-D Dust Cover	13.95
Disk Notcher-Square Cut	4.95
5.25" Disk Drive Cleaner	5.95
10 Cnt Disk Storage	1.95
50 Cnt Disk Storage	8.95
100 Cnt Disk Storage w/Lock	12.95
80 Cnt 3.5" Disk Stor. w/Lock	9.95
5.25" Disk Labels-96 cnt	1.00
5.25" DS/DD Diskettes-Black	.39
5.25" DS/DD Diskettes-10 colors	each .79
Write Protects-100 cnt Black	1.00
Tyvek Sleeves-High Quality	ea .09
Slik Stik-Joystick	6.95
Tac 2-Joystick	10.95
Tac 3-Joystick	11.95
Touch-It Static Strip	8.95
Suncom Icon Troller	17.95
Surge Protector/Power Pad	39.95

THE RAMBOard

Beyond Super

RAMBOard does just what the other copy card on the market does: it adds RAM to your 1541 disk drive. This RAM is used to create a workspace where custom software can work its magic. Copy protection is evolving past the point of nibblers and other software-only solutions. Believe us, card based copiers are the future of archival technology.

So how do you decide between our card and "Brand X"? Don't compare the similarities - compare the differences. Their card is just "out there". You buy it, and that's pretty much it. RAMBOard was designed from the very beginning as an integral component in Maverick ™, a complete system of archival tools and products. Their card puts the burden of the work on you. Are you good at soldering? You better be - their card REQUIRES it. On the other hand RAMBOards require NO soldering to install, the only exception being a handful of older 1541C's. That's not all - the other guys say they don't use parameters, but what they really mean is they don't WRITE parameters. The user is required to make special critical "copy adjustments" to copy software. Sounds like creating parameters to us. On the other hand, RAMBOard uses Maverick parameters, designed by experts to instantly and easily copy today's toughest titles. So when the other guys say that their card will copy "everything", that may be true - providing that you can figure out the proper "copy adjustment" settings for everything. Good luck!

The differences go beyond the product itself. Software Support International is the company that began with the award winning Kracker Jax series of archival parameters. Our customer support system has earned industry praise, and we've established a reputation for honesty and integrity. A close look at the track record of the other guys will show just how deep our differences run. So when you're ready to get involved with the future of archival technology, pick RAMBOard - a product you can trust, from a company you can trust.

The RAMBOard
1541/1541C Version: $34.95
NEW **1541 II Version: $44.95**
1571 Version: $49.95

ATTN. C-128D Owners — The 1571 RAMBOard is for external drives only.
The RAMBOard is an optional Maverick accessory

ALL NEW

FasTrac/128 by Mike J. Henry

Look Who's Come Out Of The Basement

ALL NEW

At Software Support International, we've gained a reputation for providing Commodore owners with the products they need to get the most out of their computers. We've never hesitated to do whatever it took to provide you with the best software on the market. So when we decided to produce the ultimate 128 utility system, we went looking for one of the ultimate programmers.

We found him.

Mike J. Henry, the brilliant young programmer who was the driving force behind the "Basement Boys", the software team that created the phenomenal Fast Hack 'Em, has turned his considerable talents onto the 128. The result: FasTrac 128, the TOTAL utility system for your 128.

Here's a list of the major features found in FasTrac 128. ALL use both 40 and 80 column outputs and are PAL compatible for our overseas users. Read carefully -FasTrac 128 does some truly amazing things:

- **FasTrac/128 Disk Copy:** Single or dual drive · Copy with or without verify · Copy in 1541, 1581, or true 1571 formats · 1764-1750 RAM expansion support · 64K video RAM support · Uses the 128's additional memory.
- **FasTrac/128 File Copy:** Single or dual drive · File Copy between ANY two Commodore compatable Drives including the SFD-1001, MSD drives, hard drives, and others · Copy in 1541 or true 1571 formats · 1581 file copy with partition support · 1764-1750 RAM expansion support · 64K video RAM support · Uses the 128's additional memory.
- **FasTrac/128 M/L Monitor:** Go ANYwhere in memory · Access both main banks · Full scrolling in both directions · Includes scrolling DriveMon.
- **FasTrac/128 Directory Editor:** Edit and organize ANY standard directory · Edit 1541 or true 1571 formats · Edit 1581 directories with full partition support.
- **FasTrac/128 IBM ™/MFM Disk Copier:** Copy standard IBM formatted 360K 5.25" disks with your 1571 drive (required) · 1764-1750 RAM expansion support · 64K video RAM support · Uses the 128's extra memory to copy in fewer passes.
- **FasTrac/128 1581 Duplicator:** Single or dual drive · 1764-1750 RAM expansion support · 64K video RAM support · Uses the 128's additional memory · This is the fastest 1581 to 1581 copier ever created!

Quite a package, eh? We don't want to mislead you - FasTrac 128 is NOT for copying protected software. Our own Maverick ™ already has those bases more than covered. FasTrac 128 was designed to allow serious 128 users to get total control of their computers. If you want to own the finest set of utilities ever made for the Commodore 128, we've just made it a lot easier - we've told you the name . . .

Mike J. Henry's FasTrac/128
Only $34.95

ATTN. REGISTERED Maverick Owners ONLY: You may buy ONE (1) copy of FasTrac/128 for only $20.00
This offer is ONLY for orders placed with Software Support.

ALL NEW

THE 1581 TOOLKIT V2

If You've Been Waiting For A Sign, This Is It.

ALL NEW

Introducing the 1581 Toolkit Version 2, the newest incarnation of the best program you can buy for your 1581 disk drive. How good is it? Well, V1 received 4 1/2 of a possible 5 stars from INFO ™ magazine - and V2 is even better. What can it do for you? Picture using your 1581 with a:

- ★ **Fast Disk Copier**
- ★ **Fast File Copier**
- ★ **Byte Pattern Search**
- ★ **Partition Creator**
- ★ **Ultrafast Formatter**
- ★ **Track & Sector Editor**
- ★ **Directory Editor**
- ★ **Error Scanner**
- ★ **Relocatable Fast Loader**
- ★ **File Track & Sector Tracer**

And V2 adds many new or enhanced features, like the fact that both our single drive fast data copier and fast file copier now support the 1764-1750 RAM expansion units for super-fast one pass copies, or like our 64k video RAM support for 128 owners! And remember also that all of our 1581 Toolkit utilities use hyperfast read/write routines and, wherever appropriate, allow full access to partitions.

So whether you're thinking about buying a 1581 drive or you already own a 1581 drive, we guarantee you'll never really USE a 1581 drive until you've got your hands on the 1581 Toolkit.

NEW LOW PRICE:
THE 1581 TOOLKIT (3.5 disk) . . . . . NOW ONLY $24.95!

VERSION 1 OWNERS: Upgrade to V2 by Sending us your Original Toolkit V1 disk along with $9.95 plus S/H

Ever wish you knew more about your 1581? David Martin's book, "The 1581 DOS Reference Guide", is what you've been wishing for. Martin's invaluable resource holds over 100 pages of detailed information that took over a year of solid research to compile. This exhaustive manual will show you the inner workings of the 1581 as nothing else can. Order now, and we'll include some additional utilities like a machine language monitor with DriveMon - the perfect companion to The 1581 DOS Reference Guide!

THE 1581 DOS REFERENCE GUIDE / $14.95

SPECIAL OFFER: GET BOTH THE 1581 REFERENCE GUIDE AND THE 1581 TOOLKIT FOR ONLY $34.95

THE 1750 CLONE

Are You Overdrawn At The Memory Bank?

Ah, the venerable Commodore 64/128. Stock, it has better sound than an Atari ST. Better graphics than a CGA equipped IBM. And more memory than....

Uh-oh.

As powerful as the Commodore is, memory has always been its weak spot. Some brilliant programmers have found some ingenious ways to work within the computer's very limited available RAM, but the fact remains that you can only go so far with 64 or even 128K. But you can go MUCH further with 512K.

The bad news is that Commodore's own 1750 512K RAM Expansion Unit (REU) is expensive and almost impossible to find. The good news is, we did something about it.

We bought brand new Commodore 1764 REU's, which come with only 256K of RAM. Next, we installed a 256K upgrade which was custom engineered to our demanding specifications. Once modified, we tested each and every unit and warranted them to be free from defects. The final product is called the 1750 Clone, and it's all the room you'll ever need on a simple plug in cartridge.

Once on board, you'll have a whopping 512K of RAM - the SAME amount of memory found on the Amiga 500. Your Commodore will operate at advanced levels of performance that the original designers never even dreamed of! You'll be amazed at the enhanced capabilities of software that takes advantage of the 1750 Clone, programs like GEOS, PaperClip III, and our own Maverick, to name a few.

The 1750 Clone works EXACTLY like the original 1750. It will open the door on years of extended use from your Commodore as even newer, more powerful software appears on the horizon, software that requires the room the 1750 Clone can provide.

Twin Cities 128 magazine says they "can completely recommend the 1750 Clone." Once you see it work, you'll feel the same way. So don't buy a whole new computer just to get more memory. Get the 1750 Clone instead -and get another decade of satisfaction from your Commodore.

IMPORTANT NOTES - READ CAREFULLY

C-64/64c (but NOT C128/128D) owners MUST buy a heavy-duty power supply to use these units. The power supply is NOT included - it is available from us separately. If you ALREADY own a 1764 RAM cartridge, we can upgrade it for you. Your unit MUST be in perfect working order for us to upgrade it. The turnaround time on upgrades is approx. 2 weeks. It will NOT be necessary for you to purchase a new power supply - the one that came with your 1764 will still work fine.

THE 1750 CLONE ONLY $199.95
1764 UPGRADE ONLY $124.95

C-128 VIDEO RAM UPGRADES

For 128 Owners Who Refuse To Be Left Behind

When Commodore first released the new 128D, we got one, opened it up, and took a good look. It didn't take long to discover one MAJOR difference. The standard C-128 has just 16K of video RAM, while the newer 128D has 64K- 400% more!

We knew that there were tremendous advantages to the extra RAM. Like being able to scroll through video memory or the potential for greatly enhanced color resolution. And, since Commodore had seen fit to make it a standard feature on all new 128D's, we knew it was only a matter of time before new software started taking advantage of the full 64K.

That time has arrived. Programs like BASIC 8, the BASIC 8 Toolkit, Spectrum 128, Sketchpad 128, and News Maker 128 have all been coded to utilize the full 64K of video RAM found on the 128D's. So if you've got a regular C-128 with only 16K of video RAM, you've got a problem. And we've got the solution.

You could upgrade on your own - but if thoughts of splattered solder and heat-damaged motherboards bother you, relax: we've developed a module that just plugs right in to your C- 128. No soldering, no hassles. Now your computer can have the same 64K video RAM as the new machines. And you'll be ready for whatever the future holds.

PLUG-IN 64K VIDEO RAM UPGRADE FOR C-128's

ONLY $49.95

Includes easy installation instructions

NEW LOW PRICE

KRACKER JAX VOLUMES 1-7

We Just Made A Good Thing Better - Without Lifting A Finger.

Kracker Jax, our ground breaking series of copy parameters, was always a superior product. When we made it, we made it right. So how can we improve it now? Easy. We slashed the price!

Each Volume of Kracker Jax allows you to make Unprotected versions of around 100 specific popular titles. No special knowledge or tools are required. Each Volume originally sold for $19.95. So if you wanted all 7 Volumes, it would have cost you $139.65. But now, you can buy each Volume for only $9.95 or, for you bargain hunters, you can buy **ALL 7 VOLUMES FOR ONLY $29.95!** That works out to a cost of only **$4.28** each!

We've also cut the price on The Shotgun II, one of the most powerful nibblers ever produced. Originally $14.95, you can now own it for only **$9.95!**

And just because there's a remote chance that it might be your birthday, we'll go one step further: Buy the Kracker Jax Volume 1 -7 package for **$29.95,** and we'll throw in The Shotgun II nibbler **FREE!** Quite a deal, huh? But if you want it, better hurry - supplies are limited. After all, nothing good lasts forever.

SOFTWARE SUPPORT INTERNATIONAL

Circle 17 on Reader Service card.

PLEASE READ BEFORE ORDERING: We accept money orders, certified checks, VISA, M/C and, Discover. Previous Software Support customers may use C.O.D. and personal checks. Orders shipped to U.S.A. (48 states), F.P.O., A.P.O., or possessions, please add $3.50 per order for S & H. U.S. shipping is by UPS ground in most cases. FAST 2nd DAY AIR available: add $1.00 per pound additional (U.S. 48 states only). Alaska or Hawaii (all orders shipped 2nd day air), please add $7.50 per order for S & H. C.O.D. available to U.S. customers only (50 states): add $2.75 along with your S & H charges per order. Canadian customers may calculate the S & H charges by including $4.00 (minimum charge) for the first two pieces of SOFTWARE and $1.00 for each additional piece per shipment. All monies must be submitted in U.S. funds. Canadians must call or write for hardware shipping charges. Foreign customers must call or write for shipping charges. Defective items are replaced at no charge if sent postpaid. All in stock orders are processed within 24 hours. U.S. SOFTWARE orders over $100 will be shipped 2nd Day Air at our regular $3.50 S & H charge (48 states only). Washington residents please add 7.6% additional for Sales Tax. All prices subject to change. All sales are final unless authorized by management.

Mail your order to: Software Support, Int.
2700 NE Andresen Road / Vancouver, WA 98661

Or call our toll-free order line at 1-800-356-1179. 6am-5pm Monday-Friday Pacific time
Technical support available. Call (206) 695-9648. 9am-5pm — Pacific time, Monday-Friday.
Orders Outside USA call (206) 695-1393.

VISA · MasterCard · DISCOVER

DEALERS — WE HAVE THE SUPPORT YOU'RE LOOKING FOR!

GEOWATCH

Here's how to make your own greeting cards using geoPublish, with an assist from geoPaint.

By DOUGLAS BAYLES

THERE ARE MANY programs on the market for designing and printing out greeting cards. They may be menu-driven and easy to use, but most of them are so structured that they limit you severely in creating your design—for example, allowing you to use only one graphic per section. And you don't really have true freedom of choice as to where you put your graphic, but must place it in one (or more) of the predetermined locations permitted by the program.

If you own GEOS and a copy of geoPublish, however, you no longer have to settle for all those limitations. GeoPublish allows you great flexibility and is capable of utilizing clip-art graphics from Print Shop, Print Master and Newsroom, thanks to the GEOS Graphics Grabber. Here is a guide to help you use geoPublish to produce your own truly distinctive greeting cards just as easily as you could with those other programs.

You will need two work disks—one for geoPublish and one for geoPaint. First set up a geoPublish work disk with geoPublish, your printer file and the Photo Manager. Then set up a geoPaint work disk with geoPaint, Photo Manager and any fonts you intend to use. If you wish, you may include any photo albums and/or the Graphics Grabber; or you can create your own graphics with geoPaint.

The Creative Process

The next thing to do, of course, is to decide what you want your card to look like. I've chosen a birthday card for my daughter as my example. I want the front to have a picture of a birthday cake with the word "HAPPY" above it, "BIRTHDAY" below it, and her age on it, and I've chosen the Dwinelle font for this. (It's a good idea to use a font the same size or slightly smaller than you want the finished product to be.) Inside the card, I've decided to use a Print Shop graphic called Sunshine, with the caption "Many Happy Returns of the Day!" For this, I chose a font called Spats, because it looks like peppermint sticks, and she loves peppermint.

Once you've decided on a design, and your work disks are ready to go, open geoPaint and create the file "Card. temp". This is just a temporary file to use in setting everything up for geoPublish. Start by importing, drawing or pasting the graphic you want to have on the front of your card. Then, using the Edit Box tool, create a photo scrap by selecting Copy from the Edit menu.

Now select the Photo Manager from the GEOS menu and create a new album called "Card Stuff". Paste the photo scrap into the album and return to geoPaint. Clear the work space or move to a clear space on the canvas. Then select the Text tool from the toolbox and enter each word or phrase (the shorter the better) in the desired font, saving them to the photo album just as you did the graphic. When you've saved all the pieces that will go on the front of your card, it's time to start on the inside.

This is done basically the same way, with one important difference: each graphic, word or phrase must be turned upside down before it is saved to the photo album. To do this, click twice on the Rotate button in the bottom toolbox just before you copy the graphic or word to the photo scrap. (It's better to use the Rotate button than the Mirror-Y button, because text will be printed backward if you simply invert it. Of course, you could use Mirror-Y and then Mirror-X, and it would look okay, but that's two separate buttons.)

When you have everything you want on your card (except for borders) saved into one photo album, exit geoPaint to the deskTop and copy the photo album "Card Stuff" to your geoPublish work disk. Open geoPublish and create a new file called "The Card". Now you create a Master Page. Select Master Page from the Mode menu and set the following horizontal guidelines, using the ruler along the left side of the paper: ½, 5, 6, and 10 inches. (See Figure 1.) Do the same for the vertical guidelines, setting them at ½, 3¾, 4¾ and 8 inches. The front of your card will be the bottom right quadrant and the inside will be the top left.

This would be a good time to save your Master Page to a library so you won't have to redraw it each time you create a new card. I suggest you establish a new Master Page Library just for your cards, since you are not tied to just one format. Refer to your geoPublish manual for instructions on creating libraries, or simply select Library from the File menu and follow the prompts.

While still in the Master Page mode, activate the Snap function in the Options menu. Now select the Polygon tool from the toolbox and create a box in the upper left quadrant by clicking once in each corner formed by the innermost guidelines (double click on the last corner). Do the same thing in the lower right quadrant. These boxes form the borders and, of course, are optional. Now you should also save this Master Page to your library, so you won't have to recreate it every time you want this standard style card.

The Graphics

Now you're ready for the graphics. Select the Page Graphics mode from the Mode menu and click on the border line in the bottom right quadrant. Select the Attributes tool, and you'll be presented with a dialog box that allows you to change the width of the border and select a pattern for it. (By the way, there are some public domain applications out there that permit you to design your own patterns for GEOS.) To see your border in its true form, you have to select Zoom from the Display menu; but for now, trust me—it will be what you selected.

At this point, it's time to start placing everything from your photo album onto the card itself. I usually start by putting my graphics on the page, but you can place the text photos first if you want. It really doesn't matter, since geoPublish is so versatile that it lets you rearrange everything time and time again! After placing your text and graphic photos in their approximate positions on the front ►

ALL NEW

MAVERICK ™ V4

PLEASE Don't Call Us The Best Copy Utility On The Market!

We've always been known as the best Commodore copy utility made. But that label just doesn't fit us anymore. Because Maverick is so much more than just a copy utility. Over its life span, Maverick has evolved into a total software management system capable of extending the abilities of your Commodore computer well beyond its original capacity.

Maverick V4 continues the evolutionary process that is transforming our original copy program into a series of dedicated modules, each component created by a master programmer, each designed to deal with a specialized task. The result is a program that creates an entire software management environment of which backing up protected software is only one part. Software Support, the company that has always pushed the Commodore further that it was ever designed to go, is proud to present Maverick V4. We've added several important new features and many dramatic enhancements to the Maverick platform. For example:

- RAMBOard™ NYBBLER: A MAJOR leap forward in protected backup capabilities, our exclusive new nybbler works with our own RAMBOard to AUTOMATICALLY shred some of the toughest protection schemes ever created! This combination of ingenious hardware and superb new software can handle many protection schemes that are untouchable with conventional nybblers alone.
- RAMBOard GCR TRACK EDITOR: This new feature, found ONLY in Maverick V4, works with RAMBOard to allow you to read, write, and even edit whole tracks at a time!
- 1581 SINGLE OR DUAL DRIVE FAST DATA COPIER: Now backup your data disks faster than ever before with your 1581 drive! 1764/1750 RAM expansion and 64K video RAM are supported!
- FILE, TRACK, & SECTOR TRACER: Identify, view, and edit any sector in any program file-fast!
- HIGH SPEED SEQUENTIAL FILE VIEWERS: Now you can view or print sequential files WITHOUT having to load the application that created those files! For example, view PaperClip™ files without waiting for PaperClip to load. File Viewers are the current rage in the IBM world -Software Support brings this advanced feature to your Commodore with the new Maverick V4!
- ENHANCED DIRECTORY EDITOR: Works with the 1541, the 1571, and now supports the 1581 disk drive! The ultimate tool for organizing your disks!
- ENHANCED TRACK & SECTOR EDITOR: Works with the 1541, the 1571 (in true double sided format), and now supports the 1581 disk drive!
- ENHANCED SECTOR MAP EDITOR: Now supports the true double sided format of the 1571 disk drive!
- ENHANCED PARAMETER MENU: Now supports two drives!
- ENHANCED BYTE PATTERN SCANNER: Perform high speed searches on 1541 disks and, now with true double sided format support, 1571 disks.
- MORE ALL-NEW PARAMETERS: Maverick V4 now includes over 450 parameters that either copy or entirely break the potentially destructive protection schemes of the world's newest and finest programs! Our parameters have always been the strongest on the market but, with our exclusive RAMBOard support, now they're more powerful than ever!

A turntable is just one component of a complete stereo system. And a copier, even the best one made, is just one module of a complete software management system. From this point on, we won't settle for just being known as having the best copier on the market. Once you see Maverick V4, you'll understand why.

THE NEW MAVERICK V4 -ONLY $34.95

NOW INCLUDES PARAMETER MODULES 1-7

Maverick V4 is available from Software Support International: Products That Work - From A Company That Cares

ALL NEW

ADDITIONAL MAVERICK V4 FEATURES

- REU support in Maverick's major modules
- 64K video RAM support in many modules
- Automatic directory recovery utility for damaged disks
- GEOS™ 2.0 64/128 1581 boot disk transfer utility
- 1541/1571/1581 fast file copier -any direction
- State of the art single or dual drive GCR nybbler
- GCR editor for the experienced hacker
- GEOS™ Parameters & Tools module
- GEOS™ desktop accessible file copier
- GEOS™ desktop accessible sector editor
- Error scanner with unique sector editor
- Single or dual drive high speed data copier
- Scrolling M/L monitor with DriveMon
- Works with ALL Commodore 64/128 computers in the 64 mode
- Extensive documentation included - over 40 pages.
- AND OUR FAMOUS SSI EXPERT TECHNICAL SUPPORT!

Attention Registered Maverick Owners: You may upgrade to the new V4

$9.95

Parameter Module #7 is also available

$9.95

(Includes Modules 2 through 7)

PLEASE NOTE: Many features now require the use of RAMBOard Available seperately from Software Support International



WELCOME TO HACK U

HACK U

A School Of Higher Learning For A Select Few.

Welcome. This is a different kind of school. Here, we will teach you about power. The power of knowledge. The power of mastering a very specialized discipline. And the power of the Commodore 64/128.

Not everyone can qualify to enter Hack U. You've got to be self-motivated - we're certainly not going to come to your house and hold your hand. You've got to be driven - mastering the Commodore can be a long journey, and is not recommended for the faint of spirit. And you've got to be intelligent - but your intellect must be tempered with equal doses of creativity and patience.

Think you qualify? Good. Not many do. But there is one more thing you need to bring with you. Curiosity. Overwhelming, insatiable curiosity. Because that's the fuel we'll use to power you on this journey.

If you're among the few to still be with us, congratulations. This is where your journey begins. The combined experiences of those who came before you are here, available for you to use whenever you're ready. All it takes is making the first step.

NEW

★ THE CSM NEWSLETTER COMPENDIUM / $29.95

From 1984 to 1986, the Golden Years of Commodore hacking, the CSM Newsletters were THE best source of inside information on the complex world of copy protection. This compendium provides you with the very best tips, tricks, hardware modifications and expert copy protection cracking techniques! If you're hungry for knowledge, this is a great source, and highly recomended by the Kracker Jax team.

★ THE CSM PROGRAM PROTECTION MANUAL VOL I / $24.95

The CSM books are the logical starting place to begin your higher education in copy protection. CSM, the original central clearing house of specialized info for hackers, put their best knowledge into these two books. Volume I provides an overview of copy protection issues and provides you with a foundation of information to begin building on.

★ THE CSM PROGRAM PROTECTION MANUAL VOL II / $29.95

Volume II begins where Volume I left off. It covers the evolution of copy protection schemes; autoboots; interrupts & resets; compilers; undocumented opcodes; encrypted programs; machine language; GCR data recording & reading; custom DOS routines like half-tracks, extras sectors, & modified formats; decryption & decoding techniques, and much more! This is a MUST READ for all serious Commodore users.

★ KRACKER JAX REVEALED: VOLUMES I, II, & III / $23.50 Per Volume

No serious hacker can be unfamiliar with the Kracker Jax name. The experts who created the award winning series of deprotection parameters were brought together to create a graduate course of inside information for the truly serious student of hacking. This is not an easy course - we strongly recommend that you don't even try the Revealed books until you study (or have experience equivalent to) the information in the CSM materials described above. But once you're ready, you'll find the Kracker Jax Revealed books to be the final step on the path to copy protection mastery.

KRACKER JAX REVEALED Book I

Uses 20 specific tutorials to introduce you to the unique concepts used by the Kracker Jax team. Includes a ML monitor, sector editor, error scanner, reset switch, & more.

KRACKER JAX REVEALED Book II

Gives you 20 more examples, and also reveals the secrets of the famous Rapidlok™ copy protection system! Includes the legendary HesMon™ machine language monitor cartridge at NO ADDITIONAL CHARGE!

KRACKER JAX REVEALED Book III

Is the final book in the Revealed series. Here, the student becomes the master as we show you how to create your own copy protection schemes, including one that can NOT be copied by any nibbler currently on the market! This book takes you deep inside the 1541 itself, where the new breed of ultra tough protection lives. Order now & get our famous $19.95 Hacker's Utility Kit software package FREE!

SOFTWARE SUPPORT INTERNATIONAL

Circle 17 on Reader Service card.

PLEASE READ BEFORE ORDERING: We accept money orders, certified checks, VISA, M/C and, Discover. Previous Software Support customers may use C.O.D. and personal checks. Orders shipped to U.S.A. (48 states). F.P.O., A.P.O., or possessions, please add $3.50 per order for S & H. U.S. shipping is by UPS ground in most cases. FAST 2nd DAY AIR available: add $1.00 per pound additional (U.S. 48 states only). Alaska or Hawaii (all orders shipped 2nd day air), please add $7.50 per order for S & H. C.O.D. available to U.S. customers only (50 states): add $2.75 along with your S & H charges per order. Canadian customers may calculate the S & H charges by including $4.00 (minimum charge) for the first two pieces of SOFTWARE and $1.00 for each additional piece per shipment. All monies must be submitted in U.S. funds. Canadians must call or write for hardware shipping charges. Foreign customers must call or write for shipping charges. Defective items are replaced at no charge if sent postpaid. All in stock orders are processed within 24 hours. U.S. SOFTWARE orders over $100 will be shipped 2nd Day Air at our regular $3.50 S & H charge (48 states only). Washington residents please add 7.6% additional for Sales Tax. All prices subject to change. All sales are final unless authorized by management.

Mail your order to: Software Support, Int.
2700 NE Andresen Road / Vancouver, WA 98661

Or call our toll-free order line at 1-800-356-1179. 6am-5pm Monday-Friday Pacific time
Technical support available. Call (206) 695-9648, 9am-5pm – Pacific time. Monday-Friday.
Orders Outside USA call (206) 695-1393.

VISA MasterCard DISCOVER

DEALERS — WE HAVE THE SUPPORT YOU'RE LOOKING FOR!

of the card, you can resize and reposition them anywhere you like. Remember that if you cover part of your picture with some of your text, you have the choice of using either Opaque or Transparent mode. Choose whichever looks better on your card.

Repeat the whole procedure for the inside of your card, using the top left quadrant, in which, remember, everything must be upside down. If you want to give yourself credit on the back of the card, you can simply select the text tool from the toolbox and create whatever you want for the back (bottom-left quadrant) of your card.

Figure 2 is an illustration of what my card looks like in the Preview mode. If you find that you need to make fine adjustments to your graphics, you can do it in Zoom mode.

Now the test! Print a copy of your card by selecting Print from the File menu. This first printout may not be properly aligned. To fix this, measure the distance from each border to the nearest edge of the paper. These measurements should all be equal. Ideally, there should be half an inch of space from each edge to a plain, thin-line border. If this doesn't turn out to be the case, readjust the paper in your printer and try again.

Once you get a perfect printout, exit to the deskTop and select the Master Page Library by clicking on its icon. Then select Info from the File menu and leave yourself a note in the remarks box, so you'll know how to set up your printer the next time you make a card.

The best way to fold your cards is to begin by folding the top half back so that you have the front of the card on one side of the paper and the inside on the other. Next, hold the card so that you're looking at the inside (the left half is blank). Now fold the left side over the right and you should be looking at the front. Make your folds as carefully as you can, so the corners come out even. You can trim the edges with scissors, but if you cut too much off, it will put the borders off center.

There are many different card designs in the world today. If you create a Master Page for each one you like, you'll have no trouble making unique greeting cards for any occasion. The use of colored paper or colored markers can also greatly help to brighten up your cards.

You could even print your Christmas cards on a laser printer and then have a professional printer run off copies for you. Then you can have colored ink and paper, or even real card stock! The possibilities are endless, and I hope you enjoy using geoPublish for making cards as much as I do. ■

Figure 1. The Master Page, with the card gridlines in place.

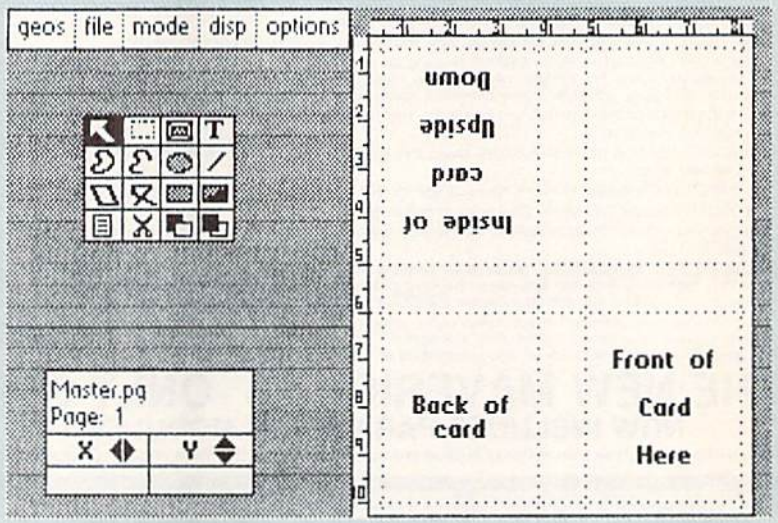
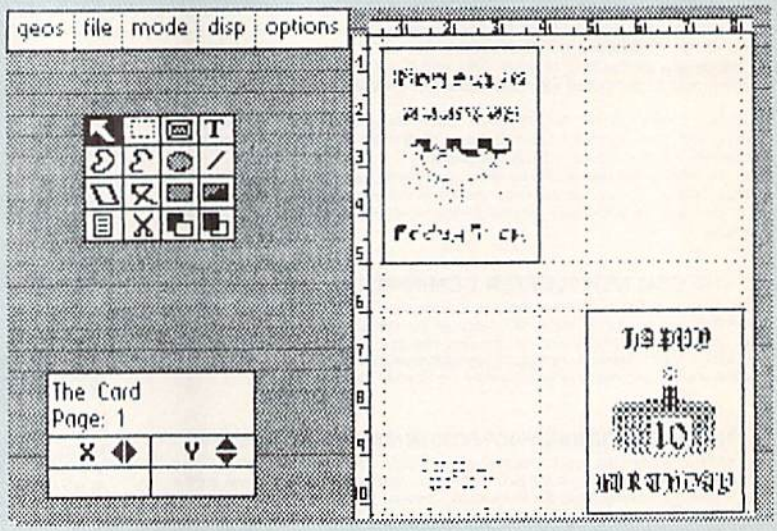


Figure 2. The card with graphics and text added.



Douglas Bayles, who works for the Navy as a contract field engineer, bought his first C-64 in 1983. He now has a 128 as well, and has become an enthusiastic GEOS user. In his spare time, he writes articles and technical reports and occasionally teaches evening adult classes in computer literacy and Basic programming.

ATTENTION GEOS USERS: THE WAIT IS OVER.

For everyone who's ever waited a tad too long for a GEOS screen to redraw itself or an application to load, congratulations. The wait is over. Your chips have come in.

The GEORAM expansion board—for both 64's and 128's—is here.

MORE MEMORY, LESS WAITING.

Developed exclusively for GEOS-equipped Commodores, these babies pack an unbelievable 512K of extra memory, which propels GEOS into light speed productivity. Accessories pop up in an instant. Screens redraw in a wink. And applications scream out in a frenzy as you whip them along with your mouse or joystick.

"An additional 512K of memory... is a really impressive upgrade... The usefulness of this becomes evident when using GEOS, as it can practically eliminate the... disk access you normally encounter." —*Run* Magazine

Hard to believe? Believe it. GEORAM's disk transfer rate is literally 35 times faster than the 1541, 1571 or 1581 disk drive. Which has the industry chattering almost as much as when GEOS first arrived on the scene:

"The difference between operating... on a 640K machine instead of a 128K machine could be compared to flying a jet and walking. Tasks that would normally cause a delay while the disk was accessed run at the speed of light..." —*Commodore* Magazine

Pretty heady stuff. But every word of it's true. Because GEORAM stores everything electronically. Which means your Commodore doesn't waste time spinning magnetic disks searching for data.

That not only increases your machine's performance. It also increases yours. Because the time you used to spend waiting is being put to better use drawing, writing or doing any of the thousands of things you're using GEOS for.

"RAM expanded C-series machines... running under the GEOS kernel—are nearly as fast and flexible as the powerhouse Mac's, ST's, Amigas and PC's." —*Computer Shopper*

So if you'd like to delete the delay, call us toll free at 1-800-888-0848, extension 1741 and order your GEORAM card today. You'll discover the difference in no time.

"It's the same GEOS, but unless you experience RAM expansion, you can't imagine the transformation... Some operations run a few seconds quicker, others (such as deskTop utilities) seem to appear before you select them... My RAM expander is the most cost-effective purchase I've ever made. Try one, and you'll never go back to magnetic media." —*Computer Shopper*

The GEORAM Expansion Card. It may have been a long time coming, but it's definitely been worth the wait.

GEORAM
1-800-888-0848
extension 1741

Send check or money order for $124.95 plus $4.95 for postage and handling, made payable to Berkeley Softworks. Do not send cash.

Name _____

Address _____

City _____ State _____ Zip _____

Phone Number _____

Mail to: Berkeley Softworks Fulfillment Center, 5334 Sterling Center Drive, Westlake Village, CA 91361

Allow two to four weeks for delivery. AF

Berkeley Softworks

The brightest minds are working with Berkeley.

Circle 138 on Reader Service card.

Protecto's SINCE 10th Anniversary 1979

COMPUTER DIRECT

WE WON'T BE UNDERSOLD!*

Expires 12/31/89

CHRISTMAS SALE

Super Commodore 64C Systems

You get all this for only $249.95

C64C Computer.....$229.95
Excelerator Plus Disk Drive.....$249.95
One Action Game.....$19.95
Free Gift Offer.....$9.95

Total Value.....$509.80



Over 50% Off

We Won't Be Undersold!

With Excelerator Plus Disk Drive

Low Holiday Price

$249.95

List $509.80

Free Game

C64C Computer

Includes One FREE Action Game
A $19.95 Value!



We Won't Be Undersold!

Low Holiday Price

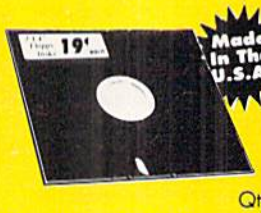
$129.95

List $229.95

5¼ FLOPPY DISKS

Lowest Price In The Country!!

100% Certified • Lifetime Guarantee



Made In The U.S.A.

19¢ each

Double Sided
Double Density

Qty of 25.....19¢ each
Qty of 25 w/sleeves.....21¢ each
Qty of 100 w/sleeves.....24¢ each

NO LIMITS!

Free Epyx Game

1541II Disk Drive

Includes One FREE Action Game!!
A $19.95 Value!!

Low Holiday Price

$189.95

List $249.95

New Low Price

Excelerator + Disk Drive

Commodore 1541 Compatible

Includes One Action Game! $19.95



Low Holiday Price

$147.95

List $249.95

800-BUY-WISE EXT. 15

800-289-9473 EXT. 15 Outside Service Area Call 312-382-5058

FAX ORDERING! 312-382-7545

Circle 15 on Reader Service card.

We Love Our Customers

COMPUTER DIRECT
22292 N. Pepper Rd.
Barrington, IL 60010

BEST SERVICE IN THE USA — PRICE IS NOT ENOUGH!

- 90 Day Immediate Replacement
- Experts In Customer Satisfaction
- Free Technical Assistance
- 24 Hr. Bulletin Board Service
- Fast, Low Cost Delivery
- No Credit Card Fees
- 15 Day Home Trial
- Free Catalogs

LARGEST SELECTION EVER

No One Can Sell This Printer For Less

180 CPS Printer with NLQ

Lifetime Warranty on Printhead



- *2yr. Immediate Replacement*
- Dot Addressable Graphics
- Italics, Elite, Pica, Condensed
- Centronics Parallel Port
- 8K Printer Buffer
- NLQ Selectable from Front Panel
- Low Cost Adapters Available
- Pressure Sensitive Controls
- Includes One Ribbon

Our Low Sale Price

$149.95 List $299.00

1200 Baud External Modem

100% Hayes Compatible

- RS232/DB25 Connector Included
- DB9 Pin Adapter Included
- Telephone Cable Included
- 1200/1300 bps Asynchronous
- Full or Half Duplex
- Auto Dial/Auto Answer
- Standard 9 Volt Battery or AC Adapter*



* AC Adapter Sold Separately for $4.95

Our Low Sale Price

$69.95 List $199.95

Save 1%* on Any Product in Our Discount Catalog *with the Computer Direct Credit Card*



Call Now 800-BUY-WISE to Apply for the Credit Card and to Get Your FREE Catalog!!!

* Introductory Offer - Apply Now!

30% Off

5¼" High Density Disks

Lots of 25 As Low As **45¢ ea**

Qty of 25 .....45¢
Qty of 25 w/sleeves.....47¢
100 w/sleeves, lables.....48¢

NO LIMITS!

3½" Micro Disks

Double Sided/Double Density

100% Certified
Made in the USA
Sold in Lots of 10

59¢ ea

Best Buy

Magnavox RGB Color Monitor



- RGB, TTL, CGA & Composite Inputs
- 640(H) x 240(V) Resolution
- Variable Sharpness Control
- Audio Input
- Interface Cables Included
- Built-In Tilt Stand

Our Low Sale Price

$234.95 List $399

VISA
MASTERCARD
COD

COMPUTER DIRECT will match any current (within 30 days), valid nationally advertised delivered price on specially marked items of the exact same product with a comparable payment method, excluding any applicable sales taxes. Verification required.

Prices do not include shipping charges. Call to get your lowest delivered cost. We insure all shipments at no extra cost to you! All packages are normally shipped UPS Ground. 2nd Day or Overnight Delivery available. Minimum shipping charge per order is $3.75. Illinois residents add 6.5% sales tax. We ship to all points in the U.S., Canada, Puerto Rico, Alaska, Hawaii, Guam, and APO & FPO. (Color monitors shipped only in Continental U.S.A.) Not responsible for typographical errors or omissions. PRICES AND AVAILABILITY SUBJECT TO CHANGE WITHOUT NOTICE.

NEW! MINIMODEM-C24™ ONLY $99.95

What's included? Everything! You don't need to worry about cables, compatibility or anything else! Aprotek Minimodem-Cs™ plug directly into your Commodore C-64, C-64C or C-128 USER port. Both are unique in that they have two separate (switchable) emulation modes (Hayes and Commodore 1670®) to make them compatible with ALL available software. Minimodem-Cs™ are full feature, modems with Auto Answer, Auto Dial, Touch-Tone or rotary dialing, have status lights and a built-in speaker. Just plug into your computer and standard phone jack with the attached cable. Supplied with software and includes a trial subscription to Compuserve.



Do you have or plan to get another computer? We have your solution. Order our ComModem™ adapter (#5100 below) along with either Minimodem-H,™ used with any computer that has a RS-232 serial port as well as with your Commodore. Aprotek Minimodems™ are tiny. Only 4¾" long, 2¾" wide and ¾" high. Our highly integrated, state-of-the-art circuitry makes our modems the best on the market and a very smart buy.

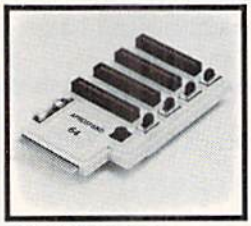
Built with pride in the USA and fully guaranteed for 1 year.

Order #	Item	Price	Shipping	Total
6412	MINIMODEM-C24™ (2400B Commodore)	99.95	_____	_____
6414	MINIMODEM-H24™ (2400B RS-232 w/male DB-25)	99.95	_____	_____
6216	MINIMODEM-AM24™ (AMIGA 500/2000 SELF PWD)	99.95	_____	_____
6212	MINIMODEM-C™ (1200B Commodore)	64.95	_____	_____
6214	MINIMODEM-H™ (1200B RS-232, specify M/F)	74.95	_____	_____

Modem shipping—Cont. US $6.00; UPS Blue, CAN, AK, HI, APO $10.00

The Original Aprospand-64™

Gives your Commodore 64 or 128 full expandability! This superbly designed expansion module plugs into the expansion port and gives you four switchable expansion connectors—plus fuse protection—plus a reset button! Before you buy an expander, be sure that it has a fuse to protect your computer.



Order #5064 . . . . . ONLY $29.95 + S&H

UNIVERSAL RS-232 INTERFACE



Connect and communicate with any of the popular RS-232 peripherals using your Commodore **USER** Port. You can now connect to printers, modems and any other RS-232 device. Comes complete with sample driver program listings. Compatible with all Commodore home computers with a USER port. 1-year warranty.

Order #5232 . . . . . $39.95 + S&H

"COM-MODEM" ADAPTER — Plug directly into USER port and connect to any RS-232 modem. **Order #5100 . . $19.95 + S&H**

"USER EXTENDER" — 10" Ribbon cable extender for your Commodore USER port. **Order #5250 . . . . . $21.95 + S&H**

Shipping per each above item: Cont. US = $4.Can, PR, HI, AK, APO, UPS Blue =$6

SEE YOUR COMMODORE DEALER OR ORDER DIRECT. DIRECT ORDER INFORMATION. All prices are cash prices—VISA and MC add 3% to total. We ship the next business day on money orders, cashier's checks, and charge cards. 14-day clearing period for checks. Prices and availability subject to change—CALL. Dealer inquiries invited. **1 year warranty plus a 2 week satisfaction or your money back trial period on all products.**

To Order Call: 800/962-5800 (8–5 PST)

For answers and information call:
Aprotek BBS Answerline 503-855-9147: 1200 or 2400 Baud, 24 hours

Or send order to:

WE'VE MOVED!

APROTEK

Dept. RN
9003 W. Evans Creek Rd.
Rogue River, OR 97537

RUN's Checksum

TYPE IN *RUN*'s CHECKSUM, which serves for both the C-64 and for the C-128 in either 40- or 80-Column mode, and save it to disk before running. When typing in a program from *RUN*, first load and run *RUN*'s Checksum. The screen will display a SYS number that deactivates and reactivates the Checksum. Always disable *RUN*'s Checksum before attempting to run another program. Note: You can abbreviate Basic keywords; spaces affect the checksum only when within quotes; and the order of characters affects the checksum.

With this new version, when you press return after typing in a program line, a one-, two-, or three-digit number from 0 to 255 appears in the home position. If this number matches the checksum value in the program listing, the line is correct. If the number that appears *doesn't* match the checksum value, compare the line with the magazine listing to find your error. Then move the cursor back up to the line and make your corrections. Now, after you press return, the correct checksum value should appear. Continue entering the listing until all the lines have been correctly typed. Then deactivate *RUN*'s Checksum, using the SYS number. Save the finished program.

All the graphics and control characters in the listings in *RUN* have been translated into understandable key combinations. They are the instructions you see inside the curly braces. For example, {SHIFT L} means you hold down the shift key while you press the L key. You do *not* type in the curly braces. What appears on the screen will look quite different from what is designated inside the braces. Here are some more examples:

{22 SPACEs}—press the space bar 22 times

{SHIFT CLR}—hold down the shift key and press the clr-home key

{2 CRSR DNs}—press the cursor-down key twice

{CTRL 1}—hold down the control key and press the 1 key

{COMD T}—hold down the Commodore logo key and press the T key

{FUNCT 1}—press the F1 key

{5 LB.s}—press the British pound key (*not* #) five times

Listing 1. *RUN*'s Checksum program. This program is available on *RUN*'s BBS for users to download.

```
10 REM RUN'S CHECKSUM 64/128 - BOB KODADEK
20 MO=128:SA=3328:IF PEEK(4096)THEN MO=64:SA=4
   9152
30 FOR I=0TO169:READB:CK=CK+B:POKE SA+I,B:NEXT
40 IFCK<>20651 THENPRINT"DATA ERROR!":END
50 POKESA+11,24:POKESA+111,38:POKESA+14,234
60 PRINTCHR$(147)STR$(MO)" RUN CHECKSUM":PRINT
70 PRINT"TO TOGGLE ON OR OFF, SYS"SA:IF MO=128
   THEN 100
80 POKESA+13,124:POKESA+15,165:POKESA+25,124:PO
   KESA+26,165
90 POKESA+39,20:POKESA+41,21:POKESA+123,205:POK
   ESA+124,189
100 POKESA+4,INT(SA/256):SYS SA:NEW
110 DATA 120,162,24,160,13,173,4,3,201,24,208,4
    ,162,13,160,67,142,4,3,140
120 DATA 5,3,88,96,32,13,67,152,72,169,0,141,0,
    255,133,176,133,180,166,22
130 DATA 164,23,134,167,132,168,170,189,0,2,240
    ,58,201,48,144,7,201,58,176
140 DATA 3,232,208,240,189,0,2,240,42,201,32,20
    8,4,164,180,240,31,201,34
150 DATA 208,6,165,180,73,1,133,180,230,176,164
    ,176,165,167,24,125,0,2,133
160 DATA 167,165,168,105,0,133,168,136,208,239,
    232,208,209,169,42,32,210
170 DATA 255,165,167,69,168,170,169,0,32,50,142
    ,169,32,32,210,255,32,210
180 DATA 255,169,13,32,210,255,104,168,96,104,1
    70,24,32,240,255,104,168
190 DATA 96,56,32,240,255,138,72,152,72,24,162,
    0,160,0,32,240,255,169
200 DATA 42,208,198
```

Lyco Computer
Marketing & Consultants

Since 1981

Star NX-1000 Series II



•180 cps draft • 45 cps NLQ • four resident fonts • 216x240 dpi resolution and print pitches ranging from 3 to 20 cpi

$169.95

PRINTERS

Panasonic

1180	$169.95*
1191	$215.95
1124	$287.95
1592	$CALL
1595	$CALL
1524	$CALL
1600 Series	$NEW

Citizen 120 D



•120 cps draft speed with improved throughput capabilities •Built-in variable-width tractor•compact design w/bottom paper feed minimize space requiremnts.

$138.95

Star

NX-1000	$149.95*
NX-1000 Color	$209.95
NX-1000C	$159.95
NX-1000C Color	$209.95
NX-1000 Series II	$169.95
NX-2400	$274.95

* With Cable Purchase

Epson

LX-810	$184.95
LQ-510	$319.95
FX-850	$329.95
FX-1050	$439.95
LQ-850	$514.95
LQ-950	$529.95

Panasonic Office Automation KX-P1180



•9-Pin personal printer • EZ-Set operator panel • adjustable push/pull tractor feed • multiple paper paths • 192 cps draft • 38 cps NLQ

$169.95*

* Quantities Limited

Printer ribbons, cables, connections and accessories available for all applications. Please Call.

Citizen

120 D	$138.95
180 D	$154.95
HSP-500	$315.95

Brother

M1709	$345.95
M1724L	$579.95

Okidata

Okimate 20w/cart	$194.95
172	$195.95
182 Turbo	$229.95
183	$219.95
320	$329.95
321	$459.95

COMMODORE SOFTWARE

Access:

Echelon	$26.95
Mach 128	$29.95
Mach 5	$20.95

Activision:

Maniac Mansion	$23.95
Neuromancer	$25.95
Rampage	$22.95

Berkeley Softworks:

Geofile 64	$29.95
Geos 64	$35.95
Geos 128	$39.95
Geowrite 128	$39.95
Berkeley TriPak	$29.95
Geocalc 64	$29.95
Geopublish	$29.95
Geofile 128	$39.95
Geos 2.0	$35.95

Broderbund:

Print Shop	$28.95
Print Shop Comp	$22.95
GraphicLib1,2,3,ea	$15.95
Carmen San Diego WI	$22.95
Carmen San Diego US	$25.95

Microprose:

Gunship	$25.95
Stealth Fighter	$28.95
Red Storm Rising	$28.95

Origin:

Ultima IV	$38.95
Ultima V	$38.95

Timeworks:

Swiftcalc 128	$31.95
Data Manager 2-64	$12.95
Data Manager 128	$28.95
Partner 64	$17.95
Partner 128	$18.95
Word Writer 128	$31.95

*** Call for New Titles ***

ACCESSORIES

Joysticks:

Boss	$12.95
Bathandle	$16.95
I Controller	$12.95
3-Way	$22.95

Diskettes:

5¼ Disk Notcher	$5.95
Xidex 5¼ DSDD	$4.95
Xidex 3½ DSDD	$9.95

Surge Protectors:

QVS PP-102	$16.95
QVS PP-112	$15.95
QVS PP-104	$23.95

Printer Interfaces:

Xetec Jr.	$35.95
Xetec Supergraphics	$55.95
Xetec Gold	$74.95
PPI	$29.95
MW 350	$49.95

Printer Paper:

1000 sheet laser	$16.95
Banner Paper 45' Roll	$10.95

Drive Maintenance:

5¼ Drive Cleaner	$4.95
3½ Drive Cleaner	$4.95

COMMODORE UPGRADES

MAGNAVOX CM8762



• 13" diagonal RGB/Composite Color Display
• Green text switch
• Built-in tilt stand
• Interface cables included

$234.95

GoldStar 2105 A



• 12" amber display
• 640h x 200v
• IBM and Commodore compatible

$69.95

MONITORS

Magnavox:

BM7652 Mon. Comp	$84.95
CM8702 Color Comp	$189.95
CM8762 RGB	$234.95
8CM-515 RGB	$259.95

GoldStar:

2105 A Composite	$69.95
1410 CGA 14"	$215.95
1420 EGA 14"	$314.95

MODEMS

Avatex:

1200e	$64.95
1200hc	$94.95
2400	$129.95

Cardinal:

MB2400EX EXT	$109.95
MB1200EX EXT	$69.95

Everex:

Evercom 12 (INT)	$54.95
Evercom 24 (INT)	$119.95
Evercom 24+ MNP	$149.95
Evercom 24E+ MNP	$199.95

Cardinal MB1200EX External Modem



• Low error data transmission and reception over standard dial-up telephone lines
• Hayes compatible with the universally-accepted AT command set
• Automatic Data Standard and Speed Adjust features

$69.95

Excel FSD-2 + Disk Drive

100% Commodore 64C drive compatible, the Excelerator Plus Disk Drive is quieter, smarter, faster, and more reliable than the 1541 and 1541C. *1-year warranty*

$139.95

HARDWARE

64C Computer	$129.95
C 128 D Computer Drive	$418.95
1541 II Disk Drive	$174.95
1084 Color Monitor	$279.95
1764 RAM C64	$109.95
Colt PC	$639.95
1670 Modem	$59.95

64 Power Supply



The MW 701-A power supply made by Micro R&D features double fused systems, schematics, and a one-year warranty. Stay with the best, stay with Micro R&D.

$34.95

"Our friendly sales staff can help with any questions you have"

Why shop at Lyco Computer? Lyco Computer offers quality name brand computer products at prices 30% to 50% below retail. If you do not see the product you want advertised, call Lyco Marketing toll free. ***How do I know I will get the product I need?*** Our marketing staff receives continous formal training by our manufacturers. As thousands of people every week capitalize on our savings and services, we hope you too, will make Lyco Computer your first choice. ***What about warranty or service?*** Our Customer Service Department is available at (717) 494-1670 to assist you. We back all of our manufacturer's stated warranty terms. Before returning any item that appears to be defective, we ask that you call our Customer Service Department. ***Will you rush an item to me?*** We offer next day air, two day air, standard UPS, and postal international shipping services. Temporary shortages are normally filled within 10 days. ***How do I order?*** We have always accepted C.O.D. orders through UPS. Prepaid cash orders over $50 are shipped freight-free. For orders under $50, please add $3 for freight. Personal and company checks require a 4 week waiting period. Visa and Master Card orders are accepted. Please add 4% for credit cards. Purchase orders are accepted from Educational Institutions. We charge sales tax on deliveries in Pennsylvania. For APO, FPO, and international orders, add $5 plus 3% for priority mail. Prices in this ad reflect cash prices. Advertised prices and availability are subject to change. Simply send your order to Lyco Computer, P.O. Box 5088, Jersey Shore, PA, 17740. Or, call 1-800-233-8760 or (717) 494-1030. Not responsible for typographical errors.

Sales: 1-800-233-8760 or 717-494-1030
Hours: Mon.-Fri. 9a.m.-9p.m. Sat.10a.m.- 6p.m.
Customer Service: 717-494-1670
Hours: Mon.-Fri. 9a.m.-5p.m.
Fax: 717-494-1441

MasterCard VISA

ATTENTION EDUCATIONAL INSTITUTIONS:
If you are not currently using our educational service program, please call our representatives for details.

1-800-233-8760

Price Guarantee

Since 1981, we have led the industry by continuing to offer the lowest national prices while providing quality service. Many companies have come and gone trying to imitate our quality and service. If by some oversight, we do not have the lowest prices advertised on the products you desire, then we would appreciate the opportunity to rectify the over sight!

From p. 10.

```
      RESS";EA                          :REM*117
6ØØ2Ø INPUT"START AT WHAT LINE";L:INPUT"LI
      NE INCREMENT";LI                  :REM*65
6ØØ3Ø IFLI<1ORA>EAORL<ØTHENPRINT"???ERROR"
      :END                              :REM*93
6ØØ4Ø PRINT"{SHFT CLR}"L"DATA";:X=Ø
                                        :REM*168
6ØØ45 A$=STR$(PEEK(A)):A$=RIGHT$(A$,LEN(A$
      )-1)                              :REM*57
6ØØ5Ø PRINTA$;:A=A+1:IFA=EATHENPOKE251,1:G
      OTO6ØØ8Ø                          :REM*129
6ØØ6Ø X=X+1:IFX<8THENPRINT",";:GOTO6ØØ45
                                        :REM*2ØØ
6ØØ7Ø POKE251,Ø                         :REM*239
6ØØ8Ø PRINT:PRINT"A="A":EA="EA":L="L":LI="
      LI":GOTO6Ø1ØØ"                    :REM*12
6ØØ9Ø POKE198,4:POKE631,19:POKE632,13:POKE
      633,13:STOP                       :REM*26
6Ø1ØØ IFPEEK(251)THENPRINT"{SHFT CLR}DONE.
      .":LIST                           :REM*246
6Ø11Ø L=L+LI:GOTO6ØØ4Ø                  :REM*211
```

—David M. Ficken, Topsail, Nfld., Canada

$56A Porting Basic 7.0 to GWBasic

I like to port Basic 7.0 programs from my C-128 over to GWBasic, the version of MS-DOS Basic used on PC-compatible computers. The initial process requires five Direct Mode commands on the C-128, as follows:

```
DLOAD "filename"
DOPEN#4,"newfilename",D0,U8,W
CMD4
LIST
PRINT#4:DCLOSE
```

In the above example, "filename" is the C-128 program to be converted. It is written back to disk as a sequential file, which you can then convert to an MS-DOS disk format by using *RUN*'s Commodore-to-MS-DOS conversion program (April 1989).

Once it's in MS-DOS format, it can be loaded into GWBasic and certain keywords can be converted. For example, you have to change "PRINT#4," to the GWBasic keyword LPrint. This entire process is many times faster than typing a Basic 7.0 program into your MS-DOS computer and making all the keyword conversions.

—Nick J. Piazza, Sylvania, OH ■

Magic is a forum for RUN*'s readers to share their programming tips, brief software or hardware modifications, shortcuts or items of general interest. If you have an idea to make computing easier and faster, send it to: Magic, RUN Magazine, 80 Elm St., Peterborough, NH 03458.* RUN *pays $10 to $40 for each trick published.*

FOOTBALL • BASKETBALL • BASEBALL

SPORTS FANS...THE SPORTS SIMULATIONS YOU HAVE BEEN WAITING FOR ARE HERE!

3 IN 1 FOOTBALL

• with Stats Compiler for each player and team • you choose from 14 offensive plays and 6 defensive formations • includes 180 college teams and the 28 Pro teams from the '88 season PLUS 174 great college and 189 great pro teams of the past

NEW! 3-POINT SHOT **COURT SIDE COLLEGE BASKETBALL & BASKETBALL: THE PRO GAME**

• each player contributes as they did in real life • Stats Compiler • you determine starting lineup, substitutions, shot selection, passing, offensive and defensive styles of play and more • the College game includes 292 teams from the '88-'89 season plus 70 all-time greats • the Pro game features the 23 Pro teams from '88-'89 and more than 125 great teams of the past

FULL COUNT BASEBALL

• Includes all 26 teams from the most recent and 52 great teams from the past • 29 man rosters • Ball park effects • Stats Compiler automatically keeps all player and team stats as well as past schedule results. • Complete boxscore to screen and/or printer after each game. • One player vs. computer manager, two-player, and auto-play options. • Input your own teams, draft or trade players from teams already included. • You choose the starting lineups, batting order, relief pitchers, plus game decisions like when to hit away, bunt for a hit, sacrifice, steal, hit & run, bring in the corners or the entire infield, take an extra base, DH option and more!

FULL COUNT Standings & League Leader Program $14.99

OTHER PAST SEASONS' TEAMS DISKS AVAILABLE AND NEW SEASONS' READY PRIOR TO PLAYOFFS FOR ALL GAMES.

Send check or money order for **$39.99** each. Visa and MasterCard accepted on phone orders only.
Please add $2.00 for postage and handling.

© LANCE HAFFNER GAMES

P.O. Box 100594 • Nashville, TN • 37224 • 615/242-2617

INQUIRE ABOUT OUR INSTANT BASEBALL AND INSTANT FOOTBALL DISKS.

Circle 61 on Reader Service card.

Get A Goldmine of Tips and Projects for Your Commodore

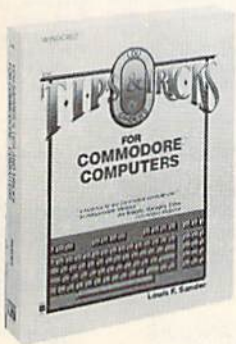


Build Up Your Game Strategies!

LOU SANDER'S GOLD MINE: Game Tips for Commodore™ Users by Lou Sander



Sharpen your game-playing skills with over 1200 tips on 500+ popular software games in this one handy volume! Master such favorites as "Breakthru," "Defender of the Crown," "GUNSHIP," "The Last Ninja," "Legacy of the Ancients," and more with these proven pointers. This rich assortment of winning formulas offers the best of Lou Sander's popular "Gold Mine" column, plus hundreds of tips never before published! 352 pp./illustrated. **No. 3323H, $28.95 Hardcover**

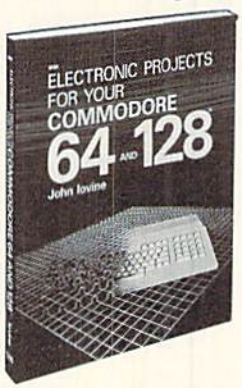


Stretch Your Commodore's Capabilities!

LOU SANDER'S TIPS AND TRICKS FOR COMMODORE COMPUTERS by Louis F. Sander

". . . good reading and an indispensable reference tool."
—James Gracely, Managing Editor, *Commodore Magazine*

Enjoy EVEN MORE tips from Lou Sander, columnist of Commodore Magazine's "Tips and Tricks." Includes 500+ user-tested tips and ready-to-use programs—many never before in print! Get valuable programs to create an easy word processor, memory saver, search mechanism, mode guard, and more. Plus, you get answers to your questions on: setting up and operating the computer; improving programming skills; and maximizing disks, printers, monitors, keyboards, peripherals, and more. 412 pp./illustrated. **No. 3192P, $21.95 Paperback**



Do Amazing Things with Your Commodore—for Under $65!

ELECTRONIC PROJECTS FOR YOUR COMMODORE 64™ AND 128™ by John Iovine

Maximize the performance and value of your Commodore 64 or 128 with 11 useful, fun-filled electronics projects from Commodore Magazine's "Projects" columnist John Iovine! This step-by-step guide shows how you can make • A simple LED interface for the user port • Appliance controller • Full-featured digital camera • Speech synthesizer • and more. 187 pp./148 illus. **No. 3083P, $15.95 Paperback**

More Bestselling Books for the Commodore User

Advanced Commodore 128 Graphics and Sound Programming *by S. Krute.* 404 pp./72 illus. (#2630H, $21.95 Hardcover)

The Commodore Programmer's Challenge: 50 Challenging Problems to Test Your Programming Skills—with Solutions in BASIC™, Pascal® and C® *by S. Chen.* 218 pp./illustrated. (#2817P, $14.95 Paperback)

Commodore 128 BASIC: Programming Techniques *by M. Hardee.* 190 pp./120 illus. (#2732P, $12.95 Paperback)

Commodore 128 Data File Programming *by D. Miller.* 297 pp./illustrated. (#2805P, $16.95 Paperback)

Serious Programming for the Commodore 64 *by H. Simpson.* 208 pp./124 illus. (#1821P, $12.95 Paperback)

1001 Things to Do with Your Commodore 128 *by M.R. Sawusch/D. Prochnow.* 206 pp./74 illus. (#2756P, $12.95 Paperback)

TAB TAB BOOKS Inc.
Blue Ridge Summit, PA 17294-0840

TO ORDER CALL TOLL FREE 1-800-343-0728

Ask for the TAB BOOKS Operator

Or mail ad to: TAB BOOKS Inc., Blue Ridge Summit, PA 17294-0840.

YES, please send me the following book(s). Please Print

Book # _____ Title _____ $ _____

Book # _____ Title _____ $ _____

Shipping and Handling ($5 outside the U.S.A.) $ 3.00

(In PA, NY, and ME add applicable sales tax.) $ _____

TOTAL $ _____

☐ Check or money order enclosed made payable to TAB BOOKS Inc.

Charge my ☐ VISA ☐ MasterCard ☐ American Express

Acct. No. _____ Exp. _____

Signature _____

Name _____

Address _____

City _____

State/Zip _____

Prices subject to change. RM129



Merry Disk

Our low pricing makes

We have what

Ho! Ho! Ho!
Save Dough, Dough, Dough, with our under $10 gift selection.

ACCOLADE
Ace of Aces $9.88
Apollo 18 ..... $9.88
Bubble Ghost $9.88
4th & Inches Football .. $9.88
4th & Inches Team Const. $6.88
Hardball $9.88
Test Drive 1 ..... $9.88

ACTIVISION
Aliens $9.88
Apache Strike $9.88
Ghostbusters $9.88
Hacker 1 or 2 ..... $9.88 Ea.
Last Ninja #1 ..... $9.88
Ocean Ranger $9.88
Predator $9.88
Shanghai $9.88
Transformers $9.88

AVANTAGE
Deceptor $9.88
Desert Fox $9.88
Frightmare $9.88
Harrier 7 ..... $9.88
Mental Blocks $9.88
Shoot'em Up Const. Set . $9.88
Spy vs. Spy 1 & 2 ..... $9.88

BOX OFFICE
Alf $9.88
High Rollers & $100,000 Pyramid $9.88

BRODERBUND
Arcade Game Const. Kit . $9.88
Choplifter/Davids Midnight Magic $6.88
Karateka $6.88
Loderunner $6.88
Magnetron $9.88
Superbike Challenge .. $6.88

CDA
Amer. Cooks French ... $9.88

CINEMAWARE CLASSICS
Sinbad $9.88

COSMI
Swift Data Base $6.88
Swift Desktop Publisher . $6.88
Swift Music $6.88
Swift Paint $6.88
Swift Spreadsheet $6.88
Swift Word Processor .. $6.88

DATA EAST
Ikari Warrior $9.88
Platoon $9.88

EASY WORKING/ SPINNAKER
Filer $6.88
Planner $6.88
Writer $6.88

ELECTRONIC ARTS
Adv. Const. Set $9.88
Amer. Cup Sailing $7.88
Artic Fox $9.88
Deathlord $9.88
Demon Stalker $9.88
Financial Cookbook ... $7.88
Heart of Africa $9.88
Instant Music $9.88
Legacy of Ancients $9.88
Lords of Conquest $9.88
Marble Madness $9.88
Mars Saga $9.88
Modem Wars $9.88
Music Const. Set $9.88
Pegasus $9.88
Pinball Const. Set $9.88
Powerplay Hockey $9.88
Realm of Impossibility ... $7.88
Skyfox $9.88
Skyfox 2 ..... $9.88
Skate or Die $9.88
Strike Fleet $9.88
Super Boulder Dash ... $9.88
Touchdown Football ... $9.88
Wasteland $9.88
World Tour Golf $9.88

EPYX
4×4 Off Road Racing .. $9.88
Drive Bomber $9.88
Space Station Oblivion . $9.88
Sub Battle Simulator ... $9.88
Summer Games 1 or 2 ..... $9.88 Ea.
Tower Toppler $9.88
Winter Games $9.88
World Games $9.88

FREE SPIRIT
Galactic Frontier $9.88

GAMESTAR
Champ. Baseball $9.88
Champ. Basketball $9.88
GFL Ch. Football $9.88
On Court Tennis $9.88
Star League Baseball/ On Field Football $9.88
Take Down $9.88

GAMETEK
Candy Land $9.88
Chutes & Ladders $9.88
Double Dare $9.88
Go To Head of Class .. $9.88
Hollywood Squares $9.88
Price is Right ..... Call
Super Password $9.88

HI-TECH EXPRESSIONS
Fun House $8.88
Print Power $9.88
Remote Control $8.88
Win, Lose or Draw $8.88

HI-TECH EXPRESSIONS
Sesame Street Series:
Astro Grover $6.88
Big Bird's Special Delivery $6.88
Ernie's Big Splash ... $6.88
Ernie's Magic Shapes . $6.88
Grover's Animal Adv. . $6.88
Pals Around Town .. $6.88
Sesame St. Print Kit ... $9.88

INFOCOM
Hitchhikers Guide $9.88
Leather Goddesses $9.88
Zork 1 ..... $9.88

INTRACORP
Business Card Maker .. $9.88

KONAMI/ACTION CITY
Circus Charles $9.88
Hyper Sports/Ping Pong $9.88

MASTERTRONIC
Last V-8 ..... $4.88
Ninja $4.88
Slam Dunk $6.88
Vegas Poker & Jackpot .. $4.88

MINDSCAPE
Mastertype (Cart) $9.88

SHARE DATA
All New Family Feud ... $8.88
Concentration $9.88
Concentration 2 ..... $9.88
Jeopardy $8.88
Jeopardy Jr. $9.88
Jeopardy 2 ..... $9.88
Sports Jeopardy $9.88
Wheel of Fortune $8.88
Wheel of Fortune 2 .... $9.88
Wheel of Fortune 3 .... $9.88
Wipe Out $9.88

SIERRA
Wizard & The Princess ... $6.88
Wiz Type $6.88

SPECTRUM HOLOBYTE
Gato $9.88

SPINNAKER
Cosmic Combat $4.88
Dark Tower $4.88
Karate Chop $6.88
Learn the Alphabet $4.88
Learn to Spell $4.88
Learn to Add $4.88

SPRINGBOARD
Certificate Maker $9.88
C.M. Library Vol. 1 .... $9.88
Newsroom $9.88
N.R. Art #1, 2, or 3 .... $9.88 Ea.

TAITO
Alcon $9.88
Arkanoid $9.88
Bubble Bobble $9.88
Renegade $9.88

THUNDER MOUNTAIN
Doc the Destroyer $6.88
Felony $9.88
Galaxian $8.88
Rambo: First Blood Part II $6.88
Super Pac Man $9.88

VALUE WARE
Artist $4.88
Educator $4.88
Entertainer $4.88
Home Banker $4.88

ACCOLADE
Blue Angels Flight Sim ... $19
Bubble Ghost $19
Fast Break $19
Grand Prix Circuit $19
Heat Wave Boat Racing ... $19
Jack Nicklaus Golf $19
J.N. Glf. Chmp. Courses $9.88
J.N. Glf. Int'l Courses .. $9.88
Mini Putt $19
Rack 'Em $19
Serve & Volley $19
Steel Thunder $19
Test Drive 2: The Duel ... $19
T.D. 2: Europe Scenery . $9.88
T.D. 2: Muscle Cars ... $9.88
T.D. 2: Calif. Scenery .. $9.88
T.D. 2: Super Cars $9.88
T.K.O. $19

ACTIVISION
Battlechess $25
Beyond Dark Castle $19
Crossbow $19
*Geo-Calc $33
*Geo-File $33
*Geo-Programmer $44
*Geo-Publish $33
*Requires Geos 64!

BLUE LION
Ticket to Hollywood $19
Ticket to London $19
Ticket to Paris $19
Ticket to Spain $19
Ticket to Wash. D.C. $23

BRODERBUND
Bank St. Writer $33
Carmen S.D. - Europe ... $25
Carmen S.D. - U.S.A. $25
Carmen S.D. - World $23
Omni-Play Basketball $23
Print Shop $26
P.S. Companion $23
P.S. Graphics #1, 2 or 3 ..... $16 Ea.
P.S. Graphics Library #1, 2 or 3 ..... $16 Ea.



ACCOLADE

Fly heart-stopping precision flight patterns with the dare-devil blue angel team. 25 actual air show maneuvers & more.

BLUE ANGELS
List $29.95

SDA Discount Price $19

Dragon Wars $29
F14 Tomcat $25
F18 Hornet $23
Grave Yardage ..... Call
Last Ninja 2 ..... $23
Neuromancer $25
Rampage $23

AMERICAN EDUCATIONAL
Biology $12
Learn to Read (Gr. 1-4) .. $25
Science: Grades 3/4 ..... $12
Science: Grades 5/6 ..... $12
Science: Grades 7/8 ..... $12
US Geography $12
US History $12
World Geography $12
World History $12

ARTWORX
Bridge 5.0 ..... $19
Cycle Knight $14
Daily Double Horse Race $14
Kaleidokubes $16
Linkword Languages .. $16 Ea.
S. P. Data Male #2 ..... $14
S. P. Data Female #1 or 3 .. $14
Strip Poker $21
Tank Attack $19

AVALON HILL
NBA Basketball $25
Super Sunday $21
SBS Gen. Mgr. Disk $19
SBS 1987 Team Disk $14

BATTERIES INCLUDED
Paperclip Publisher $33
Paperclip 3 ..... $33

BAUDVILLE
Award Maker Plus $25
Blazing Paddles $23
Video Vegas $19

BERKLEY SOFTWORKS
Geos 128 2.0 ..... $44
Geo-Calc 128 ..... $44
Geo-File 128 ..... $44
Geos 64 (2.0) $39
*Desk Pack Plus $19
*Font Pak Plus $19
*Geo-Chart $19
P.S. Graphics Library Holiday Edition $16
Slim City $19
Star Wars $19

BRITANNICA
Eye of Horus $25

CAPCOM
Bionic Commando $19
Ghosts & Gobblins $19
Gunsmoke $19
Street Fighter $19

CENTRAL POINT
Copy 2 ..... $25

CINEMAWARE
Defender of the Crown ... $23
Rocket Ranger $23
The Three Stooges $23
T.V. Sports Football $19
Warp Speed (Cart) $33

CMS
General Acct. 64 or 128 ..... $119 Ea.
Inventory 128 ..... $49

COSMI
Chomp! $16
Home Office $25
Navy Seal $19
Presumed Guilty! $16
Super Huey 2 ..... $14

DATA EAST
ABC Monday Nite Football $25
Bad Dudes $19
Batman $16
Breakthru $19
Commando $14
Guerilla War $19
Heavy Barrel $19
Robocop $23
Speed Buggy $19
Super Hang-on $19
Tag Team Wrestling $14
Victory Road $19
Vigilante $16

DATA SOFT
Alternate Reality: The City $19
The Dungeon $19

!!! SDA CLOSEOUTS !!!
Worlds Greatest Baseball $6.66
Guild of Thieves $11.11
Boston Computor Diet .. $8.88
Gulf Strike $8.88
Lip Stik + Joystick $11.11
Wizard of Oz $6.66
Typing Tutor 3 ..... $8.88
Eagles - SSI $9.99
Basic Tool Kit $6.66
Great Chefs Recipes ... $8.88
Jet Boys $6.66
Macbeth $9.99
Phantom of the Asteroids $2.22
Enlightenment $8.88
Home Inventory $4.44
Winnie the Pooh $9.99
Financial Cookbook ... $6.66
Master of Magic $3.33
Blowup Graphics $11.11
Write Now $3.33
File Now (RQ Write now) $3.33
Graph Now (RQ Write now) $3.33
Calc Now(RQ Write now) $3.33
Alien Destination Set .. $7.77
Sea Speller $2.22
Shogun - Mastertronic .. $4.44
Deep Space $8.88
* Quantities Limited

ABACUS BOOKS
Anatomy of the 1541 ..... $14
Anatomy of the C64 ..... $14
GEOS Inside & Out $13
GEOS Tricks & Tips $13

ABACUS SOFTWARE
Assembler Monitor $25
Basic $25
Basic 128 ..... $39
*Becker Basic $33
Cad Pak $25
Cad Pack 128 ..... $39
Cad Pack 64 or 128 ..... $25 Ea.
Cobol 64 or 128 ..... $25 Ea.
Fortran $25
PPM $25
PPM 128 ..... $39
Speed Term 64 or 128 ... $25
Super C64 or 128 ... $39 Ea.
Super Pascal 64 or 128 ..... $39 Ea.
TAS 128 ..... $39
*Requires GEOS!

ACCESS
Echelon w/Lip Stik $29
Heavy Metal $25
Mean Streets ..... Call
Tenth Frame $25
Triple Pack: BH1, BH2, Raid Over Moscow $14
World Class L. B. Golf ... $25
World Class L. B. Golf Fam. Course 1, 2 or 3 ... $14 Ea.

*Please Read The Following Ordering Terms & Conditions Carefully Before Placing Your Order: Orders with cashiers check or money order shipped immediately on in-stock items! Personal & Company checks, allow 3 weeks clearance. No C.O.D.'s! Shipping: Continental U.S.A.-Orders under $100 add $3; free shipping on orders over $100. AK, HI, FPO, APO-add $5 on all orders. Canada & Puerto Rico add $7.50 on all orders. Sorry, no other international orders accepted! PA residents add 6% sales tax on the total amount of order including shipping charges. CUSTOMER SERVICE HOURS: Mon.-Fri. 9 AM-5:30 PM Eastern Time. REASONS FOR CALLING CUSTOMER SERVICE—412-361-5291 (1) Status of order or back order (2) if any merchandise purchased within 60 days from SD of A is defective, please call for a return authorization number. We will not process a return without a return auth. #! Defective merchandise will be replaced with the same merchandise only. Other returns subject to a 20% restocking charge! After 60 days from your purchase date, please refer to the warranty included with the product purchased & return directly to the manufacturer. Customer service will not accept collect calls or calls on SD of A's. 800 # order lines! Prices & availability are subject to change! New titles are arriving daily! Please call for more information.

mas from SD of A

holiday shopping as easy as matching your list with ours.

you're looking for!

ACTIVISION

Adventure thru 14 full scrolling complex castle mazes. Destined to be a #1 favorite of arcade and adventure gamers everywhere.



BEYOND DARK CASTLE
List $34.95
SDA Discount Price $23

- Bismarck $19
- Cosmic Relief $19
- Firezone $19
- Global Commander $19
- Hunt for Red October $26
- Lancelot $21
- Rubicon Alliance $14
- Time & Magik $21
- Video Title Ship w/ Graphics Companion ... $21

DAVIDSON
- Algeblaster $19
- Math Blaster $19
- Spell It $19
- Word Attack $19

DESIGNWARE
- Body Transparent $19
- Designasaurus $19

DIGITAL SOLUTIONS
- Pocket Filer 2 ..... $23
- Pocket Planner 2 ..... $23
- Pocket Writer 2 ..... $33
- All 3 in 1 Super Pak $59

DIGITEK
- Hole in One Min. Golf $19
- Hollywood Poker $19
- Western Games $19

ELECTRONIC ARTS
- Altura $23
- Bard's Tale 2 or 3 .. $26 Ea.
- Bard's Hints 1, 2 or 3 .. $9 Ea.
- Beyond the Black Hole ... $26
- CavemanUgh-Lympics ... $21
- Chessmaster 2100 ..... $26
- Chuck Yeagers AFT $23
- Demon Stalker $21
- Double Dragon $23
- Dragon's Lair $19
- Empire $26
- Ferrari Formula One .... Call
- Fire King $21
- Indiana Jones Crusade Last Arcade Version $21
- Jordan vs. Bird $21
- Kings Beach Volleyball ... $21
- Madden Football ..... Call
- Magic Candle $26
- Maniac Mansion $23
- Might & Magic 1 or 2 .. $25 Ea.
- Pipe Dream $19
- Power Play Hockey $19
- Project Firestart $21
- Star Fleet 1 ..... $26
- The Mars Saga $23
- Zak McKracken $23

EPYX
- California Games $19.88
- Death Sword $14.88
- Devon Aire $19.88
- Legend of Black Silver . $19.88
- Metrocross $12.88
- Mind-Roll $14.88
- Revenge of Defender $19
- Snow Strike $14.88
- Technocop $19.88
- The Games: Winter Edition $19.88
- Tower Toppler $19.88

GAMESTAR
- Face Off Hockey $19

INFOCOM
- Battletech $25
- Zork Trilogy $16

INKWELL SYSTEMS
- #170C Deluxe L.P. $69
- #184C Light Pen $44
- Flexidraw 5.5 ..... $23
- Graphics Galleria #1 ..... $19
- Graphics Galleria #2 ..... $19
- Graphics Integrator 2 .... $19

INTRACORP
- Bumper Sticker Maker ... $33
- Button & Badge Maker ... $33
- Search For The Titanic ... $19
- Security Alert $19
- Ultimate Casino Gambling $23

LOGICAL DESIGN
- Club Backgammon $19
- Vegas Craps $19
- Vegas Gambler $19

LEISURE GENIUS
- Monopoly $19
- Risk $19
- Scrabble $19
- Scrupples $19

MEDALIST
- 3-D Pool $19
- Destroyer Escort $25
- Dr. Doom's Revenge $23
- Eliminator $19
- Exolon $19
- Netherworld $19
- Pro Soccer $25
- Pure State Baseball $25
- Savage $19

MELBOURNE HOUSE
- Barbarian $19
- Hershiser's Strike Zone ... $19
- John Elway's QB $19
- Magic Johnson B-Ball ... $19
- War in Middle Earth $25
- World Trophy Soccer $19

MICROLEAGUE
- Baseball $25
- Box Score Stats $16
- 87 or 88 Team Disk .. $14 Ea.
- General Manager $19
- WWF Wrestling $19

MICROPROSE
- Airborne Ranger $23
- F-15 Strike Eagle $14
- Intl. Team Sports $19
- Out Run $23
- Paperboy $23
- Road Runner $23
- Sgt. Slaughters Mat Wars $19
- Shinobi $19
- Super Star Ice Hockey $19
- Super Star Hockey $23
- Super Star Soccer $23
- Thunder Blade $23
- Uninvited $23
- Willow $19

*Requires Gauntlet!

MISC UTILITIES
- Bob's Term Pro $29
- Bob's Term Pro 128 ..... $39
- Doodle $25
- Final Cartridge 3 ..... $47
- Font Master 128 ..... $29
- Maverick Utilities V.3 ..... $23
- Superbase 64 ..... $25
- Superbase 128 ..... $33
- Superscript 64 ..... $23
- Superscript 128 ..... $25
- Super Snapshot (V.4) $47

ORIGIN
- Autoduel $25
- Knights of Legend $32
- Moebius $25
- Omega $33
- Quest For Clues Book 2 .. $19
- Space Rogue $32
- Tangled Tales $19
- Times of Lore $25
- Ultima 4 or 5 ..... $39 Ea.

MINDSCAPE INC.

4 Great Mindscape sports hit in 1 unbelievable package at a low price.
- Ice Hockey
- Clubhouse Sports
- Indoor Sports
- Soccer



SPORTS HITS VOL. 1
Value $130
SDA Discount Price $25

- Gunship $23
- Pirates $25
- Project Stealth Fighter ... $29
- Red Storm Rising $25
- Silent Service $14

MINDSCAPE
- 720 Skateboarding $23
- Action Fighter $19
- After Burner $23
- Alien Syndrome $23
- Aussie Games $19
- Blockbuster $19
- Captain Blood $23
- Clubhouse Sports $19
- Combat Course $19
- Crossword Magic $19
- *Deeper Dungeons $16
- De Ja Vu $23
- Gauntlet $23
- Gauntlet 2 ..... $19
- Harrier Combat Sim $19
- Hostage $19
- Indiana Jones Temple of Doom $23
- Indoor Sports $19
- Ultima 5 Hint Book $9
- Ultima Trilogy $39
- Windwalker $25

POLARWARE
- All Dogs go to Heaven ... $19

PROFESSIONAL
- Fleet System 2 Plus $33
- Fleet System 4 128 ..... $43

PSYGNOSIS
- Baal $19
- Ballistix $19
- Blood Money $19
- Captain Fizz $19
- Menace $16

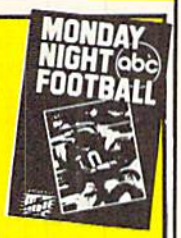
SHARE DATA
- Nightmare on Elm Street . $19

SIMON & SCHUSTER
- Star Trek: Rebel $23
- Typing Tutor 4 ..... $25

SIR TECH
- Knight of Diamonds $25
- Legacy of Llylgamyn $25
- Proving Ground $25
- Wizardry Trilogy $25

DATA EAST

Awesome gut wrenching football action w/the best digitized sound, graphics & life animations ever! This is the game you've been waiting for.



ABC MON. NITE FOOTBALL
List $39.95
SDA Discount Price $25

SPECTRUM HOLOBYTE
- Tetris $16

SPOTLIGHT
- Darkside $19
- Death Bringer $19
- Speedball $19
- Total Eclipse $19

SSI
- Hintbooks Available .. Call
- Battles of Napoleon $32
- Curse of Azure Bonds ... $26
- D. M Mast. Asst. 1 or 2 ..... $21 Ea.
- Demon's Winter $21
- Eternal Dagger $26
- First Over Germany $32
- Gettysburg $39
- Hillstar $26
- Heroes of the Lance $21
- Overrun $32
- Pool of Radiance $26
- Storm Across Europe $39
- Typhoon of Steel $32
- War Game Const. Set $21

SPINNAKER
- EZ Working Tri-Pack $14

SUBLOGIC
- Flight Simulator 2 ..... $32
- F.S. Scenery Disks ..... Call
- Hawaii Scenery $19
- Jet $26
- Stealth Mission $32
- Thunder Chopper $19
- Up Periscope $19

TAITO
- Arkanoid 2: Revenge $19
- Operation Wolf $19
- Qix $19
- Rambo 3 ..... $19
- Rastan $19
- Sky Shark $19

THREE SIXTY
- Dark Castle $23
- Thud Ridge $23
- Warlock $19

TIMEWORKS
- Data Manager 2 ..... $14
- Evelyn Wood Reader $14
- Swiftcalc/Sideways $14
- Word Writer 4 ..... $25

UNICORN
- Decimal Dungeon $19
- Percentage Panic $19
- Ten Little Robots $19

UNISON WORLD
- Art Gallery 1 or 2 .... $16 Ea.
- Art Gallery: Fantasy $16
- Print Master Plus $23

VIRGIN GAMES
- Double Dragon 2 ..... Call

WEEKLY READER
- Stickybear Series:
  - ABC's $23
  - Math 1 or 2 ..... $23 Ea.
  - Numbers $23
  - Opposites $23
  - Reading $23
  - Spellgrabber $29
  - Typing $29

ACCESSORIES
- Animation Station $49
- CompuServe Starter Kit .. $19
- Bonus 5¼ DSDD ... $4.99 Bx.
- Sony 5¼ DSDD .... $6.99 Bx.
- Disk Case (Holds 75) .. $6.88
- Disk Drive Cleaner $6.88
- 1 Controller $14
- Winner M3 Mouse: $33
- EPYX 500 XJ Joystick $14
- Wico Bat Handle Joystick . $17
- Wico Boss Joystick $12
- Wico Ergostick Joystick ... $16
- XETEC Super Graphix ... $39
- XETEC Super Graphix Jr .. $59
- XETEC Super Graphix Gold $79

Weekly Reader Software

We offer the entire line of Wkly. Reader educational software. These creative & imaginative titles make learning a fun & fascinating adventure.



STICKYBEAR MATH
1 OR 2
List $39.95
SDA Discount Price $23Ea.

Suncom

Unleash your creativity w/this powerful computer design pad. Includes design lab graphics software. Great Christmas gift!



ANIMATION STATION
List $89.95
SDA Discount Price $49

Circle 245 on Reader Service card.

Speedy Delivery
Deep Discounts
Astronomical Selections
If you can't find what you're looking for in our ad, call us.

Ask your Salesperson what's on sale this month!

USA/CANADA orders
1-800-225-7638
PA Orders 1-800-223-7784
Customer Service (412) 361-5291
Fax Order Line (412) 361-4545

- Free shipping on orders over $100 in continental USA.
- No surcharge for VISA/MasterCard.
- Your card is not charged until we ship.
- Purchase orders accepted.

Software Discounters Of America

Send check or money orders to:
P.O. Box 111327-Dept. RN
Blawnox, PA 15238

Order Line Hours: Mon.-Thurs. 9:00 AM-9:00 PM, Fri. 9:00 AM-7:00 PM, Sat. 10:00 AM-4:00 PM Eastern Time

MODEM OWNERS: You can order on-line from our Commodore Shop via the CompuServe, GEnie and Q-Link electronics malls.

GRAPHMAKER

From p. 50.

```
   SHFT R}{SHFT A}{SHFT P}{SHFT
    H}{SHFT M}{SHFT A}{SHFT K}{
   SHFT E}{SHFT R}{SHFT SPACE}6
   4/128 ****"            :REM*195
9Ø REM "****{2 SPACEs}BY {SHFT
   R}OBIN {SHFT F}RANZEL{2 SPAC
   Es}****"               :REM*211
1ØØ REM "****{5 SPACEs}{SHFT J}
   UNE, 1988{5 SPACEs}****"
                          :REM*97
11Ø REM "********************
   ******"                :REM*122
12Ø GOTO64Ø               :REM*2Ø3
13Ø REM **** COMPUTE TABS ****
                          :REM*77
14Ø TA=ABS(INT((CO-ML)/2)):RETU
   RN                     :REM*52
15Ø REM **** SPECIAL MESSAGES *
   ***                    :REM*255
16Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
   CLR}{CRSR DN}"SPC(TA)"{CTRL
    9}{SHFT E}DIT {SHFT G}RAPH
   {2 CRSR DNs}":RETURN:REM*2Ø
17Ø ML=12:GOSUB14Ø:PRINT"{SHFT
   CLR}{CRSR DN}"SPC(TA)"{CTRL
    9}{SHFT C}REATE {SHFT G}RA
   PH{2 CRSR DNs}":RETURN
                          :REM*13Ø
18Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
   CLR}{CRSR DN}"SPC(TA)"{CTRL
    9}{SHFT S}{SHFT A}{SHFT V}
   {SHFT E} {SHFT G}{SHFT R}{S
   HFT A}{SHFT P}{SHFT H}{2 CR
   SR DNs}":RETURN        :REM*23
19Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
   CLR}{CRSR DN}"SPC(TA)"{CTRL
    9}{SHFT L}{SHFT O}{SHFT A}
   {SHFT D} {SHFT G}{SHFT R}{S
   HFT A}{SHFT P}{SHFT H}{2 CR
   SR DNs}":RETURN        :REM*151
2ØØ ML=18:GOSUB14Ø:PRINT"{SHFT
   CLR}"LEFT$(CL$,12)SPC(TA)"{
   SHFT N}O {SHFT G}RAPH IN {S
   HFT M}EMORY"           :REM*221
21Ø FORI=1TO15ØØ:NEXT:RETURN
                          :REM*155
22Ø ML=28:GOSUB14Ø:PRINT"{SHFT
   CLR}"LEFT$(CL$,12)SPC(TA)"{
   SHFT E}RASE {SHFT G}RAPH IN
    {SHFT M}EMORY? (Y/N)"
                          :REM*127
23Ø REM **** WAIT FOR Y/N ****
                          :REM*193
24Ø GETA$:IFA$<>"Y"THENIFA$<>"N
   "THEN24Ø               :REM*8
25Ø RETURN                :REM*137
26Ø ML=25:GOSUB14Ø:PRINTCL$SPC(
   TA)"PRESS ANY KEY TO CONTIN
   UE";                   :REM*49
27Ø GETA$:IFA$=""THEN27Ø
                          :REM*219
28Ø REM **** DISPLAY LOWERCASE
   ****                   :REM*87
29Ø FORI=1TOLEN(A$):PRINTCHR$(A
   SC(MID$(A$,I,1))AND127);:NE
   XT                     :REM*232
3ØØ RETURN                :REM*187
31Ø REM **** DECLARE VARIABLES
   ****                   :REM*79
32Ø CLOSE1:OPEN1,Ø        :REM*177
33Ø MO=128:M=PEEK(215):IFM=128T
   HEN37Ø                 :REM*39
34Ø IFM<>ØTHENMO=64       :REM*7Ø
35Ø CO=4Ø:RA=6            :REM*1
36Ø GOTO38Ø               :REM*188
37Ø CO=8Ø:RA=12           :REM*59
38Ø DIMRV(12),RV$(15),RN$(12),S
   V(12),RA(12,2)         :REM*65
39Ø TT$="":LE$="":RN=Ø:G=Ø:PW=4
   Ø                      :REM*16
4ØØ CL$="{HOME}{24 CRSR DNs}"
                          :REM*125
41Ø RETURN                :REM*42
42Ø REM **** OPEN FILES ****
                          :REM*148
43Ø CLOSE4:CLOSE5:OPEN4,4,S1:OP
   EN5,4,S2               :REM*1Ø4
44Ø RETURN                :REM*68
45Ø CLOSE15:OPEN15,8,15,"IØ":RE
   TURN                   :REM*2Ø2
46Ø INPUT#15,N1,N2$,N3,N4:IFN1<
   2ØTHENRETURN           :REM*14Ø
47Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
   CLR}"LEFT$(CL$,12)SPC(TA)"{
   CTRL 9}{SHFT D}{SHFT I}{SHF
   T S}{SHFT K}{SHFT SPACE}{SH
   FT E}{2 SHFT Rs}{SHFT O}{SH
   FT R}{CRSR DN}"        :REM*53
48Ø ML=25:GOSUB14Ø:PRINTSPC(TA)
   N1;N2$;N3;N4           :REM*148
49Ø GOSUB26Ø:RETURN       :REM*187
5ØØ REM **** CREATE LABEL/SYMBO
   LIC ****               :REM*24Ø
51Ø MA=RV(1):MI=MA:IFRN=1THEN57
   Ø                      :REM*65
52Ø FORI=2TORN            :REM*54
53Ø IFRV(I)=ØTHEN56Ø      :REM*61
54Ø IFRV(I)>MATHENMA=RV(I)
                          :REM*19Ø
55Ø IFRV(I)<MITHENMI=RV(I)
                          :REM*127
56Ø NEXT                  :REM*176
57Ø IFMA=MITHENMI=MA-14:IFMI<ØT
   HENMI=1:MA=15          :REM*8
58Ø RA=MA-MI:NC=INT(RA/14):IFNC
   <>RA/14THENNC=NC+1     :REM*197
59Ø RV$(1)=STR$(MI):FORI=2TO15
                          :REM*136
6ØØ RV$(I)=STR$(VAL(RV$(I-1))+N
   C):NEXT                :REM*1Ø8
61Ø FORI=1TORN:SV(I)=INT(((RV(I
   )-MI)/NC)+1.5):NEXT:REM*159
62Ø RETURN                :REM*248
63Ø REM **** START PROGRAM ****
                          :REM*142
64Ø POKE53281,12:POKE5328Ø,11
                          :REM*91
65Ø PRINTCHR$(14)CHR$(8):GOSUB3
   2Ø                     :REM*68
66Ø ML=18:GOSUB14Ø:PRINT"{CTRL
   2}{SHFT CLR}{7 CRSR DNs}"SP
   C(TA)"{SHFT G}{SHFT R}{SHFT
    A}{SHFT P}{SHFT H}{SHFT M}
   {SHFT A}{SHFT K}{SHFT E}{SH
   FT R}{SHFT SPACE}64/128"
                          :REM*156
67Ø ML=2:GOSUB14Ø:PRINT:PRINTSP
   C(TA)"BY"              :REM*213
68Ø ML=14:GOSUB14Ø:PRINT:PRINTS
   PC(TA)"{SHFT R}OBIN {SHFT F
   }RANZEL"               :REM*44
69Ø ML=32:GOSUB14Ø:PRINT"{12 CR
   SR DNs}"SPC(TA)"{SHFT R}UNN
   ING IN {SHFT C}-"; :REM*185
7ØØ PRINTRIGHT$(STR$(MO),LEN(ST
   R$(MO))-1);" - ";      :REM*84
71Ø PRINTRIGHT$(STR$(CO),2);" {
   SHFT C}OLUMN {SHFT M}ODE";
                          :REM*1Ø7
72Ø FORI=1TO175Ø:NEXT     :REM*221
73Ø REM **** MAIN MENU ****
                          :REM*72
74Ø ML=17:GOSUB14Ø:PRINT"{SHFT
   CLR}{CRSR DN}"SPC(TA)"{CTRL
    9}{SHFT G}{SHFT R}{SHFT A}
   {SHFT P}{SHFT H}{SHFT M}{SH
   FT A}{SHFT K}{SHFT E}{SHFT
   R} 64/128"             :REM*122
75Ø ML=9:GOSUB14Ø:PRINT"{2 CRSR
    DNs}"SPC(TA)"{SHFT M}{SHFT
    A}{SHFT I}{SHFT N}{SHFT SP
   ACE}{SHFT M}{SHFT E}{SHFT N
   }{SHFT U}"             :REM*19
76Ø ML=18:GOSUB14Ø:PRINT"{2 CRS
   R DNs}";               :REM*187
77Ø PRINTSPC(TA)"1.{2 SPACEs}{S
   HFT C}REATE {SHFT G}RAPH":P
   RINT                   :REM*2Ø3
78Ø PRINTSPC(TA)"2.{2 SPACEs}{S
   HFT V}IEW {SHFT G}RAPH":PRI
   NT                     :REM*94
79Ø PRINTSPC(TA)"3.{2 SPACEs}{S
   HFT E}DIT {SHFT G}RAPH":PRI
   NT                     :REM*125
8ØØ PRINTSPC(TA)"4.{2 SPACEs}{S
   HFT S}AVE {SHFT G}RAPH":PRI
   NT                     :REM*223
81Ø PRINTSPC(TA)"5.{2 SPACEs}{S
   HFT L}OAD {SHFT G}RAPH":PRI
   NT                     :REM*139
82Ø PRINTSPC(TA)"6.{2 SPACEs}{S
   HFT P}RINT {SHFT G}RAPH":PR
   INT                    :REM*125
83Ø PRINTSPC(TA)"7.{2 SPACEs}{S
   HFT P}RINTER {SHFT S}ETUP":
   PRINT                  :REM*249
84Ø PRINTSPC(TA)"8.{2 SPACEs}{S
   HFT E}ND {SHFT P}ROGRAM"
                          :REM*42
85Ø ML=28:GOSUB14Ø:PRINTCL$SPC(
   TA)"{SHFT E}NTER {SHFT S}EL
   ECTION (1-8){3 SPACEs}";
                          :REM*116
86Ø IFMO=64THENPOKE198,Ø
                          :REM*19Ø
87Ø IFMO=128THENPOKE2Ø8,Ø
                          :REM*2Ø9
88Ø IFGTHENINPUT"{3 SPACEs}2{3
   CRSR LFs}";A$:GOTO9ØØ:REM*3
89Ø INPUT"{3 SPACEs}1{3 CRSR LF
   s}";A$                 :REM*64
9ØØ ONVAL(A$)GOTO98Ø,139Ø,122Ø,
   238Ø,257Ø,177Ø,277Ø,92Ø:GOT
   O74Ø                   :REM*97
91Ø REM **** END PROGRAM ****
                          :REM*141
92Ø IFG=ØTHENGOTO95Ø      :REM*245
```

```
93Ø ML=2Ø:GOSUB14Ø:PRINT"{SHFT
    CLR}"LEFT$(CL$,12)SPC(TA)"{
    SHFT A}RE YOU SURE?{2 SPACE
    s}(Y/N)"          :REM*1Ø8
94Ø GOSUB24Ø:IFA$<>"Y"THEN74Ø
                      :REM*148
95Ø ML=13:GOSUB14Ø:PRINT"{SHFT
    CLR}"LEFT$(CL$,12)SPC(TA)"{
    SHFT P}ROGRAM ENDED"
                      :REM*23Ø
96Ø PRINTCHR$(9):END  :REM*224
97Ø REM **** CREATE GRAPH ****
                      :REM*176
98Ø IFG=ØTHEN1Ø1Ø     :REM*164
99Ø GOSUB22Ø:IFA$="N"THEN74Ø
                      :REM*17Ø
1ØØØ CLR:GOSUB32Ø     :REM*14Ø
1Ø1Ø GOSUB17Ø         :REM*64
1Ø2Ø ML=16:GOSUB14Ø:PRINTSPC(TA
    )"{SHFT P}RESS {LEFT ARROW
    } FOR {SHFT M}{SHFT E}{SHF
    T N}{SHFT U}{CRSR DN}"
                      :REM*118
1Ø3Ø PRINT"{SHFT E}NTER {SHFT T
    }ITLE:{2 SPACEs}{CTRL 9}";
    :INPUT#1,TT$:PRINT:REM*113
1Ø4Ø IFTT$="{LEFT ARROW}"THEN:C
    LR:GOSUB32Ø:GOTO74Ø
                      :REM*246
1Ø5Ø PRINT"{SHFT E}NTER {SHFT L
    }EGEND:{2 SPACEs}{CTRL 9}"
    ;:INPUT#1,LE$:PRINT:REM*62
1Ø6Ø IFLE$="{LEFT ARROW}"THEN:C
    LR:GOSUB32Ø:GOTO74Ø
                      :REM*223
1Ø7Ø PRINT"{SHFT N}UMBER OF {SH
    FT R}ANGES (1-12):{8 SPACE
    s}{6 CRSR LFs}";:INPUT#1,R
    N$:RN=VAL(RN$)    :REM*141
1Ø8Ø IFRN>ØANDRN<13THEN11ØØ
                      :REM*5Ø
1Ø9Ø PRINT:PRINT"{CRSR UP}";:GO
    TO1Ø7Ø            :REM*99
11ØØ PRINT"{CRSR DN}":PRINT"{SH
    FT K}EYBOARD OR {SHFT D}IS
    K {SHFT I}NPUT? (K/D){6 SP
    ACEs}{4 CRSR LFs}";:INPUT#
    1,A$:PRINT        :REM*139
111Ø IFA$<>"K"ANDA$<>"D"THENPRI
    NT:PRINT"{2 CRSR UPs}";:GO
    TO11ØØ            :REM*61
112Ø IFA$="D"THEN295Ø :REM*149
113Ø PRINT            :REM*6
114Ø FORI=1TORN:PRINT"{SHFT L}A
    BEL FOR {SHFT R}ANGE"I"{CR
    SR LF}:{2 SPACEs}{CTRL 9}"
    ::INPUT#1,RN$(I):PRINT:NEX
    T                 :REM*168
115Ø GOSUB17Ø         :REM*212
116Ø FORI=1TORN       :REM*184
117Ø PRINT"{SHFT E}NTER {SHFT M
    }AX {SHFT V}ALUE FOR {SHFT
     R}ANGE"I"{CRSR LF}:{2 SPA
    CEs}";:INPUT#1,RV$:REM*152
118Ø RV(I)=VAL(RV$):PRINT:NEXT
                      :REM*1Ø9
119Ø GOSUB51Ø         :REM*246
12ØØ G=1:GOTO74Ø      :REM*183
121Ø REM **** EDIT GRAPH ****
                      :REM*91
122Ø IFG=ØTHENGOSUB2ØØ:GOTO74Ø
                      :REM*242
123Ø GOSUB16Ø         :REM*24
124Ø PRINT"{SHFT T}ITLE:{2 SPAC
    Es}{CTRL 9}"TT$;:FORI=1TOL
    EN(TT$):PRINT"{CRSR LF}";:
    NEXT:INPUT#1,TT$:PRINT
                      :REM*234
125Ø PRINT"{SHFT L}EGEND:{2 SPA
    CEs}{CTRL 9}"LE$;:FORI=1TO
    LEN(LE$):PRINT"{CRSR LF}";
    :NEXT:INPUT#1,LE$:PRINT
                      :REM*32
126Ø PRINT"{SHFT N}UMBER OF {SH
    FT R}ANGES (1-12):{2 SPACE
    s}{CTRL 9}"RIGHT$(STR$(RN)
    ,LEN(STR$(RN))-1);:REM*163
127Ø FORI=1TOLEN(STR$(RN))-1:PR
    INT"{CRSR LF}";:NEXT:INPUT
    #1,RN$:RN=VAL(RN$):REM*211
128Ø IFRN>ØANDRN<13THEN13ØØ
                      :REM*214
129Ø PRINT:PRINT"{CRSR UP}";:GO
    TO126Ø            :REM*76
13ØØ PRINT:PRINT      :REM*235
131Ø FORI=1TORN:PRINT"{SHFT L}A
    BEL FOR {SHFT R}ANGE"I"{CR
    SR LF}:{2 SPACEs}{CTRL 9}"
    ;RN$(I);          :REM*187
132Ø FORK=1TOLEN(RN$(I)):PRINT"
    {CRSR LF}";:NEXT:INPUT#1,R
    N$(I):PRINT:NEXT  :REM*244
133Ø GOSUB16Ø         :REM*132
134Ø FORI=1TORN:PRINT"{SHFT M}A
    X {SHFT V}ALUE FOR {SHFT R
    }ANGE"I"{CRSR LF}:{2 SPACE
    s}"STR$(RV(I));   :REM*1Ø5
135Ø FORK=1TOLEN(STR$(RV(I)))-1
    :PRINT"{CRSR LF}";:NEXT:IN
    PUT#1,RV$         :REM*29
136Ø RV(I)=VAL(RV$):PRINT:NEXT
                      :REM*38
137Ø GOSUB51Ø:GOTO74Ø :REM*221
138Ø REM **** VIEW GRAPH ****
                      :REM*136
139Ø IFG=ØTHENGOSUB2ØØ:GOTO74Ø
                      :REM*95
14ØØ PRINT"{SHFT CLR}"CHR$(142)
                      :REM*175
141Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
     CLR}"SPC(TA)"{CTRL 9}VIEW
     GRAPH{CRSR DN}"  :REM*2Ø7
142Ø UB=RN            :REM*66
143Ø IFCO=8ØTHENSP=INT(6Ø/UB)-3
    :GOTO146Ø         :REM*168
144Ø IFCO=4ØTHENIFRN>6THENUB=6
                      :REM*124
145Ø SP=INT(3Ø/UB)-3  :REM*14
146Ø ML=LEN(TT$):GOSUB14Ø:A$=TT
    $                 :REM*16
147Ø PRINTSPC(TA);:GOSUB29Ø:PRI
    NT:PRINT          :REM*82
148Ø FORI=15TO2STEP-1 :REM*52
149Ø PRINTRIGHT$("{5 SPACEs}"+R
    IGHT$(RV$(I),LEN(RV$(I))-1
    ),5)"{COMD Q}";   :REM*1Ø2
15ØØ IFI/3=INT(I/3)THENPRINT"{2
     SHFT *s}";:GOTO152Ø:REM*4
```

►

Holiday Super SAVINGS

5.25 Diskettes			3.5 Diskettes		
Bulk	5.25 DSDD	$ .19	Bulk	3.5 DSDD	$ .55
Bulk	5.25 DSHD	.30	Bulk	3.5 DSHD	1.45
White Box	5.25 DSDD	.26	White Box	3.5 DSDD	.65
White Box	5.25 DSHD	.49	White Box	3.5 DSHD	1.65
Dysan	5.25 DSDD	.80	Dysan	3.5 DSDD	1.20
Dysan	5.25 DSHD	1.40	Dysan	3.5 DSHD	2.85
Precision	5.25 DSDD	.50	Precision	3.5 DSDD	1.05
Precision	5.25 DSHD	.85	Precision	3.5 DSHD	2.39
KAO	5.25 DSDD	.57	KAO	3.5 DSDD	1.07
KAO	5.25 DSHD	.92	KAO	3.5 DSHD	2.59
Fuji	5.25 DSDD	.65	Fuji	3.5 DSDD	1.20
Fuji	5.25 DSHD	1.15	Fuji	3.5 DSHD	2.50
Goldstar	5.25 DSDD	.45	Goldstar	3.5 DSDD	1.10
Goldstar	5.25 DSHD	1.25	Goldstar	3.5 DSHD	2.95
Bonus	5.25 DSDD	.50	Bonus	3.5 DSDD	1.10
Bonus	5.25 DSHD	.85			
Verbatim	5.25 DSDD	.75	Verbatim	3.5 DSDD	1.25
Verbatim	5.25 DSHD	1.40	Verbatim	3.5 DSHD	2.75

Ribbons

NX1000 $2.90

DISKETTE STORAGE AND SUPPLIES

55 Diskette Storage Case (5.25)	$3.75
45 Diskette Storage Case (3.5)	3.75
10 Diskette Storage Case (5.25)	1.80
10 Diskette Storage Case (3.5)	1.80
5.25 Paper Sleeves (100 pack)	3.00
5.25 Labels (100 pack)	3.00
3.5 Labels (100 pack)	3.00

BOTH sleeves and labels only 3 cents each when purchased with diskettes!!

DISKETTE EMPORIUM

1-800-872-8955

24 HOURS 7 DAYS

M/C, VISA, AMEX
COD, CASH or CASHIER's CHECK
(4% Discount)
PREPAYMENT (7% Discount)

110 East Hotchkiss Ave.
Hotchkiss, CO 81419
303-872-8955
24 Hrs. 7 Days

White box diskettes come with sleeves and labels. All bulk and white box diskettes are made by KAO, Dysan Verbatim, Goldstar and other high quality brands. Brand of diskettes for bulk and white box are shipped according to availability. Brands may vary, quality will remain the same. Shipping: $.01 for each 5.25 Diskette, $.02 for each 3.5 Diskette, $.10 for each 100 Labels, $.10 for each 100 Sleeves, $.20 for each Ribbon and $.50 for each Disk Case, $2 for each Mouse.

Minimum order on all disks is 100 diskettes.
Minimum credit card order is $25.

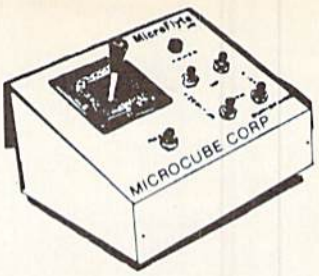
Circle 65 on Reader Service card.

```
151Ø PRINT"{2 SPACEs}";:REM*166
152Ø FORK=1TOUB:IFI>SV(K)ANDI/3
     =INT(I/3)THENPRINT"{3 SHFT
      *s}";:GOTO157Ø    :REM*141
153Ø IFI>SV(K)THENPRINT"{3 SPAC
     Es}";:GOTO157Ø     :REM*1Ø6
154Ø IFI=SV(K)THENPRINT"{CTRL 9
     }"CHR$(169)CHR$(32)CHR$(11
     Ø)"{CTRL Ø}";:GOTO157Ø
                        :REM*83
155Ø IFSV(K)=I+1THENPRINT"{CTRL
      9}"CHR$(183)CHR$(112)" {C
     TRL Ø}";:GOTO157Ø  :REM*15
156Ø PRINT"{CTRL 9} "CHR$(167)"
      {CTRL Ø}";        :REM*118
157Ø IFI/3=INT(I/3)THENFORS=1TO
     SP:PRINT"{SHFT *}";:NEXT:G
     OTO159Ø            :REM*24Ø
158Ø FORS=1TOSP:PRINT" ";:NEXT
                        :REM*227
159Ø NEXT:PRINT"{COMD W}":NEXT
                        :REM*99
16ØØ PRINTRIGHT$("{5 SPACEs}"+R
     IGHT$(RV$(1),LEN(RV$(1))-1
     ),5)"{COMD Q}";    :REM*36
161Ø PRINT"{2 SPACEs}"; :REM*25
162Ø FORK=1TOUB:IFSV(K)<1THENPR
     INT"{3 SPACEs}";:GOTO166Ø
                        :REM*27
163Ø IFSV(K)=1THENPRINT"{CTRL 9
     }"CHR$(169)CHR$(32)CHR$(11
     Ø)"{CTRL Ø}";:GOTO166Ø
                        :REM*216
164Ø IFSV(K)=2THENPRINT"{CTRL 9
     }"CHR$(183)CHR$(112)"{CTRL
      Ø}"CHR$(169);:GOTO166Ø
                        :REM*7Ø
165Ø PRINT"{CTRL 9} "CHR$(167)"
     {CTRL Ø}"CHR$(169);:REM*96
166Ø FORS=1TOSP:PRINT" ";:NEXT
                        :REM*5Ø
167Ø NEXT:PRINT"{COMD W}"
                        :REM*2Ø
168Ø PRINT"{4 SPACEs}Ø{3 COMD E
     s}";               :REM*195
169Ø FORI=1TOUB:PRINT"{3 COMD E
     s}";:FORS=1TOSP:PRINT"{COM
     D E}";:NEXT:NEXT:PRINT"{CO
     MD E}"             :REM*137
17ØØ PRINT"{7 SPACEs}";:FORI=1T
     OUB                :REM*98
171Ø PRINTLEFT$(RN$(I)+"{19 SPA
     CEs}",SP+2);" ";:NEXT
                        :REM*219
172Ø PRINT:PRINT        :REM*153
173Ø ML=LEN(LE$):GOSUB14Ø:PRINT
     SPC(TA);:A$=LE$:GOSUB29Ø
                        :REM*199
174Ø GOSUB26Ø           :REM*22
175Ø PRINT"{SHFT CLR}";CHR$(14)
     :GOTO74Ø           :REM*23
176Ø REM **** PRINT GRAPH ****
                        :REM*89
177Ø IFG=ØTHENGOSUB2ØØ:GOTO74Ø
                        :REM*21Ø
178Ø ML=11:GOSUB14Ø:PRINT"{SHFT
      CLR}"SPC(TA)"{CTRL 9}{SHF
     T P}{SHFT R}{SHFT I}{SHFT
     N}{SHFT T}{SHFT SPACE}{SHF
     T G}{SHFT R}{SHFT A}{SHFT
     P}{SHFT H}{2 CRSR DNs}"
                        :REM*243
179Ø PRINT"{SHFT T}ITLE:{2 SPAC
     Es}"TT$:PRINT      :REM*191
18ØØ PRINT"{SHFT L}EGEND: "LE$:
     PRINT              :REM*114
181Ø PRINT"{SHFT R}ANGE {SHFT N
     }AME","{SHFT M}AX {SHFT V}
     ALUE{CRSR DN}"     :REM*28
182Ø FORI=1TORN:PRINT" "RN$(I),
     ,RV(I):NEXT        :REM*3
183Ø IFMO=128 THEN BANKØ
                        :REM*236
184Ø S1=PEEK(4Ø577):S2=PEEK(4Ø5
     78):TP=CO:CO=4Ø:IFRN>6THEN
     CO=8Ø              :REM*158
185Ø GOSUB43Ø           :REM*129
186Ø I=PEEK(4Ø579):IFI=ØTHEN188
     Ø                  :REM*2Ø2
187Ø FORK=1TOI:P=PEEK(4Ø579+K):
     PRINT#4,CHR$(P);:NEXT:PRIN
     T#4                :REM*221
188Ø ML=LEN(TT$):GOSUB14Ø
                        :REM*251
189Ø PRINT#4,SPC(TA)TT$:PRINT#4
     :PRINT#4:PRINT#4   :REM*251
19ØØ SP=INT(3Ø/RN)-3:IFCO=8ØTHE
     NSP=INT(6Ø/RN)-3   :REM*136
191Ø IFPEEK(4Ø576)<>ØTHEN223Ø
                        :REM*2Ø5
192Ø FORI=15TO2STEP-1   :REM*255
193Ø IFI/2=INT(I/2)THENPRINT#5,
     "{5 SPACEs}{COMD Q}";:GOTO
     195Ø               :REM*193
194Ø PRINT#5,RIGHT$("{5 SPACEs}
     "+RIGHT$(RV$(I),LEN(RV$(I)
     )-1),5)"{COMD Q}"; :REM*36
195Ø IFI/3=INT(I/3)THENPRINT#5,
     "{2 SHFT *s}";:GOTO197Ø
                        :REM*247
196Ø PRINT#5,"{2 SPACEs}";
                        :REM*2Ø9
197Ø FORK=1TORN:IFI>SV(K)ANDI/3
     =INT(I/3)THENPRINT#5,"{3 S
     HFT *s}";:GOTO2Ø3Ø:REM*224
198Ø IFI>SV(K)THENPRINT#5,"{3 S
     PACEs}";:GOTO2Ø3Ø   :REM*52
199Ø IFI=SV(K)THENPRINT#5,"{CTR
     L 9}"CHR$(169)CHR$(32)CHR$
     (11Ø)"{CTRL Ø}";:GOTO2Ø3Ø
                        :REM*222
2ØØØ IFSV(K)=I+1THENPRINT#5,"{C
     TRL 9}"CHR$(183)CHR$(112)"
      {CTRL Ø}";:GOTO2Ø3Ø
                        :REM*17Ø
2Ø1Ø IFSV(K)=2THENPRINT"{CTRL 9
     }"CHR$(183)CHR$(112)CHR$(1
     69)"{CTRL Ø}";:GOTO2Ø3Ø
                        :REM*84
2Ø2Ø PRINT#5,"{CTRL 9} "CHR$(16
     7)" {CTRL Ø}";     :REM*236
2Ø3Ø IFI/3=INT(I/3)THENFORS=1TO
     SP:PRINT#5,"{SHFT *}";:NEX
     T:GOTO2Ø5Ø         :REM*17Ø
2Ø4Ø FORS=1TOSP:PRINT#5," ";:NE
     XT                 :REM*11
2Ø5Ø NEXT:PRINT#5,"{COMD W}":NE
     XT                 :REM*85
2Ø6Ø PRINT#5,RIGHT$("{5 SPACEs}
     "+RIGHT$(RV$(1),LEN(RV$(1)
     )-1),5)"{COMD Q}"; :REM*72
2Ø7Ø PRINT#5,"{2 SPACEs}";
                        :REM*68
2Ø8Ø FORK=1TORN:IFSV(K)<1THENPR
     INT#5,"{3 SPACEs}";:GOTO21
     2Ø                 :REM*116
2Ø9Ø IFSV(K)=1THENPRINT#5,"{CTR
     L 9}"CHR$(169)CHR$(32)CHR$
     (11Ø)"{CTRL Ø}";:GOTO212Ø
                        :REM*68
21ØØ IFSV(K)=2THENPRINT#5,"{CTR
     L 9}"CHR$(183)CHR$(112)"{C
     TRL Ø}"CHR$(169);:GOTO212Ø
                        :REM*151
211Ø PRINT#5,"{CTRL 9} "CHR$(16
     7)"{CTRL Ø}"CHR$(169);
                        :REM*139
212Ø FORS=1TOSP:PRINT#5," ";:NE
     XT                 :REM*187
213Ø NEXT:PRINT#5,"{COMD W}"
                        :REM*146
214Ø PRINT#5,"{4 SPACEs}Ø{3 COM
     D Es}";            :REM*52
215Ø FORI=1TORN:PRINT#5,"{3 COM
     D Es}";:FORS=1TOSP:PRINT#5
     ,"{COMD E}";:NEXT:NEXT:PRI
     NT#5,"{COMD E}"    :REM*23
216Ø PRINT#5,"{7 SPACEs}";:FORI
     =1TORN             :REM*211
217Ø PRINT#5,LEFT$(RN$(I)+"{19
     SPACEs}",SP+2);" ";:NEXT
                        :REM*42
218Ø PRINT#5:PRINT#5:PRINT#5
                        :REM*221
219Ø ML=LEN(LE$):GOSUB14Ø:PRINT
     #4,SPC(TA)LE$:PRINT#4:PRIN
     T#4                :REM*9Ø
22ØØ IFMO=128 THEN BANK15
                        :REM*2Ø7
221Ø CO=TP:CLOSE4:CLOSE5:REM*7Ø
222Ø PRINT"{SHFT CLR}":GOTO74Ø
                        :REM*231
223Ø FORI=15TO1STEP-1   :REM*48
224Ø IFI/2=INT(I/2)THENPRINT#5,
     "{5 SPACEs}!";:GOTO226Ø
                        :REM*1Ø4
225Ø PRINT#5,RIGHT$("{5 SPACEs}
     "+RIGHT$(RV$(I),LEN(RV$(I)
     )-1),5)"!";        :REM*4Ø
226Ø IFI/3=INT(I/3)THENPRINT#5,
     "--";:GOTO228Ø     :REM*69
227Ø PRINT#5,"{2 SPACEs}";
                        :REM*29
228Ø FORK=1TORN:IFI>SV(K)ANDI/3
     =INT(I/3)THENPRINT#5,"--"
     ;:GOTO231Ø         :REM*1ØØ
229Ø IFI>SV(K)THENPRINT#5,"{3 S
     PACEs}";:GOTO231Ø  :REM*255
23ØØ IFI<=SV(K)THENPRINT#5,":::
     ";                 :REM*249
231Ø IFI/3=INT(I/3)THENFORS=1TO
     SP:PRINT#5,"-";:NEXT:GOTO2
     33Ø                :REM*147
232Ø FORS=1TOSP:PRINT#5," ";:NE
     XT                 :REM*1ØØ
233Ø NEXT:PRINT#5,"!":NEXT
                        :REM*126
```

```
234Ø PRINT#5,"{4 SPACEs}Ø...";
                          :REM*31
235Ø FORI=1TORN:PRINT#5,"...";:
     FORS=1TOSP:PRINT#5,".";:NE
     XT:NEXT:PRINT#5,"!"
                          :REM*151
236Ø PRINT#5:GOTO216Ø     :REM*52
237Ø REM **** SAVE GRAPH ****
                          :REM*46
238Ø IFG=ØTHENGOSUB2ØØ:GOTO74Ø
                          :REM*113
239Ø GOSUB18Ø             :REM*166
24ØØ ML=24:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT E}NTER {SHFT F}ILE
     NAME FOR {SHFT S}{SHFT A}{
     SHFT V}{SHFT E},{CRSR DN}"
                          :REM*171
241Ø ML=13:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT O}R {CTRL 9}{LEFT
     ARROW}{CTRL Ø} FOR MENU{2
     CRSR DNs}"           :REM*127
242Ø ML=16:GOSUB14Ø:PRINTSPC(TA
     );:INPUT#1,FI$       :REM*175
243Ø IFFI$="{LEFT ARROW}"THEN74
     Ø                    :REM*8Ø
244Ø IFLEN(FI$)>16THENFI$=LEFT$
     (FI$,16)             :REM*44
245Ø GOSUB18Ø             :REM*226
246Ø ML=28:GOSUB14Ø:PRINTLEFT$(
     CL$,12)SPC(TA)"{SHFT S}AVI
     NG {SHFT G}RAPH "FI$
                          :REM*244
247Ø GOSUB45Ø:OPEN2,8,2,"Ø:"+FI
     $+",S,W":GOSUB46Ø:IFN1>2ØT
     HENCLOSE2:GOTO74Ø :REM*136
2475 IF MO=128 THEN BANKØ
                          :REM*9Ø
248Ø FORI=ØTO3:TP=PEEK(4Ø576+I)
     :PRINT#2,TPCHR$(13);:NEXT
                          :REM*38
249Ø IFTP>ØTHENK=TP:FORI=1TOK:T
     P=PEEK(4Ø579+I):PRINT#2,TP
     CHR$(13);:NEXT       :REM*1Ø3
2495 IF MO=128 THEN BANK15
                          :REM*54
25ØØ IFTT$=""THENTT$="."
                          :REM*1Ø2
251Ø IFLE$=""THENLE$=".":REM*22
252Ø PRINT#2,TT$CHR$(13);:PRINT
     #2,LE$CHR$(13);:PRINT#2,RN
     CHR$(13);            :REM*197
253Ø FORI=1TORN:IFRN$(I)=""THEN
     RN$(I)="."           :REM*248
254Ø PRINT#2,RV(I)CHR$(13);:PRI
     NT#2,RN$(I)CHR$(13);:NEXT
                          :REM*2ØØ
255Ø CLOSE2:CLOSE15:GOTO74Ø
                          :REM*92
256Ø REM **** LOAD GRAPH ****
                          :REM*85
257Ø IFG<>ØTHENGOSUB22Ø:IFA$<>"
     Y"THEN74Ø            :REM*123
258Ø CLR:GOSUB32Ø         :REM*19Ø
259Ø GOSUB19Ø             :REM*116
26ØØ ML=24:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT E}NTER {SHFT F}ILE
     NAME FOR {SHFT L}{SHFT O}{
     SHFT A}{SHFT D},{CRSR DN}"
                          :REM*46
261Ø ML=13:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT O}R {CTRL 9}{LEFT
     ARROW}{CTRL Ø} FOR MENU{2
     CRSR DNs}"           :REM*36
262Ø ML=16:GOSUB14Ø:PRINTSPC(TA
     );:INPUT#1,FI$       :REM*23Ø
263Ø IFFI$="{LEFT ARROW}"THEN74
     Ø                    :REM*25
264Ø IFLEN(FI$)>16THENFI$=LEFT$
     (FI$,16)             :REM*119
265Ø GOSUB19Ø             :REM*184
266Ø ML=29:GOSUB14Ø:PRINTLEFT$(
     CL$,12)SPC(TA)"{SHFT L}OAD
     ING {SHFT G}RAPH "FI$
                          :REM*213
267Ø GOSUB45Ø:OPEN2,8,2,"Ø:"+FI
     $+",S,R":GOSUB46Ø:IFN1>2ØT
     HENCLOSE2:GOTO74Ø     :REM*79
268Ø FORI=ØTO3:INPUT#2,TP:POKE4
     Ø576+I,TP:NEXT       :REM*151
269Ø IFTP>ØTHENK=TP:FORI=1TOK:I
     NPUT#2,TP:POKE4Ø579+I,TP:N
     EXT                  :REM*142
27ØØ INPUT#2,TT$:INPUT#2,LE$:IN
     PUT#2,RN             :REM*247
271Ø IFTT$="."THENTT$=" "
                          :REM*119
272Ø IFLE$="."THENLE$=" "
                          :REM*46
273Ø FORI=1TORN:INPUT#2,RV(I):I
     NPUT#2,RN$(I):IFRN$(I)="."
     THENRN$(I)=" "       :REM*86
274Ø NEXT                 :REM*61
275Ø GOSUB51Ø:CLOSE2:CLOSE15:G=
     1:GOTO74Ø            :REM*64
276Ø REM **** PRINTER SETUP ***
     *                    :REM*118
277Ø ML=1Ø:GOSUB14Ø:PRINT"{SHFT
      CLR}"SPC(TA)"{CTRL 9}{SHF
     T P}{SHFT R}{SHFT I}{SHFT
     N}{SHFT T}{SHFT E}{SHFT R}
      {SHFT S}{SHFT E}{SHFT T}{
     SHFT U}{SHFT P}{2 CRSR DNs
     }"                   :REM*3Ø
278Ø IFMO=128 THEN BANKØ
                          :REM*138
279Ø A$="YES":IFPEEK(4Ø576)<>ØT
     HENA$="NO "          :REM*6Ø
28ØØ PRINT"{SHFT C}{SHFT B}{SHF
     T M} {SHFT D}OT {SHFT M}AT
     RIX {SHFT P}RINTER{2 SPACE
     s}"A$"{5 CRSR LFs}";:INPUT
     A$                   :REM*241
281Ø IFA$="NO"THENPOKE4Ø576,1:G
     OTO283Ø              :REM*2Ø9
282Ø POKE4Ø576,Ø          :REM*96
283Ø S1=PEEK(4Ø577):S2=PEEK(4Ø5
     78):CD=PEEK(4Ø579):REM*152
284Ø PRINT:PRINT"{SHFT T}EXT {S
     HFT S}ECONDARY {SHFT A}DDR
     ESS:{2 SPACEs}"S1"{4 CRSR
     LFs}";:INPUTS1       :REM*32
285Ø PRINT:PRINT"{SHFT G}RAPHIC
      {SHFT S}ECONDARY {SHFT A}
     DDRESS:{2 SPACEs}"S2"{4 CR
     SR LFs}";:INPUTS2 :REM*189
286Ø PRINT:PRINT"{SHFT P}RINTER
      {SHFT C}ONTROL {SHFT C}OD
     ES:{2 SPACEs}"CD"{4 CRSR L
```

Continued on p. 90.

NOW AVAILABLE FOR THE AMIGA



The MicroFlyte JOYSTICK, the only fully proportional continuously variable joystick control for Flight Simulator II

". . .It transforms an excellent program into a truly realistic flight simulation system" B.A.C.E.

MICROCUBE PRODUCTS

Commodore 64/128
- MicroFlyte ATC Joystick **$59.95**
- Test/Calibration Disk: A diagnostic tool for your joystick **$4.95**

Amiga
- MicroFlyte Joystick—Plugs into the mouse port & works with most software . **$119.95**
- Analog Joystick **$74.95**

Include $4.00 shipping of joystick orders. FSII is a trademark of subLOGIC Corp.

Order Direct from:

MICROCUBE CORPORATION
P.O. Box 488
Leesburg, VA 22075
(703)777-7157

Circle 38 on Reader Service card.

AUTHORIZED SERVICE CENTER

1750 $179.95
(512K RAM EXPANSION FOR C-128)
1581 $199.00
CALL FOR PARTS
1541 / 1571
ALIGNMENTS $35 / $45
64C REPAIR $45.00

WE CARRY A COMPLETE LINE OF COMMODORE. DISCOUNTS FOR SCHOOLS.

AMIGA

AMIGA 500 CPU (REPAIR) $65.00

WE RESERVE THE RIGHT TO REFUSE SERVICE ON EXCESSIVELY DAMAGED UNITS.

AMPEX SYSTEMS, INC.
5344 JIMMY CARTER BLVD.
NORCROSS, GA 30093
(800) 962-4489 orders only
(404) 263-9190

Circle 71 on Reader Service card.

BRiWALL

Our Fifth Year In Business! We Know How To Service Our Customers!

SOLID PRODUCTS & SOLID SUPPORT

P.O. Box 129 / 58 Noble Street
Kutztown, PA 19530

24 HOURS -- TOLL FREE
1-800-638-5757
Outside USA Call 1-215-683-5433

SATISFACTION GUARANTEED

No Surcharge On Charge Orders

Friendly Service

Customer Service Business Hours M-F 9-5 EST

ACCESSORIES

Quick Brown Box 64K	$105
Aprospan 4 Slot Cart Holder	$25
Mouse M3 (1351 substitute)	$39
Lightpen-Model 170c	$69
Super Graphix Gold Interface	$89
40/80 Switch Cable	18
Apro Extender (user-port cable)	19
Aprospan 4 Slot Cart. Holder	25
Blaster Auto Fire Module	**5**
Cable 128 - Mono Cmp Video	6
Cable 64/128 40 Column monitor	6
Cables	call
Dust Covers	call
Expansion port extender cable	18
Hotshot Plus Interface	69
Icontroller	16
Joysticks	call
Leroy's Cheatsheet 64 each	3
Leroy's Cheatsheet 128 each	7
Lightpen-Model 170c	69
Lightpen-Model 184c	49
Mach 128 Cartridge	35
Maxx Yoke Flight Cntrl	**79**
Mouse M3 (1351 substitute)	39
Mousepad	8
Power Supply - C128 -Repairable	55
Power Supply - C64 -Repairable	39
Printer Interface - G-Wiz	35
Quick Brown Box 64K	105
Quick Brown Box 64K upgrade	**115**
RAM Expander - 1750	179
RS232 Deluxe Interface	39
Ribbons	call
Ribbon Renew - Re-Ink, no Equip	5
Safeskin Keyboard Protectors	call
Serial Cable - Serial 6 Foot	6
Serial Cable Splicer F/F	4
Serial-Serial Cable 12 feet	8
Super Graphix Gold Prntr Interface	89
Super Graphix Interface Senior	59
Video RAM 64K Cartridge	50
Warpspeed 128/64	35

BOOKS

Superbase The Book 64/128	$15
Machine Language 64 +	$13
1541 Troubleshoot & Repair	$17
C128 Programmer's Ref Guide	$20
C64/128 Assembly Lang Prog	$14
1541 Repair & Maint. Handbook	16
1541 Troubleshoot & Repair	17
1571 Internals +	17
Anatomy of C64 +	17
Anatomy of the 1541	17
Basic 7.0 Internals	19
C128 Assembly Language Prog	14
C128 Internals +	17
C128 Programmer's Ref. Guide	20
C128 Tips & Tricks +	17
C128 Troubleshooting & Repair	17
C64 Basic Programming	25
C64 Programmer's Ref. Guide	17
C64 Tips & Tricks +	17
C64 Troubleshoot & Repair Guide	17
C64/128 Assembly Lang. Prog	14
CPM User's Guide	17
CSM Program Protection Vol 1	24
CSM Program Protection Vol 2	29
GEOS Inside & Out +	17
GEOS Programmer's Ref. Guide	17
K Jax Book Revealed 1,2,3 each	23
Lou Sanders Tricks & Tips	19
Machine Language 64 +	13
Superbase The Book 64/128	15
Troubleshoot & Repair C64 Book	18
Twin Cities 128 Compendium 1	15

+ means that a disk is available

LATE ADDITIONS!

Afterburner	$27
Arcade Mega Hits	$27
Aussie Games	$24
Windwalker	$29

Plus, all the products listed in **BOLD** are new!

GENERAL BUSINESS

Superbase128, Superscript128 and Book package	$69
Superbase 128 - Version 3	$39
Vizistar 128	$49
Pocket Superpak 2 (Digital)	$67
Fontmaster 128 w/Speller	$39
Write Stuff 64 w/Talk	$24
KFS Accountant 128	$109
Paperclip Publisher	$39
Viziwrite 128	$45
Business Form Shop	$30
Business Form Shop /64	30
Datamanger 2 (64)	17
Fleet System 4	52
Fontmaster 128 w/Speller	39
Fontmaster II/64	35
Home Banker	7
KFS Accountant 128	109
Leroy's Label Maker	24
Microlawyer/64	39
Paperclip 3	39
Paperclip Publisher	39
Partner 128	39
Partner 64	30
Personal Portfolio Manager 128	42
Personal Portfolio Manager 64	29
Pocket Dictionary 64/128	10
Pocket Filer 2	29
Pocket Planner 2	29
Pocket Superpak 2 (Digital)	67
Pocket Writer 2	39
Security Analyst 128	35
Superbase 128 - Version 3	39
Superbase 64	29
Superbase/script:Book 128 PACK	69
Superbase/script:Book 64 PAK	59
Superscript 128	29
Superscript C64	27
Swiftcalc 64 w/Sideways	17
Technical Analysis System 128	42
Technical Analysis System 64	29
Vizistar 128	49
Viziwrite 128	45
Wordpro 128 w/ Speller w/ Filepro	30
Wordpro 64 w/Speller&TurboLoad	30
Wordwriter 4 for C64	30
Write Stuff 128 w/spellchecker	27
Write Stuff 64 w/spellchecker	22
Write Stuff 64 w/talk	24
Write Stuff Business Forms	**10**

EDUCATIONAL

Sky Travel	$35
SAT Complete (Hayden)	$32
Stickybear Reading 1	$27
Designasaurus	$27
Mavis Beacon Teaches Typing	$30
Alphabet Zoo	18
Big Bird's Special Delivery	9
Calculus by Numeric Methods	27
Counting Parade	6
Designasaurus	27
ESP Tester / C64	19
Easy Sign	17
Ernie's Big Splash	9
Ernie's Magic Shapes	9
Fun Biorythms	5
Grandma's House/64	6
Jungle Book (Reading 2)	19
Kidwriter	22
Kindercomp	18
Linkword:German	19
Linkword:French	19
Linkword:French 2	19
Linkword:Italian	19
Linkword:Russian	19
Linkword:Spanish	19
Math (First Men on Moon)	19
Mathbusters 64	6
Mavis Beacon Teaches Typing	30
Mental Blocks	**12**
Morse Code Trainer	5
Rocky's Boots	27
SAT Complete (Hayden)	32
Sky Travel	35
Stickybear ABC S	27
Stickybear Math 1 & 2 each	27
Stickybear Numbers	27
Stickybear Opposites	27
Stickybear Reading 1	27
Stickybear Reading Comp	27
Stickybear Shapes	27
Stickybear Spellgrabber	37
Stickybear Townbuilder	27
Stickybear Typing	37
Success w/Math Series each	23
Where Europe Carmen Sandiego	29
Where USA is Carmen Sandiego	29
Where World is Carmen Sandiego	27
Widham Classics each	12

ENTERTAINMENT

Curse of the Azure Bonds	$29
Ultima Trilogy (1,2,3)	$29
Galatic Frontier	$12
Battletech	$29
Scrabble	$26
AD&D - Dungeon Master Asst.	22
AD&D - Pool of Radiance	29
AD&D - Curse of the Azure Bonds	29
Batman	19
Battle Chess*	29
Battletech	29
Beyond Dark Castle	**24**
Captain Fizz	**24**
Caveman Ugh*lympics	22
Chessmaster 2100	30
Christmas Classics	7
Chutes and Ladders	**12**
Dark Side	22
Death Bringer*	24
Double Dragon	27
Dr. Doom's Revenge	24
Dragon Wars*	32
Face Off!*	24
Galatic Frontier	12
Gauntlet 2	**24**
Great War	15
Hole In One - Miniature Golf	22
Hostage	**24**
Jack Nicklaus Golf	25
Jeopardy 2	12
King of Chicago	12
King of the Beach Volleyball	**25**
Monopoly C64	24
Netherworld	24
Neuromancer	29
Omega	**36**
Project Firestart	27
Rampage	27
Risk	24
Robocop	27
Rocket Ranger	27
Roger Rabbit	22
SDI	12
Scrabble	26
Sex Vixens From Space	20
Sim City	24
Snow Strike	**27**
Speedball	**24**
Test Drive 2: The Duel	19
Three Stooges	27
Total Eclipse	24
Ultima Trilogy (1,2,3)	29
Ultima V	42
War in Middle Earth*	36
Wheel & Deal 128	24
Wheel of Fortune 2	12

Call toll-free to check on New Titles!

GEOS RELATED

Becker Basic for GEOS 64	35
Desk Pak Plus - GEOS	22
FontPak Plus -GEOS	22
GEOS 64 v 2.0	39
Geofile 128	45
Geopublish 64	39
Geos 128 V2.0	45

CREATIVITY & GRAPHICS

Home Designer	$45
Spectrum 128	$29
Newsmaker 128	$24
Computer Eyes	$105
Flexidraw 5.5/64	$29
Billboard Maker	25
Blazzing Paddles	25
Business Card Maker	29
Cad 3D 64	39
Cadpak 128	42
Cadpak 64	29
Certificate Maker	14
Certificate Maker - Library Disk	12
Colorez 128	12
Computer Eyes	105
Doodle 64	29
Flexidraw 5.5/64	29
Home Designer	45
Home Design Circuit Symbol Lib	10
Icon Factory	25
Label Wizard	21
Newsmaker 128	24
PC Board Maker 64	79
Photo Finish	19
Poster Maker 128	24
Printmaster Gallery disks each	15
Printmaster Plus	25
Printshop Companion	27
Printshop Holiday Edition	19
Screen F/X	25
Sketchpad 128	24
Slideshow Creator	13
Spectrum 128	29
Video Title Shop w/ Gr Comp 1	25

PERSONAL

Bridge 5.0	22
Dream Machine Analyze	19
Family Tree C64/C128 and LDS	39
Heartlab	49
Muscle Development Package	54
Sexual Edge	19
Tarot 128	15

UTILITIES & LANGUAGES

1541/1571 Drive Alignment	$25
Super Snapshot V4	$59
Maverick V3.0 Copier	$29
Basic 8	$29
Merlin 128	$45
Super 81 Utilities 128	$29
Big Blue Reader 64/128	$32
1541/1571 Drive Alignment	25
1581 Toolkit V2 w/DOS Ref Guide	32
Basic 8	29
Basic 8 Toolkit	17
Basic 8-How to Get Most Out of	17
Big Blue Reader 64/128	32
Bobsterm Pro /128	42
Bobsterm Pro /64	35
CP/M Kit	22
Cobol 128	29
Digitalker 128	24
Gnome Kit 64/128	29
Maverick V4.0 Copier	**29**
Merlin 128	45
Merlin 64	35
Oxford Pascal 128	29
Oxford Pascal 64	25
Physical Exam 1541/1571	29
Power Assembler 64/128	30
Power C 64/128	30
Programmers Toolbox	15
Protolinc BBS 128	29
Prototerm 128	12
Super 64 Librarian	19
Super 81 Utilities 128 & 64 each	29
Super Aide	25
Super C 128 & 64 each	45
Super Disk Librarian 128	19
Super Disk Utilities 128	25
Super Pascal 128 & 64 each	45
Super Snapshot V4	59
Super Snapshot V4 w/128 Disable	65
SysRES Enhanced	19

CHECK YOUR CURRENT MAILORDER HOUSE! DO THEY

- ❑Advertise their shipping policy?
- ❑Offer fast, friendly and reliable service?
- ❑Have a fair return/exchange program?
- ❑Have 24 hour toll-free ordering?
- ❑Have in-house technical support?
- ❑Treat you with respect and value?

IS PRICE YOUR ONLY CONCERN? CALL US AND SEE HOW EASY MAILORDER CAN BE!

BRIWALL WANTS TO BE YOUR CHRISTMAS MAILORDER SOURCE!

Free CHRISTMAS CLASSICS Disk (A $10 Value) shipped with any order over $100

Gift Cards Available Upon Request!

Gift Certificates Available in any $ amount.

We maintain an enormous inventory of Commodore software. If you don't see a title you are looking for, Please CALL!

Titles marked with * were not yet available when this ad was prepared. Please call for firm price and availablilty.

Australian Customers can order locally from Briwall Australia at: (062) 88 0131, or FAX (062) 88 0337

WHERE CAN YOU FIND PROGRAMS MADE JUST FOR YOUR 128?

CHECK US OUT! WE HAVE WHAT YOU NEED!

For Desktop Publishing? Try

NEWS MAKER 128
Desktop publishing for the 128D (or the 128 with 64K video RAM upgrade). News Maker 128 can be used to create professional looking newsletters, reports, signs and posters. It can be used as a stand-alone program or in combination with word processing or graphics software. It uses standard sequential files for "pouring" text into user-defined columns. Full page layout, pop-down menus, smooth screen scrolling, font selection, a note pad, freehand drawing, pixel edit, REU support, and a sideways printing utility are among the many features available.

ONLY $24

Graphics? Try

SKETCHPAD 128
Complete drawing system for the Commodore 128 and 1351 mouse. Sketchpad takes advantage of the 80 column graphics of the 128. A 640X200 drawing screen, smooth freehand drawing, wide selection of brushes and many fonts provided.
JUST $24

SPECTRUM 128
If you have a 128D (or 128 with 64K video RAM upgrade) you can take full advantage of this 80-column paint package with 128 colors! Menu operated. Mouse required. Features include airbrush, mirror, multi-color, block fills, pixel edit, color edit, fonts, and a slideshow maker.
ONLY $29

The Ultimate CAD Package? Try

HOME DESIGNER CAD 128
Given glowing reviews by every major Commodore magazine, this CAD system out-classes every other CAD program because of its object oriented design. With over 50 powerful commands, 5 layers, superb support of library figures and laser-quality printouts at ANY scale on your dot matrix printer or plotter, you can create drawings so accurate that a blueprint can be made from them!

Tired of working with poor quality/inaccurate printouts, manipulating little dots on a bit-map, giving up on detailed work because you can't zoom in close enough? Join the professionals!

OUR PRICE ONLY $45

BASIC 8 Package

Now get an entire Basic 8 programming library for the price of an average piece of software!

The Basic 8 package includes: **Basic 8**, the powerful 80-column graphics programming system for the Commodore 128, adding over 50 commands to standard BASIC 7.0, and including Basic Paint, Basic Write and Basic Calc; **Basic 8 Toolkit**, a point-and-click operating system that allows you to create custom pointers, fonts, patterns and icons; and **How To Get The Most Out Of Basic 8**, a book and disk combination that provides dozens of examples, two full disks of demos and a 3D animation system.

The list price of the individual pieces is $79.95.
OUR PACKAGE PRICE $49!

THREE COMMODORE 128 PACKAGES -- YOUR CHOICE $49

We've assembled three packages of Commodore 128 specific software at great savings. These three packages contain more 128 software than you probably thought was available.

#1) 80-Column Fun-N-Games - Five programs designed specifically for the 128 80 column mode! Try to make $100,000 with **Wheel & Deal**, play a talking puzzle with **Digitalker 128**, determine your destiny with **Tarot 128**, test your ESP abilities with **ESP Tester**, and improve your memory skills with **Memory Academy 128.**

#2) Programmer's Delight - Five 128 programs that will bring out the programmer in you. You get **Gnomespeed**, a 128 BASIC compiler, **Colorez**, to convert 40-column graphics to 80-column, **Digitalker 128**, for adding digitized voice to your programs, **Super Disk Librarian**, for cataloging all of your disks, and **Super Disk Utilities,** for all your file handling and disk editing **needs.**

#3) Advanced User - Five 128 programs to get the most out of your 128 system and peripherals. You get **Prototerm**, a terminal package, **Protolinc BBS**, a BBS package, **Digitalker**, for adding digitized voice to your 128 programs, **Super 81 Utilities**, a disk editing and file utility package specifically for the 1581, and **Colorez,** the 40 to 80 column conversion program.

1541/1571 DRIVE ALIGNMENT

This excellent alignment program is a must-have for every Commodore owner. Easy to use, it helps you to align your drive so that it runs just as if it were new! The simple instructional manual and on-screen help prompt you through the alignment procedure and help you adjust the speed and head stop of your drives. It even includes instructions on how to load the alignment program when nothing else will load!

Don;t be caught short! We get more RED LABEL orders for this program than any other program we sell. Save yourself the expense! Order now, keep it in your library, and use it often!

Works on the 64, 128 and SX64 for the 1541, 1571, 1541-II and compatible third party drives.

STILL ONLY $25

BRiWALL

SOLID PRODUCTS & SOLID SUPPORT
PO Box 129/58 Noble Street
Kutztown, PA 19530

Toll-free 24 Hour Order Line 1-800-638-5757

24 Hour Order Line Outside USA 1-215-683-5433

24 Hour FAX Line 1-215-683-8567

Customer Service 1-215-683-5433

Technical Support 1-215-683-5699

PLEASE COME VISIT US!
Monday - Friday 9AM-6PM EST
Saturday 9AM-12 Noon EST

VISA MasterCard

Free 6-month subscription to our newsletter with every order!

GAMES SPECTACULAR Package

Whether you are new to Commodore computers, or just looking to expand your software library, you can't afford to miss this deal!

You get a total of 10 games for less than the price of many single titles! This package includes: **Galactic Frontier**, a graphic, space exploration game where your mission is to find new life forms; **Torchbearer**, a role-playing, graphic adventure game; **Revenge of the Moon Goddess**, a collection of four adventure games; and **Eye of the Inca** a second collection of four adventure games.

Ten games in all, with a total suggested list price of $90.

OUR PACKAGE PRICE $29!

SHIPPING POLICY: ALL ORDERS received before 3PM EST will normally be shipped within 2 business days. Out of stock items will be shipped by the same shipping method as the original order, normally within 3 or 4 business days. All UPS shipments are sent Signature Required/No Driver Release. ADD the following shipping charges to your TOTAL software order.

UPS: Ground $4.50 (cont. USA ONLY); Air/Rush $8.00 (includes Puerto Rico/Hawaii); Overnight $12.00 + $2.50 PER ITEM (must be received by 12 Noon.)

Priority Mail: USA $4.50 (Includes APO/FPO); Canada/Mexico $7.00; Other Foreign $4.00 Handling + Actual Shipping + Insurance.

ORDERING INSTRUCTIONS: For your convenience, you can place a phone order 24 HOURS/7 DAYS A WEEK on our TOLL-FREE LINE 1-800-638-5757. Outside the USA, please use (215) 683-5433. Price, availability, and compatibility checks are also welcome on our order line, Monday thru Friday, 9:30AM - 4:30PM EST. AFTER HOURS Orders Only Please! When placing an order, please specify your computer model, home & daytime telephone number, shipping address, charge card number, expiration date and name of bank.

ACCEPTED PAYMENT METHODS: We gladly accept Personal Checks (no holding), Money Orders, VISA, MASTERCARD, School Purchase Orders, or COD ($4.00 additional -- for established Briwall Customers ONLY). All checks must be in US Dollars and drawn on a US bank. There is no surcharge for credit cards and your card is not charged until we ship!

RETURN POLICY (for software and accessories ONLY): We have a liberal return policy to better service your needs. If within 15 days from the time you receive an item, you are not satisfied with it for any reason, you may return it to us for either a refund, exchange, or open credit. REFUNDS ARE SUBJECT TO A 10% RESTOCKING FEE PER ITEM RETURNED ($5.00 MINIMUM PER ITEM.) EXCHANGES/OPEN CREDITS will gladly be issued for the full purchase price of the item. DEFECTIVE items, Hardware items and Special Order items will be replaced with the same item only.

TECHNICAL SUPPORT Call (215) 683-5699, Monday - Friday, 9am - 5pm EST.
We do our very best to help you with your product selections before you order, and after you receive your product. General questions, such as price, compatibility, etc., will be handled by our order staff at the time you place your order. BUT, if you have specific, detailed questions about a product, printer, compatibility, etc., you will get the most help from our Technical Support Line.

Circle 73 on Reader Service card.

From p. 87.

```
Fs}";:INPUTCD          :REM*56
287Ø POKE4Ø577,S1:POKE4Ø578,S2:
     POKE4Ø579,CD      :REM*197
288Ø IFCD=ØTHEN293Ø    :REM*139
289Ø FORI=1TOCD:CT=PEEK(4Ø579+I
     )                 :REM*52
29ØØ PRINT"{3 SPACEs}{SHFT C}OD
     E"I": ";LEFT$(STR$(CT)+"{3
      SPACEs}",3)"{4 CRSR LFs}"
     ;                 :REM*5Ø
291Ø INPUTCT:POKE4Ø579+I,CT:NEX
     T                 :REM*92
292Ø IFMO=128 THEN BANK15
                       :REM*154
293Ø GOTO74Ø           :REM*2ØØ
294Ø REM **** CREATE GRAPH DISK
      ****             :REM*215
295Ø GOSUB17Ø:PRINT    :REM*128
296Ø ML=28:GOSUB14Ø:PRINTSPC(TA
     )"1.{2 SPACEs}{SHFT U}SER
     DEFINED RANGES"   :REM*254
297Ø PRINTSPC(TA+4)"{SHFT T}ALL
     Y FIELD ({SHFT A}LPHA/{SHF
     T N}UMERIC)":PRINT :REM*6Ø
298Ø PRINTSPC(TA)"2.{2 SPACEs}{
     SHFT U}SER DEFINED RANGES"
                       :REM*185
299Ø PRINTSPC(TA+4)"{SHFT T}ALL
     Y FIELD ({SHFT N}UMERIC)":
     PRINT             :REM*144
3ØØØ PRINTSPC(TA)"3.{2 SPACEs}{
     SHFT F}ILE DEFINED RANGES"
                       :REM*1ØØ
3Ø1Ø PRINTSPC(TA+4)"{SHFT S}UM
     FIELD":PRINT      :REM*32
3Ø2Ø PRINTSPC(TA)"4.{2 SPACEs}{
     SHFT R}ETURN TO {SHFT M}AI
     N {SHFT M}ENU"    :REM*246
3Ø3Ø ML=21:GOSUB14Ø:PRINTCL$SPC
     (TA)"{SHFT E}NTER SELECTIO
     N (1-4)";         :REM*119
3Ø4Ø GETA$:IFA$=""THEN3Ø4Ø
                       :REM*98
3Ø5Ø D=VAL(A$):ONDGOTO36ØØ,374Ø
     ,395Ø,74Ø:GOTO3Ø4Ø:REM*1Ø5
3Ø6Ø ML=38:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT S}OME{2 SPACEs}DAT
     ABASE/FILE{2 SPACEs}MANAGE
     R{2 SPACEs}PROGRAMS"
                       :REM*134
3Ø7Ø PRINTSPC(TA)"PLACE DATA US
     ED BY THE PROGRAM SUCH AS"
                       :REM*7Ø
3Ø8Ø PRINTSPC(TA)"NUMBER OF{2 S
     PACEs}FIELDS,{2 SPACEs}NAM
     ES{2 SPACEs}OF{2 SPACEs}FI
     ELDS,"            :REM*244
3Ø9Ø PRINTSPC(TA)"NUMBER OF REC
     ORDS, ETC IN FRONT OF THE"
                       :REM*12Ø
31ØØ PRINTSPC(TA)"ACTUAL DATA.
     {SHFT Y}OU CAN USUALLY DET
     ERMINE"           :REM*187
311Ø PRINTSPC(TA)"HOW MANY OF T
     HESE "CHR$(34)"CONTROL"CHR
     $(34)" FIELDS YOU" :REM*69
312Ø PRINTSPC(TA)"WILL NEED{2 S
     PACEs}TO{2 SPACEs}SKIP{2 S
     PACEs}BY{2 SPACEs}LOADING{
     2 SPACEs}YOUR"    :REM*138
313Ø PRINTSPC(TA)"FILE INTO A W
     ORD PROCESSOR.{2 SPACEs}{S
     HFT E}NTER THE"   :REM*14
314Ø PRINTSPC(TA)"NUMBER OF FIE
     LDS TO SKIP,{2 SPACEs}OR{2
      SPACEs}"CHR$(34)"{LEFT AR
     ROW}"CHR$(34)"{2 SPACEs}TO
     "                 :REM*1ØØ
315Ø PRINTSPC(TA)"RETURN TO THE
      {SHFT M}{SHFT A}{SHFT I}{
     SHFT N} {SHFT M}{SHFT E}{S
     HFT N}{SHFT U}.{2 CRSR DNs
     }"                :REM*45
316Ø PRINT"{SHFT E}NTER NUMBER
     FIELDS TO SKIP";:INPUT"{3
     SPACEs}{3 CRSR LFs}";A$
                       :REM*2
317Ø IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*171
318Ø SK=VAL(A$):RETURN :REM*185
319Ø ML=38:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT T}HE {SHFT R}ANGES
      SPECIFIED BELOW MUST BE T
     HE"               :REM*242
32ØØ PRINTSPC(TA)"INFORMATION Y
     OU WISH TO{2 SPACEs}TALLY{
     2 SPACEs}WITHIN"  :REM*51
321Ø PRINTSPC(TA)"A PARTICULAR
     FIELD.{2 SPACEs}{SHFT F}IR
     ST{2 SPACEs}ENTER{2 SPACEs
     }THE"             :REM*1Ø8
322Ø PRINTSPC(TA)"DISPLACEMENT
     OR FIELD{2 SPACEs}NUMBER{2
      SPACEs}OF{2 SPACEs}THE"
                       :REM*211
323Ø PRINTSPC(TA)"DATA YOU WISH
      TO TALLY. {SHFT T}HEN ENT
     ER THE"           :REM*143
324Ø PRINTSPC(TA)"{SHFT R}ANGES
      AS REQUESTED.{2 CRSR DNs}
     "                 :REM*159
325Ø PRINTSPC(TA)"{SHFT F}IELD
     NUMBER OF DATA";:INPUT"{3
     SPACEs}{3 CRSR LFs}";A$:DD
     =VAL(A$):PRINT    :REM*52
326Ø IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*46
327Ø IFDD=ØTHEN325Ø    :REM*229
328Ø PRINTSPC(TA)"{SHFT N}UMBER
      OF FIELDS PER RECORD";
                       :REM*85
3285 INPUT"{3 SPACEs}{3 CRSR LF
     s}";A$:NF=VAL(A$):PRINT
                       :REM*98
329Ø IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*12
33ØØ IFNF=ØTHEN328Ø    :REM*81
331Ø RETURN            :REM*113
332Ø ML=38:GOSUB14Ø:PRINTSPC(TA
     )"{SHFT T}HE {SHFT R}ANGES
      SPECIFIED BELOW MUST DEFI
     NE"               :REM*3Ø
333Ø PRINTSPC(TA)"THE RECORDS I
     N WHICH YOU{2 SPACEs}WILL{
     2 SPACEs}SUM{2 SPACEs}A"
                       :REM*31
334Ø PRINTSPC(TA)"PARTICULAR{2
     SPACEs}FIELD.{3 SPACEs}{SH
     FT F}IRST{2 SPACEs}ENTER{2
      SPACEs}THE"      :REM*196
335Ø PRINTSPC(TA)"DISPLACEMENT
     OR FIELD{2 SPACEs}NUMBER{2
      SPACEs}OF{2 SPACEs}THE"
                       :REM*84
336Ø PRINTSPC(TA)"DATA YOU WISH
      TO SUM.{2 SPACEs}{SHFT T}
     HEN{2 SPACEs}ENTER THE"
                       :REM*234
337Ø PRINTSPC(TA)"FIELD NUMBER
     OF THE FIELD{2 SPACEs}OF{2
      SPACEs}RANGES."   :REM*8
338Ø PRINTSPC(TA)"{SHFT F}INALL
     Y ENTER THE {SHFT R}ANGES
     AS REQUESTED.{2 CRSR DNs}"
                       :REM*157
339Ø PRINTSPC(TA)"{SHFT F}IELD
     NUMBER OF DATA";:INPUT"{3
     SPACEs}{3 CRSR LFs}";A$:DR
     =VAL(A$):PRINT    :REM*35
34ØØ IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*186
341Ø IFDR=ØTHEN339Ø    :REM*198
342Ø PRINTSPC(TA)"{SHFT F}IELD
     NUMBER FOR {SHFT R}ANGES";
     :INPUT"{3 SPACEs}{3 CRSR L
     Fs}";A$:DD=VAL(A$):PRINT
                       :REM*46
343Ø IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*152
344Ø IFDD=ØTHEN342Ø    :REM*133
345Ø PRINTSPC(TA)"{SHFT I}S {SH
     FT R}ANGE {SHFT A}LPHA OR
     {SHFT N}UMERIC (A/N)";:INP
     UT"{3 SPACEs}{3 CRSR LFs}"
     ;A$               :REM*86
346Ø IF A$<>"A"ANDA$<>"N"THEN34
     5Ø                :REM*253
347Ø NA$=A$            :REM*188
348Ø PRINTSPC(TA)"{SHFT N}UMBER
      OF FIELDS PER RECORD";
                       :REM*28
3485 INPUT"{3 SPACEs}{3 CRSR LF
     s}";A$:NF=VAL(A$):PRINT
                       :REM*186
349Ø IFA$="{LEFT ARROW}"THEN74Ø
                       :REM*212
35ØØ IFNF=ØTHEN348Ø    :REM*58
351Ø RETURN            :REM*74
352Ø GOSUB17Ø          :REM*4
3525 PRINT"{SHFT E}NTER FILENAM
     E OR":PRINT"{2 SPACEs}{CTR
     L 9}{LEFT ARROW}{CTRL Ø} F
     OR {SHFT M}{SHFT A}{SHFT I
     }{SHFT N}{SHFT SPACE}{SHFT
      M}{SHFT E}{SHFT N}{SHFT U
     }:{2 SPACEs}";:INPUT#1,FI$
                       :REM*82
353Ø IFFI$="{LEFT ARROW}"THEN74
     Ø                 :REM*152
354Ø IFLEN(FI$)>16THENFI$=LEFT$
     (FI$)             :REM*42
355Ø PRINT"{CRSR DN}":PRINT"{SH
     FT O}PENING FILE:{2 SPACEs
     }"FI$             :REM*24Ø
356Ø GOSUB45Ø:OPEN2,8,2,"Ø:"+FI
     $+",S,R":GOSUB46Ø:IFN1>2ØT
     HENCLOSE2:GOTO352Ø:REM*237 ►
```



ONLY ▸$22

"It's one heck of a game."
—Info World Magazine

"The graphics in these games are excellent...very high quality animation."
—PC Games

SYSTEM	REQUIREMENTS	PRICE
Amiga Apple II Series	5¼" Disk, 128 K	$22
Atari ST		$25
C64/128		$22
IBM 5¼"	CGA, EGA, VGA	$22
IBM 3½"	CGA, EGA, VGA	$25

MAINSTREAM America

"If you want it, we have it. Call for the best price and service"

Call 1-800-345-1181 NOW!

MasterCard VISA

Please send your check or money order to Mainstream America, 1012 South Main Street, Taylor, PA 18517. All orders must add $3.00 for shipping and handling. Canadian orders add $7.00. C.O.D. orders please add an additional $4.00. Pennsylvania residents please add 6% sales tax. All inquiries call (717) 562-0650.

Circle 62 on Reader Service card.

COMPUTEREYES™



Capture Video Images: only $129.95

Now you can easily and inexpensively acquire images from any standard video source – videotape, camera, disk – for display on your Commodore 64 or 128. Capture time is less than six seconds.

ComputerEyes has everything you need: Interface hardware, complete easy-to-use software support on disk, owner's manual, and optional enhancement software. And it's compatible with virtually all popular graphics programs. Think of the possibilities!

ComputerEyes is backed by a one year warranty and the success of over 10,000 systems sold. Satisfaction guaranteed or return it within ten days for full refund. Also available: Demo Disk, $3; ComputerEyes with quality b/w video camera, $399.95 complete. See your dealer or order direct. For more information call 617-329-5400.

To order call 800-346-0090

Digital Vision, Inc.
270 Bridge Street
Dedham, MA 02026
VISA, M/C, COD accepted

DIGITAL VISION

Circle 128 on Reader Service card.

COLOR RIBBONS & PAPER

COLOR RIBBONS
RED, BLUE, GREEN, BROWN, PURPLE, YELLOW

Ribbons — Price Each	Black	Color	Heat Transfer
Brother M1109	4.95	5.95	7.00
C. Itoh Prowriter Jr.	7.00	9.00	–
Citizen 120D/180D	5.00	6.00	7.95
Commordore MPS 801	4.50	5.25	5.75
- MPS 802/1526	6.25	7.25	–
- MPS 803	4.95	5.95	7.00
- MPS 1000	3.95	4.95	6.75
- MPS 1200/1250	5.00	6.00	7.95
- 1525	6.50	8.00	–
Epson MX80/LX800	3.75	4.25	6.75
Okidata 82/92	1.75	2.25	4.50
Okidata 182/192	6.50	7.50	6.00
Panasonic K-XP 1080	6.75	7.75	–
Seikosha SP 800/1000	5.25	6.50	7.95
Star SG10	1.75	2.25	4.50
Star NX10/NL10	5.00	6.00	7.95
Star NX1000	4.50	5.50	6.75
Star NX1000C – 4-Color	–	8.75	–

COLOR PAPER

BRIGHT PACK –
200 Sheets/50 ea. color: Red, Blue, Green, Yellow. 9 1/2 x 11 – $11.90/pk.

PASTEL PACK –
200 Sheets/50 ea. color: Pink, Yellow, Blue, Ivory. 9 1/2 x 11 – $11.90/pk.

COLOR BANNER, PARTY BANNER, CHRISTMAS BANNER, HAPPY B-DAY BANNER, CONGRAT'S BANNER – 45'/Roll – $9.95/Ea. Roll

COLOR CERTIFICATE PAPER – 100 Shts./Pk. – $9.95/Pk.

GREETING CARDS – 50 Cards & 40 Env./Pk. – $11.95/Pk.

T-SHIRT RIBBONS (Heat Transfer) – Call For Price & Avail.
COLORS: Red, Blue, Green, Brown, Purple, Yellow, Black

COLOR DISKETTES
5 1/4" DS/DD Rainbow Pack. 10/pack – $12.50

For ribbons & paper not listed above, call for price. Price & spec. subject to change w/o notice. Min. order $25.00. S & H $3.50 minimum. Visa, M.C., C.O.D.

RAMCO COMPUTER SUPPLIES
P.O. Box 475, Manteno, IL 60950 U.S.A.
(U.S.A.) 800-522-6922 • (Canada) 800-621-5444
815-468-8081

Circle 232 on Reader Service card.

JASON-RANHEIM

CARTRIDGE MATERIALS FOR YOUR COMMODORE 64 or 128

Quality Products from the World Leader!

- Promenade C1 EPROM Programmer
- Game Type Cartridges
- Bank Switching Cartridges
- RAM/ROM Combination Cartridges
- Capture Archival Cartridge System
- Cases, EPROMS, Erasers, Etc.

Call or write for complete information!

Call Toll Free	800-421-7731
from California	916-878-0785
Tech Support	916-878-0785

JASON-RANHEIM
3105 Gayle Lane
Auburn, CA USA 95603

Circle 202 on Reader Service card.

RUN is a publication of IDG Communications/Peterborough, a division of IDG Communications, the world's largest publisher of computer-related information. IDG Communications publishes over 90 computer publications in 33 countries. Fourteen million people read one or more of IDG Communications' publications each month. IDG Communications publications contribute to the *IDG News Service*, offering the latest domestic and international computer news. IDG Communications publications include: ARGENTINA's *Computerworld Argentina*; ASIA's *Communications World, Computerworld Hong Kong, Computerworld Malaysia, Computerworld Singapore, Computerworld Southeast Asia, PC Review*; AUSTRALIA's *Computerworld Australia, Communications World, Australian PC World, Australian Macworld*; AUSTRIA's *Computerwelt Oesterreich*; BRAZIL's *Data News, PC Mundo, Micro Mundo*; CANADA's *Computer Data*; CHILE's *Informatica, Computacion Personal*; DENMARK'S *Computerworld Danmark, PC World Danmark*; FINLAND's *Tietoviikko, Mikro*; FRANCE's *Le Monde Informatique, Distributique, InfoPC, Telecoms International*; GREECE's *Micro and Computer Age*; HUNGARY's *Computerworld SZT, PC Mikrovilag*; INDIA's *Dataquest*; ISRAEL's *People & Computers Weekly, People & Computers BiWeekly*; ITALY's *Computerworld Italia*; JAPAN's *Computerworld Japan*; MEXICO's *Computerworld Mexico*; THE NETHERLANDS' *Computerworld Netherlands, PC World Benelux*; NEW ZEALAND's *Computerworld New Zealand*; NORWAY's *Computerworld Norge, PC World Norge*; PEOPLE'S REPUBLIC OF CHINA's *China Computerworld, China Computerworld Monthly*; SAUDI ARABIA's *Arabian Computer News*; SOUTH KOREA's *Computerworld Korea, PC World Korea*; SPAIN's *CIMWORLD, Computerworld Espana, Commodore World, PC World Espana, Communicaciones World, Informatica Industrial*; SWEDEN's *Computer Sweden, MikroDatorn, Svenska PC World*; SWITZERLAND's *Computerworld Schweiz*; UNITED KINGDOM's *Computer News, DEC Today, ICL Today, PC Business World, IOTUS*; UNITED STATES' *AmigaWorld, CD-ROM Review, CIO, Computer Currents, Computerworld, Computers in Science, Digital News, Federal Computer Week, 80 Micro, FOCUS Publications, inCider, InfoWorld, Macintosh Today, MacWorld, Computer & Software News (Micro Marketworld/Lebhar-Friedman), Network World, PC World, Portable Computer Review, Publish!, PC Resource, RUN, Windows*; VENEZUELA's *Computerworld Venezuela*; WEST GERMANY's *Computerwoche, PC Welt, Run, Information Management, PC Woche.*

MOVING?

Subscription Problem?

Get help with your subscription by calling our new toll free number:

1-800-274-5241

In Colorado: **1-447-9330**

between 9 a.m. and 5 p.m. EST Monday–Friday

If possible, please have your mailing label in front of you as well as your cancelled check or credit card statement if you are having problems with payment.

If moving, please give both your old address and new address.

RUN

P.O. Box 58711
Boulder, CO 80322-8711


```
357Ø PRINT:PRINT"{SHFT S}KIPPIN
     G INFO DATA{CRSR DN}":FORI
     =1TOSK:INPUT#2,A$ :REM*184
358Ø IFST AND 64 THENPRINT"{SHF
     T S}KIP FIELDS NOT SPECIFI
     ED CORRECTLY":N1=22:RETURN
                          :REM*155
359Ø NEXT:PRINT"{2 CRSR DNs}":R
     ETURN                :REM*223
36ØØ GOSUB17Ø:GOSUB3Ø6Ø:GOSUB17
     Ø:GOSUB319Ø          :REM*2Ø3
361Ø FORI=1TORN:PRINT"{SHFT L}A
     BEL FOR {SHFT R}ANGE"I"{CR
     SR LF}:{2 SPACEs}{CTRL 9}"
     ;:INPUT#1,RN$(I):PRINT:NEX
     T                    :REM*252
362Ø GOSUB352Ø:IFN1=22THENFORI=
     1TO15ØØ:NEXT:GOTO36ØØ
                          :REM*138
363Ø PRINT"{SHFT R}EADING DATA:
     "                    :REM*192
364Ø R=1                  :REM*145
365Ø FORF=1TONF           :REM*2
366Ø PRINT"{SHFT R}ECORD"R"{SHF
     T F}IELD"F"... ";    :REM*6Ø
367Ø INPUT#2,A$:RS=ST     :REM*236
368Ø PRINTA$:IFF<>DDTHEN371Ø
                          :REM*75
369Ø FORI=1TORN:IFA$=RN$(I)THEN
     RV(I)=RV(I)+1        :REM*154
37ØØ NEXT                 :REM*248
371Ø IFRS AND 64 THENPRINT"{CRS
     R DN}{SHFT F}INISHED READI
     NG DATA":GOTO373Ø    :REM*154
372Ø NEXT:R=R+1:GOTO365Ø:REM*44
373Ø CLOSE2:GOSUB51Ø:G=1:FORI=1
     TO1ØØØ:NEXT:GOTO74Ø
                          :REM*242
374Ø GOSUB17Ø:GOSUB3Ø6Ø:GOSUB17
     Ø:GOSUB319Ø          :REM*68
375Ø ML=37:GOSUB14Ø:PRINTSPC(TA
     )"{CTRL 9}{SHFT T}HE FOLLO
     WING ENTRIES MUST BE {SHFT
      N}{SHFT U}{SHFT M}{SHFT E
     }{SHFT R}{SHFT I}{SHFT C}{
     CTRL Ø}{CRSR DN}"    :REM*54
376Ø FORI=1TORN           :REM*198
377Ø PRINT"{SHFT L}OW VALUE FOR
      {SHFT R}ANGE"I"{CRSR LF}:
     {2 SPACEs}{CTRL 9}";:INPUT
     #1,A$:RA(I,1)=VAL(A$):PRIN
     T                    :REM*183
378Ø PRINT"{SHFT H}IGH VALUE FO
     R {SHFT R}ANGE"I"{CRSR LF}
     : {CTRL 9}";:INPUT#1,A$:RA
     (I,2)=VAL(A$):PRINT
                          :REM*2Ø4
379Ø PRINT:IFRA(I,1)<=RA(I,2)TH
     EN381Ø               :REM*163
38ØØ ML=3Ø:GOSUB14Ø:PRINTSPC(TA
     )"{CTRL 9}{SHFT E}{2 SHFT
     Rs}{SHFT O}{SHFT R}{CTRL Ø
     }:{2 SPACEs}{SHFT H}IGH {S
     HFT V}ALUE < {SHFT L}OW {S
     HFT V}ALUE{CRSR DN}":GOTO3
     77Ø                  :REM*247
381Ø R1$=RIGHT$(STR$(RA(I,1)),L
     EN(STR$(RA(I,1)))-1)
                          :REM*242
382Ø R2$=RIGHT$(STR$(RA(I,2)),L
     EN(STR$(RA(I,2)))-1):RN$(I
     )=R1$+"-"+R2$:NEXT:REM*215
383Ø GOSUB352Ø:IFN1=22THENFORI=
     1TO15ØØ:NEXT:GOTO374Ø
                          :REM*215
384Ø PRINT"{SHFT R}EADING DATA:
     "                    :REM*243
385Ø R=1                  :REM*66
386Ø FORF=1TONF           :REM*244
387Ø PRINT"{SHFT R}ECORD"R"{SHF
     T F}IELD"F"... ";    :REM*99
388Ø INPUT#2,A$:RS=ST     :REM*191
389Ø PRINTA$:IFF<>DDTHEN392Ø
                          :REM*64
39ØØ FORI=1TORN:IFVAL(A$)>=RA(I
     ,1)ANDVAL(A$)<=RA(I,2)THEN
     RV(I)=RV(I)+1        :REM*163
391Ø NEXT                 :REM*199
392Ø IFRS AND 64 THENPRINT:PRIN
     T"{CRSR DN}{SHFT F}INISHED
      READING DATA":GOTO394Ø
                          :REM*116
393Ø NEXT:R=R+1:GOTO386Ø
                          :REM*2Ø8
394Ø CLOSE2:GOSUB51Ø:G=1:FORI=1
     TO1ØØØ:NEXT:GOTO74Ø
                          :REM*199
395Ø GOSUB17Ø:GOSUB3Ø6Ø:GOSUB17
     Ø:GOSUB332Ø          :REM*48
396Ø FORI=1TORN:PRINT"{SHFT L}A
     BEL FOR {SHFT R}ANGE"I"{CR
     SR LF}:{2 SPACEs}{CTRL 9}"
     ;:INPUT#1,RN$(I):PRINT:NEX
     T                    :REM*147
397Ø GOSUB352Ø:IFN1=22THENFORI=
     1TO15ØØ:NEXT:GOTO395Ø
                          :REM*249
398Ø PRINT"{SHFT R}EADING DATA:
     "                    :REM*124
399Ø R=1                  :REM*2Ø6
4ØØØ FORF=1TONF           :REM*99
4Ø1Ø PRINT"{SHFT R}ECORD"R"{SHF
     T F}IELD"F"... ";    :REM*159
4Ø2Ø INPUT#2,A$:RS=ST:    :REM*246
4Ø3Ø PRINTA$:IFF=DDTHENTD$=A$
                          :REM*229
4Ø4Ø IFF=DRTHENTD=VAL(A$)
                          :REM*139
4Ø5Ø IFRS AND 64 THENPRINT:PRIN
     T"{CRSR DN}{SHFT F}INISHED
      READING DATA":GOTO4Ø7Ø
                          :REM*142
4Ø6Ø NEXT                 :REM*78
4Ø7Ø FORI=1TORN           :REM*14
4Ø8Ø IFNA$="A"THENIFTD$=RN$(I)T
     HENRV(I)=RV(I)+TD    :REM*1Ø6
4Ø9Ø IFNA$="N"THENIFVAL(TD$)=VA
     L(RN$(I))THENRV(I)=RV(I)+T
     D                    :REM*52
41ØØ NEXT                 :REM*15Ø
411Ø IFRS AND 64 THENPRINT:PRIN
     T"{CRSR DN}{SHFT F}INISHED
      READING DATA":GOTO413Ø
                          :REM*2ØØ
412Ø R=R+1:GOTO4ØØØ       :REM*158
413Ø CLOSE2:GOSUB51Ø:G=1:FORI=1
     TO1ØØØ:NEXT:GOTO74Ø
                          :REM*132 ■
```

COMPUTER REPAIR

(205) 739-0040

AMIGA $125.00 PC 10 $135.00 PC 10-II 135.00

Commodore 1541	$59.00	Commodore Monitor 1701 1802 1084 1702 1902	$85.00
MSD,1571	$85.00		
C-64	$45.00	Commodore SX-64 Portable Computer	$69.00
C-128	$85.00		*
Computers			
MOTHERBOARD REPAIR 64,1541	$35.00	Commodore Printer Repair	$75.00
SEND BOARD 128,1571	$59.00		
ONLY PC,XT,AT	$CALL$		

ALL PARTS AND LABOR INCLUDED — Authorized Commodore Service Center — 5.00 SHIPPING 15.00 APO AND * BUSINESS EQIP

!!!!! FAST TURNAROUND !!!!!

WE BUY ALIVE

C64	$CALL
1541NEWT	50.00
1541ALPS	45.00
SX64	150.00
1571, C128	100.00
1526/802	45.00

MUST BE COMPLETE
$CALL ON DEAD EQUIPMENT

POWER SUPPLIES

C64	$ 19.95
C128	49.95
1541, 1581	36.75
AMIGA 500	75.95
AMIGA 1000	134.95
AMIGA 2000	141.98

CABLES AND MISC.

REG 6 PIN DIN	$ 3.95
12' 6 PIN DIN	6.95
18' 6 PIN DIN	7.95
MONITOR CABLES	3.95
TV SWITCHES	2.50
COMMODORE KEYBOARD	CALL
WICO BAT HANDLE	17.95
DSDD-Disk 25 for	10.95

COMPUTER EQUIPMENT

C64 REFR	$ 99.00
C128 REFR	219.00
1702 CBM	169.00
CBM 1541 ALPS	159.00
STAR NX 1000C	199.00
EPSON INTERFACE	53.95

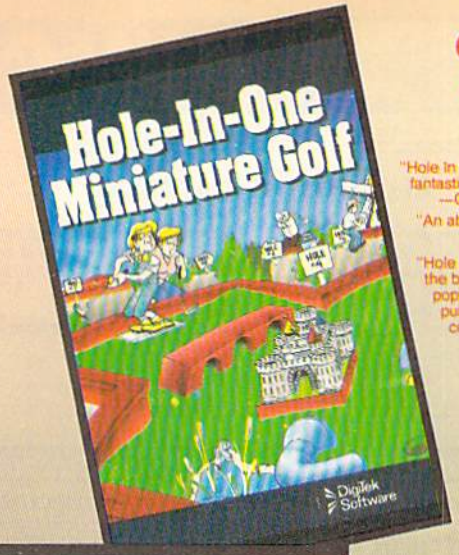
PARTS

901 ROMS	$11.95
STR54041	12.50
41464	12.95
6560 PULLS	10.00
74LS629	4.95
82S100	12.95
325302	9.95
325572	9.50
8701	6.85
8502	9.00
6526	12.50
6522	4.50
6520	3.85
6532	6.29
6502	2.85
6510	9.95
6581	12.50
6567	18.35
4164	2.75
8721	16.85
C128 UPGRADE ROMS	21.65

COMPUTER SHOPPE OF ALABAMA
(Formerly T.C. Electronics)
1310 2nd Ave., Suite C
Cullman, AL 35055

DEALERS SEND FOR PARTS CATALOG — PRICE SUBJECT TO CHANGE — $25.00 MIN ORDER

Circle 30 on Reader Service card.



ONLY $19

"Hole In One is absolutely fantastic!" —Commodore Magazine
"An absolute gem of a game." —INFO ★★★★
"Hole In One is definitely the best game on this popular pastime ever published for the home computer." —Video Games & Computer Entertainment

SYSTEM	REQUIREMENTS	PRICE
Amiga		$25
C64/128		$19
IBM 5¼"	CGA, EGA, VGA	$22
IBM 3½"	CGA, EGA, VGA	$22

MAINSTREAM America

"If you want it, we have it. Call for the best price and service"

Call 1-800-345-1181 NOW!

MasterCard VISA

Please send your check or money order to Mainstream America, 1012 South Main Street, Taylor, PA 18517. All orders must add $3.00 for shipping and handling. Canadian orders add $7.00. C.O.D. orders please add an additional $4.00. Pennsylvania residents please add 6% sales tax. All inquiries call (717) 562-0650.

Circle 55 on Reader Service card.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

1A. Title of publication: RUN. 1B. ISSN 07414285. 2. Date of filing: Sept. 25, 1989. 3. Frequency of issue: monthly. 3A. No. of issues published annually: 12. 3B. Annual subscription price: $22.97. 4. Complete mailing address of known office of publication: 80 Elm Street, Peterborough, Hillsborough County, NH 03458. 5. Complete mailing address of the headquarters of general business offices of the publisher: 80 Elm Street, Peterborough, Hillsborough County, NH 03458. 6. Full names and complete mailing address of publisher, editor and managing editor: Publisher, Stephen Robbins, 80 Elm Street, Peterborough, NH 03458; Editor, Dennis Brisson, 80 Elm Street, Peterborough, NH 03458; Managing Editor, Swain Pratt, 80 Elm Street, Peterborough, NH 03458. 7. Owner: International Data Group, PO Box 1450, 5 Speen Street, Framingham, MA 01701. 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: Patrick J. McGovern, PO Box 1450, 5 Speen Street, Framingham, MA 01701. 9. For completion by nonprofit organizations authorized to mail at special rates: not applicable. 10. Extent and nature of circulation: (X) Average no. copies each issue during preceding 12 months; (Y) Actual no. copies of single issue published nearest to filing date; A. Total no. of copies printed: (X) 191,810 (Y) 153,747. B. Paid circulation: 1. Sales through dealers and carriers, street vendors and counter sales: (X) 22,665 (Y) 19,900; 2. Mail subscription: (X) 99,036 (Y) 72,088. C. Total paid circulation: (X) 121,701 (Y) 91,988. D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies: (X) 1,793 (Y) 1,296. E. Total distribution: (X) 123,494 (Y) 93,284. F. Copies not distributed: 1. Office use, left over, unaccounted, spoiled after printing: (X) 2,428 (Y) 1,128; 2. Return from News Agents: (X) 65,888 (Y) 59,335. G. Total: (X) 191,810 (Y) 153,747.

BIG BLUE READER 128/64

MS-DOS File Transfer Utility

New Version III

Big Blue Reader transfers word processing, text and ASCII files between Commodore and IBM MS-DOS disks. ***1571 or 1581 Disk Drive is required. Does not work with 1541 drive.***
Fast and easy to use. Transfers MS-DOS files on 160K-360K 5.25" & 720K 3.5" disks; Including MS-DOS Sub-directories.
Big Blue Reader 128 supports: C-128 CP/M files, 17xx REU, 40 & 80 column modes, and much more.
(**Big Blue Reader 64** available separately only **$29.95**)

BIG BLUE READER 128/64 only $44.95

Order by check, money order, or COD.
Free shipping and handling. No credit card orders.
BBR 128/64 available as an upgrade to current users for $18 plus original BBR disk. Foreign orders add $4
CALL or WRITE for more information.

BIBLE SEARCH

Complete New Testament text and Concordance with very fast word search and verse display capabilities. Word(s) in text can be found and displayed in seconds. Includes both C64 and C128 mode programs. Please specify 1541, 1571 or 1581 formatted disk. (*Makes an excellent gift.*)
King James Version NT only $25
New International Version NT only $30

To order Call or write: **SOGWAP Software**
115 Bellmont Road; Decatur, IN 46733
Ph (219) 724-3900

Circle 62 on Reader Service card.

RUN CLASS ADS

C128 C64

ALL NEW PD CATALOG

In this catalog, we now offer over 100,000 blocks of programs for your C-128/64. Over 35,000 for your 128. We now offer GEOS, CLIPART, BASIC 8, DEMOS, MOVIES and MUSIC disks. And all for only 75 cents a piece. Most disks avg. less than 10 blocks free. Plus, we offer color inkjet printing! An exceptional value! We can be reached online at:
Q-link = Parsec, Genie = JBEE, CIS = 76456,3667
To order our catalog, send us $2.00 (US funds). Personal checks and money orders accepted. Mail to:

Parsec, Inc.
POB 111, Salem, MA 01970

$AVE MONEY!

AUTHORIZED COMMODORE SERVICE
120 Day Warranty

$37.95* C-64 repair

1541*...$45.95 | 1571*(repair).....$45.95
SX-64...$60.95 | CBM Diagnostics....$19.00
C-128...$65.95 | AMIGA Products...CALL

ANT Computer Service Center
1310 S. Dixie Hwy., Ste. 18W
Pompano Beach, FL 33060
CALL 305-785-2490

Not including head stepper or spindle motors. Must be repairable.

DEPENDABLE SERVICE FOR YOUR COMMODORE!

C-64, 1541, C-128, or 1571: FAST TURNAROUND!

$25.00 PLUS PARTS

Send computer* or drive with name, address, phone, & describe problem. We'll call with parts estimate, then repair and return to you insured by UPS. Payment can be COD or VISA, M/C. Minimum charge, estimate only is $20. * Include power supply.

AUTHORIZED COMMODORE SERVICE CENTER
★ ★ ★ ★ ★
90 DAY WARRANTY ON ALL REPAIRS

TYCOM Inc. 503 East St. Pittsfield, MA 01201 (413) 442-9771

SAVE YOUR FAMILY!

Genealogy software with features to fit every budget and requirement: LINEAGES/Starter, LINEAGES/Standard, LINEAGES/Advanced, and our most comprehensive FAMILY ROOTS. Prices $29 & up. Data is compatible between systems and you may upgrade from one to another. Call for FREE information. Satisfaction guaranteed.

QUINSEPT, INC.
PO Box 216, Lexington, MA 02173
1-800-637-ROOT 617-641-2930

COMPUTERS etc!

Save $$$ on Hardware, Software and Accessories

Call for *Free* Catalog
1 (800) 634-5546
1 (813) 377-1121

COMMODORE 128 USERS w/1571 or 1581

FORMAT EXECUTIVE Version 4.0 **$59.95** US Plus S/H
MSDOS — C-64 128 — CP M File Conversion

- Transfer files between 150 different 3.5" & 5.25" disk formats.
- Can also be used to transfer files to/from the Commodore Amiga, Atari ST & Appie Macintosh.
- Will transfer both ASCII (text) and OBJECT (program) files.
- No limitation on file sizes.
- ASCII—PETSCII Conversion
- 1581 Partitions supported.
- Wildcard transfers supported (?,*).
- Supports 154x, 157x, 158x drives & 17xx RAM disks.
- Format, Read & Write ALL disk types.

DOES MUCH MORE THAN OLDER PROGRAMS SUCH AS BIG BLUE READER
Contact us on the GEnie and Q-LINK Networks: POWERSOFT
"Format Executive is very well written and does all that it claims to do."—Twin Cities 128, Issue 25
Send Check or Money Order For $59.95 (US) + $3.50 S/H (Foreign $7.50 S/H) COD add $3 to:
POWERSOFT PO Box 7333 Bradenton, FL 34210

NOTHING LOADS YOUR PROGRAMS FASTER THAN THE QUICK BROWN BOX
A NEW CONCEPT IN COMMODORE© CARTRIDGES

Store up to 30 of your favorite programs in a single battery-backed cartridge for easy, instant access. Change contents as often as you wish. The Quick Brown Box accepts most unprotected and "frozen" programs including the only word processor that saves your text as you type, "The Write Stuff." Coexists with GEOS© and Commodore RAM Expansion Units. Loader utilities included for both C-64 and C-128 modes.

32K $99; 64K $129 (plus $3 s/h; MA res. add 5%). Call for "Write Stuff" pkg.
Brown Boxes, Inc., 26 Concord Rd., Bedford, MA 01730: (617) 275-0090; 862-3675.

"Good Reliable Stuff" *Info (Jan/Feb '88)*
"A Little Gem" *Twin Cities 128 (Mar/Apr '88)*
"You'll Never Lose Your Cool, or Your Programs" *RUN (Nov '87)*
"A Worthy Product—Long Overdue" *Ahoy (Feb '88)*

LEARN TO PLAY GUITAR

C-64 Guitar Tutor C-128

- Learn to play the guitar at home at your own pace.
- Learn chords, scales, songs, music theory and more.
- All notes and finger positions are graphically displayed.
- Play along with your computer as you would with an instructor—but you control the tempo.
- Self-paced, interactive lessons make learning fun.

SEND $29.95 (SPECIFY C-64 OR C-128) TO:
Northern Star Software
PO Box 63, Oak Creek, WI 53154

COMMODORE DIAGNOSTICIAN II™

Just released. . .This newly updated Commodore Diagnostician II™ saves you money on Repairs & Downtime by promptly locating faulty IC chips on all Commodore computers and 1541 drives. Different sections contain "cross referencing" of chips and "block layout." (A schematic is included but not needed). Over 12,000 "Diagnosticians" sold worldwide. . .See fantastic full page review in March '88 Computer Shopper Magazine. Price is $6.95 prepaid in the US.

The Grapevine Group, Inc.
35 Charlotte Drive
Wesley Hills, NY 10977

914-354-4448 • 800-292-7445 • Fax: 914-354-6696

√Book™

Your spreadsheet or data base doesn't really understand your personal checking!
Check out these features:

- √17 types of checking transactions
- √ Handles overdraft protection
- √ Remembers payees for fast entry
- √ Full screen editing and selective queries
- √ 8 types of reports plus check printing
- √ C64/40 col. and C128/80 col. programs
- √ Supports 1541/1571/1581 drives
- √ Schedules periodic transactions
- √ Custom transaction categories
- √ Monthly balancing
- √ Optional password protection
- √ Utilities with partition tools for sub-directories on 1581 drives
- √ Calculator, and more . . .

Computer Craftware • 17966 Arbolada Way • Tustin, CA 92680
(714)953-8177 • $34.95 + $2.50 S&H (CA res. add 6%)

NEW PRODUCTS FOR COMMODORE

Exclusive new Commodore accessories, User-Port Protectors, Expansion Boards, Cables, Power Supplies, Ribbons, etc.

COMMODORE CHIPS

The whole range of Commodore custom IC's in stock at reasonable prices. Same day delivery available.

NEW LOW COST PRINTERS **FREE CATALOG 1-800-227-4051** **NEW SOFTWARE $3.00 EACH**

DELTA COMPUTING TECHNOLOGIES CORP.
292 N. PLANK RD., NEWBURGH, NY 12550
914-565-7080 M-F 9AM-5PM FAX # 914-565-7082

C64/128 PUBLIC DOMAIN SOFTWARE

REQUEST FREE CATALOG or send $2 for sample disk and catalog (REFUNDABLE). Categories include education, utilities, games, business, PRINT SHOP graphics, pre-tested programs and more. Rent for $1 or buy as low as $1.50 per disk side or for 95¢ for 75 or more. $20 order gets 3 free disks of your choice.
NEXT DAY SHIPPING!

CALOKE INDUSTRIES (Dept BK)
PO Box 18477, Kansas City, MO 64133

RUN CLASS ADS

COMMODORE 64-128

FINEST PUBLIC DOMAIN PROGRAMS
PRETESTED QUALITY PROGRAMS • $1.50 • ON DISK
YOU PICK THE PROGRAMS THAT **YOU** WANT!!!
FREE DISK FULL OF PROGRAMS WITH FIRST ORDER

FOR YOUR OWN LIST AND DESCRIPTION OF THESE PROGRAMS SEND JUST A SASE TO:

JLH CO.
DEPT A
BOX 67021
TOPEKA, KS 66667

Top-Tech International, Inc.
Advanced Computer Systems

FLAT Service Rates—FAST, Professional Service

DECEMBER SPECIAL

C-64 repair with our exclusive LIFETIME WARRANTY
ONLY $79.00 (S&H included)
(You MUST send Power Supply with your computer)

VISA, MASTER CARD, DISCOVER, AMEX
(215) 389-9901 • 1112 S. Delaware Ave., Philadelphia, PA 19147 • **(215) 389-9901**

Softech Computer Systems, Inc.
153 Patchen Drive, Suite 59, Lexington, KY 40517

1750 RAM
$159

Supra 2400
Modem
$119

Lt. Kernal
64 30M . . . $785
128 20M . . $835

C-Net
Bulletin Board
64. . . . . $59.95
128. . . . $84.95

800-992-SCSI

READ THIS AD

*SATISFACTION GUARANTEED *CUSTOM MADE DUST COVERS *HEAVY 32oz VINYL
*COLORS: TAN or BROWN *QUANTITY DISCOUNTS AVAILABLE

COMPUTERS:		DISK DRIVES:		MONITORS	
C-64	$8.00	C-1541/C	$8.00	C-1702	$16.00
C-64C	10.00	C-1571	8.00	C-1802/CM141	19.00
C-128	13.00	C-1581	8.00	C-1902/AMIGA	19.00
C-128D CPU	13.00	AMIGA 3.5	8.00	C-1902A/MAG40	19.00
C-128D KEYB'D	8.00	ENHANCER2000	8.00	C-1084	19.00
AMIGA 500	13.00	FSD-1, -2	8.00	C-2001,2	19.00

PRINTERS: DOT MATRIX 10" $13.00; 15" $16.00 VCR'S: $13.00
Order by Stating Make, Model & Color Choice TAN or BROWN with Check or M.O. Plus $2.00 per Item ($5.00 max) Shp. & Hdl.
CA. Res. Add 6% Tax. COD'S $3.00. SEND DIMENSIONS FOR QUOTES ON COVERS NOT LISTED.

CROWN CUSTOM COVERS, 24621 Paige Circle, DEPT R-10
Laguna Hills, CA 92653 (714) 472-6362

JOYSTICK WARRIORS

Prepare for battle on your C-64/128!

Are you ready to enter the dark depths of the unknown? To battle legions of hideous horrors? To boldly go where Captain Kirk wouldn't even dare to!! For action and adventure write to:

AERION SOFTWARE LTD
PO Box 1222, Riverdale Station
New York, NY 10471-1222

ATTENTION ROLE PLAYERS

CHARACTER EDITORS ($19.95 each) — Might and Magic (1 or 2), Bards Tale (1, 2 or 3), Wasteland, Ultima (2, 3, 4 or 5), Wizardry (1, 2 or 3), Pool of Radiance, Neuromancer, Elite, Phantasie (1, 2 or 3), Mars Saga, Magic Candle and Curse of the Azure Bonds.

HINT BOOKS ($9.95 each) — Wizardry (1, 2, or 3), Might and Magic, Legacy of the Ancients and Curse of the Azure Bonds.

Add $3.00 for shipping/handling. Specify computer type on order.

GOSSELIN COMPUTER CONSULTANTS
PO Box 1083 • Brighton, MI 48116 • (313) 229-2453

GOOD THINGS COME IN SMALL PACKAGES!

COLORED PAPER
School Approved

1-800-322-2580
In Michigan (313) 227-9401

VISA, MC, C.O.D.
Minimum Order $25.00
S/H Add $3.50

Write for Our ***FREE*** Brochure Featuring
COLORED PAPER & SEASONAL PACKS
Continuous Labels, File & Post Cards, Disks, Classic Laid Stationery and Much More!

The Experts • PO BOX 928 • Brighton, MI 48116

A. – BRITETONES • 9-1/2x11 • CLEAN EDGE
Red • Yellow • Green • Hot Pink • Blue • Gold
PRISM PACK 25 of each color.....$12.95
Single Color 50 Pack.....$ 3.95
Envelopes 25 Single Color.....$ 2.50

B. – SOFTONES • 9-1/2x11 • CLEAN EDGE
Pink • Ivory • Green • Yellow • Blue • Lilac
PRISM PACK 25 of each color.....$10.95
Single Color 50 Pack.....$ 3.25
Envelopes 25 Single Color.....$ 2.50

C. – GLOTONES • 9-1/2x11 • CLEAN EDGE
Glo-Pink • Glo-Melon • Glo-Lemon
PRISM PACK 25 of each color.....$ 6.95
Single Color 50 Pack.....$ 4.95
Envelopes 25 Single Color.....$ 2.50

D. – CERTIFICATE PAPER • 9-1/2x11 • CLEAN EDGE
PARCHMENT PACK 25 with Gold Metallic Seals.....$ 4.95

COMMODORE AMIGA SERVICE CENTER

C-64 Repair
$39.95
includes parts/labor
flat rate repair

C-128 . . . $64.95
1541 . . . . . 25.00 (alignment)
1571 . . . . . 25.00 (alignment)
SX-64 . . . . 69.95

CALL for Commodore Chips & Power Supplies at *low* prices.
24 Hour Turnaround

A&M Computer Repair
20 Guernsey Drive, New Windsor, New York 12550
1-800-344-4102 (914) 562-7271

B.Sc. & M.S. in COMPUTER SCIENCE

The American Institute for Computer Sciences offers an in-depth correspondence program to earn your Bachelor of Science and Master of Science degrees in Computer Science at home. BSc. subjects covered are: MS/DOS, BASIC, PASCAL, C, Data File Processing, Data Structures & Operating systems. MS program includes subjects in Software Engineering and Artificial Intelligence.

AMERICAN INST. for COMPUTER SCIENCES
1704–RU 11th Avenue South
Birmingham, AL 35205
TOLL FREE 1-800-872-AICS

COMMODORE 128 & CP/M USERS
WORDSTAR®

WORDSTAR V.2.26 or SuperCalc V.1.05 or WORDPAC (including Grammatic and Spellguard) or MBASIC with compiler, BASIC or FORTRAN 80. **$39.00** each

Wordstar/SuperCalc/MBASIC includes a 763 page Osborne System Manual with extensive CP/M Tutorials as well. 3/$95.00

800-221-7372 Don Johnson
PDSC, 33 Gold St. L3. NYC, NY 10038

WHOLESALE PARTS & CHIP DISTRIBUTORS

Replacement/Upgrade Chips

6526	$12.25
6567	15.95
6510	10.95
6581	11.50
PLA	11.95
All 901 ROMs	10.95
And Many Others	
C-64 Hvy Duty w/Power Supply	24.95

New upgrades—"Fatter Agnus" #8372. . $109.95, 1.3 Kickstart ROM. . $27.95 (both w/instructions)

Prices subject to change

Att: Computer Repair Centers
You no longer have to be "Commodore Repair Authorized" to obtain the lowest prices on replacement chips or parts. The Grapevine Group will supply you with chips, upgrades, diagnostics, schematics and a library of "technical notes." Our prices 95% of the time are lower than buying from Commodore directly and 100% of the time less than our competitor(s). Write to us on your company or school letter for details.

Send for catalog of exclusive new products

Amiga Chips/Upgrades

8362 (Denise)	$56.95
8364 (Paula)	56.95
8386 (Gary 5719)	17.25
8520A1	17.95
8372 (New Agnus)	109.95
8562	22.50
68881-RC16	79.95
68881-RC12	72.50
68882-RC16	105.00
68020-RC16 (16MHz)	74.95
1.3 Kickstart ROM	27.95

The Grapevine Group, Inc.
35 Charlotte Drive, Wesley Hills, NY 10977
1-800-292-7445 or 914-354-4448

Our 9th Year
FAX: 914-354-6696
Dealer pricing available

MONEY WORKS

If You Budget Your Dollars
Let Money Works do it for you!

C-128

- 5 Income Sources
- 15 Budget Expenses
- Misc. Expenses
- $ Savings Features
- Checking
- Special printouts plus much more

A Budget/Checkbook Program for the C-128/80 Column

only
$24.95
plus $3.00 S & H
Texas residents please add $2.25 for taxes
Checks or Money Orders only
Please allow 4–6 weeks delivery

ORDER MONEY WORKS FROM: MG ENTERPRISES
Dept. 189J, 4007 89th St., Lubbock, TX 79423

JANUARY

COMING ATTRACTIONS

PROGRAMS FOR THE 1990S—
As we enter a new decade, the computing pendulum is swinging toward more creativity and productivity software. In this survey article, you'll learn what programs are available to maximize the computing power of your Commodore 64 and 128.

C-128 DATABASE—
Here's an 80-column, color database that C-128 owners can use to quickly and easily store and maintain their records and lists.

MONEY MANAGER—
What better way to start off the New Year than with this C-64/C-128 personal budget and record-keeping program that tracks your income and expenses to help you keep your financial affairs in order.

PLUS—
A first-hand report on the latest World of Commodore show, reviews, utilities, news, programming hints and tips, gaming tricks, answers to your computing questions and lots more to help users get up and RUNning on their Commodore systems.

RERUN PREVIEW—
Here's the lineup for the November–December issue of ReRUN: **Friendly File Copier**—Fast and menu-driven for two drives and a C-64; **Build a Better Basic**—Structured commands for your C-64; **Wall $treet 128**—Playing the stock market in a future setting; **Get a Load of This!**—Increase C-64 loading speed tenfold with your 1571 or 1581; **Graphmaker**—A 3-D bar graph program for the C-64 and C-128; plus bonus programs: **The Caroling Commodore**—Christmas music on the C-128; **The Family Tree**—A genealogy program for the C-64.

LIST OF ADVERTISERS

(603) 924-7138 or (800) 441-4403
NATIONAL ADVERTISING SALES MANAGER: **KEN BLAKEMAN**
NORTHEAST SALES: **BARBARA HOY**
MIDWEST/SOUTHEAST SALES: **NANCY POTTER-THOMPSON**
WESTERN STATES SALES MANAGER: **GIORGIO SALUTI, (415) 328-3470**

Reader Service		Page
33	Abacus Software	51
18	Activision	33
71	Ampex Systems, Inc.	85
*	Aprotek	78
138	Berkeley Softworks	75
73	Briwall	88, 89
35	CAPCOM USA Inc.	23
42	CAPCOM USA Inc.	25
22	CAPCOM USA Inc.	27
19	CAPCOM USA Inc.	29
*	Commodore Business Machines	2
30	Computer Shoppe of Alabama	93
166	Creative Micro Design	9
50	Data East USA, Inc.	11
128	Digital Vision	91
65	Diskette Emporium	87
3	Electronic Arts	CIII
142	Electronic Arts	47
158	Entertainment On-Line	64
*	ICR Future Soft.	55–58
80	Innerprise Software, Inc.	31
202	Jason Ranheim	91
227	Konami, Inc.	4
66	Loadstar	1
*	Lyco Computer	79
55	Mainstream America	91
62	Mainstream America	93
67	Medalist Int'l	15
56	Medalist Int'l	CIV
38	Micro Cube Corp.	85
135	Micro Prose Software	17
103	Micro Prose Software	19
59	Mindcraft	49
49	Mindscape, Inc.	12–13
*	Montgomery Grant	65
239	Origin Systems	63
11	Practical Programs	60
15	Protecto's Computer Direct	76, 77
232	Ramco Computer Printer	91
*	RUN	
	Funpak	32
	ReRUN	34
	Class Ads	94–95
133	Sir-Tech Software, Inc.	61
245	Software Discounters	82, 83
17	Software Support Int'l.	70, 71, 73
62	SOGWAP Software	93
*	Strategic Simulations	7
87	Sublogic Corp.	20
179	Taito Software, Inc.	3
179	Taito Software, Inc.	CII
*	TAB Books	81
155	Tenex Computer Express	67
236	The Soft Group	54
146	Timeworks, Inc.	21
36	Virgin Mastertronics Int'l.	39
241	Virgin Mastertronics Int'l.	53
51	VSI	69
96	Xetec, Inc.	16

For further information from our advertisers, circle the corresponding Reader Service number on the adjoining card.
*This advertiser prefers to be contacted directly.

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

***RUN* ALERT:** As a service to its readers, *RUN* will periodically publish the names of companies who are having difficulties meeting their customer obligations or who have gone out of business. Readers are advised to contact **Susan Kaniwec, Customer Service Representative, *RUN* Magazine, 80 Elm St., Peterborough, NH 03458**, before dealing with these companies: **S&S Wholesalers, Compumed, Pro-Tech-Tronics, White House Computer, Prism Software** (Waco, Texas), **Underware, Starflite** and **Scott Case** (Kingsport, TN).

PRESIDENT
ROGER J. MURPHY

EXECUTIVE VICE PRESIDENT/PUBLISHING DIRECTOR
STEPHEN D. TWOMBLY
VICE PRESIDENT OF MANUFACTURING/OPERATIONS
DENNIS S. CHRISTENSEN

SINGLE COPY SALES DIRECTOR: **LINDA RUTH**
NEWSSTAND PROMOTION MANAGER: **DEBBIE WALSH**
DIRECTOR OF CREDIT SALES & COLLECTIONS: **WILLIAM M. BOYER**

MANUFACTURING MANAGER: **LYNN LAGASSE**
TYPESETTING MANAGER: **LINDA PALMISANO**; SYSTEM SUPERVISOR: **DOREEN MEANS**
TYPESETTER: **DEBRA A. DAVIES**
FOUNDER: **WAYNE GREEN**

Manuscripts: All manuscript contributions, queries, requests for writer's guidelines and any other editorial correspondence should be directed to *RUN*, Editorial Offices, 80 Elm St., Peterborough, NH 03458; telephone: 603-924-9471.

Subscription problems or address changes: Call 1-800-274-5241 (in Colorado, call 447-9330), or write to *RUN*, Subscription Services, PO Box 58711, Boulder, CO 80322-8711.

Problems with advertisers: Send a description of the problem and your current address to: *RUN*, 80 Elm Street, Peterborough, NH 03458, ATTN.: Susan Kaniwec, Customer Service.

Back Issues: *RUN* back issues are available for $3.50, plus $1 postage and handling, from: *RUN*, Back Issue Orders, 80 Elm St., Peterborough, NH 03458; or call 1-800-343-0728.

Inquiries regarding ReRUN: Write to ReRUN, 80 Elm St., Peterborough, NH 03458, or call 1-800-343-0728.

***RUN*'s BBS**: The RUNning Board is *RUN*'s reader feedback bulletin board, which you can call anytime, day or night, seven days a week, for up-to-date information about the magazine, the Commodore industry and news and information of interest to all Commodore users. Call: 603-924-9704.

In a Battle Helmet, No One Can Hear You Scream.

You can hear footsteps running on steel. Shouts in a strange language. Echoes.

Where are they you wonder. What is this Battle Station?

Casey clicks off the safety on her Hyper-Uzi. It thrums to life. Tension.

You flip down your helmet. The world goes suddenly quiet. Your temples scream. The radar in your helmet flashes with color. "Here they come..."



You Started as Raw Recruits. Five eager faces who thought Interstellar Patrol was cake. You learned fast.

Then, Disaster. A dispute between colonists. A mysterious vision. Bloody clues pointed to the sky.



Surrounded in Hyperspace. Friendlies in Yellow, Targets in Red. Electronic fireblossoms.

New for the Commodore 64

Sentinel Worlds™ I: Future Magic™

Science Fiction Mystery Role Playing Game Designed by Karl Buiter

To order: Visit your retailer or call 800-245-4525 from U.S. or Canada 8am to 5pm PST for Visa/MC orders. Or mail check (US$) or Visa/MC #, cardholder name and exp. date to: Electronic Arts Direct Sales, P.O. Box 7530, San Mateo, CA 94403. C64 version $34.95. IBM/Tandy version $49.95. Add $3 shipping and handling. CA residents add 6.5% sales tax. Allow 1-3 weeks for delivery. Screen shots represent IBM version. Commodore 64 is a registered trademark of Commodore Electronics Limited. IBM is a registered trademark of International Business Machines, Inc. Tandy is a registered trademark of The Tandy Corporation.

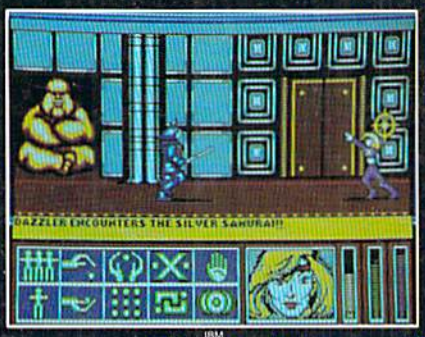
ELECTRONIC ARTS®

Circle 3 on Reader Service card.

Marvel® Comics Come To Life!

You control Marvel Super Heroes in battle against Marvel Super Villains. And they have all the special talents Marvel gave them.

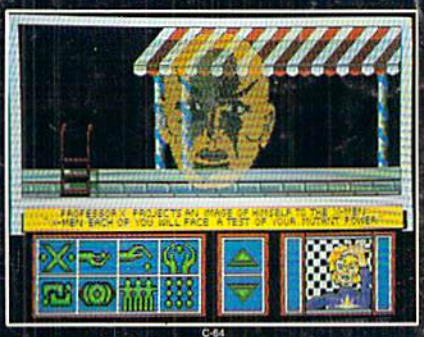
X-MEN



IBM



AMIGA


C-64

The X-Men Are Calling You to Action against Arcade and Magneto in Murderworld, the Amusement Park of Terror.

Over 500 screens of strategy, mind-bending puzzles and exciting arcade action!

Arcade and Magneto's henchmen include Wendigo • Juggernaut • Nimrod • Toad • Mystique • Silver Samurai • White Queen Pyro • The Blob • Avalanche • Robot Sentinels.

The Amazing Spider-Man™ and Captain America® IN DR. DOOM'S™ REVENGE!



IBM



AMIGA



C-64

Dr. Doom Plans to Nuke New York City.
Spider-Man and Captain America Need Your Help to Stop Him!

More than 30 challenging arcade action battle screens

Come face-to-face with Oddball • Batroc • Machete • The Rhino • Electro • Boomerang • The Grey Gargoyle • Eduardo Lobo The Hobgoblin • Rattan • Dr. Doom himself.

Win Great Prizes with Medalist "Medal Madness" Starting September 1.

See your local retailer for details.

NEW FROM

MEDALIST INTERNATIONAL

A marketing division of MicroProse Software, Inc.
180 Lakefront Drive • Hunt Valley, MD 21030

PARAGON SOFTWARE

Spider-Man now available for C-64 ($34.95) and IBM-PC/Tandy/compatibles ($44.95); due in Aug. 1989 for Amiga. X-Men due in Oct. 1989 for IBM-PC/Tandy/compatibles ($39.95); future releases for C-64 and Amiga. CAN'T find these games? Call: 301-771-1151 X-208 weekdays 8:30am to 5pm Eastern and order by MC/Visa/AmEx. Or mail check or money order. Prices include shipping in US. Add $5.00 for international orders. US funds only. MD residents add 5% sales tax. Allow 1-3 weeks for US delivery. Price may vary by machine type.

Spider-Man, Captain America, The X-Men, Dr. Doom and other characters and the distinctive likenesses thereof are trademarks of the Marvel Entertainment Group, Inc. and are used with permission. Copyright © 1989 Marvel Entertainment Group, Inc. All Rights Reserved. *The Amazing Spider-Man and Captain America in Dr. Doom's Revenge* and *The X-Men: Madness in Murderworld* are produced under license from the Marvel Entertainment Group, Inc.

Circle 56 on Reader Service card.